PLANNING AND ZONING COMMISSION

AND

CAPITAL IMPROVEMENTS ADVISORY COMMITTEE

CITY OF CORINTH, TEXAS

3300 CORINTH PARKWAY, CORINTH, TEXAS

REGULAR SESSION MEETING

MONDAY, JANUARY 23, 2017 – 7:00 P.M.

City of Corinth ♦ 3300 Corinth Parkway ♦ Corinth, Texas 76208
940-498-3260 ♦ 940-498-3266 Fax ♦ www.cityofcorinth.com
Bill Heidemann, Mayor

*** * * * PUBLIC NOTICE * * * ***

The Planning and Zoning Commission and the Capital Improvements Advisory Committee of the City of Corinth, Texas, will meet in Regular Session on Monday, January 23, 2017 at 7:00 p.m. in Corinth City Hall located at 3300 Corinth Parkway, Corinth, Texas 76208. The agenda will be as follows:

CALL TO ORDER, INVOCATION

CONSENT AGENDA
All matters listed under the Consent Agenda are considered to be routine and will be enacted in one motion. Should the Chairman, Commissioner, or any citizen desire discussion of any Item that Item will be removed from the Consent Agenda and will be considered separately.

1. Consider and act on Minutes from the December 12, 2016 Planning and Zoning Commission Special Holiday Session.

BUSINESS AGENDA

2. Present to the Capital Improvements Advisory Committee of the City of Corinth, Texas an updated report on the City's Land Use Assumptions, Capital Improvements Plan and Impact Fees for Water, Wastewater, and Roadway Systems.

3. Authorize the Chairman of the Capital Improvements Advisory Committee to file the Committee's written comments with the City Council regarding the updated report as presented.

PUBLIC HEARING / BUSINESS AGENDA ITEM

4. TO HEAR PUBLIC OPINION REGARDING A REPLAT OF OXFORD AT LAKE VIEW ADDITION, LOT 1, BLOCK 1, BEING A TOTAL OF 8.826 ACRES LEGALLY DESCRIBED AS LOT 1R, BLOCK 1, TALLAL ADDITION, IN THE H.H. SWISHER SURVEY, ABSTRACT NO. 1220, CITY OF CORINTH, DENTON COUNTY, TEXAS. (THIS PROPERTY IS LOCATED ON THE NORTH SIDE OF F.M. 2181, AND THE EAST SIDE OF S. GARRISON RD.)

4a. Consider and act on Lot 1, Block 1 of the Oxford at Lake View Addition Replat, being a total of 8.826 acres legally described as Lot 1R, Block 1, Tallal Addition, in the H.H. Swisher Survey, Abstract No. 1220, City of Corinth, Denton County, Texas. (This property is located on the north side of F.M. 2181, and the east side of S. Garrison Rd.)

PUBLIC HEARING / BUSINESS AGENDA ITEM

5. TO HEAR PUBLIC OPINION REGARDING A REQUEST FROM THE PROPERTY OWNER AND APPLICANT, RAMONA OSBURN, SENIOR VICE PRESIDENT AT TEXAS HEALTH RESOURCES BEHAVIORAL HEALTH, FOR A ZONING CHANGE THROUGH AN ORDINANCE AMENDING THE COMPREHENSIVE ZONING ORDINANCE BEING A PART OF THE UNIFIED DEVELOPMENT CODE, ORDINANCE NO. 13-05-02-08, AS AMENDED, AND A PORTION OF

PLANNED DEVELOPMENT ORDINANCE NO. 99-03-18-05, AS AMENDED, BY AMENDING THE ZONING TO PLANNED DEVELOPMENT C-2 COMMERCIAL DISTRICT AND ADDING "HOSPITAL" AS A PERMITTED USE ON LOT 1, BLOCK A, CORINTH MEDICAL CENTER ADDITION BEING 5.00 ACRES IN THE CITY OF CORINTH, DENTON COUNTY, TEXAS.

5a. Consider and act on an ordinance amending the Comprehensive Zoning Ordinance being a part of the Unified Development Code, Ordinance No. 13-05-02-08, as amended, and a portion of Planned Development Ordinance No. 99-03-18-05, as amended, by amending the zoning to Planned Development C-2 Commercial District and adding "Hospital" as a Permitted Use on Lot 1, Block A, Corinth Medical Center Addition being 5.00 acres in the City of Corinth, Denton County, Texas.

EXECUTIVE SESSION
As authorized by Section 551.071(2) of the Texas Government Code, this meeting may be convened into closed session for the purpose of seeking confidential legal advice of the City Attorney on any Agenda Item listed herein.

As a majority of Council Members of the City of Corinth may attend the above described meeting, this notice is given in accordance with Chapter 551 of the Texas Government Code. No official action will be taken by the City Council at this meeting.

ADJOURN REGULAR SESSION

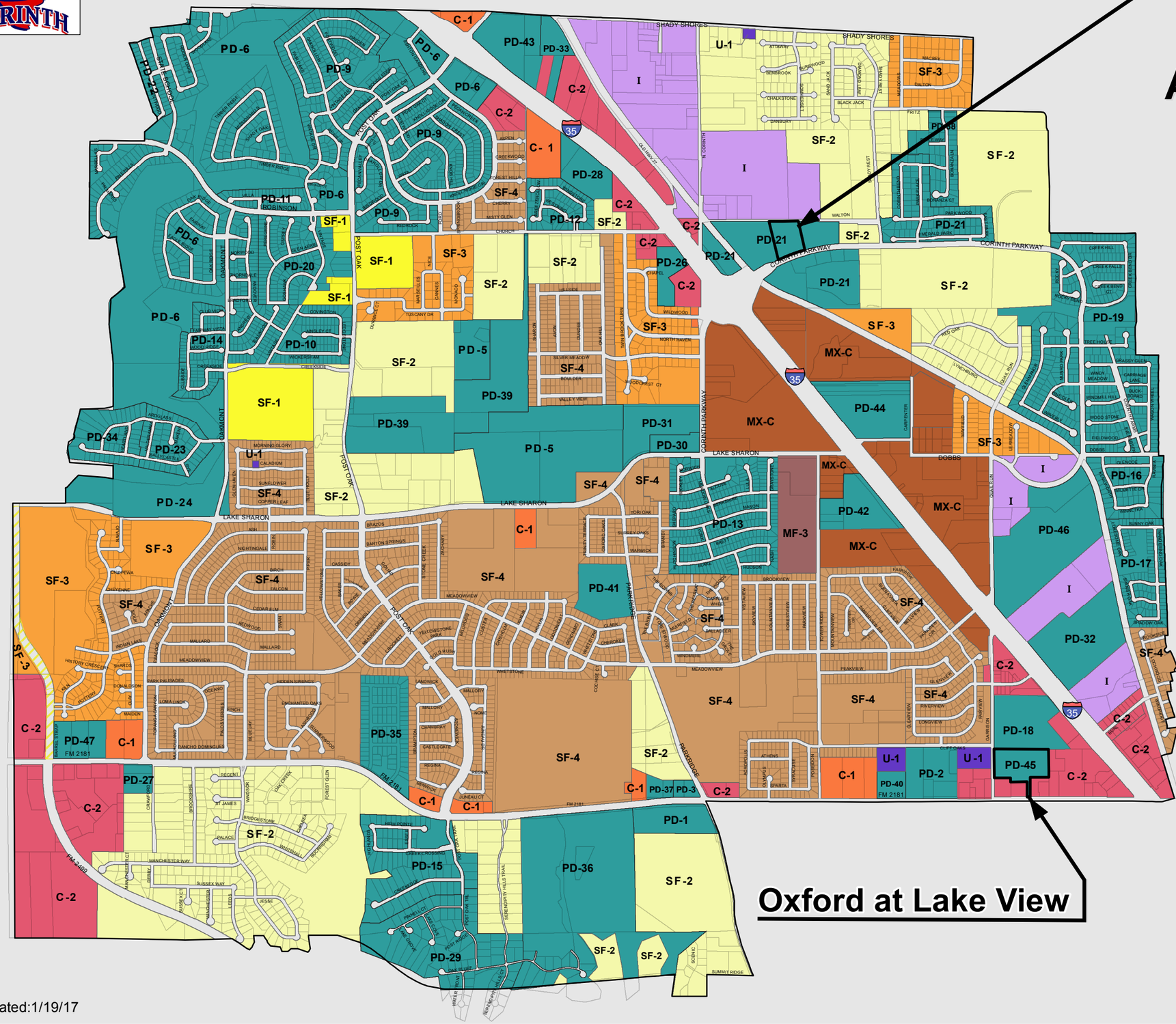
Posted this 19th day of January, 2017 before 5:00 p.m. on the bulletin board at Corinth City Hall.

Nathan Abato
Planning and Zoning Commission
Planning and Development Coordinator
City of Corinth, Texas.

Corinth City Hall is wheelchair accessible and accessible parking spaces are available. Requests for accommodations or interpretive services must be made 48 hours prior to this meeting. Please contact the City Secretary's office at 940.498-3200 or FAX 940.498-7505 for more information.
BRALE IS NOT AVAILABLE

Texas Health Behavioral Health Hospital Corinth

City of Corinth Zoning Map and Agenda Item Locations



Legend

Zoning Districts

- Future FM 2499
- C-1 Commercial
- C-2 Commercial
- C-3 Commercial
- I Industrial
- MF-1 Multi-Family Residential
- MF-2 Multi-Family Residential
- MF-3 Multi-Family Residential
- MHD Modular Home District
- MX-C Mixed Use Commercial
- PD Planned Development
- SF-1 Single Family Residential
- SF-2 Single Family Residential
- SF-3 Single Family Residential
- SF-4 Single Family Residential
- U-1 Utility

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Updated:1/19/17

9/28/16

Future Land Use Plan

Future Land Use

- Low Density Residential
- Medium Density Residential
- High Density Residential
- Mixed Residential
- Mixed Use with Residential
- Parks and Open Space
- Public/Semi-Public
- Mixed Use Non-Residential
- Office/Business Park
- Retail
- Commercial
- Industrial
- Multi-Modal Transit Center
- Transit Oriented Development
- Corinth City Center

Road Types

- Major Arterial
- Minor Arterial
- Collector
- Corinth City Limits
- FEMA 100 Year Floodplain

Plate 4-1

Note:
A Comprehensive Plan shall not constitute zoning district regulations or establish zoning district boundaries.

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Amendments
14.01.16.04
14.12.18.41
16-05-05-14

CONSENT AGENDA ITEM #1

Planning and Zoning Commission and Capital Improvements Advisory Committee
Regular Session Meeting

January 23, 2017

CONSENT AGENDA ITEM

1. Consider and act on Minutes from the December 12, 2016 Planning and Zoning Commission Special Holiday Session Meeting.

AGENDA ITEM SUMMARY/BACKGROUND

Consideration of the minutes from the December 12, 2016 Planning and Zoning Special Holiday Session Meeting.

FINANCIAL SUMMARY

Source of funding:

RECOMMENDATION

ATTACHMENTS / SUPPORTING DOCUMENTS

Copy of the minutes.

Submitted By: Nathan Abato, Planning and Development Department

Finance Review: NA
Legal Review: NA

STATE OF TEXAS
COUNTY OF DENTON
CITY OF CORINTH

On this the 12th day of December, 2016, the Planning and Zoning Commission of the City of Corinth, Texas, met in a Special Holiday Session at Corinth City Hall, located at 3300 Corinth Parkway, Corinth, Texas. The meeting date, time, place and purpose as required by Title 5, Subtitle A, Chapter 551, Subchapter C, Section 551.041, Government Code, with the following members, to wit:

Members Present	**Members Absent**
Breien Velde	
Bruce Hanson	
Dwayne Zinn	
Brian Rush	
Charles Mills	
Marc Powell	

CALL TO ORDER

The Special Holiday Session of the Planning and Zoning Commission of the City of Corinth, Texas, was called to order by Brian Rush at 7:00 p.m. Marc Powell delivered the invocation.

PUBLIC HEARING/BUSINESS AGENDA:

1. Consider and act on Minutes from the November 14, 2016 Planning and Zoning Commission Special Holiday Session.

MOTION made by Mr. Zinn to approve the minutes.

AMENDMENT SECONDED by Mr. Powell.

5-0 All in favor:

Ayes:	Breien Velde, Marc Powell, Dwayne Zinn, Brian Rush, Charles Mills
Noes:	None
Absent:	Bruce Hanson (was late to meeting)

MOTION TO APPROVE CARRIES

PUBLIC HEARING/BUSINESS AGENDA:

2. TO HEAR PUBLIC OPINION REGARDING A REPLAT OF CVS CORINTH ADDITION, LOT 2R, BLOCK A AND LOT 3, BLOCK A, BEING A TOTAL OF 13.854 ACRES LEGALLY DESCRIBED AS ALL OF LOT 2, BLOCK A, CVS CORINTH ADDITION IN THE G.W. MCGLOTHLIN SURVEY, ABSTRACT NO. 888, IN THE CITY OF CORINTH, DENTON COUNTY, TEXAS. (THIS PROPERTY IS LOCATED ON THE NORTHWEST CORNER OF F.M. 2181 AND F.M. 2499).

Ms. Levy gave an overview of the replat request—to create a third lot to the immediate west of lot one. A Sonic restaurant will be constructed on the new lot. She said staff originally recommended approval subject to the recordation of the CVS Corinth plat, which has since been recorded. She now recommends approval subject to including all recordation information on the replat. Ms. Levy said this

replat meets all of the subdivision requirements of the Unified Development Code (UDC), including the construction plans which have been approved.

PUBLIC HEARING opened at 7:07 PM.

PUBLIC HEARING closed at 7:07 PM.

2a. Consider and act on Lot 2R, Block A and Lot 3, Block A of the CVS Corinth Addition Replat, being a total of 13.854 acres legally described as all of Lot 2, Block A, CVS Corinth Addition in the G.W. McGlothlin Survey, Abstract No. 888, in the City of Corinth, Denton County, Texas.

MOTION made by Mr. Zinn to approve the replat with the condition that the recording information from the original CVS plat is added.

AMENDMENT SECONDED by Mr. Powell.

6-0 All in favor:

Ayes:	Breien Velde, Marc Powell, Bruce Hanson, Dwayne Zinn, Brian Rush, Charles Mills
Noes:	None
Absent:	None

MOTION TO APPROVE CARRIES

3. Consider and act on a Site Plan for Sonic drive-in restaurant to be located on Lot 3, Block A, CVS Corinth Addition in the City of Corinth, Denton County, Texas.

Ms. Levy gave an overview of the site plan request. It is a proposed 1,702 square foot Sonic drive-in restaurant. It will not have a drive-thru window. The landscape plan meets and exceeds all of the landscaping requirements. The proposed development meets all of the requirements of the zoning district.

Mr. Zinn asked about the standard parking spaces and if the handicap spots are in the stalls. Ms. Levy clarified that they are part of the stall parking spaces.

Mr. Hanson asked what the lighting requirements are at the boundary of the property. Ms. Levy answered that it changes going from commercial to residential—all of the boundaries in the replat would be 3.0 foot candles—a maximum.

Mr. Jacob Tiemann, with G&A Consultants, gave a presentation of the site plan proposal. There will be no trees or shrubs removed with the site plan. There will be a shared access with CVS onto 2181. Access from 2499 will be through CVS. The restaurant will have 32 drive-up stalls. He also spoke about the new Letter of Map Revision (LOMR) CVS had done and the new flood plain. The restaurant will not be in the new flood plain.

Mr. Dennis Clark, with Encore Companies, is the developer of this tract. He said he has been recognized as one of the premier Sonic operators and is very community oriented.

MOTION made by Mr. Hanson to recommend approval of the site plan as it has been presented.

AMENDMENT SECONDED by Mr. Zinn.

6-0 All in favor:

Ayes:	Breien Velde, Marc Powell, Bruce Hanson, Dwayne Zinn, Brian Rush, Charles Mills
Noes:	None
Absent:	None

MOTION TO RECOMMEND APPROVAL CARRIES

ADJOURN

Meeting adjourned at 7:38 p.m.

MINUTES APPROVED THIS _____ DAY OF _____, 2017.

_____
Brian Rush, Planning and Zoning Commission Chairman

_____
Nathan Abato, Planning and Zoning Commission Secretary

BUSINESS ITEM 2 & 3

Planning and Zoning Commission and Capital Improvements Advisory Committee
Regular Session Meeting

January 23, 2017

BUSINESS ITEM:

2. Present to the Capital Improvements Advisory Committee of the City of Corinth, Texas an updated report on the City's Land Use Assumptions, Capital Improvements Plan and Impact Fees for Water, Wastewater, and Roadway Systems.

3. Authorize the Chairman of the Capital Improvements Advisory Committee to file the Committee's written comments with the City Council regarding the updated report as presented.

APPROVAL PROCESS

Presentation of the Report and the Committee's written comments will be filed with City Council on February 2, 2017 during the regular session meeting.

NOTIFICATION TO PUBLIC

The business item is presented in a public forum and notification by sign placement, newspaper or written notice is not required.

AGENDA ITEM DESCRIPTION

The City entered into a contract with Kimley Horn and Associates to update the City's water, wastewater and roadway impact fees. Kimley Horn's presentation will update the Capital Improvements Advisory Committee on the status and findings of the project.

State law requires that cities who have adopted impact fees to periodically study and update the fees. Normally, the impact fees are updated every five years. Corinth last updated our impact fees in December of 2011. The updates are needed to ensure that the anticipated growth rates, land use assumptions and the infrastructure costs for future development are current and accurate.

The results of the analysis are used to determine the maximum accessible amount for new development. Impact fees will then be adopted by Council up to the calculated maximum accessible rate and the associated fees will be collected to help offset the cost of new development.

Impact fees are currently collected for water, sewer, and roadway when new development occurs. A presentation by Kimley Horn will provide information in three major areas:

1. Impact Fee Basics
2. The Components of Impact Fees
3. Impact Fee Calculations

After the presentation, the Committee will have the opportunity to ask questions and make comments on the report. Written comments from the Chairman of the Capital Improvements Advisory Committee will be presented City Council for their consideration. Printed copies of the Impact Fee Study are included with the background package.

A City Council meeting is scheduled to adopt the Impact Fee Report and the calculated maximum accessible impact fee level on February 2, 2017.

FINANCIAL SUMMARY

Source of Funding: No funding is required.

STAFF RECOMMENDATION

Staff recommends the CIAC receive the updated Impact Fee Study Report and file the committee's written comments with the City Council.

ATTACHMENTS / SUPPORTING DOCUMENTS

Report

Submitted By:
Department: Planning and Development

Finance Review: Yes _ NA_

Legal Review: Yes _ NA _

Director Review and Approval:

City of Corinth

2016 Land Use Assumptions, Water and Wastewater Impact Fee Report

December 2016

Kimley»Horn

Kimley-Horn and Associates, Inc.

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1.1 Introduction

The City of Corinth retained the services of Kimley-Horn and Associates, Inc. (Kimley-Horn) for the purpose of updating the impact fees for water system improvements required to serve new development. The impact fees were last updated in 2016 in accordance with Chapter 395 of the *Local Government Code* (impact fees), which requires a city imposing impact fees to update the land-use assumptions and capital improvements plan upon which the fees are calculated.

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

For convenience and reference, the following is excerpted from Chapter 395 of the *Local Government Code*, "Financing Capital Improvements required by New Development in Municipalities, Counties, and certain other Local Governments."

(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

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(7) a plan for awarding:

(A) a credit for the portion of ad valorem tax and utility service revenues generated by new service unit 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 Report*, *2017*. The impact fees are based on recommended capital improvements and the population growth projections outlined in the *Water and Wastewater Master Plan Report as well as the City's Comprehensive Master Plan.*

The study process was comprised of three (3) tasks:

A. Land Use Assumptions

In order to assess an impact fee, Land Use Assumptions must be developed to provide the basis for population and employment growth projections within a political subdivision. As defined by Chapter 395 of the Texas Local Government Code, these assumptions include a description of changes in land uses, densities, and population in the service area. In addition, these assumptions are useful in assisting the City of Corinth in determining the need and timing of capital improvements to serve future development.

In accordance with Chapter 395, information for the development of the Land Use Assumptions was determined from the City of Corinth Comprehensive Land Use Plan Categories – 2010 as well as working with City staff to identify possible changes to the future land use plan, aerial photography, and consultation with City staff.

The residential and non-residential estimates and projections were all compiled in accordance with the following categories:

Population: Number of people, based on person per dwelling unit factors.

Employment: Acreages based on retail, service, and basic land uses. Each classification has unique demand characteristics.

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, such as grocery stores and restaurants.

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

Basic: Land use activities that produce goods and services such as those that are exported outside of the local economy, such as manufacturing, construction, transportation, wholesale, trade, warehousing, and other industrial uses.

The geographic boundary of the impact fee service area for water facilities is shown in Figure 1.1. The City of Corinth contains only one (1) service area which is limited to the area within the current Water CCN. Per coordination with City staff, a single growth rate was assumed for the service area.

Table 1.1 summarizes the residential and non-residential growth projections by service area within the City of Corinth from 2016 to 2026.

Table 1.1 Residential and Non-Residential Growth Projections

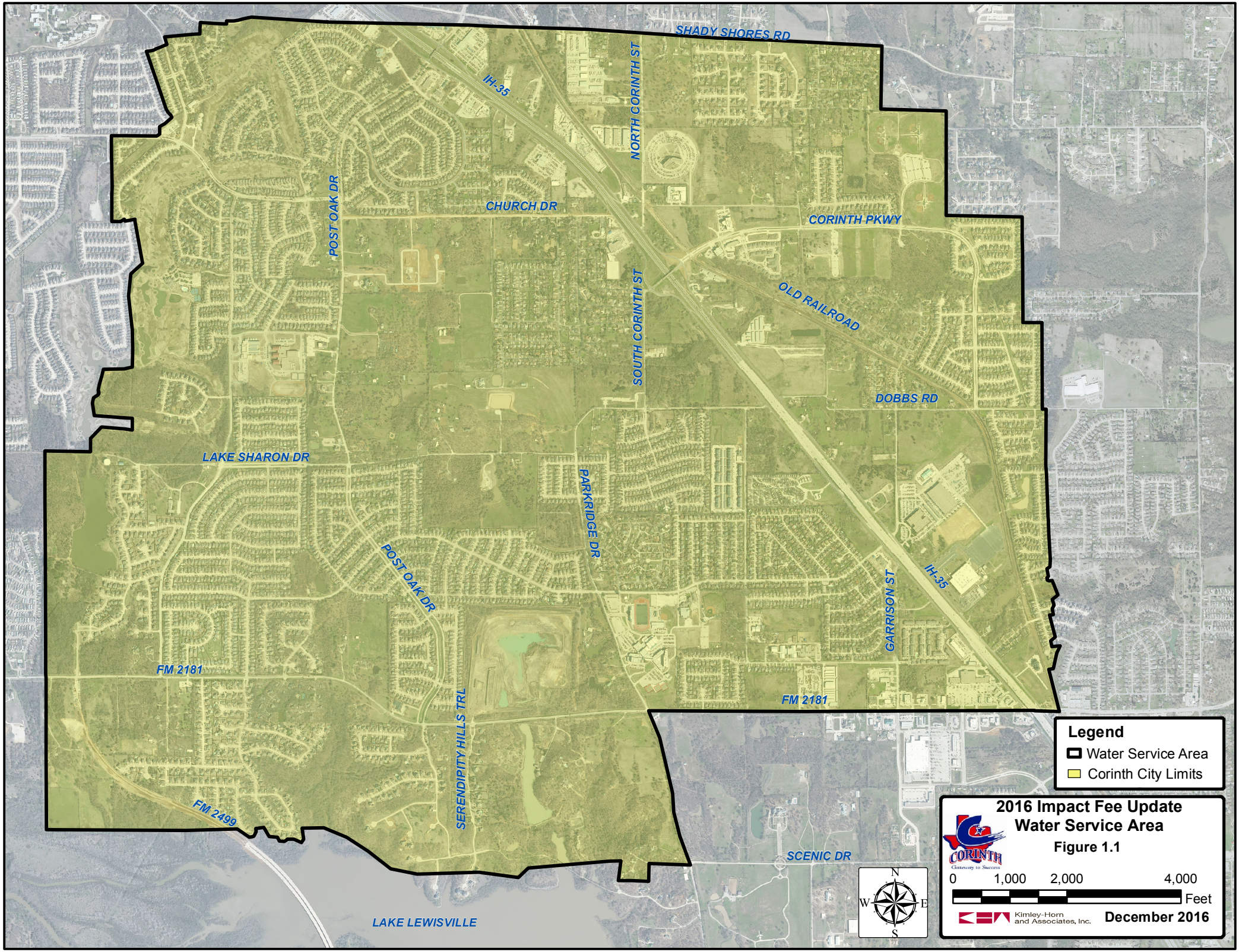
	Year	Population Growth	Employment (Sq. Ft.) Growth			
			Basic	Service	Retail	Total
Corinth	2016 - 2026	3,554	150,000	622,500	852,500	1,625,000

B. Impact Fee Capital Improvements Plan

This task involved evaluation of the water capital improvements plan outlined in the master plan and discussion with City staff to identify projects that will be built in the 10-year planning window and meet the design criteria.

C. Impact Fee Analysis and Report

This task included calculating the additional service units, service unit equivalents, 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.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POST OAK DR
CHURCH DR
CORINTH PKWY
SOUTH CORINTH ST
OLD RAILROAD
DOBBS RD
LAKE SHARON DR
PARKRIDGE DR
POST OAK DR
GARRISON ST
IH-35
FM 2181
SERENDIPITY HILLS TRL
FM 2181
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Water Service Area
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2016 Impact Fee Update
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Kimley-Horn and Associates, Inc.
December 2016
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1.2 Water Impact Fee Executive Summary

This study was performed to update the City of Corinth's Water System Impact Fees. Water system analysis and the Water System Master Plan are important tools for facilitating orderly growth of the water system and for providing adequate facilities. The implementation of an impact fee is a way for development to pay their proportionate impact on the water system.

Elements of the water system, including storage facilities, pumping facilities, and the distribution network itself, were evaluated against industry standards as outlined in the Design Criteria section of this report. Information related to the growth of the City was developed through evaluation of historical growth rates and discussions with City staff.

Water system improvements necessary to serve 10-year (2026) and ultimate system needs were evaluated. Typically, infrastructure improvements are sized beyond the 10-year requirements; however, Texas' impact fee law (Chapter 395) only allows recovery of costs to serve the 10-year planning period. For example, the projected cost to construct the infrastructure needed through 2026 is $19,597,706. Of this, $5,906,709 is projected to be eligible for recovery through impact fees. After financing costs are added and the 50% credit is applied, $3,927,961 is recoverable through impact fees serving the 10 year system needs. A portion of the remainder can be assessed as the planning window extends beyond 2026 and as the impact fees are updated in the future.

The impact fee law 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 Corinth defines a *service unit* as unit of development that consumes the amount of water requiring a standard 5/8"x 3/4" meter. 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 5/8"x 3/4" meter. The equivalency factor and associated impact fee by meter size is shown in Table 1.2.

Based on the City's 10-year growth projections and the associated demand (consumption) values, 1,782 additional service units will need water by the year 2026. Based on the additional service units and the recoverable capital improvements plans, the City may assess a maximum of $2,204 per service unit.

Table 1.2 Maximum Assessable Water Impact Fee for Commonly Used Meters

Meter Size*	Maximum Continuous Operating Capacity (GPM)**	Service Unit Equivalent	Maximum Assessable Fee ($)
5/8"x 3/4" PD	10	1	2,204
3/4" PD	15	1.5	3,306
1" PD	25	2.5	5,510
1 1/2" PD	50	5	11,020
2" PD	80	8	17,632
2" Compound	80	8	17,632
2" Turbine	160	16	35,264
3" Compound	175	17.5	38,570
3" Turbine	350	35	77,140
4" Compound	300	30	66,120
4" Turbine	650	65	143,260
6" Compound	675	67.5	148,770
6" Turbine	1,400	140	308,560
8" Compound	900	90	198,360
8" Turbine	2,400	240	528,960
10" Turbine	3,500	350	771,400

* PD = Positive Displacement Meter (Typical residential meter)
** Operating capacities obtained from American Water Works Associate (AWWA) C700-15, C701-15, and C702-15. Turbine and Compound meter flows are based on Class II (in-line) meters.

1.3 Design Criteria

A. Water Transmission Lines

The function of the transmission system is to transfer water across the water system and fill the elevated storage tanks. There are three (3) conditions for which the transmission system is evaluated:

- Peak hour demand — This is the maximum demand that the system experiences. It is the condition under which generally the lowest operational pressures are experienced.
- Tank filling (minimum hour demand) — This is the period during which the elevated tank is replenished. This is the period of lowest demand during the maximum day. It normally occurs after midnight and is the condition under which the highest operational pressures may be experienced.
- Fire flow demand — During the maximum day demand, the local transmission lines are tested to ensure that fire protection requirements are met. Pressures are allowed to fall below normal operating pressures, but should not drop below 20 psi.

The transmission system should be sized to maintain a minimum pressure of 40 psi during normal operating conditions and a minimum pressure of 20 psi during extreme operating conditions. The State requires a minimum operating pressure of 35 psi. In a current urban-type water system, operating pressures of 30-35 psi normally result in customer complaints. In addition, pressures above 80 psi are undesirable and should be avoided. The maximum pressure in extreme conditions should be limited to 120 psi because high operating pressure will result in increased system maintenance and increased operational cost. The transmission system should also be sized to limit maximum velocity in the pipe to five (5) feet per second.

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.

1. GROUND STORAGE

Ground storage serves two (2) 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. 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.

Due to inaccuracies in estimating growth, occasional extremes in usage exceed design values; ground storage should provide sufficient capacity to supply any differences. Sufficient ground storage should be provided to ensure that adequate supplies meet the maximum day demand.

2. ELEVATED STORAGE

Elevated storage serves three (3) 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 two (2) 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.

Because elevated storage is approximately four (4) times more expensive than ground storage, an economical balance between elevated storage and pumping should be sought.

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.

D. Water Demand

The criteria used for projecting the water demands for the water system were derived from the *Water and Wastewater Master Plan Report*, 2017. Table 1.3 shows the projected average day demand by land use type.

Table 1.3 Average Day Demand by Land Use Type

Land Use	gpd/acre	gpm/acre
Existing Single Family	420	0.29
Low Density Residential	1,250	0.87
High Density Residential	3,000	2.08
Mixed Residential	1,920	1.33
Mixed Use Residential	1,810	1.26
Rural	420	0.29
Parks and Open Space	50	0.03
Public/Semi-Public	1,500	1.04
Mixed Use Non-Residential	1,130	0.78
Office/Business Park	2,000	1.39
Retail	800	0.56
Commercial	1,000	0.69
Industrial	500	0.35

1.4 Impact Fee Capital Improvements Plan

The City of Corinth commissioned Kimley-Horn and Associates, Inc. to update the current Water Master Plan in 2016. The purpose of the water master 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. The Master Plan Report is anticipated to be completed in 2017 shortly after the Impact Fee Update.

Thirteen (13) projects are determined eligible for recoverable cost through impact fees over the next 10 years. The total cost of these projects is $19,597,706. The projected total CIP recoverable cost through impact fees is $5,906,709. The recoverable percentage represents the projected utilization and capacity of each project over the next 10 years. These values were determined by utilizing the hydraulic model prepared for the Water Master Plan Update. These impact fee capital improvements are shown in Table 1.4 and illustrated in Figure 1.2.

Table 1.4 Water Impact Fee Capital Improvements
Project Cost and 10-Year Recoverable Cost

Proj. #	Description	2016 Required Capacity (Percent Utilization)	2026 Required Capacity (Percent Utilization)	2016-2026 Required Capacity (Percent Utilization)	2026 Projected Recoverable Cost	Total Project Cost
1*	Lake Sharon Pump Station and 3 MG Ground Storage Tank	87%	100%	13%	$ 502,934	$ 3,868,722
2*	24-inch and 20-inch Water Line Along Lake Sharon Drive	65%	85%	20%	$ 390,878	$ 1,954,388
3*	16-inch Water Line Along South Corinth Street	45%	65%	20%	$ 47,528	$ 237,641
4*	12-inch Water Lines Along FM 2181	13%	57%	44%	$ 855,297	$ 1,943,856
5*	1.5 MG Ground Storage Tank at Lake Sharon PS	0%	32%	32%	$ 658,673	$ 2,058,354
6*	12-inch Water Line Along Shady Rest Lane and Shade Shores Road	13%	57%	44%	$ 201,832	$ 458,710
7*	12-inch Water Line Along Parkridge Drive, South of FM 2181	13%	57%	44%	$ 77,367	$ 175,835
8	12-inch Water Line Along Sharon Drive	0%	51%	51%	$ 408,000	$ 800,000
9	Quail Run Drive/Dobbs Road 16-inch and 20-inch Water Lines	40%	70%	30%	$ 630,000	$ 2,100,000
10	Quail Run 1.0 MG Elevated Storage Tank	40%	70%	30%	$ 1,230,000	$ 4,100,000
11	Old Railroad 12-inch Water Line	0%	51%	51%	$ 612,000	$ 1,200,000
12	Lake Sharon Pump Station Expansion Phase 1	0%	32%	32%	$ 192,000	$ 600,000
13	Water Impact Fee Report	0%	100%	100%	$ 100,200	$ 100,200
	Total				**$ 5,906,709**	**$19,597,706**

*Project Cost Shown is Actual Construction Cost

Corinth Water Impact Fee CIP Project List

1. Lake Sharon Pump Station and 3 MG Ground Storage Tank
2. 24-inch and 20-inch Water Line Along Lake Sharon Drive
3. 16-inch Water Line Along Corinth Parkway
4. 12-inch Water Lines Along FM 2181
5. 1.5 MG Ground Storage Tank at Lake Sharon PS
6. 12-inch Water Line Along Shady Rest Lane and Shade Shores Road
7. 12-inch Water Line Along Parkridge Drive, South of FM 2181
8. 12-inch Water Line Along Sharon Drive
9. Quail Run Drive/Dobbs Road 16-inch and 20-inch Water Lines
10. Quail Run 1.0 MG Elevated Storage Tank
11. Old Railroad 12-inch Water Line
12. Lake Sharon Pump Station Expansion Phase 1

SHADY SHORES
ROBINSON RD
OLD HWY 77
CHURCH DR
SHARON DR
CORINTH PKWY
I-35E
DOBBS RD
LAKE SHARON DR
POST OAK RD
MEADOWVIEW RD
PARKRIDGE RD
OAKMONT DR
VILLAGE PKWY
FM 2181

Legend

- Existing Ground Tank
- Proposed Ground Tank
- Proposed Elevated Tank
- Existing Pump
- Proposed Pump
- Existing Water Main
- Proposed Water Main
- Corinth City Limits

2016 Impact Fee Update
Water CIP
Figure 1.2

0 400 800 1,600 Feet

N W E S

December 2016

A. Project Descriptions

1. Lake Sharon Pump Station and 3 MG Ground Storage Tank
   This project consists of a booster pump station, a 3 MG ground storage tank, and a 20-inch water line along future Lake Sharon Drive extension. The project involved installing 3 - 4,800 gpm pumps in a building sized for the ultimate capacity of 5 - 4,800 gpm pumps.

Project Cost (Actual Construction Cost)	$3,868,722
Recoverable Cost	$502,934

2. 24-inch and 20-inch Water Line Along Lake Sharon Drive
   This project consists of a 24-inch and 20-inch water line extending into the water distribution system from the Lake Sharon Pump Station. The water line runs along Lake Sharon Drive and extends to Interstate Highway 35E.

Project Cost (Actual Construction Cost)	$1,954,388
Recoverable Cost	$390,878

3. 16-inch Water Lines Along South Corinth Street
   This project consists of a 16-inch water line along South Corinth Street needed to provide looped connections with the existing 12-inch water lines. The limits for this project are between Blue Jay Drive and Post Oak Drive and Serendipity Hills Trail and Garrison Street.

Project Cost (Actual Construction Cost)	$237,641
Recoverable Cost	$47,528

4. 12-inch Water Lines Along FM 2181
   This project consists of a 12-inch water line along FM 2181 needed to provide looped connections with the existing 12-inch water lines. The limits for this project are between Blue Jay Drive and Post Oak Drive and Serendipity Hills Trail and Garrison Street.

Project Cost (Actual Construction Cost)	$1,943,856
Recoverable Cost	$855,297

5. 1.5 MG Ground Storage Tank at Lake Sharon PS
   This project consists of a 1.5 million gallon ground storage tank at the existing Lake Sharon pump station site.

Project Cost (Actual Construction Cost)	$2,058,354
Recoverable Cost	$658,673

6. 12-inch Water Line Along Shady Rest Lane and Shade Shores Road
   This project consists of a 12-inch water line along Shady Rest Lane and Shade Shores Road. The water line connects the existing 16-inch water line along North Corinth Street with the existing 8-inch water line along Corinth Parkway.

Project Cost (Actual Construction Cost)	$458,710
Recoverable Cost	$201,832

7. 12-inch Water Line Along Parkridge Drive, South of FM 2181
   This project consists of a 12-inch water line along Parkridge Drive from FM 2181 to Scenic Drive.

Project Cost (Actual Construction Cost)	$175,835
Recoverable Cost	$77,367

8. 12-inch Water Line Along Sharon Drive
   This project consists of a 12-inch water line between Lake Sharon Drive and Church Drive.

Project Cost	$800,000
Recoverable Cost	$408,000

9. Quail Run Drive/Dobbs Road and 16-inch and 20-inch Water Lines
   This project consists of 20-inch and 16-inch water lines required to provide water supply to the proposed Quail Run Elevated Tank. The 20-inch water line runs along Dobbs Road from Interstate Highway 35E to Quail Run, then along Quail Run from Dobbs Road to the proposed elevated tank. The 16-inch water line runs along Quail run from the proposed elevated tank to Interstate Highway 35E

Project Cost	$2,100,000
Recoverable Cost	$630,000

10. Quail Run 1.0 MG Elevated Storage Tank
    This project consists of a 1.0 MG elevated storage tank along Quail Run.

Project Cost	$4,100,000
Recoverable Cost	$1,230,000

11. Old Railroad 12-inch Water Line
    This project consists of a 12-inch water line along to the Old Railroad from Corinth Parkway to Corinth Parkway.

Project Cost	$1,200,000
Recoverable Cost	$612,000

12. Lake Sharon Pump Station Expansion Phase 1
    This project consists of expanding the pump station capacity by adding a 4,800 gpm pump. The additional pump will increase the pump station capacity to 20.7 MGD (firm).

Project Cost	$600,000
Recoverable Cost	$192,000

13. Water Impact Fee Report
    Based on projected future infrastructure needs, the Water Impact Fees and Master Plan were updated to determine how much of the infrastructure costs may be recovered by the City.

Project Cost	$100,200
Recoverable Cost	$100,200

1.5 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 Corinth 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 5/8"x 3/4" meter. The measure of consumption per service unit is based on a 5/8"x 3/4" meter and the data shown in Table 1.5.

Table 1.5 Service Unit Consumption Calculation

Year	Population[1]	Residential Units (2.9 persons/unit) [1]	Water Usage Average Day Demand (MGD)	Consumption per Service Unit (GPD)
2006	17,147	5,913	3.46	585
2007	18,755	6,467	2.47	382
2008	19,215	6,625	2.88	435
2009	19,650	6,776	2.66	393
2010	19,935	6,874	2.95	429
2011	20,678	7,130	3.30	463
2012	20,721	7,145	3.19	447
2013	20,772	7,163	2.86	400
2014	20,839	7,186	2.75	383
2015	20,957	7,227	2.90	401
Average Consumption per Service Unit				432

Water Usage Source: City of Corinth
(1) Source: 2016 Land Use Assumptions

Additional Service Units and Water Impact Fee Calculation

Based on the City's 10-year growth projections and the resulting water demand projections, water service will be required for an additional 1,782 service units. The calculation is as follows:

- A service unit, which is a unit of development that consumes approximately 432 gallons per day (GPD), is a typical residential connection that uses a 5/8"x 3/4" meter. Table 3.6 outlines the future water demand projections and its relationship to the additional service units projected for the next 10-years.

Table 1.6 10-year Additional Service Units Calculation

Year	Average Day Demand (MGD)	Service Unit Demand (GPD)	Service Units
2016	3.56	432	8,241
2026	4.33	432	10,023
10-year Additional Service Units			1,782

*Projected Water Usage Source: 2005 Water and Wastewater Master Plan and 2016 Land Use Assumptions

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 to not 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 the latter; therefore, the maximum recoverable cost for impact fee shown below is 50 percent of the Pre Credit Recoverable Cost.

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

Table 1.7 10-year Recoverable Cost Breakdown

Pre Credit CIP Recoverable Cost for Impact Fee	$5,906,709
Financing Costs (4% Provided by City)	$1,949,213
Pre Credit Total	$7,855,922
Credit for Utility Revenues (50% credit)	($3,927,961)
Maximum Recoverable Cost for Impact Fee	$3,927,961

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

$$\text{Impact fee per service unit} = \frac{\$3,927,961}{1,782}$$

$$\text{Impact fee per service unit} = \$2,204$$

Therefore, the maximum assessable impact fee per service unit is $2,204.

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 5/8"x 3/4" meter. The maximum impact fee that could be assessed for other meter sizes is based on the value shown on Table 1.8, Service Unit Equivalency Table for Commonly Used Meters.

Table 1.8 Service Unit Equivalency Table for Commonly Used Meters

Meter Size*	Maximum Continuous Operating Capacity (GPM)**	Service Unit Equivalent	Maximum Assessable Fee ($)
5/8"x 3/4" PD	10	1	2,204
3/4" PD	15	1.5	3,306
1" PD	25	2.5	5,510
1 1/2" PD	50	5	11,020
2" PD	80	8	17,632
2" Compound	80	8	17,632
2" Turbine	160	16	35,264
3" Compound	175	17.5	38,570
3" Turbine	350	35	77,140
4" Compound	300	30	66,120
4" Turbine	650	65	143,260
6" Compound	675	67.5	148,770
6" Turbine	1,400	140	308,560
8" Compound	900	90	198,360
8" Turbine	2,400	240	528,960
10" Turbine	3,500	350	771,400

* PD = Positive Displacement Meter (Typical residential meter)
** Operating capacities obtained from American Water Works Associate (AWWA) C700-15, C701-15, and C702-15. Turbine and Compound meter flows are based on Class II (in-line) meters.

APPENDIX A

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

Client:	**City of Corinth**	**Date:**	**12/28/2016**
Project:	**Water Impact Fee Projects**	**Prepared By:**	**AMK**
KHA No.:	**061008048**	**Checked By:**	**MAS**

Title:	**12-inch Water Line Along Sharon Drive**	**Project:**	**8**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 20,000.00	$ 20,000
2	12" Water Line	4,150	LF	$ 100.00	$ 415,000
3	Trench Safety	4,120	LF	$ 2.00	$ 8,240
4	Seed, Fertilizer and Erosion Control	4,110	LF	$ 10.00	$ 41,100
5	Concrete Pavement Repair (SY)	10	SY	$ 80.00	$ 800
6	12" Gate Valve (1 per 2,000 LF of pipe)	3	EA	$ 7,000.00	$ 21,000
7	Fire Hydrant Assembly (1 per 2,000 LF of pipe)	3	EA	$ 6,500.00	$ 19,500
8	Bore with 24" Steel Casing	30	LF	$ 750.00	$ 22,500
9	Connect to Existing Water Line	3	EA	$ 5,000.00	$ 15,000
10	Hydrostatic Testing and Disinfection	1	LS	$ 5,000.00	$ 5,000

Basis for Cost Projection:

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

Subtotal:			$ 568,140
Eng/Survey Fees (+/- %):	15		$ 85,000
Contingency (+/- %):	25		$ 146,860
Total:			$ 800,000

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

Client:	**City of Corinth**	**Date:**	**12/28/2016**
Project:	**Water Impact Fee Projects**	**Prepared By:**	**AMK**
KHA No.:	**061008048**	**Checked By:**	**MAS**

Title:	**12-inch Water Line Along Sharon Drive**	**Project:**	**9**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 25,000.00	$ 25,000
2	16" Water Line	1,100	LF	$ 120.00	$ 132,000
3	20" Water Line	3,800	LF	$ 150.00	$ 570,000
4	Trench Safety	4,280	LF	$ 2.00	$ 8,560
5	Seed, Fertilizer and Erosion Control	430	LF	$ 10.00	$ 4,300
6	Concrete Pavement Repair (SY)	44	SY	$ 80.00	$ 3,556
7	16" Gate Valve (1 per 3,000 LF of pipe)	1	EA	$ 12,000.00	$ 12,000
8	20" Gate Valve (1 per 3,000 LF of pipe)	2	EA	$ 15,000.00	$ 30,000
9	Fire Hydrant Assembly (1 per 2,000 LF of pipe)	2	EA	$ 6,500.00	$ 13,000
10	Bore with 30" Steel Casing	70	LF	$ 900.00	$ 63,000
11	Bore with 36" Steel Casing	550	LF	$ 1,000.00	$ 550,000
12	Connect to Existing Water Line	3	EA	$ 10,000.00	$ 30,000
13	Hydrostatic Testing and Disinfection	1	LS	$ 10,000.00	$ 10,000
14	Combination 2" Air Release/Vacuum Valve & Assembly (1 per 3,000 lf of pipe)	1	EA	$ 10,000.00	$ 10,000

Basis for Cost Projection:

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

Subtotal:		$ 1,461,416
Eng/Survey Fees (+/- %):	15	$ 219,000
Contingency (+/- %):	25	$ 419,584
Total:		$ 2,100,000

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

Client:	**City of Corinth**	**Date:**	**12/28/2016**
Project:	**Water Impact Fee Projects**	**Prepared By:**	**AMK**
KHA No.:	**061008048**	**Checked By:**	**MAS**

Title:	**12-inch Water Line Along Sharon Drive**	**Project:**	**10**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 100,000.00	$ 100,000
2	Pollution Prevention and Control	1	LS	$ 5,000.00	$ 5,000
3	1.0 MG Composite Elevated Water Storage Tank	1	LS	$ 2,000,000.00	$ 2,000,000
4	20" Yard Piping	500	LF	$ 175.00	$ 87,500
5	20" Yard Gate Valve	1	EA	$ 15,000.00	$ 15,000
6	Concrete Sidewalk	150	SY	$ 30.00	$ 4,500
7	Driveway	250	SY	$ 80.00	$ 20,000
8	Site Grading	1	LS	$ 40,000.00	$ 40,000
9	8' Security Fence	1	LS	$ 80,000.00	$ 80,000
10	Electrical	1	LS	$ 200,000.00	$ 200,000
11	SCADA	1	LS	$ 50,000.00	$ 50,000
12	Landscaping	1	LS	$ 20,000.00	$ 20,000
13	Irrigation System	1	LS	$ 10,000.00	$ 10,000
14	20" Hydraulic Valve	1	LS	$ 20,000.00	$ 20,000
15	Connect to Existing Water Line	1	EA	$ 10,000.00	$ 10,000
16	Property Acquisition	1	AC	$ 250,000.00	$ 250,000

Basis for Cost Projection:

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

Subtotal:		$ 2,912,000
Eng/Survey Fees (+/- %):	15	$ 437,000
Contingency (+/- %):	25	$ 751,000
		$ -
Total:		$ 4,100,000

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

Client:	**City of Corinth**	**Date:**	**12/28/2016**
Project:	**Water Impact Fee Projects**	**Prepared By:**	**AMK**
KHA No.:	**061008048**	**Checked By:**	**MAS**

Title:	**12-inch Water Line Along Sharon Drive**	**Project:**	**11**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 25,000.00	$ 25,000
2	12" Water Line	5,800	LF	$ 100.00	$ 580,000
3	Trench Safety	5,700	LF	$ 2.00	$ 11,400
4	Seed, Fertilizer and Erosion Control	5,680	LF	$ 10.00	$ 56,800
5	Concrete Pavement Repair (SY)	20	SY	$ 80.00	$ 1,600
6	12" Gate Valve (1 per 2,000 LF of pipe)	6	EA	$ 7,000.00	$ 42,000
7	Fire Hydrant Assembly (1 per 2,000 lf of pipe)	3	EA	$ 6,500.00	$ 19,500
8	Bore with 24" Steel Casing	100	LF	$ 750.00	$ 75,000
9	Connect to Existing Water Line	2	EA	$ 5,000.00	$ 10,000
10	Hydrostatic Testing and Disinfection	1	LS	$ 5,000.00	$ 5,000

Basis for Cost Projection:

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

Subtotal:		$ 826,300
Eng/Survey Fees (+/- %):	15	$ 124,000
Contingency (+/- %):	25	$ 249,700
		$ -
Total:		$ 1,200,000

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

Client:	**City of Corinth**	**Date:**	**12/28/2016**
Project:	**Water Impact Fee Projects**	**Prepared By:**	**AMK**
KHA No.:	**061008048**	**Checked By:**	**MAS**

Title:	**12-inch Water Line Along Sharon Drive**	**Project:**	**12**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 10,000.00	$ 10,000
2	4800 GPM Pump and 400 HP Motor	1	EA	$ 120,000.00	$ 120,000
3	16" Pump Control Valve	1	EA	$ 30,000.00	$ 30,000
4	20" Spool Piping	1	LS	$ 5,000.00	$ 5,000
5	16" Spool Piping	1	LS	$ 5,000.00	$ 5,000
6	Electrical	1	LS	$ 150,000.00	$ 150,000
7	SCADA	1	LS	$ 50,000.00	$ 50,000
8	Concrete Pump Base	1	EA	$ 2,500.00	$ 2,500
9	2" Air Release Valve	1	EA	$ 4,000.00	$ 4,000

Basis for Cost Projection:

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

Subtotal:			$ 376,500
Eng/Survey Fees (+/- %):	15		$ 56,000
Contingency (+/- %):	25		$ 167,500
			$ -
Total:			$ 600,000

City of Corinth, Texas
Wastewater Impact Fee Report

THIS DOCUMENT IS INCOMPLETE AND IS RELEASED TEMPORARILY FOR INTERIM REVIEW ONLY. IT IS NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

M. A. SAMARRIPAS P.E.
SERIAL NO. 95876
DATE: 12/2016

Prepared by:

Kimley-Horn, Inc.
12750 Merit Drive, Suite 1000,
Dallas, TX 75251
972.770.1300
Registration Number: F-928

December 2016

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Appendices

2.1 Introduction

The City of Corinth retained the services of Kimley-Horn and Associates, Inc. (Kimley-Horn) for the purpose of updating the impact fees for the wastewater system improvements required to serve new development. The impact fees were last updated in 2011 in accordance with Chapter 395 of the *Local Government Code* (impact fees), which requires a city imposing impact fees to update the land-use assumptions and capital improvements plan upon which the fees are calculated.

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

For convenience and reference, the following is excerpted from Chapter 395 of the *Local Government Code*, "Financing Capital Improvements required by New Development in Municipalities, Counties, and certain other Local Governments."

(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) a plan for awarding:

(A) a credit for the portion of ad valorem tax and utility service revenues generated by new service unit 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 Report*, 2017. The impact fees are based on recommended capital improvements and the population growth projections outlined in the *Water and Wastewater Master Plan Report as well as the City's Comprehensive Master Plan.*

The study process was comprised of three (3) tasks:

A. Land Use Assumptions

In order to assess an impact fee, Land Use Assumptions must be developed to provide the basis for population and employment growth projections within a political subdivision. As defined by Chapter 395 of the Texas Local Government Code, these assumptions include a description of changes in land uses, densities, and population in the service area. In addition, these assumptions are useful in assisting the City of Corinth in determining the need and timing of capital improvements to serve future development.

In accordance with Chapter 395, information for the development of the Land Use Assumptions was determined from the City of Corinth Comprehensive Land Use Plan Categories – 2010 as well as working with City staff to identify possible changes to the future land use plan, aerial photography, and consultation with City staff.

The residential and non-residential estimates and projections were all compiled in accordance with the following categories:

Population: Number of people, based on person per dwelling unit factors.

Employment: Acreages based on retail, service, and basic land uses. Each classification has unique demand characteristics.

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, such as grocery stores and restaurants.

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

Basic: Land use activities that produce goods and services such as those that are exported outside of the local economy, such as manufacturing, construction, transportation, wholesale, trade, warehousing, and other industrial uses.

The proposed geographic boundaries for the impact fee service areas for wastewater facilities are shown in Figure 2.1. The City of Corinth contains three (3) service areas.

Table 2.1 summarizes the residential and non-residential growth projections by service area within the City of Corinth from 2016 to 2026.

Table 2.1 Residential and Non-Residential Growth Projections for the City of Corinth

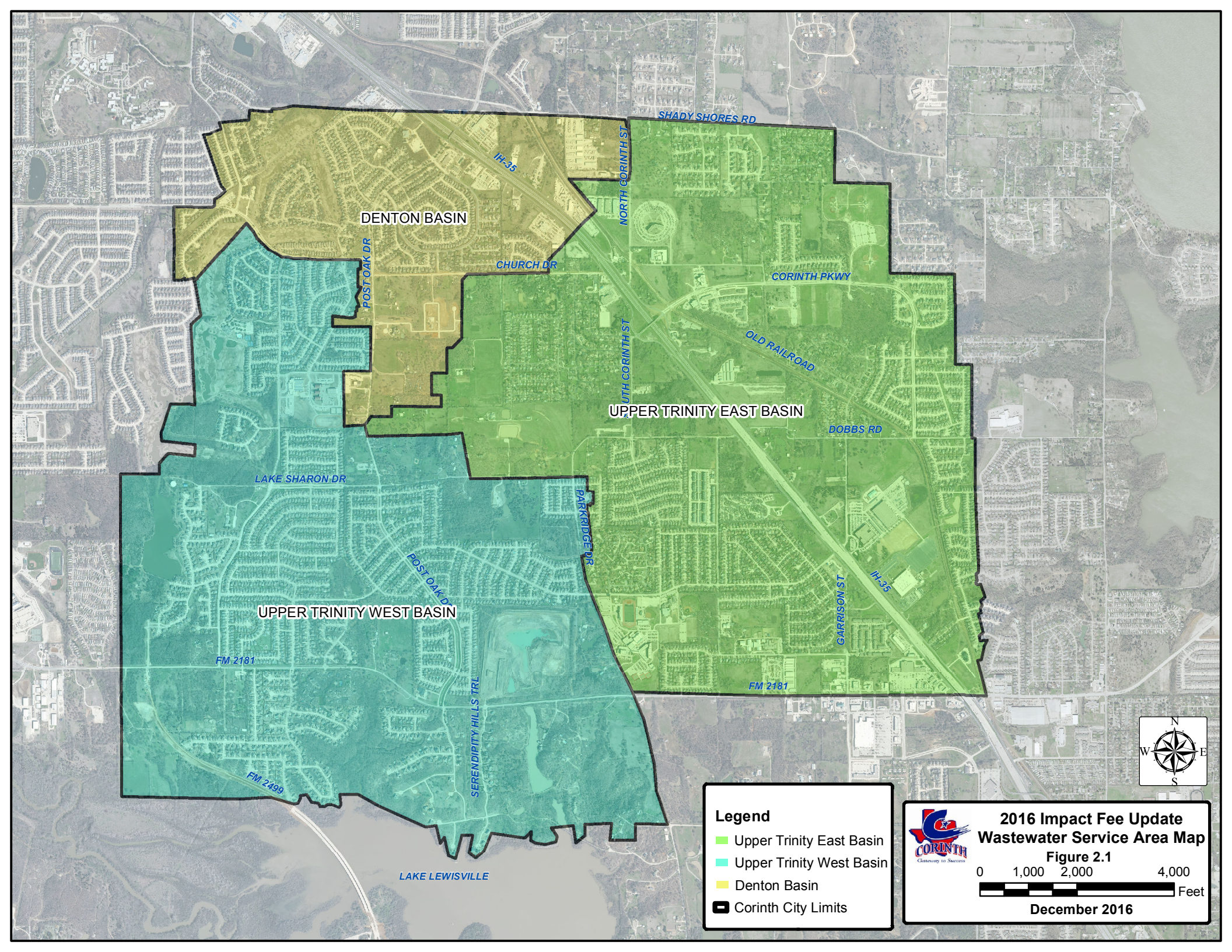
Service Area	Year	Population Growth	Employment (Sq. Ft.) Growth			
			Basic	Service	Retail	Total
Upper Trinity West	2016 - 2026	2,250	0	249,000	170,500	419,500
Upper Trinity East	2016 - 2026	1,273	90,000	373,500	682,000	1,145,500
Denton	2016 - 2026	31	60,000	0	0	60,000

B. Impact Fee Capital Improvements Plan

This task involved evaluation of the wastewater capital improvements plan outlined in the master plan and discussion with City staff to identify projects that will be built in the 10-year planning window and meet the design criteria.

C. Impact Fee Analysis and Report

This task included calculating the additional service units, service unit equivalents, 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.


DENTON BASIN
UPPER TRINITY EAST BASIN
UPPER TRINITY WEST BASIN
SHADY SHORES RD
IH-35
NORTH CORINTH ST
CHURCH DR
POST OAK DR
CORINTH PKWY
OLD RAILROAD
UTH CORINTH ST
DOBBS RD
LAKE SHARON DR
PARKRIDGE DR
POST OAK DR
GARRISON ST
IH-35
FM 2181
FM 2181
SERENDIPITY HILLS TRL
FM 2499
LAKE LEWISVILLE
N
W
E
S
Legend
Upper Trinity East Basin
Upper Trinity West Basin
Denton Basin
Corinth City Limits
CORINTH
Gateway to Success
2016 Impact Fee Update
Wastewater Service Area Map
Figure 2.1
0
1,000
2,000
4,000
Feet
December 2016

2.2 Wastewater Impact Fee Executive Summary

This study was performed to update the City of Corinth's Wastewater System Impact Fees. Wastewater system analysis and the Wastewater System Master Plan are important tools for facilitating orderly growth of the wastewater system. The implementation of an impact fee is a way for development to pay their proportionate impact on the water system.

Elements of the wastewater system, including pumping facilities, force mains and the collector network itself, were evaluated against industry standards as outlined in the Design Criteria section of this report. Information related to the growth of the City was provided through the City's 2010 Comprehensive Plan.

The City's Wastewater system is divided into three service areas, Denton, Upper Trinity East and Upper Trinity West. Each of these areas must be evaluated individually to determine the maximum impact fee allowable for each service area.

The Denton service area has zero (0) projects planned for the future and as a result there are no recoverable costs associated with this service area. The impact fee for the Denton service area is $0. While the Denton service area has no City of Corinth Impact Fee residents in this service area may be subject to a charge associated with the City of Denton Impact Fees. The proposed future Wholesale Wastewater Treatment Contract between the City of Denton and the City of Corinth may require that Corinth residents in this service area pay the adopted City of Denton Impact Fee.

The Upper Trinity East service area has ten (10) projects which are determined eligible for recoverable cost through impact fee over the next 10 years. The total cost of these projects is $6,423,750. The projected total CIP recoverable cost through impact fees is $1,750,800. After financing costs are added and the 50% credit is applied, $1,164,282 is recoverable through impact fees serving the 10-year system needs. These impact fee capital improvements are shown in Table 2.5.1 and illustrated in Figure 2.2.

The Upper Trinity West service area has five (5) projects which are determined eligible for recoverable cost through impact fee over the next 10 years. The total cost of these projects is $9,456,541. The projected total CIP recoverable cost through impact fees is $2,252,400. After financing costs are added and the 50% credit is applied, $1,500,098 is recoverable through impact fees serving the 10-year system needs. These impact fee capital improvements are shown in Table 2.5.2 and illustrated in Figure 2.2.

Table 2.2 Maximum Assessable Wastewater Impact Fee for Commonly Used Meters

Meter Size*	Maximum Continuous Operating Capacity (GPM)**	Service Unit Equivalent	Maximum Assessable Fee per Service Area ($)		
			Denton	Upper Trinity East	Upper Trinity West
5/8"x 3/4" PD	10	1	$0	1,271	2,121
3/4" PD	15	1.5	$0	1,907	3,182
1" PD	25	2.5	$0	3,178	5,303
1 1/2" PD	50	5	$0	6,355	10,605
2" PD	80	8	$0	10,168	16,968
2" Compound	80	8	$0	10,168	16,968
2" Turbine	160	16	$0	20,336	33,936
3" Compound	175	17.5	$0	22,243	37,118
3" Turbine	350	35	$0	44,485	74,235
4" Compound	300	30	$0	38,130	63,630
4" Turbine	650	65	$0	82,615	137,865
6" Compound	675	67.5	$0	85,793	143,168
6" Turbine	1,400	140	$0	177,940	296,940
8" Compound	900	90	$0	114,390	190,890
8" Turbine	2,400	240	$0	305,040	509,040
10" Turbine	3,500	350	$0	444,850	742,350

* PD = Positive Displacement Meter (Typical residential meter)
** Operating capacities obtained from American Water Works Associate (AWWA) C700-15, C701-15, and C702-15. Turbine and Compound meter flows are based on Class II (in-line) meters.

Table 2.3 Additional Service Units - 2026

Service Area	2026 Additional Service Units
Denton	95
Upper Trinity East	916
Upper Trinity West	707
TOTAL	1,718

2.3 Design Criteria

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 Stations 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. 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.

D. Wastewater Demand

The criteria used for projecting the water demands for the water system were derived from the *Water and Wastewater Master Plan Report*, 2017. Table 2.4 shows the projected average day demand by land use type.

Table 2.4 Demand by Land Use Type

Land Use Type	Demand gpd/ac	Demand gpd/dwelling unit
Residential Units	N/A	240
Non-Residential	Varies	N/A

2.4 Impact Fee Capital Improvements Plan

The City of Corinth commissioned Kimley-Horn and Associates, Inc. to update the current Wastewater Master Plan in 2016. The purpose of the wastewater master 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. The Master Plan Report is anticipated to be completed in 2017 shortly after the Impact Fee Update.

The City's Wastewater system is divided into three service areas: Denton, Upper Trinity East and Upper Trinity West. Each of these areas must be evaluated individually to determine the maximum impact fee allowable for each service area.

The Denton service area has zero (0) projects planned for the future and as a result there are no recoverable costs associated with this service area. The impact fee for the Denton service area is $0. While the Denton service area has no City of Corinth Impact Fee residents in this service area may be subject to a charge associated with the City of Denton Impact Fees. The proposed future Wholesale Wastewater Treatment Contract between the City of Denton and the City of Corinth may require that Corinth residents in this service area pay the adopted City of Denton Impact Fee.

The Upper Trinity East service area has ten (10) projects which are determined eligible for recoverable cost through impact fee over the next 10 years. The total cost of these projects is $6,423,750. The projected total CIP recoverable cost through impact fees is $1,750,800. These impact fee capital improvements are shown in Table 2.5.1 and illustrated in Figure 2.2.

The Upper Trinity West service area has five (5) projects which are determined eligible for recoverable cost through impact fee over the next 10 years. The total cost of these projects is $9,456,541. The projected total CIP recoverable cost through impact fees is $2,252,400. These impact fee capital improvements are shown in Table 2.5.2 and illustrated in Figure 2.2.

The recoverable percentage represents the projected utilization and capacity of each project over the next 10 years. These values were determined by utilizing the hydraulic model prepared for the Wastewater Master Plan Update.

Table 2.5.1 Upper Trinity East

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

Proj. #	Description	2016 Required Capacity (Percent Utilization)	2026 Required Capacity (Percent Utilization)	2016-2026 Required Capacity (Percent Utilization)	2026 Projected Recoverable Cost	Total Project Cost
1*	Lift Station 3A and 18-inch/21-inch Wastewater Line	79%	100%	21%	$ 359,700	$ 1,686,163
2*	Lift Station 3A14-inch/12-inch Force Main	59%	83%	24%	$ 165,200	$ 688,165
3*	Lift Station 3A 18-inch Wastewater Line	59%	83%	24%	$ 69,900	$ 291,425
4*	Lynchburg 15-inch, 12-inch and 10-inch Wastewater Lines	59%	83%	24%	$ 305,400	$ 1,272,325
5*	Lift Station 2 Expansion and 6-inch Force Main	59%	83%	24%	$ 152,500	$ 635,572
6	Lift Station 3A Upgrade	0%	32%	32%	$ 64,000	$ 200,000
7	Silver Meadow Lane 8-inch Wastewater Extension	0%	41%	41%	$ 82,000	$ 200,000
8	North City 8-inch Wastewater Extension	0%	41%	41%	$ 246,000	$ 600,000
9	Lift Station 3A Parallel Force Main	0%	32%	32%	$ 256,000	$ 800,000
10	Wastewater Impact Fee Update	0%	100%	100%	$ 50,100	$ 50,100
	Total				**$ 1,750,800**	**$ 6,423,750**

Table 2.5.2 Upper Trinity West

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

Proj. #	Description	2016 Required Capacity (Percent Utilization)	2026 Required Capacity (Percent Utilization)	2016-2026 Required Capacity (Percent Utilization)	2026 Projected Recoverable Cost	Total Project Cost
1	Westside Lift Station Improvements	5%	28%	23%	$ 520,500	$ 2,286,172
2	FM 2181 18-inch Force Main	5%	28%	23%	$ 625,800	$ 2,720,669
3	South Lift Station, Force Main and Gravity Improvements	0%	24%	24%	$ 528,000	$ 2,200,000
4	Southwest Lift Station, Force Main and Gravity Improvements	0%	24%	24%	$ 528,000	$ 2,200,000
5	Wastewater Impact Fee Update	0%	100%	100%	$ 50,100	$ 50,100
	Total				**$ 2,252,400**	**$ 9,456,941**

Corinth Wastewater CIP Project List
Upper Trinity East Service Area

1. Lift Station 3A and 18-inch/21-inch Wastewater Line
2. Lift Station 3A 12-inch/14-inch Force Main
3. Lift Station 3A 18-inch Wastewater Line
4. Lynchburg 15-inch, 12-inch and 10-inch Wastewater Lines
5. Lift Station 2 Expansion and 6-inch Force Main
6. Lift Station 3A Upgrade
7. North Corinth Gravity Wastewater Collectors
8. Silvermeadow Lane 8-inch Wastewater Extension
9. Lift Station 3A Parallel Force Main

Corinth Wastewater CIP Project List
Upper Trinity West Service Area

1. Westside Lift Station Improvements
2. FM 2181 18-inch Force Main
3. South Lift Station, Force Main, and Gravity Improvements
4. Southwest Lift Station, Force Main, and Gravity Improvements

DENTON BASIN

UPPER TRINITY EAST BASIN

UPPER TRINITY WEST BASIN

N. CORINTH ST

SHADY REST LN

Text

Legend

- Proposed Force Main
- Proposed Gravity Main
- Existing Force Main
- Existing Gravity Main
- Existing Lift Station
- Proposed Lift Station
- Service Area Boundary

2016 Impact Fee Update
Wastewater CIP
Figure 2.2

0 400 800 1,600 Feet

N W E S

Kimley»Horn

January 2017

A. Project Descriptions (By Service Area)

I. Denton Service area

1. No Projects Planned

Project Cost	$0
Recoverable Cost	$0

II. Upper Trinity East Service area

1. Lift Station 3A and 18-inch/21-inch Wastewater Line

This project involved the abandonment of Lift Stations 3 and 4 and the installation of three pumps along with the lift station structure. The project also involved an 18-inch/21-inch gravity wastewater line from Shady Rest Lane to the lift station site.

Project Cost (Actual Construction Cost)	$1,686,163
Recoverable Cost	$359,700

2. Lift Station 3A 14-inch/12-inch Force Main

This project involved the installation of a 14-inch/12-inch force main from the Lift Station 3A site to an existing UTRWD force main located near FM 2181.

Project Cost (Actual Construction Cost)	$688,165
Recoverable Cost	$165,200

3. Lift Station 3A 18-inch Wastewater Line

This project involved the installation of an 18-inch gravity wastewater line from Shady Rest Lane to the Old Railroad.

Project Cost (Actual Construction Cost)	$291,425
Recoverable Cost	$69,900

4. Lynchburg 15-inch, 12-inch and 10-inch Wastewater Lines

This project consisted of the installation of a 12-inch gravity wastewater line from Sharon Drive to Oak Hill Drive, a 15-inch gravity line from Oak Hill Drive to the east side of Interstate Highway 35E, and a 10-inch gravity wastewater line along the Old Railroad.

Project Cost (Actual Construction Cost)	$1,272,325
Recoverable Cost	$305,400

5. Lift Station 2 Expansion and 6-inch Force Main

This project consisted of the expansion of the existing Lift Station 2 and the installation of a 6-inch force main from the lift station to Corinth Bend.

Project Cost (Actual Construction Cost)	$635,572
Recoverable Cost	$152,500

6. Lift Station 3A Upgrade
   This project consists of the installation of a fourth pump at the existing lift station. The additional pump will increase the lift station firm capacity from 2.3 MGD to 3.4 MGD.

Project Cost	$200,000
Recoverable Cost	$64,000

7. Silver Meadow Lane 8-inch Wastewater Extension
   This project consists of the installation of 8-inch wastewater line along Silver Meadow to provide service for future developments.

Project Cost	$200,000
Recoverable Cost	$82,000

8. North City 8-inch Wastewater Extension
   This project consists of the installation of 8-inch wastewater line to provide service for future developments.

Project Cost	$600,000
Recoverable Cost	$246,000

9. Lift Station 3A Parallel Force Main
   This project consists of the installation of a parallel force main to increase pumping capacity for Lift Station 3A. The force main would begin at the lift station site and end near Dobbs Road.

Project Cost	$800,000
Recoverable Cost	$256,000

10. Wastewater Impact Fee Update
    Based on the projected future infrastructure needs, a Wastewater Impact Fee Update was completed to determine how much of the infrastructure costs may be recovered by the City. The recoverable costs associated with the Wastewater Impact Fee Update have been divided among the Upper Trinity East and Upper Trinity West service areas.

Project Cost	$50,100
Recoverable Cost	$50,100

III. Upper Trinity West Service area

1. Westside Lift Station Improvements
   This project involves the expansion of the existing Westside Lift Station. The improvements involved a new wet well and three new 2.8 MGD pumps, an associated electrical building and equipment upgrades.

Project Cost (Actual Construction Cost)	$2,286,172
Recoverable Cost	$526,700

2. FM 2181 18-inch Force Main
   This project involves the installation of an 18-inch force main from the Westside Lift Station to Interstate Highway 35E.

Project Cost (Actual Construction Cost)	$2,720,669
Recoverable Cost	$625,800

3. South Lift Station, Force Main and Gravity Improvements
   Improvements will be required to provide a regional solution to wastewater service for this area. Improvements will include gravity wastewater lines, lift station and force main.

Project Cost	$2,200,000
Recoverable Cost	$528,000

4. Southwest Lift Station, Force Main and Gravity Improvements
   Improvements will be required to provide a regional solution to wastewater service for this area. Improvements will include gravity wastewater lines, lift station and force main.

Project Cost	$2,200,000
Recoverable Cost	$528,000

5. Wastewater Impact Fee Update
   Based on the projected future infrastructure needs, a Wastewater Impact Fee Update was completed to determine how much of the infrastructure costs may be recovered by the City. The recoverable costs associated with the Wastewater Impact Fee Update have been divided among the Upper Trinity East and Upper Trinity West service areas.

Project Cost	$50,100
Recoverable Cost	$50,100

2.5 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 Corinth defines a *service unit* based on historical wastewater usage over the past 10 years as compared to the estimated residential units. From 2006 to 2010 City only has historical wastewater flow data for the Upper Trinity East and West service areas, the Denton service area wastewater flow was not metered. Since no data was available for the Denton area from 2006 to 2010 the table below only shows information related to the Upper Trinity East and West areas during those years. From 2011 to 2015 the City was able to provide meter data for all areas. The residential unit is the development type that predominately uses a 5/8"x 3/4" meter. The measure of consumption per service unit is based on a 5/8"x 3/4" meter and the data shown in Table 2.6.

Table 2.6 Service Unit Consumption Calculation

Year	Population [1]	Residential Units (2.9 persons/unit) [1]	Wastewater Flow Average Day Flow[2] (MGD)	Flow per Service Unit (GPD)
2006	14,350	4,948	0.68	137
2007	15,958	5,503	1.28	232
2008	16,418	5,661	1.04	184
2009	17,120	5,903	1.19	202
2010	17,153	5,915	1.23	208
2011	20,678	7,130	1.18	165
2012	20,721	7,145	1.30	182
2013	20,772	7,163	1.35	188
2014	20,839	7,186	1.38	192
2015	20,957	7,227	1.50	207
Average Flow per Service Unit				190

Wastewater Usage Source: City of Corinth

(1) Source: 2016 Land Use Assumptions. Population shown represents Upper Trinity East and West areas only for years 2006 to 2010.

(2) Historic Flow is for Upper Trinity East and West areas only from 2006 to 2010. No meter data available for Denton area during those years.

The City's historic usage of 190 gallons per service unit is considerably less than the usage projected in the City's Wastewater Master Plan. The master plan projects a usage of 240 gallons per day per service unit. There are numerous possible explanations for the variance in the historic data versus the master plan projections:

1. Inaccuracies associated with measuring wastewater flow
2. The historic data represents a large number of dry years which results in lower wastewater demands. The master plan focuses on projected demands for wet weather events.
3. No flow data available for the Denton Service Area for the years of 2006 to 2010

After evaluating the data available and weighing the possible explanations for the variations in the projected demands versus historic demands, it was decided to use the Master Plan demand projection of 240 gallons per day.

Based on the City's 10-year growth projections and the resulting wastewater flow projections, wastewater service will be required for 1,718 additional service units. The calculation is as follows:

- A service unit, which is a unit of development that discharges approximately 240 gallons per day GPD), is a typical residential connection that uses a 5/8"x 3/4" meter. Tables 2.7.1 – 2.7.3 outlines the future wastewater discharge projections and its relationship to the additional service units projected for the next 10-years.

Table 2.7.1 Denton Service Area 10-year Additional Service Unit Calculation

Year	Average Day Flow (MGD)	Service Unit Demand (GPD)	Service Units
2016	0.31	240	1,292
2021	0.33	240	1,387
10-year Additional Service Units			95

Table 2.7.2 Upper Trinity East Service Area 10-year Additional Service Unit Calculation

Year	Average Day Flow (MGD)	Service Unit Demand (GPD)	Service Units
2016	0.91	240	3,792
2021	1.13	240	4,708
10-year Additional Service Units			916

Table 2.7.3 Upper Trinity West Service Area 10-year Additional Service Unit Calculation

Year	Average Day Flow (MGD)	Service Unit Demand (GPD)	Service Units
2016	0.74	240	3,084
2021	0.91	240	3,791
10-year Additional Service Units			707

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 the latter; therefore, the maximum recoverable cost for impact fee shown below is 50 percent of the Pre Credit Recoverable Cost.

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

Table 2.8.1 Denton Service Area 10-year Recoverable Cost Breakdown

Pre Credit Recoverable Cost for Impact Fee	$0
Credit for Utility Revenues (50% credit)	($0)
Maximum Recoverable Cost for Impact Fee	$0

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

$$\text{Impact fee per service unit} = \frac{\$0.00}{95}$$

$$\text{Impact fee per service unit} = \$0.00$$

Therefore, the maximum assessable impact fee for the Denton service area is $0.00.

Table 2.8.2 Upper Trinity East Service Area 10-year Recoverable Cost Breakdown

Pre Credit CIP Recoverable Cost for Impact Fee	$1,750,800
Financing Cost (4% Provided by City)	$577,764
Pre Credit Total	$2,328,564
Credit for Utility Revenues (50% credit)	($1,164,282)
Maximum Recoverable Cost for Impact Fee	$1,164,282

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

$$\text{Impact fee per service unit} = \frac{\$1,164,282}{916}$$

$$\text{Impact fee per service unit} = \$1,271$$

Therefore, the maximum assessable impact fee for the Upper Trinity East service area is $1,271.

Table 2.8.3 Upper Trinity West Service Area 10-year Recoverable Cost Breakdown

Pre Credit CIP Recoverable Cost for Impact Fee	$2,252,400
Financing Cost (4% Provided by City)	$747,796
Pre Credit Total	$3,000,196
Credit for Utility Revenues (50% credit)	($1,500,098)
Maximum Recoverable Cost for Impact Fee	$1,500,098

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

$$\text{Impact fee per service unit} = \frac{\$1,500,098}{707}$$

$$\text{Impact fee per service unit} = \$2,121$$

Therefore, the maximum assessable impact fee for the Upper Trinity West service area is $2,121.

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 5/8"x 3/4" meter. The maximum impact fee that could be assessed for other meter sizes is based on the value shown on Table 2.9, Service Unit Equivalency Table for Commonly Used Meters.

Table 2.9 Service Unit Equivalency Table for Commonly Used Meters

Meter Size*	Maximum Continuous Operating Capacity (GPM)**	Service Unit Equivalent	Maximum Assessable Fee per Service Area ($)		
			Denton	Upper Trinity East	Upper Trinity West
5/8"x 3/4" PD	10	1	$0	1,271	2,121
3/4" PD	15	1.5	$0	1,907	3,182
1" PD	25	2.5	$0	3,178	5,303
1 1/2" PD	50	5	$0	6,355	10,605
2" PD	80	8	$0	10,168	16,968
2" Compound	80	8	$0	10,168	16,968
2" Turbine	160	16	$0	20,336	33,936
3" Compound	175	17.5	$0	22,243	37,118
3" Turbine	350	35	$0	44,485	74,235
4" Compound	300	30	$0	38,130	63,630
4" Turbine	650	65	$0	82,615	137,865
6" Compound	675	67.5	$0	85,793	143,168
6" Turbine	1,400	140	$0	177,940	296,940
8" Compound	900	90	$0	114,390	190,890
8" Turbine	2,400	240	$0	305,040	509,040
10" Turbine	3,500	350	$0	444,850	742,350

* PD = Positive Displacement Meter (Typical residential meter)
** Operating capacities obtained from American Water Works Associate (AWWA) C700-15, C701-15, and C702-15. Turbine and Compound meter flows are based on Class II (in-line) meters

APPENDIX A

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

Client:	**City of Corinth**	**Date:**	**1/16/2017**
Project:	**Wastewater Impact Fee Projects**	**Prepared By:**	**AMK**
KHA No.:	**061008048**	**Checked By:**	**MAS**

Title:	**South Lift Station, Force Main, and Gravity Improvements**	**Project:**	**UTW - 3**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 50,000.00	$ 50,000.00
2	8" Wastewater Main	4,270	LF	$ 60.00	$ 256,200
3	6" Wastewater Force Main	4,600	LF	$ 60.00	$ 276,000
4	0.5 MGD Lift Station	1	LS	$ 500,000.00	$ 500,000.00
5	4' Manhole (8" - 18" Main)	7	EA	$ 9,000.00	$ 63,000
6	Connect to Existing Manhole	1	EA	$ 5,000.00	$ 5,000
7	Bore with 16" Steel Casing	60	LF	$ 600.00	$ 36,000
8	Seeding, Fertilizer & Erosion Control	5,100	LF	$ 10.00	$ 51,000
9	Concrete Pavement Repair (SY)	4,200	SY	$ 80.00	$ 336,000
10	Trench Safety	8,810	LF	$ 2.00	$ 17,620
11	TV Inspection	4,270	LF	$ 1.00	$ 4,270

Basis for Cost Projection:

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

Subtotal:		$ 1,545,090
Eng/Survey Fees (+/- %):	15	$ 232,000
Contingency (+/- %):	25	$ 422,910
Total:		$ 2,200,000

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

Client:	**City of Corinth**	**Date:**	**1/16/2017**
Project:	**Wastewater Capital Improvement Projects**	**Prepared By:**	**AMK**
KHA No.:	**061008048**	**Checked By:**	**MAS**

Title:	**Southwest Lift Station, Force Main, and Gravity Improvements**	**Project:**	**UTW - 4**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 50,000.00	$ 50,000.00
2	8" Wastewater Main	9,150	LF	$ 60.00	$ 549,000
3	4" Wastewater Force Main	1,100	LF	$ 50.00	$ 55,000
4	0.1 MGD Lift Station	1	LS	$ 120,000.00	$ 120,000.00
5	4' Manhole (8" - 18" Main)	14	EA	$ 9,000.00	$ 126,000
6	Connect to Existing Manhole	1	EA	$ 5,000.00	$ 5,000
7	Bore with 12" Steel Casing	150	LF	$ 500.00	$ 75,000
8	Seeding, Fertilizer & Erosion Control	4,250	LF	$ 10.00	$ 42,500
9	Concrete Pavement Repair (SY)	6,500	SY	$ 80.00	$ 520,000
10	Trench Safety	10,100	LF	$ 2.00	$ 20,200
11	TV Inspection	9,150	LF	$ 1.00	$ 9,150

Basis for Cost Projection:

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

Subtotal:			$ 1,521,850
Eng/Survey Fees (+/- %):	15		$ 229,000
Contingency (+/- %):	25		$ 449,150
Total:			$ 2,200,000

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

Client:	**City of Corinth**	**Date:**	**1/16/2017**
Project:	**Wastewater Impact Fee Projects**	**Prepared By:**	**AMK**
KHA No.:	**061008048**	**Checked By:**	**MAS**

Title:	**Lift Station 3A Upgrade**	**Project:**	**UTE - 6**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 5,000.00	$ 5,000.00
2	750 gpm Pump and Motor (match existing)	1	EA	$ 70,000.00	$ 70,000
3	Electrical	1	LS	$ 30,000.00	$ 30,000
4	SCADA and Instrumentation	1	LS	$ 10,000.00	$ 10,000
5	Mechanical Piping	1	LS	$ 30,000.00	$ 30,000

Basis for Cost Projection:

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

Subtotal:		$ 140,000
Eng/Survey Fees (+/- %):	15	$ 21,000
Contingency (+/- %):	25	$ 39,000
Total:		$ 200,000

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

Client:	**City of Corinth**	**Date:**	**1/16/2017**
Project:	**Wastewater Capital Improvement Projects**	**Prepared By:**	**ER**
KHA No.:	**061008048**	**Checked By:**	**MAS**

Title:	**Silvermeadow Lane 8-inch Wastewater Extension**	**Project:**	**UTE - 7**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 5,000.00	$ 5,000.00
2	8" Wastewater Main	1,300	LF	$ 60.00	$ 78,000
3	4' Manhole (8" - 18" Main)	3	EA	$ 9,000.00	$ 27,000
4	Connect to Existing Manhole	1	EA	$ 5,000.00	$ 5,000
5	Bore with 12" Steel Casing	20	LF	$ 500.00	$ 10,000
6	Seeding, Fertilizer & Erosion Control	1,280	LF	$ 10.00	$ 12,800
7	Concrete Pavement Repair (SY)	10	SY	$ 80.00	$ 800
8	Trench Safety	1,280	LF	$ 2.00	$ 2,560
9	TV Inspection	1,300	LF	$ 1.00	$ 1,300

Basis for Cost Projection:

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

Subtotal:		$ 137,460
Eng/Survey Fees (+/- %):	15	$ 21,000
Contingency (+/- %):	25	$ 41,540
Total:		$ 200,000

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

Client:	**City of Corinth**	**Date:**	**1/16/2017**
Project:	**Wastewater Capital Improvement Projects**	**Prepared By:**	**ER**
KHA No.:	**061008048**	**Checked By:**	**MAS**

Title:	**North City 8-inch Wastewater Extension**	**Project:**	**UTE - 8**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 15,000.00	$ 15,000.00
2	8" Wastewater Main	3,100	LF	$ 60.00	$ 186,000
3	4' Manhole (8" - 18" Main)	9	EA	$ 9,000.00	$ 81,000
4	Connect to Existing Manhole	2	EA	$ 5,000.00	$ 10,000
5	Bore with 12" Steel Casing	70	LF	$ 500.00	$ 35,000
6	Seeding, Fertilizer & Erosion Control	2,430	LF	$ 10.00	$ 24,300
7	Concrete Pavement Repair (SY)	700	SY	$ 80.00	$ 56,000
8	Trench Safety	3,030	LF	$ 2.00	$ 6,060
9	TV Inspection	3,100	LF	$ 1.00	$ 3,100

Basis for Cost Projection:

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

Subtotal:		$ 401,460
Eng/Survey Fees (+/- %):	15	$ 61,000
Contingency (+/- %):	25	$ 137,540
Total:		$ 600,000

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

Client:	**City of Corinth**	**Date:**	**1/16/2017**
Project:	**Wastewater Impact Fee Projects**	**Prepared By:**	**AMK**
KHA No.:	**061008048**	**Checked By:**	**MAS**

Title:	**Lift Station 3A Parallel Force Main**	**Project:**	**UTE - 9**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$ 20,000.00	$ 20,000.00
2	Wastewater Force Main	2,500	LF	$ 80.00	$ 200,000
3	Gate Valve	2	EA	$ 15,000.00	$ 30,000
4	Connect to Existing Force Main	2	EA	$ 5,000.00	$ 10,000
5	Bore with Steel Casing	150	LF	$ 600.00	$ 90,000
6	Seeding, Fertilizer & Erosion Control	100	LF	$ 10.00	$ 1,000
7	Concrete Pavement Repair (SY)	2,500	SY	$ 80.00	$ 200,000
8	Trench Safety	2,350	LF	$ 2.00	$ 4,700
9	TV Inspection	2,500	LF	$ 1.00	$ 2,500

Basis for Cost Projection:

- ☑ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Subtotal:		$ 538,200
Eng/Survey Fees (+/- %):	15	$ 81,000
Contingency (+/- %):	25	$ 180,800
Total:		$ 800,000

City of Corinth

2016 Land Use Assumptions and Roadway Impact Fee Report

December 2016

Kimley»Horn

CORINTH
Gateway to Success

City of Corinth, Texas

Roadway

Impact Fee Report for 2016

December 2016

Prepared for:

City of Corinth

Prepared by:

Kimley-Horn and Associates, Inc.

12750 Merit Drive, Suite 1000

Dallas, TX 75251

Phone: 972 770 1300

TBPE Firm Registration Number: F-928

Project Number: 061008048

Table of Contents

List of Exhibits and Tables

Executive Summary

This study was performed to update the City of Corinth's Roadway Impact Fees. Transportation system analysis is an important tool for facilitating orderly growth of the transportation system and for providing adequate facilities that promote economic development in the City of Corinth. The implementation of an impact fee is a way to shift a portion of the burden of paying for new facilities onto new development.

Roadway improvements necessary to serve 10-year (2026) and ultimate system needs were evaluated. Typically, infrastructure improvements are sized beyond the 10-year requirements; however, Texas' impact fee law (Chapter 395) only allows recovery of costs to serve the 10-year planning period. For example, the projected cost to construct the infrastructure needed through 2026 is $26,202,545. After financing costs are added and a 50% credit is applied, $13,101,272 is recoverable through impact fees serving the 10-year system needs. A portion of the remainder can be assessed as the planning window extends beyond 2026 and as the impact fees are updated in the future.

The impact fee law 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 Corinth defines a *service unit* as the number of vehicle-mile of travel during the afternoon peak-hour. For each type of development, the City utilizes the Land Use/Vehicle-Mile Equivalency Table (LUVMET), presented in Table 10 to determine the number of service units.

Based on the additional service units (15,057 vehicle-miles) and the recoverable Capital Improvements Plan ($13,101,272), the City may assess a maximum of $870 per service unit.

1.0 Introduction

Impact Fees are a mechanism for funding the public infrastructure necessitated by new development. In Texas, the legislature has allowed their use for water, wastewater, roadway and drainage facilities. In the most basic terms, impact fees are meant to recover the incremental cost of the impact of each new unit of development which creates new infrastructure needs. In the case of roadway impact fees, the infrastructure need is the increased capacity on arterial and collector roadways that serve the overall transportation system.

Chapter 395 of the Texas Local Government Code describes the procedure political subdivisions must follow in order to create and implement impact fees. Senate Bill 243 (SB 243) amended Chapter 395 in 2001 to define an Impact Fee as "a charge or assessment imposed by a political subdivision against new development in order 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 retained Kimley-Horn and Associates, Inc. to provide professional transportation engineering services for the 2016 Roadway Impact Fee Update. This report 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 Capital Improvements Plan, and the Land Use Equivalency Table.

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

1. Land Use Assumptions (Pg. 6)
2. Roadway Impact Fee Capital Improvements Plan (CIP) (Pg.11)

Information from these Land Use Assumptions and Roadway Impact Fee CIP is 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 two components:

A. Computation Method for Roadway Impact Fees (Pg. 14)
B. Roadway Impact Fee Calculation (Pg. 26)

The components of the Computation Method for Roadway Impact Fee include development of:

- Service Areas (Pg. 14)
- Service Units (Pg. 14)
- Cost Per Service Unit (Pg. 16)
- Roadway Impact Fee CIP Costing Methodology (Pg. 16)
- Summary of Roadway Impact Fee CIP Costs (Pg. 20)
- Service Unit Calculation (Pg. 22)

The Roadway Impact Fee is then calculated as:

- Maximum Assessable Impact Fee Per Service Unit (Pg. 26)
- Plan for Awarding the Transportation Impact Fee Credit (Pg. 28)
- Service Unit Demand Per Unit of Development (Pg. 30)

This report also includes a section concerning the Plan for Awarding the Transportation Impact Fee Credit. In the case of the City of Corinth, the credit calculation was based on awarding a 50 percent credit.

The final section of the report is the Conclusion, which presents the findings of the update analysis and summarizes the report.

2.0 Land Use Assumptions

A. Purpose and Overview

In order to assess an impact fee, Land Use Assumptions must be developed to provide the basis for residential and employment growth projections within a political subdivision. As defined by Chapter 395 of the Texas Local Government Code, these assumptions include a description of changes in land uses, densities, and development in the service area. The land use assumptions are then used in determining the need and timing of transportation improvements to serve future development.

Information from the following sources was compiled to complete the land use assumptions:

- Denton County Appraisal District (DCAD)
- City of Corinth staff
- Historic Building Permit Data

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.
- Roadway Impact Fee Service Areas – Explanation of the division of Corinth into service areas for transportation facilities.
- Residential and Employment– Data on residential and employment growth within the service area over the next ten years (2016 – 2026).
- Land Use Assumptions Summary – A synopsis of the land use assumptions.

The residential and employment estimates and projections were compiled in accordance with the following categories:

Units: Number of dwelling units, both single and multi-family.

Employment: Square feet of building area based on three (3) different classifications. Each classification has unique trip making characteristics.

Retail: Land use activities which provide for the retail sale of goods which primarily serve households and whose location choice is oriented toward the household sector, such as 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 such as those which are exported outside of the local economy, such as manufacturing, construction, transportation, wholesale, trade, warehousing, and other industrial uses.

These broader categories are used in the development of the assumptions for impact fees; however, expanded classifications used in the assessment of impact fees are found in the Land Use / Vehicle-Mile Equivalency Table (Pg. 31).

B. Land Use Assumptions Methodology

The residential and non-residential growth projections formulated in this report were performed using reasonable and generally accepted planning principles. The following factors were considered in developing these projections:

- Character, type, density, and quantity of existing development;
- Current zoning;
- Growth trends;
- Location of vacant land;
- Physical restrictions (i.e. flood plains, railroads); and
- Physical development capacity of Corinth.

Existing residential and employment estimates were obtained using Corinth parcel data and an aerial survey of existing development.

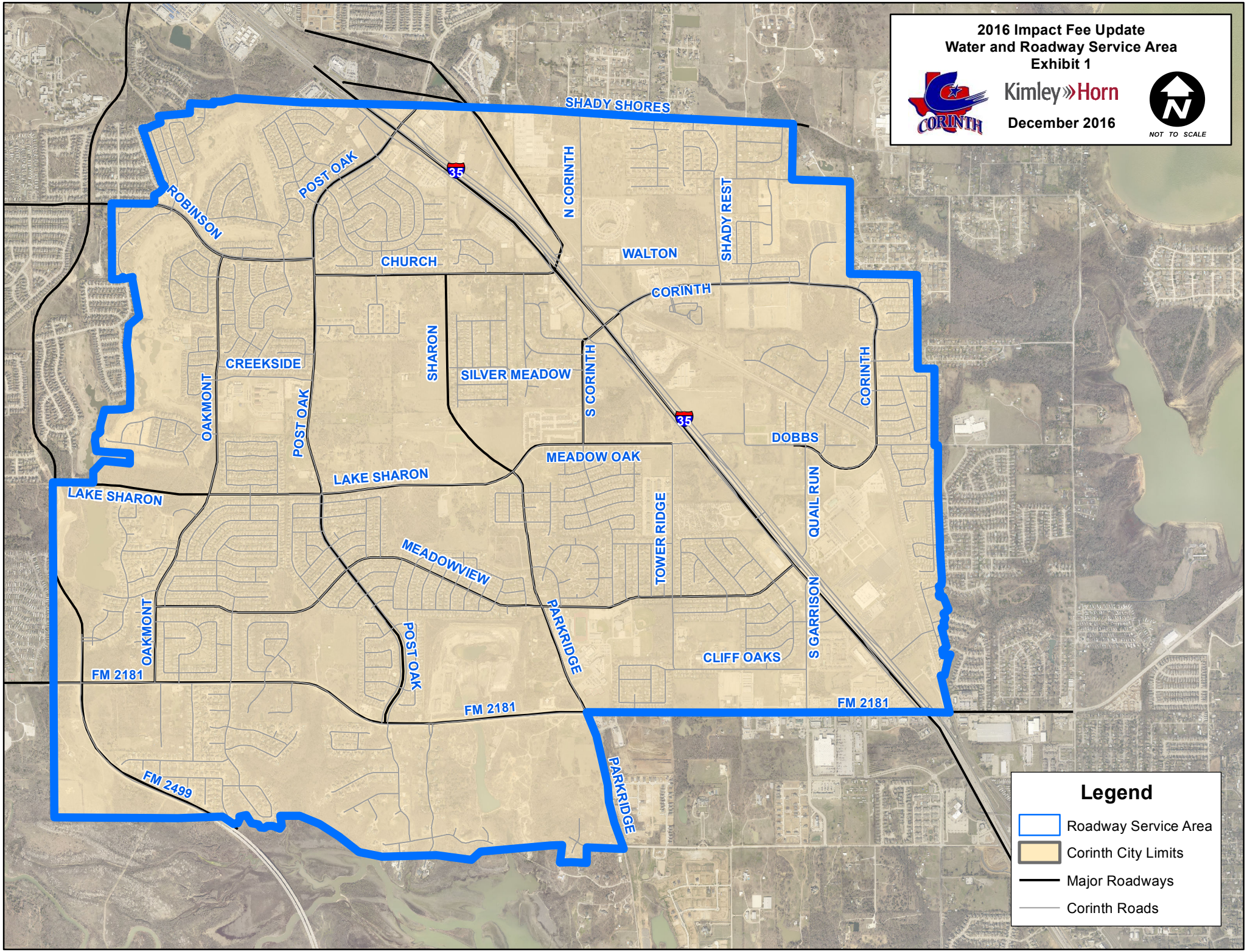
For the remaining undeveloped areas, assumptions were based upon the demographic projections for Corinth based on previous growth and planned development to estimate the ten-year growth of residential and employment development.

Research of historical building permits was performed to compare the projected growth of these known developments with previous growth trends in the City of Corinth over the last ten years.

C. Roadway Impact Fee Service Areas

The geographic boundary of the proposed impact fee service area for transportation facilities is shown in Exhibit 1. The City of Corinth is currently divided into one (1) service area, based upon the six (6) mile limit, as required in Chapter 395 (explained on Pg.14). For roadway facilities, the service areas as required by state law are limited to areas within the current corporate limits. Therefore, areas within the extraterritorial jurisdiction (ETJ) are excluded from this study. This service area covers the entire corporate boundary of the City of Corinth which is approximately four (4) miles in diameter.

It should be noted that at locations where service area boundaries follow a City thoroughfare facility, the proposed boundary is intended to follow the centerline of the roadway, unless otherwise noted. In cases where a service area boundary follows the City Limits, only those portions of the transportation facility within the City Limits are included in the service area.


2016 Impact Fee Update
Water and Roadway Service Area
Exhibit 1
Kimley»Horn
December 2016
NOT TO SCALE
SHADY SHORES
ROBINSON
POST OAK
35
N CORINTH
SHADY REST
WALTON
CHURCH
CORINTH
SHARON
SILVER MEADOW
S CORINTH
CREEKSIDE
OAKMONT
POST OAK
35
DOBBS
CORINTH
MEADOW OAK
LAKE SHARON
LAKE SHARON
QUAIL RUN
TOWER RIDGE
MEADOWVIEW
PARKRIDGE
S GARRISON
OAKMONT
POST OAK
CLIFF OAKS
FM 2181
FM 2181
FM 2181
FM 2499
PARKRIDGE
Legend
Roadway Service Area
Corinth City Limits
Major Roadways
Corinth Roads

D. Residential and Employment

Residential and Employment estimates for the base year (2016) were performed based upon a survey of the existing land uses on Corinth parcel data and aerial verification. Ten-year growth projections were prepared based upon demographic projections and consultation with City staff.

E. Land Use Assumptions Summary

Table 1 summarizes the residential and employment 10-year growth projections. The projected growth over the next ten years is reasonable compared to the historical growth over the previous ten years, as described in the Land Use Assumptions Methodology (page 7).

Table 1 Residential and Employment 10-Year Growth Projections

Service Area	Residential (Units)	Employment (Square Feet)		
		Basic	Service	Retail
Corinth	1,230	150,000	622,500	852,500

3.0 Roadway Impact Fee Capital Improvements Plan

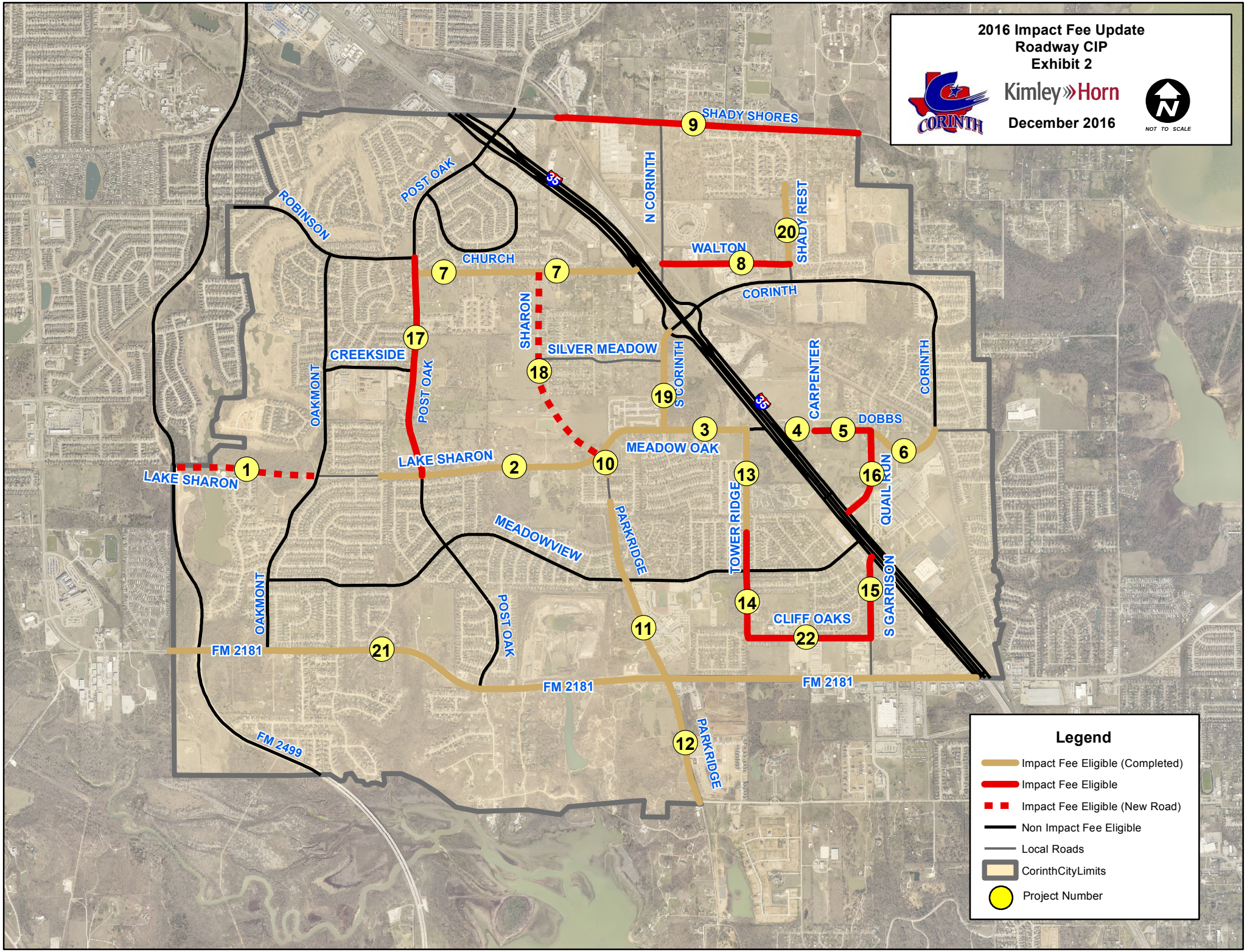
Development of a 10-year Roadway Impact Fee Capital Improvement Plan is required per Chapter 395 of the Texas local Government Code. The current Corinth Thoroughfare Plan was used as the basis for this Roadway Impact Fee CIP. The Roadway Impact Fee CIP includes arterial and collector class roadway facilities that serve the overall transportation system, as well as major intersection improvements. All of the facilities identified are included in the current Thoroughfare Plan map.

The proposed Roadway Impact Fee CIP is listed in Table 2 and mapped in Exhibit 2. The table shows the length of each project as well as the facility's Thoroughfare Plan classification. The Roadway Impact Fee CIP was developed in conjunction with input from City of Corinth staff and represents those projects that will be needed to accommodate the growth projected in the Land Use Assumptions section of this report.

Table 2 10-Year Roadway Impact Fee Capital Improvements Plan

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area
Corinth	1	Greenway	Lake Sharon Dr (1)	FM 2499 to Oakmont Dr	0.59	100%
	2	Greenway	Lake Sharon Dr (2)	Blue Holley Dr to Parkridge Dr	0.90	100%
	3	Greenway	Meadow Oak Dr	Parkridge Dr to Tower Ridge Dr	0.64	100%
	4	Greenway	Dobbs Rd (1)	IH-35E NBFR to Carpenter Ln	0.14	100%
	5	Greenway	Dobbs Rd (2)	Carpenter Ln to Quail Run Dr	0.22	100%
	6	Greenway	Dobbs Rd (3)	Quail Run to 300' east of Corinth Pkwy	0.33	100%
	7	Collector	Church Dr	Post Oak Rd to IH-35E SBFR	0.90	100%
	8	Collector	Walton Dr	North Corinth St to Shady Rest Ln	0.52	100%
	9	Collector	Shady Shores Rd	Railroad to 205' East of Dalton Dr	1.22	50%
	10	Collector	Parkridge Dr (1)	Lake Sharon Dr to Tori Oak Tr	0.09	100%
	11	Collector	Parkridge Dr (2)	Warwick Dr to FM 2181	0.76	100%
	12	Collector	Parkridge Dr (3)	FM 2181 to South City Limits	0.53	100%
	13	Collector	Tower Ridge Dr (1)	Meadow Oaks Dr to 215' South of Brookview Dr	0.42	100%
	14	Collector	Tower Ridge Dr (2)	215' South of Brookview Dr to Cliff Oaks Dr	0.43	100%
	15	Collector	Garrison St	IH 35E SBFR to Cliff Oak Dr	0.33	100%
	16	Collector	Quail Run Dr	Dobbs Rd to IH-35E NBFR	0.37	100%
	17	Greenway (1/2)	Post Oak Rd	Robinson Rd to Lake Sharon Dr	0.89	100%
	18	Collector	Sharon Dr	Church Dr to Lake Sharon Dr	0.84	100%
	19	Greenway	S. Corinth St	IH-35E SBFR to Meadow Oak Dr	0.41	100%
	20	Collector	Shady Rest Ln	Fritz Ln to Walton Dr	0.33	100%
	21	Major	FM 2181	West City Limits to IH-35E SBFR	3.32	100%
	22	Collector	Cliff Oak Dr	Tower Ridge Dr to Garrison Rd	0.50	100%

Note: The 10-Year Roadway Impact Fee CIP is not in a prioritized order.


2016 Impact Fee Update
Roadway CIP
Exhibit 2
Kimley»Horn
December 2016
NOT TO SCALE
SHADY SHORES
POST OAK
ROBINSON
N CORINTH
SHADY REST
WALTON
CHURCH
CORINTH
SHARON
SILVER MEADOW
CREEKSIDE
OAKMONT
POST OAK
S CORINTH
CARPENTER
CORINTH
DOBBS
MEADOW OAK
LAKE SHARON
LAKE SHARON
QUAIL RUN
TOWER RIDGE
PARKRIDGE
MEADOWVIEW
S GARRISON
CLIFF OAKS
OAKMONT
POST OAK
FM 2181
FM 2181
FM 2181
FM 2499
PARKRIDGE
1
2
3
4
5
6
7
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
Legend
Impact Fee Eligible (Completed)
Impact Fee Eligible
Impact Fee Eligible (New Road)
Non Impact Fee Eligible
Local Roads
CorinthCityLimits
Project Number

4.0 Computation Method for Roadway Impact Fees

A. Service Areas

The service area used in the 2016 Roadway Impact Fee Update is shown in the previously referenced Exhibit 1. 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." Based on guidance in Chapter 395 and examination of the City of Corinth, one roadway service area was deemed appropriate. This service area covers the entire corporate boundary of the City of Corinth which is approximately four (4) miles in diameter.

B. 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 2016 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 North Central Texas Council of Governments (NCTCOG) (see Appendix B).

Total Vehicle-Miles of Demand: Based on the 10-year growth projections (Pg. 25). The demand is equal to PM Trip Rate (trips) * Trip Length (miles).

The capacity values used in the 2016 Roadway Impact Fee Study are based upon Thoroughfare Capacity Criteria published by NCTCOG. Tables 3A and 3B show the service volumes as a function of the facility classification and type.

Table 3A Service Volumes for Proposed Facilities

(used in Appendix B – Roadway Impact Fee CIP Service Units of Supply)

Facility Classification	Median Configuration	Hourly Vehicle-Mile Capacity per Lane-Mile of Roadway Facility
Minor Arterial	Divided	700
Minor Arterial/Greenway	Divided	650
Collector	Undivided	425

Table 3B Service Volumes for Existing Facilities

(used in Appendix C – Existing Roadway Facilities Inventory)

Roadway Type	Description	Hourly Vehicle-Mile Capacity per Lane-Mile of Roadway Facility
2U-R	Rural Cross-Section (i.e., gravel, dirt, etc.)	150
2U	Two lane undivided	350
3U	Three lane undivided (two-way, left-turn lane)	425
4U	Four lane undivided	550
4D	Four lane divided	650
6D	Six lane divided	700

C. 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 at a level of service corresponding to the City's standards. 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.

D. Roadway Impact Fee CIP Costing Methodology

All of the project costs for an arterial or collector facility which serves the overall transportation system are eligible to be included in the Roadway Impact Fee Capital Improvements Plan. 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 capital improvements plan who is not an employee of the political subdivision."

The engineer's opinion of the probable costs of the projects in the Roadway Impact Fee CIP is 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 cost for location specific items such as bridges, highway ramps, drainage structures, and any other special components are added to each project, as appropriate. In addition, based upon discussions with City of Corinth 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 CIP as lump sum costs. The following is a detailed description of the costing worksheet/methodology for the Roadway Impact Fee CIP.

1. Overview of Roadway Impact Fee CIP Costing Worksheets

For each project a specific costing worksheet was developed (see Appendix A). Each worksheet contained the following four (4) main components:

- Project Information,
- Construction Pay Items,
- Construction Component Allowances and
- Summary of Costs and Allowances

Project Information

Construction Pay Items

Construction Component Allowances

Summary of Costs and Allowances

City of Corinth
2016 Roadway Impact Fee Update
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**4**
Name:	Dobbs Rd (1)	**This project consists of the construction of a new greenway minor arterial.**		
Limits:	IH-35E NBFR to Carpenter Ln			
Impact Fee Class:	Greenway			
Ultimate Class:	Greenway			
Length (lf):	740			
Service Area(s):	Corinth			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
104	Unclassified Street Excavation	2,302	cy	$ 9.25	$ 21,296
204	6" Lime Stabilization (with Lime @ 27#/sy)	4,440	sy	$ 3.50	$ 15,540
304	8" Concrete Pavement w/ 6" Curb	4,111	sy	$ 48.00	$ 197,333
404	4" Topsoil	3,124	sy	$ 3.75	$ 11,717
504	4' Concrete Sidewalk / Trail	8,880	sf	$ 5.00	$ 44,400
604	Concrete Driveway Approach	1	ea	$ 3,250.00	$ 3,250
				Paving Construction Cost Subtotal:	**$ 293,536**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		3%	$ 8,806
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		3%	$ 8,806
√	Roadway Drainage	Standard Internal System	30%	$ 88,061
√	Illumination		5%	$ 14,677
	Special Drainage Structures	None Anticipated	0%	$ -
√	Water	Minor Adjustments	2%	$ 5,871
√	Sewer	Minor Adjustments	1%	$ 2,935
√	Basic Landscaping/Irrigation		2%	$ 5,871
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 135,026**
			Paving and Allowance Subtotal:	**$ 428,562**
			Construction Contingency: 20%	$ 85,712
			Construction Cost TOTAL:	**$ 515,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 515,000**
Engineering/Survey/Testing:		18%	$ 92,700
Mobilization		6%	$ 30,900
Previous City contribution			
Other			
ROW/Easement Acquisition:	New Roadway Alignment	20%	$ 103,000
		Impact Fee Project Cost TOTAL:	**$ 742,000**

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

Project Information

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

- Project Number – Identifies the project a corresponding number. The corresponding number does not represent any prioritizations and is used only to identify projects. For example, Project 4 is the 4th project on the list.
- 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 Thoroughfare Plan classification of the roadway. For example, Type A stands for Major Arterial. A Major Arterial 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 of the roadway needs to be constructed.
- Ultimate Class – The functional classification on Corinth's Thoroughfare Plan.
- Length (ft) – The distance measured in feet that is used to cost out the project.
- Service Area – Represents the service area where the project is located.
- Description – Used to describe the project type assumed in the costing such as a widening or reconstruction.

2. Construction Pay Items

A typical roadway project consists of a number of costs, including the following: planning, survey, design engineering, permitting, right-of way acquisition, and construction and inspection. 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 for are shown in Table 4.

Table 4 Construction Cost Pay Items

City Pay Items
• Unclassified street excavation • Lime Stabilization • Concrete pavement and curb • Topsoil • Sidewalk • Driveways

3. Construction Component Allowances

A percentage of the paving construction cost is allotted for various major construction component allowances, as appropriate. These allowances include traffic control, pavement markings and signage, roadway drainage, illumination, minor water and sewer adjustments, landscaping and irrigation. These allowance percentages are also based on historical data.

In addition, lump sum dollar allowances are provided for special drainage structures, railroad crossings, and intersection improvements where needs are anticipated. The paving and allowance subtotal is given a twenty percent (20%) contingency, six percent (6%) mobilizations, and three percent (3%) or five percent (5%) preparation of right-of-way depending on whether the roadway is existing or will be new to determine the construction cost total.

4. Summary of Cost and Allowances

To determine the total Impact Fee Project Cost, eighteen percent (18%) of the construction cost total is added for engineering, surveying, and testing.

Percentages are also allotted ROW/easement acquisition. ROW/easement acquisition was based on whether the project was an existing alignment or future alignment. For an existing alignment, the ROW/easement acquisition cost was provided an allotment equal to 10% of the construction cost total. For a new alignment, the ROW/easement acquisition cost was equal to 20% of the construction cost total. The value for ROW/easement acquisition is an estimated contribution allocation and does not represent actual ROW/easement acquisition needs.

The Impact Fee Project Cost Total is then the Construction Cost Total plus engineering, surveying, testing, and inspection; plus ROW/easement acquisition; and minus roadway escrow agreements.

E. Summary of Roadway Impact Fee CIP Costs

Table 5 is the 10-Year Roadway Impact Fee CIP project lists for the 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 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 Roadway Impact Fee CIP establishes the list of projects for which Impact Fees can be utilized. Projects not included in the Roadway Impact Fee 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 5 – 10-Year Roadway Impact Fee CIP with Conceptual Level Cost Projections

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area	Total Project Cost	Cost in Service Area
Corinth	1	Greenway	Lake Sharon Dr (1)	FM 2499 to Oakmont Dr	0.59	100%	$ 5,135,760	$ 5,135,760
	2	Greenway	Lake Sharon Dr (2)	Blue Holley Dr to Parkridge Dr	0.90	100%	$ 5,137,991	$ 5,137,991
	3	Greenway	Meadow Oak Dr	Parkridge Dr to Tower Ridge Dr	0.64	100%	$ 3,485,426	$ 3,485,426
	4	Greenway	Dobbs Rd (1)	IH-35E NBFR to Carpenter Ln	0.14	100%	$ 742,000	$ 742,000
	5	Greenway	Dobbs Rd (2)	Carpenter Ln to Quail Run Dr	0.22	100%	$ 1,163,000	$ 1,163,000
	6	Greenway	Dobbs Rd (3)	Quail Run to 300' east of Corinth Pkwy	0.33	100%	$ 453,628	$ 453,628
	7	Collector	Church Dr	Post Oak Rd to IH-35E SBFR	0.90	100%	$ 2,700,213	$ 2,700,213
	8	Collector	Walton Dr	North Corinth St to Shady Rest Ln	0.52	100%	$ 1,473,000	$ 1,473,000
	9	Collector	Shady Shores Rd	Railroad to 205' East of Dalton Dr	1.22	50%	$ 3,473,000	$ 1,736,500
	10	Collector	Parkridge Dr (1)	Lake Sharon Dr to Tori Oak Tr	0.09	100%	$ 765,541	$ 765,541
	11	Collector	Parkridge Dr (2)	Warwick Dr to FM 2181	0.76	100%	$ 1,014,513	$ 1,014,513
	12	Collector	Parkridge Dr (3)	FM 2181 to South City Limits	0.53	100%	$ 1,454,490	$ 1,454,490
	13	Collector	Tower Ridge Dr (1)	Meadow Oaks Dr to 215' South of Brookview Dr	0.42	100%	$ 780,001	$ 780,001
	14	Collector	Tower Ridge Dr (2)	215' South of Brookview Dr to Cliff Oaks Dr	0.43	100%	$ 1,317,000	$ 1,317,000
	15	Collector	Garrison St	IH 35E SBFR to Cliff Oak Dr	0.33	100%	$ 878,000	$ 878,000
	16	Collector	Quail Run Dr	Dobbs Rd to IH-35E NBFR	0.37	100%	$ 1,127,000	$ 1,127,000
	17	Greenway (1/2)	Post Oak Rd	Robinson Rd to Lake Sharon Dr	0.89	100%	$ 2,475,000	$ 2,475,000
	18	Collector	Sharon Dr	Church Dr to Lake Sharon Dr	0.84	100%	$ 2,621,000	$ 2,621,000
	19	Greenway	S. Corinth St	IH-35E SBFR to Meadow Oak Dr	0.41	100%	$ 2,137,686	$ 2,137,686
	20	Collector	Shady Rest Ln	Fritz Ln to Walton Dr	0.33	100%	$ 1,544,049	$ 1,544,049
	21	Major	FM 2181	West City Limits to IH-35E SBFR	3.32	100%	$ 242,000	$ 242,000
	22	Collector	Cliff Oak Dr	Tower Ridge Dr to Garrison Rd	0.50	100%	$ 1,525,000	$ 1,525,000
							Service Area Project Cost Subtotal	**$ 39,908,798**
							2016 Roadway Impact Fee Update	**$ 36,000**
							Total Cost in Corinth	**$ 39,944,798**

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 Corinth.

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.

c. The project cost total within each Service Area may differ from the total shown in the Summary sheets provided to the City due to some projects that are split between multiple jurisdictions.

F. Service Unit Calculation

The basic service unit for the computation of Corinth's Roadway Impact Fees is the vehicle-mile of travel during the afternoon peak-hour (as explained on Pg.14). To determine the cost per service unit, it is necessary to project the growth in vehicle-miles of travel for the service area for the ten-year period.

The growth in vehicle-miles from 2016 to 2026 is based upon projected changes in residential units and employment for the period. In order to determine this growth, estimates of residential units, basic employment, service employment, and retail employment for 2016 were made, along with growth projections for each of these demographic statistics through 2026. The Land Use Assumptions section of this report details the growth estimates used for impact fee determination.

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. The Land Use Assumptions section of this report provides existing and projected number of building square footages for three (3) categories of employment – basic, service, and retail. 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, 9th 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, 9th Edition* and the National Household Travel Survey performed by the FHWA. The *ITE Trip Generation Manual, 9th*

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 National Household Travel Survey (NHTS) conducted by the Federal Highway Administration (FHWA).

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

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

$$\text{where...}\ L_{\max} = \min(L * OD \ \text{ or } \text{SA}_{\text{L}})$$

Variables:

TDF = Transportation Demand Factor,
T = Trip Rate (peak hour trips / unit),
P_b = Pass-By Discount (% of trips),
L_{max} = Maximum Trip Length (miles),
L = Average Trip Length (miles), and
OD = Origin-Destination Reduction (50%)
SA_L = Max Service Area Trip Length

For land uses which are characterized by longer average trip lengths the maximum trip length is typically limited to six (6) miles 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 in diameter; however, the service area within Corinth is approximated to be four (4) miles in diameter.

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 Roadway Impact Fee 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 Corinth 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.

Table 6 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 6 Transportation Demand Factor Calculations

Variable	Residential	Basic	Service	Retail
T	1.00	0.97	1.49	3.71
P_b	0%	0%	0%	34%
L	9.79	14.65	14.65	5.60
L_{max} *	4.90	4.00	4.00	2.80
TDF	4.00	3.88	5.96	6.86

* L_{max} is less than 4 miles for retail land uses; therefore this lower trip length is used for calculating the TDF for these land uses.

The application of the demographic projections and the *transportation demand factors* are presented in the 10-Year Growth Projections in Table 7. This table shows the total vehicle-miles by service area for the ten-year period between years 2016 and 2026. These estimates and projections lead to the Vehicle-Miles of Travel for the ten-year period.

Table 7 10-Year Growth Projections

Growth 2016-2026

SERVICE AREA	RESIDENTIAL VEHICLE-MILES			SQUARE FEET[4]			TRANS. DEMAND FACTOR (TDF)[5]			NON-RESIDENTIAL VEHICLE-MILES[9]				TOTAL VEHICLE-MILES[10]
	DWELLING UNITS[1]	Trip Rate TDF[2]	VEHICLE-MILES[3]	BASIC	SERVICE	RETAIL	BASIC[6]	SERVICE[7]	RETAIL[8]	BASIC	SERVICE	RETAIL	TOTAL	
		1.00					*0.97*	*1.49*	*2.45*					
Corinth	1,230	4.00	4,920	150,000	622,500	852,500	3.88	5.96	6.86	582	3,710	5,845	10,137	15,057

VEHICLE-MILES OF INCREASE[11] (2016 - 2026)

SERVICE AREA	VEH-MILES
Corinth	15,057

Notes:

[1] From *Land Use Assumptions Section*

[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 Section*

[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 (2016) subtracted from Total Vehicle-Miles (2026)

5.0 Roadway Impact Fee Calculation

A. 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 Roadway Impact Fee 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 8 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.

Table 8 Maximum Assessable Roadway Impact Fee Computation

Line	Title	Description
1	*Total Vehicle-Miles of Capacity Added by the Roadway Impact Fee CIP*	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 – 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	*Total Vehicle-Miles of Existing Demand*	A measure of the amount of traffic currently using the roadway facilities upon which capacity is being added. (from Appendix B – 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	*Total Vehicle-Miles of Existing Deficiencies*	Number of vehicle-miles of travel that are not accommodated by the existing roadway system (from Appendix C – Existing Roadway Facilities Inventory)

In order to ensure that existing deficiencies on the City's roadway network are not recoverable through impact fees, this line is based on the entire roadway network within the service area. Any roadway within the service area that is deficient – even those not identified on the Roadway Impact Fee CIP – will have these additional trips removed from the calculation.

4	*Net Amount of Vehicle-Miles of Capacity Added*	A measurement of the amount of vehicle-miles added by the Roadway Impact Fee CIP that will not be utilized by existing demand (Line 1 – Line 2 – Line 3)

This calculation identifies the portion of the Roadway Impact Fee CIP (in vehicle-miles) that can be recoverable through the collection of impact fees.

5	*Total Cost of the Roadway Impact Fee CIP within the Service Area*	The total cost of the projects within each service area (from Table 5: 10-Year Roadway Impact Fee Capital Improvements Plan with Conceptual Level Cost Opinions)

This line simply identifies the total cost of all of the projects identified in each service area.

6	*Cost of Net Capacity Supplied*	The total Roadway Impact Fee 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)]

Using the ratio of vehicle-miles added by the Roadway Impact Fee CIP available to serve future growth to the total vehicle-miles added, the total cost of the CIP is reduced to the amount available for future growth (i.e. excluding existing usage and deficiencies).

7	*Cost to Meet Existing Needs and Usage*	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)

This line is provided for information purposes only – it is to present the portion of the total cost of the Roadway Impact Fee CIP that is required to meet existing demand.

8	*Total Vehicle-Miles of New Demand over Ten Years*	Based upon the growth projection provided in the Land Use Assumptions, an estimate of the number of new vehicle-miles within the service area over the next ten years. (from Table 7)

This line presents the amount of growth (in vehicle-miles) projected to occur within each service area over the next ten years.

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

In order to ensure that the vehicle-miles added by the Roadway Impact Fee 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 amount of vehicle-miles added by the Roadway Impact Fee CIP exceeds the growth projected to occur in the next ten years, the Roadway Impact Fee CIP cost is reduced accordingly.

11	*Cost of Roadway Impact Fee CIP Attributable to New Growth*	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).

This value is the total Roadway Impact Fee 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.

B. Plan for Awarding the Transportation Impact Fee Credit

Chapter 395 of the Texas Local Government Code requires the Roadway Impact Fee Capital Improvements Plan 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 following table summarizes the portions of Table 8 that utilize this credit calculation, based on awarding a 50 percent credit.

Line	Title	Description
12	*Net Financing Costs*	Using 4% Interest Rate for Bond Debt Service.
13	*Existing Impact Fee Fund Balance*	Existing Roadway Impact Fees in fund balance as of October 2016
14	*Cost of the CIP and Financing Attributable to New Growth*	The sum of the Cost of Capacity Added Attributable to New Growth, Financing Costs, and Interest Earnings. (Line 11 + Line 12 - Line 13)
15	*Pre-Credit Maximum Fee Per Service Unit*	Found by dividing the Cost of the CIP and Financing Attributable to New Growth (Line 14) by the Total Vehicle-Miles of New Demand Over Ten Years (Line 8). (Line 14 / Line 8)
16	*Credit*	A credit equal to 50% of the total projected cost, as per section 395.014 of the Texas Local Government Code.
17	*Recoverable Cost of CIP and Financing*	The difference between the Cost of the CIP and Financing Attributable to New Growth (Line 14) and the Credit for Ad Valorem Taxes (Line 16). (Line 14 - Line 16)
18	*Maximum Assessable Fee Per Service Unit*	Found by dividing the Recoverable Cost of the CIP and Financing (Line 17) by the Total Vehicle-Miles of New Demand Over Ten Years (Line 8). (Line 17 / Line 8)

Table 9 Maximum Assessable Roadway Impact Fee

	SERVICE AREA:	Corinth
1	TOTAL VEH-MI OF CAPACITY ADDED BY THE CIP (FROM CIP SERVICE UNITS OF SUPPLY, **APPENDIX B)**	30,293
2	TOTAL VEH-MI OF EXISTING DEMAND (FROM CIP SERVICE UNITS OF SUPPLY, **APPENDIX B**)	10,469
3	TOTAL VEH-MI OF EXISTING DEFICIENCIES (FROM EXISTING FACILITIES INVENTORY, **APPENDIX C**)	0
4	NET AMOUNT OF VEH-MI OF CAPACITY ADDED (LINE 1 - LINE 2 - LINE 3)	19,824
5	TOTAL COST OF THE CIP WITHIN SERVICE AREA (FROM **TABLE 5**)	$ 39,944,798
6	COST OF NET CAPACITY SUPPLIED (LINE 4 / LINE 1) * (LINE 5)	$ 26,140,220
7	COST TO MEET EXISTING NEEDS AND USAGE (LINE 5 - LINE 6)	$ 13,804,578
8	TOTAL VEH-MI OF NEW DEMAND OVER TEN YEARS (FROM **TABLE 7**)	15,057
9	PERCENT OF CAPACITY ADDED ATTRIBUTABLE TO GROWTH (LINE 8 / LINE 4)	75.9%
10	IF LINE 8 > LINE 4, REDUCE LINE 9 TO 100%, OTHERWISE NO CHANGE	75.9%
11	COST OF CAPACITY ADDED ATTRIBUTABLE TO GROWTH (LINE 6 * LINE 10)	$ 19,840,427
12	FINANCING COSTS	$ 6,587,022
13	EXISTING IMPACT FEE FUND BALANCE	$ 224,904
14	COST OF CIP AND FINANCING ATTRIBUTABLE TO GROWTH (LINE 11 + LINE 12 - LINE 13)	$ 26,202,545
15	PRE-CREDIT MAX FEE PER SERVICE UNIT ($ PER VEH-MI) (LINE 14 / LINE 8)	$ 1,740
16	CREDIT (50% OF LINE 14)	$ 13,101,272
17	RECOVERABLE COST OF CIP AND FINANCING (LINE 14 - LINE 16)	$ 13,101,272
18	MAX ASSESSABLE FEE PER SERVICE UNIT ($ PER VEH-MI) (LINE 17 / LINE 8)	$ 870

C. 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 10. This table lists the predominant land uses that may occur within the City of Corinth. 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 11. 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 afternoon peak hour by each land use per development unit. The next column in Table 10, 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, 9th 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.

To convert vehicle trips to vehicle-miles, it is necessary to multiply trips by trip length. The adjusted trip length values are based on the *Regional Origin-Destination Travel Survey* performed by the NCTCOG and NHTS. The other adjustment to trip length is the 50% origin-destination reduction to avoid double counting of trips. At this stage, another important aspect of the state law is applied – the limit on transportation service unit demand. If the adjusted trip length is above the maximum trip length, four (4) miles, the maximum trip length used for calculation is reduced to four (4) miles. This reduction, as discussed previously, limits the maximum trip length to the approximate size of the service areas.

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 10 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	NHTS Trip Length (mi)	Adj. For O-D	Adj. Trip Length (mi)	Max Trip Length (mi)	Veh-Mi Per Dev-Unit
PORT AND TERMINAL											
Truck Terminal	030	Acre	6.55			6.55	14.65	50%	7.33	4.00	26.20
INDUSTRIAL											
General Light Industrial	110	1,000 SF GFA	0.97			0.97	14.65	50%	7.33	4.00	3.88
General Heavy Industrial	120	1,000 SF GFA	0.68			0.68	14.65	50%	7.33	4.00	2.72
Industrial Park	130	1,000 SF GFA	0.86			0.85	14.65	50%	7.33	4.00	3.40
Warehousing	150	1,000 SF GFA	0.32			0.32	14.65	50%	7.33	4.00	1.28
Mini-Warehouse	151	1,000 SF GFA	0.26			0.26	14.65	50%	7.33	4.00	1.04
RESIDENTIAL											
Single-Family Detached Housing	210	Dwelling Unit	1.00			1.00	9.79	50%	4.90	4.00	4.00
Apartment/Multi-family	220	Dwelling Unit	0.62			0.62	9.79	50%	4.90	4.00	2.48
Residential Condominium/Townhome	230	Dwelling Unit	0.52			0.52	9.79	50%	4.90	4.00	2.08
Senior Adult Housing-Detached	251	Dwelling Unit	0.27			0.27	9.79	50%	4.90	4.00	1.08
Senior Adult Housing-Attached	252	Dwelling Unit	0.25			0.25	9.79	50%	4.90	4.00	1.00
Assisted Living	254	Beds	0.22			0.22	9.79	50%	4.90	4.00	0.88
LODGING											
Hotel	310	Room	0.60			0.60	6.43	50%	3.22	3.22	1.93
Motel / Other Lodging Facilities	320	Room	0.47			0.47	6.43	50%	3.22	3.22	1.51
RECREATIONAL											
Golf Driving Range	432	Tee	1.25			1.25	7.86	50%	3.93	3.93	4.91
Golf Course	430	Acre	0.30			0.30	7.86	50%	3.93	3.93	1.18
Recreational Community Center	495	1,000 SF GFA	2.74			2.74	7.86	50%	3.93	3.93	10.77
Ice Skating Rink	465	1,000 SF GFA	2.36			2.36	7.86	50%	3.93	3.93	9.27
Miniature Golf Course	431	Hole	0.33			0.33	7.86	50%	3.93	3.93	1.30
Multiplex Movie Theater	445	Screens	13.64			13.64	7.86	50%	3.93	3.93	53.61
Racquet / Tennis Club	491	Court	3.35			3.35	7.86	50%	3.93	3.93	13.17
INSTITUTIONAL											
Church	560	1,000 SF GFA	0.55			0.55	8.31	50%	4.16	4.00	2.20
Day Care Center	565	1,000 SF GFA	12.34	44%	B	6.91	3.49	50%	1.75	1.75	12.06
Primary/Middle School (1-8)	522	Students	0.16			0.16	3.49	50%	1.75	1.75	0.28
High School	530	Students	0.13			0.13	3.49	50%	1.75	1.75	0.23
Junior / Community College	540	Students	0.12			0.12	10.44	50%	5.22	4.00	0.48
University / College	550	Students	0.17			0.17	10.44	50%	5.22	4.00	0.68
MEDICAL											
Clinic	630	1,000 SF GFA	5.18			5.18	9.85	50%	4.93	4.00	20.72
Hospital	610	Beds	0.93			0.93	9.85	50%	4.93	4.00	3.72
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	4.72	30%	B	3.30	9.85	50%	4.93	4.00	13.20

Key to Sources of Pass-by Rates:

A: ITE Trip Generation Handbook 3rd Edition (August 2014)

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 10 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	NHTS Trip Length (mi)	Adj. For O-D	Adj. Trip Length (mi)	Max Trip Length (mi)	Veh-Mi Per Dev-Unit
OFFICE											
Corporate Headquarters Building	714	1,000 SF GFA	1.41			1.41	14.65	50%	7.33	4.00	5.64
General Office Building	710	1,000 SF GFA	1.49			1.49	14.65	50%	7.33	4.00	5.96
Medical-Dental Office Building	720	1,000 SF GFA	3.57			3.57	9.85	50%	4.93	4.00	14.28
Single Tenant Office Building	715	1,000 SF GFA	1.74			1.74	14.65	50%	7.33	4.00	6.96
Office Park	750	1,000 SF GFA	1.48			1.48	14.65	50%	7.33	4.00	5.92
COMMERCIAL											
Automobile Related											
Automobile Care Center	942	1,000 SF Occ. GLA	3.11	40%	B	1.87	4.45	50%	2.23	2.23	4.15
Automobile Parts Sales	843	1,000 SF GFA	5.98	43%	A	3.41	4.45	50%	2.23	2.23	7.58
Gasoline/Service Station	944	Vehicle Fueling Position	13.87	42%	A	8.04	1.20	50%	0.60	0.60	4.83
Gasoline/Service Station w/ Conv Market	945	Vehicle Fueling Position	13.54	56%	B	5.96	1.20	50%	0.60	0.60	3.57
Gasoline/Service Station w/ Conv Market and Car Wash	946	Vehicle Fueling Position	13.86	56%	A	6.10	1.20	50%	0.60	0.60	3.66
New Car Sales	841	1,000 SF GFA	2.62	20%	B	2.10	4.45	50%	2.23	2.23	4.66
Quick Lubrication Vehicle Shop	941	Servicing Positions	5.19	40%	B	3.11	4.45	50%	2.23	2.23	6.93
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	4.15	28%	A	2.99	4.45	50%	2.23	2.23	6.65
Dining											
Fast Food Restaurant with Drive-Thru Window	934	1,000 SF GFA	32.65	50%	A	16.33	5.64	50%	2.82	2.82	46.04
Fast Food Restaurant without Drive-Thru Window	933	1,000 SF GFA	26.15	50%	B	13.08	5.64	50%	2.82	2.82	36.87
High Turnover (Sit-Down) Restaurant	932	1,000 SF GFA	9.85	43%	A	5.61	6.07	50%	3.04	3.04	17.04
Quality Restaurant	931	1,000 SF GFA	7.49	44%	A	4.19	6.07	50%	3.04	3.04	12.73
Coffee/Donut Shop with Drive-Thru Window	937	1,000 SF GFA	42.80	70%	A	12.84	4.53	50%	2.27	2.27	29.08
Other Retail											
Free-Standing Discount Store	815	1,000 SF GFA	4.98	30%	C	3.49	5.60	50%	2.80	2.80	9.76
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	48%	A	1.21	5.60	50%	2.80	2.80	3.39
Pharmacy/Drugstore w/o Drive-Thru Window	880	1,000 SF GFA	8.40	53%	A	3.95	5.60	50%	2.80	2.80	11.05
Pharmacy/Drugstore w/ Drive-Thru Window	881	1,000 SF GFA	9.91	49%	A	5.05	5.60	50%	2.80	2.80	14.15
Shopping Center	820	1,000 SF GFA	3.71	34%	A	2.45	5.60	50%	2.80	2.80	6.86
Supermarket	850	1,000 SF GFA	9.48	36%	A	6.07	5.60	50%	2.80	2.80	16.99
Toy/Children's Superstore	864	1,000 SF GFA	4.99	30%	B	3.49	5.60	50%	2.80	2.80	9.78
Department Store	875	1,000 SF GFA	1.87	30%	B	1.31	5.60	50%	2.80	2.80	3.67
SERVICES											
Walk-In Bank	911	1,000 SF GFA	12.13	40%	B	7.28	3.39	50%	1.70	1.70	12.34
Drive-In Bank	912	Drive-in Lanes	33.24	47%	A	17.62	3.39	50%	1.70	1.70	29.86
Hair Salon	918	1,000 SF GLA	1.45	30%	B	1.02	3.39	50%	1.70	1.70	1.72

Key to Sources of Pass-by Rates:

A: ITE Trip Generation Handbook 3rd Edition (August 2014)

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 11 Land Use Descriptions

Land Use Category	ITE Land Use Code	Land Use Description
PORT AND TERMINAL		
Truck Terminal	030	Point of good transfer between trucks, between trucks and rail, or between trucks and ports.
INDUSTRIAL		
General Light Industrial	110	Emphasis on activities other than manufacturing with minimal office space; typically employing fewer than 500 workers
General Heavy Industrial	120	Primary activity is conversion of raw materials or parts into finished products; high number of employees per industrial plant
Industrial Park	130	Area containing a number of industries or related facilities
Warehousing	150	Devoted to storage of materials but may included office and maintenance areas
Mini-Warehouse	151	Facilities with a number of units rented to others for the storage of goods; typically refered to as "self-storage" facilities.
RESIDENTIAL		
Single-Family Detached Housing	210	Single-family detached homes on individual lots
Apartment/Multi-family	220	At least 3 rental dwelling units per building
Residential Condominium/Townhome	230	Single-family ownership units that have at least one other single-family owned unit within the same building
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 recreational services.
Assisted Living	254	Residential settings that provide either routine general protective oversight or assistance with activities.
LODGING		
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 provide sleeping accomodations and often a restaurant. They provide little or no meeting space and few services.
RECREATIONAL		
Golf Driving Range	432	Facilities with driving tees for practice; may provide individual or group lessons; may have prop shop and/or refreshment facilities
Golf Course	430	May include municipal courses and private country clubs; may have driving ranges, pro shops, and restaurant/banquet facilities
Recreational Community Center	495	Category includes racquet clubs, health/fitness clubs, can include facilities such as YMCA's
Ice Skating Rink	465	Rinks for ice skating and related sports; may contain spectator areas and refreshment facilities
Miniature Golf	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)
Multiplex Movie Theater	445	Movie theater with audience seating, minimum of ten screens, lobby, and refreshment area.
Racquet / Tennis Club	491	Indoor or outdoor facilities specifically designed for playing tennis but also may provide facilities as swimming, whirlpools, saunas, etc.
INSTITUTIONAL		
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.
MEDICAL		
Clinic	630	Facilities with limited diagnostic and outpatient care, but is unable to provide prolonged in-house medical and surgical
Hospital	610	Medical and surgical facilities with overnight accommodations
Nursing Home	620	Primary function is to care for persons who are unable to care for themselves. Rest and convalescent homes with residents who do little or no driving
Animal Hospital/Veterinary Clinic	640	Specializes in the medical care and treatment for animals.

Table 11 (Cont'd) Land Use Descriptions

Land Use Category	ITE Land Use Code	Land Use Description
OFFICE		
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	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
COMMERCIAL		
Automobile Related		
Automobile Care Center	942	Automobile repair and servicing including stereo installations and upholstering
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
Service Station w/ Conv Market and Car Wash	946	Gasoline sales with convenience store and car washes where the primary business is gasoline sales
New Car Sales	841	New car dealerships, typically with automobile servicing, part sales, and used car sales
Quick Lubrication Vehicle Cshop	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
Dining		
Fast Food Restaurant w/ Drive-Thru	934	High-turnover fast food restaurant for carry-out and eat-in customers with a drive-thru window or drive-in service.
Fast Food Restaurant without Drive-Thru	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	937	Single tenant coffee and donut restaurant with drive-thru.
Other Retail		
Free-Standing Retail Store	815	Category includes free-standing stores with off-street parking; typically offer a variety of products and services with long store hours
Garden Center (Nursery)	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 sell perscription and non-prescription drugs without a drive-thru.
Pharmacy/Drugstore w/ Drive-Thru Window	881	Facilities that sell perscription and non-prescription drugs with a drive-thru.
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 specialized in the sale of apparel, footweat, bedding, home products, jewelry, etc.
SERVICES		
Bank (Walk-In)	911	Bank without drive-thru lanes
Bank (Drive In)	912	Bank with drive-thru lanes
Hair Salon	918	Specialize in cosmetic and beauty services.

6.0 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

Step 1	Determine Development Unit and Vehicle-Miles Per Development Unit
	From Table 10 [Land Use – Vehicle-Mile Equivalency Table] Development Type: 1 Dwelling Unit of Single-Family Detached Housing Number of Development Units: 1 Dwelling Unit Veh-Mi Per Development Unit: 4.00
Step 2	Determine Maximum Assessable Impact Fee Per Service Unit (Vehicle-Mile)
	From Table 9, Line 18 [Maximum Assessable Fee Per Service Unit] Service Area: $870
Step 3	Determine Maximum Assessable Impact Fee
	Impact Fee = # of Development Units * Veh-Mi Per Dev Unit * Max. Fee Per Service Unit Impact Fee = 1 * 4.00 * $870 Maximum Assessable Impact Fee = $3,480

Example 2:

Development Type – 125,000 square foot Home Improvement Superstore

Step 1	Determine Development Unit and Vehicle-Miles Per Development Unit
	From Table 10 [Land Use – Vehicle-Mile Equivalency Table] Development Type: 125,000 square feet of Home Improvement Superstore Development Unit: 1,000 square feet of Gross Floor Area Veh-Mi Per Development Unit: 3.39
Step 2	Determine Maximum Assessable Impact Fee Per Service Unit (Vehicle-Mile)
	From Table 9, Line 18 [Maximum Assessable Fee Per Service Unit] Service Area: $870
Step 3	Determine Maximum Assessable Impact Fee
	Impact Fee = # of Development Units * Veh-Mi Per Dev Unit * Max. Fee Per Service Unit Impact Fee = 125 * 3.39 * $870 Maximum Assessable Impact Fee = $368,663

7.0 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 Improvement 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 Roadway Impact Fee ordinance 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 first public hearing on the Land Use Assumptions and Roadway Impact Fee CIP and a second public hearing on the 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 Transportation 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.

8.0 Conclusions

The City of Corinth 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 Corinth. The maximum assessable roadway impact fee calculated in this report is $870 per vehicle-mile.

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.

APPENDICES

A. Conceptual Level Project Cost Projections

B. Roadway Impact Fee CIP Service Units of Supply

C. Existing Roadway Facilities Inventory

Appendix A – Conceptual Level Project Cost Projections

City of Corinth - 2016 Roadway Impact Fee Update

Capital Improvement Plan for Roadway Impact Fees

Summary of Conceptual Level Project Cost Projections

Roadway Improvements - Corinth

#	Class	Project	Limits	Status	% in SA	Project Cost	Project Cost in SA
1	Greenway	Lake Sharon Dr (1)	FM 2499 to Oakmont Dr	NEW	100%	$5,135,760	$5,135,760
2	Greenway	Lake Sharon Dr (2)	Blue Holley Dr to Parkridge Dr	COMPLETED	100%	$5,137,991	$5,137,991
3	Greenway	Meadow Oak Dr	Parkridge Dr to Tower Ridge Dr	COMPLETED	100%	$3,485,426	$3,485,426
4	Greenway	Dobbs Rd (1)	IH-35E NBFR to Carpenter Ln	NEW	100%	$742,000	$742,000
5	Greenway	Dobbs Rd (2)	Carpenter Ln to Quail Run Dr	WIDENING	100%	$1,163,000	$1,163,000
6	Greenway	Dobbs Rd (3)	Quail Run to 300' east of Corinth Pkwy	COMPLETED	100%	$453,628	$453,628
7	Collector	Church Dr	Post Oak Rd to IH-35E SBFR	COMPLETED	100%	$2,700,213	$2,700,213
8	Collector	Walton Dr	North Corinth St to Shady Rest Ln	WIDENING	100%	$1,473,000	$1,473,000
9	Collector	Shady Shores Rd	Railroad to 205' East of Dalton Dr	WIDENING	50%	$3,473,000	$1,736,500
10	Collector	Parkridge Dr (1)	Lake Sharon Dr to Tori Oak Tr	COMPLETED	100%	$765,541	$765,541
11	Collector	Parkridge Dr (2)	Warwick Dr to FM 2181	COMPLETED	100%	$1,014,513	$1,014,513
12	Collector	Parkridge Dr (3)	FM 2181 to South City Limits	COMPLETED	100%	$1,454,490	$1,454,490
13	Collector	Tower Ridge Dr (1)	Meadow Oaks Dr to 215' South of Brookview Dr	COMPLETED	100%	$780,001	$780,001
14	Collector	Tower Ridge Dr (2)	215' South of Brookview Dr to Cliff Oaks Dr	WIDENING	100%	$1,317,000	$1,317,000
15	Collector	Garrison St	IH 35E SBFR to Cliff Oak Dr	WIDENING	100%	$878,000	$878,000
16	Collector	Quail Run Dr	Dobbs Rd to IH-35E NBFR	WIDENING	100%	$1,127,000	$1,127,000
17	Greenway (1/2)	Post Oak Rd	Robinson Rd to Lake Sharon Dr	WIDENING	100%	$2,475,000	$2,475,000
18	Collector	Sharon Dr	Church Dr to Lake Sharon Dr	NEW	100%	$2,621,000	$2,621,000
19	Greenway	S. Corinth St	IH-35E SBFR to Meadow Oak Dr	COMPLETED	100%	$2,137,686	$2,137,686
20	Collector	Shady Rest Ln	Fritz Ln to Walton Dr	COMPLETED	100%	$1,544,049	$1,544,049
21	Major	FM 2181	West City Limits to IH-35E SBFR	COMPLETED	100%	$242,000	$242,000
22	Collector	Cliff Oak Dr	Tower Ridge Dr to Garrison Rd	WIDENING	100%	$1,525,000	$1,525,000
				TOTAL		**$ 41,645,298**	**$ 39,908,798**

*Total may be higher than presented in Table 5 (10-Year Roadway Improvement Plan for Roadway Impact Fees with Conceptual Level Cost Opinions) because the cost of some projects are shared between jurisdications.

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 Corinth.

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 Corinth
2016 Roadway Impact Fee Update
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
updated: 12/22/2016

Project Information:		**Description:**	**Project No.**	**1**
Name:	Lake Sharon Dr (1)	**This project consists of the construction of a new greenway minor arterial. The cost estimate of $6,435,760 was provided by the City of Corinth. $1,300,000 has been removed from the cost due to a County of Denton ICA Agreement. Therefore, the City contribution to this facility was $5,135,760.**		
Limits:	FM 2499 to Oakmont Dr			
Impact Fee Class:	Greenway			
Ultimate Class:	Greenway			
Length (lf):	3,105			
Service Area(s):	Corinth			

Impact Fee Project Cost Summary			
Item Description	**Notes:**	**Allowance**	**Item Cost**
Construction:	Cost Estimate Provided By Corinth		$ 5,248,000
Engineering/Survey/Testing:			$ 553,660
Mobilization			$ -
Previous City contribution			$ -
Other	County of Denton ICA Agreement		$ (1,300,000)
ROW/Easement Acquisition:			$ 634,100
		Impact Fee Project Cost TOTAL:	**$ 5,135,760**

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 Corinth.

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 Corinth
2016 Roadway Impact Fee Update
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**2**
Name:	Lake Sharon Dr (2)	**This project consisted of the construction of a greenway minor arterial. This City project was a combination of Impact Fee Project Number 2, 3, and 9. The cost provided by the City for these three projects was $9,569,257.29. $5,167,398.94 (54%) is contributed to Lake Sharon Drive from Blue Holley to Parkridge Drive. $29,408 has been removed from the cost for escrow funds. Therefore, the City contribution to this facility was $5,137,991.**		
Limits:	Blue Holley Dr to Parkridge Dr			
Impact Fee Class:	Greenway			
Ultimate Class:	Greenway			
Length (lf):	4,740			
Service Area(s):	Corinth			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:	Actual Cost Provided By Corinth		**$ 3,716,120**
Engineering/Survey/Testing:			$ 442,512
Previous City contribution	Escrow Funds		$ (29,408)
Other			$ 568,320
ROW/Easement Acquisition:	Actual Cost Provided By Corinth		$ 440,447
		Impact Fee Project Cost TOTAL:	**$ 5,137,991**

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 Corinth.

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 Corinth
2016 Roadway Impact Fee Update
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**3**
Name:	Meadow Oak Dr	**This project consisted of the construction of a greenway minor arterial. This City project was a combination of Impact Fee Project Number 2, 3, and 9. The cost provided by the City for these three projects was $9,569,257.29. $3,636,317.77 (38%) is contributed to Meadow Oaks Drive from Parkridge Drive to Tower Ridge Drive. $150,892 has been removed from the cost for escrow funds. Therefore, the City contribution to this facility was $3,485,426.**		
Limits:	Parkridge Dr to Tower Ridge Dr			
Impact Fee Class:	Greenway			
Ultimate Class:	Greenway			
Length (lf):	3,395			
Service Area(s):	Corinth			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:	Actual Cost Provided By Corinth		**$ 2,615,047**
Engineering/Survey/Testing:			$ 311,397
Previous City contribution	Escrow Funds		$ (150,892)
Other			$ 399,929
ROW/Easement Acquisition:	Actual Cost Provided By Corinth		$ 309,944
		Impact Fee Project Cost TOTAL:	**$ 3,485,426**

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 Corinth.

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 Corinth

2016 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**4**
Name:	Dobbs Rd (1)	**This project consists of the construction of a new greenway minor arterial.**		
Limits:	IH-35E NBFR to Carpenter Ln			
Impact Fee Class:	Greenway			
Ultimate Class:	Greenway			
Length (lf):	740			
Service Area(s):	Corinth			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
104	Unclassified Street Excavation	2,302	cy	$ 9.25	$ 21,296
204	6" Lime Stabilization (with Lime @ 27#/sy)	4,440	sy	$ 3.50	$ 15,540
304	8" Concrete Pavement w/ 6" Curb	4,111	sy	$ 48.00	$ 197,333
404	4" Topsoil	3,124	sy	$ 3.75	$ 11,717
504	4' Concrete Sidewalk / Trail	8,880	sf	$ 5.00	$ 44,400
604	Concrete Driveway Approach	1	ea	$ 3,250.00	$ 3,250
				Paving Construction Cost Subtotal:	**$ 293,536**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		3%	$ 8,806
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		3%	$ 8,806
√	Roadway Drainage	Standard Internal System	30%	$ 88,061
√	Illumination		5%	$ 14,677
	Special Drainage Structures	None Anticipated	0%	$ -
√	Water	Minor Adjustments	2%	$ 5,871
√	Sewer	Minor Adjustments	1%	$ 2,935
√	Basic Landscaping/Irrigation		2%	$ 5,871
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 135,026**
			Paving and Allowance Subtotal:	**$ 428,562**
			Construction Contingency: 20%	$ 85,712
			Construction Cost TOTAL:	**$ 515,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 515,000**
Engineering/Survey/Testing:		18%	$ 92,700
Mobilization		6%	$ 30,900
Previous City contribution			
Other			
ROW/Easement Acquisition:	New Roadway Alignment	20%	$ 103,000
		Impact Fee Project Cost TOTAL:	**$ 742,000**

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 Corinth.

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 Corinth

2016 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**5**
Name:	Dobbs Rd (2)	**This project consists of the reconstruction of a two-lane rural asphalt facility to a greenway minor arterial.**		
Limits:	Carpenter Ln to Quail Run Dr			
Impact Fee Class:	Greenway			
Ultimate Class:	Greenway			
Length (lf):	1,180			
Service Area(s):	Corinth			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
104	Unclassified Street Excavation	3,671	cy	$ 9.25	$ 33,958
204	6" Lime Stabilization (with Lime @ 27#/sy)	7,080	sy	$ 3.50	$ 24,780
304	8" Concrete Pavement w/ 6" Curb	6,556	sy	$ 48.00	$ 314,667
404	4" Topsoil	4,982	sy	$ 3.75	$ 18,683
504	4' Concrete Sidewalk / Trail	14,160	sf	$ 5.00	$ 70,800
604	Concrete Driveway Approach	1	ea	$ 3,250.00	$ 3,250
				Paving Construction Cost Subtotal:	**$ 466,138**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 23,307
√	Traffic Control	Construction Phase Traffic Control	7%	$ 32,630
√	Pavement Markings/Markers		3%	$ 13,984
√	Roadway Drainage	Standard Internal System	30%	$ 139,841
√	Illumination		5%	$ 23,307
	Special Drainage Structures	None Anticipated	0%	$ -
√	Water	Minor Adjustments	2%	$ 9,323
√	Sewer	Minor Adjustments	1%	$ 4,661
√	Basic Landscaping/Irrigation		2%	$ 9,323
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 256,376**
			Paving and Allowance Subtotal:	**$ 722,514**
			Construction Contingency: 20%	$ 144,503
			Construction Cost TOTAL:	**$ 868,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 868,000**
Engineering/Survey/Testing:		18%	$ 156,240
Mobilization		6%	$ 52,080
Previous City contribution			
Other			
ROW/Easement Acquisition:	Existing Alignment	10%	$ 86,800
		Impact Fee Project Cost TOTAL:	**$ 1,163,000**

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City of Corinth

2016 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 12/22/2016

Project Information:	**Description:**	**Project No.**	**6**
Name:	Dobbs Rd (3)	**This project consisted of the construction of a greenway minor arterial. The cost provided by the City for this facilty was $1,066,652. $400,000 has been removed from the cost due to a Developer contribution. $213,024 has been removed from the cost for escrow funds. Therefore, the City contribution to this facility was $453,628.**	
Limits:	Quail Run to 300' east of Corinth Pkwy		
Impact Fee Class:	Greenway		
Ultimate Class:	Greenway		
Length (lf):	1,765		
Service Area(s):	Corinth		

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:	Actual Cost Provided By Corinth		**$ 1,025,466**
Engineering/Survey/Testing:			
Previous Contribution	Developer and Escrow		$ (613,024)
Misc Cost			$ 32,454
ROW/Easement Acquisition:	Actual Cost Provided By Corinth		$ 8,732
		Impact Fee Project Cost TOTAL:	**$ 453,628**

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City of Corinth
2016 Roadway Impact Fee Update
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**7**
Name:	Church Dr	**This project consisted of the construction of a collector facility. The cost provided by the City for this facilty was $2,887,440. $187,227 has been removed from the cost for escrow funds. Therefore, the City contribution to this facility was $2,700,213.**		
Limits:	Post Oak Rd to IH-35E SBFR			
Impact Fee Class:	Collector			
Ultimate Class:	Collector			
Length (lf):	4,755			
Service Area(s):	Corinth			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:	Actual Cost Provided By Corinth	-	**$ 2,287,055**
Engineering/Survey/Testing:			$ 317,150
Previous City contribution	Escrow Funds		$ (187,227)
Other			$ 54,220
ROW/Easement Acquisition:	Actual Cost Provided By Corinth		$ 229,015
		Impact Fee Project Cost TOTAL:	**$ 2,700,213**

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City of Corinth

2016 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**8**
Name:	Walton Dr	**This project consists of the reconstruction of a two-lane rural asphalt facility to a collector.**		
Limits:	North Corinth St to Shady Rest Ln			
Impact Fee Class:	Collector			
Ultimate Class:	Collector			
Length (lf):	2,730			
Service Area(s):	Corinth			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	6,218	cy	$ 9.25	$ 57,520
203	6" Lime Stabilization (with Lime @ 27#/sy)	12,133	sy	$ 3.50	$ 42,467
303	8" Concrete Pavement w/ 6" Curb	11,527	sy	$ 35.00	$ 403,433
403	4" Topsoil	4,247	sy	$ 3.75	$ 15,925
503	4' Concrete Sidewalk	21,840	sf	$ 5.00	$ 109,200
603	Concrete Driveway Approach	3	ea	$ 3,250.00	$ 9,750
				Paving Construction Cost Subtotal:	**$ 638,295**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 31,915
√	Traffic Control	Construction Phase Traffic Control	7%	$ 44,681
√	Pavement Markings/Markers		3%	$ 19,149
√	Roadway Drainage	Standard Internal System	30%	$ 191,488
√	Illumination		5%	$ 31,915
	Special Drainage Structures	None Anticipated	0%	$ -
√	Water	Minor Adjustments	2%	$ 12,766
√	Sewer	Minor Adjustments	1%	$ 6,383
√	Basic Landscaping/Irrigation		2%	$ 12,766
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 351,062**
			Paving and Allowance Subtotal:	**$ 989,357**
			Construction Contingency: 20%	$ 197,871
			Construction Cost TOTAL:	**$ 1,188,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 1,188,000**
Engineering/Survey/Testing:		18%	$ 213,840
Mobilization		6%	$ 71,280
Previous City contribution			
Other			
ROW/Easement Acquisition:	NO ROW INCLUDED	0%	$ -
		Impact Fee Project Cost TOTAL:	**$ 1,473,000**

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City of Corinth

2016 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**9**
Name:	Shady Shores Rd	**This project consists of the reconstruction of a two-lane asphalt facility to a collector.**		
Limits:	Railroad to 205' East of Dalton Dr			
Impact Fee Class:	Collector			
Ultimate Class:	Collector			
Length (lf):	6,455			
Service Area(s):	Corinth			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	14,703	cy	$ 9.25	$ 136,003
203	6" Lime Stabilization (with Lime @ 27#/sy)	28,689	sy	$ 3.50	$ 100,411
303	8" Concrete Pavement w/ 6" Curb	27,254	sy	$ 35.00	$ 953,906
403	4" Topsoil	10,041	sy	$ 3.75	$ 37,654
503	4' Concrete Sidewalk	51,640	sf	$ 5.00	$ 258,200
603	Concrete Driveway Approach	6	ea	$ 3,250.00	$ 19,500
				Paving Construction Cost Subtotal:	**$ 1,505,674**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 75,284
√	Traffic Control	Construction Phase Traffic Control	7%	$ 105,397
√	Pavement Markings/Markers		3%	$ 45,170
√	Roadway Drainage	Standard Internal System	30%	$ 451,702
√	Illumination		5%	$ 75,284
	Special Drainage Structures	None Anticipated	0%	$ -
√	Water	Minor Adjustments	2%	$ 30,113
√	Sewer	Minor Adjustments	1%	$ 15,057
√	Basic Landscaping/Irrigation		2%	$ 30,113
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 828,121**
			Paving and Allowance Subtotal:	**$ 2,333,795**
			Construction Contingency: 20%	$ 466,759
			Construction Cost TOTAL:	**$ 2,801,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 2,801,000**
Engineering/Survey/Testing:		18%	$ 504,180
Mobilization		6%	$ 168,060
Previous City contribution			
Other			
ROW/Easement Acquisition:	NO ROW INCLUDED	0%	$ -
		Impact Fee Project Cost TOTAL:	**$ 3,473,000**

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City of Corinth
2016 Roadway Impact Fee Update
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**10**
Name:	Parkridge Dr (1)	**This project consisted of the construction of a collector. This City project was a combination of Project Number 2, 3, and 9, The cost provided by the City for these three projects was $9,569,257.29. $765,540.58 (8%) is contributed to Parkridge Drive from Lake Sharon Drive to Tori Oak Trail.**		
Limits:	Lake Sharon Dr to Tori Oak Tr			
Impact Fee Class:	Collector			
Ultimate Class:	Collector			
Length (lf):	485			
Service Area(s):	Corinth			

Impact Fee Project Cost Summary			
Item Description	**Notes:**	**Allowance**	**Item Cost**
Construction:	Actual Cost Provided By Corinth		**$ 550,536**
Engineering/Survey/Testing:			$ 65,557
Previous City contribution			
Other			$ 84,196
ROW/Easement Acquisition:	Actual Cost Provided By Corinth		$ 65,251
		Impact Fee Project Cost TOTAL:	**$ 765,541**

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City of Corinth
2016 Roadway Impact Fee Update
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**11**
Name:	Parkridge Dr (2)	**This project consisted of the construction of a collector facility. The cost provided by the City for this facilty was $1,805,798.08. $41,285 has been removed from the cost for escrow funds. $750,000 has been removed from the cost due to a County of Denton ICA Agreement. Therefore, the City contribution to this facility was $1,014,513.**		
Limits:	Warwick Dr to FM 2181			
Impact Fee Class:	Collector			
Ultimate Class:	Collector			
Length (lf):	4,010			
Service Area(s):	Corinth			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:	Actual Cost Provided By Corinth		**$ 1,386,175**
Engineering/Survey/Testing:			$ 269,650
Previous Contribution	ICA Agreement and Escrow Fund		$ (791,285)
Other			$ 97,534
ROW/Easement Acquisition:	Actual Cost Provided By Corinth		$ 52,439
		Impact Fee Project Cost TOTAL:	**$ 1,014,513**

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City of Corinth
2016 Roadway Impact Fee Update
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**12**
Name:	Parkridge Dr (3)	**This project consisted of the reconstruction of a two-lane rural asphalt facility to a collector. The cost provided by the City for this facilty was $1,554,490.29. $1,000,000 has been removed from the cost due to a County of Denton ICA Agreement. Therefore, the City contribution to this facility was $1,454,490.**		
Limits:	FM 2181 to South City Limits			
Impact Fee Class:	Collector			
Ultimate Class:	Collector			
Length (lf):	2,775			
Service Area(s):	Corinth			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:	Actual Cost Provided By Corinth		**$ 1,266,343**
Engineering/Survey/Testing:	Actual Cost Provided By Corinth		$ 168,531
Previous Contribution	County of Denton ICA Agreement		$ (100,000)
Other			$ 12,733
ROW/Easement Acquisition:	Actual Cost Provided By Corinth		$ 106,883
		Impact Fee Project Cost TOTAL:	**$ 1,454,490**

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City of Corinth

2016 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 12/21/2016

Project Information:	**Description:**	**Project No.**	**13**
Name:	Tower Ridge Dr (1)	**This project consisted of the reconstruction of a two-lane rural asphalt facility to a collector.The cost provided by the City for this facilty was $1,105,000.91. $75,000 has been removed from the cost for escrow funds. $250,000 removed from the costs for RW Impact Fees. Therefore, the City contribution to this facility was $780,001.**	
Limits:	Meadow Oaks Dr to 215' South of Brookview Dr		
Impact Fee Class:	Collector		
Ultimate Class:	Collector		
Length (lf):	2,210		
Service Area(s):	Corinth		

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:	Actual Cost Provided By Corinth		**$ 1,000,214**
Engineering/Survey/Testing:	Actual Cost Provided By Corinth		$ 104,405
Previous City contribution	Escrow Fund		$ (325,000)
Other			$ 382
ROW/Easement Acquisition:			
		Impact Fee Project Cost TOTAL:	**$ 780,001**

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City of Corinth

2016 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 12/21/2016

Project Information:	**Description:**	**Project No.**	**14**
Name:	Tower Ridge Dr (2)	**This project consists of the reconstruction of a two-lane rural asphalt facility to a collector.**	
Limits:	215' South of Brookview Dr to Cliff Oaks Dr		
Impact Fee Class:	Collector		
Ultimate Class:	Collector		
Length (lf):	2,265		
Service Area(s):	Corinth		

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	5,159	cy	$ 9.25	$ 47,722
203	6" Lime Stabilization (with Lime @ 27#/sy)	10,067	sy	$ 3.50	$ 35,233
303	8" Concrete Pavement w/ 6" Curb	9,563	sy	$ 35.00	$ 334,717
403	4" Topsoil	3,523	sy	$ 3.75	$ 13,213
503	4' Concrete Sidewalk	18,120	sf	$ 5.00	$ 90,600
603	Concrete Driveway Approach	2	ea	$ 3,250.00	$ 6,500
				Paving Construction Cost Subtotal:	**$ 527,985**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 26,399
√	Traffic Control	Construction Phase Traffic Control	7%	$ 36,959
√	Pavement Markings/Markers		3%	$ 15,840
√	Roadway Drainage	Standard Internal System	30%	$ 158,395
√	Illumination		5%	$ 26,399
	Special Drainage Structures	None Anticipated	0%	$ -
√	Water	Minor Adjustments	2%	$ 10,560
√	Sewer	Minor Adjustments	1%	$ 5,280
√	Basic Landscaping/Irrigation		2%	$ 10,560
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 290,392**
			Paving and Allowance Subtotal:	**$ 818,376**
			Construction Contingency: 20%	$ 163,675
			Construction Cost TOTAL:	**$ 983,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 983,000**
Engineering/Survey/Testing:		18%	$ 176,940
Mobilization		6%	$ 58,980
Previous City contribution			
Other			
ROW/Easement Acquisition:	Existing Alignment	10%	$ 98,300
		Impact Fee Project Cost TOTAL:	**$ 1,317,000**

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City of Corinth

2016 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**15**
Name:	Garrison St	**This project consists of the reconstruction of a two-lane rural asphalt facility to a collector. $145,982 has been removed from the cost for escrow funds.**		
Limits:	IH 35E SBFR to Cliff Oak Dr			
Impact Fee Class:	Collector			
Ultimate Class:	Collector			
Length (lf):	1,755			
Service Area(s):	Corinth			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	3,998	cy	$ 9.25	$ 36,977
203	6" Lime Stabilization (with Lime @ 27#/sy)	7,800	sy	$ 3.50	$ 27,300
303	8" Concrete Pavement w/ 6" Curb	7,410	sy	$ 35.00	$ 259,350
403	4" Topsoil	2,730	sy	$ 3.75	$ 10,238
503	4' Concrete Sidewalk	14,040	sf	$ 5.00	$ 70,200
603	Concrete Driveway Approach	2	ea	$ 3,250.00	$ 6,500
				Paving Construction Cost Subtotal:	**$ 410,564**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 20,528
√	Traffic Control	Construction Phase Traffic Control	7%	$ 28,740
√	Pavement Markings/Markers		3%	$ 12,317
√	Roadway Drainage	Standard Internal System	30%	$ 123,169
√	Illumination		5%	$ 20,528
	Special Drainage Structures	None Anticipated	0%	$ -
√	Water	Minor Adjustments	2%	$ 8,211
√	Sewer	Minor Adjustments	1%	$ 4,106
√	Basic Landscaping/Irrigation		2%	$ 8,211
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 225,810**
			Paving and Allowance Subtotal:	**$ 636,375**
			Construction Contingency: 20%	$ 127,275
			Construction Cost TOTAL:	**$ 764,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 764,000**
Engineering/Survey/Testing:		18%	$ 137,520
Mobilization		6%	$ 45,840
Previous City contribution			
Other	Escrow		$ (145,982)
ROW/Easement Acquisition:	Existing Alignment	10%	$ 76,400
		Impact Fee Project Cost TOTAL:	**$ 878,000**

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City of Corinth

2016 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**16**
Name:	Quail Run Dr	**This project consists of the reconstruction of a two-lane rural asphalt facility to a collector. Note a part of this facility is realigned to the IH-35E NBFR.**		
Limits:	Dobbs Rd to IH-35E NBFR			
Impact Fee Class:	Collector			
Ultimate Class:	Collector			
Length (lf):	1,935			
Service Area(s):	Corinth			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	4,408	cy	$ 9.25	$ 40,769
203	6" Lime Stabilization (with Lime @ 27#/sy)	8,600	sy	$ 3.50	$ 30,100
303	8" Concrete Pavement w/ 6" Curb	8,170	sy	$ 35.00	$ 285,950
403	4" Topsoil	3,010	sy	$ 3.75	$ 11,288
503	4' Concrete Sidewalk	15,480	sf	$ 5.00	$ 77,400
603	Concrete Driveway Approach	2	ea	$ 3,250.00	$ 6,500
				Paving Construction Cost Subtotal:	**$ 452,007**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 22,600
√	Traffic Control	Construction Phase Traffic Control	7%	$ 31,640
√	Pavement Markings/Markers		3%	$ 13,560
√	Roadway Drainage	Standard Internal System	30%	$ 135,602
√	Illumination		5%	$ 22,600
	Special Drainage Structures	None Anticipated	0%	$ -
√	Water	Minor Adjustments	2%	$ 9,040
√	Sewer	Minor Adjustments	1%	$ 4,520
√	Basic Landscaping/Irrigation		2%	$ 9,040
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 248,604**
			Paving and Allowance Subtotal:	**$ 700,611**
			Construction Contingency: 20%	$ 140,122
			Construction Cost TOTAL:	**$ 841,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 841,000**
Engineering/Survey/Testing:		18%	$ 151,380
Mobilization		6%	$ 50,460
Previous City contribution			
Other			
ROW/Easement Acquisition:	Existing Alignment	10%	$ 84,100
		Impact Fee Project Cost TOTAL:	**$ 1,127,000**

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City of Corinth

2016 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**17**
Name:	Post Oak Rd	**This project consists of the widening of a two-lane facility to a greenway minor arterial.**		
Limits:	Robinson Rd to Lake Sharon Dr			
Impact Fee Class:	Greenway (1/2)			
Ultimate Class:	Greenway			
Length (lf):	4,725			
Service Area(s):	Corinth			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	6,825	cy	$ 9.25	$ 63,131
207	6" Lime Stabilization (with Lime @ 27#/sy)	13,388	sy	$ 3.50	$ 46,856
307	8" Concrete Pavement w/ 6" Curb	12,863	sy	$ 48.00	$ 617,400
407	4" Topsoil	16,013	sy	$ 3.75	$ 60,047
507	4' Concrete Sidewalk / Trail	37,800	sf	$ 5.00	$ 189,000
607	Concrete Driveway Approach	5	ea	$ 3,250.00	$ 16,250
				Paving Construction Cost Subtotal:	**$ 992,684**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 49,634
√	Traffic Control	Construction Phase Traffic Control	7%	$ 69,488
√	Pavement Markings/Markers		3%	$ 29,781
√	Roadway Drainage	Standard Internal System	30%	$ 297,805
√	Illumination		5%	$ 49,634
	Special Drainage Structures	None Anticipated	0%	$ -
√	Water	Minor Adjustments	2%	$ 19,854
√	Sewer	Minor Adjustments	1%	$ 9,927
√	Basic Landscaping/Irrigation		2%	$ 19,854
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 545,976**
			Paving and Allowance Subtotal:	**$ 1,538,661**
			Construction Contingency: 20%	$ 307,732
			Construction Cost TOTAL:	**$ 1,847,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 1,847,000**
Engineering/Survey/Testing:		18%	$ 332,460
Mobilization		6%	$ 110,820
Previous City contribution			
Other			
ROW/Easement Acquisition:	Existing Alignment	10%	$ 184,700
		Impact Fee Project Cost TOTAL:	**$ 2,475,000**

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 Corinth.

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 Corinth

2016 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**18**
Name:	Sharon Dr	**This project consists of the construction of a new collector.**		
Limits:	Church Dr to Lake Sharon Dr			
Impact Fee Class:	Collector			
Ultimate Class:	Collector			
Length (lf):	4,455			
Service Area(s):	Corinth			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	10,148	cy	$ 9.25	$ 93,864
203	6" Lime Stabilization (with Lime @ 27#/sy)	19,800	sy	$ 3.50	$ 69,300
303	8" Concrete Pavement w/ 6" Curb	18,810	sy	$ 35.00	$ 658,350
403	4" Topsoil	6,930	sy	$ 3.75	$ 25,988
503	4' Concrete Sidewalk	35,640	sf	$ 5.00	$ 178,200
603	Concrete Driveway Approach	4	ea	$ 3,250.00	$ 13,000
				Paving Construction Cost Subtotal:	**$ 1,038,702**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		3%	$ 31,161
	Traffic Control	None Anticipated	0%	$ -
√	Pavement Markings/Markers		3%	$ 31,161
√	Roadway Drainage	Standard Internal System	30%	$ 311,611
√	Illumination		5%	$ 51,935
	Special Drainage Structures	None Anticipated	0%	$ -
√	Water	Minor Adjustments	2%	$ 20,774
√	Sewer	Minor Adjustments	1%	$ 10,387
√	Basic Landscaping/Irrigation		2%	$ 20,774
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 477,803**
			Paving and Allowance Subtotal:	**$ 1,516,505**
			Construction Contingency: 20%	$ 303,301
			Construction Cost TOTAL:	**$ 1,820,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 1,820,000**
Engineering/Survey/Testing:		18%	$ 327,600
Mobilization		6%	$ 109,200
Previous City contribution			
Other			
ROW/Easement Acquisition:	New Roadway Alignment	20%	$ 364,000
		Impact Fee Project Cost TOTAL:	**$ 2,621,000**

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City of Corinth
2016 Roadway Impact Fee Update
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**19**
Name:	S. Corinth St	**This project consisted of the construction of a greenway minor arterial. The construction cost provided by the City for this facilty was $2,137,686.15.**		
Limits:	IH-35E SBFR to Meadow Oak Dr			
Impact Fee Class:	Greenway			
Ultimate Class:	Greenway			
Length (lf):	2,145			
Service Area(s):	Corinth			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:	Actual Cost Provided By Corinth	-	**$ 1,811,934**
Engineering/Survey/Testing:			$ 230,350
Previous City contribution			
Other			$ 67,466
ROW/Easement Acquisition:	Actual Cost Provided By Corinth		$ 27,936
		Impact Fee Project Cost TOTAL:	**$ 2,137,686**

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 Corinth.

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

City of Corinth
2016 Roadway Impact Fee Update
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**20**
Name:	Shady Rest Ln	**This project consisted of the reconstruction of an asphalt facility to a collector. The construction cost provided by the City for this facilty was $1,619,768.85. $75,720 has been removed for escrow funds. Therefore, the City contribution to this facility was $1,544,049.**		
Limits:	Fritz Ln to Walton Dr			
Impact Fee Class:	Collector			
Ultimate Class:	Collector			
Length (lf):	1,720			
Service Area(s):	Corinth			

Impact Fee Project Cost Summary			
Item Description	**Notes:**	**Allowance**	**Item Cost**
Construction:	Actual Cost Provided By Corinth		**$ 1,239,470**
Engineering/Survey/Testing:	Actual Cost Provided By Corinth		$ 143,995
Previous City contribution	Escrow Funds		$ (75,720)
Other			
ROW/Easement Acquisition:	Actual Cost Provided By Corinth		$ 236,304
		Impact Fee Project Cost TOTAL:	**$ 1,544,049**

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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 Corinth
2016 Roadway Impact Fee Update
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**21**
Name:	FM 2181	**This project consisted of the widening of a two-lane TxDOT facility to a six-lane major arterial. The City contributed $242,000 to the design and environmental testing of this facility.**		
Limits:	West City Limits to IH-35E SBFR			
Impact Fee Class:	Major			
Ultimate Class:	Major			
Length (lf):	17,520			
Service Area(s):	Corinth			

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:			
Engineering/Survey/Testing:			$ 242,000
Previous City contribution			
Other			
ROW/Easement Acquisition:			$ -
		Impact Fee Project Cost TOTAL:	**$ 242,000**

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 Corinth.

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

City of Corinth

2016 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 12/21/2016

Project Information:		**Description:**	**Project No.**	**22**
Name:	Cliff Oak Dr	**This project consists of the reconstruction of a two-lane asphalt facility to a collector.**		
Limits:	Tower Ridge Dr to Garrison Rd			
Impact Fee Class:	Collector			
Ultimate Class:	Collector			
Length (lf):	2,615			
Service Area(s):	Corinth			

Roadway Construction Cost Projection

No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	5,956	cy	$ 9.25	$ 55,097
203	6" Lime Stabilization (with Lime @ 27#/sy)	11,622	sy	$ 3.50	$ 40,678
303	8" Concrete Pavement w/ 6" Curb	11,041	sy	$ 35.00	$ 386,439
403	4" Topsoil	4,068	sy	$ 3.75	$ 15,254
503	4' Concrete Sidewalk	20,920	sf	$ 5.00	$ 104,600
603	Concrete Driveway Approach	3	ea	$ 3,250.00	$ 9,750
				Paving Construction Cost Subtotal:	**$ 611,817**

Major Construction Component Allowances:**

	Item Description	Notes	Allowance	Item Cost
√	Prep ROW		5%	$ 30,591
√	Traffic Control	Construction Phase Traffic Control	7%	$ 42,827
√	Pavement Markings/Markers		3%	$ 18,355
√	Roadway Drainage	Standard Internal System	30%	$ 183,545
√	Illumination		5%	$ 30,591
	Special Drainage Structures	None Anticipated	0%	$ -
√	Water	Minor Adjustments	2%	$ 12,236
√	Sewer	Minor Adjustments	1%	$ 6,118
√	Basic Landscaping/Irrigation		2%	$ 12,236
	Other:		$0	$ -
**Allowances based on % of Paving Construction Cost Subtotal			**Allowance Subtotal:**	**$ 336,500**
			Paving and Allowance Subtotal:	**$ 948,317**
			Construction Contingency: 20%	$ 189,663
			Construction Cost TOTAL:	**$ 1,138,000**

Impact Fee Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction:		-	**$ 1,138,000**
Engineering/Survey/Testing:		18%	$ 204,840
Mobilization		6%	$ 68,280
Previous City contribution			
Other			
ROW/Easement Acquisition:	Existing Alignment	10%	$ 113,800
		Impact Fee Project Cost TOTAL:	**$ 1,525,000**

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 Corinth.

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

Appendix B – Roadway Impact Fee CIP Service Units of Supply

City of Corinth - 2016 Roadway Impact Fee Update

CIP Service Units of Supply

City of Corinth

12/22/2016

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	Lake Sharon Dr (1)	FM 2499 to Oakmont Dr	0.59	4	Greenway	0	100%	650	1,529	0	1,529	$ 5,135,760	$ 5,135,760
2	Lake Sharon Dr (2)	Blue Holley Dr to Parkridge Dr	0.90	4	Greenway	414	100%	650	2,334	372	1,962	$ 5,137,991	$ 5,137,991
3	Meadow Oak Dr	Parkridge Dr to Tower Ridge Dr	0.64	4	Greenway	227	100%	650	1,672	146	1,526	$ 3,485,426	$ 3,485,426
4	Dobbs Rd (1)	IH-35E NBFR to Carpenter Ln	0.14	4	Greenway	0	100%	650	364	0	364	$ 742,000	$ 742,000
5	Dobbs Rd (2)	Carpenter Ln to Quail Run Dr	0.22	4	Greenway	104	100%	650	581	23	558	$ 1,163,000	$ 1,163,000
6	Dobbs Rd (3)	Quail Run to 300' east of Corinth Pkwy	0.33	4	Greenway	521	100%	650	869	174	695	$ 453,628	$ 453,628
7	Church Dr	Post Oak Rd to IH-35E SBFR	0.90	2	Collector	96	100%	425	765	86	679	$ 2,700,213	$ 2,700,213
8	Walton Dr	North Corinth St to Shady Rest Ln	0.52	2	Collector	122	100%	425	439	63	376	$ 1,473,000	$ 1,473,000
9	Shady Shores Rd	Railroad to 205' East of Dalton Dr	1.22	2	Collector	427	50%	425	520	261	259	$ 3,473,000	$ 1,736,500
10	Parkridge Dr (1)	Lake Sharon Dr to Tori Oak Tr	0.09	2	Collector	346	100%	425	78	32	46	$ 765,541	$ 765,541
11	Parkridge Dr (2)	Warwick Dr to FM 2181	0.76	2	Collector	346	100%	425	646	262	383	$ 1,014,513	$ 1,014,513
12	Parkridge Dr (3)	FM 2181 to South City Limits	0.53	2	Collector	133	100%	425	447	70	377	$ 1,454,490	$ 1,454,490
13	Tower Ridge Dr (1)	Meadow Oaks Dr to 215' South of Brookview Dr	0.42	2	Collector	300	100%	425	356	126	230	$ 780,001	$ 780,001
14	Tower Ridge Dr (2)	215' South of Brookview Dr to Cliff Oaks Dr	0.43	2	Collector	300	100%	425	365	129	236	$ 1,317,000	$ 1,317,000
15	Garrison St	IH 35E SBFR to Cliff Oak Dr	0.33	2	Collector	215	100%	425	283	71	211	$ 878,000	$ 878,000
16	Quail Run Dr	Dobbs Rd to IH-35E NBFR	0.37	2	Collector	511	100%	425	312	187	124	$ 1,127,000	$ 1,127,000
17	Post Oak Rd	Robinson Rd to Lake Sharon Dr	0.89	4	Greenway (1/2)	483	100%	650	2,327	432	1,894	$ 2,475,000	$ 2,475,000
18	Sharon Dr	Church Dr to Lake Sharon Dr	0.84	2	Collector	0	100%	425	717	0	717	$ 2,621,000	$ 2,621,000
19	S. Corinth St	IH-35E SBFR to Meadow Oak Dr	0.41	4	Greenway	533	100%	650	1,056	217	840	$ 2,137,686	$ 2,137,686
20	Shady Rest Ln	Fritz Ln to Walton Dr	0.33	2	Collector	278	100%	425	277	91	186	$ 1,544,049	$ 1,544,049
21	FM 2181	West City Limits to IH-35E SBFR	3.32	6	Major	2,283	100%	700	13,936	7,575	6,362	$ 242,000	$ 242,000
22	Cliff Oak Dr	Tower Ridge Dr to Garrison Rd	0.50	2	Collector	307	100%	425	421	152	269	$ 1,525,000	$ 1,525,000
SUBTOTAL									**30,293**	**10,469**	**19,824**	**$ 41,645,298**	**$ 39,908,798**
												2016 Roadway Impact Fee Update	**$ 36,000**
												TOTAL COST IN SERVICE AREA	**$ 39,944,798**

Appendix C – Existing Roadway Facilities

City of Corinth - 2016 Roadway Impact Fee Update

Existing Roadway Facilities Inventory

City of Corinth - Service Area

ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST LANES		EXIST SECT	TYPE	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
					NB/EB	SB/WB									
CHURCH	Post Oak	IH 35	4753.33	0.90	1	1	3U	Collector	96	50%	425	383	43	339	
CLIFF OAKS	Toweridge Dr	S Garrison St	2614.80	0.50	1	1	2U	Collector	307	100%	350	347	152	195	
CORINTH	Dobbs	Dobbs	1765.36	0.33	2	2	4D	Minor Arterial	521	50%	650	435	87	348	
CORINTH	Lake Sharon	IH 35	2143.22	0.41	2	2	4D	Minor Arterial	533	100%	650	1,055	216	839	
CORINTH	IH 35	Dobbs	8084.53	1.53	2	2	4D	Minor Arterial	284	100%	650	3,981	435	3,546	
CORINTH	Bridge	E of IH 35	404.69	0.08	4	4	4U	Minor Arterial	2368	100%	550	337	181	156	
CORINTH	W of IH 35	Bridge	385.89	0.07	4	4	4U	Minor Arterial	533	50%	550	161	19	141	
CORINTH	IH 35	Shady Shores	3465.13	0.66	1	1	3U	Collector	546	100%	425	558	359	199	
CREEKSIDE	Oakmont Dr	Post Oak Dr	1920.17	0.36	1	1	2U	Collector	0	100%	350	255	0	255	
DOBBS	IH 35	Corinth	2250.14	0.43	1	1	2U	Minor Arterial	104	50%	350	149	22	127	
DOBBS	Kenilworth Dr	City Limits	873.46	0.17	1	1	2U	Minor Arterial	379	100%	350	116	63	53	
DOBBS	Corinth	Kenilworth Dr	309.19	0.06	1	1	3U	Minor Arterial	379	100%	425	50	22	28	
FM 2181	Village Pkwy	Oakmont	1473.05	0.28	3	3	6D	Major Arterial	2283	100%	700	1,172	637	535	
FM 2181	Oakmont	Post Oak	4842.40	0.92	3	3	6D	Major Arterial	2283	100%	700	3,852	2,094	1,758	
FM 2181	Parkridge	S Garrison St	4375.80	0.83	3	3	6D	Major Arterial	2283	100%	700	3,481	1,892	1,589	
FM 2181	Post Oak	Parkridge	3955.27	0.75	3	3	6D	Major Arterial	2033	100%	700	3,146	1,523	1,623	
FM 2181	City Limit	Village Pkwy	621.11	0.12	3	3	6D	Major Arterial	1846	100%	700	494	217	277	
FM 2181	S Garrison St	IH 35	2253.10	0.43	3	3	6D	Major Arterial	1711	100%	700	1,792	730	1,062	
FM 2499	FM 2181	City Limit	4079.23	0.77	2	2	4D	Major Arterial	0	100%	650	2,009	0	2,009	
GARRISON	Cliff Oaks Dr	S Garrison St	1754.22	0.33	1	1	2U	Collector	215	100%	350	233	71	161	
GARRISON	FM 2181	Cliff Oaks Dr	863.56	0.16	1	1	2U	Collector	215	100%	350	114	35	79	
LAKE SHARON	Blue Holley Dr	Post Oak Dr	877.71	0.17	2	2	4D	Minor Arterial	330	100%	650	432	55	377	
LAKE SHARON	Post Oak Dr	Silvermeadow Ln	3860.07	0.73	2	2	4D	Minor Arterial	414	100%	650	1,901	303	1,598	
LAKE SHARON	Corinth	TowerRidge Dr	1771.38	0.34	2	2	4D	Minor Arterial	495	100%	650	872	166	706	
LAKE SHARON	Silvermeadow Ln	Corinth	1621.67	0.31	2	2	4D	Minor Arterial	495	50%	650	399	76	323	
LAKE SHARON	Oakmont Dr	Blue Holly Dr	1363.57	0.26	2	2	4D	Minor Arterial	330	100%	650	671	85	586	
MEADOW OAKS	Towerridge Dr	IH 35	412.32	0.08	1	1	2U	Minor Arterial	226	100%	350	55	18	37	
MEADOWVIEW	Post Oak Dr	Parkridge Dr	4108.59	0.78	1	1	2U	Collector	227	100%	350	545	177	368	
MEADOWVIEW	Oakmont	Post Oak Dr	4200.35	0.80	1	1	2U	Collector	227	100%	350	557	181	376	
MEADOWVIEW	Tower Ridge Dr	IH 35	2617.81	0.50	1	1	2U	Collector	227	100%	350	347	113	235	
MEADOWVIEW	Parkridge Dr	Tower Ridge Dr	2619.68	0.50	1	1	2U	Collector	227	100%	350	347	113	235	
OAKMONT	Lake Sharon Dr	Robinson Rd	4789.67	0.91	1	1	2U	Collector	526	100%	350	635	477	158	
OAKMONT	Meadowview Dr	Lake Sharon Dr	2519.19	0.48	1	1	2U	Collector	526	100%	350	334	251	83	
OAKMONT	FM 2181	Meadowview Dr	1511.45	0.29	1	1	2U	Collector	526	100%	350	200	150	50	
PARKRIDGE	Tori Oak Trail	Lake Sharon	485.63	0.09	1	1	3U	Collector	346	100%	425	78	32	46	
PARKRIDGE	FM 2181	Meadowview Dr	2288.61	0.43	1	1	3U	Collector	346	100%	425	368	150	219	
PARKRIDGE	Meadowview Dr	Warwick Dr	1719.38	0.33	1	1	3U	Collector	346	100%	425	277	113	164	
PARKRIDGE	City Limits	FM 2181	2773.58	0.53	1	1	3U	Collector	133	100%	425	447	70	376	
PARKRIDGE	Warwick Dr	Tori Oak Trail	580.62	0.11	1	1	3U	Collector	133	100%	425	93	15	79	
PECAN CREEK	Post Oak Dr	Post Oak Dr	4711.05	0.89	1	1	3U	Collector	100	100%	425	758	89	669	
POST OAK	Church Dr	Robinson Rd	342.50	0.06	1	1	3U	Minor Arterial	483	100%	425	55	31	24	
POST OAK	Lake Sharon Dr	South of Creekside Dr	1544.92	0.29	1	1	2U	Minor Arterial	483	100%	350	205	141	63	
POST OAK	South of Creekside Dr	Church Dr	2836.60	0.54	1	1	2U	Minor Arterial	483	100%	350	376	259	117	
POST OAK	FM 2181	Lake Sharon	5168.68	0.98	2	2	4D	Minor Arterial	418	100%	650	2,545	409	2,136	
POST OAK	IH 35	City Limits	672.84	0.13	2	2	4D	Minor Arterial	1086	100%	650	331	138	193	
POST OAK			142.76	0.03	2	2	4D	Minor Arterial	1086	100%	650	70	29	41	
POST OAK			197.82	0.04	2	2	4D	Minor Arterial	1086	100%	650	97	41	57	
POST OAK	Robinson Rd	IH 35	3114.21	0.59	2	2	4D	Minor Arterial	1086	100%	650	1,534	640	893	
QUAIL RUN	IH 35	Dobbs	1933.66	0.37	1	1	2U	Collector	511	100%	350	256	187	69	
ROBINSON			99.74	0.02	1	1	2U	Minor Arterial	425	100%	350	13	8	5	
ROBINSON	City Limit	Post Oak Dr	4285.19	0.81	2	2	4D	Minor Arterial	425	100%	650	2,110	345	1,765	
SHADY REST	Walton Dr	Fritz Ln	1719.99	0.33	1	1	3U	Collector	278	100%	425	277	91	186	
SHADY REST	Corinth	Walton Dr	372.78	0.07	1	1	3U	Collector	278	100%	425	60	20	40	
SHADY SHORES	City Limits	City Limits	6454.90	1.22	1	1	2U	Collector	427	100%	350	856	522	334	
SILVER MEADOW	Silvermeadow Ln	Corinth	2683.59	0.51	1	1	2U-R	Collector	153	100%	150	152	78	74	
TOWER RIDGE (1)	215' S of Brookview Dr	Meadows Oak Dr	2210.85	0.42	1	1	3U	Collector	300	100%	425	356	126	230	
TOWER RIDGE (2)	Meadowview Dr	Brookview Dr	826.92	0.16	1	1	2U	Collector	300	100%	350	110	47	63	
TOWER RIDGE (2)	Cliff Oaks Dr	Meadowview Dr	1440.05	0.27	1	1	2U	Collector	300	100%	350	191	82	109	
WALTON	N Corinth St	Shady Rest Ln	2728.79	0.52	1	1	2U	Collector	122	100%	350	362	63	299	
SUBTOTAL			**156,224**	**30**								**43,393**	**14,688**	**28,704**	**0**

PUBLIC HEARING/BUSINESS AGENDA ITEM #4 and 4a.

Planning and Zoning Commission and Capital Improvements Advisory Committee
Regular Session Meeting
January 23, 2017

AGENDA ITEM

4. TO HEAR PUBLIC OPINION REGARDING LOT 1, BLOCK 1, OXFORD AT LAKE VIEW ADDITION REPLAT, BEING A TOTAL OF 8.826 ACRES LEGALLY DESCRIBED AS LOT 1R, BLOCK 1, TALLAL ADDITION, IN THE H.H. SWISHER SURVEY, ABSTRACT NO. 1220, CITY OF CORINTH, DENTON COUNTY, TEXAS. (THIS PROPERTY IS LOCATED ON THE NORTH SIDE OF F.M. 2181, AND THE EAST SIDE OF S. GARRISON RD.)

4a. Consider and act on Lot 1, Block 1 of the Oxford at Lake View Addition Replat, being a total of 8.826 acres legally described as Lot 1R, Block 1, Tallal Addition, in the H.H. Swisher Survey, Abstract No. 1220, City of Corinth, Denton County, Texas. (This property is located on the north side of F.M. 2181, and the east side of S. Garrison Rd.)

APPROVAL PROCESS

The Planning and Zoning Commission shall consider and act on this item. If the replat and the associated construction plans meet the requirements of the City of Corinth, Denton County and the State of Texas, the replat should be approved.

The Replat is a final action item for the Planning and Zoning Commission.

AGENDA ITEM DESCRIPTION

Lot 1R, Block 1 of the Tallal Addition is being replatted to create proposed Lot 1, Block 1 of the Oxford at Lake View Addition. The property was rezoned PD (MX-R) on September 15, 2016, and the applicant intends to develop a vertical, mixed-use development with multi-family and office/retail (commercial) on the ground floor of two of the multi-family buildings.

The proposed 240 unit multi-family, and approximately 7,700 sq. ft. of retail or commercial mixed-use development includes (5) five, 4-story buildings with a unit mix of 128 (1 bedroom/1 bath), 96 (2-bedroom/2 bath), and 16 (3-bedroom/2 bath) units. The commercial square footage is proposed to be on the first floor of Buildings 3 and 4; the buildings nearest the entrance off of F.M. 2181.

Amenities for the vertical, mixed-use development include a clubhouse, outdoor pool and spa, 5’ hardscape trail around a retention pond, outdoor seating area and gathering area near the office/retail (commercial) uses, a 9,343 sq. ft. open space area and street furniture. The street furniture includes a total of (6) benches and (6) trash receptacles (2 benches/2 trash receptacles around the open space, 2 around the retention pond, and 2 around the office/retail areas). Landscaping also includes street trees around the office/retail areas, enhanced landscaping around the retail/commercial buildings and entrance off of S. Garrison St., as well as a tree-lined entrance along F.M. 2181.

Water will be detained in the proposed retention pond in the northeast corner of the property and will also serve as an amenity for the mixed-use development.

The applicant is seeking approval of Lot 1, Block 1, Oxford at Lake View Addition Replat at this time.

FINANCIAL SUMMARY

Source of Funding: No funding is required.

RECOMMENDATION

Staff recommends **Approval** of the Replat, subject to revised and approved construction plans.

ATTACHMENTS/SUPPORTING DOCUMENTS

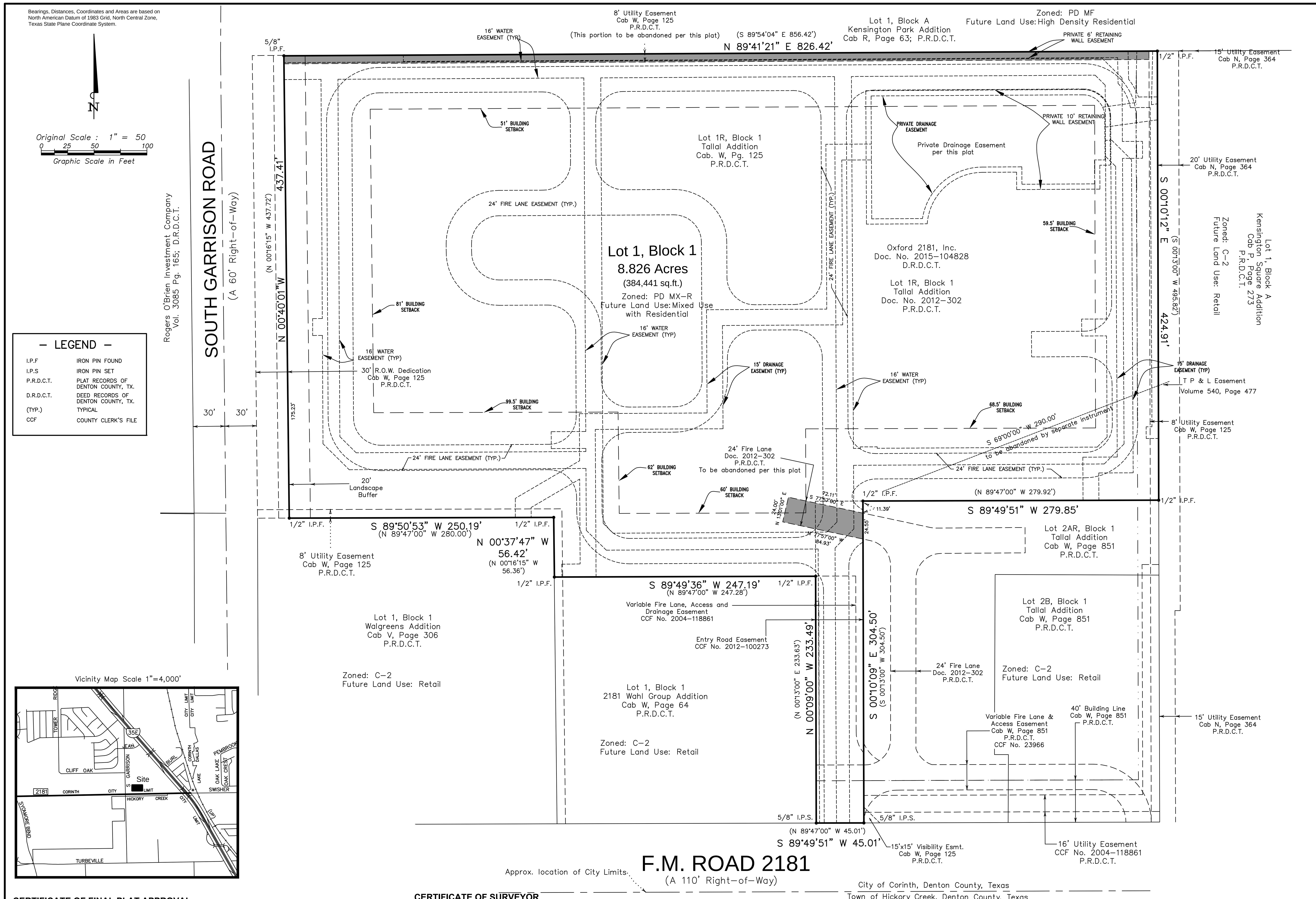
Replat

Submitted By: Lori Levy, AICP
Department: Planning and Development

Finance Review: Yes___ NA _X_

Legal Review: Yes ___ NA _X_

Director Review and Approval:



OWNER'S ACKNOWLEDGEMENT AND DEDICATION

STATE OF TEXAS §
COUNTY OF DENTON §

WE, Oxford 2181, the undersigned, owners of the land shown on this plat within the area described by metes and bounds as follows:

Being that certain Lot 1R, Block 1, Tallal Addition, Denton County, Texas, as conveyed to Oxford 2181, Inc., by the deed recorded as Document No. 2015-104828 Deed Records, Denton County, Texas (D.R.,D.Co.,Tx.),being all that certain lot, tract or parcel of land situated in the H.H. Swisher Survey, Abstract No. 1220, City of Corinth, Denton County, Texas, designated as Lot 1R, Block 1, Tallal Addition to the City of Corinth as shown on that map filed as Document No. 2012-302, Plat Records, Denton County, Texas, (P.R.D.Co.,Tx.) and being more particularly described as follows:

BEGINNING at a 5/8 inch iron pin found for the common Northwest corner of said Lot 1R and Southwest corner of Lot 1, Block A, Kensington Park Addition as filed in Cabinet R, Page 63, P.R.D.Co.,Tx. said point being in the East Right of Way (ROW) line of Garrison Road;

THENCE with the common North line of said Lot 1R and South line of said Lot 1, North 89 degrees 41 minutes 21 seconds East a distance of 826.42 feet to a 1/2-inch iron pin found for the common Northeast corner of said Lot 1R and Northwest corner of Lot 1, Block A, Kensington Square Addition, as filed in Cabinet P, Page 273, P.R.D.Co.,Tx;

THENCE with the common East line of said Lot 1R and West line of Lot 1, South 00 degrees 10 minutes 12 seconds East, a distance of 424.91 feet to a 1/2-inch iron pin found for the common most easterly Southeast corner of said Lot 1R, and Northeast corner of Lot 2AR, Block 1, Tallal Addition, as filed in Cabinet W, Page 851, P.R.D.Co.,Tx;

THENCE with the common South line of said Lot 1R and North line of said Lot 2AR, South 89 degrees 49 minutes 51 seconds West, a distance of 279.85 feet to a 1/2-inch iron pin found for a common Interior Ell corner of said Lot 1R and Northwest corner of said Lot 2AR;

THENCE with the common East line of said Lot 1R and West line of said Lot 2AR, South 00 degrees 10 minutes 09 seconds East, a distance of 304.50 feet to a point for the common most southerly Southeast corner of said Lot 1R and Southwest corner of said Lot 2AR, in the North ROW line of FM Road 2181;

THENCE with the common South line of said Lot 1R and said North ROW line, South 89 degrees 49 minutes 51 seconds West a distance of 45.01 feet to a point for the common most southerly Southwest corner of said Lot 1R and Southeast corner of Lot 1, Block 1, 2181 Wahl Group Addition, as filed in Cabinet W, Page 64, P.R.D.Co.,Tx;

THENCE with the common West line of said Lot 1R, and East line of said Lot 1, North 00 degrees 09 minutes 00 seconds West, a distance of 233.49 feet to a 1/2-inch iron pin found for the ell corner said Lot 1R and Northeast corner of said Lot 1,

THENCE with the common South line of said Lot 1R and North line of said Lot 1, South 89 degrees 49 minutes 36 seconds West a distance of 247.19 feet to a 1/2-inch iron pin found for the common most southerly Southwest corner said Lot 1R and Northeast corner of said Lot 1, in the East line of Lot 1 Block 1, Walgreens Addition, as filed in Cabinet V, Page 306;

THENCE with the common West line of said Lot 1R and East line of said Lot 1, North 00 degrees 37 minutes 47 seconds West a distance of 56.42 feet to a 1/2-inch iron pin found for a common ell corner said Lot 1R and Northeast corner of said Lot 1;

THENCE with the common South line of said Lot 1R and North line of said Lot 1, South 89 degrees 50 minutes 53 seconds West a distance of 250.19 feet to a 1/2-inch iron pin found for the common most westerly Southwest corner said Lot 1R and Northwest corner of said Lot 1, in the East ROW line of Garrison Road;

THENCE, with the common West line of said Lot 1R and said East ROW line, North 00 degrees 40 minutes 01 seconds West a distance of 437.41 feet to the POINT OF BEGINNING, containing in all some 8.826 acres of land, more or less

and designated herein as Lot 1, Block 1, Oxford at Lake View, a subdivision to the City of Corinth, Texas and whose name is subscribed hereto, hereby dedicate to the public use forever by fee simple title, free and clear of all liens and encumbrances, all streets, thoroughfares, alleys, parks and trails, and to the public use forever easements for sidewalks, storm drainage facilities, floodways, water mains, wastewater mains and other utilities, and any other property necessary to serve the plat and to implement the requirements of the platting ordinances, rules and regulations thereon shown for the purpose and consideration therein expressed.

Owner:

____
ANTHONY SWARTZ President Date

STATE OF TEXAS §
COUNTY OF ____________________ §

BEFORE ME, the undersigned authority in and for ____________________County, Texas on this day personally appeared ANTHONY SWARTZ, known to me to be the person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that he/she is _________________________________,and that he/she is authorized to execute the foregoing instrument for the purposes and considerations therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the ___________ day of __________________________, 20__.

Notary Public, State of Texas Notary name (printed)

My commission expires:_____________________

LIENHOLDER'S RATIFICATION OF PLAT DEDICATION

STATE OF TEXAS §
COUNTY OF ____________________ §

WHEREAS, ______________________________ acting by and through the undersigned, its duly authorized agent, is the lienholder of the property described hereon, does hereby ratify all dedications and provisions of this plat as shown.

LIENHOLDER:____________________________________ DATE______________________

STATE OF TEXAS §
COUNTY OF ______________________ §

BEFORE ME, the undersigned authority in and for ____________________County, Texas, on this day personally appeared ________________________, known to me to be the person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that he/she is _________________________________,and that he/she is authorized to execute the foregoing instrument for the purposes and considerations therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the ___________ day of __________________________, 20__.

Notary Public, State of Texas Notary name (printed)

My commission expires:_____________________

CERTIFICATE OF FINAL PLAT APPROVAL

Approved

____
Chairman Planning and Zoning Commission
City of Corinth, Texas

____
Date

The undersigned, the City Secretary of the City of Corinth, Texas hereby certifies that the forgoing Final Plat of the **OXFORD at LAKE VIEW ADDITION** to the City of Corinth was submitted to the Planning & Zoning Commission on the ___________day of ______________________, 20__, and the Commission, by formal action, then and there accepted the Final Plat and hereby authorizes the developer to proceed with construction of public works improvements and infrastructure as indicated on the accompanying construction plans and said Commission further authorizes the Chairman of the Planning and Zoning Commission to note the acceptance thereof by signing his\her name as hereinabove subscribed.

WITNESS BY HAND this the ________day of _________________________, 20__.

____
City Secretary
City of Corinth, Texas

CERTIFICATE OF SURVEYOR

STATE OF TEXAS §
COUNTY OF TARRANT §

I the undersigned, a Registered Professional Surveyor in the State of Texas, hereby certify that this plat is true and correct and was prepared from an actual survey of the property made under my supervision on the ground.

PRELIMINARY
THIS DOCUMENT SHALL NOT TO BE RECORDED FOR ANY PURPOSE AND SHOULD NOT VIEWED OR RELIED UPON AS A FINAL SURVEY

George R. Hill R.P.L.S No. 6022
Registered Professional Surveyor

____
Date

STATE OF TEXAS §
COUNTY OF TARRANT §

BEFORE ME, the undersigned authority, on this day personally appeared, George R. Hill known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and considerations therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the __________ day of ________________________, 20__.

____
Notary Public, _____________State of Texas Notary name (printed)
My commission expires:___________________

OWNER'S STATEMENT FOR FIRE LANE EASEMENT

The undersigned, covenants and agrees that he (they) shall construct the fire lane easements, as dedicated and shown hereon, a fire lane in accordance with the Fire Code and City standards and that he (they) shall maintain the same in a state of good repair at all times in accordance with City Ordinance. The fire lane shall be kept free of obstructions in accordance with City ordinance. The maintenance of pavement in accordance to City Ordinance of the fire lane easements is the responsibility of the owner. The owner shall identify the fire lane in accordance with City Ordinance. The Chief of Police or his/her duly authorized representative is hereby duly authorized to cause such fire lane and utility easements to be maintained free and unobstructed at all times for fire department and emergency use.

Owner (Printed Name): ______________________________

Owner (Signature): ________________________________

Date: ___________________

OWNERS:
Oxford 2181, Inc
Tony Swartz, President
8411 Preston Road, Suite 711
Dallas, TX 75225
Tel: 214-754-0577
tony.swartz@oxfordenterprisesinc.com

SURVEYOR:
George R. Hill
Sempco Surveying, Inc.
Firm Reg. #10094500
3208 So. Main Street
Fort Worth, TX 76110
Tel: 817-926-7876
george@sempcosurveying.com

ENGINEER:
Michael Thomas
MJ Thomas Engineering, LLC.
Firm Reg # F-9435
3973 W Vickery Blvd, Ste 103
Fort Worth, TX 76107
Tel: 817-732-9839
mickeyT@mjthomaseng.com

Project No. 10389

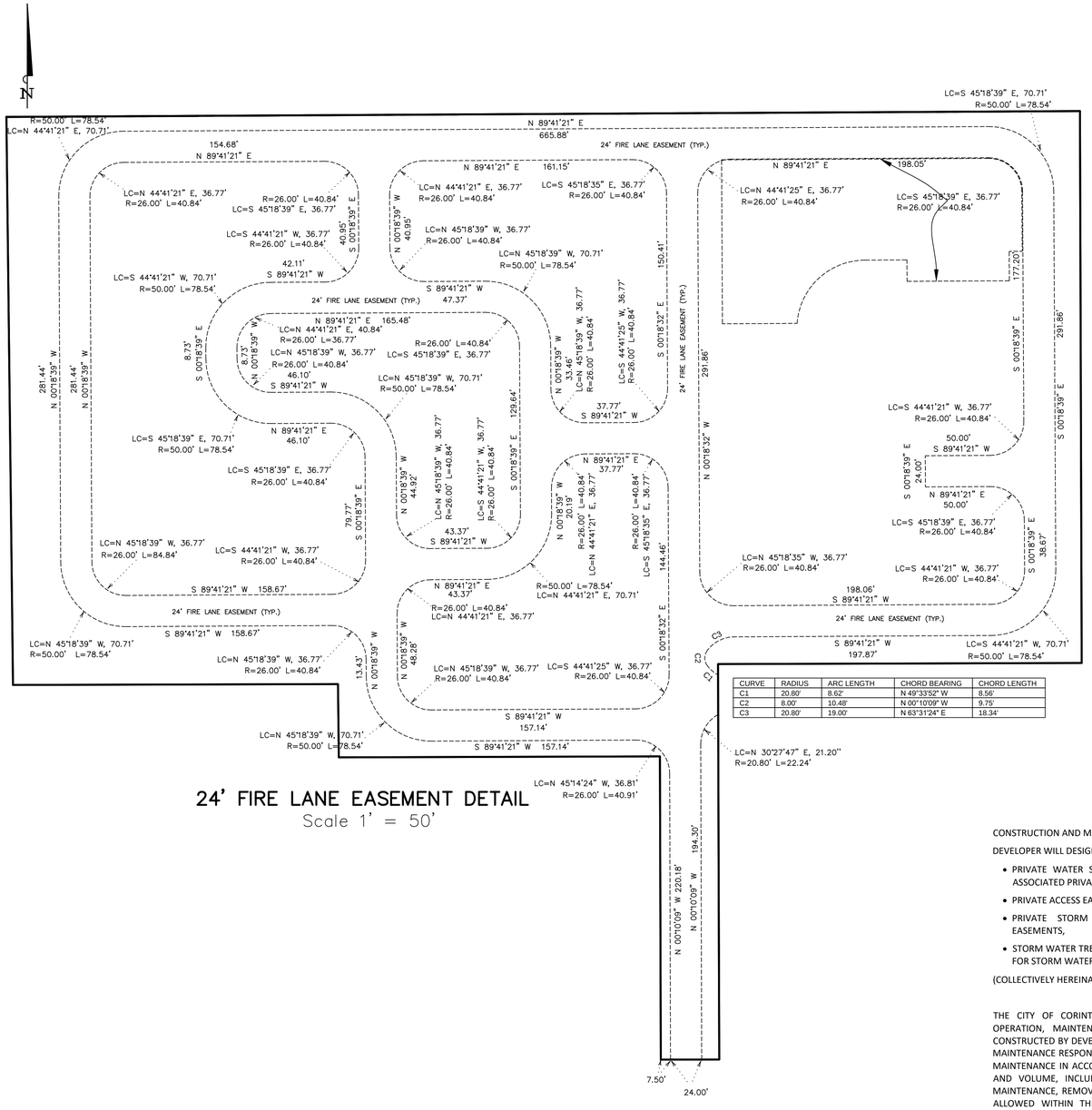
Sempco Surveying Inc.
3208 S. MAIN ST. FORT WORTH, TX 76110-4278
TEL:(817)926-7876 FAX:(817)926-7878
GPS-SURVEYING-MAPPING-PLANNING-CONSULTANTS
Website:Sempcosurveying.com Firm Registration Number 10094500

REPLAT
LOT 1, BLOCK 1
OXFORD at LAKE VIEW ADDITION

BEING a replat of Lot 1R, Block 1, Tallal Addition, an addition to the City of Corinth, Denton County, Texas, according to the Plat recorded in Clerk's File No. 2012-302 P.R.,D.Co.,Tx.

Date: January 18, 2017

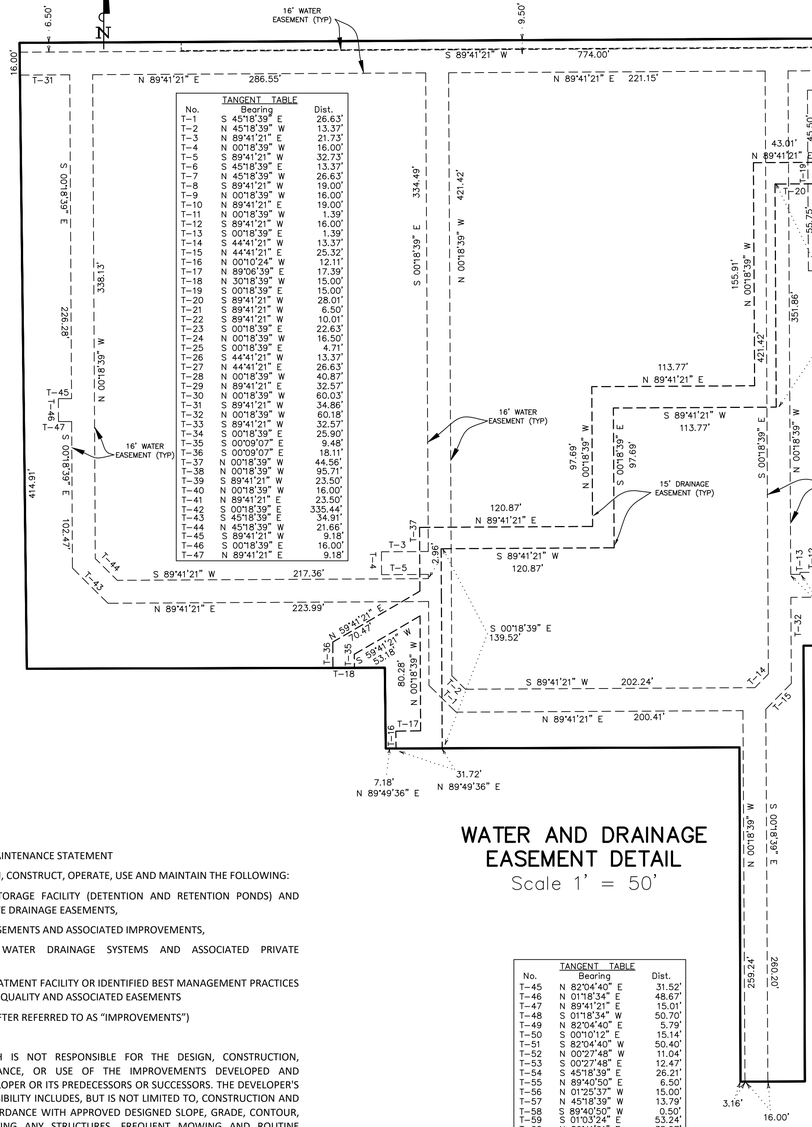
THIS PLAT RECORDED CLERKS FILE______________



CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	20.80'	8.62'	N 49°33'52" W	8.56'
C2	8.00'	10.48'	N 00°10'09" W	9.75'
C3	20.80'	19.00'	N 63°31'24" E	18.34'

LC=N 30°27'47" E, 21.20'
R=20.80' L=22.24'

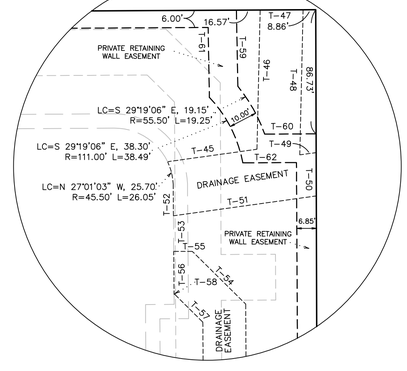
24' FIRE LANE EASEMENT DETAIL
Scale 1' = 50'



TANGENT TABLE		
No.	Bearing	Dist.
T-1	S 45°18'39" E	26.63'
T-2	N 45°18'39" W	13.37'
T-3	N 89°41'21" E	21.73'
T-4	N 00°18'39" W	16.00'
T-5	S 89°41'21" W	32.73'
T-6	S 45°18'39" E	13.37'
T-7	N 45°18'39" W	26.63'
T-8	S 89°41'21" W	19.00'
T-9	N 00°18'39" W	16.00'
T-10	N 89°41'21" E	19.00'
T-11	N 00°18'39" W	1.39'
T-12	S 89°41'21" W	16.00'
T-13	S 00°18'39" E	1.39'
T-14	S 44°41'21" W	13.37'
T-15	N 44°41'21" E	25.32'
T-16	N 00°10'24" W	12.11'
T-17	N 89°06'39" E	17.39'
T-18	N 30°18'39" W	15.00'
T-19	S 00°18'39" E	15.00'
T-20	S 89°41'21" W	28.01'
T-21	S 89°41'21" W	6.50'
T-22	S 89°41'21" W	10.01'
T-23	S 00°18'39" E	22.63'
T-24	N 00°18'39" W	16.50'
T-25	S 00°18'39" E	4.71'
T-26	S 44°41'21" W	13.37'
T-27	N 44°41'21" E	26.63'
T-28	N 00°18'39" W	40.87'
T-29	N 89°41'21" E	32.57'
T-30	N 00°18'39" W	60.03'
T-31	S 89°41'21" W	34.86'
T-32	N 00°18'39" W	60.18'
T-33	S 89°41'21" W	32.57'
T-34	S 00°18'39" E	25.90'
T-35	S 00°09'07" E	9.48'
T-36	S 00°09'07" E	18.11'
T-37	N 00°18'39" W	44.56'
T-38	N 00°18'39" W	95.71'
T-39	S 89°41'21" W	23.50'
T-40	N 00°18'39" W	16.00'
T-41	N 89°41'21" E	23.50'
T-42	S 00°18'39" E	335.44'
T-43	S 45°18'39" E	34.91'
T-44	N 45°18'39" W	21.66'
T-45	S 89°41'21" W	9.18'
T-46	S 00°18'39" E	16.00'
T-47	N 89°41'21" E	9.18'

WATER AND DRAINAGE EASEMENT DETAIL
Scale 1' = 50'

TANGENT TABLE		
No.	Bearing	Dist.
T-45	N 82°04'40" E	31.52'
T-46	N 01°18'34" E	48.67'
T-47	N 89°41'21" E	15.01'
T-48	S 01°18'34" W	50.70'
T-49	N 82°04'40" E	5.79'
T-50	S 00°10'12" E	15.14'
T-51	S 82°04'40" W	50.40'
T-52	N 00°27'48" W	11.04'
T-53	S 00°27'48" E	12.47'
T-54	S 45°18'39" E	26.21'
T-55	N 89°40'50" E	6.50'
T-56	N 01°25'37" W	15.00'
T-57	N 45°18'39" W	13.79'
T-58	S 89°40'50" W	0.50'
T-59	S 01°03'24" E	53.24'
T-60	N 89°41'21" E	35.97'
T-61	S 01°03'24" E	24.41'
T-62	N 89°41'21" E	18.73'
T-63	S 00°18'39" E	302.10'
T-64	N 89°51'48" W	5.50'
T-65	S 00°18'39" E	11.08'
T-66	N 89°41'21" E	11.63'
T-67	S 00°10'56" E	58.40'



WALL AND DRAINAGE EASEMENT DETAIL
Not to Scale

CONSTRUCTION AND MAINTENANCE STATEMENT

DEVELOPER WILL DESIGN, CONSTRUCT, OPERATE, USE AND MAINTAIN THE FOLLOWING:

- PRIVATE WATER STORAGE FACILITY (DETENTION AND RETENTION PONDS) AND ASSOCIATED PRIVATE DRAINAGE EASEMENTS,
- PRIVATE ACCESS EASEMENTS AND ASSOCIATED IMPROVEMENTS,
- PRIVATE STORM WATER DRAINAGE SYSTEMS AND ASSOCIATED PRIVATE EASEMENTS,
- STORM WATER TREATMENT FACILITY OR IDENTIFIED BEST MANAGEMENT PRACTICES FOR STORM WATER QUALITY AND ASSOCIATED EASEMENTS

(COLLECTIVELY HEREINAFTER REFERRED TO AS "IMPROVEMENTS")

THE CITY OF CORINTH IS NOT RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, OR USE OF THE IMPROVEMENTS DEVELOPED AND CONSTRUCTED BY DEVELOPER OR ITS PREDECESSORS OR SUCCESSORS. THE DEVELOPER'S MAINTENANCE RESPONSIBILITY INCLUDES, BUT IS NOT LIMITED TO, CONSTRUCTION AND MAINTENANCE IN ACCORDANCE WITH APPROVED DESIGNED SLOPE, GRADE, CONTOUR, AND VOLUME, INCLUDING ANY STRUCTURES, FREQUENT MOWING AND ROUTINE MAINTENANCE, REMOVAL OF DEBRIS, AND REPAIR OF EROSION. NO FACILITIES WILL BE ALLOWED WITHIN THE IMPROVEMENTS AREAS WITHOUT THE ADVANCE WRITTEN PERMISSION OF THE DIRECTOR OF PUBLIC WORKS.

DEVELOPER WILL INDEMNIFY, DEFEND, AN HOLD HARMLESS THE CITY OF CORINTH, ITS OFFICERS, EMPLOYEES, AND AGENTS FROM ANY DIRECT OR INDIRECT LOSS, DAMAGE, LIABILITY, OR EXPENSE AND ATTORNEY'S FEES FOR ANY AND ALL DAMAGES, ACCIDENTS, CASUALTIES, OCCURRENCES, OR CLAIMS WHICH ARISE OUT OF OR RESULT FROM THE DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, CONDITION OR USE OF THE IMPROVEMENTS, INCLUDING ANY NON-PERFORMANCE OF THE FOREGOING. DEVELOPER WILL REQUIRE ANY SUCCESSOR IN INTEREST OF ALL OR PART OF THE PROPERTY, INCLUDING ANY PROPERTY OWNERS ASSOCIATION, TO ACCEPT FULL RESPONSIBILITY AND LIABILITY FOR THE IMPROVEMENTS. THE COVENANTS SHALL INCLUDE THE FULL OBLIGATION AND RESPONSIBILITY OF MAINTAINING AND OPERATING SAID IMPROVEMENTS. IF THE PROPERTY IS FURTHER SUBDIVIDED, DEVELOPER SHALL IMPOSE THESE COVENANTS UPON ALL LOTS ABUTTING, ADJACENT OR SERVED BY THE IMPROVEMENTS. ALL OF THE ABOVE OBLIGATIONS SHALL BE COVENANTS RUNNING WITH THE LAND. ACCESS TO THE IMPROVEMENTS IS GRANTED TO THE CITY FOR ANY PURPOSE RELATED TO THE EXERCISE OF GOVERNMENTAL SERVICES OR FUNCTIONS, INCLUDING BUT NOT LIMITED TO, FIRE AND POLICE PROTECTION, INSPECTION AND CODE ENFORCEMENT.

DEVELOPER/OWNER SIGNATURE

By:_____

Its: _____

REPLAT
LOT 1, BLOCK 1
OXFORD at LAKE VIEW ADDITION

BEING a replat of Lot 1R, Block 1, Tallal Addition, an addition to the City of Corinth, Denton County, Texas, according to the Plat recorded in Clerk's File No. 2012-302 P.R.,D.Co.,Tx.

Date: January 18, 2017

Project No. 10389

Sempco Surveying Inc.
3208 S. MAIN ST. FORT WORTH, TX 76110-4278
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GPS-SURVEYING-MAPPING-PLANNING-CONSULTANTS
Website:Sempcosurveying.com Firm Registration Number 10094500

PUBLIC HEARING / BUSINESS ITEM #5 & 5a

Planning and Zoning Commission and Capital Improvements Advisory Committee
Regular Session Meeting

January 23, 2017

AGENDA ITEM

5. PUBLIC HEARING: To hear public opinion regarding a request from the property owner and applicant, Ramona Osburn, Senior Vice President at Texas Health Resources Behavioral Health, for a zoning change through an ordinance amending the Comprehensive Zoning Ordinance being a part of the Unified Development Code, Ordinance No. 13-05-02-08, as amended, and a portion of Planned Development Ordinance No. 99-03-18-05, as amended, by amending the zoning to Planned Development C-2 Commercial District and adding "Hospital" as a Permitted Use on Lot 1, Block A, Corinth Medical Center Addition being 5.00 acres in the City of Corinth, Denton County, Texas.

5a. BUSINESS: Consider and act on an ordinance amending the Comprehensive Zoning Ordinance being a part of the Unified Development Code, Ordinance No. 13-05-02-08, as amended, and a portion of Planned Development Ordinance No. 99-03-18-05, as amended, by amending the zoning to Planned Development C-2 Commercial District and adding "Hospital" as a Permitted Use on Lot 1, Block A, Corinth Medical Center Addition being 5.00 acres in the City of Corinth, Denton County, Texas.

APPROVAL PROCESS

A recommendation from the Planning and Zoning Commission regarding the site plan will be presented to City Council for final approval.

The Planning and Zoning Commission recommendation is anticipated to go before City Council on November 17, 2016 during the regular session meeting.

NOTIFICATION TO PUBLIC

Notification by sign placement, newspaper or written notice is notice is not required for the site plan process related to building permits or on-site construction / development.

AGENDA ITEM DESCRIPTION

With the approval of the Unified Development Code in May 2013 the Business Overlay District which included the Town Center Sub-district was eliminated from the City's Comprehensive Zoning Ordinance. At that time the Long Term Acute Care Hospital at 3305 Corinth Parkway was a legal non-conforming use. In 2016 after the LTAC Hospital vacated the premises, Texas Health Resources purchased the facility.

A Letter of Intent from Texas Health Resources describes re-opening the facility to provide the care for patients in need of psychiatric and substance abuse needs within both Denton and Collin counties. The hospital intends to employ board certified physicians, registered nurses who specialize in psychiatric services, licensed professional counselors and social workers, as well as auxiliary staff including mental health associates, food

services and pharmaceutical to meet needs of their patients. In addition, Texas Health Behavioral Health Hospital Corinth will serve the students of NCTC, TWU and UNT for clinical rotation whereby nursing, counselor and social work students achieve required experience through direct patient care opportunities within the facility.

Texas Health Resources submitted a building permit application to renovate the existing structure located on the north side of Corinth Parkway across from City Hall. In the process of reviewing applications for building permits it is normal procedure to verify that the zoning is in place for the planned tenants is appropriate. During those discussions between the building official and planners and attorney, it was realized that the current zoning did not allow for a hospital. At this time, Texas Health Resources is requesting a amending the Planned Development to Planned Development C-2 Commercial District. Included in this request are uses allowed in the C-2 Commercial District as well as hospitals as defined below:

HOSPITAL, ACUTE CARE: An institution where sick or injured patients are given medical or surgical treatment intended to restore them to health and an active life, and which is licensed by the State of Texas

HOSPITAL, CHRONIC CARE: An institution where those persons suffering from illness, injury, deformity, deficiency or age are given care and treatment on a prolonged or permanent basis, and which is licensed by the State of Texas.

The ordinance attached has offered a PD Design Statement which describes the intent of the proposed PD, Planned Development as well as a PD Concept Design Map. The site changes proposed will eliminate the oxygen tank and enclosure and will include an outdoor Respite Courtyard for patient and staff use with a maximum size of 18' x 28'. It will be located with access to the dining hall and controlled by an egress gate. The perimeter wall will be minimum 10' in height providing engineered plans and constructed of masonry, steel and wood. Approval of this minor site change would be allowed administratively by this ordinance.

ZONING

This property is zoned Planned Development with a proposed amendment Planned Development C-2 Commercial District and adding hospitals as defined above and represented in the proposed ordinance.

COMPREHENSIVE PLAN FUTURE LAND USE DESIGNATION

The Comprehensive Plan Future Land Use Map shows this areas designation to be Mixed Use with Residential and Multi-Modal Transit Center.

FINANCIAL SUMMARY

Source of Funding: No funding is required.

STAFF RECOMMENDATION

Staff recommends approval of the Planned Development Amendment.

ATTACHMENTS / SUPPORTING DOCUMENTS

Location Map
Zoning Map
Land Use Map

Submitted By: Barbara Cubbage, Planning and Development Manager
Department: Planning and Development

Finance Review: Yes _ NA X

Legal Review: Yes _ NA _

Director Review and Approval:

ORDINANCE NO. 17-02-23-__

AN ORDINANCE AMENDING THE COMPREHENSIVE ZONING ORDINANCE BEING A PART OF THE UNIFIED DEVELOPMENT CODE, ORDINANCE NO. 13-05-02-08, AS AMENDED, AND A PORTION OF PLANNED DEVELOPMENT ORDINANCE NO. 99-03-18-05, AS AMENDED, BY AMENDING THE ZONING TO PLANNED DEVELOPMENT C-2 COMMERCIAL DISTRICT AND ADDING "HOSPITAL" AS A PERMITTED USE ON LOT 1, BLOCK A, CORINTH MEDICAL CENTER ADDITION BEING 5.00 ACRES; PROVIDING FOR A PROPERTY DESCRIPTION; PROVIDING FOR A PENALTY FOR VIOLATIONS NOT TO EXCEED $2,000.00 FOR EACH OFFENSE; PROVIDING FOR A SEVERABILITY CLAUSE; PROVIDING FOR PUBLICATION; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the City of Corinth, Texas has adopted Ordinance 13-05-02-08, which adopts a Unified Development Code, which includes the Comprehensive Zoning Ordinance and which, in accordance with the City's Comprehensive Plan, establishes zoning districts and adopts a Zoning Map; and

WHEREAS, the hereinafter described property is zoned as Planned Development C-2, Commercial District Classification under the City's Unified Development Code and a person having a proprietary interest in the property has requested a change in the zoning classification of said property; and

WHEREAS, the Planning and Zoning Commission of the City of Corinth and the City Council of the City of Corinth, having given the requisite notices by publication and otherwise, and after holding due hearings and affording a full and fair hearing to all the property owners generally, and to the persons interested and situated in the affected area and in the vicinity thereof, the City of Corinth City Council is of the opinion that said change in the approved site plan for said district; and

WHEREAS, the City Council considered the following factors in making a determination as to whether the requested change should be granted or denied: safety of the motoring public and the pedestrians using the facilities in the area immediately surrounding the sites; safety from fire hazards and damages; noise producing elements and glare of the vehicular and stationary lights and effect of such lights on established character of the neighborhood; location, lighting and types of signs and relation of signs to traffic control and adjacent property; street size and adequacy of width for traffic reasonably expected to be generated by the proposed use around the site and in the immediate neighborhood; adequacy of parking as determined by requirements of this ordinance for off-street parking facilities; location of ingress and egress points for parking and off-street loading spaces, and protection of public health by surfacing on all parking areas to control dust; effect on the promotion of health and the general welfare; effect on light and air; effect on the over-crowding of the land; effect on the concentration of population, and effect on transportation, water, sewerage, schools, parks and other public facilities; and

WHEREAS, the City Council further considered among other things the character of the districts and their peculiar suitability for particular uses and the view to conserve the value of the buildings, and encourage the most appropriate use of the land throughout this City; and

WHEREAS, the City Council finds that the proposed change promotes the health and the general welfare, provides adequate light and air, prevents the over-crowding of land, avoids undue concentration of population, and facilitates the adequate provision of transportation, water, sewerage, schools, parks and other public requirements; and the general health, safety and welfare of the community;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CORINTH, TEXAS:

SECTION I - LEGAL PROPERTY DESCRIPTION

That in accordance with the Unified Development Code, the Zoning is amended to Planned Development C-2 Commercial District adding Hospital as a permitted use and the Zoning Map of the City of Corinth is hereby amended on 5.000 acres of land being Corinth Medical Center Addition, Lot 1, Block A as described in "Exhibit A" attached and incorporated by reference herein.

SECTION II – PLANNED DEVELOPMENT ZONING EXHIBIT

The PD Design Statement and PD Concept Design Map documents approved and described as "Exhibit B" attached hereto and made a part hereof are approved. The Planned Development Master Plan shall control the use and development of the property, and all building permits and development requests shall be in accordance with the plan until it is amended by the City Council. The property owner shall furnish a reproducible copy of the approved PD Concept Design Map for signature by the Mayor and acknowledgement by the City Secretary. The Planned Development Master Plan, including the signed map shall be made a part of the permanent file and maintained by the City Secretary.

SECTION III – LAND USE REGULATIONS

A. The Zoning and Land Use Regulations set forth in "Exhibit C" attached hereto and made a part hereof for all purposes shall be adhered to in its entirety for the purposes of this Planned Development C-2 Commercial District and adding "Hospital" as a permitted use. In the event of conflict between the provisions of "Exhibit C" and provisions of any other exhibit, the provisions of "Exhibit C" control.

B. That the zoning regulations and districts for C-2 Commercial District and as herein established have been made in accordance with the Comprehensive Plan for the purpose of promoting the health, safety, morals and the general welfare of the community. They have been designed, with respect to both present conditions and the conditions reasonably anticipated to exist in the foreseeable future; to lessen congestion in the streets; to provide adequate light and air; to prevent over-crowding of land; to avoid undue concentration of population; and to facilitate the adequate provision of transportation, water, sewerage, drainage and surface water, parks and other commercial needs and development of the community. They have been made after a full and complete hearing with reasonable consideration among other things of the character of the district and its peculiar suitability for

the particular uses and with a view of conserving the value of buildings and encouraging the most appropriate use of land throughout the community

SECTION IV – PENALTY FOR VIOLATIONS

Any person, firm, or corporation violating any of the provisions of this ordinance shall upon conviction be fined a sum not to exceed two thousand dollars ($2,000.00); and each and every day that these provisions are violated shall constitute a separate and distinct offense.

SECTION V – SEVERABILITY CLAUSE

If any section, paragraph, clause, phrase or provision of this ordinance shall be adjudged invalid or held unconstitutional, the same shall not affect the validity of this ordinance as a whole, or any part or provision thereof, other than the part so decided to be invalid or unconstitutional.

SECTION VI – EFFECTIVE DATE

This Ordinance shall become effective upon approval and publication.

PASSED AND APPROVED THIS 23rd DAY OF FEBRUARY, 2017.

APPROVED:

_____
Bill Heidemann, Mayor
City of Corinth, Texas

ATTEST:

_____
Kim Pence, City Secretary
City of Corinth, Texas

APPROVED AS TO FORM:

_____
City Attorney

"EXHIBIT A"

METES AND BOUNDS LEGAL PROPERTY DESCRIPTION

WHEREAS WE, MPT of Corinth, LP are the owners of all that certain lot, tract or parcel of land situated in the J. Walton Survey, Abstract Number 1389, City of Corinth, Denton County, Texas, and being part of that certain tract of land described in deed to Pinnell-Ford L. C. recorded in Clerk's File Number 97-R0046701 of the Real Property Records of Denton County, Texas, and being all of Lots 1R and 2R, Block A, Corinth Medical Center, according to the plat thereof recorded in document number 2011-10 of the Plat Records of Denton County, Texas:

BEGINNING at a 1/2" capped rebar (G & A) found at the northeast corner of said Lot 2R, the northwest corner of Corinth Healthcare Realty Addition, according to the plat thereof recorded in document number 2011-135 of the Plat Records of Denton County, Texas, and being on the south line of Walton Road according to that certain called 1.097 acre tract of land described in deed to the City of Corinth recorded in Volume 5244, Page 4071 of the Real Property Records of Denton County, Texas, said point being N 88°28'14" W, 19.22 feet from a Brittain & Crawford capped rebar found at the southeast corner thereof;

THENCE S 11°37'51" E, 430.99 feet along the east line of said Lot 2R, and the west line of said Corinth Healthcare Realty Addition, to a 1/2" P.B.S.& J. capped rebar found at the southwest corner thereof and the southeast corner of said lot 2R, said point being on the north line Corinth Parkway according to that certain called 3.761 acre tract of land described in deed to The City of Corinth recorded in Volume 4564, Page 2044 of the Real Property Records of Denton County, Texas;

THENCE along the south line of said Lot 2R and the north line of said Corinth Parkway with the arc of a curve to the left having a radius of 2542.00 feet, central angle of 09°51'10", passing at 315.45 feet, the southwest corner of said Lot 2R, and the southeast corner of said Lot 1R, continuing a total arc length of 437.14 feet, whose chord bears S 71°06'39" W, 436.60 feet, to a 1/2" capped rebar (B T G) found at the southwest corner thereof, and being the southeast corner of that certain called 10.490 acre tract of land described in deed to Anchor City Investment, LLC recorded in document number 2006-90896 of the Real Property Records of Denton County, Texas;

THENCE N 11°37'51" W, 587.41 feet, along the west line of said Lot 1R, and the east line of said 10.490 acre tract, to a 1/2" capped rebar (G & A) found at the northwest corner of said Lot 1R, and being the northeast corner of said 10.490 acre tract, and being on the south line of said Walton Road;

THENCE S 88°28'14" E, along the north line of said Lot 1R and the south line of said Walton Road, passing at 197.03 feet the northeast corner of said Lot 1R, and the northwest corner of said Lot 2R, continuing a total distance of 444.78 feet to the POINT OF BEGINNING and containing approximately 5.000 acres of land.

"EXHIBIT B"
PD CONCEPT DESIGN STATEMENT

The Texas Health Behavioral Health Hospital Corinth will treat patients living with psychiatric and addiction problems in both Inpatient and Outpatient environment. The facility will be a 60 bed hospital serving patients throughout the Denton County region. The facility will be licensed under the Texas Department of State Health Service Chapter 134, Chapter 25, for Private Psychiatric Hospital and Crisis Stabilization Unit licensing Rules and NFPA 101.

The facility will treat four distinct populations on four distinct units:
Children ages 7- 11
Adolescents ages 12-17
Adults ages 18-64
Seniors 65 and older

The inpatient units will be locked units for patient safety and all areas of the facility will be camera monitored by staff at all times including patient rooms. A typical inpatient stay will be approx. 5-7 days depending on their care plan.

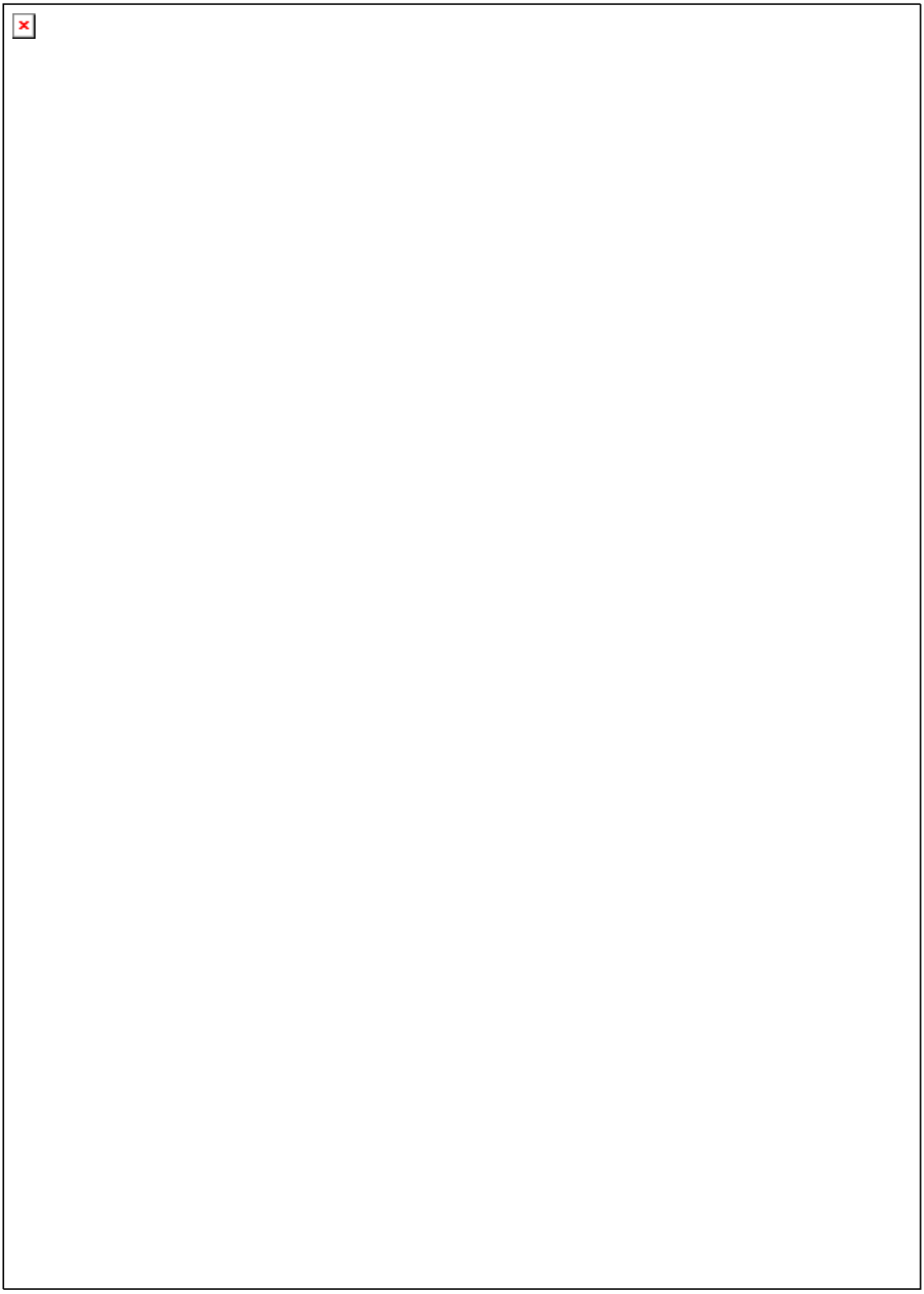
The Corinth facility will also provide Outpatient programs. These patients will not stay overnight and will make use of the dining area as well as, group meeting and activity spaces. Outpatients will have scheduled appointments that will occur during the 8am to 5pm hours.

In addition to the Administrative office space on 1st and 3rd floors, the building houses support spaces like Dining, Lab, Pharmacy and building support services. An outdoor garden area with fence is also planned for patient and staff respite.

The Scope of the construction project includes the Interior Renovation of the previously licensed hospital spaces (60 beds) to accommodate the same 60 beds for inpatient stay that are both Semi Private and Private rooms.

The goal of the building's design is to avoid an institutional look that blends with the community context and that also meets the applicable hospital codes and regulations. A patient centered environment, makes a significant and positive impact on hospital therapeutic and healing spaces where staff and patients enjoy a comfortable, attractive and non-institutional feel.

"EXHIBIT B"
PD DESIGN MAP



"EXHIBIT C"
LAND USE REGULATIONS

SECTION 1: REGULATIONS

A. Purpose

The regulations set forth in this Exhibit provide development standards for C-2 Commercial District designations within Corinth Medical Center Addition Lot 1, Block A. The Planned Development C-2 Commercial District (PD C-2) is identified by metes and bounds on Exhibit A and is depicted on Exhibit B. Every use not authorized herein is expressly prohibited in this PD C-2 District.

B. Base District

In this Planned Development C-2 Commercial District, the C-2 Commercial regulations of the Corinth Unified Development Code, Ordinance No. 13-05-02-08, as amended, shall apply except as modified herein.

SECTION 2: USES AND AREA REGULATIONS

A. Purpose

The purpose of this Planned Development Ordinance is to allow the "Hospital" use as defined below within the Corinth Medical Center Addition.

B. Permitted Uses and Use Regulations

In the Planned Development (PD) District, no building or land shall be used and no building shall be hereafter erected, reconstructed, enlarged or converted, unless permitted by the C-2 Commercial District regulations of the Unified Development Code, as amended, except as otherwise included in the PD.

The Permitted Uses in Section 2.05.02 of the Unified Development Code, Ordinance No. 13-05-02-08, as amended, for the C-2 Commercial District shall apply, except the following uses are permitted:

1. HOSPITAL, ACUTE CARE: An institution where sick or injured patients are given medical or surgical treatment intended to restore them to health and an active life, and which is licensed by the State of Texas.

2. HOSPITAL, CHRONIC CARE: An institution where those persons suffering from illness, injury, deformity, deficiency or age are given care and treatment on a prolonged or permanent basis, and which is licensed by the State of Texas.

C. Dimensional Regulations

The Dimensional Regulations described in Section 2.05.04 of the Unified Development Code, Ordinance No. 13-05-02-08, as amended, for the C-2 Commercial District shall apply.

D. Development Standards

The Development Standards described in Section 2.05.02 of the Unified Development Code, Ordinance No. 13-05-02-08, as amended, for the C-2 Commercial District, as amended shall apply for all new construction except as follows:

1. UDC Section 2.07.07 Accessory Buildings and Uses except for the following:

    a. Courtyard: An outdoor Respite Courtyard for patient and staff use with a maximum size of 18' x 28'. It will be located with access to the dining hall and controlled by an egress gate. The perimeter wall will be minimum 10' in height providing engineered plans and constructed of masonry, steel and wood.

2. UDC Section 2.09.01 Landscape Regulations shall apply.

3. UDC Section 2.09.02 Tree Preservation Regulations shall apply.

4. UDC Section 2.09.03 Vehicle Parking Regulations shall apply.

5. UDC Section 2.09.04 Building Façade Material Standards shall apply.

6. UDC Section 2.09.05 Residential Adjacency Standards shall apply.

7. UDC Section 2.09.06 Nonresidential Architectural Standards shall apply.

8. UDC Section 2.09.07 Lighting and Glare Regulations shall apply.

9. UDC Section 4.01 Sign Regulations shall apply.

10. UDC Section 4.02 Fence and Screening Regulations shall apply.

11. UDC Section 2.10.08 Site Plans; the Courtyard Site Plan will be approved administratively.