



**NOTICE OF A SPECIAL MEETING
OF THE TOWN OF ARGYLE
CAPITAL IMPROVEMENTS ADVISORY COMMITTEE (CIAC)
Tuesday, December 3, 2019
7:00 p.m.
(or at the conclusion of the meeting of the
Planning and Zoning Commission)**

Notice is hereby given of a Special Meeting of the Town of Argyle Capital Improvements Advisory Committee beginning at 7:00 p.m., Tuesday, December 3 2019, at Argyle Town Hall, 308 Denton Street, Argyle, Texas. The items listed below are placed on the agenda for discussion and/or action.

AGENDA

A. CALL TO ORDER – Chairman

B. MINUTES

1. Consider approval of the minutes of the Special Meeting of the Capital Improvements Advisory Committee of November 5, 2019.

C. NEW BUSINESS

1. Consider a recommendation on the Wastewater and Roadway Impact Fee Study, Land Use Assumptions, Wastewater and Roadway Capital Improvements Plans, and the Wastewater and Roadway Impact Fee Rates.

D. ADJOURN

CERTIFICATION

I hereby certify that the above notice was posted on the bulletin board at Argyle Town Hall, 308 Denton Street, Argyle, Texas, on the 27th day of November, 2019.

David Hawkins, AICP Director of Community Development

**MINUTES OF A SPECIAL MEETING OF THE TOWN OF ARGYLE
CAPITAL IMPROVEMENTS ADVISORY COMMITTEE
November 5, 2019**

A Special Meeting of the Capital Improvements Advisory Committee (CIAC) was held on Tuesday, November 5, at 5:00 p.m. at Argyle Town Hall, located at 308 Denton Street, Argyle, Texas. This was an OPEN MEETING, open to the public, subject to the open meeting laws of the State of Texas and, as required by law was hereby posted on November 1, 2019 at 5:00 PM, at Argyle Town Hall, giving notice of time, date, place, and agenda thereof.

CIAC MEMBERS PRESENT:

Rick Bradford, Chairman
Jeff Castellanos
Casey Stewart
Paul Kula
Matthew Holtman – Ad Hoc Member
Jason Lillard – Ad Hoc Member

CIAC MEMBERS ABSENT:

Richard Spies, Vice-Chairman
Leona McDade
Gordon Baethge

STAFF PRESENT:

David Hawkins, Director of Community Development
Angie Manglaris, Development Coordinator
Gary Vickery, Town Engineer
Robin Harris, Teague, Nall & Perkins

MEETING AGENDA

A. CALL TO ORDER

Chairman Bradford called the meeting to order at 5:07 p.m., noting a quorum was present.

B. NEW BUSINESS

1. Discussion and receive presentation on the 2020 Wastewater and Roadway Impact Fees Update.

Mr. Hawkins gave a brief overview of the intent of the Special Meeting of the Capital Improvements Advisory Committee and explained the meeting was the kick-off of the Impact Fee update study required by State Law.

Mr. Gary Vickery, Town Engineer with Teague Nall & Perkins, provided the Committee with an overview of how the Impact Fee study works, the data the engineers take into account when performing the Impact Fee study update, and the timeline in which the study had to be completed.

Mr. Robin Harris, Teague, Nall & Perkins, provided the Committee with an overview of the specific service areas that will be looked at when performing the Impact Fee study. Mr. Harris explained how current Zoning and the Future Land Use Plan affect population predictions and the study.

The Committee asked questions regarding the timeline of the project and the differences between residential and commercial impact fees and how those fees are calculated.

C. ADJOURN

Chairman Bradford adjourned the meeting at 5:43 p.m.

APPROVED this the 3rd day of December, 2019.

Rick Bradford
Chairman

WITNESS:

David Hawkins, AICP
Director of Community Development

Town of Argyle

Wastewater and Roadway Impact Fees

Fact Sheet

<u>Wastewater Impact Fee Calculation</u>		<u>Reference</u>
Eligible Capital Improvement Cost	\$2,572,903	Eligible Cost, Table 3.2
Finance Cost	<u>\$1,234,993</u>	4 percent per year for 10 years
Total CIP Eligible Cost	\$3,807,896	Eligible cost including financing
Impact Fee Cost w/ Credit (50%)	\$1,903,948	50% Credit
Impact Fee Preparation	\$ 70,000	Two Impact Fee Study Preparations
Impact Fee Cost	\$1,973,948	Impact Fee Cost including Study Prep.
10-Year Growth in Service Units	805	Growth in Service Units, Table 3.1
Maximum Wastewater Impact Fee w/ 50% Credit	\$2,452/SU	Impact fee cost divided by Service Units

2010 Impact Fee Study Maximum Fee w/50% Credit \$ 2,914/SU

<u>Service Size</u>	<u>Existing Impact Fee</u>	<u>2010 Study Max Impact Fee</u>	<u>2020 Study Max Impact Fee</u>
5/8"	\$2,914.00	\$2,914.00	\$2,452.00
3/4"	\$2,914.00	\$2,914.00	\$2,452.00
1"	\$7,868.00	\$7,868.00	\$6,620.40
1-1/2"	\$9,616.18	\$9,616.18	\$8,091.60

Notes:

1. 5/8" and 3/4" Service Size = 1.0 Service units
2. 1" Service Size = 2.7 Service Units. Cost = Service units x cost per service unit, 2.7 x \$2,914 = \$7,868
3. 1 1/2" Service Size = 3.0 Service Units. Cost = Service units x cost per service unit, 3.0 x \$2,914 = \$9,616.18

Roadway Impact Fee Calculation		Reference
Eligible Capital Improvement Cost w 50% Credit	\$16,632,501	Eligible cost w/ credit, Table 4.5
Finance Cost	<u>\$ 7,986,600</u>	4 percent per year for 10 years
Total CIP Eligible Cost	\$24,616,101	Eligible cost including financing
Program Cost Attributed to Growth	\$ 4,852,746	= Percent of Capacity* Eligible cost
Impact Fee Preparation	\$ 70,000	Two Impact Fee Study Preparations
Impact Fee Cost	\$ 4,922,746	Impact Fee Cost including Study Prep.
10-Year Growth in Service Units	3016	Growth in Service Units, Table 4.2
Estimated Capacity with CIP and System	15,299	Table 4.17
Percent of Capacity Attributed to Growth	19.7	Service unit growth divided by capacity
Maximum Roadway Impact Fee w/ 50% Credit	\$1632/SU	Impact fee cost divided by Service Units

2010 Impact Fee Study Maximum Fee w/50% Credit \$ 1,191/SU

Land Use	Existing Impact Fee	2010 Study Max Impact Fee	2020 Study Max Impact Fee
Residential	\$2,500.00	\$3,715.92	\$5,091.84
General Office (10,000 Sq. Ft.)	\$27,393.00	\$54,786.00	\$75,072.00
General Retail (10,000 Sq. Ft.)	\$26,798.00	\$53,595.00	\$73,440.00

Notes:

1. Residential Impact Fee = 3.12 x cost per service unit, 3.12 x \$801.28 = \$2,500
2. General Office (10,000 sq. ft.) Impact Fee = 4.6 per 1000 sq. ft. x cost per service unit, 4.6 x 10 x \$595.50 = \$27,393
3. General Retail (10,000 sq. ft.) Impact Fee = 4.5 per 1000 sq. ft. x cost per service unit, 4.5 x 10 x \$595.50 = \$26,798

- I. Executive Summary
- II. IMPLEMENTATION OF IMPACT FEES

Authorization

The Texas Local Government Code, Chapter 395 authorizes political subdivisions to impose impact fees on land within its corporate boundaries and extraterritorial jurisdiction (ETJ). The basis for Impact fees are the capital improvements required to serve new development expected during the next ten (10) years from the time that impact fees are set or amended.

Impact fee revenues may not be used to repair, modernize or expand infrastructure needed to serve existing development or for operation and maintenance of capital infrastructure. Funds which are not applied toward funding of authorized projects within (10) years of payment must be refunded.

During the 2001 session of the Texas Legislature, the impact fee law was amended. The change in the law became effective September 1, 2000. Significant changes included the following:

- A credit for ad valorem taxes and utility service billing revenues must be calculated or, as an alternative, a 50% credit against the maximum assessable impact fee calculated.
- A comparison of the proposed fees to a standard calculation for a maximum fee
- Fees are to be collected at issuance of the building permit
- Must submit annual certification of compliance to the Attorney General by September 30th.
- Forfeit ten (10) percent of fees to the State as a penalty if a positive certification is not filed timely.
- Must hold a Public Hearing to approve the Land Use Plan and Capital Improvements Plans with advertisement 30 days prior to the hearing.
- Must hold a Public Hearing to set impact fees with advertisement 30 days prior to the hearing.

The Local Government Code now requires that a town update the information supporting its impact fees every five (5) years, after fees have been adopted. The information that must be included in the update includes the following:

- Impact Fee revenues collected and expended to fund eligible capital improvements
- Land use assumptions
- Capital Improvement plans
- Applicable impact fees to be assessed

Historical Impact Fee Studies

The Town of Argyle Wastewater and Roadway Impact Fees were reviewed last in 2015. Ordinance No. 2015-08 approved the findings of the review. In the 2015 review of impact fees no changes were made to land use assumptions, capital improvements or wastewater or roadway impact fees. Prior to 2015, a detail evaluation was performed in 2010, and the findings of the 2010 Impact Fee study for wastewater and roadway was approved with Ordinance No. 2010-10. Table 2.1 provides the current Wastewater and Roadway Impact fees. The current Wastewater impact fee is \$2,914 per service unit. The current Roadway impact fee is \$801.28 for residential and \$595.50 for non-residential. Table 2.2 provides a comparison of the Town of Argyle impact fees with other communities within the region.

Historical Impact Fee Revenues and Expenditures

As of March 30, 2019, the unaudited balances for the impact fees are as follows:

Wastewater Impact Fee Account: \$535,915.37

Roadway Impact Fee Account: \$1,173,918.08

The Town has several CIP projects in process for both wastewater and roadway that will use these funds.

Service Area and Land Use

The Town city limits is the current service area for the roadway impact fee study. See Figure 2.1. The current service area for wastewater impact fee study is the town limits plus the ETJ, see Figure 2.2. These two assumptions will continue to be used for this study.

The land use assumptions for the impact fee program are from the Town's Comprehensive plan. The Future Land Use plan and associated designations and land use allocations will be used for growth projections. See Figure 2.3 and Table 2.3.

Population Growth

Table 2.4 shows existing population data taken from the North Central Texas Council of Governments (NCTCOG). The average population growth over the last ten years was 2.43 percent. Average growth over the last five years has been 3.51 percent. In addition to the steady growth within the Town, there appears to be potential for a surge in growth over the next four to five years. Based on 2018 aerial data, approximately 478 single-family residential lots are in the process of construction. Population increases from these lots are not included within the current 2019 estimates. Based on an assumed average three persons per household, the population increase from these lots equates to an additional 1,434 persons. Distributing this population over a five-year period equates to a 6.1 percent increase in population per year. In addition to this population increase, additional

population increase will most likely occur for the remainder of the ten-year period. For the purposes of estimating the ten-year population growth, the first five years will be estimated using a 6.1 percent per year increase and the last five years using a 3.5 percent per year increase. Based on these assumptions, the population estimate for 2030 is 6,656. Using three persons per household, this population increase would translate to 829 new single-family dwellings within the Town by 2030.

Population increases within the ETJ are also anticipated during the ten-year period. Referring to Figure 2.2, most of the service area within the ETJ falls within the Belmont and Canyon Falls development boundaries. These two service areas are not included within the analysis because they have contributed to the Trinity River Authority (TRA) Graham Branch Wastewater Transportation System infrastructure cost and have their own reimbursement program. Building permits and associated impact fees are not obtained for these areas by the Town. Since these two areas comprise most of the developable area within the ETJ, population increases attributed to the ETJ will not be considered.

Population Distribution

The Future Land Use Plan has a variety of land uses, with the majority of the single-family residential land uses being rural type development. The rural nature of the Town is by design. The rural land use lot size ranges from one acre to ten acres minimum. With these lot sizes, new development within the rural areas will have private onsite wastewater treatment systems and therefore are exempt from Wastewater Impact Fees. Roadway impact fees can be applied for these properties. Another characteristic of the rural land use areas is low population density. These areas will not contribute greatly to the anticipated population increase. The following table shows the percentage of building permits issued for properties using private onsite wastewater systems for FY 16-19.

<u>Year</u>	<u>Building Permits W/ Private Onsite Sewer</u>
2016	9%
2017	7.6%
2018	20.7%
2019	10.3%

Based on these percentages, 85 percent of the anticipated population increase will be attributed to lot sizes requiring public sewer and 15 percent of the population increase will be attributed to lot sizes having onsite private sewer. With this distribution, 124 housing units would be in the rural land use area, and 705 housing units would be in the areas requiring a public sewer system.

There is approximately 734 existing developed rural lots and 725 small lots within the Town limits and ETJ, excluding the Belmont and Canyon Falls service areas. With these existing lot counts, the 2030 estimated lot counts would be 858 rural lots and 1430 lots requiring public wastewater facilities.

III. WASTEWATER IMPACT FEE ANALYSIS

General

The wastewater impact fees are implemented so that a community has the ability to supplement funding of CIP projects for meeting the wastewater capacity needs for the Town with regard to new development. The planning period for the impact fees is ten-year, with an update required in 5 years. In order to develop the wastewater impact fee according to Chapter 395 of the Texas Local Government code population projections have to be converted to wastewater service unit increases, capital improvement projects need to be developed including the project cost, and the representative portion of these costs allocated to the anticipate increase in service units.

Wastewater Service Units

The most common method for determining wastewater service units is to base the service unit on a single family dwelling and the size of water meter size used for a single family dwelling. All other types of land use and associated meter sizes can be correlated to the single family dwelling based upon meter size. For the Town of Argyle 5/8" x3/4" meters are used for single family dwellings and for the most part 1" meter sizes for commercial/retail developments. The service unit equivalent (SFE) for a 1" meter is 2.7 SFE as shown in Table 2.1.

Another method that can be used is correlating the amount of wastewater contributed by a single family dwelling to other types of land use wastewater contribution. For this type of correlation, it is best to use winter time water demand data which will closely represent the amount of wastewater contribution. This method has been used for schools and churches for the impact fee study. The standard wastewater contribution used for the single family dwelling is 320 gallons per day (GPD). This value is used for the agreements the Town has with the City of Denton and the TRA.

Table 3.1 shows the existing estimated service units and the proposed service units for 2030. The total projected increase in service units is 805, which is an 87 percent increase over the ten-year period. This also computes to be approximately 6.49 percent increase in service units per year over the next 10 years. The increase in residential service units is based upon the estimated population growth. The increase in commercial/retail service units, corresponding to the one-inch meter size, is based upon two new commercial/retail businesses per year over the ten-year period. School service unit increases are based upon

one student for each single family residential service unit increase. Church service units were increased by 3.4 percent per year for the ten-year period.

Wastewater Capital Improvement Plan

Figures 3.1 and 3.2 show the existing wastewater infrastructure for the Town of Argyle. There are 4 wastewater service basins within the existing wastewater system. The wastewater services basins include the Denton basin, the TRA West basin, the TRA East basin, and the Future basin. The Denton basin flows to the City of Denton wastewater collection system and is treated by the City of Denton. The TRA West and TRA East basins flow to the TRA transmission lines and wastewater is treated at the TRA treatment plant. The Future basin encompasses area that is within the rural land use zone which currently have private onsite wastewater systems. Each of these wastewater service basins are separated by natural topographic ridge lines.

Figure 3.3 shows the proposed wastewater system CIP. The location and type of improvements anticipated are consistent with the 2010 impact fee study and reflect remaining improvements to be constructed. The majority of required capacity building infrastructure for future development has been constructed with the Graveyard line and the TRA Lines. Table 3.2 shows the Wastewater CIP Project Cost summary and the eligible cost associated with the current ten-year period. Table 3.3 shows the detailed improvement cost for each of the projects. The following describes each one of the CIP projects:

- Crawford Rd Wastewater CIP – Table 3.3 – Project Cost: \$4,830,304
The 12” wastewater collection and Lift station CIP project will provide capacity for the development adjacent to IH 35 in the northwest portion of the Town limits. This CIP is included within the Denton basin.
- Old Justin Road Wastewater CIP – Table 3.3 – Project Cost: \$ 1,635,907
The 8” wastewater collection CIP project will provide capacity for the development adjacent to IH 35, C. Taylor Rd, and future Gateway Blvd. This CIP project will flow into the TRA West basin.
- Sam Davis Rd Sewer CIP – Table 3.3 – Project Cost: \$ 333,144
The 8” wastewater collection CIP project will provide capacity for PD Commercial Planned Development land use area adjacent to Sam Davis Road. This project will flow into the TRA West basin.
- FM 407 Wastewater CIP – Table 3.3 – Project Cost: \$715,669
The 8” wastewater collection CIP project will provide capacity for the development of the C3 Rural Corridor fronting FM 407. This project will flow into the TRA East basin.

Additional Wastewater Capacity Building

As mentioned above, the Town has two separate basins with wastewater capacity for future development. These two basins are the Denton Basin and the TRA Basin. The main collection system for the Denton basin is the Graveyard line. The main collection system for the TRA basin are TRA Line Segment A, B, C, and D.

The capacity developed for the Denton Basin using the Graveyard collection system is 1600 Single Family Equivalents (SFE) or 512000 gallons per day based on 320 gallons per day per SFE. The Town also has an additional 560 SFE capacity in the original Country Club pressure sewer line that also discharges into the City of Denton wastewater collection system. The existing lift station no. 1 and the pressure sewer line are not currently in use but could be put back in service if needed. The Town's participation cost for the Graveyard collection system improvements was \$1,152,535.42, including both interest and principal payments. This cost has been retired and is not an eligible cost for the project.

The TRA collection system has capacity for the Town and other properties within the basin. The total Town capacity for the TRA Basin is 1.996 MGD or 3119 Living Unit Equivalents. A Living Unit Equivalent is a SFE multiplied by 2.0 to account for a peaking factor and Infiltration/Inflow. The Town's TRA West Basin capacity is 1.373 MGD and the Town's TRA East Basin capacity is 0.623 MGD. The following shows the capacities for the Town per TRA Line Segment:

Development Line Segment S-1 – 0.623 MGD, 973 LUE's, 1946 SFE

TRA Line Segment B – 0.623 MGD, 973 LUE's, 1946 SFE

TRA Line Segment C – 1.373 MGD, 1731 LUE's, 3462 SFE

TRA Line Segment D – 1.373 MGD, 1731 LUE's, 3462 SFE

The Development Line Segment S-1 was constructed by private development. The developer was reimbursement project cost by Denton County, therefore Line Segment S-1 project cost are not an eligible CIP cost.

The Town's participation cost in the TRA transmission line improvements was \$803,950.32 for TRA Line Segment B and \$1,518,303 for capacity building of Line Segment C and D. The capacity building for Line C and D were paid upfront by development and the \$1,518,303 cost is to be reimbursed to the developer through impact fees. Figure 3.4 shows the TRA Impact Fee Reimbursement area associated with the Line Segment C and D capacity building. The Line Segment B, C, and D cost are eligible CIP cost.

Total Cost Associated with Capacity Building

The total cost for capacity building includes the current CIP project listed above and the capacity that has been obtained through the TRA Basin Improvements. The Basin improvement cost are discounted to reflect the remaining capacity available. Table 3.4 shows the respective

percentages of the capacity remaining. Currently the only sewer flow contribution from Argyle to the TRA basin is from the Liberty Christian School and the Cross Timbers Church. Table 3.4 shows the winter maximum average flows based upon water usage from these two sources. Approximately 98 percent of the TRA capacity is available. This will most likely change considerably over the next four to five years due to current development within the TRA basin. Table 3.4 shows approximately 65 percent of the Denton Basin capacity is available. This will also change once lift station No. 1 is taken out of service and the area contributing to lift station No. 1 drains to the TRA basin.

Maximum Wastewater Impact Fee

According to Chapter 395 of the Texas Local Government Code the Maximum Assessable Wastewater Impact Fee cost per service unit is calculated by dividing the total CIP cost associated with the capacity needs of new development by the anticipated increase in service units based upon the service area and land use assumptions. A credit also is required to account for Ad Valorem Taxes and Utility Billing revenues. The credit is 50% of the calculated Maximum Assessable Wastewater Impact Fee. The following show the calculations:

<u>Wastewater Impact Fee Calculation</u>		<u>Reference</u>
Eligible Capital Improvement Cost	\$2,572,903	Eligible Cost, Table 3.2
Finance Cost	<u>\$1,234,993</u>	4 percent per year for 10 years
Total CIP Eligible Cost	\$3,807,896	Eligible cost including financing
Impact Fee Cost w/ Credit (50%)	\$1,903,948	50% Credit
Impact Fee Preparation	\$ 70,000	Two Impact Fee Study Preparations
Impact Fee Cost	\$1,973,948	Impact Fee Cost including Study Prep.
10-Year Growth in Service Units	805	Growth in Service Units, Table 3.1
Maximum Wastewater Impact Fee w/ 50% Credit	\$2452/SU	Impact fee cost divided by Service Units

IV. Roadway Impact Fee Analysis

General

Roadway Impact Fees are assessed for the same reasons as wastewater impact fees, in order to generate supplemental funding for CIP projects to address capacity requirements associated with new development. Though the service units used for calculating the roadway impact fees are different than the service units for wastewater impact fees, the general methods are the same. Both the wastewater and the roadway service unit increases are based upon projected population increases.

Roadway Service Units

Roadway service units are based upon the peak hour trip generation of the population base and other demographics within the service area such as commercial buildings, schools, churches, and government buildings. The previous roadway impact fee report developed in May 2010 by Freese & Nichols utilized a Vehicle-Mile Service Unit method that accounts for the peak hour volume over the average travel length of the trip, commonly called the trip length. The existing report provided a table establishing service unit factors used to compute peak hour vehicle mile trip generation for various land uses. The Town has been using this table to compute impact fees for associate land uses. Table 4.1 shows the land use designations and the service unit factors that the Town uses.

Table 4.2 shows the estimated peak hour trip generation for both existing conditions and future additions using the quantities for each land use and the associated service unit factor taken from Table 4.1.

Single family quantities were estimated using the population data previously described. Commercial, Post Office, City Hall, and Church quantities were based upon a square foot estimate of floor space for each land use. School quantities are based upon staff and student attendance. The total existing peak hour vehicle-mile trip generation calculated was 6838. The future addition estimate is 3016. This represents a 44 % increase for the ten-year period. This also represents a 3.72 percent increase per year for the ten-year period.

Existing Roadway Capacity

Roadway capacity is related to the Level of Service (LOS) desired. The more congested a given roadway the less desirable is its function or Level of Service. A free-flowing roadway is a LOS A while a highly congested roadway is LOS F. The existing capacity analysis shown in the 2010 study used LOS D to evaluate capacity. Table 4.3 shows the LOS D peak hour lane capacity for several types of roadway section that was included within the 2010 study. These values will be used to evaluate the current capacity of the roadways.

Each year the Town conducts 24-hour traffic counts for the major roadways within the Town limits. The traffic counts have been conducted since 2008 and provides useful information related to traffic flow and roadway capacity. Table 4.4 shows the traffic count data from 2008 through 2018 and the results of the capacity evaluation. Refer to Figure 4.1 for roadway locations.

A factor is used to convert 24-hour traffic counts to estimated peak hour traffic volumes. The factor can range from about 8 to 12 percent of the 24-hour traffic count. For the purpose of this report an 11 percent factor was used. The table shows a general increase in traffic volumes within the Town. Crawford Road, C Taylor Road, Harbole Road at the high school, North Gibbons, Stonecrest Road and Old Justin Road have seen substantial increases in traffic. Table 4.4 shows that Crawford Road does not meet LOS D capacity.

Roadway Capital Improvement Plan

Figure 4.1 shows the existing major roadway system within the Town of Argyle. Figure 4.2 is the Thoroughfare Plan that shows the existing major roadways, proposed roadways, and proposed future typical road sections. A two-phase approach is proposed for roadway CIP projects. Phase one improvements would increase roadway capacity to LOS D or better. Phase two improvements would be consistent with the thoroughfare plan typical roadway sections and would provide LOS C capacity or better. Most likely the Phase two projects will be well into the future due to the cost and capacity needs. Figure 4.3 shows the proposed Phase 1 CIP projects and Table 5 provides a summary of the CIP project costs including the impact eligible cost. Table 4.18 shows the estimated increase in lane capacity due to the Phase 1 roadway CIP projects. The increase in roadway capacity for phase 1 improvements are attributed to constructing turn lanes and improving lane widths. A roundabout is also included in the Crawford Road CIP project to add capacity to Crawford Road.

The following describes each one of the CIP projects:

- **Crawford Road Ph 1** – Table 4.6 – Project Cost: \$ 3,463,600
Crawford Road is currently a heavily travelled roadway that has seen over a 300 percent increase in use since 2012 based upon the annual trip counts taken by the Town each year. It is currently a narrow 2 lane road with no turn lanes. The road is designated as a Type B Minor Arterial. Capacity building project that will provide turn lanes at intersections, a roundabout, and roadway width widening.
- **Old Justin Road Ph 1 (IH 35 to Taylor)** – Table 4.7 – Project Cost: \$ 1,167,633
Old Justin Road is currently a narrow 2 lane road that is designated as a Type B Minor Arterial. Capacity building project that will provide turn lanes at intersections, and roadway width widening.
- **Old Justin Road Ph 1 (C. Taylor Road to US HWY 377)** – Table 4.8 – Project Cost: \$ 4,212,189

Old Justin Road is currently a narrow 2 lane road that is designated as a Type E Rural Collector. Capacity building project that will provide turn lanes at intersections and roadway width widening.

- **Hickory Hill Road Ph 1** (US HWY 377 to E. Hickory Ridge Cr.) – Table 4.9 – Project Cost: \$ 2,025,020
Hickory Hill Road is currently a narrow 2 lane road that is designated as a Type C Major Collector. Capacity building project that will provide turn lanes at intersections and roadway width widening.
- **Hickory Hill Road Ph 1** (E. Hickory Ridge Cr. To Gibbon Road – Table 4.10 – Project Cost: \$ 1,959,759
Hickory Hill Road is currently a narrow 2 lane road that is designated as a Type E Rural Collector. Capacity building project that will provide turn lanes at intersections and roadway width widening.
- **Sam Davis Road Ph 1** (IH 35 to Gateway Blvd) – Table 4.11 – Project Cost: \$ 1,655,311
Sam Davis Road is currently a narrow 2 lane road that is designated as a Type C Major Collector. Capacity building project that will provide turn lanes at intersections and roadway width widening.
- **Harbole Road Ph 1** (US HWY 377 to Shadow Wood Dr.) – Table 4.12 – Project Cost: \$ 1,550,690
Harbole Road is currently a narrow 2 lane road that is designated as a Type D Minor Collector. Capacity building project that will provide turn lanes at intersections and roadway width widening.
- **C. Taylor Road Ph 1** (Crawford to Old Justin Road) – Table 4.13 – Project Cost: \$ 3,569,725
Road is currently a narrow 2 lane road that is designated as a Type B Minor Arterial. Capacity building project that will provide turn lanes at intersections and roadway width widening.
- **Gateway Blvd Ph 1** (Old Justin Road to Sam Davis) – Table 4.14 – Project Cost: \$ 3,724,518
New Roadway
- **Gateway Blvd Ph 1** (Sam Davis to FM 407) – Table 4.15 – Project Cost: \$ 3,180,371
New Roadway
- **Gateway Blvd Ph 1** (FM 407 to Avalon Blvd) – Table 4.16 – Project Cost: \$ 3,199,080
New Roadway
- **Gibbons Road Ph 1** (Hickory Hill to FM 407) – Table 4.17 – Project Cost: \$ 3,557,106

Road is currently a narrow 2 lane road that is designated as a Type E Rural Collector. Capacity building project that will provide turn lanes at intersections and roadway width widening.

Maximum Roadway Impact Fee

According to Chapter 395 of the Texas Local Government Code the Maximum Assessable Roadway Impact Fee cost per service unit is calculated by dividing the total CIP cost associated with the capacity needs of new development by the anticipated increase in service units based upon the service area, land use assumptions, and Thoroughfare plan. A credit also is required to account for Ad Valorem Taxes. The credit is 50% of the calculated Maximum Assessable Roadway Impact Fee. The following show the calculations:

<u>Roadway Impact Fee Calculation</u>		<u>Reference</u>
Eligible Capital Improvement Cost w 50% Credit	\$16,632,501	Eligible cost w/ credit, Table 4.5
Finance Cost	<u>\$ 7,986,600</u>	4 percent per year for 10 years
Total CIP Eligible Cost	\$24,616,101	Eligible cost including financing
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Estimated Capacity with CIP and System	15,299	Table 4.17
Percent of Capacity Attributed to Growth	19.7	Service unit growth divided by capacity
Maximum Roadway Impact Fee w/ 50% Credit	\$1632/SU	Impact fee cost divided by Service Units

TABLE 2.1
TOWN OF ARGYLE
Wastewater and Roadway Impact Fee Study
Current Impact Fees

WASTEWATER

Service Unit	Impact Fee Per Unit	Percent Of Maximum	
SFE	\$2,914	50	
SFE = Single Family Equivalent (3/4 Inch Water Meter)			
Meter Size	Service Unit Equivalents	Impact Fee	
3/4"	1	\$2,914.00	
1"	2.7	\$7,867.80	
1 1/2"	3.3	\$9,616.20	
2"	10.7	\$31,179.80	
3"	23.3	\$67,896.20	
4"	40	\$116,560.00	

ROADWAY:

Service Unit	USE	Impact Fee	Percent Of Maximum
VMT	Residential	\$801.28	33.6
VMT	Non-Resident	\$595.50	25

VMT = Vehicle-Mile-Trip

Category	Land Use	Unit	Service Unit Factor (VM/Unit)
Residential	Single Family	DU	3.12
	Apt/Townhouse	DU	1.76
	Retirement Community	0	0.71
	Independent Sr Living	DU	0.66
	Others not specified	DU	3.12

Office			
	General Office	1000 GFA	4.60
	Corporate Headquarters	1000 GFA	4.33
	Medical-Dental	1000 GFA	13.32
	U.S. Post Office	1000 GFA	12.37
	Business Park	1000 GFA	4.12
	Research & Development	1000 GFA	3.45
	Others not specified	1000 GFA	4.60
Commercial			
	Retail/shopping center	1000 GFA	4.50
	Quality restaurant	1000 GFA	6.23
	Fast Food with drive thru	1000 GFA	17.38
	High turnover restaurant	1000 GFA	8.08
	Gas Station w/ convenience	1000 GFA	9.96
	Convenience market w/gas	1000 GFA	6.11
	Convenience market	1000 GFA	5.28
	Grocery/supermarket	1000 GFA	5.55
	Discount club	1000 GFA	3.81
	Auto sales	1000 GFA	3.36
	Video rental store	1000 GFA	4.59
	Bank	1000 GFA	15.44
	Pharmacy-Drug /w Drive	1000 GFA	1.64
	Apparel store	1000 GFA	2.22
	Movie theater	Screens	18.20
	Furniture store	1000 GFA	0.37
	Home Improvement Super Store	1000 GFA	2.16
	Hardware/paint store	1000 GFA	2.68
	Building materials/lumber store	1000 GFA	2.49
	Nusery(garden center)	1000 GFA	2.09
	Nursery (wholesale)	1000 GFA	1.75
	Hotel	Rooms	1.16
	Motel	Rooms	0.93
	All suites hote	Rooms	1.08
	Auto care center	1000 GFA	3.13

	Quick Lube shop	1000 GFA	3.11
	Auto parts sales	1000 GFA	3.58
	Tire Superstore	1000 GFA	3.86
	Wholesale tire store	1000 GFA	2.93
	Mini-warehouse/self storage	1000 GFA	0.81
	Others not specified	1000 GFA	4.50
Industrial			
	General light industrial	1000 GFA	3.03
	Manufacturing	1000 GFA	3.17
	Industrial park	1000 GFA	3.39
	Warehousing	1000 GFA	1.97
	Others not specified	1000 GFA	3.03
Institutional			
	Private school (K-12)	Students	0.33
	Junior/community college	Students	0.24
	University/college	Students	1.64
	Day care center	1000 GFA	2.33
	Hospital	1000 GFA	2.80
	Nursing home	Beds	0.54
	Assisted living center	Beds	0.54
	Place of worship	1000 GFA	0.75

VM = Vehicle Mile

DU = Dwelling Unit

GFA = Gross Floor Area

GLA = Gross Leasable Area

TABLE 2.2
TOWN OF ARGYLE
Wastewater and Roadway Impact Fee Study
Impact Fee Comparison

Wastewater Impact Fees:

	5/8"	3/4"	1"	1-1/2"
Town of Argyle	\$2,914.00	\$2,914.00	\$7,868.00	\$9,616.18
Flower Mound-Long Prairie District Residential	\$2,436.00	\$3,645.00	\$6,090.00	\$12,180.00
Flower Mound-Long Prairie District Non-Residential	\$1,218.00	\$1,827.00	\$3,045.00	\$6,090.00
Southlake	\$2,609.00	\$3,914.00	\$6,523.00	\$13,045.00
Northlake	\$964.00	\$1,446.00	\$2,410.00	\$4,821.00
Colleyville	\$643.00	\$965.00	\$1,068.00	\$3,215.00
Keller	\$918.00	\$1,560.60	\$2,478.60	\$3,029.40
Melissa	\$398.67	\$598.00	\$996.67	\$1,993.33
Prosper	\$1,129.00	\$1,129.00	\$2,822.00	\$5,644.00

Roadway Impact Fees:

	Residential	General Office (Based on a 10,000 SQ FT building)	General Retail (Based on a 10,000 SQ FT building)
Town of Argyle	\$2,500.00	\$27,393.00	\$26,797.00
Town of Flower Mound-Service Area A	\$1,424.10	\$9,599.75	\$13,218.75
Town of Flower Mound-Service Area B	\$3,714.78	\$24,949.10	\$34,419.95
City of Southlake-North Service Area	\$2,292.00	\$25,610.00	\$48,300.00
City of Southlake-South Service Area	\$1,640.00	\$18,330.00	\$34,560.00
Northlake Zone 1 (NW)	\$6,094.10	NA	\$226,033.00
Northlake Zone 2 (NE)	\$3,844.98	NA	\$142,623.00
Northlake Zone 3 (SW)	\$691.60	NA	\$25,657.60
Northlake Zone 4 (SE)	\$710.62	NA	\$26,632.50
City of Colleyville Service Area 1	\$4,941.00	\$7,790.00	\$7,790.00
City of Colleyville Service Area 2	\$4,941.00	\$21,580.00	\$2,158.00
Keller Service Area 1	\$2,999.19	\$24,922.00	\$24,922.00
Keller Service Area 2	\$2,451.00	\$18,416.30	\$18,416.30
Melissa Service Area 1	\$3,915.12	\$39,151.16	\$18,900.56
Melissa Service Area 2	\$3,775.48	\$37,754.80	\$28,571.20
Prosper Area 1	\$6,053.00	\$51,320.00	\$141,350.00
Prosper Area 2	\$4,589.00	\$38,910.00	\$107,160.00

TABLE 2.3
TOWN OF ARGYLE
Wastewater and Roadway Impact Fee Study
Future Landuse Designations

Designation	Density Residential	Density Commercial	% Residential	% Commercial	% Public
PD- Commercial Planned Development	0	> 0.7 F.A.R.	0	95	5
T5 - Regional Center	5 - 6 DU/AC	>0.4 F.A.R.	35	55	10
T4 - Village Center	5 - 6 DU/AC	>0.4 F.A.R.	50	40	10
T3A - Low Density Railroad Transition	1 AC min	>0.35 F.A.R.	75	10	15
T3 - Low Density Transition	1 AC min	>0.35 F.A.R.	75	10	15
T2 - Rural Residential	5 AC/DU		95		5
T1 - Rural or Conservation Residential	10 AC/DU		90		10
C1 - Rural Corridor	10 AC/DU		90		10
C2 - Approach Corridor	< 1 DU/AC		90		10
C3 - Centers Corridor	5 - 6 DU/AC	> 0.5 F.A.R.	30	60	10

TABLE 2.4
TOWN OF ARGYLE
Wastewater and Roadway Impact Fee Study
Population Growth Projections

Year	Town Populator	Growth Rate %
2010	3282	
2011	3300	0.55
2012	3350	1.52
2013	3420	2.09
2014	3510	2.63
2015	3690	5.13
2016	3820	3.52
2017	3920	2.62
2018	4040	3.06
2019	4170	3.22
Average		2.43
Average Last 5 years		3.51
Proposed Growth Projection Determination		
Approximate Lots Developed - 2019		478
Population From Lots Over 5 Years (3 persons/lot)		1434
Growth Per Year First 5 Years (%/year)		6.1
Growth for Next 5 years (%/year)		3.5
Estimated 2030 Population		6656
Population Addition for 10-year Period		2486
Estimated Additional Lots for 10-year Period (3 persons/lot)		829
85% Small Lot Requiring Sewer Service		705
15% Large Lot w/ Onsite Sewer System		124

TABLE 3.1
TOWN OF ARGYLE
Wastewater Impact Fee Study
Wastewater Service Units For 2020-2030

Meter Size	2020 Service Connection:	2020 Service Units	2030 Projected Service Connections:	2030 Projected Service Units	Projected Growth In Service Units	% Increase
5/8" x 3/4"	725	725	1430	1430	705	97
1"	42	113	62	167	54	48
Schools		78		122	44	56
Churches		5		7	2	41
Total		921		1727	805	87

Notes:

1. 2020 School estimated service units based on Winter Maximum Average Water Demand. See Below
2. 2020 Churches estimated service units based on Winter Maximum Average Water Demand. See Below
3. Commercial (1") 2030 Service Connections estimate based on 2 Commercial/Retail businesses per year.
4. School 2030 Service Connection estimate based on 1 student per Single Family Service Unit Increase
5. Church 2030 Service Connection estimate based on 3.4 percent per year growth

Service Unit Estimate for Schools and Churches

	Existing Winter Avg. Max. Water Per Month	Existing Service Units Base on SFE
Schools		
Argyle ISD	374600	39
Liberty Christian	370900	39
Churches	44200	5

SFE = 320 Gallons per Day (GPD)

TABLE 3.2
TOWN OF ARGYLE
Wastewater Impact Fee Study
Wastewater CIP Project Cost Summary

Project Name	Est. Project Cost	Current Utilization (%)	2030 Utilization (%)	Cost		
				Current Development	10 Year (2020-2030)	Eligible After 2030
Crawford Road Wastewater Imp	\$4,830,304	0	12	\$0	\$579,636	\$4,250,668
Old Justin Road Wastewater Imp	\$1,635,907	0	50	\$0	\$817,954	\$817,954
Sam Davis Road Wastewater Imp	\$333,144	0	20	\$0	\$66,629	\$266,515
FM 407 Wastewater Imp	\$715,669	0	100	\$0	\$715,669	\$0
TRA Line Segment B Cost Participation	\$803,950	2	30	\$16,079	\$241,185	\$546,686
TRA Line C/D Oversize Capacity	\$1,518,303	0	10	\$0	\$151,830	\$1,366,473
Total	\$9,837,277			\$16,079	\$2,572,903	\$7,248,295

Table 3.3

CONCEPTUAL OPINION OF PROBABLE COST

Teague Nall and Perkins, Inc.
Consulting Engineers



TNP Project Number: ARG 19224

Client: Town of Argyle

Date: 11/26/2019

Project Name: Wastewater Impact Fee Study

ITEM NO.	DESCRIPTION OF ITEMS	QTY	UNIT	UNIT COST	TOTAL
Crawford Road Wastewater Improvements					
1	Surety Bonds	1	LS	\$50,400.00	\$50,400
2	Mobilization/Demobilization	1	LS	\$126,000.00	\$126,000
3	Erosion, Sedimentation, and Environmental Controls	1	LS	\$10,000.00	\$10,000
4	Barricades, Signs, and Traffic Control	1	LS	\$10,000.00	\$10,000
5	Project Signs	2	EA	\$500.00	\$1,000
6	12" PVC Sewer Main	8,550	LF	\$80.00	\$684,000
7	8" PVC Sewer Main	1,100	LF	\$70.00	\$77,000
8	4" PVC Force Main	2,150	LF	\$50.00	\$107,500
9	24" Bore and Casing under I-35W	435	LF	\$400.00	\$174,000
10	12" RJDl Carrier Pipe	435	LF	\$110.00	\$47,850
11	4' Diameter Standard Manhole	28	EA	\$6,000.00	\$168,000
12	Trench Safety	11,800	LF	\$3.00	\$35,400
13	Lift Station	1	LS	\$650,000.00	\$650,000
14	Asphalt Surface Restoration	500	SY	\$60.00	\$30,000
15	Gravel Surface Restoration	6,500	SY	\$8.00	\$52,000
16	Hydroseed Surface restoration	26,000	SY	\$2.00	\$52,000
Subtotal Crawford Road Wastewater Improvements					\$2,275,150
20% Contingency					\$455,030
Total Construction					\$2,730,180
Design Engineering (~10%)					\$273,000
Design Survey (~2%)					\$55,000
Lift Station Property Acquisition					\$125,000
	Easements	40,000	SF	\$2.00	\$80,000
Grand Total					\$3,263,180
10 Year Projected Cost @ 4%					\$4,830,304
Old Justin Road Wastewater Improvements					
1	Surety Bonds	1	LS	\$16,100.00	\$16,100
2	Mobilization/Demobilization	1	LS	\$40,000.00	\$40,000
3	Erosion, Sedimentation, and Environmental Controls	1	LS	\$5,000.00	\$5,000
4	Barricades, Signs, and Traffic Control	1	LS	\$5,000.00	\$5,000
5	Project Signs	2	EA	\$500.00	\$1,000
6	8" PVC Sewer Main	6,400	LF	\$70.00	\$448,000
7	4' Diameter Standard Manhole	15	EA	\$6,000.00	\$90,000
8	Trench Safety	6,400	LF	\$3.00	\$19,200
9	Asphalt Surface Restoration	300	SY	\$60.00	\$18,000
10	Gravel Surface Restoration	7,000	SY	\$8.00	\$56,000
11	Hydroseed Surface restoration	14,000	SY	\$2.00	\$28,000
Subtotal Old Justin Road Wastewater Improvements					\$726,300
20% Contingency					\$145,260
Total Construction					\$871,560
Design Engineering (~10%)					\$87,000
Design Survey (~2%)					\$17,000
	Easements	64,800	SF	\$2.00	\$129,600
Grand Total					\$1,105,160
10 Year Projected Cost @ 4%					\$1,635,907

Table 3.3

CONCEPTUAL OPINION OF PROBABLE COST

Teague Nall and Perkins, Inc.
Consulting Engineers



TNP Project Number: ARG 19224

Client: Town of Argyle

Date: 11/26/2019

Project Name: Wastewater Impact Fee Study

ITEM NO.	DESCRIPTION OF ITEMS	QTY	UNIT	UNIT COST	TOTAL
Sam Davis Road Wastewater Improvements					
1	Surety Bonds	1	LS	\$3,700.00	\$3,700
2	Mobilization/Demobilization	1	LS	\$9,300.00	\$9,300
3	Erosion, Sedimentation, and Environmental Controls	1	LS	\$2,500.00	\$2,500
4	Barricades, Signs, and Traffic Control	1	LS	\$2,500.00	\$2,500
5	Project Signs	1	EA	\$500.00	\$500
6	8" PVC Sewer Main	1,450	LF	\$70.00	\$101,500
7	4' Diameter Standard Manhole	3	EA	\$6,000.00	\$18,000
8	Trench Safety	1,450	LF	\$3.00	\$4,350
9	Asphalt Surface Restoration	100	SY	\$60.00	\$6,000
10	Gravel Surface Restoration	1,600	SY	\$8.00	\$12,800
11	Hydroseed Surface restoration	3,200	SY	\$2.00	\$6,400
Subtotal Sam Davis Road Wastewater Improvements					\$167,550
20% Contingency					\$33,510
Total Construction					\$201,060
Design Engineering (~10%)					\$20,000
Design Survey (~2%)					\$4,000
Easements		0	SF	\$2.00	\$0
Grand Total					\$225,060
10 Year Projected Cost @ 4%					\$333,144
F.M. 407 Wastewater Improvements					
1	Surety Bonds	1	LS	\$6,700.00	\$6,700
2	Mobilization/Demobilization	1	LS	\$16,600.00	\$16,600
3	Erosion, Sedimentation, and Environmental Controls	1	LS	\$8,000.00	\$8,000
4	Barricades, Signs, and Traffic Control	1	LS	\$8,000.00	\$8,000
5	Project Signs	2	EA	\$500.00	\$1,000
6	8" PVC Sewer Main	2,500	LF	\$70.00	\$175,000
7	4' Diameter Standard Manhole	5	EA	\$6,000.00	\$30,000
8	Trench Safety	2,500	LF	\$3.00	\$7,500
9	Asphalt Surface Restoration	300	SY	\$60.00	\$18,000
10	Gravel Surface Restoration	2,300	SY	\$8.00	\$18,400
11	Hydroseed Surface restoration	5,600	SY	\$2.00	\$11,200
Subtotal F.M. 407 Wastewater Improvements					\$300,400
20% Contingency					\$60,080
Total Construction					\$360,480
Design Engineering (~10%)					\$36,000
Design Survey (~2%)					\$7,000
Easements		40,000	SF	\$2.00	\$80,000
Grand Total					\$483,480
10 Year Projected Cost @ 4%					\$715,669

TABLE 3.4**TOWN OF ARGYLE****Wastewater Impact Fee Study****Wastewater System Capacity****DENTON GRAVEYARD LINE:****Agreement Capacity - 1600 SFE****Additional Capacity Available - 560 SFE****SFE = 320 GPD**

	No. Days	Metered Flow (MG)	Graveyard Line No. Customers	Average GPD	SFE	1600 SFE Available Capacity	% Capacity Remaining
FY19							
08/31/2019-09/30/2019	30	4.244	775	141467	442	1158	72
07/31/2019-08/31/2019	30	4.79	760	159667	499	1101	69
06/29/2019-7/31/2019	33	3.781	748	114576	358	1242	78
05/31/2019-06/28/2019	28	3.982	739	142214	444	1156	72
04/30/2019-05/31/2019	31	8.5240	748	274968	859	741	46
03/29/2019-04/30/2019	32	4.4420	748	138813	434	1166	73
02/28/2019-03/29/2019	29	5.5110	747	190034	594	1006	63
01/30/2019 to 02/28/2019	28	6.2556	746	223414	698	902	56
12/31/2018 to 01/31/2019	31	5.7470	747	185387	579	1021	64
11/30/2018 to 12/31/2018	31	5.1770	737	167000	522	1078	67
10/30/2018 to 11/30/2018	30	5.7000		190000	594	1006	63
09/28/2018 to 10/31/2018	33	7.1850	727	217727	680	920	57
Total		65.3386		179010	559	1041	65
FY18							
08/31/2018 to 09/30/2018	28	5.2950	722	189107	591	1009	63
07/31/2018 to 08/31/2018	31	4.4510	726	143581	449	1151	72
06/29/2018 to 07/31/2018	32	3.6060	714	112688	352	1248	78
05/31/2018 to 06/29/2018	29	3.5510	711	122448	383	1217	76
04/30/2018 to 05/31/2018	31	4.9490	713	159645	499	1101	69
03/30/2018 to 04/30/2018	31	4.0920	704	132000	413	1188	74
02/28/2018 to 03/30/2018	30	4.8230	707	160767	502	1098	69
01/31/2018 to 02/28/2018	28	5.0840	703	181571	567	1033	65
12/29/2017 to 01/31/2018	33	4.4810	700	135788	424	1176	73
11/30/2017 to 12/29/2017	29	3.9600	692	136552	427	1173	73
10/30/2017 to 11/30/2017	30	3.9190	690	130633	408	1192	74
09/29/2017 to 10/31/2017	32	4.3050	681	134531	420	1180	74
Total		52.5160		143879	450	1150	72

FY17							
08/31/2017 to 09/29/2017	29	3.7860	680	130552	408	1192	75
07/31/2017 to 08/31/2017	31	4.9880	677	160903	503	1097	69
06/30/2017 to 07/31/2017	31	3.7290	676	120290	376	1224	77
05/31/2017 to 06/30/2017	30	4.8780	667	162600	508	1092	68
04/28/2017 to 05/31/2017	33	4.5090	655	136636	427	1173	73
03/31/2017 to 04/28/2017	28	4.7940	650	171214	535	1065	67
02/28/2017 to 03/31/2017	31	4.1970	651	135387	423	1177	74
01/31/2017 to 02/28/2017	28	4.3580	637	155643	486	1114	70
12/30/2016 to 01/31/2017	32	4.3580	637	136188	426	1174	73
11/30/2016 to 12/30/2016	30	4.5100	635	150333	470	1130	71
10/31/2016 to 11/30/2016	30	5.0160	634	167200	523	1078	67
09/30/2016 to 10/31/2016	31	4.2480	634	137032	428	1172	73
Total		53.3710		146222	457	1143	71

TRA LINE:

Agreement Capacity

Development Line Segment S-1 - 0.623 MGD, 973 LUE, 1946 SFE

TRA Line Segment B - 0.623 MGD, 973 LUE, 1946 SFE

TRA Line Segment C - 1.373 MGD, 1731 LUE, 3462 SFE

TRA Line Segment D - 1.373 MGD, 1731 LUE, 3462 SFE

FY19							
February 2109	28	0.4000	2	14286	45	1901	98
January 2019	31	0.2387	2	7700	24	1922	99
December 2018	31	0.3657	2	11797	37	1909	98

TABLE 4.1
TOWN OF ARGYLE
Wastewater and Roadway Impact Fee Study
Land Use Vehicle-Mile Equivalency

Category	Land Use	Unit	Service Unit Factor (VM/Unit)
Residential			
	Single Family	DU	3.12
	Apt/Townhouse	DU	1.76
	Retirement Community	DU	0.71
	Independent Sr Living	DU	0.66
	Others not specified	DU	3.12
Office			
	General Office	1000 GFA	4.60
	Corporate Headquarters	1000 GFA	4.33
	Medical-Dental	1000 GFA	13.32
	U.S. Post Office	1000 GFA	12.37
	Business Park	1000 GFA	4.12
	Research & Development	1000 GFA	3.45
	Others not specified	1000 GFA	4.60
Commercial			
	Retail/shopping center	1000 GFA	4.50
	Quality restaurant	1000 GFA	6.23
	Fast Food with drive thru	1000 GFA	17.38
	High turnover restaurant	1000 GFA	8.08
	Gas Station w/ convenience	1000 GFA	9.96
	Convenience market w/gas	1000 GFA	6.11
	Convenience market	1000 GFA	5.28
	Grocery/supermarket	1000 GFA	5.55
	Discount club	1000 GFA	3.81
	Auto sales	1000 GFA	3.36
	Video rental store	1000 GFA	4.59
	Bank	1000 GFA	15.44
	Pharmacy-Drug /w Drive	1000 GFA	1.64
	Apparel store	1000 GFA	2.22
	Movie theater	Screens	18.20
	Furniture store	1000 GFA	0.37
	Home Improvement Super Store	1000 GFA	2.16
	Hardware/paint store	1000 GFA	2.68
	Building materials/lumber store	1000 GFA	2.49
	Nusery(garden center)	1000 GFA	2.09
	Nursery (wholesale)	1000 GFA	1.75
	Hotel	Rooms	1.16

	Motel	Rooms	0.93
	All suites hotel	Rooms	1.08
	Auto care center	1000 GFA	3.13
	Quick Lube shop	1000 GFA	3.11
	Auto parts sales	1000 GFA	3.58
	Tire Superstore	1000 GFA	3.86
	Wholesale tire store	1000 GFA	2.93
	Mini-warehouse/self storage	1000 GFA	0.81
	Others not specified	1000 GFA	4.50
Industrial			
	General light industrial	1000 GFA	3.03
	Manufacturing	1000 GFA	3.17
	Industrial park	1000 GFA	3.39
	Warehousing	1000 GFA	1.97
	Others not specified	1000 GFA	3.03
Institutional			
	Private school (K-12)	Students	0.33
	Junior/community college	Students	0.24
	University/college	Students	1.64
	Day care center	1000 GFA	2.33
	Hospital	1000 GFA	2.80
	Nursing home	Beds	0.54
	Assisted living center	Beds	0.54
	Place of worship	1000 GFA	0.75

VM = Vehicle Mile

DU = Dwelling Unit

GFA = Gross Floor Area

GLA = Gross Leasable Area

TABLE 4.2
TOWN OF ARGYLE
Roadway Impact Fee Study
Peak Hour Trip Generation

Land Use	Existing Condition				Future Addition			
	Units	Quantity	Table 4.1 Factor	Vehicle-Mile Trip Generation	Quantity	% Increase	Factor	Vehicle-Mile Trip Generation
Single Family								
Large Lot	DU	734	3.12	2290	124	17	3.12	387
Small Lot	DU	725	3.12	2262	705	97	3.12	2200
Commercial/Retail	Per/1000 SQ FT	191.8	4.5	863	42	22	4.5	190
Post Office	Per/1000 SQ FT	6.1	12.37	75				0
City Hall	Per/1000 SQ FT	12.1	4.6	56				0
Churches	Per/1000 SQ FT	69.9	0.75	52	10	15	0.75	8
Schools Argyle ISD	Persons	3034	0.24	728	524	17	0.25	131
Schools Liberty Christian	Persons	1550	0.33	512	305	20	0.33	101
TOTAL				6838				3016
Total 2030 Vehicle-Mile Trips								9854
Total Trip Increase (%)								44
Percent CIP Utilization								44
Average Increase Per Year (%)								3.72

Notes:

1. Vehicle-Mile Trip Generation = Quantity * Table 4.1 Factor
2. Future Addition Single Family quantity from population increase distribution
3. Future Addition Commercial/Retail quantity = 22 percent growth in square footage
4. Future Addition Church quantity = 15 percent growth in Church square footage
5. Future Addition School quantity = 1 person for each new single family dwelling

TABLE 4.3
TOWN OF ARGYLE
Roadway Impact Fee Study
LOS D Roadway Capacity

Roadway Facility	Roadway Designator	Vehicle per Hour per Lane -Mile
Divided Arterial	DA	625
Undivided Arterial	UA	600
One-Way Roadway	OW	625
Divided Arterial (No Continuous Turn Lane)	SA	625
Divided Collector	DC	500
Undivided Collector	UC	450

Hourly Capacities taken from 2010 Roadway Impact Fee Study by Freese & Nicho

TABLE 4.4
TOWN OF ARGYLE
Roadway Impact Fee Study
Existing Roadway Capacity

Peak Hour Factor 0.11

Street	Location	Length Miles	2008 Count	2009 Count	2010 Count	2011 Count	2012 Count	2013 Count	2014 Count	2015 Count	2016 Count	2017 Count	2018 Count	5 Year Average	Maximum Last 5 Year	5 Year Average Peak Hour	Maximum Last 5 Year Peak Hour	LOS D PKHR /LANE	VMT Supply	VMT Demand	VMT Capacity
Crawford Rd	E. of L.S. #1	0.12	4235	5044	4269	4450	4558	4810	5410	5937	6864	7026	7705	6588	7705	725	848	450	108	102	6
Crawford Rd	E. of C. Taylor Rd.	1.31	1947	2488	2207	2676	3124	3375	1883	3411	4181	9058	9690	5645	9690	621	1066	450	1179	1396	-217
C Taylor	S. of Crawford	0.95	570	532	505	571	578	790	737	583	619	646	1451	807	1451	89	160	450	855	152	703
Country Club Rd	E. of 377	0.86	5057	5101	4789	3819	6193	4730	3949	4700	2942	4953	5712	4451	5712	490	628	450	774	540	234
Denton(Hickory Hill)	W. of Mesquite	1.5	1317	1360	1290	1912	1410	1239	1647	1415	1144	1246	1334	1357	1647	149	181	450	1350	272	1078
Frenchtown	E. of Stonecrest/W. of Charyl	0.11	1192	820	1182	1296	1523	1673	969	1556	1038	1555	2700	1564	2700	172	297	450	99	33	66
Frenchtown	E. of 377	1.96	981	2580	2894	1738	1755	1675	1150	1895	2059	2011	1740	1771	2059	195	226	450	1764	444	1320
Harpole	W. of Hwy 377	0.25	366	388	431	597	578	598	363	429	385	408	419	401	429	44	47	450	225	12	213
Harpole	E. of 377	0.44	655	663	1060	1112	1199	921	920	1212	1096	968	923	1024	1212	113	133	450	396	59	337
Harpole	E. of Shadowwood	0.4	620	618	606	492	595	463	258	402	540	511	443	431	540	47	59	450	360	24	336
Harpole	W. of S. Gibbons	1.14	565	255	521	504	372	516	516	545	689	1510	424	737	1510	81	166	450	1026	189	837
Harpole	E. of S. Gibbons	0.8	430	354	631	539	394	385	426	508	571	790	464	552	790	61	87	450	720	70	650
N Gibbons	N. of Harpole	0.87	377	539	1182	776	603	732	350	497	954	584	1022	681	1022	75	112	450	783	98	685
S Gibbons Road	N. of 407	0.45	368	422	1022	657	682	652	595	568	775	1225	1245	882	1245	97	137	450	405	62	343
S Gibbons Road	N of Frenchtown	0.47													1245		137	450	423	64	359
Old Justin	E. of C. Taylor	1.52	457	306	424	414	408	416	550	525	519	594	748	587	748	65	82	450	1368	125	1243
Old Justin Rd.	E. of W. Front	0.29	-	-	-	-	-	1966	2155	2360	2500	2478	3173	2533	3173	279	349	450	261	101	160
Sam Davis	E of I-35	0.41	73	68	50	56	78	74	72	78	72	113	148	97	148	11	16	450	369	7	362
Sam Davis	W. of Stonecrest	1.1	180	228	238	261	243	200	171	364	386	206	451	316	451	35	50	450	990	55	935
Stonecrest	S. Harb/ N. Sam Davis	0.19	295	245	272	350	406	395	229	391	436	677	530	453	677	50	74	450	171	14	157
Stonecrest	N. of 407	0.54	346	301	289	327	400	340	266	386	363	401	977	479	977	53	107	450	486	58	428
Stonecrest	S. of 407	0.38	814	801	1250	1024	1049	1103	568	1754	1774	2413	2511	1804	2511	198	276	450	342	105	237
Stonecrest	S. of Frenchtown	0.09	1378	833	1414	1540	1445	2043	1447	2591	1420	2288	2697	2089	2697	230	297	450	81	27	54
Stonecrest	S. of Forest Trail	0.81	934	493	1025	1274	1034	988	994	1653	1051	1450	1313	1292	1653	142	182	450	729	147	582
Total		16.96																	15264	4154	11110

TABLE 4.5
TOWN OF ARGYLE
Roadway Impact Fee Study
Roadway CIP Project Cost Summary

Project Name	Phase 1 Estimated Project Cost	Phase 1 Maximum Eligible Cos
Crawford Road Ph 1 Imp	\$3,463,600	\$1,731,800
Old Justin Road Ph 1 (IH 35 to Gateway) Imp	\$1,167,633	\$583,817
Old Justin Road Ph 1 (Gateway to 377) Imp	\$4,212,189	\$2,106,095
Hickory Hill Road Ph 1 (377 to E Hickory Ridge Cr)	\$2,025,020	\$1,012,510
Hickory Hill Road Ph 1 (Hickory Ridge Cr to Gibbons)	\$1,959,759	\$979,880
Sam Davis Road Ph 1 (IH 35 to Gateway) Imp	\$1,655,311	\$827,656
Harbole Road Ph 1 Imp	\$1,550,690	\$775,345
C. Taylor Road Ph 1 Imp	\$3,569,725	\$1,784,863
Gateway Blvd Ph 1 (Old Justin Rd to Sam Davis)	\$3,724,518	\$1,862,259
Gateway Blvd Ph 1 (Sam Davis to FM 407)	\$3,180,371	\$1,590,186
Gateway Blvd Ph 1 (FM 407 to Avalon Blvd)	\$3,199,080	\$1,599,540
Gibbons Road Ph 1 (Hickory Hill Rd to FM 407) Imp	\$3,557,106	\$1,778,553
Total	\$33,265,002	\$16,632,501

Table 4.6**CONCEPTUAL OPINION OF PROBABLE COST**

Teague Nall and Perkins, Inc.
Consulting Engineers



TNP Project Number: ARG 19283

Client: Town of Argyle

Date: 11/26/2019

Project Name: Roadway Impact Fee Study

Crawford Road - Phase I

Classification: Type B Minor Arterial

Phase I Section: 2-Lane Asphalt with Turn Lanes (Phase II: 4-lane Concrete, Median Divided 65' B-B)

Required ROW: 60'

Existing ROW: 60' (Est. Avg)

Project Length: 7,400'

Item No.	Description of Items	Qty	Unit	Unit Cost	Total
Roadway					
1	Surety Bonds	1	LS	\$90,000.00	\$90,000
2	Mobilization/Demobilization	1	LS	\$150,000.00	\$150,000
3	Erosion, Sedimentation, and Environmental Controls	1	LS	\$40,000.00	\$40,000
4	Barricades, Signs, and Traffic Controls	1	LS	\$100,000.00	\$100,000
5	Portable Changeable Message Signs	0	Day	\$100.00	\$0
6	Project Signs	2	EA	\$500.00	\$1,000
7	Prepare Right-of-Way	74	STA	\$1,200.00	\$88,800
8	Unclassified Excavation	21,200	CY	\$18.00	\$381,600
9	Remove Existing Culvert	2	EA	\$1,500.00	\$3,000
10	Remove Existing Concrete	2,099	SY	\$15.00	\$31,488
11	8" Cement Treat Base	26,000	SY	\$3.50	\$91,000
12	Portland Cement @ 6% (40lb/sy)	520	TON	\$200.00	\$104,000
13	Roundabout (City of Denton)	0	EA	\$275,000.00	\$0
14	7" Asphalt Pavement	23,500	SY	\$32.00	\$752,000
15	5" Concrete Driveway	676	SY	\$75.00	\$50,730
16	6" Concrete Curb	0	LF	\$12.00	\$0
17	Concrete Sidewalk	270	SF	\$5.00	\$1,350
18	Retaining Wall	0	SF	\$75.00	\$0
19	18" RCP Culvert	220	LF	\$150.00	\$33,000
20	24" RCP Culvert	353	LF	\$185.00	\$65,305
21	30" RCP Culvert	82	LF	\$200.00	\$16,400
22	36" RCP Culvert	22	LF	\$220.00	\$4,840
23	42" RCP Culvert	80	LF	\$250.00	\$20,000
24	18" Precast S.E.T.	6	EA	\$1,000.00	\$6,000
25	24" Precast S.E.T.	12	EA	\$1,300.00	\$15,600
26	30" Precast S.E.T.	2	EA	\$1,500.00	\$3,000
27	36" Precast S.E.T.	2	EA	\$1,800.00	\$3,600
28	42" Precast S.E.T.	1	EA	\$2,200.00	\$2,200
29	4'x4' Drop Inlet	1	EA	\$4,000.00	\$4,000
30	Relocate Drop Inlet	1	0	\$5,000.00	\$5,000
31	6' Concrete Flume	0	LF	\$40.00	\$0
32	Extend Existing Culvert /w Headwalls	1	LS	\$100,000.00	\$100,000
33	Metal Beam Guard Fence	300	LF	\$40.00	\$12,000
34	Single Guardrail Terminal	4	EA	\$2,000.00	\$8,000
35	Relocate Mailbox	2	EA	\$500.00	\$1,000
36	Common Bermuda Solid Sod	7,103	SY	\$8.00	\$56,824
37	Hydromulching	23,738	SY	\$1.50	\$35,606

Table 4.6

CONCEPTUAL OPINION OF PROBABLE COST

Teague Nall and Perkins, Inc.
Consulting Engineers



TNP Project Number: ARG 19283

Client: Town of Argyle

Date: 11/26/2019

Project Name: Roadway Impact Fee Study

Crawford Road - Phase I

Classification: Type B Minor Arterial

Phase I Section: 2-Lane Asphalt with Turn Lanes (Phase II: 4-lane Concrete, Median Divided 65' B-B)

Required ROW: 60'

Existing ROW: 60' (Est. Avg)

Project Length: 7,400'

Item No.	Description of Items	Qty	Unit	Unit Cost	Total
38	Pavement Markings	1	LS	\$30,000.00	\$30,000
39	Small Roadside Signs	25	EA	\$600.00	\$15,000
40	Colorized Patterned Concrete	0	SY	\$45.00	\$0
41	Remove & Replace Privacy Fence	0	LF	\$12.00	\$0
42	Remove & Replace Pipe & Mesh Fence	0	LF	\$14.00	\$0
43	Barbed Wire Fence	800	LF	\$10.00	\$8,000
44	Pipe Rail Fence	749	LF	\$18.00	\$13,482
45	Wood fence	0	LF	\$15.00	\$0
46	Water Line & FH relocation	1	LS	\$5,000.00	\$5,000
				Subtotal Roadway	\$2,348,825
				20% Contingency	\$469,765
				Total Roadway	\$2,818,600
	ROW Acquisition				\$361,000
	Engineering (~7% of Construction Cost)				\$210,000
	Design Survey (~2% of Construction Cost)				\$54,000
	Geotechnical Engineering (~0.7% of Construction Cost)				\$20,000
	Total Capital Cost				\$3,463,600
	Capital Cost per Linear Foot				\$468.05

Table 4.7**CONCEPTUAL OPINION OF PROBABLE COST**

Teague Nall and Perkins, Inc.
Consulting Engineers



TNP Project Number: ARG 19224

Client: Town of Argyle

Date: 11/26/2019

Project Name: Roadway Impact Fee Study

Old Justin Rd west of Gateway Blvd - Phase I

Classification: Type B Minor Arterial

Phase I Section: 2-Lane Asphalt with Turn Lanes (Phase II: 4-lane Concrete, Median Divided 65' B-B)

Required ROW: 90'

Existing ROW: 75' (Est. Avg)

Project Length: 1,550'

ITEM NO.	DESCRIPTION OF ITEMS	QTY	UNIT	UNIT COST	TOTAL
	Roadway Improvements				
1	Mobilization (~5% Construction Cost)	1	LS	\$39,000.00	\$39,000
2	ROW Preparation	16	STA	\$2,500.00	\$40,000
3	Barricades, Signs, and Traffic Control	1	LS	\$10,000.00	\$10,000
4	Temporary Erosion Controls	1	LS	\$15,500.00	\$15,500
5	7" Asphalt Paving	4,950	SY	\$32.00	\$158,400
6	Left Turn Lanes for 3-Way Intersection (400 SY Add'l Pvmt)	0	EA	\$20,000.00	\$0
7	Left Turn Lanes for 4-Way Intersection (533 SY Add'l Pvmt)	2	EA	\$26,650.00	\$53,300
8	8" Cement Stabilized Subgrade @ 30lbs/sy	6,600	SY	\$8.00	\$52,800
9	Cement for Stabilization	99	TN	\$180.00	\$17,820
10	5' Wide Sidewalks and Ramps	0	LF	\$25.00	\$0
11	Storm Drainage (Ditches)	1,550	LF	\$40.00	\$62,000
12	Large Culverts	1	EA	\$50,000.00	\$50,000
13	Top Soil and Hydromulching	9,500	SY	\$2.50	\$23,750
14	Pavement Markings and Signage	1,000	LF	\$10.00	\$10,000
15	Traffic Signals	0	EA	\$200,000.00	\$0
16	Landscaping	0	LS	\$0.00	\$0
	Subtotal Roadway Improvements				\$532,570
	20% Contingency				\$106,514
	Total Construction				\$639,084
	ROW Acquisition	23,250	SF	\$3.00	\$69,750
	Engineering (10% of Construction Cost)				\$64,000
	Design Survey (2% of Construction Cost)				\$12,782
	Geotechnical Engineering (0.5% of Construction Cost)				\$3,195
	Total Capital Cost				\$788,811
	Capital Cost per Linear Foot				\$508.91
	Future Capital Cost (10 years @ 4%)				\$1,167,633

Table 4.8**CONCEPTUAL OPINION OF PROBABLE COST**

Teague Nall and Perkins, Inc.
 Consulting Engineers



TNP Project Number: ARG 19224

Client: Town of Argyle

Date: 11/26/2019

Project Name: Roadway Impact Fee Study

Old Justin Rd east of Gateway Blvd to US 377 - Phase I

Classification: Type E Rural Collector

Phase I Section: 25' wide 2-lane asphalt with ditches (Phase II: 2-lane asphalt, 30' wide)

Required ROW: 80'

Existing ROW: 75' (Est. Avg)

Project Length: 7,950'

ITEM NO.	DESCRIPTION OF ITEMS	QTY	UNIT	UNIT COST	TOTAL
	Roadway Improvements				
1	Mobilization (~5% Construction Cost)	1	LS	\$120,000.00	\$120,000
2	ROW Preparation	132	STA	\$2,500.00	\$330,000
3	Barricades, Signs, and Traffic Control	1	LS	\$10,000.00	\$10,000
4	Temporary Erosion Controls	1	LS	\$5,000.00	\$5,000
5	2" Asphalt Surface Course	24,300	SY	\$15.00	\$364,500
6	4" Asphalt Base Course	24,300	SY	\$25.00	\$607,500
7	6" Cement Stabilized Subgrade @ 24lbs/sy	26,700	SY	\$6.00	\$160,200
8	Cement for Stabilization	320	TN	\$180.00	\$57,600
9	Small Culverts	5	EA	\$15,000.00	\$75,000
10	Large Culverts	1	EA	\$150,000.00	\$150,000
11	Top Soil and Hydromulching	46,400	SY	\$2.50	\$116,000
12	Pavement Markings and Signage	2,400	LF	\$10.00	\$24,000
13	Landscaping	0	LS	\$0.00	\$0
	Subtotal Roadway Improvements				\$2,019,800
	20% Contingency				\$403,960
	Total Construction				\$2,423,760
	ROW Acquisition	39,750	SF	\$3.00	\$119,250
	Engineering (10% of Construction Cost)				\$242,000
	Design Survey (2% of Construction Cost)				\$48,475
	Geotechnical Engineering (0.5% of Construction Cost)				\$12,119
	Total Capital Cost				\$2,845,604
	Capital Cost per Linear Foot				\$357.94
	Future Capital Cost (10 years @ 4%)				\$4,212,189

Table 4.9**CONCEPTUAL OPINION OF PROBABLE COST**

Teague Nall and Perkins, Inc.
Consulting Engineers



TNP Project Number: ARG 19224

Client: Town of Argyle

Date: 11/26/2019

Project Name: Roadway Impact Fee Study

Hickory Hill Road from US 377 to Hickory Ridge - Phase I

Classification: Type C Major Collector

Phase I Section: 25' wide 2-lane asphalt with ditches (Phase II: 4-lane asphalt with curbs, 49' wide)

Required ROW: 80'

Existing ROW: 80' (Est. Avg)

Project Length: 3,550'

ITEM NO.	DESCRIPTION OF ITEMS	QTY	UNIT	UNIT COST	TOTAL
	Roadway Improvements				
1	Mobilization (~5% Construction Cost)	1	LS	\$60,000.00	\$60,000
2	ROW Preparation	36	STA	\$2,500.00	\$90,000
3	Barricades, Signs, and Traffic Control	1	LS	\$10,000.00	\$10,000
4	Temporary Erosion Controls	1	LS	\$35,500.00	\$35,500
5	3" Asphalt Surface Course	10,900	SY	\$14.00	\$152,600
6	4" Asphalt Base Course	10,900	SY	\$18.00	\$196,200
7	Left Turn Lanes for 3-Way Intersection (400 SY Add'l Pvmt)	3	EA	\$14,000.00	\$42,000
8	Left Turn Lanes for 4-Way Intersection (533 SY Add'l Pvmt)	3	EA	\$18,650.00	\$55,950
9	6" Cement Stabilized Subgrade @ 24lbs/sy	15,000	SY	\$6.00	\$90,000
10	Cement for Stabilization	180	TN	\$180.00	\$32,400
11	Concrete Curb and Gutter	0	LF	\$20.00	\$0
12	5' Sidewalks and Ramps	0	LF	\$25.00	\$0
13	Storm Drainage (Ditches)	2,800	LF	\$40.00	\$112,000
14	Small Culverts	2	EA	\$15,000.00	\$30,000
15	Large Culverts	0	EA	\$150,000.00	\$0
16	Top Soil and Hydromulching	20,700	SY	\$2.50	\$51,750
17	Pavement Markings and Signage	2,130	LF	\$10.00	\$21,300
18	Traffic Signals	0	EA	\$200,000.00	\$0
19	Landscaping	0	LS	\$0.00	\$0
	Subtotal Roadway Improvements				\$979,700
	20% Contingency				\$195,940
	Total Construction				\$1,175,640
	ROW Acquisition	15,000	SF	\$3.00	\$45,000
	Engineering (10% of Construction Cost)				\$118,000
	Design Survey (2% of Construction Cost)				\$23,513
	Geotechnical Engineering (0.5% of Construction Cost)				\$5,878
	Total Capital Cost				\$1,368,031
	Capital Cost per Linear Foot				\$385.36
	Future Capital Cost (10 years @ 4%)				\$2,025,020

Table 4.10**CONCEPTUAL OPINION OF PROBABLE COST**

Teague Nall and Perkins, Inc.
Consulting Engineers



TNP Project Number: ARG 19224

Client: Town of Argyle

Date: 11/26/2019

Project Name: Roadway Impact Fee Study

Hickory Hill Road east of Hickory Ridge to Gibbons Road - Phase I

Classification: Type E Rural Collector

Phase I Section: 25' wide 2-lane asphalt with ditches (Phase II: 2-lane asphalt, 30' wide)

Required ROW: 80'

Existing ROW: 70' (Est. Avg)

Project Length: 4,350'

ITEM NO.	DESCRIPTION OF ITEMS	QTY	UNIT	UNIT COST	TOTAL
	Roadway Improvements				
1	Mobilization (~5% Construction Cost)	1	LS	\$53,000.00	\$53,000
2	ROW Preparation	44	STA	\$2,500.00	\$110,000
3	Barricades, Signs, and Traffic Control	1	LS	\$10,000.00	\$10,000
4	Temporary Erosion Controls	1	LS	\$5,000.00	\$5,000
5	3" Asphalt Surface Course	13,300	SY	\$15.00	\$199,500
6	4" Asphalt Base Course	13,300	SY	\$20.00	\$266,000
7	6" Cement Stabilized Subgrade @ 24lbs/sy	14,600	SY	\$6.00	\$87,600
8	Cement for Stabilization	175	TN	\$180.00	\$31,500
9	Small Culverts	3	EA	\$15,000.00	\$45,000
10	Large Culverts	0	EA	\$150,000.00	\$0
11	Top Soil and Hydromulching	25,400	SY	\$2.50	\$63,500
12	Pavement Markings and Signage	1,300	LF	\$10.00	\$13,000
13	Landscaping	0	LS	\$0.00	\$0
	Subtotal Roadway Improvements				\$884,100
	20% Contingency				\$176,820
	Total Construction				\$1,060,920
	ROW Acquisition	43,500	SF	\$3.00	\$130,500
	Engineering (10% of Construction Cost)				\$106,000
	Design Survey (2% of Construction Cost)				\$21,218
	Geotechnical Engineering (0.5% of Construction Cost)				\$5,305
	Total Capital Cost				\$1,323,943
	Capital Cost per Linear Foot				\$304.35
	Future Capital Cost (10 years @ 4%)				\$1,959,759

Table 4.11**CONCEPTUAL OPINION OF PROBABLE COST**

Teague Nall and Perkins, Inc.
Consulting Engineers



TNP Project Number: ARG 19224

Client: Town of Argyle

Date: 11/26/2019

Project Name: Roadway Impact Fee Study

Sam Davis West from I-35W to Gateway Blvd - Phase I

Classification: Type C Major Collector

Phase I Section: 25' wide 2-lane asphalt with ditches (Phase II: 4-lane asphalt with curbs, 49' wide)

Required ROW: 80'

Existing ROW: 65' (Est. Avg)

Project Length: 2,200'

ITEM NO.	DESCRIPTION OF ITEMS	QTY	UNIT	UNIT COST	TOTAL
	Roadway Improvements				
1	Mobilization (~5% Construction Cost)	1	LS	\$45,000.00	\$45,000
2	ROW Preparation	22	STA	\$2,500.00	\$55,000
3	Barricades, Signs, and Traffic Control	1	LS	\$10,000.00	\$10,000
4	Temporary Erosion Controls	1	LS	\$22,000.00	\$22,000
5	3" Asphalt Surface Course	6,750	SY	\$15.00	\$101,250
6	4" Asphalt Base Course	6,750	SY	\$20.00	\$135,000
7	Left Turn Lanes for 3-Way Intersection (400 SY Add'l Pvmt)	0	EA	\$14,000.00	\$0
8	Left Turn Lanes for 4-Way Intersection (533 SY Add'l Pvmt)	2	EA	\$18,650.00	\$37,300
7	6" Cement Stabilized Subgrade @ 24lbs/sy	8,600	SY	\$6.00	\$51,600
10	Cement for Stabilization	103	TN	\$180.00	\$18,540
11	Concrete Curb and Gutter	0	LF	\$20.00	\$0
12	5' Sidewalks and Ramps	0	LF	\$25.00	\$0
13	Storm Drainage (Ditches)	1,800	LF	\$40.00	\$72,000
14	Small Culverts	1	EA	\$15,000.00	\$15,000
15	Large Culverts	1	EA	\$150,000.00	\$150,000
16	Top Soil and Hydromulching	12,800	SY	\$2.50	\$32,000
17	Pavement Markings and Signage	1,000	LF	\$10.00	\$10,000
18	Traffic Signals	0	EA	\$200,000.00	\$0
19	Landscaping	0	LS	\$0.00	\$0
	Subtotal Roadway Improvements				\$754,690
	20% Contingency				\$150,938
	Total Construction				\$905,628
	ROW Acquisition	33,000	SF	\$3.00	\$99,000
	Engineering (10% of Construction Cost)				\$91,000
	Design Survey (2% of Construction Cost)				\$18,113
	Geotechnical Engineering (0.5% of Construction Cost)				\$4,528
	Total Capital Cost				\$1,118,269
	Capital Cost per Linear Foot				\$508.30
	Future Capital Cost (10 years @ 4%)				\$1,655,311

Table 4.12**CONCEPTUAL OPINION OF PROBABLE COST**

Teague Nall and Perkins, Inc.
 Consulting Engineers



TNP Project Number: ARG 19224

Client: Town of Argyle

Date: 11/26/2019

Project Name: Roadway Impact Fee Study

Harpole Road from U.S.377 to Shadow Wood Drive - Phase I

Classification: Type D Minor Collector

Phase I Section: 25' wide 2-lane asphalt with ditches (Phase II: 2-lane asphalt with curbs, 37' wide)

Required ROW: 70'

Existing ROW: 0' (Est. Avg)

Project Length: 2,300'

ITEM NO.	DESCRIPTION OF ITEMS	QTY	UNIT	UNIT COST	TOTAL
	Roadway Improvements				
1	Mobilization (~5% Construction Cost)	1	LS	\$46,500.00	\$46,500
2	ROW Preparation	19	STA	\$2,500.00	\$47,500
3	Barricades, Signs, and Traffic Control	1	LS	\$10,000.00	\$10,000
4	Temporary Erosion Controls	1	LS	\$5,000.00	\$5,000
5	3" Asphalt Surface Course	7,000	SY	\$15.00	\$105,000
6	4" Asphalt Base Course	7,000	SY	\$20.00	\$140,000
7	Left Turn Lanes for 3-Way Intersection (400 SY Add'l Pvmnt)	1	EA	\$14,000.00	\$14,000
8	6" Cement Stabilized Subgrade @ 24lbs/sy	8,200	SY	\$6.00	\$49,200
9	Cement for Stabilization	98	TN	\$180.00	\$17,640
10	Concrete Curb and Gutter	0	LF	\$20.00	\$0
11	5' Wide Sidewalks and Ramps	0	LF	\$25.00	\$0
12	Storm Drainage (Inlets and RCP)	1,500	LF	\$200.00	\$300,000
13	Small Culverts	0	EA	\$15,000.00	\$0
14	Large Culverts	0	EA	\$150,000.00	\$0
15	Top Soil and Hydromulching	10,900	SY	\$2.50	\$27,250
16	Pavement Markings and Signage	1,400	LF	\$10.00	\$14,000
17	Landscaping	0	LS	\$0.00	\$0
	Subtotal Roadway Improvements				\$776,090
	20% Contingency				\$155,218
	Total Construction				\$931,308
	ROW Acquisition	0	SF	\$3.00	\$0
	Engineering (10% of Construction Cost)				\$93,000
	Design Survey (2% of Construction Cost)				\$18,626
	Geotechnical Engineering (0.5% of Construction Cost)				\$4,657
	Total Capital Cost				\$1,047,591
	Capital Cost per Linear Foot				\$455.47
	Future Capital Cost (10 years @ 4%)				\$1,550,690

Table 4.13**CONCEPTUAL OPINION OF PROBABLE COST**Teague Nall and Perkins, Inc.
Consulting Engineers

TNP Project Number: ARG 19224

Client: Town of Argyle

Date: 11/26/2019

Project Name: Roadway Impact Fee Study

C. Taylor Road - Phase I**Classification: Type B Minor Arterial**

Phase I Section: 2-Lane Asphalt with Turn Lanes (Phase II: 4-lane Concrete, Median Divided 65' B-B)

Required ROW: 90'

Existing ROW: 65' (Est. Avg)

Project Length: 5,000'

ITEM NO.	DESCRIPTION OF ITEMS	QTY	UNIT	UNIT COST	TOTAL
	Roadway Improvements				
1	Mobilization (~5% Construction Cost)	1	LS	\$110,000.00	\$110,000
2	ROW Preparation	50	STA	\$2,500.00	\$125,000
3	Barricades, Signs, and Traffic Control	1	LS	\$50,000.00	\$50,000
4	Temporary Erosion Controls	1	LS	\$50,000.00	\$50,000
5	7" Asphalt Paving	16,000	SY	\$32.00	\$512,000
6	Left Turn Lanes for 3-Way Intersection (400 SY Add'l Pvmnt)	4	EA	\$20,000.00	\$80,000
7	Left Turn Lanes for 4-Way Intersection (533 SY Add'l Pvmnt)	2	EA	\$26,650.00	\$53,300
8	8" Cement Stabilized Subgrade @ 30lbs/sy	20,500	SY	\$8.00	\$164,000
9	Cement for Stabilization	310	TN	\$180.00	\$55,800
10	5' Wide Sidewalks and Ramps	0	LF	\$25.00	\$0
11	Storm Drainage (Ditches)	5,000	LF	\$40.00	\$200,000
12	Large Culverts	0	EA	\$150,000.00	\$0
13	Top Soil and Hydromulching	31,400	SY	\$2.50	\$78,500
14	Pavement Markings and Signage	3,000	LF	\$10.00	\$30,000
15	Traffic Signals	0	EA	\$200,000.00	\$0
16	Landscaping	0	LS	\$0.00	\$0
	Subtotal Roadway Improvements				\$1,508,600
	20% Contingency				\$301,720
	Total Construction				\$1,810,320
	ROW Acquisition	125,000	SF	\$3.00	\$375,000
	Engineering (10% of Construction Cost)				\$181,000
	Design Survey (2% of Construction Cost)				\$36,206
	Geotechnical Engineering (0.5% of Construction Cost)				\$9,052
	Total Capital Cost				\$2,411,578
	Capital Cost per Linear Foot				\$482.32
	Future Capital Cost (10 years @ 4%)				\$3,569,725

Table 4.14**CONCEPTUAL OPINION OF PROBABLE COST**

Teague Nall and Perkins, Inc.
Consulting Engineers



TNP Project Number: ARG 19224

Client: Town of Argyle

Date: 11/26/2019

Project Name: Roadway Impact Fee Study

Gateway Boulevard from Old Justin to Sam Davis - Phase I

Classification: Type B Minor Arterial

Phase I Section: 2-Lane Asphalt with Turn Lanes (Phase II: 4-lane Concrete, Median Divided 65' B-B)

Required ROW: 90'

Existing ROW: 0'

Project Length: 3,950'

ITEM NO.	DESCRIPTION OF ITEMS	QTY	UNIT	UNIT COST	TOTAL
	Roadway Improvements				
1	Mobilization (~5% Construction Cost)	1	LS	\$65,000.00	\$65,000
2	ROW Preparation	40	STA	\$2,500.00	\$100,000
3	Barricades, Signs, and Traffic Control	1	LS	\$3,500.00	\$3,500
4	Temporary Erosion Controls	1	LS	\$40,000.00	\$40,000
5	7" Asphalt Paving	12,600	SY	\$32.00	\$403,200
6	Left Turn Lanes for 3-Way Intersection (400 SY Add'l Pvmt)	0	EA	\$20,000.00	\$0
7	Left Turn Lanes for 4-Way Intersection (533 SY Add'l Pvmt)	2	EA	\$26,650.00	\$53,300
8	8" Cement Stabilized Subgrade @ 30lbs/sy	15,100	SY	\$8.00	\$120,800
9	Cement for Stabilization	230	TN	\$180.00	\$41,400
10	5' Wide Sidewalks and Ramps (Sidewalks in Phase II)	0	LF	\$25.00	\$0
11	Storm Drainage (Ditches)	3,950	LF	\$40.00	\$158,000
12	Large Culverts	0	EA	\$150,000.00	\$0
13	Top Soil and Hydromulching	25,800	SY	\$2.50	\$64,500
14	Pavement Markings and Signage	2,400	LF	\$10.00	\$24,000
15	Traffic Signals	0	EA	\$200,000.00	\$0
16	Landscaping	0	LS	\$0.00	\$0
	Subtotal Roadway Improvements				\$1,073,700
	20% Contingency				\$214,740
	Total Construction				\$1,288,440
	ROW Acquisition	355,500	SF	\$3.00	\$1,066,500
	Engineering (10% of Construction Cost)				\$129,000
	Design Survey (2% of Construction Cost)				\$25,769
	Geotechnical Engineering (0.5% of Construction Cost)				\$6,442
	Total Capital Cost				\$2,516,151
	Capital Cost per Linear Foot				\$637.00
	Future Capital Cost (10 years @ 4%)				\$3,724,518

Table 4.15

CONCEPTUAL OPINION OF PROBABLE COST

Teague Nall and Perkins, Inc.
Consulting Engineers



TNP Project Number: ARG 19224

Client: Town of Argyle

Date: 11/26/2019

Project Name: Roadway Impact Fee Study

Gateway Boulevard from Sam Davis to F.M. 407 - Phase I

Classification: Type B Minor Arterial

Phase I Section: 2-Lane Asphalt with Turn Lanes (Phase II: 4-lane Concrete, Median Divided 65' B-B)

Required ROW: 90'

Existing ROW: 0'

Project Length: 3,000'

ITEM NO.	DESCRIPTION OF ITEMS	QTY	UNIT	UNIT COST	TOTAL
	Roadway Improvements				
1	Mobilization (~5% Construction Cost)	1	LS	\$60,000.00	\$60,000
2	ROW Preparation	30	STA	\$2,500.00	\$75,000
3	Barricades, Signs, and Traffic Control	1	LS	\$3,500.00	\$3,500
4	Temporary Erosion Controls	1	LS	\$30,000.00	\$30,000
5	7" Asphalt Paving	9,600	SY	\$32.00	\$307,200
6	Left Turn Lanes for 3-Way Intersection (400 SY Add'l Pvmt)	0	EA	\$20,000.00	\$0
7	Left Turn Lanes for 4-Way Intersection (533 SY Add'l Pvmt)	2	EA	\$26,650.00	\$53,300
8	8" Cement Stabilized Subgrade @ 30lbs/sy	11,700	SY	\$8.00	\$93,600
9	Cement for Stabilization	180	TN	\$180.00	\$32,400
10	5' Wide Sidewalks and Ramps (Sidewalks in Phase II)	0	LF	\$25.00	\$0
11	Storm Drainage (Ditches)	3,000	LF	\$40.00	\$120,000
12	Large Culverts	1	EA	\$150,000.00	\$150,000
13	Top Soil and Hydromulching	19,400	SY	\$2.50	\$48,500
14	Pavement Markings and Signage	1,800	LF	\$10.00	\$18,000
15	Traffic Signals	0	EA	\$200,000.00	\$0
16	Landscaping	0	LS	\$0.00	\$0
	Subtotal Roadway Improvements				\$991,500
	20% Contingency				\$198,300
	Total Construction				\$1,189,800
	ROW Acquisition	270,000	SF	\$3.00	\$810,000
	Engineering (10% of Construction Cost)				\$119,000
	Design Survey (2% of Construction Cost)				\$23,796
	Geotechnical Engineering (0.5% of Construction Cost)				\$5,949
	Total Capital Cost				\$2,148,545
	Capital Cost per Linear Foot				\$716.18
	Future Capital Cost (10 years @ 4%)				\$3,180,371

Table 4.16**CONCEPTUAL OPINION OF PROBABLE COST**Teague Nall and Perkins, Inc.
Consulting Engineers

TNP Project Number: ARG 19224

Client: Town of Argyle

Date: 11/26/2019

Project Name: Roadway Impact Fee Study

Gateway Boulevard from F.M. 407 to Avalon Blvd - Phase I**Classification: Type B Minor Arterial**

Phase I Section: 2-Lane Asphalt with Turn Lanes (Phase II: 4-lane Concrete, Median Divided 65' B-B)

Required ROW: 90'

Existing ROW: 0'

Project Length: 2,800'

ITEM NO.	DESCRIPTION OF ITEMS	QTY	UNIT	UNIT COST	TOTAL
	Roadway Improvements				
1	Mobilization (~5% Construction Cost)	1	LS	\$57,000.00	\$57,000
2	ROW Preparation	28	STA	\$2,500.00	\$70,000
3	Barricades, Signs, and Traffic Control	1	LS	\$3,500.00	\$3,500
4	Temporary Erosion Controls	1	LS	\$28,000.00	\$28,000
5	7" Asphalt Paving	8,950	SY	\$32.00	\$286,400
6	Left Turn Lanes for 3-Way Intersection (400 SY Add'l Pvmt)	0	EA	\$20,000.00	\$0
7	Left Turn Lanes for 4-Way Intersection (533 SY Add'l Pvmt)	2	EA	\$26,650.00	\$53,300
8	8" Cement Stabilized Subgrade @ 30lbs/sy	11,000	SY	\$8.00	\$88,000
9	Cement for Stabilization	170	TN	\$180.00	\$30,600
10	5' Wide Sidewalks and Ramps (Sidewalks in Phase II)	0	LF	\$25.00	\$0
11	Storm Drainage (Ditches)	2,800	LF	\$40.00	\$112,000
12	Large Culverts	1	EA	\$250,000.00	\$250,000
13	Top Soil and Hydromulching	18,000	SY	\$2.50	\$45,000
14	Pavement Markings and Signage	1,700	LF	\$10.00	\$17,000
15	Traffic Signals	0	EA	\$200,000.00	\$0
16	Landscaping	0	LS	\$0.00	\$0
	Subtotal Roadway Improvements				\$1,040,800
	20% Contingency				\$208,160
	Total Construction				\$1,248,960
	ROW Acquisition	252,000	SF	\$3.00	\$756,000
	Engineering (10% of Construction Cost)				\$125,000
	Design Survey (2% of Construction Cost)				\$24,979
	Geotechnical Engineering (0.5% of Construction Cost)				\$6,245
	Total Capital Cost				\$2,161,184
	Capital Cost per Linear Foot				\$771.85
	Future Capital Cost (10 years @ 4%)				\$3,199,080

Table 4.17**CONCEPTUAL OPINION OF PROBABLE COST**

Teague Nall and Perkins, Inc.
Consulting Engineers



TNP Project Number: ARG 19224

Client: Town of Argyle

Date: 11/26/2019

Project Name: Roadway Impact Fee Study

Gibbons Road from Hickory Hill Road to F.M. 407 - Phase I

Classification: Type E Rural Collector

Phase I Section: 25' wide 2-lane asphalt with ditches (Phase II: 2-lane asphalt, 30' wide)

Required ROW: 80'

Existing ROW: 65' (Est. Avg)

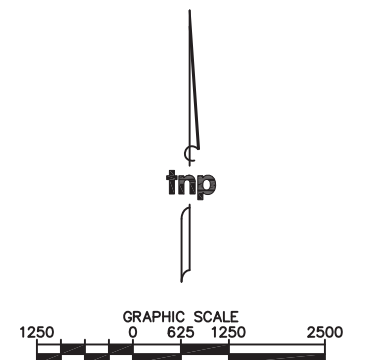
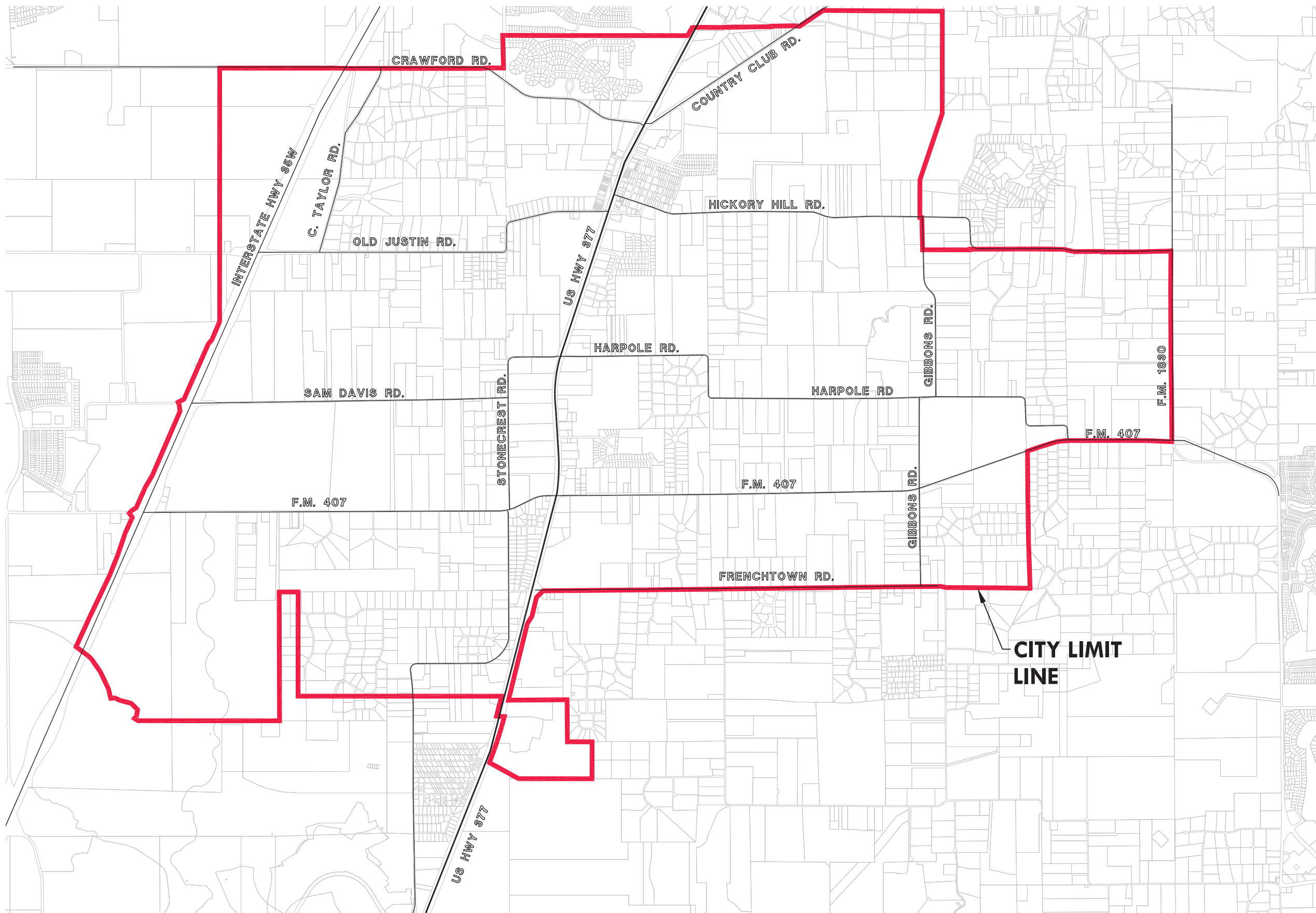
Project Length: 7,000'

ITEM NO.	DESCRIPTION OF ITEMS	QTY	UNIT	UNIT COST	TOTAL
	Roadway Improvements				
1	Mobilization (~5% Construction Cost)	1	LS	\$92,500.00	\$92,500
2	ROW Preparation	70	STA	\$2,500.00	\$175,000
3	Barricades, Signs, and Traffic Control	1	LS	\$10,000.00	\$10,000
4	Temporary Erosion Controls	1	LS	\$5,000.00	\$5,000
5	3" Asphalt Surface Course	21,400	SY	\$15.00	\$321,000
6	4" Asphalt Base Course	21,400	SY	\$20.00	\$428,000
7	6" Cement Stabilized Subgrade @ 24lbs/sy	23,500	SY	\$6.00	\$141,000
8	Cement for Stabilization	282	TN	\$180.00	\$50,760
9	Small Culverts	0	EA	\$15,000.00	\$0
10	Large Culverts	1	EA	\$200,000.00	\$200,000
11	Top Soil and Hydromulching	40,850	SY	\$2.50	\$102,125
12	Pavement Markings and Signage	2,100	LF	\$10.00	\$21,000
13	Landscaping	0	LS	\$0.00	\$0
	Subtotal Roadway Improvements				\$1,546,385
	20% Contingency				\$309,277
	Total Construction				\$1,855,662
	ROW Acquisition	105,000	SF	\$3.00	\$315,000
	Engineering (10% of Construction Cost)				\$186,000
	Design Survey (2% of Construction Cost)				\$37,113
	Geotechnical Engineering (0.5% of Construction Cost)				\$9,278
	Total Capital Cost				\$2,403,054
	Capital Cost per Linear Foot				\$343.29
	Future Capital Cost (10 years @ 4%)				\$3,557,106

TABLE 4.18
TOWN OF ARGYLE
Roadway Impact Fee Study
Proposed Phase 1 Roadway Capacity

Peak Hour Factor 0.11

Street	Location	Length Miles	Estimated PKHR /LANE	VMT Supply	Existing VMT Demand	VMT Capacity
Crawford Rd	IH 35 to 377	1.4	550	1540	1396	144
C Taylor	S. of Crawford	0.95	525	997.5	152	846
Country Club Rd	E. of 377	0.86	450	774	540	234
Denton(Hickory Hill)	W. of Mesquite	1.5	525	1575	272	1303
Frenchtown	E. of Stonecrest/W. of Charyl	0.11	450	99	33	66
Frenchtown	E. of 377	1.96	450	1764	444	1320
Harpole	W. of Hwy 377	0.25	450	225	12	213
Harpole	E. of 377	0.44	450	396	59	337
Harpole	E. of Shadowwood	0.4	525	420	24	396
Harpole	W. of S. Gibbons	1.14	450	1026	189	837
Harpole	E. of S. Gibbons	0.8	450	720	70	650
N Gibbons	N. of Harpole	0.87	525	913.5	98	816
S Gibbons Road	N. of 407	0.45	525	472.5	62	411
S Gibbons Road	N of Frenchtown	0.47	450	423	64	359
Old Justin	E. of C. Taylor	1.52	525	1596	125	1471
Old Justin Rd.	E. of W. Front	0.29	525	304.5	101	204
Sam Davis	W of Gateway	0.41	450	369	7	362
Sam Davis	W. of Stonecrest	1.1	450	990	55	935
Stonecrest	S. Harb/ N. Sam Davis	0.19	450	171	14	157
Stonecrest	N. of 407	0.54	450	486	58	428
Stonecrest	S. of 407	0.38	450	342	105	237
Stonecrest	S. of Frenchtown	0.09	450	81	27	54
Stonecrest	S. of Forest Trail	0.81	450	729	147	582
New Road	Near Corral City	0.36	450	324	0	324
Gateway	S of Old Justin Road	2.49	525	2614.5	0	2615
Total		19.78		19352.5	4054	15299

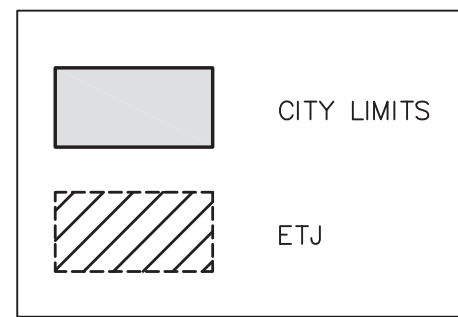
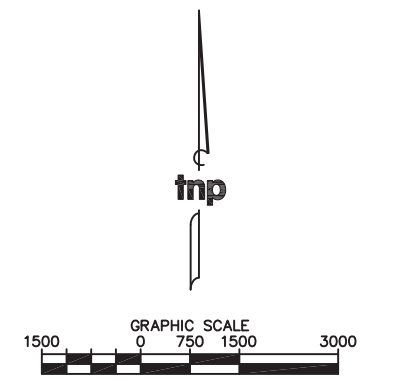
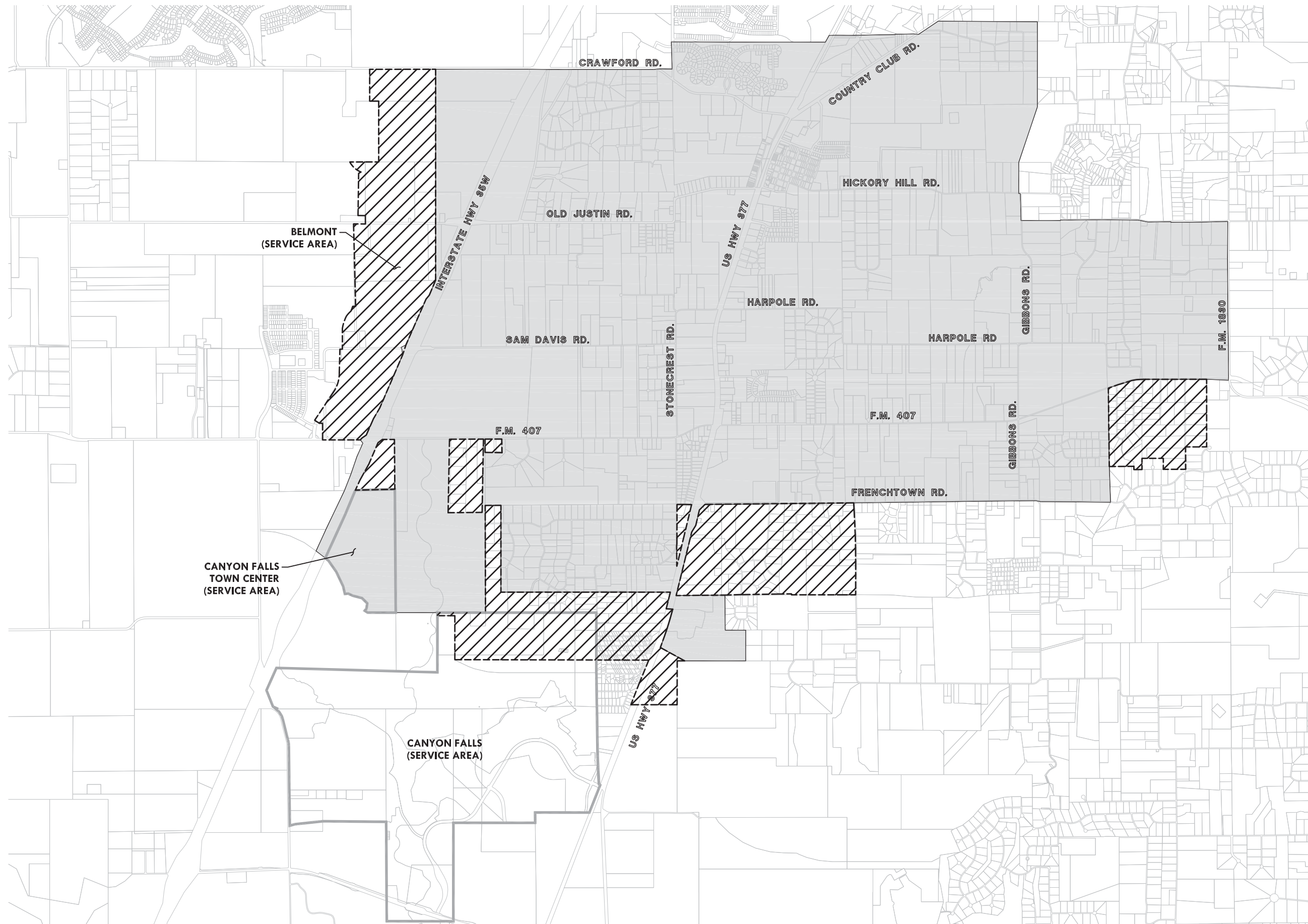


Drawing: Q:\PROJECTS\ARG\2024\con\exhibits\Figure 2.1 Roadway Map.dwg at Nov 19, 2019--6:17am by mharris
 Layout: Layout1 Xrefs: 2234 Exhibit Border.dwg




teague nall & perkins
 3200 S Interstate 35E, Suite 1129
 Denton, Texas 76210
 940.383.4177 ph 940.383.8026 fx
 TBPE Registration No. F-230
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FIGURE 2.1
Town of Argyle
Roadway System Impact Fees
Roadway Service Area Plan



Drawing: Q:\PROJECTS\ARG\19224\cad\enrich\19224\19224.dwg of Nov. 26, 2019 - 9:12am by aridgway
 Layout: Layout1
 Plots: 225x24 Enrich Border.dwg



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FIGURE 2.2
Town of Argyle
Wastewater System Impact Fees
Wastewater Service Area Plan

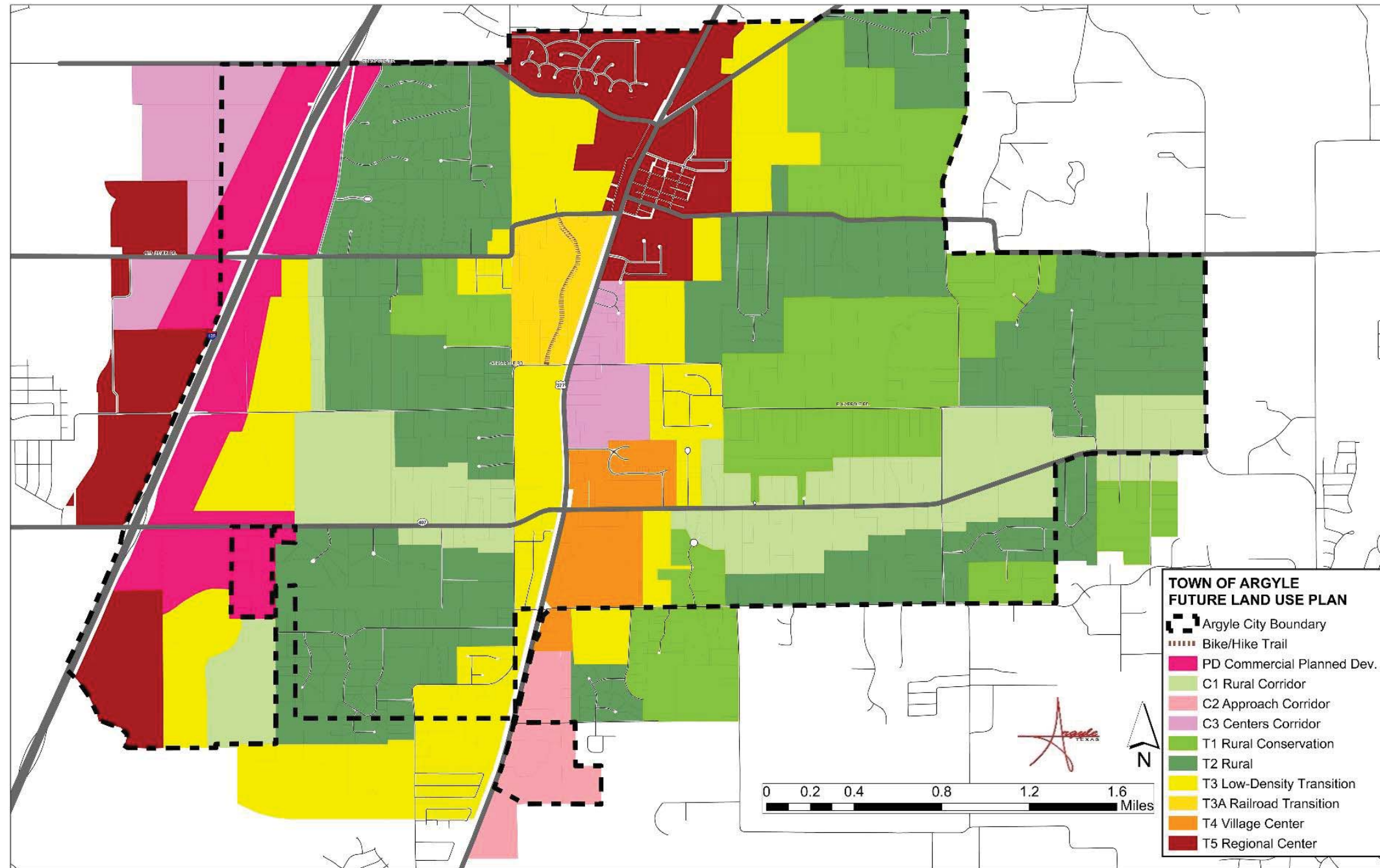
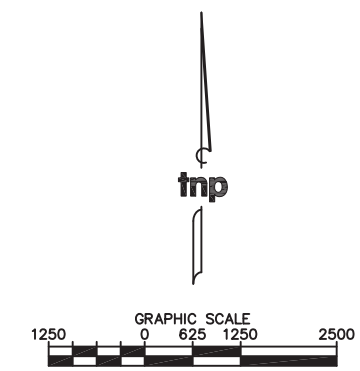
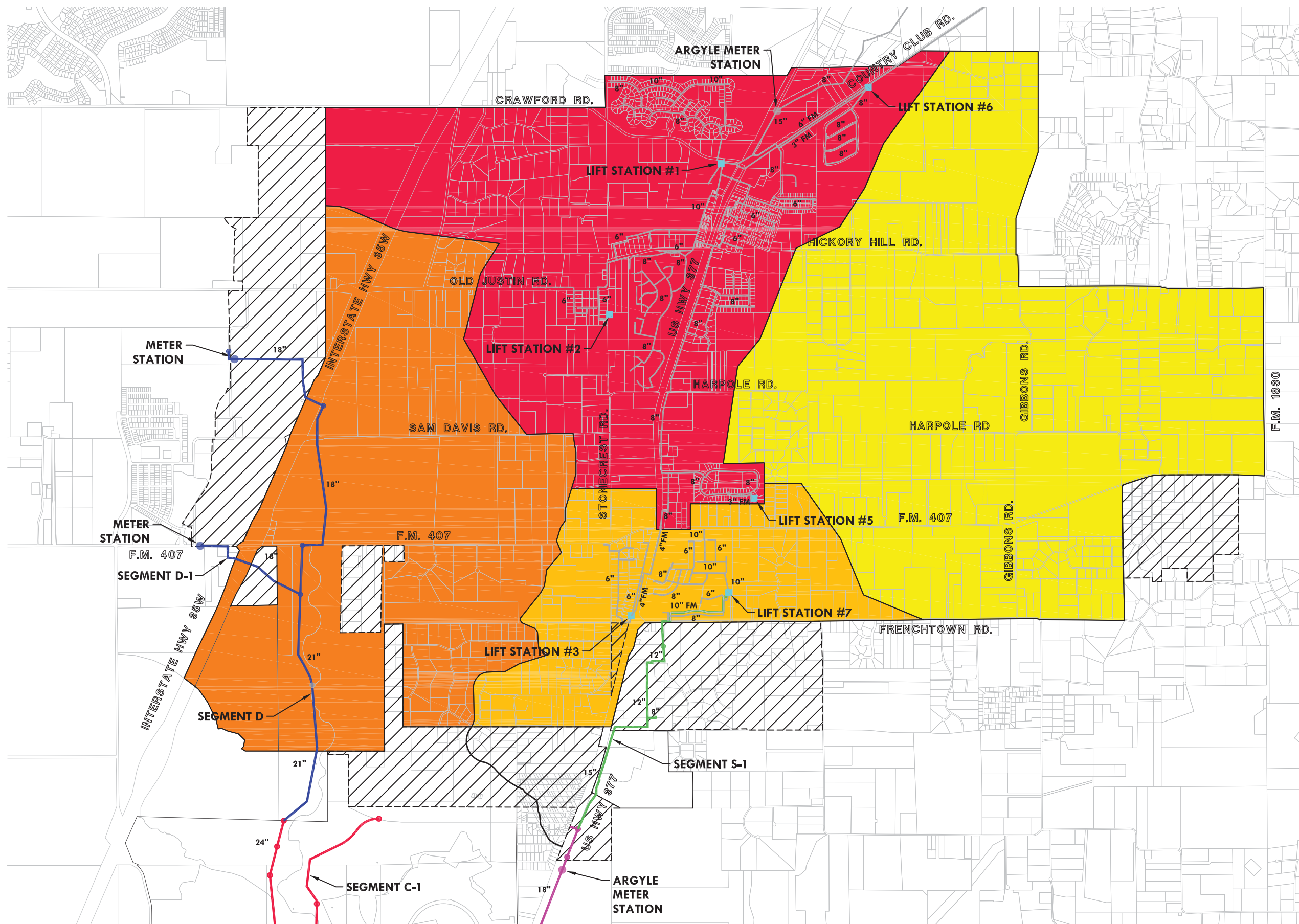


Figure 1 Town of Argyle Future Land Use Plan

FIGURE 2.3
Town of Argyle
Wastewater and Roadway
Impact Fees
Future Land Use Plan

Drawing: Q:\PROJECTS\ARG\19224\con\exhibits\Figure 3.1 & 3.2 Overall Existing Wastewater System Map.dwg, at Nov 26, 2019 - 6:55am by eridgway
 Layout: CITY LIMITS - Xrefs: 22-34 Exhibit Border.dwg



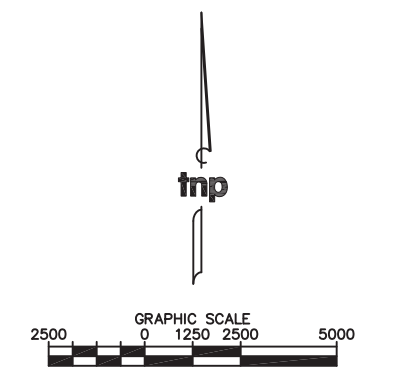
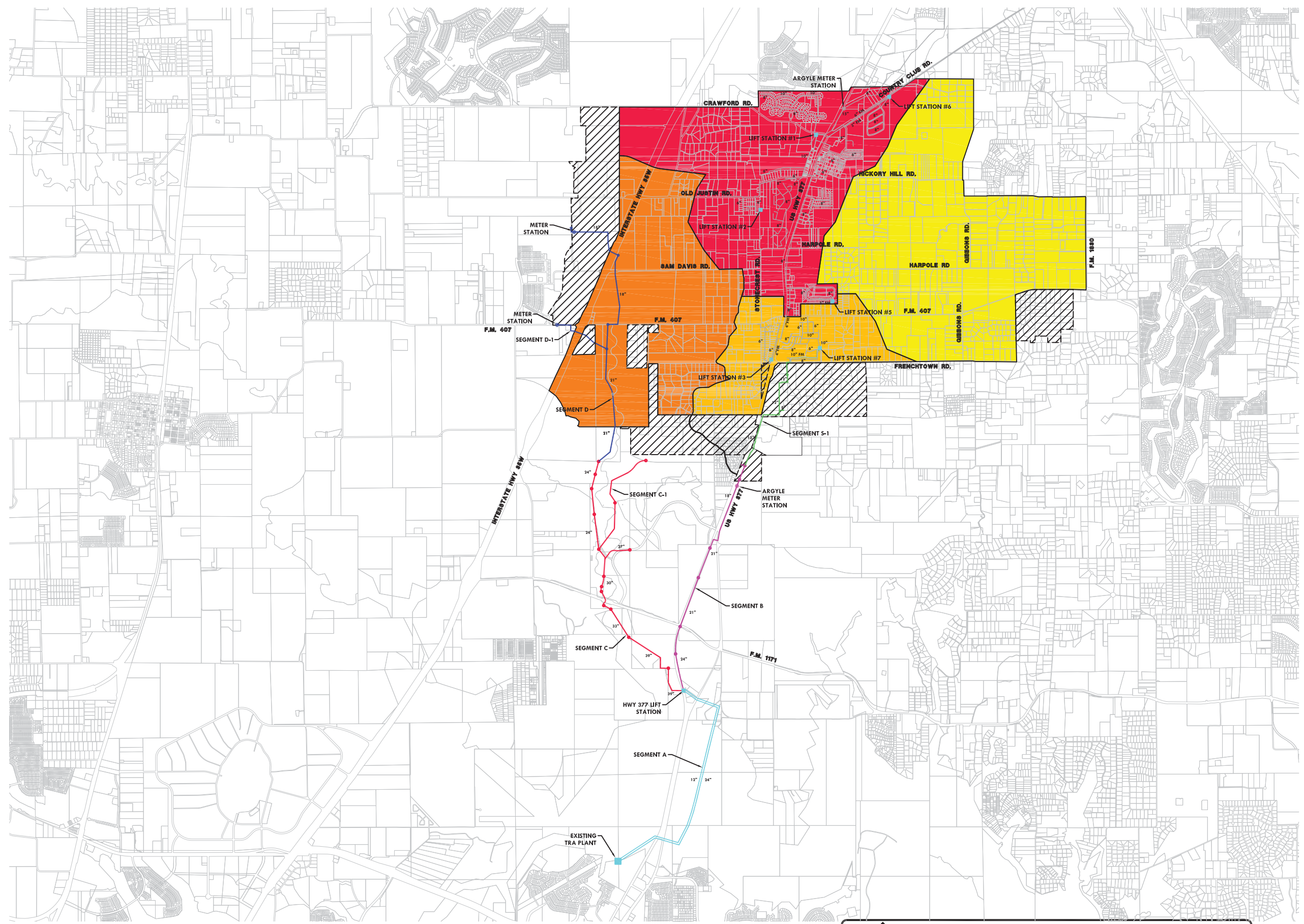
LEGEND

	DENTON BASIN
	TRA BASIN WEST
	TRA BASIN EAST
	FUTURE BASIN

FIGURE 3.1
 Town of Argyle
 Wastewater System Impact Fees
 Existing Wastewater
 System Map

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Drawing: Q:\PROJECTS\ARG\2024\con\exhibits\Figure 3.1 & 3.2 Overall Existing Wastewater System Map.dwg, dt Nov 26, 2019 - 6:56am by eridgway
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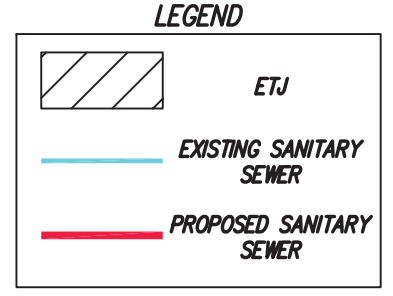
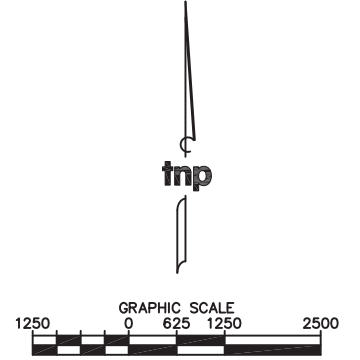
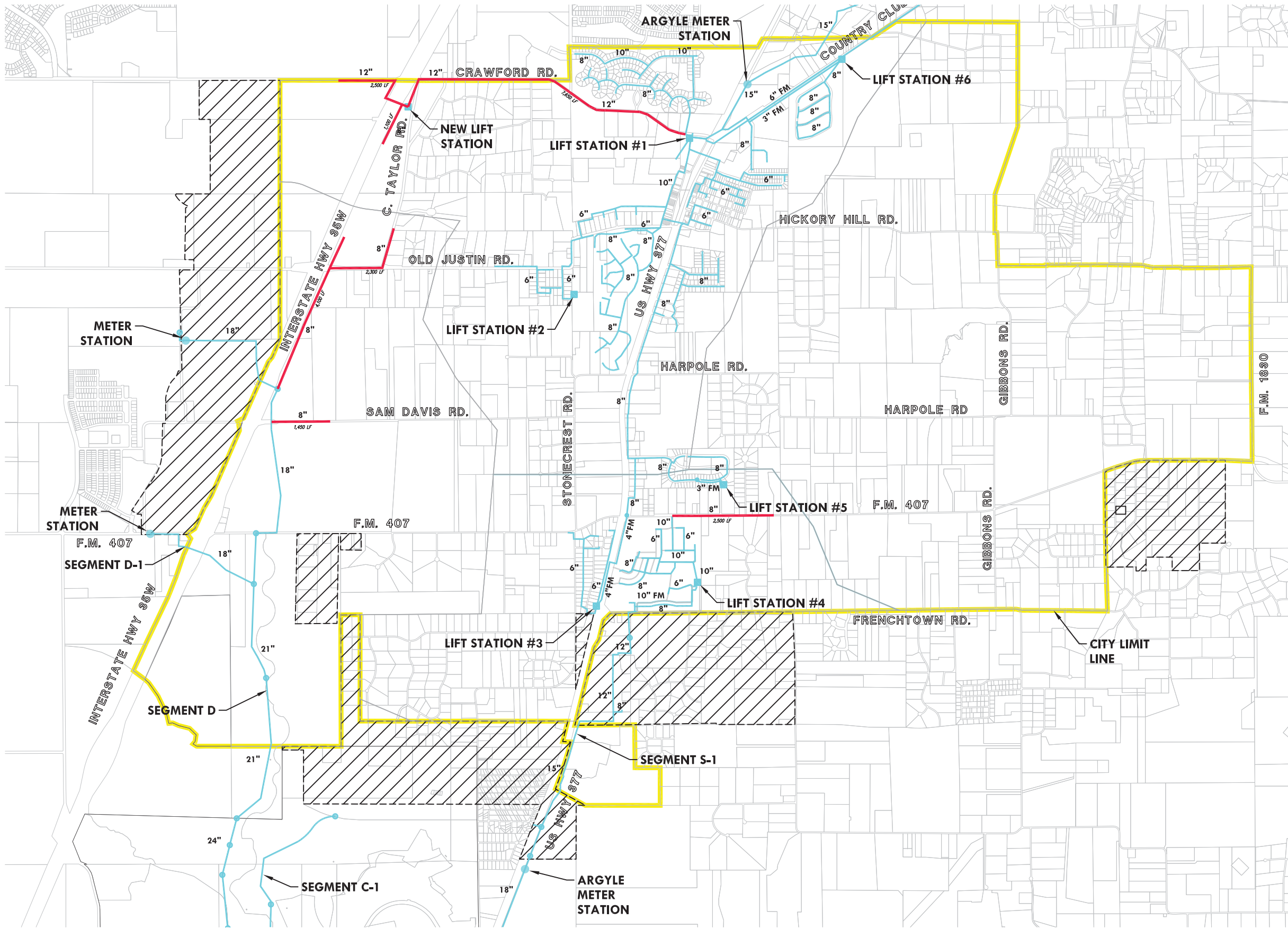


LEGEND


	DENTON BASIN
	TRA BASIN WEST
	TRA BASIN EAST
	FUTURE BASIN

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FIGURE 3.2
Town of Argyle
Wastewater System Impact Fees
Overall Existing Wastewater
System Map

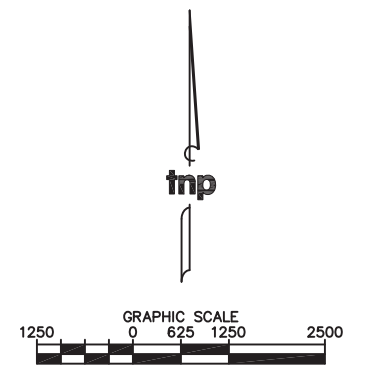
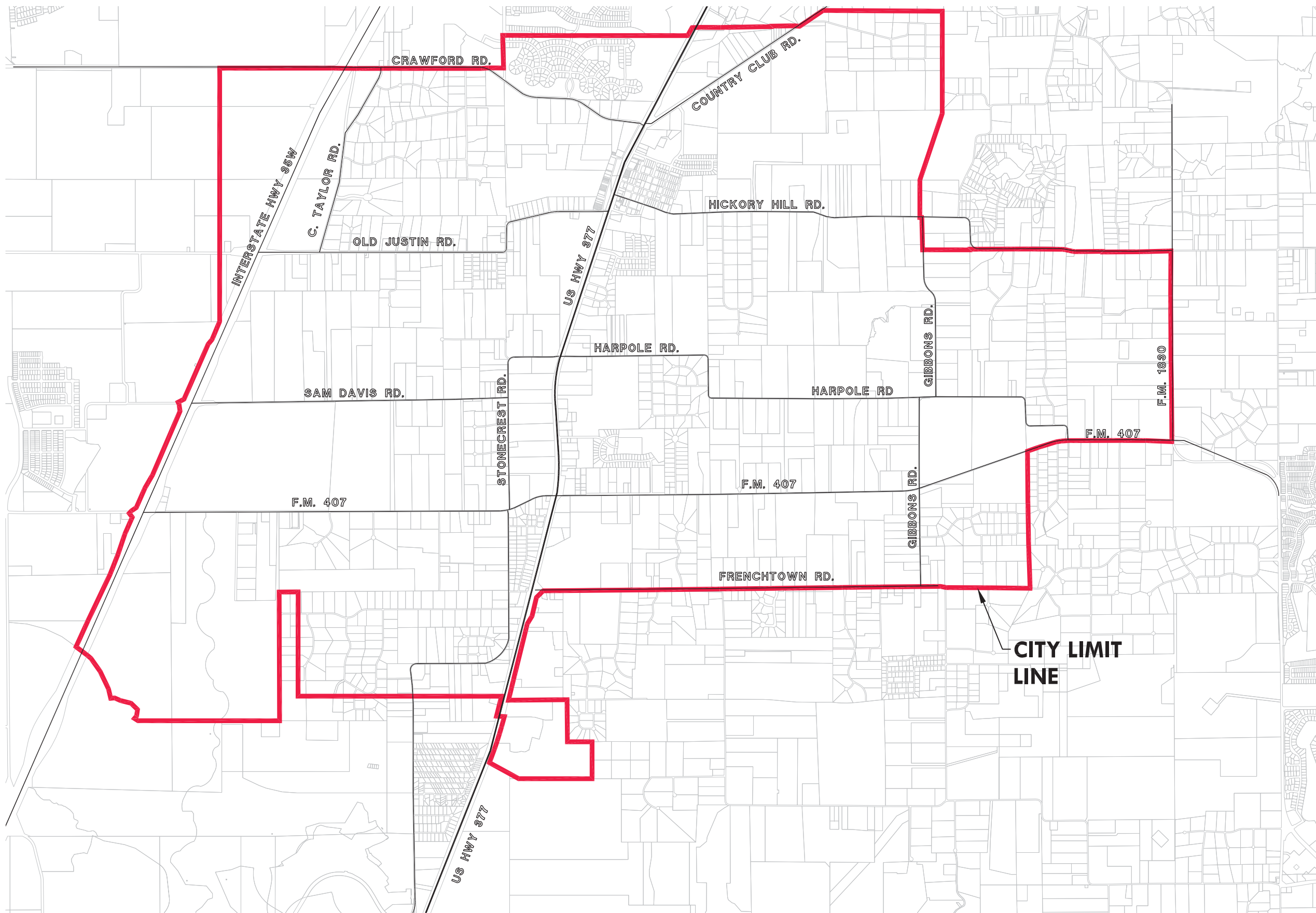


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 Layout: Figure 3.3 - Xrefs: 22x34 Exhibit Border.dwg



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FIGURE 3.3
Town of Argyle
Wastewater System Impact Fees
Capitol Improvements Plan

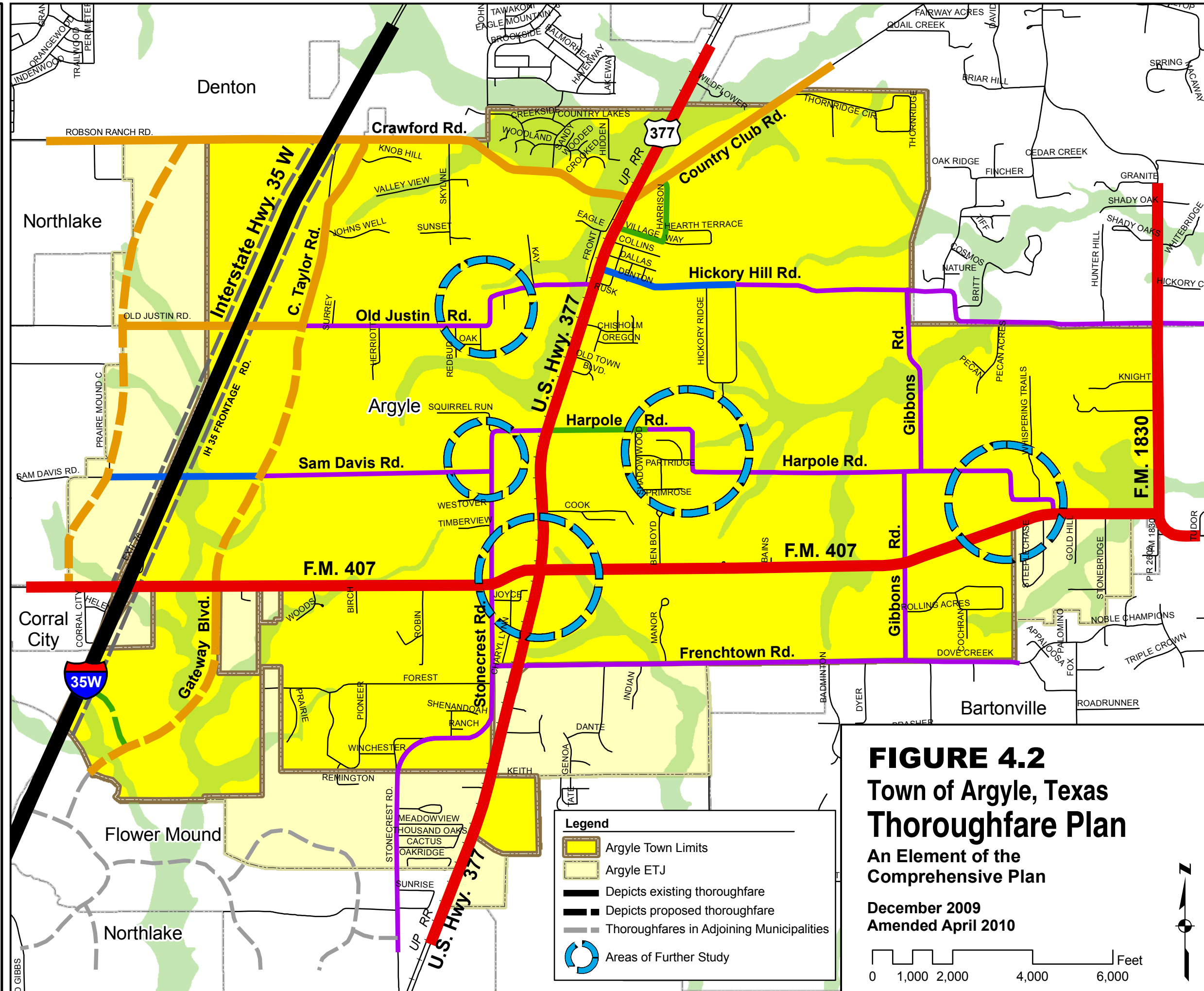
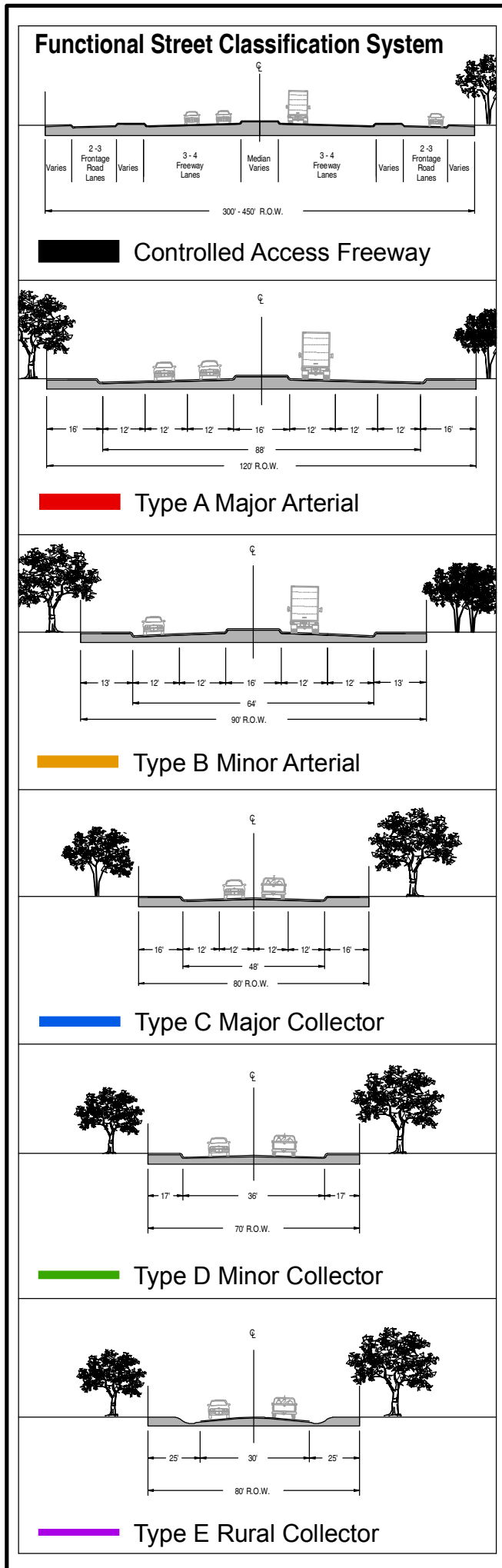


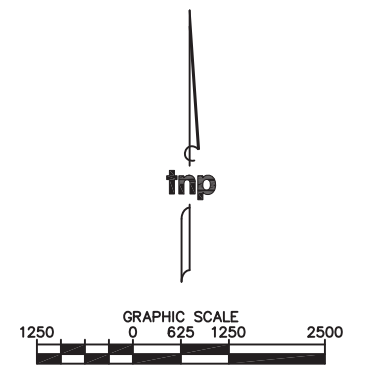
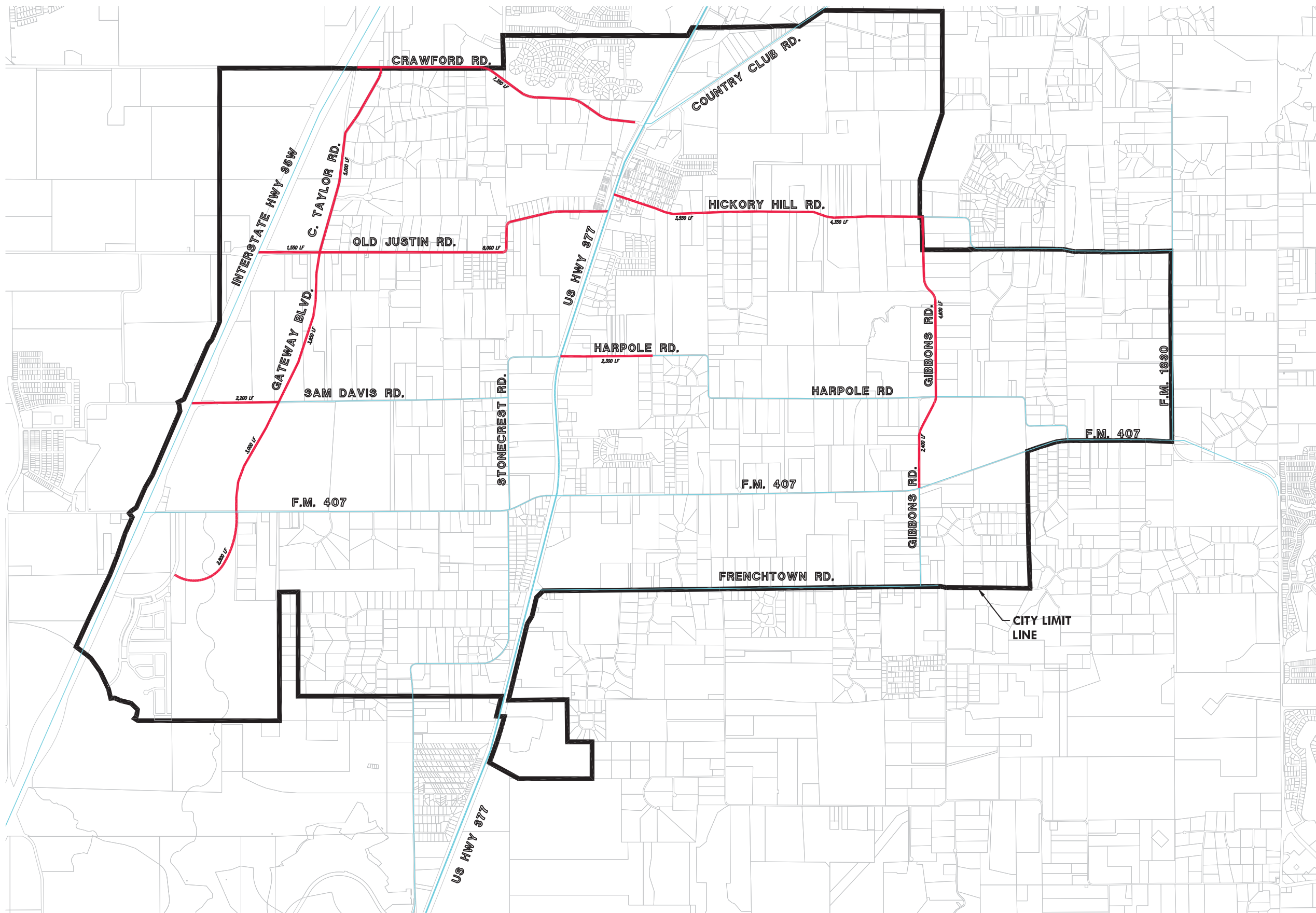
Drawing: Q:\PROJECTS\ARG\19224\cond\exhibits\Figure 4.1 Existing Roadway System.dwg, at Nov 19, 2019 - 6:43am by rharis
 Layout: Layout1 Xref: 2234 Exhibit Border.dwg



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FIGURE 4.1
Town of Argyle
Roadway System Impact Fees
Existing Roadway System






LEGEND

	EXISTING ROAD
	PROPOSED ROAD WORK

Drawing: Q:\PROJECTS\ARG19224\exhibits\Roadway System Impact Fees Capital Improvements Plan.dwg at Nov 26, 2019 - 7:38am by aridgwy
 Layout: Layout1 Xref: 2234 Exhibit Border.dwg



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FIGURE 4.3
Town of Argyle
Roadway System Impact Fees
Capital Improvement Plan