



**NOTICE OF A WORK SESSION
OF THE TOWN COUNCIL
February 11, 2020 – 5:30 pm**

Notice is hereby given as required by Title 5, Chapter 551.041 of the Government Code that the Argyle Town Council will meet in a work session on February 11, 2020 at 5:30 pm at the Argyle Town Hall, 308 Denton Street, Argyle, Texas. The items listed below are placed on the agenda for discussion.

WORK SESSION AGENDA – 5:30 PM

A. CALL WORK SESSION TO ORDER

No action will be taken during the work session.

1. Discussion and receive presentation 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.

B. ADJOURN

CERTIFICATION

I hereby certify that the above notice was posted in the bulletin board at Argyle Town Hall, 308 Denton Street, Argyle, Texas, by 9:00 am on the 7th day of February, 2020.

A handwritten signature in blue ink that reads "Erika McConis".

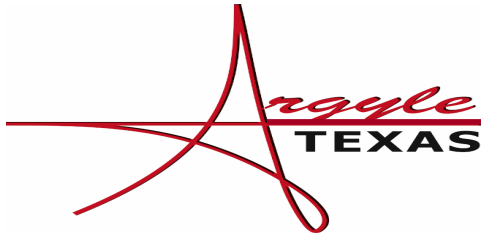
Erika, Town Secretary

NOTE: If, during the course of the meeting, any discussion of any item on the agenda should be held in a closed meeting, the Council will conduct a closed meeting in accordance with the Texas Open Meetings Act, Texas Government Code, Chapter 551, Subchapters D and E.

A quorum of the members of the Planning and Zoning Commission, Economic Development Corporation, and Crime Control Prevention District may be in attendance at this meeting.

The boards/commissions will take no action during the course of this meeting.

Persons with disabilities who plan to attend this public meeting and who may need auxiliary aid or services are requested to contact the Argyle Town Hall 48 hours in advance, at 940-464-7273, and reasonable accommodations will be made for assistance.



TOWN COUNCIL DATE SHEET

Meeting Date: February 11, 2020

To: Mayor and Members of the Town Council

From: David Hawkins, Director of Community Development
Gary Vickery, P.E., Town Engineer
Robin Harris, P.E., Teague Nall & Perkins, Inc.

Subject: Discussion and receive presentation 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.

Purpose:

Discussion and receive presentation 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.

Background:

Collection of impact fees has been a proven funding mechanism in the Town of Argyle to offset and recoup costs for capital improvements or facility expansions necessitated by and attributed to new development. The concept is such that each development pays an equitable and commensurate share for its "impact" onto the transportation and utility network, as the community grows. As a result, there are both wastewater impact fees and roadway impact fees that are collected and used for specific capital improvements.

The amount of the proportionate fee for each development and use is determined by a detailed study (town-wide), which makes assumptions about future land use and infrastructure (capital improvements) needed over time, commonly as 10-year projections. Such a study is required by Chapter 395 of the Texas Local Government Code, in order to legitimize the impact fee structure that the town implements.

Per Chapter 395 of the Texas Local Government Code (TLGC), Impact Fee Ordinances are mandated to be evaluated and updated every five (5) years. The last update for the Town of Argyle was completed on April 7, 2015, with no changes to the fee assessment rates (same rates from 2010 Impact Fee Study). The next update will need to be completed by April 28, 2020 (5 years from previous adoption). In

accordance with State statutes, the Planning and Zoning Commission serves as the Capital Improvements Advisory Committee (CIAC) which is the responsible government body in overseeing the Town's Impact Fee Ordinance and their updates.

The CIAC reviewed and discussed the proposed Impact Fee Study at their January 7, 2020 meeting and made the following recommendations to the Town Council:

1. Recommend approval of the Wastewater and Roadway Impact Fee Study, Land Use Assumptions, Population Estimates, and the Wastewater and Roadway Capital Improvements Plans as presented.
2. Recommend approval of the proposed Wastewater Impact Fee to be set at fifty percent (50%) of the maximum assessment rate.
3. Recommend approval of the proposed Residential Roadway Impact Fee to be set at fifty percent (50%) of the maximum assessment rate.
4. Recommend approval of the proposed Non-Residential Roadway Impact Fee to be set at forty percent (40%) of the maximum assessment rate.

Requested Action:

No formal action is needed on this agenda item. A public hearing has been scheduled on this Impact Fee Update for consideration on March 24, 2020.

Attachment(s):

- Draft Impact Fee Study
- Comparison Charts between current 2010 and Proposed 2020 Impact Fee Rates (includes CIAC Recommendation Rates)
- Wastewater and Roadway Impact Fee Update Slide Presentation

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 |
| 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 |

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 | | 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)

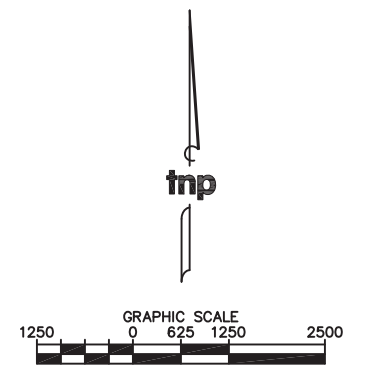
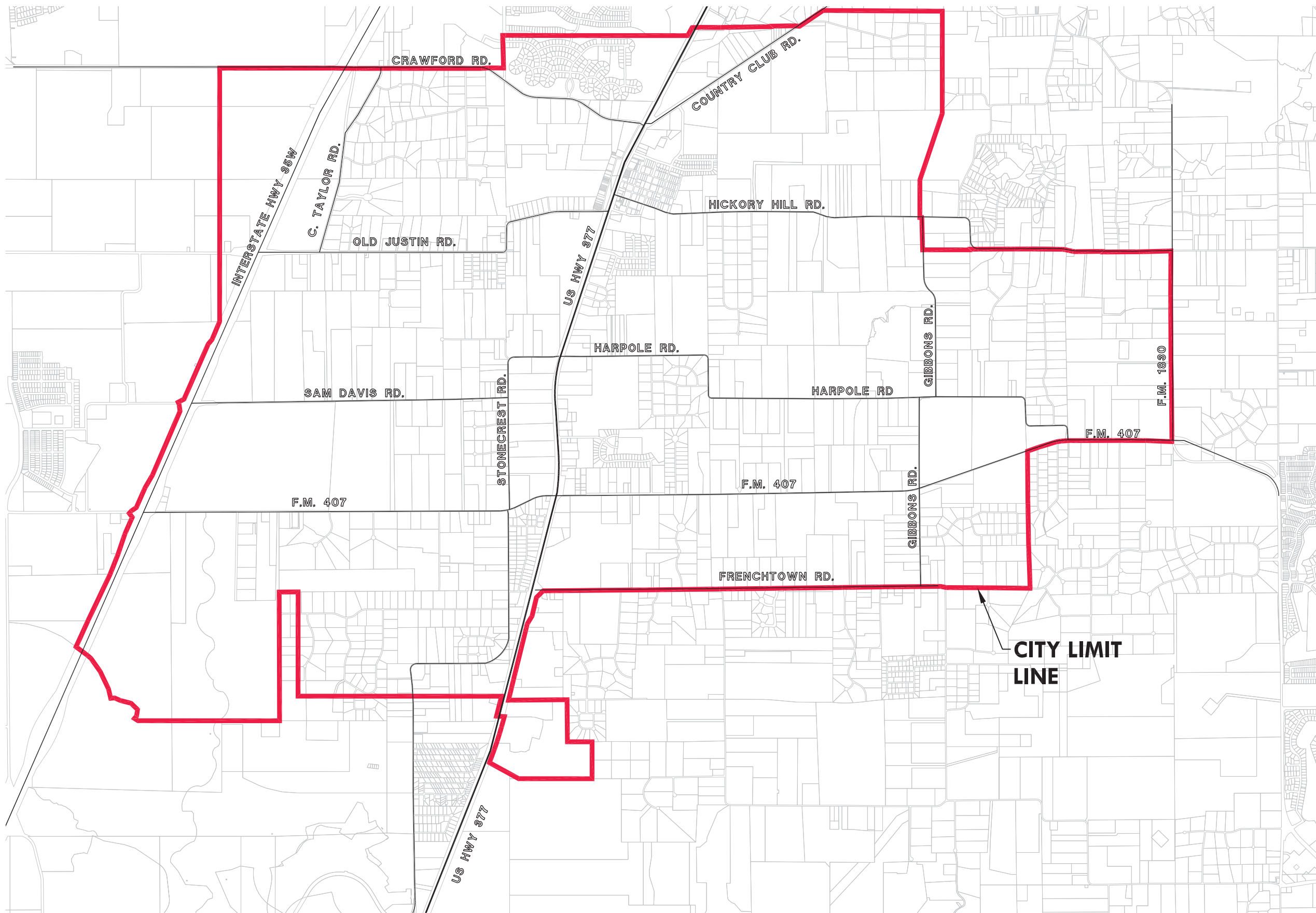
Project Length: 7,000'

| 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 |

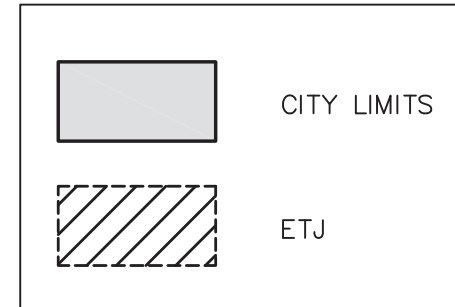
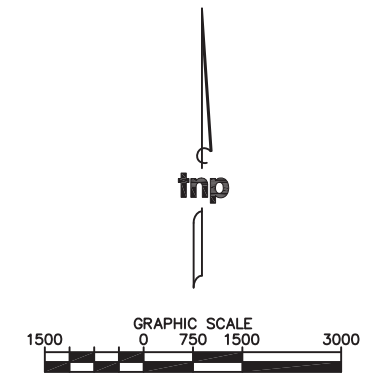
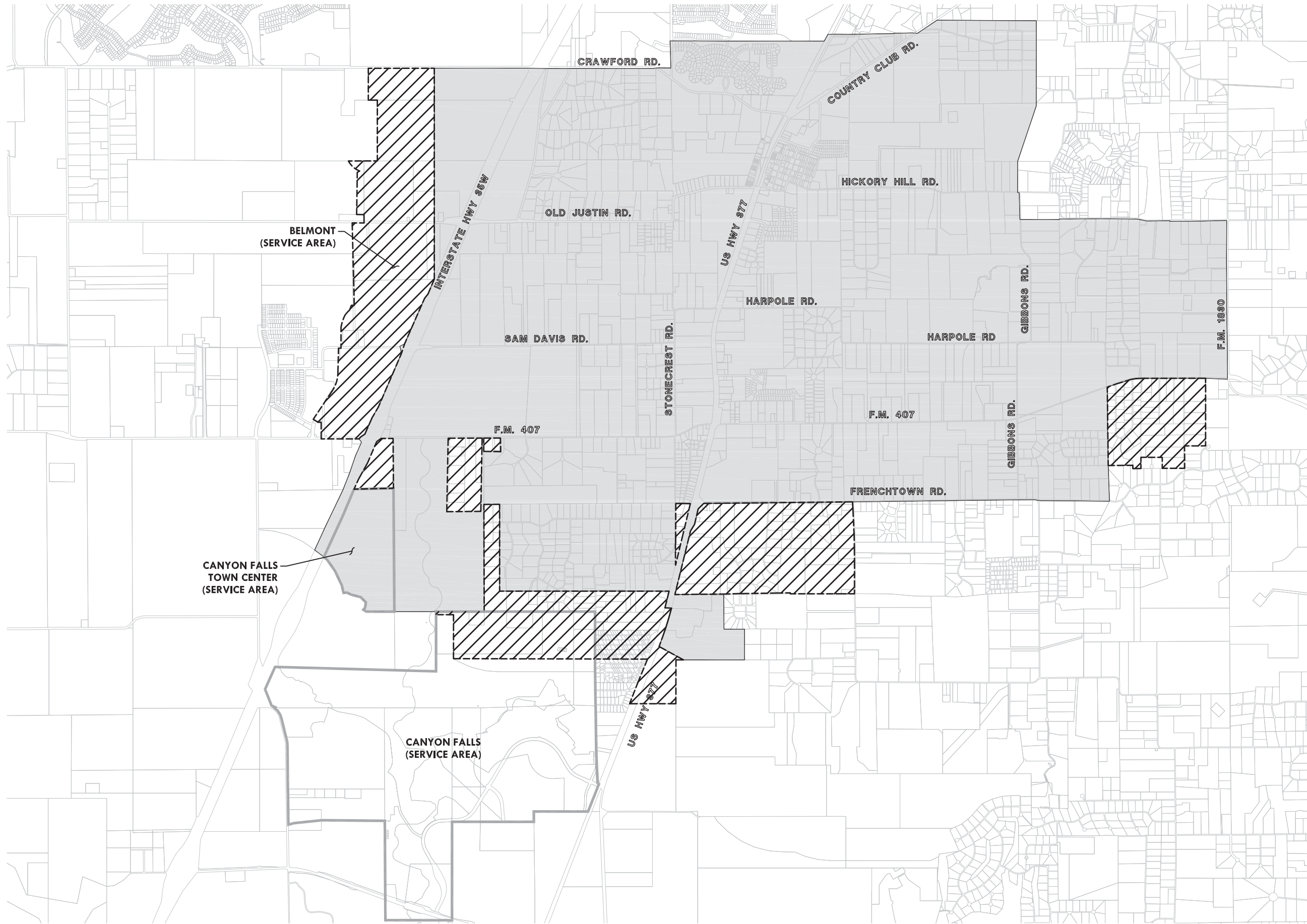


Drawing: Q:\PROJECTS\ARG\2024\con\exhibits\Figure 2.1 Roadway Map.dwg at Nov 19, 2019--6:17am by mharris
 Layout: Layout1 Xrefs: 22x34 Exhibit Border.dwg



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
 www.tnpinc.com

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
 Pairs: 22524 Enrich 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
 www.tnpinc.com

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

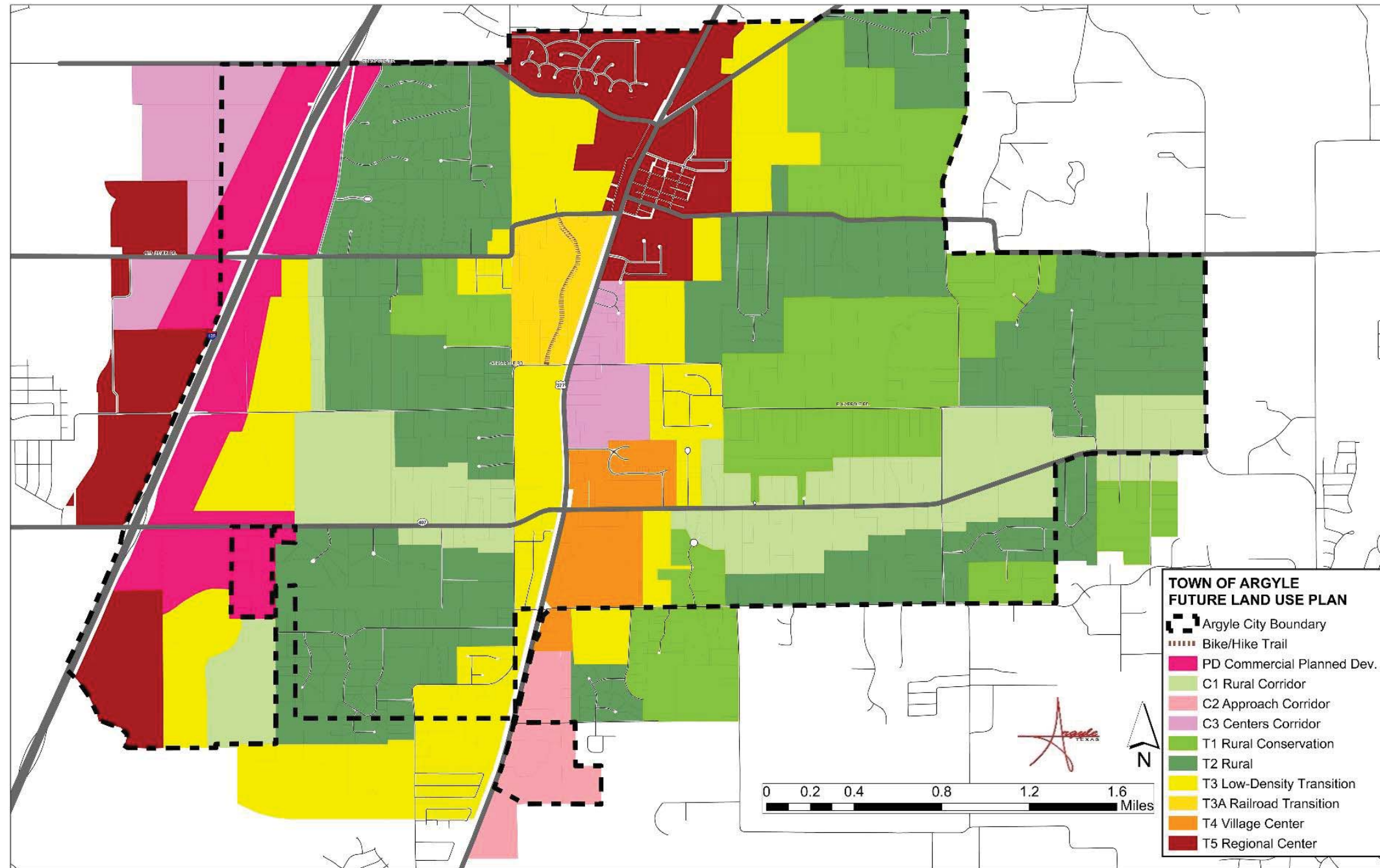
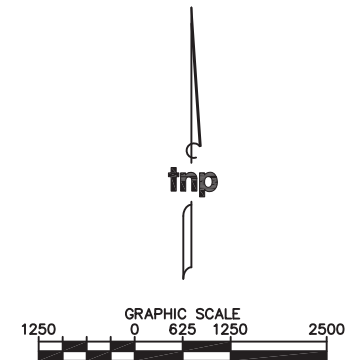
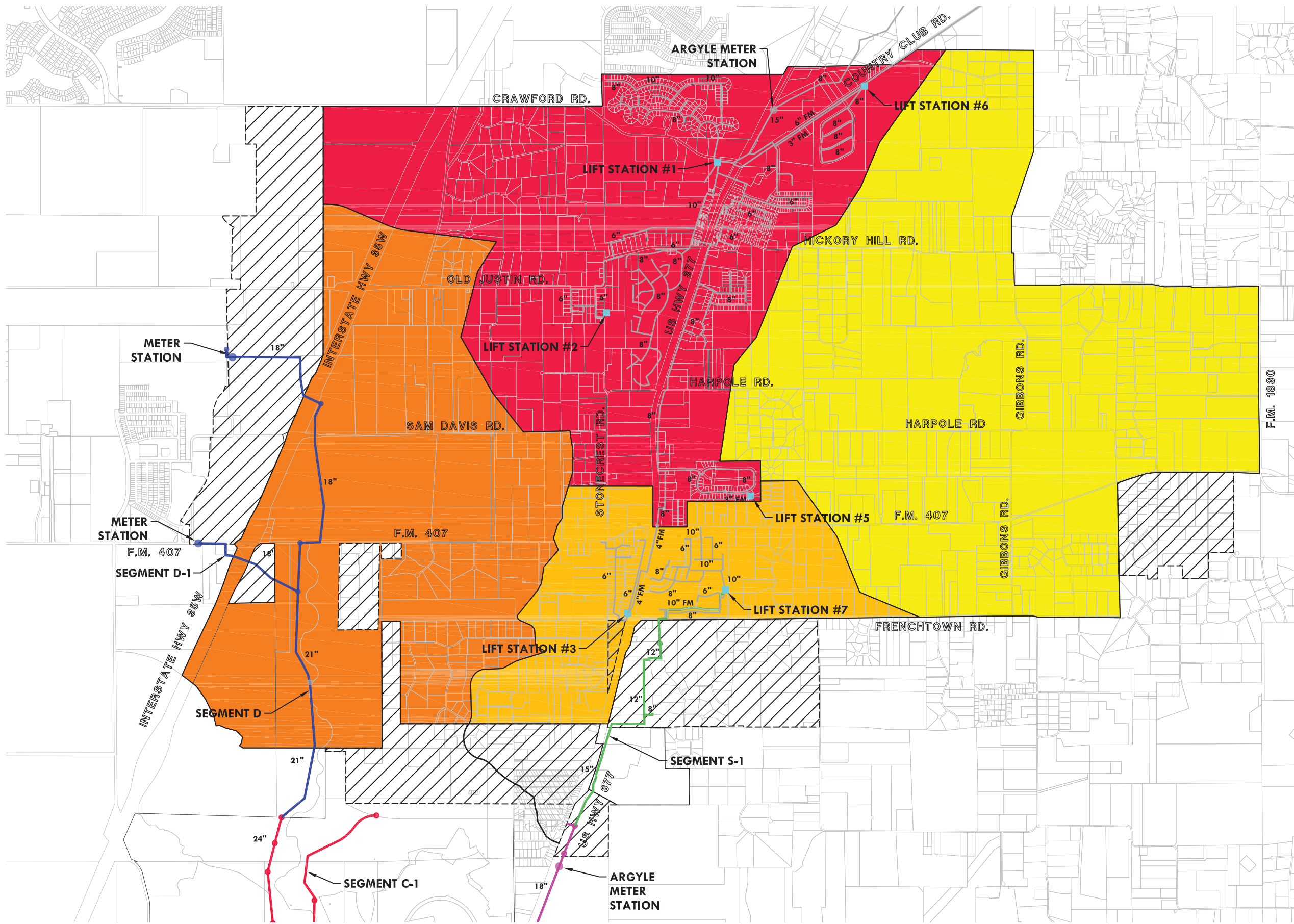


Figure 1 Town of Argyle Future Land Use Plan

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



LEGEND

| | |
|--|----------------|
| | DENTON BASIN |
| | TRA BASIN WEST |
| | TRA BASIN EAST |
| | FUTURE BASIN |

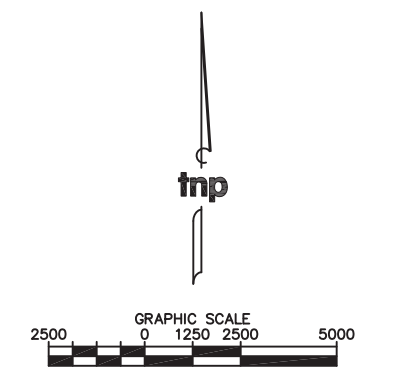
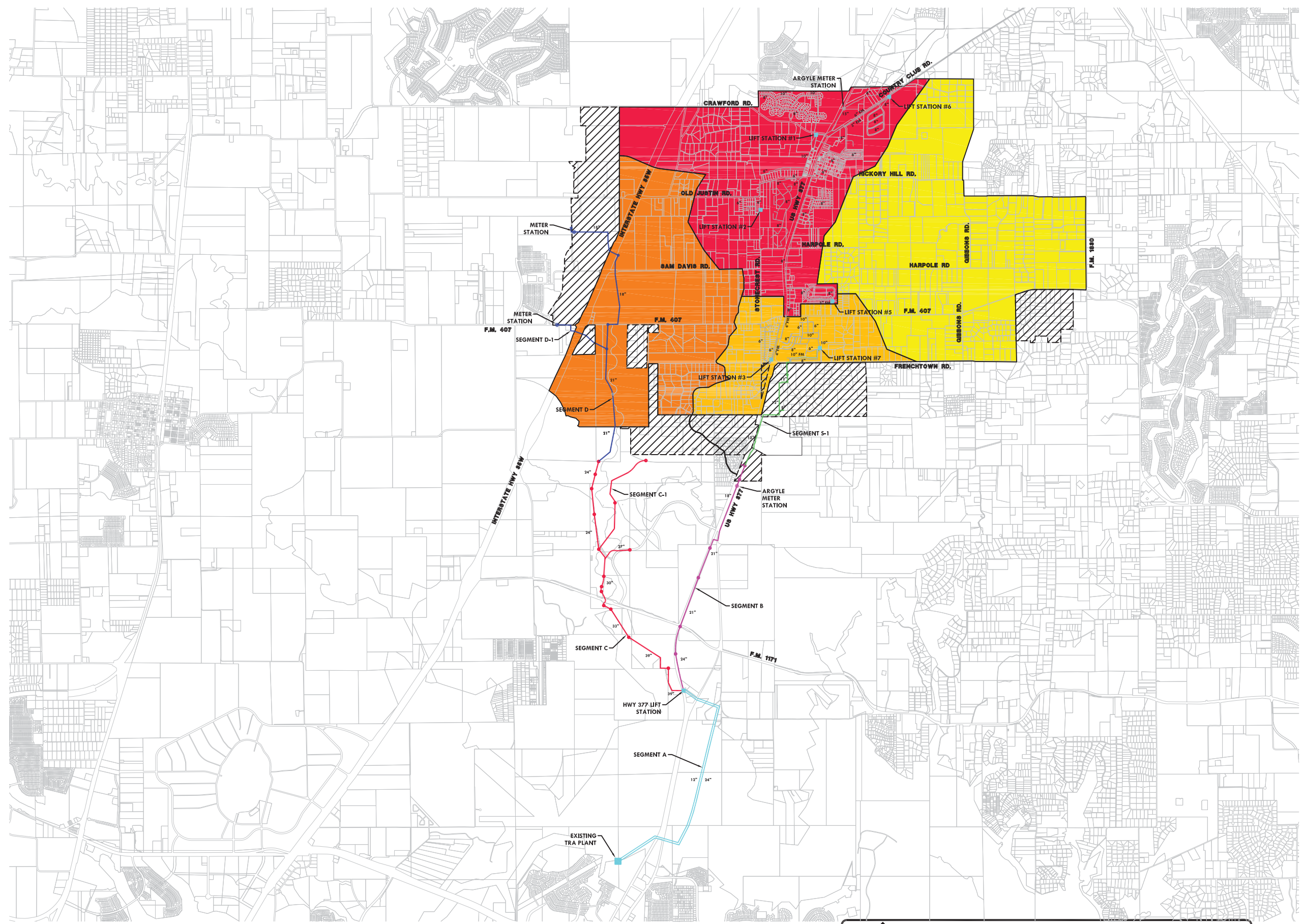
Drawing: Q:\PROJECTS\ARG\19224\con\exhibits\Figure 3.1 & 3.2 Overall Existing Wastewater System Map.dwg, at Nov 26, 2019 - 6:55am by eridgway
 Layout: CITY LIMITS - Xrefs: 22-34 Exhibit Border.dwg



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
 www.tnpinc.com

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

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
 Layout: OVERALL Xrefs: 22524 Exhibit Border.dwg

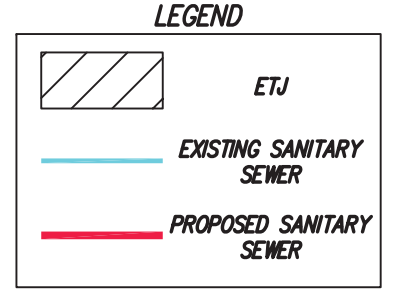
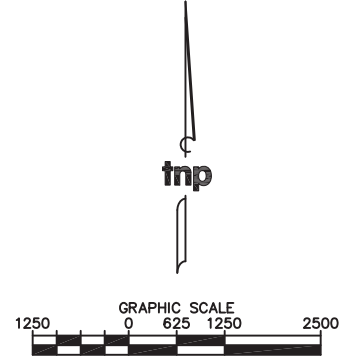
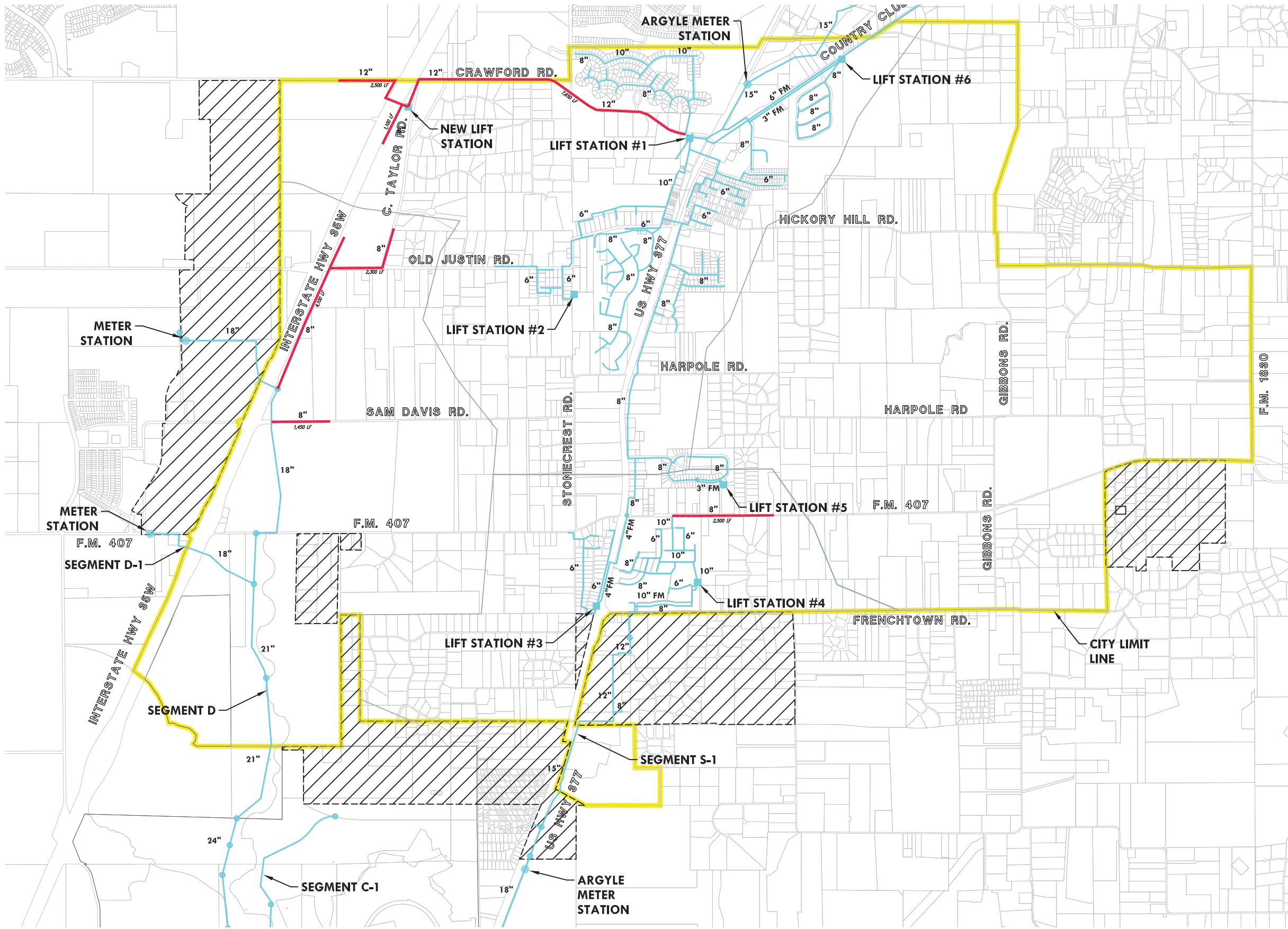


LEGEND

| | |
|--|-----------------------|
| | DENTON BASIN |
| | TRA BASIN WEST |
| | TRA BASIN EAST |
| | FUTURE BASIN |

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

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
 www.tnpinc.com



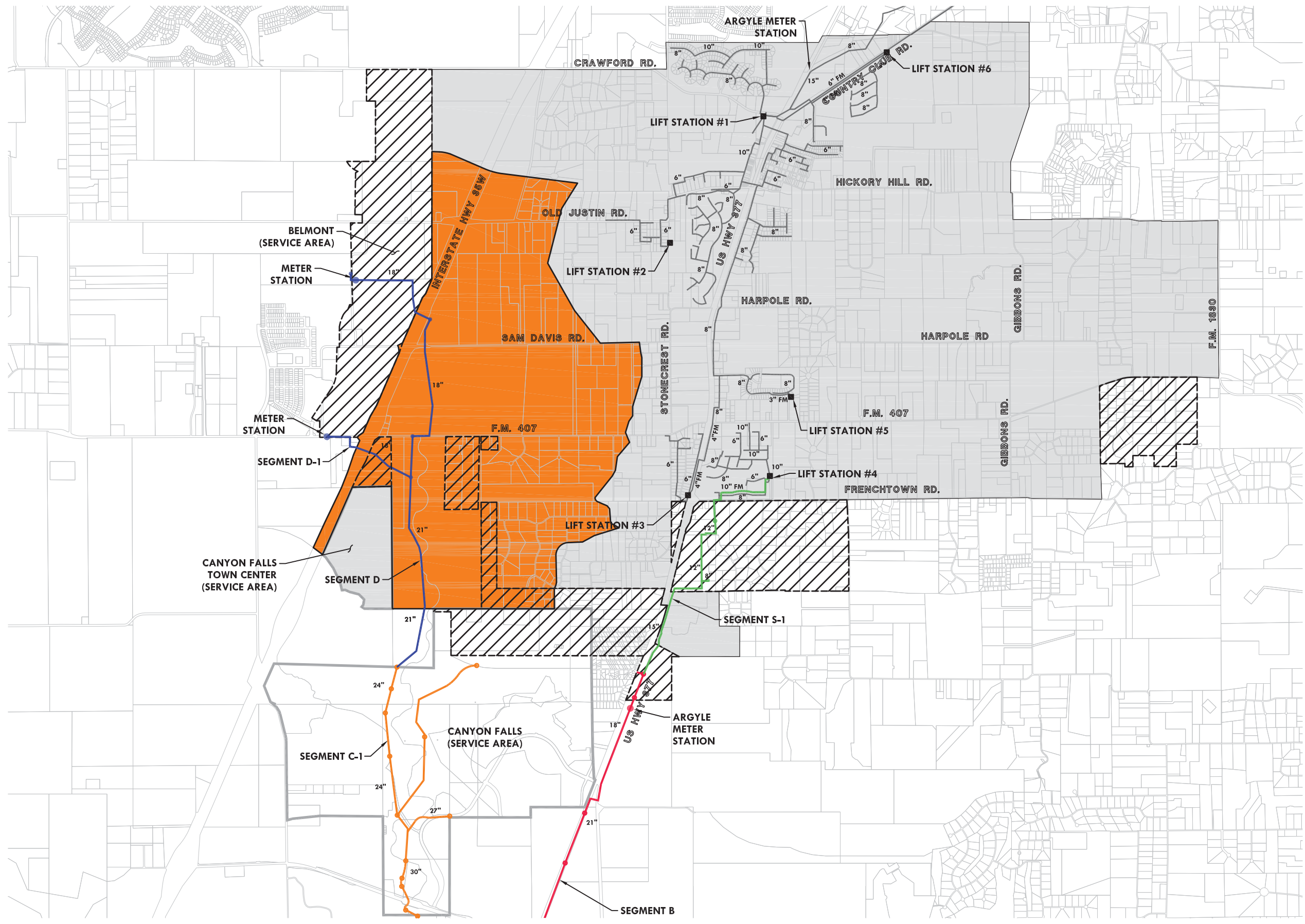
Drawing: Q:\PROJECTS\ARG19224\con\exhibits\Wastewater System Impact Fees Capitol Improvements Plan.dwg at Nov 26, 2019 - 7:42am by aridgwy
 Layout: Figure 3.3 - Xrefs: 22x34 Exhibit Border.dwg



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
 www.tnpinc.com

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

Drawing: Q:\PROJECTS\ARG\2024\con\exhibits\Figure 3.4 TRA Impact Fee Reimbursement Area.dwg at Nov 26, 2019-6:58am by ardgway
Layout: Layout1 Xref: 2234 Exhibit Border.dwg



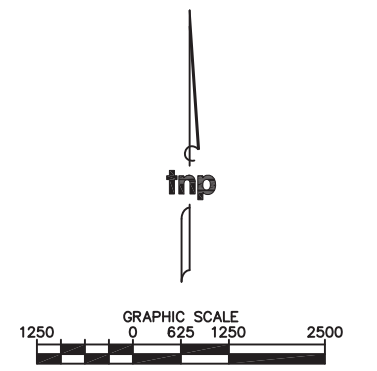
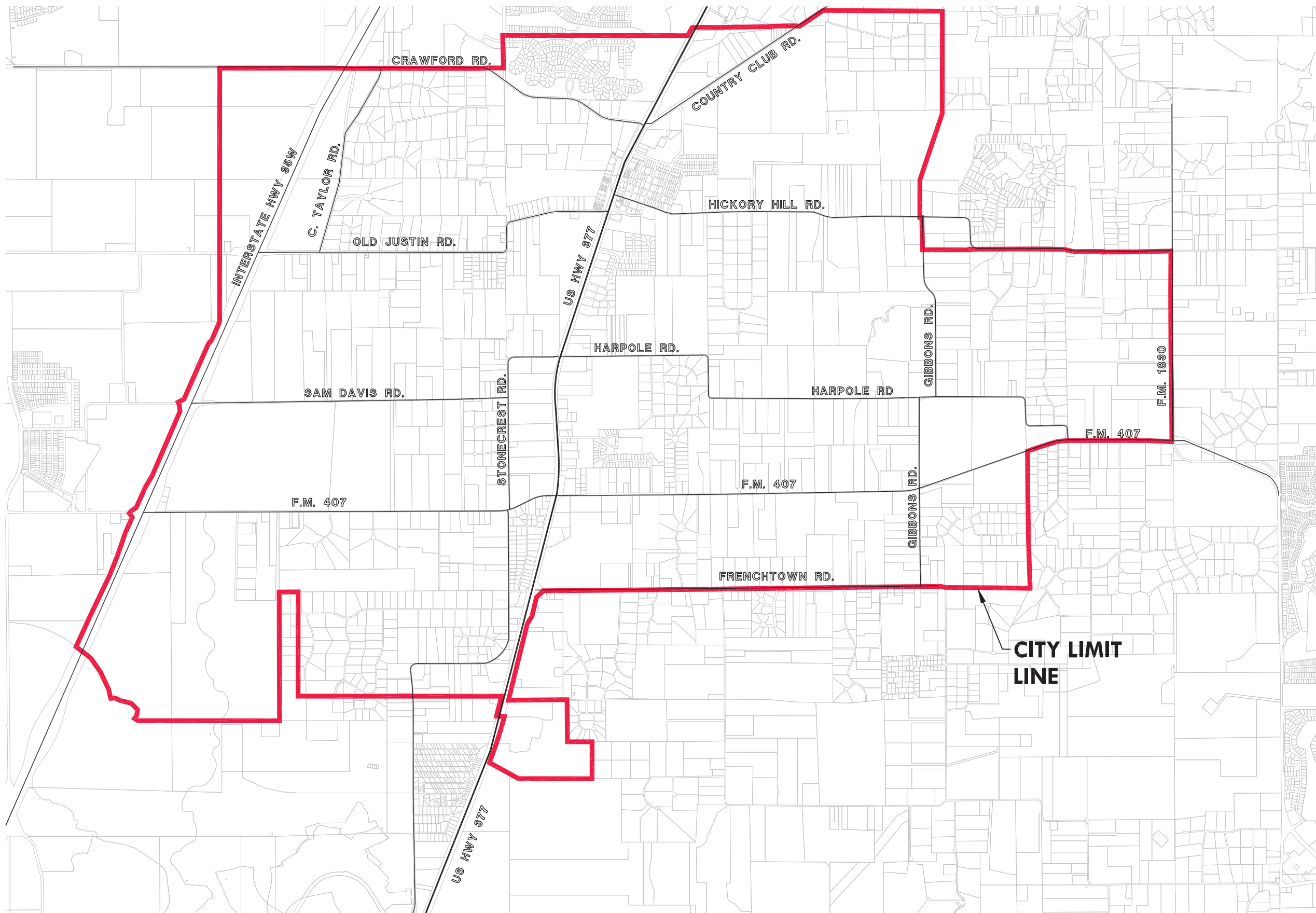
1500 0 750 1500 3000
GRAPHIC SCALE

tnp


- CITY LIMITS
- ETJ
- REIMBURSEMENT AREA

FIGURE 3.4
Town of Argyle
Wastewater System Impact Fees
TRA Impact Fee
Reimbursement Area

tnp
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
www.tnpinc.com

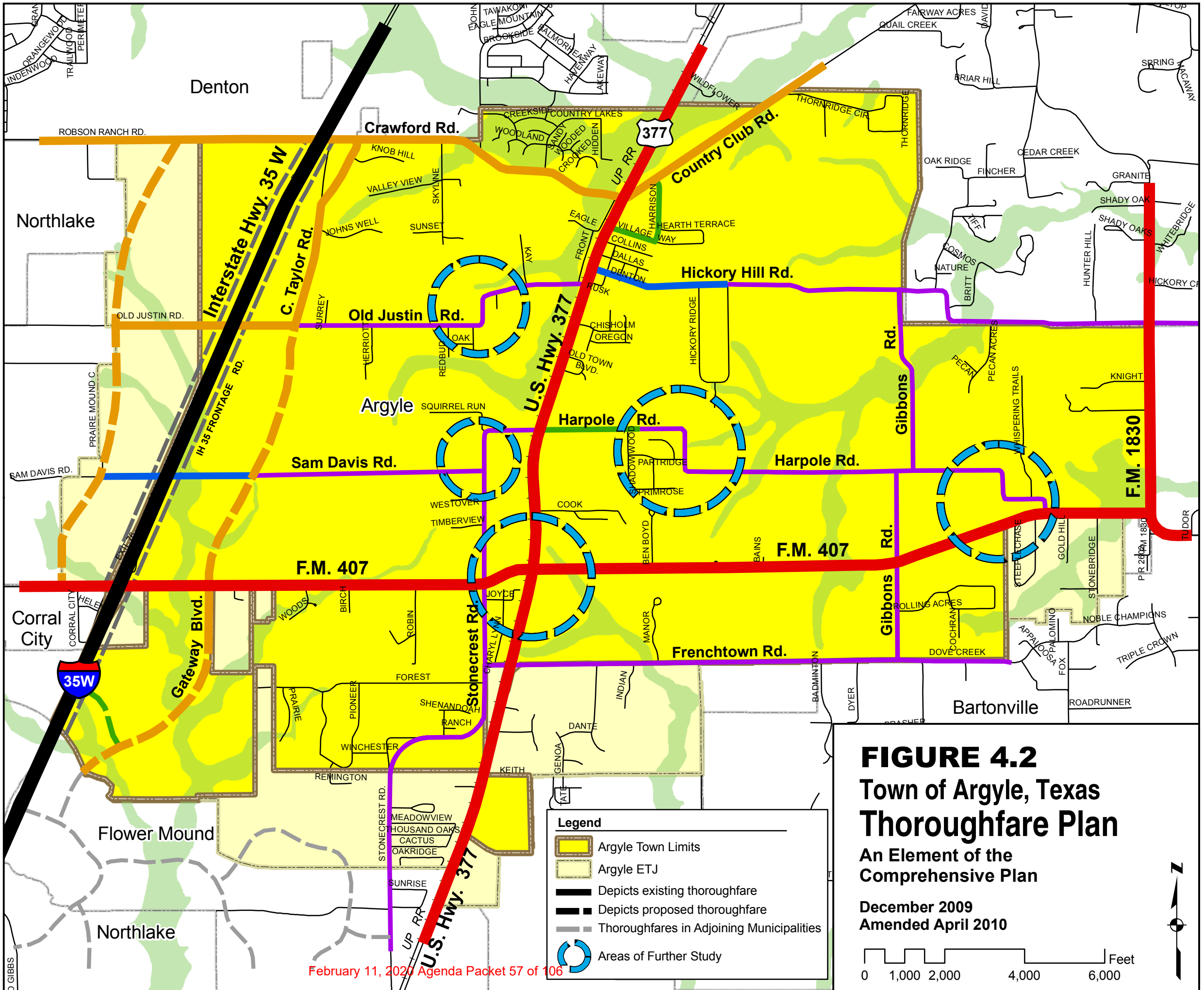
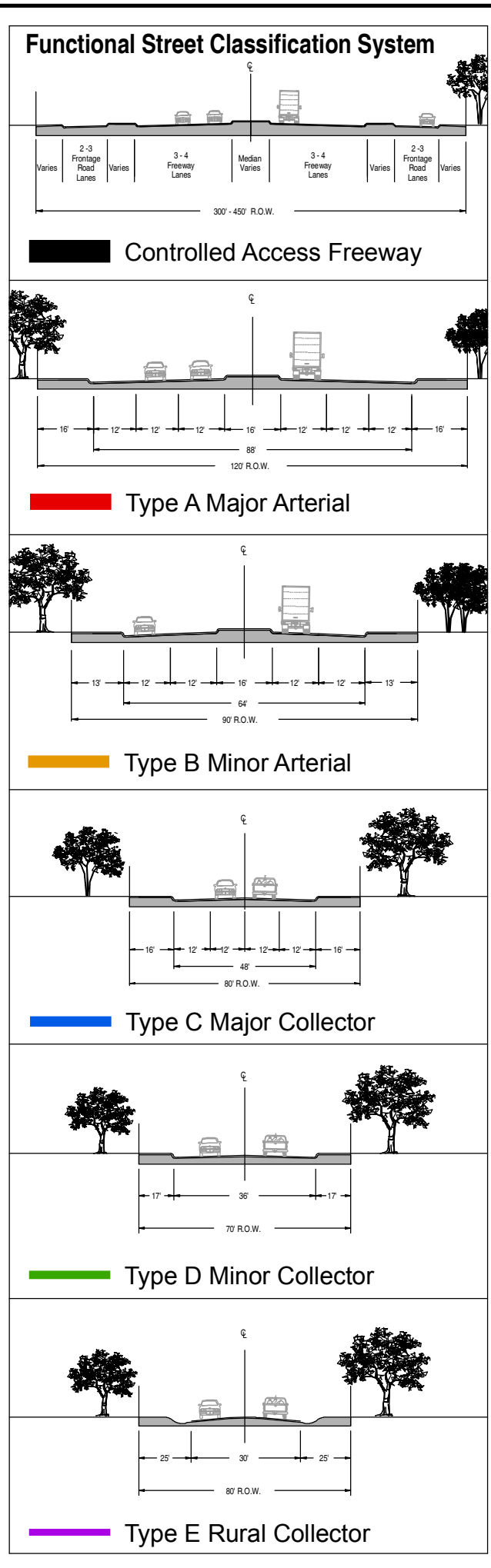


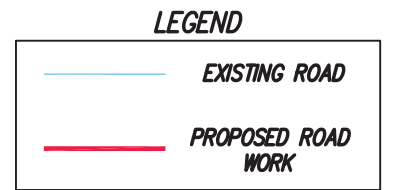
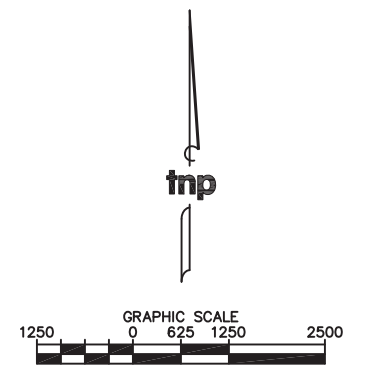
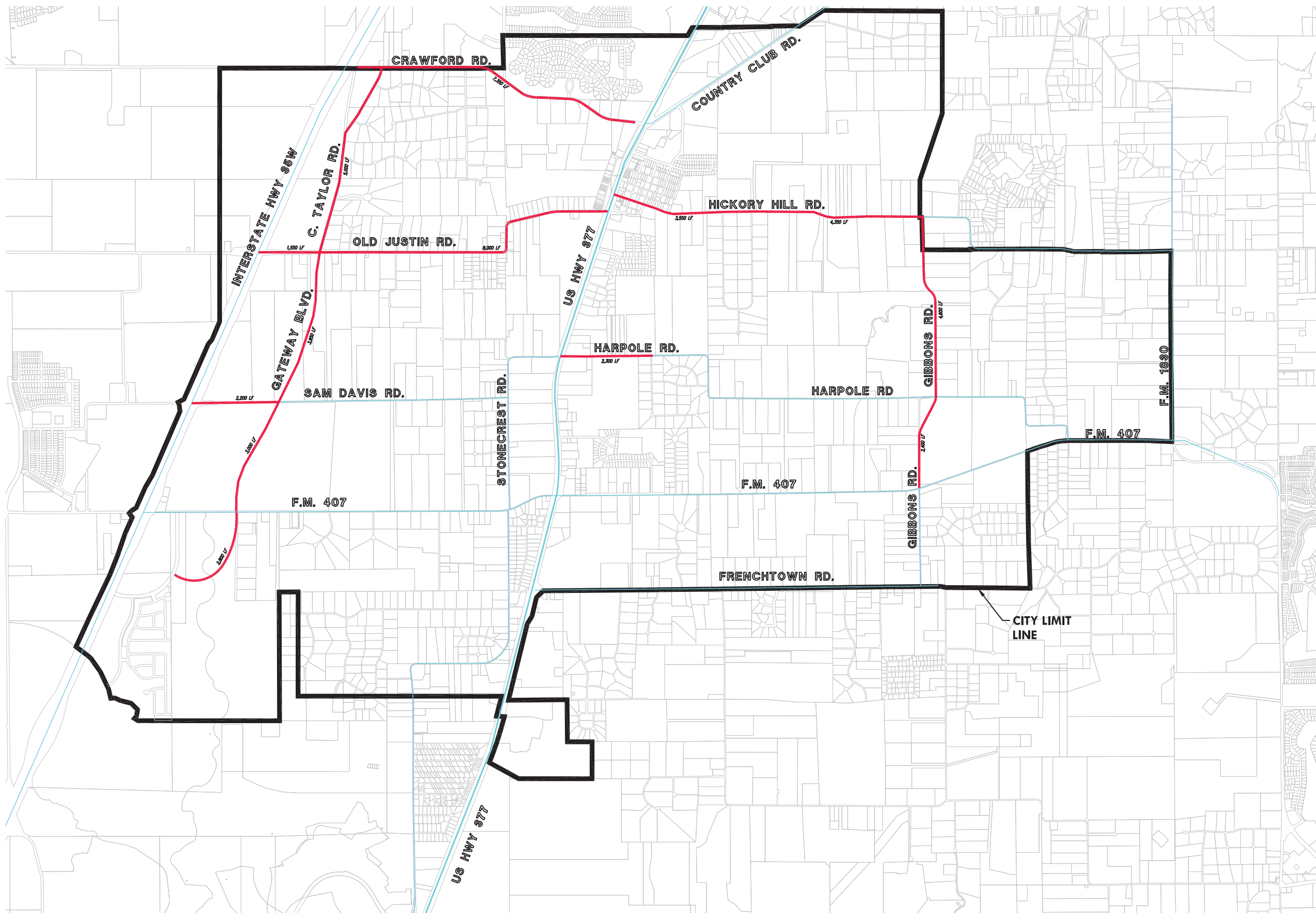
Drawing: Q:\PROJECTS\ARG\19224\cond\exhibits\Figure 4.1 Existing Roadway System.dwg, at Nov 19, 2019 - 6:43pm by rharris
 Layout: Layout1 Xref: 2234 Exhibit Border.dwg



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
 www.tnpinc.com

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





Drawing: Q:\PROJECTS\ARG19224\exhibits\Roadway System Impact Fees Capital Improvements Plan.dwg at Nov 26, 2019 - 7:38am by aridgwy
 Layout: Layout1 Xref: 22-34 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
 www.tnpinc.com

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

Wastewater Impact Fees - 2010 (at Adopted 50% max.)

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

Wastewater Impact Fees - 2020 (at Proposed 50% max.)

| | | 5/8" | 3/4" | 1" | 1-1/2" |
|---|---|-------------------|-------------------|-------------------|-------------------|
| 1 | Southlake | \$2,609.00 | \$3,914.00 | \$6,523.00 | \$13,045.00 |
| 2 | Argyle | \$2,452.00 | \$2,452.00 | \$6,620.40 | \$8,091.60 |
| | Argyle (Recommended by CIAC 1.7.20) | \$2,452.00 | \$2,452.00 | \$6,620.40 | \$8,091.60 |
| 3 | Flower Mound-Long Prairie District Residential | \$2,436.00 | \$3,645.00 | \$6,090.00 | \$12,180.00 |
| 4 | Flower Mound-Long Prairie District Non-Residential | \$1,218.00 | \$1,827.00 | \$3,045.00 | \$6,090.00 |
| 5 | Prosper | \$1,129.00 | \$1,129.00 | \$2,822.00 | \$5,644.00 |
| 6 | Northlake | \$964.00 | \$1,446.00 | \$2,410.00 | \$4,821.00 |
| 7 | Keller | \$918.00 | \$1,560.60 | \$2,478.60 | \$3,029.40 |
| 8 | Colleyville | \$643.00 | \$965.00 | \$1,068.00 | \$3,215.00 |
| 9 | Melissa | \$398.67 | \$598.00 | \$996.67 | \$1,993.33 |

Residential Roadway Impact Fees - 2010 (at Adopted 33.6% Max.)

| | | Residential |
|-----------|-------------------------------|-------------------|
| 1 | Northlake Zone 1 (NW) | \$6,094.10 |
| 2 | Prosper Service Area 1 | \$6,053.00 |
| 3 | Colleyville Service Area 1 | \$4,941.00 |
| 4 | Colleyville Service Area 2 | \$4,941.00 |
| 5 | Prosper Service Area 2 | \$4,589.00 |
| 6 | Melissa Service Area 1 | \$3,915.12 |
| 7 | Northlake Zone 2- (NE) | \$3,844.98 |
| 8 | Melissa Service Area 2 | \$3,775.48 |
| 9 | Flower Mound- Service Area B | \$3,714.78 |
| 10 | Keller Service Area 1 | \$2,999.19 |
| 11 | Town of Argyle | \$2,500.00 |
| 12 | Keller Service Area 2 | \$2,451.00 |
| 13 | Southlake- North Service Area | \$2,292.00 |
| 14 | Southlake- South Service Area | \$1,640.00 |
| 15 | Flower Mound- Service Area A | \$1,424.10 |
| 16 | Northlake Zone 4 (SE) | \$710.62 |
| 17 | Northlake Zone 3 (SW) | \$691.60 |

Residential Roadway Impact Fees - 2020 (Proposed Rates)

| | | Residential |
|-----------------------|-------------------------------|--|
| 1 | Northlake Zone 1 (NW) | \$6,094.10 |
| 2 | Prosper Service Area 1 | \$6,053.00 |
| Town of Argyle | | \$5,091.84 (at 50% of Max.) |
| Town of Argyle | | \$5,091.84 (at 50% of Max.) as Recommended by CIAC 1.7.20 |
| 3 | Colleyville Service Area 1 | \$4,941.00 |
| 4 | Colleyville Service Area 2 | \$4,941.00 |
| 5 | Prosper Service Area 2 | \$4,589.00 |
| 6 | Melissa Service Area 1 | \$3,915.12 |
| 7 | Northlake Zone 2- (NE) | \$3,844.98 |
| 8 | Melissa Service Area 2 | \$3,775.48 |
| 9 | Flower Mound- Service Area B | \$3,714.78 |
| Town of Argyle | | \$3,421.70 (at 33.6% of Max.) |
| 11 | Keller Service Area 1 | \$2,999.19 |
| Town of Argyle | | \$2,545.92 (at 25% of Max.) |
| 12 | Keller Service Area 2 | \$2,451.00 |
| 13 | Southlake- North Service Area | \$2,292.00 |
| 14 | Southlake- South Service Area | \$1,640.00 |
| 15 | Flower Mound- Service Area A | \$1,424.10 |
| 16 | Northlake Zone 4 (SE) | \$710.62 |
| 17 | Northlake Zone 3 (SW) | \$691.60 |

General Office Roadway Impact Fees - 2010 (at Adopted 25% of Max.)

General Office (Based on a
10,000 sq. ft. building)

| | | |
|----------|------------------------------|--------------------|
| 1 | Prosper Service Area 1 | \$51,320.00 |
| 2 | Prosper Service Area 2 | \$38,910.00 |
| 3 | Town of Argyle | \$27,393.00 |
| 4 | Southlake North Service Area | \$25,610.00 |
| 5 | Flower Mound- Service Area B | \$24,949.10 |
| 6 | Keller Service Area 1 | \$24,922.00 |
| 7 | Colleyville Service Area 2 | \$21,580.00 |
| 8 | Keller Service Area 2 | \$18,416.30 |
| 9 | Southlake South Service Area | \$18,330.00 |
| 10 | Flower Mound- Service Area A | \$9,599.75 |
| 11 | Melissa Service Area 2 | \$8,816.26 |
| 12 | Colleyville Service Area 1 | \$7,790.00 |
| 13 | Melissa Service Area 1 | \$5,832.17 |
| 14 | Northlake Zone 1 (NW) | NA |
| 15 | Northlake Zone 2 (NE) | NA |
| 16 | Northlake Zone 3 (SW) | NA |
| 17 | Northlake Zone 4 (SE) | NA |

General Office Roadway Impact Fees - 2020 (at Various Rates of Max.)

General Office (Based on a
10,000 sq. ft. building)

| | | |
|-----------------------|------------------------------|---|
| Town of Argyle | | \$75,072.00 (at 50% of Max.) |
| Town of Argyle | | \$60,057.60 (at 40% of Max.) as Recommended by CIAC 1.7.20 |
| 1 | Prosper Service Area 1 | \$51,320.00 |
| Town of Argyle | | \$50,448.20 (at 33.6% of Max.) |
| 2 | Prosper Service Area 2 | \$38,910.00 |
| Town of Argyle | | \$37,536.00 (at 25% of Max.) |
| 3 | Southlake North Service Area | \$25,610.00 |
| 4 | Flower Mound- Service Area B | \$24,949.10 |
| 5 | Keller Service Area 1 | \$24,922.00 |
| 6 | Colleyville Service Area 2 | \$21,580.00 |
| 7 | Keller Service Area 2 | \$18,416.30 |
| 8 | Southlake South Service Area | \$18,330.00 |
| 9 | Flower Mound- Service Area A | \$9,599.75 |
| 10 | Melissa Service Area 2 | \$8,816.26 |
| 11 | Colleyville Service Area 1 | \$7,790.00 |
| 12 | Melissa Service Area 1 | \$5,832.17 |
| 13 | Northlake Zone 1 (NW) | NA |
| 14 | Northlake Zone 2 (NE) | NA |
| 15 | Northlake Zone 3 (SW) | NA |
| 16 | Northlake Zone 4 (SE) | NA |

General Retail Roadway Impact Fees - 2010 (at Adopted 25% of Max.)

General Retail (Based on a
10,000 sq. ft. building)

| | | |
|----------|------------------------------|--------------------|
| 1 | Northlake Zone 1 (NW) | \$226,033.00 |
| 2 | Northlake Zone 2 (NE) | \$142,623.00 |
| 3 | Prosper Service Area 1 | \$49,620.00 |
| 4 | Southlake North Service Area | \$48,300.00 |
| 5 | Prosper Service Area 2 | \$37,620.00 |
| 6 | Southlake South Service Area | \$34,560.00 |
| 7 | Flower Mound- Service Area B | \$34,419.95 |
| 8 | Town of Argyle | \$26,797.00 |
| 9 | Northlake Zone 4 (SE) | \$26,632.50 |
| 10 | Northlake Zone 3 (SW) | \$25,657.60 |
| 11 | Keller Service Area 1 | \$24,922.00 |
| 12 | Colleyville Service Area 2 | \$21,580.00 |
| 13 | Keller Service Area 2 | \$18,416.30 |
| 14 | Flower Mound- Service Area A | \$13,218.75 |
| 15 | Melissa Service Area 2 | \$9,969.31 |
| 16 | Colleyville Service Area 1 | \$7,790.00 |
| 17 | Melissa Service Area 1 | \$6,594.95 |

General Retail Roadway Impact Fees - 2020 (at Various Rates of Max.)

General Retail (Based on a
10,000 sq. ft. building)

| | | |
|-----------------------|------------------------------|---|
| 1 | Northlake Zone 1 (NW) | \$226,033.00 |
| 2 | Northlake Zone 2 (NE) | \$142,623.00 |
| Town of Argyle | | \$73,440.00 (at 50% of Max.) |
| Town of Argyle | | \$58,752.00 (at 40% of Max.) as Recommended by CIAC 1.7.20 |
| 3 | Prosper Service Area 1 | \$49,620.00 |
| Town of Argyle | | \$49,351.50 (at 33.6% of Max.) |
| 4 | Southlake North Service Area | \$48,300.00 |
| 5 | Prosper Service Area 2 | \$37,620.00 |
| Town of Argyle | | \$36,720.00 (at 25% of Max.) |
| 6 | Southlake South Service Area | \$34,560.00 |
| 7 | Flower Mound- Service Area B | \$34,419.95 |
| 8 | Northlake Zone 4 (SE) | \$26,632.50 |
| 9 | Northlake Zone 3 (SW) | \$25,657.60 |
| 10 | Keller Service Area 1 | \$24,922.00 |
| 11 | Colleyville Service Area 2 | \$21,580.00 |
| 12 | Keller Service Area 2 | \$18,416.30 |
| 13 | Flower Mound- Service Area A | \$13,218.75 |
| 14 | Melissa Service Area 2 | \$9,969.31 |
| 15 | Colleyville Service Area 1 | \$7,790.00 |
| 16 | Melissa Service Area 1 | \$6,594.95 |

Recent Development Projects - 2010 -2020 Impact Fee Comparison

| | | 2010 Roadway Impact Fee (at Adopted 25% of Max.) | 2020 Roadway Impact Fees (various rates) |
|---|---|---|---|
| 1 | Well Church (20,00 sq. ft. Religious Institution) | \$9,158.79 | \$25,100.16 (50% of max.) |
| | | | \$20,080.13 (40% of max.) as Recommended by CIAC 1.7.20 |
| | | | \$16,867.25 (33.6% of max.) |
| | | | \$12,550.08 (25% of max.) |
| 2 | Eagle Plaza (10,188 sq. ft. retail bldg.) | \$27,303.68 | \$74,827.20 (50% of max.) |
| | | | \$59,891.76 (40% of max.) as Recommended by CIAC 1.7.20 |
| | | | \$50,283.70 (33.6% of max.) |
| | | | \$37,413.60 (25% of max.) |
| 3 | BPS Jet (22,936 sq. ft. corp. office, warehouse, lab) | \$47,514.35 | \$130,200.96 (50% of max.) |
| | | | \$104,160.77 (40% of max.) as Recommended by CIAC 1.7.20 |
| | | | \$87,494.72 (33.6% of max.) |
| | | | \$65,100.48 (25% of max.) |
| 4 | Integrity Performance Sports (183,340 sq. ft. health club, restaurant, office) | \$498,225.08 | \$1,365,412.80 (50% of max.) |
| | | | \$1,092,330.24 (40% of max.) as Recommended by CIAC 1.7.20 |
| | | | \$917,554.05 (33.6% of max.) |
| | | | \$682,706.40 (25% of max.) |

Town of Argyle Wastewater and Roadway Impact Fees Update



**Presentation to
Town Council
February 11, 2020**

IMPACT FEES ARE:

- ***A vehicle for attributing the additional cost of providing basic services due to growth in the community to the developments that bring that growth.***
- ***To be used only for new capital improvements and/or for projects that increase capacity.***

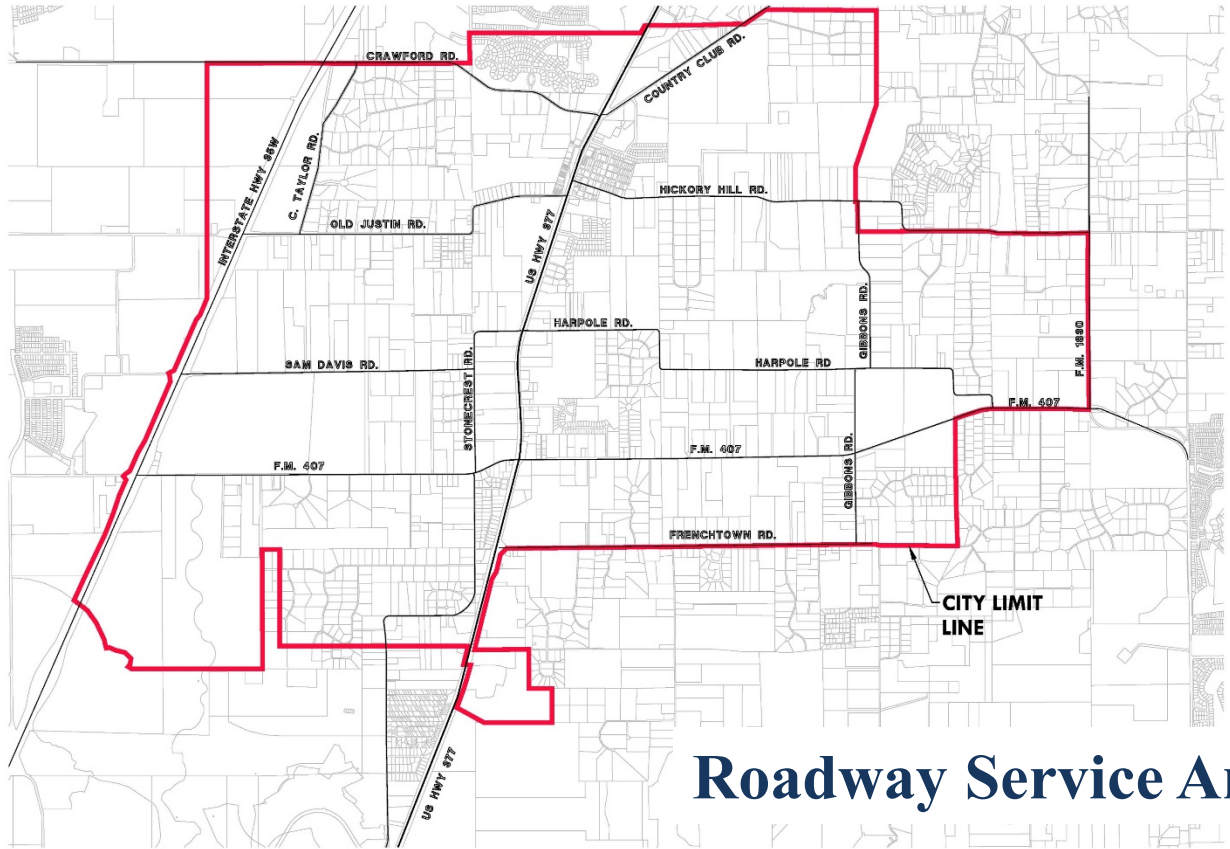
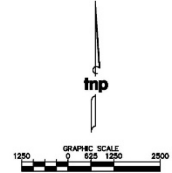
IMPACT FEES ARE:

- ***Not for addressing existing deficiencies.***
- ***Not for debt service on non-Impact Fee projects.***
- ***Only for projects in the Impact Fee CIPs.***
- ***Collected at issuance of the building permit.***
- ***Reviewed and updated at least every 5 years.***
- ***Based on a 10-Year planning window.***

PROPOSED TIMELINE

| MILESTONE | DATE |
|---|------------------|
| 1. Presentation to Advisory Committee | November 5, 2019 |
| 2. Presentation to Advisory Committee | December 3, 2019 |
| 3. Advisory Committee Recommendations | January 7, 2020 |
| 4. Town Council to set Public Hearing | January 28, 2020 |
| 5. Presentation to Town Council | TBD |
| 6. Public Hearing, Town Council sets Impact Fee Rates | March 24, 2020 |





Roadway Service Area



teague nail & perkins
 2200 S Interstate 33E, Suite 1129
 Denton, Texas 76210
 940.383.4177 ph 940.389.8026 fx
 TNP's Registration No. F-230
 www.tnplnc.com

FIGURE 2.1
Town of Argyle
Roadway Service Area Plan



Date: 2/10/20 10:52:03 AM
 User: C:\Users\jperkins\Documents\2020\11-19-2019\11-19-2019.dwg
 Plot: 11-19-2019.dwg
 Plot Date: 2/10/20 10:52:03 AM

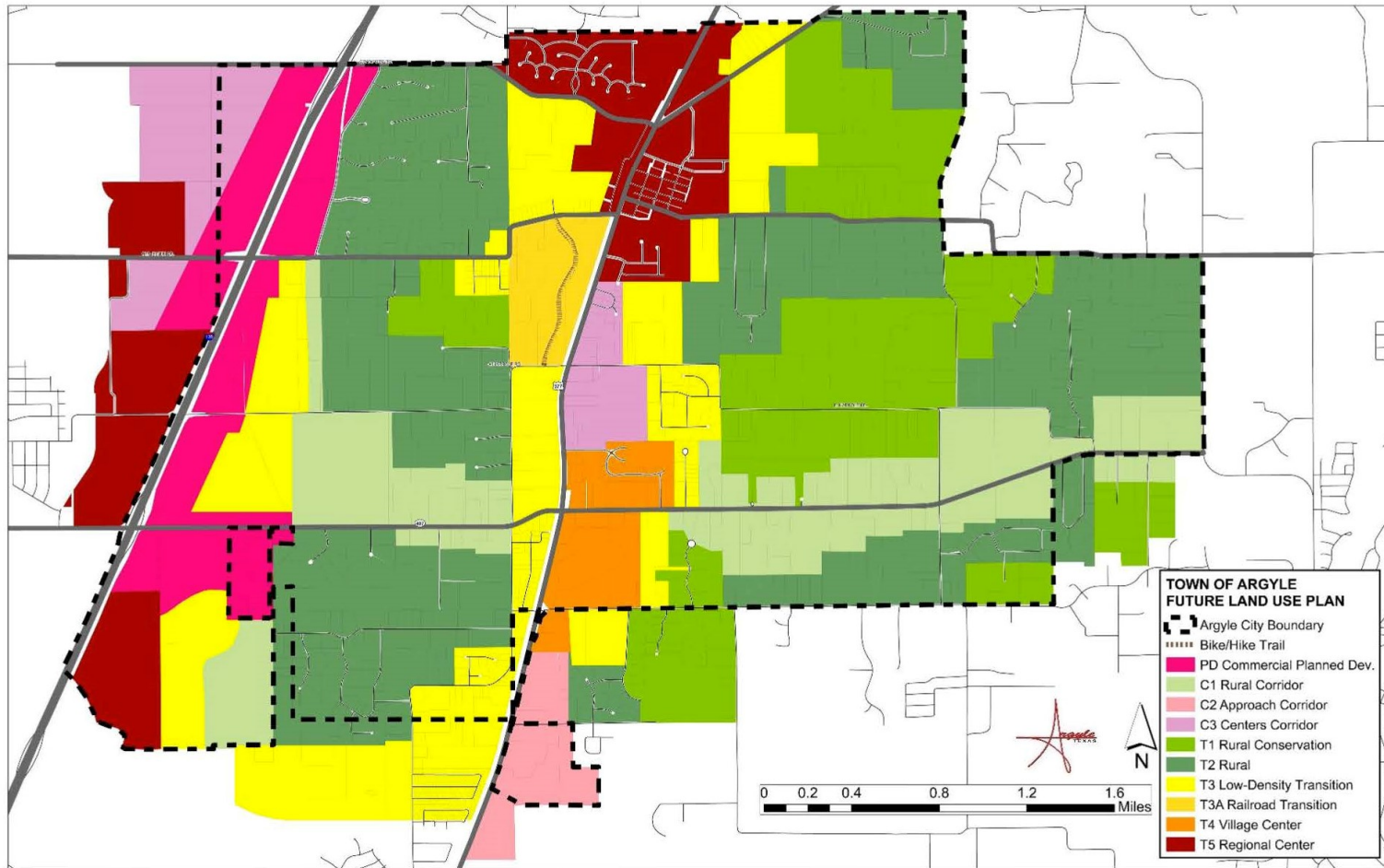
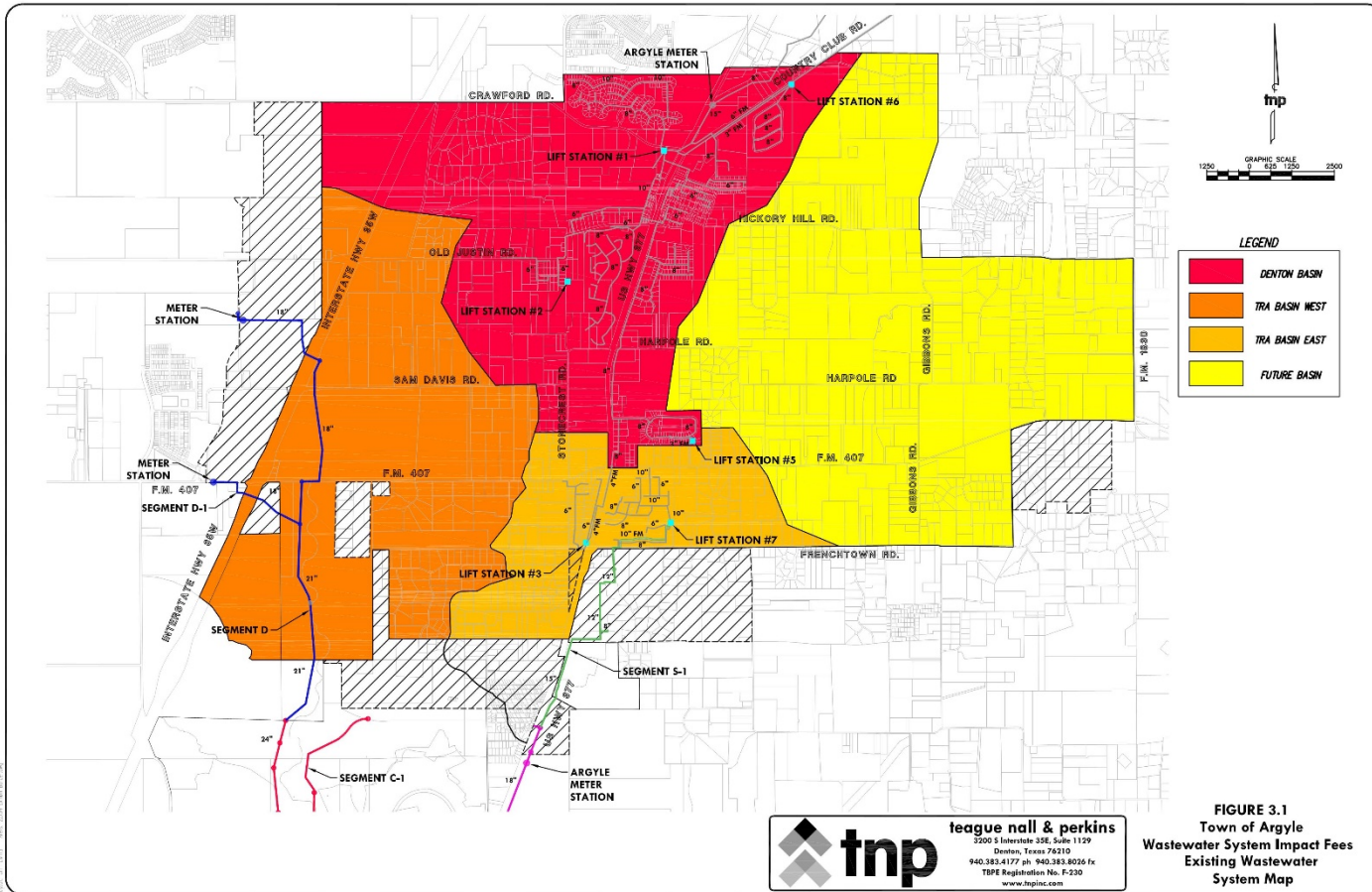


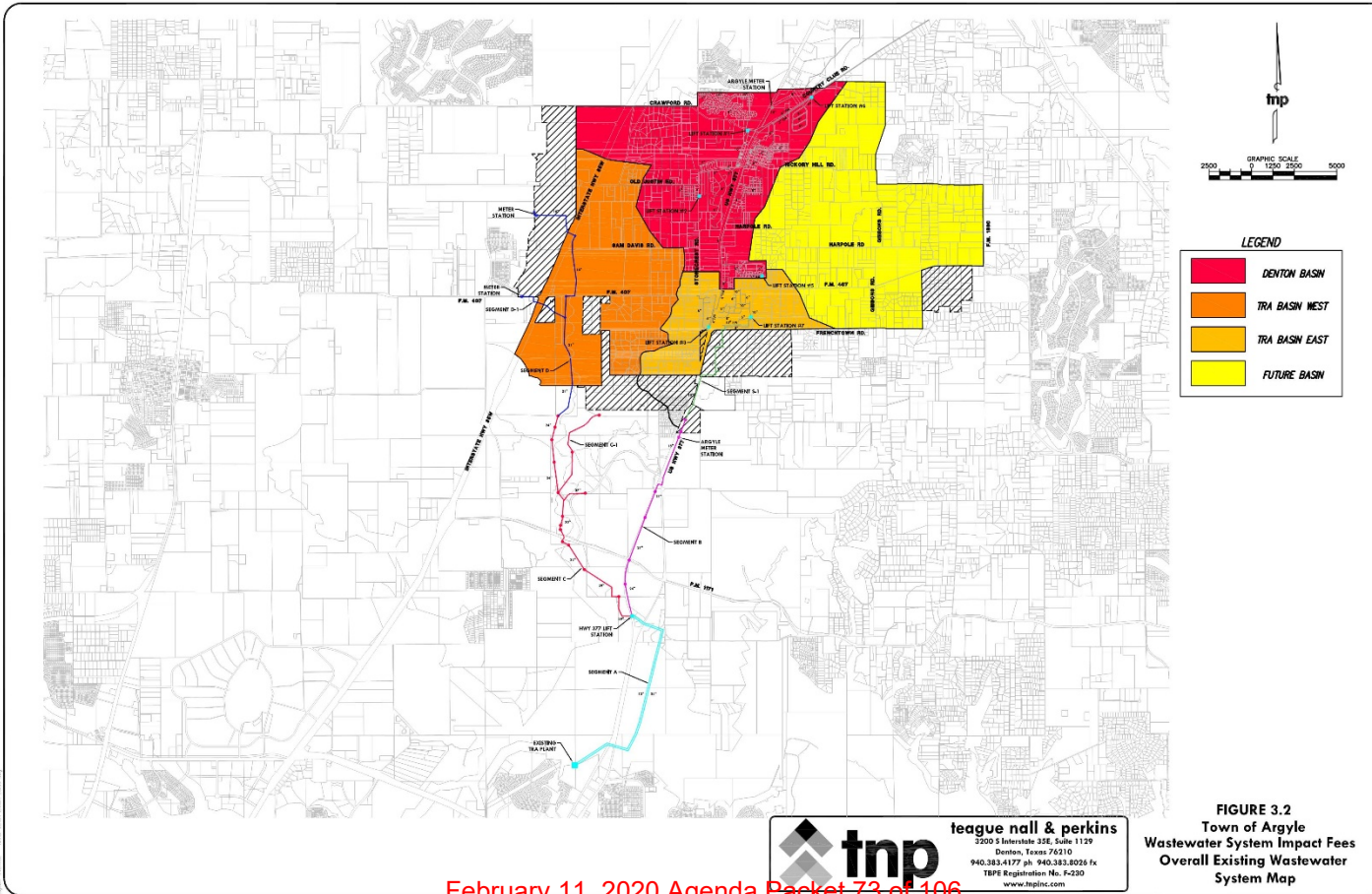
TABLE 2.4
TOWN OF ARGYLE
Wastewater and Roadway Impact Fee Study
Population Growth Projections

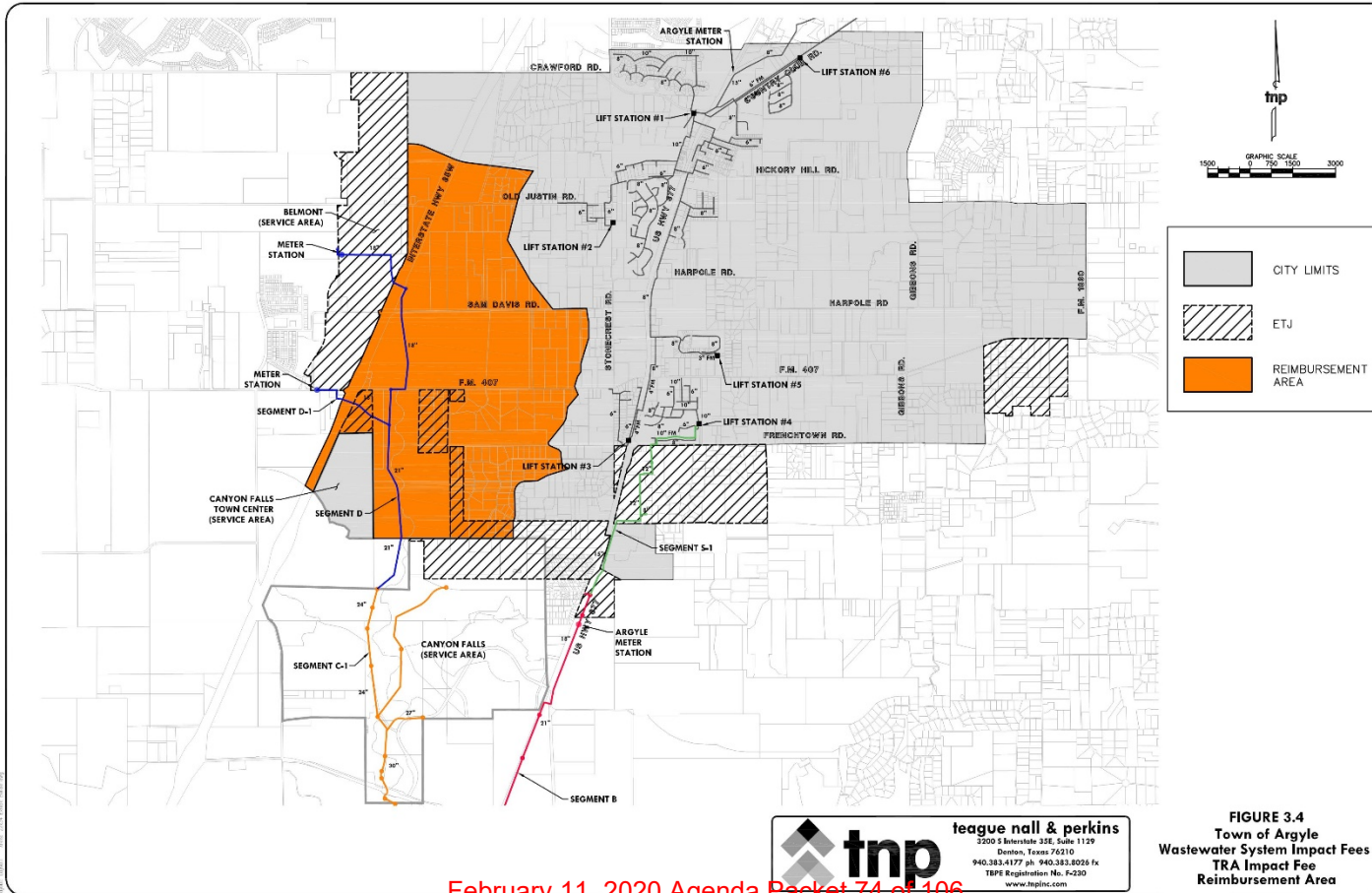
| Year | Town Populatioir | Growth Rate % |
|---|------------------|------------------|
| 2010 | 3282 | |
| 2011 | 3300 | 0.55 |
| 2012 | 3350 | 1.52 |
| 2013 | 3420 | 2.09 |
| 2014 | 3510 | 2.63 |
| 2015 | 3690 | 5.13 |
| 2016 | 3820 | 3.52 |
| 2017 | 3920 | 2.62 |
| 2018 | 4040 | 3.06 |
| 2019 | 4170 | 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 |





teague nall & perkins
2005 Interstate 35E, Suite 1129
Denton, Texas 76210
940.383.4177 ph 940.383.8026 fx
TDEP Registration No. F-220
www.tnpsc.com





teague nall & perkins
 2200 S. Brierly State 336, Suite 1129
 Denton, Texas 76210
 940.383.4177 ph 940.383.8026 fx
 TBPB Registration No. 4-230
 www.tnplinc.com

| <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 | |



| Service Size | Existing Impact Fee | 2010 Study Max Impact Fee | 2020 Study Max Impact Fee |
|---------------------|----------------------------|--------------------------------------|--------------------------------------|
| 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



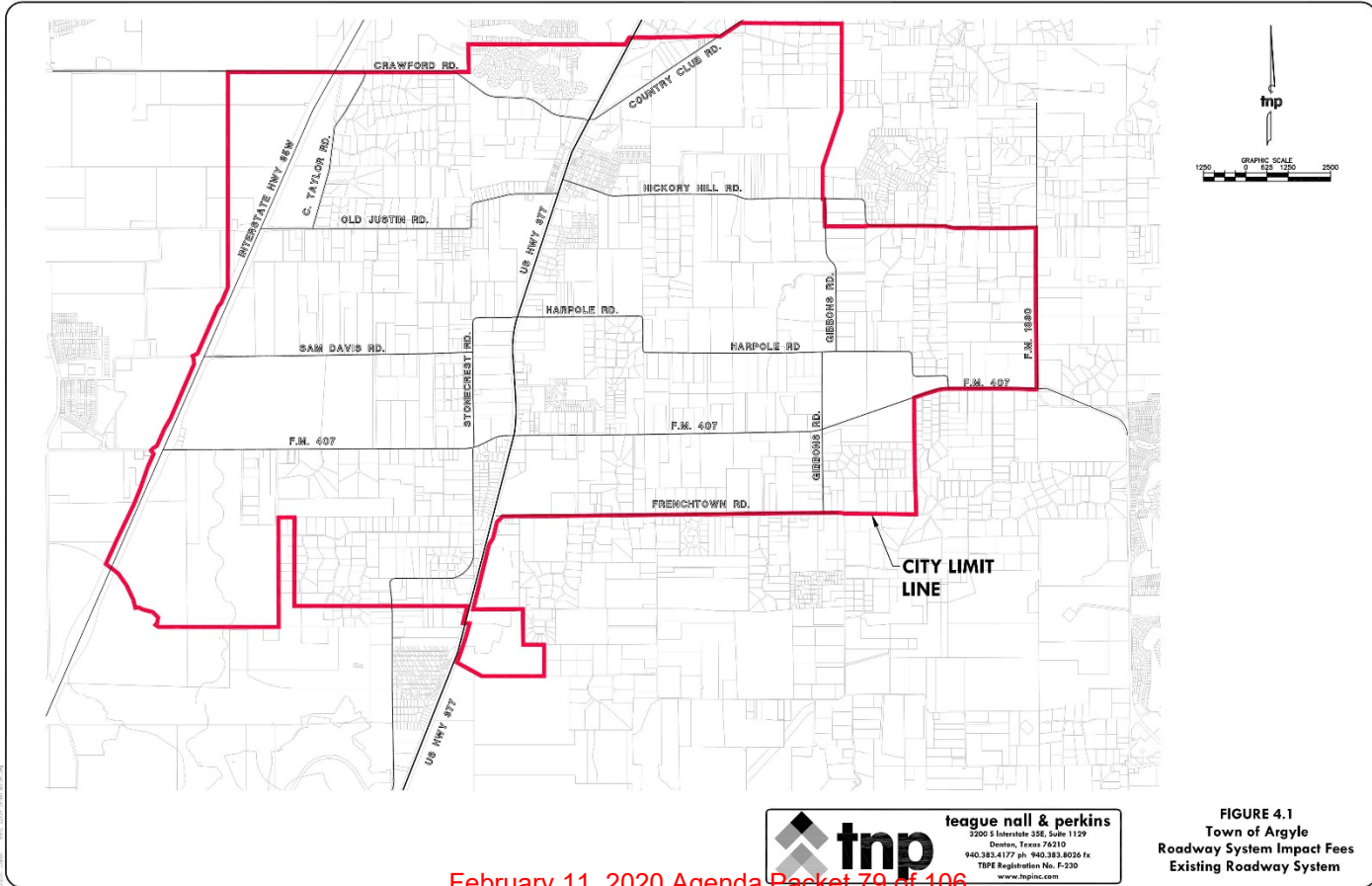
Wastewater Impact Fees - 2010 (at Adopted 50% max.)

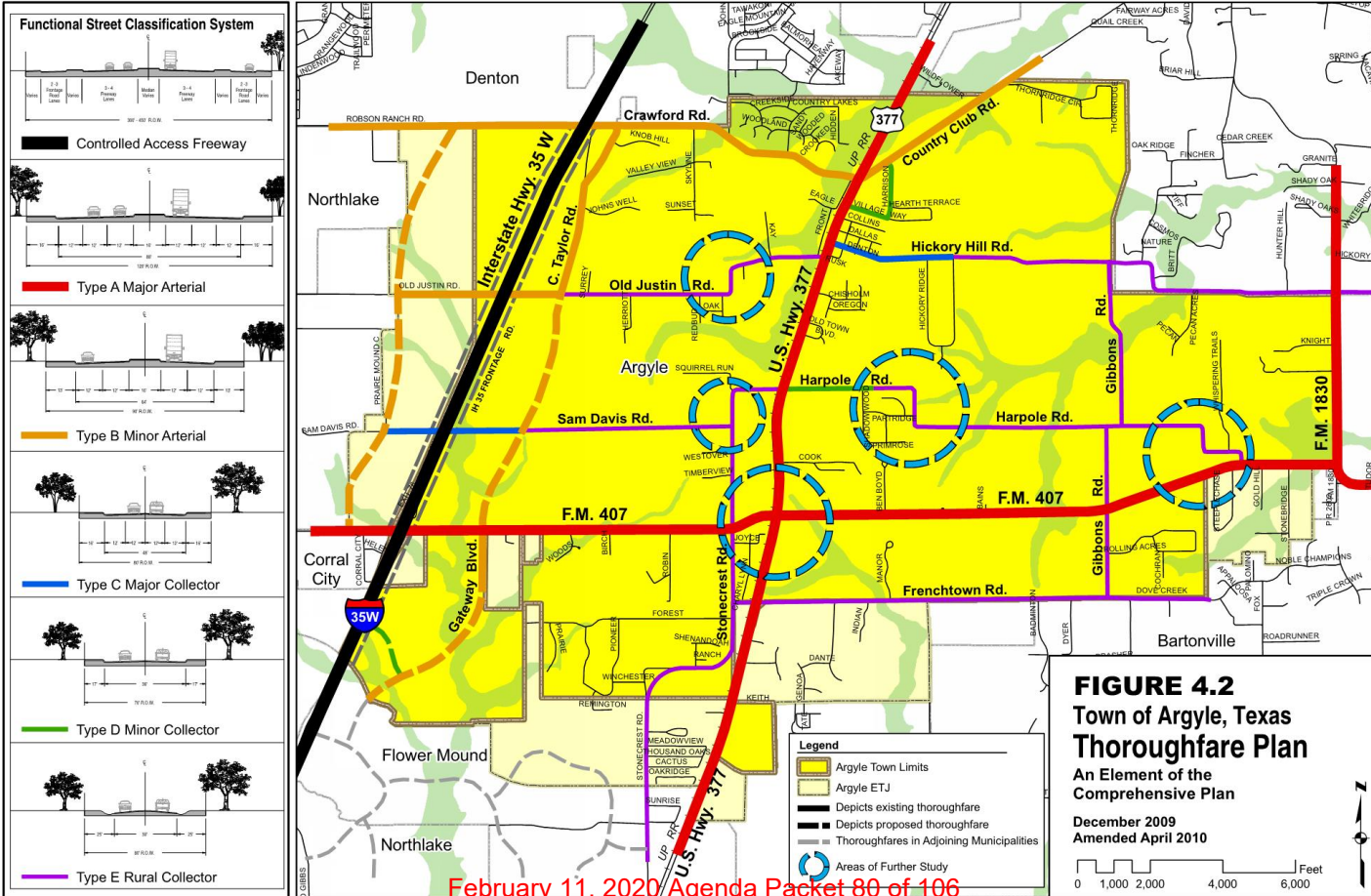
| | | 5/8" | 3/4" | 1" | 1-1/2" |
|---|--|------------|------------|------------|-------------|
| 1 | Argyle | \$2,914.00 | \$2,914.00 | \$7,868.00 | 9,616.18 |
| 2 | Southlake | \$2,609.00 | \$3,914.00 | \$6,523.00 | \$13,045.00 |
| 3 | Flower Mound-Long Prairie District Residential | \$2,436.00 | \$3,645.00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

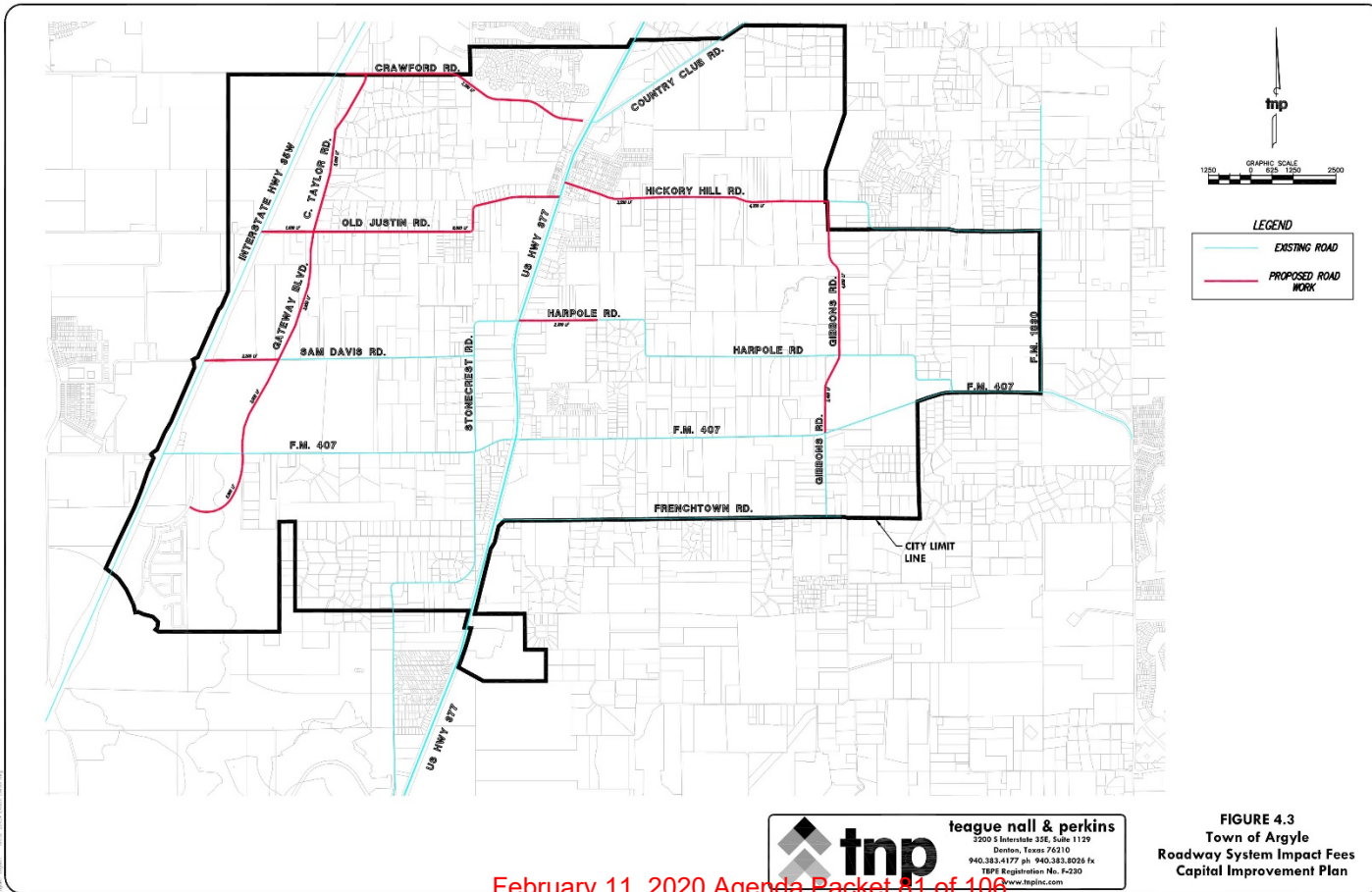
Wastewater Impact Fees - 2020 (at Proposed 50% max.)

| | | 5/8" | 3/4" | 1" | 1-1/2" |
|---|--|------------|------------|------------|-------------|
| 1 | Southlake | \$2,609.00 | \$3,914.00 | \$6,523.00 | \$13,045.00 |
| 2 | Argyle | \$2,452.00 | \$2,452.00 | \$6,620.40 | \$8,091.60 |
| | Argyle (Recommended by CIAC 1.7.20) | \$2,452.00 | \$2,452.00 | \$6,620.40 | \$8,091.60 |
| 3 | Flower Mound-Long Prairie District Residential | \$2,436.00 | \$3,645.00 | \$6,090.00 | \$12,180.00 |
| 4 | Flower Mound-Long Prairie District Non-Residential | \$1,218.00 | \$1,827.00 | \$3,045.00 | \$6,090.00 |
| 5 | Prosper | \$1,129.00 | \$1,129.00 | \$2,822.00 | \$5,644.00 |
| 6 | Northlake | \$964.00 | \$1,446.00 | \$2,410.00 | \$4,821.00 |
| 7 | Keller | \$918.00 | \$1,560.60 | \$2,478.60 | \$3,029.40 |
| 8 | Colleyville | \$643.00 | \$965.00 | \$1,068.00 | \$3,215.00 |
| 9 | Melissa | \$398.67 | \$598.00 | \$996.67 | \$1,993.33 |









tnp teague nall & perkins
 3300 S Interstate 35E, Suite 1120
 Denton, Texas 76210
 940.383.4177 ph 940.383.8026 fx
 TRF# Registration No. 4-230
 www.tnpinc.com



Copyright © 2019 TNP. All rights reserved. This document is the property of TNP. It is not to be distributed, copied, or reproduced without the written permission of TNP.

| <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 |
| 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 | |



| <u>Land Use</u> | <u>Existing Impact Fee</u> | <u>2010 Study Max Impact Fee</u> | <u>2020 Study Max Impact Fee</u> |
|------------------------------------|----------------------------|--------------------------------------|--------------------------------------|
| 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 = $3.12 \times \text{cost per service unit}$, $3.12 \times \$801.28 = \$2,500$
2. General Office (10,000 sq. ft.) Impact Fee = $4.6 \text{ per } 1000 \text{ sq. ft.} \times \text{cost per service unit}$, $4.6 \times 10 \times \$595.50 = \$27,393$
3. General Retail (10,000 sq. ft.) Impact Fee = $4.5 \text{ per } 1000 \text{ sq. ft.} \times \text{cost per service unit}$, $4.5 \times 10 \times \$595.50 = \$26,798$



Residential Roadway Impact Fees - 2010 (at Adopted 33.6% Max.)

| | | Residential |
|-----------|-------------------------------|-------------------|
| 1 | Northlake Zone 1 (NW) | \$6,094.10 |
| 2 | Prosper Service Area 1 | \$6,053.00 |
| 3 | Colleyville Service Area 1 | \$4,941.00 |
| 4 | Colleyville Service Area 2 | \$4,941.00 |
| 5 | Prosper Service Area 2 | \$4,589.00 |
| 6 | Melissa Service Area 1 | \$3,915.12 |
| 7 | Northlake Zone 2 - (NE) | \$3,844.98 |
| 8 | Melissa Service Area 2 | \$3,775.48 |
| 9 | Flower Mound- Service Area B | \$3,714.78 |
| 10 | Keller Service Area 1 | \$2,999.19 |
| 11 | Town of Argyle | \$2,500.00 |
| 12 | Keller Service Area 2 | \$2,451.00 |
| 13 | Southlake- North Service Area | \$2,292.00 |
| 14 | Southlake- South Service Area | \$1,640.00 |
| 15 | Flower Mound- Service Area A | \$1,424.10 |
| 16 | Northlake Zone 4 (SE) | \$710.62 |
| 17 | Northlake Zone 3 (SW) | \$691.60 |

Residential Roadway Impact Fees - 2020 (Proposed Rates)

| | | Residential |
|-----------------------|-------------------------------|--|
| 1 | Northlake Zone 1 (NW) | \$6,094.10 |
| 2 | Prosper Service Area 1 | \$6,053.00 |
| Town of Argyle | | \$5,091.84 (at 50% of Max.) |
| Town of Argyle | | \$5,091.84 (at 50% of Max.) as Recommended by CIAC 1.7.20 |
| 3 | Colleyville Service Area 1 | \$4,941.00 |
| 4 | Colleyville Service Area 2 | \$4,941.00 |
| 5 | Prosper Service Area 2 | \$4,589.00 |
| 6 | Melissa Service Area 1 | \$3,915.12 |
| 7 | Northlake Zone 2 - (NE) | \$3,844.98 |
| 8 | Melissa Service Area 2 | \$3,775.48 |
| 9 | Flower Mound- Service Area B | \$3,714.78 |
| Town of Argyle | | \$3,421.70 (at 33.6% of Max.) |
| 11 | Keller Service Area 1 | \$2,999.19 |
| Town of Argyle | | \$2,545.92 (at 25% of Max.) |
| 12 | Keller Service Area 2 | \$2,451.00 |
| 13 | Southlake- North Service Area | \$2,292.00 |
| 14 | Southlake- South Service Area | \$1,640.00 |
| 15 | Flower Mound- Service Area A | \$1,424.10 |
| 16 | Northlake Zone 4 (SE) | \$710.62 |
| 17 | Northlake Zone 3 (SW) | \$691.60 |



General Retail Roadway Impact Fees - 2010 (at Adopted 25% of Max.)

| | | General Retail (Based on a 10,000 sq. ft. building) |
|----------|------------------------------|--|
| 1 | Northlake Zone 1 (NW) | \$226,033.00 |
| 2 | Northlake Zone 2 (NE) | \$142,623.00 |
| 3 | Prosper Service Area 1 | \$49,620.00 |
| 4 | Southlake North Service Area | \$48,300.00 |
| 5 | Prosper Service Area 2 | \$37,620.00 |
| 6 | Southlake South Service Area | \$34,560.00 |
| 7 | Flower Mound- Service Area B | \$34,419.95 |
| 8 | Town of Argyle | \$26,797.00 |
| 9 | Northlake Zone 4 (SE) | \$26,632.50 |
| 10 | Northlake Zone 3 (SW) | \$25,657.60 |
| 11 | Keller Service Area 1 | \$24,922.00 |
| 12 | Colleyville Service Area 2 | \$21,580.00 |
| 13 | Keller Service Area 2 | \$18,416.30 |
| 14 | Flower Mound- Service Area A | \$13,218.75 |
| 15 | Melissa Service Area 2 | \$9,969.31 |
| 16 | Colleyville Service Area 1 | \$7,790.00 |
| 17 | Melissa Service Area 1 | \$6,594.95 |

General Retail Roadway Impact Fees - 2020 (at Various Rates of Max.)

| | | General Retail (Based on a 10,000 sq. ft. building) |
|-----------------------|------------------------------|---|
| 1 | Northlake Zone 1 (NW) | \$226,033.00 |
| 2 | Northlake Zone 2 (NE) | \$142,623.00 |
| Town of Argyle | | \$73,440.00 (at 50% of Max.) |
| Town of Argyle | | \$58,752.00 (at 40% of Max.) as Recommended by CIAC 1.7.20 |
| 3 | Prosper Service Area 1 | \$49,620.00 |
| Town of Argyle | | \$49,351.50 (at 33.6% of Max.) |
| 4 | Southlake North Service Area | \$48,300.00 |
| 5 | Prosper Service Area 2 | \$37,620.00 |
| Town of Argyle | | \$36,720.00 (at 25% of Max.) |
| 6 | Southlake South Service Area | \$34,560.00 |
| 7 | Flower Mound- Service Area B | \$34,419.95 |
| 8 | Northlake Zone 4 (SE) | \$26,632.50 |
| 9 | Northlake Zone 3 (SW) | \$25,657.60 |
| 10 | Keller Service Area 1 | \$24,922.00 |
| 11 | Colleyville Service Area 2 | \$21,580.00 |
| 12 | Keller Service Area 2 | \$18,416.30 |
| 13 | Flower Mound- Service Area A | \$13,218.75 |
| 14 | Melissa Service Area 2 | \$9,969.31 |
| 15 | Colleyville Service Area 1 | \$7,790.00 |
| 16 | Melissa Service Area 1 | \$6,594.95 |



General Office Roadway Impact Fees - 2010 (at Adopted 25% of Max.)

| | | General Office (Based on a 10,000 sq. ft. building) |
|----------|------------------------------|--|
| 1 | Prosper Service Area 1 | \$51,320.00 |
| 2 | Prosper Service Area 2 | \$38,910.00 |
| 3 | Town of Argyle | \$27,393.00 |
| 4 | Southlake North Service Area | \$25,610.00 |
| 5 | Flower Mound- Service Area B | \$24,949.10 |
| 6 | Keller Service Area 1 | \$24,922.00 |
| 7 | Colleyville Service Area 2 | \$21,580.00 |
| 8 | Keller Service Area 2 | \$18,416.30 |
| 9 | Southlake South Service Area | \$18,330.00 |
| 10 | Flower Mound- Service Area A | \$9,599.75 |
| 11 | Melissa Service Area 2 | \$8,816.26 |
| 12 | Colleyville Service Area 1 | \$7,790.00 |
| 13 | Melissa Service Area 1 | \$5,832.17 |
| 14 | Northlake Zone 1 (NW) | NA |
| 15 | Northlake Zone 2 (NE) | NA |
| 16 | Northlake Zone 3 (SW) | NA |
| 17 | Northlake Zone 4 (SE) | NA |

General Office Roadway Impact Fees - 2020 (at Various Rates of Max.)

| | | General Office (Based on a 10,000 sq. ft. building) |
|----|------------------------------|---|
| | Town of Argyle | \$75,072.00 (at 50% of Max.) |
| | Town of Argyle | \$60,057.60 (at 40% of Max.) as Recommended by CIAC 1.7.20 |
| 1 | Prosper Service Area 1 | \$51,320.00 |
| | Town of Argyle | \$50,448.20 (at 33.6% of Max.) |
| 2 | Prosper Service Area 2 | \$38,910.00 |
| | Town of Argyle | \$37,536.00 (at 25% of Max.) |
| 3 | Southlake North Service Area | \$25,610.00 |
| 4 | Flower Mound- Service Area B | \$24,949.10 |
| 5 | Keller Service Area 1 | \$24,922.00 |
| 6 | Colleyville Service Area 2 | \$21,580.00 |
| 7 | Keller Service Area 2 | \$18,416.30 |
| 8 | Southlake South Service Area | \$18,330.00 |
| 9 | Flower Mound- Service Area A | \$9,599.75 |
| 10 | Melissa Service Area 2 | \$8,816.26 |
| 11 | Colleyville Service Area 1 | \$7,790.00 |
| 12 | Melissa Service Area 1 | \$5,832.17 |
| 13 | Northlake Zone 1 (NW) | NA |
| 14 | Northlake Zone 2 (NE) | NA |
| 15 | Northlake Zone 3 (SW) | NA |
| 16 | Northlake Zone 4 (SE) | NA |



Recent Development Projects - 2010 -2020 Impact Fee Comparison

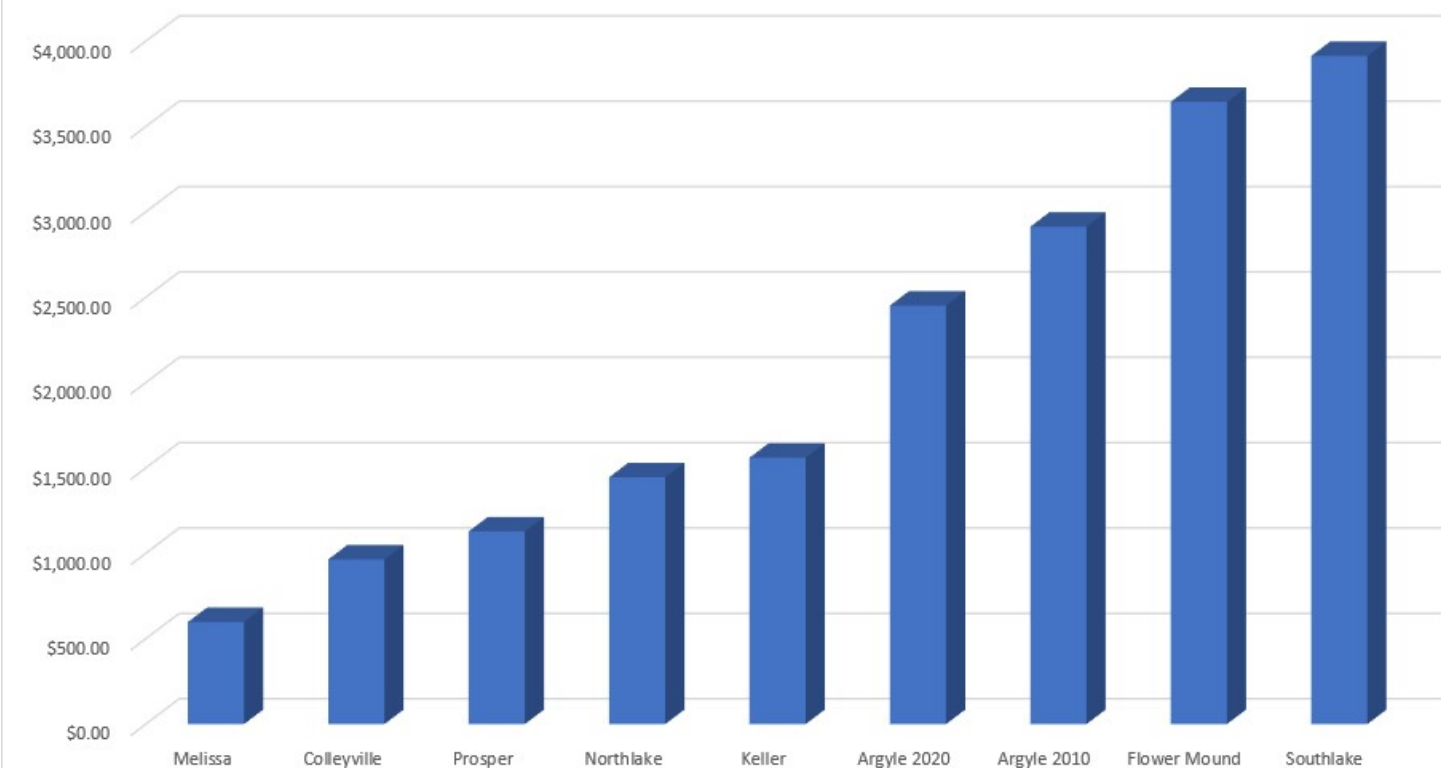
| | | 2010 Roadway Impact Fee (at Adopted 25% of Max.) | 2020 Roadway Impact Fees (various rates) |
|---|---|---|---|
| 1 | Well Church (20,00 sq. ft. Religious Institution) | \$9,158.79 | \$25,100.16 (50% of max.) |
| | | | \$20,080.13 (40% of max.) as Recommended by CIAC 1.7.20 |
| | | | \$16,867.25 (33.6% of max.) |
| | | | \$12,550.08 (25% of max.) |
| 2 | Eagle Plaza (10,188 sq. ft. retail bldg.) | \$27,303.68 | \$74,827.20 (50% of max.) |
| | | | \$59,891.76 (40% of max.) as Recommended by CIAC 1.7.20 |
| | | | \$50,283.70 (33.6% of max.) |
| | | | \$37,413.60 (25% of max.) |
| 3 | BPS Jet (22,936 sq. ft. corp. office, warehouse, lab) | \$47,514.35 | \$130,200.96 (50% of max.) |
| | | | \$104,160.77 (40% of max.) as Recommended by CIAC 1.7.20 |
| | | | \$87,494.72 (33.6% of max.) |
| | | | \$65,100.48 (25% of max.) |
| 4 | Integrity Performance Sports (183,340 sq. ft. health club, restaurant, office) | \$498,225.08 | \$1,365,412.80 (50% of max.) |
| | | | \$1,092,330.24 (40% of max.) as Recommended by CIAC 1.7.20 |
| | | | \$917,554.05 (33.6% of max.) |
| | | | \$682,706.40 (25% of max.) |





QUESTIONS AND COMMENTS

Wastewater Impact Fee Comparison Residential Lots



Roadway Impact Fee Comparison Residential Lots

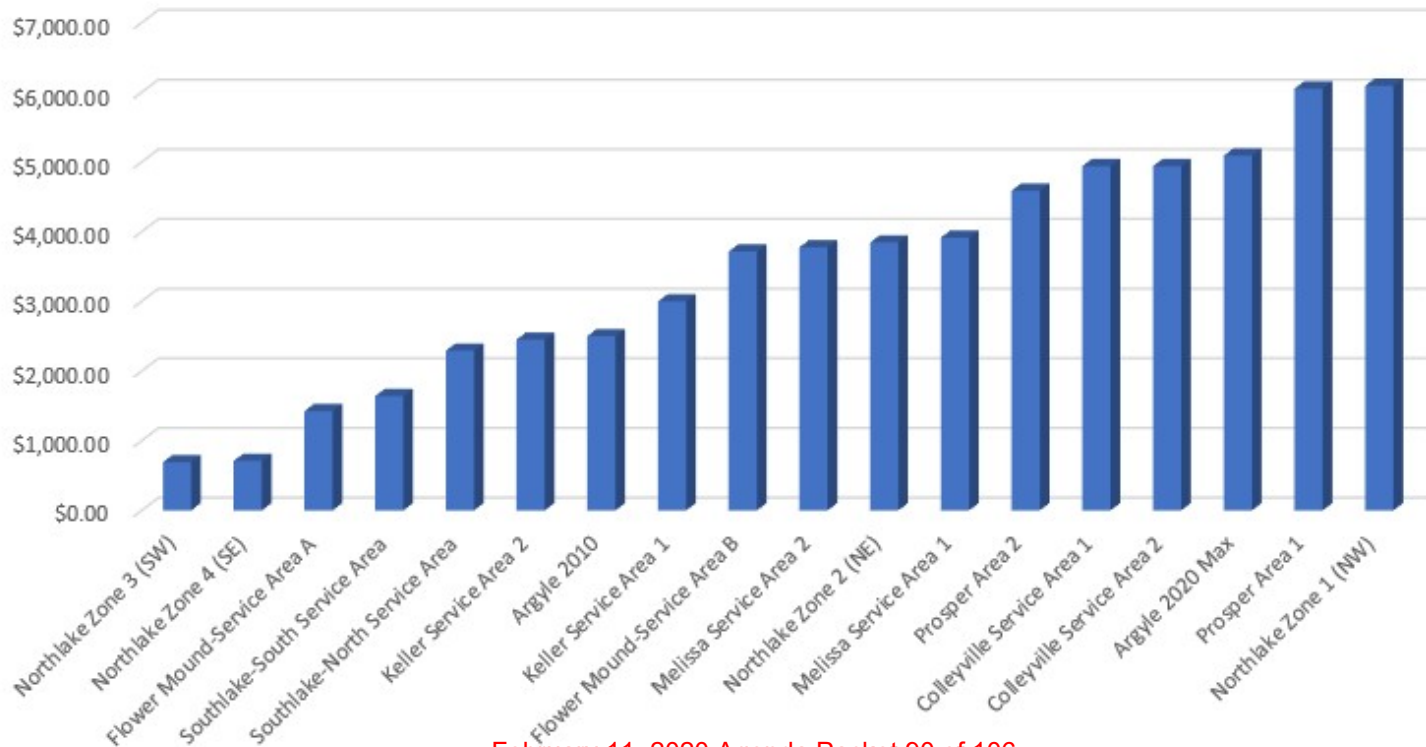


TABLE 2.1
TOWN OF ARGYLE
Wastewater and Roadway Impact Fee Study
Current Impact Fees

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 | | \$1,589.00 | \$8,910.00 | \$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 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 Connection: | 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 3.4 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 | | 205.40 | 31828 | 1150 | 1150 | 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 |
| | Nursery(garden center) | 1000 GFA | 2.09 |
| | Nursery (wholesale) | 1000 GFA | 1.75 |



| | | | |
|--|-----------------------------|----------|------|
| | 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 Designation | 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 & Nichc



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 | 9056 | 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 | 725 | 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 4.18
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 |

