

ORDINANCE NO. 2016-189

AN ORDINANCE OF THE CITY OF DENTON, TEXAS, ADOPTING ROADWAY IMPACT FEES PER SERVICE UNIT; ESTABLISHING PROCEDURES FOR THE ASSESSMENT, COLLECTION, COMPUTATION, EXPENDITURE, REFUND AND GENERAL ADMINISTRATION OF ROADWAY IMPACT FEES; PROVIDING FOR THE ESTABLISHMENT OF ACCOUNTS FOR ROADWAY IMPACT FEES; PROVIDING CONSTRUCTION, SEVERABILITY, AND CONFLICT CLAUSES; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Chapter 395, Tex. Loc. Gov't Code (the "Statute") provides the requirements and procedures for the adoption of Land Use Assumptions, Roadway Impact Fee Capital Improvements Plan, and Roadway Impact Fees; and

WHEREAS, the City retained Kimley-Horn and Associates ("Kimley-Horn") to prepare a Roadway Impact Fee Study that contains Land Use Assumptions ("LUA") reflecting a description of five Service Areas and projections of 10-year growth in residential and nonresidential land uses in each Service Area, a Roadway Impact Fee Capital Improvements Plan ("CIP") to identify Capital Improvements or Roadway Facility expansions for which Roadway Impact Fees may be assessed, and a calculation of the Roadway Impact Fee. The Roadway Impact Fee Study is attached as Exhibit A hereto and incorporated by reference herein; and

WHEREAS, after notice of public hearing was published as required by the Statute, the City Council held a public hearing on March 22, 2016 in which the City Council adopted the CIP and LUA by Ordinance No. 2016-085; and

WHEREAS, the Capital Improvement Advisory Committee of the City of Denton ("CIAC"), created pursuant to Sec. 395.058, Tex. Loc. Gov't Code, filed its written comments on the proposed Roadway Impact Fees before the fifth (5th) business day before the date of the public hearing on the adoption of the Roadway Impact Fee; and

WHEREAS, as required by Section 395.054, Tex. Loc. Gov't Code, the City Council conducted a public hearing on April 26, 2016 and continued on June 21, 2016 on the adoption of Roadway Impact Fees in which any member of the public had the right to appear at the hearing and present evidence for or against the plan and proposed fee; and

WHEREAS, the City Council desires to adopt the Roadway Impact Fees and related administrative process as herein described and finds that it is in the best interest of the citizens of the City of Denton; **NOW THEREFORE**,

THE COUNCIL OF THE CITY OF DENTON HEREBY ORDAINS:

SECTION 1. Short Title. This Ordinance shall be known and cited as the “Denton Roadway Impact Fee Regulations”.

SECTION 2. Findings Incorporated. The findings set forth above are incorporated into the body of this Ordinance as if fully set forth herein and are hereby found to be true and correct factual and legislative determinations of the City of Denton, Texas.

SECTION 3. Purpose. This Ordinance is intended to assure the provision of adequate roadway facilities to serve New Development in the City by requiring each development to pay a share of the costs of such Capital Improvements or Roadway Facility expansions necessitated by and attributable to such New Development.

SECTION 4. Authority. This Ordinance is adopted pursuant to Texas Local Government Code (TLGC) Chapter 395 and the Denton City Charter. Chapter 395 supplements this Ordinance to the extent that its provisions may be applicable hereto and, to such extent, its provisions are incorporated herein by reference. The provisions of this Ordinance shall not be construed to limit the power of the City to utilize other methods authorized under State law or pursuant to other City powers to accomplish the purposes set forth herein, either in substitution or in conjunction with this Ordinance. Guidelines may be developed by ordinance, resolution, or otherwise to implement and administer this Ordinance.

SECTION 5. Applicability. The provisions of this Ordinance apply to all new, non-exempt development within the corporate boundaries of the City located within a Roadway Service Area.

SECTION 6. Incorporation of Land Use Assumptions and Roadway Impact Fee Capital Improvements Plan. The Roadway Impact Fee Capital Improvements Plan and Land Use Assumptions identifying Capital Improvements or Facility Expansions pursuant to which Roadway Impact Fees may be assessed, as considered and adopted by the City Council Ordinance No. 2016-085 at the March 22, 2016 public hearing and attached with the Roadway Impact Fee Study as **Exhibit A** hereto is incorporated herein by reference for all purposes, including any future amendments thereto.

SECTION 7. Definitions. In this Ordinance:

- A. **Assessment** means the determination of the amount of the Maximum Assessable Roadway Impact Fee per Service Unit which can be imposed on New Development pursuant to this Ordinance.
- B. **Capital Improvement** means a Roadway Facility with a life expectancy of three or more years, to be owned and operated by or on behalf of the City.
- C. **City** means the City of Denton, Texas.

- D. Credit means a reduction in the amount of a Roadway Impact Fee(s), payments, or charges for approved construction or provision of the same type of Capital Improvement for which a fee has been assessed for a New Development. This is done by either by a proven decrease in the number of Service Units attributable to such development or a decrease in the amount of Roadway Impact Fees otherwise due, that results from contributions of land, improvements or funds to construct system improvements in accordance with the City's subdivision and development regulations, policies or requirements, as determined by the City.
- E. Final plat approval means authorization by the City Planning and Zoning Commission that the final map of a proposed subdivision meets all City standards and conditions in accordance with the City's subdivision regulations and the Executive Chairman of the City Planning and Zoning Commission executes the applicant's plat and that the plat may be recorded in the office of the county clerk of Denton. The term applies both to original plats and replats.
- F. Impact Fee, or "Roadway Impact Fee", means a fee, charge, or Assessment for Roadway Facilities imposed on New Development by the City pursuant to this Ordinance in order to generate revenue to fund or recoup all or part of the costs of Capital Improvements or facility expansion necessitated by and attributable to such New Development. The term includes amortized charges, lump-sum charges, capital recovery fees, contributions in aid of construction and any other fee that functions as described by this Ordinance or the Statute. The term is inclusive of both the Maximum Assessable Roadway Impact Fee and the Roadway Impact Fee Collection Rate as herein described.
- G. Land Use Assumptions means the description of Service Areas and the projections of population and employment growth and associated changes in land uses, densities and intensities adopted by the City, as may be amended from time to time, upon which the Roadway Impact Fee Capital Improvements Plan is based.
- H. Land Use Equivalency Table means a table converting the demands for Capital Improvements generated by various land uses to numbers of Service Units, as may be amended from time to time. The land use equivalency table may be incorporated in a schedule of Impact Fee rates, attached as Exhibit C hereto and incorporated by reference herein.
- I. Maximum Assessable Roadway Impact Fee means the Impact Fee that is established for each Service Area computed by calculating the total projected costs of Capital Improvements necessitated by and attributable to New Development and subtracting a portion of ad valorem tax revenues to be generated by new Service Units, including the payment of debt, associated with the roadway CIP, and then dividing that amount by the total number of Service Units anticipated within the Service Area based upon the land use assumptions. The Maximum Assessable Roadway Impact Fee shall be

established and reflected in Exhibit B, Schedule 1, attached hereto and incorporated herein. The City may adopt a Roadway Impact Fee Collection Rate that is less than this amount, but in no instance shall the Roadway Impact Fee exceed the Maximum Assessable Roadway Impact Fee except by amendment of this Ordinance.

- J. New Development means a project involving the construction, reconstruction, redevelopment, conversion, structural alteration, relocation, or enlargement of any structure, or any use or extension of land, which has the effect of increasing the requirements for Capital Improvements or facility expansions, measured by the number of Service Units to be generated by such activity.
- K. Recoupment means the imposition of an Impact Fee to reimburse the City for Capital Improvements which the City has previously oversized to serve New Development.
- L. Roadway Impact Fee Collection Rate means the current amount of Roadway Impact Fee adopted by Denton City Council to be paid by the property owner, as may from time to time be amended, which is the result of a percentage reduction of the adopted Maximum Assessable Roadway Impact Fee. The adopted Roadway Impact Fee Collection Rate shall be established and reflected in Exhibit B, Schedule 2, attached hereto and incorporated herein. The adopted Roadway Impact Fee Collection Rate may be further reduced with Credits, designed to fairly reflect the value of Roadway Facilities provided by a developer in accordance with the City's development regulations or requirements.
- M. Roadway means any primary and secondary arterial or collector designated in the City's adopted Mobility Plan, as may be amended from time to time. Roadway also includes any thoroughfare designated as a numbered highway on the official federal or Texas highway system; to the extent that the City incurs Capital Improvement costs for such facility.
- N. Roadway Facility means an improvement or appurtenance to a Roadway which includes, but is not limited to, rights-of-way, whether conveyed by deed or easement; intersection improvements; traffic signals; turn lanes; drainage facilities associated with the Roadway Facility; street lighting or curbs, and water and wastewater improvements affected by the Roadway Facility. Roadway Facility also includes any improvement or appurtenance to an intersection with a Roadway officially enumerated in the federal or Texas highway system, and to any improvements or appurtenances to such federal or Texas highway, to the extent that the City has incurred capital costs for such facilities, including without limitation local matching funds and costs related to utility line relocation and the establishment of curbs, gutters, sidewalks, drainage appurtenances and rights-of-way. Roadway Facility excludes those improvements or appurtenances to any Roadway which is a Site-related Facility.

- O. Roadway Facility expansion means the expansion of the capacity of an existing roadway in the City, but does not include the repair, maintenance, modernization, or expansion of an existing roadway to better serve existing development.
- P. Roadway Impact Fee Capital Improvements Plan, or “Capital Improvements Plan” (CIP) means the adopted plan included in Exhibit A, as may be amended from time to time, which identifies the roadway facilities or Roadway Facility expansions and their costs for each roadway Service Area, which are necessitated by and which are attributable to New Development, for a period not to exceed 10 years, which are to be financed in whole or in part through the imposition of Roadway Impact Fees pursuant to this Ordinance.
- Q. Service Area means a Roadway Service Area within the City’s corporate boundary, within which Impact Fees for Roadway Capital Improvements or Roadway Facility expansions may be collected for New Development occurring within such area and within which fees so collected will be expended for those types of improvements or expansions identified in the Roadway Impact Fee Capital Improvements Plan applicable to the Service Area.
- R. Service Unit means a vehicle mile. A vehicle-mile shall be defined as one (1) vehicle traveling a distance of one (1) mile during the afternoon peak hour as calculated herein.
- S. Site-related Facility means an improvement or facility which is for the primary use or benefit of one or more New Developments and/or which is for the primary purpose of safe and adequate provision of Roadway Facilities to serve the New Development, including access to the development, which is not included in the Roadway Capital Improvements Plan, and for which the developer (s) or property owner(s) is solely responsible under subdivision or other applicable development regulations. Site-related Facility may include a Roadway improvement which is located offsite, or within or on the perimeter of the development site.
- T. System Facility means a roadway improvement or facility expansion which is designated in the Roadway Impact Fee Capital Improvements Plan and which is not a Site-related Facility. System Facility may include a roadway improvement which is located offsite, or within or on the perimeter of the development site.

SECTION 8. Roadway Service Areas. The City hereby establishes five (5) Roadway Service Areas, constituting land within the City’s corporate boundaries, as depicted in Exhibit A attached hereto and incorporated by reference herein. The boundaries of the Roadway Service Areas may be amended from time to time, or new Roadway Service Areas may be delineated, pursuant to the procedures of this Ordinance.

SECTION 9. Roadway Impact Fees Adopted. The City hereby adopts the Maximum Assessable Roadway Impact Fee attached and incorporated as Exhibit B, Schedule 1, and the Roadway Impact

Fee Collection Rate attached and incorporated as Exhibit B, Schedule 2. Each non-exempt New Development shall be assessed the Maximum Assessable Roadway Impact Fee and shall pay the Roadway Impact Fee Collection Rate, minus any applicable Credits, as described herein. Except as herein otherwise provided, the Assessment and collection of a Roadway Impact Fee shall be additional and supplemental to, and not in substitution of, any other tax, fee, charge or assessment which is lawfully imposed on and due against the property.

SECTION 10. Roadway Impact Fee Required. No Final Plat for New Development shall be released for filing with Denton County without Assessment of an Impact Fee pursuant to this Ordinance; or, if no plat is required, then no building permit shall be issued until such Assessment is made and paid in accordance with the Assessment and collection procedures indicated herein.

SECTION 11. Assessment of Impact Fees. Assessment of the Impact Fee for any New Development shall be made as follows:

- A. For a New Development which has received final plat approval before the effective date of this Ordinance, Assessment of Impact Fees shall occur on the effective date of this Ordinance, and shall be the amount of the Maximum Assessable Roadway Impact Fee per Service Unit as set forth in Exhibit B, Schedule 1. However, the Roadway Impact Fee Collection Rate shall not be collected on any Service Unit which has received final plat approval before the effective date of this Ordinance and for which a valid building permit is issued within one year after the date of adoption of this Ordinance.
- B. For land which is not required to be platted at the time of application for a building permit pursuant to the City's subdivision regulations prior to development, Assessment of Roadway Impact Fees shall occur at the time application is made for the building permit, and shall be the amount of the Maximum Assessable Roadway Impact Fee per Service Unit as set forth in Exhibit B, Schedule 1 then in effect.
- C. For New Development which is submitted for approval pursuant to the City's subdivision regulations or which is proposed for replatting on or after the effective date of this Ordinance, Assessment of Impact Fees shall be at the time of final plat or replat approval, and shall be the amount of the Maximum Assessable Roadway Impact Fee per Service Unit as set forth in Exhibit B, Schedule 1 then in effect.
- D. Following Assessment of the Impact Fee pursuant to this Section, the amount of the Impact Fee Assessment per Service Unit for that development cannot be increased, unless the owner proposes to change the approved development by the submission of a new application for final plat approval or other development application that results in approval of additional Service Units, in which case a new Assessment shall occur at the Exhibit B, Schedule 1 rate then in effect for such additional Service Units.
- E. The Director of Engineering or his or her designee shall compute the Roadway Impact Fees for New Development by first determining whether the New

Development is eligible for Credits calculated in accordance with this Ordinance, which would further reduce Impact Fees otherwise due in whole or in part. The total amount of Impact Fees for the New Development shall be attached to the development application as a condition of approval.

- F. Approval of an amending plat pursuant to Tex. Loc. Gov't Code, Section 212.016 and the City's subdivision regulations is not subject to reassessment for an Impact Fee.
- G. For the following uses in Table 10 of Exhibit C, Land Use/Vehicle-Mile Equivalency Table (LUVMET) of the Roadway Impact Fee Study, the maximum Service Unit charge will be capped at 1.92 vehicle miles per development unit: General Light Industrial, General Heavy Industrial, and Industrial Park.

SECTION 12. Exemptions to Impact Fees. The following are exempt from the applicability of this Ordinance:

- A. Pursuant to Tex. Loc. Gov't Code Section 395.022, as amended, a public school district is not required to pay Roadway Impact Fees imposed under this Ordinance unless the board of trustees of the district consents to the payment of the fees by entering a contract with the City imposing the fees.
- B. A change in use that generates less than 10 times the number of Service Units attributable to the immediately preceding use is exempt from the payment of Impact Fees.

SECTION 13. Collection of Impact Fees. Roadway Impact Fees shall be collected in the following manner; however, the City has the ability to require construction greater than the Roadway Impact Fee Collection Rate for amounts up to the Maximum Assessable Roadway Impact Fee:

- A. The Roadway Impact Fee Collection Rate shall be paid at the time the City issues a building permit for a New Development.
- B. For properties requiring a plat, the Roadway Impact Fee Collection Rate to be paid and collected per Service Unit for New Development shall be the amount listed in Exhibit B, Schedule 2 in effect at the time of final plat approval for up to a one-year period following such final plat approval. After the one-year period has expired, the Roadway Impact Fee Collection Rate shall be paid according to the current amount listed in Exhibit B, Schedule 2 then in effect.
- C. For properties that do not require the filing of a plat, the Roadway Impact Fee Collection Rate shall be paid and collected per Service Unit for New Development in the amount listed in Exhibit B, Schedule 2 in effect at the time that the building permit is filed.

- D. If the building permit for which an Impact Fee has been paid has expired, and a new application is thereafter filed, the Roadway Impact Fee Collection Rate shall be computed using Exhibit B, Schedule 2 in effect at the time of the new application, with Credits for previous payment of Impact Fees being applied against the new Impact Fees due.
- E. Whenever the property owner proposes to increase the number of Service Units for a development, the additional Impact Fees collected for such new Service Units shall be determined by using Exhibit B, Schedule 2 in effect at the time of the request, and such additional fee shall be collected at the times prescribed by this section.
- F. The City may vary the rates of collection or amount of Roadway Impact Fees per Service Unit among or within Service Areas in order to reasonably further goals and policies affecting the adequacy of roadway facilities serving New Development, or other regulatory purposes affecting the type, quality, intensity, economic development potential or development timing of land uses within such Service Areas.
- G. The Maximum Assessable Roadway Impact Fee per Service Unit for Roadway Facilities, as may be amended from time to time, hereby is declared to be an approximate and appropriate measure of the impacts generated by a new unit of development on the City's Roadway System. To the extent that the Roadway Impact Fee Collection Rate charged against a New Development, as may be amended from time to time, is less than the Maximum Assessable Roadway Impact Fee per Service Unit assessed, such difference hereby is declared to be founded on policies unrelated to measurement of the impacts of the New Development on the City's roadway system. The Maximum Assessable Roadway Impact Fee may be used in evaluating any claim by a property owner that the dedication or construction of a Capital Improvement within a Service Area imposed as a condition of development approval pursuant to the City's subdivision or development regulations is disproportionate to the impacts created by the development on the City's Roadway System.

SECTION 14. Credits against Impact Fees. The City may credit the contribution of land, improvements or funding for construction of any System Facility that is required or agreed to by the City, pursuant to rules established in this section or pursuant to administrative guidelines promulgated by the City with the following limitations:

- A. The Credit shall be associated with the plat or other detailed plan of development for the property that is to be served by the Roadway Facility.
- B. Master Planned Community projects, including subdivisions containing multiple phases, and whether approved before or after the effective date of these Impact Fee regulations, may apply for Credits against Roadway Impact Fees for the entire project based upon contributions of land, improvements or funds toward construction of system facilities, or other Roadway Capital Improvements supplying excess capacity. Credits shall be determined by comparing costs of Roadway Capital Improvements

supplied by the project with the costs of Roadway Capital Improvements to be utilized by development within the project, utilizing a methodology approved by the City. The Credit determination shall be incorporated within an agreement for Credits, in accordance with this Ordinance. The Roadway requirements of an agreement for Credits shall not be less than what is required by the Denton Development Code.

- C. The City's current policies and regulations shall apply to determine a New Development's obligations to construct adjacent System Facilities. The obligation to construct, however, shall not exceed the Maximum Assessable Roadway Impact Fee assessed against the New Development under Exhibit B, Schedule 1. Construction required under such policies and regulations shall be a Credit against the amount of Impact Fees otherwise due. If the costs of constructing a System Facility in accordance with the current City policies and regulations are greater than the amount of the Roadway Impact Fee Collection Rate due, the amount of the Credit due shall be deemed to be 100% of the assessed Impact Fees and no Impact Fee shall be collected thereafter for the development, unless the number of Service Units is subsequently increased.
- D. All Credits against Roadway Impact Fees shall be based upon standards promulgated by the City, which may be adopted as administrative guidelines, including the following standards:
- (1) No Credit shall be given for the dedication or construction of Site-related Facilities.
 - (2) No Credit shall be given for a Roadway Facility which is not identified within the Roadway Impact Fee Capital Improvements Plan, unless the facility is on or qualifies for inclusion on the Mobility Plan and the City agrees that such improvement supplies capacity to New Developments other than the development paying the Roadway Impact Fee and provisions for Credits are incorporated in an agreement for Credits pursuant to this Ordinance.
 - (3) In no event will the City grant a Credit when no Roadway Impact Fees can be collected pursuant to this Ordinance or for any amount exceeding the Roadway Impact Fee Collection Rate due for the development, unless expressly agreed to by the City in writing.
 - (4) The City may participate in the costs of a System Facility to be dedicated to the City, including costs that exceed the amount of the Impact Fees due for the development, in accordance with policies and rules established by the City. The amount of any Credit for construction of a System Facility shall be reduced by the amount of any participation funds received from the City.

- (5) Where funds for Roadway Facilities have been escrowed under an agreement that was executed with the City prior to the effective date of this Ordinance, the following rules apply:
- (a) Funds expended under the agreement for Roadway Facilities shall first be credited against the amount of Roadway Impact Fees that would have been due under Exhibit B, Schedule 2 for those units of development for which building permits already have been issued;
 - (b) Any remaining funds shall be credited against Impact Fees due for the development under Exhibit B, Schedule 2 at the time building permits are issued.
- E. Credits for construction of Capital Improvements shall be deemed created when the Capital Improvements are completed and the City has accepted the facility, or in the case of Capital Improvements constructed and accepted prior to the Effective Date of this Ordinance, on such effective date. Credits created after the Effective Date of this Ordinance shall expire ten (10) years from the date the Credit was created. Credits arising prior to such Effective Date shall expire ten (10) years from such effective date. Upon application by the property owner, the City may agree to extend the expiration date for the Credit on mutually agreeable terms.
- F. Unless an agreement for Credits, as described herein, is executed providing for a different manner of applying Credits against Roadway Impact Fees due, a Credit associated with a plat shall be applied at the time of application for the first building permit and, at each building permit application thereafter, to reduce Impact Fees due until the Credit is exhausted.
- G. An owner of a New Development who has constructed or financed a Roadway Capital Improvement or Roadway Facility expansion designated in the Roadway Impact Fee Capital Improvements Plans, or other Roadway Capital Improvement that supplies excess capacity, as required or authorized by the City, shall enter into an agreement with the City to provide for Credits against Roadway Impact Fees due for the development in accordance with this paragraph. The agreement shall identify the basis for and the method for computing and the amount of the Credit due and any reduction in Credits attributable to consumption of road capacity by developed lots or tracts served by the Roadway Capital Improvements. For multi-phased projects, the City may require that total Credits be proportionally allocated among the phases. If authorized by the City, the agreement also may provide for allocation of Credits among New Developments within the project, and provisions for the timing and collection of Impact Fees.

SECTION 15. Use of Proceeds of Impact Fee Accounts. The Roadway Impact Fees collected for each Service Area pursuant to these regulations may be used to finance or to recoup the costs of any roadway improvements or facility expansions identified in the Roadway Impact Fee Capital

Improvements Plan for the Service Area, including but not limited to the construction contract price, surveying and engineering fees, and land acquisition costs (including land purchases, court awards and costs, attorney's fees, and expert witness fees). Roadway Impact Fees may also be used to pay the principal sum and interest and other finance costs on bonds, notes or other obligations issued by or on behalf of the City to finance such roadway improvements or facility expansions. Roadway Impact Fees also may be used to pay fees actually contracted to be paid to an independent qualified engineer or financial consultant for preparation of or updating the Roadway Impact Fee Capital Improvements Plan. Impact Fees collected may not be used to pay for the expenses prohibited by Statute.

SECTION 16. Establishment of Accounts. The City's Finance Department shall establish an account to which interest is allocated for each Service Area for which a Roadway Impact Fee is imposed pursuant to this Ordinance. Each Impact Fee collected within the Service Area shall be deposited in such account with the following regulations:

- A. Interest earned on the account into which the Impact Fees are deposited shall be considered funds of the account and shall be used solely for the purposes authorized in this Ordinance and the Statute.
- B. The City's Finance Department shall establish adequate financial and accounting controls to ensure that Roadway Impact Fees disbursed from the account are utilized solely for the purposes authorized in this Ordinance and the Statute. Disbursement of funds shall be authorized by the City at such times as are reasonably necessary to carry out the purposes and intent of this Ordinance; provided, however, that any Roadway Impact Fee paid shall be expended within a reasonable period of time, but not to exceed ten (10) years from the date the fee is deposited into the account.
- C. The City's Finance Department shall maintain and keep financial records for Roadway Impact Fees, which shall show the source and disbursement of all fees collected in or expended from each Service Area. The records of the account into which Impact Fees are deposited shall be open for public inspection and copying during ordinary business hours. The City may establish a fee for copying services.

SECTION 17. Impact Fee as Additional and Supplemental Regulation. Roadway Impact Fees established by these regulations are additional and supplemental to, and not in substitution of, any other requirements imposed by the City on the development of land or the issuance of building permits or certificates of occupancy. Such Impact Fees are intended to be consistent with and to further the policies of the Denton Plan, the Capital Improvements Plan, the zoning ordinances, subdivision regulations and other City policies, ordinances and resolutions by which the City seeks to ensure the provision of adequate public facilities in conjunction with the development of land. This Ordinance shall not affect, in any manner, the permissible use of property, density of development, design, and improvement standards and requirements, or any other aspect of the development of land or provision of public improvements subject to the zoning and subdivision regulations or other regulations and policies of the City, which shall be operative and remain in full force and effect without limitation with respect to all such development.

SECTION 18. Updates to Plans and Revision of Fees. The City shall update its Land Use Assumptions and Capital Improvements Plan and make any revision of fees as indicated below:

- A. The City shall update its Land Use Assumptions and Roadway Impact Fee Capital Improvements Plans and shall recalculate the Roadway Impact Fees based thereon in accordance with the procedures set forth in Texas Local Gov't Code, Ch. 395, or in any successor statute. However, this does not preclude the City from reviewing its Land Use Assumptions, Roadway Impact Fee Capital Improvements Plans, Roadway Impact Fees, and other factors such as market conditions more frequently than provided for herein to determine whether the Land Use Assumptions and Roadway Capital Improvements Plans should be updated and the Roadway Impact Fees recalculated accordingly, utilizing statutory update procedures.
- B. Exhibit B, Schedule 2 may be amended without revising the Land Use Assumptions and Roadway Capital Improvements Plans at any time prior to the update provided for in this Section, provided that the Roadway Impact Fee Collection Rate to be collected under **Exhibit B, Schedule 2** do not exceed the Maximum Assessable Roadway Impact Fees assessed under **Exhibit B, Schedule 1**.
- C. If, at the time an update is required as indicated herein and the City Council determines that no change to the Land Use Assumptions, Roadway Impact Fee Capital Improvements Plan or Roadway Impact Fees are needed, it may dispense with such update by following the procedures in Texas Local Gov't Code, Section 395.0575 or its successor statute.
- D. The City may amend any other provisions of this Ordinance in accordance with procedures for ordinance amendments contained in the City's Charter or State law.

SECTION 19. Refunds

- A. Upon application, any Roadway Impact Fee or portion thereof collected pursuant to this Ordinance, which has not been expended within the Service Area within ten (10) years from the date of payment, shall be refunded to the record owner of the property for which the Impact Fee was paid or, if the Impact Fee was paid by another governmental entity, to such governmental entity, together with interest calculated from the date of collection to the date of refund at the statutory rate as set forth in Sec. 302.002, Tex. Fin. Code, or its successor statute. The application for refund pursuant to this section shall be submitted within sixty (60) days after the expiration of the ten-year period for expenditure of the Impact Fee. An Impact Fee shall be considered expended on a first-in, first out basis.
- B. An Impact Fee collected pursuant to this Ordinance shall also be considered expended if the total expenditures for Capital Improvements or Roadway Facility expansions authorized within the Service Area within ten (10) years following the

date of payment exceeds the total fees collected within the Service Area for such improvements or expansions during such period.

- C. If a refund is due pursuant to Subsections A or B, the City shall divide the difference between the amount of expenditures and the amount of the Impact Fees collected by the total number of Service Units assumed within the Service Area for the period to determine the refund due per Service Unit. The refund to the record owner shall be calculated by multiplying the refund due per Service Unit by the number of Service Units for the development for which the fee was paid, and interest due shall be calculated upon that amount.

SECTION 20. Rebates. If the building permit for a New Development for which a Roadway Impact Fee has been paid has expired, and a modified or new application has not been filed within six (6) months of such expiration, the City shall, upon written application, rebate the amount of the Impact Fee to the record owner of the property for which the Impact Fee was paid. If no application for rebate pursuant to this subsection has been filed within this period, no rebate shall become due.

SECTION 21. Appeals. The property owner or applicant for New Development may appeal the applicability or amount of the Roadway Impact Fee or the availability or amount of Credits or Refunds to the City Council using the following procedure:

- A. The burden of proof shall be on the applicant to demonstrate that relief should be granted by the City.
- B. The applicant must file a written notice of appeal with the City Manager or his/her designee within thirty (30) days following the decision being appealed. Along with the notice of appeal, an applicant may request an alternative Service Unit computation for land uses not contained with the latest edition of the ITE Trip Generation Manual by submitting a trip generation study demonstrating the appropriateness of the trip generation rates for the proposed development. An applicant may also include an alternative Service Unit calculation.
- C. The City Manager or his/her designee (“Manager”) may (1) resolve the appeal, if the applicant agrees with the Manager’s decision, or (2) if the applicant does not agree, refer the matter to the City Council for decision, along with the Manager’s recommendation and any trip generation study provided, if any.
- D. If City Council review is requested by the applicant after receiving the Manager’s decision, the City Secretary shall schedule a public hearing at which the applicant may present testimony and evidence before the City Council. The City Council shall act on the appeal within 60 days of receipt of the notice of appeal by the City, unless otherwise agreed by the Applicant.
- E. If the notice of appeal is accompanied by a payment or other security satisfactory to the City Attorney in an amount equal to the original determination of the Roadway

Impact Fee due, the City shall process and may issue a building permit if other requirements are met while the appeal is pending.

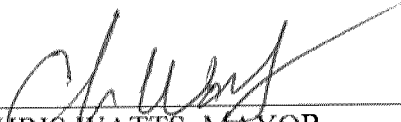
- F. If the City Council allows for a different amount of the Roadway Impact Fee due for a New Development under this section to be paid, it may cause to be appropriated from other City funds the amount of the reduction in the Impact Fee to the account for the Service Area in which the property is located.

SECTION 22. Severability. If any provision of this Ordinance or the application of any provision to any person or circumstance is held invalid, the invalidity shall not affect other provisions or applications of the Ordinance which can be given effect without the invalid provision or application, and to this end the provisions of this Ordinance are declared to be severable.

SECTION 23. Conflicts. This Ordinance shall be cumulative of all provisions of ordinances and of the Code of Ordinances for the City of Denton, Texas, as amended, except where provisions of this Ordinance are in direct conflict with the provisions of such ordinances or such Code, in which event the conflicting provisions of such ordinances and Code are hereby repealed.

SECTION 24. Effective Date. This Ordinance shall take effect on **July 5, 2016** or immediately from and after its passage and publication in accordance with the provisions of the Texas Local Government Code, whichever is later, and it is accordingly so ordained.

PASSED AND APPROVED this the 21st day of June, 2016.


CHRIS WATTS, MAYOR

ATTEST:
JENNIFER WALTERS, CITY SECRETARY

BY: 

APPROVED AS TO LEGAL FORM:
ANITA BURGESS, CITY ATTORNEY

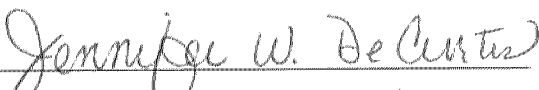
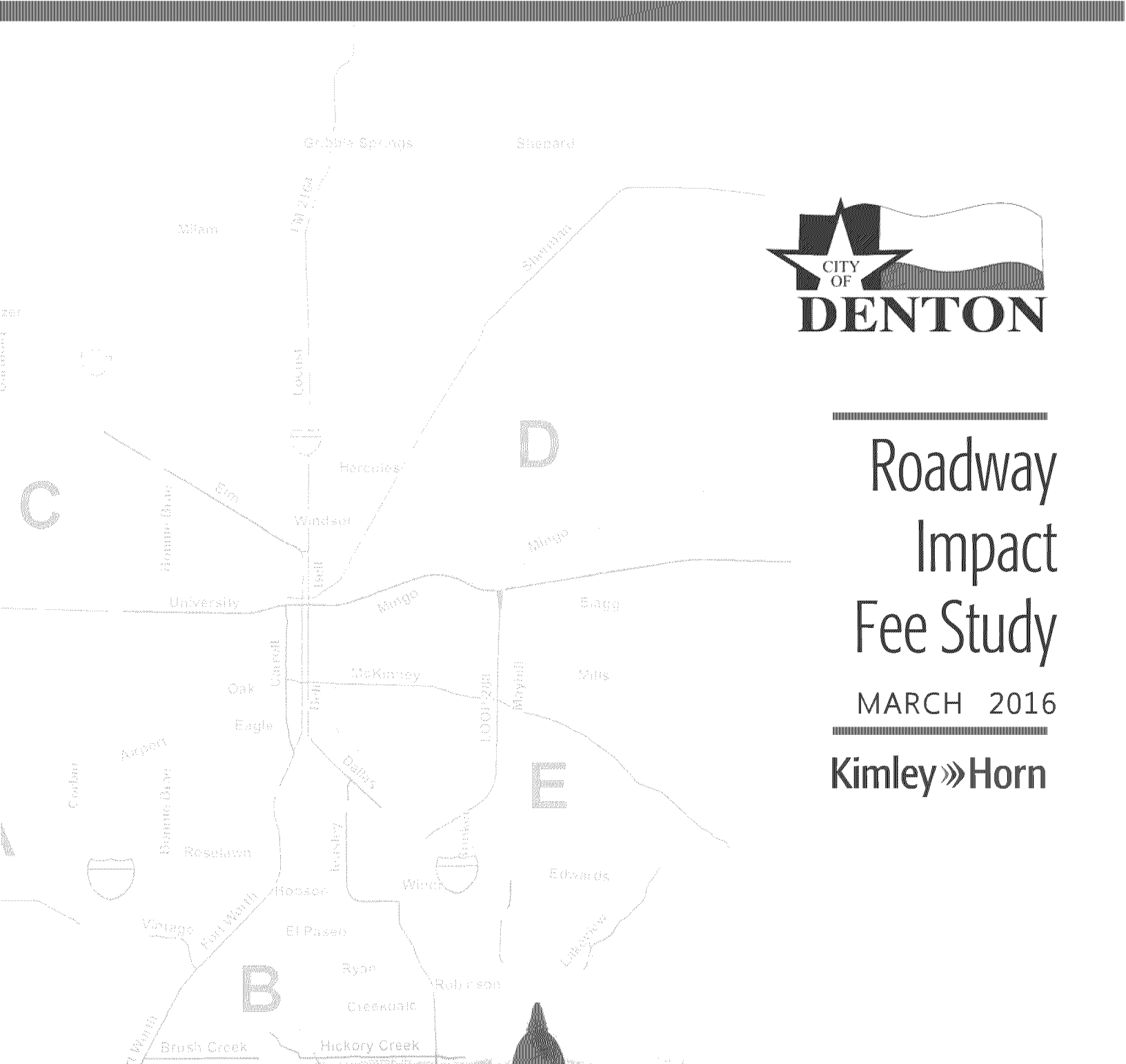
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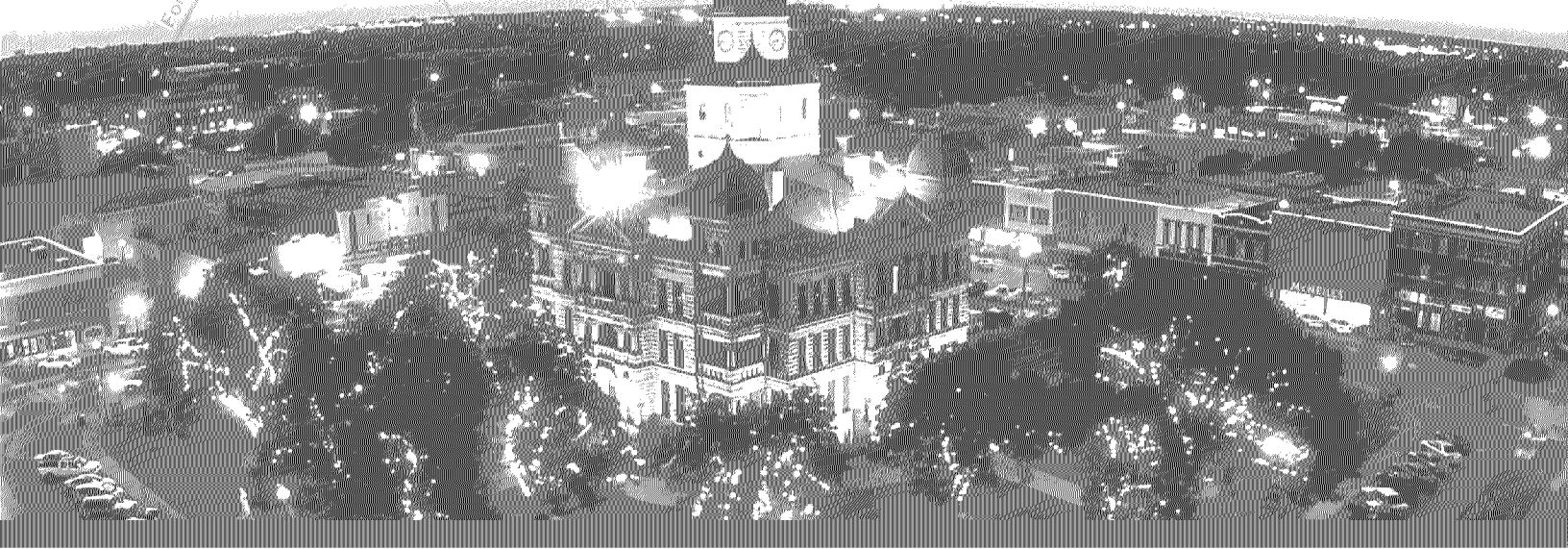
EXHIBIT A
(ROADWAY IMPACT FEE STUDY)



Roadway Impact Fee Study

MARCH 2016

Kimley»Horn



CITY OF DENTON, TEXAS ROADWAY IMPACT FEE STUDY



March
2016

Prepared for the City of Denton

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EXECUTIVE SUMMARY

Introduction

Impact Fees are a mechanism for funding the public infrastructure necessitated by new development. Across the country, they are used to fund police and fire facilities, parks, schools, roads and utilities. In Texas, the legislature has allowed their use for water, wastewater, roadway and drainage facilities. Since 1998, they have been used to fund public water and wastewater improvements in the City of Denton.

In the most basic terms, impact fees are meant to recover the incremental cost of the impact of each new unit of development creating new infrastructure needs. In the case of roadway impact fees, the infrastructure need is the increased capacity on arterial and collector roadways that serve the overall transportation system. The purpose of the 2015 Roadway Impact Fee Study is to identify the fee per unit of new development necessary to fund these improvements in accordance with the enabling legislation, Chapter 395 of the Texas Local Government Code.

Impact Fee Basics

Transportation Impact Fees are determined by several key variables, each described below in greater detail.

Impact Fee Study

The primary purpose of the 2015 Roadway Impact Fee Study is to determine the maximum impact fee per unit of new development chargeable as allowed by the state law. This determination is not a recommendation; the actual fee amount ultimately assessed is at the discretion of the Denton City Council, so long as it does not exceed the maximum assessable allowed by law. The study looks at a period of 10 years to project new growth and corresponding capacity needs, as required by state law. The study (and corresponding maximum fees) must be restudied at least every five years. However, the study can be updated at any time to accommodate significant changes in any of the key variables of the impact fee equation.

Service Areas

A Service Area is a geographic area within which a unique maximum impact fee is determined. All fees collected within the Service Area must be spent on eligible improvements within the same Service Area. For Roadway Impact Fees, the Service Area may not exceed 6 miles. In Denton, this restriction necessitated the creation of 5 separate Service Areas. A map of the Service Areas can be found on Page 6.

In defining the Service Area boundaries, the project team considered the corporate boundary, required size limit, adjacent land uses, and topography. Since each Service Area has a unique maximum impact fee, the per-unit maximum fee for an identical land use will vary from one Service Area to the next. For this reason, the team contained areas of uniform land use within the same Service Area boundary where possible.

Land Use Assumptions

The maximum Roadway Impact Fee determination is required to be based on the projected growth and corresponding capacity needs in a 10-year window. This study considers the years 2015-2025.

In order to arrive at a reasonable projection of growth, all vacant parcels were inventoried. It was assumed that vacant parcels would develop according to the Future Land Use Plan specified in the Comprehensive Plan (Pg. 8). To project future development in the ten year window, the known developing areas within the city were assumed to be fully developed by the year 2025. Research of historical building permits was performed to compare the projected growth of these known development areas against historical data.

Roadway Impact Fee Capital Improvement Plan (CIP)

The Roadway Impact Fee CIP is distinct and separate from the City's traditional Capital Improvements Plan. The Roadway Impact Fee CIP is simply the list of projects eligible for funding through impact fees. Only those capacity improvements included in the City's adopted Mobility Plan are included in the Roadway Impact Fee CIP. Capacity improvements may include the addition of lanes, intersection improvements, or the extension of a new road. Resurfacing or other maintenance activities do not qualify as capacity improvements under impact fee law in Texas.

Only the projects listed in the Roadway Impact Fee CIP are eligible to utilize impact fee funds. In order to optimize future flexibility, all capacity improvement projects included in the Mobility Plan are included in the Roadway Impact Fee CIP and will be eligible to utilize impact fee funds. Only the costs associated with providing the additional capacity necessitated by 10-years of growth can be used to calculate the maximum impact fee.

In order to calculate the maximum impact fee, the total cost of the Roadway Impact Fee CIP at build-out was reduced to account for:

- The portion of new capacity that will address existing needs, and
- The portion of new capacity that will not be necessitated until beyond the 10-year growth window.

A ratio that compares 10 years’ demand for capacity to the net supply of capacity (total new capacity in the Roadway Impact Fee CIP minus existing needs) can be calculated. This ratio, which may not exceed 100%, is then applied to the cost of the net capacity supplied. The result is a determination of the costs attributable to the next 10 years’ growth, which is then used to calculate the maximum impact fee in accordance with state law. The result is known as the cost of the Roadway Impact Fee CIP Attributable to Growth (i.e. recoverable portion of the Roadway Impact Fee CIP):

Service Areas	A	B	C	D	E
Cost of Roadway Impact Fee CIP Attributable to Growth and Financing	\$ 138,551,183	\$ 15,480,446	\$ 91,188,335	\$ 27,780,229	\$ 60,424,470

Service Units

The impact fee law defines a service unit as follows: “Service Unit means a standardized measure of consumption attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards and based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous 10 years.”

The 2015 Roadway Impact Fee Study defines a *service unit* as the number of vehicle-miles. Based on the City’s 10-year growth projections the associated demand (consumption) values for each service area are as follows in terms of vehicle-miles:

Impact Fee Calculation

The maximum impact fee allowable in each of the five service areas is then calculated by dividing the Roadway Impact Fee CIP Attributable to Growth by the number of vehicle-miles in the corresponding Service Area in the above table. This calculation is performed for each service area individually; each service area has a stand-alone Roadway Impact Fee CIP and 10-year growth projection.

Below is the listing of the 2015 Roadway Impact Fee Study’s Maximum Assessable Impact Fee Per Service Unit (Vehicle-Mile):

Service Areas	A	B	C	D	E
2015 Roadway Impact Fee Study Maximum Assessable Fee Per Vehilce-Mile	\$ 2,200	\$ 1,260	\$ 2,184	\$ 1,945	\$ 2,241

Chapter 395 Required Adoption Process

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

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

Collection and Use of Transportation Impact Fees

Roadway Impact fees are assessed when a final plat is recorded. The assessment defines the impact of each unit at the time of platting, according to land use, and may not exceed the maximum impact fee allowed by law. Roadway Impact Fees are collected when a building permit is issued.

Therefore, funds are not collected until development-impacts are introduced to the transportation system. Funds collected within a service area can be used only within the same service area. Finally, fees must be utilized within 10 years of collection, or must be refunded with interest.

I. INTRODUCTION

Chapter 395 of the Texas Local Government Code describes the procedure political subdivisions must follow in order to create and implement impact fees. Senate Bill 243 (SB 243) amended Chapter 395 in 2001 to define an Impact Fee as “a charge or assessment imposed by a political subdivision against new development in order to generate revenue for funding or recouping the costs of capital improvements or facility expansions necessitated by and attributable to the new development.”

The City retained Kimley-Horn and Associates, Inc. to provide professional transportation engineering services for the 2015 Roadway Impact Fee Study. This report includes details of the Roadway Impact Fee calculation methodology in accordance with Chapter 395, the applicable Land Use Assumptions, development of the Roadway Impact Fee Capital Improvements Plan, and the Land Use Equivalency Table.

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

- 1) **Land Use Assumptions** (Pg. 3)
- 2) **Roadway Impact Fee Capital Improvements Plan (CIP)** (Pg. 9)

Information from these Land Use Assumptions and Roadway Impact Fee CIP is used extensively throughout the remainder of the report.

There is a detailed discussion of the methodology for the computation of impact fees. This discussion is broken into three components:

- 1) **Methodology for Roadway Impact Fees** (Pg. 20)
- 2) **Roadway Impact Fee Calculation** (Pg. 37)
- 3) **Plan for Financing and the Ad Valorem Tax Credit** (Pg. 39)

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

- Service Areas (Pg. 20)
- Service Units (Pg. 20)
- Cost Per Service Unit (Pg. 22)
- Roadway Impact Fee CIP Costing Methodology (Pg. 22)
- Summary of Roadway Impact Fee CIP Costs (Pg. 26)
- Service Unit Calculation (Pg. 32)

The Roadway Impact Fee is then calculated as:

- Maximum Assessable Impact Fee Per Service Unit (Pg. 37)
- Service Unit Demand Per Unit of Development (Pg. 44)

The report also includes a section concerning the **Plan for Financing and the Ad Valorem Tax Credit**. This involves the calculation of the applicable credit required by law to offset the City's use of ad valorem taxes to help fund the Roadway Impact Fee CIP. This plan, prepared by NewGen Strategies, and upon which we relied, details the maximum assessable impact fee per service unit the City of Fort Worth may apply under Chapter 395 of the Texas Local Government Code.

II. LAND USE ASSUMPTIONS

A. Purpose and Overview

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

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

- Denton Plan 2030 (City of Denton Comprehensive Plan)
- Denton County Appraisal District (DCAD)
- North Central Texas Council of Governments (NCTCOG)
- City of Denton staff

The Land Use Assumptions include the following components:

- **Land Use Assumptions Methodology** – An overview of the general methodology used to generate the land use assumptions.
- **Roadway Impact Fee Service Areas** – Explanation of the division of Denton into service areas for transportation facilities.
- **Residential and Employment**– Data on residential and employment growth within the service area over the next ten years (2015 – 2025).
- **Land Use Assumptions Summary** – A synopsis of the land use assumptions.

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

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

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

Retail: Land use activities which provide for the retail sale of goods which primarily serve households and whose location choice is oriented toward the household sector, such as grocery stores and restaurants.

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

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

The above categories in the Land Use Assumptions match those used to develop the travel demand model for the City of Denton. These broader categories are used in the development of the assumptions for impact fees; however, expanded classifications used in the assessment of impact fees are found in the Land Use / Vehicle-Mile Equivalency Table (Pg. 46).

B. Land Use Assumptions Methodology

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

- Character, type, density, and quantity of existing development;
- Current zoning plans;
- Future Land Use Plan (based on Denton Plan 2030);
- Growth trends;
- Location of vacant land;

- Physical restrictions (i.e. flood plains, railroads); and
- Physical development capacity of Denton.

Existing residential and employment estimates were obtained using Denton Central Appraisal District (DCAD) parcel data and an aerial survey of existing development. Building data from the Texas Higher Education Coordination Board were also obtained to accurately reflect existing development within The University of North Texas and Texas Women's University campuses, as these are tax-exempt institutions for which no information was available in the DCAD parcel data.

For the remaining undeveloped areas, assumptions based upon the City's Future Land Use Plan were used to estimate the ultimate buildout of residential and employment development. To project future development in the ten year window, the known developing areas within the city were assumed to be fully developed by the year 2025.

Research of historical building permits was performed to compare the projected growth of these known developments with previous growth trends in the City of Denton over the last ten years. During the last ten years, approximately 9,516 residential units and 12 million square feet of employment were developed. It is projected that the next ten years of development would be reasonably close to these estimates.

C. Roadway Impact Fee Service Areas

The geographic boundary of the proposed impact fee service areas for transportation facilities is shown in **Exhibit 1**. The City of Denton is currently divided into five (5) service areas, each based upon the six (6) mile limit, as required in Chapter 395 (explained on Pg. 20). For roadway facilities, the service areas as required by state law are limited to areas within the current corporate limits. Therefore, areas within the extraterritorial jurisdiction (ETJ) and non-annexation areas (NAAs) are excluded from this study.

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

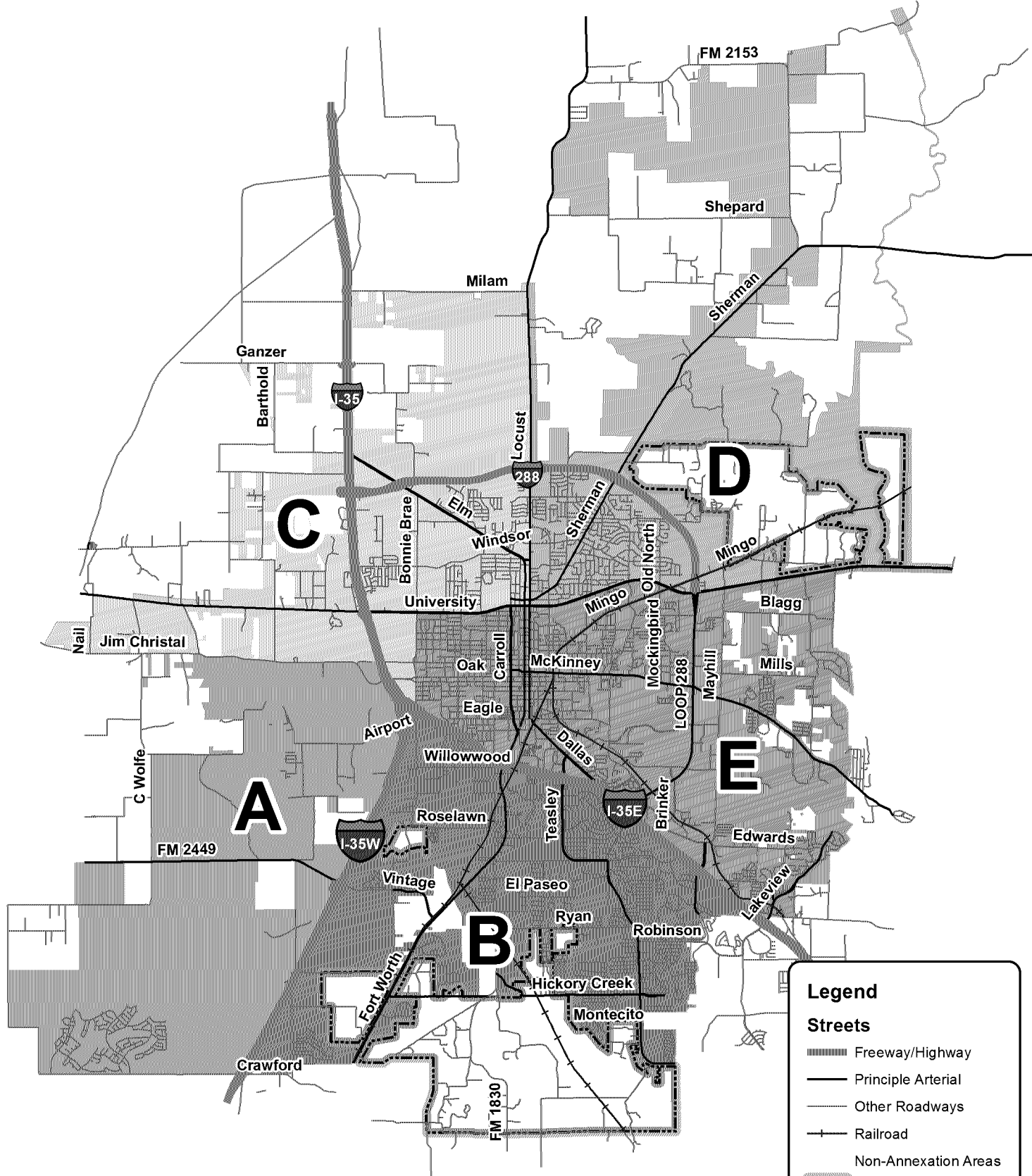
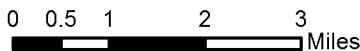


Exhibit 1. Proposed Service Areas
2015 Roadway Impact Fee Study



Kimley»Horn
 March 2016



Legend

Streets

- Freeway/Highway
- Principle Arterial
- Other Roadways
- Railroad
- Non-Annexation Areas
- ETJ

Service Areas

- A
- B
- C
- D
- E

D. Residential and Employment

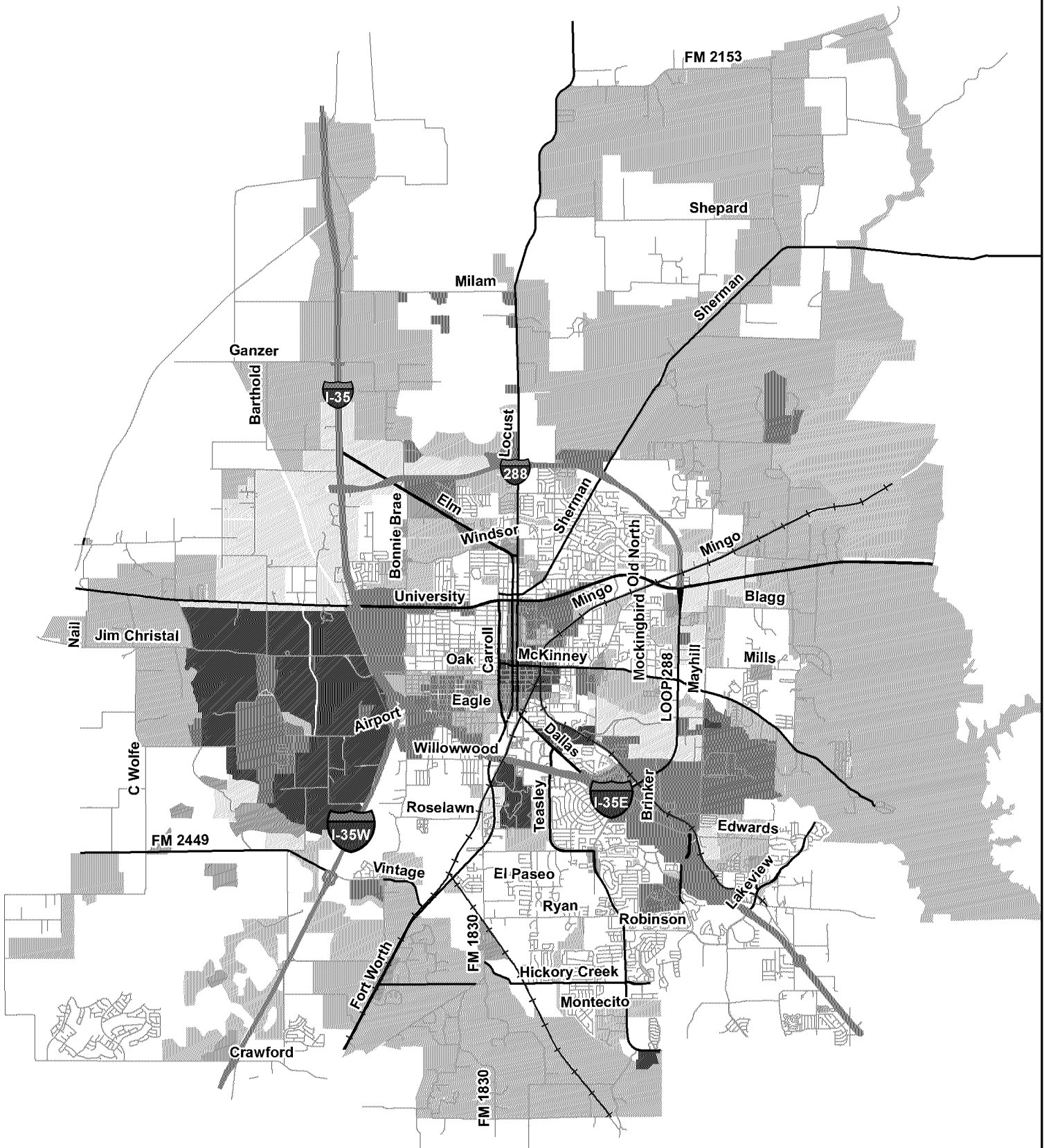
Residential and Employment estimates for the base year (2015) were performed based upon a survey of the existing land uses on DCAD parcel data, aerial verification, and college campus building data. Build-out projections were prepared by combining the existing land uses within the service area with reasonable density assumptions for undeveloped land based upon the Denton Plan 2030 - Future Land Use Plan. Ten year growth projections were prepared based upon historic growth trends, location of recent and known development within the City, and consultation with City staff. **Exhibit 2** presents the existing City limits and the proposed service areas, combined with the Future Land Use Plan.

E. Land Use Assumptions Summary

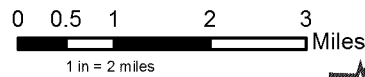
Table 1 summarizes the residential and employment 10-year growth projections. The projected growth over the next ten years is reasonable compared to the historical growth over the previous ten years, as described in the Land Use Assumptions Methodology (page 4).

Table 1. Residential and Employment 10-Year Projections

Service Area	Residential		Employment		
	Single Family	Multi-Family	Basic	Service	Retail
	Dwelling Units		Sq. Ft.	Sq. Ft.	Sq. Ft.
A	3,713	1,890	3,685,975	960,894	681,432
B	909	211	618,915	32,021	419,263
C	1,033	832	680,537	1,222,722	2,530,669
D	702	187	850,814	193,124	466,617
E	390	1,099	732,932	1,014,708	897,984
Sub-Total	6,747	4,219	6,569,173	3,423,469	4,995,965
Total	10,966		14,988,607		



**Exhibit 2. Future Land Use Plan
2015 Roadway Impact Fee Study**



Kimley»Horn
March 2016



Legend

Denton Future Land Use Plan

- | | | | |
|--|-----------------------------|--|--|
| | Business Innovation | | Residential - Low Density |
| | Commercial | | Residential - Moderate Density |
| | Community Mixed Use | | Neighborhood Mixed Use |
| | Downtown Denton | | Parks / Open Space |
| | Downtown Compatibility Area | | Regional Mixed Use |
| | Government/Institutional | | Rural Areas |
| | Industrial Commerce | | Neighborhood/University Compatibility Area |

Streets

- Freeway/Highway
- Principle Arterial
- Other Roadways
- Railroad

III. ROADWAY IMPACT FEE CAPITAL IMPROVEMENTS PLAN

Development of a 10-year Roadway Impact Fee Capital Improvement Plan is required per Chapter 395 of the Texas local Government Code. To accomplish this, the current Denton Mobility Plan has been updated using a Denton-specific Travel Demand Model. The Travel Demand Model was developed using the existing roadway network and residential and employment data to develop a baseline scenario. This scenario was calibrated using existing vehicle counts. Several build-out scenarios were run using the build-out residential and employment data to assist in completing the updated mobility plan map. This updated mobility plan map serves as the basis for this Roadway Impact Fee CIP. The Roadway Impact Fee CIP includes arterial and collector class roadway facilities that serve the overall transportation system, as well as major intersection improvements. All of the facilities identified are included in the proposed mobility plan map.

The proposed Roadway Impact Fee CIP is listed in **Tables 2.A – 2.E** and mapped in **Exhibits 3.A – 3.E**. The tables show the length of each project as well as the facility's Mobility Plan classification. The Roadway Impact Fee CIP was developed in conjunction with input from City of Denton staff and represents those projects that will be needed to accommodate the growth projected in the Land Use Assumptions section of this report.

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

Proj. #	IF Class	Roadway	Limits	Length (mi)	% In Service Area
A-1	SA	Jim Christal (1)	490' E of C. Wolfe to Thomas J. Egan	0.28	50%
A-2, C-21	SA	Jim Christal (2)	225' E of Future Loop to Masch Branch	0.75	50%
A-3, C-22	PA	Jim Christal (3)	Masch Branch to Scripture	1.23	50%
A-4	PA	Jim Christal (4)	Scripture to I-35 SBFR	0.60	100%
A-5	PA	Airport	Masch Branch to I-35W SBFR	1.75	100%
A-6	SA	Amyx	C. Wolfe to FM 2499	2.60	100%
A-7	SA	Shelby	Westcourt/Underwood to Corbin	0.61	100%
A-8	SA	Cole Ranch E-W SA #1	Cole Ranch N-S SA to Future Loop	0.87	100%
A-9	SA	FM 2499 (1)	C. Wolfe to 345' E of Cole Ranch-Hunter Ranch Arterial	1.07	100%
A-10	SA	FM 2499 (2)	345' E of Cole Ranch-Hunter Ranch Arterial to Underwood	1.27	100%
A-11	SA	Cole Ranch E-W SA #2	Cole Ranch N-S SA to Cole Ranch-Hunter Ranch Arterial	1.06	100%
A-12	SA	H. Lively (1)	725' E of Seabron to 1,975' W of C. Wolfe	0.74	100%
A-13	SA	H. Lively (2)	1,975' W of C. Wolfe to C. Wolfe	0.37	50%
A-14	SA	H. Lively (3)	C. Wolfe to John Paine/Underwood (2)	2.40	100%
A-15	SA	Hunter Ranch Arterial	Hunter Ranch N-S Col #1 to Brush Creek	2.22	100%
A-16	PA	Brush Creek (1)	Hunter Ranch N-S Col #2 to I-35W	2.71	100%
A-17	SA	Ed Robson	FM 2449 to H. Lively	0.62	100%
A-18	C	C. Wolfe	Tom Cole to FM 2449	1.58	50%
A-19	SA	H. Lively (4)	FM 2499 to H. Lively	0.63	50%
A-20	SA	Cole Ranch N-S SA	Tom Cole to H. Lively	2.39	100%
A-21	PA	Cole Ranch-Hunter Ranch Arterial	Amyx to Hunter Ranch Arterial	3.43	100%
A-22	PA	Future Loop (2)	Jim Christal to 4,965' S of Jim Christal	0.94	100%
A-23	PA	Future Loop (3)	260' N of Tom Cole to FM 2449	1.78	100%
A-24	PA	Future Loop (4)	1,040' W of Amyx to Underwood	0.57	50%
A-25	PA	Future Loop (5)	Underwood to I-35W SBFR	0.73	100%
A-26	C	Jim Christal-Tom Cole Collector	Jim Christal to Tom Cole	0.76	100%
A-27	SA (1/2)	Westcourt	Airport to Springside	0.79	100%
A-28	SA	Westcourt/Underwood	Springside to 1,700' S of Springside	0.32	100%
A-29	SA	Underwood (1)	1,700' S of Springside to 2,655' N of FM 2449	0.29	50%
A-30	SA	Underwood (2)	2,655' N of FM 2449 to FM 2449	0.50	100%
A-31	SA	John Paine/Underwood (1)	FM 2449 to 1,265' N of H. Lively	0.72	50%
A-32	SA	John Paine/Underwood (2)	1,265' N of H. Lively to 970' N of Brush Creek	0.62	100%
A-33	SA	John Paine/Underwood (3)	970' N of Brush Creek to Brush Creek	0.18	100%
A-34	PA (2/3)	Western	Jim Christal to Airport	1.23	100%
A-35	C	Precision (1)	Jim Christal to 1,775' N of Airport	0.42	100%
A-36	C	Precision (2)	1,775' N of Airport to Airport	0.34	100%

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

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

Proj. #	IF Class	Roadway	Limits	Length (mi)	% In Service Area
B-1	C	Parvin	Highland Park to McCormick	0.51	100%
B-2	SA	Hobson	Country Club to Teasley	1.14	100%
B-3	PA	Vintage	490' W of Bonnie Brae to Fort Worth (US 377)	0.96	100%
B-4	C	El Paseo	Country Club to Belmont	0.36	100%
B-5	SA	Ryan	Country Club to Teasley	2.06	100%
B-6	SA (1/2)	Robinson (1)	Teasley to 220' E of Wheeler Ridge	0.52	100%
B-7	SA (1/2)	Robinson (2)	175' E of Berkley to 315' E of State School Rd	0.13	100%
B-8	C (1/3)	Creekdale (1)	Ryan to 660' S. of Ryan	0.13	100%
B-9	C	Creekdale (2)	660' S. of Ryan to Thistle Way	0.42	100%
B-10	C (1/3)	Creekdale (3)	Thistle Way to Riverpass	0.12	50%
B-11	C	Creekdale (4)	210' E of Riverchase Trail to 280' W of Pimlico	0.60	100%
B-12	PA	Brush Creek (2)	I-35W NBFR to John Paine (Future)	0.37	100%
B-13	PA	Brush Creek (3)	John Paine (Future) to 2,010' E of John Paine (Future)	0.38	100%
B-14	PA	Brush Creek (4)	225' W. of Fort Worth to 500' E. of Fort Worth	0.14	100%
B-15	PA	Brush Creek (5)	500' E. of Fort Worth to 2,180' East of Fort Worth	0.32	50%
B-16	PA	Hickory Creek (1)	Country Club to 1,955' E. of Country Club	0.37	100%
B-17	PA	Hickory Creek (2)	Riverpass to Montecito	0.43	50%
B-18	PA	Hickory Creek (3)	Montecito to Teasley	0.85	100%
B-19	PA (1/3)	Hickory Creek (4)	Teasley to Nautical	0.25	100%
B-20	PA (2/3)	Hickory Creek (5)	Nautical to Erin	0.13	100%
B-21	PA	Hickory Creek (6)	Erin to State School Road (Future)	0.09	100%
B-22	C	John Paine-Fort Worth Collector	John Paine to Fort Worth (US 377)	0.41	100%
B-23	C	John Paine (1)	Vintage to Brush Creek	1.41	100%
B-24	C	John Paine (2)	Brush Creek to Johnson	0.50	50%
B-25	C	John Paine (3)	Johnson to 135' N of Athens	0.39	100%
B-26	SA	Bonnie Brae (4)	I-35E SBFR to Vintage	2.45	100%
B-27	SA	Bonnie Brae (5)	Vintage to Fort Worth (US 377)	1.07	100%
B-28	C	Highland Park	130' S of Willowcrest to Roselawn	0.78	100%
B-29	PA	Fort Worth (US 377)	I-35E to S City Limits	5.13	100%
B-30	SA	FM 1830	Fort Worth (US 377) to Brush Creek	2.14	100%
B-31	C	Ryan-Creekdale Collector	Ryan to Creekdale	0.48	100%
B-32	PA	Teasley	Sundown to S City Limits	3.39	100%

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

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

Proj. #	IF Class	Roadway	Limits	Length (mi)	% In Service Area
C-1	SA	Milam (1)	I-35 SBFR to 175' E of I-35 NBFR	0.09	100%
C-2	SA	Milam (2)	175' E of I-35 NBFR to FM 2164 (Locust)	2.28	50%
C-3	C	Bobcat	1,105' W of Milam Ridge to HOD N-S Secondary Arterial	0.41	100%
C-4	PA	Ganzer	230' W. of Rector to Future Cindy	0.63	50%
C-5	PA	Ganzer/Long (1)	625' W of I-35 SBFR to 350' E of I-35 NBFR	0.22	100%
C-6	SA	Ganzer/Long (2)	Ganzer to FM 2164 (Locust)	2.15	100%
C-7	C	Barthold-Cindy Collector	Barthold to 1,135' W of Cindy (Future)	0.21	100%
C-8	C	Masch Branch-I-35 Collector	1,295' W of I-35 to I-35	0.25	100%
C-9	SA	HOD E-W Secondary Arterial (1)	HOD N-S Secondary Arterial to 840' E of HOD N-S	0.16	100%
C-10	SA	HOD E-W Secondary Arterial (2)	840' E of HOD N-S Secondary Arterial to 130' E of Bonnie	0.44	50%
C-11	SA	HOD E-W Secondary Arterial (3)	130' E of Bonnie Brae (Existing) to FM 2164 (Locust)	2.86	100%
C-12	PA	HWY 1173 (1)	460' E of Masch Branch (Existing) to 375' E of Barthold	0.52	50%
C-13	PA	HWY 1173 (2)	Cindy to I-35 SBFR	0.60	100%
C-14	PA (1/3)	Elm (US 377)	I-35 NBFR to Elm/Locust Couplet	3.01	100%
C-15	C	Hercules	115' E of Northpointe to Locust	0.41	100%
C-16	SA	Westgate (E-W)	Westgate (N-S) to Bonnie Brae	0.56	100%
C-17	C	Riney (1)	Bonnie Brae to 990' W of Elm	0.34	100%
C-18	C	Riney (2)	990' W of Elm to Elm	0.19	100%
C-19	SA	Masch Branch-I-35 Secondary Arterial	Masch Branch to I-35 SBFR	1.34	100%
C-20	SA	Jim Christal (1)	490' E of C. Wolfe to Thomas J. Egan	0.79	50%
A-2, C-21	SA	Jim Christal (2)	225' E of Future Loop to Masch Branch	0.75	50%
A-3, C-22	PA	Jim Christal (3)	Masch Branch to Scripture	1.23	50%
C-23	SA	Nail (1)	University to 2,240' S of University	0.42	50%
C-24	SA	Nail (2)	2,240 S of University to Jim Christal	0.47	100%
C-25	C	Thomas J Egan (1)	555' N. of University to 550' S of University	0.21	100%
C-26	C	Thomas J Egan (2)	550' S of University to Jim Christal	0.66	50%
C-27	PA	Future Loop (1)	University to 745' N of Jim Christal	0.56	100%
C-28	PA	Masch Branch (1)	1,290' S of HWY 1173 to Miller	0.79	50%
C-29	PA	Masch Branch (2)	895' W of Future Loop to 1,255' N of University	0.59	100%
C-30	PA	Masch Branch (3)	1,255' N of University to Jim Christal	1.02	100%
C-31	SA	Lover's Lane (1)	HWY 1173 to 325' N of Fruth	0.27	50%
C-32	SA	Lover's Lane (2)	325' N of Fruth to 340' N of Littlebrook	0.17	100%
C-33	SA	Lover's Lane (3)	340' N of Littlebrook to Hook	0.10	50%
C-34	SA	Lover's Lane (4)	Hook to Masch Branch-I-35 SA	0.71	100%
C-35	SA	Barthold	Ganzer to City Limits	0.58	50%
C-36	SA	Cindy (1)	Ganzer to 1,280' S of Ganzer	0.24	50%
C-37	SA	Cindy (2)	1,280' S of Ganzer to Masch Branch-I-35 Collector	0.41	100%
C-38	SA	Cindy (3)	FM 1173 (Future) to 150' S of Future Loop	0.42	100%
C-39	SA	Cindy (4)	1,050' N of Masch Branch-I-35 PA to Tieszen	0.82	100%
C-40	SA	Cindy (5)	Tieszen to University	0.36	100%
C-41	PA (2/3)	Western (1)	University to Jim Christal	0.80	100%
C-42	C	Milam-Bobcat Col	Milam to Bobcat (Future)	0.57	100%
C-43	SA	HOD N-S Secondary Arterial (1)	Milam to 220' S of Bobcat	0.58	100%
C-44	SA	HOD N-S Secondary Arterial (2)	2830' N of Elm to Elm	0.54	100%
C-45	SA	Heritage Trail	University to Scripture	0.77	100%
C-46	PA	Bonnie Brae (1)	Milam to Loop 288 EBFR	3.17	100%
C-47	SA	Bonnie Brae (2)	Loop 288 EBFR to 860' N of Riney	0.43	100%
C-48,E-14	SA	Bonnie Brae (3)	University to I-35	1.41	50%
C-49	C	Fallmeadow	140' S of Meadow Edge to Gardenview	0.19	100%
C-50,D-45	PA	FM 2164 (Locust) (1)	City Limits to Loop 288 WBFR	2.70	50%
C-51,D-46	PA	FM 2164 (Locust) (2)	Loop 288 WBFR to Elm	1.41	50%

Notes: The 10-Year Roadway Impact Fee CIP is not in a prioritized order; HOD: Hills of Denton.

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

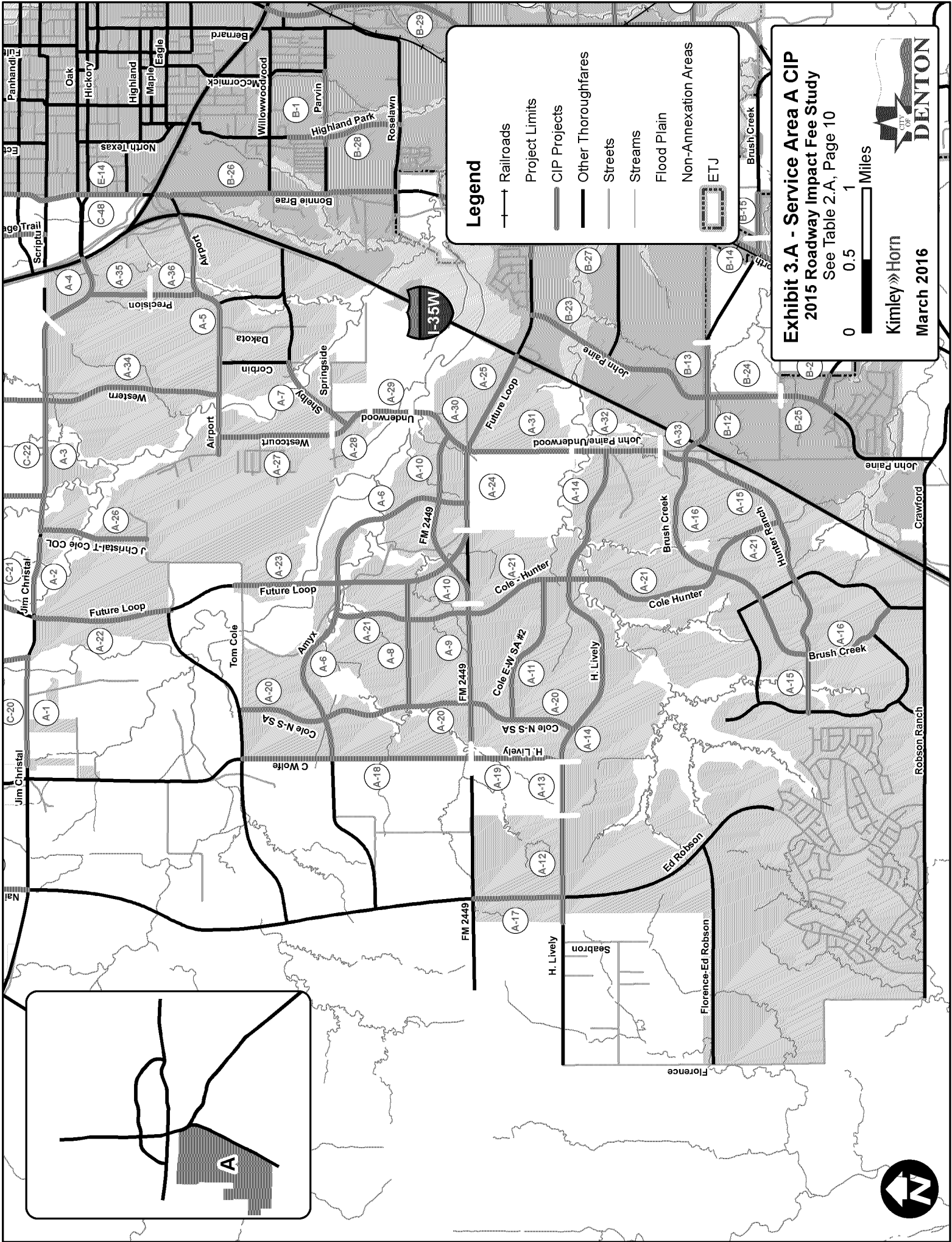
Proj. #	IF Class	Roadway	Limits	Length (mi)	% In Service Area
D-1	C	FM 2164-Brittany Hill Collector (1)	1,605' E of FM 2164 to 745' W of Mesquite Ridge	0.57	100%
D-2	C	FM 2164-Brittany Hill Collector (2)	745' W of Mesquite Ridge to Mesquite Ridge	0.14	50%
D-3	C	FM 2164-Brittany Hill Collector (3)	Mesquite Ridge to Brittany Hill	0.49	100%
D-4	SA	FM 2153 (Realigned)	City Limits to 620' S of Somerset	2.03	100%
D-5	PA	FM 2164-FM 2153 (Realigned) PA	FM 2164 (Locust) to Indian Wells (Future)	0.73	100%
D-6	PA	FM 2164-FM 2153 (Realigned) PA	Mesquite Ridge (Future) to FM 2153 (Realigned)	1.79	100%
D-7	SA	FM 2164-FM 2153 SA (1)	FM 2164 (Locust) to Indian Wells (Future)	0.93	100%
D-8	SA	FM 2164-FM 2153 SA (2)	540' E of Green Valley (Future) to FM 2153	0.90	100%
D-9	SA	Shepard	1,490' W of FM 2153 to FM 2153	0.28	100%
D-10	C	Gribble Springs-Chapman Collector	630' N of FM 2164-Brittany Hill Collector to Gribble Springs	1.69	100%
D-11	C	Mesquite Ridge (1)	FM 2164-Brittany Hill Collector to 400' N of FM 2164-FM 2153 (Realigned) PA	0.52	100%
D-12	C	Mesquite Ridge (2)	400' N of FM 2164-FM 2153 (Realigned) PA to 470' S of FM 2164-FM 2153 (Realigned) PA	0.16	50%
D-13	C	Mesquite Ridge (3)	470' S of FM 2164-FM 2153 (Realigned) PA to 1,005' S of FM 2164-FM 2153 (Realigned) PA	0.10	100%
D-14	SA	Brittany Hill (1)	355' S of Covey to 795' S of FM 2164-FM 2153 (Realigned) PA	0.78	100%
D-15	SA	Brittany Hill (2)	795' S of FM 2164-FM 2153 (Realigned) PA to 770' N of FM 2164-FM 2153 SA	0.20	50%
D-16	C	FM 2153 (1)	City Limits to Burger (S)	1.44	100%
D-17	C	FM 2153 (2)	Burger to FM 2153 (Realigned)	0.27	100%
D-18	C	FM 2153 (Realigned)-FM 2153 Collector	FM 2153 (Realigned) to FM 2153	0.79	100%
D-19	SA	FM 2153 (3)	620' S of Somerset to Sherman	1.14	50%
D-20	SA	Green Valley (1)	Warschun to 860' S of Warschun	0.16	100%
D-21	SA	Green Valley (2)	860' S of Warschun to Sherman	0.23	100%
D-22	SA	Milam (3)	FM 2164 (Locust) to 605' E of FM 2164 (Locust)	0.11	100%
D-23	SA	Bobcat (3)	FM 2164 (Locust) to 515' E of FM 2164 (Locust)	0.09	100%
D-24	SA	Cooper Creek (1)	860' W of Hartlee-Cooper Collector #1 to Hartlee Field	2.13	100%
D-25	SA	Cooper Creek (2)	Silver Dome to Fishtrap	0.66	50%
D-26	SA	Cooper Creek (3)	Fishtrap to University	0.50	100%
D-27	C	Golden Circle	Hartlee Field (Future) to Hartlee Field (Existing)	1.78	100%
D-28	SA	Hartlee Field (1)	FM 2164 (Locust) to 500' E of FM 2164 (Locust)	0.09	100%
D-29	SA	Hartlee Field (2)	West City Limits to Woodland Hill	1.10	100%
D-30	C	Long (1)	FM 2164 (Locust) to 525' E of FM 2164	0.10	100%
D-31	C	Long (2)	City Limits to Stuart	0.34	100%
D-32	C	Hartlee Field (3)	Sherman to 515' E. of Sherman	0.43	100%
D-33	C	Kings-Windsor Collector	Kings Row to Windsor	0.09	100%
D-34	C	Windsor	410' E of Saints to Cooper Creek	1.02	100%
D-35	SA	Mingo (2)	University to 455' E. of Cooper Creek	0.95	100%
D-36	PA	Post Oak (1)	N. City Limits to Cooper Creek (Future)	0.86	100%
D-37	PA	Post Oak/Cooper Creek	Cooper Creek (Future) to Hartlee Field	0.40	100%
D-38	PA	Post Oak (2)	Railroad to Fishtrap	0.33	100%
D-39	PA	Post Oak (3)	Fishtrap to 940' S of Fishtrap	0.18	50%
D-40	PA	Post Oak (4)	940' S of Fishtrap to University	0.07	100%
D-41	C	Deerwood	2,855' N of Kings Row to 680' N of Kings Row	0.41	100%
D-42	C	Hartlee-Cooper Col	Hartlee Field to Cooper Creek	0.82	100%
D-43	PA	Sherman (1)	Locust to Loop 288 WBFR	2.30	100%
D-44	PA	Sherman (2)	Loop 288 WBFR to City Limits	4.65	100%
C-50,D-45	PA	FM 2164 (Locust) (1)	City Limits to Loop 288 WBFR	2.70	50%
C-51,D-46	PA	FM 2164 (Locust) (2)	Loop 288 WBFR to Elm	1.41	50%

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

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

Proj. #	IF Class	Roadway	Limits	Length (mi)	% In Service Area
E-1	SA	Mingo (1)	435' NE of Bell to University	2.06	100%
E-2	C	Lattimore	Ruddell to 475' E of Ruddell	0.09	100%
E-3	C	Audra	Bayfield to Loop 288	0.27	100%
E-4	C	Blagg	Mayhill to Lakeview	1.28	100%
E-5	SA	McKinney (FM 426)	Woodrow to East City Limits	3.95	100%
E-6	C	Duchess (1)	Woodrow to 115' W of Trailhead	0.75	100%
E-7	C (1/2)	Duchess (2)	115' W of Trailhead to 1,000' W of Loop 288	0.38	100%
E-8	C	Morse (1)	Woodrow to Shady Oaks	0.25	100%
E-9	SA (1/2)	Morse (2)	Kimberly to Mayhill	0.51	100%
E-10	SA	Spencer	485' E of Loop 288 to Mayhill	0.34	100%
E-11	C	Lakeview (1)	Post Oak (Future) to 1025' E of Post Oak (Future)	0.19	100%
E-12	C	Lakeview (2)	2,745' E of Post Oak (Future) to Bishop Pine	0.36	100%
E-13	C	Edwards	560' E of Mayhill to Swisher	1.02	100%
C-48,E-14	SA	Bonnie Brae (3)	University to I-35E NBFR	1.41	50%
E-15	C	Ruddell	Mingo to Willis	0.11	100%
E-16	C	Mockingbird	McKinney to 850' S of McKinney	0.16	100%
E-17	SA	Brinker	Shady Oaks to Spencer	0.53	100%
E-18	SA	Mayhill (1)	University to Colorado	3.81	100%
E-19	PA (1/3)	Mayhill (2)	Colorado to I-35E NBFR	0.45	100%
E-20	PA	Post Oak (5)	University to 1,010' N of Blagg	0.33	100%
E-21	PA	Post Oak (6)	1,010' N of Blagg to 1,650' S of Blagg	0.50	50%
E-22	PA	Post Oak (7)	1,490' N of Mills to 2,400' N of McKinney	0.79	100%
E-23	PA	Post Oak (8)	1,230' N of McKinney to Pockrus Page	2.48	100%
E-24	PA	Post Oak (9)	Pockrus Page to Lakeview	0.27	100%
E-25	C	Lakeview (3)	130' S of Rodeo to 735' S of Mills	0.37	100%
E-26	C	Trinity-McKinney Connector (1)	Trinity to 1290' N of McKinney	1.27	100%
E-27	SA	Trinity-McKinney Connector (2)	1290' N of McKinney to McKinney	0.24	100%

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

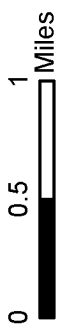


Legend

- +— Railroads
- Project Limits
- CIP Projects
- Other Thoroughfares
- Streets
- Streams
- Flood Plain
- Non-Annexation Areas
- ETJ

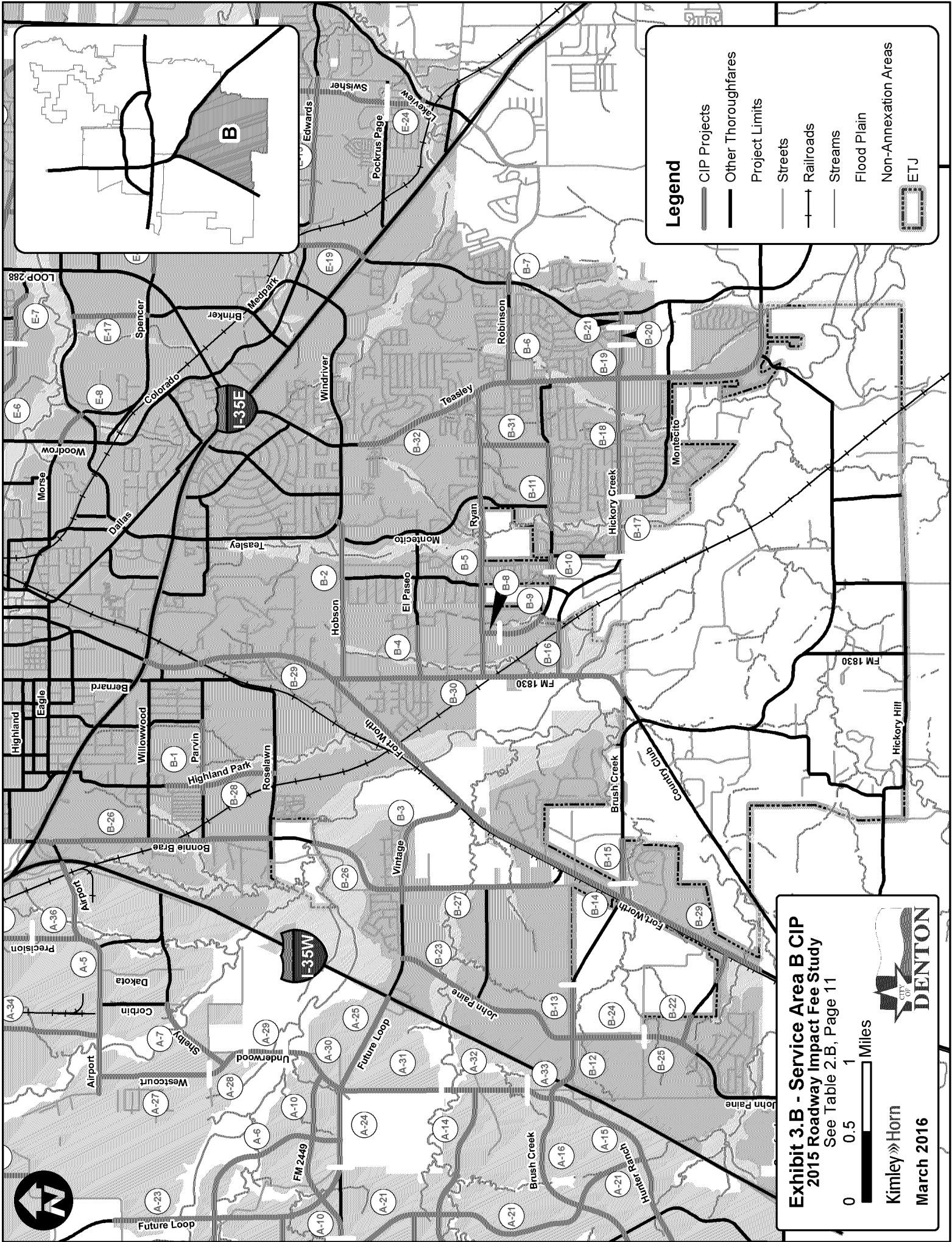
**Exhibit 3.A - Service Area A CIP
2015 Roadway Impact Fee Study**

See Table 2.A, Page 10



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March 2016





Legend

- CIP Projects
- Other Thoroughfares
- Project Limits
- Streets
- Railroads
- Streams
- Flood Plain
- Non-Annexation Areas
- ETJ

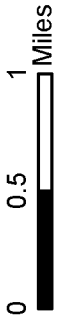
**Exhibit 3.B - Service Area B CIP
2015 Roadway Impact Fee Study**
See Table 2.B, Page 11

0 0.5 1 Miles

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March 2016

Exhibit 3.C - Service Area C CIP
2015 Roadway Impact Fee Study

See Table 2.C, Page 12



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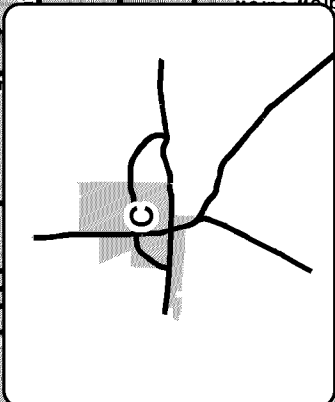
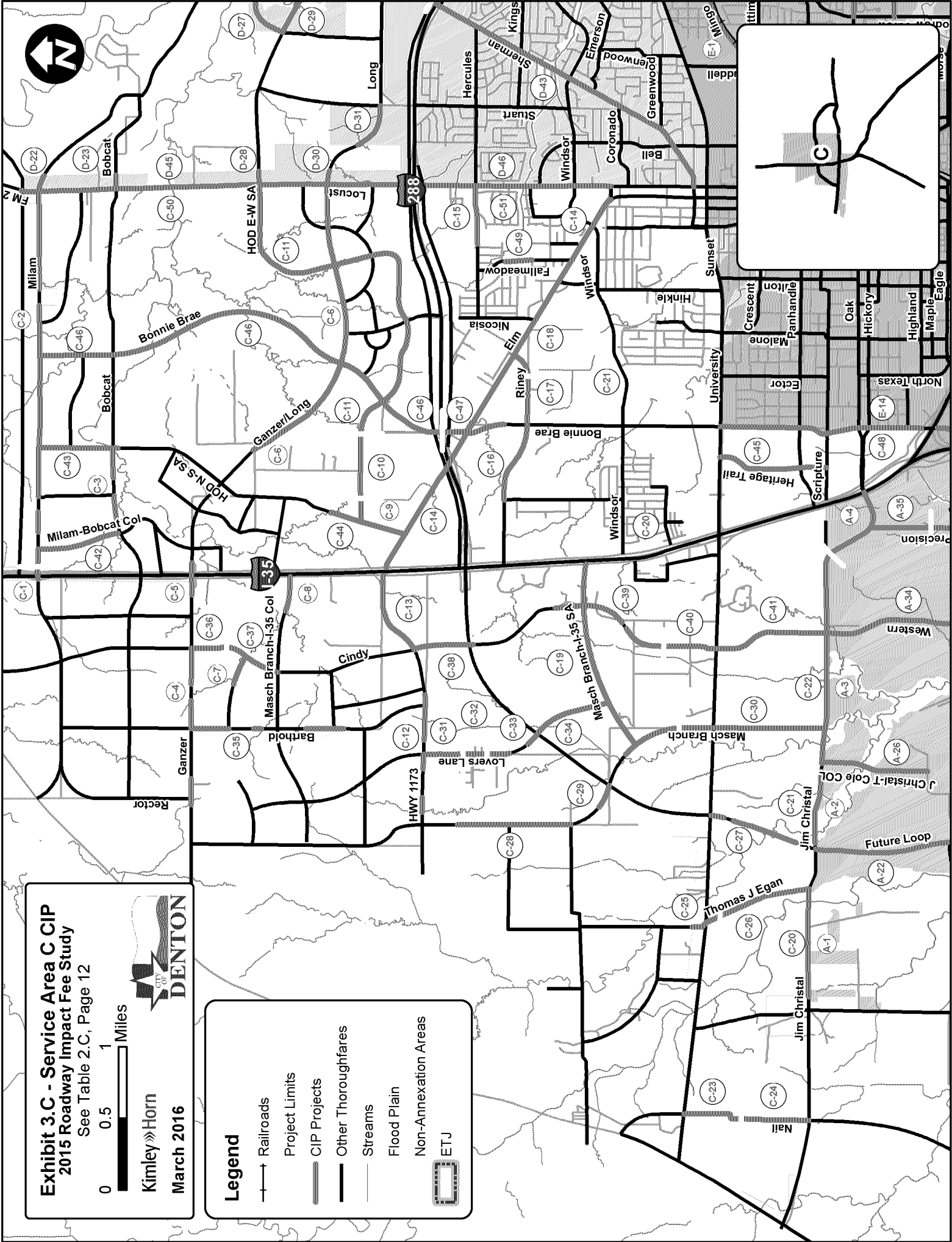
March 2016



Legend

- Railroads
- Project Limits
- CIP Projects
- Other Thoroughfares
- Streams
- Flood Plain
- Non-Annexation Areas

ETJ



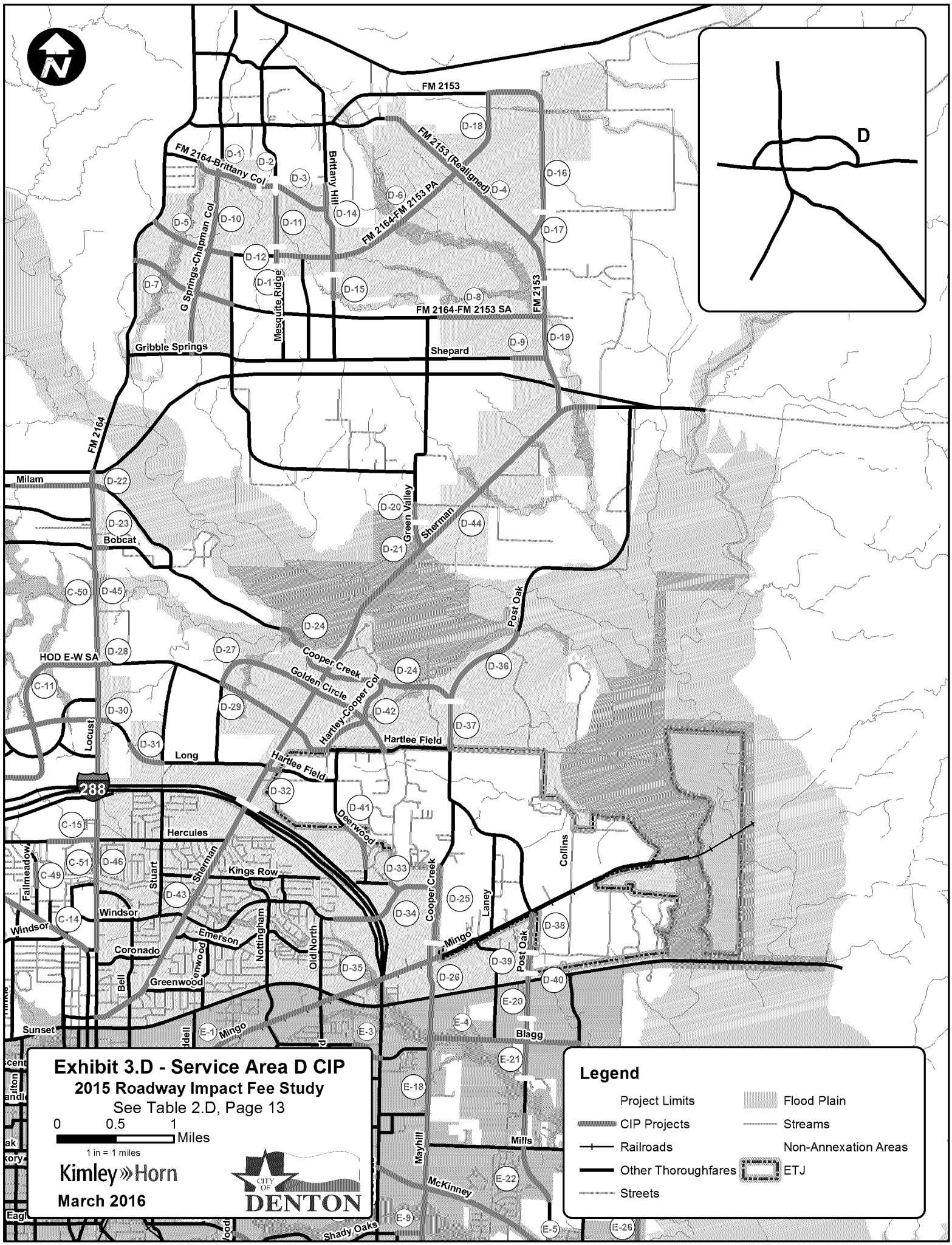
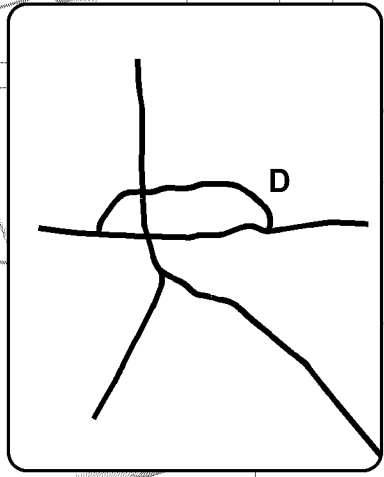
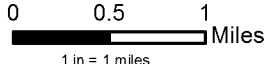


Exhibit 3.D - Service Area D CIP

2015 Roadway Impact Fee Study

See Table 2.D, Page 13

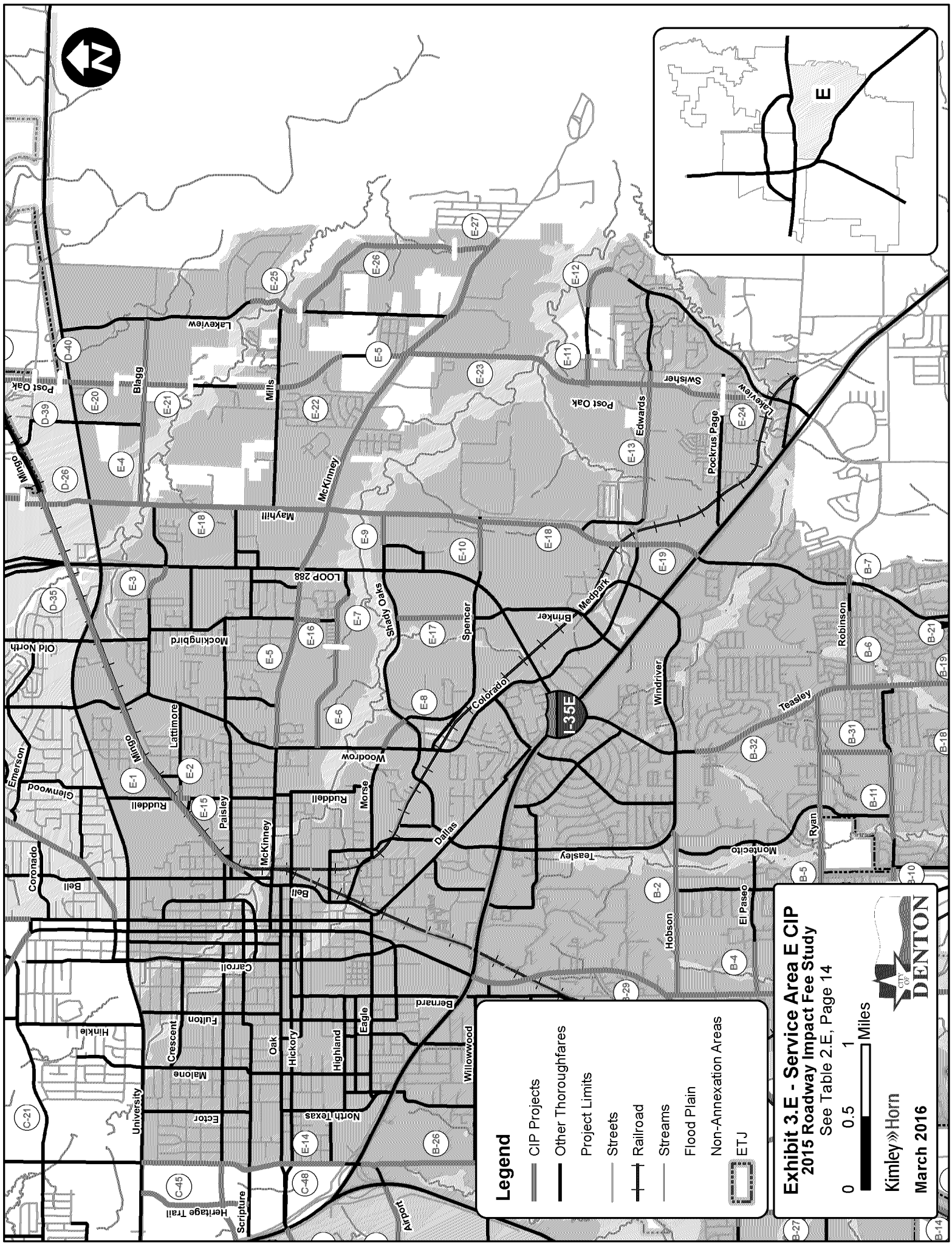


1 in = 1 miles
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March 2016

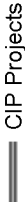
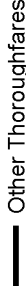
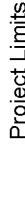
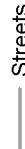
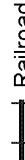
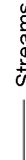
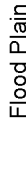
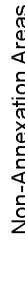



Legend

- Project Limits
- CIP Projects
- Railroads
- Other Thoroughfares
- Streets
- Flood Plain
- Streams
- Non-Annexation Areas
- ETJ

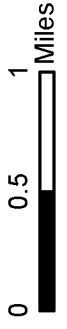


Legend

-  CIP Projects
-  Other Thoroughfares
-  Project Limits
-  Streets
-  Railroad
-  Streams
-  Flood Plain
-  Non-Annexation Areas
-  ETJ

**Exhibit 3.E - Service Area E CIP
2015 Roadway Impact Fee Study**

See Table 2.E, Page 14



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IV. COMPUTATION METHOD FOR ROADWAY IMPACT FEES

A. Service Areas

The five (5) service areas used in the 2015 Roadway Impact Fee Study are shown in **Exhibit 1**. These service areas cover the entire corporate area of the City of Denton. Chapter 395 of the Texas Local Government Code specifies that “the service area is limited to an area within the corporate boundaries of the political subdivision and shall not exceed six (6) miles.”

B. Service Units

The “service unit” is a measure of consumption or use of the capital facilities by new development. In other words, it is the unit of measure used in the 2015 Roadway Impact Fee Study to quantify the supply and demand for roads in the City. For transportation purposes, the service unit is defined as a vehicle-mile. Below is the definition for vehicle-mile.

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

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

Total Vehicle-Miles of Demand: Based on the 10-year growth projections (Pg. 36). The demand is equal to PM Trip Rate (trips) * Trip Length (miles).

The capacity values used in the 2015 Roadway Impact Fee Study are based upon Thoroughfare Capacity Criteria published by the North Central Texas Council of Governments (NCTCOG) and applied to City of Denton thoroughfare standards. **Tables 3A** and **3B** show the service volumes as a function of the facility classification and type.

Table 3A. Service Volumes for Proposed Facilities
(used in Appendix B – Roadway Impact Fee CIP Service Units of Supply)

Facility Classification	Median Configuration	Hourly Vehicle-Mile Capacity per Lane-Mile of Roadway Facility
Primary Arterial (PA)	Divided	850
Secondary Arterial (SA)	Divided	750
Collector (C)	Undivided	550

Table 3B. Service Volumes for Existing Facilities
(used in Appendix C – Existing Roadway Facilities Inventory)

Roadway Type	Description	Hourly Vehicle-Mile Capacity per Lane-Mile of Roadway Facility
2U-R	Rural Cross-Section (i.e., gravel, dirt, etc.)	150
2U-H	Two lane undivided – Arterial Type	725
2-1W	Two lane – one way couplet	650
2U	Two lane undivided	425
3-1W	Three lane - one way couplet	700
3U	Three lane undivided (two-way, left-turn lane)	550
4U	Four lane undivided	550
4D	Four lane divided	750
6D	Six lane divided	850

C. Cost Per Service Unit

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

The second component of the cost per service unit is the determination of the number of service units in each service area. This number is the measure of the growth in transportation demand that is projected to occur in the ten-year period.

D. Roadway Impact Fee CIP Costing Methodology

All of the project costs for an arterial or collector facility which serves the overall transportation system are eligible to be included in the Roadway Impact Fee Capital Improvements Plan. Chapter 395 of the Texas Local Government Code specifies that the allowable costs are "...including and limited to the:

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

The engineer's opinion of the probable costs of the projects in the Roadway Impact Fee CIP is based, in part, on the calculation of a unit cost of construction. This means that a cost per linear foot of roadway is calculated based on an average price for the various components of roadway construction. This allows the probable cost to be determined by the type of facility being constructed, the number of lanes, and the length of the project. The cost for location specific items such as bridges, highway ramps, drainage structures, and any other

special components are added to each project, as appropriate. The following is a detailed description of the costing worksheet/methodology for the Roadway Impact Fee CIP.

1. Overview of Roadway Impact Fee CIP Costing Worksheets

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

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

2.

Project Information

City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
updated: 3/23/2016

Project Information:		Description:	Project No.	B-27
Name:	Bonnie Brae (5)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	Vintage to Fort Worth (US 377)			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	5,655			
Service Area(s):	B			

Construction Pay Items

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	19,478	cy	\$ 9.25	\$ 180,175
207	12" Lime Stabilization (with Lime @ 50#/sy)	37,700	sy	\$ 8.00	\$ 301,600
306	11" Concrete Pavement and Curb	35,187	sy	\$ 54.00	\$ 1,900,080
407	5' Concrete Sidewalk	56,550	sy	\$ 4.50	\$ 254,475
507	Turn Lanes and Median Openings	2,533	sy	\$ 62.00	\$ 157,044
Paving Construction Cost Subtotal:					\$ 2,793,374

Construction Component Allowances

Major Construction Component Allowances*			
Item Description	Notes	Allowance	Item Cost
√ Traffic Control	Construction Phase Traffic Control	5%	\$ 139,669
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 83,801
√ Roadway Drainage	Standard Internal System	30%	\$ 838,012
√ Illumination		5%	\$ 139,669
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$ 800,000
√ Water	Minor Adjustments	2%	\$ 55,867
√ Sewer	Minor Adjustments	1%	\$ 27,934
√ Landscaping and Irrigation		6%	\$ 167,602
Intersection Improvements	None Anticipated	-	\$ -
Miscellaneous:		\$0	\$ -
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 2,252,554
Paving and Allowance Subtotal:		\$	5,045,928
Construction Contingency:		15%	\$ 756,889
Mobilization		5%	\$ 252,296
Prep ROW		3%	\$ 151,378
Construction Cost TOTAL:		\$	6,207,000

Summary of Costs and Allowances

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 6,207,000
Engineering/Survey/Testing:		16%	\$ 993,120
Inspection		3.5%	\$ 217,245
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 931,050
Impact Fee Project Cost TOTAL:		\$	8,348,000

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

Project Information

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

- Project Number – Identifies which Service Area the project is in with a corresponding number. The corresponding number does not represent any prioritizations and is used only to identify projects. For example, Project A-10 is in Service Area A and is the 10th project on the list.
- Name – A unique identifier for each project. In some cases abbreviations are used for the project name. For example, a roadway within the Hills of Denton may be shown as HOD. In cases where roadway names are unknown the connecting limits may be used such as FM 2164 - FM 2153 SA represents a secondary arterial (SA) that connects FM 2164 to FM 2153.
- Limits – Represents the beginning and ending location for each project.
- Impact Fee Class – The costing class to be used in the analysis. The impact fee class provides the width for the various elements in the roadway. The construction costs are variable, based on the proposed Mobility Plan classification of the roadway. For example, PA stands for Primary Arterial. A PA Impact Fee Class means the entire roadway is to be constructed. Additional classifications are utilized in cases where a portion of the facility currently exists and the road is only to be widened. The following notations are used for these projects:
 - “(1/2)” for facilities where half the facility still needs to be constructed;
 - “(1/3)” for future six-lane principal arterials facilities where two additional median lanes are needed
 - “(2/3)” for future six-lane principal arterials facilities where four additional lanes are needed
- Ultimate Class – The functional classification on Denton’s Mobility Plan.
- Length (ft) – The distance measured in feet that is used to cost out the project.
- Service Area(s) – Represents the service areas where the project is located. In some cases the project is located either in the ETJ or NAA.
- Description – Used to describe the project type assumed in the costing such as a widening or reconstruction.

3. Construction Pay Items

A typical roadway project consists of a number of costs, including the following: planning, survey, design engineering, permitting, right-of way acquisition, and construction and inspection. While the construction cost component of a project may actually consist of approximately 100 various pay items, a simplified approach was used for developing the conceptual level project costs. The pay items for both concrete and asphalt roads are shown in **Table 4**.

Table 4. Construction Cost Pay Items

Concrete Pay Items	Asphalt Pay Items
<ul style="list-style-type: none"> • Unclassified street excavation • Lime Stabilization • Concrete pavement and curb • Sidewalk • Turn lanes and median openings 	<ul style="list-style-type: none"> • Unclassified street excavation • Lime Stabilization • Type C asphalt top layer • Type B asphalt base layers • Sidewalk • Curb and gutter • Turn lanes and median openings

4. Construction Component Allowances

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

In addition, lump sum dollar allowances are provided for special drainage structures, railroad crossings, and intersection improvements where needs are anticipated. The paving and allowance subtotal is given a fifteen percent (15%) contingency, five percent (5%) mobilizations, and three (3%) preparation of right-of-way to determine the construction cost total.

5. Summary of Cost and Allowances

To determine the total Impact Fee Project Cost, sixteen percent (16%) of the construction cost total is added for engineering, surveying, and testing. In addition, three and a half percent (3.5%) of the construction cost total is added for inspection for non-TxDOT projects.

Percentages are also allotted ROW/easement acquisition. ROW/easement acquisition was based on whether the project was an existing alignment or future alignment. For an existing alignment, the ROW/easement acquisition cost was provided an allotment equal to 15% of the construction cost total. For a new alignment, the ROW/easement acquisition cost was equal to 30% of the construction cost total. The value for ROW/easement acquisition is an estimated contribution allocation and does not represent actual ROW/easement acquisition needs. This allotment was based on an assumption of \$2-\$3 per square feet for ROW acquisition. For TxDOT facilities assumed no ROW/easement acquisition was allotted.

Cash funds allocated from roadway escrow agreements have been subtracted from the corresponding City projects.

The Impact Fee Project Cost Total is then the Construction Cost Total plus engineering, surveying, testing, and inspection; plus ROW/easement acquisition; and minus roadway escrow agreements. Based upon discussions with City of Denton staff, state highway projects were included with a projected contribution of twenty percent (20%) of the total project.

E. Summary of Roadway Impact Fee CIP Costs

Tables 5.A – 5.E are the 10-Year Roadway Impact Fee CIP project lists for each service area with planning level project costs. Individual project cost worksheets can be seen in **Appendix A**, Conceptual Level Project Cost Projections. It should be noted that these tables reflect only conceptual-level opinions or assumptions regarding the portions of future project costs that are recoverable through impact fees. Actual project costs are likely to change with time and are dependent on market and economic conditions that cannot be predicted.

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

**Table 5.A – 10-Year Roadway Impact Fee CIP
with Conceptual Level Cost Projections – Service Area A**

Service Area	Proj. #	Class	Roadway	Limits	Cost in Service Area
SA A	A-1	SA	Jim Christal (1)	490' E of C. Wolfe to Thomas J. Egan	\$ 2,085,000
	A-2, C-21	SA	Jim Christal (2)	225' E of Future Loop to Masch Branch	\$ 3,466,500
	A-3, C-22	PA	Jim Christal (3)	Masch Branch to Scripture	\$ 7,196,500
	A-4	PA	Jim Christal (4)	Scripture to I-35 SBFR	\$ 5,617,000
	A-5	PA	Airport	Masch Branch to I-35W SBFR	\$ 2,930,800
	A-6	SA	Amyx	C. Wolfe to FM 2499	\$ 23,125,000
	A-7	SA	Shelby	Westcourt/Underwood to Corbin	\$ 5,946,000
	A-8	SA	Cole Ranch E-W SA #1	Cole Ranch N-S SA to Future Loop	\$ 6,928,000
	A-9	SA	FM 2499 (1)	C. Wolfe to 345' E of Cole Ranch-Hunter Ranch Arterial	\$ 1,357,600
	A-10	SA	FM 2499 (2)	345' E of Cole Ranch-Hunter Ranch Arterial to Underwood (2)	\$ 1,467,200
	A-11	SA	Cole Ranch E-W SA #2	Cole Ranch N-S SA to Cole Ranch-Hunter Ranch Arterial	\$ 7,337,000
	A-12	SA	H. Lively (1)	725' E of Seabron to 1,975' W of C. Wolfe	\$ 4,864,000
	A-13	SA	H. Lively (2)	1,975' W of C. Wolfe to C. Wolfe	\$ 1,434,000
	A-14	SA	H. Lively (3)	C. Wolfe to John Paine/Underwood (2)	\$ 17,294,000
	A-15	SA	Hunter Ranch Arterial	Hunter Ranch N-S Col #1 to Brush Creek	\$ 17,438,000
	A-16	PA	Brush Creek (1)	Hunter Ranch N-S Col #2 to I-35W	\$ 25,385,000
	A-17	SA	Ed Robson	FM 2449 to H. Lively	\$ 4,762,000
	A-18	C	C. Wolfe	Tom Cole to FM 2449	\$ 3,426,500
	A-19	SA	H. Lively (4)	FM 2499 to H. Lively	\$ 3,004,000
	A-20	SA	Cole Ranch N-S SA	Tom Cole to H. Lively	\$ 17,500,000
	A-21	PA	Cole Ranch-Hunter Ranch Arterial	Amyx to Hunter Ranch Arterial	\$ 32,915,000
	A-22	PA	Future Loop (2)	Jim Christal to 4,965' S of Jim Christal	\$ 1,345,800
	A-23	PA	Future Loop (3)	260' N of Tom Cole to FM 2449	\$ 3,151,400
	A-24	PA	Future Loop (4)	1,040' W of Amyx to Underwood	\$ 463,100
	A-25	PA	Future Loop (5)	Underwood to I-35W SBFR	\$ 1,101,400
	A-26	C	Jim Christal-Tom Cole Collector	Jim Christal to Tom Cole	\$ 4,075,000
	A-27	SA (1/2)	Westcourt	Airport to Springside	\$ 2,964,000
	A-28	SA	Westcourt/Underwood	Springside to 1,700' S of Springside	\$ 2,234,000
	A-29	SA	Underwood (1)	1,700' S of Springside to 2,655' N of FM 2449	\$ 1,677,000
	A-30	SA	Underwood (2)	2,655' N of FM 2449 to FM 2449	\$ 4,303,000
	A-31	SA	John Paine/Underwood (1)	FM 2449 to 1,265' N of H. Lively	\$ 2,366,500
	A-32	SA	John Paine/Underwood (2)	1,265' N of H. Lively to 970' N of Brush Creek	\$ 4,646,000
	A-33	SA	John Paine/Underwood (3)	970' N of Brush Creek to Brush Creek	\$ 1,275,000
	A-34	PA (2/3)	Western	Jim Christal to Airport	\$ 7,201,000
	A-35	C	Precision (1)	Jim Christal to 1,775' N of Airport	\$ 1,816,000
	A-36	C	Precision (2)	1,775' N of Airport to Airport	\$ 1,375,000
Service Area Project Cost Subtotal					\$ 235,473,300
2015 Roadway Impact Fee Study Cost Per Service Area					\$ 55,300
Total Cost in SERVICE AREA A					\$ 235,528,600

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

**Table 5.B – 10-Year 10-Year Roadway Impact Fee CIP
with Conceptual Level Cost Projections – Service Area B**

Service Area	Proj. #	Class	Roadway	Limits	Cost in Service Area
SA B	B-1	C	Parvin	Highland Park to McCormick	\$ 2,456,000
	B-2	SA	Hobson	Country Club to Teasley	\$ 9,163,000
	B-3	PA	Vintage	490' W of Bonnie Brae to Fort Worth (US 377)	\$ 4,187,189
	B-4	C	El Paseo	Country Club to Belmont	\$ 2,305,000
	B-5	SA	Ryan	Country Club to Teasley	\$ 16,369,000
	B-6	SA (1/2)	Robinson (1)	Teasley to 220' E of Wheeler Ridge	\$ 2,381,000
	B-7	SA (1/2)	Robinson (2)	175' E of Berkley to 315' E of State School Rd	\$ 892,000
	B-8	C (1/3)	Creekdale (1)	Ryan to 660' S. of Ryan	\$ 194,000
	B-9	C	Creekdale (2)	660' S. of Ryan to Thistle Way	\$ 2,343,000
	B-10	C (1/3)	Creekdale (3)	Thistle Way to Riverpass	\$ 91,000
	B-11	C	Creekdale (4)	210' E of Riverchase Trail to 280' W of Pimlico	\$ 3,551,000
	B-12	PA	Brush Creek (2)	I-35W NBFR to John Paine (Future)	\$ 4,024,000
	B-13	PA	Brush Creek (3)	John Paine (Future) to 2,010' E of John Paine (Future)	\$ 3,963,000
	B-14	PA	Brush Creek (4)	225' W. of Fort Worth to 500' E. of Fort Worth	\$ 1,603,000
	B-15	PA	Brush Creek (5)	500' E. of Fort Worth to 2,180' East of Fort Worth	\$ 1,594,500
	B-16	PA	Hickory Creek (1)	Country Club to 1,955' E. of Country Club	\$ 4,654,000
	B-17	PA	Hickory Creek (2)	Riverpass to Montecito	\$ 1,840,500
	B-18	PA	Hickory Creek (3)	Montecito to Teasley	\$ 7,254,000
	B-19	PA (1/3)	Hickory Creek (4)	Teasley to Nautical	\$ 339,000
	B-20	PA (2/3)	Hickory Creek (5)	Nautical to Erin	\$ 740,000
	B-21	PA	Hickory Creek (6)	Erin to State School Road (Future)	\$ 875,000
	B-22	C	John Paine-Fort Worth Collector	John Paine to Fort Worth (US 377)	\$ 2,244,000
	B-23	C	John Paine (1)	Vintage to Brush Creek	\$ 6,828,000
	B-24	C	John Paine (2)	Brush Creek to Johnson	\$ 1,175,000
	B-25	C	John Paine (3)	Johnson to 135' N of Athens	\$ 1,858,000
	B-26	SA	Bonnie Brae (4)	I-35E SBFR to Vintage	\$ 10,578,162
	B-27	SA	Bonnie Brae (5)	Vintage to Fort Worth (US 377)	\$ 8,348,000
	B-28	C	Highland Park	130' S of Willowcrest to Roselawn	\$ 3,090,000
	B-29	PA	Fort Worth (US 377)	I-35E to S City Limits	\$ 9,079,000
	B-30	SA	FM 1830	Fort Worth (US 377) to Brush Creek	\$ 3,235,400
	B-31	C	Ryan-Creekdale Collector	Ryan to Creekdale	\$ 2,630,000
	B-32	PA	Teasley	Sundown to S City Limits	\$ 5,250,000
Service Area Project Cost Subtotal					\$ 125,134,751
2015 Roadway Impact Fee Study Cost Per Service Area					\$ 55,300
Total Cost in SERVICE AREA B					\$ 125,190,051

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

**Table 5.C – 10-Year Roadway Impact Fee CIP
with Conceptual Level Cost Projections – Service Area C**

Service Area	Proj. #	Class	Roadway	Limits	Cost in Service Area
SAC	C-1	SA	Milam (1)	I-35 SBFR to 175' E of I-35 NBFR	\$ 2,561,000
	C-2	SA	Milam (2)	175' E of I-35 NBFR to FM 2164 (Locust)	\$ 8,136,500
	C-3	C	Bobcat	1,105' W of Milam Ridge to HOD N-S Secondary Arterial	\$ 2,692,000
	C-4	PA	Ganzer	230' W. of Rector to Future Cindy	\$ 2,729,500
	C-5	PA	Ganzer/Long (1)	625' W of I-35 SBFR to 350' E of I-35 NBFR	\$ 3,529,000
	C-6	SA	Ganzer/Long (2)	Ganzer to FM 2164 (Locust)	\$ 15,614,000
	C-7	C	Barthold-Cindy Collector	Barthold to 1,135' W of Cindy (Future)	\$ 1,292,000
	C-8	C	Masch Branch-I-35 Collector	1,295' W of I-35 to I-35	\$ 1,603,000
	C-9	SA	HOD E-W Secondary Arterial (1)	HOD N-S Secondary Arterial to 840' E of HOD N-S Secondary Arterial	\$ 1,286,000
	C-10	SA	HOD E-W Secondary Arterial (2)	840' E of HOD N-S Secondary Arterial to 130' E of Bonnie Brae (Existing)	\$ 1,447,000
	C-11	SA	HOD E-W Secondary Arterial (3)	130' E of Bonnie Brae (Existing) to FM 2164 (Locust)	\$ 20,940,000
	C-12	PA	HWY 1173 (1)	460' E of Masch Branch (Existing) to 375' E of Barthold (Future)	\$ 403,900
	C-13	PA	HWY 1173 (2)	Cindy to I-35 SBFR	\$ 961,600
	C-14	PA (1/3)	Elm (US 377)	I-35 NBFR to Elm/Locust Couplet	\$ 1,075,000
	C-15	C	Hercules	115' E of Northpointe to Locust	\$ 1,760,000
	C-16	SA	Westgate (E-W)	Westgate (N-S) to Bonnie Brae	\$ 4,353,000
	C-17	C	Riney (1)	Bonnie Brae to 990' W of Elm	\$ 1,381,000
	C-18	C	Riney (2)	990' W of Elm to Elm	\$ 1,263,000
	C-19	SA	Masch Branch-I-35 Secondary Arterial	Masch Branch to I-35 SBFR	\$ 10,767,000
	C-20	SA	Jim Christal (1)	490' E of C. Wolfe to Thomas J. Egan	\$ 3,758,500
	A-2, C-21	SA	Jim Christal (2)	225' E of Future Loop to Masch Branch	\$ 3,466,500
	A-3, C-22	PA	Jim Christal (3)	Masch Branch to Scripture	\$ 7,196,500
	C-23	SA	Nail (1)	University to 2,240' S of University	\$ 1,598,500
	C-24	SA	Nail (2)	2,240' S of University to Jim Christal	\$ 3,501,000
	C-25	C	Thomas J Egan (1)	555' N. of University to 550' S of University	\$ 1,270,000
	C-26	C	Thomas J Egan (2)	550' S of University to Jim Christal	\$ 1,339,000
	C-27	PA	Future Loop (1)	University to 745' N of Jim Christal	\$ 1,316,400
	C-28	PA	Masch Branch (1)	1,290' S of HWY 1173 to Miller	\$ 3,448,000
	C-29	PA	Masch Branch (2)	895' W of Future Loop to 1,255' N of University	\$ 5,485,000
	C-30	PA	Masch Branch (3)	1,255' N of University to Jim Christal	\$ 9,246,000
	C-31	SA	Lover's Lane (1)	HWY 1173 to 325' N of Fruth	\$ 1,089,000
	C-32	SA	Lover's Lane (2)	325' N of Fruth to 340' N of Littlebrook	\$ 1,119,000
	C-33	SA	Lover's Lane (3)	340' N of Littlebrook to Hook	\$ 333,000
	C-34	SA	Lover's Lane (4)	Hook to Masch Branch-I-35 SA	\$ 4,920,000
	C-35	SA	Barthold	Ganzer to City Limits	\$ 2,119,500
	C-36	SA	Cindy (1)	Ganzer to 1,280' S of Ganzer	\$ 1,067,500
	C-37	SA	Cindy (2)	1,280' S of Ganzer to Masch Branch-I-35 Collector	\$ 3,355,000
	C-38	SA	Cindy (3)	FM 1173 (Future) to 150' S of Future Loop	\$ 2,884,000
	C-39	SA	Cindy (4)	1,050' N of Masch Branch-I-35 PA to Tieszen	\$ 6,476,000
	C-40	SA	Cindy (5)	Tieszen to University	\$ 2,806,000
	C-41	PA (2/3)	Western (1)	University to Jim Christal	\$ 4,650,000
	C-42	C	Milam-Bobcat Col	Milam to Bobcat (Future)	\$ 2,842,000
	C-43	SA	HOD N-S Secondary Arterial (1)	Milam to 220' S of Bobcat	\$ 5,079,000
	C-44	SA	HOD N-S Secondary Arterial (2)	2830' N of Elm to Elm	\$ 3,899,000
	C-45	SA	Heritage Trail	University to Scripture	\$ 6,239,000
	C-46	PA	Bonnie Brae (1)	Milam to Loop 288 EBFR	\$ 32,903,000
	C-47	SA	Bonnie Brae (2)	Loop 288 EBFR to 860' N of Riney	\$ 3,603,000
	C-48,E-14	SA	Bonnie Brae (3)	University to I-35	\$ 2,975,108
	C-49	C	Fallmeadow	140' S of Meadow Edge to Gardenview	\$ 810,000
	C-50,D-45	PA	FM 2164 (Locust) (1)	City Limits to Loop 288 WBFR	\$ 2,319,500
	C-51,D-46	PA	FM 2164 (Locust) (2)	Loop 288 WBFR to Elm	\$ 1,156,900
Service Area Project Cost Subtotal					\$ 218,065,408
2015 Roadway Impact Fee Study Cost Per Service Area					\$ 55,300
Total Cost in SERVICE AREA C					\$ 218,120,708

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

**Table 5.D – 10-Year Roadway Impact Fee CIP
with Conceptual Level Cost Projections – Service Area D**

Service Area	Proj. #	Class	Roadway	Limits	Cost in Service Area	
SA D	D-1	C	FM 2164-Brittany Hill Collector (1)	1,605' E of FM 2164 to 745' W of Mesquite Ridge	\$ 2,603,000	
	D-2	C	FM 2164-Brittany Hill Collector (2)	745' W of Mesquite Ridge to Mesquite Ridge	\$ 395,500	
	D-3	C	FM 2164-Brittany Hill Collector (3)	Mesquite Ridge to Brittany Hill	\$ 2,115,000	
	D-4	SA	FM 2153 (Realigned)	City Limits to 620' S of Somerset	\$ 2,217,400	
	D-5	PA	FM 2164-FM 2153 (Realigned) PA	FM 2164 (Locust) to Indian Wells (Future)	\$ 8,426,000	
	D-6	PA	FM 2164-FM 2153 (Realigned) PA	Mesquite Ridge (Future) to FM 2153 (Realigned)	\$ 18,496,000	
	D-7	SA	FM 2164-FM 2153 SA (1)	FM 2164 (Locust) to Indian Wells (Future)	\$ 7,593,000	
	D-8	SA	FM 2164-FM 2153 SA (2)	540' E of Green Valley (Future) to FM 2153	\$ 7,617,000	
	D-9	SA	Shepard	1,490' W of FM 2153 to FM 2153	\$ 2,265,000	
	D-10	C	Gribble Springs-Chapman Collector	630' N of FM 2164-Brittany Hill Collector to Gribble Springs	\$ 7,471,000	
	D-11	C	Mesquite Ridge (1)	FM 2164-Brittany Hill Collector to 400' N of FM 2164-FM 2153 (Realigned) PA	\$ 2,431,000	
	D-12	C	Mesquite Ridge (2)	400' N of FM 2164-FM 2153 (Realigned) PA to 470' S of FM 2164-FM 2153 (Realigned) PA	\$ 356,500	
	D-13	C	Mesquite Ridge (3)	470' S of FM 2164-FM 2153 (Realigned) PA to 1,005' S of FM 2164-FM 2153 (Realigned) PA	\$ 447,000	
	D-14	SA	Brittany Hill (1)	355' S of Covey to 795' S of FM 2164-FM 2153 (Realigned) PA	\$ 5,620,000	
	D-15	SA	Brittany Hill (2)	795' S of FM 2164-FM 2153 (Realigned) PA to 770' N of FM 2164-FM 2153 SA	\$ 880,500	
	D-16	C	FM 2153 (1)	City Limits to Burger (S)	\$ 1,069,200	
	D-17	C	FM 2153 (2)	Burger to FM 2153 (Realigned)	\$ 250,600	
	D-18	C	FM 2153 (Realigned)-FM 2153 Collector	FM 2153 (Realigned) to FM 2153	\$ 3,416,000	
	D-19	SA	FM 2153 (3)	620' S of Somerset to Sherman	\$ 699,400	
	D-20	SA	Green Valley (1)	Warschun to 860' S of Warschun	\$ 1,069,000	
	D-21	SA	Green Valley (2)	860' S of Warschun to Sherman	\$ 2,954,000	
	D-22	SA	Milam (3)	FM 2164 (Locust) to 605' E of FM 2164 (Locust)	\$ 667,000	
	D-23	SA	Bobcat (3)	FM 2164 (Locust) to 515' E of FM 2164 (Locust)	\$ 621,000	
	D-24	SA	Cooper Creek (1)	860' W of Hartlee-Cooper Collector #1 to Hartlee Field	\$ 17,427,000	
	D-25	SA	Cooper Creek (2)	Silver Dome to Fishtrap	\$ 2,776,000	
	D-26	SA	Cooper Creek (3)	Fishtrap to University	\$ 4,490,000	
	D-27	C	Golden Circle	Hartlee Field (Future) to Hartlee Field (Existing)	\$ 7,476,000	
	D-28	SA	Hartlee Field (1)	FM 2164 (Locust) to 500' E of FM 2164 (Locust)	\$ 658,000	
	D-29	SA	Hartlee Field (2)	West City Limits to Woodland Hill	\$ 8,472,000	
	D-30	C	Long (1)	FM 2164 (Locust) to 525' E of FM 2164	\$ 431,000	
	D-31	C	Long (2)	City Limits to Stuart	\$ 1,658,000	
	D-32	C	Hartlee Field (3)	Sherman to 515' E. of Sherman	\$ 2,129,000	
	D-33	C	Kings-Windsor Collector	Kings Row to Windsor	\$ 356,000	
	D-34	C	Windsor	410' E of Saints to Cooper Creek	\$ 6,095,000	
	D-35	SA	Mingo (2)	University to 455' E. of Cooper Creek	\$ 6,923,000	
	D-36	PA	Post Oak (1)	N. City Limits to Cooper Creek (Future)	\$ 8,870,000	
	D-37	PA	Post Oak/Cooper Creek	Cooper Creek (Future) to Hartlee Field	\$ 4,626,000	
	D-38	PA	Post Oak (2)	Railroad to Fishtrap	\$ 4,504,000	
	D-39	PA	Post Oak (3)	Fishtrap to 940' S of Fishtrap	\$ 1,273,500	
	D-40	PA	Post Oak (4)	940' S of Fishtrap to University	\$ 1,534,000	
	D-41	C	Deerwood	2,855' N of Kings Row to 680' N of Kings Row	\$ 1,624,000	
	D-42	C	Hartlee-Cooper Col	Hartlee Field to Cooper Creek	\$ 3,914,000	
	D-43	PA	Sherman (1)	Locust to Loop 288 WBFR	\$ 3,764,200	
	D-44	PA	Sherman (2)	Loop 288 WBFR to City Limits	\$ 8,545,200	
	C-50,D-45	PA	FM 2164 (Locust) (1)	City Limits to Loop 288 WBFR	\$ 2,319,500	
	C-51,D-46	PA	FM 2164 (Locust) (2)	Loop 288 WBFR to Elm	\$ 1,156,900	
	Service Area Project Cost Subtotal					\$ 180,702,400
	2015 Roadway Impact Fee Study Cost Per Service Area					\$ 55,300
	Total Cost in SERVICE AREA D					\$ 180,757,700

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

**Table 5.E – 10-Year Roadway Impact Fee CIP
with Conceptual Level Cost Projections – Service Area E**

Service Area	Proj. #	Class	Roadway	Limits	Cost in Service Area
SA E	E-1	SA	Mingo (1)	435' NE of Bell to University	\$ 13,406,000
	E-2	C	Lattimore	Ruddell to 475' E of Ruddell	\$ 807,000
	E-3	C	Audra	Bayfield to Loop 288	\$ 1,505,000
	E-4	C	Blagg	Mayhill to Lakeview	\$ 6,701,000
	E-5	SA	McKinney (FM 426)	Woodrow to East City Limits	\$ 4,829,400
	E-6	C	Duchess (1)	Woodrow to 115' W of Trailhead	\$ 4,125,000
	E-7	C (1/2)	Duchess (2)	115' W of Trailhead to 1,000' W of Loop 288	\$ 1,197,000
	E-8	C	Morse (1)	Woodrow to Shady Oaks	\$ 1,706,000
	E-9	SA (1/2)	Morse (2)	Kimberly to Mayhill	\$ 2,346,000
	E-10	SA	Spencer	485' E of Loop 288 to Mayhill	\$ 2,455,000
	E-11	C	Lakeview (1)	Post Oak (Future) to 1025' E of Post Oak (Future)	\$ 839,000
	E-12	C	Lakeview (2)	2,745' E of Post Oak (Future) to Bishop Pine	\$ 1,555,000
	E-13	C	Edwards	560' E of Mayhill to Swisher	\$ 3,794,000
	C-48.E-14	SA	Bonnie Brae (3)	University to I-35E NBFR	\$ 2,975,108
	E-15	C	Ruddell	Mingo to Willis	\$ 424,000
	E-16	C	Mockingbird	McKinney to 850' S of McKinney	\$ 697,000
	E-17	SA	Brinker	Shady Oaks to Spencer	\$ 4,138,000
	E-18	SA	Mayhill (1)	University to Colorado	\$ 5,667,507
	E-19	PA (1/3)	Mayhill (2)	Colorado to I-35E NBFR	\$ 1,928,000
	E-20	PA	Post Oak (5)	University to 1,010' N of Blagg	\$ 3,465,000
	E-21	PA	Post Oak (6)	1,010' N of Blagg to 1,650' S of Blagg	\$ 2,323,000
	E-22	PA	Post Oak (7)	1,490' N of Mills to 2,400' N of McKinney	\$ 7,746,000
	E-23	PA	Post Oak (8)	1,230' N of McKinney to Pockrus Page	\$ 33,321,000
	E-24	PA	Post Oak (9)	Pockrus Page to Lakeview	\$ 2,800,000
	E-25	C	Lakeview (3)	130' S of Rodeo to 735' S of Mills	\$ 1,844,000
	E-26	C	Trinity-McKinney Connector (1)	Trinity to 1290' N of McKinney	\$ 6,312,000
	E-27	SA	Trinity-McKinney Connector (2)	1290' N of McKinney to McKinney	\$ 1,695,000
Service Area Project Cost Subtotal					\$ 120,601,015
2015 Roadway Impact Fee Study Cost Per Service Area					\$ 55,300
Total Cost in SERVICE AREA E					\$ 120,656,315

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

F. Service Unit Calculation

The basic service unit for the computation of Denton's Roadway Impact Fees is the vehicle-mile of travel during the afternoon peak-hour (as explained on Pg. 20). To determine the cost per service unit, it is necessary to project the growth in vehicle-miles of travel for the service area for the ten-year period.

The growth in vehicle-miles from 2015 to 2025 is based upon projected changes in residential units and employment for the period. In order to determine this growth, estimates of residential units, basic employment, service employment, and retail employment for 2015 were made, along with growth projections for each of these demographic statistics through 2025. The Land Use Assumptions section of this report details the growth estimates used for impact fee determination.

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

For non-residential land uses, the process is similar. The Land Use Assumptions section of this report provides existing and projected number of building square footages for three (3) categories of employment – basic, service, and retail. These categories correspond to an aggregation of other specific land use categories based on the North American Industrial Classification System (NAICS).

Building square footage is the most common independent variable for the estimation of non-residential trips in the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition*. This characteristic is more appropriate than the number of employees, because building square footage is tied more closely to trip generation and is known at the time of application for any development that would require the assessment of an impact fee.

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

The *transportation demand factors* are aggregate rates derived from two sources – the *ITE Trip Generation Manual, 9th Edition* and the National Household Travel Survey performed by the FHWA. The *ITE Trip Generation Manual, 9th Edition* provides the number of trips that are produced or attracted to the land use for each dwelling unit, square foot of building, or other corresponding unit. For the retail category of land uses, the rate is adjusted to account for the fact that a percentage of retail trips are made by people who would otherwise be traveling past that particular establishment anyway, such as a trip between work and home. For example, a stop at a nearby supermarket on the way home from work does not create a new trip onto the roadway network. These trips are called pass-by trips, and since the travel demand is accounted for in the land use calculations relative to the primary trip, it is necessary to discount the retail trip generation rates to avoid double counting trips.

The next component of the *transportation demand factor* accounts for the length of each trip. The average trip length for each category is based on the National Household Travel Survey conducted by the Federal Highway Administration (FHWA).

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

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

where... $L_{\max} = \min(L * OD \text{ or } 6)$

Variables:

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

The maximum trip length was limited to six (6) miles based on the maximum trip length within each service area. Chapter 395 of the Texas Local Government Code allows for a service area of six (6) miles, and the service areas within Denton are closely approximated with a six (6) mile distance.

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

Table 6 shows the derivation of the *Transportation Demand Factor* for the residential land uses and the three (3) non-residential land use categories. The values utilized for all variables shown in the *transportation demand factor* equation are also shown in the table.

Table 6. Transportation Demand Factor Calculations

Variable	Residential	Basic	Service	Retail
T	1.00	0.97	1.49	3.71
P_b	0%	0%	0%	34%
L	9.79	14.65	14.65	5.60
L_{max}*	4.90	6.00	6.00	2.80
TDF	4.90	5.82	8.94	6.86

* L_{max} is less than 6 miles for residential and retail land uses; therefore this lower trip length is used for calculating the TDF for these land uses.

Variables:

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

The application of the demographic projections and the *transportation demand factors* are presented in the 10-Year Growth Projections in **Table 7**. This table shows the total vehicle-miles by service area for the years 2015 and 2025. These estimates and projections lead to the Vehicle-Miles of Travel for both 2015 and 2025.

Table 7. 10-Year Growth Projections

SERVICE AREA	RESIDENTIAL VEHICLE-MILES		NON-RESIDENTIAL SQUARE FEET ⁴			TRANS. DEMAND FACTOR ⁵		NON-RESIDENTIAL VEHICLE-MILES ⁹			TOTAL VEHICLE MILES ¹⁰				
	Single Family Units	Multi-Family Units	Trip Rate TDF ²	VEHICLE MILES ³	BASIC	SERVICE	RETAIL	BASIC ⁶	SERVICE ⁷	RETAIL ⁸		BASIC	SERVICE	RETAIL	TOTAL
A	3,713	1,890	1.00	27,455	3,685,975	960,894	681,432	0.97	1.49	3.71	21,452	8,590	4,675	34,717	62,172
B	909	211		5,488	618,915	32,021	419,263				3,602	286	2,876	6,764	12,252
C	1,033	832	4.90	9,139	680,537	1,222,722	2,530,669		8.94	6.86	3,981	10,931	17,360	32,252	41,391
D	702	187		4,356	850,814	193,124	466,617				4,952	1,727	3,201	9,880	14,236
E	390	1,099		7,296	732,932	1,014,708	897,984				4,266	9,071	6,160	19,497	26,793
Totals	6,747	4,219		53,733	6,569,173	3,423,469	4,995,965				38,233	30,605	34,272	103,110	156,843

VEHICLE-MILES OF INCREASE (2015 - 2025)

SERVICE AREA	VEH-MILES
A	62,172
B	12,252
C	41,391
D	14,236
E	26,793

Notes:

- ¹ From City of Denton 2015 Land Use Assumptions for Roadway Impact Fees
- ² Transportation Demand Factor for each Service Area (from LUMMET) using Single Family Detached Housing land use and trip generation rate
- ³ Calculated by multiplying TDF by the number of dwelling units
- ⁴ From City of Denton 2015 Land Use Assumptions for Roadway Impact Fees
- ⁵ Trip generation rate and Transportation Demand Factors from LUMMET for each land use
- ⁶ 'Basic' corresponds to General Light Industrial land use and trip generation rate
- ⁷ 'Service' corresponds to General Office land use and trip generation rate
- ⁸ 'Retail' corresponds to Shopping Center land use and trip generation rate
- ⁹ Calculated by multiplying Transportation Demand Factor by the number of thousand square feet for each land use
- ¹⁰ Residential plus non-residential vehicle-mile totals for each Service Area

V. ROADWAY IMPACT FEE CALCULATION

A. Maximum Assessable Impact Fee Per Service Unit

This section presents the maximum assessable impact fee rate calculated for each service area. The maximum assessable impact fee is the sum of the eligible Roadway Impact Fee CIP costs for the service area divided by the growth in travel attributable to new development projected to occur within the 10-year period. A majority of the components of this calculation have been described and presented in previous sections of this report. The purpose of this section is to document the computation for each service area and to demonstrate that the guidelines provided by Chapter 395 of the Texas Local Government Code have been addressed. **Table 8** illustrates the computation of the maximum assessable impact fee computed for each service area. Each row in the table is numbered to simplify explanation of the calculation. The calculation of the maximum assessable impact fee is shown in **Table 9**. Each row in the table is numbered to simplify explanation of the calculation.

Table 8. Maximum Assessable Roadway Impact Fee Computation

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

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

2	<i>Total Vehicle-Miles of Existing Demand</i>	A measure of the amount of traffic currently using the roadway facilities upon which capacity is being added. (from Appendix B – CIP Units of Supply)
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A number of facilities identified in the CIP have traffic currently utilizing a portion of their existing capacity. This line displays the total amount of capacity along these facilities currently being used by existing traffic.

3	<i>Total Vehicle-Miles of Existing Deficiencies</i>	Number of vehicle-miles of travel that are not accommodated by the existing roadway system (from Appendix C – Existing Roadway Facilities Inventory)
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In order to ensure that existing deficiencies on the City’s roadway network are not recoverable through impact fees, this line is based on the entire roadway network within the service area. Any roadway within the service area that is deficient – even those not identified on the Roadway Impact Fee CIP – will have these additional trips removed from the calculation.

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

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

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

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

8	<i>Total Vehicle-Miles of New Demand over Ten Years</i>	Based upon the growth projection provided in the Land Use Assumptions , an estimate of the number of new vehicle-miles within the service area over the next ten years. (from Table 7)
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This line presents the amount of growth (in vehicle-miles) projected to occur within each service area over the next ten years.

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

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

11	<i>Cost of Roadway Impact Fee CIP Attributable to New Growth</i>	The result of multiplying the Cost of Net Capacity Added (Line 6) by the Percent of Capacity Added Attributable to New Growth, limited to 100% (Line 9) .
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This value is the total Roadway Impact Fee CIP project costs (excluding financial costs) that may be recovered through impact fees. This line is determined considering the limitations to impact fees required by the Texas legislature.

B. Plan for Financing and the Ad Valorem Tax Credit

Chapter 395 of the Texas Local Government Code requires the Roadway Impact Fee Capital Improvements Plan for Roadway Impact Fees to contain specific enumeration of a plan for awarding the impact fee credit. Section 395.014 of the Code requires:

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

The plan is summarized, as prepared by NewGen Strategies in **Appendix D** and **Appendix E**, Plan for Awarding the Transportation Impact Fee Credit. The following table summarizes the portions of **Table 8** that utilize this credit calculation.

Line	Title	Description
12	<i>Financing Costs</i>	(from Appendix D – Plan for Awarding the Transportation Impact Fee Credit)
13	<i>Interest Earnings</i>	(from Appendix D – Plan for Awarding the Transportation Impact Fee Credit)
14	<i>Cost of the Roadway Impact Fee CIP and Financing Attributable to New Growth</i>	The sum of the Cost of Capacity Added Attributable to New Growth, Financing Costs, and Interest Earnings. (Line 11 + Line 12 + Line 13)
15	<i>Pre-Credit Maximum Fee Per Service Unit</i>	Found by dividing the Cost of the TIP and Financing Attributable to New Growth (Line 14) by the Total Vehicle-Miles of New Demand Over Ten Years (Line 8). (Line 14 / Line 8)
16	<i>Credit for Ad Valorem Taxes</i>	A credit for the portion of ad valorem taxes projected to be generated by the new service units, as per Section 395.014 of the Local Government Code. (from Appendix D – Plan for Awarding the Transportation Impact Fee Credit)
17	<i>Recoverable Cost of the Roadway Impact Fee CIP and Financing</i>	The difference between the Cost of the TIP and Financing Attributable to New Growth (Line 14) and the Credit for Ad Valorem Taxes (Line 16). (Line 14 + Line 16)
18	<i>Maximum Assessable Fee Per Service Unit</i>	Found by dividing the Recoverable Cost of the TIP and Financing (Line 17) by the Total Vehicle-Miles of New Demand Over Ten Years (Line 8). (Line 17 / Line 8)

C. Maximum Assessable Impact Fee Determination

The impact fee determination method employed by NewGen Strategies and Solutions, LLC is developed through a financial based model, which fully recognizes the requirements of Chapter 395, including the recognition of cash and/or debt financing, interest earnings, fund balances, and applicable credits associated with the use of ad valorem taxes. In developing the components of the financial model several assumptions must be made, including the following:

- Financing
 - Method of financing (i.e. cash or debt financing)
 - The level of financing (e.g. 50% debt / 50% cash)
 - Cost of financing
 - Debt repayment structure
- Timing and Level of Expenditures and Revenues
- Interest Earnings
- Annual Service Unit Growth
- Portion of Ad Valorem Tax Revenue Used to Fund Impact Fee Transportation Improvements

The assumptions employed in the maximum assessable impact fee determination provide a reasonable basis for forecasting, however, it must be emphasized that these assumptions may not necessarily reflect actual future conditions. To address this, Chapter 395 requires the monitoring of impact fees through the Impact Fee Advisory Committee, and allows for the option to update or revise impact fees to reflect the actual implementation of the impact fee program.

Once the cost of capacity added that is attributable to growth (**Table 8** - line 11) is determined, it must then be decided how the cost will be financed: cash and/or debt. For any previously funded projects, whether partially funded or in full, actual costs of capital have been included. Based on discussions with City staff, it is assumed that the City will debt finance 50% of the future project costs and cash finance 50%. For debt financing, the cost of financing is based on the City staff's estimates of future debt costs for bonds issued with 20-

year terms, as shown in **Appendix E**. Debt service payments for each future debt issue are assumed to remain constant over the issue's term.

Currently, the exact timing and annual level of capital expenditures over the 10-year forecast is indeterminate; therefore, it is assumed that capital expenditures will occur in equal amounts over the 10-year program period. It is also assumed that for debt financed capital projects, the City will expend debt proceeds over a 2-year timeframe. For the calculation of the maximum assessable impact fee, debt is assumed to be issued in equal amounts for each year. Because of the 10-year forecast limitation, and in order to recognize the full amount of debt to be issued for the cost of capacity added that is attributable to growth during the 10-year period, a portion of year 9 and all of year 10 bond proceeds are assumed to be spent fully in year 10.

Because debt is issued over 20-year terms and impact fees developed herein are to be charged over a 10-year period, sufficient fund balance must be generated to meet the future debt service obligations. Because of the generation of the fund balance, excess monies will be available for interest earnings. Chapter 395 states that interest earnings are funds of the impact fee account and are to be held to the same restrictions as impact fee revenues. Therefore, in order to recognize that interest earnings are used to fund transportation improvements, interest earnings are credited against the costs recoverable through impact fees. It should be noted that Chapter 395 does not require the upfront recognition of interest earnings in the impact fee determination; however, in an effort to acknowledge the time value of the impact fee payers' monies, interest earnings have been credited. Interest is assumed to be earned at an annual rate of 0.55% based on the City's average annual return on consolidated cash funds as of 2/28/15.

As with the timing and level of the capital expenditures over the 10-year forecast, the timing and annual level of service unit growth over the 10-year program period is indeterminate at the present time. As such, it is assumed that service unit growth will be consistent over the 10-year forecast.

Chapter 395 requires a plan for awarding either a credit for the portion of ad valorem tax and/or utility service revenues generated by new service units during the program period that are used for payment of improvements that are included in the Roadway Impact Fee CIP. As an alternative, a credit equal to 50% of the total cost of implementing the Roadway

Impact Fee CIP may be used. The City has elected to pursue the determination of a credit for the portion of ad valorem tax revenues generated by new service units during the program period that are used for payment of improvements that are included in the Roadway Impact Fee CIP. It should be noted that the credit is not a determination to recognize the total ad valorem tax revenue generated by new service units, but is only a credit for the portion of ad valorem tax revenue that is used for payment of improvements that are included in the Roadway Impact Fee CIP. Theoretically, the credit determination could be zero (0) if the City does not utilize any of the new service unit ad valorem tax revenue to fund improvements that are included in the Roadway Impact Fee CIP. However, to be conservative and recognize potential cash flow issues that can occur with the funding of major capital improvement projects, it is assumed that the cash funded projects (50% of the improvement costs included in the Roadway Impact Fee CIP) could potentially be funded by ad valorem tax revenue.

Since payments made through ad valorem tax revenue will consist of not only the revenue generated by new service units in the defined service area, but also existing property owners throughout the City, the portion attributable to the new service units in the defined service area must be isolated, as illustrated in the credit calculation in **Appendix E**.

The following summarizes the financial model's determination of the maximum assessable impact fee:

- Recoverable Impact Fee Transportation Improvements Costs (**Table 8**, line 11)
- Plus: Financing Costs (**Table 8**, line 12)
- Less: Interest Earnings (**Table 8**, line 13)
- Pre Credit Recoverable Costs for Impact Fee (**Table 8**, line 15)
- Less: Credit for Ad Valorem Revenues (**Table 8**, line 17)
- Maximum Recoverable Costs for Impact Fee (**Table 8**, line 18)

Table 9. Maximum Assessable Roadway Impact Fee

SERVICE AREA:		A	B	C	D	E
1	TOTAL VEH-MI OF CAPACITY ADDED BY THE ROADWAY IMPACT FEE CIP (FROM ROADWAY IMPACT FEE CIP SERVICE UNITS OF SUPPLY, APPENDIX B)	133,673	111,795	124,976	116,855	66,913
2	TOTAL VEH-MI OF EXISTING DEMAND (FROM ROADWAY IMPACT FEE CIP SERVICE UNITS OF SUPPLY, APPENDIX B)	3,681	27,933	6,721	6,718	15,424
3	TOTAL VEH-MI OF EXISTING DEFICIENCIES (FROM EXISTING ROADWAY FACILITIES INVENTORY, APPENDIX C)	261	6,262	4,479	105	6,025
4	NET AMOUNT OF VEH-MI OF CAPACITY ADDED (LINE 1 - LINE 2 - LINE 3)	129,731	77,600	113,776	110,032	45,464
5	TOTAL COST OF THE ROADWAY IMPACT FEE CIP WITHIN SERVICE AREA (FROM TABLES 5A TO 5E)	\$ 235,528,600	\$ 125,190,051	\$ 218,120,708	\$ 180,757,700	\$ 120,656,315
6	COST OF NET CAPACITY SUPPLIED (LINE 4 / LINE 1) * (LINE 5)	\$ 228,582,891	\$ 86,897,875	\$ 198,573,339	\$ 170,203,511	\$ 81,979,865
7	COST TO MEET EXISTING NEEDS AND USAGE (LINE 5 - LINE 6)	\$ 6,945,709	\$ 38,292,176	\$ 19,547,369	\$ 10,554,189	\$ 38,676,450
8	TOTAL VEH-MI OF NEW DEMAND OVER TEN YEARS (FROM TABLE 7 AND LAND USE ASSUMPTIONS)	62,172	12,252	41,391	14,236	26,793
9	PERCENT OF CAPACITY ADDED ATTRIBUTABLE TO GROWTH (LINE 8 / LINE 4)	47.9%	15.7%	36.3%	12.9%	58.9%
10	IF LINE 8 > LINE 4, REDUCE LINE 9 TO 100%, OTHERWISE NO CHANGE	47.9%	15.7%	36.3%	12.9%	58.9%
11	COST OF ROADWAY IMPACT FEE CIP ATTRIBUTABLE TO GROWTH (LINE 6 * LINE 10)	\$ 109,491,205	\$ 13,642,966	\$ 72,082,122	\$ 21,956,253	\$ 48,286,140
12	FINANCING COSTS (FROM APPENDIX D)	\$ 33,684,366	\$ 2,322,238	\$ 22,140,252	\$ 6,754,720	\$ 14,091,510
13	INTEREST EARNINGS (FROM APPENDIX D)	\$ (4,624,388)	\$ (484,758)	\$ (3,034,039)	\$ (930,744)	\$ (1,953,180)
14	COST OF THE ROADWAY IMPACT FEE CIP AND FINANCING ATTRIBUTABLE TO NEW GROWTH (LINE 11 + LINE 12 + LINE 13)	\$ 138,551,183	\$ 15,480,446	\$ 91,188,335	\$ 27,780,229	\$ 60,424,470
15	PRE-CREDIT MAXIMUM FEE PER SERVICE UNIT (LINE 14 / LINE 8)	\$ 2,229	\$ 1,264	\$ 2,203	\$ 1,951	\$ 2,255
16	CREDIT FOR AD VALOREM TAXES (FROM APPENDIX D)	\$ (1,756,407)	\$ (42,150)	\$ (808,251)	\$ (86,104)	\$ (386,264)
17	RECOVERABLE COST OF ROADWAY IMPACT FEE CIP AND FINANCING (LINE 14 + LINE 16)	\$ 136,794,776	\$ 15,438,296	\$ 90,380,084	\$ 27,694,125	\$ 60,038,206
18	MAXIMUM ASSESSABLE FEE PER SERVICE UNIT (LINE 17 / LINE 8)	\$ 2,200	\$ 1,260	\$ 2,184	\$ 1,945	\$ 2,241

D. Service Unit Demand Per Unit of Development

The Roadway Impact Fee is determined by multiplying the impact fee rate by the number of service units projected for the proposed development. For this purpose, the City will utilize the Land Use/Vehicle-Mile Equivalency Table (LUVMET), presented in **Table 10**. This table lists the predominant land uses that may occur within the City of Denton. For each land use, the development unit that defines the development's magnitude with respect to transportation demand is shown. Although every possible use cannot be anticipated, the majority of local uses are found in this table. The descriptions for each land use are presented in **Table 11**. If the exact use is not listed, one similar in trip-making characteristics can serve as a reasonable proxy. The individual land uses are grouped into categories, such as residential, office, commercial, industrial, and institutional.

The trip rates presented for each land use is a fundamental component of the LUVMET. The trip rate is the average number of trips generated during the afternoon peak hour by each land use per development unit. The next column in **Table 10**, if applicable to the land use, presents the number of trips to and from certain land uses reduced by pass-by trips, as previously discussed.

The definitive source of the trip generation and pass-by statistics is the *ITE Trip Generation Manual, 9th Edition*, the latest edition. This manual utilizes trip generation studies for a variety of land uses throughout the United States, and is the standard used by traffic engineers and transportation planners for traffic impact analysis, site design, and transportation planning. However, for land uses not contained within the 9th Edition of the *ITE Trip Generation Manual*, an alternative service unit demand could be calculated by completing a trip generation study based on the procedure identified in the *ITE Trip Generation Handbook*.

To convert vehicle trips to vehicle-miles, it is necessary to multiply trips by trip length. The trip length values are based on the *National Household Travel Survey* performed by the FHWA. The other adjustment to trip length is the 50% origin-destination reduction to avoid double counting of trips. At this stage, another important aspect of the state law is applied – the limit on transportation service unit demand. If the adjusted trip length is above six (6) miles, the maximum trip length used for calculation is reduced to six (6) miles. This reduction, as

discussed previously, limits the maximum trip length to the approximate size of the service areas.

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

Table 10 - Land Use / Vehicle-Mile Equivalency Table (LUVMET)

Land Use Category	ITE Land Use Code	Development Unit	Trip Gen Rate (PM)	Pass-by Rate	Pass-by Source	Trip Rate	NHTS Trip Length (mi)	Adj. For O-D	Adj. Trip Length (mi)	Max Trip Length (mi)	Veh-Mi Per Dev-Unit
PORT AND TERMINAL											
Truck Terminal	050	Acre	6.55			6.55	14.65	50%	7.32	6.00	39.30
INDUSTRIAL											
General Light Industrial	110	1,000 SF GFA	0.97			0.97	14.65	50%	7.33	6.00	5.82
General Heavy Industrial	120	1,000 SF GFA	0.68			0.68	14.65	50%	7.33	6.00	4.08
Industrial Park	130	1,000 SF GFA	0.85			0.85	14.65	50%	7.33	6.00	5.10
Warehousing	150	1,000 SF GFA	0.32			0.32	14.65	50%	7.33	6.00	1.92
Mini-Warehouse	151	1,000 SF GFA	0.26			0.26	14.65	50%	7.33	6.00	1.56
RESIDENTIAL											
Single-Family Detached Housing	210	Dwelling Unit	1.00			1.00	9.79	50%	4.90	4.90	4.90
Apartment/Multi-family	220	Dwelling Unit	0.62			0.62	9.79	50%	4.90	4.90	3.04
Residential Condominium/Townhome	230	Dwelling Unit	0.52			0.52	9.79	50%	4.90	4.90	2.55
Senior Adult Housing-Detached	251	Dwelling Unit	0.27			0.27	9.79	50%	4.90	4.90	1.32
Senior Adult Housing-Attached	252	Dwelling Unit	0.25			0.25	9.79	50%	4.90	4.90	1.23
Assisted Living	254	Beds	0.22			0.22	9.79	50%	4.90	4.90	1.08
LODGING											
Hotel	310	Room	0.60			0.60	6.43	50%	3.22	3.22	1.93
Motel / Other Lodging Facilities	320	Room	0.47			0.47	6.43	50%	3.22	3.22	1.51
RECREATIONAL											
Golf/Driving Range	432	Tee	1.25			1.25	7.86	50%	3.93	3.93	4.91
Golf Course	430	Acre	0.30			0.30	7.86	50%	3.93	3.93	1.18
Recreational Community Center	495	1,000 SF GFA	2.74			2.74	7.86	50%	3.93	3.93	10.77
Ice Skating Rink	465	1,000 SF GFA	2.36			2.36	7.86	50%	3.93	3.93	9.27
Miniature Golf Course	431	Hole	0.33			0.33	7.86	50%	3.93	3.93	1.30
Multiplex/Movie Theater	445	Screens	13.64			13.64	7.86	50%	3.93	3.93	53.61
Racquet / Tennis Club	491	Court	3.35			3.35	7.86	50%	3.93	3.93	13.17
INSTITUTIONAL											
Church	560	1,000 SF GFA	0.55			0.55	8.31	50%	4.16	4.16	2.29
Day Care Center	565	1,000 SF GFA	12.34	44%	B	6.91	3.49	50%	1.75	1.75	12.09
Primary/Middle School (1-8)	522	Students	0.16			0.16	3.49	50%	1.75	1.75	0.28
High School	530	Students	0.13			0.13	3.49	50%	1.75	1.75	0.23
Junior / Community College	540	Students	0.12			0.12	10.44	50%	5.22	5.22	0.63
University / College	550	Students	0.17			0.17	10.44	50%	5.22	5.22	0.89
MEDICAL											
Clinic	630	1,000 SF GFA	5.18			5.18	9.85	50%	4.93	4.93	25.54
Hospital	610	1,000 SF GFA	0.93			0.93	9.85	50%	4.93	4.93	4.58
Nursing Home	620	Beds	0.22			0.22	9.85	50%	4.93	4.93	1.08
Animal Hospital/Veterinary Clinic	640	1,000 SF GFA	4.72	30%	B	3.30	9.85	50%	4.93	4.93	16.27
OFFICE											
Corporate Headquarters Building	714	1,000 SF GFA	1.41			1.41	14.65	50%	7.33	6.00	8.46
General Office Building	710	1,000 SF GFA	1.49			1.49	14.65	50%	7.33	6.00	8.94
Medical-Dental Office Building	720	1,000 SF GFA	3.57			3.57	9.85	50%	4.93	4.93	17.60
Single Tenant Office Building	715	1,000 SF GFA	1.74			1.74	14.65	50%	7.33	6.00	10.44
Office Park	750	1,000 SF GFA	1.48			1.48	14.65	50%	7.33	6.00	8.88

Key to Sources of Pass-by Rates:

A: ITE Trip Generation Handbook 2nd Edition (June 2004)

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

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

Table 10 (Cont'd). Land Use / Vehicle-Mile Equivalency Table (LUMMET)

Land Use Category	ITE Land Use Code	Development Unit	Trip Gen Rate (PM)	Pass-by Rate	Pass-by Source	Trip Rate	NHTS Trip Length (mi)	NCTCOG Trip Length (mi)	Adj. For O-D	Adj. Trip Length (mi)	Max Trip Length (mi)	Veh-Mi Per Dev-Unit
COMMERCIAL												
Automobile Related												
Automobile Care Center	942	1,000 SF Occ. GLA	3.11	40%	B	1.87	4.45	6.43	50%	2.23	2.23	4.17
Automobile Parts Sales	843	1,000 SF GFA	5.98	43%	A	3.41	4.45	6.43	50%	2.23	2.23	7.60
Gasoline/Service Station	944	Vehicle Fueling Position	13.87	42%	A	8.04	1.20	1.20	50%	0.60	0.60	4.82
Gasoline/Service Station w/ Conv Market	945	Vehicle Fueling Position	13.51	56%	B	5.94	1.20	1.20	50%	0.60	0.60	3.56
Gasoline/Service Station w/ Conv Market and Car Wash	946	Vehicle Fueling Position	13.86	56%	A	6.10	1.20	1.20	50%	0.60	0.60	3.66
New Car Sales	841	1,000 SF GFA	2.62	20%	B	2.10	4.45	6.43	50%	2.23	2.23	4.68
Quick Lubrication Vehicle Shop	941	Servicing Positions	5.19	40%	B	3.11	4.45	6.43	50%	2.23	2.23	6.94
Self-Service Car Wash	947	Stall	5.54	40%	B	3.32	1.20	1.20	50%	0.60	0.60	1.99
Tire Store	848	1,000 SF GFA	4.15	28%	A	2.99	4.45	6.43	50%	2.23	2.23	6.67
Dining												
Fast Food Restaurant with Drive-Thru Window	934	1,000 SF GFA	32.65	50%	A	16.33	5.64	4.79	50%	2.82	2.82	46.05
Fast Food Restaurant without Drive-Thru Window	933	1,000 SF GFA	26.15	50%	B	13.08	5.64	4.79	50%	2.82	2.82	36.89
High Turnover (Sit-Down) Restaurant	932	1,000 SF GFA	9.85	43%	A	5.61	6.07	4.79	50%	3.04	3.04	17.05
Quality Restaurant	931	1,000 SF GFA	7.49	44%	A	4.19	6.07	4.79	50%	3.04	3.04	12.74
Coffee/Donut Shop with Drive-Thru Window	937	1,000 SF GFA	42.80	70%	A	12.84	4.53	4.79	50%	2.27	2.27	29.15
Other Retail												
Free-Standing Discount Store	815	1,000 SF GFA	4.98	30%	C	3.49	5.60	6.43	50%	2.80	2.80	9.77
Nursery (Garden Center)	817	1,000 SF GFA	6.94	30%	B	4.86	5.60	6.43	50%	2.80	2.80	13.61
Home Improvement Superstore	862	1,000 SF GFA	2.33	48%	A	1.21	5.60	6.43	50%	2.80	2.80	3.39
Pharmacy/Drugstore w/o Drive-Thru Window	880	1,000 SF GFA	8.40	53%	A	3.95	5.60	6.43	50%	2.80	2.80	11.06
Pharmacy/Drugstore w/ Drive-Thru Window	881	1,000 SF GFA	9.91	49%	A	5.05	5.60	6.43	50%	2.80	2.80	14.14
Shopping Center	820	1,000 SF GLA	3.71	34%	A	2.45	5.60	6.43	50%	2.80	2.80	6.86
Supermarket	850	1,000 SF GFA	9.48	36%	A	6.07	5.60	6.43	50%	2.80	2.80	17.00
Toy/Children's Superstore	864	1,000 SF GFA	4.99	30%	B	3.49	5.60	6.43	50%	2.80	2.80	9.77
Department Store	875	1,000 SF GFA	1.87	30%	B	1.31	5.60	6.43	50%	2.80	2.80	3.67
SERVICES												
Walk-In Bank	911	1,000 SF GFA	12.13	40%	B	7.28	4.45	3.39	50%	2.23	2.23	16.23
Drive-In Bank	912	Drive-in Lanes	33.24	47%	A	17.62	4.45	3.39	50%	2.23	2.23	39.29
Hair Salon	918	1,000 SF GLA	1.45	30%	B	1.02	4.45	3.39	50%	2.23	2.23	2.27

Key to Sources of Pass-by Rates:

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

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

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

Table 11 - Land Use Descriptions

Land Use Category	I/E Land Use Code	Land Use Description
PORT AND TERMINAL		
Truck Terminal	030	Point of good transfer between trucks or between trucks and rail
INDUSTRIAL		
General Light Industrial	110	Emphasis on activities other than manufacturing; typically employing fewer than 500 workers
General Heavy Industrial	120	Primary activity is conversion of raw materials or parts into finished products
Industrial Park	130	Area containing a number of industries or related facilities
Warehousing	150	Devoted to storage of materials but may included office and maintenance areas
Mini-Warehouse	151	Facilities with a number of units rented to others for the storage of goods
RESIDENTIAL		
Single-Family Detached Housing	210	Single-family detached homes on individual lots
Apartment/Multi-family	220	At least 4 rental dwelling units per building
Residential Condominium/Townhome	230	Single-family ownership units that have at least one other single-family owned unit within the same building
Senior Adult Housing-Detached	251	Consists of detached independent living developments that include amenities such as golf courses and swimming pools
Senior Adult Housing-Attached	252	Consists of attached independent living developments that include limited social or recreation services
Assisted Living	254	Residential settings that provide either routine general protective oversight or assistance with activities.
LODGING		
Hotel	310	Lodging facilities that typically have on-site restaurants, lounges, meeting and/or banquet rooms, or other retail shops and services
Motel / Other Lodging Facilities	320	Lodging facilities that may have small on-site restaurant or buffet area but little or no meeting space
RECREATIONAL		
Golf Driving Range	432	Facilities with driving tees for practice; may provide individual or group lessons; may have prop shop and/or refreshment facilities
Golf Course	430	May include municipal courses and private country clubs; may have driving ranges, pro shops, and restaurant/banquet facilities
Recreational Community Center	495	Category includes racquet clubs, health/fitness clubs, can include facilities such as YMCA's
Ice Skating Rink	465	Rinks for ice skating and related sports; may contain spectator areas and refreshment facilities
Miniature Golf Course	431	One or more individual putting courses; category should not be used when part of a larger entertainment center(with batting cages, video game centers, etc)
Multiplex Movie Theater	445	Movie theater with audience seating, minimum of ten screens, lobby, and refreshment area.
Racquet / Tennis Club	491	Indoor or outdoor facilities specifically designed for playing tennis
INSITUTIONAL		
Church	560	Churches and houses of worship
Day Care Center	565	Generally includes facilities for care of pre-school aged children, generally includes classrooms, offices, eating areas, and playgrounds
Primary/Middle School (1-8)	522	Serves students who have not yet entered high school
High School	530	Serves students who have completed middle or junior high school
Junior / Community College	540	Two-year junior, community, or technical colleges
University / College	550	Four-year universities or colleges that may or may not offer graduate programs
MEDICAL		
Clinic	630	Facilities with limited diagnostic and outpatient care
Hospital	610	Medical and surgical facilities with overnight accommodations
Nursing Home	620	Rest and convalescent homes with residents who do little or no driving
Animal Hospital/Veterinary Clinic	640	Rest and convalescent homes with residents who do little or no driving
OFFICE		
Corporate Headquarters Building	714	Office building housing corporate headquarters of a single company or organization
General Office Building	710	Office buildings which house multiple tenants
Medical-Dental Office Building	720	Multi-tenant building with offices for physicians and/or dentists
Single Tenant Office Building	715	Single tenant office buildings other than corporate headquarters
Office Park	750	Office buildings (typically low-rise) in a campus setting and served by a common roadway system

Table 1 (Cont'd). Land Use Descriptions

Land Use Category	ITE Land Use Code	Land Use Description
COMMERCIAL		
Automobile Related		
Automobile Care Center	942	Automobile repair and servicing including stereo installations and upholstery
Automobile Parts Sales	843	Retail sale of auto parts but no on-site vehicle repair
Gasoline/Service Station	944	Gasoline sales without convenience store or car wash; may include repair
Gasoline/Service Station w/ Conv Market	945	Gasoline sales with convenience store where the primary business is gasoline sales
Gasoline/Service Station w/ Conv Market and Car Wash	946	Gasoline sales with convenience store and car washes where the primary business is gasoline sales
New Car Sales	841	New car dealerships, typically with automobile servicing, part sales, and used car sales
Quick Lubrication Vehicle Shop	941	Primary business is to perform oil changes and fluid/filter changes with other repair services not provided
Self-Service Car Wash	947	Has stalls for driver to park and wash the vehicle
Tire Store	848	Primary business is sales and installation of tires; usually do not have large storage or warehouse area
Dining		
Fast Food Restaurant with Drive-Thru Window	934	High-turnover fast food restaurant for carry-out and eat-in customers with a drive-thru window
Fast Food Restaurant without Drive-Thru Window	933	High-turnover fast food restaurant for carry-out and eat-in customers, but without a drive-thru window
High Turnover (Sit-Down) Restaurant	932	Restaurants with turnover rates less than one hour; typically includes moderately-priced chain restaurants
Quality Restaurant	931	Restaurants with turnover rates of one hour or longer; typically require reservations
Coffee/Donut Shop with Drive-Thru Window	937	Coffee and Donut restaurants with drive-through windows, hold long store hours and have limited indoor seating
Other Retail		
Free-Standing Discount Store	815	Category includes free-standing stores with off-street parking; typically offer a variety of products and services with long store hours
Nursery (Garden Center)	817	Building with a yard of planting or landscape stock; may have office, storage, shipping or greenhouse facilities
Home Improvement Superstore	862	Warehouse-type facilities offering a large variety of products and services including lumber, tool, paint, lighting, and fixtures, among other items.
Pharmacy/Drugstore w/o Drive-Thru Window	880	Facilities that primarily sell prescription and non-prescription drugs without a drive-through window
Pharmacy/Drugstore w/ Drive-Thru Window	881	Facilities that primarily sell prescription and non-prescription drugs with a drive-through window
Shopping Center	820	Integrated group of commercial establishments; planning, owned, and managed as a unit
Supermarket	850	Primary business is sale of groceries, food, and household cleaning items; may include photo, pharmacy, video rental, and/or ATM
Toy/Children's Superstore	864	Businesses specializing in child-oriented merchandise
Department Store	875	Free-standing stores that specialize in the sale of apparel, footwear, bedding, home products, jewelry, etc.
SERVICES		
Walk-In Bank	911	Banks with their own parking lots, no drive-in lanes but contain non-drive-through ATMs
Drive-In Bank	912	Banking facilities to conduct financial transactions from the vehicle; also usually apart of walk-in bank
Hair Salon	918	Facilities that specialize in cosmetic and beauty services including hair cutting and styling

VI. SAMPLE CALCULATIONS

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

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

Roadway Impact Fee Calculation Steps – Example 1	
Step 1	Determine Development Unit and Vehicle-Miles Per Development Unit
	<i>From Table 10 [Land Use – Vehicle-Mile Equivalency Table]</i> Development Type: 1 Dwelling Unit of Single-Family Detached Housing Number of Development Units: 1 Dwelling Unit Veh-Mi Per Development Unit: 4.90
Step 2	Determine Maximum Assessable Impact Fee Per Service Unit (Vehicle-Mile)
	<i>From Table 9, Line 14 [Maximum Assessable Fee Per Service Unit]</i> Service Area A: \$2,200
Step 3	Determine Maximum Assessable Impact Fee
	Impact Fee = # of Development Units * Veh-Mi Per Dev Unit * Max. Fee Per Service Unit
	Impact Fee = 1 * 4.90 * \$2,200 Maximum Assessable Impact Fee = \$10,780

Example 2:
Development Type – 125,000 square foot Home Improvement Superstore in Service Area D

Roadway Impact Fee Calculation Steps – Example 2	
Step 1	Determine Development Unit and Vehicle-Miles Per Development Unit
	<i>From Table 10 [Land Use – Vehicle-Mile Equivalency Table]</i> Development Type: 125,000 square feet of Home Improvement Superstore Development Unit: 1,000 square feet of Gross Floor Area Veh-Mi Per Development Unit: 3.39
Step 2	Determine Maximum Assessable Impact Fee Per Service Unit (Vehicle-Mile)
	<i>From Table 9, Line 14 [Maximum Assessable Fee Per Service Unit]</i> Service Area D: \$1,945
Step 3	Determine Maximum Assessable Impact Fee
	Impact Fee = # of Development Units * Veh-Mi Per Dev Unit * Max. Fee Per Service Unit
	Impact Fee = 125 * 3.39 * \$1,945 Maximum Assessable Impact Fee = \$824,194

VII. ADOPTION AND ADMINISTRATION OF ROADWAY IMPACT FEES

A. Adoption Process

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

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

B. Collection and Use of Transportation Impact Fees

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

VIII. CONCLUSIONS

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

This report establishes the maximum allowable Roadway Impact Fee that could be assessed by the City of Denton, as shown in the previously referenced **Table 9**.

This document serves as a guide to the assessment of Roadway Impact Fees pertaining to future development, and the City’s need for transportation improvements to accommodate that growth. Following the public hearing process, the City Council may establish an impact fee amount to be collected, up to the calculated maximum and establish the Roadway Impact Fee Ordinance accordingly.

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

Below is the listing of the 2015 Roadway Impact Fee Study’s Maximum Assessable Impact Fee Per Service Unit (Vehicle-Mile):

Service Areas	A	B	C	D	E
2015 Roadway Impact Fee Study Maximum Assessable Fee Per Vehicle-Mile	\$ 2,200	\$ 1,260	\$ 2,184	\$ 1,945	\$ 2,241

APPENDICES

A. Conceptual Level Project Cost Projections

SERVICE AREA A
SERVICE AREA B
SERVICE AREA C
SERVICE AREA D
SERVICE AREA E

B. Roadway Impact Fee CIP Service Units of Supply

C. Existing Roadway Facilities Inventory

**D. Plan for Awarding the Transportation Impact Fee Credit
Summary**

**E. Plan for Awarding the Transportation Impact Fee Credit
Supporting Exhibits**

Appendix A – Conceptual Level Project Cost Projections

City of Denton - 2015 Roadway Impact Fee Study
 Capital Improvement Plan for Roadway Impact Fees
 Summary of Conceptual Level Project Cost Projections

Roadway Improvements - Service Area A

#	IF Class	Project	Limits		Percent in Service Area	Project Cost	Total Cost in Service Area
			From	To			
A-1	SA	Jim Christal (1)	480' E of C. Wolfe	Thomas J. Egan	50%	\$ 4,170,000	\$ 2,085,000
A-2, C-21	SA	Jim Christal (2)	225' E of Future Loop	Masch Branch	50%	\$ 6,933,000	\$ 3,466,500
A-3, C-22	PA	Jim Christal (3)	Masch Branch	Scripture	50%	\$ 14,393,000	\$ 7,196,500
A-4	PA	Jim Christal (4)	Scripture	I-35 SBFR	100%	\$ 5,617,000	\$ 5,617,000
A-5	PA	Airport	Masch Branch	I-35W SBFR	100%	\$ 2,930,800	\$ 2,930,800
A-6	SA	Amyx	C. Wolfe	FM 2499	100%	\$ 23,125,000	\$ 23,125,000
A-7	SA	Shelby	Westcourt/Underwood	Corbin	100%	\$ 5,948,000	\$ 5,948,000
A-8	SA	Cole Ranch E-W SA #1	Cole Ranch N-S SA	Future Loop	100%	\$ 6,928,000	\$ 6,928,000
A-9	SA	FM 2499 (1)	C. Wolfe	345' E of Cole Ranch-Hunter Ranch Arterial	100%	\$ 1,357,600	\$ 1,357,600
A-10	SA	FM 2499 (2)	345' E of Cole Ranch-Hunter Ranch Arterial	Underwood (2)	100%	\$ 1,487,200	\$ 1,487,200
A-11	SA	Cole Ranch E-W SA #2	Cole Ranch N-S SA	Cole Ranch-Hunter Ranch Arterial	100%	\$ 7,337,000	\$ 7,337,000
A-12	SA	H. Lively (1)	725' E of Seabron	1,975' W of C. Wolfe	100%	\$ 4,864,000	\$ 4,864,000
A-13	SA	H. Lively (2)	1,975' W of C. Wolfe	C. Wolfe	50%	\$ 2,868,000	\$ 1,434,000
A-14	SA	H. Lively (3)	C. Wolfe	John Paine/Underwood (2)	100%	\$ 17,294,000	\$ 17,294,000
A-15	SA	Hunter Ranch Arterial	Hunter Ranch N-S Col #1	Brush Creek	100%	\$ 17,438,000	\$ 17,438,000
A-16	PA	Brush Creek (1)	Hunter Ranch N-S Col #2	I-35W	100%	\$ 25,385,000	\$ 25,385,000
A-17	SA	Ed Robson	FM 2449	H. Lively	100%	\$ 4,782,000	\$ 4,782,000
A-18	C	C. Wolfe	Tom Cole	FM 2449	50%	\$ 6,853,000	\$ 3,426,500
A-19	SA	H. Lively (4)	FM 2499	H. Lively	50%	\$ 6,008,000	\$ 3,004,000
A-20	SA	Cole Ranch N-S SA	Tom Cole	H. Lively	100%	\$ 17,500,000	\$ 17,500,000
A-21	PA	Cole Ranch-Hunter Ranch Arterial	Amyx	Hunter Ranch Arterial	100%	\$ 32,915,000	\$ 32,915,000
A-22	PA	Future Loop (2)	Jim Christal	4,965' S of Jim Christal	100%	\$ 1,345,800	\$ 1,345,800
A-23	PA	Future Loop (3)	280' N of Tom Cole	FM 2449	100%	\$ 3,151,400	\$ 3,151,400
A-24	PA	Future Loop (4)	1,040' W of Amyx	Underwood	50%	\$ 926,200	\$ 463,100
A-25	PA	Future Loop (5)	Underwood	I-35W SBFR	100%	\$ 1,101,400	\$ 1,101,400
A-26	C	Jim Christal-Tom Cole Collector	Jim Christal	Tom Cole	100%	\$ 4,075,000	\$ 4,075,000
A-27	SA (1/2)	Westcourt	Airport	Springside	100%	\$ 2,984,000	\$ 2,984,000
A-28	SA	Westcourt/Underwood	Springside	1,700' S of Springside	100%	\$ 2,234,000	\$ 2,234,000
A-29	SA	Underwood (1)	1,700' S of Springside	2,655' N of FM 2449	50%	\$ 3,354,000	\$ 1,677,000
A-30	SA	Underwood (2)	2,655' N of FM 2449	FM 2449	100%	\$ 4,303,000	\$ 4,303,000
A-31	SA	John Paine/Underwood (1)	FM 2449	1,285' N of H. Lively	50%	\$ 4,733,000	\$ 2,366,500
A-32	SA	John Paine/Underwood (2)	1,285' N of H. Lively	970' N of Brush Creek	100%	\$ 4,646,000	\$ 4,646,000
A-33	SA	John Paine/Underwood (3)	970' N of Brush Creek	Brush Creek	100%	\$ 1,275,000	\$ 1,275,000
A-34	PA (2/3)	Western	Jim Christal	Airport	100%	\$ 7,201,000	\$ 7,201,000
A-35	C	Precision (1)	Jim Christal	1,775' N of Airport	100%	\$ 1,818,000	\$ 1,818,000
A-36	C	Precision (2)	1,775' N of Airport	Airport	100%	\$ 1,375,000	\$ 1,375,000
TOTAL						\$ 260,592,400	\$ 235,473,300

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-1
Name:	Jim Christal (1)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	490' E of C. Wolfe to Thomas J. Egan			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	1,465		(Corresponds with C-30. Excludes 2,695' in SA C,NAA)	
Service Area(s):	A,C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	5,046	cy	\$ 9.25	\$ 46,677
207	12" Lime Stabilization (with Lime @ 50#/sy)	9,767	sy	\$ 8.00	\$ 78,133
306	11" Concrete Pavement and Curb	9,116	sy	\$ 54.00	\$ 492,240
407	5' Concrete Sidewalk	14,650	sy	\$ 4.50	\$ 65,925
507	Turn Lanes and Median Openings	656	sy	\$ 62.00	\$ 40,684
Paving Construction Cost Subtotal:					\$ 723,659
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	36,183	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	21,710	
√ Roadway Drainage	Standard Internal System	30%	\$	217,098	
√ Illumination		5%	\$	36,183	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	1,170,000	
√ Water	Minor Adjustments	2%	\$	14,473	
√ Sewer	Minor Adjustments	1%	\$	7,237	
√ Landscaping and Irrigation		6%	\$	43,420	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	1,796,303	
		Paving and Allowance Subtotal:	\$	2,519,962	
		Construction Contingency:	15%	\$	377,994
		Mobilization	5%	\$	125,998
		Prep ROW	3%	\$	75,599
		Construction Cost TOTAL:	\$	3,100,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,100,000
Engineering/Survey/Testing:		16%	\$ 496,000
Inspection		3.5%	\$ 108,500
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 465,000
Impact Fee Project Cost TOTAL:			\$ 4,170,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-2, C-21
Name:	Jim Christal (2)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial. (Excludes 290' in Non-Annexation Area)		
Limits:	225' E of Future Loop to Masch Branch			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	3,970			
Service Area(s):	A,C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	13,674	cy	\$ 9.25	\$ 126,489
207	12" Lime Stabilization (with Lime @ 50#/sy)	26,467	sy	\$ 8.00	\$ 211,733
306	11" Concrete Pavement and Curb	24,702	sy	\$ 54.00	\$ 1,333,920
407	5' Concrete Sidewalk	39,700	sy	\$ 4.50	\$ 178,650
507	Turn Lanes and Median Openings	1,778	sy	\$ 62.00	\$ 110,250
Paving Construction Cost Subtotal:					\$ 1,961,042
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	98,052	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	58,831	
√ Roadway Drainage	Standard Internal System	30%	\$	588,313	
√ Illumination		5%	\$	98,052	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	1,210,000	
√ Water	Minor Adjustments	2%	\$	39,221	
√ Sewer	Minor Adjustments	1%	\$	19,610	
√ Landscaping and Irrigation		6%	\$	117,663	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	2,229,742	
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 4,190,784
Construction Contingency:					15% \$ 628,618
Mobilization					5% \$ 209,539
Prep ROW					3% \$ 125,724
Construction Cost TOTAL:					\$ 5,155,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,155,000
Engineering/Survey/Testing:		16%	\$ 824,800
Inspection		3.5%	\$ 180,425
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 773,250
Impact Fee Project Cost TOTAL:			\$ 6,933,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.
Name:	Jim Christal (3)	This project consists of the reconstruction of the existing pavement to a six lane divided concrete primary arterial.	A-3, C-22
Limits:	Masch Branch to Scripture		
Impact Fee Class:	PA		
Ultimate Class:	Primary Arterial		
Length (lf):	6,470		
Service Area(s):	A,C		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	30,193	cy	\$ 9.25	\$ 279,288
201	12" Lime Stabilization (with Lime @ 50#/sy)	58,949	sy	\$ 8.00	\$ 471,591
301	11" Concrete Pavement and Curb	56,073	sy	\$ 54.00	\$ 3,027,960
401	5' Concrete Sidewalk	64,700	sy	\$ 4.50	\$ 291,150
501	Turn Lanes and Median Openings	2,898	sy	\$ 62.00	\$ 179,677
Paving Construction Cost Subtotal:					\$ 4,249,667
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	212,483	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	127,490	
√ Roadway Drainage	Standard Internal System	30%	\$	1,274,900	
√ Illumination		5%	\$	212,483	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	1,490,000	
√ Water	Minor Adjustments	2%	\$	84,993	
√ Sewer	Minor Adjustments	1%	\$	42,497	
√ Landscaping and Irrigation		6%	\$	254,980	
√ Intersection Improvements		-	\$	750,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 4,449,827
Paving and Allowance Subtotal:					\$ 8,699,493
Construction Contingency:					15% \$ 1,304,924
Mobilization					5% \$ 434,975
Prep ROW					3% \$ 260,985
Construction Cost TOTAL:					\$ 10,701,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 10,701,000
Engineering/Survey/Testing:		16%	\$ 1,712,160
Inspection		3.5%	\$ 374,535
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 1,605,150
Impact Fee Project Cost TOTAL:			\$ 14,393,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-4
Name:	Jim Christal (4)	This project consists of the reconstruction of the existing pavement to a six lane divided concrete primary arterial.		
Limits:	Scripture to I-35 SBFR			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	3,150			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	14,700	cy	\$ 9.25	\$ 135,975
201	12" Lime Stabilization (with Lime @ 50#/sy)	28,700	sy	\$ 8.00	\$ 229,600
301	11" Concrete Pavement and Curb	27,300	sy	\$ 54.00	\$ 1,474,200
401	5' Concrete Sidewalk	31,500	sy	\$ 4.50	\$ 141,750
501	Turn Lanes and Median Openings	1,411	sy	\$ 62.00	\$ 87,478
Paving Construction Cost Subtotal:					\$ 2,069,003
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	103,450	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	62,070	
√ Roadway Drainage	Standard Internal System	30%	\$	620,701	
√ Illumination		5%	\$	103,450	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	41,380	
√ Sewer	Minor Adjustments	1%	\$	20,690	
√ Landscaping and Irrigation		6%	\$	124,140	
Intersection Improvements	None Anticipated	-	\$	-	
√ Miscellaneous:	At-Grade Railroad Crossing	N/A	\$	250,000	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	1,325,882	
Paving and Allowance Subtotal:					\$ 3,394,885
Construction Contingency:					15% \$ 509,233
Mobilization					5% \$ 169,744
Prep ROW					3% \$ 101,847
Construction Cost TOTAL:					\$ 4,176,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,176,000
Engineering/Survey/Testing:		16%	\$ 668,160
Inspection		3.5%	\$ 146,160
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 626,400
Impact Fee Project Cost TOTAL:			\$ 5,617,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-5
Name:	Airport	This project consists of the reconstruction of the existing pavement to a six lane divided concrete primary arterial.		
Limits:	Masch Branch to I-35W SBFR			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	9,265			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	43,237	cy	\$ 9.25	\$ 399,939
201	12" Lime Stabilization (with Lime @ 50#/sy)	84,414	sy	\$ 8.00	\$ 675,316
301	11" Concrete Pavement and Curb	80,297	sy	\$ 54.00	\$ 4,336,020
401	5' Concrete Sidewalk	92,650	sy	\$ 4.50	\$ 416,925
501	Turn Lanes and Median Openings	4,150	sy	\$ 62.00	\$ 257,297
Paving Construction Cost Subtotal:					\$ 6,085,496
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	304,275	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	182,565	
√ Roadway Drainage	Standard Internal System	30%	\$	1,825,649	
√ Illumination		5%	\$	304,275	
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$	220,000	
√ Water	Minor Adjustments	2%	\$	121,710	
√ Sewer	Minor Adjustments	1%	\$	60,855	
√ Landscaping and Irrigation		6%	\$	365,130	
√ Intersection Improvements		-	\$	250,000	
√ Miscellaneous:	Railroad bridge crossing	N/A	\$	552,000	
		Allowance Subtotal:	\$	4,186,458	
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 10,271,955
Construction Contingency:					15% \$ 1,540,793
Mobilization					5% \$ 513,598
Prep ROW					3% \$ 308,159
Construction Cost TOTAL:					\$ 12,635,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 12,635,000
Engineering/Survey/Testing:		16%	\$ 2,021,600
Inspection	TxDOT Roadway	0%	\$ -
Other: Developer Contribution	Project GWP06-0022		\$ (2,500)
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 2,930,800

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-6
Name:	Amyx	This project consists of the construction of a new four lane divided concrete secondary arterial (Cole Ranch MPC).		
Limits:	C. Wolfe to FM 2499			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	13,735			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	47,309	cy	\$ 9.25	\$ 437,612
207	12" Lime Stabilization (with Lime @ 50#/sy)	91,567	sy	\$ 8.00	\$ 732,533
306	11" Concrete Pavement and Curb	85,462	sy	\$ 54.00	\$ 4,614,960
407	5' Concrete Sidewalk	137,350	sy	\$ 4.50	\$ 618,075
507	Turn Lanes and Median Openings	6,152	sy	\$ 62.00	\$ 381,432
Paving Construction Cost Subtotal:					\$ 6,784,613
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$	-	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	203,538	
√ Roadway Drainage	Standard Internal System	30%	\$	2,035,384	
√ Illumination		5%	\$	339,231	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	2,310,000	
√ Water	Minor Adjustments	2%	\$	135,692	
√ Sewer	Minor Adjustments	1%	\$	67,846	
√ Landscaping and Irrigation		6%	\$	407,077	
√ Intersection Improvements		-	\$	500,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	5,998,768	
Paving and Allowance Subtotal:			\$	12,783,381	
Construction Contingency:			15%	\$	1,917,507
Mobilization			5%	\$	639,169
Prep ROW			1%	\$	127,834
Construction Cost TOTAL:					\$ 15,468,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 15,468,000
Engineering/Survey/Testing:		16%	\$ 2,474,880
Inspection		3.5%	\$ 541,380
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 4,640,400
Impact Fee Project Cost TOTAL:			\$ 23,125,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-7
Name:	Shelby	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	Westcourt/Underwood to Corbin			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	3,245			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	11,177	cy	\$ 9.25	\$ 103,389
207	12" Lime Stabilization (with Lime @ 50#/sy)	21,633	sy	\$ 8.00	\$ 173,067
306	11" Concrete Pavement and Curb	20,191	sy	\$ 54.00	\$ 1,090,320
407	5' Concrete Sidewalk	32,450	sy	\$ 4.50	\$ 146,025
507	Turn Lanes and Median Openings	1,453	sy	\$ 62.00	\$ 90,116
Paving Construction Cost Subtotal:					\$ 1,602,917
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$	-	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	48,088	
√ Roadway Drainage	Standard Internal System	30%	\$	480,875	
√ Illumination		5%	\$	80,146	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	680,000	
√ Water	Minor Adjustments	2%	\$	32,058	
√ Sewer	Minor Adjustments	1%	\$	16,029	
√ Landscaping and Irrigation		6%	\$	96,175	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	1,683,371	
Paving and Allowance Subtotal:					\$ 3,286,288
Construction Contingency:					15% \$ 492,943
Mobilization					5% \$ 164,314
Prep ROW					1% \$ 32,863
Construction Cost TOTAL:					\$ 3,977,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,977,000
Engineering/Survey/Testing:		16%	\$ 636,320
Inspection		3.5%	\$ 139,195
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,193,100
Impact Fee Project Cost TOTAL:			\$ 5,946,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-8
Name:	Cole Ranch E-W SA #1	This project consists of the construction of a new four lane divided concrete secondary arterial (Cole Ranch MPC).		
Limits:	Cole Ranch N-S SA to Future Loop			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	4,585			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	15,793	cy	\$ 9.25	\$ 146,083
207	12" Lime Stabilization (with Lime @ 50#/sy)	30,567	sy	\$ 8.00	\$ 244,533
306	11" Concrete Pavement and Curb	28,529	sy	\$ 54.00	\$ 1,540,560
407	5' Concrete Sidewalk	45,850	sy	\$ 4.50	\$ 206,325
507	Turn Lanes and Median Openings	2,054	sy	\$ 62.00	\$ 127,329
Paving Construction Cost Subtotal:					\$ 2,264,831
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$	-	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	67,945	
√ Roadway Drainage	Standard Internal System	30%	\$	679,449	
√ Illumination		5%	\$	113,242	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	45,297	
√ Sewer	Minor Adjustments	1%	\$	22,648	
√ Landscaping and Irrigation		6%	\$	135,890	
√ Intersection Improvements		-	\$	500,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	1,564,470	
Paving and Allowance Subtotal:			\$	3,829,301	
Construction Contingency:			15%	\$	574,395
Mobilization			5%	\$	191,465
Prep ROW			1%	\$	38,293
Construction Cost TOTAL:			\$	4,634,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,634,000
Engineering/Survey/Testing:		16%	\$ 741,440
Inspection		3.5%	\$ 162,190
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,390,200
Impact Fee Project Cost TOTAL:			\$ 6,928,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-9
Name:	FM 2499 (1)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	C. Wolfe to 345' E of Cole Ranch-Hunter Ranch Arterial			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	5,670			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	19,530	cy	\$ 9.25	\$ 180,653
207	12" Lime Stabilization (with Lime @ 50#/sy)	37,800	sy	\$ 8.00	\$ 302,400
306	11" Concrete Pavement and Curb	35,280	sy	\$ 54.00	\$ 1,905,120
407	5' Concrete Sidewalk	56,700	sy	\$ 4.50	\$ 255,150
507	Turn Lanes and Median Openings	2,540	sy	\$ 62.00	\$ 157,461
Paving Construction Cost Subtotal:					\$ 2,800,783
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	140,039	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	84,023	
√ Roadway Drainage	Standard Internal System	30%	\$	840,235	
√ Illumination		5%	\$	140,039	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	56,016	
√ Sewer	Minor Adjustments	1%	\$	28,008	
√ Landscaping and Irrigation		6%	\$	168,047	
√ Intersection Improvements		-	\$	500,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 1,956,407
Paving and Allowance Subtotal:					\$ 4,757,190
Construction Contingency:					15% \$ 713,579
Mobilization					5% \$ 237,860
Prep ROW					3% \$ 142,716
Construction Cost TOTAL:					\$ 5,852,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,852,000
Engineering/Survey/Testing:		16%	\$ 936,320
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 1,357,600

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-10
Name:	FM 2499 (2)	This project consists of the construction of a new four lane divided concrete secondary arterial (Cole Ranch MPC).		
Limits:	345' E of Cole Ranch-Hunter Ranch Arterial to Underwood (2)			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	6,715			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	23,129	cy	\$ 9.25	\$ 213,947
207	12" Lime Stabilization (with Lime @ 50#/sy)	44,767	sy	\$ 8.00	\$ 358,133
306	11" Concrete Pavement and Curb	41,782	sy	\$ 54.00	\$ 2,256,240
407	5' Concrete Sidewalk	67,150	sy	\$ 4.50	\$ 302,175
507	Turn Lanes and Median Openings	3,008	sy	\$ 62.00	\$ 186,481
Paving Construction Cost Subtotal:					\$ 3,316,977

Major Construction Component Allowances**:			
Item Description	Notes	Allowance	Item Cost
Traffic Control	None Anticipated	0%	\$ -
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 99,509
√ Roadway Drainage	Standard Internal System	30%	\$ 995,093
√ Illumination		5%	\$ 165,849
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 100,000
√ Water	Minor Adjustments	2%	\$ 66,340
√ Sewer	Minor Adjustments	1%	\$ 33,170
√ Landscaping and Irrigation		6%	\$ 199,019
√ Intersection Improvements		-	\$ 250,000
Miscellaneous:		\$0	\$ -
		Allowance Subtotal:	\$ 1,908,979

		Paving and Allowance Subtotal:	\$ 5,225,956
		Construction Contingency:	15% \$ 783,893
		Mobilization	5% \$ 261,298
		Prep ROW	1% \$ 52,260
Construction Cost TOTAL:			\$ 6,324,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 6,324,000
Engineering/Survey/Testing:		16%	\$ 1,011,840
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 1,467,200

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-11
Name:	Cole Ranch E-W SA #2	This project consists of the construction of a new four lane divided concrete secondary arterial (Cole Ranch MPC).		
Limits:	Cole Ranch N-S SA to Cole Ranch-Hunter Ranch Arterial			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	5,585			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	19,237	cy	\$ 9.25	\$ 177,944
207	12" Lime Stabilization (with Lime @ 50#/sy)	37,233	sy	\$ 8.00	\$ 297,867
306	11" Concrete Pavement and Curb	34,751	sy	\$ 54.00	\$ 1,876,560
407	5' Concrete Sidewalk	55,850	sy	\$ 4.50	\$ 251,325
507	Turn Lanes and Median Openings	2,502	sy	\$ 62.00	\$ 155,100
Paving Construction Cost Subtotal:					\$ 2,758,796

Major Construction Component Allowances**:			
Item Description	Notes	Allowance	Item Cost
Traffic Control	None Anticipated	0%	\$ -
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 82,764
√ Roadway Drainage	Standard Internal System	30%	\$ 827,639
√ Illumination		5%	\$ 137,940
Special Drainage Structures	None Anticipated	-	\$ -
√ Water	Minor Adjustments	2%	\$ 55,176
√ Sewer	Minor Adjustments	1%	\$ 27,588
√ Landscaping and Irrigation		6%	\$ 165,528
Intersection Improvements	None Anticipated	-	\$ -
Miscellaneous:		\$0	\$ -
		Allowance Subtotal:	\$ 1,296,634

		Paving and Allowance Subtotal:	\$ 4,055,430
		Construction Contingency:	15% \$ 608,315
		Mobilization	5% \$ 202,772
		Prep ROW	1% \$ 40,554
Construction Cost TOTAL:			\$ 4,908,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,908,000
Engineering/Survey/Testing:		16%	\$ 785,280
Inspection		3.5%	\$ 171,780
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,472,400
Impact Fee Project Cost TOTAL:			\$ 7,337,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-12
Name:	H. Lively (1)	This project consists of the reconstruction of the existing pavement as a four lane divided concrete secondary arterial.		
Limits:	725' E of Seabron to 1,975' W of C. Wolfe			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	3,915			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	13,485	cy	\$ 9.25	\$ 124,736
207	12" Lime Stabilization (with Lime @ 50#/sy)	26,100	sy	\$ 8.00	\$ 208,800
306	11" Concrete Pavement and Curb	24,360	sy	\$ 54.00	\$ 1,315,440
407	5' Concrete Sidewalk	39,150	sy	\$ 4.50	\$ 176,175
507	Turn Lanes and Median Openings	1,754	sy	\$ 62.00	\$ 108,723
Paving Construction Cost Subtotal:					\$ 1,933,874
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	96,694	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	58,016	
√ Roadway Drainage	Standard Internal System	30%	\$	580,162	
√ Illumination		5%	\$	96,694	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	38,677	
√ Sewer	Minor Adjustments	1%	\$	19,339	
√ Landscaping and Irrigation		6%	\$	116,032	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	1,005,615	
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 2,939,489
Construction Contingency:					15% \$ 440,923
Mobilization					5% \$ 146,974
Prep ROW					3% \$ 88,185
Construction Cost TOTAL:					\$ 3,616,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,616,000
Engineering/Survey/Testing:		16%	\$ 578,560
Inspection		3.5%	\$ 126,560
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 542,400
Impact Fee Project Cost TOTAL:			\$ 4,864,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-13
Name:	H. Lively (2)	This project consists of the reconstruction of the existing pavement as a four lane divided concrete secondary arterial.		
Limits:	1,975' W of C. Wolfe to C. Wolfe			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	1,975			
Service Area(s):	A,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	6,803	cy	\$ 9.25	\$ 62,926
207	12" Lime Stabilization (with Lime @ 50#/sy)	13,167	sy	\$ 8.00	\$ 105,333
306	11" Concrete Pavement and Curb	12,289	sy	\$ 54.00	\$ 663,600
407	5' Concrete Sidewalk	19,750	sy	\$ 4.50	\$ 88,875
507	Turn Lanes and Median Openings	885	sy	\$ 62.00	\$ 54,847
Paving Construction Cost Subtotal:					\$ 975,581
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	48,779	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	29,267	
√ Roadway Drainage	Standard Internal System	30%	\$	292,674	
√ Illumination		5%	\$	48,779	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	19,512	
√ Sewer	Minor Adjustments	1%	\$	9,756	
√ Landscaping and Irrigation		6%	\$	58,535	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	757,302	
		Paving and Allowance Subtotal:		\$	1,732,884
		Construction Contingency:	15%	\$	259,933
		Mobilization	5%	\$	86,644
		Prep ROW	3%	\$	51,987
Construction Cost TOTAL:					\$ 2,132,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,132,000
Engineering/Survey/Testing:		16%	\$ 341,120
Inspection		3.5%	\$ 74,620
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 319,800
Impact Fee Project Cost TOTAL:			\$ 2,868,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-14
Name:	H. Lively (3)	This project consists of the construction of a new four lane divided concrete secondary arterial. (Cole Ranch MPC)		
Limits:	C. Wolfe to John Paine/Underwood (2)			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	12,670			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	43,641	cy	\$ 9.25	\$ 403,680
207	12" Lime Stabilization (with Lime @ 50#/sy)	84,467	sy	\$ 8.00	\$ 675,733
306	11" Concrete Pavement and Curb	78,836	sy	\$ 54.00	\$ 4,257,120
407	5' Concrete Sidewalk	126,700	sy	\$ 4.50	\$ 570,150
507	Turn Lanes and Median Openings	5,675	sy	\$ 62.00	\$ 351,856
Paving Construction Cost Subtotal:					\$ 6,258,540
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 187,756		
√ Roadway Drainage	Standard Internal System	30%	\$ 1,877,562		
√ Illumination		5%	\$ 312,927		
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$ 360,000		
√ Water	Minor Adjustments	2%	\$ 125,171		
√ Sewer	Minor Adjustments	1%	\$ 62,585		
√ Landscaping and Irrigation		6%	\$ 375,512		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 3,301,514		
		Paving and Allowance Subtotal:		\$ 9,560,054	
		Construction Contingency:	15%	\$ 1,434,008	
		Mobilization	5%	\$ 478,003	
		Prep ROW	1%	\$ 95,601	
		Construction Cost TOTAL:		\$ 11,568,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 11,568,000
Engineering/Survey/Testing:		16%	\$ 1,850,880
Inspection		3.5%	\$ 404,880
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 3,470,400
Impact Fee Project Cost TOTAL:			\$ 17,294,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-15
Name:	Hunter Ranch Arterial	This project consists of the construction of a new four lane divided concrete secondary arterial (Hunter Ranch MPC).		
Limits:	Hunter Ranch N-S Col #1 to Brush Creek			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	11,705			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	40,317	cy	\$ 9.25	\$ 372,934
207	12" Lime Stabilization (with Lime @ 50#/sy)	78,033	sy	\$ 8.00	\$ 624,267
306	11" Concrete Pavement and Curb	72,831	sy	\$ 54.00	\$ 3,932,880
407	5' Concrete Sidewalk	117,050	sy	\$ 4.50	\$ 526,725
507	Turn Lanes and Median Openings	5,243	sy	\$ 62.00	\$ 325,058
Paving Construction Cost Subtotal:					\$ 5,781,864
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 173,456		
√ Roadway Drainage	Standard Internal System	30%	\$ 1,734,559		
√ Illumination		5%	\$ 289,093		
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$ 640,000		
√ Water	Minor Adjustments	2%	\$ 115,637		
√ Sewer	Minor Adjustments	1%	\$ 57,819		
√ Landscaping and Irrigation		6%	\$ 346,912		
√ Intersection Improvements		-	\$ 500,000		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 3,857,476		
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 9,639,339
Construction Contingency:					15% \$ 1,445,901
Mobilization					5% \$ 481,967
Prep ROW					1% \$ 96,393
Construction Cost TOTAL:					\$ 11,664,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 11,664,000
Engineering/Survey/Testing:		16%	\$ 1,866,240
Inspection		3.5%	\$ 408,240
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 3,499,200
Impact Fee Project Cost TOTAL:			\$ 17,438,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-16
Name:	Brush Creek (1)	This project consists of the construction of a new six lane divided concrete primary arterial (Hunter Ranch MPC).		
Limits:	Hunter Ranch N-S Col #2 to I-35W			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	14,285			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	66,663	cy	\$ 9.25	\$ 616,636
201	12" Lime Stabilization (with Lime @ 50#/sy)	130,152	sy	\$ 8.00	\$ 1,041,218
301	11" Concrete Pavement and Curb	123,803	sy	\$ 54.00	\$ 6,685,380
401	5' Concrete Sidewalk	142,850	sy	\$ 4.50	\$ 642,825
501	Turn Lanes and Median Openings	6,398	sy	\$ 62.00	\$ 396,706
Paving Construction Cost Subtotal:					\$ 9,382,765
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$	-	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	281,483	
√ Roadway Drainage	Standard Internal System	30%	\$	2,814,829	
√ Illumination		5%	\$	469,138	
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$	240,000	
√ Water	Minor Adjustments	2%	\$	187,655	
√ Sewer	Minor Adjustments	1%	\$	93,828	
√ Landscaping and Irrigation		6%	\$	562,966	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
Allowance Subtotal:					\$ 4,649,900
Paving and Allowance Subtotal:					\$ 14,032,664
Construction Contingency:					15% \$ 2,104,900
Mobilization					5% \$ 701,633
Prep ROW					1% \$ 140,327
Construction Cost TOTAL:					\$ 16,980,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 16,980,000
Engineering/Survey/Testing:		16%	\$ 2,716,800
Inspection		3.5%	\$ 594,300
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 5,094,000
Impact Fee Project Cost TOTAL:			\$ 25,385,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-17
Name:	Ed Robson	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	FM 2449 to H. Lively			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	3,280			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	11,298	cy	\$ 9.25	\$ 104,504
207	12" Lime Stabilization (with Lime @ 50#/sy)	21,867	sy	\$ 8.00	\$ 174,933
306	11" Concrete Pavement and Curb	20,409	sy	\$ 54.00	\$ 1,102,080
407	5' Concrete Sidewalk	32,800	sy	\$ 4.50	\$ 147,600
507	Turn Lanes and Median Openings	1,469	sy	\$ 62.00	\$ 91,088
Paving Construction Cost Subtotal:					\$ 1,620,206
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 48,606		
√ Roadway Drainage	Standard Internal System	30%	\$ 486,062		
√ Illumination		5%	\$ 81,010		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 32,404		
√ Sewer	Minor Adjustments	1%	\$ 16,202		
√ Landscaping and Irrigation		6%	\$ 97,212		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 1,011,497		
Paving and Allowance Subtotal:					\$ 2,631,703
Construction Contingency:					15% \$ 394,755
Mobilization					5% \$ 131,585
Prep ROW					1% \$ 26,317
Construction Cost TOTAL:					\$ 3,185,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,185,000
Engineering/Survey/Testing:		16%	\$ 509,600
Inspection		3.5%	\$ 111,475
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 955,500
Impact Fee Project Cost TOTAL:			\$ 4,762,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-18
Name:	C. Wolfe	This project consists of the reconstruction of the existing pavement as a two lane concrete collector.		
Limits:	Tom Cole to FM 2449			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	8,365			
Service Area(s):	A,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	18,589	cy	\$ 9.25	\$ 171,947
211	8" Lime Stabilization (with Lime @ 50#/sy)	36,248	sy	\$ 6.00	\$ 217,490
310	8" Concrete Pavement and Curb	34,389	sy	\$ 46.00	\$ 1,581,914
411	8' Concrete Sidewalk	133,840	sy	\$ 4.50	\$ 602,280
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 2,573,632
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	128,682	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	77,209	
√ Roadway Drainage	Standard Internal System	30%	\$	772,090	
√ Illumination		5%	\$	128,682	
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$	230,000	
√ Water	Minor Adjustments	2%	\$	51,473	
√ Sewer	Minor Adjustments	1%	\$	25,736	
√ Landscaping and Irrigation		6%	\$	154,418	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	1,568,288	
		Paving and Allowance Subtotal:		\$	4,141,920
		Construction Contingency:	15%	\$	621,288
		Mobilization	5%	\$	207,096
		Prep ROW	3%	\$	124,258
Construction Cost TOTAL:					\$ 5,095,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,095,000
Engineering/Survey/Testing:		16%	\$ 815,200
Inspection		3.5%	\$ 178,325
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 764,250
Impact Fee Project Cost TOTAL:			\$ 6,853,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-19
Name:	H. Lively (4)	This project consists of the reconstruction of the existing pavement as a four lane divided concrete facility.		
Limits:	FM 2499 to H. Lively			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	3,345			
Service Area(s):	A,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	11,522	cy	\$ 9.25	\$ 106,575
207	12" Lime Stabilization (with Lime @ 50#/sy)	22,300	sy	\$ 8.00	\$ 178,400
306	11" Concrete Pavement and Curb	20,813	sy	\$ 54.00	\$ 1,123,920
407	5' Concrete Sidewalk	33,450	sy	\$ 4.50	\$ 150,525
507	Turn Lanes and Median Openings	1,498	sy	\$ 62.00	\$ 92,893
Paving Construction Cost Subtotal:					\$ 1,652,314
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	82,616	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	49,569	
√ Roadway Drainage	Standard Internal System	30%	\$	495,694	
√ Illumination		5%	\$	82,616	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	1,120,000	
√ Water	Minor Adjustments	2%	\$	33,046	
√ Sewer	Minor Adjustments	1%	\$	16,523	
√ Landscaping and Irrigation		6%	\$	99,139	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	1,979,203	
		Paving and Allowance Subtotal:	\$	3,631,517	
		Construction Contingency:	15%	\$	544,728
		Mobilization	5%	\$	181,576
		Prep ROW	3%	\$	108,946
		Construction Cost TOTAL:	\$	4,467,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,467,000
Engineering/Survey/Testing:		16%	\$ 714,720
Inspection		3.5%	\$ 156,345
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 670,050
Impact Fee Project Cost TOTAL:			\$ 6,008,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-20
Name:	Cole Ranch N-S SA	This project consists of the construction of a new four lane divided concrete secondary arterial (Cole Ranch MPC).		
Limits:	Tom Cole to H. Lively			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	12,620			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	43,469	cy	\$ 9.25	\$ 402,087
207	12" Lime Stabilization (with Lime @ 50#/sy)	84,133	sy	\$ 8.00	\$ 673,067
306	11" Concrete Pavement and Curb	78,524	sy	\$ 54.00	\$ 4,240,320
407	5' Concrete Sidewalk	126,200	sy	\$ 4.50	\$ 567,900
507	Turn Lanes and Median Openings	5,653	sy	\$ 62.00	\$ 350,468
Paving Construction Cost Subtotal:					\$ 6,233,842
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$	-	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	187,015	
√ Roadway Drainage	Standard Internal System	30%	\$	1,870,153	
√ Illumination		5%	\$	311,692	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	510,000	
√ Water	Minor Adjustments	2%	\$	124,677	
√ Sewer	Minor Adjustments	1%	\$	62,338	
√ Landscaping and Irrigation		6%	\$	374,031	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 3,439,906
Paving and Allowance Subtotal:					\$ 9,673,747
Construction Contingency:					15% \$ 1,451,062
Mobilization					5% \$ 483,687
Prep ROW					1% \$ 96,737
Construction Cost TOTAL:					\$ 11,706,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 11,706,000
Engineering/Survey/Testing:		16%	\$ 1,872,960
Inspection		3.5%	\$ 409,710
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 3,511,800
Impact Fee Project Cost TOTAL:			\$ 17,500,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-21
Name:	Cole Ranch-Hunter Ranch Arterial	This project consists of the construction of a new six lane divided concrete primary arterial (Cole Ranch MPC).		
Limits:	Amyx to Hunter Ranch Arterial			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	18,130			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	84,607	cy	\$ 9.25	\$ 782,612
201	12" Lime Stabilization (with Lime @ 50#/sy)	165,184	sy	\$ 8.00	\$ 1,321,476
301	11" Concrete Pavement and Curb	157,127	sy	\$ 54.00	\$ 8,484,840
401	5' Concrete Sidewalk	181,300	sy	\$ 4.50	\$ 815,850
501	Turn Lanes and Median Openings	8,121	sy	\$ 62.00	\$ 503,485
Paving Construction Cost Subtotal:					\$ 11,908,262
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$	-	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	357,248	
√ Roadway Drainage	Standard Internal System	30%	\$	3,572,479	
√ Illumination		5%	\$	595,413	
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$	440,000	
√ Water	Minor Adjustments	2%	\$	238,165	
√ Sewer	Minor Adjustments	1%	\$	119,083	
√ Landscaping and Irrigation		6%	\$	714,496	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	6,286,883	
Paving and Allowance Subtotal:			\$	18,195,146	
Construction Contingency:			15%	\$	2,729,272
Mobilization			5%	\$	909,757
Prep ROW			1%	\$	181,951
Construction Cost TOTAL:					\$ 22,017,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 22,017,000
Engineering/Survey/Testing:		16%	\$ 3,522,720
Inspection		3.5%	\$ 770,595
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 6,605,100
Impact Fee Project Cost TOTAL:			\$ 32,915,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-22
Name:	Future Loop (2)	This project consists of the construction of a new		
Limits:	Jim Christal to 4,965' S of Jim Christal	six lane divided concrete primary arterial.		
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	4,965			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	23,170	cy	\$ 9.25	\$ 214,323
201	12" Lime Stabilization (with Lime @ 50#/sy)	45,237	sy	\$ 8.00	\$ 361,893
301	11" Concrete Pavement and Curb	43,030	sy	\$ 54.00	\$ 2,323,620
401	5' Concrete Sidewalk	49,650	sy	\$ 4.50	\$ 223,425
501	Turn Lanes and Median Openings	2,224	sy	\$ 62.00	\$ 137,882
Paving Construction Cost Subtotal:					\$ 3,261,143
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 97,834		
√ Roadway Drainage	Standard Internal System	30%	\$ 978,343		
√ Illumination		5%	\$ 163,057		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 65,223		
√ Sewer	Minor Adjustments	1%	\$ 32,611		
√ Landscaping and Irrigation		6%	\$ 195,669		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
Allowance Subtotal:					\$ 1,532,737
Paving and Allowance Subtotal:					\$ 4,793,880
Construction Contingency:					15% \$ 719,082
Mobilization					5% \$ 239,694
Prep ROW					1% \$ 47,939
Construction Cost TOTAL:					\$ 5,801,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,801,000
Engineering/Survey/Testing:		16%	\$ 928,160
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 1,345,800

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-23
Name:	Future Loop (3)	This project consists of the construction of a new six lane divided concrete primary arterial (Cole Ranch MPC).		
Limits:	260' N of Tom Cole to FM 2449			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	9,400			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	43,867	cy	\$ 9.25	\$ 405,767
201	12" Lime Stabilization (with Lime @ 50#/sy)	85,644	sy	\$ 8.00	\$ 685,156
301	11" Concrete Pavement and Curb	81,467	sy	\$ 54.00	\$ 4,399,200
401	5' Concrete Sidewalk	94,000	sy	\$ 4.50	\$ 423,000
501	Turn Lanes and Median Openings	4,210	sy	\$ 62.00	\$ 261,046
Paving Construction Cost Subtotal:					\$ 6,174,168
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$	-	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	185,225	
√ Roadway Drainage	Standard Internal System	30%	\$	1,852,250	
√ Illumination		5%	\$	308,708	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	2,150,000	
√ Water	Minor Adjustments	2%	\$	123,483	
√ Sewer	Minor Adjustments	1%	\$	61,742	
√ Landscaping and Irrigation		6%	\$	370,450	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 5,051,859
Paving and Allowance Subtotal:					\$ 11,226,027
Construction Contingency:					15% \$ 1,683,904
Mobilization					5% \$ 561,301
Prep ROW					1% \$ 112,260
Construction Cost TOTAL:					\$ 13,584,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 13,584,000
Engineering/Survey/Testing:		16%	\$ 2,173,440
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 3,151,400

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-24
Name:	Future Loop (4)	This project consists of the reconstruction of the existing pavement as a six lane divided concrete primary arterial.		
Limits:	1,040' W of Amyx to Underwood			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	3,000			
Service Area(s):	A,NAA			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	14,000	cy	\$ 9.25	\$ 129,500
201	12" Lime Stabilization (with Lime @ 50#/sy)	27,333	sy	\$ 8.00	\$ 218,667
301	11" Concrete Pavement and Curb	26,000	sy	\$ 54.00	\$ 1,404,000
401	5' Concrete Sidewalk	30,000	sy	\$ 4.50	\$ 135,000
501	Turn Lanes and Median Openings	1,344	sy	\$ 62.00	\$ 83,313
Paving Construction Cost Subtotal:					\$ 1,970,479
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	98,524	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	59,114	
√ Roadway Drainage	Standard Internal System	30%	\$	591,144	
√ Illumination		5%	\$	98,524	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	39,410	
√ Sewer	Minor Adjustments	1%	\$	19,705	
√ Landscaping and Irrigation		6%	\$	118,229	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	1,274,649	
		Paving and Allowance Subtotal:	\$	3,245,128	
		Construction Contingency:	15%	\$	486,769
		Mobilization	5%	\$	162,256
		Prep ROW	3%	\$	97,354
		Construction Cost TOTAL:	\$	3,992,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,992,000
Engineering/Survey/Testing:		16%	\$ 638,720
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 926,200

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-25
Name:	Future Loop (5)	This project consists of the reconstruction of the existing pavement as a six lane divided concrete primary arterial.		
Limits:	Underwood to I-35W SBFR			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	3,865			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	18,037	cy	\$ 9.25	\$ 166,839
201	12" Lime Stabilization (with Lime @ 50#/sy)	35,214	sy	\$ 8.00	\$ 281,716
301	11" Concrete Pavement and Curb	33,497	sy	\$ 54.00	\$ 1,808,820
401	5' Concrete Sidewalk	38,650	sy	\$ 4.50	\$ 173,925
501	Turn Lanes and Median Openings	1,731	sy	\$ 62.00	\$ 107,334
Paving Construction Cost Subtotal:					\$ 2,538,634
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	126,932	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	76,159	
√ Roadway Drainage	Standard Internal System	30%	\$	761,590	
√ Illumination		5%	\$	126,932	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	50,773	
√ Sewer	Minor Adjustments	1%	\$	25,386	
√ Landscaping and Irrigation		6%	\$	152,318	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	1,320,090	
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 3,858,724
Construction Contingency:					15% \$ 578,809
Mobilization					5% \$ 192,936
Prep ROW					3% \$ 115,762
Construction Cost TOTAL:					\$ 4,747,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,747,000
Engineering/Survey/Testing:		16%	\$ 759,520
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 1,101,400

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-26
Name:	Jim Christal-Tom Cole Collector	This project consists of the construction of a new two lane concrete collector.		
Limits:	Jim Christal to Tom Cole			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	4,030			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	8,956	cy	\$ 9.25	\$ 82,839
211	8" Lime Stabilization (with Lime @ 50#/sy)	17,463	sy	\$ 6.00	\$ 104,780
310	8" Concrete Pavement and Curb	16,568	sy	\$ 46.00	\$ 762,118
411	8' Concrete Sidewalk	64,480	sy	\$ 4.50	\$ 290,160
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 1,239,897
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 37,197		
√ Roadway Drainage	Standard Internal System	30%	\$ 371,969		
√ Illumination		5%	\$ 61,995		
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$ 430,000		
√ Water	Minor Adjustments	2%	\$ 24,798		
√ Sewer	Minor Adjustments	1%	\$ 12,399		
√ Landscaping and Irrigation		6%	\$ 74,394		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 1,012,751		
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 2,252,648
Construction Contingency:					15% \$ 337,897
Mobilization					5% \$ 112,632
Prep ROW					1% \$ 22,526
Construction Cost TOTAL:					\$ 2,726,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,726,000
Engineering/Survey/Testing:		16%	\$ 436,160
Inspection		3.5%	\$ 95,410
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 817,800
Impact Fee Project Cost TOTAL:			\$ 4,075,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-27
Name:	Westcourt	The project consists of the widening of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	Airport to Springside			
Impact Fee Class:	SA (1/2)			
Ultimate Class:	Secondary Arterial			
Length (lf):	4,160			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	7,164	cy	\$ 9.25	\$ 66,271
208	12" Lime Stabilization (with Lime @ 50#/sy)	13,867	sy	\$ 8.00	\$ 110,933
307	11" Concrete Pavement and Curb	12,942	sy	\$ 54.00	\$ 698,880
408	5' Concrete Sidewalk	41,600	sy	\$ 4.50	\$ 187,200
508	Turn Lanes and Median Openings	1,863	sy	\$ 62.00	\$ 115,527
Paving Construction Cost Subtotal:					\$ 1,178,811
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	58,941	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	35,364	
√ Roadway Drainage	Standard Internal System	30%	\$	353,643	
√ Illumination		5%	\$	58,941	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	23,576	
√ Sewer	Minor Adjustments	1%	\$	11,788	
√ Landscaping and Irrigation		6%	\$	70,729	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	612,982	
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 1,791,793
Construction Contingency:					15% \$ 268,769
Mobilization					5% \$ 89,590
Prep ROW					3% \$ 53,754
Construction Cost TOTAL:					\$ 2,204,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,204,000
Engineering/Survey/Testing:		16%	\$ 352,640
Inspection		3.5%	\$ 77,140
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 330,600
Impact Fee Project Cost TOTAL:			\$ 2,964,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No. A-28
Name:	Westcourt/Underwood	This project consists of the construction of a new four lane divided concrete secondary arterial. This segment aligns Westcourt with Underwood.	
Limits:	Springside to 1,700' S of Springside		
Impact Fee Class:	SA		
Ultimate Class:	Secondary Arterial		
Length (lf):	1,700		
Service Area(s):	A		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	5,856	cy	\$ 9.25	\$ 54,164
207	12" Lime Stabilization (with Lime @ 50#/sy)	11,333	sy	\$ 8.00	\$ 90,667
306	11" Concrete Pavement and Curb	10,578	sy	\$ 54.00	\$ 571,200
407	5' Concrete Sidewalk	17,000	sy	\$ 4.50	\$ 76,500
507	Turn Lanes and Median Openings	761	sy	\$ 62.00	\$ 47,210
Paving Construction Cost Subtotal:					\$ 839,741
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 25,192		
√ Roadway Drainage	Standard Internal System	30%	\$ 251,922		
√ Illumination		5%	\$ 41,987		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 16,795		
√ Sewer	Minor Adjustments	1%	\$ 8,397		
√ Landscaping and Irrigation		6%	\$ 50,384		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 394,678		
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 1,234,419
Construction Contingency:					15% \$ 185,163
Mobilization					5% \$ 61,721
Prep ROW					1% \$ 12,344
Construction Cost TOTAL:					\$ 1,494,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,494,000
Engineering/Survey/Testing:		16%	\$ 239,040
Inspection		3.5%	\$ 52,290
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 448,200
Impact Fee Project Cost TOTAL:			\$ 2,234,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-29
Name:	Underwood (1)	This project consists of the reconstruction of the existing pavement as a four lane divided concrete secondary arterial.		
Limits:	1,700' S of Springside to 2,655' N of FM 2449			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	1,515			
Service Area(s):	A,NAA			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	5,218	cy	\$ 9.25	\$ 48,270
207	12" Lime Stabilization (with Lime @ 50#/sy)	10,100	sy	\$ 8.00	\$ 80,800
306	11" Concrete Pavement and Curb	9,427	sy	\$ 54.00	\$ 509,040
407	5' Concrete Sidewalk	15,150	sy	\$ 4.50	\$ 68,175
507	Turn Lanes and Median Openings	679	sy	\$ 62.00	\$ 42,073
Paving Construction Cost Subtotal:					\$ 748,357
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	37,418	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	22,451	
√ Roadway Drainage	Standard Internal System	30%	\$	224,507	
√ Illumination		5%	\$	37,418	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	890,000	
√ Water	Minor Adjustments	2%	\$	14,967	
√ Sewer	Minor Adjustments	1%	\$	7,484	
√ Landscaping and Irrigation		6%	\$	44,901	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
Allowance Subtotal:					\$ 1,279,146
Paving and Allowance Subtotal:					\$ 2,027,503
Construction Contingency:					15% \$ 304,125
Mobilization					5% \$ 101,375
Prep ROW					3% \$ 60,825
Construction Cost TOTAL:					\$ 2,494,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,494,000
Engineering/Survey/Testing:		16%	\$ 399,040
Inspection		3.5%	\$ 87,290
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 374,100
Impact Fee Project Cost TOTAL:			\$ 3,354,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-30
Name:	Underwood (2)	This project consists of the construction of a new four lane divided concrete secondary arterial. This segment straightens out Underwood to its existing crossing at FM 2449 at John Paine (Cole Ranch MPC).		
Limits:	2,655' N of FM 2449 to FM 2449			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	2,655			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	9,145	cy	\$ 9.25	\$ 84,591
207	12" Lime Stabilization (with Lime @ 50#/sy)	17,700	sy	\$ 8.00	\$ 141,600
306	11" Concrete Pavement and Curb	16,520	sy	\$ 54.00	\$ 892,080
407	5' Concrete Sidewalk	26,550	sy	\$ 4.50	\$ 119,475
507	Turn Lanes and Median Openings	1,189	sy	\$ 62.00	\$ 73,732
Paving Construction Cost Subtotal:					\$ 1,311,478
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$	-	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	39,344	
√ Roadway Drainage	Standard Internal System	30%	\$	393,443	
√ Illumination		5%	\$	65,574	
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$	450,000	
√ Water	Minor Adjustments	2%	\$	26,230	
√ Sewer	Minor Adjustments	1%	\$	13,115	
√ Landscaping and Irrigation		6%	\$	78,689	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	1,066,395	
Paving and Allowance Subtotal:					\$ 2,377,872
Construction Contingency:					15% \$ 356,681
Mobilization					5% \$ 118,894
Prep ROW					1% \$ 23,779
Construction Cost TOTAL:					\$ 2,878,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,878,000
Engineering/Survey/Testing:		16%	\$ 460,480
Inspection		3.5%	\$ 100,730
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 863,400
Impact Fee Project Cost TOTAL:			\$ 4,303,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No. A-31
Name:	John Paine/Underwood (1)	This project consists of the reconstruction of the existing pavement as a four lane divided concrete secondary arterial (Cole Ranch MPC).	
Limits:	FM 2449 to 1,265' N of H. Lively		
Impact Fee Class:	SA		
Ultimate Class:	Secondary Arterial		
Length (lf):	3,810		
Service Area(s):	A,ETJ		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	13,123	cy	\$ 9.25	\$ 121,391
207	12" Lime Stabilization (with Lime @ 50#/sy)	25,400	sy	\$ 8.00	\$ 203,200
306	11" Concrete Pavement and Curb	23,707	sy	\$ 54.00	\$ 1,280,160
407	5' Concrete Sidewalk	38,100	sy	\$ 4.50	\$ 171,450
507	Turn Lanes and Median Openings	1,707	sy	\$ 62.00	\$ 105,807
Paving Construction Cost Subtotal:					\$ 1,882,008
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	94,100	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	56,460	
√ Roadway Drainage	Standard Internal System	30%	\$	564,602	
√ Illumination		5%	\$	94,100	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	37,640	
√ Sewer	Minor Adjustments	1%	\$	18,820	
√ Landscaping and Irrigation		6%	\$	112,920	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	978,644	
		Paving and Allowance Subtotal:	\$	2,860,652	
		Construction Contingency:	15%	\$	429,098
		Mobilization	5%	\$	143,033
		Prep ROW	3%	\$	85,820
Construction Cost TOTAL:					\$ 3,519,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,519,000
Engineering/Survey/Testing:		16%	\$ 563,040
Inspection		3.5%	\$ 123,165
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 527,850
Impact Fee Project Cost TOTAL:			\$ 4,733,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-32
Name:	John Paine/Underwood (2)	This project consists of the reconstruction of the existing pavement as a four lane divided concrete secondary arterial (Cole Ranch MPC).		
Limits:	1,265' N of H. Lively to 970' N of Brush Creek			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	3,260			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	11,229	cy	\$ 9.25	\$ 103,867
207	12" Lime Stabilization (with Lime @ 50#/sy)	21,733	sy	\$ 8.00	\$ 173,867
306	11" Concrete Pavement and Curb	20,284	sy	\$ 54.00	\$ 1,095,360
407	5' Concrete Sidewalk	32,600	sy	\$ 4.50	\$ 146,700
507	Turn Lanes and Median Openings	1,460	sy	\$ 62.00	\$ 90,533
Paving Construction Cost Subtotal:					\$ 1,610,327
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	80,516	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	48,310	
√ Roadway Drainage	Standard Internal System	30%	\$	483,098	
√ Illumination		5%	\$	80,516	
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$	360,000	
√ Water	Minor Adjustments	2%	\$	32,207	
√ Sewer	Minor Adjustments	1%	\$	16,103	
√ Landscaping and Irrigation		6%	\$	96,620	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
Allowance Subtotal:					\$ 1,197,370
Paving and Allowance Subtotal:					\$ 2,807,697
Construction Contingency:					15% \$ 421,155
Mobilization					5% \$ 140,385
Prep ROW					3% \$ 84,231
Construction Cost TOTAL:					\$ 3,454,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,454,000
Engineering/Survey/Testing:		16%	\$ 552,640
Inspection		3.5%	\$ 120,890
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 518,100
Impact Fee Project Cost TOTAL:			\$ 4,646,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-33
Name:	John Paine/Underwood (3)	This project consists of the construction of a new four lane divided concrete secondary arterial (Hunter Ranch MPC).		
Limits:	970' N of Brush Creek to Brush Creek			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	970			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	3,341	cy	\$ 9.25	\$ 30,905
207	12" Lime Stabilization (with Lime @ 50#/sy)	6,467	sy	\$ 8.00	\$ 51,733
306	11" Concrete Pavement and Curb	6,036	sy	\$ 54.00	\$ 325,920
407	5' Concrete Sidewalk	9,700	sy	\$ 4.50	\$ 43,650
507	Turn Lanes and Median Openings	434	sy	\$ 62.00	\$ 26,938
Paving Construction Cost Subtotal:					\$ 479,146
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 14,374		
√ Roadway Drainage	Standard Internal System	30%	\$ 143,744		
√ Illumination		5%	\$ 23,957		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 9,583		
√ Sewer	Minor Adjustments	1%	\$ 4,791		
√ Landscaping and Irrigation		6%	\$ 28,749		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 225,199		
Paving and Allowance Subtotal:			\$ 704,345		
Construction Contingency:			15%	\$ 105,652	
Mobilization			5%	\$ 35,217	
Prep ROW			1%	\$ 7,043	
Construction Cost TOTAL:			\$ 853,000		

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 853,000
Engineering/Survey/Testing:		16%	\$ 136,480
Inspection		3.5%	\$ 29,855
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 255,900
Impact Fee Project Cost TOTAL:			\$ 1,275,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-34
Name:	Western	The project consists of the widening of the existing two lane concrete pavement to a six lane divided concrete primary arterial.		
Limits:	Jim Christal to Airport			
Impact Fee Class:	PA (2/3)			
Ultimate Class:	Primary Arterial			
Length (lf):	6,485			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
102	Unclassified Street Excavation	19,455	cy	\$ 9.25	\$ 179,959
202	12" Lime Stabilization (with Lime @ 50#/sy)	39,270	sy	\$ 8.00	\$ 314,162
302	11" Concrete Pavement and Curb	37,109	sy	\$ 54.00	\$ 2,003,865
402	5' Concrete Sidewalk	32,425	sy	\$ 4.50	\$ 145,913
502	Turn Lanes and Median Openings	2,906	sy	\$ 62.00	\$ 180,170
Paving Construction Cost Subtotal:					\$ 2,824,068
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	141,203	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	84,722	
√ Roadway Drainage	Standard Internal System	30%	\$	847,221	
√ Illumination		5%	\$	141,203	
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$	60,000	
√ Water	Minor Adjustments	2%	\$	56,481	
√ Sewer	Minor Adjustments	1%	\$	28,241	
√ Landscaping and Irrigation		6%	\$	169,444	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
Allowance Subtotal:					\$ 1,528,516
Paving and Allowance Subtotal:					\$ 4,352,584
Construction Contingency:					15% \$ 652,888
Mobilization					5% \$ 217,629
Prep ROW					3% \$ 130,578
Construction Cost TOTAL:					\$ 5,354,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,354,000
Engineering/Survey/Testing:		16%	\$ 856,640
Inspection		3.5%	\$ 187,390
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 803,100
Impact Fee Project Cost TOTAL:			\$ 7,201,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-35
Name:	Precision (1)	This project consists of the construction of a new two lane concrete collector.		
Limits:	Jim Christal to 1,775' N of Airport			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	2,220			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	4,933	cy	\$ 9.25	\$ 45,633
211	8" Lime Stabilization (with Lime @ 50#/sy)	9,620	sy	\$ 6.00	\$ 57,720
310	8" Concrete Pavement and Curb	9,127	sy	\$ 46.00	\$ 419,827
411	8' Concrete Sidewalk	35,520	sy	\$ 4.50	\$ 159,840
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 683,020
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 20,491		
√ Roadway Drainage	Standard Internal System	30%	\$ 204,906		
√ Illumination		5%	\$ 34,151		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 13,660		
√ Sewer	Minor Adjustments	1%	\$ 6,830		
√ Landscaping and Irrigation		6%	\$ 40,981		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 321,019		
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 1,004,039
Construction Contingency:					15% \$ 150,606
Mobilization					5% \$ 50,202
Prep ROW					1% \$ 10,040
Construction Cost TOTAL:					\$ 1,215,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,215,000
Engineering/Survey/Testing:		16%	\$ 194,400
Inspection		3.5%	\$ 42,525
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 364,500
Impact Fee Project Cost TOTAL:			\$ 1,816,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-36
Name:	Precision (2)	This project consists of the reconstruction of the existing pavement as a two lane concrete collector.		
Limits:	1,775' N of Airport to Airport			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	1,775			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	3,944	cy	\$ 9.25	\$ 36,486
211	8" Lime Stabilization (with Lime @ 50#/sy)	7,692	sy	\$ 6.00	\$ 46,150
310	8" Concrete Pavement and Curb	7,297	sy	\$ 46.00	\$ 335,672
411	8' Concrete Sidewalk	28,400	sy	\$ 4.50	\$ 127,800
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 546,108
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	27,305	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	16,383	
√ Roadway Drainage	Standard Internal System	30%	\$	163,833	
√ Illumination		5%	\$	27,305	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	10,922	
√ Sewer	Minor Adjustments	1%	\$	5,461	
√ Landscaping and Irrigation		6%	\$	32,767	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	283,976	
Paving and Allowance Subtotal:			\$	830,085	
Construction Contingency:			15%	\$	124,513
Mobilization			5%	\$	41,504
Prep ROW			3%	\$	24,903
Construction Cost TOTAL:			\$	1,022,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,022,000
Engineering/Survey/Testing:		16%	\$ 163,520
Inspection		3.5%	\$ 35,770
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 153,300
Impact Fee Project Cost TOTAL:			\$ 1,375,000

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City of Denton - 2015 Roadway Impact Fee Study

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

Roadway Improvements - Service Area B

#	IF Class	Project	Limits		Percent in Service Area	Project Cost	Total Cost in Service Area
			From	To			
B-1	C	Parvin	Highland Park	McCormick	100%	\$ 2,456,000	\$ 2,456,000
B-2	SA	Hobson	Country Club	Teasley	100%	\$ 9,163,000	\$ 9,163,000
B-3	PA	Vintage	490' W of Bonnie Brae	Fort Worth (US 377)	100%	\$ 4,187,189	\$ 4,187,189
B-4	C	El Paseo	Country Club	Belmont	100%	\$ 2,305,000	\$ 2,305,000
B-5	SA	Ryan	Country Club	Teasley	100%	\$ 16,369,000	\$ 16,369,000
B-6	SA (1/2)	Robinson (1)	Teasley	220' E of Wheeler Ridge	100%	\$ 2,381,000	\$ 2,381,000
B-7	SA (1/2)	Robinson (2)	175' E of Berkley	315' E of State School Rd	100%	\$ 892,000	\$ 892,000
B-8	C (1/3)	Creekdale (1)	Ryan	660' S. of Ryan	100%	\$ 194,000	\$ 194,000
B-9	C	Creekdale (2)	660' S. of Ryan	Thistle Way	100%	\$ 2,343,000	\$ 2,343,000
B-10	C (1/3)	Creekdale (3)	Thistle Way	Riverpass	50%	\$ 182,000	\$ 91,000
B-11	C	Creekdale (4)	210' E of Riverchase Trail	280' W of Pimlico	100%	\$ 3,551,000	\$ 3,551,000
B-12	PA	Brush Creek (2)	I-35W NBFR	John Paine (Future)	100%	\$ 4,024,000	\$ 4,024,000
B-13	PA	Brush Creek (3)	John Paine (Future)	2,010' E of John Paine (Future)	100%	\$ 3,963,000	\$ 3,963,000
B-14	PA	Brush Creek (4)	225' W. of Fort Worth	500' E. of Fort Worth	100%	\$ 1,603,000	\$ 1,603,000
B-15	PA	Brush Creek (5)	500' E. of Fort Worth	2,180' East of Fort Worth	50%	\$ 3,189,000	\$ 1,594,500
B-16	PA	Hickory Creek (1)	Country Club	1,955' E. of Country Club	100%	\$ 4,654,000	\$ 4,654,000
B-17	PA	Hickory Creek (2)	Riverpass	Montecito	50%	\$ 3,681,000	\$ 1,840,500
B-18	PA	Hickory Creek (3)	Montecito	Teasley	100%	\$ 7,254,000	\$ 7,254,000
B-19	PA (1/3)	Hickory Creek (4)	Teasley	Nautical	100%	\$ 339,000	\$ 339,000
B-20	PA (2/3)	Hickory Creek (5)	Nautical	Erin	100%	\$ 740,000	\$ 740,000
B-21	PA	Hickory Creek (6)	Erin	State School Road (Future)	100%	\$ 875,000	\$ 875,000
B-22	C	John Paine-Fort Worth Collector	John Paine	Fort Worth (US 377)	100%	\$ 2,244,000	\$ 2,244,000
B-23	C	John Paine (1)	Vintage	Brush Creek	100%	\$ 6,828,000	\$ 6,828,000
B-24	C	John Paine (2)	Brush Creek	Johnson	50%	\$ 2,350,000	\$ 1,175,000
B-25	C	John Paine (3)	Johnson	135' N of Athens	100%	\$ 1,858,000	\$ 1,858,000
B-26	SA	Bonnie Brae (4)	I-35E SBFR	Vintage	100%	\$ 10,578,162	\$ 10,578,162
B-27	SA	Bonnie Brae (5)	Vintage	Fort Worth (US 377)	100%	\$ 8,348,000	\$ 8,348,000
B-28	C	Highland Park	130' S of Willowcrest	Roselawn	100%	\$ 3,090,000	\$ 3,090,000
B-29	PA	Fort Worth (US 377)	I-35E	S City Limits	100%	\$ 9,079,000	\$ 9,079,000
B-30	SA	FM 1830	Fort Worth (US 377)	Brush Creek	100%	\$ 3,235,400	\$ 3,235,400
B-31	C	Ryan-Creekdale Collector	Ryan	Creekdale	100%	\$ 2,630,000	\$ 2,630,000
B-32	PA	Teasley	Sundown	S City Limits	100%	\$ 5,250,000	\$ 5,250,000
TOTAL						\$ 129,835,751	\$ 125,134,751

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-1
Name:	Parvin	This project consists of the construction of a new two lane asphalt collector.		
Limits:	Highland Park to McCormick			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	2,685			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	5,967	cy	\$ 9.25	\$ 55,192
208	2" Asphalt (Type C)	10,740	sy	\$ 7.75	\$ 83,235
308	4" Asphalt Base (Type B)	10,740	sy	\$ 11.50	\$ 123,510
408	5" Asphalt Base (Type B)	11,337	sy	\$ 18.50	\$ 209,728
508	8" Lime Stabilization (with Lime @ 50#/sy)	11,635	sy	\$ 3.00	\$ 34,905
608	8' Concrete Sidewalk	42,960	sf	\$ 4.50	\$ 193,320
708	Machine Laid Curb & Gutter	5,370	lf	\$ 10.00	\$ 53,700
808	Turn Lanes and Median Openings	0	sy	\$ 40.75	\$ -
Paving Construction Cost Subtotal:					\$ 753,590
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 22,608		
√ Roadway Drainage	Standard Internal System	30%	\$ 226,077		
√ Illumination		5%	\$ 37,680		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 250,000		
√ Water	Minor Adjustments	2%	\$ 15,072		
√ Sewer	Minor Adjustments	1%	\$ 7,536		
√ Landscaping and Irrigation		6%	\$ 45,215		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 604,187		
		Paving and Allowance Subtotal:	\$ 1,357,777		
		Construction Contingency:	15%	\$ 203,667	
		Mobilization	5%	\$ 67,889	
		Prep ROW	1%	\$ 13,578	
Construction Cost TOTAL:					\$ 1,643,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,643,000
Engineering/Survey/Testing:		16%	\$ 262,880
Inspection		3.5%	\$ 57,505
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 492,900
Impact Fee Project Cost TOTAL:			\$ 2,456,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-2
Name:	Hobson	This project consists of the reconstruction of the existing pavement as a four lane concrete secondary arterial.		
Limits:	Country Club to Teasley			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	6,045			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	20,822	cy	\$ 9.25	\$ 192,600
207	12" Lime Stabilization (with Lime @ 50#/sy)	40,300	sy	\$ 8.00	\$ 322,400
306	11" Concrete Pavement and Curb	37,613	sy	\$ 54.00	\$ 2,031,120
407	5' Concrete Sidewalk	60,450	sy	\$ 4.50	\$ 272,025
507	Turn Lanes and Median Openings	2,708	sy	\$ 62.00	\$ 167,875
Paving Construction Cost Subtotal:					\$ 2,986,020
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	149,301	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	89,581	
√ Roadway Drainage	Standard Internal System	30%	\$	895,806	
√ Illumination		5%	\$	149,301	
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$	500,000	
√ Water	Minor Adjustments	2%	\$	59,720	
√ Sewer	Minor Adjustments	1%	\$	29,860	
√ Landscaping and Irrigation		6%	\$	179,161	
√ Intersection Improvements		-	\$	500,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	2,552,730	
Paving and Allowance Subtotal:			\$	5,538,751	
Construction Contingency:			15%	\$	830,813
Mobilization			5%	\$	276,938
Prep ROW			3%	\$	166,163
Construction Cost TOTAL:					\$ 6,813,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 6,813,000
Engineering/Survey/Testing:		16%	\$ 1,090,080
Inspection		3.5%	\$ 238,455
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 1,021,950
Impact Fee Project Cost TOTAL:			\$ 9,163,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-3
Name:	Vintage	This project consists of the construction of the outside lanes of an existing two lane concrete facility to become a primary arterial. The City's contribution to the overall project (Bonnie Brae + Vintage) is \$22,037,838. The contribution to Vintage is \$4,187,189 (19%).		
Limits:	490' W of Bonnie Brae to Fort Worth (US 377)			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	5,095			
Service Area(s):	B			

Roadway Construction Cost Projection	
Construction Cost TOTAL:	\$ 46,739,189

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 46,739,189
Engineering/Survey/Testing:		-	\$ 10,250,000
ROW/Easement Acquisition:	Existing Alignment	-	\$ 16,950,000
Overall Project Cost Total:			\$ 73,939,189
City Contribution:			\$ 22,037,838
Impact Fee Project Cost (19%):			\$ 4,187,189

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-4
Name:	El Paseo	This project consists of the construction of a new two lane concrete collector.		
Limits:	Country Club to Belmont			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	1,910			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	4,244	cy	\$ 9.25	\$ 39,261
211	8" Lime Stabilization (with Lime @ 50#/sy)	8,277	sy	\$ 6.00	\$ 49,660
310	8" Concrete Pavement and Curb	7,852	sy	\$ 46.00	\$ 361,202
411	8' Concrete Sidewalk	30,560	sy	\$ 4.50	\$ 137,520
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 587,643
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 17,629		
√ Roadway Drainage	Standard Internal System	30%	\$ 176,293		
√ Illumination		5%	\$ 29,382		
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$ 410,000		
√ Water	Minor Adjustments	2%	\$ 11,753		
√ Sewer	Minor Adjustments	1%	\$ 5,876		
√ Landscaping and Irrigation		6%	\$ 35,259		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 686,192		
Paving and Allowance Subtotal:					\$ 1,273,836
Construction Contingency:					15% \$ 191,075
Mobilization					5% \$ 63,692
Prep ROW					1% \$ 12,738
Construction Cost TOTAL:					\$ 1,542,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,542,000
Engineering/Survey/Testing:		16%	\$ 246,720
Inspection		3.5%	\$ 53,970
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 462,600
Impact Fee Project Cost TOTAL:			\$ 2,305,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-5
Name:	Ryan	This project consists of the reconstruction of the existing pavement as a four lane divided concrete secondary arterial.		
Limits:	Country Club to Teasley			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	10,875			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	37,458	cy	\$ 9.25	\$ 346,490
207	12" Lime Stabilization (with Lime @ 50#/sy)	72,500	sy	\$ 8.00	\$ 580,000
306	11" Concrete Pavement and Curb	67,667	sy	\$ 54.00	\$ 3,654,000
407	5' Concrete Sidewalk	108,750	sy	\$ 4.50	\$ 489,375
507	Turn Lanes and Median Openings	4,871	sy	\$ 62.00	\$ 302,008
Paving Construction Cost Subtotal:					\$ 5,371,872
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	268,594	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	161,156	
√ Roadway Drainage	Standard Internal System	30%	\$	1,611,562	
√ Illumination		5%	\$	268,594	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	990,000	
√ Water	Minor Adjustments	2%	\$	107,437	
√ Sewer	Minor Adjustments	1%	\$	53,719	
√ Landscaping and Irrigation		6%	\$	322,312	
√ Intersection Improvements		-	\$	750,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	4,533,374	
Paving and Allowance Subtotal:					\$ 9,905,246
Construction Contingency:					15% \$ 1,485,787
Mobilization					5% \$ 495,262
Prep ROW					3% \$ 297,157
Construction Cost TOTAL:					\$ 12,184,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 12,184,000
Engineering/Survey/Testing:		16%	\$ 1,949,440
Inspection		3.5%	\$ 426,440
Other: Developer Contribution	Project No. FP07-002		\$ (18,660)
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 1,827,600
Impact Fee Project Cost TOTAL:			\$ 16,369,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-6
Name:	Robinson (1)	This project consists of the construction of the northern two lanes of the existing two lane concrete secondary arterial.		
Limits:	Teasley to 220' E of Wheeler Ridge			
Impact Fee Class:	SA (1/2)			
Ultimate Class:	Secondary Arterial			
Length (lf):	2,765			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	4,762	cy	\$ 9.25	\$ 44,048
208	12" Lime Stabilization (with Lime @ 50#/sy)	9,217	sy	\$ 8.00	\$ 73,733
307	11" Concrete Pavement and Curb	8,602	sy	\$ 54.00	\$ 464,520
408	5' Concrete Sidewalk	27,650	sy	\$ 4.50	\$ 124,425
508	Turn Lanes and Median Openings	1,238	sy	\$ 62.00	\$ 76,786
Paving Construction Cost Subtotal:					\$ 783,513
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	39,176	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	23,505	
√ Roadway Drainage	Standard Internal System	30%	\$	235,054	
√ Illumination		5%	\$	39,176	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	15,670	
√ Sewer	Minor Adjustments	1%	\$	7,835	
√ Landscaping and Irrigation		6%	\$	47,011	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 657,427
Paving and Allowance Subtotal:					\$ 1,440,939
Construction Contingency:					15% \$ 216,141
Mobilization					5% \$ 72,047
Prep ROW					3% \$ 43,228
Construction Cost TOTAL:					\$ 1,773,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,773,000
Engineering/Survey/Testing:		16%	\$ 283,680
Inspection		3.5%	\$ 62,055
Other: Developer Contribution	Project No. FP02-0042		\$ (4,000)
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 265,950
Impact Fee Project Cost TOTAL:			\$ 2,381,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-7
Name:	Robinson (2)	This project consists of the construction of the northern two lanes of the existing two lane concrete secondary arterial.		
Limits:	175' E of Berkley to 315' E of State School Rd			
Impact Fee Class:	SA (1/2)			
Ultimate Class:	Secondary Arterial			
Length (lf):	670			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	1,154	cy	\$ 9.25	\$ 10,673
208	12" Lime Stabilization (with Lime @ 50#/sy)	2,233	sy	\$ 8.00	\$ 17,867
307	11" Concrete Pavement and Curb	2,084	sy	\$ 54.00	\$ 112,560
408	5' Concrete Sidewalk	6,700	sy	\$ 4.50	\$ 30,150
508	Turn Lanes and Median Openings	300	sy	\$ 62.00	\$ 18,606
Paving Construction Cost Subtotal:					\$ 189,857
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	9,493	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	5,696	
√ Roadway Drainage	Standard Internal System	30%	\$	56,957	
√ Illumination		5%	\$	9,493	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	3,797	
√ Sewer	Minor Adjustments	1%	\$	1,899	
√ Landscaping and Irrigation		6%	\$	11,391	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	348,725	
		Paving and Allowance Subtotal:	\$	538,582	
		Construction Contingency:	15%	\$	80,787
		Mobilization	5%	\$	26,929
		Prep ROW	3%	\$	16,157
		Construction Cost TOTAL:	\$	663,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 663,000
Engineering/Survey/Testing:		16%	\$ 106,080
Inspection		3.5%	\$ 23,205
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 99,450
Impact Fee Project Cost TOTAL:			\$ 892,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-8
Name:	Creekdale (1)	This project consists of the widening of an existing two lane concrete facility into a collector.		
Limits:	Ryan to 660' S. of Ryan			
Impact Fee Class:	C (1/3)			
Ultimate Class:	Collector			
Length (lf):	660			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
113	Unclassified Street Excavation	513	cy	\$ 9.25	\$ 4,748
213	8" Lime Stabilization (with Lime @ 50#/sy)	990	sy	\$ 6.00	\$ 5,940
312	8" Concrete Pavement and Curb	917	sy	\$ 46.00	\$ 42,167
413	8' Concrete Sidewalk	5,280	sy	\$ 4.50	\$ 23,760
513	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 76,615
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	3,831	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	2,298	
√ Roadway Drainage	Standard Internal System	30%	\$	22,985	
√ Illumination		5%	\$	3,831	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	1,532	
√ Sewer	Minor Adjustments	1%	\$	766	
√ Landscaping and Irrigation		6%	\$	4,597	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	39,840	
		Paving and Allowance Subtotal:	\$	116,455	
		Construction Contingency:	15%	\$	17,468
		Mobilization	5%	\$	5,823
		Prep ROW	3%	\$	3,494
		Construction Cost TOTAL:	\$	144,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 144,000
Engineering/Survey/Testing:		16%	\$ 23,040
Inspection		3.5%	\$ 5,040
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 21,600
Impact Fee Project Cost TOTAL:			\$ 194,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-9
Name:	Creekdale (2)	This project consists of the construction of a new two lane concrete collector. (Excludes 1,345' in the ETJ)		
Limits:	660' S. of Ryan to Thistle Way			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	2,200			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	4,889	cy	\$ 9.25	\$ 45,222
211	8" Lime Stabilization (with Lime @ 50#/sy)	9,533	sy	\$ 6.00	\$ 57,200
310	8" Concrete Pavement and Curb	9,044	sy	\$ 46.00	\$ 416,044
411	8' Concrete Sidewalk	35,200	sy	\$ 4.50	\$ 158,400
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 676,867
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 20,306		
√ Roadway Drainage	Standard Internal System	30%	\$ 203,060		
√ Illumination		5%	\$ 33,843		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 300,000		
√ Water	Minor Adjustments	2%	\$ 13,537		
√ Sewer	Minor Adjustments	1%	\$ 6,769		
√ Landscaping and Irrigation		6%	\$ 40,612		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 618,127		
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 1,294,994
Construction Contingency:					15% \$ 194,249
Mobilization					5% \$ 64,750
Prep ROW					1% \$ 12,950
Construction Cost TOTAL:					\$ 1,567,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,567,000
Engineering/Survey/Testing:		16%	\$ 250,720
Inspection		3.5%	\$ 54,845
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 470,100
Impact Fee Project Cost TOTAL:			\$ 2,343,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-10
Name:	Creekdale (3)	This project consists of the widening of an existing two lane concrete facility into a collector.		
Limits:	Thistle Way to Riverpass			
Impact Fee Class:	C (1/3)			
Ultimate Class:	Collector			
Length (lf):	620			
Service Area(s):	B,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
113	Unclassified Street Excavation	482	cy	\$ 9.25	\$ 4,461
213	8" Lime Stabilization (with Lime @ 50#/sy)	930	sy	\$ 6.00	\$ 5,580
312	8" Concrete Pavement and Curb	861	sy	\$ 46.00	\$ 39,611
413	8' Concrete Sidewalk	4,960	sy	\$ 4.50	\$ 22,320
513	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 71,972
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	3,599	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	2,159	
√ Roadway Drainage	Standard Internal System	30%	\$	21,592	
√ Illumination		5%	\$	3,599	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	1,439	
√ Sewer	Minor Adjustments	1%	\$	720	
√ Landscaping and Irrigation		6%	\$	4,318	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	37,425	
		Paving and Allowance Subtotal:	\$	109,397	
		Construction Contingency:	15%	\$	16,410
		Mobilization	5%	\$	5,470
		Prep ROW	3%	\$	3,282
		Construction Cost TOTAL:	\$	135,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 135,000
Engineering/Survey/Testing:		16%	\$ 21,600
Inspection		3.5%	\$ 4,725
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 20,250
Impact Fee Project Cost TOTAL:			\$ 182,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-11
Name:	Creekdale (4)	This project consists of the construction of a new two lane concrete collector.		
Limits:	210' E of Riverchase Trail to 280' W of Pimlico			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	3,145			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	6,989	cy	\$ 9.25	\$ 64,647
211	8" Lime Stabilization (with Lime @ 50#/sy)	13,628	sy	\$ 6.00	\$ 81,770
310	8" Concrete Pavement and Curb	12,929	sy	\$ 46.00	\$ 594,754
411	8' Concrete Sidewalk	50,320	sy	\$ 4.50	\$ 226,440
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 967,612
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 29,028		
√ Roadway Drainage	Standard Internal System	30%	\$ 290,284		
√ Illumination		5%	\$ 48,381		
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$ 540,000		
√ Water	Minor Adjustments	2%	\$ 19,352		
√ Sewer	Minor Adjustments	1%	\$ 9,676		
√ Landscaping and Irrigation		6%	\$ 58,057		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 994,777		
		Paving and Allowance Subtotal:		\$	1,962,389
		Construction Contingency:	15%	\$	294,358
		Mobilization	5%	\$	98,119
		Prep ROW	1%	\$	19,624
		Construction Cost TOTAL:		\$	2,375,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,375,000
Engineering/Survey/Testing:		16%	\$ 380,000
Inspection		3.5%	\$ 83,125
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 712,500
Impact Fee Project Cost TOTAL:			\$ 3,551,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No. B-12
Name:	Brush Creek (2)	This project consists of the reconstruction of an existing two lane asphalt facility (Allred) into a six lane divided concrete primary arterial.	
Limits:	I-35W NBFR to John Paine (Future)		
Impact Fee Class:	PA		
Ultimate Class:	Primary Arterial		
Length (lf):	1,935		
Service Area(s):	B		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	9,030	cy	\$ 9.25	\$ 83,528
201	12" Lime Stabilization (with Lime @ 50#/sy)	17,630	sy	\$ 8.00	\$ 141,040
301	11" Concrete Pavement and Curb	16,770	sy	\$ 54.00	\$ 905,580
401	5' Concrete Sidewalk	19,350	sy	\$ 4.50	\$ 87,075
501	Turn Lanes and Median Openings	867	sy	\$ 62.00	\$ 53,737
Paving Construction Cost Subtotal:					\$ 1,270,959
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	63,548	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	38,129	
√ Roadway Drainage	Standard Internal System	30%	\$	381,288	
√ Illumination		5%	\$	63,548	
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$	250,000	
√ Water	Minor Adjustments	2%	\$	25,419	
√ Sewer	Minor Adjustments	1%	\$	12,710	
√ Landscaping and Irrigation		6%	\$	76,258	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 1,160,899
Paving and Allowance Subtotal:					\$ 2,431,858
Construction Contingency:					15% \$ 364,779
Mobilization					5% \$ 121,593
Prep ROW					3% \$ 72,956
Construction Cost TOTAL:					\$ 2,992,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,992,000
Engineering/Survey/Testing:		16%	\$ 478,720
Inspection		3.5%	\$ 104,720
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 448,800
Impact Fee Project Cost TOTAL:			\$ 4,024,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-13
Name:	Brush Creek (3)	This project consists of the construction of a new six lane divided concrete primary arterial.		
Limits:	John Paine (Future) to 2,010' E of John Paine (Future)			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	2,010			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	9,380	cy	\$ 9.25	\$ 86,765
201	12" Lime Stabilization (with Lime @ 50#/sy)	18,313	sy	\$ 8.00	\$ 146,507
301	11" Concrete Pavement and Curb	17,420	sy	\$ 54.00	\$ 940,680
401	5' Concrete Sidewalk	20,100	sy	\$ 4.50	\$ 90,450
501	Turn Lanes and Median Openings	900	sy	\$ 62.00	\$ 55,819
Paving Construction Cost Subtotal:					\$ 1,320,221

Major Construction Component Allowances**:			
Item Description	Notes	Allowance	Item Cost
Traffic Control	None Anticipated	0%	\$ -
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 39,607
√ Roadway Drainage	Standard Internal System	30%	\$ 396,066
√ Illumination		5%	\$ 66,011
Special Drainage Structures	None Anticipated	-	\$ -
√ Water	Minor Adjustments	2%	\$ 26,404
√ Sewer	Minor Adjustments	1%	\$ 13,202
√ Landscaping and Irrigation		6%	\$ 79,213
Intersection Improvements	None Anticipated	-	\$ -
√ Miscellaneous:	Railroad Bridge Crossing	\$0	\$ 250,000
		Allowance Subtotal:	\$ 870,504
**Allowances based on % of Paving Construction Cost Subtotal			
		Paving and Allowance Subtotal:	\$ 2,190,725
		Construction Contingency:	15% \$ 328,609
		Mobilization	5% \$ 109,536
		Prep ROW	1% \$ 21,907
		Construction Cost TOTAL:	\$ 2,651,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,651,000
Engineering/Survey/Testing:		16%	\$ 424,160
Inspection		3.5%	\$ 92,785
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 795,300
Impact Fee Project Cost TOTAL:			\$ 3,963,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-14
Name:	Brush Creek (4)	This project consists of the reconstruction of the existing pavement as a six lane divided concrete primary arterial.		
Limits:	225' W. of Fort Worth to 500' E. of For			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	720			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	3,360	cy	\$ 9.25	\$ 31,080
201	12" Lime Stabilization (with Lime @ 50#/sy)	6,560	sy	\$ 8.00	\$ 52,480
301	11" Concrete Pavement and Curb	6,240	sy	\$ 54.00	\$ 336,960
401	5' Concrete Sidewalk	7,200	sy	\$ 4.50	\$ 32,400
501	Turn Lanes and Median Openings	323	sy	\$ 62.00	\$ 19,995
Paving Construction Cost Subtotal:					\$ 472,915
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	23,646	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	14,187	
√ Roadway Drainage	Standard Internal System	30%	\$	141,875	
√ Illumination		5%	\$	23,646	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	9,458	
√ Sewer	Minor Adjustments	1%	\$	4,729	
√ Landscaping and Irrigation		6%	\$	28,375	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	495,916	
		Paving and Allowance Subtotal:	\$	968,831	
		Construction Contingency:	15%	\$	145,325
		Mobilization	5%	\$	48,442
		Prep ROW	3%	\$	29,065
		Construction Cost TOTAL:	\$	1,192,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,192,000
Engineering/Survey/Testing:		16%	\$ 190,720
Inspection		3.5%	\$ 41,720
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 178,800
Impact Fee Project Cost TOTAL:			\$ 1,603,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-15
Name:	Brush Creek (5)	This project consists of the reconstruction of the existing pavement as a six lane divided concrete primary arterial.		
Limits:	500' E. of Fort Worth to 2,180' East of Fort Worth			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	1,680			
Service Area(s):	B,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	7,840	cy	\$ 9.25	\$ 72,520
201	12" Lime Stabilization (with Lime @ 50#/sy)	15,307	sy	\$ 8.00	\$ 122,453
301	11" Concrete Pavement and Curb	14,560	sy	\$ 54.00	\$ 786,240
401	5' Concrete Sidewalk	16,800	sy	\$ 4.50	\$ 75,600
501	Turn Lanes and Median Openings	753	sy	\$ 62.00	\$ 46,655
Paving Construction Cost Subtotal:					\$ 1,103,468
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	55,173	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	33,104	
√ Roadway Drainage	Standard Internal System	30%	\$	331,041	
√ Illumination		5%	\$	55,173	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	22,069	
√ Sewer	Minor Adjustments	1%	\$	11,035	
√ Landscaping and Irrigation		6%	\$	66,208	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	823,804	
		Paving and Allowance Subtotal:		\$	1,927,272
		Construction Contingency:	15%	\$	289,091
		Mobilization	5%	\$	96,364
		Prep ROW	3%	\$	57,818
Construction Cost TOTAL:					\$ 2,371,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,371,000
Engineering/Survey/Testing:		16%	\$ 379,360
Inspection		3.5%	\$ 82,985
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 355,650
Impact Fee Project Cost TOTAL:			\$ 3,189,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-15
Name:	Brush Creek (5)	This project consists of the construction of a new six lane divided concrete primary arterial.		
Limits:	500' E. of Fort Worth to 2,180' East of Fort Worth			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	1,680			
Service Area(s):	B,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	7,840	cy	\$ 9.25	\$ 72,520
201	12" Lime Stabilization (with Lime @ 50#/sy)	15,307	sy	\$ 8.00	\$ 122,453
301	11" Concrete Pavement and Curb	14,560	sy	\$ 54.00	\$ 786,240
401	5' Concrete Sidewalk	16,800	sy	\$ 4.50	\$ 75,600
501	Turn Lanes and Median Openings	753	sy	\$ 62.00	\$ 46,655
Paving Construction Cost Subtotal:					\$ 1,103,468
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 33,104		
√ Roadway Drainage	Standard Internal System	30%	\$ 331,041		
√ Illumination		5%	\$ 55,173		
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$ 700,000		
√ Water	Minor Adjustments	2%	\$ 22,069		
√ Sewer	Minor Adjustments	1%	\$ 11,035		
√ Landscaping and Irrigation		6%	\$ 66,208		
Intersection Improvements	None Anticipated	-	\$ -		
√ Miscellaneous:	Railroad Bridge Crossing	\$0	\$ 250,000		
		Allowance Subtotal:	\$ 1,468,630		
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 2,572,098
Construction Contingency:					15% \$ 385,815
Mobilization					5% \$ 128,605
Prep ROW					1% \$ 25,721
Construction Cost TOTAL:					\$ 3,113,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,113,000
Engineering/Survey/Testing:		16%	\$ 498,080
Inspection		3.5%	\$ 108,955
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 933,900
Impact Fee Project Cost TOTAL:			\$ 4,654,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-17
Name:	Hickory Creek (2)	This project consists of the reconstruction of the existing pavement as a six lane divided primary arterial.		
Limits:	Riverpass to Montecito			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	2,250			
Service Area(s):	B,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	10,500	cy	\$ 9.25	\$ 97,125
201	2" Asphalt (Type C)	19,000	sy	\$ 7.75	\$ 147,250
301	4" Asphalt Base (Type B)	19,000	sy	\$ 11.50	\$ 218,500
401	6" Asphalt Base (Type B)	20,000	sy	\$ 21.00	\$ 420,000
501	12" Lime Stabilization (with Lime @ 50#/sy)	20,500	sy	\$ 4.00	\$ 82,000
601	5' Concrete Sidewalk	22,500	sf	\$ 4.50	\$ 101,250
701	Machine Laid Curb & Gutter	9,000	lf	\$ 10.00	\$ 90,000
801	Turn Lanes and Median Openings	1,008	sy	\$ 44.25	\$ 44,596
Paving Construction Cost Subtotal:					\$ 1,200,721
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	60,036	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	36,022	
√ Roadway Drainage	Standard Internal System	30%	\$	360,216	
√ Illumination		5%	\$	60,036	
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$	400,000	
√ Water	Minor Adjustments	2%	\$	24,014	
√ Sewer	Minor Adjustments	1%	\$	12,007	
√ Landscaping and Irrigation		6%	\$	72,043	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 1,024,375
Paving and Allowance Subtotal:					\$ 2,225,095
Construction Contingency:					15% \$ 333,764
Mobilization					5% \$ 111,255
Prep ROW					3% \$ 66,753
Construction Cost TOTAL:					\$ 2,737,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,737,000
Engineering/Survey/Testing:		16%	\$ 437,920
Inspection		3.5%	\$ 95,795
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 410,550
Impact Fee Project Cost TOTAL:			\$ 3,681,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-18
Name:	Hickory Creek (3)	This project consists of the reconstruction of the existing pavement as a six lane divided primary arterial.		
Limits:	Montecito to Teasley			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	4,480			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	20,907	cy	\$ 9.25	\$ 193,387
201	2" Asphalt (Type C)	37,831	sy	\$ 7.75	\$ 293,191
301	4" Asphalt Base (Type B)	37,831	sy	\$ 11.50	\$ 435,058
401	6" Asphalt Base (Type B)	39,822	sy	\$ 21.00	\$ 836,267
501	12" Lime Stabilization (with Lime @ 50#/sy)	40,818	sy	\$ 4.00	\$ 163,271
601	5' Concrete Sidewalk	44,800	sf	\$ 4.50	\$ 201,600
701	Machine Laid Curb & Gutter	17,920	lf	\$ 10.00	\$ 179,200
801	Turn Lanes and Median Openings	2,007	sy	\$ 44.25	\$ 88,795
Paving Construction Cost Subtotal:					\$ 2,390,768
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	119,538	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	71,723	
√ Roadway Drainage	Standard Internal System	30%	\$	717,231	
√ Illumination		5%	\$	119,538	
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$	500,000	
√ Water	Minor Adjustments	2%	\$	47,815	
√ Sewer	Minor Adjustments	1%	\$	23,908	
√ Landscaping and Irrigation		6%	\$	143,446	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 1,993,200
Paving and Allowance Subtotal:					\$ 4,383,968
Construction Contingency:					15% \$ 657,595
Mobilization					5% \$ 219,198
Prep ROW					3% \$ 131,519
Construction Cost TOTAL:					\$ 5,393,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,393,000
Engineering/Survey/Testing:		16%	\$ 862,880
Inspection		3.5%	\$ 188,755
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 808,950
Impact Fee Project Cost TOTAL:			\$ 7,254,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-19
Name:	Hickory Creek (4)	This project consists of the construction of the inside median lanes to complete the six lane divided concrete primary arterial.		
Limits:	Teasley to Nautical			
Impact Fee Class:	PA (1/3)			
Ultimate Class:	Primary Arterial			
Length (lf):	1,305			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
105	Unclassified Street Excavation	1,885	cy	\$ 9.25	\$ 17,436
205	12" Lime Stabilization (with Lime @ 50#/sy)	3,625	sy	\$ 8.00	\$ 29,000
304	11" Concrete Pavement and Curb	3,335	sy	\$ 54.00	\$ 180,090
405	5' Concrete Sidewalk	0	sy	\$ 4.50	\$ -
505	Turn Lanes and Median Openings	495	sy	\$ 68.00	\$ 33,681
Paving Construction Cost Subtotal:					\$ 260,207
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	13,010	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	7,806	
Roadway Drainage	None Anticipated	0%	\$	-	
√ Illumination		5%	\$	13,010	
Special Drainage Structures	None Anticipated	-	\$	-	
Water	None Anticipated	0%	\$	-	
Sewer	None Anticipated	0%	\$	-	
√ Landscaping and Irrigation		6%	\$	15,612	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	49,439	
Paving and Allowance Subtotal:			\$	309,646	
Construction Contingency:			15%	\$	46,447
Mobilization			5%	\$	15,482
Prep ROW			3%	\$	9,289
Construction Cost TOTAL:			\$	381,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 381,000
Engineering/Survey/Testing:		16%	\$ 60,960
Inspection		3.5%	\$ 13,335
Other: Developer Contribution	Project No. FP04-0002		\$ (116,720)
ROW/Easement Acquisition:	No ROW Acquisition Costs included	0%	\$ -
Impact Fee Project Cost TOTAL:			\$ 339,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-20
Name:	Hickory Creek (5)	This project consists of the construction of the northern inside and and southern three lanes to complete the six lane divided concrete primary arterial.		
Limits:	Nautical to Erin			
Impact Fee Class:	PA (2/3)			
Ultimate Class:	Primary Arterial			
Length (lf):	675			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
102	Unclassified Street Excavation	2,025	cy	\$ 9.25	\$ 18,731
202	12" Lime Stabilization (with Lime @ 50#/sy)	4,088	sy	\$ 8.00	\$ 32,700
302	11" Concrete Pavement and Curb	3,863	sy	\$ 54.00	\$ 208,575
402	5' Concrete Sidewalk	3,375	sy	\$ 4.50	\$ 15,188
502	Turn Lanes and Median Openings	302	sy	\$ 62.00	\$ 18,753
Paving Construction Cost Subtotal:					\$ 293,947
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	14,697	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	8,818	
√ Roadway Drainage	Standard Internal System	30%	\$	88,184	
√ Illumination		5%	\$	14,697	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	5,879	
√ Sewer	Minor Adjustments	1%	\$	2,939	
√ Landscaping and Irrigation		6%	\$	17,637	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	152,852	
Paving and Allowance Subtotal:			\$	446,799	
Construction Contingency:			15%	\$	67,020
Mobilization			5%	\$	22,340
Prep ROW			3%	\$	13,404
Construction Cost TOTAL:			\$	550,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 550,000
Engineering/Survey/Testing:		16%	\$ 88,000
Inspection		3.5%	\$ 19,250
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 82,500
Impact Fee Project Cost TOTAL:			\$ 740,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-21
Name:	Hickory Creek (6)	This project consists of the construction of a new six lane divided primary arterial.		
Limits:	Erin to State School Road (Future)			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	500			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	2,333	cy	\$ 9.25	\$ 21,583
201	12" Lime Stabilization (with Lime @ 50#/sy)	4,556	sy	\$ 8.00	\$ 36,444
301	11" Concrete Pavement and Curb	4,333	sy	\$ 54.00	\$ 234,000
401	5' Concrete Sidewalk	5,000	sy	\$ 4.50	\$ 22,500
501	Turn Lanes and Median Openings	224	sy	\$ 62.00	\$ 13,885
Paving Construction Cost Subtotal:					\$ 328,413
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 9,852		
√ Roadway Drainage	Standard Internal System	30%	\$ 98,524		
√ Illumination		5%	\$ 16,421		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 6,568		
√ Sewer	Minor Adjustments	1%	\$ 3,284		
√ Landscaping and Irrigation		6%	\$ 19,705		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 154,354		
		Paving and Allowance Subtotal:		\$ 482,767	
		Construction Contingency:	15%	\$ 72,415	
		Mobilization	5%	\$ 24,138	
		Prep ROW	1%	\$ 4,828	
		Construction Cost TOTAL:		\$ 585,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 585,000
Engineering/Survey/Testing:		16%	\$ 93,600
Inspection		3.5%	\$ 20,475
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 175,500
Impact Fee Project Cost TOTAL:			\$ 875,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-22
Name:	John Paine-Fort Worth Collector	This project consists of the construction of a new two lane concrete collector. (Excludes 1,675' in the ETJ)		
Limits:	John Paine to Fort Worth (US 377)			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	2,190			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	4,867	cy	\$ 9.25	\$ 45,017
211	8" Lime Stabilization (with Lime @ 50#/sy)	9,490	sy	\$ 6.00	\$ 56,940
310	8" Concrete Pavement and Curb	9,003	sy	\$ 46.00	\$ 414,153
411	8' Concrete Sidewalk	35,040	sy	\$ 4.50	\$ 157,680
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 673,790
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 20,214		
√ Roadway Drainage	Standard Internal System	30%	\$ 202,137		
√ Illumination		5%	\$ 33,690		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 13,476		
√ Sewer	Minor Adjustments	1%	\$ 6,738		
√ Landscaping and Irrigation		6%	\$ 40,427		
Intersection Improvements	None Anticipated	-	\$ -		
√ Miscellaneous:	Railroad Bridge Crossing	\$0	\$ 250,000		
		Allowance Subtotal:	\$ 566,681		
					**Allowances based on % of Paving Construction Cost Subtotal
Paving and Allowance Subtotal:					\$ 1,240,471
Construction Contingency:					15% \$ 186,071
Mobilization					5% \$ 62,024
Prep ROW					1% \$ 12,405
Construction Cost TOTAL:					\$ 1,501,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,501,000
Engineering/Survey/Testing:		16%	\$ 240,160
Inspection		3.5%	\$ 52,535
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 450,300
Impact Fee Project Cost TOTAL:			\$ 2,244,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-23
Name:	John Paine (1)	This project consists of the construction of a new two lane concrete collector.		
Limits:	Vintage to Brush Creek			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	7,460			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	16,578	cy	\$ 9.25	\$ 153,344
211	8" Lime Stabilization (with Lime @ 50#/sy)	32,327	sy	\$ 6.00	\$ 193,960
310	8" Concrete Pavement and Curb	30,669	sy	\$ 46.00	\$ 1,410,769
411	8' Concrete Sidewalk	119,360	sy	\$ 4.50	\$ 537,120
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 2,295,193
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 68,856		
√ Roadway Drainage	Standard Internal System	30%	\$ 688,558		
√ Illumination		5%	\$ 114,760		
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$ 400,000		
√ Water	Minor Adjustments	2%	\$ 45,904		
√ Sewer	Minor Adjustments	1%	\$ 22,952		
√ Landscaping and Irrigation		6%	\$ 137,712		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 1,478,741		
		Paving and Allowance Subtotal:		\$ 3,773,934	
		Construction Contingency:	15%	\$ 566,090	
		Mobilization	5%	\$ 188,697	
		Prep ROW	1%	\$ 37,739	
Construction Cost TOTAL:					\$ 4,567,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,567,000
Engineering/Survey/Testing:		16%	\$ 730,720
Inspection		3.5%	\$ 159,845
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,370,100
Impact Fee Project Cost TOTAL:			\$ 6,828,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-24
Name:	John Paine (2)	This project consists of the construction of a new two lane concrete collector.		
Limits:	Brush Creek to Johnson			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	2,650			
Service Area(s):	B,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	5,889	cy	\$ 9.25	\$ 54,472
211	8" Lime Stabilization (with Lime @ 50#/sy)	11,483	sy	\$ 6.00	\$ 68,900
310	8" Concrete Pavement and Curb	10,894	sy	\$ 46.00	\$ 501,144
411	8' Concrete Sidewalk	42,400	sy	\$ 4.50	\$ 190,800
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 815,317
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 24,460		
√ Roadway Drainage	Standard Internal System	30%	\$ 244,595		
√ Illumination		5%	\$ 40,766		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 100,000		
√ Water	Minor Adjustments	2%	\$ 16,306		
√ Sewer	Minor Adjustments	1%	\$ 8,153		
√ Landscaping and Irrigation		6%	\$ 48,919		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 483,199		
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 1,298,516
Construction Contingency:					15% \$ 194,777
Mobilization					5% \$ 64,926
Prep ROW					1% \$ 12,985
Construction Cost TOTAL:					\$ 1,572,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,572,000
Engineering/Survey/Testing:		16%	\$ 251,520
Inspection		3.5%	\$ 55,020
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 471,600
Impact Fee Project Cost TOTAL:			\$ 2,350,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-25
Name:	John Paine (3)	This project consists of the construction of a new two lane concrete collector.		
Limits:	Johnson to 135' N of Athens			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	2,050			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	4,556	cy	\$ 9.25	\$ 42,139
211	8" Lime Stabilization (with Lime @ 50#/sy)	8,883	sy	\$ 6.00	\$ 53,300
310	8" Concrete Pavement and Curb	8,428	sy	\$ 46.00	\$ 387,678
411	8' Concrete Sidewalk	32,800	sy	\$ 4.50	\$ 147,600
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 630,717
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 18,922		
√ Roadway Drainage	Standard Internal System	30%	\$ 189,215		
√ Illumination		5%	\$ 31,536		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 100,000		
√ Water	Minor Adjustments	2%	\$ 12,614		
√ Sewer	Minor Adjustments	1%	\$ 6,307		
√ Landscaping and Irrigation		6%	\$ 37,843		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 396,437		
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 1,027,154
Construction Contingency:					15% \$ 154,073
Mobilization					5% \$ 51,358
Prep ROW					1% \$ 10,272
Construction Cost TOTAL:					\$ 1,243,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,243,000
Engineering/Survey/Testing:		16%	\$ 198,880
Inspection		3.5%	\$ 43,505
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 372,900
Impact Fee Project Cost TOTAL:			\$ 1,858,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-26
Name:	Bonnie Brae (4)	This project consists of the reconstruction of the existing asphalt pavement as a four lane divided secondary arterial. The City's contribution to the overall project (Bonnie Brae + Vintage) is \$22,037,838. The contribution to this segment of Bonnie Brae is \$11,900,433 (48%).		
Limits:	I-35E SBFR to Vintage			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	12,950			
Service Area(s):	B			

Roadway Construction Cost Projection	
Construction Cost TOTAL:	\$ 46,739,189

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 46,739,189
Engineering/Survey/Testing:		-	\$ 10,250,000
ROW/Easement Acquisition:	Existing Alignment	-	\$ 16,950,000
		Impact Fee Project Cost TOTAL:	\$ 73,939,000
		City Contribution:	\$ 22,037,838
		Impact Fee Project Cost (48%):	\$ 10,578,162

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-27
Name:	Bonnie Brae (5)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	Vintage to Fort Worth (US 377)			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	5,655			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	19,478	cy	\$ 9.25	\$ 180,175
207	12" Lime Stabilization (with Lime @ 50#/sy)	37,700	sy	\$ 8.00	\$ 301,600
306	11" Concrete Pavement and Curb	35,187	sy	\$ 54.00	\$ 1,900,080
407	5' Concrete Sidewalk	56,550	sy	\$ 4.50	\$ 254,475
507	Turn Lanes and Median Openings	2,533	sy	\$ 62.00	\$ 157,044
Paving Construction Cost Subtotal:					\$ 2,793,374
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	139,669	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	83,801	
√ Roadway Drainage	Standard Internal System	30%	\$	838,012	
√ Illumination		5%	\$	139,669	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	800,000	
√ Water	Minor Adjustments	2%	\$	55,867	
√ Sewer	Minor Adjustments	1%	\$	27,934	
√ Landscaping and Irrigation		6%	\$	167,602	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 2,252,554
Paving and Allowance Subtotal:					\$ 5,045,928
Construction Contingency:					15% \$ 756,889
Mobilization					5% \$ 252,296
Prep ROW					3% \$ 151,378
Construction Cost TOTAL:					\$ 6,207,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 6,207,000
Engineering/Survey/Testing:		16%	\$ 993,120
Inspection		3.5%	\$ 217,245
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 931,050
Impact Fee Project Cost TOTAL:			\$ 8,348,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-28
Name:	Highland Park	This project consists of the construction of a new two lane asphalt collector.		
Limits:	130' S of Willowcrest to Roselawn			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	4,140			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	9,200	cy	\$ 9.25	\$ 85,100
208	2" Asphalt (Type C)	16,560	sy	\$ 7.75	\$ 128,340
308	4" Asphalt Base (Type B)	16,560	sy	\$ 11.50	\$ 190,440
408	5" Asphalt Base (Type B)	17,480	sy	\$ 18.50	\$ 323,380
508	8" Lime Stabilization (with Lime @ 50#/sy)	17,940	sy	\$ 3.00	\$ 53,820
608	8' Concrete Sidewalk	66,240	sf	\$ 4.50	\$ 298,080
708	Machine Laid Curb & Gutter	8,280	lf	\$ 10.00	\$ 82,800
808	Turn Lanes and Median Openings	0	sy	\$ 40.75	\$ -
Paving Construction Cost Subtotal:					\$ 1,161,960
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 34,859		
√ Roadway Drainage	Standard Internal System	30%	\$ 348,588		
√ Illumination		5%	\$ 58,098		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 23,239		
√ Sewer	Minor Adjustments	1%	\$ 11,620		
√ Landscaping and Irrigation		6%	\$ 69,718		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 546,121
Paving and Allowance Subtotal:					\$ 1,708,081
Construction Contingency:					15% \$ 256,212
Mobilization					5% \$ 85,404
Prep ROW					1% \$ 17,081
Construction Cost TOTAL:					\$ 2,067,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,067,000
Engineering/Survey/Testing:		16%	\$ 330,720
Inspection		3.5%	\$ 72,345
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 620,100
Impact Fee Project Cost TOTAL:			\$ 3,090,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-29
Name:	Fort Worth (US 377)	This project consists of the reconstruction of the existing pavement as a six lane divided concrete primary arterial.		
Limits:	I-35E to S City Limits			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	27,110			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	126,513	cy	\$ 9.25	\$ 1,170,248
201	12" Lime Stabilization (with Lime @ 50#/sy)	247,002	sy	\$ 8.00	\$ 1,976,018
301	11" Concrete Pavement and Curb	234,953	sy	\$ 54.00	\$ 12,687,480
401	5' Concrete Sidewalk	271,100	sy	\$ 4.50	\$ 1,219,950
501	Turn Lanes and Median Openings	12,143	sy	\$ 62.00	\$ 752,867
Paving Construction Cost Subtotal:					\$ 17,806,563
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	890,328	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	534,197	
√ Roadway Drainage	Standard Internal System	30%	\$	5,341,969	
√ Illumination		5%	\$	890,328	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	3,500,000	
√ Water	Minor Adjustments	2%	\$	356,131	
√ Sewer	Minor Adjustments	1%	\$	178,066	
√ Landscaping and Irrigation		6%	\$	1,068,394	
√ Intersection Improvements		-	\$	1,000,000	
√ Miscellaneous:	Railroad Crossing (Underpass Widening)	\$0	\$	250,000	
		Allowance Subtotal:	\$	14,009,413	
Paving and Allowance Subtotal:					\$ 31,815,976
Construction Contingency:					15% \$ 4,772,396
Mobilization					5% \$ 1,590,799
Prep ROW					3% \$ 954,479
Construction Cost TOTAL:					\$ 39,134,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 39,134,000
Engineering/Survey/Testing:		16%	\$ 6,261,440
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 9,079,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-30
Name:	FM 1830	This project consists of the reconstruction of the existing pavement as a four lane divided secondary arterial.		
Limits:	Fort Worth (US 377) to Brush Creek			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	11,305			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	38,939	cy	\$ 9.25	\$ 360,190
207	12" Lime Stabilization (with Lime @ 50#/sy)	75,367	sy	\$ 8.00	\$ 602,933
306	11" Concrete Pavement and Curb	70,342	sy	\$ 54.00	\$ 3,798,480
407	5' Concrete Sidewalk	113,050	sy	\$ 4.50	\$ 508,725
507	Turn Lanes and Median Openings	5,064	sy	\$ 62.00	\$ 313,949
Paving Construction Cost Subtotal:					\$ 5,584,277
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	279,214	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	167,528	
√ Roadway Drainage	Standard Internal System	30%	\$	1,675,283	
√ Illumination		5%	\$	279,214	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	2,600,000	
√ Water	Minor Adjustments	2%	\$	111,686	
√ Sewer	Minor Adjustments	1%	\$	55,843	
√ Landscaping and Irrigation		6%	\$	335,057	
√ Intersection Improvements	None Anticipated	-	\$	-	
√ Miscellaneous:	Railroad Crossing	\$0	\$	250,000	
		Allowance Subtotal:	\$	5,753,824	
		Paving and Allowance Subtotal:	\$	11,338,102	
		Construction Contingency:	15%	\$	1,700,715
		Mobilization	5%	\$	566,905
		Prep ROW	3%	\$	340,143
		Construction Cost TOTAL:	\$	13,946,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 13,946,000
Engineering/Survey/Testing:		16%	\$ 2,231,360
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 3,235,400

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-31
Name:	Ryan-Creekdale Collector	This project consists of the construction of a new four lane concrete facility.		
Limits:	Ryan to Creekdale			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	2,550			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	5,667	cy	\$ 9.25	\$ 52,417
211	8" Lime Stabilization (with Lime @ 50#/sy)	11,050	sy	\$ 6.00	\$ 66,300
310	8" Concrete Pavement and Curb	10,483	sy	\$ 46.00	\$ 482,233
411	8' Concrete Sidewalk	40,800	sy	\$ 4.50	\$ 183,600
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 784,550
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 23,537		
√ Roadway Drainage	Standard Internal System	30%	\$ 235,365		
√ Illumination		5%	\$ 39,228		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 300,000		
√ Water	Minor Adjustments	2%	\$ 15,691		
√ Sewer	Minor Adjustments	1%	\$ 7,846		
√ Landscaping and Irrigation		6%	\$ 47,073		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 668,739		
		**Allowances based on % of Paving Construction Cost Subtotal			
Paving and Allowance Subtotal:					\$ 1,453,289
Construction Contingency:					15% \$ 217,993
Mobilization					5% \$ 72,664
Prep ROW					1% \$ 14,533
Construction Cost TOTAL:					\$ 1,759,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,759,000
Engineering/Survey/Testing:		16%	\$ 281,440
Inspection		3.5%	\$ 61,565
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 527,700
Impact Fee Project Cost TOTAL:			\$ 2,630,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	B-32
Name:	Teasley	This project consists of the reconstruction of the existing pavement as a six lane divided concrete primary arterial.		
Limits:	Sundown to S City Limits			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	17,880			
Service Area(s):	B			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	83,440	cy	\$ 9.25	\$ 771,820
201	12" Lime Stabilization (with Lime @ 50#/sy)	162,907	sy	\$ 8.00	\$ 1,303,253
301	11" Concrete Pavement and Curb	154,960	sy	\$ 54.00	\$ 8,367,840
401	5' Concrete Sidewalk	178,800	sy	\$ 4.50	\$ 804,600
501	Turn Lanes and Median Openings	8,009	sy	\$ 62.00	\$ 496,543
Paving Construction Cost Subtotal:					\$ 11,744,056
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	587,203	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	352,322	
√ Roadway Drainage	Standard Internal System	30%	\$	3,523,217	
√ Illumination		5%	\$	587,203	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	550,000	
√ Water	Minor Adjustments	2%	\$	234,881	
√ Sewer	Minor Adjustments	1%	\$	117,441	
√ Landscaping and Irrigation		6%	\$	704,643	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 6,656,909
Paving and Allowance Subtotal:					\$ 18,400,965
Construction Contingency:					15% \$ 2,760,145
Mobilization					5% \$ 920,048
Prep ROW					3% \$ 552,029
Construction Cost TOTAL:					\$ 22,634,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 22,634,000
Engineering/Survey/Testing:		16%	\$ 3,621,440
Inspection	TxDOT Roadway	0%	\$ -
Other: Developer Contribution	Project No. FP10-0020		\$ (5,780)
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 5,250,000

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City of Denton - 2015 Roadway Impact Fee Study
Capital Improvement Plan for Roadway Impact Fees
Summary of Conceptual Level Project Cost Projections

Roadway Improvements - Service Area C

#	IF Class	Project	Limits		Percent in Service Area	Project Cost	Total Cost in Service Area
			From	To			
C-1	SA	Milam (1)	I-35 SBFR	175' E of I-35 NBFR	100%	\$ 2,561,000	\$ 2,561,000
C-2	SA	Milam (2)	175' E of I-35 NBFR	FM 2164 (Locust)	50%	\$ 16,273,000	\$ 8,136,500
C-3	C	Bobcat	1,105' W of Milam Ridge	HOD N-S Secondary Arterial	100%	\$ 2,692,000	\$ 2,692,000
C-4	PA	Ganzer	230' W of Rector	Future Cindy	50%	\$ 5,459,000	\$ 2,729,500
C-5	PA	Ganzer/Long (1)	625' W of I-35 SBFR	350' E of I-35 NBFR	100%	\$ 3,529,000	\$ 3,529,000
C-6	SA	Ganzer/Long (2)	Ganzer	FM 2164 (Locust)	100%	\$ 15,614,000	\$ 15,614,000
C-7	C	Barthold-Cindy Collector	Barthold	1,135' W of Cindy (Future)	100%	\$ 1,292,000	\$ 1,292,000
C-8	C	Masch Branch-I-35 Collector	1,295' W of I-35	I-35	100%	\$ 1,603,000	\$ 1,603,000
C-9	SA	HOD E-W Secondary Arterial (1)	HOD N-S Secondary Arterial	840' E of HOD N-S Secondary Arterial	100%	\$ 1,266,000	\$ 1,266,000
C-10	SA	HOD E-W Secondary Arterial (2)	840' E of HOD N-S Secondary Arterial	130' E of Bonnie Brae (Existing)	50%	\$ 2,894,000	\$ 1,447,000
C-11	SA	HOD E-W Secondary Arterial (3)	130' E of Bonnie Brae (Existing)	FM 2164 (Locust)	100%	\$ 20,940,000	\$ 20,940,000
C-12	PA	HWY 1173 (1)	460' E of Masch Branch (Existing)	375' E of Barthold (Future)	50%	\$ 807,800	\$ 403,900
C-13	PA	HWY 1173 (2)	Cindy	I-35 SBFR	100%	\$ 961,800	\$ 961,800
C-14	PA (1/3)	Elm (US 377)	I-35 NBFR	Elm/Locust Couplet	100%	\$ 1,075,000	\$ 1,075,000
C-15	C	Hercules	115' E of Northpointe	Locust	100%	\$ 1,760,000	\$ 1,760,000
C-16	SA	Westgate (E-W)	Westgate (N-S)	Bonnie Brae	100%	\$ 4,353,000	\$ 4,353,000
C-17	C	Riney (1)	Bonnie Brae	990' W of Elm	100%	\$ 1,381,000	\$ 1,381,000
C-18	C	Riney (2)	990' W of Elm	Elm	100%	\$ 1,263,000	\$ 1,263,000
C-19	SA	Masch Branch-I-35 Secondary Arterial	Masch Branch	I-35 SBFR	100%	\$ 10,767,000	\$ 10,767,000
C-20	SA	Jim Christal (1)	490' E of C. Wolfe	Thomas J. Egan	50%	\$ 7,517,000	\$ 3,758,500
A-2, C-21	SA	Jim Christal (2)	225' E of Future Loop	Masch Branch	50%	\$ 6,933,000	\$ 3,466,500
A-3, C-22	PA	Jim Christal (3)	Masch Branch	Scripture	50%	\$ 14,393,000	\$ 7,196,500
C-23	SA	Nail (1)	University	2,240' S of University	50%	\$ 3,197,000	\$ 1,598,500
C-24	SA	Nail (2)	2,240 S of University	Jim Christal	100%	\$ 3,501,000	\$ 3,501,000
C-25	C	Thomas J Egan (1)	555' N. of University	550' S of University	100%	\$ 1,270,000	\$ 1,270,000
C-26	C	Thomas J Egan (2)	550' S of University	Jim Christal	50%	\$ 2,678,000	\$ 1,339,000
C-27	PA	Future Loop (1)	University	745' N of Jim Christal	100%	\$ 1,318,400	\$ 1,318,400
C-28	PA	Masch Branch (1)	1,290' S of HWY 1173	Miller	50%	\$ 6,896,000	\$ 3,448,000
C-29	PA	Masch Branch (2)	895' W of Future Loop	1,255' N of University	100%	\$ 5,485,000	\$ 5,485,000
C-30	PA	Masch Branch (3)	1,255' N of University	Jim Christal	100%	\$ 9,246,000	\$ 9,246,000
C-31	SA	Lover's Lane (1)	HWY 1173	325' N of Fruth	50%	\$ 2,178,000	\$ 1,089,000
C-32	SA	Lover's Lane (2)	325' N of Fruth	340' N of Littlebrook	100%	\$ 1,119,000	\$ 1,119,000
C-33	SA	Lover's Lane (3)	340' N of Littlebrook	Hook	50%	\$ 666,000	\$ 333,000
C-34	SA	Lover's Lane (4)	Hook	Masch Branch-I-35 SA	100%	\$ 4,920,000	\$ 4,920,000
C-35	SA	Barthold	Ganzer	City Limits	50%	\$ 4,239,000	\$ 2,119,500
C-36	SA	Cindy (1)	Ganzer	1,280' S of Ganzer	50%	\$ 2,135,000	\$ 1,067,500
C-37	SA	Cindy (2)	1,280' S of Ganzer	Masch Branch-I-35 Collector	100%	\$ 3,355,000	\$ 3,355,000
C-38	SA	Cindy (3)	FM 1173 (Future)	150' S of Future Loop	100%	\$ 2,884,000	\$ 2,884,000
C-39	SA	Cindy (4)	1,050' N of Masch Branch-I-35 PA	Tieszen	100%	\$ 6,476,000	\$ 6,476,000
C-40	SA	Cindy (5)	Tieszen	University	100%	\$ 2,806,000	\$ 2,806,000
C-41	PA (2/3)	Western (1)	University	Jim Christal	100%	\$ 4,650,000	\$ 4,650,000
C-42	C	Milam-Bobcat Col	Milam	Bobcat (Future)	100%	\$ 2,842,000	\$ 2,842,000
C-43	SA	HOD N-S Secondary Arterial (1)	Milam	220' S of Bobcat	100%	\$ 5,079,000	\$ 5,079,000
C-44	SA	HOD N-S Secondary Arterial (2)	2830' N of Elm	Elm	100%	\$ 3,899,000	\$ 3,899,000
C-45	SA	Heritage Trail	University	Scripture	100%	\$ 6,239,000	\$ 6,239,000
C-46	PA	Bonnie Brae (1)	Milam	Loop 288 EBFR	100%	\$ 32,903,000	\$ 32,903,000
C-47	SA	Bonnie Brae (2)	Loop 288 EBFR	860' N of Riney	100%	\$ 3,603,000	\$ 3,603,000
C-48 E-14	SA	Bonnie Brae (3)	University	I-35	50%	\$ 5,950,216	\$ 2,975,108
C-49	C	Fallmeadow	140' S of Meadow Edge	Gardenview	100%	\$ 610,000	\$ 610,000
C-50 D-45	PA	FM 2164 (Locust) (1)	City Limits	Loop 288 WBFR	50%	\$ 4,639,000	\$ 2,319,500
C-51 D-46	PA	FM 2164 (Locust) (2)	Loop 288 WBFR	Elm	50%	\$ 2,313,800	\$ 1,156,900
TOTAL						\$ 282,649,816	\$ 218,065,408

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-1
Name:	Milam (1)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	I-35 SBFR to 175' E of I-35 NBFR			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	450			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	1,550	cy	\$ 9.25	\$ 14,338
207	12" Lime Stabilization (with Lime @ 50#/sy)	3,000	sy	\$ 8.00	\$ 24,000
306	11" Concrete Pavement and Curb	2,800	sy	\$ 54.00	\$ 151,200
407	5' Concrete Sidewalk	4,500	sy	\$ 4.50	\$ 20,250
507	Turn Lanes and Median Openings	202	sy	\$ 62.00	\$ 12,497
Paving Construction Cost Subtotal:					\$ 222,284
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	11,114	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	6,669	
√ Roadway Drainage	Standard Internal System	30%	\$	66,685	
√ Illumination		5%	\$	11,114	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	4,446	
√ Sewer	Minor Adjustments	1%	\$	2,223	
√ Landscaping and Irrigation		6%	\$	13,337	
√ Intersection Improvements		-	\$	500,000	
√ Miscellaneous:	Bridge over IH-35		\$	710,000	
		Allowance Subtotal:	\$	1,325,588	
		Paving and Allowance Subtotal:		\$	1,547,872
		Construction Contingency:	15%	\$	232,181
		Mobilization	5%	\$	77,394
		Prep ROW	3%	\$	46,436
		Construction Cost TOTAL:		\$	1,904,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,904,000
Engineering/Survey/Testing:		16%	\$ 304,640
Inspection		3.5%	\$ 66,640
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 285,600
Impact Fee Project Cost TOTAL:			\$ 2,561,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-2
Name:	Milam (2)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial. (Excludes 1,760 ft in ETJ/NAA)		
Limits:	175' E of I-35 NBFR to FM 2164 (Locust)			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	12,035			
Service Area(s):	C,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	41,454	cy	\$ 9.25	\$ 383,448
207	12" Lime Stabilization (with Lime @ 50#/sy)	80,233	sy	\$ 8.00	\$ 641,867
306	11" Concrete Pavement and Curb	74,884	sy	\$ 54.00	\$ 4,043,760
407	5' Concrete Sidewalk	120,350	sy	\$ 4.50	\$ 541,575
507	Turn Lanes and Median Openings	5,391	sy	\$ 62.00	\$ 334,222
Paving Construction Cost Subtotal:					\$ 5,944,872
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	297,244	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	178,346	
√ Roadway Drainage	Standard Internal System	30%	\$	1,783,462	
√ Illumination		5%	\$	297,244	
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$	300,000	
√ Water	Minor Adjustments	2%	\$	118,897	
√ Sewer	Minor Adjustments	1%	\$	59,449	
√ Landscaping and Irrigation		6%	\$	356,692	
√ Intersection Improvements		-	\$	500,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 3,891,334
Paving and Allowance Subtotal:					\$ 9,836,206
Construction Contingency:					15% \$ 1,475,431
Mobilization					5% \$ 491,810
Prep ROW					3% \$ 295,086
Construction Cost TOTAL:					\$ 12,099,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 12,099,000
Engineering/Survey/Testing:		16%	\$ 1,935,840
Inspection		3.5%	\$ 423,465
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 1,814,850
Impact Fee Project Cost TOTAL:			\$ 16,273,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No. C-3
Name:	Bobcat	This project consists of the	
Limits:	1,105' W of Milam Ridge to HOD N-S Secondary Arterial	construction of a new two lane concrete collector. (Hills of Denton MPC)	
Impact Fee Class:	C		
Ultimate Class:	Collector		
Length (lf):	2,185	(Excludes 670' in the ETJ)	
Service Area(s):	C		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	4,856	cy	\$ 9.25	\$ 44,914
211	8" Lime Stabilization (with Lime @ 50#/sy)	9,468	sy	\$ 6.00	\$ 56,810
310	8" Concrete Pavement and Curb	8,983	sy	\$ 46.00	\$ 413,208
411	8' Concrete Sidewalk	34,960	sy	\$ 4.50	\$ 157,320
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 672,252
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 20,168		
√ Roadway Drainage	Standard Internal System	30%	\$ 201,676		
√ Illumination		5%	\$ 33,613		
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$ 500,000		
√ Water	Minor Adjustments	2%	\$ 13,445		
√ Sewer	Minor Adjustments	1%	\$ 6,723		
√ Landscaping and Irrigation		6%	\$ 40,335		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
Allowance Subtotal:					\$ 815,958
Paving and Allowance Subtotal:					\$ 1,488,210
Construction Contingency:					15% \$ 223,231
Mobilization					5% \$ 74,410
Prep ROW					1% \$ 14,882
Construction Cost TOTAL:					\$ 1,801,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,801,000
Engineering/Survey/Testing:		16%	\$ 288,160
Inspection		3.5%	\$ 63,035
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 540,300
Impact Fee Project Cost TOTAL:			\$ 2,692,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No. C-4
Name:	Ganzer	This project consists of the reconstruction of the existing pavement to a six lane divided concrete primary arterial.	
Limits:	230' W. of Rector to Future Cindy		
Impact Fee Class:	PA		
Ultimate Class:	Primary Arterial		
Length (lf):	3,305		(Excludes 4,415' in the ETJ)
Service Area(s):	C,ETJ		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	15,423	cy	\$ 9.25	\$ 142,666
201	12" Lime Stabilization (with Lime @ 50#/sy)	30,112	sy	\$ 8.00	\$ 240,898
301	11" Concrete Pavement and Curb	28,643	sy	\$ 54.00	\$ 1,546,740
401	5' Concrete Sidewalk	33,050	sy	\$ 4.50	\$ 148,725
501	Turn Lanes and Median Openings	1,480	sy	\$ 62.00	\$ 91,783
Paving Construction Cost Subtotal:					\$ 2,170,811
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	108,541	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	65,124	
√ Roadway Drainage	Standard Internal System	30%	\$	651,243	
√ Illumination		5%	\$	108,541	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	43,416	
√ Sewer	Minor Adjustments	1%	\$	21,708	
√ Landscaping and Irrigation		6%	\$	130,249	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	1,128,822	
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 3,299,633
Construction Contingency:					15% \$ 494,945
Mobilization					5% \$ 164,982
Prep ROW					3% \$ 98,989
Construction Cost TOTAL:					\$ 4,059,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,059,000
Engineering/Survey/Testing:		16%	\$ 649,440
Inspection		3.5%	\$ 142,065
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 608,850
Impact Fee Project Cost TOTAL:			\$ 5,459,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-5
Name:	Ganzer/Long (1)	This project consists of the reconstruction of the existing pavement to a six lane divided concrete primary arterial.		
Limits:	625' W of I-35 SBFR to 350' E of I-35 NBFR			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	1,175			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	5,483	cy	\$ 9.25	\$ 50,721
201	12" Lime Stabilization (with Lime @ 50#/sy)	10,706	sy	\$ 8.00	\$ 85,644
301	11" Concrete Pavement and Curb	10,183	sy	\$ 54.00	\$ 549,900
401	5' Concrete Sidewalk	11,750	sy	\$ 4.50	\$ 52,875
501	Turn Lanes and Median Openings	526	sy	\$ 62.00	\$ 32,631
Paving Construction Cost Subtotal:					\$ 771,771
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	38,589	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	23,153	
√ Roadway Drainage	Standard Internal System	30%	\$	231,531	
√ Illumination		5%	\$	38,589	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	15,435	
√ Sewer	Minor Adjustments	1%	\$	7,718	
√ Landscaping and Irrigation		6%	\$	46,306	
√ Intersection Improvements		-	\$	250,000	
√ Miscellaneous:	Bridge over IH-35		\$	710,000	
		Allowance Subtotal:	\$	1,361,321	
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 2,133,092
Construction Contingency:					15% \$ 319,964
Mobilization					5% \$ 106,655
Prep ROW					3% \$ 63,993
Construction Cost TOTAL:					\$ 2,624,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,624,000
Engineering/Survey/Testing:		16%	\$ 419,840
Inspection		3.5%	\$ 91,840
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 393,600
Impact Fee Project Cost TOTAL:			\$ 3,529,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-6
Name:	Ganzer/Long (2)	This project consists of the construction of a new four lane divided concrete secondary arterial (Hills of Denton MPC).		
Limits:	Ganzer to FM 2164 (Locust)			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	11,335			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	39,043	cy	\$ 9.25	\$ 361,146
207	12" Lime Stabilization (with Lime @ 50#/sy)	75,567	sy	\$ 8.00	\$ 604,533
306	11" Concrete Pavement and Curb	70,529	sy	\$ 54.00	\$ 3,808,560
407	5' Concrete Sidewalk	113,350	sy	\$ 4.50	\$ 510,075
507	Turn Lanes and Median Openings	5,077	sy	\$ 62.00	\$ 314,782
Paving Construction Cost Subtotal:					\$ 5,599,096
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$	-	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	167,973	
√ Roadway Drainage	Standard Internal System	30%	\$	1,679,729	
√ Illumination		5%	\$	279,955	
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$	400,000	
√ Water	Minor Adjustments	2%	\$	111,982	
√ Sewer	Minor Adjustments	1%	\$	55,991	
√ Landscaping and Irrigation		6%	\$	335,946	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 3,031,575
Paving and Allowance Subtotal:					\$ 8,630,672
Construction Contingency:					15% \$ 1,294,601
Mobilization					5% \$ 431,534
Prep ROW					1% \$ 86,307
Construction Cost TOTAL:					\$ 10,444,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 10,444,000
Engineering/Survey/Testing:		16%	\$ 1,671,040
Inspection		3.5%	\$ 365,540
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 3,133,200
Impact Fee Project Cost TOTAL:			\$ 15,614,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-7
Name:	Barthold-Cindy Collector	This project consists of the construction of a new		
Limits:	Barthold to 1,135' W of Cindy (Future)	two lane concrete collector. (Hills of Denton MPC)		
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	1,135			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	2,522	cy	\$ 9.25	\$ 23,331
211	8" Lime Stabilization (with Lime @ 50#/sy)	4,918	sy	\$ 6.00	\$ 29,510
310	8" Concrete Pavement and Curb	4,666	sy	\$ 46.00	\$ 214,641
411	8' Concrete Sidewalk	18,160	sy	\$ 4.50	\$ 81,720
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 349,202
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 10,476		
√ Roadway Drainage	Standard Internal System	30%	\$ 104,761		
√ Illumination		5%	\$ 17,460		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 200,000		
√ Water	Minor Adjustments	2%	\$ 6,984		
√ Sewer	Minor Adjustments	1%	\$ 3,492		
√ Landscaping and Irrigation		6%	\$ 20,952		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 364,125		
		**Allowances based on % of Paving Construction Cost Subtotal			
Paving and Allowance Subtotal:					\$ 713,326
Construction Contingency:					15% \$ 106,999
Mobilization					5% \$ 35,666
Prep ROW					1% \$ 7,133
Construction Cost TOTAL:					\$ 864,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 864,000
Engineering/Survey/Testing:		16%	\$ 138,240
Inspection		3.5%	\$ 30,240
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 259,200
Impact Fee Project Cost TOTAL:			\$ 1,292,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-8
Name:	Masch Branch-I-35 Collector	This project consists of the construction of a new two lane concrete collector. (Hills of Denton MPC)		
Limits:	1,295' W of I-35 to I-35			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	1,295			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	2,878	cy	\$ 9.25	\$ 26,619
211	8" Lime Stabilization (with Lime @ 50#/sy)	5,612	sy	\$ 6.00	\$ 33,670
310	8" Concrete Pavement and Curb	5,324	sy	\$ 46.00	\$ 244,899
411	8' Concrete Sidewalk	20,720	sy	\$ 4.50	\$ 93,240
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 398,428
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 11,953		
√ Roadway Drainage	Standard Internal System	30%	\$ 119,529		
√ Illumination		5%	\$ 19,921		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 300,000		
√ Water	Minor Adjustments	2%	\$ 7,969		
√ Sewer	Minor Adjustments	1%	\$ 3,984		
√ Landscaping and Irrigation		6%	\$ 23,906		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 487,261		
Paving and Allowance Subtotal:					\$ 885,690
Construction Contingency:					15% \$ 132,853
Mobilization					5% \$ 44,284
Prep ROW					1% \$ 8,857
Construction Cost TOTAL:					\$ 1,072,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,072,000
Engineering/Survey/Testing:		16%	\$ 171,520
Inspection		3.5%	\$ 37,520
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 321,600
Impact Fee Project Cost TOTAL:			\$ 1,603,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-9
Name:	HOD E-W Secondary Arterial (1)	This project consists of the construction of a new four lane divided concrete secondary arterial. (Hills of Denton MPC)		
Limits:	HOD N-S Secondary Arterial to 840' E of HOD N-S Secondary Arterial			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	840			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	2,893	cy	\$ 9.25	\$ 26,763
207	12" Lime Stabilization (with Lime @ 50#/sy)	5,600	sy	\$ 8.00	\$ 44,800
306	11" Concrete Pavement and Curb	5,227	sy	\$ 54.00	\$ 282,240
407	5' Concrete Sidewalk	8,400	sy	\$ 4.50	\$ 37,800
507	Turn Lanes and Median Openings	376	sy	\$ 62.00	\$ 23,328
Paving Construction Cost Subtotal:					\$ 414,931

Major Construction Component Allowances**:			
Item Description	Notes	Allowance	Item Cost
Traffic Control	None Anticipated	0%	\$ -
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 12,448
√ Roadway Drainage	Standard Internal System	30%	\$ 124,479
√ Illumination		5%	\$ 20,747
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 100,000
√ Water	Minor Adjustments	2%	\$ 8,299
√ Sewer	Minor Adjustments	1%	\$ 4,149
√ Landscaping and Irrigation		6%	\$ 24,896
Intersection Improvements	None Anticipated	-	\$ -
Miscellaneous:		\$0	\$ -
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 295,017
Paving and Allowance Subtotal:		\$ 709,948	
Construction Contingency:		15%	\$ 106,492
Mobilization		5%	\$ 35,497
Prep ROW		1%	\$ 7,099
Construction Cost TOTAL:		\$ 860,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 860,000
Engineering/Survey/Testing:		16%	\$ 137,600
Inspection		3.5%	\$ 30,100
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 258,000
Impact Fee Project Cost TOTAL:			\$ 1,286,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-10
Name:	HOD E-W Secondary Arterial (2)	This project consists of the reconstruction of the existing pavement (some new) to a four lane divided concrete secondary arterial. (Hills of Denton MPC)		
Limits:	840' E of HOD N-S Secondary Arterial to 130' E of Bonnie Brae			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	2,330			
Service Area(s):	C,NAA			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	8,026	cy	\$ 9.25	\$ 74,236
207	12" Lime Stabilization (with Lime @ 50#/sy)	15,533	sy	\$ 8.00	\$ 124,267
306	11" Concrete Pavement and Curb	14,498	sy	\$ 54.00	\$ 782,880
407	5' Concrete Sidewalk	23,300	sy	\$ 4.50	\$ 104,850
507	Turn Lanes and Median Openings	1,044	sy	\$ 62.00	\$ 64,706
Paving Construction Cost Subtotal:					\$ 1,150,939
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	57,547	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	34,528	
√ Roadway Drainage	Standard Internal System	30%	\$	345,282	
√ Illumination		5%	\$	57,547	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	23,019	
√ Sewer	Minor Adjustments	1%	\$	11,509	
√ Landscaping and Irrigation		6%	\$	69,056	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	598,488	
		Paving and Allowance Subtotal:		\$	1,749,427
		Construction Contingency:	15%	\$	262,414
		Mobilization	5%	\$	87,471
		Prep ROW	3%	\$	52,483
		Construction Cost TOTAL:		\$	2,152,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,152,000
Engineering/Survey/Testing:		16%	\$ 344,320
Inspection		3.5%	\$ 75,320
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 322,800
Impact Fee Project Cost TOTAL:			\$ 2,894,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-11
Name:	HOD E-W Secondary Arterial (3)	This project consists of the construction of a new four lane divided concrete secondary arterial. (Hills of Denton MPC)		
Limits:	130' E of Bonnie Brae (Existing) to FM 2164 (Locust)			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	15,115			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	52,063	cy	\$ 9.25	\$ 481,581
207	12" Lime Stabilization (with Lime @ 50#/sy)	100,767	sy	\$ 8.00	\$ 806,133
306	11" Concrete Pavement and Curb	94,049	sy	\$ 54.00	\$ 5,078,640
407	5' Concrete Sidewalk	151,150	sy	\$ 4.50	\$ 680,175
507	Turn Lanes and Median Openings	6,770	sy	\$ 62.00	\$ 419,756
Paving Construction Cost Subtotal:					\$ 7,466,285

Major Construction Component Allowances**:			
Item Description	Notes	Allowance	Item Cost
Traffic Control	None Anticipated	0%	\$ -
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 223,989
√ Roadway Drainage	Standard Internal System	30%	\$ 2,239,886
√ Illumination		5%	\$ 373,314
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$ 600,000
√ Water	Minor Adjustments	2%	\$ 149,326
√ Sewer	Minor Adjustments	1%	\$ 74,663
√ Landscaping and Irrigation		6%	\$ 447,977
Intersection Improvements	None Anticipated	-	\$ -
Miscellaneous:		\$0	\$ -
		Allowance Subtotal:	\$ 4,109,154

		Paving and Allowance Subtotal:	\$ 11,575,439
		Construction Contingency:	15% \$ 1,736,316
		Mobilization	5% \$ 578,772
		Prep ROW	1% \$ 115,754
Construction Cost TOTAL:			\$ 14,007,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 14,007,000
Engineering/Survey/Testing:		16%	\$ 2,241,120
Inspection		3.5%	\$ 490,245
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 4,202,100
Impact Fee Project Cost TOTAL:			\$ 20,940,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-12
Name:	HWY 1173 (1)	This project consists of the reconstruction of the existing pavement to a six lane divided concrete primary arterial.		
Limits:	460' E of Masch Branch (Existing) to 375' E of Barthold (Future)			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	2,735	(Excludes 1,580' in the ETJ)		
Service Area(s):	C,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	12,763	cy	\$ 9.25	\$ 118,061
201	12" Lime Stabilization (with Lime @ 50#/sy)	24,919	sy	\$ 8.00	\$ 199,351
301	11" Concrete Pavement and Curb	23,703	sy	\$ 54.00	\$ 1,279,980
401	5' Concrete Sidewalk	27,350	sy	\$ 4.50	\$ 123,075
501	Turn Lanes and Median Openings	1,225	sy	\$ 62.00	\$ 75,953
Paving Construction Cost Subtotal:					\$ 1,796,420

Major Construction Component Allowances**:			
Item Description	Notes	Allowance	Item Cost
√ Traffic Control	Construction Phase Traffic Control	5%	\$ 89,821
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 53,893
√ Roadway Drainage	Standard Internal System	30%	\$ 538,926
√ Illumination		5%	\$ 89,821
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 100,000
√ Water	Minor Adjustments	2%	\$ 35,928
√ Sewer	Minor Adjustments	1%	\$ 17,964
√ Landscaping and Irrigation		6%	\$ 107,785
Intersection Improvements	None Anticipated	-	\$ -
Miscellaneous:		\$0	\$ -
		Allowance Subtotal:	\$ 1,034,138
		Paving and Allowance Subtotal:	\$ 2,830,559
		Construction Contingency:	15% \$ 424,584
		Mobilization	5% \$ 141,528
		Prep ROW	3% \$ 84,917
		Construction Cost TOTAL:	\$ 3,482,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,482,000
Engineering/Survey/Testing:		16%	\$ 557,120
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 807,800

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-13
Name:	HWY 1173 (2)	This project consists of the construction of a new six lane divided concrete primary arterial.		
Limits:	Cindy to I-35 SBFR			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	3,185			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	14,863	cy	\$ 9.25	\$ 137,486
201	12" Lime Stabilization (with Lime @ 50#/sy)	29,019	sy	\$ 8.00	\$ 232,151
301	11" Concrete Pavement and Curb	27,603	sy	\$ 54.00	\$ 1,490,580
401	5' Concrete Sidewalk	31,850	sy	\$ 4.50	\$ 143,325
501	Turn Lanes and Median Openings	1,427	sy	\$ 62.00	\$ 88,450
Paving Construction Cost Subtotal:					\$ 2,091,992
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 62,760		
√ Roadway Drainage	Standard Internal System	30%	\$ 627,598		
√ Illumination		5%	\$ 104,600		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 100,000		
√ Water	Minor Adjustments	2%	\$ 41,840		
√ Sewer	Minor Adjustments	1%	\$ 20,920		
√ Landscaping and Irrigation		6%	\$ 125,520		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 1,333,236		
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 3,425,228
Construction Contingency:					15% \$ 513,784
Mobilization					5% \$ 171,261
Prep ROW					1% \$ 34,252
Construction Cost TOTAL:					\$ 4,145,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,145,000
Engineering/Survey/Testing:		16%	\$ 663,200
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 961,600

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-14
Name:	Elm (US 377)	This project consists of the construction of the median lanes to complete a six lane divided concrete primary arterial.		
Limits:	I-35 NBFR to Elm/Locust Couplet			
Impact Fee Class:	PA (1/3)			
Ultimate Class:	Primary Arterial			
Length (lf):	15,875			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
105	Unclassified Street Excavation	22,931	cy	\$ 9.25	\$ 212,108
205	12" Lime Stabilization (with Lime @ 50#/sy)	44,097	sy	\$ 8.00	\$ 352,778
304	11" Concrete Pavement and Curb	40,569	sy	\$ 54.00	\$ 2,190,750
405	5' Concrete Sidewalk	0	sy	\$ 4.50	\$ -
505	Turn Lanes and Median Openings	6,025	sy	\$ 68.00	\$ 409,719
Paving Construction Cost Subtotal:					\$ 3,165,355
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	158,268	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	94,961	
Roadway Drainage	None Anticipated	0%	\$	-	
√ Illumination		5%	\$	158,268	
Special Drainage Structures	None Anticipated	-	\$	-	
Water	None Anticipated	0%	\$	-	
Sewer	None Anticipated	0%	\$	-	
√ Landscaping and Irrigation		6%	\$	189,921	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	601,417	
Paving and Allowance Subtotal:					\$ 3,766,772
Construction Contingency:					15% \$ 565,016
Mobilization					5% \$ 188,339
Prep ROW					3% \$ 113,003
Construction Cost TOTAL:					\$ 4,634,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,634,000
Engineering/Survey/Testing:		16%	\$ 741,440
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 1,075,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-15
Name:	Hercules	This project consists of the construction of a new two lane concrete collector.		
Limits:	115' E of Northpointe to Locust			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	2,150			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	4,778	cy	\$ 9.25	\$ 44,194
211	8" Lime Stabilization (with Lime @ 50#/sy)	9,317	sy	\$ 6.00	\$ 55,900
310	8" Concrete Pavement and Curb	8,839	sy	\$ 46.00	\$ 406,589
411	8' Concrete Sidewalk	34,400	sy	\$ 4.50	\$ 154,800
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 661,483
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 19,845		
√ Roadway Drainage	Standard Internal System	30%	\$ 198,445		
√ Illumination		5%	\$ 33,074		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 13,230		
√ Sewer	Minor Adjustments	1%	\$ 6,615		
√ Landscaping and Irrigation		6%	\$ 39,689		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 310,897		
Paving and Allowance Subtotal:					\$ 972,381
Construction Contingency:					15% \$ 145,857
Mobilization					5% \$ 48,619
Prep ROW					1% \$ 9,724
Construction Cost TOTAL:					\$ 1,177,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,177,000
Engineering/Survey/Testing:		16%	\$ 188,320
Inspection		3.5%	\$ 41,195
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 353,100
Impact Fee Project Cost TOTAL:			\$ 1,760,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-16
Name:	Westgate (E-W)	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	Westgate (N-S) to Bonnie Brae			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	2,970			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	10,230	cy	\$ 9.25	\$ 94,628
207	12" Lime Stabilization (with Lime @ 50#/sy)	19,800	sy	\$ 8.00	\$ 158,400
306	11" Concrete Pavement and Curb	18,480	sy	\$ 54.00	\$ 997,920
407	5' Concrete Sidewalk	29,700	sy	\$ 4.50	\$ 133,650
507	Turn Lanes and Median Openings	1,330	sy	\$ 62.00	\$ 82,479
Paving Construction Cost Subtotal:					\$ 1,467,077
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 44,012		
√ Roadway Drainage	Standard Internal System	30%	\$ 440,123		
√ Illumination		5%	\$ 73,354		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 29,342		
√ Sewer	Minor Adjustments	1%	\$ 14,671		
√ Landscaping and Irrigation		6%	\$ 88,025		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 939,526		
Paving and Allowance Subtotal:					\$ 2,406,603
Construction Contingency:					15% \$ 360,990
Mobilization					5% \$ 120,330
Prep ROW					1% \$ 24,066
Construction Cost TOTAL:					\$ 2,912,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,912,000
Engineering/Survey/Testing:		16%	\$ 465,920
Inspection		3.5%	\$ 101,920
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 873,600
Impact Fee Project Cost TOTAL:			\$ 4,353,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-17
Name:	Riney (1)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	Bonnie Brae to 990' W of Elm			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	1,785			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	3,967	cy	\$ 9.25	\$ 36,692
211	8" Lime Stabilization (with Lime @ 50#/sy)	7,735	sy	\$ 6.00	\$ 46,410
310	8" Concrete Pavement and Curb	7,338	sy	\$ 46.00	\$ 337,563
411	8' Concrete Sidewalk	28,560	sy	\$ 4.50	\$ 128,520
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 549,185
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	27,459	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	16,476	
√ Roadway Drainage	Standard Internal System	30%	\$	164,756	
√ Illumination		5%	\$	27,459	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	10,984	
√ Sewer	Minor Adjustments	1%	\$	5,492	
√ Landscaping and Irrigation		6%	\$	32,951	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	285,576	
		Paving and Allowance Subtotal:	\$	834,761	
		Construction Contingency:	15%	\$	125,214
		Mobilization	5%	\$	41,738
		Prep ROW	3%	\$	25,043
		Construction Cost TOTAL:	\$	1,027,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,027,000
Engineering/Survey/Testing:		16%	\$ 164,320
Inspection		3.5%	\$ 35,945
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 154,050
Impact Fee Project Cost TOTAL:			\$ 1,381,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-18
Name:	Riney (2)	This project consists of the construction (realignment) of a new four lane divided concrete secondary arterial.		
Limits:	990' W of Elm to Elm			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	990			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	2,200	cy	\$ 9.25	\$ 20,350
211	8" Lime Stabilization (with Lime @ 50#/sy)	4,290	sy	\$ 6.00	\$ 25,740
310	8" Concrete Pavement and Curb	4,070	sy	\$ 46.00	\$ 187,220
411	8' Concrete Sidewalk	15,840	sy	\$ 4.50	\$ 71,280
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 304,590
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 9,138		
√ Roadway Drainage	Standard Internal System	30%	\$ 91,377		
√ Illumination		5%	\$ 15,230		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 6,092		
√ Sewer	Minor Adjustments	1%	\$ 3,046		
√ Landscaping and Irrigation		6%	\$ 18,275		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 393,157		
Paving and Allowance Subtotal:					\$ 697,747
Construction Contingency:					15% \$ 104,662
Mobilization					5% \$ 34,887
Prep ROW					1% \$ 6,977
Construction Cost TOTAL:					\$ 845,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 845,000
Engineering/Survey/Testing:		16%	\$ 135,200
Inspection		3.5%	\$ 29,575
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 253,500
Impact Fee Project Cost TOTAL:			\$ 1,263,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-19
Name:	Masch Branch-I-35 Secondary Arterial	This project consists of the construction of a new six lane divided concrete primary arterial. (Hills of Denton MPC)		
Limits:	Masch Branch to I-35 SBFR			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	7,095			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	24,438	cy	\$ 9.25	\$ 226,055
207	12" Lime Stabilization (with Lime @ 50#/sy)	47,300	sy	\$ 8.00	\$ 378,400
306	11" Concrete Pavement and Curb	44,147	sy	\$ 54.00	\$ 2,383,920
407	5' Concrete Sidewalk	70,950	sy	\$ 4.50	\$ 319,275
507	Turn Lanes and Median Openings	3,178	sy	\$ 62.00	\$ 197,034
Paving Construction Cost Subtotal:					\$ 3,504,684
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 105,141		
√ Roadway Drainage	Standard Internal System	30%	\$ 1,051,405		
√ Illumination		5%	\$ 175,234		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 300,000		
√ Water	Minor Adjustments	2%	\$ 70,094		
√ Sewer	Minor Adjustments	1%	\$ 35,047		
√ Landscaping and Irrigation		6%	\$ 210,281		
√ Intersection Improvements		-	\$ 250,000		
√ Miscellaneous:	Railroad Crossing	\$0	\$ 250,000		
Allowance Subtotal:					\$ 2,447,201
Paving and Allowance Subtotal:					\$ 5,951,885
Construction Contingency:					15% \$ 892,783
Mobilization					5% \$ 297,594
Prep ROW					1% \$ 59,519
Construction Cost TOTAL:					\$ 7,202,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 7,202,000
Engineering/Survey/Testing:		16%	\$ 1,152,320
Inspection		3.5%	\$ 252,070
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 2,160,600
Impact Fee Project Cost TOTAL:			\$ 10,767,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-20
Name:	Jim Christal (1)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	490' E of C. Wolfe to Thomas J. Egan			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	4,160		(Corresponds with A-1)	
Service Area(s):	A,C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	14,329	cy	\$ 9.25	\$ 132,542
207	12" Lime Stabilization (with Lime @ 50#/sy)	27,733	sy	\$ 8.00	\$ 221,867
306	11" Concrete Pavement and Curb	25,884	sy	\$ 54.00	\$ 1,397,760
407	5' Concrete Sidewalk	41,600	sy	\$ 4.50	\$ 187,200
507	Turn Lanes and Median Openings	1,863	sy	\$ 62.00	\$ 115,527
Paving Construction Cost Subtotal:					\$ 2,054,896
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	102,745	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	61,647	
√ Roadway Drainage	Standard Internal System	30%	\$	616,469	
√ Illumination		5%	\$	102,745	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	1,170,000	
√ Water	Minor Adjustments	2%	\$	41,098	
√ Sewer	Minor Adjustments	1%	\$	20,549	
√ Landscaping and Irrigation		6%	\$	123,294	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 2,488,546
Paving and Allowance Subtotal:					\$ 4,543,441
Construction Contingency:					15% \$ 681,516
Mobilization					5% \$ 227,172
Prep ROW					3% \$ 136,303
Construction Cost TOTAL:					\$ 5,589,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,589,000
Engineering/Survey/Testing:		16%	\$ 894,240
Inspection		3.5%	\$ 195,615
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 838,350
Impact Fee Project Cost TOTAL:			\$ 7,517,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	A-2, C-21
Name:	Jim Christal (2)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial. (Excludes 290' in Non-Annexation Area)		
Limits:	225' E of Future Loop to Masch Branch			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	3,970			
Service Area(s):	A,C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	13,674	cy	\$ 9.25	\$ 126,489
207	12" Lime Stabilization (with Lime @ 50#/sy)	26,467	sy	\$ 8.00	\$ 211,733
306	11" Concrete Pavement and Curb	24,702	sy	\$ 54.00	\$ 1,333,920
407	5' Concrete Sidewalk	39,700	sy	\$ 4.50	\$ 178,650
507	Turn Lanes and Median Openings	1,778	sy	\$ 62.00	\$ 110,250
Paving Construction Cost Subtotal:					\$ 1,961,042
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	98,052	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	58,831	
√ Roadway Drainage	Standard Internal System	30%	\$	588,313	
√ Illumination		5%	\$	98,052	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	1,210,000	
√ Water	Minor Adjustments	2%	\$	39,221	
√ Sewer	Minor Adjustments	1%	\$	19,610	
√ Landscaping and Irrigation		6%	\$	117,663	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
Allowance Subtotal:					\$ 2,229,742
Paving and Allowance Subtotal:					\$ 4,190,784
Construction Contingency:					15% \$ 628,618
Mobilization					5% \$ 209,539
Prep ROW					3% \$ 125,724
Construction Cost TOTAL:					\$ 5,155,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,155,000
Engineering/Survey/Testing:		16%	\$ 824,800
Inspection		3.5%	\$ 180,425
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 773,250
Impact Fee Project Cost TOTAL:			\$ 6,933,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.
Name:	Jim Christal (3)	This project consists of the reconstruction of the existing pavement to a six lane divided concrete primary arterial.	A-3, C-22
Limits:	Masch Branch to Scripture		
Impact Fee Class:	PA		
Ultimate Class:	Primary Arterial		
Length (lf):	6,470		
Service Area(s):	A,C		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	30,193	cy	\$ 9.25	\$ 279,288
201	12" Lime Stabilization (with Lime @ 50#/sy)	58,949	sy	\$ 8.00	\$ 471,591
301	11" Concrete Pavement and Curb	56,073	sy	\$ 54.00	\$ 3,027,960
401	5' Concrete Sidewalk	64,700	sy	\$ 4.50	\$ 291,150
501	Turn Lanes and Median Openings	2,898	sy	\$ 62.00	\$ 179,677
Paving Construction Cost Subtotal:					\$ 4,249,667
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	212,483	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	127,490	
√ Roadway Drainage	Standard Internal System	30%	\$	1,274,900	
√ Illumination		5%	\$	212,483	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	1,490,000	
√ Water	Minor Adjustments	2%	\$	84,993	
√ Sewer	Minor Adjustments	1%	\$	42,497	
√ Landscaping and Irrigation		6%	\$	254,980	
√ Intersection Improvements		-	\$	750,000	
Miscellaneous:		\$0	\$	-	
Allowance Subtotal:					\$ 4,449,827
Paving and Allowance Subtotal:					\$ 8,699,493
Construction Contingency:					15% \$ 1,304,924
Mobilization					5% \$ 434,975
Prep ROW					3% \$ 260,985
Construction Cost TOTAL:					\$ 10,701,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 10,701,000
Engineering/Survey/Testing:		16%	\$ 1,712,160
Inspection		3.5%	\$ 374,535
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 1,605,150
Impact Fee Project Cost TOTAL:			\$ 14,393,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-23
Name:	Nail (1)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	University to 2,240' S of University			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	2,240			
Service Area(s):	C,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	7,716	cy	\$ 9.25	\$ 71,369
207	12" Lime Stabilization (with Lime @ 50#/sy)	14,933	sy	\$ 8.00	\$ 119,467
306	11" Concrete Pavement and Curb	13,938	sy	\$ 54.00	\$ 752,640
407	5' Concrete Sidewalk	22,400	sy	\$ 4.50	\$ 100,800
507	Turn Lanes and Median Openings	1,003	sy	\$ 62.00	\$ 62,207
Paving Construction Cost Subtotal:					\$ 1,106,482
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	55,324	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	33,194	
√ Roadway Drainage	Standard Internal System	30%	\$	331,945	
√ Illumination		5%	\$	55,324	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	22,130	
√ Sewer	Minor Adjustments	1%	\$	11,065	
√ Landscaping and Irrigation		6%	\$	66,389	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	825,371	
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 1,931,853
Construction Contingency:					15% \$ 289,778
Mobilization					5% \$ 96,593
Prep ROW					3% \$ 57,956
Construction Cost TOTAL:					\$ 2,377,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,377,000
Engineering/Survey/Testing:		16%	\$ 380,320
Inspection		3.5%	\$ 83,195
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 356,550
Impact Fee Project Cost TOTAL:			\$ 3,197,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-24
Name:	Nail (2)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	2,240 S of University to Jim Christal			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	2,485			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	8,559	cy	\$ 9.25	\$ 79,175
207	12" Lime Stabilization (with Lime @ 50#/sy)	16,567	sy	\$ 8.00	\$ 132,533
306	11" Concrete Pavement and Curb	15,462	sy	\$ 54.00	\$ 834,960
407	5' Concrete Sidewalk	24,850	sy	\$ 4.50	\$ 111,825
507	Turn Lanes and Median Openings	1,113	sy	\$ 62.00	\$ 69,011
Paving Construction Cost Subtotal:					\$ 1,227,504
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	61,375	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	36,825	
√ Roadway Drainage	Standard Internal System	30%	\$	368,251	
√ Illumination		5%	\$	61,375	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	24,550	
√ Sewer	Minor Adjustments	1%	\$	12,275	
√ Landscaping and Irrigation		6%	\$	73,650	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	888,302	
		Paving and Allowance Subtotal:		\$	2,115,806
		Construction Contingency:	15%	\$	317,371
		Mobilization	5%	\$	105,790
		Prep ROW	3%	\$	63,474
Construction Cost TOTAL:					\$ 2,603,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,603,000
Engineering/Survey/Testing:		16%	\$ 416,480
Inspection		3.5%	\$ 91,105
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 390,450
Impact Fee Project Cost TOTAL:			\$ 3,501,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-25
Name:	Thomas J Egan (1)	This project consists of the reconstruction of the existing pavement to a two lane concrete collector.		
Limits:	555' N. of University to 550' S of University			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	1,105			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	2,456	cy	\$ 9.25	\$ 22,714
211	8" Lime Stabilization (with Lime @ 50#/sy)	4,788	sy	\$ 6.00	\$ 28,730
310	8" Concrete Pavement and Curb	4,543	sy	\$ 46.00	\$ 208,968
411	8' Concrete Sidewalk	17,680	sy	\$ 4.50	\$ 79,560
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 339,972
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	16,999	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	10,199	
√ Roadway Drainage	Standard Internal System	30%	\$	101,992	
√ Illumination		5%	\$	16,999	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	6,799	
√ Sewer	Minor Adjustments	1%	\$	3,400	
√ Landscaping and Irrigation		6%	\$	20,398	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	426,785	
Paving and Allowance Subtotal:			\$	766,757	
Construction Contingency:			15%	\$	115,014
Mobilization			5%	\$	38,338
Prep ROW			3%	\$	23,003
Construction Cost TOTAL:			\$	944,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 944,000
Engineering/Survey/Testing:		16%	\$ 151,040
Inspection		3.5%	\$ 33,040
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 141,600
Impact Fee Project Cost TOTAL:			\$ 1,270,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-26
Name:	Thomas J Egan (2)	This project consists of the reconstruction of the existing pavement to a two lane concrete collector.		
Limits:	550' S of University to Jim Christal			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	3,460			
Service Area(s):	C,NAA			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	7,689	cy	\$ 9.25	\$ 71,122
211	8" Lime Stabilization (with Lime @ 50#/sy)	14,993	sy	\$ 6.00	\$ 89,960
310	8" Concrete Pavement and Curb	14,224	sy	\$ 46.00	\$ 654,324
411	8' Concrete Sidewalk	55,360	sy	\$ 4.50	\$ 249,120
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 1,064,527
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	53,226	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	31,936	
√ Roadway Drainage	Standard Internal System	30%	\$	319,358	
√ Illumination		5%	\$	53,226	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	21,291	
√ Sewer	Minor Adjustments	1%	\$	10,645	
√ Landscaping and Irrigation		6%	\$	63,872	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	553,554	
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 1,618,081
Construction Contingency:					15% \$ 242,712
Mobilization					5% \$ 80,904
Prep ROW					3% \$ 48,542
Construction Cost TOTAL:					\$ 1,991,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,991,000
Engineering/Survey/Testing:		16%	\$ 318,560
Inspection		3.5%	\$ 69,685
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 298,650
Impact Fee Project Cost TOTAL:			\$ 2,678,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-27
Name:	Future Loop (1)	This project consists of the construction of a new six lane divided concrete primary arterial.		
Limits:	University to 745' N of Jim Christal			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial		(Excludes 370' of Non Annexation Area)	
Length (lf):	2,940			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	13,720	cy	\$ 9.25	\$ 126,910
201	12" Lime Stabilization (with Lime @ 50#/sy)	26,787	sy	\$ 8.00	\$ 214,293
301	11" Concrete Pavement and Curb	25,480	sy	\$ 54.00	\$ 1,375,920
401	5' Concrete Sidewalk	29,400	sy	\$ 4.50	\$ 132,300
501	Turn Lanes and Median Openings	1,317	sy	\$ 62.00	\$ 81,646
Paving Construction Cost Subtotal:					\$ 1,931,070
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 57,932		
√ Roadway Drainage	Standard Internal System	30%	\$ 579,321		
√ Illumination		5%	\$ 96,553		
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$ 1,600,000		
√ Water	Minor Adjustments	2%	\$ 38,621		
√ Sewer	Minor Adjustments	1%	\$ 19,311		
√ Landscaping and Irrigation		6%	\$ 115,864		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 2,757,603		
Paving and Allowance Subtotal:					\$ 4,688,672
Construction Contingency:					15% \$ 703,301
Mobilization					5% \$ 234,434
Prep ROW					1% \$ 46,887
Construction Cost TOTAL:					\$ 5,674,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,674,000
Engineering/Survey/Testing:		16%	\$ 907,840
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 1,316,400

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-28
Name:	Masch Branch (1)	This project consists of the reconstruction of the existing pavement to a six lane divided concrete primary arterial. (Hills of Denton MPC)		
Limits:	1,290' S of HWY 1173 to Miller			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	4,175			
Service Area(s):	C,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	19,483	cy	\$ 9.25	\$ 180,221
201	12" Lime Stabilization (with Lime @ 50#/sy)	38,039	sy	\$ 8.00	\$ 304,311
301	11" Concrete Pavement and Curb	36,183	sy	\$ 54.00	\$ 1,953,900
401	5' Concrete Sidewalk	41,750	sy	\$ 4.50	\$ 187,875
501	Turn Lanes and Median Openings	1,870	sy	\$ 62.00	\$ 115,943
Paving Construction Cost Subtotal:					\$ 2,742,250
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	137,113	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	82,268	
√ Roadway Drainage	Standard Internal System	30%	\$	822,675	
√ Illumination		5%	\$	137,113	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	54,845	
√ Sewer	Minor Adjustments	1%	\$	27,423	
√ Landscaping and Irrigation		6%	\$	164,535	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	1,425,970	
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 4,168,220
Construction Contingency:					15% \$ 625,233
Mobilization					5% \$ 208,411
Prep ROW					3% \$ 125,047
Construction Cost TOTAL:					\$ 5,127,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,127,000
Engineering/Survey/Testing:		16%	\$ 820,320
Inspection		3.5%	\$ 179,445
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 769,050
Impact Fee Project Cost TOTAL:			\$ 6,896,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-29
Name:	Masch Branch (2)	This project consists of the construction of a new six lane divided concrete primary arterial. (Hills of Denton MPC) (Excludes 1,295' in the ETJ)		
Limits:	895' W of Future Loop to 1,255' N of University			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	3,140			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	14,653	cy	\$ 9.25	\$ 135,543
201	12" Lime Stabilization (with Lime @ 50#/sy)	28,609	sy	\$ 8.00	\$ 228,871
301	11" Concrete Pavement and Curb	27,213	sy	\$ 54.00	\$ 1,469,520
401	5' Concrete Sidewalk	31,400	sy	\$ 4.50	\$ 141,300
501	Turn Lanes and Median Openings	1,406	sy	\$ 62.00	\$ 87,200
Paving Construction Cost Subtotal:					\$ 2,062,435
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 61,873		
√ Roadway Drainage	Standard Internal System	30%	\$ 618,730		
√ Illumination		5%	\$ 103,122		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 41,249		
√ Sewer	Minor Adjustments	1%	\$ 20,624		
√ Landscaping and Irrigation		6%	\$ 123,746		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 969,344		
Paving and Allowance Subtotal:					\$ 3,031,779
Construction Contingency:					15% \$ 454,767
Mobilization					5% \$ 151,589
Prep ROW					1% \$ 30,318
Construction Cost TOTAL:					\$ 3,669,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,669,000
Engineering/Survey/Testing:		16%	\$ 587,040
Inspection		3.5%	\$ 128,415
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,100,700
Impact Fee Project Cost TOTAL:			\$ 5,485,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-30
Name:	Masch Branch (3)	This project consists of the reconstruction of the existing pavement to a six lane divided concrete primary arterial. (Hills of Denton MPC)		
Limits:	1,255' N of University to Jim Christal			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	5,370			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	25,060	cy	\$ 9.25	\$ 231,805
201	12" Lime Stabilization (with Lime @ 50#/sy)	48,927	sy	\$ 8.00	\$ 391,413
301	11" Concrete Pavement and Curb	46,540	sy	\$ 54.00	\$ 2,513,160
401	5' Concrete Sidewalk	53,700	sy	\$ 4.50	\$ 241,650
501	Turn Lanes and Median Openings	2,405	sy	\$ 62.00	\$ 149,129
Paving Construction Cost Subtotal:					\$ 3,527,158
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	176,358	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	105,815	
√ Roadway Drainage	Standard Internal System	30%	\$	1,058,147	
√ Illumination		5%	\$	176,358	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	70,543	
√ Sewer	Minor Adjustments	1%	\$	35,272	
√ Landscaping and Irrigation		6%	\$	211,629	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	2,084,122	
Paving and Allowance Subtotal:					\$ 5,611,280
Construction Contingency:					15% \$ 841,692
Mobilization					5% \$ 280,564
Prep ROW					3% \$ 168,338
Construction Cost TOTAL:					\$ 6,902,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 6,902,000
Engineering/Survey/Testing:		16%	\$ 1,104,320
Inspection		3.5%	\$ 241,570
Other: Developer Contribution	Projects PP07-0015, PP10-0013		\$ (37,640)
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 1,035,300
Impact Fee Project Cost TOTAL:			\$ 9,246,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-31
Name:	Lover's Lane (1)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial. (Hills of Denton MPC)		
Limits:	HWY 1173 to 325' N of Fruth			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	1,420			
Service Area(s):	C,NAA			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	4,891	cy	\$ 9.25	\$ 45,243
207	12" Lime Stabilization (with Lime @ 50#/sy)	9,467	sy	\$ 8.00	\$ 75,733
306	11" Concrete Pavement and Curb	8,836	sy	\$ 54.00	\$ 477,120
407	5' Concrete Sidewalk	14,200	sy	\$ 4.50	\$ 63,900
507	Turn Lanes and Median Openings	636	sy	\$ 62.00	\$ 39,435
Paving Construction Cost Subtotal:					\$ 701,431
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	35,072	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	21,043	
√ Roadway Drainage	Standard Internal System	30%	\$	210,429	
√ Illumination		5%	\$	35,072	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	14,029	
√ Sewer	Minor Adjustments	1%	\$	7,014	
√ Landscaping and Irrigation		6%	\$	42,086	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	614,744	
		Paving and Allowance Subtotal:	\$	1,316,175	
		Construction Contingency:	15%	\$	197,426
		Mobilization	5%	\$	65,809
		Prep ROW	3%	\$	39,485
		Construction Cost TOTAL:	\$	1,619,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,619,000
Engineering/Survey/Testing:		16%	\$ 259,040
Inspection		3.5%	\$ 56,665
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 242,850
Impact Fee Project Cost TOTAL:			\$ 2,178,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-32
Name:	Lover's Lane (2)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial. (Hills of Denton MPC)		
Limits:	325' N of Fruth to 340' N of Littlebrook			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	900			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	3,100	cy	\$ 9.25	\$ 28,675
207	12" Lime Stabilization (with Lime @ 50#/sy)	6,000	sy	\$ 8.00	\$ 48,000
306	11" Concrete Pavement and Curb	5,600	sy	\$ 54.00	\$ 302,400
407	5' Concrete Sidewalk	9,000	sy	\$ 4.50	\$ 40,500
507	Turn Lanes and Median Openings	403	sy	\$ 62.00	\$ 24,994
Paving Construction Cost Subtotal:					\$ 444,569
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	22,228	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	13,337	
√ Roadway Drainage	Standard Internal System	30%	\$	133,371	
√ Illumination		5%	\$	22,228	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	8,891	
√ Sewer	Minor Adjustments	1%	\$	4,446	
√ Landscaping and Irrigation		6%	\$	26,674	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	231,176	
		Paving and Allowance Subtotal:		\$	675,745
		Construction Contingency:	15%	\$	101,362
		Mobilization	5%	\$	33,787
		Prep ROW	3%	\$	20,272
Construction Cost TOTAL:					\$ 832,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 832,000
Engineering/Survey/Testing:		16%	\$ 133,120
Inspection		3.5%	\$ 29,120
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 124,800
Impact Fee Project Cost TOTAL:			\$ 1,119,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-33
Name:	Lover's Lane (3)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial. (Hills of Denton MPC)		
Limits:	340' N of Littlebrook to Hook			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	535			
Service Area(s):	C,NAA			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	1,843	cy	\$ 9.25	\$ 17,046
207	12" Lime Stabilization (with Lime @ 50#/sy)	3,567	sy	\$ 8.00	\$ 28,533
306	11" Concrete Pavement and Curb	3,329	sy	\$ 54.00	\$ 179,760
407	5' Concrete Sidewalk	5,350	sy	\$ 4.50	\$ 24,075
507	Turn Lanes and Median Openings	240	sy	\$ 62.00	\$ 14,857
Paving Construction Cost Subtotal:					\$ 264,271
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	13,214	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	7,928	
√ Roadway Drainage	Standard Internal System	30%	\$	79,281	
√ Illumination		5%	\$	13,214	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	5,285	
√ Sewer	Minor Adjustments	1%	\$	2,643	
√ Landscaping and Irrigation		6%	\$	15,856	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	137,421	
		Paving and Allowance Subtotal:	\$	401,693	
		Construction Contingency:	15%	\$	60,254
		Mobilization	5%	\$	20,085
		Prep ROW	3%	\$	12,051
		Construction Cost TOTAL:	\$	495,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 495,000
Engineering/Survey/Testing:		16%	\$ 79,200
Inspection		3.5%	\$ 17,325
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 74,250
Impact Fee Project Cost TOTAL:			\$ 666,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-34
Name:	Lover's Lane (4)	This project consists of the construction of a new four lane divided concrete secondary arterial. (Hills of Denton MPC)		
Limits:	Hook to Masch Branch-I-35 SA			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	3,745		(Excludes 750' in the ETJ)	
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	12,899	cy	\$ 9.25	\$ 119,320
207	12" Lime Stabilization (with Lime @ 50#/sy)	24,967	sy	\$ 8.00	\$ 199,733
306	11" Concrete Pavement and Curb	23,302	sy	\$ 54.00	\$ 1,258,320
407	5' Concrete Sidewalk	37,450	sy	\$ 4.50	\$ 168,525
507	Turn Lanes and Median Openings	1,677	sy	\$ 62.00	\$ 104,002
Paving Construction Cost Subtotal:					\$ 1,849,900
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 55,497		
√ Roadway Drainage	Standard Internal System	30%	\$ 554,970		
√ Illumination		5%	\$ 92,495		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 36,998		
√ Sewer	Minor Adjustments	1%	\$ 18,499		
√ Landscaping and Irrigation		6%	\$ 110,994		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 869,453		
		Paving and Allowance Subtotal:		\$ 2,719,353	
		Construction Contingency:	15%	\$ 407,903	
		Mobilization	5%	\$ 135,968	
		Prep ROW	1%	\$ 27,194	
		Construction Cost TOTAL:		\$ 3,291,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,291,000
Engineering/Survey/Testing:		16%	\$ 526,560
Inspection		3.5%	\$ 115,185
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 987,300
Impact Fee Project Cost TOTAL:			\$ 4,920,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-35
Name:	Barthold	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	Ganzer to City Limits			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	3,080		(Excludes 2,535' in the ETJ)	
Service Area(s):	C,NAA			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	10,609	cy	\$ 9.25	\$ 98,132
207	12" Lime Stabilization (with Lime @ 50#/sy)	20,533	sy	\$ 8.00	\$ 164,267
306	11" Concrete Pavement and Curb	19,164	sy	\$ 54.00	\$ 1,034,880
407	5' Concrete Sidewalk	30,800	sy	\$ 4.50	\$ 138,600
507	Turn Lanes and Median Openings	1,380	sy	\$ 62.00	\$ 85,534
Paving Construction Cost Subtotal:					\$ 1,521,413
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	76,071	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	45,642	
√ Roadway Drainage	Standard Internal System	30%	\$	456,424	
√ Illumination		5%	\$	76,071	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	30,428	
√ Sewer	Minor Adjustments	1%	\$	15,214	
√ Landscaping and Irrigation		6%	\$	91,285	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	1,041,135	
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 2,562,548
Construction Contingency:					15% \$ 384,382
Mobilization					5% \$ 128,127
Prep ROW					3% \$ 76,876
Construction Cost TOTAL:					\$ 3,152,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,152,000
Engineering/Survey/Testing:		16%	\$ 504,320
Inspection		3.5%	\$ 110,320
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 472,800
Impact Fee Project Cost TOTAL:			\$ 4,239,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-36
Name:	Cindy (1)	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	Ganzer to 1,280' S of Ganzer			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	1,280			
Service Area(s):	C,NAA			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	4,409	cy	\$ 9.25	\$ 40,782
207	12" Lime Stabilization (with Lime @ 50#/sy)	8,533	sy	\$ 8.00	\$ 68,267
306	11" Concrete Pavement and Curb	7,964	sy	\$ 54.00	\$ 430,080
407	5' Concrete Sidewalk	12,800	sy	\$ 4.50	\$ 57,600
507	Turn Lanes and Median Openings	573	sy	\$ 62.00	\$ 35,547
Paving Construction Cost Subtotal:					\$ 632,276
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 18,968		
√ Roadway Drainage	Standard Internal System	30%	\$ 189,683		
√ Illumination		5%	\$ 31,614		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 12,646		
√ Sewer	Minor Adjustments	1%	\$ 6,323		
√ Landscaping and Irrigation		6%	\$ 37,937		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 547,170		
Paving and Allowance Subtotal:					\$ 1,179,445
Construction Contingency:					15% \$ 176,917
Mobilization					5% \$ 58,972
Prep ROW					1% \$ 11,794
Construction Cost TOTAL:					\$ 1,428,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,428,000
Engineering/Survey/Testing:		16%	\$ 228,480
Inspection		3.5%	\$ 49,980
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 428,400
Impact Fee Project Cost TOTAL:			\$ 2,135,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-37
Name:	Cindy (2)	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	1,280' S of Ganzer to Masch Branch-I-35 Collector			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	2,140			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	7,371	cy	\$ 9.25	\$ 68,183
207	12" Lime Stabilization (with Lime @ 50#/sy)	14,267	sy	\$ 8.00	\$ 114,133
306	11" Concrete Pavement and Curb	13,316	sy	\$ 54.00	\$ 719,040
407	5' Concrete Sidewalk	21,400	sy	\$ 4.50	\$ 96,300
507	Turn Lanes and Median Openings	959	sy	\$ 62.00	\$ 59,430
Paving Construction Cost Subtotal:					\$ 1,057,086
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 31,713		
√ Roadway Drainage	Standard Internal System	30%	\$ 317,126		
√ Illumination		5%	\$ 52,854		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 300,000		
√ Water	Minor Adjustments	2%	\$ 21,142		
√ Sewer	Minor Adjustments	1%	\$ 10,571		
√ Landscaping and Irrigation		6%	\$ 63,425		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 796,830		
Paving and Allowance Subtotal:					\$ 1,853,916
Construction Contingency:					15% \$ 278,087
Mobilization					5% \$ 92,696
Prep ROW					1% \$ 18,539
Construction Cost TOTAL:					\$ 2,244,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,244,000
Engineering/Survey/Testing:		16%	\$ 359,040
Inspection		3.5%	\$ 78,540
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 673,200
Impact Fee Project Cost TOTAL:			\$ 3,355,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-38
Name:	Cindy (3)	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	FM 1173 (Future) to 150' S of Future Loop			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	2,195			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	7,561	cy	\$ 9.25	\$ 69,935
207	12" Lime Stabilization (with Lime @ 50#/sy)	14,633	sy	\$ 8.00	\$ 117,067
306	11" Concrete Pavement and Curb	13,658	sy	\$ 54.00	\$ 737,520
407	5' Concrete Sidewalk	21,950	sy	\$ 4.50	\$ 98,775
507	Turn Lanes and Median Openings	983	sy	\$ 62.00	\$ 60,957
Paving Construction Cost Subtotal:					\$ 1,084,254
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$	-	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	32,528	
√ Roadway Drainage	Standard Internal System	30%	\$	325,276	
√ Illumination		5%	\$	54,213	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	21,685	
√ Sewer	Minor Adjustments	1%	\$	10,843	
√ Landscaping and Irrigation		6%	\$	65,055	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	509,599	
Paving and Allowance Subtotal:			\$	1,593,853	
Construction Contingency:			15%	\$	239,078
Mobilization			5%	\$	79,693
Prep ROW			1%	\$	15,939
Construction Cost TOTAL:			\$	1,929,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,929,000
Engineering/Survey/Testing:		16%	\$ 308,640
Inspection		3.5%	\$ 67,515
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 578,700
Impact Fee Project Cost TOTAL:			\$ 2,884,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-39
Name:	Cindy (4)	This project consists of the construction of a new four lane divided concrete secondary arterial. (Excludes 260' in the ETJ)		
Limits:	1,050' N of Masch Branch-I-35 PA to Tieszen			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	4,310			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	14,846	cy	\$ 9.25	\$ 137,321
207	12" Lime Stabilization (with Lime @ 50#/sy)	28,733	sy	\$ 8.00	\$ 229,867
306	11" Concrete Pavement and Curb	26,818	sy	\$ 54.00	\$ 1,448,160
407	5' Concrete Sidewalk	43,100	sy	\$ 4.50	\$ 193,950
507	Turn Lanes and Median Openings	1,931	sy	\$ 62.00	\$ 119,692
Paving Construction Cost Subtotal:					\$ 2,128,990
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 63,870		
√ Roadway Drainage	Standard Internal System	30%	\$ 638,697		
√ Illumination		5%	\$ 106,450		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 200,000		
√ Water	Minor Adjustments	2%	\$ 42,580		
√ Sewer	Minor Adjustments	1%	\$ 21,290		
√ Landscaping and Irrigation		6%	\$ 127,739		
Intersection Improvements	None Anticipated	-	\$ -		
√ Miscellaneous:	Railroad Crossing	\$0	\$ 250,000		
		Allowance Subtotal:	\$ 1,450,625		
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 3,579,616
Construction Contingency:					15% \$ 536,942
Mobilization					5% \$ 178,981
Prep ROW					1% \$ 35,796
Construction Cost TOTAL:					\$ 4,332,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,332,000
Engineering/Survey/Testing:		16%	\$ 693,120
Inspection		3.5%	\$ 151,620
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,299,600
Impact Fee Project Cost TOTAL:			\$ 6,476,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-40
Name:	Cindy (5)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	Tieszen to University			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	1,925			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	6,631	cy	\$ 9.25	\$ 61,333
207	12" Lime Stabilization (with Lime @ 50#/sy)	12,833	sy	\$ 8.00	\$ 102,667
306	11" Concrete Pavement and Curb	11,978	sy	\$ 54.00	\$ 646,800
407	5' Concrete Sidewalk	19,250	sy	\$ 4.50	\$ 86,625
507	Turn Lanes and Median Openings	862	sy	\$ 62.00	\$ 53,459
Paving Construction Cost Subtotal:					\$ 950,883
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	47,544	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	28,526	
√ Roadway Drainage	Standard Internal System	30%	\$	285,265	
√ Illumination		5%	\$	47,544	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	19,018	
√ Sewer	Minor Adjustments	1%	\$	9,509	
√ Landscaping and Irrigation		6%	\$	57,053	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	744,459	
		Paving and Allowance Subtotal:		\$	1,695,342
		Construction Contingency:	15%	\$	254,301
		Mobilization	5%	\$	84,767
		Prep ROW	3%	\$	50,860
Construction Cost TOTAL:					\$ 2,086,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,086,000
Engineering/Survey/Testing:		16%	\$ 333,760
Inspection		3.5%	\$ 73,010
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 312,900
Impact Fee Project Cost TOTAL:			\$ 2,806,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-41
Name:	Western (1)	This project consists of the widening of the existing pavement to complete the six lane divided concrete primary arterial.		
Limits:	University to Jim Christal			
Impact Fee Class:	PA (2/3)			
Ultimate Class:	Primary Arterial			
Length (lf):	4,245			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
102	Unclassified Street Excavation	12,735	cy	\$ 9.25	\$ 117,799
202	12" Lime Stabilization (with Lime @ 50#/sy)	25,706	sy	\$ 8.00	\$ 205,647
302	11" Concrete Pavement and Curb	24,291	sy	\$ 54.00	\$ 1,311,705
402	5' Concrete Sidewalk	21,225	sy	\$ 4.50	\$ 95,513
502	Turn Lanes and Median Openings	1,902	sy	\$ 62.00	\$ 117,937
Paving Construction Cost Subtotal:					\$ 1,848,600
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	92,430	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	55,458	
√ Roadway Drainage	Standard Internal System	30%	\$	554,580	
√ Illumination		5%	\$	92,430	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	36,972	
√ Sewer	Minor Adjustments	1%	\$	18,486	
√ Landscaping and Irrigation		6%	\$	110,916	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	961,272	
		Paving and Allowance Subtotal:		\$	2,809,872
		Construction Contingency:	15%	\$	421,481
		Mobilization	5%	\$	140,494
		Prep ROW	3%	\$	84,296
Construction Cost TOTAL:					\$ 3,457,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,457,000
Engineering/Survey/Testing:		16%	\$ 553,120
Inspection		3.5%	\$ 120,995
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 518,550
Impact Fee Project Cost TOTAL:			\$ 4,650,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-42
Name:	Milam-Bobcat Col	This project consists of the construction of a new two lane concrete collector.		
Limits:	Milam to Bobcat (Future)			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	3,030			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	6,733	cy	\$ 9.25	\$ 62,283
211	8" Lime Stabilization (with Lime @ 50#/sy)	13,130	sy	\$ 6.00	\$ 78,780
310	8" Concrete Pavement and Curb	12,457	sy	\$ 46.00	\$ 573,007
411	8' Concrete Sidewalk	48,480	sy	\$ 4.50	\$ 218,160
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 932,230
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 27,967		
√ Roadway Drainage	Standard Internal System	30%	\$ 279,669		
√ Illumination		5%	\$ 46,612		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 200,000		
√ Water	Minor Adjustments	2%	\$ 18,645		
√ Sewer	Minor Adjustments	1%	\$ 9,322		
√ Landscaping and Irrigation		6%	\$ 55,934		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 638,148		
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 1,570,378
Construction Contingency:					15% \$ 235,557
Mobilization					5% \$ 78,519
Prep ROW					1% \$ 15,704
Construction Cost TOTAL:					\$ 1,901,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,901,000
Engineering/Survey/Testing:		16%	\$ 304,160
Inspection		3.5%	\$ 66,535
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 570,300
Impact Fee Project Cost TOTAL:			\$ 2,842,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-43
Name:	HOD N-S Secondary Arterial (1)	This project consists of the construction of a new four lane divided concrete secondary arterial (Hills of Denton MPC).		
Limits:	Milam to 220' S of Bobcat			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	3,040			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	10,471	cy	\$ 9.25	\$ 96,858
207	12" Lime Stabilization (with Lime @ 50#/sy)	20,267	sy	\$ 8.00	\$ 162,133
306	11" Concrete Pavement and Curb	18,916	sy	\$ 54.00	\$ 1,021,440
407	5' Concrete Sidewalk	30,400	sy	\$ 4.50	\$ 136,800
507	Turn Lanes and Median Openings	1,362	sy	\$ 62.00	\$ 84,423
Paving Construction Cost Subtotal:					\$ 1,501,654
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 45,050		
√ Roadway Drainage	Standard Internal System	30%	\$ 450,496		
√ Illumination		5%	\$ 75,083		
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$ 600,000		
√ Water	Minor Adjustments	2%	\$ 30,033		
√ Sewer	Minor Adjustments	1%	\$ 15,017		
√ Landscaping and Irrigation		6%	\$ 90,099		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 1,305,778		
Paving and Allowance Subtotal:					\$ 2,807,432
Construction Contingency:					15% \$ 421,115
Mobilization					5% \$ 140,372
Prep ROW					1% \$ 28,074
Construction Cost TOTAL:					\$ 3,397,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,397,000
Engineering/Survey/Testing:		16%	\$ 543,520
Inspection		3.5%	\$ 118,895
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,019,100
Impact Fee Project Cost TOTAL:			\$ 5,079,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-44
Name:	HOD N-S Secondary Arterial (2)	This project consists of the construction of a new four lane divided concrete secondary arterial (Hills of Denton MPC).		
Limits:	2830' N of Elm to Elm			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	2,830			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	9,748	cy	\$ 9.25	\$ 90,167
207	12" Lime Stabilization (with Lime @ 50#/sy)	18,867	sy	\$ 8.00	\$ 150,933
306	11" Concrete Pavement and Curb	17,609	sy	\$ 54.00	\$ 950,880
407	5' Concrete Sidewalk	28,300	sy	\$ 4.50	\$ 127,350
507	Turn Lanes and Median Openings	1,268	sy	\$ 62.00	\$ 78,591
Paving Construction Cost Subtotal:					\$ 1,397,922
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 41,938		
√ Roadway Drainage	Standard Internal System	30%	\$ 419,377		
√ Illumination		5%	\$ 69,896		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 100,000		
√ Water	Minor Adjustments	2%	\$ 27,958		
√ Sewer	Minor Adjustments	1%	\$ 13,979		
√ Landscaping and Irrigation		6%	\$ 83,875		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 757,023		
		**Allowances based on % of Paving Construction Cost Subtotal			
Paving and Allowance Subtotal:					\$ 2,154,945
Construction Contingency:					15% \$ 323,242
Mobilization					5% \$ 107,747
Prep ROW					1% \$ 21,549
Construction Cost TOTAL:					\$ 2,608,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,608,000
Engineering/Survey/Testing:		16%	\$ 417,280
Inspection		3.5%	\$ 91,280
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 782,400
Impact Fee Project Cost TOTAL:			\$ 3,899,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-45
Name:	Heritage Trail	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	University to Scripture			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	4,060			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	13,984	cy	\$ 9.25	\$ 129,356
207	12" Lime Stabilization (with Lime @ 50#/sy)	27,067	sy	\$ 8.00	\$ 216,533
306	11" Concrete Pavement and Curb	25,262	sy	\$ 54.00	\$ 1,364,160
407	5' Concrete Sidewalk	40,600	sy	\$ 4.50	\$ 182,700
507	Turn Lanes and Median Openings	1,819	sy	\$ 62.00	\$ 112,750
Paving Construction Cost Subtotal:					\$ 2,005,499
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 60,165		
√ Roadway Drainage	Standard Internal System	30%	\$ 601,650		
√ Illumination		5%	\$ 100,275		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 40,110		
√ Sewer	Minor Adjustments	1%	\$ 20,055		
√ Landscaping and Irrigation		6%	\$ 120,330		
√ Intersection Improvements		-	\$ 500,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 1,442,585		
Paving and Allowance Subtotal:					\$ 3,448,084
Construction Contingency:					15% \$ 517,213
Mobilization					5% \$ 172,404
Prep ROW					1% \$ 34,481
Construction Cost TOTAL:					\$ 4,173,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,173,000
Engineering/Survey/Testing:		16%	\$ 667,680
Inspection		3.5%	\$ 146,055
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,251,900
Impact Fee Project Cost TOTAL:			\$ 6,239,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-46
Name:	Bonnie Brae (1)	This project consists of the construction of a new six lane divided concrete primary arterial (Hills of Denton MPC).		
Limits:	Milam to Loop 288 EBFR			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	16,715			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	78,003	cy	\$ 9.25	\$ 721,531
201	12" Lime Stabilization (with Lime @ 50#/sy)	152,292	sy	\$ 8.00	\$ 1,218,338
301	11" Concrete Pavement and Curb	144,863	sy	\$ 54.00	\$ 7,822,620
401	5' Concrete Sidewalk	167,150	sy	\$ 4.50	\$ 752,175
501	Turn Lanes and Median Openings	7,487	sy	\$ 62.00	\$ 464,189
Paving Construction Cost Subtotal:					\$ 10,978,853
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 329,366		
√ Roadway Drainage	Standard Internal System	30%	\$ 3,293,656		
√ Illumination		5%	\$ 548,943		
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$ 1,800,000		
√ Water	Minor Adjustments	2%	\$ 219,577		
√ Sewer	Minor Adjustments	1%	\$ 109,789		
√ Landscaping and Irrigation		6%	\$ 658,731		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 7,210,061		
Paving and Allowance Subtotal:					\$ 18,188,914
Construction Contingency:					15% \$ 2,728,337
Mobilization					5% \$ 909,446
Prep ROW					1% \$ 181,889
Construction Cost TOTAL:					\$ 22,009,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 22,009,000
Engineering/Survey/Testing:		16%	\$ 3,521,440
Inspection		3.5%	\$ 770,315
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 6,602,700
Impact Fee Project Cost TOTAL:			\$ 32,903,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-47
Name:	Bonnie Brae (2)	This project consists of the construction of a new (realignment) four lane divided concrete secondary arterial.		
Limits:	Loop 288 EBFR to 860' N of Riney			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	2,260			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	7,784	cy	\$ 9.25	\$ 72,006
207	12" Lime Stabilization (with Lime @ 50#/sy)	15,067	sy	\$ 8.00	\$ 120,533
306	11" Concrete Pavement and Curb	14,062	sy	\$ 54.00	\$ 759,360
407	5' Concrete Sidewalk	22,600	sy	\$ 4.50	\$ 101,700
507	Turn Lanes and Median Openings	1,012	sy	\$ 62.00	\$ 62,762
Paving Construction Cost Subtotal:					\$ 1,116,362
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 33,491		
√ Roadway Drainage	Standard Internal System	30%	\$ 334,908		
√ Illumination		5%	\$ 55,818		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 100,000		
√ Water	Minor Adjustments	2%	\$ 22,327		
√ Sewer	Minor Adjustments	1%	\$ 11,164		
√ Landscaping and Irrigation		6%	\$ 66,982		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 874,690		
		**Allowances based on % of Paving Construction Cost Subtotal			
Paving and Allowance Subtotal:					\$ 1,991,051
Construction Contingency:					15% \$ 298,658
Mobilization					5% \$ 99,553
Prep ROW					1% \$ 19,911
Construction Cost TOTAL:					\$ 2,410,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,410,000
Engineering/Survey/Testing:		16%	\$ 385,600
Inspection		3.5%	\$ 84,350
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 723,000
Impact Fee Project Cost TOTAL:			\$ 3,603,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.
Name:	Bonnie Brae (3)	This project consists of the reconstruction of the existing asphalt pavement as a four lane divided secondary arterial. The City's contribution to the overall project (Bonnie Brae + Vintage) is \$22,037,838. The contribution to this segment of Bonnie Brae is \$5,950,216 (27%).	C-48,E-14
Limits:	University to I-35		
Impact Fee Class:	SA		
Ultimate Class:	Secondary Arterial		
Length (lf):	7,465		
Service Area(s):	C,E		

Roadway Construction Cost Projection	
Construction Cost TOTAL:	\$ 7,756,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 7,756,000
Engineering/Survey/Testing:		-	\$ 10,250,000
ROW/Easement Acquisition:	Existing Alignment	-	\$ 16,950,000
Impact Fee Project Cost TOTAL:			\$ 34,956,000
City Contribution:			\$ 22,037,838
Impact Fee Project Cost (27%):			\$ 5,950,216

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-49
Name:	Fallmeadow	This project consists of the construction of a new two lane concrete collector.		
Limits:	140' S of Meadow Edge to Gardenview			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	990			
Service Area(s):	C			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	2,200	cy	\$ 9.25	\$ 20,350
211	8" Lime Stabilization (with Lime @ 50#/sy)	4,290	sy	\$ 6.00	\$ 25,740
310	8" Concrete Pavement and Curb	4,070	sy	\$ 46.00	\$ 187,220
411	8' Concrete Sidewalk	15,840	sy	\$ 4.50	\$ 71,280
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 304,590
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 9,138		
√ Roadway Drainage	Standard Internal System	30%	\$ 91,377		
√ Illumination		5%	\$ 15,230		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 6,092		
√ Sewer	Minor Adjustments	1%	\$ 3,046		
√ Landscaping and Irrigation		6%	\$ 18,275		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 143,157		
		Paving and Allowance Subtotal:	\$ 447,747		
		Construction Contingency:	15%	\$ 67,162	
		Mobilization	5%	\$ 22,387	
		Prep ROW	1%	\$ 4,477	
		Construction Cost TOTAL:	\$ 542,000		

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 542,000
Engineering/Survey/Testing:		16%	\$ 86,720
Inspection		3.5%	\$ 18,970
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 162,600
Impact Fee Project Cost TOTAL:			\$ 810,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-50,D-45
Name:	FM 2164 (Locust) (1)	This project consists of the reconstruction of the existing pavement to a six lane divided concrete primary arterial.		
Limits:	City Limits to Loop 288 WBFR			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	14,280			
Service Area(s):	C,D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	66,640	cy	\$ 9.25	\$ 616,420
201	12" Lime Stabilization (with Lime @ 50#/sy)	130,107	sy	\$ 8.00	\$ 1,040,853
301	11" Concrete Pavement and Curb	123,760	sy	\$ 54.00	\$ 6,683,040
401	5' Concrete Sidewalk	142,800	sy	\$ 4.50	\$ 642,600
501	Turn Lanes and Median Openings	6,396	sy	\$ 62.00	\$ 396,568
Paving Construction Cost Subtotal:					\$ 9,379,481
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	468,974	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	281,384	
√ Roadway Drainage	Standard Internal System	30%	\$	2,813,844	
√ Illumination		5%	\$	468,974	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	1,000,000	
√ Water	Minor Adjustments	2%	\$	187,590	
√ Sewer	Minor Adjustments	1%	\$	93,795	
√ Landscaping and Irrigation		6%	\$	562,769	
√ Intersection Improvements		-	\$	1,000,000	
Miscellaneous:		\$0	\$	-	
Allowance Subtotal:					\$ 6,877,330
Paving and Allowance Subtotal:					\$ 16,256,811
Construction Contingency:					15% \$ 2,438,522
Mobilization					5% \$ 812,841
Prep ROW					3% \$ 487,704
Construction Cost TOTAL:					\$ 19,996,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 19,996,000
Engineering/Survey/Testing:		16%	\$ 3,199,360
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 4,639,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.
Name:	FM 2164 (Locust) (2)	This project consists of the reconstruction of the existing pavement to a six lane divided concrete primary arterial.	C-51,D-46
Limits:	Loop 288 WBFR to Elm		
Impact Fee Class:	PA		
Ultimate Class:	Primary Arterial		
Length (lf):	7,420		
Service Area(s):	C,D		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	34,627	cy	\$ 9.25	\$ 320,297
201	12" Lime Stabilization (with Lime @ 50#/sy)	67,604	sy	\$ 8.00	\$ 540,836
301	11" Concrete Pavement and Curb	64,307	sy	\$ 54.00	\$ 3,472,560
401	5' Concrete Sidewalk	74,200	sy	\$ 4.50	\$ 333,900
501	Turn Lanes and Median Openings	3,324	sy	\$ 62.00	\$ 206,060
Paving Construction Cost Subtotal:					\$ 4,873,652
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	243,683	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	146,210	
√ Roadway Drainage	Standard Internal System	30%	\$	1,462,096	
√ Illumination		5%	\$	243,683	
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$	200,000	
√ Water	Minor Adjustments	2%	\$	97,473	
√ Sewer	Minor Adjustments	1%	\$	48,737	
√ Landscaping and Irrigation		6%	\$	292,419	
√ Intersection Improvements		-	\$	500,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 3,234,299
Paving and Allowance Subtotal:					\$ 8,107,951
Construction Contingency:					15% \$ 1,216,193
Mobilization					5% \$ 405,398
Prep ROW					3% \$ 243,239
Construction Cost TOTAL:					\$ 9,973,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 9,973,000
Engineering/Survey/Testing:		16%	\$ 1,595,680
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 2,313,800

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City of Denton - 2015 Roadway Impact Fee Study
Capital Improvement Plan for Roadway Impact Fees
Summary of Conceptual Level Project Cost Projections

Roadway Improvements - Service Area D

#	IF Class	Project	Limits		Percent in Service Area	Project Cost	Total Cost in Service Area
			From	To			
D-1	C	FM 2164-Brittany Hill Collector (1)	1,605' E of FM 2164	745' W of Mesquite Ridge	100%	\$ 2,603,000	\$ 2,603,000
D-2	C	FM 2164-Brittany Hill Collector (2)	745' W of Mesquite Ridge	Mesquite Ridge	50%	\$ 791,000	\$ 395,500
D-3	C	FM 2164-Brittany Hill Collector (3)	Mesquite Ridge	Brittany Hill	100%	\$ 2,115,000	\$ 2,115,000
D-4	SA	FM 2153 (Realigned)	City Limits	620' S of Somerset	100%	\$ 2,217,400	\$ 2,217,400
D-5	PA	FM 2164-FM 2153 (Realigned) PA	FM 2164 (Locust)	Indian Wells (Future)	100%	\$ 8,426,000	\$ 8,426,000
D-6	PA	FM 2164-FM 2153 (Realigned) PA	Mesquite Ridge (Future)	FM 2153 (Realigned)	100%	\$ 18,498,000	\$ 18,498,000
D-7	SA	FM 2164-FM 2153 SA (1)	FM 2164 (Locust)	Indian Wells (Future)	100%	\$ 7,593,000	\$ 7,593,000
D-8	SA	FM 2164-FM 2153 SA (2)	540' E of Green Valley (Future)	FM 2153	100%	\$ 7,617,000	\$ 7,617,000
D-9	SA	Shepard	1,480' W of FM 2153	FM 2153	100%	\$ 2,265,000	\$ 2,265,000
D-10	C	Gribble Springs-Chapman Collector	630' N of FM 2164-Brittany Hill Collector	Gribble Springs	100%	\$ 7,471,000	\$ 7,471,000
D-11	C	Mesquite Ridge (1)	FM 2164-Brittany Hill Collector	400' N of FM 2164-FM 2153 (Realigned) PA	100%	\$ 2,431,000	\$ 2,431,000
D-12	C	Mesquite Ridge (2)	400' N of FM 2164-FM 2153 (Realigned) PA	470' S of FM 2164-FM 2153 (Realigned) PA	50%	\$ 713,000	\$ 356,500
D-13	C	Mesquite Ridge (3)	470' S of FM 2164-FM 2153 (Realigned) PA	1,005' S of FM 2164-FM 2153 (Realigned) PA	100%	\$ 447,000	\$ 447,000
D-14	SA	Brittany Hill (1)	355' S of Covey	795' S of FM 2164-FM 2153 (Realigned) PA	100%	\$ 5,620,000	\$ 5,620,000
D-15	SA	Brittany Hill (2)	795' S of FM 2164-FM 2153 (Realigned) PA	770' N of FM 2164-FM 2153 SA	50%	\$ 1,761,000	\$ 880,500
D-16	C	FM 2153 (1)	City Limits	Burger (S)	100%	\$ 1,069,200	\$ 1,069,200
D-17	C	FM 2153 (2)	Burger	FM 2153 (Realigned)	100%	\$ 250,600	\$ 250,600
D-18	C	FM 2153 (Realigned); FM 2153 Collector	FM 2153 (Realigned)	FM 2153	100%	\$ 3,416,000	\$ 3,416,000
D-19	SA	FM 2153 (3)	620' S of Somerset	Sherman	50%	\$ 1,988,800	\$ 989,400
D-20	SA	Green Valley (1)	Warschun	860' S of Warschun	100%	\$ 1,069,000	\$ 1,069,000
D-21	SA	Green Valley (2)	860' S of Warschun	Sherman	100%	\$ 2,954,000	\$ 2,954,000
D-22	SA	Milam (3)	FM 2164 (Locust)	605' E of FM 2164 (Locust)	100%	\$ 667,000	\$ 667,000
D-23	SA	Bobcat (3)	FM 2164 (Locust)	515' E of FM 2164 (Locust)	100%	\$ 621,000	\$ 621,000
D-24	SA	Cooper Creek (1)	860' W of Hartlee-Cooper Collector #1	Hartlee Field	100%	\$ 17,427,000	\$ 17,427,000
D-25	SA	Cooper Creek (2)	Silver Dome	Fishtrap	50%	\$ 5,552,000	\$ 2,776,000
D-26	SA	Cooper Creek (3)	Fishtrap	University	100%	\$ 4,490,000	\$ 4,490,000
D-27	C	Golden Circle	Hartlee Field (Future)	Hartlee Field (Existing)	100%	\$ 7,476,000	\$ 7,476,000
D-28	SA	Hartlee Field (1)	FM 2164 (Locust)	500' E of FM 2164 (Locust)	100%	\$ 658,000	\$ 658,000
D-29	SA	Hartlee Field (2)	West City Limits	Woodland Hill	100%	\$ 8,472,000	\$ 8,472,000
D-30	C	Long (1)	FM 2164 (Locust)	525' E of FM 2164	100%	\$ 431,000	\$ 431,000
D-31	C	Long (2)	City Limits	Stuart	100%	\$ 1,658,000	\$ 1,658,000
D-32	C	Hartlee Field (3)	Sherman	515' E of Sherman	100%	\$ 2,129,000	\$ 2,129,000
D-33	C	Kings-Windsor Collector	Kings Row	Windsor	100%	\$ 356,000	\$ 356,000
D-34	C	Windsor	410' E of Saints	Cooper Creek	100%	\$ 6,095,000	\$ 6,095,000
D-35	SA	Mingo (2)	University	455' E of Cooper Creek	100%	\$ 6,923,000	\$ 6,923,000
D-36	PA	Post Oak (1)	N. City Limits	Cooper Creek (Future)	100%	\$ 8,870,000	\$ 8,870,000
D-37	PA	Post Oak/Cooper Creek	Cooper Creek (Future)	Hartlee Field	100%	\$ 4,626,000	\$ 4,626,000
D-38	PA	Post Oak (2)	Railroad	Fishtrap	100%	\$ 4,504,000	\$ 4,504,000
D-39	PA	Post Oak (3)	Fishtrap	940' S of Fishtrap	50%	\$ 2,547,000	\$ 1,273,500
D-40	PA	Post Oak (4)	940' S of Fishtrap	University	100%	\$ 1,534,000	\$ 1,534,000
D-41	C	Deerwood	2,855' N of Kings Row	880' N of Kings Row	100%	\$ 1,624,000	\$ 1,624,000
D-42	C	Hartlee-Cooper Col	Hartlee Field	Cooper Creek	100%	\$ 3,914,000	\$ 3,914,000
D-43	PA	Sherman (1)	Locust	Loop 288 WBFR	100%	\$ 3,764,200	\$ 3,764,200
D-44	PA	Sherman (2)	Loop 288 WBFR	City Limits	100%	\$ 8,545,200	\$ 8,545,200
C-50 D-45	PA	FM 2164 (Locust) (1)	City Limits	Loop 288 WBFR	50%	\$ 4,639,000	\$ 2,319,500
C-51 D-46	PA	FM 2164 (Locust) (2)	Loop 288 WBFR	Elm	50%	\$ 2,313,800	\$ 1,156,900
TOTAL						\$ 190,560,200	\$ 180,702,400

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-1
Name:	FM 2164-Brittany Hill Collector (1)	This project consists of the construction of a new two lane concrete collector.		
Limits:	1,605' E of FM 2164 to 745' W of Mesquite Ridge			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	3,025			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	6,722	cy	\$ 9.25	\$ 62,181
211	8" Lime Stabilization (with Lime @ 50#/sy)	13,108	sy	\$ 6.00	\$ 78,650
310	8" Concrete Pavement and Curb	12,436	sy	\$ 46.00	\$ 572,061
411	8' Concrete Sidewalk	48,400	sy	\$ 4.50	\$ 217,800
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 930,692

Major Construction Component Allowances**:			
Item Description	Notes	Allowance	Item Cost
Traffic Control	None Anticipated	0%	\$ -
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 27,921
√ Roadway Drainage	Standard Internal System	30%	\$ 279,208
√ Illumination		5%	\$ 46,535
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 70,000
√ Water	Minor Adjustments	2%	\$ 18,614
√ Sewer	Minor Adjustments	1%	\$ 9,307
√ Landscaping and Irrigation		6%	\$ 55,842
Intersection Improvements	None Anticipated	-	\$ -
Miscellaneous:		\$0	\$ -
		Allowance Subtotal:	\$ 507,425
**Allowances based on % of Paving Construction Cost Subtotal			
Paving and Allowance Subtotal:			\$ 1,438,117
Construction Contingency:			15% \$ 215,718
Mobilization			5% \$ 71,906
Prep ROW			1% \$ 14,381
Construction Cost TOTAL:			\$ 1,741,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,741,000
Engineering/Survey/Testing:		16%	\$ 278,560
Inspection		3.5%	\$ 60,935
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 522,300
Impact Fee Project Cost TOTAL:			\$ 2,603,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-2
Name:	FM 2164-Brittany Hill Collector (2)	This project consists of the construction of a new two lane concrete collector.		
Limits:	745' W of Mesquite Ridge to Mesquite Ridge			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	745			
Service Area(s):	D,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	1,656	cy	\$ 9.25	\$ 15,314
211	8" Lime Stabilization (with Lime @ 50#/sy)	3,228	sy	\$ 6.00	\$ 19,370
310	8" Concrete Pavement and Curb	3,063	sy	\$ 46.00	\$ 140,888
411	8' Concrete Sidewalk	11,920	sy	\$ 4.50	\$ 53,640
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 229,212
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 6,876		
√ Roadway Drainage	Standard Internal System	30%	\$ 68,764		
√ Illumination		5%	\$ 11,461		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 100,000		
√ Water	Minor Adjustments	2%	\$ 4,584		
√ Sewer	Minor Adjustments	1%	\$ 2,292		
√ Landscaping and Irrigation		6%	\$ 13,753		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 207,729		
Paving and Allowance Subtotal:					\$ 436,941
Construction Contingency:					15% \$ 65,541
Mobilization					5% \$ 21,847
Prep ROW					1% \$ 4,369
Construction Cost TOTAL:					\$ 529,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 529,000
Engineering/Survey/Testing:		16%	\$ 84,640
Inspection		3.5%	\$ 18,515
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 158,700
Impact Fee Project Cost TOTAL:			\$ 791,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-3
Name:	FM 2164-Brittany Hill Collector (3)	This project consists of the construction of a new two lane concrete collector.		
Limits:	Mesquite Ridge to Brittany Hill			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	2,585			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	5,744	cy	\$ 9.25	\$ 53,136
211	8" Lime Stabilization (with Lime @ 50#/sy)	11,202	sy	\$ 6.00	\$ 67,210
310	8" Concrete Pavement and Curb	10,627	sy	\$ 46.00	\$ 488,852
411	8' Concrete Sidewalk	41,360	sy	\$ 4.50	\$ 186,120
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 795,318
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 23,860		
√ Roadway Drainage	Standard Internal System	30%	\$ 238,596		
√ Illumination		5%	\$ 39,766		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 15,906		
√ Sewer	Minor Adjustments	1%	\$ 7,953		
√ Landscaping and Irrigation		6%	\$ 47,719		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 373,800		
Paving and Allowance Subtotal:					\$ 1,169,118
Construction Contingency:					15% \$ 175,368
Mobilization					5% \$ 58,456
Prep ROW					1% \$ 11,691
Construction Cost TOTAL:					\$ 1,415,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,415,000
Engineering/Survey/Testing:		16%	\$ 226,400
Inspection		3.5%	\$ 49,525
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 424,500
Impact Fee Project Cost TOTAL:			\$ 2,115,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-4
Name:	FM 2153 (Realigned)	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	City Limits to 620' S of Somerset			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	10,740			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	36,993	cy	\$ 9.25	\$ 342,188
207	12" Lime Stabilization (with Lime @ 50#/sy)	71,600	sy	\$ 8.00	\$ 572,800
306	11" Concrete Pavement and Curb	66,827	sy	\$ 54.00	\$ 3,608,640
407	5' Concrete Sidewalk	107,400	sy	\$ 4.50	\$ 483,300
507	Turn Lanes and Median Openings	4,811	sy	\$ 62.00	\$ 298,259
Paving Construction Cost Subtotal:					\$ 5,305,187
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$	-	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	159,156	
√ Roadway Drainage	Standard Internal System	30%	\$	1,591,556	
√ Illumination		5%	\$	265,259	
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$	100,000	
√ Water	Minor Adjustments	2%	\$	106,104	
√ Sewer	Minor Adjustments	1%	\$	53,052	
√ Landscaping and Irrigation		6%	\$	318,311	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 2,593,438
Paving and Allowance Subtotal:					\$ 7,898,625
Construction Contingency:					15% \$ 1,184,794
Mobilization					5% \$ 394,931
Prep ROW					1% \$ 78,986
Construction Cost TOTAL:					\$ 9,558,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 9,558,000
Engineering/Survey/Testing:		16%	\$ 1,529,280
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 2,217,400

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-5
Name:	FM 2164-FM 2153 (Realigned) PA	This project consists of the construction of a new six lane divided concrete primary arterial.		
Limits:	FM 2164 (Locust) to Indian Wells (Future)			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	3,840			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	17,920	cy	\$ 9.25	\$ 165,760
201	12" Lime Stabilization (with Lime @ 50#/sy)	34,987	sy	\$ 8.00	\$ 279,893
301	11" Concrete Pavement and Curb	33,280	sy	\$ 54.00	\$ 1,797,120
401	5' Concrete Sidewalk	38,400	sy	\$ 4.50	\$ 172,800
501	Turn Lanes and Median Openings	1,720	sy	\$ 62.00	\$ 106,640
Paving Construction Cost Subtotal:					\$ 2,522,213
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 75,666		
√ Roadway Drainage	Standard Internal System	30%	\$ 756,664		
√ Illumination		5%	\$ 126,111		
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$ 700,000		
√ Water	Minor Adjustments	2%	\$ 50,444		
√ Sewer	Minor Adjustments	1%	\$ 25,222		
√ Landscaping and Irrigation		6%	\$ 151,333		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 2,135,440		
Paving and Allowance Subtotal:					\$ 4,657,654
Construction Contingency:					15% \$ 698,648
Mobilization					5% \$ 232,883
Prep ROW					1% \$ 46,577
Construction Cost TOTAL:					\$ 5,636,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,636,000
Engineering/Survey/Testing:		16%	\$ 901,760
Inspection		3.5%	\$ 197,260
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,690,800
Impact Fee Project Cost TOTAL:			\$ 8,426,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-6
Name:	FM 2164-FM 2153 (Realigned) PA	This project consists of the construction of a new six lane divided concrete primary arterial.		
Limits:	Mesquite Ridge (Future) to FM 2153 (Realigned)			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	9,450			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	44,100	cy	\$ 9.25	\$ 407,925
201	12" Lime Stabilization (with Lime @ 50#/sy)	86,100	sy	\$ 8.00	\$ 688,800
301	11" Concrete Pavement and Curb	81,900	sy	\$ 54.00	\$ 4,422,600
401	5' Concrete Sidewalk	94,500	sy	\$ 4.50	\$ 425,250
501	Turn Lanes and Median Openings	4,233	sy	\$ 62.00	\$ 262,434
Paving Construction Cost Subtotal:					\$ 6,207,009
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 186,210		
√ Roadway Drainage	Standard Internal System	30%	\$ 1,862,103		
√ Illumination		5%	\$ 310,350		
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$ 1,100,000		
√ Water	Minor Adjustments	2%	\$ 124,140		
√ Sewer	Minor Adjustments	1%	\$ 62,070		
√ Landscaping and Irrigation		6%	\$ 372,421		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 4,017,294		
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 10,224,304
Construction Contingency:					15% \$ 1,533,646
Mobilization					5% \$ 511,215
Prep ROW					1% \$ 102,243
Construction Cost TOTAL:					\$ 12,372,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 12,372,000
Engineering/Survey/Testing:		16%	\$ 1,979,520
Inspection		3.5%	\$ 433,020
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 3,711,600
Impact Fee Project Cost TOTAL:			\$ 18,496,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-7
Name:	FM 2164-FM 2153 SA (1)	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	FM 2164 (Locust) to Indian Wells (Future)			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	4,885			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	16,826	cy	\$ 9.25	\$ 155,642
207	12" Lime Stabilization (with Lime @ 50#/sy)	32,567	sy	\$ 8.00	\$ 260,533
306	11" Concrete Pavement and Curb	30,396	sy	\$ 54.00	\$ 1,641,360
407	5' Concrete Sidewalk	48,850	sy	\$ 4.50	\$ 219,825
507	Turn Lanes and Median Openings	2,188	sy	\$ 62.00	\$ 135,661
Paving Construction Cost Subtotal:					\$ 2,413,020
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 72,391		
√ Roadway Drainage	Standard Internal System	30%	\$ 723,906		
√ Illumination		5%	\$ 120,651		
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$ 400,000		
√ Water	Minor Adjustments	2%	\$ 48,260		
√ Sewer	Minor Adjustments	1%	\$ 24,130		
√ Landscaping and Irrigation		6%	\$ 144,781		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 1,784,120		
Paving and Allowance Subtotal:					\$ 4,197,140
Construction Contingency:					15% \$ 629,571
Mobilization					5% \$ 209,857
Prep ROW					1% \$ 41,971
Construction Cost TOTAL:					\$ 5,079,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,079,000
Engineering/Survey/Testing:		16%	\$ 812,640
Inspection		3.5%	\$ 177,765
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,523,700
Impact Fee Project Cost TOTAL:			\$ 7,593,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-8
Name:	FM 2164-FM 2153 SA (2)	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	540' E of Green Valley (Future) to FM 2153			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	4,765			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	16,413	cy	\$ 9.25	\$ 151,818
207	12" Lime Stabilization (with Lime @ 50#/sy)	31,767	sy	\$ 8.00	\$ 254,133
306	11" Concrete Pavement and Curb	29,649	sy	\$ 54.00	\$ 1,601,040
407	5' Concrete Sidewalk	47,650	sy	\$ 4.50	\$ 214,425
507	Turn Lanes and Median Openings	2,134	sy	\$ 62.00	\$ 132,328
Paving Construction Cost Subtotal:					\$ 2,353,745
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 70,612		
√ Roadway Drainage	Standard Internal System	30%	\$ 706,123		
√ Illumination		5%	\$ 117,687		
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$ 500,000		
√ Water	Minor Adjustments	2%	\$ 47,075		
√ Sewer	Minor Adjustments	1%	\$ 23,537		
√ Landscaping and Irrigation		6%	\$ 141,225		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 1,856,260
Paving and Allowance Subtotal:					\$ 4,210,004
Construction Contingency:					15% \$ 631,501
Mobilization					5% \$ 210,500
Prep ROW					1% \$ 42,100
Construction Cost TOTAL:					\$ 5,095,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,095,000
Engineering/Survey/Testing:		16%	\$ 815,200
Inspection		3.5%	\$ 178,325
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,528,500
Impact Fee Project Cost TOTAL:			\$ 7,617,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-9
Name:	Shepard	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	1,490' W of FM 2153 to FM 2153			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	1,490			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	5,132	cy	\$ 9.25	\$ 47,473
207	12" Lime Stabilization (with Lime @ 50#/sy)	9,933	sy	\$ 8.00	\$ 79,467
306	11" Concrete Pavement and Curb	9,271	sy	\$ 54.00	\$ 500,640
407	5' Concrete Sidewalk	14,900	sy	\$ 4.50	\$ 67,050
507	Turn Lanes and Median Openings	667	sy	\$ 62.00	\$ 41,379
Paving Construction Cost Subtotal:					\$ 736,008
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	36,800	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	22,080	
√ Roadway Drainage	Standard Internal System	30%	\$	220,802	
√ Illumination		5%	\$	36,800	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	14,720	
√ Sewer	Minor Adjustments	1%	\$	7,360	
√ Landscaping and Irrigation		6%	\$	44,160	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	632,724	
		Paving and Allowance Subtotal:		\$	1,368,733
		Construction Contingency:	15%	\$	205,310
		Mobilization	5%	\$	68,437
		Prep ROW	3%	\$	41,062
Construction Cost TOTAL:					\$ 1,684,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,684,000
Engineering/Survey/Testing:		16%	\$ 269,440
Inspection		3.5%	\$ 58,940
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 252,600
Impact Fee Project Cost TOTAL:			\$ 2,265,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-10
Name:	Gribble Springs-Chapman Collector	This project consists of the construction of a new two lane concrete collector.		
Limits:	630' N of FM 2164-Brittany Hill Collector to Gribble Springs			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	8,910			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	19,800	cy	\$ 9.25	\$ 183,150
211	8" Lime Stabilization (with Lime @ 50#/sy)	38,610	sy	\$ 6.00	\$ 231,660
310	8" Concrete Pavement and Curb	36,630	sy	\$ 46.00	\$ 1,684,980
411	8' Concrete Sidewalk	142,560	sy	\$ 4.50	\$ 641,520
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 2,741,310

Major Construction Component Allowances**:			
Item Description	Notes	Allowance	Item Cost
Traffic Control	None Anticipated	0%	\$ -
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 82,239
√ Roadway Drainage	Standard Internal System	30%	\$ 822,393
√ Illumination		5%	\$ 137,066
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 100,000
√ Water	Minor Adjustments	2%	\$ 54,826
√ Sewer	Minor Adjustments	1%	\$ 27,413
√ Landscaping and Irrigation		6%	\$ 164,479
Intersection Improvements	None Anticipated	-	\$ -
Miscellaneous:		\$0	\$ -
		Allowance Subtotal:	\$ 1,388,416
**Allowances based on % of Paving Construction Cost Subtotal			
Paving and Allowance Subtotal:			\$ 4,129,726
Construction Contingency:		15%	\$ 619,459
Mobilization		5%	\$ 206,486
Prep ROW		1%	\$ 41,297
Construction Cost TOTAL:			\$ 4,997,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,997,000
Engineering/Survey/Testing:		16%	\$ 799,520
Inspection		3.5%	\$ 174,895
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,499,100
Impact Fee Project Cost TOTAL:			\$ 7,471,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-11
Name:	Mesquite Ridge (1)	This project consists of the construction of a new two lane concrete collector.		
Limits:	FM 2164-Brittany Hill Collector to 400 N' of FM 2164-FM 2153 (Realigned)			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	2,750			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	6,111	cy	\$ 9.25	\$ 56,528
211	8" Lime Stabilization (with Lime @ 50#/sy)	11,917	sy	\$ 6.00	\$ 71,500
310	8" Concrete Pavement and Curb	11,306	sy	\$ 46.00	\$ 520,056
411	8' Concrete Sidewalk	44,000	sy	\$ 4.50	\$ 198,000
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 846,083

Major Construction Component Allowances**:			
Item Description	Notes	Allowance	Item Cost
Traffic Control	None Anticipated	0%	\$ -
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 25,383
√ Roadway Drainage	Standard Internal System	30%	\$ 253,825
√ Illumination		5%	\$ 42,304
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 100,000
√ Water	Minor Adjustments	2%	\$ 16,922
√ Sewer	Minor Adjustments	1%	\$ 8,461
√ Landscaping and Irrigation		6%	\$ 50,765
Intersection Improvements	None Anticipated	-	\$ -
Miscellaneous:		\$0	\$ -
		Allowance Subtotal:	\$ 497,659
**Allowances based on % of Paving Construction Cost Subtotal			
Paving and Allowance Subtotal:			\$ 1,343,743
Construction Contingency:		15%	\$ 201,561
Mobilization		5%	\$ 67,187
Prep ROW		1%	\$ 13,437
Construction Cost TOTAL:			\$ 1,626,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,626,000
Engineering/Survey/Testing:		16%	\$ 260,160
Inspection		3.5%	\$ 56,910
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 487,800
Impact Fee Project Cost TOTAL:			\$ 2,431,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-12
Name:	Mesquite Ridge (2)	This project consists of the construction of a new two lane concrete collector.		
Limits:	400' N of FM 2164-FM 2153 (Realigned) PA to			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	870			
Service Area(s):	D, ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	1,933	cy	\$ 9.25	\$ 17,883
211	8" Lime Stabilization (with Lime @ 50#/sy)	3,770	sy	\$ 6.00	\$ 22,620
310	8" Concrete Pavement and Curb	3,577	sy	\$ 46.00	\$ 164,527
411	8' Concrete Sidewalk	13,920	sy	\$ 4.50	\$ 62,640
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 267,670

Major Construction Component Allowances**:			
Item Description	Notes	Allowance	Item Cost
Traffic Control	None Anticipated	0%	\$ -
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 8,030
√ Roadway Drainage	Standard Internal System	30%	\$ 80,301
√ Illumination		5%	\$ 13,384
Special Drainage Structures	None Anticipated	-	\$ -
√ Water	Minor Adjustments	2%	\$ 5,353
√ Sewer	Minor Adjustments	1%	\$ 2,677
√ Landscaping and Irrigation		6%	\$ 16,060
Intersection Improvements	None Anticipated	-	\$ -
Miscellaneous:		\$0	\$ -
		Allowance Subtotal:	\$ 125,805

		Paving and Allowance Subtotal:	\$ 393,475
		Construction Contingency:	15% \$ 59,021
		Mobilization	5% \$ 19,674
		Prep ROW	1% \$ 3,935
Construction Cost TOTAL:			\$ 477,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 477,000
Engineering/Survey/Testing:		16%	\$ 76,320
Inspection		3.5%	\$ 16,695
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 143,100
Impact Fee Project Cost TOTAL:			\$ 713,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-13
Name:	Mesquite Ridge (3)	This project consists of the construction of a new two lane concrete collector.		
Limits:	470' S of FM 2164-FM 2153 (Realigned) PA to 1,005' S of FM			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	545			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	1,211	cy	\$ 9.25	\$ 11,203
211	8" Lime Stabilization (with Lime @ 50#/sy)	2,362	sy	\$ 6.00	\$ 14,170
310	8" Concrete Pavement and Curb	2,241	sy	\$ 46.00	\$ 103,066
411	8' Concrete Sidewalk	8,720	sy	\$ 4.50	\$ 39,240
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 167,678

Major Construction Component Allowances**:			
Item Description	Notes	Allowance	Item Cost
Traffic Control	None Anticipated	0%	\$ -
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 5,030
√ Roadway Drainage	Standard Internal System	30%	\$ 50,304
√ Illumination		5%	\$ 8,384
Special Drainage Structures	None Anticipated	-	\$ -
√ Water	Minor Adjustments	2%	\$ 3,354
√ Sewer	Minor Adjustments	1%	\$ 1,677
√ Landscaping and Irrigation		6%	\$ 10,061
Intersection Improvements	None Anticipated	-	\$ -
Miscellaneous:		\$0	\$ -
		Allowance Subtotal:	\$ 78,809
		Paving and Allowance Subtotal:	\$ 246,487
		Construction Contingency:	15% \$ 36,973
		Mobilization	5% \$ 12,324
		Prep ROW	1% \$ 2,465
		Construction Cost TOTAL:	\$ 299,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 299,000
Engineering/Survey/Testing:		16%	\$ 47,840
Inspection		3.5%	\$ 10,465
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 89,700
Impact Fee Project Cost TOTAL:			\$ 447,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-14
Name:	Brittany Hill (1)	This project consists of the construction of a new		
Limits:	355' S of Covey to 795' S of FM 2164- four lane divided concrete secondary arterial.			
	FM 2153 (Realigned) PA			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	4,140			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	14,260	cy	\$ 9.25	\$ 131,905
207	12" Lime Stabilization (with Lime @ 50#/sy)	27,600	sy	\$ 8.00	\$ 220,800
306	11" Concrete Pavement and Curb	25,760	sy	\$ 54.00	\$ 1,391,040
407	5' Concrete Sidewalk	41,400	sy	\$ 4.50	\$ 186,300
507	Turn Lanes and Median Openings	1,854	sy	\$ 62.00	\$ 114,971
Paving Construction Cost Subtotal:					\$ 2,045,016

Major Construction Component Allowances**:			
Item Description	Notes	Allowance	Item Cost
Traffic Control	None Anticipated	0%	\$ -
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 61,350
√ Roadway Drainage	Standard Internal System	30%	\$ 613,505
√ Illumination		5%	\$ 102,251
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 100,000
√ Water	Minor Adjustments	2%	\$ 40,900
√ Sewer	Minor Adjustments	1%	\$ 20,450
√ Landscaping and Irrigation		6%	\$ 122,701
Intersection Improvements	None Anticipated	-	\$ -
Miscellaneous:		\$0	\$ -
		Allowance Subtotal:	\$ 1,061,158
Paving and Allowance Subtotal:			\$ 3,106,174
Construction Contingency:		15%	\$ 465,926
Mobilization		5%	\$ 155,309
Prep ROW		1%	\$ 31,062
Construction Cost TOTAL:			\$ 3,759,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,759,000
Engineering/Survey/Testing:		16%	\$ 601,440
Inspection		3.5%	\$ 131,565
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,127,700
Impact Fee Project Cost TOTAL:			\$ 5,620,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-15
Name:	Brittany Hill (2)	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	795' S of FM 2164-FM 2153 (Realigned) PA to			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	1,065			
Service Area(s):	D,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	3,668	cy	\$ 9.25	\$ 33,932
207	12" Lime Stabilization (with Lime @ 50#/sy)	7,100	sy	\$ 8.00	\$ 56,800
306	11" Concrete Pavement and Curb	6,627	sy	\$ 54.00	\$ 357,840
407	5' Concrete Sidewalk	10,650	sy	\$ 4.50	\$ 47,925
507	Turn Lanes and Median Openings	477	sy	\$ 62.00	\$ 29,576
Paving Construction Cost Subtotal:					\$ 526,073
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 15,782		
√ Roadway Drainage	Standard Internal System	30%	\$ 157,822		
√ Illumination		5%	\$ 26,304		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 200,000		
√ Water	Minor Adjustments	2%	\$ 10,521		
√ Sewer	Minor Adjustments	1%	\$ 5,261		
√ Landscaping and Irrigation		6%	\$ 31,564		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 447,254		
		Paving and Allowance Subtotal:		\$ 973,327	
		Construction Contingency:	15%	\$ 145,999	
		Mobilization	5%	\$ 48,666	
		Prep ROW	1%	\$ 9,733	
		Construction Cost TOTAL:		\$ 1,178,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,178,000
Engineering/Survey/Testing:		16%	\$ 188,480
Inspection		3.5%	\$ 41,230
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 353,400
Impact Fee Project Cost TOTAL:			\$ 1,761,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-16
Name:	FM 2153 (1)	This project consists of the reconstruction of the existing pavement to a two lane concrete collector.		
Limits:	City Limits to Burger (S)			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	7,585			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	16,856	cy	\$ 9.25	\$ 155,914
211	8" Lime Stabilization (with Lime @ 50#/sy)	32,868	sy	\$ 6.00	\$ 197,210
310	8" Concrete Pavement and Curb	31,183	sy	\$ 46.00	\$ 1,434,408
411	8' Concrete Sidewalk	121,360	sy	\$ 4.50	\$ 546,120
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 2,333,652
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	116,683	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	70,010	
√ Roadway Drainage	Standard Internal System	30%	\$	700,096	
√ Illumination		5%	\$	116,683	
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$	200,000	
√ Water	Minor Adjustments	2%	\$	46,673	
√ Sewer	Minor Adjustments	1%	\$	23,337	
√ Landscaping and Irrigation		6%	\$	140,019	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
Allowance Subtotal:					\$ 1,413,499
Paving and Allowance Subtotal:					\$ 3,747,151
Construction Contingency:					15% \$ 562,073
Mobilization					5% \$ 187,358
Prep ROW					3% \$ 112,415
Construction Cost TOTAL:					\$ 4,609,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,609,000
Engineering/Survey/Testing:		16%	\$ 737,440
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 1,069,200

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-17
Name:	FM 2153 (2)	This project consists of the construction of a new two lane concrete collector.		
Limits:	Burger to FM 2153 (Realigned)			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	1,420			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	3,156	cy	\$ 9.25	\$ 29,189
211	8" Lime Stabilization (with Lime @ 50#/sy)	6,153	sy	\$ 6.00	\$ 36,920
310	8" Concrete Pavement and Curb	5,838	sy	\$ 46.00	\$ 268,538
411	8' Concrete Sidewalk	22,720	sy	\$ 4.50	\$ 102,240
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 436,887
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 13,107		
√ Roadway Drainage	Standard Internal System	30%	\$ 131,066		
√ Illumination		5%	\$ 21,844		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 8,738		
√ Sewer	Minor Adjustments	1%	\$ 4,369		
√ Landscaping and Irrigation		6%	\$ 26,213		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 455,337		
Paving and Allowance Subtotal:					\$ 892,223
Construction Contingency:					15% \$ 133,834
Mobilization					5% \$ 44,611
Prep ROW					1% \$ 8,922
Construction Cost TOTAL:					\$ 1,080,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,080,000
Engineering/Survey/Testing:		16%	\$ 172,800
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 250,600

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-18
Name:	FM 2153 (Realigned)-FM 2153 Collector	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	FM 2153 (Realigned) to FM 2153			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	4,175			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	9,278	cy	\$ 9.25	\$ 85,819
211	8" Lime Stabilization (with Lime @ 50#/sy)	18,092	sy	\$ 6.00	\$ 108,550
310	8" Concrete Pavement and Curb	17,164	sy	\$ 46.00	\$ 789,539
411	8' Concrete Sidewalk	66,800	sy	\$ 4.50	\$ 300,600
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 1,284,508
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 38,535		
√ Roadway Drainage	Standard Internal System	30%	\$ 385,353		
√ Illumination		5%	\$ 64,225		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 25,690		
√ Sewer	Minor Adjustments	1%	\$ 12,845		
√ Landscaping and Irrigation		6%	\$ 77,071		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 603,719		
Paving and Allowance Subtotal:					\$ 1,888,227
Construction Contingency:					15% \$ 283,234
Mobilization					5% \$ 94,411
Prep ROW					1% \$ 18,882
Construction Cost TOTAL:					\$ 2,285,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,285,000
Engineering/Survey/Testing:		16%	\$ 365,600
Inspection		3.5%	\$ 79,975
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 685,500
Impact Fee Project Cost TOTAL:			\$ 3,416,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-19
Name:	FM 2153 (3)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	620' S of Somerset to Sherman			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	5,995			
Service Area(s):	D,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	20,649	cy	\$ 9.25	\$ 191,007
207	12" Lime Stabilization (with Lime @ 50#/sy)	39,967	sy	\$ 8.00	\$ 319,733
306	11" Concrete Pavement and Curb	37,302	sy	\$ 54.00	\$ 2,014,320
407	5' Concrete Sidewalk	59,950	sy	\$ 4.50	\$ 269,775
507	Turn Lanes and Median Openings	2,685	sy	\$ 62.00	\$ 166,486
Paving Construction Cost Subtotal:					\$ 2,961,322
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	148,066	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	88,840	
√ Roadway Drainage	Standard Internal System	30%	\$	888,397	
√ Illumination		5%	\$	148,066	
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$	400,000	
√ Water	Minor Adjustments	2%	\$	59,226	
√ Sewer	Minor Adjustments	1%	\$	29,613	
√ Landscaping and Irrigation		6%	\$	177,679	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 1,939,887
Paving and Allowance Subtotal:					\$ 4,901,209
Construction Contingency:					15% \$ 735,181
Mobilization					5% \$ 245,060
Prep ROW					3% \$ 147,036
Construction Cost TOTAL:					\$ 6,029,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 6,029,000
Engineering/Survey/Testing:		16%	\$ 964,640
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 1,398,800

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-20
Name:	Green Valley (1)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	Warschun to 860' S of Warschun			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	860			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	2,962	cy	\$ 9.25	\$ 27,401
207	12" Lime Stabilization (with Lime @ 50#/sy)	5,733	sy	\$ 8.00	\$ 45,867
306	11" Concrete Pavement and Curb	5,351	sy	\$ 54.00	\$ 288,960
407	5' Concrete Sidewalk	8,600	sy	\$ 4.50	\$ 38,700
507	Turn Lanes and Median Openings	385	sy	\$ 62.00	\$ 23,883
Paving Construction Cost Subtotal:					\$ 424,810
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	21,241	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	12,744	
√ Roadway Drainage	Standard Internal System	30%	\$	127,443	
√ Illumination		5%	\$	21,241	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	8,496	
√ Sewer	Minor Adjustments	1%	\$	4,248	
√ Landscaping and Irrigation		6%	\$	25,489	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
Allowance Subtotal:					\$ 220,901
Paving and Allowance Subtotal:					\$ 645,711
Construction Contingency:					15% \$ 96,857
Mobilization					5% \$ 32,286
Prep ROW					3% \$ 19,371
Construction Cost TOTAL:					\$ 795,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 795,000
Engineering/Survey/Testing:		16%	\$ 127,200
Inspection		3.5%	\$ 27,825
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 119,250
Impact Fee Project Cost TOTAL:			\$ 1,069,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-21
Name:	Green Valley (2)	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	860' S of Warschun to Sherman			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	1,215			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	4,185	cy	\$ 9.25	\$ 38,711
207	12" Lime Stabilization (with Lime @ 50#/sy)	8,100	sy	\$ 8.00	\$ 64,800
306	11" Concrete Pavement and Curb	7,560	sy	\$ 54.00	\$ 408,240
407	5' Concrete Sidewalk	12,150	sy	\$ 4.50	\$ 54,675
507	Turn Lanes and Median Openings	544	sy	\$ 62.00	\$ 33,742
Paving Construction Cost Subtotal:					\$ 600,168
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 18,005		
√ Roadway Drainage	Standard Internal System	30%	\$ 180,050		
√ Illumination		5%	\$ 30,008		
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$ 500,000		
√ Water	Minor Adjustments	2%	\$ 12,003		
√ Sewer	Minor Adjustments	1%	\$ 6,002		
√ Landscaping and Irrigation		6%	\$ 36,010		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 1,032,079		
Paving and Allowance Subtotal:					\$ 1,632,247
Construction Contingency:					15% \$ 244,837
Mobilization					5% \$ 81,612
Prep ROW					1% \$ 16,322
Construction Cost TOTAL:					\$ 1,976,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,976,000
Engineering/Survey/Testing:		16%	\$ 316,160
Inspection		3.5%	\$ 69,160
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 592,800
Impact Fee Project Cost TOTAL:			\$ 2,954,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-22
Name:	Milam (3)	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	FM 2164 (Locust) to 605' E of FM 2164 (Locust)			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	605			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
104	Unclassified Street Excavation	2,084	cy	\$ 9.25	\$ 19,276
204	2" Asphalt (Type C)	3,630	sy	\$ 7.75	\$ 28,133
304	4" Asphalt Base (Type B)	3,630	sy	\$ 11.50	\$ 41,745
404	6" Asphalt Base (Type B)	3,899	sy	\$ 21.00	\$ 81,877
504	12" Lime Stabilization (with Lime @ 50#/sy)	4,033	sy	\$ 4.00	\$ 16,133
604	5' Concrete Sidewalk	6,050	sf	\$ 4.50	\$ 27,225
704	Machine Laid Curb & Gutter	2,420	lf	\$ 10.00	\$ 24,200
804	Turn Lanes and Median Openings	271	sy	\$ 44.25	\$ 11,991
Paving Construction Cost Subtotal:					\$ 250,580
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 7,517		
√ Roadway Drainage	Standard Internal System	30%	\$ 75,174		
√ Illumination		5%	\$ 12,529		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 5,012		
√ Sewer	Minor Adjustments	1%	\$ 2,506		
√ Landscaping and Irrigation		6%	\$ 15,035		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 117,772		
Paving and Allowance Subtotal:					\$ 368,352
Construction Contingency:					15% \$ 55,253
Mobilization					5% \$ 18,418
Prep ROW					1% \$ 3,684
Construction Cost TOTAL:					\$ 446,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 446,000
Engineering/Survey/Testing:		16%	\$ 71,360
Inspection		3.5%	\$ 15,610
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 133,800
Impact Fee Project Cost TOTAL:			\$ 667,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No. D-23
Name:	Bobcat (3)	This project consists of the reconstruction of an existing asphalt facility into a four lane divided concrete secondary arterial.	
Limits:	FM 2164 (Locust) to 515' E of FM 2164 (Locust)		
Impact Fee Class:	SA		
Ultimate Class:	Secondary Arterial		
Length (lf):	500		
Service Area(s):	D		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	1,722	cy	\$ 9.25	\$ 15,931
207	12" Lime Stabilization (with Lime @ 50#/sy)	3,333	sy	\$ 8.00	\$ 26,667
306	11" Concrete Pavement and Curb	3,111	sy	\$ 54.00	\$ 168,000
407	5' Concrete Sidewalk	5,000	sy	\$ 4.50	\$ 22,500
507	Turn Lanes and Median Openings	224	sy	\$ 62.00	\$ 13,885
Paving Construction Cost Subtotal:					\$ 246,983
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	12,349	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	7,409	
√ Roadway Drainage	Standard Internal System	30%	\$	74,095	
√ Illumination		5%	\$	12,349	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	4,940	
√ Sewer	Minor Adjustments	1%	\$	2,470	
√ Landscaping and Irrigation		6%	\$	14,819	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	128,431	
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 375,414
Construction Contingency:					15% \$ 56,312
Mobilization					5% \$ 18,771
Prep ROW					3% \$ 11,262
Construction Cost TOTAL:					\$ 462,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 462,000
Engineering/Survey/Testing:		16%	\$ 73,920
Inspection		3.5%	\$ 16,170
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 69,300
Impact Fee Project Cost TOTAL:			\$ 621,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-24
Name:	Cooper Creek (1)	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	860' W of Hartlee-Cooper Collector #1 to Hartlee Field			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	11,270			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	38,819	cy	\$ 9.25	\$ 359,075
207	12" Lime Stabilization (with Lime @ 50#/sy)	75,133	sy	\$ 8.00	\$ 601,067
306	11" Concrete Pavement and Curb	70,124	sy	\$ 54.00	\$ 3,786,720
407	5' Concrete Sidewalk	112,700	sy	\$ 4.50	\$ 507,150
507	Turn Lanes and Median Openings	5,048	sy	\$ 62.00	\$ 312,977
Paving Construction Cost Subtotal:					\$ 5,566,989

Major Construction Component Allowances**:			
Item Description	Notes	Allowance	Item Cost
Traffic Control	None Anticipated	0%	\$ -
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 167,010
√ Roadway Drainage	Standard Internal System	30%	\$ 1,670,097
√ Illumination		5%	\$ 278,349
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$ 1,200,000
√ Water	Minor Adjustments	2%	\$ 111,340
√ Sewer	Minor Adjustments	1%	\$ 55,670
√ Landscaping and Irrigation		6%	\$ 334,019
√ Intersection Improvements		-	\$ 250,000
Miscellaneous:		\$0	\$ -
		Allowance Subtotal:	\$ 4,066,485
Paving and Allowance Subtotal:			\$ 9,633,473
Construction Contingency:		15%	\$ 1,445,021
Mobilization		5%	\$ 481,674
Prep ROW		1%	\$ 96,335
Construction Cost TOTAL:			\$ 11,657,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 11,657,000
Engineering/Survey/Testing:		16%	\$ 1,865,120
Inspection		3.5%	\$ 407,995
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 3,497,100
Impact Fee Project Cost TOTAL:			\$ 17,427,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-25
Name:	Cooper Creek (2)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	Silver Dome to Fishtrap			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	3,470			
Service Area(s):	D,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	11,952	cy	\$ 9.25	\$ 110,558
207	12" Lime Stabilization (with Lime @ 50#/sy)	23,133	sy	\$ 8.00	\$ 185,067
306	11" Concrete Pavement and Curb	21,591	sy	\$ 54.00	\$ 1,165,920
407	5' Concrete Sidewalk	34,700	sy	\$ 4.50	\$ 156,150
507	Turn Lanes and Median Openings	1,554	sy	\$ 62.00	\$ 96,365
Paving Construction Cost Subtotal:					\$ 1,714,060
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	85,703	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	51,422	
√ Roadway Drainage	Standard Internal System	30%	\$	514,218	
√ Illumination		5%	\$	85,703	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	34,281	
√ Sewer	Minor Adjustments	1%	\$	17,141	
√ Landscaping and Irrigation		6%	\$	102,844	
√ Intersection Improvements		-	\$	500,000	
√ Miscellaneous:	Railroad Crossing	\$0	\$	250,000	
Allowance Subtotal:					\$ 1,641,311
Paving and Allowance Subtotal:					\$ 3,355,370
Construction Contingency:					15% \$ 503,306
Mobilization					5% \$ 167,769
Prep ROW					3% \$ 100,661
Construction Cost TOTAL:					\$ 4,128,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,128,000
Engineering/Survey/Testing:		16%	\$ 660,480
Inspection		3.5%	\$ 144,480
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 619,200
Impact Fee Project Cost TOTAL:			\$ 5,552,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-26
Name:	Cooper Creek (3)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	Fishtrap to University			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	2,615			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	9,007	cy	\$ 9.25	\$ 83,317
207	12" Lime Stabilization (with Lime @ 50#/sy)	17,433	sy	\$ 8.00	\$ 139,467
306	11" Concrete Pavement and Curb	16,271	sy	\$ 54.00	\$ 878,640
407	5' Concrete Sidewalk	26,150	sy	\$ 4.50	\$ 117,675
507	Turn Lanes and Median Openings	1,171	sy	\$ 62.00	\$ 72,621
Paving Construction Cost Subtotal:					\$ 1,291,719
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	64,586	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	38,752	
√ Roadway Drainage	Standard Internal System	30%	\$	387,516	
√ Illumination		5%	\$	64,586	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	25,834	
√ Sewer	Minor Adjustments	1%	\$	12,917	
√ Landscaping and Irrigation		6%	\$	77,503	
√ Intersection Improvements		-	\$	500,000	
√ Miscellaneous:	Railroad Crossing	\$0	\$	250,000	
		Allowance Subtotal:	\$	1,421,694	
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 2,713,413
Construction Contingency:					15% \$ 407,012
Mobilization					5% \$ 135,671
Prep ROW					3% \$ 81,402
Construction Cost TOTAL:					\$ 3,338,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,338,000
Engineering/Survey/Testing:		16%	\$ 534,080
Inspection		3.5%	\$ 116,830
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 500,700
Impact Fee Project Cost TOTAL:			\$ 4,490,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-27
Name:	Golden Circle	This project consists of the construction of a new two lane concrete collector.		
Limits:	Hartlee Field (Future) to Hartlee Field (Existing)			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	9,410			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	20,911	cy	\$ 9.25	\$ 193,428
208	2" Asphalt (Type C)	37,640	sy	\$ 7.75	\$ 291,710
308	4" Asphalt Base (Type B)	37,640	sy	\$ 11.50	\$ 432,860
408	5" Asphalt Base (Type B)	39,731	sy	\$ 18.50	\$ 735,026
508	8" Lime Stabilization (with Lime @ 50#/sy)	40,777	sy	\$ 3.00	\$ 122,330
608	8' Concrete Sidewalk	150,560	sf	\$ 4.50	\$ 677,520
708	Machine Laid Curb & Gutter	18,820	lf	\$ 10.00	\$ 188,200
808	Turn Lanes and Median Openings	0	sy	\$ 40.75	\$ -
Paving Construction Cost Subtotal:					\$ 2,641,073
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 79,232		
√ Roadway Drainage	Standard Internal System	30%	\$ 792,322		
√ Illumination		5%	\$ 132,054		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 52,821		
√ Sewer	Minor Adjustments	1%	\$ 26,411		
√ Landscaping and Irrigation		6%	\$ 158,464		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 1,491,304		
		Paving and Allowance Subtotal:	\$ 4,132,378		
		Construction Contingency:	15%	\$ 619,857	
		Mobilization	5%	\$ 206,619	
		Prep ROW	1%	\$ 41,324	
Construction Cost TOTAL:					\$ 5,001,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,001,000
Engineering/Survey/Testing:		16%	\$ 800,160
Inspection		3.5%	\$ 175,035
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,500,300
Impact Fee Project Cost TOTAL:			\$ 7,476,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-28
Name:	Hartlee Field (1)	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	FM 2164 (Locust) to 500' E of FM 2164 (Locust)			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	500			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	1,722	cy	\$ 9.25	\$ 15,931
207	12" Lime Stabilization (with Lime @ 50#/sy)	3,333	sy	\$ 8.00	\$ 26,667
306	11" Concrete Pavement and Curb	3,111	sy	\$ 54.00	\$ 168,000
407	5' Concrete Sidewalk	5,000	sy	\$ 4.50	\$ 22,500
507	Turn Lanes and Median Openings	224	sy	\$ 62.00	\$ 13,885
Paving Construction Cost Subtotal:					\$ 246,983
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$	-	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	7,409	
√ Roadway Drainage	Standard Internal System	30%	\$	74,095	
√ Illumination		5%	\$	12,349	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	4,940	
√ Sewer	Minor Adjustments	1%	\$	2,470	
√ Landscaping and Irrigation		6%	\$	14,819	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	116,082	
		Paving and Allowance Subtotal:	\$	363,064	
		Construction Contingency:	15%	\$	54,460
		Mobilization	5%	\$	18,153
		Prep ROW	1%	\$	3,631
		Construction Cost TOTAL:	\$	440,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 440,000
Engineering/Survey/Testing:		16%	\$ 70,400
Inspection		3.5%	\$ 15,400
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 132,000
Impact Fee Project Cost TOTAL:			\$ 658,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-29
Name:	Hartlee Field (2)	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	West City Limits to Woodland Hill			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	5,830			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	20,081	cy	\$ 9.25	\$ 185,750
207	12" Lime Stabilization (with Lime @ 50#/sy)	38,867	sy	\$ 8.00	\$ 310,933
306	11" Concrete Pavement and Curb	36,276	sy	\$ 54.00	\$ 1,958,880
407	5' Concrete Sidewalk	58,300	sy	\$ 4.50	\$ 262,350
507	Turn Lanes and Median Openings	2,611	sy	\$ 62.00	\$ 161,904
Paving Construction Cost Subtotal:					\$ 2,879,818
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 86,395		
√ Roadway Drainage	Standard Internal System	30%	\$ 863,945		
√ Illumination		5%	\$ 143,991		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 200,000		
√ Water	Minor Adjustments	2%	\$ 57,596		
√ Sewer	Minor Adjustments	1%	\$ 28,798		
√ Landscaping and Irrigation		6%	\$ 172,789		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 1,803,514		
		Paving and Allowance Subtotal:	\$ 4,683,332		
		Construction Contingency:	15%	\$ 702,500	
		Mobilization	5%	\$ 234,167	
		Prep ROW	1%	\$ 46,833	
		Construction Cost TOTAL:	\$ 5,667,000		

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,667,000
Engineering/Survey/Testing:		16%	\$ 906,720
Inspection		3.5%	\$ 198,345
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,700,100
Impact Fee Project Cost TOTAL:			\$ 8,472,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-30
Name:	Long (1)	This project consists of the construction of a new two lane concrete collector.		
Limits:	FM 2164 (Locust) to 525' E of FM 2164			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	525			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	1,167	cy	\$ 9.25	\$ 10,792
211	8" Lime Stabilization (with Lime @ 50#/sy)	2,275	sy	\$ 6.00	\$ 13,650
310	8" Concrete Pavement and Curb	2,158	sy	\$ 46.00	\$ 99,283
411	8' Concrete Sidewalk	8,400	sy	\$ 4.50	\$ 37,800
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 161,525
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$	-	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	4,846	
√ Roadway Drainage	Standard Internal System	30%	\$	48,458	
√ Illumination		5%	\$	8,076	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	3,231	
√ Sewer	Minor Adjustments	1%	\$	1,615	
√ Landscaping and Irrigation		6%	\$	9,692	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	75,917	
		Paving and Allowance Subtotal:		\$	237,442
		Construction Contingency:	15%	\$	35,616
		Mobilization	5%	\$	11,872
		Prep ROW	1%	\$	2,374
Construction Cost TOTAL:					\$ 288,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 288,000
Engineering/Survey/Testing:		16%	\$ 46,080
Inspection		3.5%	\$ 10,080
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 86,400
Impact Fee Project Cost TOTAL:			\$ 431,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-31
Name:	Long (2)	This project consists of the construction of a new two lane concrete collector.		
Limits:	City Limits to Stuart			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	1,805			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	4,011	cy	\$ 9.25	\$ 37,103
211	8" Lime Stabilization (with Lime @ 50#/sy)	7,822	sy	\$ 6.00	\$ 46,930
310	8" Concrete Pavement and Curb	7,421	sy	\$ 46.00	\$ 341,346
411	8' Concrete Sidewalk	28,880	sy	\$ 4.50	\$ 129,960
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 555,338
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 16,660		
√ Roadway Drainage	Standard Internal System	30%	\$ 166,602		
√ Illumination		5%	\$ 27,767		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 100,000		
√ Water	Minor Adjustments	2%	\$ 11,107		
√ Sewer	Minor Adjustments	1%	\$ 5,553		
√ Landscaping and Irrigation		6%	\$ 33,320		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 361,009		
		Paving and Allowance Subtotal:		\$ 916,347	
		Construction Contingency:	15%	\$ 137,452	
		Mobilization	5%	\$ 45,817	
		Prep ROW	1%	\$ 9,163	
		Construction Cost TOTAL:		\$ 1,109,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,109,000
Engineering/Survey/Testing:		16%	\$ 177,440
Inspection		3.5%	\$ 38,815
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 332,700
Impact Fee Project Cost TOTAL:			\$ 1,658,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-32
Name:	Hartlee Field (3)	This project consists of the construction of a new two lane asphalt collector.		
Limits:	Sherman to 515' E. of Sherman			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	2,245			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	4,989	cy	\$ 9.25	\$ 46,147
208	2" Asphalt (Type C)	8,980	sy	\$ 7.75	\$ 69,595
308	4" Asphalt Base (Type B)	8,980	sy	\$ 11.50	\$ 103,270
408	5" Asphalt Base (Type B)	9,479	sy	\$ 18.50	\$ 175,359
508	8" Lime Stabilization (with Lime @ 50#/sy)	9,728	sy	\$ 3.00	\$ 29,185
608	8' Concrete Sidewalk	35,920	sf	\$ 4.50	\$ 161,640
708	Machine Laid Curb & Gutter	4,490	lf	\$ 10.00	\$ 44,900
808	Turn Lanes and Median Openings	0	sy	\$ 40.75	\$ -
Paving Construction Cost Subtotal:					\$ 630,097
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 18,903		
√ Roadway Drainage	Standard Internal System	30%	\$ 189,029		
√ Illumination		5%	\$ 31,505		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 12,602		
√ Sewer	Minor Adjustments	1%	\$ 6,301		
√ Landscaping and Irrigation		6%	\$ 37,806		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 546,145		
		Paving and Allowance Subtotal:	\$ 1,176,242		
		Construction Contingency:	15%	\$ 176,436	
		Mobilization	5%	\$ 58,812	
		Prep ROW	1%	\$ 11,762	
		Construction Cost TOTAL:	\$ 1,424,000		

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,424,000
Engineering/Survey/Testing:		16%	\$ 227,840
Inspection		3.5%	\$ 49,840
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 427,200
Impact Fee Project Cost TOTAL:			\$ 2,129,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-33
Name:	Kings-Windsor Collector	This project consists of the construction of a new two lane asphalt collector.		
Limits:	Kings Row to Windsor			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	475			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	1,056	cy	\$ 9.25	\$ 9,764
208	2" Asphalt (Type C)	1,900	sy	\$ 7.75	\$ 14,725
308	4" Asphalt Base (Type B)	1,900	sy	\$ 11.50	\$ 21,850
408	5" Asphalt Base (Type B)	2,006	sy	\$ 18.50	\$ 37,103
508	8" Lime Stabilization (with Lime @ 50#/sy)	2,058	sy	\$ 3.00	\$ 6,175
608	8' Concrete Sidewalk	7,600	sf	\$ 4.50	\$ 34,200
708	Machine Laid Curb & Gutter	950	lf	\$ 10.00	\$ 9,500
808	Turn Lanes and Median Openings	0	sy	\$ 40.75	\$ -
Paving Construction Cost Subtotal:					\$ 133,317
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 4,000		
√ Roadway Drainage	Standard Internal System	30%	\$ 39,995		
√ Illumination		5%	\$ 6,666		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 2,666		
√ Sewer	Minor Adjustments	1%	\$ 1,333		
√ Landscaping and Irrigation		6%	\$ 7,999		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 62,659		
		Paving and Allowance Subtotal:	\$ 195,976		
		Construction Contingency:	15%	\$ 29,396	
		Mobilization	5%	\$ 9,799	
		Prep ROW	1%	\$ 1,960	
Construction Cost TOTAL:					\$ 238,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 238,000
Engineering/Survey/Testing:		16%	\$ 38,080
Inspection		3.5%	\$ 8,330
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 71,400
Impact Fee Project Cost TOTAL:			\$ 356,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-34
Name:	Windsor	This project consists of the construction of a new two lane asphalt collector.		
Limits:	410' E of Saints to Cooper Creek			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	5,385			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	11,967	cy	\$ 9.25	\$ 110,692
208	2" Asphalt (Type C)	21,540	sy	\$ 7.75	\$ 166,935
308	4" Asphalt Base (Type B)	21,540	sy	\$ 11.50	\$ 247,710
408	5" Asphalt Base (Type B)	22,737	sy	\$ 18.50	\$ 420,628
508	8" Lime Stabilization (with Lime @ 50#/sy)	23,335	sy	\$ 3.00	\$ 70,005
608	8' Concrete Sidewalk	86,160	sf	\$ 4.50	\$ 387,720
708	Machine Laid Curb & Gutter	10,770	lf	\$ 10.00	\$ 107,700
808	Turn Lanes and Median Openings	0	sy	\$ 40.75	\$ -
Paving Construction Cost Subtotal:					\$ 1,511,390
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 45,342		
√ Roadway Drainage	Standard Internal System	30%	\$ 453,417		
√ Illumination		5%	\$ 75,570		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 30,228		
√ Sewer	Minor Adjustments	1%	\$ 15,114		
√ Landscaping and Irrigation		6%	\$ 90,683		
√ Intersection Improvements		-	\$ 250,000		
√ Miscellaneous:	485' Bridge over Loop 288	\$50/Sq. Ft.	\$ 897,250		
Allowance Subtotal:					\$ 1,857,603
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 3,368,993
Construction Contingency:					15% \$ 505,349
Mobilization					5% \$ 168,450
Prep ROW					1% \$ 33,690
Construction Cost TOTAL:					\$ 4,077,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,077,000
Engineering/Survey/Testing:		16%	\$ 652,320
Inspection		3.5%	\$ 142,695
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,223,100
Impact Fee Project Cost TOTAL:			\$ 6,095,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-35
Name:	Mingo (2)	This project consists of the reconstruction of the existing pavement to a four lane divided concrete secondary arterial.		
Limits:	University to 455' E. of Cooper Creek			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	5,040			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	17,360	cy	\$ 9.25	\$ 160,580
207	12" Lime Stabilization (with Lime @ 50#/sy)	33,600	sy	\$ 8.00	\$ 268,800
306	11" Concrete Pavement and Curb	31,360	sy	\$ 54.00	\$ 1,693,440
407	5' Concrete Sidewalk	50,400	sy	\$ 4.50	\$ 226,800
507	Turn Lanes and Median Openings	2,258	sy	\$ 62.00	\$ 139,965
Paving Construction Cost Subtotal:					\$ 2,489,585
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	124,479	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	74,688	
√ Roadway Drainage	Standard Internal System	30%	\$	746,876	
√ Illumination		5%	\$	124,479	
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$	400,000	
√ Water	Minor Adjustments	2%	\$	49,792	
√ Sewer	Minor Adjustments	1%	\$	24,896	
√ Landscaping and Irrigation		6%	\$	149,375	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
Allowance Subtotal:					\$ 1,694,584
Paving and Allowance Subtotal:					\$ 4,184,169
Construction Contingency:					15% \$ 627,625
Mobilization					5% \$ 209,208
Prep ROW					3% \$ 125,525
Construction Cost TOTAL:					\$ 5,147,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,147,000
Engineering/Survey/Testing:		16%	\$ 823,520
Inspection		3.5%	\$ 180,145
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 772,050
Impact Fee Project Cost TOTAL:			\$ 6,923,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No. D-36
Name:	Post Oak (1)	This project consists of the construction of a new six lane divided concrete primary arterial.	
Limits:	N. City Limits to Cooper Creek (Future)		
Impact Fee Class:	PA		
Ultimate Class:	Primary Arterial		
Length (lf):	4,560		
Service Area(s):	D		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	21,280	cy	\$ 9.25	\$ 196,840
201	12" Lime Stabilization (with Lime @ 50#/sy)	41,547	sy	\$ 8.00	\$ 332,373
301	11" Concrete Pavement and Curb	39,520	sy	\$ 54.00	\$ 2,134,080
401	5' Concrete Sidewalk	45,600	sy	\$ 4.50	\$ 205,200
501	Turn Lanes and Median Openings	2,043	sy	\$ 62.00	\$ 126,635
Paving Construction Cost Subtotal:					\$ 2,995,128
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 89,854		
√ Roadway Drainage	Standard Internal System	30%	\$ 898,539		
√ Illumination		5%	\$ 149,756		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 59,903		
√ Sewer	Minor Adjustments	1%	\$ 29,951		
√ Landscaping and Irrigation		6%	\$ 179,708		
√ Intersection Improvements		-	\$ 250,000		
√ Miscellaneous:	Railroad Bridge Crossing	\$0	\$ 250,000		
		Allowance Subtotal:	\$ 1,907,710		
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 4,902,839
Construction Contingency:					15% \$ 735,426
Mobilization					5% \$ 245,142
Prep ROW					1% \$ 49,028
Construction Cost TOTAL:					\$ 5,933,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,933,000
Engineering/Survey/Testing:		16%	\$ 949,280
Inspection		3.5%	\$ 207,655
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,779,900
Impact Fee Project Cost TOTAL:			\$ 8,870,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No. D-37
Name:	Post Oak/Cooper Creek	This project consists of the construction of a new six lane divided concrete primary arterial.	
Limits:	Cooper Creek (Future) to Hartlee Field		
Impact Fee Class:	PA		
Ultimate Class:	Primary Arterial		
Length (lf):	2,130		
Service Area(s):	D		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	9,940	cy	\$ 9.25	\$ 91,945
201	12" Lime Stabilization (with Lime @ 50#/sy)	19,407	sy	\$ 8.00	\$ 155,253
301	11" Concrete Pavement and Curb	18,460	sy	\$ 54.00	\$ 996,840
401	5' Concrete Sidewalk	21,300	sy	\$ 4.50	\$ 95,850
501	Turn Lanes and Median Openings	954	sy	\$ 62.00	\$ 59,152
Paving Construction Cost Subtotal:					\$ 1,399,040
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 41,971		
√ Roadway Drainage	Standard Internal System	30%	\$ 419,712		
√ Illumination		5%	\$ 69,952		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 27,981		
√ Sewer	Minor Adjustments	1%	\$ 13,990		
√ Landscaping and Irrigation		6%	\$ 83,942		
√ Intersection Improvements		-	\$ 250,000		
√ Miscellaneous:	Railroad Bridge Crossing	\$0	\$ 250,000		
		Allowance Subtotal:	\$ 1,157,549		
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 2,556,589
Construction Contingency:					15% \$ 383,488
Mobilization					5% \$ 127,829
Prep ROW					1% \$ 25,566
Construction Cost TOTAL:					\$ 3,094,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,094,000
Engineering/Survey/Testing:		16%	\$ 495,040
Inspection		3.5%	\$ 108,290
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 928,200
Impact Fee Project Cost TOTAL:			\$ 4,626,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-38
Name:	Post Oak (2)	This project consists of the construction of a new six lane divided concrete primary arterial.		
Limits:	Railroad to Fishtrap			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	1,750			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	8,167	cy	\$ 9.25	\$ 75,542
201	12" Lime Stabilization (with Lime @ 50#/sy)	15,944	sy	\$ 8.00	\$ 127,556
301	11" Concrete Pavement and Curb	15,167	sy	\$ 54.00	\$ 819,000
401	5' Concrete Sidewalk	17,500	sy	\$ 4.50	\$ 78,750
501	Turn Lanes and Median Openings	784	sy	\$ 62.00	\$ 48,599
Paving Construction Cost Subtotal:					\$ 1,149,446
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 34,483		
√ Roadway Drainage	Standard Internal System	30%	\$ 344,834		
√ Illumination		5%	\$ 57,472		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 300,000		
√ Water	Minor Adjustments	2%	\$ 22,989		
√ Sewer	Minor Adjustments	1%	\$ 11,494		
√ Landscaping and Irrigation		6%	\$ 68,967		
√ Intersection Improvements		-	\$ 250,000		
√ Miscellaneous:	Railroad Bridge Crossing	\$0	\$ 250,000		
		Allowance Subtotal:	\$ 1,340,240		
Paving and Allowance Subtotal:					\$ 2,489,686
Construction Contingency:					15% \$ 373,453
Mobilization					5% \$ 124,484
Prep ROW					1% \$ 24,897
Construction Cost TOTAL:					\$ 3,013,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,013,000
Engineering/Survey/Testing:		16%	\$ 482,080
Inspection		3.5%	\$ 105,455
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 903,900
Impact Fee Project Cost TOTAL:			\$ 4,504,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-39
Name:	Post Oak (3)	This project consists of the construction of a new six lane divided concrete primary arterial.		
Limits:	Fishtrap to 940' S of Fishtrap			
Impact Fee Class:	PA			
Ultimate Class:	0			
Length (lf):	940			
Service Area(s):	D,ETJ			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	4,387	cy	\$ 9.25	\$ 40,577
201	12" Lime Stabilization (with Lime @ 50#/sy)	8,564	sy	\$ 8.00	\$ 68,516
301	11" Concrete Pavement and Curb	8,147	sy	\$ 54.00	\$ 439,920
401	5' Concrete Sidewalk	9,400	sy	\$ 4.50	\$ 42,300
501	Turn Lanes and Median Openings	421	sy	\$ 62.00	\$ 26,105
Paving Construction Cost Subtotal:					\$ 617,417
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 18,523		
√ Roadway Drainage	Standard Internal System	30%	\$ 185,225		
√ Illumination		5%	\$ 30,871		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 12,348		
√ Sewer	Minor Adjustments	1%	\$ 6,174		
√ Landscaping and Irrigation		6%	\$ 37,045		
√ Intersection Improvements		-	\$ 250,000		
√ Miscellaneous:	Railroad Bridge Crossing	\$0	\$ 250,000		
		Allowance Subtotal:	\$ 790,186		
Paving and Allowance Subtotal:					\$ 1,407,603
Construction Contingency:					15% \$ 211,140
Mobilization					5% \$ 70,380
Prep ROW					1% \$ 14,076
Construction Cost TOTAL:					\$ 1,704,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,704,000
Engineering/Survey/Testing:		16%	\$ 272,640
Inspection		3.5%	\$ 59,640
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 511,200
Impact Fee Project Cost TOTAL:			\$ 2,547,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-40
Name:	Post Oak (4)	This project consists of the construction of a new six lane divided concrete primary arterial.		
Limits:	940' S of Fishtrap to University			
Impact Fee Class:	PA			
Ultimate Class:	0			
Length (lf):	360			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	1,680	cy	\$ 9.25	\$ 15,540
201	12" Lime Stabilization (with Lime @ 50#/sy)	3,280	sy	\$ 8.00	\$ 26,240
301	11" Concrete Pavement and Curb	3,120	sy	\$ 54.00	\$ 168,480
401	5' Concrete Sidewalk	3,600	sy	\$ 4.50	\$ 16,200
501	Turn Lanes and Median Openings	161	sy	\$ 62.00	\$ 9,998
Paving Construction Cost Subtotal:					\$ 236,458
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 7,094		
√ Roadway Drainage	Standard Internal System	30%	\$ 70,937		
√ Illumination		5%	\$ 11,823		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 4,729		
√ Sewer	Minor Adjustments	1%	\$ 2,365		
√ Landscaping and Irrigation		6%	\$ 14,187		
√ Intersection Improvements		-	\$ 250,000		
√ Miscellaneous:	Railroad Bridge Crossing	\$0	\$ 250,000		
		Allowance Subtotal:	\$ 611,135		
					**Allowances based on % of Paving Construction Cost Subtotal
Paving and Allowance Subtotal:					\$ 847,593
Construction Contingency:					15% \$ 127,139
Mobilization					5% \$ 42,380
Prep ROW					1% \$ 8,476
Construction Cost TOTAL:					\$ 1,026,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,026,000
Engineering/Survey/Testing:		16%	\$ 164,160
Inspection		3.5%	\$ 35,910
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 307,800
Impact Fee Project Cost TOTAL:			\$ 1,534,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No. D-41
Name:	Deerwood	This project consists of the construction of a new two lane asphalt collector.	
Limits:	2,855' N of Kings Row to 680' N of Kings Row		
Impact Fee Class:	C		
Ultimate Class:	Collector		
Length (lf):	2,175		
Service Area(s):	D		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	4,833	cy	\$ 9.25	\$ 44,708
208	2" Asphalt (Type C)	8,700	sy	\$ 7.75	\$ 67,425
308	4" Asphalt Base (Type B)	8,700	sy	\$ 11.50	\$ 100,050
408	5" Asphalt Base (Type B)	9,183	sy	\$ 18.50	\$ 169,892
508	8" Lime Stabilization (with Lime @ 50#/sy)	9,425	sy	\$ 3.00	\$ 28,275
608	8' Concrete Sidewalk	34,800	sf	\$ 4.50	\$ 156,600
708	Machine Laid Curb & Gutter	4,350	lf	\$ 10.00	\$ 43,500
808	Turn Lanes and Median Openings	0	sy	\$ 40.75	\$ -
Paving Construction Cost Subtotal:					\$ 610,450
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 18,314		
√ Roadway Drainage	Standard Internal System	30%	\$ 183,135		
√ Illumination		5%	\$ 30,523		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 12,209		
√ Sewer	Minor Adjustments	1%	\$ 6,105		
√ Landscaping and Irrigation		6%	\$ 36,627		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 286,912		
		Paving and Allowance Subtotal:	\$ 897,362		
		Construction Contingency:	15%	\$ 134,604	
		Mobilization	5%	\$ 44,868	
		Prep ROW	1%	\$ 8,974	
		Construction Cost TOTAL:	\$ 1,086,000		

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,086,000
Engineering/Survey/Testing:		16%	\$ 173,760
Inspection		3.5%	\$ 38,010
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 325,800
Impact Fee Project Cost TOTAL:			\$ 1,624,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-42
Name:	Hartlee-Cooper Col	This project consists of the construction of a new two lane concrete collector.		
Limits:	Hartlee Field to Cooper Creek			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	4,340			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	9,644	cy	\$ 9.25	\$ 89,211
211	8" Lime Stabilization (with Lime @ 50#/sy)	18,807	sy	\$ 6.00	\$ 112,840
310	8" Concrete Pavement and Curb	17,842	sy	\$ 46.00	\$ 820,742
411	8' Concrete Sidewalk	69,440	sy	\$ 4.50	\$ 312,480
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 1,335,273
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 40,058		
√ Roadway Drainage	Standard Internal System	30%	\$ 400,582		
√ Illumination		5%	\$ 66,764		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 200,000		
√ Water	Minor Adjustments	2%	\$ 26,705		
√ Sewer	Minor Adjustments	1%	\$ 13,353		
√ Landscaping and Irrigation		6%	\$ 80,116		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 827,578		
Paving and Allowance Subtotal:					\$ 2,162,852
Construction Contingency:					15% \$ 324,428
Mobilization					5% \$ 108,143
Prep ROW					1% \$ 21,629
Construction Cost TOTAL:					\$ 2,618,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,618,000
Engineering/Survey/Testing:		16%	\$ 418,880
Inspection		3.5%	\$ 91,630
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 785,400
Impact Fee Project Cost TOTAL:			\$ 3,914,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-43
Name:	Sherman (1)	This project consists of the reconstruction of the existing pavement to a six lane divided concrete primary arterial.		
Limits:	Locust to Loop 288 WBFR			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	12,160			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	56,747	cy	\$ 9.25	\$ 524,907
201	12" Lime Stabilization (with Lime @ 50#/sy)	110,791	sy	\$ 8.00	\$ 886,329
301	11" Concrete Pavement and Curb	105,387	sy	\$ 54.00	\$ 5,690,880
401	5' Concrete Sidewalk	121,600	sy	\$ 4.50	\$ 547,200
501	Turn Lanes and Median Openings	5,447	sy	\$ 62.00	\$ 337,693
Paving Construction Cost Subtotal:					\$ 7,987,009
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	399,350	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	239,610	
√ Roadway Drainage	Standard Internal System	30%	\$	2,396,103	
√ Illumination		5%	\$	399,350	
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$	300,000	
√ Water	Minor Adjustments	2%	\$	159,740	
√ Sewer	Minor Adjustments	1%	\$	79,870	
√ Landscaping and Irrigation		6%	\$	479,221	
√ Intersection Improvements		-	\$	750,000	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	5,203,245	
Paving and Allowance Subtotal:					\$ 13,190,254
Construction Contingency:					15% \$ 1,978,538
Mobilization					5% \$ 659,513
Prep ROW					3% \$ 395,708
Construction Cost TOTAL:					\$ 16,225,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 16,225,000
Engineering/Survey/Testing:		16%	\$ 2,596,000
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 3,764,200

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	D-44
Name:	Sherman (2)	This project consists of the reconstruction of the existing pavement to a six lane divided concrete primary arterial.		
Limits:	Loop 288 WBFR to City Limits			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	24,535			
Service Area(s):	D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	114,497	cy	\$ 9.25	\$ 1,059,094
201	12" Lime Stabilization (with Lime @ 50#/sy)	223,541	sy	\$ 8.00	\$ 1,788,329
301	11" Concrete Pavement and Curb	212,637	sy	\$ 54.00	\$ 11,482,380
401	5' Concrete Sidewalk	245,350	sy	\$ 4.50	\$ 1,104,075
501	Turn Lanes and Median Openings	10,990	sy	\$ 62.00	\$ 681,357
Paving Construction Cost Subtotal:					\$ 16,115,235
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	805,762	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	483,457	
√ Roadway Drainage	Standard Internal System	30%	\$	4,834,571	
√ Illumination		5%	\$	805,762	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	5,200,000	
√ Water	Minor Adjustments	2%	\$	322,305	
√ Sewer	Minor Adjustments	1%	\$	161,152	
√ Landscaping and Irrigation		6%	\$	966,914	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 13,829,922
Paving and Allowance Subtotal:					\$ 29,945,158
Construction Contingency:					15% \$ 4,491,774
Mobilization					5% \$ 1,497,258
Prep ROW					3% \$ 898,355
Construction Cost TOTAL:					\$ 36,833,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 36,833,000
Engineering/Survey/Testing:		16%	\$ 5,893,280
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 8,545,200

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-50,D-45
Name:	FM 2164 (Locust) (1)	This project consists of the reconstruction of the existing pavement to a six lane divided concrete primary arterial.		
Limits:	City Limits to Loop 288 WBFR			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	14,280			
Service Area(s):	C,D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	66,640	cy	\$ 9.25	\$ 616,420
201	12" Lime Stabilization (with Lime @ 50#/sy)	130,107	sy	\$ 8.00	\$ 1,040,853
301	11" Concrete Pavement and Curb	123,760	sy	\$ 54.00	\$ 6,683,040
401	5' Concrete Sidewalk	142,800	sy	\$ 4.50	\$ 642,600
501	Turn Lanes and Median Openings	6,396	sy	\$ 62.00	\$ 396,568
Paving Construction Cost Subtotal:					\$ 9,379,481
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	468,974	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	281,384	
√ Roadway Drainage	Standard Internal System	30%	\$	2,813,844	
√ Illumination		5%	\$	468,974	
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$	1,000,000	
√ Water	Minor Adjustments	2%	\$	187,590	
√ Sewer	Minor Adjustments	1%	\$	93,795	
√ Landscaping and Irrigation		6%	\$	562,769	
√ Intersection Improvements		-	\$	1,000,000	
Miscellaneous:		\$0	\$	-	
Allowance Subtotal:					\$ 6,877,330
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 16,256,811
Construction Contingency:					15% \$ 2,438,522
Mobilization					5% \$ 812,841
Prep ROW					3% \$ 487,704
Construction Cost TOTAL:					\$ 19,996,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 19,996,000
Engineering/Survey/Testing:		16%	\$ 3,199,360
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 4,639,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	C-51,D-46
Name:	FM 2164 (Locust) (2)	This project consists of the reconstruction of the existing pavement to a six lane divided concrete primary arterial.		
Limits:	Loop 288 WBFR to Elm			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	7,420			
Service Area(s):	C,D			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	34,627	cy	\$ 9.25	\$ 320,297
201	12" Lime Stabilization (with Lime @ 50#/sy)	67,604	sy	\$ 8.00	\$ 540,836
301	11" Concrete Pavement and Curb	64,307	sy	\$ 54.00	\$ 3,472,560
401	5' Concrete Sidewalk	74,200	sy	\$ 4.50	\$ 333,900
501	Turn Lanes and Median Openings	3,324	sy	\$ 62.00	\$ 206,060
Paving Construction Cost Subtotal:					\$ 4,873,652
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	243,683	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	146,210	
√ Roadway Drainage	Standard Internal System	30%	\$	1,462,096	
√ Illumination		5%	\$	243,683	
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$	200,000	
√ Water	Minor Adjustments	2%	\$	97,473	
√ Sewer	Minor Adjustments	1%	\$	48,737	
√ Landscaping and Irrigation		6%	\$	292,419	
√ Intersection Improvements		-	\$	500,000	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	3,234,299	
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 8,107,951
Construction Contingency:					15% \$ 1,216,193
Mobilization					5% \$ 405,398
Prep ROW					3% \$ 243,239
Construction Cost TOTAL:					\$ 9,973,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 9,973,000
Engineering/Survey/Testing:		16%	\$ 1,595,680
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 2,313,800

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City of Denton - 2015 Roadway Impact Fee Study

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

Roadway Improvements - Service Area E

#	IF Class	Project	Limits		Percent in Service Area	Project Cost	Total Cost in Service Area
			From	To			
E-1	SA	Mingo (1)	435' NE of Bell	University	100%	\$ 13,406,000	\$ 13,406,000
E-2	C	Lattimore	Ruddell	475' E of Ruddell	100%	\$ 807,000	\$ 807,000
E-3	C	Audra	Bayfield	Loop 288	100%	\$ 1,505,000	\$ 1,505,000
E-4	C	Blagg	Mayhill	Lakeview	100%	\$ 6,701,000	\$ 6,701,000
E-5	SA	McKinney (FM 426)	Woodrow	East City Limits	100%	\$ 4,829,400	\$ 4,829,400
E-6	C	Duchess (1)	Woodrow	115' W of Trailhead	100%	\$ 4,125,000	\$ 4,125,000
E-7	C (1/2)	Duchess (2)	115' W of Trailhead	1,000' W of Loop 288	100%	\$ 1,197,000	\$ 1,197,000
E-8	C	Morse (1)	Woodrow	Shady Oaks	100%	\$ 1,706,000	\$ 1,706,000
E-9	SA (1/2)	Morse (2)	Kimberly	Mayhill	100%	\$ 2,346,000	\$ 2,346,000
E-10	SA	Spencer	485' E of Loop 288	Mayhill	100%	\$ 2,455,000	\$ 2,455,000
E-11	C	Lakeview (1)	Post Oak (Future)	1025' E of Post Oak (Future)	100%	\$ 839,000	\$ 839,000
E-12	C	Lakeview (2)	2,745' E of Post Oak (Future)	Bishop Pine	100%	\$ 1,555,000	\$ 1,555,000
E-13	C	Edwards	560' E of Mayhill	Swisher	100%	\$ 3,794,000	\$ 3,794,000
C-48,E-14	SA	Bonnie Brae (3)	University	I-35E NBFR	50%	\$ 5,950,216	\$ 2,975,108
E-15	C	Ruddell	Mingo	Willis	100%	\$ 424,000	\$ 424,000
E-16	C	Mockingbird	McKinney	850' S of McKinney	100%	\$ 697,000	\$ 697,000
E-17	SA	Brinker	Shady Oaks	Spencer	100%	\$ 4,138,000	\$ 4,138,000
E-18	SA	Mayhill (1)	University	Colorado	100%	\$ 5,667,507	\$ 5,667,507
E-19	PA (1/3)	Mayhill (2)	Colorado	I-35E NBFR	100%	\$ 1,928,000	\$ 1,928,000
E-20	PA	Post Oak (5)	University	1,010' N of Blagg	100%	\$ 3,465,000	\$ 3,465,000
E-21	PA	Post Oak (6)	1,010' N of Blagg	1,650' S of Blagg	50%	\$ 4,646,000	\$ 2,323,000
E-22	PA	Post Oak (7)	1,490' N of Mills	2,400' N of McKinney	100%	\$ 7,746,000	\$ 7,746,000
E-23	PA	Post Oak (8)	1,230' N of McKinney	Pockrus Page	100%	\$ 33,321,000	\$ 33,321,000
E-24	PA	Post Oak (9)	Pockrus Page	Lakeview	100%	\$ 2,800,000	\$ 2,800,000
E-25	C	Lakeview (3)	130' S of Rodeo	735' S of Mills	100%	\$ 1,844,000	\$ 1,844,000
E-26	C	Trinity-McKinney Connector (1)	Trinity	1290' N of McKinney	100%	\$ 6,312,000	\$ 6,312,000
E-27	SA	Trinity-McKinney Connector (2)	1290' N of McKinney	McKinney	100%	\$ 1,695,000	\$ 1,695,000
TOTAL						\$ 125,899,123	\$ 120,601,015

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-1
Name:	Mingo (1)	This project consists of the reconstruction of the existing pavement as a four lane divided asphalt secondary arterial.		
Limits:	435' NE of Bell to University			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	10,885			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
104	Unclassified Street Excavation	37,493	cy	\$ 9.25	\$ 346,808
204	2" Asphalt (Type C)	65,310	sy	\$ 7.75	\$ 506,153
304	4" Asphalt Base (Type B)	65,310	sy	\$ 11.50	\$ 751,065
404	6" Asphalt Base (Type B)	70,148	sy	\$ 21.00	\$ 1,473,103
504	12" Lime Stabilization (with Lime @ 50#/sy)	72,567	sy	\$ 4.00	\$ 290,267
604	5' Concrete Sidewalk	108,850	sf	\$ 4.50	\$ 489,825
704	Machine Laid Curb & Gutter	43,540	lf	\$ 10.00	\$ 435,400
804	Turn Lanes and Median Openings	4,876	sy	\$ 44.25	\$ 215,744
Paving Construction Cost Subtotal:					\$ 4,508,365
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	225,418	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	135,251	
√ Roadway Drainage	Standard Internal System	30%	\$	1,352,509	
√ Illumination		5%	\$	225,418	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	90,167	
√ Sewer	Minor Adjustments	1%	\$	45,084	
√ Landscaping and Irrigation		6%	\$	270,502	
√ Intersection Improvements		-	\$	1,250,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 3,594,350
Paving and Allowance Subtotal:					\$ 8,102,714
Construction Contingency:					15% \$ 1,215,407
Mobilization					5% \$ 405,136
Prep ROW					3% \$ 243,081
Construction Cost TOTAL:					\$ 9,967,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 9,967,000
Engineering/Survey/Testing:		16%	\$ 1,594,720
Inspection		3.5%	\$ 348,845
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 1,495,050
Impact Fee Project Cost TOTAL:			\$ 13,406,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-2
Name:	Lattimore	This project consists of the construction of a new two lane asphalt collector facility.		
Limits:	Ruddell to 475' E of Ruddell			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	475			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	1,056	cy	\$ 9.25	\$ 9,764
208	2" Asphalt (Type C)	1,900	sy	\$ 7.75	\$ 14,725
308	4" Asphalt Base (Type B)	1,900	sy	\$ 11.50	\$ 21,850
408	5" Asphalt Base (Type B)	2,006	sy	\$ 18.50	\$ 37,103
508	8" Lime Stabilization (with Lime @ 50#/sy)	2,058	sy	\$ 3.00	\$ 6,175
608	8' Concrete Sidewalk	7,600	sf	\$ 4.50	\$ 34,200
708	Machine Laid Curb & Gutter	950	lf	\$ 10.00	\$ 9,500
808	Turn Lanes and Median Openings	0	sy	\$ 40.75	\$ -
Paving Construction Cost Subtotal:					\$ 133,317
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 4,000		
√ Roadway Drainage	Standard Internal System	30%	\$ 39,995		
√ Illumination		5%	\$ 6,666		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 2,666		
√ Sewer	Minor Adjustments	1%	\$ 1,333		
√ Landscaping and Irrigation		6%	\$ 7,999		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 312,659
Paving and Allowance Subtotal:					\$ 445,976
Construction Contingency:					15% \$ 66,896
Mobilization					5% \$ 22,299
Prep ROW					1% \$ 4,460
Construction Cost TOTAL:					\$ 540,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 540,000
Engineering/Survey/Testing:		16%	\$ 86,400
Inspection		3.5%	\$ 18,900
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 162,000
Impact Fee Project Cost TOTAL:			\$ 807,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-3
Name:	Audra	This project consists of the construction of a new two lane asphalt collector.		
Limits:	Bayfield to Loop 288			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	1,410			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	3,133	cy	\$ 9.25	\$ 28,983
208	2" Asphalt (Type C)	5,640	sy	\$ 7.75	\$ 43,710
308	4" Asphalt Base (Type B)	5,640	sy	\$ 11.50	\$ 64,860
408	5" Asphalt Base (Type B)	5,953	sy	\$ 18.50	\$ 110,137
508	8" Lime Stabilization (with Lime @ 50#/sy)	6,110	sy	\$ 3.00	\$ 18,330
608	8' Concrete Sidewalk	22,560	sf	\$ 4.50	\$ 101,520
708	Machine Laid Curb & Gutter	2,820	lf	\$ 10.00	\$ 28,200
808	Turn Lanes and Median Openings	0	sy	\$ 40.75	\$ -
Paving Construction Cost Subtotal:					\$ 395,740
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 11,872		
√ Roadway Drainage	Standard Internal System	30%	\$ 118,722		
√ Illumination		5%	\$ 19,787		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 7,915		
√ Sewer	Minor Adjustments	1%	\$ 3,957		
√ Landscaping and Irrigation		6%	\$ 23,744		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 435,998		
Paving and Allowance Subtotal:					\$ 831,738
Construction Contingency:					15% \$ 124,761
Mobilization					5% \$ 41,587
Prep ROW					1% \$ 8,317
Construction Cost TOTAL:					\$ 1,007,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,007,000
Engineering/Survey/Testing:		16%	\$ 161,120
Inspection		3.5%	\$ 35,245
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 302,100
Impact Fee Project Cost TOTAL:			\$ 1,505,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-4
Name:	Blagg	This project consists of the reconstruction of the existing pavement as a two lane concrete collector.		
Limits:	Mayhill to Lakeview			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	6,735			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	14,967	cy	\$ 9.25	\$ 138,442
211	8" Lime Stabilization (with Lime @ 50#/sy)	29,185	sy	\$ 6.00	\$ 175,110
310	8" Concrete Pavement and Curb	27,688	sy	\$ 46.00	\$ 1,273,663
411	8' Concrete Sidewalk	107,760	sy	\$ 4.50	\$ 484,920
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 2,072,135
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	103,607	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	62,164	
√ Roadway Drainage	Standard Internal System	30%	\$	621,641	
√ Illumination		5%	\$	103,607	
√ Special Drainage Structures	Major Stream Crossing(s)	N/A	\$	400,000	
√ Water	Minor Adjustments	2%	\$	41,443	
√ Sewer	Minor Adjustments	1%	\$	20,721	
√ Landscaping and Irrigation		6%	\$	124,328	
√ Intersection Improvements		-	\$	500,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	1,977,510	
Paving and Allowance Subtotal:					\$ 4,049,645
Construction Contingency:					15% \$ 607,447
Mobilization					5% \$ 202,482
Prep ROW					3% \$ 121,489
Construction Cost TOTAL:					\$ 4,982,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,982,000
Engineering/Survey/Testing:		16%	\$ 797,120
Inspection		3.5%	\$ 174,370
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 747,300
Impact Fee Project Cost TOTAL:			\$ 6,701,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-5
Name:	McKinney (FM 426)	This project consists of the reconstruction of the existing pavement as a four lane divided concrete secondary arterial.		
Limits:	Woodrow to East City Limits			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	20,875			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	71,903	cy	\$ 9.25	\$ 665,101
207	12" Lime Stabilization (with Lime @ 50#/sy)	139,167	sy	\$ 8.00	\$ 1,113,333
306	11" Concrete Pavement and Curb	129,889	sy	\$ 54.00	\$ 7,014,000
407	5' Concrete Sidewalk	208,750	sy	\$ 4.50	\$ 939,375
507	Turn Lanes and Median Openings	9,350	sy	\$ 62.00	\$ 579,716
Paving Construction Cost Subtotal:					\$ 10,311,525
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	515,576	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	309,346	
√ Roadway Drainage	Standard Internal System	30%	\$	3,093,458	
√ Illumination		5%	\$	515,576	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	206,231	
√ Sewer	Minor Adjustments	1%	\$	103,115	
√ Landscaping and Irrigation		6%	\$	618,692	
√ Intersection Improvements		-	\$	1,250,000	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	6,611,993	
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 16,923,518
Construction Contingency:					15% \$ 2,538,528
Mobilization					5% \$ 846,176
Prep ROW					3% \$ 507,706
Construction Cost TOTAL:					\$ 20,816,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 20,816,000
Engineering/Survey/Testing:		16%	\$ 3,330,560
Inspection	TxDOT Roadway	0%	\$ -
Other			
ROW/Easement Acquisition:	TxDOT Roadway	0%	\$ -
Impact Fee Project Cost TOTAL (20% City Contribution)			\$ 4,829,400

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-6
Name:	Duchess (1)	This project consists of the construction of a new two lane concrete collector facility.		
Limits:	Woodrow to 115' W of Trailhead			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	3,935			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	8,744	cy	\$ 9.25	\$ 80,886
211	8" Lime Stabilization (with Lime @ 50#/sy)	17,052	sy	\$ 6.00	\$ 102,310
310	8" Concrete Pavement and Curb	16,177	sy	\$ 46.00	\$ 744,152
411	8' Concrete Sidewalk	62,960	sy	\$ 4.50	\$ 283,320
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 1,210,668
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 36,320		
√ Roadway Drainage	Standard Internal System	30%	\$ 363,201		
√ Illumination		5%	\$ 60,533		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 250,000		
√ Water	Minor Adjustments	2%	\$ 24,213		
√ Sewer	Minor Adjustments	1%	\$ 12,107		
√ Landscaping and Irrigation		6%	\$ 72,640		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 1,069,014
Paving and Allowance Subtotal:					\$ 2,279,682
Construction Contingency:					15% \$ 341,952
Mobilization					5% \$ 113,984
Prep ROW					1% \$ 22,797
Construction Cost TOTAL:					\$ 2,759,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,759,000
Engineering/Survey/Testing:		16%	\$ 441,440
Inspection		3.5%	\$ 96,565
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 827,700
Impact Fee Project Cost TOTAL:			\$ 4,125,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-7
Name:	Duchess (2)	This project consists of the widening of the existing pavement to a concrete collector.		
Limits:	115' W of Trailhead to 1,000' W of Loop 288			
Impact Fee Class:	C (1/2)			
Ultimate Class:	Collector			
Length (lf):	1,995			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
112	Unclassified Street Excavation	2,217	cy	\$ 9.25	\$ 20,504
212	8" Lime Stabilization (with Lime @ 50#/sy)	4,323	sy	\$ 7.00	\$ 30,258
311	8" Concrete Pavement and Curb	4,101	sy	\$ 46.00	\$ 188,638
412	8' Concrete Sidewalk	15,960	sy	\$ 4.50	\$ 71,820
512	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 311,220
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	15,561	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	9,337	
√ Roadway Drainage	Standard Internal System	30%	\$	93,366	
√ Illumination		5%	\$	15,561	
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$	250,000	
√ Water	Minor Adjustments	2%	\$	6,224	
√ Sewer	Minor Adjustments	1%	\$	3,112	
√ Landscaping and Irrigation		6%	\$	18,673	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	411,834	
		Paving and Allowance Subtotal:	\$	723,054	
		Construction Contingency:	15%	\$	108,458
		Mobilization	5%	\$	36,153
		Prep ROW	3%	\$	21,692
		Construction Cost TOTAL:	\$	890,000	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 890,000
Engineering/Survey/Testing:		16%	\$ 142,400
Inspection		3.5%	\$ 31,150
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 133,500
Impact Fee Project Cost TOTAL:			\$ 1,197,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-8
Name:	Morse (1)	This project consists of the construction of a new two lane concrete collector.		
Limits:	Woodrow to Shady Oaks			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	1,310			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	2,911	cy	\$ 9.25	\$ 26,928
211	8" Lime Stabilization (with Lime @ 50#/sy)	5,677	sy	\$ 6.00	\$ 34,060
310	8" Concrete Pavement and Curb	5,386	sy	\$ 46.00	\$ 247,736
411	8' Concrete Sidewalk	20,960	sy	\$ 4.50	\$ 94,320
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 403,043
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 12,091		
√ Roadway Drainage	Standard Internal System	30%	\$ 120,913		
√ Illumination		5%	\$ 20,152		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 100,000		
√ Water	Minor Adjustments	2%	\$ 8,061		
√ Sewer	Minor Adjustments	1%	\$ 4,030		
√ Landscaping and Irrigation		6%	\$ 24,183		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 539,430		
		Paving and Allowance Subtotal:	\$ 942,474		
		Construction Contingency:	15%	\$ 141,371	
		Mobilization	5%	\$ 47,124	
		Prep ROW	1%	\$ 9,425	
		Construction Cost TOTAL:	\$ 1,141,000		

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,141,000
Engineering/Survey/Testing:		16%	\$ 182,560
Inspection		3.5%	\$ 39,935
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 342,300
Impact Fee Project Cost TOTAL:			\$ 1,706,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-9
Name:	Morse (2)	This project consists of the construction of the southern two lanes to complete the roadway as a four lane divided concrete secondary arterial.		
Limits:	Kimberly to Mayhill			
Impact Fee Class:	SA (1/2)			
Ultimate Class:	Secondary Arterial			
Length (lf):	2,710			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	4,667	cy	\$ 9.25	\$ 43,172
208	12" Lime Stabilization (with Lime @ 50#/sy)	9,033	sy	\$ 8.00	\$ 72,267
307	11" Concrete Pavement and Curb	8,431	sy	\$ 54.00	\$ 455,280
408	5' Concrete Sidewalk	27,100	sy	\$ 4.50	\$ 121,950
508	Turn Lanes and Median Openings	1,214	sy	\$ 62.00	\$ 75,259
Paving Construction Cost Subtotal:					\$ 767,927
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	38,396	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	23,038	
√ Roadway Drainage	Standard Internal System	30%	\$	230,378	
√ Illumination		5%	\$	38,396	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	15,359	
√ Sewer	Minor Adjustments	1%	\$	7,679	
√ Landscaping and Irrigation		6%	\$	46,076	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 649,322
Paving and Allowance Subtotal:					\$ 1,417,250
Construction Contingency:					15% \$ 212,587
Mobilization					5% \$ 70,862
Prep ROW					3% \$ 42,517
Construction Cost TOTAL:					\$ 1,744,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,744,000
Engineering/Survey/Testing:		16%	\$ 279,040
Inspection		3.5%	\$ 61,040
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 261,600
Impact Fee Project Cost TOTAL:			\$ 2,346,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-10
Name:	Spencer	This project consists of the reconstruction of the existing pavement as a four lane divided asphalt secondary arterial.		
Limits:	485' E of Loop 288 to Mayhill			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	1,800			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
104	Unclassified Street Excavation	6,200	cy	\$ 9.25	\$ 57,350
204	2" Asphalt (Type C)	10,800	sy	\$ 7.75	\$ 83,700
304	4" Asphalt Base (Type B)	10,800	sy	\$ 11.50	\$ 124,200
404	6" Asphalt Base (Type B)	11,600	sy	\$ 21.00	\$ 243,600
504	12" Lime Stabilization (with Lime @ 50#/sy)	12,000	sy	\$ 4.00	\$ 48,000
604	5' Concrete Sidewalk	18,000	sf	\$ 4.50	\$ 81,000
704	Machine Laid Curb & Gutter	7,200	lf	\$ 10.00	\$ 72,000
804	Turn Lanes and Median Openings	806	sy	\$ 44.25	\$ 35,677
Paving Construction Cost Subtotal:					\$ 745,527
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	37,276	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	22,366	
√ Roadway Drainage	Standard Internal System	30%	\$	223,658	
√ Illumination		5%	\$	37,276	
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$	100,000	
√ Water	Minor Adjustments	2%	\$	14,911	
√ Sewer	Minor Adjustments	1%	\$	7,455	
√ Landscaping and Irrigation		6%	\$	44,732	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 737,674
Paving and Allowance Subtotal:					\$ 1,483,200
Construction Contingency:					15% \$ 222,480
Mobilization					5% \$ 74,160
Prep ROW					3% \$ 44,496
Construction Cost TOTAL:					\$ 1,825,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,825,000
Engineering/Survey/Testing:		16%	\$ 292,000
Inspection		3.5%	\$ 63,875
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 273,750
Impact Fee Project Cost TOTAL:			\$ 2,455,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-11
Name:	Lakeview (1)	This project consists of the construction of a new two lane concrete collector.		
Limits:	Post Oak (Future) to 1025' E of Post Oak (Future)			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	1,025			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	2,278	cy	\$ 9.25	\$ 21,069
211	8" Lime Stabilization (with Lime @ 50#/sy)	4,442	sy	\$ 6.00	\$ 26,650
310	8" Concrete Pavement and Curb	4,214	sy	\$ 46.00	\$ 193,839
411	8' Concrete Sidewalk	16,400	sy	\$ 4.50	\$ 73,800
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 315,358
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$	-	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	9,461	
√ Roadway Drainage	Standard Internal System	30%	\$	94,608	
√ Illumination		5%	\$	15,768	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	6,307	
√ Sewer	Minor Adjustments	1%	\$	3,154	
√ Landscaping and Irrigation		6%	\$	18,922	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	148,218	
		Paving and Allowance Subtotal:		\$	463,577
		Construction Contingency:	15%	\$	69,537
		Mobilization	5%	\$	23,179
		Prep ROW	1%	\$	4,636
Construction Cost TOTAL:					\$ 561,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 561,000
Engineering/Survey/Testing:		16%	\$ 89,760
Inspection		3.5%	\$ 19,635
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 168,300
Impact Fee Project Cost TOTAL:			\$ 839,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-12
Name:	Lakeview (2)	This project consists of the construction of a new two lane concrete collector facility.		
Limits:	2,745' E of Post Oak (Future) to Bishop Pine			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	1,900			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	4,222	cy	\$ 9.25	\$ 39,056
211	8" Lime Stabilization (with Lime @ 50#/sy)	8,233	sy	\$ 6.00	\$ 49,400
310	8" Concrete Pavement and Curb	7,811	sy	\$ 46.00	\$ 359,311
411	8' Concrete Sidewalk	30,400	sy	\$ 4.50	\$ 136,800
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 584,567
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 17,537		
√ Roadway Drainage	Standard Internal System	30%	\$ 175,370		
√ Illumination		5%	\$ 29,228		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 11,691		
√ Sewer	Minor Adjustments	1%	\$ 5,846		
√ Landscaping and Irrigation		6%	\$ 35,074		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 274,746		
**Allowances based on % of Paving Construction Cost Subtotal					
Paving and Allowance Subtotal:					\$ 859,313
Construction Contingency:					15% \$ 128,897
Mobilization					5% \$ 42,966
Prep ROW					1% \$ 8,593
Construction Cost TOTAL:					\$ 1,040,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,040,000
Engineering/Survey/Testing:		16%	\$ 166,400
Inspection		3.5%	\$ 36,400
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 312,000
Impact Fee Project Cost TOTAL:			\$ 1,555,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-13
Name:	Edwards	This project consists of the reconstruction of the existing pavement as a two lane asphalt collector.		
Limits:	560' E of Mayhill to Swisher			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	5,375			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	11,944	cy	\$ 9.25	\$ 110,486
208	2" Asphalt (Type C)	21,500	sy	\$ 7.75	\$ 166,625
308	4" Asphalt Base (Type B)	21,500	sy	\$ 11.50	\$ 247,250
408	5" Asphalt Base (Type B)	22,694	sy	\$ 18.50	\$ 419,847
508	8" Lime Stabilization (with Lime @ 50#/sy)	23,292	sy	\$ 3.00	\$ 69,875
608	8' Concrete Sidewalk	86,000	sf	\$ 4.50	\$ 387,000
708	Machine Laid Curb & Gutter	10,750	lf	\$ 10.00	\$ 107,500
808	Turn Lanes and Median Openings	0	sy	\$ 40.75	\$ -
Paving Construction Cost Subtotal:					\$ 1,508,583
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	75,429	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	45,258	
√ Roadway Drainage	Standard Internal System	30%	\$	452,575	
√ Illumination		5%	\$	75,429	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	30,172	
√ Sewer	Minor Adjustments	1%	\$	15,086	
√ Landscaping and Irrigation		6%	\$	90,515	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	784,463	
		**Allowances based on % of Paving Construction Cost Subtotal			
Paving and Allowance Subtotal:					\$ 2,293,047
Construction Contingency:					15% \$ 343,957
Mobilization					5% \$ 114,652
Prep ROW					3% \$ 68,791
Construction Cost TOTAL:					\$ 2,821,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,821,000
Engineering/Survey/Testing:		16%	\$ 451,360
Inspection		3.5%	\$ 98,735
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 423,150
Impact Fee Project Cost TOTAL:			\$ 3,794,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.
Name:	Bonnie Brae (3)	This project consists of the reconstruction of the existing asphalt pavement as a four lane divided secondary arterial. The City's contribution to the overall project (Bonnie Brae + Vintage) is \$22,037,838. The contribution to this segment of Bonnie Brae is \$5,950,216 (27%).	C-48,E-14
Limits:	University to I-35E NBFR		
Impact Fee Class:	SA		
Ultimate Class:	Secondary Arterial		
Length (lf):	7,465		
Service Area(s):	C,E		

Roadway Construction Cost Projection	
Construction Cost TOTAL:	\$ 46,739,189

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 46,739,189
Engineering/Survey/Testing:		-	\$ 10,250,000
ROW/Easement Acquisition:	Existing Alignment	-	\$ 16,950,000
Impact Fee Project Cost TOTAL:			\$ 73,939,000
City Contribution:			\$ 22,037,838
Impact Fee Project Cost (27%):			\$ 5,950,216

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-15
Name:	Ruddell	This project consists of the construction of a new two lane asphalt collector facility (realignment).		
Limits:	Mingo to Willis			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	575			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	1,278	cy	\$ 9.25	\$ 11,819
208	2" Asphalt (Type C)	2,300	sy	\$ 7.75	\$ 17,825
308	4" Asphalt Base (Type B)	2,300	sy	\$ 11.50	\$ 26,450
408	5" Asphalt Base (Type B)	2,428	sy	\$ 18.50	\$ 44,914
508	8" Lime Stabilization (with Lime @ 50#/sy)	2,492	sy	\$ 3.00	\$ 7,475
608	8' Concrete Sidewalk	9,200	sf	\$ 4.50	\$ 41,400
708	Machine Laid Curb & Gutter	1,150	lf	\$ 10.00	\$ 11,500
808	Turn Lanes and Median Openings	0	sy	\$ 40.75	\$ -
Paving Construction Cost Subtotal:					\$ 161,383
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 4,842		
√ Roadway Drainage	Standard Internal System	30%	\$ 48,415		
√ Illumination		5%	\$ 8,069		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 3,228		
√ Sewer	Minor Adjustments	1%	\$ 1,614		
√ Landscaping and Irrigation		6%	\$ 9,683		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 75,850		
Paving and Allowance Subtotal:					\$ 237,234
Construction Contingency:					15% \$ 35,585
Mobilization					5% \$ 11,862
Prep ROW					1% \$ 2,372
Construction Cost TOTAL:					\$ 288,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 288,000
Engineering/Survey/Testing:		16%	\$ 46,080
Inspection		3.5%	\$ 10,080
Other (developer contribution)			\$ (6,100)
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 86,400
Impact Fee Project Cost TOTAL:			\$ 424,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-16
Name:	Mockingbird	This project consists of the construction of a new two lane concrete collector facility.		
Limits:	McKinney to 850' S of McKinney			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	850			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	1,889	cy	\$ 9.25	\$ 17,472
211	8" Lime Stabilization (with Lime @ 50#/sy)	3,683	sy	\$ 6.00	\$ 22,100
310	8" Concrete Pavement and Curb	3,494	sy	\$ 46.00	\$ 160,744
411	8' Concrete Sidewalk	13,600	sy	\$ 4.50	\$ 61,200
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 261,517
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 7,846		
√ Roadway Drainage	Standard Internal System	30%	\$ 78,455		
√ Illumination		5%	\$ 13,076		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 5,230		
√ Sewer	Minor Adjustments	1%	\$ 2,615		
√ Landscaping and Irrigation		6%	\$ 15,691		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 122,913		
Paving and Allowance Subtotal:					\$ 384,430
Construction Contingency:					15% \$ 57,664
Mobilization					5% \$ 19,221
Prep ROW					1% \$ 3,844
Construction Cost TOTAL:					\$ 466,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 466,000
Engineering/Survey/Testing:		16%	\$ 74,560
Inspection		3.5%	\$ 16,310
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 139,800
Impact Fee Project Cost TOTAL:			\$ 697,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-17
Name:	Brinker	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	Shady Oaks to Spencer			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	2,805			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	9,662	cy	\$ 9.25	\$ 89,370
207	12" Lime Stabilization (with Lime @ 50#/sy)	18,700	sy	\$ 8.00	\$ 149,600
306	11" Concrete Pavement and Curb	17,453	sy	\$ 54.00	\$ 942,480
407	5' Concrete Sidewalk	28,050	sy	\$ 4.50	\$ 126,225
507	Turn Lanes and Median Openings	1,256	sy	\$ 62.00	\$ 77,897
Paving Construction Cost Subtotal:					\$ 1,385,573
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 41,567		
√ Roadway Drainage	Standard Internal System	30%	\$ 415,672		
√ Illumination		5%	\$ 69,279		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 27,711		
√ Sewer	Minor Adjustments	1%	\$ 13,856		
√ Landscaping and Irrigation		6%	\$ 83,134		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 901,219		
Paving and Allowance Subtotal:					\$ 2,286,792
Construction Contingency:					15% \$ 343,019
Mobilization					5% \$ 114,340
Prep ROW					1% \$ 22,868
Construction Cost TOTAL:					\$ 2,768,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,768,000
Engineering/Survey/Testing:		16%	\$ 442,880
Inspection		3.5%	\$ 96,880
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 830,400
Impact Fee Project Cost TOTAL:			\$ 4,138,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-18
Name:	Mayhill (1)	This project consists of the reconstruction of the existing pavement as a four lane divided concrete secondary arterial. The total City contribution to the project is \$5,667,507		
Limits:	University to Colorado			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	20,115			
Service Area(s):	E			

Roadway Construction Cost Projection	
Construction Cost TOTAL:	\$ 38,932,892

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 38,932,892
Engineering/Survey/Testing:		-	\$ 5,454,159
ROW/Easement Acquisition:	Existing Alignment	-	\$ 12,283,515
Impact Fee Project Cost TOTAL:			\$ 56,670,566
City Contribution			\$ 5,667,507

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-19
Name:	Mayhill (2)	This project consists of the construction of the median lanes to complete a six lane divided concrete primary arterial.		
Limits:	Colorado to I-35E NBFR			
Impact Fee Class:	PA (1/3)			
Ultimate Class:	Primary Arterial			
Length (lf):	2,365			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
105	Unclassified Street Excavation	3,416	cy	\$ 9.25	\$ 31,599
205	12" Lime Stabilization (with Lime @ 50#/sy)	6,569	sy	\$ 8.00	\$ 52,556
304	11" Concrete Pavement and Curb	6,044	sy	\$ 54.00	\$ 326,370
405	5' Concrete Sidewalk	0	sy	\$ 4.50	\$ -
505	Turn Lanes and Median Openings	898	sy	\$ 68.00	\$ 61,039
Paving Construction Cost Subtotal:					\$ 471,563
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	23,578	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	14,147	
Roadway Drainage	None Anticipated	0%	\$	-	
√ Illumination		5%	\$	23,578	
Special Drainage Structures	None Anticipated	-	\$	-	
Water	None Anticipated	0%	\$	-	
Sewer	None Anticipated	0%	\$	-	
√ Landscaping and Irrigation		6%	\$	28,294	
√ Intersection Improvements		-	\$	750,000	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$	839,597	
Paving and Allowance Subtotal:					\$ 1,311,160
Construction Contingency:					15% \$ 196,674
Mobilization					5% \$ 65,558
Prep ROW					3% \$ 39,335
Construction Cost TOTAL:					\$ 1,613,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,613,000
Engineering/Survey/Testing:		16%	\$ 258,080
Inspection		3.5%	\$ 56,455
Other			
ROW/Easement Acquisition:	No ROW Acquisition Costs included	0%	\$ -
Impact Fee Project Cost TOTAL:			\$ 1,928,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-20
Name:	Post Oak (5)	This project consists of the construction of a new six lane divided concrete primary arterial.		
Limits:	University to 1,010' N of Blagg			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	1,725			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	8,050	cy	\$ 9.25	\$ 74,463
201	12" Lime Stabilization (with Lime @ 50#/sy)	15,717	sy	\$ 8.00	\$ 125,733
301	11" Concrete Pavement and Curb	14,950	sy	\$ 54.00	\$ 807,300
401	5' Concrete Sidewalk	17,250	sy	\$ 4.50	\$ 77,625
501	Turn Lanes and Median Openings	773	sy	\$ 62.00	\$ 47,905
Paving Construction Cost Subtotal:					\$ 1,133,026
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 33,991		
√ Roadway Drainage	Standard Internal System	30%	\$ 339,908		
√ Illumination		5%	\$ 56,651		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 22,661		
√ Sewer	Minor Adjustments	1%	\$ 11,330		
√ Landscaping and Irrigation		6%	\$ 67,982		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 782,522		
Paving and Allowance Subtotal:					\$ 1,915,548
Construction Contingency:					15% \$ 287,332
Mobilization					5% \$ 95,777
Prep ROW					1% \$ 19,155
Construction Cost TOTAL:					\$ 2,318,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,318,000
Engineering/Survey/Testing:		16%	\$ 370,880
Inspection		3.5%	\$ 81,130
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 695,400
Impact Fee Project Cost TOTAL:			\$ 3,465,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-21
Name:	Post Oak (6)	This project consists of the construction of a new six lane divided concrete primary arterial (note south of Blagg there is an existing roadway) .		
Limits:	1,010' N of Blagg to 1,650' S of Blagg			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	2,660			
Service Area(s):	E,NAA			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	12,413	cy	\$ 9.25	\$ 114,823
201	12" Lime Stabilization (with Lime @ 50#/sy)	24,236	sy	\$ 8.00	\$ 193,884
301	11" Concrete Pavement and Curb	23,053	sy	\$ 54.00	\$ 1,244,880
401	5' Concrete Sidewalk	26,600	sy	\$ 4.50	\$ 119,700
501	Turn Lanes and Median Openings	1,191	sy	\$ 62.00	\$ 73,870
Paving Construction Cost Subtotal:					\$ 1,747,158
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$	-	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	52,415	
√ Roadway Drainage	Standard Internal System	30%	\$	524,147	
√ Illumination		5%	\$	87,358	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	34,943	
√ Sewer	Minor Adjustments	1%	\$	17,472	
√ Landscaping and Irrigation		6%	\$	104,829	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 821,164
Paving and Allowance Subtotal:					\$ 2,568,323
Construction Contingency:					15% \$ 385,248
Mobilization					5% \$ 128,416
Prep ROW					1% \$ 25,683
Construction Cost TOTAL:					\$ 3,108,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,108,000
Engineering/Survey/Testing:		16%	\$ 497,280
Inspection		3.5%	\$ 108,780
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 932,400
Impact Fee Project Cost TOTAL:			\$ 4,646,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-22
Name:	Post Oak (7)	This project consists of the construction of a new six lane divided concrete primary arterial.		
Limits:	1,490' N of Mills to 2,400' N of McKinney			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	4,175			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	19,483	cy	\$ 9.25	\$ 180,221
201	12" Lime Stabilization (with Lime @ 50#/sy)	38,039	sy	\$ 8.00	\$ 304,311
301	11" Concrete Pavement and Curb	36,183	sy	\$ 54.00	\$ 1,953,900
401	5' Concrete Sidewalk	41,750	sy	\$ 4.50	\$ 187,875
501	Turn Lanes and Median Openings	1,870	sy	\$ 62.00	\$ 115,943
Paving Construction Cost Subtotal:					\$ 2,742,250
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 82,268		
√ Roadway Drainage	Standard Internal System	30%	\$ 822,675		
√ Illumination		5%	\$ 137,113		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 54,845		
√ Sewer	Minor Adjustments	1%	\$ 27,423		
√ Landscaping and Irrigation		6%	\$ 164,535		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
		Allowance Subtotal:	\$ 1,538,858		
		Paving and Allowance Subtotal:	\$ 4,281,108		
		Construction Contingency:	15%	\$ 642,166	
		Mobilization	5%	\$ 214,055	
		Prep ROW	1%	\$ 42,811	
		Construction Cost TOTAL:	\$ 5,181,000		

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,181,000
Engineering/Survey/Testing:		16%	\$ 828,960
Inspection		3.5%	\$ 181,335
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,554,300
Impact Fee Project Cost TOTAL:			\$ 7,746,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-23
Name:	Post Oak (8)	This project consists of the construction of a new		
Limits:	1,230' N of McKinney to Pockrus Page	six lane divided concrete primary arterial.		
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	13,070			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	60,993	cy	\$ 9.25	\$ 564,188
201	12" Lime Stabilization (with Lime @ 50#/sy)	119,082	sy	\$ 8.00	\$ 952,658
301	11" Concrete Pavement and Curb	113,273	sy	\$ 54.00	\$ 6,116,760
401	5' Concrete Sidewalk	130,700	sy	\$ 4.50	\$ 588,150
501	Turn Lanes and Median Openings	5,854	sy	\$ 62.00	\$ 362,965
Paving Construction Cost Subtotal:					\$ 8,584,721
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 257,542		
√ Roadway Drainage	Standard Internal System	30%	\$ 2,575,416		
√ Illumination		5%	\$ 429,236		
√ Special Drainage Structures	Drainage Crossing(s)	N/A	\$ 5,800,000		
√ Water	Minor Adjustments	2%	\$ 171,694		
√ Sewer	Minor Adjustments	1%	\$ 85,847		
√ Landscaping and Irrigation		6%	\$ 515,083		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal					Allowance Subtotal: \$ 9,834,819
Paving and Allowance Subtotal:					\$ 18,419,540
Construction Contingency:					15% \$ 2,762,931
Mobilization					5% \$ 920,977
Prep ROW					1% \$ 184,195
Construction Cost TOTAL:					\$ 22,288,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 22,288,000
Engineering/Survey/Testing:		16%	\$ 3,566,080
Inspection		3.5%	\$ 780,080
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 6,686,400
Impact Fee Project Cost TOTAL:			\$ 33,321,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-24
Name:	Post Oak (9)	This project consists of the reconstruction of the existing pavement as a six lane divided concrete primary arterial.		
Limits:	Pockrus Page to Lakeview			
Impact Fee Class:	PA			
Ultimate Class:	Primary Arterial			
Length (lf):	1,445			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	6,743	cy	\$ 9.25	\$ 62,376
201	12" Lime Stabilization (with Lime @ 50#/sy)	13,166	sy	\$ 8.00	\$ 105,324
301	11" Concrete Pavement and Curb	12,523	sy	\$ 54.00	\$ 676,260
401	5' Concrete Sidewalk	14,450	sy	\$ 4.50	\$ 65,025
501	Turn Lanes and Median Openings	647	sy	\$ 62.00	\$ 40,129
Paving Construction Cost Subtotal:					\$ 949,114
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	47,456	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	28,473	
√ Roadway Drainage	Standard Internal System	30%	\$	284,734	
√ Illumination		5%	\$	47,456	
Special Drainage Structures	None Anticipated	-	\$	-	
√ Water	Minor Adjustments	2%	\$	18,982	
√ Sewer	Minor Adjustments	1%	\$	9,491	
√ Landscaping and Irrigation		6%	\$	56,947	
√ Intersection Improvements		-	\$	250,000	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	743,539	
		Paving and Allowance Subtotal:		\$	1,692,653
		Construction Contingency:	15%	\$	253,898
		Mobilization	5%	\$	84,633
		Prep ROW	3%	\$	50,780
Construction Cost TOTAL:					\$ 2,082,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,082,000
Engineering/Survey/Testing:		16%	\$ 333,120
Inspection		3.5%	\$ 72,870
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 312,300
Impact Fee Project Cost TOTAL:			\$ 2,800,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-25
Name:	Lakeview (3)	This project consists of the reconstruction of the existing pavement as a four lane divided concrete secondary arterial.		
Limits:	130' S of Rodeo to 735' S of Mills			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	1,955			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	4,344	cy	\$ 9.25	\$ 40,186
211	8" Lime Stabilization (with Lime @ 50#/sy)	8,472	sy	\$ 6.00	\$ 50,830
310	8" Concrete Pavement and Curb	8,037	sy	\$ 46.00	\$ 369,712
411	8' Concrete Sidewalk	31,280	sy	\$ 4.50	\$ 140,760
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 601,488
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	30,074	
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$	18,045	
√ Roadway Drainage	Standard Internal System	30%	\$	180,447	
√ Illumination		5%	\$	30,074	
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$	200,000	
√ Water	Minor Adjustments	2%	\$	12,030	
√ Sewer	Minor Adjustments	1%	\$	6,015	
√ Landscaping and Irrigation		6%	\$	36,089	
Intersection Improvements	None Anticipated	-	\$	-	
Miscellaneous:		\$0	\$	-	
		Allowance Subtotal:	\$	512,774	
		Paving and Allowance Subtotal:		\$	1,114,262
		Construction Contingency:	15%	\$	167,139
		Mobilization	5%	\$	55,713
		Prep ROW	3%	\$	33,428
Construction Cost TOTAL:					\$ 1,371,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,371,000
Engineering/Survey/Testing:		16%	\$ 219,360
Inspection		3.5%	\$ 47,985
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 205,650
Impact Fee Project Cost TOTAL:			\$ 1,844,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-26
Name:	Trinity-McKinney Connector (1)	This project consists of the construction of a new two lane concrete collector.		
Limits:	Trinity to 1290' N of McKinney			
Impact Fee Class:	C			
Ultimate Class:	Collector			
Length (lf):	6,720			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
111	Unclassified Street Excavation	14,933	cy	\$ 9.25	\$ 138,133
211	8" Lime Stabilization (with Lime @ 50#/sy)	29,120	sy	\$ 6.00	\$ 174,720
310	8" Concrete Pavement and Curb	27,627	sy	\$ 46.00	\$ 1,270,827
411	8' Concrete Sidewalk	107,520	sy	\$ 4.50	\$ 483,840
511	Turn Lanes and Median Openings	0	sy	\$ 52.00	\$ -
Paving Construction Cost Subtotal:					\$ 2,067,520
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 62,026		
√ Roadway Drainage	Standard Internal System	30%	\$ 620,256		
√ Illumination		5%	\$ 103,376		
√ Special Drainage Structures	Minor Stream Crossing(s)	N/A	\$ 200,000		
√ Water	Minor Adjustments	2%	\$ 41,350		
√ Sewer	Minor Adjustments	1%	\$ 20,675		
√ Landscaping and Irrigation		6%	\$ 124,051		
√ Intersection Improvements		-	\$ 250,000		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 1,421,734		
Paving and Allowance Subtotal:					\$ 3,489,254
Construction Contingency:					15% \$ 523,388
Mobilization					5% \$ 174,463
Prep ROW					1% \$ 34,893
Construction Cost TOTAL:					\$ 4,222,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 4,222,000
Engineering/Survey/Testing:		16%	\$ 675,520
Inspection		3.5%	\$ 147,770
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 1,266,600
Impact Fee Project Cost TOTAL:			\$ 6,312,000

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City of Denton
2015 Roadway Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.
 updated: 2/8/2016

Project Information:		Description:	Project No.	E-27
Name:	Trinity-McKinney Connector (2)	This project consists of the construction of a new four lane divided concrete secondary arterial.		
Limits:	1290' N of McKinney to McKinney			
Impact Fee Class:	SA			
Ultimate Class:	Secondary Arterial			
Length (lf):	1,290			
Service Area(s):	E			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
107	Unclassified Street Excavation	4,443	cy	\$ 9.25	\$ 41,101
207	12" Lime Stabilization (with Lime @ 50#/sy)	8,600	sy	\$ 8.00	\$ 68,800
306	11" Concrete Pavement and Curb	8,027	sy	\$ 54.00	\$ 433,440
407	5' Concrete Sidewalk	12,900	sy	\$ 4.50	\$ 58,050
507	Turn Lanes and Median Openings	578	sy	\$ 62.00	\$ 35,824
Paving Construction Cost Subtotal:					\$ 637,215
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Signs/Posts	Includes Striping/Signs for Bicycle Facilities	3%	\$ 19,116		
√ Roadway Drainage	Standard Internal System	30%	\$ 191,165		
√ Illumination		5%	\$ 31,861		
Special Drainage Structures	None Anticipated	-	\$ -		
√ Water	Minor Adjustments	2%	\$ 12,744		
√ Sewer	Minor Adjustments	1%	\$ 6,372		
√ Landscaping and Irrigation		6%	\$ 38,233		
Intersection Improvements	None Anticipated	-	\$ -		
Miscellaneous:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal		Allowance Subtotal:	\$ 299,491		
Paving and Allowance Subtotal:			\$ 936,706		
Construction Contingency:			15%	\$ 140,506	
Mobilization			5%	\$ 46,835	
Prep ROW			1%	\$ 9,367	
Construction Cost TOTAL:			\$ 1,134,000		

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,134,000
Engineering/Survey/Testing:		16%	\$ 181,440
Inspection		3.5%	\$ 39,690
Other			
ROW/Easement Acquisition:	New Roadway Alignment	30%	\$ 340,200
Impact Fee Project Cost TOTAL:			\$ 1,695,000

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Appendix B – Roadway Impact Fee CIP Service Units of Supply

City of Denton - 2015 Roadway Impact Fee Study

CIP Service Units of Supply

Service Area A

2/6/2016

Project ID #	ROADWAY	LIMITS	LENGTH (MI)	LANES	IMPACT FEE CLASSIFICATION	PEAK HOUR VOLUME	% IN SERVICE AREA	VEHMI CAPACITY PK-HR PER LN	VEHMI SUPPLY PK-HR TOTAL ¹	VEHMI TOTAL DEMAND PK-HR ²	EXCESS CAPACITY PK-HR VEHMI ³	TOTAL PROJECT COST	TOTAL PROJECT COST IN SERVICE AREA
A-1	Jim Christal (1)	490' E of C. Wolfe to Thomas J. Egan	0.28	4	SA	31	50%	750	416	4	412	\$ 4,170,000	\$ 2,085,000
A-2, C-21	Jim Christal (2)	225' E of Future Loop to Masch Branch	0.75	4	SA	31	50%	750	1128	12	1116	\$ 6,933,000	\$ 3,486,500,00
A-3, C-22	Jim Christal (3)	Masch Branch to Scripture	1.23	6	PA	31	50%	850	3125	19	3106	\$ 14,393,000	\$ 7,196,500,00
A-4	Jim Christal (4)	Scripture to I-35 SBFR	0.60	6	PA	31	100%	850	3043	18	3025	\$ 5,617,000	\$ 5,617,000
A-5	Airport	Masch Branch to I-35W SBFR	1.75	6	PA	1,044	100%	850	8949	1,832	7,117	\$ 2,930,800	\$ 2,930,800
A-6	Amyx	C. Wolfe to FM 2499	2.60	4	SA	New	100%	750	7804	0	7,804	\$ 23,125,000	\$ 23,125,000
A-7	Shelby	Westcourt/Underwood to Corbin	0.61	4	SA	New	100%	750	1844	0	1,844	\$ 5,946,000	\$ 5,946,000
A-8	Cole Ranch E-W SA #1	C. Wolfe to 345' E of Cole Ranch-Hunter Ranch Arterial	0.87	4	SA	New	100%	750	2605	0	2,605	\$ 6,928,000	\$ 6,928,000
A-9	FM 2499 (2)	345' E of Cole Ranch-Hunter Ranch Arterial to Underwood (2)	1.27	4	SA	New	100%	750	3815	0	3,815	\$ 1,467,200	\$ 1,467,200
A-10	FM 2499 (1)	Cole Ranch N-S SA to Cole Ranch-Hunter Ranch Arterial	1.06	4	SA	New	100%	750	3173	0	3,173	\$ 7,337,000	\$ 7,337,000
A-11	H. Lively (1)	725' E of Seabron to 1.975' W of C. Wolfe	0.74	4	SA	100	100%	750	2224	74	2,150	\$ 4,864,000	\$ 4,864,000
A-12	H. Lively (2)	1.975' W of C. Wolfe to C. Wolfe	0.37	4	SA	100	50%	750	561	19	542	\$ 17,294,000	\$ 17,294,000
A-13	H. Lively (3)	C. Wolfe to John Paine/Underwood (2)	2.40	4	SA	New	100%	750	7199	0	7,199	\$ 2,868,000	\$ 2,868,000
A-14	H. Lively (4)	Hunter Ranch N-S Col #1 to Brush Creek	2.22	4	SA	New	100%	750	6651	0	6,651	\$ 17,438,000	\$ 17,438,000
A-15	Hunter Ranch Arterial	Hunter Ranch N-S Col #2 to I-35W	2.71	6	PA	New	100%	850	13798	0	13,798	\$ 25,385,000	\$ 25,385,000
A-16	Brush Creek (1)	Ed Robson	0.62	4	SA	New	100%	750	1864	0	1,864	\$ 4,762,000	\$ 4,762,000
A-17	Ed Robson	Tom Cole to FM 2449	1.58	2	C	29	50%	550	871	23	848	\$ 6,008,000	\$ 3,428,500
A-18	C. Wolfe	FM 2449 to H. Lively	0.63	4	SA	29	50%	750	960	9	941	\$ 6,008,000	\$ 3,004,000
A-19	H. Lively (4)	FM 2499 to H. Lively	2.39	4	SA	New	100%	750	7170	0	7,170	\$ 17,500,000	\$ 17,500,000
A-20	Cole Ranch N-S SA	Tom Cole to H. Lively	3.43	6	PA	New	100%	850	17512	0	17,512	\$ 32,915,000	\$ 32,915,000
A-21	Cole Ranch-Hunter Ranch Arterial	Amyx to Hunter Ranch Arterial	0.94	6	PA	New	100%	850	4796	0	4,796	\$ 1,345,800	\$ 1,345,800
A-22	Future Loop (2)	Jim Christal to 4.965' S of Jim Christal	1.78	6	PA	New	100%	850	9080	0	9,080	\$ 3,151,400	\$ 3,151,400
A-23	Future Loop (3)	260' N of Tom Cole to FM 2449	0.57	6	PA	486	50%	850	1449	136	1,311	\$ 926,200	\$ 463,100
A-24	Future Loop (4)	1.040' W of Amyx to Underwood	0.73	6	PA	486	100%	850	3733	356	3,377	\$ 1,101,400	\$ 1,101,400
A-25	Future Loop (5)	Underwood to I-35W SBFR	0.78	2	C	New	100%	550	840	0	840	\$ 4,075,000	\$ 4,075,000
A-26	Jim Christal-Tom Cole Collector	Jim Christal to Tom Cole	0.79	4	SA (1/2)	156	100%	750	2364	123	2,241	\$ 2,964,000	\$ 2,964,000
A-27	Westcourt	Airport to Springside	0.32	4	SA	68	100%	750	966	22	944	\$ 2,234,000	\$ 2,234,000
A-28	Underwood	1.700' S of Springside to 2.665' N of FM 2449	0.29	4	SA	68	50%	750	430	10	420	\$ 3,354,000	\$ 1,677,000
A-29	Underwood (1)	2.665' N of FM 2449 to FM 2449	0.50	4	SA	68	100%	750	1509	34	1,475	\$ 4,303,000	\$ 4,303,000
A-30	Underwood (2)	FM 2449 to 1.265' N of H. Lively	0.72	4	SA	100	50%	750	1082	36	1,046	\$ 4,733,000	\$ 2,368,500
A-31	John Paine/Underwood (1)	FM 2449 to 1.265' N of H. Lively	0.62	4	SA	100	100%	750	1852	62	1,790	\$ 4,646,000	\$ 4,646,000
A-32	John Paine/Underwood (2)	970' N of Brush Creek to Brush Creek	0.18	4	SA	New	100%	750	551	0	551	\$ 1,275,000	\$ 1,275,000
A-33	John Paine/Underwood (3)	Jim Christal to Airport	1.23	6	PA (2/3)	272	100%	850	6264	334	5,930	\$ 7,201,000	\$ 7,201,000
A-34	Westem	Jim Christal to Airport	0.42	2	C	New	100%	550	463	0	463	\$ 1,816,000	\$ 1,816,000
A-35	Precision (1)	Jim Christal to 1.775' N of Airport	0.34	2	C	100	100%	550	370	34	336	\$ 1,375,000	\$ 1,375,000
A-36	Precision (2)	1.775' N of Airport to Airport	0.54	2	C								
SUBTOTAL								133,673	3,681	129,992	129,992	\$ 260,592,000	\$ 235,473,300

2015 Roadway Impact Fee Study Cost Per Service Area \$ 56,300
TOTAL COST IN SERVICE AREA A \$ 235,528,600

1. Veh-Mi Supply Pk-Hr Total = [Length (mi)] * [Exist Lanes] * [Veh-Mi Capacity Pk-Hr Per Ln] * [% in Service Area]
 2. Veh-Mi Demand Pk-Hr Total = [Length (mi)] * [PM Peak Hour Vol] * [% in Service Area]
 3. Excess Capacity Pk-Hr Veh-Mi = [Veh-Mi Supply Pk-Hr Total] - [Veh-Mi Demand Pk-Hr Total]
 Note: Mileage lengths are shown as rounded to the nearest 0.01. Actual calculations were performed using exact mileage length [Length (ft) / 5,280].

City of Denton - 2015 Roadway Impact Fee Study

CIP Service Units of Supply

Service Area B

2/6/2016

Project ID #	ROADWAY	LIMITS	LENGTH (MI)	LANES	IMPACT FEE CLASSIFICATION	PEAK HOUR VOLUME	% IN SERVICE AREA	VEH-MI CAPACITY PER LN	VEH-MI SUPPLY TOTAL ¹	VEH-MI DEMAND PK-HR ²	EXCESS CAPACITY PK-HR ³ VEH-MI ³	TOTAL PROJECT COST	TOTAL PROJECT COST IN SERVICE AREA
B-1	Parvin	Highland Park to McCormick	0.51	2	C	New	100%	550	559	0	0	\$ 2,456,000	\$ 2,456,000
B-2	Hobson	Country Club to Teasley	1.14	4	SA	New	100%	750	3435	749	2686	\$ 9,163,000	\$ 9,163,000
B-3	Vintage	490' W of Bonnie Brae to Fort Worth (US 377)	0.64	6	PA	298	100%	850	4921	288	4,633	\$ 4,187,189	\$ 4,187,189
B-4	El Paseo	Country Club to Belmont	0.36	2	C	New	100%	550	398	0	398	\$ 2,305,000	\$ 2,305,000
B-5	Ryan	Country Club to Teasley	2.06	4	SA	571	100%	750	6179	1,176	5,003	\$ 16,369,000	\$ 16,369,000
B-6	Robinson (1)	Teasley to 220' E of Wheeler Ridge	0.52	4	SA (1/2)	880	100%	750	1571	461	1,110	\$ 2,381,000	\$ 2,381,000
B-7	Robinson (2)	175' E of Berkley to 315' E of State School Rd	0.13	4	SA (1/2)	156	100%	750	381	20	361	\$ 892,000	\$ 892,000
B-8	Creekdale (1)	Ryan to 660' S. of Ryan	0.13	2	C (1/3)	10	100%	550	138	1	137	\$ 194,000	\$ 194,000
B-9	Creekdale (2)	660' S. of Ryan to Thistle Way	0.42	2	C	New	100%	550	458	0	458	\$ 2,343,000	\$ 2,343,000
B-10	Creekdale (3)	Thistle Way to Riverpass	0.12	2	C (1/3)	100	50%	550	65	6	59	\$ 182,000	\$ 91,000
B-11	Creekdale (4)	210' E of Riverchase Trail to 280' W of Plimlico	0.60	2	C	New	100%	550	655	0	655	\$ 3,551,000	\$ 3,551,000
B-12	Brush Creek (2)	I-35W/NBFR to John Paine (Future)	0.37	6	PA	167	100%	850	1869	61	1,808	\$ 4,024,000	\$ 4,024,000
B-13	Brush Creek (3)	John Paine (Future) to 2,010' E of John Paine (Future)	0.38	6	PA	New	100%	850	1941	0	1,941	\$ 3,963,000	\$ 3,963,000
B-14	Brush Creek (4)	225' W. of Fort Worth to 500' E. of Fort Worth	0.14	6	PA	167	100%	850	695	23	672	\$ 1,603,000	\$ 1,603,000
B-15	Brush Creek (5)	500' E. of Fort Worth to 2,180' East of Fort Worth	0.32	6	PA	167	50%	850	811	27	784	\$ 3,189,000	\$ 1,594,500
B-16	Hickory Creek (1)	Country Club to 1,955' E. of Country Club	0.37	6	PA	New	100%	850	1888	0	1,888	\$ 4,654,000	\$ 4,654,000
B-17	Hickory Creek (2)	Riverpass to Montecito	0.43	6	PA	943	50%	850	1087	201	886	\$ 3,681,000	\$ 1,840,500
B-18	Hickory Creek (3)	Montecito to Teasley	0.85	6	PA	943	100%	850	4327	800	3,527	\$ 4,024,000	\$ 7,254,000
B-19	Hickory Creek (4)	Teasley to Nautical	0.25	6	PA (1/3)	100	100%	850	1261	25	1,236	\$ 339,000	\$ 339,000
B-20	Hickory Creek (5)	Nautical to Erin	0.13	6	PA (2/3)	100	100%	850	652	13	639	\$ 740,000	\$ 740,000
B-21	Hickory Creek (6)	Erin to State School Road (Future)	0.09	6	PA	New	100%	850	483	0	483	\$ 875,000	\$ 875,000
B-22	John Paine-Fort Worth Collector	#REF!	0.41	2	C	New	100%	550	456	0	456	\$ 2,244,000	\$ 2,244,000
B-23	John Paine (1)	Vintage to Brush Creek	1.41	2	C	New	100%	550	1554	0	1,554	\$ 6,828,000	\$ 6,828,000
B-24	John Paine (2)	Brush Creek to Johnson	0.50	2	C	New	50%	550	276	0	276	\$ 2,350,000	\$ 1,175,000
B-25	John Paine (3)	Johnson to 135' N of Athens	0.39	2	C	New	100%	550	427	0	427	\$ 1,858,000	\$ 1,858,000
B-26	Bonnie Brae (4)	I-35E SBFR to Vintage	2.45	4	SA	451	100%	750	7358	1,106	6,252	\$ 10,578,162	\$ 10,578,162
B-27	Bonnie Brae (5)	Vintage to Fort Worth (US 377)	1.07	4	SA	451	100%	750	3213	483	2,730	\$ 8,348,000	\$ 8,348,000
B-28	Highland Park	130' S of Willowcrest to Roselawn	0.78	2	C	New	100%	550	863	0	863	\$ 3,090,000	\$ 3,090,000
B-29	Fort Worth (US 377)	I-35E to S City Limits	5.13	6	PA	2,100	100%	850	26186	10,782	15,404	\$ 9,079,000	\$ 9,079,000
B-30	FM 1530	Fort Worth (US 377) to Brush Creek	2.14	4	SA	893	100%	750	6423	1,912	4,511	\$ 3,235,400	\$ 3,235,400
B-31	Ryan-Creekdale Collector	Ryan to Creekdale	0.48	2	C	New	100%	550	531	0	531	\$ 2,630,000	\$ 2,630,000
B-32	Teasley	Sundown to S City Limits	3.39	6	PA	2,300	100%	850	17270	7,789	9,481	\$ 5,250,000	\$ 5,250,000
SUBTOTAL									111,795	27,933	83,862	\$ 129,835,751	\$ 125,134,751

2015 Roadway Impact Fee Study Cost Per Service Area \$ 55,300
 TOTAL COST IN SERVICE AREA B \$ 125,190,051

1. Veh-Mi Supply Pk-Hr Total = [Length (mi)] * [Exist Lanes] * [Veh-Mi Capacity Pk-Hr Per Ln] * [% in Service Area]

2. Veh-Mi Demand Pk-Hr Total = [Length (mi)] * [PM Peak Hour Vol] * [% in Service Area]

3. Excess Capacity Pk-Hr Veh-Mi = [Veh-Mi Supply Pk-Hr Total] - [Veh-Mi Demand Pk-Hr Total]

Note: Mileage lengths are shown as rounded to the nearest 0.01. Actual calculations were performed using exact mileage length [Length (ft) / 5,280].

City of Denton - 2015 Roadway Impact Fee Study

CIP Service Units of Supply

Service Area C

2/6/2016

Project ID #	ROADWAY	LIMITS	LENGTH (MI)	LANES	IMPACT CLASSIFICATION	PEAK HOUR VOLUME	% IN SERVICE AREA	VEH-MI CAPACITY PER LN	VEH-MI SUPPLY PK-HR	VEH-MI DEMAND PK-HR ²	EXCESS CAPACITY PK-HR	TOTAL PROJECT COST IN SERVICE AREA
									TOTAL			TOTAL PROJECT COST
C-1	Milam (1)	I-35 SBFR to 175' E of I-35 NBFR	0.09	4	SA	272	100%	750	256	233	23	\$ 2,561,000
C-2	Milam (2)	175' E of I-35 NBFR to FM 2164 (Locust)	2.28	4	SA	272	50%	750	3419	310	3109	\$ 16,273,000
C-3	Bobcat	1,105' W of Milam Ridge to HOD N-S Secondary Arterial	0.41	2	C	New	100%	850	455	0	455	\$ 2,692,000
C-4	Ganzer	230' W of Rector to Future Cindy	0.63	6	PA	139	50%	850	1596	44	1552	\$ 5,459,000
C-5	Ganzer/Long (1)	625' W of I-35 SBFR to 350' E of I-35 NBFR	0.22	6	PA	139	100%	850	1135	31	1104	\$ 3,529,000
C-6	Ganzer/Long (2)	Ganzer to FM 2164 (Locust)	2.15	4	SA	New	100%	750	6440	0	6,440	\$ 15,614,000
C-7	Barthold-Cindy Collector	Barthold to 1,135' W of Cindy (Future)	0.21	2	C	New	100%	550	236	0	236	\$ 1,292,000
C-8	Masch Branch-I-35 Collector	1,295' W of I-35 to I-35	0.25	2	C	New	100%	550	270	0	270	\$ 1,603,000
C-9	HOD E-W Secondary Arterial (1)	HOD N-S Secondary Arterial to 840' E of HOD N-S Secondary Arterial	0.16	4	SA	New	100%	750	477	0	477	\$ 1,286,000
C-10	HOD E-W Secondary Arterial (2)	840' E of HOD N-S Secondary Arterial to 130' E of Bonnie Brae (Existing)	0.44	4	SA	New	50%	750	662	10	662	\$ 2,894,000
C-11	HOD E-W Secondary Arterial (3)	130' E of Bonnie Brae (Existing) to FM 2164 (Locust)	2.86	4	SA	New	100%	750	8568	0	8,568	\$ 20,940,000
C-12	HWY 1173 (1)	460' E of Masch Branch (Existing) to 375' E of Barthold (Future)	0.52	6	PA	1,184	50%	850	1321	307	1,014	\$ 807,800
C-13	HWY 1173 (2)	Cindy to I-35 SBFR	0.60	6	PA	1,184	100%	850	3076	714	2,362	\$ 961,600
C-14	Elm (US 377)	I-35 NBFR to Elm/Locust Couplet	3.01	6	PA (1/3)	843	100%	850	15334	2,535	12,799	\$ 1,075,000
C-15	Hercules	115' E of Northpointe to Locust	0.41	2	C	New	100%	550	448	0	448	\$ 1,760,000
C-16	Westgate (E-W)	Westgate (N-S) to Bonnie Brae	0.56	4	SA	New	100%	750	1688	0	1,688	\$ 4,353,000
C-17	Riney (1)	Bonnie Brae to 990' W of Elm	0.34	2	C	24	100%	550	372	8	364	\$ 1,381,000
C-18	Riney (2)	990' W of Elm to Elm	0.19	4	C	24	100%	550	206	5	201	\$ 1,263,000
C-19	Masch Branch-I-35 Secondary Arterial	Masch Branch to I-35 SBFR	1.34	4	SA	New	100%	750	4031	0	4,031	\$ 10,767,000
C-20	Jim Christal (1)	490' E of C. Wolfe to Thomas J. Egan	0.79	4	SA	31	50%	750	1182	12	1,170	\$ 7,517,000
C-21	Jim Christal (2)	225' E of Future Loop to Masch Branch	0.75	4	SA	31	50%	750	1128	12	1,116	\$ 6,933,000
A-3, C-22	Jim Christal (3)	Masch Branch to Scripture	1.23	6	PA	31	50%	850	3125	19	3,106	\$ 14,393,000
C-23	Nail (1)	University to 2,240' S of University	0.42	4	SA	38	50%	750	636	8	628	\$ 3,197,000
C-24	Nail (2)	2,240' S of University to Jim Christal	0.47	4	SA	38	100%	750	1412	18	1,394	\$ 3,601,000
C-25	Thomas J Egan (1)	555' N of University to 550' S of University	0.21	2	C	35	100%	550	230	7	223	\$ 1,270,000
C-26	Thomas J Egan (2)	550' S of University to Jim Christal	0.66	2	C	35	50%	550	360	11	349	\$ 2,678,000
C-27	Future Loop (1)	University to 745' N of Jim Christal	0.86	6	PA	New	100%	850	2840	0	2,840	\$ 1,316,400
C-28	Masch Branch (1)	1,290' S of HWY 1173 to Miller	0.79	6	PA	157	50%	850	2016	62	1,954	\$ 6,896,000
C-29	Masch Branch (2)	895' W of Future Loop to 1,255' N of University	0.59	6	PA	157	100%	850	3033	93	2,940	\$ 5,485,000
C-30	Masch Branch (3)	1,255' N of University to Jim Christal	1.02	6	PA	157	100%	850	5187	160	5,027	\$ 9,246,000
C-31	Lover's Lane (1)	HWY 1173 to 325' N of Fruitt	0.27	4	SA	23	50%	750	403	3	400	\$ 2,178,000
C-32	Lover's Lane (2)	325' N of Fruitt to 340' N of Littlebrook	0.17	4	SA	23	100%	750	511	4	507	\$ 1,119,000
C-33	Lover's Lane (3)	340' N of Littlebrook to Hook	0.10	4	SA	23	50%	750	152	1	151	\$ 666,000
C-34	Lover's Lane (4)	Hook to Masch Branch-I-35 SA	0.71	4	SA	23	100%	750	2128	16	2,112	\$ 4,920,000
C-35	Barthold	Ganzer to City Limits	0.58	4	SA	100	50%	750	875	29	846	\$ 4,239,000
C-36	Cindy (1)	Ganzer to 1,280' S of Ganzer	0.24	4	SA	New	50%	750	364	0	364	\$ 2,135,000
C-37	Cindy (2)	1,280' S of Ganzer to Masch Branch-I-35 Collector	0.41	4	SA	New	100%	750	1216	0	1,216	\$ 3,355,000
C-38	Cindy (3)	FM 1173 (Future) to 150' S of Future Loop	0.42	4	SA	New	100%	750	1247	0	1,247	\$ 2,884,000
C-39	Cindy (4)	1,050' N of Masch Branch-I-35 PA to Tieszen	0.82	4	SA	New	100%	750	2449	0	2,449	\$ 6,476,000
C-40	Cindy (5)	Tieszen to University	0.36	4	SA	100	100%	750	1084	36	1,058	\$ 2,806,000
C-41	Western (1)	University to Jim Christal	0.80	6	PA (2/3)	332	100%	850	4100	287	3,833	\$ 4,650,000
C-42	Milam-Bobcat Col	Milam to Bobcat (Future)	0.57	2	C	New	100%	550	631	0	631	\$ 2,842,000
C-43	HOD N-S Secondary Arterial (1)	Milam to 220' S of Bobcat	0.68	4	SA	New	100%	750	1727	0	1,727	\$ 5,079,000
C-44	HOD N-S Secondary Arterial (2)	2830' N of Elm to Elm	0.64	4	SA	New	100%	750	1608	0	1,608	\$ 3,899,000
C-45	Heritage Trail	University to Scripture	0.77	4	SA	New	100%	750	2307	0	2,307	\$ 6,239,000
C-46	Bonnie Brae (1)	Milam to Loop 288 EBFR	3.17	6	PA	New	100%	850	16145	0	16,145	\$ 32,903,000
C-47	Bonnie Brae (2)	Loop 288 EBFR to 860' N of Riney	0.43	4	SA	424	100%	750	1284	181	1,103	\$ 3,603,000
C-48 E-14	Fallemeadow	University to I-35	0.19	4	SA	1,316	50%	750	2121	930	1,191	\$ 5,950,216
C-49	Loop 288 EBFR	140' S of Meadow Edge to Gardenview	0.11	2	C	New	100%	550	206	0	206	\$ 810,000
C-50 D-45	FM 2164 (Locust) (1)	City Limits to Loop 288 WBFR	2.70	6	PA	599	50%	850	6897	444	6,453	\$ 4,639,000
C-51 D-46	FM 2164 (Locust) (2)	Loop 288 WBFR to Elm	1.41	6	PA	599	50%	850	6897	421	3,163	\$ 2,313,500
SUBTOTAL									124,976	6,721	118,255	\$ 282,649,816

2015 Roadway Impact Fee Study Cost Per Service Area \$ 55,300

TOTAL COST IN SERVICE AREA C \$ 218,120,708

1. Veh-Mi Supply Pk-Hr Total = [Length (mi)] * [Exist Lanes] * [Veh-Mi Capacity Pk-Hr Per Ln] * [% in Service Area]
 2. Veh-Mi Demand Pk-Hr Total = [Length (mi)] * [PM Peak Hour Vol] * [% in Service Area]
 3. Excess Capacity Pk-Hr Veh-Mi = [Veh-Mi Supply Pk-Hr Total] - [Veh-Mi Demand Pk-Hr Total]
 Note: Mileage lengths are shown as rounded to the nearest 0.01. Actual calculations were performed using exact mileage length [Length (ft) / 5,280].

City of Denton - 2015 Roadway Impact Fee Study

CIP Service Units of Supply

Service Area D

2/8/2016

Project ID #	ROADWAY	LIMITS	LENGTH (MI)	LANES	IMPACT CLASSIFICATION	PEAK HOUR VOLUME	% IN SERVICE AREA	VEH-MI CAPACITY PER LN	VEH-MI SUPPLY PK-HR TOTAL	VEH-MI DEMAND PK-HR ²	EXCESS CAPACITY PK-HR VEH-MI ³	TOTAL PROJECT COST	TOTAL PROJECT COST IN SERVICE AREA
D-1	FM 2164-Brittany Hill Collector (1)	1.605' E of FM 2164 to 745' W of Mesquite Ridge	0.57	2	C	New	100%	550	630	0	630	\$ 2,603,000	\$ 2,603,000
D-2	FM 2164-Brittany Hill Collector (2)	745' W of Mesquite Ridge to Mesquite Ridge	0.14	2	C	New	50%	550	78	0	78	\$ 791,000	\$ 395,500.00
D-3	FM 2164-Brittany Hill Collector (3)	Mesquite Ridge to Brittany Hill	0.43	2	C	New	100%	550	539	0	539	\$ 2,115,000.00	\$ 2,115,000.00
D-4	FM 2153 (Realigned)	City Limits to 620' S of Somerset	2.03	4	SA	New	100%	750	6102	0	6102	\$ 2,217,400	\$ 2,217,400.00
D-5	FM 2164-FM 2153 (Realigned) PA	FM 2164 (Locust) to Indian Wells (Future)	0.73	6	PA	New	100%	850	3709	0	3709	\$ 8,426,000	\$ 8,426,000.00
D-6	FM 2164-FM 2153 (Realigned) PA	Mesquite Ridge (Future) to FM 2153 (Realigned)	1.79	6	PA	New	100%	850	9128	0	9128	\$ 18,496,000	\$ 18,496,000.00
D-7	FM 2164-FM 2153 SA (1)	FM 2164 (Locust) to Indian Wells (Future)	0.93	4	SA	New	100%	750	2776	0	2776	\$ 7,593,000	\$ 7,593,000.00
D-8	FM 2164-FM 2153 SA (2)	540' E of Green Valley (Future) to FM 2153	0.90	4	SA	New	100%	750	2707	0	2707	\$ 7,617,000	\$ 7,617,000.00
D-9	Shepard	1.490' W of FM 2153 to FM 2153	0.28	4	SA	10	100%	750	847	3	844	\$ 2,265,000	\$ 2,265,000.00
D-10	Gibbie Springs-Chapman Collector	630' N of FM 2164-Brittany Hill Collector to Gibbie Springs	1.69	2	C	New	100%	550	1856	0	1856	\$ 7,471,000	\$ 7,471,000.00
D-11	Mesquite Ridge (1)	FM 2164-Brittany Hill Collector to 400' N of FM 2164-FM 2153 (Realigned) PA	0.52	2	C	New	100%	550	573	0	573	\$ 7,431,000	\$ 7,431,000.00
D-12	Mesquite Ridge (2)	400' N of FM 2164-FM 2153 (Realigned) PA to 470' S of FM 2164-FM 2153 (Realigned) PA	0.16	2	C	New	50%	550	91	0	91	\$ 447,000	\$ 447,000.00
D-13	Mesquite Ridge (3)	470' S of FM 2164-FM 2153 (Realigned) PA to 1,005' S of FM 2164-FM 2153 (Realigned) PA	0.10	2	C	New	100%	550	114	0	114	\$ 5,620,000	\$ 5,620,000.00
D-14	Brittany Hill (1)	355' S of Covey to 795' S of FM 2164-FM 2153 (Realigned) PA	0.78	4	SA	New	100%	750	2352	0	2352	\$ 1,398,800	\$ 1,398,800.00
D-15	Brittany Hill (2)	795' S of FM 2164-FM 2153 (Realigned) PA to 770' N of FM 2164-FM 2153 SA	0.20	4	SA	New	50%	750	303	0	303	\$ 1,761,000	\$ 1,761,000.00
D-16	FM 2153 (1)	City Limits to Burger (S)	1.44	2	C	New	100%	550	1580	72	1,508	\$ 1,069,200	\$ 1,069,200.00
D-17	FM 2153 (2)	Burger to FM 2153 (Realigned)	0.27	2	C	New	100%	550	296	13	283	\$ 250,600	\$ 250,600.00
D-18	FM 2153 (Realigned)-FM 2153 Collector	FM 2153 (Realigned) to FM 2153	0.79	2	C	New	100%	550	870	0	870	\$ 3,416,000	\$ 3,416,000.00
D-19	FM 2153 (3)	620' S of Somerset to Sherman	1.14	4	SA	New	50%	750	1703	28	1,675	\$ 1,398,800	\$ 1,398,800.00
D-20	Green Valley (1)	Warschun to 860' S of Warschun	0.16	4	SA	New	100%	750	489	2	487	\$ 1,069,000	\$ 1,069,000.00
D-21	Green Valley (2)	860' S of Warschun to Sherman	0.23	4	SA	New	100%	750	690	0	690	\$ 2,954,000	\$ 2,954,000.00
D-22	Milam (3)	FM 2164 (Locust) to 605' E of FM 2164 (Locust)	0.11	4	SA	New	100%	750	344	0	344	\$ 667,000	\$ 667,000.00
D-23	Cooper Creek (1)	860' W of Hartlee-Cooper Collector #1 to Hartlee Field	2.13	4	SA	New	100%	750	284	1	283	\$ 621,000	\$ 621,000.00
D-24	Cooper Creek (2)	Silver Dome to Fishtrap	0.66	4	SA	New	50%	750	986	27	959	\$ 5,562,000	\$ 5,562,000.00
D-25	Cooper Creek (3)	Fishtrap to University	0.50	4	SA	New	100%	750	1488	0	1,486	\$ 4,490,000	\$ 4,490,000.00
D-26	Golden Circle	Hartlee Field (Future) to Hartlee Field (Existing)	1.78	2	C	New	100%	550	1960	0	1,960	\$ 7,476,000	\$ 7,476,000.00
D-27	Hartlee Field (1)	FM 2164 (Locust) to 500' E of FM 2164 (Locust)	0.09	4	SA	New	100%	750	284	0	284	\$ 668,000	\$ 668,000.00
D-28	Hartlee Field (2)	West City Limits to Woodland Hill	1.10	4	SA	New	100%	750	3313	0	3,313	\$ 8,472,000	\$ 8,472,000.00
D-30	Long (1)	FM 2164 (Locust) to 525' E of FM 2164	0.10	2	C	New	100%	550	109	0	109	\$ 431,000	\$ 431,000.00
D-31	Long (2)	City Limits to Stuart	0.34	2	C	New	100%	550	376	0	376	\$ 1,668,000	\$ 1,668,000.00
D-32	Hartlee Field (3)	Sherman to 515' E. of Sherman	0.43	2	C	New	100%	550	468	43	425	\$ 2,129,000	\$ 2,129,000.00
D-33	Kings-Windsor Collector	Kings Row to Windsor	0.09	2	C	New	100%	550	99	0	99	\$ 3,095,000	\$ 3,095,000.00
D-34	Mingo (2)	University to 455' E. of Cooper Creek	0.86	4	SA	New	100%	750	2864	0	2,864	\$ 6,923,000	\$ 6,923,000.00
D-35	Post Oak (1)	University to 455' E. of Cooper Creek	0.86	6	PA	New	100%	850	4405	0	4,405	\$ 8,870,000	\$ 8,870,000.00
D-36	Post Oak (2)	Cooper Creek (Future) to Hartlee Field	0.40	6	PA	New	100%	850	2057	0	2,057	\$ 4,626,000	\$ 4,626,000.00
D-37	Post Oak (3)	Railroad to Fishtrap	0.33	6	PA	New	100%	850	1690	0	1,690	\$ 4,504,000	\$ 4,504,000.00
D-38	Post Oak (4)	Fishtrap to 940' S of Fishtrap	0.18	6	PA	New	50%	850	454	0	454	\$ 2,547,000	\$ 2,547,000.00
D-39	Post Oak (5)	940' S of Fishtrap to University	0.07	6	PA	New	100%	850	348	0	348	\$ 1,534,000	\$ 1,534,000.00
D-40	Deerwood	2,855' N of Kings Row to 680' N of Kings Row	0.41	2	C	New	100%	550	453	0	453	\$ 1,624,000	\$ 1,624,000.00
D-41	Hartlee-Cooper Col	Hartlee Field to Cooper Creek	0.82	2	C	New	100%	550	904	0	904	\$ 3,914,000	\$ 3,914,000.00
D-42	Sherman (1)	Loop 288 WBFR to City Limits	2.30	6	PA	New	100%	850	23699	2,649	21,050	\$ 3,764,200	\$ 3,764,200.00
D-43	Sherman (2)	Loop 288 WBFR to City Limits	4.65	6	PA	New	100%	850	23699	2,649	21,050	\$ 3,764,200	\$ 3,764,200.00
C-50-D-45	FM 2164 (Locust) (1)	City Limits to Loop 288 WBFR	2.70	6	PA	New	50%	850	6897	444	6,453	\$ 4,639,000	\$ 4,639,000.00
C-51-D-46	FM 2164 (Locust) (2)	Loop 288 WBFR to Elm	1.41	6	PA	New	50%	850	3584	663	2,921	\$ 2,313,800	\$ 2,313,800.00
SUBTOTAL			116.855	6,718			50%	116,855	110,137	6,718	110,137	\$ 190,560,200	\$ 180,702,400

2015 Roadway Impact Fee Study Cost Per Service Area \$ 56,300

TOTAL COST IN SERVICE AREA D \$ 180,757,700

1. Veh-Mi Supply Pk-Hr Total = [Length (mi)] * [Exist Lanes] * [Veh-Mi Capacity Pk-Hr Per Ln] * [% in Service Area]

2. Veh-Mi Demand Pk-Hr Total = [Length (mi)] * [PM Peak Hour Vol] * [% in Service Area]

3. Excess Capacity Pk-Hr Veh-Mi = [Veh-Mi Supply Pk-Hr Total] - [Veh-Mi Demand Pk-Hr Total]

Note: Mileage lengths are shown as rounded to the nearest 0.01. Actual calculations were performed using exact mileage length [Length (ft) / 5,280].

City of Denton - 2015 Roadway Impact Fee Study

CIP Service Units of Supply

Service Area E

2/6/2016

Project ID #	ROADWAY	LIMITS	LENGTH (MI)	LANES	IMPACT FEE CLASSIFICATION	PEAK HOUR VOLUME	% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN	VEH-MI SUPPLY PK-HR TOTAL ¹	VEH-MI TOTAL DEMAND PK-HR ²	EXCESS CAPACITY PK-HR VEH-MI ³	TOTAL PROJECT COST	TOTAL PROJECT COST IN SERVICE AREA
E-1	Mingo (1)	435' NE of Bell to University	2.06	4	SA	900	100%	750	6185	1,855	4,330	\$ 13,406,000	\$ 13,406,000
E-2	Lattimore	Ruddell to 475' E of Ruddell	0.09	2	C	New	100%	550	99	0	99	\$ 807,000	\$ 807,000
E-3	Audra	Bayfield to Loop 288	0.27	2	C	New	100%	550	294	0	294	\$ 1,505,000	\$ 1,505,000
E-4	Blagg	Mayhill to Lakeview	1.28	2	C	69	100%	550	1403	88	1,315	\$ 6,701,000	\$ 6,701,000
E-5	McKinney (FM 426)	Woodrow to East City Limits	3.95	4	SA	1,400	100%	750	11861	5,535	6,326	\$ 4,829,400	\$ 4,829,400
E-6	Duchess (1)	Woodrow to 115' W of Trailhead	0.75	2	C	New	100%	550	820	0	820	\$ 4,125,000	\$ 4,125,000
E-7	Duchess (2)	115' W of Trailhead to 1,000' W of Loop 288	0.38	2	C (1/2)	50	100%	550	416	19	397	\$ 1,197,000	\$ 1,197,000
E-8	Morse (1)	Woodrow to Shady Oaks	0.25	2	C	New	100%	550	273	0	273	\$ 1,706,000	\$ 1,706,000
E-9	Morse (2)	Kimberly to Mayhill	0.51	4	SA (1/2)	312	100%	750	1540	160	1,380	\$ 2,346,000	\$ 2,346,000
E-10	Spencer	485' E of Loop 288 to Mayhill	0.34	4	SA	544	100%	750	1023	185	838	\$ 2,455,000	\$ 2,455,000
E-11	Lakeview (1)	Post Oak (Future) to 1025' E of Post Oak (Future)	0.19	2	C	New	100%	550	214	0	214	\$ 839,000	\$ 839,000
E-12	Lakeview (2)	2,745' E of Post Oak (Future) to Bishop Pine	0.36	2	C	New	100%	550	396	0	396	\$ 1,555,000	\$ 1,555,000
E-13	Edwards	560' E of Mayhill to Swisher	1.02	2	C	794	100%	550	1120	808	312	\$ 3,794,000	\$ 3,794,000
C-48 E-14	Bonnie Brae (3)	University to I-35E NBFR	1.41	4	SA	1,316	50%	750	2121	930	1,191	\$ 5,950,216	\$ 2,975,106
E-15	Ruddell	Mingo to Willis	0.11	2	C	160	100%	550	120	17	103	\$ 424,000	\$ 424,000
E-16	Mockingbird	McKinney to 850' S of McKinney	0.16	2	C	New	100%	550	177	0	177	\$ 697,000	\$ 697,000
E-17	Binker	Shady Oaks to Spencer	0.53	4	SA	New	100%	750	1594	0	1,594	\$ 4,138,000	\$ 4,138,000
E-18	Mayhill (1)	University to Colorado	3.81	4	SA	1,358	100%	750	11429	5,174	6,255	\$ 5,667,507	\$ 5,667,507
E-19	Mayhill (2)	Colorado to I-35E NBFR	0.45	6	PA (1/3)	1,358	100%	850	2284	608	1,676	\$ 1,928,000	\$ 1,928,000
E-20	Post Oak (5)	University to 1,010' N of Blagg	0.33	6	PA	New	100%	850	1666	0	1,666	\$ 3,465,000	\$ 3,465,000
E-21	Post Oak (6)	1,010' N of Blagg to 1,650' S of Blagg	0.50	6	PA	New	50%	850	1285	0	1,285	\$ 4,646,000	\$ 2,323,000
E-22	Post Oak (7)	1,490' N of Mills to 2,400' N of McKinney	0.79	6	PA	New	100%	850	4033	0	4,033	\$ 7,746,000	\$ 7,746,000
E-23	Post Oak (8)	1,230' N of McKinney to Pockrus Page	2.48	6	PA	New	100%	850	12624	0	12,624	\$ 33,321,000	\$ 33,321,000
E-24	Post Oak (9)	Pockrus Page to Lakeview	0.27	6	PA	100	100%	850	1396	27	1,369	\$ 2,800,000	\$ 2,800,000
E-25	Lakeview (3)	130' S of Rodero to 735' S of Mills	0.37	2	C	49	100%	550	407	18	389	\$ 1,844,000	\$ 1,844,000
E-26	Trinity-McKinney Connector (1)	Trinity to 1290' N of McKinney	1.27	2	C	New	100%	550	1400	0	1,400	\$ 6,312,000	\$ 6,312,000
E-27	Trinity-McKinney Connector (2)	1290' N of McKinney to McKinney	0.24	4	SA	New	100%	750	733	0	733	\$ 1,695,000	\$ 1,695,000
SUBTOTAL								66,913	15,424	51,489	125,899,123	\$ 120,601,015	\$ 55,300

2015 Roadway Impact Fee Study Cost Per Service Area \$ 120,601,015

TOTAL COST IN SERVICE AREA E \$ 120,601,015

1. Veh-Mi Supply Pk-Hr Total = [Length (mi)] * [Exist Lanes] * [Veh-Mi Capacity Pk-Hr Per Ln] * [% in Service Area]

2. Veh-Mi Demand Pk-Hr Total = [Length (mi)] * [PM Peak Hour Vol] * [% in Service Area]

3. Excess Capacity Pk-Hr Veh-Mi = [Veh-Mi Supply Pk-Hr Total] - [Veh-Mi Demand Pk-Hr Total]

Note: Mileage lengths are shown as rounded to the nearest 0.01. Actual calculations were performed using exact mileage length [Length (ft) / 5,280].

Appendix C – Existing Roadway Facilities Inventory

City of Denton - 2015 Roadway Impact Fee Study
Existing Roadway Facilities Inventory

ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST LANES		EXIST LANES	CLASS	FUTURE LANES	PM PEAK HOUR VOL		% IN SERVICE AREA	VEH-MI CAPACITY PER LN		VEH-MI SUPPLY PK-HR		VEH-MI DEMAND PK-HR		EXCESS CAPACITY PK-HR		EXISTING DEFICIENCIES PK-HR	
					NB/EB	SB/WB				NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
OAK	Jim Christal	I-35 SBFR	3,057	0.58	1	1	2UA	Second Major Arterial	4D	21	10	100%	425	425	246	246	6	234	240			
Airport Rd	West Branch	Western	2,180	0.41	1	1	2UA	Second Major Arterial	4D	127	127	100%	425	425	175	175	52	123	123			
Airport Rd	Western	1295' W of I-35W SBFR	5,804	1.10	1	1	2UA	Second Major Arterial	4D	511	533	100%	425	425	467	467	562	586	-95	-119	95	119
Airport Rd	1295' W of I-35W SBFR	I-35W SBFR	1,284	0.25	1	1	2U	Second Major Arterial	4D	511	533	100%	425	425	104	104	125	131	-21	-26	21	26
Metro	1560' W of I-35W SBFR	I-35W SBFR	1,919	0.36	1	1	2U-L	Collector	4U	0	0	100%	150	150	55	55	0	0	55	55		
Shelby	Airport	Dakota	1,329	0.25	1	1	2U	Collector	4U	0	0	100%	425	425	107	107	0	0	107	107		
Springside	Westcourt	Underwood	815	0.15	1	1	2UA	Second Major Arterial	4D	33	35	100%	425	425	66	66	5	61	60			
FM 2449	C. Wolfe Road	Underwood	15,735	2.89	1	1	2U-H	Primary Major Arterial	4D	243	243	100%	725	725	2,082	2,082	701	701	1,391	1,391		
Robson Ranch Road	Florence	I-35W	15,733	2.88	2	2	4UA	Second Major Arterial	4D	168	206	50%	560	560	1,639	1,639	250	307	1,389	1,332		
C. Wolfe Road	University	FM 2449	16,824	3.19	1	1	2UA	Collector	4U	13	16	100%	425	425	677	677	21	25	656	652		
Westcourt Blvd	Airport	Springside	4,169	0.79	1	1	2U	Second Major Arterial	4D	55	101	100%	425	425	336	336	43	60	292	256		
Underwood	Springside	2860' S of Underwood	2,859	0.54	1	1	2UA	Second Major Arterial	4D	35	33	100%	425	425	230	230	19	18	211	212		
Western Blvd	Jim Christal	505' N of Airport	5,981	1.13	1	1	2U	Primary Major Arterial	4D	151	121	100%	425	425	481	481	171	137	310	344		
Western Blvd	505' N of Airport	Airport	563	0.10	1	1	3U	Primary Major Arterial	4D	451	421	100%	558	558	52	52	14	12	38	44		
Conin	Airport	Shelby	2,382	0.46	1	1	2UA	Collector	4U	91	46	100%	425	425	265	265	44	42	161	163		
Dakota	Shelby	Airport	2,389	0.51	1	1	2UA	Collector	4U	91	46	100%	425	425	261	261	53	48	178	183		
SUBTOTAL			77,716	14.72						103	35				5,792	5,792	2,009	2,042	4,784	4,751	116	745
															13,385	4,050	9,334					

1. Veh-Mi Supply Pk-Hr Total = [Length (mi)] * [Exist Lanes] * [Veh-Mi Capacity Pk-Hr Per Ln] * [% in Service Area]

2. Veh-Mi Demand Pk-Hr Total = [Length (mi)] * [PM Peak Hour Vol] * [% in Service Area]

3. Excess Capacity Pk-Hr Veh-Mi = [Veh-Mi Supply Pk-Hr Total] - [Veh-Mi Demand Pk-Hr Total]

4. Existing Deficiencies Pk-Hr Veh-Mi = [Veh-Mi Demand Pk-Hr Total] - [Veh-Mi Supply Pk-Hr Total]

Note: Mileage lengths are shown as rounded to the nearest 0.01. Actual calculations were performed using exact mileage length [Length (ft) / 5,280].

City of Denton - 2015 Roadway Impact Fee Study
Existing Roadway Facilities Inventory

2/8/2016

Service Area B

ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST LANES		EXIST LANES	CLASS	FUTURE LANES	PM PEAK HOUR VOL	% IN SERVICE AREA	VEH-MI CAPACITY PER LN		VEH-MI SUPPLY PK-HR		VEH-MI DEMAND PK-HR TOTAL ²	EXCESS CAPACITY PK-HR		EXISTING DEFICIENCIES PK-HR	
					NB/EB	SB/WB						NB/EB	SB/WB	NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
Willowwood	Bonnie Brae	Bernard	6,043	1.14	1	1	2UA	Collector	4U	62	100%	425	486	71	415	407				
Airport	I-35W SBFR	Bonnie Brae	0.16	0.09	1	1	2U	Second Major Arterial	4U	0	100%	425	67	0	67	67				
Acme	Bernard	Fort Worth	478	0.09	1	1	2U	Collector	4U	0	100%	425	38	0	38	38				
Highland Park	Bonnie Brae	Highland Park	1,819	0.34	1	1	2UA	Collector	4U	0	100%	425	146	0	146	146				
Parvin	McComick	Bernard	1,579	0.30	1	1	2UA	Collector	4U	0	100%	425	127	0	127	127				
Londberry	Sam Bass	Southridge	3,865	0.73	1	1	2UA	Collector	4U	0	100%	425	311	0	311	311				
Roselawn	Bonnie Brae	Bernard	8,099	1.53	1	1	2UA	Collector	4U	23	100%	425	652	35	44	617	607			
Hobson Ln	Country Club	Tesley Ln	5,953	1.13	1	1	2UA	Second Major Arterial	4D	452	100%	425	479	510	228	-30	251	30		
Tesley Ln	Hobson	Lillian B Miller	2,912	0.55	2	2	4D	Primary Major Arterial	6D	763	100%	750	827	421	572	406	255			
Windriver	Lillian B Miller	L-35E	5,987	1.14	1	1	3U	Collector	4U	356	100%	550	625	404	461	220	164			
Vintage Blvd	Napa Valley	Napa Valley	3,431	0.65	1	1	2U	Primary Major Arterial	6D	207	100%	425	276	135	75	142	201			
Vintage Blvd	Napa Valley	Fort Worth	5,373	1.02	1	1	2D	Primary Major Arterial	6D	165	100%	550	560	168	135	392	434			
El Paseo	Forrestridge	Montecito	1,273	0.23	1	1	2UA	Collector	4U	0	100%	425	142	0	142	142				
Ryan Rd	Country Club	Forrestridge	3,477	0.66	1	1	2UA	Second Major Arterial	4D	341	100%	425	280	225	51	55	126			
Ryan Rd	Forrestridge	Andrew	727	0.14	1	1	2UA	Second Major Arterial	4D	341	100%	425	59	47	32	12	27			
Ryan Rd	Andrew	Montecito	2,980	0.49	1	1	2UA	Second Major Arterial	4D	341	100%	425	208	175	41	85				
Ryan Rd	Montecito	Tesley Ln	4,021	0.76	1	1	2U	Second Major Arterial	4D	341	100%	425	324	260	175	64	149			
Robinson Rd	Tesley Ln	485 W. of Berkeley	2,748	0.52	1	1	2U	Second Major Arterial	4D	392	100%	425	221	204	254	17	-33			33
Robinson Rd	485 W. of Berkeley	190 E. of Berkeley	675	0.13	2	2	4D	Second Major Arterial	4D	455	100%	750	192	50	62	142	129			
Creekdale Dr	Riverpass	1050 E. of Riverpass	1,052	0.20	1	1	2U	Collector	4U	0	100%	425	53	54	56	-1	-4			4
Creekdale Dr	280 W. of Pimlico	Tesley Ln	2,817	0.53	1	1	2U	Collector	4U	0	100%	425	85	0	0	85	85			
Hickory Creek Rd	Brush Creek Rd	FM 1930	7,718	1.46	1	1	2UA	Primary Major Arterial	6D	97	100%	425	227	142	102	479	519			
Hickory Creek Rd	Riverpass	680 W. of Montecito	1,604	0.30	1	1	2U	Primary Major Arterial	6D	387	100%	425	129	118	169	12	-40			40
Hickory Creek Rd	Hickory Creek Rd	Tesley Ln	5,154	0.98	1	1	2UA	Primary Major Arterial	6D	387	100%	425	415	378	543	37	-128			128
Montecito	Montecito	Montecito	882	0.16	2	2	4U	Collector	4U	0	100%	550	180	0	0	180	180			
Robson Ranch Rd	Montecito	US 377	4,123	0.78	1	1	2UA	Second Major Arterial	4D	224	100%	425	166	87	53	78	113			
Hickory Hill Rd	Hilltop	265 E. of RR	4,706	0.89	1	1	2UA	Collector	4U	0	100%	425	379	379	0	379	379			
Hickory Hill Rd	City Limits	FM 1930	6,924	1.31	1	1	2UA	Second Major Arterial	4D	65	50%	425	279	43	34	236	245			
Hickory Hill Rd	FM 1930	Hilltop	2,628	0.50	1	1	2UA	Second Major Arterial	4D	0	50%	425	106	0	0	106	106			

1. Veh-Mi Supply Pk-Hr Total = (Length (mi)) * (Exist Lanes) * (Veh-Mi Capacity Pk-Hr Per Ln) * [% in Service Area]
 2. Veh-Mi Demand Pk-Hr Total = (Length (mi)) * (PM Peak Hour Vol) * [% in Service Area]
 3. Excess Capacity Pk-Hr Veh-Mi = (Veh-Mi Supply Pk-Hr Total) - (Veh-Mi Demand Pk-Hr Total)
 4. Existing Deficiencies Pk-Hr Veh-Mi = (Veh-Mi Demand Pk-Hr Total) - (Veh-Mi Supply Pk-Hr Total)
 Note: Mileage lengths are shown as rounded to the nearest 0.01. Actual calculations were performed using exact mileage length (Length (ft) / 5,280).

City of Denton - 2015 Roadway Impact Fee Study
Existing Roadway Facilities Inventory

2/9/2016

Service Area B: Continued

ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST LANES		EXIST LANES	CLASS	FUTURE LANES	PM PEAK HOUR VOL		% IN SERVICE AREA	VEH-MI CAPACITY PER LN		VEH-MI SUPPLY PK-HR		VEH-MI DEMAND PK-HR		EXCESS CAPACITY PK-HR		EXISTING DEFICIENCIES PK-HR	
					NB/EB	SB/WB				NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Bonnie Brae	L-36E SBFR	Airport	501	0.09	1	1	2U	Second Major Arterial	4D	795	392	100%	425	425	40	75	37	3	-35			35
Bonnie Brae	Willowwood	Willowwood	3,665	0.70	1	1	2UA	Second Major Arterial	4D	216	235	100%	425	425	297	297	151	164	146	133		
Bonnie Brae	Highland Park	Highland Park	2,066	0.39	1	1	2UA	Second Major Arterial	4D	216	235	100%	425	425	165	165	84	92	81	74		
Bonnie Brae	Roselaw	Roselaw	2,757	0.52	1	1	2UA	Second Major Arterial	4D	216	235	100%	425	425	222	222	113	123	109	99		
Bonnie Brae	553' S. of Roselawn	553' S. of Roselawn	553	0.10	1	1	2UA	Second Major Arterial	4D	216	235	100%	425	425	45	45	25	22	20			
Bonnie Brae	2010' N. of Vintage	Vintage	2,009	0.38	1	1	2UA	Second Major Arterial	4D	216	235	100%	425	425	162	162	82	89	80	72		
John Paine	Athens	Meandering Creek	3,663	0.67	2	2	4U	Second Major Arterial	4D	135	97	100%	550	550	742	742	65	65	651	677		
John Paine	Meandering Creek	Crawford	976	0.18	1	1	3U	Second Major Arterial	4U	135	97	50%	550	550	51	51	12	9	38	42		
Highland Park	L-36E SBFR	Willowwood	3,154	0.60	1	1	2UA	Collector	4U	0	0	100%	425	425	254	254	0	0	254	254		
McCormick	L-36E SBFR	Willowwood	1,877	0.36	1	1	2UA	Collector	4U	180	180	100%	425	425	151	151	64	64	87	87		
McCormick	Willowwood	Pravin	2,087	0.40	1	1	2UA	Collector	4U	0	0	100%	425	425	168	168	0	0	168	168		
Beard	L-36E SBFR	Roselaw	3,421	0.65	1	1	2UA	Collector	4U	123	123	100%	425	425	275	275	80	80	196	196		
Fort Worth Dr	L-36E	Brush Creek Rd	21,252	4.03	1	1	2U-H	Primary Major Arterial	6D	1,050	1,050	100%	725	725	2,918	2,918	4,226	4,226	-1,308	-1,308	1,308	1,308
Fort Worth Dr	Brush Creek Rd	South City Limits	5,619	1.0	1	1	2U-H	Primary Major Arterial	6D	516	372	100%	725	725	789	789	569	410	230	389		
Country Club Rd	FM 1630	South City Limits	8,122	1.54	1	1	2U-H	Second Major Arterial	4D	189	122	100%	425	425	1,115	1,115	281	188	823	928		
Fincher	FM 1630	Hickory Hill Rd	6,825	1.29	1	1	2UA	Collector	4U	0	0	100%	425	425	549	549	0	0	549	549		
Fort Worth	Country Club	Brush Creek Rd	11,308	2.14	1	1	2U-H	Second Major Arterial	4D	493	400	100%	725	725	1,553	1,553	1,056	857	497	696		
FM 1630	Brush Creek Rd	Country Club	816	0.15	1	1	2U-H	Second Major Arterial	4D	493	400	100%	725	725	1,112	1,112	76	62	36	50		
FM 1630	Country Club	Hickory Hill Rd	12,077	2.29	1	1	2U-H	Second Major Arterial	4D	378	310	100%	725	725	1,658	1,658	865	709	794	949		
Sam Bass	L-36E	Londonberry	1,600	0.30	1	1	2UA	Collector	4U	0	0	100%	425	425	129	129	0	0	129	129		
Forrestridge	Hobson	1515' S. of Hobson	1,517	0.29	1	1	2DA	Collector	4U	0	0	100%	550	550	158	158	0	0	158	158		
Forrestridge	1515' S. of Hobson	Ryan	3,845	0.73	1	1	2UA	Collector	4U	0	0	100%	425	425	309	309	0	0	309	309		
Riverpass	Creekdale	Hickory Creek Rd	2,594	0.49	1	1	2U	Collector	4U	0	0	100%	425	425	209	209	0	0	209	209		
Hilltop	Old Alton	Hickory Hill Rd	2,720	0.52	1	1	2UA	Collector	4U	0	0	100%	425	425	219	219	0	0	219	219		
Teesley Ln	L-36E	Hobson	6,448	1.22	2	2	4U	Primary Major Arterial	6D	1,150	1,150	100%	550	550	1,344	1,344	1,405	1,405	-61	-61	61	61
Montecito	Hobson	Ryan	6,020	1.14	1	1	2UA	Collector	4U	32	37	100%	425	425	485	485	36	42	448	442		
Montecito	1120' S. of Ryan	Pennsylvania	1,118	0.21	1	1	2UA	Collector	4U	32	37	100%	425	425	90	90	7	8	83	82		
Southridge	L-36E	Pennsylvania	2,816	0.55	1	1	2UA	Collector	4U	0	0	100%	425	425	235	235	0	0	235	235		
Southridge	Pennsylvania	Lillian B Miller	2,041	0.39	1	1	2UA	Collector	4U	0	0	100%	425	425	164	164	0	0	164	164		
Pennsylvania	L-36E	Southridge	1,561	0.30	1	1	2UA	Collector	4U	0	0	100%	425	425	126	126	0	0	126	126		
Pennsylvania	Southridge	Teesley Ln	4,074	0.77	1	1	2UA	Collector	4U	0	0	100%	425	425	328	328	0	0	328	328		
Lillian B Miller	L-36E	Windriver	4,237	0.80	2	2	4DA	Second Major Arterial	4U	873	637	100%	750	750	1,204	1,204	701	511	503	693		
Teesley Ln	Windriver	Bent Oaks	1,257	0.24	2	2	4D	Primary Major Arterial	6D	1,099	1,160	100%	750	750	357	357	262	276	95	81		
Teesley Ln	Bent Oaks	Robinson	5,972	1.07	1	1	2U	Primary Major Arterial	6D	1,031	1,036	100%	425	425	457	457	1,108	1,113	-651	-656	651	656
Teesley Ln	Robinson	Hickory Creek Rd	4,152	0.79	1	1	2U-H	Primary Major Arterial	6D	974	1,003	100%	725	725	570	570	766	789	-168	-168	219	219
Teesley Ln	Hickory Creek Rd	Montecito	1,888	0.36	1	1	3U	Primary Major Arterial	6D	966	894	100%	550	550	197	197	345	320	-149	-123	149	123
Teesley Ln	Montecito	City Limits	5,848	1.07	1	1	2U	Primary Major Arterial	6D	897	898	100%	425	425	454	454	959	950	-505	-465	465	465
FM 2469	L-36E	Unicom Lake	1,099	0.20	1	1	3U	Primary Major Arterial	6D	715	739	100%	550	550	156	156	203	210	-47	-54	54	54
FM 2469	Unicom Lake	1385' S. of Unicom Lake	1,390	0.26	1	1	2UA	Primary Major Arterial	6D	715	739	100%	425	425	111	111	197	194	-76	-82	76	82
SUBTOTAL			254,628	48.23											27,152	27,152	17,283	16,275	9,871	10,877	3,059	3,203
															34,305	33,557			20,748	6,262		

1. Veh-Mi Supply Pk-Hr Total = [Length (mi)] * [Exist Lanes] * [Veh-Mi Capacity Pk-Hr Per Ln] * [% in Service Area]

2. Veh-Mi Demand Pk-Hr Total = [Length (mi)] * [PM Peak Hour Vol] * [% in Service Area]

3. Excess Capacity Pk-Hr Veh-Mi = [Veh-Mi Supply Pk-Hr Total] - [Veh-Mi Demand Pk-Hr Total]

4. Existing Deficiencies Pk-Hr Veh-Mi = [Veh-Mi Demand Pk-Hr Total] - [Veh-Mi Supply Pk-Hr Total]

Note: Mileage lengths are shown as rounded to the nearest 0.01. Actual calculations were performed using exact mileage length [Length (ft) / 5,280].

City of Denton - 2015 Roadway Impact Fee Study
Existing Roadway Facilities Inventory

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Service Area C

ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST LANES		EXIST LANES	CLASS	FUTURE LANES	PM PEAK HOUR VOL		% IN SERVICE AREA	VEH-MI CAPACITY PER LN		VEH-MI SUPPLY PK-HR		VEH-MI DEMAND PK-HR		EXCESS CAPACITY		EXISTING DEFICIENCIES	
					NB/EB	SB/WB				NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Milam Rd	I-35	Locust	14,152	2.68	1	1	2U	Second Major Arterial	4D	136	136	50%	725	725	972	972	182	182	789	789		
Ganzer Rd	FM 156	I-35	12,986	2.46	1	1	2U-R	Second Major Arterial	4D	47	92	50%	150	150	184	184	58	113	127	71		
Westgate	West City Limits	4,520 W of I-35	6,540	1.24	1	1	2U	Second Major Arterial	4D	432	752	50%	425	425	263	263	268	466	-4	-203	4	203
Hercules	I-35	1460 E. of I-35	1,461	0.28	2	2	4D	Second Major Arterial	4U	0	0	100%	750	750	415	415	0	0	415	415		
Riney	Nicossa	Northpointe	2,708	0.51	1	1	2U	Collector	4U	0	0	100%	425	425	218	218	0	0	218	218		
Cobblestone	Bonnie Brae	US 77	2,983	0.56	1	1	2U	Collector	4U	23	1	100%	425	425	240	240	13	1	227	240		
Windsor Dr	Evers	Locust	1,132	0.21	1	1	2U	Collector	4U	0	0	100%	425	425	91	91	0	0	91	91		
Windsor Dr	1020' E. of I-35	1020' E. of I-35	1,019	0.19	1	1	2U	Second Major Arterial	4D	244	199	100%	425	425	82	82	47	38	35	44		
Windsor Dr	160' E. of I-35	160' E. of I-35	648	0.12	2	2	4D	Second Major Arterial	4D	244	199	100%	750	750	184	184	30	24	154	160		
Windsor Dr	Westgate	Westgate	488	0.09	1	1	2U	Second Major Arterial	4D	244	199	100%	425	425	39	39	23	18	17	21		
Windsor Dr	Bonnie Brae	Bonnie Brae	2,705	0.51	2	2	4D	Second Major Arterial	4D	244	199	100%	750	750	768	768	125	102	643	667		
Windsor Dr	790' E. of Bonnie Brae	790' E. of Bonnie Brae	789	0.15	2	2	3U	Second Major Arterial	4D	268	241	100%	550	550	82	164	43	36	39	128		
Windsor Dr	Hilde	Hilde	4,145	0.84	1	1	2U	Second Major Arterial	4D	268	241	100%	425	425	358	358	242	203	115	155		
Windsor Dr	US 377	US 377	2,417	0.66	2	2	4U	Second Major Arterial	4D	268	241	100%	550	550	504	504	132	10	372	383		
Windsor Dr	Schuyler	US 377	2,009	0.38	2	2	4U	Second Major Arterial	4D	306	217	100%	550	550	419	419	16	83	302	336		
Barcelona	Worthington	Schuyler	706	0.13	1	1	2U	Collector	4U	0	0	100%	425	425	57	57	0	0	57	57		
Thunderbird	I-35 NBFR	Mesa	620	0.12	1	1	2U	Collector	4U	0	0	100%	425	425	50	50	0	0	50	50		
Sherman Dr	Carroll	Crestmeadow	2,190	0.41	1	1	2U	Collector	4U	0	0	100%	425	425	176	176	0	0	176	176		
University Dr	West City Limits	Carroll	1,466	0.28	2	2	4U	Primary Major Arterial	6D	827	520	100%	550	550	305	305	250	144	76	161		
University Dr	Thomas J Egan	Thomas J Egan	3,941	0.75	1	1	2U	Primary Major Arterial	6D	1,016	1,200	100%	425	425	317	317	758	886	-441	-578	441	578
University Dr	Thomas J Egan	Masch Branch	7,190	1.36	1	1	3U	Primary Major Arterial	6D	1,016	1,200	100%	550	550	749	749	1,384	1,634	-635	-885	635	885
University Dr	Masch Branch	I-35	7,108	1.35	1	1	3U-H	Primary Major Arterial	6D	1,145	1,200	100%	725	725	976	976	1,541	1,615	-565	-639	565	639
University Dr	I-35	Bonnie Brae	3,981	0.75	3	3	7U	Primary Major Arterial	6D	1,566	1,524	100%	850	850	1,923	1,923	1,181	1,149	742	774		
University Dr	Bonnie Brae	Cornell	4,129	0.78	3	3	7U	Primary Major Arterial	6D	1,566	1,524	100%	850	850	997	997	612	596	385	401		
University Dr	Cornell	Carroll St.	3,304	0.63	2	2	4D	Primary Major Arterial	6D	1,566	1,524	50%	750	750	469	469	477	-21	-8	21	8	
University Dr	Carroll	Elm	1,056	0.20	2	2	4D	Primary Major Arterial	6D	1,566	1,524	50%	750	750	150	150	157	152	-7	-2	7	2
University Dr	Elm	Locust	408	0.08	2	2	4D	Primary Major Arterial	6D	1,150	1,150	50%	750	750	58	58	44	44	14	14		
University Dr	West City Limits	Oak	16,409	3.11	1	1	2U	Second Major Arterial	4D	21	10	100%	425	425	660	660	33	16	628	645		
University Dr	Jim Christal Rd	Oak	1,285	0.24	1	1	2U	Collector	4U	0	0	50%	425	425	52	52	0	0	52	52		
University Dr	Jim Christal Rd	Bonnie Brae	2,456	0.47	1	1	2U	Collector	4U	184	184	100%	425	425	198	198	86	86	112	112		
University Dr	I-35 NBFR	Bonnie Brae	2,517	0.48	2	2	2-1W	Second Major Arterial	4D	328	162	100%	650	650	620	620	0	156	77	463	-77	100
University Dr	I-35 SBFR	Bonnie Brae	2,493	0.47	0	2	2-1W	Second Major Arterial	4D	212	386	100%	650	650	614	614	100	182	-100	432		

1. Veh-Mi Supply Pk-Hr Total = (Length (mi)) * (Exist Lanes) * (Veh-Mi Capacity Pk-Hr Per Ln) * (% in Service Area)
 2. Veh-Mi Demand Pk-Hr Total = (Length (mi)) * (PM Peak Hour Vol) * (% in Service Area)
 3. Excess Capacity Pk-Hr Veh-Mi = [Veh-Mi Supply Pk-Hr Total] - [Veh-Mi Demand Pk-Hr Total]
 4. Existing Deficiencies Pk-Hr Veh-Mi = [Veh-Mi Demand Pk-Hr Total] - [Veh-Mi Supply Pk-Hr Total]
 Note: Mileage lengths are shown as rounded to the nearest 0.01. Actual calculations were performed using exact mileage length [Length (ft) / 5,280].

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Service Area C: Continued

ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST LANES		EXIST LANES	CLASS	FUTURE LANES	PEAK HOUR VOL	% IN SERVICE AREA	VEH-MI CAPACITY PER LN		VEH-MI SUPPLY		VEH-MI DEMAND		EXCESS CAPACITY		EXISTING DEFICIENCIES	
					NB/EB	SB/WB						NB/EB	SB/WB	NB/EB	SB/WB	TOTAL ²	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB
Nail	City Limits	Jim Christal	2,472	0.47	1	1	2UA	Collector	4U	5	33	425	199	199	15	15	197	184	184		
Thomas J Egan	North City Limits	North City Limits	550	0.10	1	1	2UA	Collector	4U	0	0	425	44	44	0	0	44	44	44		
Thomas J Egan	University	Jim Christal	4,011	0.76	1	1	2UA	Collector	4U	18	17	425	323	323	14	13	309	310	310		
Maasch Branch	Hwy 1173	Miller	5,465	1.04	1	1	2UA	Collector	4U	33	124	425	220	220	17	64	203	156	156		
Maasch Branch	Miller	Lovers Lane	3,782	0.72	1	1	2UA	Collector	4U	124	33	425	304	304	89	24	216	281	281		
Maasch Branch	Lovers Lane	Lovers Lane	4,954	0.94	1	1	2UA	Collector	4U	143	88	425	399	399	134	83	265	316	316		
Maasch Branch	University	Jim Christal	4,112	0.78	1	1	2UA	Collector	4U	21	10	425	331	331	16	8	315	323	323		
Lovers Lane	FM 1173	Maasch Branch	6,970	1.30	2	2	2UA	Collector	4U	18	5	425	553	553	23	7	530	546	546		
Western Blvd	University	680' S. of University	678	0.13	2	2	4U	Primary Major Arterial	6D	256	76	550	141	141	33	10	108	131	131		
Western Blvd	680' S. of University	Jim Christal	3,570	0.68	1	1	2U	Primary Major Arterial	6D	266	76	425	287	287	173	51	114	236	244		
Washington	Schulder	Barcelona	1,152	0.22	1	1	2U	Collector	4U	0	0	425	93	93	0	0	93	93	93		
Mesa	Barcelona	University	1,906	0.36	1	1	2UA	Collector	4U	0	0	425	153	153	0	0	153	153	153		
Hwy 77	L35 NBFR	Elm	4,460	0.84	2	2	4D	Primary Major Arterial	6D	288	545	750	1,287	1,287	252	480	1,015	807	807		
Greenway	635 S. of Thunderbird	Thunderbird	633	0.12	1	1	2UA	Collector	4U	0	0	425	51	51	0	0	51	51	51		
Cresmeadow	Thunderbird	Westward	545	0.10	1	1	2UA	Collector	4U	0	0	425	44	44	0	0	44	44	44		
Bonnie Brae St	Westside	Windsor	4,370	0.83	2	2	4UA	Second Major Arterial	4D	187	237	950	910	910	135	186	756	714	714		
Bonnie Brae St	Windsor	University	3,985	0.89	2	2	4UA	Second Major Arterial	4D	539	446	950	747	747	366	303	381	444	444		
Bonnie Brae St	University	Hickory	5,543	1.05	2	2	4UA	Second Major Arterial	4D	635	635	950	577	577	333	333	244	244	244		
Bonnie Brae St	Hickory	Prarie	1,424	0.27	2	2	4UA	Second Major Arterial	4D	658	658	950	550	550	89	89	60	60	60		
Bonnie Brae St	L35E NBFR	Prarie	500	0.09	2	2	4U	Second Major Arterial	4D	928	928	550	52	52	31	31	21	21	21		
Bonnie Brae St	L35E SBFR	Auburn	583	0.11	2	2	4U	Collector	4U	0	0	425	205	205	0	0	205	205	205		
Malone	Auburn	University	2,550	0.48	1	1	2UA	Collector	4U	95	48	425	224	224	50	25	174	199	199		
Nicosia	Beal	US 77	2,782	0.53	1	1	2U	Collector	4U	242	182	425	367	367	209	157	158	210	210		
Hinkle	University	Windsor	4,555	0.86	1	1	2UA	Collector	4U	0	0	425	114	114	0	0	114	114	114		
Riney	Windsor	US 77	1,421	0.27	1	1	2UA	Collector	4U	0	0	425	123	123	0	0	123	123	123		
Fallmeadow	University	1530' N. of University	1,532	0.29	1	1	2UA	Collector	4U	0	0	425	79	79	0	0	79	79	79		
Fallmeadow	Meadowedge	Hercules	985	0.19	1	1	2U	Collector	4U	0	0	425	84	84	0	0	84	84	84		
Joyce	University	Gardenview	1,044	0.20	1	1	2UA	Collector	4U	0	0	425	252	252	77	62	175	190	190		
Carroll Blvd	Northridge	Sherman	3,133	0.59	1	1	2UA	Collector	4U	130	104	850	253	253	13	10	240	243	243		
Carroll Blvd	Sherman	University	524	0.10	3	3	6D	Primary Major Arterial	6D	130	104	850	253	253	13	10	240	243	243		
Evers	Cobblestone	Windsor	1,384	0.26	1	1	2UA	Collector	4U	0	0	425	111	111	0	0	111	111	111		
Elm	US 77	University	3,545	0.67	0	3	3-1W	Primary Major Arterial	6D	312	624	700	0	0	209	419	-209	991	209		
Louist St	North City Limits	Loop 288 WBFR	14,227	2.69	1	1	2U-H	Primary Major Arterial	6D	155	173	725	977	977	209	233	768	744	744		
Louist St	Loop 288 WBFR	Loop 288 WBFR	2,048	0.39	1	1	3UA	Primary Major Arterial	6D	281	308	550	107	107	56	60	50	47	47		
Louist St	2050' S. of Loop 288 WBFR	US 77	5,367	1.02	1	1	2UA	Primary Major Arterial	6D	281	308	425	216	216	148	157	68	59	59		
Louist St	US 77	University	3,523	0.67	2	0	2-1W	Primary Major Arterial	6D	628	315	650	434	0	210	105	224	-105	105		
SUBTOTAL			64,625	12.24								23,028	24,081		11,011	11,441	12,018	12,670	1,982	2,497	4,279

1. Veh-Mi Supply Pk-Hr Total = [Length (mi)] * [Exist Lanes] * [Veh-Mi Capacity Pk-Hr Per Ln] * [% in Service Area]

2. Veh-Mi Demand Pk-Hr Total = [Length (mi)] * [PM Peak Hour Vol] * [% in Service Area]

3. Excess Capacity Pk-Hr Veh-Mi = [Veh-Mi Supply Pk-Hr Total] - [Veh-Mi Demand Pk-Hr Total]

4. Existing Deficiencies Pk-Hr Veh-Mi = [Veh-Mi Demand Pk-Hr Total] - [Veh-Mi Supply Pk-Hr Total]

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Service Area D

ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST LANES		EXIST LANES	CLASS	FUTURE LANES	PM PEAK HOUR VOL	% IN SERVICE AREA	VEH-MI CAPACITY PER LN		VEH-MI SUPPLY		VEH-MI DEMAND		EXCESS CAPACITY		EXISTING DEFICIENCIES			
					NB/EB	SB/WB						NB/EB	SB/WB	TOTAL ¹	NB/EB	SB/WB	TOTAL ²	NB/EB	SB/WB	NB/EB	SB/WB		
Sherman Dr	Locust	665 S. of Coronado	3,512	0.67	2	2	4U	Primary Major Arterial	6D	520	100%	550	550	732	346	346	386	386					
Sherman Dr	665 S. of Coronado	Windsor	2,826	0.54	2	2	5U	Primary Major Arterial	6D	520	100%	725	725	776	278	278	498	498					
Sherman Dr	Windsor	315 N of Kings Row	2,345	0.44	2	2	5U	Primary Major Arterial	6D	385	100%	725	725	644	171	171	473	473					
Sherman Dr	315 N of Kings Row	Loop 288	3,255	0.62	2	2	4U	Primary Major Arterial	6D	395	100%	850	850	678	237	237	441	441					
Sherman Dr	Loop 288	North City Limits	24,753	4.69	1	1	2U+H	Primary Major Arterial	6D	285	100%	725	3,389	3,389	1,338	1,338	2,063	2,063					
Hartlee Field	Hartlee Court	Cooper Creek	6,460	1.22	1	1	2U+	Collector	4U	0	100%	425	425	520	0	0	520	520					
Hercules	Locust	Meadowlane Place	723	0.14	1	1	3U	Collector	4U	117	100%	550	550	75	16	13	59	62					
Hercules	Meadowlane Place	Redstone	806	0.15	1	1	2U	Collector	4U	117	100%	425	425	65	18	15	47	50					
Hercules	Redstone	Stuart	1,398	0.26	2	2	4D	Collector	4U	117	100%	750	750	397	31	25	366	372					
Hercules	850' E. of Stuart	Stuart	848	0.16	1	1	2U+	Collector	4U	117	100%	425	425	68	19	15	49	53					
Hercules	850' E. of Stuart	Sherman	2,113	0.40	1	1	2U+	Collector	4U	117	100%	425	425	170	47	38	123	132					
Kings Row	Nottingham	Nottingham	4,013	0.76	1	1	2U+	Collector	4U	131	100%	425	425	323	100	109	233	214					
Kings Row	Nottingham	Cooper Branch	3,241	0.61	1	1	2U+	Collector	4U	84	100%	425	425	261	52	68	209	163					
Kings Row	1560 W. of Farris	Farris	1,558	0.30	1	1	2U+	Collector	4U	189	100%	425	425	125	35	0	135	125					
Windsor Dr	Locust	Bell	1,695	0.30	2	2	4U	Second Major Arterial	4D	189	100%	550	550	334	57	80	277	285					
Windsor Dr	Bell	Stuart	1,289	0.24	1	1	2U+	Second Major Arterial	4D	189	100%	425	425	102	45	63	57	39					
Windsor Dr	Stuart	Glenwood	2,310	0.44	1	1	2U+	Second Major Arterial	4D	182	100%	425	425	186	80	59	106	127					
Windsor Dr	Glenwood	Nottingham	3,374	0.64	1	1	2U+	Second Major Arterial	4D	182	100%	425	425	272	116	86	155	185					
Windsor Dr	Nottingham	595' E. of Old North	3,284	0.62	1	1	2U+	Second Major Arterial	4D	63	100%	425	425	284	39	40	225	225					
Coronado	Locust	Sherman	3,089	0.59	1	1	2U+	Collector	4U	48	100%	425	425	249	27	39	222	209					
Emerson	Sherman	Old North	7,422	1.41	1	1	2U+	Collector	4U	19	100%	425	425	597	27	20	571	578					
Greenwood	Sherman	Glenwood	2,891	0.51	1	1	2U+	Collector	4U	86	100%	425	425	217	44	24	173	192					
Mingo	Cooper Creek	Collins	7,095	1.34	1	1	2U+	Collector	4U	67	100%	425	425	570	90	75	480	495					
University Dr	Loop 288	Loop 288	13,441	2.55	3	3	6D	Primary Major Arterial	6D	1,150	50%	850	3,246	3,246	1,464	1,464	1,782	1,782					
University Dr	Loop 288	East City Limits	20,250	3.84	3	3	7U	Primary Major Arterial	6D	1,926	50%	850	4,890	4,890	3,693	3,693	1,197	1,154					
Locust St	North City Limits	Loop 288 WBFR	14,227	2.69	1	1	2U+H	Primary Major Arterial	6D	155	50%	725	977	977	209	233	788	744					
Locust St	Loop 288 WBFR	2050' S of Loop 288 WBFR	2,048	0.39	1	1	3U+	Primary Major Arterial	6D	291	50%	550	107	107	56	60	50	47					
Locust St	2050' S of Loop 288 WBFR	US 77	5,367	1.02	1	1	2U+	Primary Major Arterial	6D	291	50%	425	216	216	148	157	68	59					
Locust St	US 77	University	3,523	0.67	2	0	2-1W	Primary Major Arterial	6D	629	50%	650	434	0	210	105	224	-105				105	
Bell	Locust	Sherman	6,024	1.14	1	1	2U+	Collector	4U	271	100%	425	425	485	309	270	176	214					
Bell	Sherman	University	1,265	0.24	1	1	2U+	Collector	4U	271	100%	425	425	102	65	57	37	45					
Stuart	Loop 288	Hercules	2,265	0.43	1	1	2U+	Collector	4U	126	85	100%	425	182	182	54	41	128	142				
Stuart	Hercules	University	3,413	0.65	1	1	2U+	Collector	4U	126	85	100%	425	275	275	81	61	193	213				
Glenwood	Windsor	Windsor	3,734	0.71	1	1	2U+	Collector	4U	34	28	100%	425	301	301	24	20	277	281				
Glenwood	Kings Row	Windsor	1,492	0.28	1	1	2U+	Collector	4U	229	138	100%	425	120	120	65	39	55	81				
Nottingham Dr	Windsor	University	3,970	0.73	1	1	2U+	Second Major Arterial	4D	229	138	100%	425	312	312	168	101	144	210				
Dunes	Windsor	Windsor	1,148	0.22	1	1	2U+	Collector	4U	0	100%	425	425	92	0	0	92	92					
Old North	Windsor	University	3,222	0.63	1	1	2U+	Second Major Arterial	4D	232	154	100%	425	287	287	146	87	121	171				
Cooper Creek	Hartlee Field	University	11,686	2.21	1	1	2U+	Collector	4U	52	31	100%	425	941	941	115	69	626	672				
Frishtap	Mingo	Gesling	1,218	0.23	1	1	2U+	Collector	4U	0	100%	425	425	98	0	0	98	98					
Gesling	Frishtap	University	1,639	0.31	1	1	3U+	Collector	4U	17	2	100%	550	150	150	5	1	185	170				
Laney	Wright (N)	Mingo	3,389	0.64	1	1	2U+R	Collector	4U	0	100%	150	150	96	0	0	96	96					
Collins	2050' S of Hartlee Field	Mingo	5,280	1.00	1	1	2U+	Collector	4U	0	100%	425	425	423	423	0	423	423					
SUBTOTAL			198,541	38									48,082	19,665	9,677	24,321	24,758	24,758	14,647	14,647	0	105	

1. Veh-Mi Supply Pk-Hr Total = [Length (mi)] * [Exist Lanes] * [Veh-Mi Capacity Pk-Hr Per Ln] * [% in Service Area]
 2. Veh-Mi Demand Pk-Hr Total = [Length (mi)] * [PM Peak Hour Vol] * [% in Service Area]
 3. Excess Capacity Pk-Hr Veh-Mi = [Veh-Mi Supply Pk-Hr Total] - [Veh-Mi Demand Pk-Hr Total]
 4. Existing Deficiencies Pk-Hr Veh-Mi = [Veh-Mi Demand Pk-Hr Total] - [Veh-Mi Supply Pk-Hr Total]
 Note: Mileage lengths are shown as rounded to the nearest 0.01. Actual calculations were performed using exact mileage length [Length (ft) / 5,280].

**City of Denton - 2015 Roadway Impact Fee Study
Existing Roadway Facilities Inventory**

2/9/2016

Service Area E

ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST LANES		CLASS	FUTURE LANES	PM PEAK HOUR VOL		% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN		VEH-MI SUPPLY PK-HR TOTAL ¹		VEH-MI DEMAND PK-HR TOTAL ²		EXCESS CAPACITY PK-HR		EXISTING DEFICIENCIES PK-HR							
					NB/EB	SB/WB			NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Sunset	University	Carroll	1,613	0.31	1	2	2	4U	220	165	100%	425	130	130	67	50	63	79									
University Dr	Loop 288	Loop 288	2,55	0.48	3	3	6D	6D	1,150	1,150	50%	850	3,246	3,246	1,464	1,464	1,782	1,782									
University Dr	Loop 288	East City Limits	20,250	3.84	3	3	7U	1,926	1,948	50%	850	4,890	4,890	3,693	3,736	1,154	1,544										
Crescent	Alice	Carroll	951	0.18	1	1	2U/A	189	169	100%	425	77	77	34	34	43	43										
Crosscut	Malone	Alice	3,045	0.58	1	1	2U/A	169	189	100%	425	245	245	97	97	148	148										
Lattimore	Nottingham	Audra	2,634	0.50	1	1	2U/A	4U	0	0	100%	425	212	212	0	0	212	212									
Audra	Nottingham	Bayfield	3,463	0.66	1	1	2U/A	4U	0	0	100%	425	279	279	0	0	279	279									
Prominence	Loop 288	1135 E. of Loop 288	1,134	0.21	2	2	4U	45	43	100%	550	236	236	10	9	227	227										
Prominence	1135 E. of Loop 288	Mayhill	1,223	0.23	2	2	4U	45	43	100%	550	255	255	10	10	244	117										
Blair	Mayhill	Lakeway	6,640	1.26	1	1	2U/A	4U	20	20	100%	425	534	534	50	36	484	498									
Parkland	Bonnie Brae	Malone	3,482	0.66	1	1	2U/A	4U	20	20	100%	425	280	280	13	13	267	267									
Parkland	Malone	Fulton	1,988	0.38	1	1	2U/A	4U	47	47	100%	425	160	160	18	18	142	142									
Parkland	Fulton	Edwar	2,552	0.48	1	1	2U/A	4U	113	113	100%	425	205	205	55	55	151	151									
Winthers	Oakland	Wingo	1,475	0.28	1	1	2U/A	4U	81	81	100%	425	119	119	0	0	119	119									
Falsley	Prarie	Audra	4,873	0.94	1	1	2U/A	4U	96	102	100%	425	400	400	98	78	292	324									
Falsley	1200 E. of Audra	Water Oak	1,200	0.23	1	1	2U/A	4U	86	102	100%	425	97	97	22	23	75	73									
Falsley	1200 E. of Audra	Mockingbird	1,021	0.19	1	1	2U	4U	96	102	100%	425	82	82	19	20	64	62									
Falsley	Water Oak	Mockingbird	1,528	0.29	1	1	2U	4U	96	102	100%	425	123	123	28	30	95	93									
Scripture	Ector	Congress	3,462	0.66	1	1	2U/A	4U	200	200	100%	425	279	279	131	131	148	148									
Congress	Scripture	Parkway	4,491	0.85	1	1	2U/A	4U	151	151	100%	425	361	361	128	128	233	233									
Orsile	Mockingbird	Loop 288	1,802	0.34	1	1	2U/A	4U	0	0	100%	425	145	145	0	0	145	145									
Russell Newman	Loop 288	Mayhill	2,135	0.40	1	1	3U/A	4U	0	0	100%	550	222	222	0	0	222	222									
Market	Loop 288	Blake	619	0.12	1	1	3U/A	4U	0	0	100%	550	64	64	0	0	64	64									
Gary	Mayhill	Lakeway	7,257	1.37	1	1	2U/A	4U	191	282	100%	425	584	584	263	388	322	187									
Parkway	Carroll	Elm	1,054	0.20	2	2	4U/A	4U	0	0	100%	550	220	220	0	0	220	220									
Parkway	Elm	Loop 288	400	0.08	2	2	4U/A	4U	88	136	100%	550	83	83	5	10	78	73									
Parkway	Loop 288	Congress	1,612	0.31	2	2	4U/A	4U	0	0	100%	550	336	336	0	0	336	336									
Mingo	Bell	Nottingham	8,003	1.52	1	1	2U/A	4U	593	307	100%	425	644	644	899	465	-255	179	255								
Mingo	Nottingham	Old North	2,562	0.49	1	1	2U/A	4U	328	174	100%	425	206	206	159	84	47	122									
McKinney St	Elm	Loop 288	378	0.07	2	2	4U/A	4U	695	695	100%	550	79	79	50	29	29	29									
McKinney St	Woodrow	Loop 288	6,284	1.19	2	2	4U/A	6D	845	845	100%	550	1,309	1,309	1,006	1,006	303	303									
McKinney St	Woodrow	Mayhill	8,983	1.70	1	1	2U/A	6D	700	700	100%	425	723	723	1,191	1,191	-468	-468	468	468							
McKinney St	Lakeway (Future)	Lakeway (Future)	5,791	1.10	1	1	2U/A	6D	670	670	100%	425	466	466	735	735	-269	-269	269	269							
McKinney St	Lakeway (Future)	Loop 288	2,624	0.50	1	1	2U/A	4U	55	55	100%	425	211	211	27	27	184	184									
McKinney St	Loop 288	500 W of Lake Crest	2,969	0.56	1	1	2U/A	4D	55	55	100%	425	239	239	31	31	208	208									
Oak	Bonnie Brae	North Texas	1,938	0.37	0	2	2U/A	4D	230	230	100%	650	650	650	84	84	393	393									
Oak	North Texas	Ave B	2,030	0.38	0	2	2U/A	4D	343	343	100%	650	650	650	0	0	-132	-132	132	132							
Oak	Ave B	Cedar	4,366	0.81	0	2	2U/A	4D	413	413	100%	650	650	650	0	0	-368	-368	368	368							
Oak	Cedar	Loop 288	519	0.11	0	2	2U/A	4U	413	413	100%	650	650	650	0	0	140	140									
Oak	Loop 288	Bell	1,287	0.24	1	1	2U/A	4U	102	102	100%	425	104	104	25	25	79	79									
Hickory	Bonnie Brae	North Texas	1,940	0.37	2	0	2U/A	4D	230	230	100%	650	478	478	0	0	393	485									
Hickory	North Texas	Ave B	2,025	0.38	2	0	2U/A	4D	343	343	100%	650	489	489	0	0	132	367									
Hickory	Ave B	Cedar	4,289	0.81	2	0	2U/A	4D	443	443	100%	650	1,051	1,051	0	0	-358	-358	358	358							
Hickory	Loop 288	Ruddell	4,959	0.97	1	1	2U/A	4U	196	196	100%	425	368	368	170	170	198	198									
Hickory	Loop 288	Cedar	589	0.11	2	0	2U/A	4U	0	0	100%	650	140	140	0	0	0	0									
Hickory	Ave A	Loop 288	3,823	0.72	1	1	2U/A	4U	0	0	100%	425	308	308	0	0	308	308									
Hickory	Bonnie Brae	North Texas	1,947	0.37	1	1	2U/A	4U	0	0	100%	425	157	157	0	0	157	157									
Hickory	North Texas	Prarie	1,854	0.35	1	1	2U/A	4U	0	0	100%	425	149	149	0	0	149	149									
Hickory	Prarie	Highland	1,854	0.35	1	1	2U/A	4U	0	0	100%	425	149	149	0	0	149	149									
Hickory	Highland	North Texas	4,159	0.79	0	2	2U/A	4U	224	224	100%	650	650	650	176	176	0	848									
Hickory	Ave D	Bernard	3,498	0.66	2	0	2U/A	4U	228	228	100%	650	861	861	0	0	709	0									
Hickory	North Texas	Bernard	2,377	0.45	2	2	4U/A	4D	406	406	100%	550	580	580	183	183	312	312									
Hickory	EAGLE DRIVE	Ave A	3,593	0.68	2	2	4U/A	4D	798	798	100%	550	749	749	543	543	206	206									
Hickory	EAGLE DRIVE	Elm	532	0.10	2	2	4U/A	4D	0	0	100%	550	111	111	0	0	111	111									
Hickory	Elm	Loop 288	532	0.10	2	2	4U/A	4D	0	0	100%	550	111	111	0	0	111	111									
Hickory	Loop 288	Ruddell	2,214	0.42	1	1	2U/A	4U	102	113	100%	425	178	178	43	47	135	135									
Hickory	Loop 288	Ruddell	2,305	0.44	1	1	2U/A	4U	102	113	100%	425	186	186	45	49	141	136									
Hickory	Loop 288	Ruddell	1,460	0.28	1	1	2U/A	4U	83	202	100%	425	118	118	26	56	62	62									
Hickory	Loop 288	Carroll	2,638	0.50	1	1	2U/A	4U	0	0	100%	425	212	212	0	0	212	212									
Hickory	Loop 288	Bell	234	0.04	2	2	4U/A	4D	0	0	100%	550	49	49	0	0	49	49									
Hickory	Dallas Dr	Teasley	4,003	0.76	2	2	5U/A	6D	1,072	1,560	100%	725	1,069	1,													

City of Denton - 2015 Roadway Impact Fee Study
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ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST LANES		CLASS	FUTURE LANES	P/M PEAK HOUR VOL	% IN SERVICE AREA	VER-H/M CAPACITY PK-HR PER LN		VER-H/M SUPPLY PK-HR TOTAL ¹		VER-H/M DEMAND PK-HR TOTAL ²		EXCESS CAPACITY PK-HR VER-H/M ³		EXISTING DEFICIENCIES PK-HR VER-H/M ⁴	
					NB/EB	SB/WB					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Shady Oaks	Teasley	Woodrow	3,088	0.59	1	3/A	Second Major Arterial	4D	541	100%	550	550	323	317	462	5	-139			
Shady Oaks	Woodrow	Loop 288	7,234	1.37	2	4D	Second Major Arterial	4D	158	100%	750	750	2,055	2,160	1,839	1,815				
Morse / Shady Oaks	Loop 288	Kimberly	914	0.17	2	4D/A	Second Major Arterial	4D	218	100%	750	750	260	38	16	222	243			
Morse / Shady Oaks	Kimberly	Mayhill	1,150	0.22	1	2/A	Second Major Arterial	4U	218	100%	425	425	93	47	20	45	72			
Kimberly	Loop 288	Kimberly	720	0.14	1	2/A	Collector	4U	0	100%	425	425	58	0	0	58	58			
Spencer	Woodrow	Brinker	5,318	1.01	2	4U	Collector	4U	468	100%	550	550	1,108	1,108	471	691				
Spencer	Loop 288	Brinker	1,215	0.23	2	4U	Collector	4U	468	100%	550	550	253	253	121	158				
Spencer	Loop 288	Mayhill	2,481	0.47	1	2/A	Collector	4U	287	100%	425	425	200	200	135	65	79			
Shady Oaks	Shady Oaks	510' W. of San Jacinto	3,181	0.60	2	4/A	Second Major Arterial	4D	513	100%	550	550	663	663	303	354	360			
Colorado Blvd	510' W. of San Jacinto	Loop 288	2,409	0.46	2	4D/A	Second Major Arterial	4D	513	100%	750	750	664	234	229	450	455			
Colorado Blvd	Loop 288	Sardar Ct	321	0.06	2	4D/A	Second Major Arterial	4D	552	100%	750	750	91	91	34	58	70			
Colorado Blvd	Sardar Ct	495' E. of Sardar Ct	466	0.09	2	4/A	Second Major Arterial	4D	552	100%	550	550	103	103	32	51	71			
Colorado Blvd	495' E. of Sardar Ct	Brinker	2,640	0.50	2	4/A	Second Major Arterial	4D	552	100%	750	750	590	590	213	366	447			
Colorado Blvd	Brinker	Mayhill	3,614	0.68	2	4/A	Second Major Arterial	4D	681	100%	750	750	1,027	1,027	468	284	561			
Colorado Blvd	Mayhill	Swisher	5,833	1.12	1	2/A	Collector	4U	543	100%	425	425	478	610	282	-133	186			
Edwards Rd	Swisher	Lakeview	2,838	0.56	1	2/A	Collector	4U	76	100%	425	425	236	42	34	194	202			
Edwards Rd	Swisher	1450' E. of I-35E	1,448	0.27	1	2/A	Collector	4U	51	100%	425	425	117	14	26	103	91			
Pockins Page	I-35E	1450' E. of I-35E	4,096	0.78	1	2/A	Collector	4U	51	100%	425	425	330	40	74	290	256			
Shady Shores	I-35E WBFR	1080' E. of I-35E WBFR	1,088	0.21	1	2/A	Collector	4U	0	100%	425	425	88	0	0	88	88			
Shady Shores	I-35E WBFR	1080' E. of I-35E WBFR	1,170	0.22	1	2/A	Collector	4U	0	100%	425	425	94	0	0	94	94			
Shady Shores	585' E. of Lakeview	Old US Hwy 77	389	0.08	1	2/A	Collector	4U	0	100%	425	425	32	0	0	32	32			
Bonnie Brae St	University	Hickory	5,543	1.05	2	4/A	Second Major Arterial	4D	635	50%	550	550	577	333	333	244				
Bonnie Brae St	Hickory	Prarie	1,424	0.27	2	4/A	Second Major Arterial	4D	658	50%	550	550	148	89	89	60	60			
Bonnie Brae St	Prarie	I-35E NBFR	500	0.09	2	4U	Second Major Arterial	4D	658	50%	550	550	52	31	31	21	21			
Bonnie Brae St	I-35E NBFR	University	583	0.11	2	4U	Second Major Arterial	4D	928	50%	550	550	61	51	9	9	9			
Ector	University	Scripture	3,865	0.73	1	2/A	Collector	4U	39	100%	425	425	311	29	29	282	282			
North Texas	Hickory	Hickory	380	0.07	1	2/A	Second Major Arterial	4U	125	100%	425	425	29	9	9	20	20			
North Texas	Hickory	2515' S. of Hickory	2,514	0.48	2	2	Second Major Arterial	4D	398	100%	550	550	524	190	190	334				
North Texas	Hickory	Eagle	695	0.13	2	4D/A	Second Major Arterial	4D	500	100%	750	750	197	66	66	132	132			
North Texas	I-35E	Eagle	749	0.14	2	4D/A	Second Major Arterial	4D	647	100%	750	750	213	92	92	121	121			
Malone	University	Crescent	962	0.18	2	4/A	Collector	4U	360	100%	550	550	200	66	66	135	135			
Malone	Crescent	Congress	2,997	0.57	2	2	Collector	4U	260	100%	550	550	624	624	148	477	477			
Jaobe	Scripture	Oak	1,117	0.21	1	2/A	Collector	4U	216	100%	425	425	90	46	46	44	44			
Ave D	Highland	Eagle	941	0.18	1	2/A	Collector	4U	0	100%	425	425	76	76	0	76	76			
Ave C	Oak	Mulberry	734	0.14	1	2/A	Collector	4U	343	100%	550	550	80	80	39	41	41			
Ave C	Mulberry	Chesnut	769	0.15	1	2/A	Collector	4U	271	100%	550	550	76	76	48	48	29			
Ave C	Chesnut	Highland	891	0.16	1	2/A	Collector	4U	312	100%	550	550	83	83	47	47	36			
Ave C	Highland	Eagle	924	0.18	1	2/A	Collector	4U	307	100%	550	550	88	88	55	43	43			
Ave A	Oak	Mulberry	747	0.14	1	2/A	Collector	4U	0	100%	425	425	60	0	0	60	60			
Ave A	Mulberry	Eagle	961	0.19	1	2/A	Collector	4U	0	100%	425	425	79	0	0	79	79			
Ave A	Eagle	I-35E NBFR	1,658	0.35	2	4/A	Collector	4U	410	100%	550	550	367	367	144	243	243			
Fulton	University	Crescent	1,460	0.28	1	2/A	Collector	4U	172	100%	425	425	118	118	48	48	70			
Fulton	Crescent	Oak	3,587	0.68	1	2/A	Collector	4U	165	100%	425	425	289	112	107	177	181			
Welch	Oak	Hickory	388	0.07	1	2/A	Collector	4U	0	100%	425	425	30	0	0	30	30			
Welch	Hickory	Mulberry	383	0.07	2	1	Collector	4U	0	100%	550	550	76	38	0	76	38			
Welch	Mulberry	Sycamore	368	0.07	2	2	Collector	4U	311	100%	550	550	77	77	22	22	55			
Welch	Sycamore	Highland	1,203	0.23	2	4/A	Collector	4U	326	100%	550	550	251	251	74	74	176			
Welch	Highland	Eagle	974	0.18	2	2	Collector	4U	420	100%	550	550	203	203	77	77	125			
Welch	Eagle	Collins	926	0.18	1	2/A	Collector	4U	420	100%	425	425	75	74	74	1	1			
Bernard	Hickory	Eagle	2,948	0.56	1	2/A	Collector	4U	179	100%	425	425	237	100	100	137	137			
Bernard	Eagle	I-35E NBFR	3,157	0.60	1	2/A	Collector	4U	103	100%	425	425	254	62	62	193	193			
Carroll Blvd	University	Panhandle	3,482	0.66	3	6D	Primary Major Arterial	6D	1,287	100%	850	850	1,686	851	851	1,258				
Carroll Blvd	Panhandle	Oak	2,092	0.40	3	3	Primary Major Arterial	6D	1,453	100%	850	850	1,010	1,010	576	445	435			
Carroll Blvd	Oak	Hickory	381	0.07	3	6D	Primary Major Arterial	6D	1,522	100%	850	850	184	184	110	84	74			
Carroll Blvd	Hickory	Collins	3,835	0.73	3	3	Primary Major Arterial	6D	1,211	100%	850	850	1,852	880	880	1,058	973			
Carroll Blvd	Collins	Oak	5,558	1.05	1	2/A	Collector	4U	0	100%	425	425	447	0	0	447	447			
Bolivar	University	Pauline	3,933	0.74	0	2	Primary Major Arterial	6D	387	100%	650	650	0	968	288	-288	393	288		
Elm	University	Pauline	1,248	0.24	0	3	Primary Major Arterial	6D	387	100%	700	700	0	496	91	163	314	91		
Elm	Pauline	McKinney	3,689	0.70	0	2	Primary Major Arterial	6D	438	100%	650	650	0	911	308	-308	603	308		

1. Veh-Mi Supply Pk-Hr Total = [Length (mi)] * [Exist Lanes] * [Veh-Mi Capacity Pk-Hr Per Ln] * [% in Service Area]
 2. Veh-Mi Demand Pk-Hr Total = [Length (mi)] * [P/M Peak Hour Vol] * [% in Service Area]
 3. Excess Capacity Pk-Hr Veh-Mi = [Veh-Mi Supply Pk-Hr Total] - [Veh-Mi Demand Pk-Hr Total]
 4. Existing Deficiencies Pk-Hr Veh-Mi = [Veh-Mi Demand Pk-Hr Total] - [Veh-Mi Supply Pk-Hr Total]
 Note: Mileage lengths are shown as rounded to the nearest 0.01. Actual calculations were performed using exact mileage length [Length (ft) / 5,280].

City of Denton - 2015 Roadway Impact Fee Study
Existing Roadway Facilities Inventory

Service Area E: Continued

ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST LANES		CLASS	FUTURE LANES	PM PEAK HOUR VOL		% IN SERVICE AREA	VER-HMI CAPACITY PK-HR PER LN		VER-HMI SUPPLY PK-HR TOTAL ¹		VER-HMI DEMAND PK-HR TOTAL ²		EXCESS CAPACITY PK-HR VEH-MI ³		EXISTING DEFICIENCIES PK-HR VEH-MI ⁴	
					NB/EB	SB/WB			NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB		
Fort Worth Dr	Collins		967	0.18	0	3	3-1W	6D	0	0	100%	700	700	385	0	0	0	0	385	0	385
Fort Worth Dr	Collins		3,042	0.58	3	3	Primary Major Arterial	6D	1,550	1,550	100%	850	850	1,469	883	883	883	576	576	483	483
Fort Worth Dr	Hickory		5,934	1.12	2	0	Primary Major Arterial	6D	860	430	100%	650	650	1,461	0	0	0	483	483	483	483
Loquist St	Dallas		2,921	0.55	3	0	Primary Major Arterial	6D	400	400	100%	700	700	1,162	0	0	221	221	940	221	221
Loquist St	Whiters		2,774	0.53	1	0	Collector	4U	0	0	100%	425	425	223	223	0	0	223	223	223	221
Oakland	College		2,213	0.42	1	1	Collector	4U	516	386	100%	550	550	231	231	216	162	14	69	69	69
Bell	College		835	0.16	1	1	Collector	4U	516	386	100%	550	550	87	87	62	61	5	26	26	26
Bell	Texas		1,484	0.28	2	2	Collector	4U	516	386	100%	550	550	309	309	145	108	164	201	201	201
Bell	Mingo		655	0.12	1	1	Collector	4U	516	386	100%	425	425	53	53	64	48	11	5	5	11
Bell Ave	McKinney		4,709	0.89	2	2	Collector	4U	1,074	904	100%	550	550	961	961	958	806	23	175	175	175
Center Place	Dallas		2,758	0.52	1	0	Second Major Arterial	4D	0	0	100%	425	425	222	222	0	0	222	222	222	222
Center Place	Dallas		2,758	0.52	1	0	Collector	4U	0	0	100%	425	425	222	222	0	0	222	222	222	222
Frame	Paisley		246	0.05	1	1	Collector	4U	0	0	100%	425	425	20	20	0	0	20	20	20	20
Frame	Paisley		246	0.05	1	1	Collector	4U	0	0	100%	425	425	20	20	0	0	20	20	20	20
Lakey	Morse		1,531	0.29	1	1	Collector	4U	0	0	100%	425	425	123	123	0	0	123	123	123	123
Lakey	Morse		1,531	0.29	1	1	Collector	4U	0	0	100%	425	425	123	123	0	0	123	123	123	123
Duncan	Tresley		2,984	0.54	1	1	Collector	4U	0	0	100%	425	425	231	231	0	0	231	231	231	231
Duncan	Tresley		2,984	0.54	1	1	Collector	4U	0	0	100%	425	425	231	231	0	0	231	231	231	231
Tresley	UP Railroad		1,128	0.21	1	1	Collector	4U	0	0	100%	425	425	91	91	0	0	91	91	91	91
Tresley	Shady Oaks		832	0.16	2	2	Second Major Arterial	4D	541	787	100%	750	750	236	236	85	124	151	112	151	112
Tresley	Shady Oaks		832	0.16	2	2	Primary Major Arterial	6D	970	970	100%	750	750	540	540	349	349	191	191	357	357
Ruddell	Morse		1,902	0.36	2	2	Collector	4U	82	78	100%	425	425	437	437	84	80	353	357	357	357
Ruddell	Morse		1,902	0.36	2	2	Collector	4U	82	78	100%	425	425	437	437	84	80	353	357	357	357
Ruddell	Paisley		5,427	1.03	1	1	Collector	4U	198	147	100%	425	425	198	198	92	69	106	130	130	130
Ruddell	Paisley		5,427	1.03	1	1	Collector	4U	198	147	100%	425	425	198	198	92	69	106	130	130	130
Ruddell	University		2,461	0.47	1	1	Collector	4U	0	0	100%	425	425	65	65	0	0	65	65	65	65
Pertain	Mingo		802	0.15	1	1	Collector	4U	0	0	100%	425	425	65	65	0	0	65	65	65	65
Pertain	Mingo		802	0.15	1	1	Collector	4U	0	0	100%	425	425	65	65	0	0	65	65	65	65
Nottingham	Audra		2,883	0.55	2	2	Second Major Arterial	4D	217	166	100%	550	550	601	601	118	102	482	489	489	489
Nottingham	Audra		2,883	0.55	2	2	Second Major Arterial	4D	217	166	100%	550	550	601	601	118	102	482	489	489	489
Audra	600 S of Paisley		3,504	0.66	2	2	Second Major Arterial	4D	317	199	100%	550	550	730	730	210	132	520	598	598	598
Audra	600 S of Paisley		3,504	0.66	2	2	Second Major Arterial	4D	317	199	100%	550	550	730	730	210	132	520	598	598	598
Woodrow	McKinney		1,629	0.31	2	2	Second Major Arterial	4D	317	199	100%	750	750	463	463	98	61	365	401	401	401
Woodrow	McKinney		1,629	0.31	2	2	Second Major Arterial	4D	317	199	100%	750	750	463	463	98	61	365	401	401	401
Woodrow	McKinney		3,812	0.74	2	2	Second Major Arterial	4D	728	879	100%	725	725	1,074	1,074	540	651	534	423	423	423
Woodrow	McKinney		3,812	0.74	2	2	Second Major Arterial	4D	728	879	100%	725	725	1,074	1,074	540	651	534	423	423	423
Mack	Paisley		1,969	0.37	1	1	Collector	4U	0	0	100%	425	425	158	158	0	0	158	158	158	158
Mack	Paisley		1,969	0.37	1	1	Collector	4U	0	0	100%	425	425	158	158	0	0	158	158	158	158
Old North	Mingo		578	0.11	1	1	Collector	4U	0	0	100%	425	425	47	47	0	0	47	47	47	47
Old North	Mingo		578	0.11	1	1	Collector	4U	0	0	100%	425	425	47	47	0	0	47	47	47	47
Mockingbird	Audra		1,800	0.36	1	1	Collector	4U	0	0	100%	425	425	152	152	0	0	152	152	152	152
Mockingbird	Audra		1,800	0.36	1	1	Collector	4U	0	0	100%	425	425	152	152	0	0	152	152	152	152
Mockingbird	Audra		5,501	1.04	1	1	Collector	4U	190	114	100%	425	425	443	443	198	144	245	324	324	324
Mockingbird	Audra		5,501	1.04	1	1	Collector	4U	190	114	100%	425	425	443	443	198	144	245	324	324	324
San Jacinto	Dallas		2,273	0.43	2	2	Second Major Arterial	4D	312	219	100%	750	750	646	646	134	99	511	551	551	551
San Jacinto	Dallas		2,273	0.43	2	2	Second Major Arterial	4D	312	219	100%	750	750	646	646	134	99	511	551	551	551
Cardinal	McKinney		1,813	0.34	1	1	Collector	4U	0	0	100%	425	425	146	146	0	0	146	146	146	146
Cardinal	McKinney		1,813	0.34	1	1	Collector	4U	0	0	100%	425	425	146	146	0	0	146	146	146	146
S LOOP 288	University		19,517	3.70	3	3	Primary Major Arterial	6D	1,756	1,724	100%	850	850	9,426	6,491	6,373	6,491	2,935	3,053	3,053	3,053
S LOOP 288	University		19,517	3.70	3	3	Primary Major Arterial	6D	1,756	1,724	100%	850	850	9,426	6,491	6,373	6,491	2,935	3,053	3,053	3,053
Spencer	Loop 288		1,082	0.20	2	2	Second Major Arterial	4D	297	291	100%	750	750	307	307	61	60	247	248	248	248
Spencer	Loop 288		1,082	0.20	2	2	Second Major Arterial	4D	297	291	100%	750	750	307	307	61	60	247	248	248	248
Spencer	Loop 288		2,366	0.45	2	2	Second Major Arterial	4D	702	674	100%	750	750	678	678	317	305	373	373	373	373
Spencer	Loop 288		2,366	0.45	2	2	Second Major Arterial	4D	702	674	100%	750	750	678	678	317	305	373	373	373	373
Quail Creek	Colorado		1,872	0.32	2	2	Second Major Arterial	4D	702	688	100%	750	750	475	475	222	166	253	269	269	269
Quail Creek	Colorado		1,872	0.32	2	2	Second Major Arterial	4D	702	688	100%	750	750	475	475	222	166	253	269	269	269
Quail Creek	Colorado		740	0.14	2	2	Second Major Arterial	4D	239	308	100%	750	750	0	0	0	0	0	0	0	0
Quail Creek	Colorado		740	0.14	2	2	Second Major Arterial	4D	239	308	100%	750	750	0	0	0	0	0	0	0	0
Blake	Russell Newman		792	0.15	1	1	Collector	4U	0	0	100%	425	425	83	83	0	0	83	83	83	83
Blake	Russell Newman		792	0.15	1	1	Collector	4U	0	0	100%	425	425	83	83	0	0	83	83	83	83
Kimberty	Morse		1,666	0.28	1	1	Collector	4U	0	0	100%	425	425	120	120	0	0	120	120	120	120
Kimberty	Morse		1,666	0.28	1	1	Collector	4U	0	0	100%	425	425	120	120	0	0	120	120	120	1

**Appendix D – Plan for Awarding the
Transportation Impact Fee Credit Summary**

(as prepared by NewGen Strategies.)

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area A

Recoverable Impact Fee CIP Costs	\$ 109,491,205	Line 11, Max Fee Calculation Table
Principal Paid on Existing Debt Funded Project Costs	-	Page 3 of Appendix E - Service Area A
Financing Costs	33,684,366	See Detail Below
Interest Earnings	(4,624,388)	Page 5 of Appendix E - Service Area A
Pre Credit Recoverable Cost for Impact Fee	\$ 138,551,183	Sum of Above
Credit for Ad Valorem Revenues	(1,756,407)	Page 8 of Appendix E - Service Area A
Maximum Recoverable Cost for Impact Fee	\$ 136,794,776	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees.
Reference is Service Area A column, line 11 on the Max Fee Calculation Table.

Principal Paid on Existing Debt Funded Project Costs:

Not Applicable to Service Area A.

Financing Costs:

Represents the interest costs associated with debt financing the new impact fee project costs. It is assumed one-half of the new impact fee project costs will be funded through new debt issues (Page 7 of Appendix E - Service Area A). Interest costs are derived from forecasted debt issues.

New Annual Debt Service	\$ 88,429,969	(Page 3 of Appendix E - Service Area A)
Existing Annual Debt Service	-	(Page 3 of Appendix E - Service Area A)
Principal Component	(54,745,603)	(Page 4 of Appendix E - Service Area A)
Financing Costs	\$ 33,684,366	

Interest Earnings:

Represents the interest earned on cash flows. Assumes a 0.55% annual interest rate based on the City's current annual return as of 02/28/2015. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 5 of Appendix E - Service Area A.

Pre Credit Recoverable Cost for Impact Fee

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Interest Earnings.

Credit for Ad Valorem Revenues:

In 2001, the Impact Fee Statute was amended to include a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for impact fee capital improvements. The credit recognizes ad valorem revenues used to fund the debt service of debt financed impact fee eligible projects and assumes that all non-debt funded impact fee eligible project costs will be funded solely through impact fee revenues or non-ad valorem revenue sources. Reference is page 8 of Appendix E - Service Area A.

Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Ad Valorem Revenues.
This is the maximum cost that can be recovered through impact fees.

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area B

Recoverable Impact Fee CIP Costs	\$ 13,642,966	Line 11, Max Fee Calculation Table
Principal Paid on Existing Debt Funded Project Costs	(104,946)	Page 3 of Appendix E - Service Area B
Financing Costs	2,427,184	See Detail Below
Interest Earnings	(484,758)	Page 5 of Appendix E - Service Area B
Pre Credit Recoverable Cost for Impact Fee	\$ 15,480,446	Sum of Above
Credit for Ad Valorem Revenues	(42,150)	Page 8 of Appendix E - Service Area B
Maximum Recoverable Cost for Impact Fee	\$ 15,438,296	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees.
Reference is Service Area B column, line 11 on the Max Fee Calculation Table.

Principal Paid on Existing Debt Funded Project Costs:

Represents the portion of principal paid for existing debt funded project costs assuming an interest rate provided by the City, level debt service payments and a debt issue in 2010.

Financing Costs:

Represents the interest costs associated with debt financing the new impact fee project costs. It is assumed one-half of the new impact fee project costs will be funded through new debt issues (Page 7 of Appendix E - Service Area B). Interest costs are derived from forecasted debt issues.

New Annual Debt Service	\$ 9,124,984	(Page 3 of Appendix E - Service Area B)
Existing Annual Debt Service	449,673	(Page 3 of Appendix E - Service Area B)
Principal Component	(7,147,473)	(Page 4 of Appendix E - Service Area B)
Financing Costs	\$ 2,427,184	

Interest Earnings:

Represents the interest earned on cash flows. Assumes a 0.55% annual interest rate based on the City's current annual return as of 02/28/2015. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 5 of Appendix E - Service Area B.

Pre Credit Recoverable Cost for Impact Fee

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Interest Earnings.

Credit for Ad Valorem Revenues:

In 2001, the Impact Fee Statute was amended to include a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for impact fee capital improvements. The credit recognizes ad valorem revenues used to fund the debt service of debt financed impact fee eligible projects and assumes that all non-debt funded impact fee eligible project costs will be funded solely through impact fee revenues or non-ad valorem revenue sources. Reference is page 8 of Appendix E - Service Area B.

Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Ad Valorem Revenues.
This is the maximum cost that can be recovered through impact fees.

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area C

Recoverable Impact Fee CIP Costs	\$ 72,082,122	Line 11, Max Fee Calculation Table
Principal Paid on Existing Debt Funded Project Costs	(70,406)	Page 3 of Appendix E - Service Area C
Financing Costs	22,210,657	See Detail Below
Interest Earnings	(3,034,039)	Page 5 of Appendix E - Service Area C
Pre Credit Recoverable Cost for Impact Fee	\$ 91,188,335	Sum of Above
Credit for Ad Valorem Revenues	(808,251)	Page 8 of Appendix E - Service Area C
Maximum Recoverable Cost for Impact Fee	\$ 90,380,084	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees.
Reference is Service Area C column, line 11 on the Max Fee Calculation Table.

Principal Paid on Existing Debt Funded Project Costs:

Represents the portion of principal paid for existing debt funded project costs assuming an interest rate provided by the City, level debt service payments and a debt issue in 2014.

Financing Costs:

Represents the interest costs associated with debt financing the new impact fee project costs. It is assumed one-half of the new impact fee project costs will be funded through new debt issues (Page 7 of Appendix E - Service Area C). Interest costs are derived from forecasted debt issues.

New Annual Debt Service	\$ 57,423,076	(Page 3 of Appendix E - Service Area C)
Existing Annual Debt Service	1,249,574	(Page 3 of Appendix E - Service Area C)
Principal Component	(36,461,993)	(Page 4 of Appendix E - Service Area C)
Financing Costs	\$ 22,210,657	

Interest Earnings:

Represents the interest earned on cash flows. Assumes a 0.55% annual interest rate based on the City's current annual return as of 02/28/2015. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 5 of Appendix E - Service Area C.

Pre Credit Recoverable Cost for Impact Fee

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Interest Earnings.

Credit for Ad Valorem Revenues:

In 2001, the Impact Fee Statute was amended to include a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for impact fee capital improvements. The credit recognizes ad valorem revenues used to fund the debt service of debt financed impact fee eligible projects and assumes that all non-debt funded impact fee eligible project costs will be funded solely through impact fee revenues or non-ad valorem revenue sources. Reference is page 8 of Appendix E - Service Area C.

Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Ad Valorem Revenues.
This is the maximum cost that can be recovered through impact fees.

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area D

Recoverable Impact Fee CIP Costs	\$ 21,956,253	Line 11, Max Fee Calculation Table
Principal Paid on Existing Debt Funded Project Costs	-	Page 3 of Appendix E - Service Area D
Financing Costs	6,754,720	See Detail Below
Interest Earnings	(930,744)	Page 5 of Appendix E - Service Area D
Pre Credit Recoverable Cost for Impact Fee	\$ 27,780,229	Sum of Above
Credit for Ad Valorem Revenues	(86,104)	Page 8 of Appendix E - Service Area D
Maximum Recoverable Cost for Impact Fee	\$ 27,694,125	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees.
Reference is Service Area D column, line 11 on the Max Fee Calculation Table.

Principal Paid on Existing Debt Funded Project Costs:

Not Applicable to Service Area D.

Financing Costs:

Represents the interest costs associated with debt financing the new impact fee project costs. It is assumed one-half of the new impact fee project costs will be funded through new debt issues (Page 7 of Appendix E - Service Area D). Interest costs are derived from forecasted debt issues.

New Annual Debt Service	\$ 17,732,847	(Page 3 of Appendix E - Service Area D)
Existing Annual Debt Service	-	(Page 3 of Appendix E - Service Area D)
Principal Component	(10,978,127)	(Page 4 of Appendix E - Service Area D)
Financing Costs	\$ 6,754,720	

Interest Earnings:

Represents the interest earned on cash flows. Assumes a 0.55% annual interest rate based on the City's current annual return as of 02/28/2015. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 5 of Appendix E - Service Area D.

Pre Credit Recoverable Cost for Impact Fee

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Interest Earnings.

Credit for Ad Valorem Revenues:

In 2001, the Impact Fee Statute was amended to include a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for impact fee capital improvements. The credit recognizes ad valorem revenues used to fund the debt service of debt financed impact fee eligible projects and assumes that all non-debt funded impact fee eligible project costs will be funded solely through impact fee revenues or non-ad valorem revenue sources. Reference is page 8 of Appendix E - Service Area D.

Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Ad Valorem Revenues.
This is the maximum cost that can be recovered through impact fees.

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area E

Recoverable Impact Fee CIP Costs	\$ 48,286,140	Line 11, Max Fee Calculation Table
Principal Paid on Existing Debt Funded Project Costs	(574,906)	Page 3 of Appendix E - Service Area E
Financing Costs	14,666,416	See Detail Below
Interest Earnings	(1,953,180)	Page 5 of Appendix E - Service Area E
Pre Credit Recoverable Cost for Impact Fee	\$ 60,424,470	Sum of Above
Credit for Ad Valorem Revenues	(386,264)	Page 8 of Appendix E - Service Area E
Maximum Recoverable Cost for Impact Fee	\$ 60,038,206	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees.
Reference is Service Area E column, line 11 on the Max Fee Calculation Table.

Principal Paid on Existing Debt Funded Project Costs:

Represents the portion of principal paid for existing debt funded project costs assuming an interest rate provided by the City, level debt service payments and debt issues in 2010 and 2014.

Financing Costs:

Represents the interest costs associated with debt financing the new impact fee project costs. It is assumed one-half of the new impact fee project costs will be funded through new debt issues (Page 7 of Appendix E - Service Area E). Interest costs are derived from forecasted debt issues.

New Annual Debt Service	\$ 36,206,524	(Page 3 of Appendix E - Service Area E)
Existing Annual Debt Service	3,611,064	(Page 3 of Appendix E - Service Area E)
Principal Component	(25,151,173)	(Page 4 of Appendix E - Service Area E)
Financing Costs	\$ 14,666,416	

Interest Earnings:

Represents the interest earned on cash flows. Assumes a 0.55% annual interest rate based on the City's current annual return as of 02/28/2015. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 5 of Appendix E - Service Area E.

Pre Credit Recoverable Cost for Impact Fee

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Interest Earnings.

Credit for Ad Valorem Revenues:

In 2001, the Impact Fee Statute was amended to include a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for impact fee capital improvements. The credit recognizes ad valorem revenues used to fund the debt service of debt financed impact fee eligible projects and assumes that all non-debt funded impact fee eligible project costs will be funded solely through impact fee revenues or non-ad valorem revenue sources. Reference is page 8 of Appendix E - Service Area E.

Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Ad Valorem Revenues.
This is the maximum cost that can be recovered through impact fees.

**Appendix E – Plan for Awarding the
Transportation Impact Fee Credit Supporting Exhibits**

(as prepared by NewGen Strategies.)

City of Denton 2015 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Appendix E - Impact Fee Calculation Assumptions
Service Area A

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.55%
Annual Service Unit Growth ⁽²⁾	6,217
Portion of Projects Funded by Existing Debt ⁽³⁾	\$ -
Non-debt Funded New Project Cost ⁽⁴⁾	54,745,603
New Project Cost Funded Through New Debt ⁽⁵⁾	54,745,603
Total Recoverable Project Cost ⁽⁶⁾	\$ 109,491,205

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁷⁾</u>	<u>Interest⁽⁸⁾</u>	<u>Term</u>
1	\$ 5,474,560	3.30%	20
2	5,474,560	4.05%	20
3	5,474,560	4.80%	20
4	5,474,560	5.50%	20
5	5,474,560	5.50%	20
6	5,474,560	5.50%	20
7	5,474,560	5.50%	20
8	5,474,560	5.50%	20
9	5,474,560	5.50%	20
10	5,474,560	5.50%	20
Total	\$ 54,745,603		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽⁹⁾</u>
1	\$ 8,211,840
2	10,949,121
3	10,949,121
4	10,949,121
5	10,949,121
6	10,949,121
7	10,949,121
8	10,949,121
9	10,949,121
10	13,686,401
Total	\$ 109,491,205

- (1) City's current annual return as of 2015
- (2) Derived from the 10-year Growth Projections Report, Table 7
- (3) Not Applicable for this Area
- (4) Assumes 50% of new project costs funded through sources other than debt
- (5) Assumes 50% of new project costs funded through new debt issues
- (6) Line 11 of the Max Fee Table Report
- (7) Assumes new debt issued in equal annual amounts
- (8) Estimated interest cost provided by City Staff
- (9) Assumes new debt proceeds expended over a 2-year timeframe with Year 10 bond proceeds spent in one year; Non-debt funded capital expenditures made in equal annual amounts

City of Denton 2015 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Appendix E - Impact Fee Calculation Assumptions
Service Area B

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.55%
Annual Service Unit Growth ⁽²⁾	1,225
Portion of Projects Funded by Existing Debt ⁽³⁾	\$ 1,603,285
Non-debt Funded New Project Cost ⁽⁴⁾	6,390,547
New Project Cost Funded Through New Debt ⁽⁵⁾	5,649,134
Total Recoverable Project Cost ⁽⁶⁾	\$ 13,642,966

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁷⁾</u>	<u>Interest⁽⁸⁾</u>	<u>Term</u>
1	\$ 564,913	3.30%	20
2	564,913	4.05%	20
3	564,913	4.80%	20
4	564,913	5.50%	20
5	564,913	5.50%	20
6	564,913	5.50%	20
7	564,913	5.50%	20
8	564,913	5.50%	20
9	564,913	5.50%	20
10	564,913	5.50%	20
Total	\$ 5,649,134		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽⁹⁾</u>
1	\$ 902,976
2	1,203,968
3	1,203,968
4	1,203,968
5	1,203,968
6	1,203,968
7	1,203,968
8	1,203,968
9	1,203,968
10	1,504,960
Total	\$ 12,039,681

- (1) City's current annual return as of 2015
- (2) Derived from the 10-year Growth Projections Report, Table 7
- (3) Existing funding assumption made by staff for credit calculation; result of multiple refundings and a change in methodology to consolidated bond balances
- (4) Assumes 50% of new project costs funded through sources other than debt
- (5) Assumes 50% of new project costs funded through new debt issues
- (6) Line 11 of the Max Fee Table Report
- (7) Assumes new debt issued in equal annual amounts
- (8) Estimated interest cost provided by City Staff
- (9) Assumes new debt proceeds expended over a 2-year timeframe with Year 10 bond proceeds spent in one year; Non-debt funded capital expenditures made in equal annual amounts

City of Denton 2015 Roadway Impact Fee Study
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Appendix E - Impact Fee Calculation Assumptions
Service Area C

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.55%
Annual Service Unit Growth ⁽²⁾	4,139
Portion of Projects Funded by Existing Debt ⁽³⁾	\$ 982,676
Non-debt Funded New Project Cost ⁽⁴⁾	35,549,723
New Project Cost Funded Through New Debt ⁽⁵⁾	35,549,723
Total Recoverable Project Cost ⁽⁶⁾	\$ 72,082,122

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁷⁾</u>	<u>Interest⁽⁸⁾</u>	<u>Term</u>
1	\$ 3,554,972	3.30%	20
2	3,554,972	4.05%	20
3	3,554,972	4.80%	20
4	3,554,972	5.50%	20
5	3,554,972	5.50%	20
6	3,554,972	5.50%	20
7	3,554,972	5.50%	20
8	3,554,972	5.50%	20
9	3,554,972	5.50%	20
10	3,554,972	5.50%	20
Total	\$ 35,549,723		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽⁹⁾</u>
1	\$ 5,332,458
2	7,109,945
3	7,109,945
4	7,109,945
5	7,109,945
6	7,109,945
7	7,109,945
8	7,109,945
9	7,109,945
10	8,887,431
Total	\$ 71,099,446

- (1) City's current annual return as of 2015
- (2) Derived from the 10-year Growth Projections Report, Table 7
- (3) Existing funding assumption made by staff for credit calculation; result of multiple refundings and a change in methodology to consolidated bond balances
- (4) Assumes 50% of new project costs funded through sources other than debt
- (5) Assumes 50% of new project costs funded through new debt issues
- (6) Line 11 of the Max Fee Table Report
- (7) Assumes new debt issued in equal annual amounts
- (8) Estimated interest cost provided by City Staff
- (9) Assumes new debt proceeds expended over a 2-year timeframe with Year 10 bond proceeds spent in one year; Non-debt funded capital expenditures made in equal annual amounts

City of Denton 2015 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees
Appendix E - Impact Fee Calculation Assumptions
Service Area C

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	\$ 245,627	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 245,627
2	245,627	262,741	-	-	-	-	-	-	-	-	508,367
3	245,627	262,741	280,443	-	-	-	-	-	-	-	788,810
4	245,627	262,741	280,443	297,478	-	-	-	-	-	-	1,086,288
5	245,627	262,741	280,443	297,478	297,478	-	-	-	-	-	1,383,765
6	245,627	262,741	280,443	297,478	297,478	297,478	-	-	-	-	1,681,243
7	245,627	262,741	280,443	297,478	297,478	297,478	297,478	-	-	-	1,978,721
8	245,627	262,741	280,443	297,478	297,478	297,478	297,478	297,478	-	-	2,276,198
9	245,627	262,741	280,443	297,478	297,478	297,478	297,478	297,478	297,478	-	2,573,676
10	245,627	262,741	280,443	297,478	297,478	297,478	297,478	297,478	297,478	297,478	2,871,154
11	245,627	262,741	280,443	297,478	297,478	297,478	297,478	297,478	297,478	297,478	2,871,154
12	245,627	262,741	280,443	297,478	297,478	297,478	297,478	297,478	297,478	297,478	2,871,154
13	245,627	262,741	280,443	297,478	297,478	297,478	297,478	297,478	297,478	297,478	2,871,154
14	245,627	262,741	280,443	297,478	297,478	297,478	297,478	297,478	297,478	297,478	2,871,154
15	245,627	262,741	280,443	297,478	297,478	297,478	297,478	297,478	297,478	297,478	2,871,154
16	245,627	262,741	280,443	297,478	297,478	297,478	297,478	297,478	297,478	297,478	2,871,154
17	245,627	262,741	280,443	297,478	297,478	297,478	297,478	297,478	297,478	297,478	2,871,154
18	245,627	262,741	280,443	297,478	297,478	297,478	297,478	297,478	297,478	297,478	2,871,154
19	245,627	262,741	280,443	297,478	297,478	297,478	297,478	297,478	297,478	297,478	2,871,154
20	245,627	262,741	280,443	297,478	297,478	297,478	297,478	297,478	297,478	297,478	2,871,154
21	-	262,741	280,443	297,478	297,478	297,478	297,478	297,478	297,478	297,478	2,625,527
22	-	-	280,443	297,478	297,478	297,478	297,478	297,478	297,478	297,478	2,362,787
23	-	-	-	297,478	297,478	297,478	297,478	297,478	297,478	297,478	2,082,344
24	-	-	-	-	297,478	297,478	297,478	297,478	297,478	297,478	1,784,866
25	-	-	-	-	-	297,478	297,478	297,478	297,478	297,478	1,487,389
26	-	-	-	-	-	-	297,478	297,478	297,478	297,478	1,189,911
27	-	-	-	-	-	-	-	297,478	297,478	297,478	892,433
28	-	-	-	-	-	-	-	-	297,478	297,478	594,955
29	-	-	-	-	-	-	-	-	-	297,478	297,478
\$	4,912,531	\$ 5,254,811	\$ 5,608,856	\$ 5,949,554	\$ 5,949,554	\$ 5,949,554	\$ 5,949,554	\$ 5,949,554	\$ 5,949,554	\$ 5,949,554	\$ 57,423,076

City of Denton 2015 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees
Appendix E - Impact Fee Calculation Assumptions

II. Summary of Annual Expenses

Year	New Annual Debt Service ⁽¹⁾	Annual Capital Expenditures ⁽²⁾	Annual Bond Proceeds ⁽²⁾	Existing Annual Debt Service ⁽³⁾	Annual Credit ⁽⁴⁾	Total Expense
1	\$ 245,627	\$ 5,332,458	\$ (3,554,972)	\$ 69,421	\$ (2,375)	\$ 2,090,158
2	508,367	7,109,945	(3,554,972)	69,421	(8,647)	4,124,113
3	788,810	7,109,945	(3,554,972)	69,421	(19,123)	4,394,080
4	1,086,288	7,109,945	(3,554,972)	69,421	(34,081)	4,676,599
5	1,383,765	7,109,945	(3,554,972)	69,421	(53,175)	4,954,983
6	1,681,243	7,109,945	(3,554,972)	69,421	(76,314)	5,229,322
7	1,978,721	7,109,945	(3,554,972)	69,421	(103,411)	5,499,703
8	2,276,198	7,109,945	(3,554,972)	69,421	(134,380)	5,766,212
9	2,573,676	7,109,945	(3,554,972)	69,421	(169,138)	6,028,931
10	2,871,154	8,887,431	(3,554,972)	69,421	(207,607)	8,065,426
11	2,871,154	-	-	69,421	-	2,940,575
12	2,871,154	-	-	69,421	-	2,940,575
13	2,871,154	-	-	69,421	-	2,940,575
14	2,871,154	-	-	69,421	-	2,940,575
15	2,871,154	-	-	69,421	-	2,940,575
16	2,871,154	-	-	69,421	-	2,940,575
17	2,871,154	-	-	69,421	-	2,940,575
18	2,871,154	-	-	-	-	2,871,154
19	2,871,154	-	-	-	-	2,871,154
20	2,625,527	-	-	-	-	2,625,527
21	2,362,787	-	-	-	-	2,362,787
22	2,082,344	-	-	-	-	2,082,344
23	1,784,866	-	-	-	-	1,784,866
24	1,487,389	-	-	-	-	1,487,389
25	1,189,911	-	-	-	-	1,189,911
26	892,433	-	-	-	-	892,433
27	594,955	-	-	-	-	594,955
28	297,478	-	-	-	-	297,478
29	\$ 57,423,076	\$ 71,099,446	\$ (35,549,723)	\$ 1,249,574	\$ (808,251)	\$ 93,414,123

City of Denton 2015 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Appendix E - Impact Fee Calculation Assumptions

III. Summary of Principal Paid to Date for Existing Debt⁽³⁾

	2014	2015	Total Paid to Date
Debt	\$ 34,590	35,816	<u>70,406</u>

IV. Summary of Debt Financing

Existing Debt Funded Project Costs ⁽⁶⁾	982,676
-Less Principal PTD	70,406
Outstanding Debt Principal	912,270
New Project Costs Debt Principal ⁽⁵⁾	35,549,723
Principal Component	<u>\$ 36,461,993</u>

- (1) Appendix E - Service Area C, Page 2
- (2) Appendix E - Service Area C, Page 1
- (3) Existing debt funded project costs assuming City's estimated average cost of outstanding system debt and constant annual debt service payments.
- (4) Appendix E - Service Area C, Page 7
- (5) Appendix E - Service Area C, Page 1

City of Denton 2015 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees Appendix E - Impact Fee Calculation Assumptions Service Area C

<u>Year</u>	<u>Impact Fee</u>	<u>Service Units</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ 2,184	4,139	\$ 9,038,008	\$ 2,090,158	\$ 6,947,850	19,107	6,966,957
2	2,184	4,139	9,038,008	4,124,113	4,913,895	51,831	11,932,683
3	2,184	4,139	9,038,008	4,394,080	4,643,928	78,401	16,655,012
4	2,184	4,139	9,038,008	4,676,599	4,361,409	103,596	21,120,017
5	2,184	4,139	9,038,008	4,954,983	4,083,025	127,388	25,330,431
6	2,184	4,139	9,038,008	5,229,322	3,808,686	149,791	29,288,908
7	2,184	4,139	9,038,008	5,499,703	3,538,305	170,819	32,998,033
8	2,184	4,139	9,038,008	5,766,212	3,271,796	190,487	36,460,316
9	2,184	4,139	9,038,008	6,028,931	3,009,078	208,807	39,678,200
10	2,184	4,139	9,038,008	8,065,426	972,582	220,905	40,871,687
11	-	-	-	2,940,575	(2,940,575)	216,708	38,147,820
12	-	-	-	2,940,575	(2,940,575)	201,726	35,408,972
13	-	-	-	2,940,575	(2,940,575)	186,663	32,655,060
14	-	-	-	2,940,575	(2,940,575)	171,516	29,886,002
15	-	-	-	2,940,575	(2,940,575)	156,286	27,101,714
16	-	-	-	2,940,575	(2,940,575)	140,973	24,302,112
17	-	-	-	2,940,575	(2,940,575)	125,575	21,487,112
18	-	-	-	2,940,575	(2,940,575)	110,093	18,656,630
19	-	-	-	2,871,154	(2,871,154)	94,716	15,880,192
20	-	-	-	2,871,154	(2,871,154)	79,445	13,088,484
21	-	-	-	2,625,527	(2,625,527)	64,766	10,527,723
22	-	-	-	2,362,787	(2,362,787)	51,405	8,216,341
23	-	-	-	2,082,344	(2,082,344)	39,463	6,173,461
24	-	-	-	1,784,866	(1,784,866)	29,046	4,417,640
25	-	-	-	1,487,389	(1,487,389)	20,207	2,950,458
26	-	-	-	1,189,911	(1,189,911)	12,955	1,773,503
27	-	-	-	892,433	(892,433)	7,300	888,370
28	-	-	-	594,955	(594,955)	3,250	296,664
29	-	-	-	297,478	(297,478)	814	(0)
			90,380,084	93,414,123		3,034,039	

City of Denton 2015 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Appendix E - Impact Fee Calculation Assumptions

Service Area C

<u>Year</u>	<u>Number of Years to End of Period</u>	<u>Future Value Escalation</u>		<u>Annual Service Units</u>		<u>Annual Expense</u>	
		<u>Interest Rate Factor</u>	<u>Recovery Fee Factor</u>	<u>Actual</u>	<u>Escalated</u>	<u>Actual</u>	<u>Escalated</u>
1	29	1.1692	1.0000	4,139	4,839	\$ 2,090,158	\$ 2,443,824
2	28	1.1628	1.0000	4,139	4,813	4,124,113	4,795,560
3	27	1.1564	1.0000	4,139	4,787	4,394,080	5,081,531
4	26	1.1501	1.0000	4,139	4,760	4,676,599	5,378,668
5	25	1.1438	1.0000	4,139	4,734	4,954,983	5,667,671
6	24	1.1376	1.0000	4,139	4,708	5,229,322	5,948,751
7	23	1.1314	1.0000	4,139	4,683	5,499,703	6,222,108
8	22	1.1252	1.0000	4,139	4,657	5,766,212	6,487,940
9	21	1.1190	1.0000	4,139	4,632	6,028,931	6,746,437
10	20	1.1129	1.0000	4,139	4,606	8,065,426	8,975,929
11	19	1.1068	1.0000	-	-	2,940,575	3,254,634
12	18	1.1007	1.0000	-	-	2,940,575	3,236,832
13	17	1.0947	1.0000	-	-	2,940,575	3,219,127
14	16	1.0887	1.0000	-	-	2,940,575	3,201,518
15	15	1.0828	1.0000	-	-	2,940,575	3,184,006
16	14	1.0769	1.0000	-	-	2,940,575	3,166,590
17	13	1.0710	1.0000	-	-	2,940,575	3,149,269
18	12	1.0651	1.0000	-	-	2,940,575	3,132,043
19	11	1.0593	1.0000	-	-	2,871,154	3,041,374
20	10	1.0535	1.0000	-	-	2,871,154	3,024,738
21	9	1.0477	1.0000	-	-	2,625,527	2,750,843
22	8	1.0420	1.0000	-	-	2,362,787	2,462,021
23	7	1.0363	1.0000	-	-	2,082,344	2,157,931
24	6	1.0306	1.0000	-	-	1,784,866	1,839,538
25	5	1.0250	1.0000	-	-	1,487,389	1,524,563
26	4	1.0194	1.0000	-	-	1,189,911	1,212,979
27	3	1.0138	1.0000	-	-	892,433	904,758
28	2	1.0083	1.0000	-	-	594,955	599,873
29	1	1.0028	1.0000	-	-	297,478	298,296
					47,220	93,414,123	103,109,354

Total Escalated Expense for Entire Period	\$ 103,109,354
Total Escalated Service Units	47,220
Impact Fee for Service Area C	\$ 2,184

City of Denton 2015 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees
Appendix E - Impact Fee Calculation Assumptions
Service Area C

Impact Fee Project Name ⁽¹⁾	Impact Fee Project No. ⁽¹⁾	Cost In Service Area ⁽¹⁾	Impact Fee Recoverable Cost ⁽²⁾	Debt Funded ⁽³⁾ Existing	Debt Funded ⁽³⁾ Proposed	Non-Debt Funded ⁽³⁾	Impact Fee Recoverable Cost
Milam (1)	C-1	\$ 2,561,000	\$ 845,896	\$ -	\$ 422,948	\$ 422,948	\$ 845,896
Milam (2)	C-2	8,136,500	2,687,479	-	1,343,740	1,343,740	2,687,479
Bobcat	C-3	2,692,000	889,165	-	444,583	444,583	889,165
Ganzer	C-4	2,728,500	901,552	-	450,776	450,776	901,552
Ganzer/Long (1)	C-5	3,529,000	1,163,626	-	582,813	582,813	1,163,626
Ganzer/Long (2)	C-6	15,614,000	5,157,291	-	2,578,646	2,578,646	5,157,291
Barthold-Cindy Collector	C-7	1,292,000	426,747	-	213,373	213,373	426,747
Masch Branch-H-35 Collector	C-8	1,603,000	529,470	-	264,735	264,735	529,470
HOD E-W Secondary Arterial (1)	C-9	1,286,000	424,765	-	212,382	212,382	424,765
HOD E-W Secondary Arterial (2)	C-10	1,447,000	477,943	-	238,971	238,971	477,943
HOD E-W Secondary Arterial (3)	C-11	20,940,000	6,916,464	-	3,458,232	3,458,232	6,916,464
HWY 1173 (1)	C-12	403,900	133,408	-	66,704	66,704	133,408
HWY 1173 (2)	C-13	961,600	317,616	-	158,808	158,808	317,616
Elm (US 377)	C-14	1,075,000	355,072	-	177,536	177,536	355,072
Hercules	C-15	1,760,000	581,327	-	290,663	290,663	581,327
Westgate (E-W)	C-16	4,353,000	1,437,792	-	718,896	718,896	1,437,792
Riney (1)	C-17	1,381,000	456,143	-	228,072	228,072	456,143
Riney (2)	C-18	1,263,000	417,168	-	208,584	208,584	417,168
Masch Branch-H-35 Secondary Arterial	C-19	10,767,000	3,556,331	-	1,778,166	1,778,166	3,556,331
Jim Christal (1)	C-20	3,758,500	1,241,429	-	620,715	620,715	1,241,429
Jim Christal (2)	A-2, C-21	3,466,500	1,144,982	-	572,491	572,491	1,144,982
Jim Christal (3)	A-3, C-22	7,196,500	2,376,998	-	1,188,499	1,188,499	2,376,998
Nail (1)	C-23	1,598,500	527,983	-	263,992	263,992	527,983
Nail (2)	C-24	3,501,000	1,156,377	-	578,189	578,189	1,156,377
Thomas J Egan (1)	C-25	1,270,000	419,480	-	209,740	209,740	419,480
Thomas J Egan (2)	C-26	1,339,000	442,271	-	221,135	221,135	442,271
Future Loop (1)	C-27	1,316,400	434,806	-	217,403	217,403	434,806
Masch Branch (1)	C-28	3,448,000	1,138,872	-	569,436	569,436	1,138,872
Masch Branch (2)	C-29	5,485,000	1,811,691	-	905,845	905,845	1,811,691
Masch Branch (3)	C-30	9,246,000	3,053,946	-	1,526,973	1,526,973	3,053,946
Lover's Lane (1)	C-31	1,089,000	359,696	-	179,848	179,848	359,696
Lover's Lane (2)	C-32	1,119,000	369,605	-	184,802	184,802	369,605
Lover's Lane (3)	C-33	333,000	109,990	-	54,995	54,995	109,990
Lover's Lane (4)	C-34	4,920,000	1,625,072	-	812,536	812,536	1,625,072
Barthold	C-35	2,119,500	700,069	-	350,035	350,035	700,069
Cindy (1)	C-36	1,067,500	352,594	-	176,297	176,297	352,594
Cindy (2)	C-37	3,365,000	1,108,154	-	554,077	554,077	1,108,154
Cindy (3)	C-38	2,884,000	952,583	-	476,291	476,291	952,583
Cindy (4)	C-39	6,476,000	2,139,017	-	1,069,509	1,069,509	2,139,017
Cindy (5)	C-40	2,806,000	926,619	-	463,410	463,410	926,619
Western (1)	C-41	4,650,000	1,535,891	-	767,946	767,946	1,535,891
Milam-Bobcat Col	C-42	2,842,000	938,710	-	469,355	469,355	938,710
HOD N-S Secondary Arterial (1)	C-43	5,079,000	1,677,589	-	838,795	838,795	1,677,589
HOD N-S Secondary Arterial (2)	C-44	3,899,000	1,287,836	-	643,918	643,918	1,287,836
Heritage Trail	C-45	6,239,000	2,060,736	-	1,030,368	1,030,368	2,060,736
Bonnie Brae (1)	C-46	32,903,000	10,867,833	-	5,433,917	5,433,917	10,867,833
Bonnie Brae (2)	C-47	3,603,000	1,190,068	-	595,034	595,034	1,190,068
Bonnie Brae (3)	C-48, E-14	2,975,108	982,676	982,676	-	-	982,676
Fallmeadow	C-49	810,000	267,542	-	133,771	133,771	267,542
FM 2164 (Locust) (1)	C-50, D-45	2,319,500	766,129	-	383,064	383,064	766,129
FM 2164 (Locust) (2)	C-51, D-46	1,156,900	382,123	-	191,062	191,062	382,123
Roadway Impact Fee Project Total		\$ 218,120,708	\$ 72,082,122	\$ 982,676	\$ 35,549,723	\$ 35,549,723	\$ 72,082,122

(1) 2015 Roadway Impact Fee Study As Assigned to Service Area, Appendix A
(2) Line 11 of the Max Fee Table Report
(3) Based on Contributions by Project and Planned Future Debt Financing

City of Denton 2015 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Appendix E - Impact Fee Calculation Assumptions
 Service Area C

2015 Vehicle Miles (All Service Areas)	544,870
Ten Year Growth in Vehicle Miles (Service Area C) ⁽¹⁾	41,391
Annual Growth in Vehicle Miles	4,139

	1	2	3	4	5	6	7	8	9	10	Total
Total Debt Service Eligible for Impact Fees	\$ 315,047	\$ 577,788	\$ 858,231	\$ 1,155,708	\$ 1,453,186	\$ 1,750,664	\$ 2,048,141	\$ 2,345,619	\$ 2,643,097	\$ 2,940,575	\$ 16,088,056
2015 Vehicle Miles plus Service Area C Growth	549,009	553,148	557,288	561,427	565,566	569,705	573,844	577,983	582,122	586,261	
Total Debt Service Eligible for Impact Fees per Vehicle Mile	\$ 0.57	\$ 1.04	\$ 1.54	\$ 2.06	\$ 2.57	\$ 3.07	\$ 3.57	\$ 4.06	\$ 4.54	\$ 5.02	
Annual Growth in Service Area C Vehicle Miles (Cumulative)	4,139	8,278	12,417	16,556	20,695	24,834	28,973	33,112	37,251	41,391	
Annual Ad Valorem Revenue Generated by Vehicle Miles for Debt Service Eligible for Impact Fees	\$ 2,375	\$ 8,647	\$ 19,123	\$ 34,081	\$ 53,175	\$ 76,314	\$ 103,411	\$ 134,380	\$ 169,138	\$ 207,607	\$ 808,251

\$ 808,251

Credit Amount

(1) Line 8 of the Max Fee Table Report

City of Denton 2015 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Appendix E - Impact Fee Calculation Assumptions
Service Area D

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.55%
Annual Service Unit Growth ⁽²⁾	1,424
Portion of Projects Funded by Existing Debt ⁽³⁾	\$ -
Non-debt Funded New Project Cost ⁽⁴⁾	10,978,127
New Project Cost Funded Through New Debt ⁽⁵⁾	10,978,127
Total Recoverable Project Cost ⁽⁶⁾	\$ 21,956,253

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁷⁾</u>	<u>Interest⁽⁸⁾</u>	<u>Term</u>
1	\$ 1,097,813	3.30%	20
2	1,097,813	4.05%	20
3	1,097,813	4.80%	20
4	1,097,813	5.50%	20
5	1,097,813	5.50%	20
6	1,097,813	5.50%	20
7	1,097,813	5.50%	20
8	1,097,813	5.50%	20
9	1,097,813	5.50%	20
10	1,097,813	5.50%	20
Total	\$ 10,978,127		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽⁹⁾</u>
1	\$ 1,646,719
2	2,195,625
3	2,195,625
4	2,195,625
5	2,195,625
6	2,195,625
7	2,195,625
8	2,195,625
9	2,195,625
10	2,744,532
Total	\$ 21,956,253

- (1) City's current annual return as of 2015
- (2) Derived from the 10-year Growth Projections Report, Table 7
- (3) Not Applicable for this Area
- (4) Assumes 50% of new project costs funded through sources other than debt
- (5) Assumes 50% of new project costs funded through new debt issues
- (6) Line 11 of the Max Fee Table Report
- (7) Assumes new debt issued in equal annual amounts
- (8) Estimated interest cost provided by City Staff
- (9) Assumes new debt proceeds expended over a 2-year timeframe with Year 10 bond proceeds spent in one year; Non-debt funded capital expenditures made in equal annual amounts

City of Denton 2015 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees
Appendix E - Impact Fee Calculation Assumptions
Service Area D

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	\$ 75,852	-	-	-	-	-	-	-	-	-	\$ 75,852
2	81,137	81,137	-	-	-	-	-	-	-	-	156,989
3	81,137	81,137	86,604	-	-	-	-	-	-	-	243,593
4	81,137	81,137	86,604	91,864	-	-	-	-	-	-	335,457
5	81,137	81,137	86,604	91,864	91,864	-	-	-	-	-	427,321
6	81,137	81,137	86,604	91,864	91,864	91,864	-	-	-	-	519,185
7	81,137	81,137	86,604	91,864	91,864	91,864	91,864	-	-	-	611,050
8	81,137	81,137	86,604	91,864	91,864	91,864	91,864	91,864	-	-	702,914
9	81,137	81,137	86,604	91,864	91,864	91,864	91,864	91,864	91,864	-	794,778
10	81,137	81,137	86,604	91,864	91,864	91,864	91,864	91,864	91,864	91,864	886,642
11	81,137	81,137	86,604	91,864	91,864	91,864	91,864	91,864	91,864	91,864	886,642
12	81,137	81,137	86,604	91,864	91,864	91,864	91,864	91,864	91,864	91,864	886,642
13	81,137	81,137	86,604	91,864	91,864	91,864	91,864	91,864	91,864	91,864	886,642
14	81,137	81,137	86,604	91,864	91,864	91,864	91,864	91,864	91,864	91,864	886,642
15	81,137	81,137	86,604	91,864	91,864	91,864	91,864	91,864	91,864	91,864	886,642
16	81,137	81,137	86,604	91,864	91,864	91,864	91,864	91,864	91,864	91,864	886,642
17	81,137	81,137	86,604	91,864	91,864	91,864	91,864	91,864	91,864	91,864	886,642
18	81,137	81,137	86,604	91,864	91,864	91,864	91,864	91,864	91,864	91,864	886,642
19	81,137	81,137	86,604	91,864	91,864	91,864	91,864	91,864	91,864	91,864	886,642
20	81,137	81,137	86,604	91,864	91,864	91,864	91,864	91,864	91,864	91,864	886,642
21	81,137	81,137	86,604	91,864	91,864	91,864	91,864	91,864	91,864	91,864	886,642
22	-	-	86,604	91,864	91,864	91,864	91,864	91,864	91,864	91,864	810,790
23	-	-	86,604	91,864	91,864	91,864	91,864	91,864	91,864	91,864	729,653
24	-	-	86,604	91,864	91,864	91,864	91,864	91,864	91,864	91,864	643,050
25	-	-	-	91,864	91,864	91,864	91,864	91,864	91,864	91,864	551,185
26	-	-	-	91,864	91,864	91,864	91,864	91,864	91,864	91,864	459,321
27	-	-	-	91,864	91,864	91,864	91,864	91,864	91,864	91,864	367,457
28	-	-	-	91,864	91,864	91,864	91,864	91,864	91,864	91,864	275,593
29	-	-	-	91,864	91,864	91,864	91,864	91,864	91,864	91,864	183,728
	\$ 1,517,041	\$ 1,622,741	\$ 1,732,073	\$ 1,837,285	\$ 1,837,285	\$ 1,837,285	\$ 1,837,285	\$ 1,837,285	\$ 1,837,285	\$ 1,837,285	\$ 17,732,847

City of Denton 2015 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees
Appendix E - Impact Fee Calculation Assumptions

II. Summary of Annual Expenses

Year	New Annual Debt Service ⁽¹⁾	Annual Capital Expenditures ⁽²⁾	Annual Bond Proceeds ⁽²⁾	Existing Annual Debt Service ⁽³⁾	Annual Credit ⁽⁴⁾	Total Expense
1	\$ 75,852	\$ 1,646,719	\$ (1,097,813)	\$ -	\$ (198)	\$ 624,561
2	156,989	2,195,625	(1,097,813)	-	(816)	1,253,986
3	243,593	2,195,625	(1,097,813)	-	(1,894)	1,339,511
4	335,457	2,195,625	(1,097,813)	-	(3,470)	1,429,800
5	427,321	2,195,625	(1,097,813)	-	(5,510)	1,519,623
6	519,185	2,195,625	(1,097,813)	-	(8,013)	1,608,985
7	611,050	2,195,625	(1,097,813)	-	(10,975)	1,697,887
8	702,914	2,195,625	(1,097,813)	-	(14,391)	1,786,335
9	794,778	2,195,625	(1,097,813)	-	(18,260)	1,874,331
10	886,642	2,744,532	(1,097,813)	-	(22,576)	2,510,785
11	886,642	-	-	-	-	886,642
12	886,642	-	-	-	-	886,642
13	886,642	-	-	-	-	886,642
14	886,642	-	-	-	-	886,642
15	886,642	-	-	-	-	886,642
16	886,642	-	-	-	-	886,642
17	886,642	-	-	-	-	886,642
18	886,642	-	-	-	-	886,642
19	886,642	-	-	-	-	886,642
20	886,642	-	-	-	-	886,642
21	810,790	-	-	-	-	810,790
22	729,653	-	-	-	-	729,653
23	643,050	-	-	-	-	643,050
24	551,185	-	-	-	-	551,185
25	459,321	-	-	-	-	459,321
26	367,457	-	-	-	-	367,457
27	275,593	-	-	-	-	275,593
28	183,728	-	-	-	-	183,728
29	91,864	-	-	-	-	91,864
	<u>\$ 17,732,847</u>	<u>\$ 21,956,253</u>	<u>\$ (10,978,127)</u>	<u>\$ -</u>	<u>\$ (86,104)</u>	<u>\$ 28,624,870</u>

City of Denton 2015 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Appendix E - Impact Fee Calculation Assumptions

III. Summary of Principal Paid to Date for Existing Debt⁽³⁾

The projects related to this area have not been previously funded with debt.

IV. Summary of Debt Financing

Existing Debt Funded Project Costs ⁽⁵⁾	-
-Less Principal PTD	-
Outstanding Debt Principal	-
<u>New Project Costs Debt Principal⁽⁵⁾</u>	<u>10,978,127</u>
Principal Component	\$ 10,978,127

- (1) Appendix E - Service Area D, Page 2
- (2) Appendix E - Service Area D, Page 1
- (3) Not Applicable for this Area
- (4) Appendix E - Service Area D, Page 7
- (5) Appendix E - Service Area D, Page 1

City of Denton 2015 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees Appendix E - Impact Fee Calculation Assumptions Service Area D

<u>Year</u>	<u>Impact Fee</u>	<u>Service Units</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ 1,945	1,424	\$ 2,769,413	\$ 624,561	\$ 2,144,852	5,898	2,150,750
2	1,945	1,424	2,769,413	1,253,986	1,515,427	15,997	3,682,174
3	1,945	1,424	2,769,413	1,339,511	1,429,902	24,184	5,136,259
4	1,945	1,424	2,769,413	1,429,800	1,339,613	31,933	6,507,805
5	1,945	1,424	2,769,413	1,519,623	1,249,789	39,230	7,796,824
6	1,945	1,424	2,769,413	1,608,985	1,160,428	46,074	9,003,326
7	1,945	1,424	2,769,413	1,697,887	1,071,525	52,465	10,127,316
8	1,945	1,424	2,769,413	1,786,335	983,078	58,404	11,168,797
9	1,945	1,424	2,769,413	1,874,331	895,081	63,890	12,127,768
10	1,945	1,424	2,769,413	2,510,785	258,627	67,414	12,453,810
11	-	-	-	886,642	(886,642)	66,058	11,633,225
12	-	-	-	886,642	(886,642)	61,544	10,808,127
13	-	-	-	886,642	(886,642)	57,006	9,978,491
14	-	-	-	886,642	(886,642)	52,443	9,144,292
15	-	-	-	886,642	(886,642)	47,855	8,305,505
16	-	-	-	886,642	(886,642)	43,242	7,462,105
17	-	-	-	886,642	(886,642)	38,603	6,614,066
18	-	-	-	886,642	(886,642)	33,939	5,761,363
19	-	-	-	886,642	(886,642)	29,249	4,903,969
20	-	-	-	886,642	(886,642)	24,534	4,041,861
21	-	-	-	810,790	(810,790)	20,001	3,251,071
22	-	-	-	729,653	(729,653)	15,874	2,537,292
23	-	-	-	643,050	(643,050)	12,187	1,906,429
24	-	-	-	551,185	(551,185)	8,970	1,364,213
25	-	-	-	459,321	(459,321)	6,240	911,132
26	-	-	-	367,457	(367,457)	4,001	547,676
27	-	-	-	275,593	(275,593)	2,254	274,338
28	-	-	-	183,728	(183,728)	1,004	91,613
29	-	-	-	91,864	(91,864)	251	(0)
			27,694,125	28,624,870		930,744	

City of Denton 2015 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Appendix E - Impact Fee Calculation Assumptions
 Service Area D

Year	Number of Years to End of Period	Future Value Escalation		Annual Service Units		Annual Expense		
		Interest Rate Factor	Recovery Fee Factor	Actual	Escalated	Actual	Escalated	
1	29	1.1692	1.0000	1,424	1,664	\$ 624,561	\$ 730,240	
2	28	1.1628	1.0000	1,424	1,655	1,253,986	1,458,147	
3	27	1.1564	1.0000	1,424	1,646	1,339,511	1,549,077	
4	26	1.1501	1.0000	1,424	1,637	1,429,800	1,644,447	
5	25	1.1438	1.0000	1,424	1,628	1,519,623	1,738,195	
6	24	1.1376	1.0000	1,424	1,619	1,608,985	1,830,342	
7	23	1.1314	1.0000	1,424	1,611	1,697,887	1,920,911	
8	22	1.1252	1.0000	1,424	1,602	1,786,335	2,009,922	
9	21	1.1190	1.0000	1,424	1,593	1,874,331	2,097,396	
10	20	1.1129	1.0000	1,424	1,584	2,510,785	2,794,227	
11	19	1.1068	1.0000	-	-	886,642	981,338	
12	18	1.1007	1.0000	-	-	886,642	975,970	
13	17	1.0947	1.0000	-	-	886,642	970,631	
14	16	1.0887	1.0000	-	-	886,642	965,322	
15	15	1.0828	1.0000	-	-	886,642	960,042	
16	14	1.0769	1.0000	-	-	886,642	954,791	
17	13	1.0710	1.0000	-	-	886,642	949,568	
18	12	1.0651	1.0000	-	-	886,642	944,374	
19	11	1.0593	1.0000	-	-	886,642	939,208	
20	10	1.0535	1.0000	-	-	886,642	934,071	
21	9	1.0477	1.0000	-	-	810,790	849,489	
22	8	1.0420	1.0000	-	-	729,653	760,298	
23	7	1.0363	1.0000	-	-	643,050	666,392	
24	6	1.0306	1.0000	-	-	551,185	568,069	
25	5	1.0250	1.0000	-	-	459,321	470,801	
26	4	1.0194	1.0000	-	-	367,457	374,581	
27	3	1.0138	1.0000	-	-	275,593	279,399	
28	2	1.0083	1.0000	-	-	183,728	185,247	
29	1	1.0028	1.0000	-	-	91,864	92,117	
				16,241		28,624,870		31,594,609

Total Escalated Expense for Entire Period	\$ 31,594,609
Total Escalated Service Units	16,241
Impact Fee for Service Area D	\$ 1,945

City of Denton 2015 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Appendix E - Impact Fee Calculation Assumptions

Service Area D

Impact Fee Project Name ⁽¹⁾	Impact Fee Project No. ⁽¹⁾	Cost in Service Area ⁽¹⁾	Impact Fee Recoverable Cost ⁽²⁾	Debt Funded ⁽³⁾	Proposed	Non-Debt Funded ⁽³⁾	Impact Fee Recoverable Cost
FM 2164-Brittany Hill Collector (1)	D-1	\$ 2,603,000	\$ 315,481	\$ -	\$ 157,741	\$ 157,741	\$ 315,481
FM 2164-Brittany Hill Collector (2)	D-2	395,500	47,934	-	23,967	23,967	47,934
FM 2164-Brittany Hill Collector (3)	D-3	2,115,000	256,336	-	128,168	128,168	256,336
FM 2153 (Reassigned)	D-4	2,217,400	268,747	-	134,373	134,373	268,747
FM 2164-FM 2153 (Reassigned) PA	D-5	8,426,000	1,021,223	-	510,611	510,611	1,021,223
FM 2164-FM 2153 (Reassigned) PA	D-6	18,496,000	2,241,697	-	1,120,848	1,120,848	2,241,697
FM 2164-FM 2153 SA (1)	D-7	7,593,000	920,264	-	460,132	460,132	920,264
FM 2164-FM 2153 SA (2)	D-8	7,617,000	923,173	-	461,586	461,586	923,173
Shepard	D-9	2,265,000	274,516	-	137,258	137,258	274,516
Gribble Springs-Chapman Collector	D-10	7,471,000	905,478	-	452,739	452,739	905,478
Mesquite Ridge (1)	D-11	2,431,000	294,635	-	147,317	147,317	294,635
Mesquite Ridge (2)	D-12	356,500	43,207	-	21,604	21,604	43,207
Mesquite Ridge (3)	D-13	447,000	54,176	-	27,088	27,088	54,176
Brittany Hill (1)	D-14	5,620,000	681,138	-	340,569	340,569	681,138
Brittany Hill (2)	D-15	880,500	106,716	-	53,358	53,358	106,716
FM 2153 (1)	D-16	1,069,200	129,586	-	64,793	64,793	129,586
FM 2153 (2)	D-17	250,600	30,372	-	15,186	15,186	30,372
FM 2153 (Reassigned)+FM 2153 Collector	D-18	3,416,000	414,016	-	207,008	207,008	414,016
FM 2153 (3)	D-19	699,400	84,767	-	42,383	42,383	84,767
Green Valley (1)	D-20	1,069,000	129,562	-	64,781	64,781	129,562
Green Valley (2)	D-21	2,954,000	358,022	-	179,011	179,011	358,022
Milam (3)	D-22	667,000	80,840	-	40,420	40,420	80,840
Bobcat (3)	D-23	621,000	75,265	-	37,632	37,632	75,265
Cooper Creek (1)	D-24	17,427,000	2,112,135	-	1,056,068	1,056,068	2,112,135
Cooper Creek (2)	D-25	2,776,000	336,448	-	168,224	168,224	336,448
Cooper Creek (3)	D-26	4,490,000	544,184	-	272,092	272,092	544,184
Golden Circle	D-27	7,476,000	906,084	-	453,042	453,042	906,084
Hartlee Field (1)	D-28	658,000	79,749	-	39,874	39,874	79,749
Hartlee Field (2)	D-29	8,472,000	1,026,798	-	513,399	513,399	1,026,798
Long (1)	D-30	431,000	52,237	-	26,118	26,118	52,237
Long (2)	D-31	1,658,000	200,948	-	100,474	100,474	200,948
Hartlee Field (3)	D-32	2,129,000	258,033	-	129,016	129,016	258,033
Kings-Windsor Collector	D-33	356,000	43,147	-	21,573	21,573	43,147
Windsor	D-34	6,095,000	738,708	-	369,354	369,354	738,708
Mingo (2)	D-35	6,923,000	839,061	-	419,530	419,530	839,061
Post Oak (1)	D-36	8,870,000	1,075,035	-	537,518	537,518	1,075,035
Post Oak/Cooper Creek	D-37	4,626,000	560,667	-	280,333	280,333	560,667
Post Oak (2)	D-38	4,504,000	545,880	-	272,940	272,940	545,880
Post Oak (3)	D-39	1,273,500	154,947	-	77,173	77,173	154,947
Post Oak (4)	D-40	1,534,000	185,919	-	92,960	92,960	185,919
Deerwood	D-41	1,624,000	196,827	-	98,414	98,414	196,827
Hartlee-Cooper Col	D-42	3,914,000	474,373	-	237,186	237,186	474,373
Sherman (1)	D-43	3,764,200	456,217	-	228,109	228,109	456,217
Sherman (2)	D-44	8,545,200	1,035,670	-	517,835	517,835	1,035,670
FM 2164 (Locust) (1)	C-50,D-45	2,319,500	281,121	-	140,561	140,561	281,121
FM 2164 (Locust) (2)	C-51,D-46	1,156,900	140,215	-	70,108	70,108	140,215
Roadway Impact Fee Project Total		\$ 180,757,700	\$ 21,956,253	\$ -	\$ 10,978,127	\$ 10,978,127	\$ 21,956,253

(1) 2015 Roadway Impact Fee Study As Assigned to Service Area, Appendix A

(2) Line 11 of the Max Fee Table Report

(3) Based on Contributions by Project and Planned Future Debt Financing

City of Denton 2015 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees
Appendix E - Impact Fee Calculation Assumptions
Service Area D

2015 Vehicle Miles (All Service Areas) 544,870

Ten Year Growth in Vehicle Miles (Service Area D) ⁽¹⁾ 14,236

Annual Growth in Vehicle Miles 1,424

	1	2	3	4	5	6	7	8	9	10	Total
Total Debt Service Eligible for Impact Fees	\$ 75,852	\$ 156,989	\$ 243,593	\$ 335,457	\$ 427,321	\$ 519,185	\$ 611,050	\$ 702,914	\$ 794,778	\$ 886,642	\$ 4,753,781
2015 Vehicle Miles plus Service Area D Growth	546,294	547,718	549,141	550,565	551,988	553,412	554,836	556,259	557,683	559,106	
Total Debt Service Eligible for Impact Fees per Vehicle Mile	\$ 0.14	\$ 0.29	\$ 0.44	\$ 0.61	\$ 0.77	\$ 0.94	\$ 1.10	\$ 1.26	\$ 1.43	\$ 1.59	
Annual Growth in Service Area D Vehicle Miles (Cumulative)	1,424	2,847	4,271	5,694	7,118	8,542	9,965	11,389	12,812	14,236	
Annual Ad Valorem Revenue Generated by Vehicle Miles for Debt Service Eligible for Impact Fees	\$ 198	\$ 816	\$ 1,894	\$ 3,470	\$ 5,510	\$ 8,013	\$ 10,975	\$ 14,391	\$ 18,260	\$ 22,576	\$ 86,104
Credit Amount											\$ 86,104

(1) Line 8 of the Max Fee Table Report

City of Denton 2015 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Appendix E - Impact Fee Calculation Assumptions
Service Area E

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.55%
Annual Service Unit Growth ⁽²⁾	2,679
Portion of Projects Funded by Existing Debt ⁽³⁾	\$ 3,311,189
Non-debt Funded New Project Cost ⁽⁴⁾	22,560,061
New Project Cost Funded Through New Debt ⁽⁵⁾	22,414,890
Total Recoverable Project Cost ⁽⁶⁾	\$ 48,286,140

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁷⁾</u>	<u>Interest⁽⁸⁾</u>	<u>Term</u>
1	\$ 2,241,489	3.30%	20
2	2,241,489	4.05%	20
3	2,241,489	4.80%	20
4	2,241,489	5.50%	20
5	2,241,489	5.50%	20
6	2,241,489	5.50%	20
7	2,241,489	5.50%	20
8	2,241,489	5.50%	20
9	2,241,489	5.50%	20
10	2,241,489	5.50%	20
Total	\$ 22,414,890		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽⁹⁾</u>
1	\$ 3,373,121
2	4,497,495
3	4,497,495
4	4,497,495
5	4,497,495
6	4,497,495
7	4,497,495
8	4,497,495
9	4,497,495
10	5,621,869
Total	\$ 44,974,951

- (1) City's current annual return as of 2015
- (2) Derived from the 10-year Growth Projections Report, Table 7
- (3) Existing funding assumption made by staff for credit calculation; result of multiple refundings and a change in methodology to consolidated bond balances
- (4) Assumes 50% of new project costs funded through sources other than debt
- (5) Assumes 50% of new project costs funded through new debt issues
- (6) Line 11 of the Max Fee Table Report
- (7) Assumes new debt issued in equal annual amounts
- (8) Estimated interest cost provided by City Staff
- (9) Assumes new debt proceeds expended over a 2-year timeframe with Year 10 bond proceeds spent in one year; Non-debt funded capital expenditures made in equal annual amounts

City of Denton 2015 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees
Appendix E - Impact Fee Calculation Assumptions
Service Area E

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	\$ 154,873	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 154,873
2	154,873	165,664	-	-	-	-	-	-	-	-	320,537
3	154,873	165,664	176,825	-	-	-	-	-	-	-	497,362
4	154,873	165,664	176,825	187,566	-	-	-	-	-	-	684,928
5	154,873	165,664	176,825	187,566	187,566	-	-	-	-	-	872,495
6	154,873	165,664	176,825	187,566	187,566	187,566	-	-	-	-	1,060,061
7	154,873	165,664	176,825	187,566	187,566	187,566	187,566	-	-	-	1,247,627
8	154,873	165,664	176,825	187,566	187,566	187,566	187,566	187,566	-	-	1,435,194
9	154,873	165,664	176,825	187,566	187,566	187,566	187,566	187,566	187,566	-	1,622,760
10	154,873	165,664	176,825	187,566	187,566	187,566	187,566	187,566	187,566	187,566	1,810,326
11	154,873	165,664	176,825	187,566	187,566	187,566	187,566	187,566	187,566	187,566	1,810,326
12	154,873	165,664	176,825	187,566	187,566	187,566	187,566	187,566	187,566	187,566	1,810,326
13	154,873	165,664	176,825	187,566	187,566	187,566	187,566	187,566	187,566	187,566	1,810,326
14	154,873	165,664	176,825	187,566	187,566	187,566	187,566	187,566	187,566	187,566	1,810,326
15	154,873	165,664	176,825	187,566	187,566	187,566	187,566	187,566	187,566	187,566	1,810,326
16	154,873	165,664	176,825	187,566	187,566	187,566	187,566	187,566	187,566	187,566	1,810,326
17	154,873	165,664	176,825	187,566	187,566	187,566	187,566	187,566	187,566	187,566	1,810,326
18	154,873	165,664	176,825	187,566	187,566	187,566	187,566	187,566	187,566	187,566	1,810,326
19	154,873	165,664	176,825	187,566	187,566	187,566	187,566	187,566	187,566	187,566	1,810,326
20	154,873	165,664	176,825	187,566	187,566	187,566	187,566	187,566	187,566	187,566	1,810,326
21	-	165,664	176,825	187,566	187,566	187,566	187,566	187,566	187,566	187,566	1,655,453
22	-	-	176,825	187,566	187,566	187,566	187,566	187,566	187,566	187,566	1,489,789
23	-	-	-	187,566	187,566	187,566	187,566	187,566	187,566	187,566	1,312,964
24	-	-	-	-	187,566	187,566	187,566	187,566	187,566	187,566	1,125,398
25	-	-	-	-	-	187,566	187,566	187,566	187,566	187,566	937,831
26	-	-	-	-	-	-	187,566	187,566	187,566	187,566	750,265
27	-	-	-	-	-	-	-	187,566	187,566	187,566	562,699
28	-	-	-	-	-	-	-	-	187,566	187,566	375,133
29	-	-	-	-	-	-	-	-	-	187,566	187,566
\$	3,097,460	\$ 3,313,275	\$ 3,536,508	\$ 3,751,326	\$ 3,751,326	\$ 3,751,326	\$ 3,751,326	\$ 3,751,326	\$ 3,751,326	\$ 3,751,326	\$ 36,206,524

City of Denton 2015 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees
Appendix E - Impact Fee Calculation Assumptions

II. Summary of Annual Expenses

Year	New Annual Debt Service ⁽¹⁾	Annual Capital Expenditures ⁽²⁾	Annual Bond Proceeds ⁽²⁾	Existing Annual Debt Service ⁽³⁾	Annual Credit ⁽⁴⁾	Total Expense
1	\$ 154,873	\$ 3,373,121	\$ (2,241,489)	\$ 233,918	\$ (1,902)	\$ 1,518,521
2	320,537	4,497,495	(2,241,489)	233,918	(5,400)	2,805,061
3	497,362	4,497,495	(2,241,489)	233,918	(10,631)	2,976,655
4	684,928	4,497,495	(2,241,489)	233,918	(17,724)	3,157,128
5	872,495	4,497,495	(2,241,489)	233,918	(26,550)	3,335,868
6	1,060,061	4,497,495	(2,241,489)	233,918	(37,083)	3,512,902
7	1,247,627	4,497,495	(2,241,489)	233,918	(49,300)	3,688,251
8	1,435,194	4,497,495	(2,241,489)	233,918	(63,175)	3,861,942
9	1,622,760	4,497,495	(2,241,489)	233,918	(78,687)	4,033,997
10	1,810,326	5,621,869	(2,241,489)	233,918	(95,811)	5,328,813
11	1,810,326	-	-	233,918	-	2,044,244
12	1,810,326	-	-	233,918	-	2,044,244
13	1,810,326	-	-	233,918	-	2,044,244
14	1,810,326	-	-	233,918	-	2,044,244
15	1,810,326	-	-	84,054	-	1,894,380
16	1,810,326	-	-	84,054	-	1,894,380
17	1,810,326	-	-	84,054	-	1,894,380
18	1,810,326	-	-	-	-	1,810,326
19	1,810,326	-	-	-	-	1,810,326
20	1,810,326	-	-	-	-	1,655,453
21	1,655,453	-	-	-	-	1,489,789
22	1,489,789	-	-	-	-	1,312,964
23	1,312,964	-	-	-	-	1,125,398
24	1,125,398	-	-	-	-	937,831
25	937,831	-	-	-	-	750,265
26	750,265	-	-	-	-	562,699
27	562,699	-	-	-	-	375,133
28	375,133	-	-	-	-	187,566
29	187,566	-	-	-	-	
	\$ 36,206,524	\$ 44,974,951	\$ (22,414,890)	\$ 3,611,064	\$ (386,264)	\$ 61,991,385

City of Denton 2015 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Appendix E - Impact Fee Calculation Assumptions

III. Summary of Principal Paid to Date for Existing Debt⁽³⁾

	2010 Debt	2014 Debt	Total Paid to Date
2010	\$ 74,672	\$ -	74,672
2011	77,319	-	77,319
2012	80,059	-	80,059
2013	82,897	-	82,897
2014	85,835	41,881	127,716
2015	88,878	43,365	132,243
Total Paid to Date	\$ 489,660	\$ 85,246	\$ 574,906

IV. Summary of Debt Financing

Existing Debt Funded Project Costs ⁽⁶⁾	3,311,189
-Less Principal PTD	574,906
Outstanding Debt Principal	2,736,283
<u>New Project Costs Debt Principal⁽⁵⁾</u>	<u>22,414,890</u>
Principal Component	\$ 25,151,173

- (1) Appendix E - Service Area E, Page 2
- (2) Appendix E - Service Area E, Page 1
- (3) Existing debt funded project costs assuming City's estimated average cost of outstanding system debt and constant annual debt service payments.
- (4) Appendix E - Service Area E, Page 7
- (5) Appendix E - Service Area E, Page 1

City of Denton 2015 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees Appendix E - Impact Fee Calculation Assumptions Service Area E

<u>Year</u>	<u>Impact Fee</u>	<u>Service Units</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ 2,241	2,679	\$ 6,003,821	\$ 1,518,521	\$ 4,485,300	\$ 12,335	4,497,634
2	2,241	2,679	6,003,821	2,805,061	3,198,760	33,534	7,729,928
3	2,241	2,679	6,003,821	2,976,655	3,027,165	50,839	10,807,932
4	2,241	2,679	6,003,821	3,157,128	2,846,693	67,272	13,721,897
5	2,241	2,679	6,003,821	3,335,868	2,667,952	82,807	16,472,656
6	2,241	2,679	6,003,821	3,512,902	2,490,919	97,450	19,061,025
7	2,241	2,679	6,003,821	3,688,251	2,315,569	111,203	21,487,798
8	2,241	2,679	6,003,821	3,861,942	2,141,878	124,073	23,753,749
9	2,241	2,679	6,003,821	4,033,997	1,969,823	136,063	25,859,635
10	2,241	2,679	6,003,821	5,328,813	675,008	144,084	26,678,727
11	-	-	-	2,044,244	(2,044,244)	141,111	24,775,594
12	-	-	-	2,044,244	(2,044,244)	130,644	22,861,994
13	-	-	-	2,044,244	(2,044,244)	120,119	20,937,870
14	-	-	-	2,044,244	(2,044,244)	109,537	19,003,162
15	-	-	-	1,894,380	(1,894,380)	99,308	17,208,090
16	-	-	-	1,894,380	(1,894,380)	89,435	15,403,145
17	-	-	-	1,894,380	(1,894,380)	79,508	13,588,273
18	-	-	-	1,894,380	(1,894,380)	69,526	11,763,420
19	-	-	-	1,810,326	(1,810,326)	59,720	10,012,814
20	-	-	-	1,810,326	(1,810,326)	50,092	8,252,580
21	-	-	-	1,655,453	(1,655,453)	40,837	6,637,963
22	-	-	-	1,489,789	(1,489,789)	32,412	5,180,585
23	-	-	-	1,312,964	(1,312,964)	24,883	3,892,504
24	-	-	-	1,125,398	(1,125,398)	18,314	2,785,420
25	-	-	-	937,831	(937,831)	12,741	1,860,329
26	-	-	-	750,265	(750,265)	8,169	1,118,233
27	-	-	-	562,699	(562,699)	4,603	560,137
28	-	-	-	375,133	(375,133)	2,049	187,053
29	-	-	-	187,566	(187,566)	513	(0)
			60,038,206	61,991,385		1,953,180	

City of Denton 2015 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Appendix E - Impact Fee Calculation Assumptions

Service Area E

<u>Year</u>	<u>Number of Years to End of Period</u>	<u>Future Value Escalation</u>		<u>Annual Service Units</u>		<u>Annual Expense</u>		
		<u>Interest Rate Factor</u>	<u>Recovery Fee Factor</u>	<u>Actual</u>	<u>Escalated</u>	<u>Actual</u>	<u>Escalated</u>	
1	29	1.1692	1.0000	2,679	3,133	\$ 1,518,521	\$ 1,775,462	
2	28	1.1628	1.0000	2,679	3,116	2,805,061	3,261,752	
3	27	1.1564	1.0000	2,679	3,098	2,976,655	3,442,351	
4	26	1.1501	1.0000	2,679	3,082	3,157,128	3,631,088	
5	25	1.1438	1.0000	2,679	3,065	3,335,868	3,815,675	
6	24	1.1376	1.0000	2,679	3,048	3,512,902	3,996,192	
7	23	1.1314	1.0000	2,679	3,031	3,688,251	4,172,716	
8	22	1.1252	1.0000	2,679	3,015	3,861,942	4,345,322	
9	21	1.1190	1.0000	2,679	2,998	4,033,997	4,514,085	
10	20	1.1129	1.0000	2,679	2,982	5,328,813	5,930,381	
11	19	1.1068	1.0000	-	-	2,044,244	2,262,574	
12	18	1.1007	1.0000	-	-	2,044,244	2,250,198	
13	17	1.0947	1.0000	-	-	2,044,244	2,237,889	
14	16	1.0887	1.0000	-	-	2,044,244	2,225,648	
15	15	1.0828	1.0000	-	-	1,894,380	2,051,204	
16	14	1.0769	1.0000	-	-	1,894,380	2,039,984	
17	13	1.0710	1.0000	-	-	1,894,380	2,028,825	
18	12	1.0651	1.0000	-	-	1,894,380	2,017,728	
19	11	1.0593	1.0000	-	-	1,810,326	1,917,654	
20	10	1.0535	1.0000	-	-	1,810,326	1,907,165	
21	9	1.0477	1.0000	-	-	1,655,453	1,734,468	
22	8	1.0420	1.0000	-	-	1,489,789	1,552,359	
23	7	1.0363	1.0000	-	-	1,312,964	1,360,623	
24	6	1.0306	1.0000	-	-	1,125,398	1,159,869	
25	5	1.0250	1.0000	-	-	937,831	961,271	
26	4	1.0194	1.0000	-	-	750,265	764,810	
27	3	1.0138	1.0000	-	-	562,699	570,470	
28	2	1.0083	1.0000	-	-	375,133	378,233	
29	1	1.0028	1.0000	-	-	187,566	188,082	
						30,567	61,991,385	68,494,079

Total Escalated Expense for Entire Period	\$ 68,494,079
Total Escalated Service Units	30,567
Impact Fee for Service Area E	\$ 2,241

City of Denton 2015 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Appendix E - Impact Fee Calculation Assumptions Service Area E

Impact Fee Project Name ⁽¹⁾	Impact Fee Project No. ⁽¹⁾	Cost in		Impact Fee		Debt Funded ⁽³⁾		Non-Debt		Impact Fee Recoverable Cost
		Service Area ⁽¹⁾		Recoverable Cost ⁽²⁾		Existing	Proposed	Funded ⁽³⁾		
Mingo (1)	E-1	\$ 13,406,000	\$	5,361,337	\$	-	\$ 2,680,668	\$ 2,680,668	\$	5,361,337
Lattimore	E-2	807,000		322,736		-	161,368	161,368		322,736
Audra	E-3	1,505,000		601,881		-	300,940	300,940		601,881
Blagg	E-4	6,701,000		2,679,868		-	1,339,934	1,339,934		2,679,868
McKinney (FM 426)	E-5	4,829,400		1,931,377		-	965,688	965,688		1,931,377
Duchess (1)	E-6	4,125,000		1,649,673		-	824,836	824,836		1,649,673
Duchess (2)	E-7	1,197,000		478,705		-	239,353	239,353		478,705
Morse (1)	E-8	1,706,000		682,265		-	341,132	341,132		682,265
Morse (2)	E-9	2,346,000		938,214		-	469,107	469,107		938,214
Spencer	E-10	2,455,000		981,805		-	490,903	490,903		981,805
Lakeview (1)	E-11	839,000		335,533		-	167,767	167,767		335,533
Lakeview (2)	E-12	1,555,000		621,877		-	310,938	310,938		621,877
Edwards	E-13	3,794,000		1,517,299		-	758,650	758,650		1,517,299
Bonnie Brae (3)	C-48,E-14	2,975,108		1,189,807		1,189,807	-	-		1,189,807
Ruddell	E-15	424,000		169,566		-	84,783	84,783		169,566
Mockingbird	E-16	697,000		278,745		-	139,372	139,372		278,745
Brinker (1)	E-17	4,138,000		1,654,872		-	827,436	827,436		1,654,872
Mayhill (1)	E-18	5,667,507		2,266,553		2,121,382	-	145,171		2,266,553
Mayhill (2)	E-19	1,928,000		771,047		-	385,524	385,524		771,047
Post Oak (5)	E-20	3,465,000		1,385,725		-	692,863	692,863		1,385,725
Post Oak (6)	E-21	2,323,000		929,016		-	464,508	464,508		929,016
Post Oak (7)	E-22	7,746,000		3,097,786		-	1,548,893	1,548,893		3,097,786
Post Oak (8)	E-23	33,321,000		13,325,757		-	6,662,878	6,662,878		13,325,757
Post Oak (9)	E-24	2,800,000		1,119,778		-	559,889	559,889		1,119,778
Lakeview (3)	E-25	1,844,000		737,454		-	368,727	368,727		737,454
Trinity-McKinney Connector (1)	E-26	6,312,000		2,524,299		-	1,262,150	1,262,150		2,524,299
Trinity-McKinney Connector (2)	E-27	1,695,000		677,866		-	338,933	338,933		677,866
Roadway Impact Fee Project		55,300		55,300		-	27,650	27,650		55,300
Total		\$ 120,656,315	\$	48,286,140	\$ 3,311,189	\$ 22,414,890	\$ 22,560,061	\$	\$ 48,286,140	

(1) 2015 Roadway Impact Fee Study As Assigned to Service Area, Appendix A
(2) Line 11 of the Max Fee Table Report
(3) Based on Contributions by Project and Planned Future Debt Financing

City of Denton 2015 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Appendix E - Impact Fee Calculation Assumptions
 Service Area E

2015 Vehicle Miles (All Service Areas) 544,870
 Ten Year Growth in Vehicle Miles (Service Area E) ⁽¹⁾ 26,793
 Annual Growth in Vehicle Miles 2,679

	1	2	3	4	5	6	7	8	9	10	Total
Total Debt Service Eligible for Impact Fees	\$ 388,791	\$ 554,455	\$ 731,280	\$ 918,846	\$ 1,106,413	\$ 1,293,979	\$ 1,481,545	\$ 1,669,111	\$ 1,856,678	\$ 2,044,244	\$ 12,045,342
2015 Vehicle Miles plus Service Area E Growth	547,550	550,229	552,908	555,588	558,267	560,946	563,626	566,305	568,984	571,663	
Total Debt Service Eligible for Impact Fees per Vehicle Mile	\$ 0.71	\$ 1.01	\$ 1.32	\$ 1.65	\$ 1.98	\$ 2.31	\$ 2.63	\$ 2.95	\$ 3.26	\$ 3.58	
Annual Growth in Service Area E Vehicle Miles (Cumulative)	2,679	5,359	8,038	10,717	13,397	16,076	18,755	21,434	24,114	26,793	
Annual Ad Valorem Revenue Generated by Vehicle Miles for Debt Service Eligible for Impact Fees	\$ 1,902	\$ 5,400	\$ 10,631	\$ 17,724	\$ 26,550	\$ 37,083	\$ 49,300	\$ 63,175	\$ 78,687	\$ 95,811	\$ 386,264
Credit Amount											\$ 386,264

(1) Line 8 of the Max Fee Table Report

EXHIBIT B

SCHEDULE 1

MAXIMUM ASSESSABLE ROADWAY IMPACT FEE PER SERVICE UNIT

Service Areas	<u>Exhibit B - Schedule 1</u> Maximum Assessable Roadway Impact Fee Per Service Unit	
	Service Area A	\$
Service Area B	\$	1,260
Service Area C	\$	2,184
Service Area D	\$	1,945
Service Area E	\$	2,241

SCHEDULE 2

ROADWAY IMPACT FEE COLLECTION RATE PER SERVICE UNIT

	<u>Exhibit B - Schedule 2</u> Roadway Impact Fee Collection Rate Per Service Unit					
	Assessment Date	Properties platted on or before 7/4/2016; and		On or after 7/5/2016; and		
Building Permit Application Date	On or before 7/4/2017	On or after 7/5/2017		On or after 7/5/2016		
Service Areas	Land Use Type		Land Use Type		Land Use Type	
	Residential	Non-Residential	Residential	Non-Residential	Residential	Non-Residential
A	No Roadway Impact Fee Due		\$408.16	\$306.12	\$408.16	\$306.12
B			\$408.16	\$306.12	\$408.16	\$306.12
C			\$408.16	\$306.12	\$408.16	\$306.12
D			\$408.16	\$306.12	\$408.16	\$306.12
E			\$408.16	\$306.12	\$408.16	\$306.12

**EXHIBIT C
(LAND USE EQUIVALENCY TABLE)**

Exhibit C - Land Use Equivalency Table

Land Use Category	ITE Land Use Code	Development Unit	Trip Gen Rate (PM)	Pass-by Rate	Pass-by Source	Trip Rate	NHIS Trip Length (mi)	NCTCOG Trip Length (mi)	Adj. For O-D	Adj. Trip Length (mi)	Max Trip Length (mi)	Veh-MI Per Dev-Unit
PORT AND TERMINAL												
Truck Terminal	030	Acre	6.55			6.55	14.65	10.02	50%	7.32	6.00	39.30
INDUSTRIAL												
General Light Industrial	110	1,000 SF GFA	0.97			0.97	14.65	10.02	50%	7.33	6.00	5.82
General Heavy Industrial	120	1,000 SF GFA	0.68			0.68	14.65	10.02	50%	7.33	6.00	4.08
Industrial Park	130	1,000 SF GFA	0.85			0.85	14.65	10.02	50%	7.33	6.00	5.10
Warehousing	150	1,000 SF GFA	0.32			0.32	14.65	10.83	50%	7.33	6.00	1.92
Mini-Warehouse	151	1,000 SF GFA	0.26			0.26	14.65	10.83	50%	7.33	6.00	1.56
RESIDENTIAL												
Single-Family Detached Housing	210	Dwelling Unit	1.00			1.00	9.79	17.21	50%	4.90	4.90	4.90
Apartment/Multi-family	220	Dwelling Unit	0.62			0.62	9.79	17.21	50%	4.90	4.90	3.04
Residential Condominium/Townhome	230	Dwelling Unit	0.52			0.52	9.79	17.21	50%	4.90	4.90	2.55
Senior Adult Housing-Detached	251	Dwelling Unit	0.27			0.27	9.79	17.21	50%	4.90	4.90	1.32
Senior Adult Housing-Attached	252	Dwelling Unit	0.25			0.25	9.79	17.21	50%	4.90	4.90	1.23
Assisted Living	254	Beds	0.22			0.22	9.79	17.21	50%	4.90	4.90	1.08
LODGING												
Hotel	310	Room	0.60			0.60	6.43	6.43	50%	3.22	3.22	1.93
Motel/ Other Lodging Facilities	320	Room	0.47			0.47	6.43	6.43	50%	3.22	3.22	1.51
RECREATIONAL												
Golf/Driving Range	432	Tee	1.25			1.25	7.86	6.43	50%	3.93	3.93	4.91
Golf Course	430	Acre	0.30			0.30	7.86	6.43	50%	3.93	3.93	1.18
Recreational Community Center	495	1,000 SF GFA	2.74			2.74	7.86	6.43	50%	3.93	3.93	10.77
Ice Skating Rink	465	1,000 SF GFA	2.36			2.36	7.86	6.43	50%	3.93	3.93	9.27
Miniature Golf Course	431	Hole	0.33			0.33	7.86	6.43	50%	3.93	3.93	1.30
Multiplex Movie Theater	445	Screens	13.64			13.64	7.86	6.43	50%	3.93	3.93	53.61
Racquet / Tennis Club	491	Court	3.35			3.35	7.86	6.43	50%	3.93	3.93	13.17
INSTITUTIONAL												
Church	560	1,000 SF GFA	0.55			0.55	8.31	4.20	50%	4.16	4.16	2.29
Day Care Center	565	1,000 SF GFA	12.34	44%	B	6.91	3.49	4.20	50%	1.75	1.75	12.09
Primary/Middle School (1-8)	522	Students	0.16			0.16	3.49	4.20	50%	1.75	1.75	0.28
High School	530	Students	0.13			0.13	3.49	4.20	50%	1.75	1.75	0.23
Junior / Community College	540	Students	0.12			0.12	10.44	4.20	50%	5.22	5.22	0.63
University / College	550	Students	0.17			0.17	10.44	4.20	50%	5.22	5.22	0.89
MEDICAL												
Clinic	630	1,000 SF GFA	5.18			5.18	9.85	7.55	50%	4.93	4.93	25.54
Hospital	610	1,000 SF GFA	0.93			0.93	9.85	7.55	50%	4.93	4.93	4.58
Nursing Home	620	Beds	0.22			0.22	9.85	7.55	50%	4.93	4.93	1.08
Animal Hospital/Veterinary Clinic	640	1,000 SF GFA	4.72	30%	B	3.30	9.85	7.55	50%	4.93	4.93	16.27
OFFICE												
Corporate Headquarters Building	714	1,000 SF GFA	1.41			1.41	14.65	10.92	50%	7.33	6.00	8.46
General Office Building	710	1,000 SF GFA	1.49			1.49	14.65	10.92	50%	7.33	6.00	8.94
Medical-Dental Office Building	720	1,000 SF GFA	3.57			3.57	9.85	10.92	50%	4.93	4.93	17.60
Single Tenant Office Building	715	1,000 SF GFA	1.74			1.74	14.65	10.92	50%	7.33	6.00	10.44
Office Park	750	1,000 SF GFA	1.48			1.48	14.65	10.92	50%	7.33	6.00	8.88
COMMERCIAL												
Automobile Related												
Automobile Care Center	942	1,000 SF Occ. GLA	3.11	40%	B	1.87	4.45	6.43	50%	2.23	2.23	4.17
Automobile Parts Sales	843	1,000 SF GFA	5.98	43%	A	3.41	4.45	6.43	50%	2.23	2.23	7.60
Gasoline/Service Station	944	Vehicle Fueling Position	13.87	42%	A	8.04	1.20	1.20	50%	0.60	0.60	4.82
Gasoline/Service Station w/ Conv Market	945	Vehicle Fueling Position	13.51	56%	B	5.94	1.20	1.20	50%	0.60	0.60	3.56
Gasoline/Service Station w/ Conv Market and Car Wash	946	Vehicle Fueling Position	13.86	56%	A	6.10	1.20	1.20	50%	0.60	0.60	3.66
New Car Sales	841	1,000 SF GFA	2.62	20%	B	2.10	4.45	6.43	50%	2.23	2.23	4.68
Quick Lubrication Vehicle Shop	941	Service Positions	5.19	40%	B	3.11	4.45	6.43	50%	2.23	2.23	6.94
Self-Service Car Wash	947	Stall	5.54	40%	B	3.32	1.20	1.20	50%	0.60	0.60	1.99
Tire Store	848	1,000 SF GFA	4.15	28%	A	2.99	4.45	6.43	50%	2.23	2.23	6.67
Dining												
Fast Food Restaurant with Drive-Thru Window	934	1,000 SF GFA	32.65	50%	A	16.33	5.64	4.79	50%	2.82	2.82	46.05
Fast Food Restaurant without Drive-Thru Window	933	1,000 SF GFA	26.15	50%	B	13.08	5.64	4.79	50%	2.82	2.82	36.89
High Turnover (Sit-Down) Restaurant	932	1,000 SF GFA	9.85	43%	A	5.61	6.07	4.79	50%	3.04	3.04	17.05
Quality Restaurant	931	1,000 SF GFA	7.49	44%	A	4.19	6.07	4.79	50%	3.04	3.04	12.74
Coffee/Donut Shop with Drive-Thru Window	937	1,000 SF GFA	42.80	70%	A	12.84	4.53	4.79	50%	2.27	2.27	29.15
Other Retail												
Free-Standing Discount Store	815	1,000 SF GFA	4.98	30%	C	3.49	5.60	6.43	50%	2.80	2.80	9.77
Nursery (Garden Center)	817	1,000 SF GFA	6.94	30%	B	4.86	5.60	6.43	50%	2.80	2.80	13.61
Home Improvement Superstore	862	1,000 SF GFA	2.33	48%	A	1.21	5.60	6.43	50%	2.80	2.80	3.39
Pharmacy/Drugstore w/o Drive-Thru Window	880	1,000 SF GFA	8.40	53%	A	3.95	5.60	6.43	50%	2.80	2.80	11.06
Pharmacy/Drugstore w/ Drive-Thru Window	881	1,000 SF GFA	9.91	49%	A	5.05	5.60	6.43	50%	2.80	2.80	14.14
Shopping Center	820	1,000 SF GLA	3.71	34%	A	2.45	5.60	6.43	50%	2.80	2.80	6.86
Supermarket	850	1,000 SF GFA	9.48	36%	A	6.07	5.60	6.43	50%	2.80	2.80	17.00
Toy/Children's Superstore	864	1,000 SF GFA	4.99	30%	B	3.49	5.60	6.43	50%	2.80	2.80	9.77
Department Store	875	1,000 SF GFA	1.87	30%	B	1.31	5.60	6.43	50%	2.80	2.80	3.67
SERVICES												
Walk-In Bank	911	1,000 SF GFA	12.13	40%	B	7.28	4.45	3.39	50%	2.23	2.23	16.23
Drive-In Bank	912	Drive-in Lanes	33.24	47%	A	17.62	4.45	3.39	50%	2.23	2.23	39.29
Hair Salon	918	1,000 SF GLA	1.45	30%	B	1.02	4.45	3.39	50%	2.23	2.23	2.27

Key to Sources of Pass-by Rates:

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

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

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