City of Fort Worth, Texas

Mayor and Council Communication

COUNCIL ACTION: Approved on 5/2/2006

DATE: Tuesday, May 02, 2006
LOG NAME: 60SKYLINE RANCH **REFERENCE NO.: C-21432**

SUBJECT:
Authorize Approval of a Community Facilities Agreement with Wilbow-Skyline Development Corporation for Construction of Water and Sewer Services to Serve Skyline Ranch (Walnut Creek Sanitary Sewer Interceptor, Phase II and III)

RECOMMENDATION:

It is recommended that the City Council authorize the City Manager to execute a Community Facilities Agreement with Wilbow-Skyline Development Corporation, for the installation of water and sewer services to serve Skyline Ranch (Walnut Creek Sanitary Sewer Interceptor, Phase II and III), a future single-family development, located in far southwest Fort Worth.

DISCUSSION:

Wilbow-Skyline Development Corporation, the developer of Skyline Ranch (Walnut Creek Sanitary Sewer Interceptor, Phase II and III), has executed a proposed contract for community facilities to serve a single-family development located in the far southwest part of Fort Worth, south of Aledo and east of Concho Valley Trail (see attached map).

The total cost for water and sewer improvements for this development is $2,657,445. There will be City participation in water pipe (24"/12") oversizing to increase pipe capacity in the development area of Skyline Ranch, Phase I (Walnut Creek Phase III). The City will participate in sewer pipe (33"/8") and (30"/8") oversizing to increase pipe capacity in the drainage area of Walnut Creek Phase II and III. The Developer and City estimated costs for water and sewer improvements are subject to construction inspection fees.

ESTIMATED COSTS:

	DEVELOPER	CITY	TOTAL
WATER WITHIN SKYLINE RANCH (WALNUT CREEK, PHASE III)	$459,307.00	$56,497.00	$515,804.00
SEWER WITHIN SKYLINE RANCH (WALNUT CREEK, PHASE III)	$330,414.00	$0.00	$330,414.00
33	$255,260.00	$1,096,520.00	$1,351,780.00
30	$163,430.00	$243,910.00	$407,340.00
INSPECTION	$24,168.00	$27,939.00	$52,107.00
TOTAL	$1,232,579.00	$1,424,866.00	$2,657,445.00

* BBT Crossing Ltd., a Benbrook developer, will contribute $150,000 toward the City's portion of the construction cost to the 33" sewer trunk main (Walnut Creek, Phase II) before construction begins. BBT Crossing Ltd. will be responsible for the cost and construction of a meter station and will dedicate the appropriate easements.

This development is zoned A-5 and located in COUNCIL DISTRICT 3.

FISCAL INFORMATION/CERTIFICATION:

The Finance Director certifies that funds are available in the current capital budget, as appropriated, of the Water and Sewer Capital Projects Funds.

TO Fund/Account/Centers	FROM Fund/Account/Centers	
	P264 539140 603140034388	$56,497.00
	P274 539140 703140034388	$243,910.00
	P274 539140 703140034387	$1,096,520.00

Submitted for City Manager's Office by:	Marc Ott (6122)
Originating Department Head:	S. Frank Crumb (8207)
Additional Information Contact:	Carrie McBeth (7585)

10/10/19

10:51 AM

COMMUNITY FACILITIES AGREEMENT WITH CITY PARTICIPATION

Developer Company Name: PB Ventana 1, LLC

Address, State, Zip Code: 4001 Maple Avenue Suite 600, Dallas, TX 75219

Phone & Email: 214-954-7025

Authorized Signatory, Title: Peter Pincoffs, Manager

Project Name: Ventana Gravity Sewer and Force Main Line

Brief Description: Sewer

Project Location: Southwest corner of Aledo Road and Chapin School Rd.

Plat Case Number: FP-15-119, FP-17-071, FP-18-139 Plat Name: Ventana

Mapsco: <Mapsco> Council District: City Project Number: 102076

CFA Number: CFA19-0058

COMMUNITY FACILITIES AGREEMENT WITH CITY PARTICIPATION

THE STATE OF TEXAS	§	City Secretary
COUNTY OF TARRANT	§	Contract No. 52889

WHEREAS, PB Ventana 1, LLC, ("Developer"), desires to make certain specific improvements as described below and on the exhibits attached hereto ("Improvements") related to a project generally described as Ventana Gravity Sewer and Force Main Line ("Project") within the City of Fort Worth, Texas ("City"); and

WHEREAS, the City has reviewed the proposed Improvements and desires to have the Developer oversize the proposed Improvements to provide capacity for future development in the area ("Oversized Improvements"); and

WHEREAS, the Developer and the City desire to enter into this Community Facilities Agreement ("CFA" or "Agreement") in connection with the collective Improvements for the Project; and

WHEREAS, the City has reviewed the Project and desires to participate in the Project in accordance with this Agreement as presented by the Cost Summary Table and Exhibits attached hereto and authorized by City Council via M&C 29180 on June 25, 2019; and

WHEREAS, The City's cost participation shall be in an amount not to exceed $1,669,461.00 ("Participation"); and

WHEREAS, the City has requested the Developer to cause, and the Developer agrees to cause, the design, permitting and construction of the Project for which the City will, subject to City Council approval, reimburse the Developer for the City's portion of those costs after City's final acceptance of the Project.

NOW, THEREFORE, for and in consideration of the covenants and conditions contained herein, the City and the Developer do hereby agree as follows:

General Requirements

A. The Policy for the Installation of Community Facilities ("Policy") dated March 2001, approved by the City Council of the City of Fort Worth, as amended, is hereby incorporated into this Agreement as if copied herein verbatim. Developer agrees to comply with all provisions of said Policy in the performance of its duties and obligations hereunder and to cause all contractors hired by Developer to comply with the Policy in connection with the work performed by said contractors.

B. Developer shall provide financial security in conformance with paragraph 6, Section II, of the Policy and recognizes that there shall be no reduction in the collateral until the Project has been completed and the City has officially accepted the Improvements. Developer further acknowledges that said acceptance process requires the Developer's contractor(s) to submit a signed affidavit of bills paid signed by its contractor and consent of surety signed by its surety to ensure the contractor has paid any sub-contractor(s) and suppliers in full. Additionally, the contractor will provide in writing that the contractor has been paid in full by Developer for all the services provided under their contract.

C. Developer agrees to cause the construction of the Improvements contemplated by this Agreement and that said construction shall be completed in a good and workmanlike manner and in accordance with all City standards and the City-approved construction plans, specifications and cost estimates provided for the Project and the exhibits attached hereto.

D. The following checked exhibits describe the Improvements and are incorporated herein: Water (A) ☐, Sewer (A-1) ☒, Paving (B) ☐, Storm Drain (B-1) ☐, Street Lights & Signs (C) ☐.

E. The Developer shall award all contracts for the construction of community facilities in accordance with Section II, paragraph 7 of the Policy and the contracts for the construction of the public infrastructure shall be administered in conformance with paragraph 8, Section II, of the Policy. Developer shall ensure its contractor(s) pays the then-current City-established wage rates.

F. For all Improvements included in this Agreement for which the Developer awards construction contract(s), Developer agrees to the following:

   i. To employ a construction contractor who is approved by the director of the department having jurisdiction over the infrastructure to be constructed, said contractor to meet City's requirements for being prequalified, insured, licensed and bonded to do work in public ways and/or prequalified to perform water/wastewater construction as the case may be.

   ii. To require its contractor to furnish to the City a payment and performance bond in the names of the City and the Developer for one hundred percent (100%) of the contract price of the infrastructure, and a maintenance bond in the name of the City for one hundred percent (100%) of the contract price of the

infrastructure for a period of two (2) years from the date of final acceptance insuring the maintenance and repair of the constructed infrastructure during the term of the maintenance bond. All bonds to be furnished before work is commenced and to meet the requirements of Chapter 2253, Texas Government Code.

iii. To require the contractor(s) it hires to perform the construction work contemplated herein to provide insurance equal to or in excess of the amounts required by the City's standard specifications and contract documents for developer-awarded infrastructure construction contracts. The City shall be named as additional insured on all insurance required by said documents and same will be evidenced on the Certificate of Insurance (ACORD or other state-approved form) supplied by the contractor's insurance provider and bound in the construction contract book.

iv. To require its contractor to give 48 hours advance notice of intent to commence construction to the City's Construction Services Division so that City inspection personnel will be available; to require the contractor to allow the construction to be subject to inspection at any and all times by City inspection forces, to not install or relocate any sanitary sewer, storm drain, or water pipe unless a responsible City inspector is present and gives his consent to proceed, and to make such laboratory tests of materials being used as may be required by the City.

v. To require its contractor to have fully executed contract documents submitted to the City to schedule a Pre-Construction Meeting. The submittal should occur no less than 10 working days prior to the desired date of the meeting. No construction will commence without a City-issued Notice to Proceed to the Developer's contractor.

vi. To delay connections of buildings to service lines of sewer and water mains constructed under this Agreement, if any, until said sewer and water mains and service lines have been completed to the satisfaction of the Water Department.

G. Developer shall provide, at its expense, unless otherwise agreed to by City, all engineering drawings and documents necessary to construct the Improvements under this Agreement.

H. Developer shall cause the installation or adjustment of the required utilities to serve the development or to construct the Improvements required herein.

I. City shall not be responsible for payment of any costs that may be incurred by Developer in the relocation of any utilities that are or may be in conflict with any of the community facilities to be installed hereunder. City will be responsible for the costs of utility relocation necessitated by the City's participation in this Agreement.

J. ***Developer hereby releases and agrees to indemnify, defend and hold the City harmless for any inadequacies in the preliminary plans, specifications and cost estimates supplied by the Developer for this Agreement.***

K. Developer agrees to provide, at its expense, all necessary rights of way and easements across property owned by Developer and required for the construction of the current and future improvements provided for by this Agreement.

L. ***The Developer further covenants and agrees to, and by these presents does hereby, fully indemnify, hold harmless and defend the City, its officers, agents and employees from all suits, actions or claims of any character, whether real or asserted, brought for or on account of any injuries (including death) or damages sustained by any persons or to any property, resulting from or in connection with the construction, design, performance or completion of any work to be performed by said Developer, his contractors, subcontractors, officers, agents or employees, or in consequence of any failure to properly safeguard the work, or on account of any act, intentional or otherwise, neglect or misconduct of said Developer, its contractors, sub-contractors, officers, agents or employees.***

M. ***The Developer will further require its contractors to indemnify, defend and hold harmless the City, its officers, agents and employees from and against any and all claims, suits or causes of action of any nature whatsoever, whether real or asserted, brought for or on account of any injuries or damages to persons or property, including death, resulting from or in any way connected with the construction of the infrastructure contemplated herein, whether or not such injuries, death or damages are caused, in whole or in part, by the alleged negligence of the City of Fort Worth, its officers, servants, or employees. Further, Developer will require its contractors to indemnify and hold harmless the City for any losses, damages, costs or expenses suffered by the City or caused as a result of said contractor's failure to complete the work and construct the improvements in a good and workmanlike manner, free from defects, in conformance with the Policy, and in accordance with all plans and specifications.***

N. Upon completion of all work associated with the construction of the Improvements; Developer will assign to the City a non-exclusive right to enforce the contracts entered into by the Developer with its contractor along with an assignment of all warranties given by the contractor, whether express or implied. Further, Developer agrees that all contracts with any contractor shall include provisions granting to the City the right to enforce such contracts as an express intended third party beneficiary of such contracts.

O. Inspection and material testing fees are required as follows and further apportioned in the Cost Summary Table below

i. Developer shall pay in cash water and wastewater inspection fees and material testing fees equal to two percent (2%) for a total of 4% of the Developer's share of the total construction cost as stated in the construction contract.

ii. Developer shall pay in cash paving and storm drain inspection fees equal to four percent (4%) and material testing fees equal to two percent (2%) for a total of 6% of the Developer's share of the total construction cost as stated in the construction contract.

iii. Developer shall pay in cash the total cost of streetlights or if the City is not installing the streetlights, inspection fees equal to four percent (4%) of the Developer's share of the streetlight construction cost as stated in the construction contract.

iv. Developer shall pay in cash the total cost of street signs necessary for Developer's portion of the Project.

P. COMPLETION WITHIN 2 YEARS

i. The City's obligation to participate (exclusive of front foot charges) in this Agreement shall terminate if the Improvements are not completed within two (2) years; provided, however, if construction of the Improvements has started within the two year period, the Developer may request that the CFA be extended for one (1) additional year. If the Improvements are not completed within such extension period, there will be no further obligation of the City to participate. City participation in this CFA shall be subject to the annual availability of City funds as approved by the City Council.

ii. Subject to paragraph i, above, the City shall reimburse Developer for the City's costs upon presentation of proper documentation of completion of installation of the Oversized Improvements.

iii. **Nothing contained herein is intended to limit the Developer's obligations under the Policy, this Agreement, its financial guarantee, its agreement with its contractor or other related agreements.**

iv. The City may utilize the Developer's financial guarantee submitted for this Agreement to cause the completion of the construction of the Improvements if at the end of two (2) years from the date of this Agreement (and any extension period) the Improvements have not been completed and accepted.

v. The City may utilize the Developer's financial guarantee to cause the payment of costs for construction of the Improvements before the expiration of two (2) years if the Developer breaches this Agreement, becomes insolvent or fails to pay costs of construction and the financial guarantee is not a Completion Agreement. If the financial guarantee is a Completion Agreement and the Developer's contractors and/or suppliers are not paid for the costs of supplies and/or construction, the contractors and/or suppliers may put a lien upon the property which is the subject of the Completion Agreement.

Q. Developer acknowledges that in accordance with Chapter 2270 of the Texas Government Code, the City is prohibited from entering into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract. The terms "boycott Israel" and "company" shall have the meanings ascribed to those terms in Section 808.001 of the Texas Government Code. By signing this contract, Developer certifies that Developer's signature provides written verification to the City that Developer: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract.

R. IMMIGRATION AND NATIONALITY ACT
Developer shall verify the identity and employment eligibility of its employees who perform work under this Agreement, including completing the Employment Eligibility Verification Form (I-9). Upon request by City, Developer shall provide City with copies of all I-9 forms and supporting eligibility documentation for each employee who performs work under this Agreement. Developer shall adhere to all Federal and State laws as well as establish appropriate procedures and controls so that no services will be performed by any Developer employee who is not legally eligible to perform such services. DEVELOPER SHALL INDEMNIFY CITY AND HOLD CITY HARMLESS FROM

ANY PENALTIES, LIABILITIES, OR LOSSES DUE TO VIOLATIONS OF THIS PARAGRAPH BY DEVELOPER, DEVELOPER'S EMPLOYEES, SUBCONTRACTORS, AGENTS, OR LICENSEES. City, upon written notice to Developer, shall have the right to immediately terminate this Agreement for violations of this provision by Developer.

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Cost Summary Sheet

Project Name: Ventana Gravity Sewer and Force Main Line

CFA No.: CFA19-0058 City Project No.: 102076

Items	Developer's Cost	City's Cost	Total Cost
A. Water and Sewer Construction			
1. Water Construction			$ -
2. Sewer Construction	$ 672,261.47	$ 1,364,628.23	$ 2,036,889.70
Water and Sewer Construction Total	$ 672,261.47	$ 1,364,628.23	$ 2,036,889.70
B. TPW Construction			
1. Street	$ -	$ -	$ -
2. Storm Drain	$ -	$ -	$ -
3. Street Lights Installed by Developer	$ -	$ -	$ -
4. Signals	$ -	$ -	$ -
TPW Construction Cost Total	$ -	$ -	$ -
Total Construction Cost (excluding the fees):	**$ 672,261.47**	**$ 1,364,628.23**	**$ 2,036,889.70**
Construction Fees:			
C. Water/Sewer Inspection Fee (2%)	$ 13,445.23	$ 27,292.56	$ 40,737.79
D. Water/Sewer Material Testing Fee (2%)	$ 13,445.23	$ 27,292.56	$ 40,737.79
Sub-Total for Water Construction Fees	$ 26,890.46	$ 54,585.12	$ 81,475.58
E. TPW Inspection Fee (4%)	$ -	$ -	$ -
F. TPW Material Testing (2%)	$ -	$ -	$ -
G. Street Light Inspsection Cost	$ -	$ -	$ -
H. Signals Inspection Cost	$ -	$ -	$ -
J. Land & ROW cost	$ 68,779.28	$ 133,512.72	$ 202,292.00
TPW Construction Fees Subtotal	$ 68,779.28	$ 133,512.72	$ 202,292.00
Total Construction Fees	**$ 95,669.74**	**$ 188,097.84**	**$ 283,767.58**
TOTAL PROJECT COST	**$ 767,931.21**	**$ 1,552,726.07**	**$ 2,320,657.28**

Financial Guarantee Options, choose one	***Amount***	***Choice (Mark one)***
Bond = 100%	$ 2,036,889.70	x
Completion Agreement = 100% / Holds Plat	$ 2,036,889.70	
Cash Escrow Water/Sanitary Sewer= 125%	$ 840,326.84	
Cash Escrow Paving/Storm Drain = 125%	$ -	
Letter of Credit = 125% w/2yr expiration period	$ 2,546,112.13	

The costs stated herein may be based upon construction estimates rather than actual costs. The City's portion of inspection and material testing fees are directly allocated to the City's accounts for charges and does not reimburse the Water Inspection and Material Testing Fees to the Developer. The City's participation estimate shall be limited to the unit prices contained in City of Fort Worth Ordinance No. 19192-06-2010, as amended, ("Unit Price Ordinance") or as determined by public competitive bid. The City's cost participation (excluding inspection and material testing fees) is not a lump sum amount and may be less than stated above

depending upon actual quantities as shown on the Notice of Final Completion package ('Green sheet') and based on unit prices from the construction contract documents. In no event shall the City pay more per unit than as determined pursuant to the Unit Price Ordinance or public competitive bid.

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IN TESTIMONY WHEREOF, the City of Fort Worth has caused this instrument to be executed in its name and on its behalf by its Assistant City Manager, attested by its City Secretary, with the corporate seal of the City affixed, and said Developer has executed this instrument effective as of the date subscribed by the City's designated City Manager.

CITY OF FORT WORTH

Dana Burghdoff (Oct 9, 2019)
Dana Burghdoff
Interim Assistant City Manager

Date: Oct 9, 2019

Recommended by:

Evelyn Roberts (Oct 8, 2019)
Evelyn Roberts
Contract Compliance Specialist

Approved as to Form & Legality:

Richard A. McCracken (Oct 9, 2019)
Richard A. McCracken
Assistant City Attorney

M&C No. C-29180
Date: 6/25/19
Form 1295: 2019-492061

ATTEST:

Mary J. Kayser (Oct 10, 2019)
Mary J. Kayser
City Secretary

CITY OF FORT WORTH TEXAS

DEVELOPER
PB Ventana 1, LLC

Peter Pincoffs (Oct 6, 2019)

Name: Peter Pincoffs
Title: Manager

Date: Oct 8, 2019

ATTEST: (Only if required by Developer)

Signature
Name: <Name>

Contract Compliance Manager:

By signing I acknowledge that I am the person responsible for the monitoring and administration of this contract, including ensuring all performance and reporting requirements.

Jennifer Espinoza on behalf of Janie Morales (Oct 8, 2019)

Janie Morales

Planning Manager

OFFICIAL RECORD
CITY SECRETARY
FT. WORTH, TX

Check items associated with the project being undertaken; checked items must be included as Attachments to this Agreement

Included	Attachment
☒	Attachment 1 - Changes to Standard Community Facilities Agreement with City Participation
☒	Location Map
☐	Exhibit A: Water Improvements
☐	Water Cost Estimate
☒	Exhibit A-1: Sewer Improvements
☒	Sewer Cost Estimate
☐	Exhibit B: Paving Improvements
☐	Paving Cost Estimate
☐	Exhibit B-1: Storm Drain Improvements
☐	Storm Drain Cost Estimate
☐	Exhibit C: Street Lights and Signs Improvements
☐	Street Lights and Signs Cost Estimate

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ATTACHMENT "1"

Changes to Standard Agreement
Community Facilities Agreement
City Project No. 102076

None

SECTION 00 42 43
Developer Awarded Projects - PROPOSAL FORM

UNIT PRICE BID

Bidder's Application

Project Item Information					Bidder's Proposal	
Bidlist Item No.	Description	Specification Section No.	Unit of Measure	Bid Quantity	Unit Price	Bid Value
UNIT II: SANITARY SEWER IMPROVEMENTS						
1	0241.0100 Remove Sidewalk (4")	02 41 13	SF	330	$2.52	$831.60
2	0241.1300 Remove Concrete Curb	02 41 13	LF	15	$5.68	$85.20
3	2412.2016 Remove 15" Sewer Line	02 41 14	LF	5	$8.87	$44.35
4	3125.0101 SWPPP ≥ 1 acre	31 25 00	LS	1	$5,911.03	$5,911.03
5	3137.0101 Concrete Riprap	31 37 00	SY	168	$69.52	$11,679.36
6	3137.0102 Large Stone Riprap, dry	31 37 00	SY	295	$73.47	$21,673.65
7	3211.0122 6" Flexible Base, Type A, GR- 2	32 11 23	SY	2331	$20.00	$46,620.00
8	3213.0103 8" Reinforced Concrete Pavement (3,000	32 13 13	SY	192	$42.67	$8,192.64
9	3213.0301 Replace 6' Sidewalk (4")	32 13 20	SF	90	$4.80	$432.00
10	3213.0401 6" Concrete Driveway	32 13 20	SF	225	$8.38	$1,885.50
11	3292.0200 Broadcast Seeding	32 92 13	SY	17851.1	$2.66	$47,483.96
12	3301.0002 Post-CCTV Inspection Testing	33 01 31	LF	9099	$1.73	$15,741.27
13	3301.0101 Manhole Vacuum Testing	33 01 30	EA	17	$155.13	$2,637.21
14	3305.0109 Trench Safety	33 05 10	LY	9099	$1.00	$9,099.00
15	3305.0112 Concrete Collar	33 05 17	EA	17	$425.75	$7,237.75
16	3305.1104 24" Casing By Other Than Open Cut	33 05 22	LF	180	$460.00	$82,800.00
17	3305.1105 30" Casing By Other Than Open Cut	33 05 22	LF	115	$534.11	$61,422.65
18	3305.1106 36" Casing By Other Than Open Cut	33 05 22	LF	224	$775.00	$173,600.00
19	3305.3013 36" Steel Encasement for 24" PVC	33 05 24	LF	331	$750.00	$248,250.00
20	3305.3006 16" PVC Force Main	33 11 10, 33	LF	4929	$135.66	$668,774.54
21	3312.1002 2" Combination Air Valve Assembly W/ Flush	33 31 70	EA	2	$6,727.57	$13,455.14
22	3312.3006 16" Gate Valve w/ Vault	00 00 00	EA	3	$12,445.68	$37,337.04
23	3331.4116 8" ASTM 3034, SDR-26 PVC	33 11 10, 33	LF	530	$43.81	$23,219.30
24	3331.4201 10" ASTM 3034, SDR-26 PVC	33 11 10, 33	LF	40	$39.22	$1,568.80
25	3331.4208 12" ASTM 3034, SDR-26 PVC	33 11 10, 33	LF	2194	$51.00	$111,894.00
26	3331.4209 12" ASTM 3034, SDR-26 PVC W/ CSS	33 11 10, 33	LF	105	$63.84	$6,703.20
27	3331.4215 15" ASTM 3034, SDR-26 PVC	33 11 10, 33	LF	82	$48.47	$3,974.54
28	3331.4225 18" ASTM 3034, SDR-26 PVC	33 11 10, 33	LF	591	$100.48	$59,383.68
29	3331.4308 21" ASTM F679 PS 115	33 11 10, 33	LF	525	$115.33	$60,548.25
30	3331.4317 24" ASTM F679 PS 115	33 11 10, 33	LF	530	$81.62	$43,258.60
31	3331.4401 30" ASTM F679 PS 115	33 11 10, 33	LF	5	$102.02	$510.10
32	3339.0001 Epoxy Manhole Liner	33 39 60	VF	232.1	$184.34	$42,785.31
33	3339.1001 4' Manhole	33 39 10, 33	EA	3	$3,414.86	$10,244.58
34	3339.1002 4' Drop Manhole	33 39 10, 33	EA	4	$3,883.68	$15,534.72
35	3339.1003 4' Extra Depth Manhole	33 39 10, 33	VF	41.4	$173.66	$7,189.52
36	3339.1101 5' Manhole	33 39 10, 33	EA	7	$8,192.05	$57,344.35
37	3339.1102 5' Drop Manhole	33 39 10, 33	EA	2	$8,560.76	$17,121.52
38	3339.1103 5' Extra Depth Manhole	33 39 10, 33	VF	101.2	$256.41	$25,948.69
39	3339.1001 4' Manhole W/ Odor Control Unit	00 00 00	EA	1	$3,414.86	$3,414.86
40	3341.0403 42" RCP	00 00 00	LF	162	$120.69	$19,551.78
41	0171.0101 Construction Staking	00 00 00	LS	1	$1,500.00	$1,500.00
42	0170.0100 Mobilization	00 00 00	LS	1	$60,000.00	$60,000.00
TOTAL UNIT II: SANITARY SEWER IMPROVEMENTS						$2,036,889.70

SECTION 00 42 43
Developer Awarded Projects - PROPOSAL FORM

UNIT PRICE BID

Bidder's Application

Project Item Information					Bidder's Proposal	
Bidlist Item No.	Description	Specification Section No.	Unit of Measure	Bid Quantity	Unit Price	Bid Value

Bid Summary

UNIT I: WATER IMPROVEMENTS	
UNIT II: SANITARY SEWER IMPROVEMENTS	$2,036,889.70
UNIT III: DRAINAGE IMPROVEMENTS	
UNIT IV: PAVING IMPROVEMENTS	
UNIT V: STREET LIGHTING IMPROVEMENTS	
UNIT VI: TRAFFIC SIGNAL IMPROVEMENTS	
Total Construction Bid	$2,036,889.70

This Bid is submitted by the entity named below:

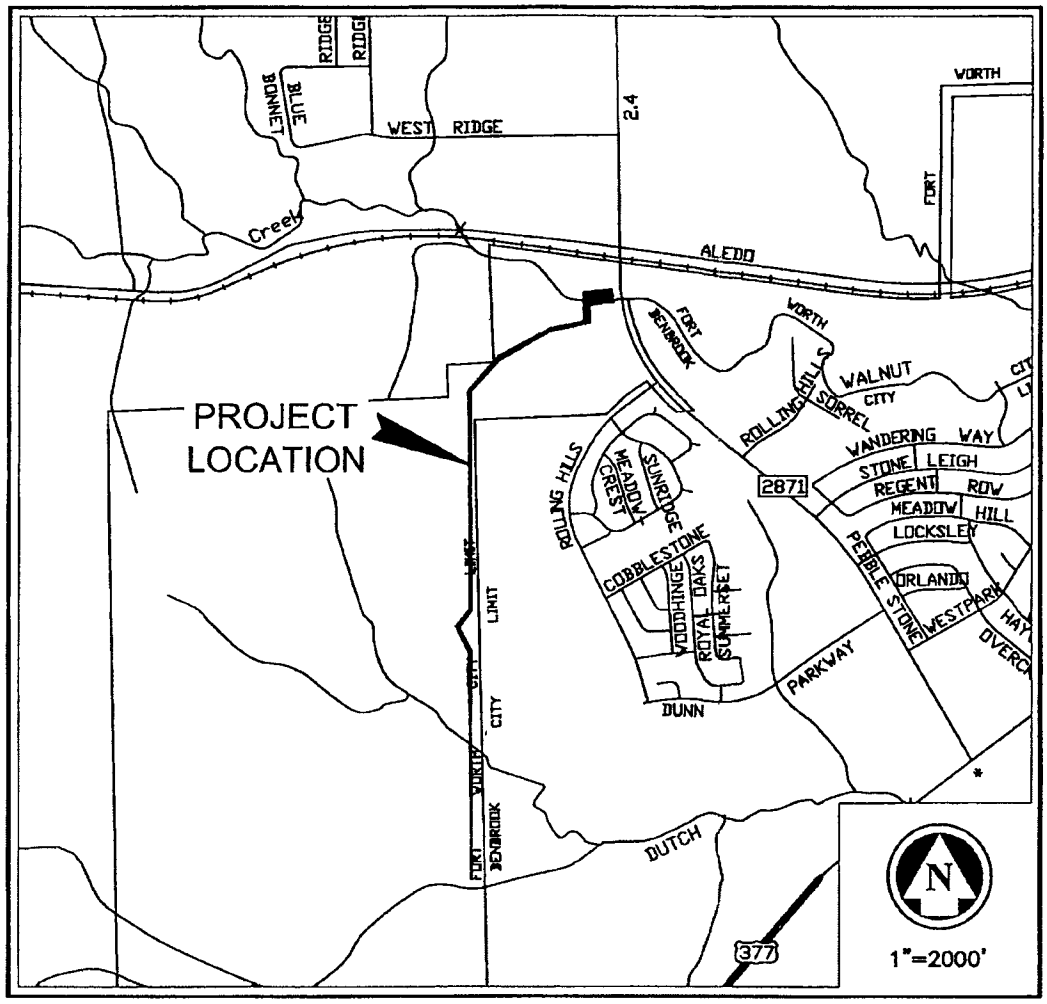
BIDDER:
Blue Star Utilities, LLC
2600 Chambers St.

Vanas, TX 76084

BY: Steve Hugdahl
TITLE: OWNER
DATE: 8/21/19

Contractor agrees to complete WORK for FINAL ACCEPTANCE within 97 **working days after the date when the CONTRACT commences to run as provided in the General Conditions.**

END OF SECTION



MAPSCO NO. 86N
COUNCIL DISTRICT NO. 3

VICINITY MAP

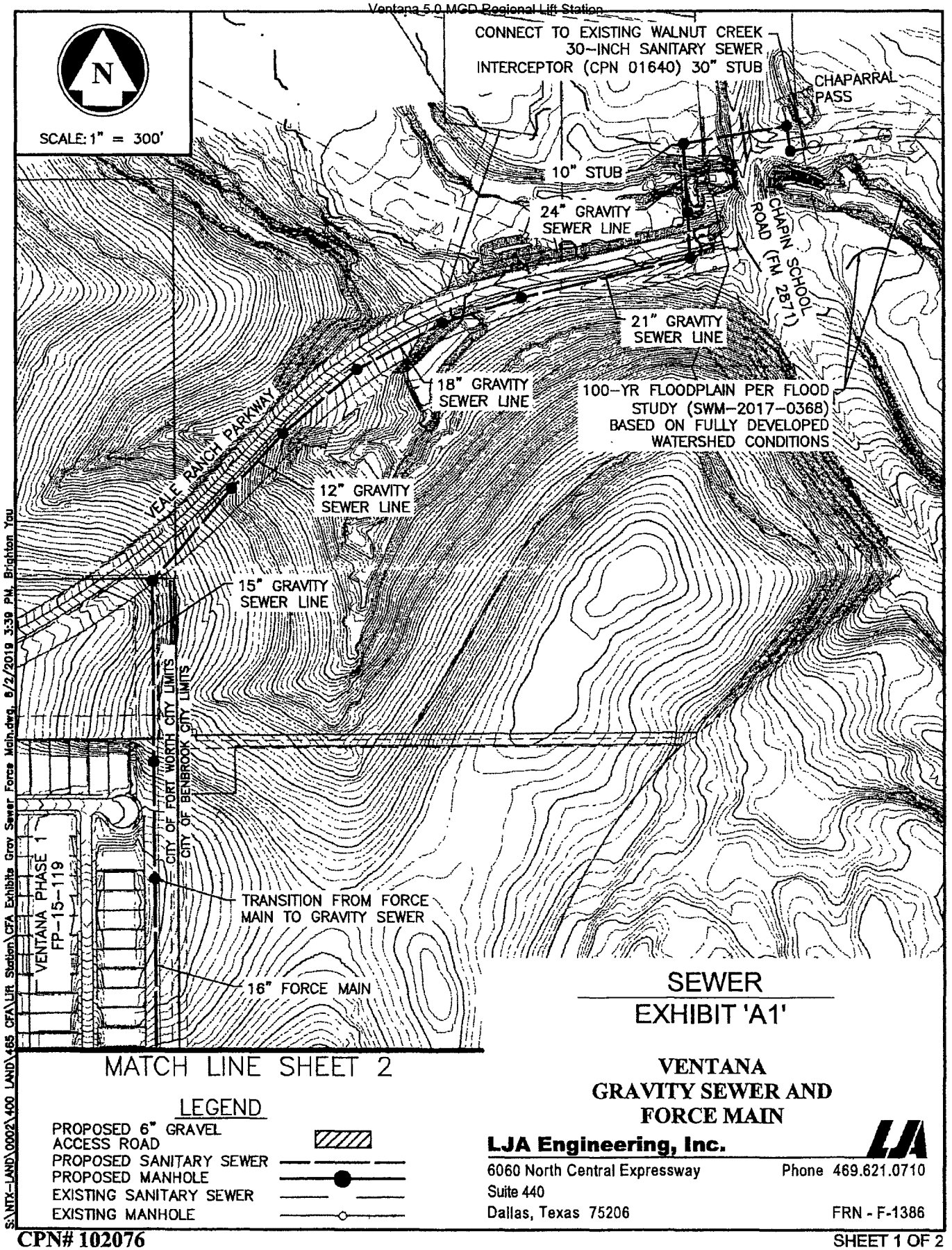
VENTANA
GRAVITY SEWER AND
FORCE MAIN

LJA Engineering, Inc.
6060 North Central Expressway
Suite 440
Dallas, Texas 75206
Phone 469.621.0710
FRN - F-1386

S:\NTX-LAND\0002\400 LAND\485 CFA\Lift Station\CFA Exhibits Grav Sewer Force Main.dwg, 6/2/2019 3:48 PM, Brighton You

CPN# 102076

CCN Area 3
Contract No.52889
Ventana 5.0 MGD Regional Lift Station



MATCH LINE SHEET 2

LEGEND

- PROPOSED 6" GRAVEL ACCESS ROAD
- PROPOSED SANITARY SEWER
- PROPOSED MANHOLE
- EXISTING SANITARY SEWER
- EXISTING MANHOLE

SEWER
EXHIBIT 'A1'

VENTANA
GRAVITY SEWER AND FORCE MAIN

LJA Engineering, Inc.
6060 North Central Expressway
Suite 440
Dallas, Texas 75206
Phone 469.621.0710
FRN - F-1386

CPN# 102076

SHEET 1 OF 2

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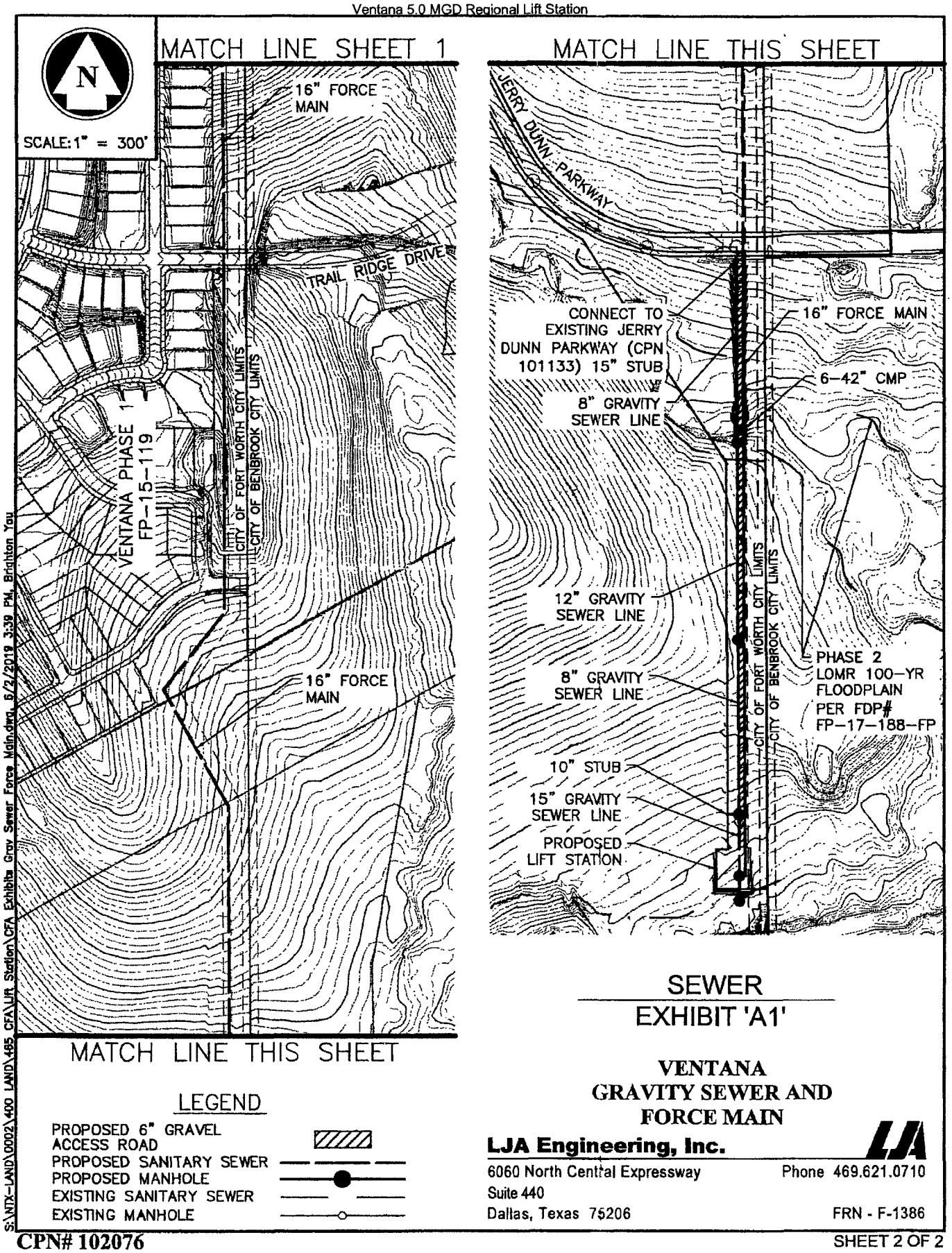
CCN Area 3
Contract No.52889
Ventana 5.0 MGD Regional Lift Station



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SEWER
EXHIBIT 'A1'

VENTANA
GRAVITY SEWER AND
FORCE MAIN

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SHEET 2 OF 2

CITY COUNCIL AGENDA

COUNCIL ACTION: Approved on 6/25/2019

DATE:	6/25/2019	**REFERENCE NO.:**	**C-29180	**LOG NAME:**	60VENATANA SEWER LIFT STATION GRAVITY & FM
CODE:	C	**TYPE:**	CONSENT	**PUBLIC HEARING:**	NO

SUBJECT: Authorize Execution of Two Community Facilities Agreements with PB Ventana 1 LLC: for Construction and Oversizing of a Lift Station, with City Participation in the Amount of $1,661,405.00, and for Construction and Oversizing of Gravity Sewer and Force Mains with City Participation in the Amount of $1,669,461.00, in Southwest Fort Worth to Serve the Ventana Addition Development and Anticipated Future Development in the Surrounding Area (COUNCIL DISTRICT 3)

RECOMMENDATION:

It is recommended that the City Council:

1. Authorize execution of a Community Facilities Agreement with PB Ventana 1, LLC with City Participation in the amount of $1,661,405.00, for construction and oversizing of a lift station to serve the Ventana Addition development and anticipated future development in the surrounding area in southwest Fort Worth (City Project Number 101675); and
2. Authorize execution of a Community Facilities Agreement with PB Ventana 1, LLC with City Participation in the amount of $1,669,461.00, for construction and oversizing of the gravity sewer and force mains to serve the Ventana Addition development and anticipated future development in the surrounding area in southwest Fort Worth. (City Project Number 102076)

DISCUSSION:

The Ventana Addition (Ventana) is a single-family development located in southwest Fort Worth, west of FM 2871 and south of Aledo Road. Ventana requires a sewer lift station providing 1.7 million gallons per day (MGD) and 8-inch to 30-inch gravity and force mains. The Water Department would like to oversize the lift station to 5.0 MGD, the gravity main to 30 inches, and the force main to 16 inches in order to serve anticipated future development in the area. The City will contribute approximately 66\% of the cost while the Developer will contribute approximately 34\% of the cost. The City's participation may include construction costs, easement costs, land acquisition costs, TXDOT permits, and Oncor extensions.

The City is participating in the design of the public improvements pursuant to City Secretary Contract Number 51255 which was approved by the City Council on August 7, 2018 (M&C C-28780). The lift station will be publicly bid. Public bidding of the gravity and force mains is not required as authorized by chapter 212, subchapter C of the Texas Local Government Code.

The City's collective cost participation for the improvements is estimated to be $3,330,866.00 as shown on the table below, of that amount, $4,117.00 for Lift Station Site Dedication and $139,849.00 for Land and R.O.W acquisition.

Lift Station Public Bid:

A Construction	Developer Cost 34\%	City Cost 66\ %	Total Cost
2. Sewer	$601,749.00	$1,168,101.00	$1,769,850.00

Contingency 25\% of total construction cost	$0.00	$442,463.00	$442,463.00
Total Construction	$601,749.00	$1,610,564.00	$2,212,313.00
Construction Fee:			
B. Inspection Fee (2\%)	$12,035.00	$23,362.00	$35,397.00
C. Material Testing Fee (2\%)	$12,035.00	$23,362.00	$35,397.00
Construction Fees Sub-Total	$24,070.00	$46,724.00	$70,794.00
Lift Station - Site Dedication Cost	$2,121.00	$4,117.00	$6,238.00
Total Project Cost	$627,940.00	$1,661,405.00	$2,289,345.00

Off-Site Sewer Private Bid:

A. Construction	Developers Cost	City Cost	Total Cost
2. Sewer	$555,391.00	$1,078,112.00	$1,633,503.00
Contingency 25\% of Total Construction Cost	$0.00	$408,376.00	$408,376.00
Total Construction	$555,391.00	$1,486,488.00	$2,041,879.00
Construction Fees:			
B. Inspection Fee(2\%)	$11,108.00	$21,562.00	$32,670.00
C. Material Testing Fee (2\%)	$11,108.00	$21,562.00	$32,670.00
Construction Fee Sub-Total	$22,216.00	$43,124.00	$65,340.00
Land and R.O.W Cost	$72,044.00	$139,849.00	$211,893.00
Total Project Cost	$649,651.00	$1,669,461.00	$2,319,112.00

The reimbursement of the participation, excluding inspection and material testing fees, is not a lump-sum amount and may be less than the stated amount depending upon the actual quantities and unit prices from the Notice of Final Completion Package, commonly referred to as the Green Sheet Package.

This development is located COUNCIL DISTRICT 3.

FISCAL INFORMATION/CERTIFICATION:

The Director of Finance certifies that funds are available in the current capital budget, as appropriated, of Water and Sewer 2017A Bond Funds. The Water and Sewer Bond 2017A CFA Programmable Project P00001 includes an appropriation of $4,725,496 for the city participation on developer capital projects. After the funding of this M&C, the amount of $1,394,630 of the appropriation will be available to fund future individual projects.

Appropriations for oversizing of Lift Station and oversizing of gravity sewer and force mains in Southwest Fort Worth to serve the Ventana Addition Development and anticipated future development are as depicted below:

FUND	Existing Appropriations	Additional Appropriations	Project Total*

Water & Sewer Bond 2017A - Fund 56011	$3,683,556.00	$0.00	$3,683,556.00
Project Total	$3,683,556.00	$0.00	$3,683,556.00

TO

Fund	Department ID	Account	Project ID	Program	Activity	Budget Year	Reference # (Chartfield 2)	Amount

FROM

Fund	Department ID	Account	Project ID	Program	Activity	Budget Year	Reference # (Chartfield 2)	Amount

Submitted for City Manager's Office by: Jay Chapa (5804)

Originating Department Head: Chris Harder (5020)

Additional Information Contact: Esteban Perez (8428)

ATTACHMENTS

Sewer Main _Location.pdf
Ventana Lift Station CFA Location Map1519271.pdf

CITY SECRETARY
CONTRACT NO. 41470

CITY OF FORT WORTH, TEXAS

STANDARD AGREEMENT FOR ENGINEERING RELATED DESIGN SERVICES

This AGREEMENT is between the City of Fort Worth, a home-rule municipal corporation situated in Tarrant, Denton, Parker and Wise Counties, Texas (the "CITY"), and Dunaway Associates, L.P., (the "ENGINEER"), for a PROJECT generally described as: Wesleyan Hills Drainage Improvements Project.

Article I

Scope of Services

A. The Scope of Services is set forth in Attachment A.

Article II

Compensation

A. The ENGINEER's compensation is set forth in Attachment B.

Article III

Terms of Payment

Payments to the ENGINEER will be made as follows:

A. Invoice and Payment

(1) The Engineer shall provide the City sufficient documentation, including but not limited to meeting the requirements set forth in Attachment D to this AGREEMENT, to reasonably substantiate the invoices.

(2) The ENGINEER will issue monthly invoices for all work performed under this AGREEMENT. Invoices are due and payable within 30 days of receipt.

(3) Upon completion of services enumerated in Article I, the final payment of any balance will be due within 30 days of receipt of the final invoice.

(4) In the event of a disputed or contested billing, only that portion so contested will be withheld from payment, and the undisputed portion will be paid. The CITY will exercise reasonableness in contesting any bill or portion thereof. No interest will accrue on any contested portion of the billing until mutually resolved.

(5) If the CITY fails to make payment in full to ENGINEER for billings contested in good faith within 60 days of the amount due, the ENGINEER may, after giving 7 days' written notice to CITY, suspend services under this AGREEMENT until

paid in full. In the event of suspension of services, the ENGINEER shall have no liability to CITY for delays or damages caused the CITY because of such suspension of services.

Article IV

Obligations of the Engineer

Amendments to Article IV, if any, are included in Attachment C.

A. General

The ENGINEER will serve as the CITY's professional engineering representative under this Agreement, providing professional engineering consultation and advice and furnishing customary services incidental thereto.

B. Standard of Care

The standard of care applicable to the ENGINEER's services will be the degree of skill and diligence normally employed in the State of Texas by professional engineers or consultants performing the same or similar services at the time such services are performed.

C. Subsurface Investigations

(1) The ENGINEER shall advise the CITY with regard to the necessity for subcontract work such as special surveys, tests, test borings, or other subsurface investigations in connection with design and engineering work to be performed hereunder. The ENGINEER shall also advise the CITY concerning the results of same. Such surveys, tests, and investigations shall be furnished by the CITY, unless otherwise specified in Attachment A.

(2) In soils, foundation, groundwater, and other subsurface investigations, the actual characteristics may vary significantly between successive test points and sample intervals and at locations other than where observations, exploration, and investigations have been made. Because of the inherent uncertainties in subsurface evaluations, changed or unanticipated underground conditions may occur that could affect the total PROJECT cost and/or execution. These conditions and cost/execution effects are not the responsibility of the ENGINEER.

D. Preparation of Engineering Drawings

The ENGINEER will provide to the CITY the original drawings of all plans in ink on reproducible mylar sheets and electronic files in .pdf format, or as otherwise approved by CITY, which shall become the property of the CITY. CITY may use such drawings in any manner it desires; provided, however, that the ENGINEER shall not be liable for the use of such drawings for any project other than the PROJECT described herein.

E. Engineer's Personnel at Construction Site

(1) The presence or duties of the ENGINEER's personnel at a construction site, whether as on-site representatives or otherwise, do not make the ENGINEER or its personnel in any way responsible for those duties that belong to the CITY and/or the CITY's construction contractors or other entities, and do not relieve the construction contractors or any other entity of their obligations, duties, and responsibilities, including, but not limited to, all construction methods, means, techniques, sequences, and procedures necessary for coordinating and completing all portions of the construction work in accordance with the Contract Documents and any health or safety precautions required by such construction work. The ENGINEER and its personnel have no authority to exercise any control over any construction contractor or other entity or their employees in connection with their work or any health or safety precautions.

(2) Except to the extent of specific site visits expressly detailed and set forth in Attachment A, the ENGINEER or its personnel shall have no obligation or responsibility to visit the construction site to become familiar with the progress or quality of the completed work on the PROJECT or to determine, in general, if the work on the PROJECT is being performed in a manner indicating that the PROJECT, when completed, will be in accordance with the Contract Documents, nor shall anything in the Contract Documents or the agreement between CITY and ENGINEER be construed as requiring ENGINEER to make exhaustive or continuous on-site inspections to discover latent defects in the work or otherwise check the quality or quantity of the work on the PROJECT. If the ENGINEER makes on-site observation(s) of a deviation from the Contract Documents, the ENGINEER shall inform the CITY.

(3) When professional certification of performance or characteristics of materials, systems or equipment is reasonably required to perform the services set forth in the Scope of Services, the ENGINEER shall be entitled to rely upon such certification to establish materials, systems or equipment and performance criteria to be required in the Contract Documents.

F. Opinions of Probable Cost, Financial Considerations, and Schedules

(1) The ENGINEER shall provide opinions of probable costs based on the current available information at the time of preparation, in accordance with Attachment A.

(2) In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the PROJECT, the ENGINEER has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by third parties; quality, type, management, or direction of operating personnel; and other economic and operational factors that may materially affect the ultimate PROJECT cost or schedule. Therefore, the ENGINEER makes no warranty that the CITY's actual PROJECT costs, financial aspects, economic feasibility, or schedules will not vary from the ENGINEER's opinions, analyses, projections, or estimates.

G. Construction Progress Payments

Recommendations by the ENGINEER to the CITY for periodic construction progress payments to the construction contractor will be based on the ENGINEER's knowledge, information, and belief from selective sampling and observation that the work has progressed to the point indicated. Such recommendations do not represent that continuous or detailed examinations have been made by the ENGINEER to ascertain that the construction contractor has completed the work in exact accordance with the Contract Documents; that the final work will be acceptable in all respects; that the ENGINEER has made an examination to ascertain how or for what purpose the construction contractor has used the moneys paid; that title to any of the work, materials, or equipment has passed to the CITY free and clear of liens, claims, security interests, or encumbrances; or that there are not other matters at issue between the CITY and the construction contractor that affect the amount that should be paid.

H. Record Drawings

Record drawings, if required, will be prepared, in part, on the basis of information compiled and furnished by others, and may not always represent the exact location, type of various components, or exact manner in which the PROJECT was finally constructed. The ENGINEER is not responsible for any errors or omissions in the information from others that is incorporated into the record drawings.

I. Minority and Woman Business Enterprise (M/WBE) Participation

In accord with City of Fort Worth Ordinance No. 15530, as amended, the City has goals for the participation of minority business enterprises and woman business enterprises in City contracts. Engineer acknowledges the M/WBE goal established for this contract and its accepted written commitment to M/WBE participation. Any misrepresentation of facts (other than a negligent

misrepresentation) and/or the commission of fraud by the Engineer may result in the termination of this Agreement and debarment from participating in City contracts for a period of time of not less than three (3) years.

J. Right to Audit

(1) ENGINEER agrees that the CITY shall, until the expiration of five (5) years after final payment under this contract, have access to and the right to examine and photocopy any directly pertinent books, documents, papers and records of the ENGINEER involving transactions relating to this contract. ENGINEER agrees that the CITY shall have access during normal working hours to all necessary ENGINEER facilities and shall be provided adequate and appropriate work space in order to conduct audits in compliance with the provisions of this section. The CITY shall give ENGINEER reasonable advance notice of intended audits.

(2) ENGINEER further agrees to include in all its subconsultant agreements hereunder a provision to the effect that the subconsultant agrees that the CITY shall, until the expiration of five (5) years after final payment under the subcontract, have access to and the right to examine and photocopy any directly pertinent books, documents, papers and records of such subconsultant, involving transactions to the subcontract, and further, that the CITY shall have access during normal working hours to all subconsultant facilities, and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with the provisions of this article together with subsection (3) hereof. CITY shall give subconsultant reasonable advance notice of intended audits.

(3) ENGINEER and subconsultant agree to photocopy such documents as may be requested by the CITY. The CITY agrees to reimburse ENGINEER for the cost of copies at the rate published in the Texas Administrative Code in effect as of the time copying is performed.

K. INSURANCE

(1) ENGINEER'S INSURANCE

a. Commercial General Liability – the ENGINEER shall maintain commercial general liability (CGL) and, if necessary, commercial umbrella insurance with a limit of not less than $1,000,000.00 per each occurrence with a $2,000,000.00 aggregate. If such Commercial General Liability insurance contains a general aggregate limit, it shall apply separately to this PROJECT or location.

i. The CITY shall be included as an insured under the CGL, using ISO additional insured endorsement or a substitute providing equivalent coverage, and under the commercial umbrella, if any. This insurance shall apply as primary insurance with respect to any other

insurance or self-insurance programs afforded to the CITY. The Commercial General Liability insurance policy shall have no exclusions by endorsements that would alter or nullify: premises/operations, products/completed operations, contractual, personal injury, or advertizing injury, which are normally contained within the policy, unless the CITY approves such exclusions in writing.

ii. ENGINEER waives all rights against the CITY and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by the commercial general liability or commercial umbrella liability insurance maintained in accordance with this agreement.

b. Business Auto – the ENGINEER shall maintain business auto liability and, if necessary, commercial umbrella liability insurance with a limit of not less than $1,000,000 each accident. Such insurance shall cover liability arising out of "any auto", including owned, hired, and non-owned autos, when said vehicle is used in the course of the PROJECT. If the engineer owns no vehicles, coverage for hired or non-owned is acceptable.

i. ENGINEER waives all rights against the CITY and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by the business auto liability or commercial umbrella liability insurance obtained by ENGINEER pursuant to this agreement or under any applicable auto physical damage coverage.

c. Workers' Compensation –ENGINEER shall maintain workers compensation and employers liability insurance and, if necessary, commercial umbrella liability insurance with a limit of not less than $100,000.00 each accident for bodily injury by accident or $100,000.00 each employee for bodily injury by disease, with $500,000.00 policy limit.

i. ENGINEER waives all rights against the CITY and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by workers compensation and employer's liability or commercial umbrella insurance obtained by ENGINEER pursuant to this agreement.

d. Professional Liability – the ENGINEER shall maintain professional liability, a claims-made policy, with a minimum of $1,000,000.00 per claim and aggregate. The policy shall contain a retroactive date prior to the date of the contract or the first date of services to be performed, whichever is earlier. Coverage shall be maintained for a period of 5 years following the completion of the contract. An annual certificate of insurance specifically referencing this project shall be submitted to the CITY for each year following completion of the contract.

(2) GENERAL INSURANCE REQUIREMENTS

a. Certificates of insurance evidencing that the ENGINEER has obtained all required insurance shall be delivered to the CITY prior to ENGINEER proceeding with the PROJECT.

b. Applicable policies shall be endorsed to name the CITY an Additional Insured thereon, as its interests may appear. The term CITY shall include its employees, officers, officials, agents, and volunteers as respects the contracted services.

c. Certificate(s) of insurance shall document that insurance coverage specified in this agreement are provided under applicable policies documented thereon.

d. Any failure on part of the CITY to request required insurance documentation shall not constitute a waiver of the insurance requirements.

e. A minimum of thirty (30) days notice of cancellation or material change in coverage shall be provided to the CITY. A ten (10) days notice shall be acceptable in the event of non-payment of premium. Notice shall be sent to the respective Department Director (by name), City of Fort Worth, 1000 Throckmorton, Fort Worth, Texas 76102.

f. Insurers for all policies must be authorized to do business in the State of Texas and have a minimum rating of A:V or greater, in the current A.M. Best Key Rating Guide or have reasonably equivalent financial strength and solvency to the satisfaction of Risk Management.

g. Any deductible or self insured retention in excess of $25,000.00 that would change or alter the requirements herein is subject to approval by the CITY in writing, if coverage is not provided on a first-dollar basis. The CITY, at it sole discretion, may consent to alternative coverage maintained through insurance pools or risk retention groups. Dedicated financial resources or letters of credit may also be acceptable to the CITY.

h. Applicable policies shall each be endorsed with a waiver of subrogation in favor of the CITY as respects the PROJECT.

i. The CITY shall be entitled, upon its request and without incurring expense, to review the ENGINEER's insurance policies including endorsements thereto and, at the CITY's discretion; the ENGINEER may be required to provide proof of insurance premium payments.

j. Lines of coverage, other than Professional Liability, underwritten on a claims-made basis, shall contain a retroactive date coincident with or prior to the date of the contractual agreement. The certificate of insurance shall

state both the retroactive date and that the coverage is claims-made.

k. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption nor restrictive modification or changes from date of commencement of the PROJECT until final payment and termination of any coverage required to be maintained after final payments.

l. The CITY shall not be responsible for the direct payment of any insurance premiums required by this agreement.

m. Sub consultants and subcontractors to/of the ENGINEER shall be required by the ENGINEER to maintain the same or reasonably equivalent insurance coverage as required for the ENGINEER. When sub consultants/subcontractors maintain insurance coverage, ENGINEER shall provide CITY with documentation thereof on a certificate of insurance.

L. Independent Consultant

The ENGINEER agrees to perform all services as an independent consultant and not as a subcontractor, agent, or employee of the CITY.

M. Disclosure

The ENGINEER acknowledges to the CITY that it has made full disclosure in writing of any existing conflicts of interest or potential conflicts of interest, including personal financial interest, direct or indirect, in property abutting the proposed PROJECT and business relationships with abutting property cities. The ENGINEER further acknowledges that it will make disclosure in writing of any conflicts of interest that develop subsequent to the signing of this contract and prior to final payment under the contract.

N. Asbestos or Hazardous Substances

(1) If asbestos or hazardous substances in any form are encountered or suspected, the ENGINEER will stop its own work in the affected portions of the PROJECT to permit testing and evaluation.

(2) If asbestos or other hazardous substances are suspected, the CITY may request the ENGINEER to assist in obtaining the services of a qualified subcontractor to manage the remediation activities of the PROJECT.

O. Permitting Authorities - Design Changes

If permitting authorities require design changes so as to comply with published design criteria and/or current engineering practice standards which the ENGINEER should have been aware of at the time this Agreement was executed, the ENGINEER shall revise plans and specifications, as required, at its own cost and expense. However, if design changes are required due to the

changes in the permitting authorities' published design criteria and/or practice standards criteria which are published after the date of this Agreement which the ENGINEER could not have been reasonably aware of, the ENGINEER shall notify the CITY of such changes and an adjustment in compensation will be made through an amendment to this AGREEMENT.

P. Schedule

ENGINEER shall manage the PROJECT in accordance with the schedule developed per Attachment D to this AGREEMENT.

Article V

Obligations of the City

Amendments to Article V, if any, are included in Attachment C.

A. City-Furnished Data

ENGINEER may rely upon the accuracy, timeliness, and completeness of the information provided by the CITY.

B. Access to Facilities and Property

The CITY will make its facilities accessible to the ENGINEER as required for the ENGINEER's performance of its services. The CITY will perform, at no cost to the ENGINEER, such tests of equipment, machinery, pipelines, and other components of the CITY's facilities as may be required in connection with the ENGINEER's services. The CITY will be responsible for all acts of the CITY's personnel.

C. Advertisements, Permits, and Access

Unless otherwise agreed to in the Scope of Services, the CITY will obtain, arrange, and pay for all advertisements for bids; permits and licenses required by local, state, or federal authorities; and land, easements, rights-of-way, and access necessary for the ENGINEER's services or PROJECT construction.

D. Timely Review

The CITY will examine the ENGINEER's studies, reports, sketches, drawings, specifications, proposals, and other documents; obtain advice of an attorney, insurance counselor, accountant, auditor, bond and financial advisors, and other consultants as the CITY deems appropriate; and render in writing decisions required by the CITY in a timely manner in accordance with the project schedule prepared in accordance with Attachment D.

E. Prompt Notice

The CITY will give prompt written notice to the ENGINEER whenever CITY observes or becomes aware of any development that affects the scope or timing of the ENGINEER's services or of any defect in the work of the ENGINEER or construction contractors.

F. Asbestos or Hazardous Substances Release.

(1) CITY acknowledges ENGINEER will perform part of the work at CITY's facilities that may contain hazardous materials, including asbestos containing materials, or conditions, and that ENGINEER had no prior role in the generation, treatment, storage, or disposition of such materials. In consideration of the associated risks that may give rise to claims by third parties or employees of City, City hereby releases ENGINEER from any damage or liability related to the presence of such materials.

(2) The release required above shall not apply in the event the discharge, release or escape of hazardous substances, contaminants, or asbestos is a result of ENGINEER's negligence or if ENGINEER brings such hazardous substance, contaminant or asbestos onto the project.

G. Contractor Indemnification and Claims

The CITY agrees to include in all construction contracts the provisions of Article IV.E. regarding the ENGINEER's Personnel at Construction Site, and provisions providing contractor indemnification of the CITY and the ENGINEER for contractor's negligence.

H. Contractor Claims and Third-Party Beneficiaries

(1) The CITY agrees to include the following clause in all contracts with construction contractors and equipment or materials suppliers:

> "Contractors, subcontractors and equipment and materials suppliers on the PROJECT, or their sureties, shall maintain no direct action against the ENGINEER, its officers, employees, and subcontractors, for any claim arising out of, in connection with, or resulting from the engineering services performed. Only the CITY will be the beneficiary of any undertaking by the ENGINEER."

(2) This AGREEMENT gives no rights or benefits to anyone other than the CITY and the ENGINEER and there are no third-party beneficiaries.

(3) The CITY will include in each agreement it enters into with any other entity or person regarding the PROJECT a provision that such entity or person shall have no third-party beneficiary rights under this Agreement.

(4) Nothing contained in this section V.H. shall be construed as a waiver of any right the CITY has to bring a claim against ENGINEER.

I. CITY's Insurance

(1) The CITY may maintain property insurance on certain pre-existing structures associated with the PROJECT.

(2) The CITY will ensure that Builders Risk/Installation insurance is maintained at the replacement cost value of the PROJECT. The CITY may provide ENGINEER a copy of the policy or documentation of such on a certificate of insurance.

(3) The CITY will specify that the Builders Risk/Installation insurance shall be comprehensive in coverage appropriate to the PROJECT risks.

J. Litigation Assistance

The Scope of Services does not include costs of the ENGINEER for required or requested assistance to support, prepare, document, bring, defend, or assist in litigation undertaken or defended by the CITY. In the event CITY requests such services of the ENGINEER, this AGREEMENT shall be amended or a separate agreement will be negotiated between the parties.

K. Changes

The CITY may make or approve changes within the general Scope of Services in this AGREEMENT. If such changes affect the ENGINEER's cost of or time required for performance of the services, an equitable adjustment will be made through an amendment to this AGREEMENT with appropriate CITY approval.

Article VI

General Legal Provisions

Amendments to Article VI, if any, are included in Attachment C.

A. Authorization to Proceed

ENGINEER shall be authorized to proceed with this AGREEMENT upon receipt of a written Notice to Proceed from the CITY.

B. Reuse of Project Documents

All designs, drawings, specifications, documents, and other work products of the ENGINEER, whether in hard copy or in electronic form, are instruments of

service for this PROJECT, whether the PROJECT is completed or not. Reuse, change, or alteration by the CITY or by others acting through or on behalf of the CITY of any such instruments of service without the written permission of the ENGINEER will be at the CITY's sole risk. The CITY shall own the final designs, drawings, specifications and documents.

C. Force Majeure

The ENGINEER is not responsible for damages or delay in performance caused by acts of God, strikes, lockouts, accidents, or other events beyond the control of the ENGINEER that prevent ENGINEER's performance of its obligations hereunder.

D. Termination

(1) This AGREEMENT may be terminated only by the City for convenience on 30 days' written notice. This AGREEMENT may be terminated by either the CITY or the ENGINEER for cause if either party fails substantially to perform through no fault of the other and does not commence correction of such nonperformance with in 5 days of written notice and diligently complete the correction thereafter.

(2) If this AGREEMENT is terminated for the convenience of the City, the ENGINEER will be paid for termination expenses as follows:

a.) Cost of reproduction of partial or complete studies, plans, specifications or other forms of ENGINEER'S work product;

b.) Out-of-pocket expenses for purchasing electronic data files and other data storage supplies or services;

c.) The time requirements for the ENGINEER'S personnel to document the work underway at the time of the CITY'S termination for convenience so that the work effort is suitable for long time storage.

(3) Prior to proceeding with termination services, the ENGINEER will submit to the CITY an itemized statement of all termination expenses. The CITY'S approval will be obtained in writing prior to proceeding with termination services.

E. Suspension, Delay, or Interruption to Work

The CITY may suspend, delay, or interrupt the services of the ENGINEER for the convenience of the CITY. In the event of such suspension, delay, or interruption, an equitable adjustment in the PROJECT's schedule, commitment and cost of the ENGINEER's personnel and subcontractors, and ENGINEER's compensation will be made.

F. Indemnification

In accordance with Texas Local Government Code Section 271.904, the ENGINEER shall indemnify, hold harmless, and defend the CITY against liability for any damage caused by or resulting from an act of negligence, intentional tort, intellectual property infringement, or failure to pay a subcontractor or supplier committed by the ENGINEER or ENGINEER's agent, consultant under contract, or another entity over which the ENGINEER exercises control.

G. Assignment

Neither party shall assign all or any part of this AGREEMENT without the prior written consent of the other party.

H. Interpretation

Limitations on liability and indemnities in this AGREEMENT are business understandings between the parties and shall apply to all the different theories of recovery, including breach of contract or warranty, tort including negligence, strict or statutory liability, or any other cause of action, except for willful misconduct or gross negligence for limitations of liability and sole negligence for indemnification. Parties mean the CITY and the ENGINEER, and their officers, employees, agents, and subcontractors.

I. Jurisdiction

The law of the State of Texas shall govern the validity of this AGREEMENT, its interpretation and performance, and any other claims related to it. The venue for any litigation related to this AGREEMENT shall be Tarrant County, Texas.

J. Severability and Survival

If any of the provisions contained in this AGREEMENT are held for any reason to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability will not affect any other provision, and this AGREEMENT shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein. Articles V.F., VI.B., VI.D., VI.F., VI.H., and VI.I. shall survive termination of this AGREEMENT for any cause.

K. Observe and Comply

ENGINEER shall at all times observe and comply with all federal and State laws and regulations and with all City ordinances and regulations which in any way affect this AGREEMENT and the work hereunder, and shall observe and comply with all orders, laws ordinances and regulations which may exist or may be enacted later by governing bodies having jurisdiction or authority for such enactment. No plea of misunderstanding or ignorance thereof shall be

considered. ENGINEER agrees to defend, indemnify and hold harmless CITY and all of its officers, agents and employees from and against all claims or liability arising out of the violation of any such order, law, ordinance, or regulation, whether it be by itself or its employees.

Article VII

Attachments, Schedules, and Signatures

This AGREEMENT, including its attachments and schedules, constitutes the entire AGREEMENT, supersedes all prior written or oral understandings, and may only be changed by a written amendment executed by both parties. The following attachments and schedules are hereby made a part of this AGREEMENT:

Attachment A - Scope of Services
Attachment B – Compensation
Attachment C - Amendments to Standard Agreement for Engineering Services
Attachment D - Project Schedule
Attachment E - Location Map

Executed this the 21st day of Feb., 2011.

ATTEST:

Marty Hendrix
City Secretary

CITY OF FORT WORTH

By: _____
Fernando Costa
Assistant City Manager

APPROVED AS TO FORM AND LEGALITY

By: _____
Assistant City Attorney

C-24670
Contract Authorization

1-4-2011
Date

APPROVAL RECOMMENDED

By: _____
Greg Simmons, P.E.
Director, (Acting) Transportation/Public Works Department

Dunaway Associates, L.P.

By: _____
Name: Toby K. Ford, P.E.
Title: Vice President

By: _____

OFFICIAL RECORD
CITY SECRETARY
FT. WORTH, TX

ATTACHMENT "A"

Scope for Engineering Design Related Services for Storm Water Improvements Projects

The scope set forth herein defines the work to be performed by the ENGINEER in completing the project. Both the CITY and ENGINEER have attempted to clearly define the work to be performed and address the needs of the Project. Under this scope, "ENGINEER" is expanded to include any sub-consultant, including surveyor, employed or contracted by the ENGINEER.

OBJECTIVE

The objective of this project is to eliminate flooding problems located on Wesleyan Drive at the intersection with Strong Avenue.

A Drainage Study for the Wesleyan Hills Drainage Improvements was prepared by A.N.A. Consultants, L.L.C., on April 23, 2010, for the City of Fort Worth Transportation & Public Works Department, which recommended the following improvements:

- Addition of three new inlets @ the Wesleyan/Strong intersection.
- Replacement of existing storm drain between Strong Ave and Mitchell Blvd to increase capacity.

WORK TO BE PERFORMED

Task 1. Design Management
Task 2. Conceptual Design
Task 3. Preliminary Design
Task 4. Final Design
Task 7. ROW/Easement Services
Task 8. Survey Services

TASK 1. DESIGN MANAGEMENT.

ENGINEER will manage the work outlined in this scope to ensure efficient and effective use of ENGINEER's and CITY's time and resources. ENGINEER will manage change, communicate effectively, coordinate internally and externally as needed, and proactively address issues with the CITY's Project Manager and others as necessary to make progress on the work.

1.1. Managing the Team

- Lead, manage and direct design team activities
- Ensure quality control is practiced in performance of the work
- Communicate internally among team members
- Task and allocate team resources

1.2. Communications and Reporting

- Attend a pre-design project kickoff/chartering meeting with CITY staff to confirm and clarify scope, understand CITY objectives, and ensure economical and functional designs that meet CITY requirements.

- Conduct review meetings with the CITY at the end of each design phase.
- Prepare invoices, in accordance with Attachment B to this Standard Agreement and submit monthly in the format requested by the CITY.
- Prepare and submit monthly progress reports in the format provided by the respective CITY Department.
- Prepare and submit baseline Project Schedule initially, and Project Schedule updates with a schedule narrative monthly, as required in Attachment D to this Standard Agreement and according to the City of Fort Worth's Schedule Guidance Document.
- Complete Monthly M/WBE Report Form and Final Summary Payment Report Form at the end of the project.
- Coordinate with other agencies and entities as necessary for the design of the proposed infrastructure, and provide and obtain information needed to prepare the design.
- With respect to coordination with permitting authorities, ENGINEER shall communicate with permitting authorities such that their regulatory requirements are appropriately reflected in the designs. ENGINEER shall work with regulatory authorities to obtain approval of the designs, and make changes necessary to meet their requirements, as part of the design scope.
- Personnel and Vehicle Identification: When conducting site visits to the project location, the ENGINEER or any of its sub-consultants shall carry readily visible information identifying the name of the company and the company representative.

ASSUMPTIONS

- Meetings with the City include: pre-design/kickoff meetings (up to 3), 30%, 60%, 90% and 100% design review meetings.

DELIVERABLES

A. Meeting summaries with action items

B. Monthly invoices

C. Monthly progress reports

D. Baseline design schedule

E. Monthly schedule updates with schedule narrative describing any current or anticipated schedule changes

F. Monthly M/WBE Report Form and Final Summary Payment Report Form

TASK 2. CONCEPTUAL DESIGN (30 PERCENT).

The Conceptual Design shall be submitted to CITY per the approved Project Schedule.

The purpose of the conceptual design is for the ENGINEER to identify, develop, communicate through the defined deliverables, and recommend the design concept that

successfully addresses the design problem, and to obtain the CITY's endorsement of this concept.

ENGINEER will develop the conceptual design of the infrastructure as follows.

2.1. Data Collection

- In addition to data obtained from the CITY, ENGINEER will research and make efforts to obtain pertinent information to aid in coordination of the proposed improvements with any planned future improvements that may influence the project. ENGINEER will also identify and seek to obtain data for existing conditions that may impact the project including; utilities, agencies (such as TxDOT and railroads), CITY Master Plans, CITY drainage complaint files, existing applicable drainage studies, FEMA floodplain and floodway maps, existing models of project area (if any) and property ownership as available from the Tax Assessor's office.
- The following is applicable at all locations that require water service line replacement: The ENGINEER shall visit the project site and obtain the meter numbers and sizes on all existing meters to be replaced on the project and shall identify existing sample stations and fire line locations.

2.2. Drainage Computations

- ENGINEER will perform conceptual design computations for improvements to the existing storm drain system between Strong Avenue and Mitchell Boulevard. The computations will include one alternative storm drain improvement alignment along Strong Avenue between Wesleyan Street and Mitchell Boulevard, and Mitchell Boulevard from the Strong Avenue intersection north to the existing storm drain system.
    - Delineate the watershed based on contour data and field verification and document existing street, right-of-way and storm drain capacities for the subject site. A drainage area map will be drawn at maximum 1" = 200' scale from available 2-foot contour data with the contours labeled. Data source and year will be provided by the CITY.
    - Calculations regarding street and right-of-way capacities and design discharges (5-year and 100-year frequencies) at selected critical locations will be provided. Capacities of existing storm drain will be calculated and shown. All calculations shall conform to CITY criteria delineated in the CITY's *Storm Water Management Design Manual*. All locations in the project area where 100-year runoff exceeds available storm drain and right-of-way capacities shall be clearly identified. The as-built drawings for the existing downstream storm drain system (S-2211) will be utilized to estimate the starting hydraulic grade line (HGL) elevation for the proposed storm drain improvement design calculations.
    - The ENGINEER's responsibility includes recommendations for improvements of the existing system as deemed reasonable and consistent with CITY standards.
- ENGINEER will perform a detention analysis to estimate the pond storage volume required so that the peak storm water runoff of the 97-acre area south of

Berry Street under the future ultimate development conditions is at or below the capacity of the existing storm drain system within Wesleyan Street. The detention analysis will provide a conceptual volume only and will not include development of a detailed detention pond grading or detailed design of structures associated with a future detention pond.

- Develop a unit hydrograph of the estimate storm water runoff to the detention pond location south of Berry Street, opposite Wesleyan Street.
- Develop a rating curve of the hydraulic grade line elevation in the existing storm drain system in Wesleyan Street to use as the outlet structure of a future detention facility.
- Route the unit hydrograph through a conceptual detention pond configuration to verify the detention storage volume required corresponding to a peak outflow consistent with the design discharge of the existing storm drain system in Wesleyan Street.

2.3. Subsurface Utility Engineering

Provide Subsurface Utility Engineering (SUE) to Quality Level B, as described below. The SUE shall be performed in accordance with CI/ASCE 38-02.

Quality Level D

- Conduct appropriate investigations (e.g., owner records, County/CITY records, personal interviews, visual inspections, etc.), to help identify utility owners that may have facilities within the project limits or that may be affected by the project.
- Collect applicable records (e.g., utility owner base maps, "as built" or record drawings, permit records, field notes, geographic information system data, oral histories, etc.) on the existence and approximate location of existing involved utilities.
- Review records for: evidence or indication of additional available records; duplicate or conflicting information; need for clarification.
- Develop SUE plan sheets and transfer information on all involved utilities to appropriate design plan sheets, electronic files, and/or other documents as required. Exercise professional judgment to resolve conflicting information. For information depicted, indicate: utility type and ownership; date of depiction; quality level(s); end points of any utility data; line status (e.g., active, abandoned, out of service); line size and condition; number of jointly buried cables; and encasement.

Quality Level C (includes tasks as described for Quality Level D)

- Identify surface features, from project topographic data and from field observations, that are surface appurtenances of subsurface utilities.
- Include survey and correlation of aerial or ground-mounted utility facilities in Quality Level C tasks.
- Survey surface features of subsurface utility facilities or systems.
- The survey shall also include (in addition to subsurface utility features visible at the ground surface): determination of invert elevations of any manholes and vaults; sketches showing interior dimensions and line connections of such

manholes and vaults; any surface markings denoting subsurface utilities, furnished by utility owners for design purposes.

- Exercise professional judgment to correlate data from different sources, and to resolve conflicting information.
- Update (or prepare) plan sheets, electronic files, and/or other documents to reflect the integration of Quality Level D and Quality Level C information.
- Recommend follow-up investigations (e.g., additional surveys, consultation with utility owners, etc.) as may be needed to further resolve discrepancies.
- Provide Quality Level C to identify overhead utilities on the project and provide the overhead utility information on the SUE plan sheets.

Level B (includes tasks as described for Quality Level C)

- Select and apply appropriate surface geophysical method(s) to search for and detect subsurface utilities within the project limits, and/or to trace a particular utility line or system.
- Based on an interpretation of data, mark the indications of utilities on the ground surface for subsequent survey. Utilize paint or other method acceptable for marking of lines.
- Unless otherwise directed, mark centerline of single-conduit lines, and outside edges of multi-conduit systems.
- Resolve differences between designated utilities and utility records and surveyed appurtenances.
- Recommend additional measures to resolve differences if they still exist. Recommendations may include additional or different surface geophysical methods, exploratory excavation, or upgrade to Quality Level A data.
- As an alternative to the physical marking of lines, the ENGINEER may, with CITY's approval, utilize other means of data collection, storage, retrieval, and reduction, that enables the correlation of surface geophysical data to the project's survey control.

2.4. Pollutant Removal

- Where feasible, ENGINEER will design new flood control structures to provide pollutant removal from storm water. ENGINEER will suggest feasibility of flood control structures during the conceptual design submittal. If it is determined that the City would like to incorporate the recommended design of pollutant removal structures in this project a contract amendment will be made to this scope of services.

2.5. The Conceptual Design Package shall include the following:

- Written summary of the design concept for replacing the existing storm drain system in place and of one alignment alternative from the sump location at Strong Ave and Wesleyan heading west in Strong Ave, then north in Mitchell Blvd and connecting with the existing storm drain system in Mitchell Blvd, with consideration given to strengths and weaknesses, cost comparison, and the rationale for selecting the recommended design concept. Recommendations will be based on the Drainage Study of Wesleyan Hills Drainage Improvements

prepared for the City of Fort Worth Transportation and Public Works by A.N.A. Consultants, L.L.C., dated April 23, 2010.

- Written summary of the detention analysis summarizing the approach taken, assumptions made, and conclusion reached regarding the amount of detention storage needed to accomplish the desired peak flow reduction.
- Written summary of the feasibility of flood control structures.
- Cover sheet
- Drainage area map with supporting drainage computations in the CITY's standard tabular format.
- SUE Plan sheets sealed by a licensed professional engineer registered in the State of Texas.
- Horizontal alignment (excluding profiles) of proposed storm water improvements, including existing lot layout, streets, street right-of-way, proposed easements, and existing utilities gathered during the SUE within the project limits.
- Proposed phasing of water, sanitary sewer, street and drainage work documented in both the project schedule and narrative form.
- Documentation of key design decisions (Project Decision Log).
- Estimates of probable construction cost.

ASSUMPTIONS

- All storm water calculations and design shall conform to the City of Fort Worth *Storm Water Management Design Manual*, March 2006.
- The SUE and SUE plan sheets shall be in accordance with CI/ASCE 38-02.
- 8 copies of the conceptual design package will be delivered. Drawings will be half size (11" x 17") and reports on letter size (8-1/2" x 11").
- DWF files created from design CAD drawings and reports in .pdf format will be uploaded to the designated project folder in Buzzsaw
- ENGINEER shall not proceed with Preliminary Design activities without written approval by the CITY of the Conceptual Design Package.

DELIVERABLES

A. Conceptual Design Package.

TASK 3. PRELIMINARY DESIGN (60 PERCENT).

Preliminary plans shall be submitted to CITY per the approved Project Schedule.

ENGINEER will develop the preliminary design of the infrastructure as follows.

3.1. Development of Preliminary Design Drawings shall include the following:

- Cover Sheet
- Drainage area maps showing proposed improvements with drainage calculations and hydraulic computations in accordance with the City of Fort Worth *Storm Water Management Design Manual, March 2006.*
- A Project Control Sheet, showing all Control Points, used or set while gathering data. Generally on a scale of not less than 1:400. The following information shall be indicated for each Control Point: Identified (existing City Monument #8901, PK Nail, 5/8" Iron Rod); X, Y and Z Coordinates, in an identified coordinate system, and a referred bearing base. Z coordinate on City Datum only; descriptive location (i.e. set in the centerline of the inlet in the South curb line of North Side Drive at the East end of radius at the Southeast corner of North Side Drive and North Main Street).
- Overall project easement layout sheet(s).
- SUE plan drawings.
- Plan and profile drawings of proposed storm water improvements, including existing lot layout with property ownership, streets, curb lines, driveways, medians (if applicable), sidewalks, existing and proposed water and sanitary sewer mains, existing utilities gathered during the SUE and existing utility easements within the project limits.
- No less than two bench marks per plan/profile sheet.
- The ENGINEER will prepare standard and special detail sheets that are not already included in the City's standard details. These may include connection details between various parts of the project, tunneling details, boring and jacking details, waterline relocations, details unique to the construction of the project, trenchless details, and special service lateral reconnections.

3.2. Geotechnical Investigation

- Soil investigations, including field and laboratory tests, borings, related engineering analysis and recommendations for determining soil conditions will be made. In addition to the above investigations, borings and appropriate field and laboratory analysis will be made at reasonable intervals along the project alignment for the Contractor's use in determining soil conditions for preparing bids and a Trench Safety Plan.
- The ENGINEER shall prepare a detailed geotechnical engineering study in conformance with the *City of Fort Worth Pavement Design Standards Manual, 2005.* The study shall include recommendations regarding utility trenching and identifying existing groundwater elevation at each boring.

3.3 Constructability Review

- Prior to the 60 percent review meeting with the CITY, the ENGINEER shall schedule and attend a project site visit with the CITY Project Manager and Construction personnel to walk the project. The ENGINEER shall summarize the CITY's comments from the field visit and submit this information to the CITY in writing.

3.4 Public Meeting

- After the preliminary plans have been reviewed and approved by the CITY, the ENGINEER shall prepare project exhibits, and attend public meeting to help explain the proposed project to residents. The CITY shall select a suitable location and mail the invitation letters to the affected customers. The ENGINEER shall coordinate with CITY GIS staff to identify affected property owners/residents and develop a spreadsheet listing addresses of those to invite to the public meeting.

3.5 Utility Clearance

- The ENGINEER will consult with the CITY's Transportation and Public Works Department, Water Department, and other CITY departments, public utilities, private utilities, and government agencies to determine the approximate location of above and underground utilities, and other facilities (current and future) that have an impact or influence on the project. ENGINEER will design CITY facilities to avoid or minimize conflicts with existing utilities, and where known and possible consider potential future utilities in designs.
- The ENGINEER shall upload individual DWF files for each plan sheet of the approved preliminary plan set to the designated project folder in Buzzsaw for forwarding to all utility companies which have facilities within the limits of the project. The DWF files should be created directly from the CAD files as opposed to PDF files.

3.6 Traffic Control Plan

- Develop a traffic control plan utilizing standard traffic reroute configurations posted as "Typicals" on the CITY's Buzzsaw website. The typicals need not be sealed individually, if included in the sealed contract documents.
- Develop supplemental traffic control drawings as needed for review and approval by the Traffic Division of the Transportation and Public Works Department. These drawings shall be sealed by a professional engineer registered in the State of Texas.

ASSUMPTIONS

- All storm water calculations and design shall conform to the City of Fort Worth *Storm Water Management Design Manual*, March 2006.
- 2 borings at an average bore depth of 12 feet each will be provided.
- Traffic Control "Typicals" will be utilized to the extent possible. It is assumed that one project specific traffic control plan will be developed if required due to realignment of the existing storm drain system.
- 2 copies of the geotechnical report will be delivered to the CITY.
- 0 full size plans will be delivered for Utility Clearance.
- 5 half size and 1 full size plans will be delivered for Constructability Review.
- 10 half size and 1 full size drawings will be delivered for Preliminary Design.

- DWF files created from design CAD drawings will be uploaded to the designated project folder in Buzzsaw.
- ENGINEER will attend one public meeting and one constructability review meeting and site visit.
- ENGINEER shall not proceed with Final Design activities without written approval by the CITY of the Preliminary Design plans.

DELIVERABLES

A. Preliminary Design drawings

B. Utility Clearance drawings

C. Geotechnical Report

D. Documentation of key design decisions (Project Decision Log)

E. Estimates of probable construction cost

F. Public Meeting exhibits

G. Traffic Control Plans

TASK 4. FINAL DESIGN (90 PERCENT) AND FINAL CONSTRUCTION DOCUMENTS (100 PERCENT).

Upon approval of the Preliminary plans, ENGINEER will prepare construction plans as follows:

- Final draft construction plans and specifications shall be submitted to CITY per the approved Project Schedule.
- The ENGINEER shall submit a final design estimate of probable construction cost with the final design plans submitted. This estimate shall use ONLY standard CITY bid items.
- Following a 90% construction plan review meeting with the CITY, the ENGINEER shall submit Final Plans (100%) to the CITY per the approved Project Schedule. Each plan sheet shall be stamped, dated, and signed by the ENGINEER registered in State of Texas.

ASSUMPTIONS

- All storm water calculations and design shall conform to the City of Fort Worth *Storm Water Management Design Manual*, March 2006.
- 10 half size and 2 full size drawings and 2 specifications will be delivered for the 90% design.
- A DWF file for the 90% Design will be created from design CAD drawings and will be uploaded to the project folder in Buzzsaw.
- 2 full size drawings and 2 specifications will be delivered for the 100% design.

- A DWF file for the 100% Design will be created from design CAD drawings and will be uploaded to the project folder in Buzzsaw.
- Estimated final sheet list to include the following: Cover, Legend & Index, Project Control, Easement Layout, Drainage Area Map, Hydraulic Calculations, Plan & Profile Sheets (3), Inlets & Laterals, Details, Traffic Control Plans

DELIVERABLES

A. 90% construction plans specifications.

B. 100% construction plans and specifications.

C. Documentation of key design decisions (Project Decision Log).

D. Detailed estimates of probable construction cost for the authorized construction project, including summaries of bid items and quantities using the CITY's standard bid items and format.

E. Original cover mylar for the signatures of authorized CITY officials.

TASK 5. BID PHASE SERVICES. – [N/A]

TASK 6. CONSTRUCTION PHASE SERVICES. – [N/A]

TASK 7. ROW/EASEMENT SERVICES.

ENGINEER will support and perform activities related to ROW and easements as outlined below, per scoping direction and guidance from the CITY's Project Manager.

7.1. Right-of-Way Research

- The ENGINEER shall determine rights-of-way and easement needs for construction of the project. Required temporary and permanent easements will be identified based on available information and recommendations will be made for approval by the CITY.

7.2 Right-of-Way/Easement Preparation and Submittal.

- The ENGINEER shall prepare documents to be used to obtain right-of-way and permanent and/or temporary easements required to construct the improvements.
- The documentation shall be provided in conformance with the checklists and templates available on the CITY's Buzzsaw site.

ASSUMPTIONS

- The number of Permanent and Temporary Construction Easements will consist of 2, number of parcels will consist of 2 and the number of copies will consist of 3
- Right-of-Way research includes review of property/right-of-way records based on current internet based Tarrant Appraisal District (TAD) information available at the start of the project and available on-ground property information (i.e. iron

rods, fences, stakes, etc.). It does not include effort for chain of title research, parent track research, additional research for easements not included in the TAD, right-of-way takings, easement vacations and abandonments, right-of-way vacations, and street closures.

DELIVERABLES

A. Easement exhibits and metes and bounds provided on CITY forms

TASK 8. SURVEY.

ENGINEER will provide survey support as follows.

8.1 Design Survey

- ENGINEER will perform field surveys to collect horizontal and vertical elevations and other information needed by ENGINEER in design and preparation of plans for the project. Information gathered during the survey shall include topographic data, utilities as required by the SUE, structures, trees (measure caliper, identify overall canopy, and have qualified arborist identify species of trees), and other features relevant to the final plan sheets. Existing drainage at intersections will be verified by field surveys. Spot elevations will be shown on intersection layouts with cross slope to fit intersecting grade lines.
- The minimum survey information to be provided on the plans shall include the following:
  - A Project Control Sheet, showing **ALL** Control Points, used or set while gathering data. Generally on a scale of not less than 1:400:
  - The following information about each Control Point;
    a. Identified (Existing. CITY Monument #8901, PK Nail, 5/8" Iron Rod)
    b. X, Y and Z Coordinates, in an identified coordinate system, and a referred bearing base. Z coordinate on CITY Datum only.
    c. Descriptive Location (Ex. Set in the centerline of the inlet in the South curb line of North Side Drive at the East end of radius at the Southeast corner of North Side Drive and North Main Street).

8.2. Temporary Right of Entry Preparation and Submittal

- Prior to entering property for field survey, the ENGINEER shall prepare, mail and request Temporary Right of Entry from landowners.
- The documentation shall be provided in conformance with the checklists and templates available on the CITY's Buzzsaw site.

8.3. Construction Survey – [N/A]

TASK 9. PERMITTING. – [N/A]

ADDITIONAL SERVICES NOT INCLUDED IN THE EXISTING SCOPE OF SERVICES

Additional Services not included in the existing Scope of Services – CITY and ENGINEER agree that the following services are beyond the Scope of Services described in the tasks above. However, ENGINEER can provide these services, if needed, upon the CITY's written request. Any additional amounts paid to the ENGINEER as a result of any material change to the Scope of the Project shall be agreed upon in writing by both parties before the services are performed. These additional services include the following:

- Negotiation of easements or property acquisition.
- Services related to development of the CITY's project financing and/or budget.
- Services related to disputes over pre-qualification, bid protests, bid rejection and re-bidding of the contract for construction.
- Services related to damages caused by fire, flood, earthquake or other acts of God.
- Services related to warranty claims, enforcement and inspection after final completion.
- Services to support, prepare, document, bring, defend, or assist in litigation undertaken or defended by the CITY.
- Performance of miscellaneous and supplemental services related to the project as requested by the CITY.
- Bid phase and construction phase services are not included in this scope of services.
- This scope of services does not include the design of special storm drain junction structures, sanitary sewer and storm drain conflict structures or utility crossing adjustments. It is assumed that the City's standard storm drain manholes will be used. If special junction structures, conflict structures or utility crossing adjustments are required, design of these will be added by contract amendment at a later date.
- Preparation of an erosion control plan or SWPPP are not included in this scope of service.

ATTACHMENT B
COMPENSATION

Design Services for
Wesleyan Hills Drainage Improvements Project
City Project No. 01608
Lump Sum Project

I. Compensation

A. The ENGINEER shall be compensated a total lump sum fee of **$128,957.00** as summarized in Exhibit B-1 – Engineer Invoice and Section IV – Summary of Total Project Fees. The total lump sum fee shall be considered full compensation for the services described in Attachment A, including all labor materials, supplies, and equipment necessary to deliver the services.

B. The ENGINEER shall be paid monthly payments as described in Section II - Method of Payment.

II. Method of Payment

A. Partial payment shall be made to the ENGINEER monthly upon City's approval of an invoice prepared and submitted by the ENGINEER in the format and including content as presented in Exhibit B-1, Progress Reports as required in item III. of this Attachment B, and Schedule as required in Attachment D to this Agreement.

B. The estimated current physical percent complete as required on the invoice shall be calculated from the progress schedule as required in Attachment D to this Standard Agreement and according to the current version of the City of Fort Worth's Schedule Guidance Document.

C. The cumulative sum of such monthly partial fee payments shall not exceed the total current project budget including all approved Amendments.

D. Each invoice shall be verified as to its accuracy and compliance with the terms of this Agreement by an officer of the ENGINEER.

III. Progress Reports

A. The ENGINEER shall prepare and submit to the designated representative of the Transportation and Public Works Department monthly progress reports and schedules in the format required by the City.

ATTACHMENT B
COMPENSATION

IV. Summary of Total Project Fees

Firm	Primary Responsibility	Fee Amount	%
Prime Consultant			
Dunaway Associates, L.P.	Engineering & Project Management	$102,507.00	79
Proposed M/WBE Sub-Consultants			
Gorrondona & Associates, Inc.	Topographic Survey, SUE, Easement Documents & Geotechnical Bores	$26,450.00	21
Non-M/WBE Consultants			
	TOTAL	**$128,957.00**	100%

Project Number & Name	Total Fee	M/WBE Fee	M/WBE %
City Project No. 01608 Wesleyan Hills Storm Water Improvements	$128,957.00	$26,450.00	21%

City M/WBE Goal = 21%

Consultant Committed Goal = 21 %

EXHIBIT "B-1"
ENGINEER INVOICE
(Supplement to Attachment B)

Insert required invoice format following this page, including negotiated total budget and allocations of budgets across work types and work phases.

Level of Effort Spreadsheet
TASK/HOUR BREAKDOWN
Design Services for
Wesleyan Hills Drainage Improvements Project
City Project No. 01608

Task No.	Task Description	Labor (hours)							Total Labor Cost	Expense				Total Expense Cost	Task Sub Total
		Principal	Department Director	Project Manager	Project Engineer	EIT	CADD	Administrative		Subconsultant		Travel	Reproduction		
	Rate	$205	$160	$135	$125	$110	$100	$80		MWBE	Non-MWBE				
1.0	Project Management	17	28	72	44	8	8	22	$26,625	$0	$0	$120	$100	$220	$26,845
1.1	Managing the Team														
1.1.1	Internal Team Meetings	3	8	8	8	8	8		$5,555					$0	$5,555
1.1.2	QA/QC	6	8	12	16				$5,380				$100	$100	$5,480
1.2	Communications and Reporting														
1.2.1	Pre-Design Coordination Meeting	2	5	6	4			1	$2,760			$20		$20	$2,780
1.2.2	Project Update Meetings (Monthly)			8	6			2	$2,240					$0	$2,240
1.2.3	Design Submittal Review Meetings	2	5	6	6			6	$3,410			$100		$100	$3,510
1.2.4	Prepare Baseline Schedule	1		8				1	$1,365					$0	$1,365
1.2.5	Prepare Monthly Progress Reports with Schedule	1		8				4	$1,605					$0	$1,605
1.2.6	Prepare Monthly MWBE Reports	1		8				4	$1,605					$0	$1,605
1.2.7	Invoicing	1		8				4	$1,605					$0	$1,605
2.0	Conceptual Design (30-Percent)	4	19	11	40	81	80	2	$27,415	$7,250	$0	$0	$212	$7,462	$34,877
2.1	Data Collection				8			2	$1,160					$0	$1,160
2.2	Drainage Computations and Drainage Area Map														
	• watershed/drainage area map			1	1	2	8	8	$2,225					$0	$2,225
	• storm drain/ROW capacity calculations			1		8	24		$3,800					$0	$3,800
	• recommend improvements			2			8		$1,200					$0	$1,200
	• develop hydrograph for peak discharge			1			8		$1,040					$0	$1,040
	• develop outlet structure rating curve			2			8		$880					$0	$880
	• estimate storage required			1			6		$820					$0	$820
2.3	Subsurface Utility Engineering								$0	$7,250				$7,250	$7,250
2.4	Pollutant Removal			2					$320					$0	$320
2.5	Concept Design Package								$0					$0	$0
	• design drawings	2		4	12		64		$8,850				$212	$212	$9,062
	• written summary of storm drain concept	1	4	2		10	4		$2,615					$0	$2,615
	• written summary of detention concept		4			10	4		$2,140					$0	$2,140
	• written summary of pollutant removal		1			1			$270					$0	$270
	• Project Decision Log			2	2				$520					$0	$520
	• Construction Estimate	1		2	8				$1,475					$0	$1,475
3.0	Preliminary Design (60 Percent)	18	0	43	67	0	108	2	$28,830	$3,500	$0	$40	$750	$4,290	$33,120
3.1	Preliminary Design Drawings	13		28	40		64		$19,845				$630	$630	$20,475
3.2	Geotechnical Investigation								$0	$3,500				$3,500	$3,500
3.3	Constructability Review	1		3	3			2	$1,145			$20		$20	$1,165
3.4	Public Meeting	2		2	2		8		$1,730			$20	$120	$140	$1,870
3.5	Utility Clearance			2	4				$770					$0	$770
3.6	Traffic Control Plan	1		4	8		16		$3,345					$0	$3,345
3.7	Project Decision Log			2	2				$520					$0	$520
3.8	Construction Estimate	1		2	8				$1,475					$0	$1,475

Level of Effort Spreadsheet
TASK/HOUR BREAKDOWN
Design Services for
Wesleyan Hills Drainage Improvements Project
City Project No. 01608

Task No.	Task Description	Labor (hours)							Total Labor Cost	Expense				Total Expense Cost	Task Sub Total
		Principal	Department Director	Project Manager	Project Engineer	EIT	CADD	Administrative		Subconsultant		Travel	Reproduction		
	Rate	$205	$160	$135	$125	$110	$100	$80		MWBE	Non-MWBE				
4.0	Final Design	5	0	17	26	0	56	24	$14,090	$0	$0	$0	$1,225	$1,225	$15,315
4.1	Final Draft (90%) Construction Plans and Specifications	2		8	12		40	16	$8,270				$560	$560	$8,830
4.2	Final (100%) Plans and Specifications	2		8	8		16	8	$4,730				$665	$665	$5,395
4.3	Project Decision Logs (90% and 100%)				4				$500					$0	$500
4.4	Construction Estimates (90% and 100%)	1		1	2				$590					$0	$590
5.0	Bid Phase - N/A	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0
6.0	Construction Phase Services - N/A	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0
7.0	ROW/Easement Services	0	0	0	0	0	0	0	$0	$4,925	$0	$0	$0	$4,925	$4,926
7.1	Right-of-Way Research								$0	$2,125				$2,125	$2,125
7.2	Right-of-Way/Easement Preparation and Submittal								$0	$2,800				$2,800	$2,800
8.0	Survey	0	0	1	0	0	0	4	$455	$10,775	$0	$0	$0	$10,775	$11,230
8.1	Design Survey								$0	$10,775				$10,775	$10,775
8.2	Temporary Right of Entry Submittal			1				4	$455	$0				$0	$455
9.0	Permitting - N/A	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0
	Totals	44	47	144	177	89	252	54	$97,415	$26,450	$0	$160	$2,287	$28,897	$128,312

Project Summary	
Total Hours	807
Total Labor	$97,415
Total Expense	$28,897
MWBE Subconsultant	$26,450
Non-MWBE Subconsultant	$0
10% Sub Markup	$2,645
MWBE Participation	21%
Total Project Cost	$128,957

CCN Area 3
Contract No. 4147O
Morningstar Development

Professional Services Payment Request

Project Manager: Vibhuti Pandey, P.E.

Summary LOCK UNLOCK

Project: Wesleyan Hills Drainage Improvements
City Project #: 01608

City Sec Number:
Purchase Order:

Company Name: Dunaway Associates, L.P.

Consultant Instructions:

Fill in green cells including Invoice Number, From and To Dates and the included worksheets.

When your invoice is complete, save and close, start Buzzsaw and Add your invoice to the Consultant folder within Project's folder.

Consultant's PM: Kervin Campbell, P.E.
Vendor Invoice #:
Payment Request #:
From Date:
To Date:
Invoice Date:

email: KCampbell@dunaway-assoc.com
Office Address: 550 Bailey Ave Ste #400, Ft. Worth, TX 76107
Telephone: 817-335-1121
Fax: 817-335-7437

Sheet	FAC and Work Type Description	Agreement Amount	Amendment Amount	Agreement Amount to Date	Completed Amount	Percent Completed	($) Invoiced Previously	Current Invoice	Remaining Balance
Work Type 1	Storm Water P229 531200 2082801608	$128,957.00		$128,957.00					$128,957.00
Work Type 2									
Work Type 3									
Work Type 4									
Work Type 5									
Work Type 6									
Totals This Payment Reques		$128,957.00		$128,957.00					$128,957.00

Overall Percentage Complete

CCN Area 3
Contract No. 41470
Morningstar Development

Professional Services Payment Request

Project Manager: Vibhuti Pandey, P.E.

Project: Wesleyan Hills Drainage Improvements

City Project #: 01608
Work Type Desc: Storm Water
F/A/C: P229 531200 2082801608
City Sec Number:
Purchase Order:

Consultant Instructions:

Fill in green cells including Percent Complete and Invoiced Previously Quantities
When your invoice is complete, save and close, start Buzzsaw and Add your invoice to the Consultant folder within Project's folder.

Company Name: Dunaway Associates, L.P.

Consultant's PM: Kervin Campbell, P E.
Vendor Invoice #:
Payment Request #:
From Date:
To Date:
Invoice Date:

email: KCampbell@dunaway-assoc.com
Office Address 550 Bailey Ave Ste #400, Ft. Worth, TX 76107
Telephone: 817-335-1121
Fax: 817-335-7437

Pay Items

Description	Agreement Amount	Amendment Number	Amendment Amount	Agreement Amount to Date	Completed Amount	Percent Completed	($) Invoiced Previously	Current Invoice	Remaining Balance
30 - Design	$128,957.00			$128,957.00					$128,957.00
Totals This Unit:	$128,957.00			$128,957.00					$128,957.00

Overall Percentage Complete:

CCN Area 3
Contract No. 41470
Morningstar Development

ATTACHMENT "C"

CHANGES AND AMENDMENTS TO STANDARD AGREEMENT

Design Services for
Wesleyan Hills Drainage Improvements Project
City Project No. 01608

No changes to the Standard Agreement.

ATTACHMENT D - PROJECT SCHEDULE

ID	Task Name	Duration	Physical % Complete	Start	Finish
0	**Wesleyan Hills Storm Drain Improvements - Baseline Schedule**	**183 days**	**0%**	**Mon 2/28/11**	**Mon 11/14/11**
1	Design	183 days	0%	Mon 2/28/11	Mon 11/14/11
2	Design	183 days	0%	Mon 2/28/11	Mon 11/14/11
3	Overall Design	183 days	0%	Mon 2/28/11	Mon 11/14/11
4	30% Conceptual Design	71 days	0%	Mon 2/28/11	Tue 6/7/11
5	Issue Design Notice To Proceed	0 days	0%	Mon 2/28/11	Mon 2/28/11
6	Prepare 30% Conceptual Plans	60 days	0%	Mon 2/28/11	Fri 5/20/11
7	30% Conceptual Plan Submittal	0 days	0%	Fri 5/20/11	Fri 5/20/11
8	Review 30% Conceptual Plan(CFW)	10 days	0%	Mon 5/23/11	Mon 6/6/11
9	Hold Project Meeting	1 day	0%	Tue 6/7/11	Tue 6/7/11
10	60% Preliminary Design	51 days	0%	Wed 6/8/11	Thu 8/18/11
11	Prepare 60% Preliminary Plans and Specifications	40 days	0%	Wed 6/8/11	Wed 8/3/11
12	60% Preliminary Plan and Specification Submittal	0 days	0%	Wed 8/3/11	Wed 8/3/11
13	Submit Plans and Specs to Utilities	5 days	0%	Thu 8/4/11	Wed 8/10/11
14	Review 60% Preliminary Plans and Specifications (CFW)	10 days	0%	Thu 8/4/11	Wed 8/17/11
15	Hold Project Meeting	1 day	0%	Thu 8/18/11	Thu 8/18/11
16	90% Final Design	61 days	0%	Fri 8/19/11	Mon 11/14/11
17	Prepare 90% Final Plans and Specifications	30 days	0%	Fri 8/19/11	Fri 9/30/11
18	90% Final Plan and Specification Submittal	0 days	0%	Fri 9/30/11	Fri 9/30/11
19	Review 90% Final Plans and Specifications (CFW)	10 days	0%	Mon 10/3/11	Fri 10/14/11
20	Hold Project Meeting	1 day	0%	Mon 10/17/11	Mon 10/17/11
21	Incorporate Final Comments and Submit Final Plans and Specifications	15 days	0%	Tue 10/18/11	Mon 11/7/11
22	Approve Final Plans and Specifications and Route for Signatures	5 days	0%	Tue 11/8/11	Mon 11/14/11
23	Design Complete	0 days	0%	Mon 11/14/11	Mon 11/14/11

Project: Wesleyan Hills Drainage Improvements Project
Date: Project No. 01608

Task — Milestone — External Tasks
Split — Summary — External MileTask
Progress — Project Summary — Split

CCN Area 3
Contract No. 41470
Morningstar Development
ATTACHMENT "E"

WESLEYAN HILLS
STORM DRAINAGE IMPROVEMENTS

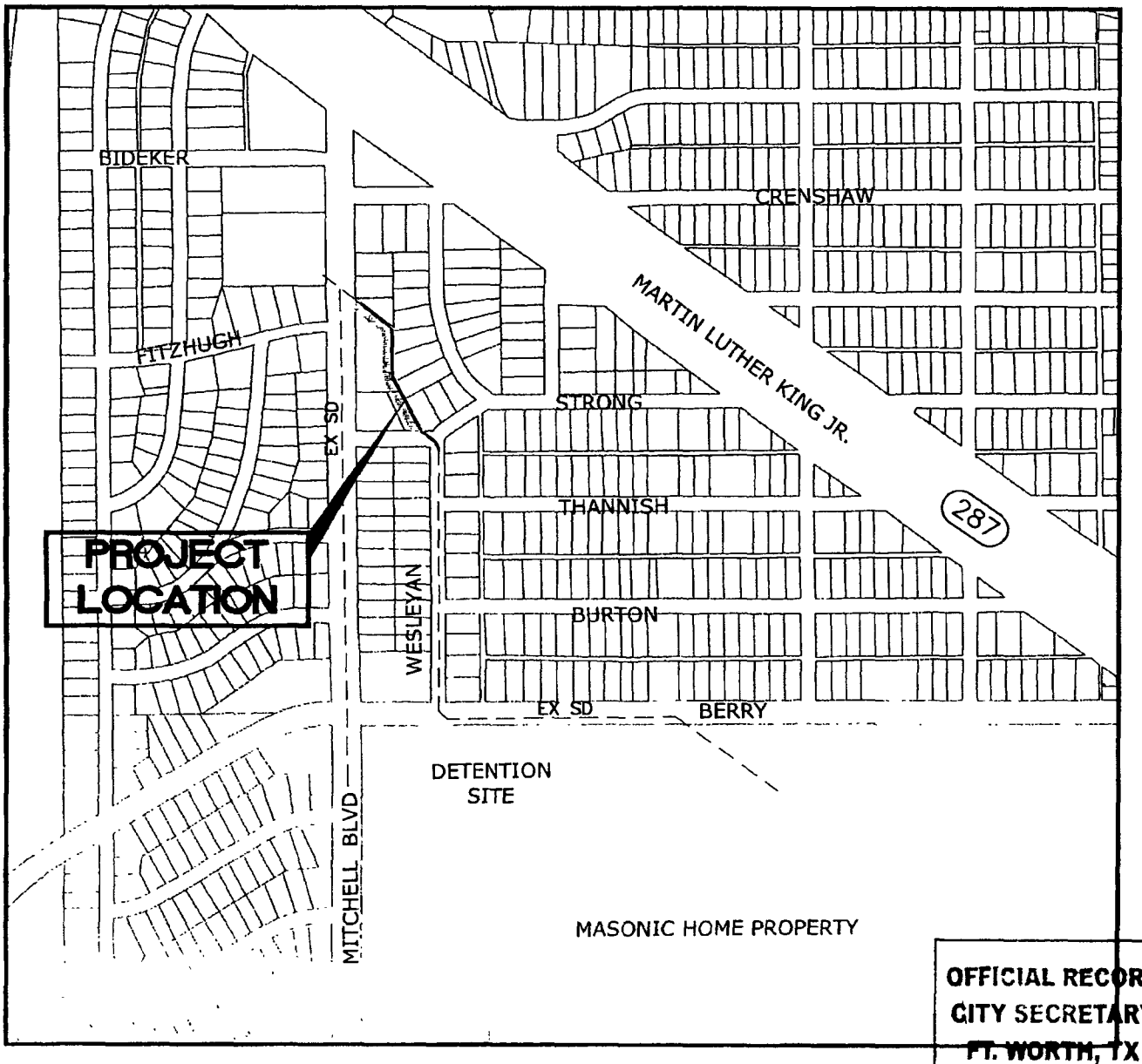
MAPSCO 78S
COUNCIL DISTRICT 8

FORT WORTH

500 0 500
SCALE: 1"=500'

PROPOSED BOX CULVERT
EXISTING SD
TEMP CONSTRUCTION EASEMENT

DUNAWAY
550 Bailey Avenue • Suite 400 • Fort Worth, Texas 76107
Tel: 817.335.1121 • Fax: 817.335.7437
(TX REG. F-1114)



OFFICIAL RECORD
CITY SECRETARY
FT. WORTH, TX

City of Fort Worth, Texas
Mayor and Council Communication

COUNCIL ACTION: Approved on 1/4/2011

DATE: Tuesday, January 04, 2011 **REFERENCE NO.:** **C-24670
LOG NAME: 20SCOPE_WESLEYAN_HILLS
SUBJECT:
Authorize an Engineering Agreement in the Amount of $128,957.00 with Dunaway Associates, L.P., for the Wesleyan Hills Drainage Improvements Project (COUNCIL DISTRICT 8)

RECOMMENDATION:

It is recommended that the City Council authorize the City Manager to execute an engineering agreement with Dunaway Associates, L.P., in the amount of $128,957.00 for scope assessment of Wesleyan Hills Drainage Improvements Project.

DISCUSSION:

The Storm Water Management Program was established to reduce flooding in Fort Worth, preserve streams, minimize water pollution, and to operate the storm water system in a more effective manner to fully comply with state and federal regulatory requirements. This will be accomplished by infrastructure reconstruction and system maintenance, master planning, enhanced development review, and increased public education and outreach.

On September 22, 2009, (Ordinance No. 18838-09-2009) the City Council approved the issuance and sale of $45,000,000.00 in revenue bonds for the Storm Water Capital Projects Bond 2009 Fund, to fund a two-year storm water capital project program.

A Request for Qualifications (RFQ) to provide drainage design was issued by the City in March of 2010 and 61 design consultants submitted statements of qualifications, including Dunaway Associates, L.P., (Dunaway Associates). Dunaway Associates was selected to study the drainage in this area and to provide scope assessment services for any identified drainage improvements for the Wesleyan Hills Drainage Improvements Project (City Project No. 01608).

During rain events the intersection of Wesleyan Drive and Strong Avenue has flooded, and the roadway has been overtopped.

The scope assessment services for the subject engineering agreement will include identification, development and recommendation of design improvements.

The scope of services for the study include the following: field survey, subsurface utility engineering, data acquisition, hydrologic and hydraulic analysis, alternative analysis, construction cost estimating, and preparation of a drainage study report. Should a drainage improvement project result from the study, the agreement with Dunaway Associates, L.P., will likely be amended to increase the scope of their services to include full engineering design.

Dunaway Associates, L.P., proposes to perform the scope assessment services for a lump sum fee of $128,957.00. City staff considers the fee to be fair and reasonable for the scope of services proposed.

Dunaway Associates, L.P., is in compliance with the City's M/WBE Ordinance by committing to 21 percent M/WBE participation. The City's goal on the project is 21 percent.

This project is located in COUNCIL DISTRICT 8, Mapsco 62M and H, 63E and J.

FISCAL INFORMATION:

The Financial Management Services Director certifies that funds are available in the current capital budget, as appropriated, of the Storm Water Capital Projects Bond 2009 Fund.

FUND CENTERS:

TO Fund/Account/Centers	FROM Fund/Account/Centers	
	P227 531200 208280160830	$128,957.00

CERTIFICATIONS:

Submitted for City Manager's Office by:	Fernando Costa (6122)
Originating Department Head:	William Verkest (7801)
Additional Information Contact:	Vibhuti Pandey (2424)

ATTACHMENTS

1. 01608_MWBE_Compliance_Approved.pdf
2. FAR-01608-00001-Design.pdf
3. fundingverification.doc
4. M_AND_C_01608.pdf

SECTION 00 52 43
AGREEMENT

THIS AGREEMENT, authorized on 3/27/18 is made by and between the City of Forth Worth, a Texas home rule municipality, acting by and through its duly authorized City Manager, ("City"), and **Jackson Construction, Ltd.**, authorized to do business in Texas, acting by and through its duly authorized representative, ("Contractor").

City and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

Article 1. WORK

Contractor shall complete all Work as specified or indicated in the Contract Documents for the Project identified herein.

Article 2. PROJECT

The project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

Walsh Ranch Sanitary Sewer Extension, Phase IVA

City Project No. 100924

Article 3. CONTRACT PRICE

City agrees to pay Contractor for performance of the Work in accordance with the Contract Documents an amount, in current funds, of **Two Million, Eight Hundred Twenty-Four Thousand, Six Hundred Eleven** Dollars ($ **2,824,611.00**).

Article 4. CONTRACT TIME

4.1 Final Acceptance.

The Work will be complete for Final Acceptance within **270** days after the date when the Contract Time commences to run, as provided in Paragraph 2.03 of the General Conditions, plus any extension thereof allowed in accordance with Article 12 of the General Conditions.

4.2 Liquidated Damages

Contractor recognizes that *time is of the essence* for completion of Milestones, if any, and to achieve Final Acceptance of the Work and City will suffer financial loss if the Work is not completed within the time(s) specified in Paragraph 4.1 above. The Contractor also recognizes the delays, expense and difficulties involved in proving in a legal proceeding, the actual loss suffered by the City if the Work is not completed on time. Accordingly, instead of requiring any such proof, Contractor agrees that as liquidated damages for delay (but not as a penalty), Contractor shall pay City **Five Hundred Dollars** (*$500.00*) for each day that expires after the time specified in Paragraph 4.1 for Final Acceptance until the City issues the Final Letter of Acceptance.

Article 5. CONTRACT DOCUMENTS

5.1 CONTENTS:

A. The Contract Documents which comprise the entire agreement between City and Contractor concerning the Work consist of the following:

1. This Agreement.
2. Attachments to this Agreement:
   a. Bid Form
      1) Proposal Form
      2) Vendor Compliance to State Law Non-Resident Bidder
      3) Prequalification Statement
      4) State and Federal documents *(project specific)*
   b. Current Prevailing Wage Rate Table
   c. Insurance ACORD Form(s)
   d. Payment Bond
   e. Performance Bond
   f. Maintenance Bond
   g. Power of Attorney for the Bonds
   h. Worker's Compensation Affidavit
   i. MBE and/or SBE Utilization Form
3. General Conditions.
4. Supplementary Conditions.
5. Specifications specifically made a part of the Contract Documents by attachment or, if not attached, as incorporated by reference and described in the Table of Contents of the Project's Contract Documents.
6. Drawings.
7. Addenda.
8. Documentation submitted by Contractor prior to Notice of Award.
9. The following which may be delivered or issued after the Effective Date of the Agreement and, if issued, become an incorporated part of the Contract Documents:
   a. Notice to Proceed.
   b. Field Orders.
   c. Change Orders.
   d. Letter of Final Acceptance.

Article 6. INDEMNIFICATION

6.1 Contractor covenants and agrees to indemnify, hold harmless and defend, at its own expense, the city, its officers, servants and employees, from and against any and all claims arising out of, or alleged to arise out of, the work and services to be performed by the contractor, its officers, agents, employees, subcontractors, licenses or invitees under this contract. This indemnification provision is specifically intended to operate and be effective even if it is alleged or proven that all or some of the damages being sought were caused, in whole or in part, by any act, omission or negligence of the city. This indemnity provision is intended to include, without limitation, indemnity for costs, expenses and legal fees incurred by the city in defending against such claims and causes of actions.

6.2 Contractor covenants and agrees to indemnify and hold harmless, at its own expense, the city, its officers, servants and employees, from and against any and all loss, damage or destruction of property of the city, arising out of, or alleged to arise out of, the work and services to be performed by the contractor, its officers, agents, employees, subcontractors, licensees or invitees under this contract. This indemnification provision is specifically intended to operate and be effective even if it is alleged or proven that all or some of the damages being sought were caused, in whole or in part, by any act, omission or negligence of the city.

Article 7. MISCELLANEOUS

7.1 Terms.

Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.

7.2 Assignment of Contract.

This Agreement, including all of the Contract Documents may not be assigned by the Contractor without the advanced express written consent of the City.

7.3 Successors and Assigns.

City and Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, in respect to all covenants, agreements and obligations contained in the Contract Documents.

7.4 Severability.

Any provision or part of the Contract Documents held to be unconstitutional, void or unenforceable by a court of competent jurisdiction shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon CITY and CONTRACTOR.

7.5 Governing Law and Venue.

This Agreement, including all of the Contract Documents is performable in the State of Texas. Venue shall be Tarrant County, Texas, or the United States District Court for the Northern District of Texas, Fort Worth Division.

7.6 Authority to Sign.

Contractor shall attach evidence of authority to sign Agreement if signed by someone other than the duly authorized signatory of the Contractor.

7.7 Prohibition On Contracts With Companies Boycotting Israel.
Contractor acknowledges that in accordance with Chapter 2270 of the Texas Government Code, the City is prohibited from entering into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract.

The terms "boycott Israel" and "company" shall have the meanings ascribed to those terms in Section 808.001 of the Texas Government Code. ***By signing this contract, Contractor certifies that Contractor's signature provides written verification to the City that Contractor: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract.***

7.8 Immigration Nationality Act.

Contractor shall verify the identity and employment eligibility of its employees who perform work under this Agreement, including completing the Employment Eligibility Verification Form (I-9). Upon request by City, Contractor shall provide City with copies of all I-9 forms and supporting eligibility documentation for each employee who performs work under this Agreement. Contractor shall adhere to all Federal and State laws as well as establish appropriate procedures and controls so that no services will be performed by any Contractor employee who is not legally eligible to perform such services. **CONTRACTOR SHALL INDEMNIFY CITY AND HOLD CITY HARMLESS FROM ANY PENALTIES, LIABILITIES, OR LOSSES DUE TO VIOLATIONS OF THIS PARAGRAPH BY CONTRACTOR, CONTRACTOR'S EMPLOYEES, SUBCONTRACTORS, AGENTS, OR LICENSEES.** City, upon written notice to Contractor, shall have the right to immediately terminate this Agreement for violations of this provision by Contractor.

7.9 No Third-Party Beneficiaries.

This Agreement gives no rights or benefits to anyone other than the City and the Contractor and there are no third-party beneficiaries.

7.10 No Cause of Action Against Engineer.

Contractor, its subcontractors and equipment and materials suppliers on the PROJECT or their sureties, shall maintain no direct action against the Engineer, its officers, employees, and subcontractors, for any claim arising out of, in connection with, or resulting from the engineering services performed. Only the City will be the beneficiary of any undertaking by the Engineer. The presence or duties of the Engineer's personnel at a construction site, whether as on-site representatives or otherwise, do not make the Engineer or its personnel in any way responsible for those duties that belong to the City and/or the City's construction contractors or other entities, and do not relieve the construction contractors or any other entity of their obligations, duties, and responsibilities, including, but not limited to, all construction methods, means, techniques, sequences, and procedures necessary for coordinating and completing all portions of the construction work in accordance with the Contract Documents and any health or safety precautions required by such construction work. The Engineer and its personnel have no authority to exercise any control over any construction contractor or other entity or their employees in connection with their work or any health or safety precautions.

SIGNATURE PAGE TO FOLLOW

IN WITNESS WHEREOF, City and Contractor have each executed this Agreement to be effective as of the date subscribed by the City's designated Assistant City Manager ("Effective Date").

Contractor: Jackson Construction Ltd.

By: Troy K Jackson
(Signature)

Troy L. Jackson
(Printed Name)

Title: President

Address:

5112 Sun Valley Dr.
Fort Worth, TX 76119

City/State/Zip:

Date

City of Fort Worth

By:

Jesus Chapa
Assistant City Manager

Date 3/27/18

Attest: M Hayes
City Secretary

(Seal)

M&C C-28648
Date: 3/27/18
Form 1295 No. 2018-314640

Contract Compliance Manager:
By signing, I acknowledge that I am the person responsible for the monitoring and administration of this contract, including ensuring all performance and reporting requirements.

Alain Lanlon
Project Manager.

Approved as to Form and Legality:

Douglas W. Black
Assistant City Attorney

APPROVAL RECOMMENDED:

~~Kenneth Morgan~~ Chris Harder. P.E.
Acting DIRECTOR,
Director, Water Department

OFFICIAL RECORD
CITY SECRETARY
FT. WORTH, TX

CCN Area 5
Contract No. 26067
Amending Contract No. 24777 Related to Contract No. 26152

AMENDMENT NO. 1

STATE OF TEXAS δ

COUNTY OF TARRANT δ

CITY SECRETARY CONTRACT NO.

CITY SECRETARY CONTRACT NO. 26067

WHEREAS, the City of Fort Worth ("City") and Dunaway and Associates, Inc. ("Engineer") made and entered into City Secretary Contract No. 24777, ("Contract") which was authorized by the City Council by M&C C-17299 on the 2nd day of March, 1999; and

WHEREAS, the Contract involves engineering services for the following project:

The M-321 and M-423 sanitary sewer basins are located in far south Fort Worth near the Everman Parkway and Garden Acres interchanges with I-35W. These two sanitary sewer mains are needed to meet anticipated future demands resulting from growth in the area.

WHEREAS, it has become necessary to execute Amendment No. 1 to said Contract to include an increased scope of work and revised maximum fee;

NOW THEREFORE, City and Engineer, acting herein by and through their duly authorized representatives, enter into the following agreement which amends the Contract:

1.

Article I, of the Contract is amended to include the additional engineering services specified in M&C C-18067, adopted by the City Council on June 13, 2000, and further explained in a proposal letter dated March 15, 2000, copies of which are attached hereto and incorporated herein. The cost to City for the additional services performed by Engineer total $33,291.23.

2.

Article II, of the Contract is amended to provide for an increase in the maximum fee to be paid to Engineer for all work and services performed under the Contract, as amended, so that the total fee paid by the City for all work and services shall not exceed the sum of $214,691.23.

3.

All other provisions of the Contract, which are not expressly amended herein, shall remain in full force and effect.

Executed on this the 20th day of July, 2000, in Fort Worth, Tarrant County, Texas.

ATTEST:

Gloria Pearson 7-20-00
City Secretary

CITY OF FORT WORTH:

Mike Groomer
Assistant City Manager

APPROVAL RECOMMENDED:

A. Douglas Rademaker, P.E.
Director, Department of Engineering

ENGINEER:
Dunaway and Associates, Inc.

James E. DeOtte, P.E.
Vice President

APPROVED AS TO FORM AND LEGALITY:

Gary Steinberger
Assistant City Attorney

C-18067
Contract Authorization

6-13-00
Date

DUNAWAY ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS

DAI No. 9820600

March 15, 2000

Mr. Anthony Wilkins, P.E.
Transportation & Public Works Department
City of Fort Worth
1000 Throckmorton
Fort Worth, Texas 76102

Reference: **Amendment No. 1**
Main 321 & 423 Drainage Areas
Sanitary Sewer System Improvements
D.O.E. No. 2730
Sewer Project No. PS 58-070580174710

Dear Mr. Wilkins:

Dunaway Associates Inc. (DAI) is pleased to present this Amendment No. 1 for the following additional services that are beyond our original scope of services.

- 2,160 LF of additional survey and design for re-routed sewer alignment:
  - *The re-route of the sewer line was requested by the City to accommodate a shallower* alignment than the route initially chosen by the City. This revised alignment was also coordinated with the property owner with regard to his preference of the sewer's location in relation to the existing buildings on his site. This survey was performed by our M/WBE sub-consultant, Gorrondona & Associates, Inc.
- 3 additional easements prepared for re-routed sewer alignment in two locations:
  - 1 for the re-routed 2,160 LF sewer line
  - 2 for the extension at the upstream end of M-423
    - The extension was a request by the City to lengthen the end of the line to provide service to the property owner located just west of the initial upstream end of the original alignment.
- Additional survey necessary for staking of soil boring locations:
  - The City requested that DAI provide the survey in lieu of using the City's own crews. This survey was performed by DAI's survey crews in lieu of our M/WBE sub-consultant to meet the time schedule created by the City from the date of request for the staking to the already established date of advertisement.

1501 MERRIMAC CIRCLE • SUITE 100 • FORT WORTH, TEXAS 76107-6572 • (817) 335-1121 • METRO (817) 429-2135 • FAX (817) 335-7437

- **Amendment No. 1**
  Main 321 & 423 Drainage Areas
  March 15, 2000
  Page 2

  - Additional printing associated with this amendment:

    - This reproduction was performed by our M/WBE sub-consultant, Trevino & Assoc., Inc.

A summary of the proposed budget for this revised amendment is as follows:

Basic Fee	
Design of 2,160 LF of sewer ($10.00/LF)	$ 21,600.00
Survey (2,160 LF x $1.90) - M/WBE	$ 4,104.00
(10% of subconsultant)	$ 410.40
Easement Preparation ($500/ea)	$ 1,500.00
Reproduction - M/WBE	$ 2,442.02
(10% of subconsultant)	$ 244.20
Special Services	
Staking of soil boring locations	$ 2,990.61
TOTAL PROPOSED AMENDMENT	**$ 33,291.23**

A summary of the total project fees are as follows:

Contract	Description	Fee
Original Contract	26,000 LF of sewer	$ 181,400.00
Amendment No. 1	Additional 2,160 LF of sewer & survey for soil borings	$ 33,291.23
TOTAL PROJECT		**$ 214,691.23**

Please review the enclosed information and do not hesitate to call me if you have any questions or require additional information regarding this revised proposal.

Sincerely,

DUNAWAY ASSOCIATES, INC.

Brian S. Darby, P.E.
Project Manager

BSD/do

9820600_Ltr_AWilkins_Amend1_BSD.doc

Enclosure

Amendment No. 1
Main 321 & 423 Drainage Areas
Sanitary Sewer System Improvements
D.O.E. No. 2730
Sewer Project No. PS 58-070580174710

Design Services: Sewer Main Construction

DESCRIPTION	Previous Estimated Expense	Increased Expense	Total Expense
Construction Estimate	$1,737,400.00	$201,870.90	$1,939,270.90
Curve "A" 7.0% in original contract (8.6% in 4 Contracts for this Addendum	$121,618.00	$45,159.30	$166,777.30
Less 15% for City Administration	$103,360.00	$38,400.00	$141,760.00
Survey	$54,340.00	$7,505.01	$61,845.01
Easements	$14,500.00	$1,500.00	$16,000.00
Printings	$4,200.00	$2,686.22	$6,886.22
Alignment and Sizing Study	$2,000.00	$0.00	$2,000.00
Public Meetings	$800.00	$0.00	$800.00
Deliver Documents, Bidding Assistance, Pre-Bid Conf.	$1,000.00	$0.00	$1,000.00
Final Inspection	$400.00	$0.00	$400.00
Final Report	$800.00	$0.00	$800.00
TOTAL FEE	**$181,400.00**	**$50,091.23**	**$231,491.23**

CORRONDONA & ASSOCIATES, INC.
REGISTERED PROFESSIONAL LAND SURVEYORS
6707 BRENTWOOD STAIR ROAD SUITE 50 FORT WORTH, TEXAS 76112 PHONE 817/496-1424 FAX 817/496-1768

March 13, 2000

Dunaway Associates, Inc.
Attn: Mr. Brian Darby, PE
1501 Merrimac Circle, Suite 100
Fort Worth, Texas 76107-6512

Re: SANITARY SEWER REHABILITATION, M-321 & M-423 SEWER BASIN

Dear Mr. Darby:

Gorrondona & Associates, Inc. has completed the topographic/design surveying for the re-alignment of the above referenced project for the City of Fort Worth. The fees for the design/topographic survey totaled $4,104.00.

If you have any questions or need additional information please contact me at (817)496-1424.

Sincerely,

GORRONDONA & ASSOCIATES, INC.

Brad J. Gorrondona, RPLS
President

VIA FACSIMILE 335-7437

HUGO C. TREVINO AND ASSOCIATES INC.

P.O. Box 3528
Ft. Worth, Tx 76113

Phone (817) 332-4272
Fax (817) 332-9621

March 14, 2000

Brian Darby
Dunaway and Associates

Dear Brian,

This letter is stating that the reprographic work for project M321-423 was issued and completed for the total amount of $2442.02. If anyone has any questions regarding this work or transaction, you can contact me at the office at 817-332-4272.

Sincerely,

Hugo Trevino II
General Business Manager

CCN Area 5
Contract No. 26067
Amending Contract No. 24777 Related to Contract No. 26152

City of Fort Worth, Texas

Mayor and Council Communication

DATE	REFERENCE NUMBER	LOG NAME	PAGE
6/13/00	**C-18067	30EVER	1 of 2
SUBJECT	APPROPRIATION ORDINANCE AND AMENDMENT OF ENGINEERING SERVICES AGREEMENT TO DUNAWAY AND ASSOCIATES, INC. FOR THE DESIGN OF THE M-321 AND M-423 SANITARY SEWER MAINS		

RECOMMENDATION:

It is recommended that the City Council:

1. Authorize the transfer of $33,291.23 from the Water and Sewer operating Fund to the Sewer Capital Project Fund; and

2. Adopt the attached appropriation ordinance increasing estimated receipts and appropriations in the Sewer Capital Project Fund in the amount of $33,291.23 from available funds; and

3. Authorize the City Manager to execute Amendment No. 1 to City Secretary Contract (No. 24777) with Dunaway and Associates, Inc. in the amount of $33,291.23 to provide for additional design services, thereby increasing the contract amount to $214,691.23.

DISCUSSION:

On March 3, 1999 (M&C C-17299), the City Council authorized the City Manager to execute an engineering services agreement with Dunaway and Associates, Inc. in the amount of $181,400.00 for the preparation of plans and specifications for sewer improvements to the M-321 and M-423 sanitary sewers.

The M-321 and M-423 sanitary sewer basins are located in far south Fort Worth near the Everman Parkway and Garden Acres interchanges with IH-35W. These two sanitary sewer mains are needed to meet anticipated future demands resulting from growth in the area.

The work covered under this amendment includes changing the alignment and/or adjustments to the sewer line, requiring that the plan and profile sheets be revised, preparation of three additional easement documents required for the re-routed sanitary sewer alignment in two locations, providing the additional survey necessary for staking of soil boring locations, and additional printing associated with this amendment request.

Dunaway and Associates, Inc. is in compliance with the City's M/WBE Ordinance by committing to an additional 15% M/WBE participation. The City's goal on this amendment is 20%.

The project is located in COUNCIL DISTRICT 6, Mapsco 105 and 106.

CCN Area 5
Contract No. 26067
Amending Contract No. 24777 Related to Contract No. 26152

City of Fort Worth, Texas

Mayor and Council Communication

DATE	REFERENCE NUMBER	LOG NAME	PAGE
6/13/00	**C-18067	30EVER	2 of 2

SUBJECT	
	APPROPRIATION ORDINANCE AND AMENDMENT OF ENGINEERING SERVICES AGREEMENT TO DUNAWAY AND ASSOCIATES, INC. FOR THE DESIGN OF THE M-321 AND M-423 SANITARY SEWER MAINS

FISCAL INFORMATION/CERTIFICATION:

The Finance Director certifies that upon approval and completion of the above recommendations, and adoption of the attached appropriation ordinance, funds will be available in the current capital budget, as appropriated, of the Sewer Capital Project Fund.

MG:k

Submitted for City Manager's Office by:		FUND	ACCOUNT	CENTER	AMOUNT
		(to)			
		2) PS58	531200	070580174710	$33,291.23
Mike Groomer	6140	1&2) PS58	472045	070580174710	$33,291.23
Originating Department Head:					
A. Douglas Rademaker	6157	(from)			
		3) PS58	531200	070580174710	$33,291.23
Additional Information Contact:		1) PE45	538070	0709020	$33,291.23
A. Douglas Rademaker	6157				

CITY SECRETARY

APPROVED
CITY COUNCIL
JUN 13 2000

City Secretary of the City of Fort Worth, Texas

Resolution No. 14224

Attachment E
Excerpts from the City's 2019 Comprehensive Plan

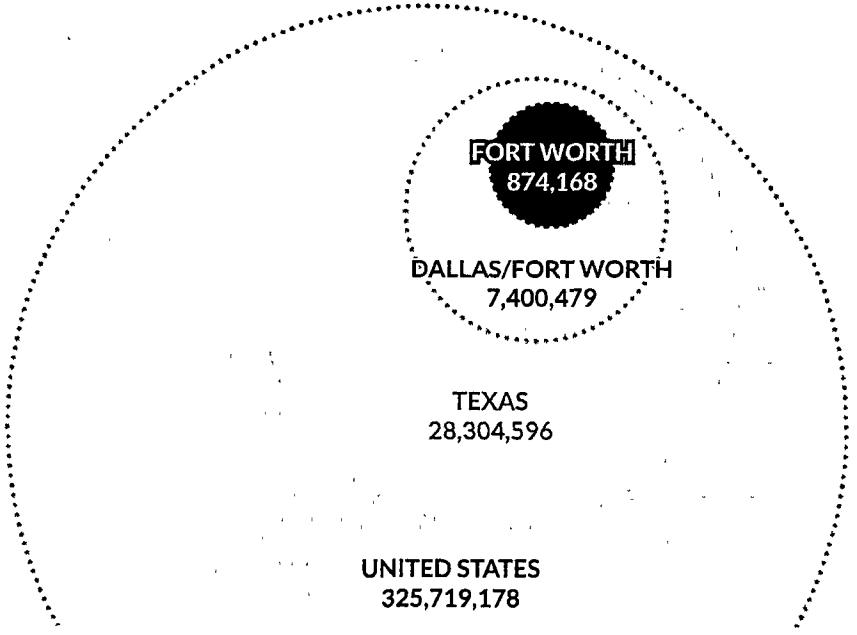
FORT WORTH®

CHAPTER 1
POPULATION TRENDS

According to U.S. Census Bureau estimates, Fort Worth's population is 874,168 and the City is ranked 15th in the nation. Fort Worth's ranking had remained consistent at 16th since 2010, with one anomalous estimate year in 2013 when Fort Worth ranked 17th. Fort Worth is estimated to have added 18,664 people between July of 2016 and 2017, equating to 51 people per day.

Since April 1, 2010, Fort Worth's growth rate has slowed compared with the rapid growth of the 2000s and is more in line with growth experienced in the 1990s. Between July 1, 2013 and July 1, 2017, Fort Worth added an additional 81,441 people, representing an annual average growth rate of 1.96 percent.

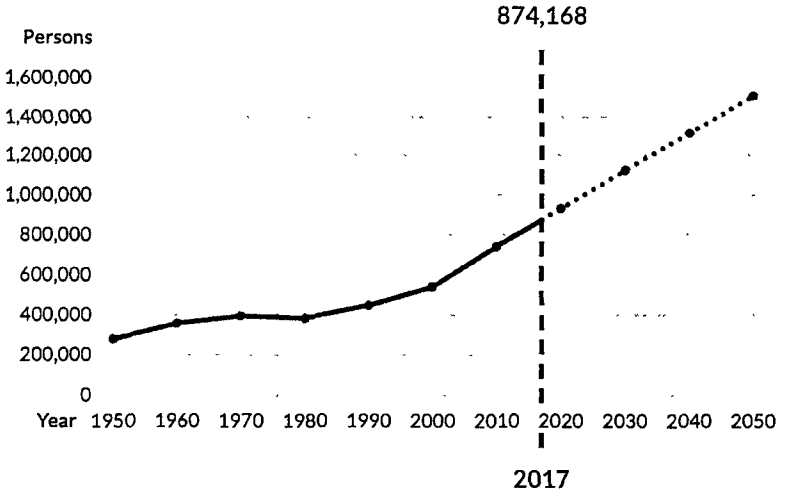
CURRENT POPULATION



Source: U.S. Census Bureau Annual Esti mates of Resident Population

FORT WORTH POPULATION, 1950-2045

Fort Worth has a larger population than Denver, San Francisco, Seattle, Portland, Boston, Charlotte, and Washington DC.

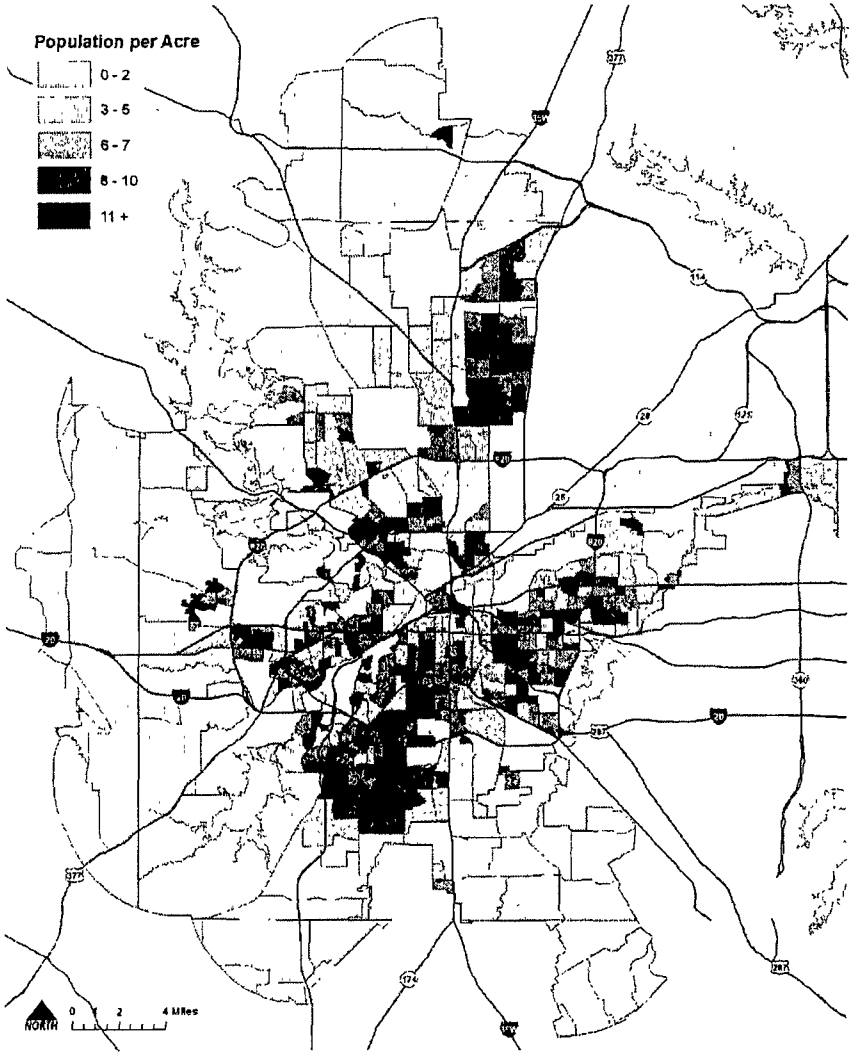


Source: NCTCOG and U.S. Census Bureau Annual Esti mates of Resident Population

342.2	15th	132,962	2,535	29.7%	32.9
LAND AREA IN SQUARE MILES	NATIONAL POPULATION RANK	POPULATION CHANGE 2010-2017	POPULATION DENSITY PER SQUARE MILE	BACHELORS DEGREE OR HIGHER	MEDIAN AGE

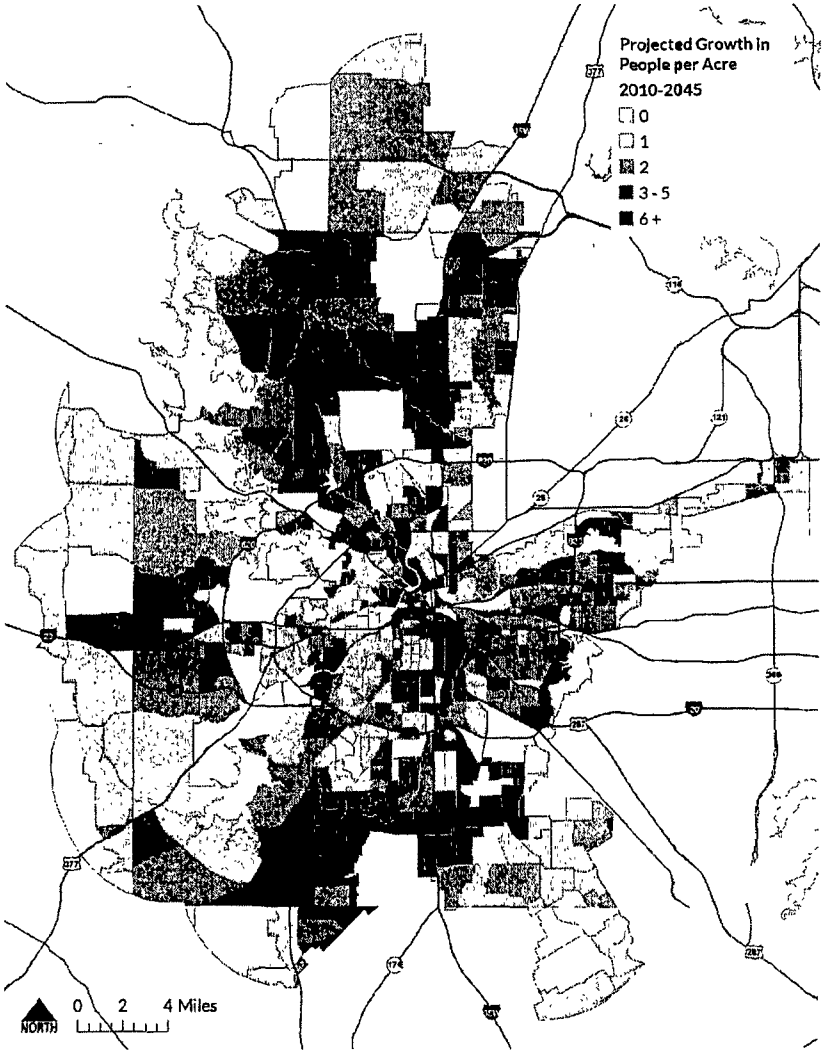
Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

EXISTING POPULATION DENSITY



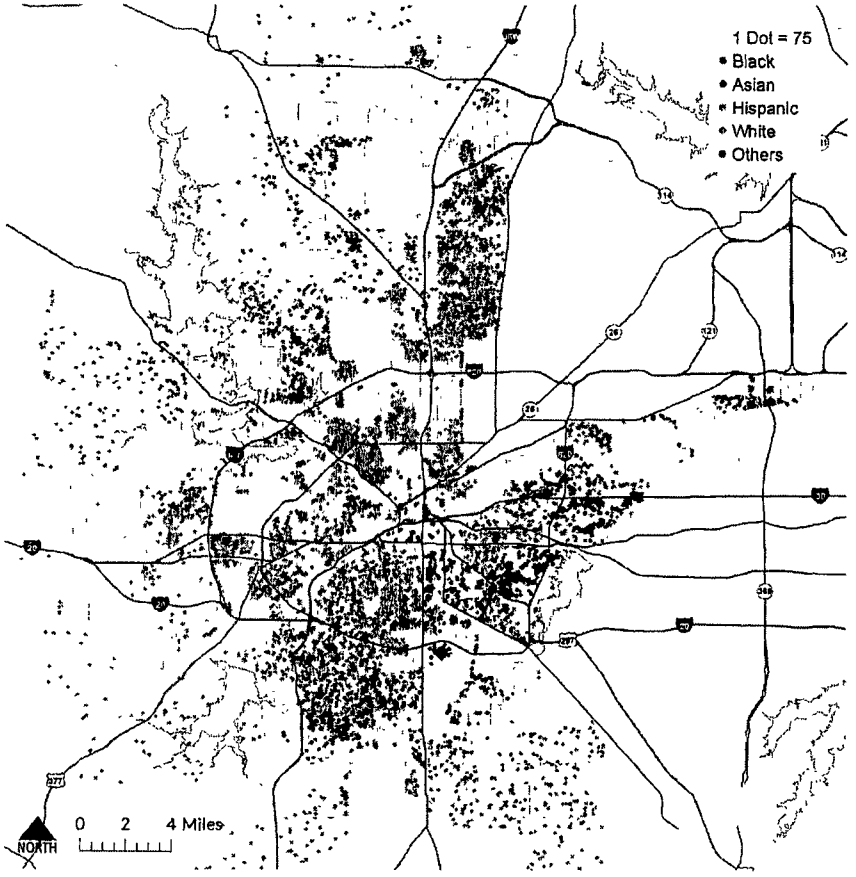
Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

PROJECTED POPULATION GROWTH



Source: U.S. Census Bureau, 2010 Census and North Central Texas Council of Government Demographic Forecast, 2017

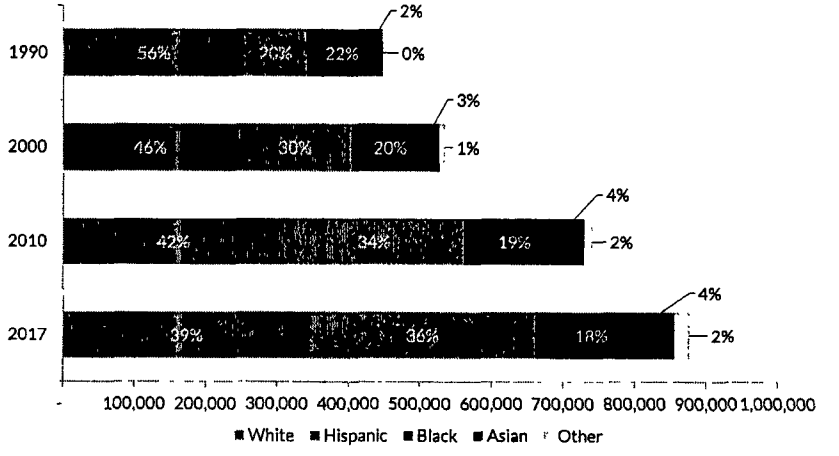
RACE DISTRIBUTION



Source: U.S. Census Bureau, 2010 Census

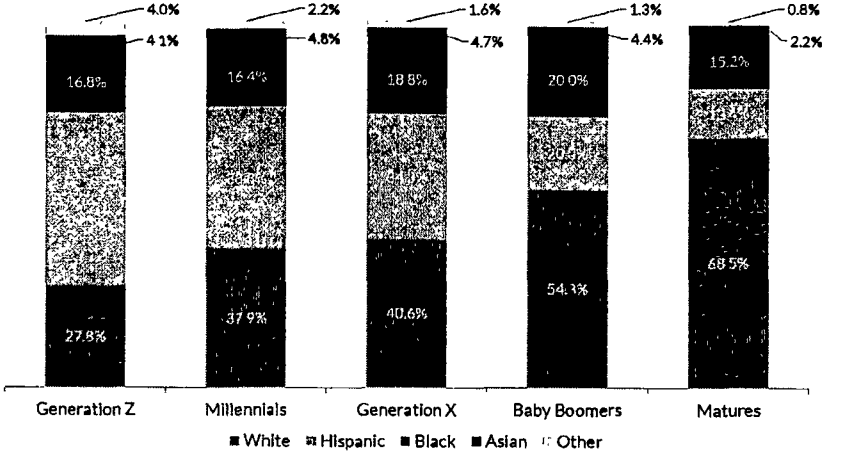
While Fort Worth's total population grows, there will also be changes in the composition of the population. Collectively, minorities have become the majority. The percentage of the population over the age of 65 will continue increasing through 2040. Changes in age composition will result in a need for different types of housing and services.

RACE / ETHNICITY



Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

RACE BY GENERATION



Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

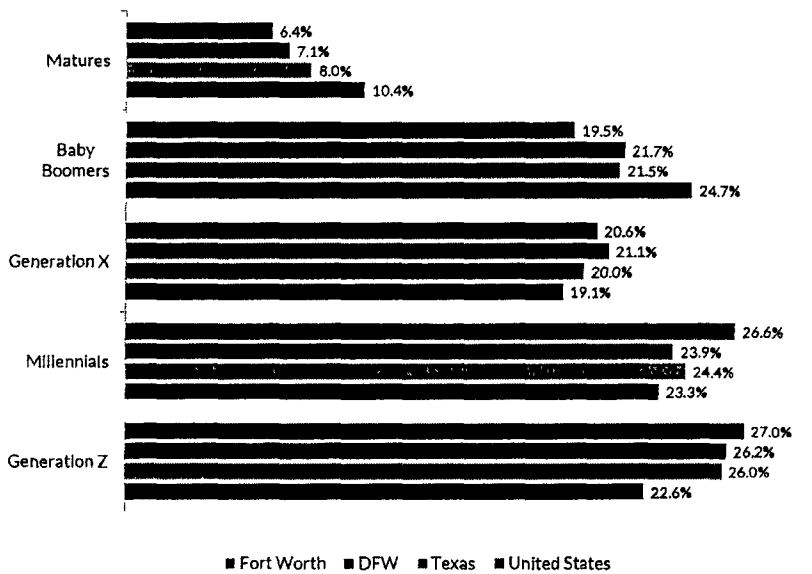
AGE AND GENERATIONS

MEDIAN AGE COMPARISON

FORT WORTH	32.9
DFW	34.9
TEXAS	34.7
USA	38.1

Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

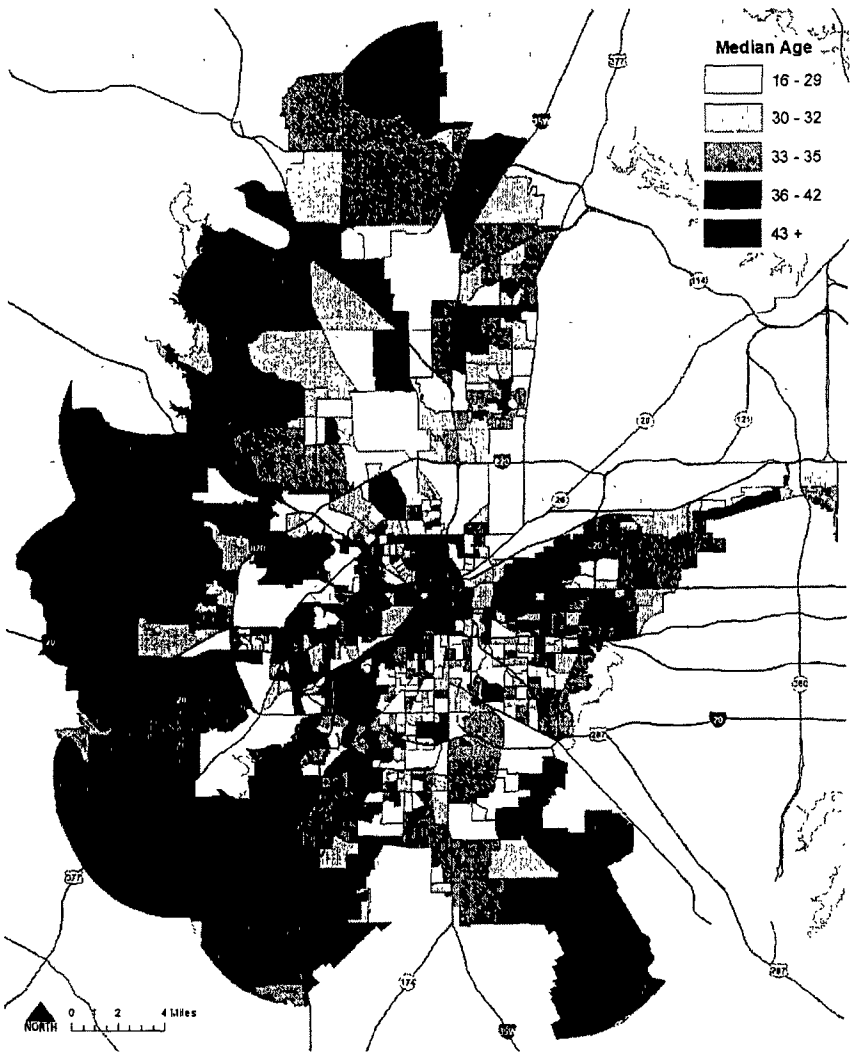
GENERATION COMPARISON



Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

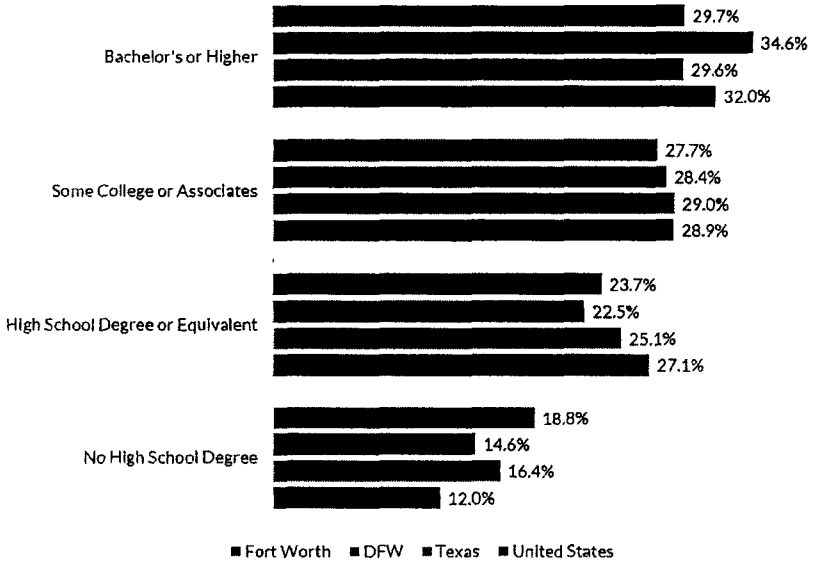
While the aging baby boom generation (those born between 1946 and 1964) is expected to increase demand on social services, Fort Worth is a relatively young city compared to the U.S. and Texas.

MEDIAN AGE



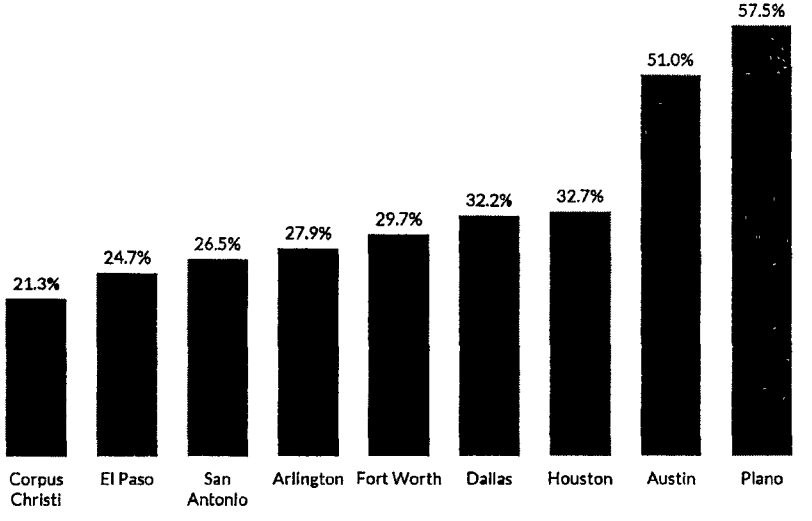
Source: U.S. Census Bureau, 2017 American Community Survey 5-Year Estimates

EDUCATIONAL ATTAINMENT COMPARISON



Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

BACHELORS DEGREE OR HIGHER



Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

LANGUAGE SPOKEN AT HOME

Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

1 in 6

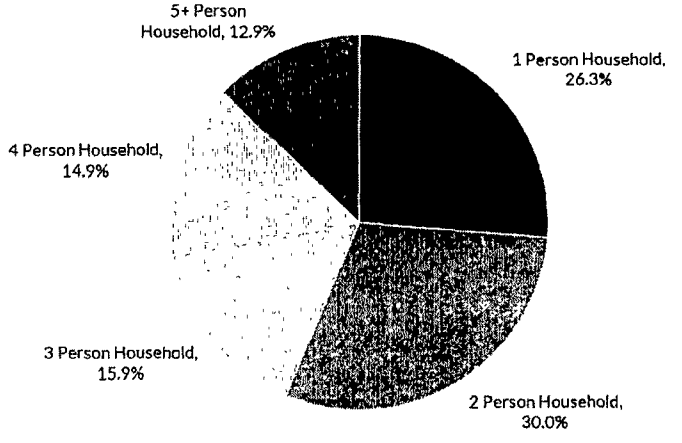
Texas residents were born in a foreign country according to the Texas Demographer report "The Foreign-Born Population in Texas: Sources of Growth", 2015

33.8%

Fort Worth households that speak a language other than english according to the U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

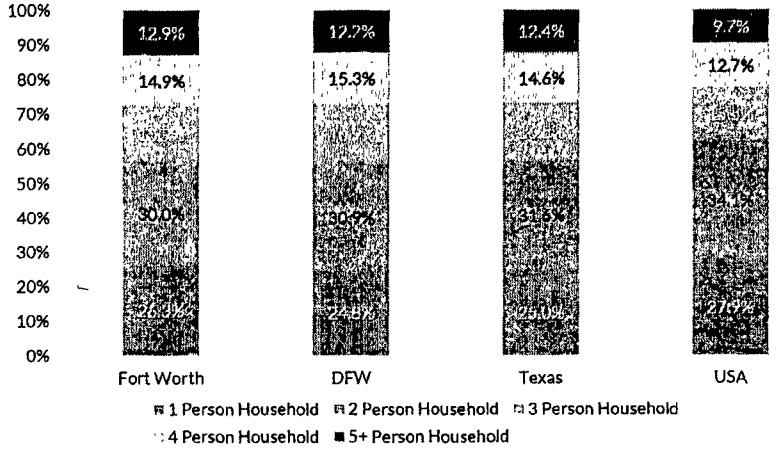
HOUSEHOLD SIZE AND STATUS

FORT WORTH HOUSEHOLD SIZE



Source: U.S. Census Bureau, 2017 American Community Survey 5-Year Estimates

HOUSEHOLD SIZE COMPARISON



Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

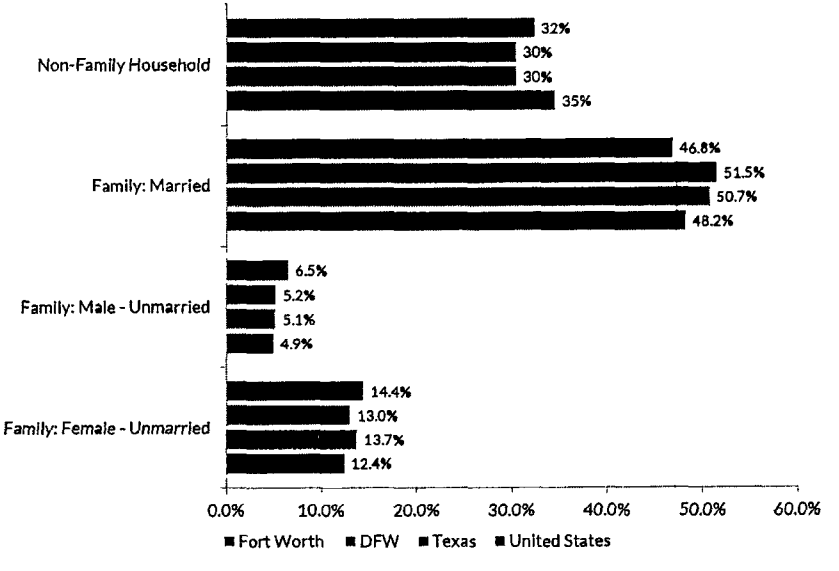
One-person households and two-person households constitute more than half of the total population in Fort Worth.

2.86 Persons
Average Household Size

32%
Nonfamily Households

Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

HOUSEHOLD STATUS COMPARISON



Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates

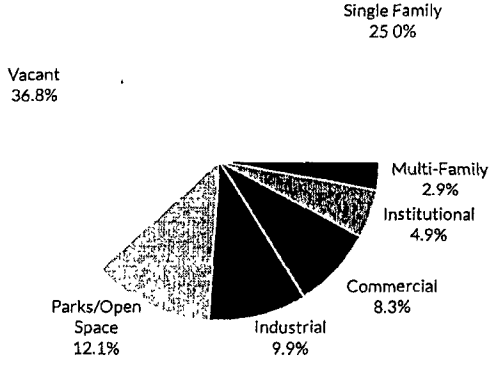
FORT WORTH®

CHAPTER 4
LAND USE

Land use refers to how land is currently used and how it should be used in the future. Population and economic trends help predict future needs for various land uses. The City of Fort Worth guides land use to ensure that land resources appropriately encourage economic development, promote a variety of housing choices, preserve natural and historic resources, and accommodate transportation routes and public facilities, in order to protect and improve Fort Worth's quality of life.

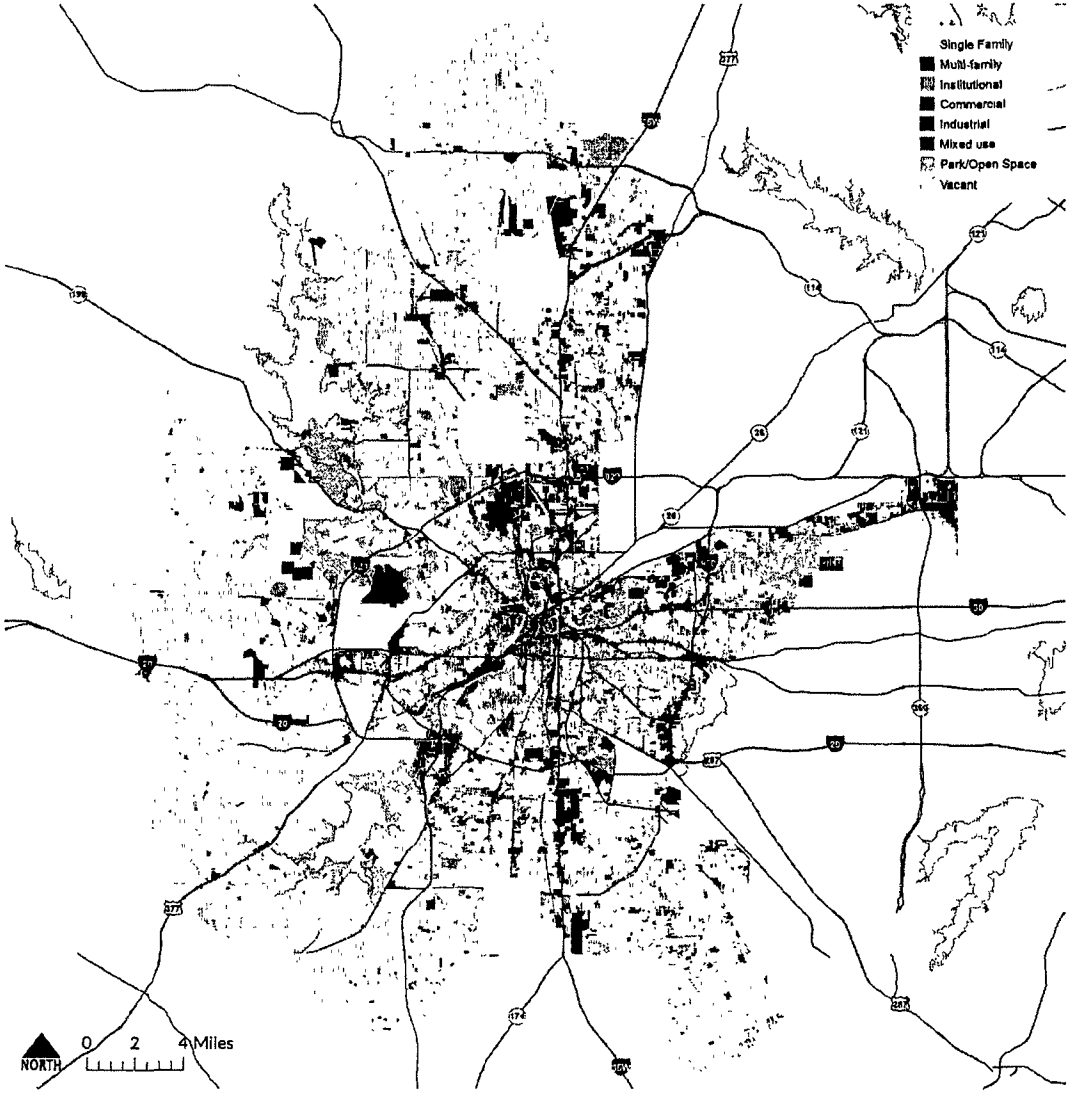
An understanding of Fort Worth's land use and zoning puts into perspective the City's development history and how Fort Worth may continue to develop. According to the North Central Texas Council of Governments (NCTCOG), low density single-family residential (including duplexes and townhouses), and manufactured housing occupies the greatest amount of developed land area in Fort Worth. In recent decades, development has often occurred in a leapfrog fashion, leading to a pattern of land uses that is irregular, non-contiguous, and less efficient and cost-effective to serve than is desirable. The City of Fort Worth also has the largest amount of vacant and developable land among cities in the North Texas region. This provides an opportunity to grow in more focused and efficient development patterns in the future.

EXISTING LAND USE BY PERCENTAGE



Source: North Central Texas Council of Governments (NCTCOG), 2015 Land Use

EXISTING LAND USE



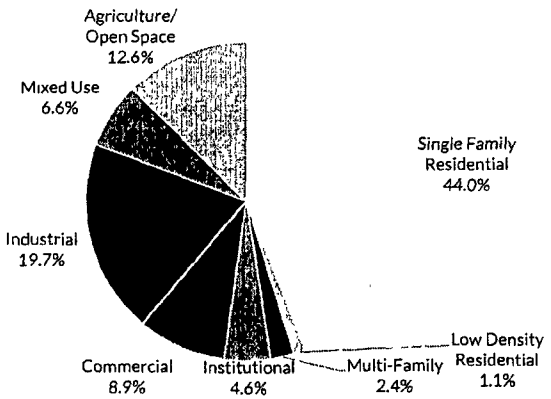
Source: North Central Texas Council of Governments (NCTCOG), 2015 Land Use

Fort Worth is one of the fastest growing amongst the 20 largest U.S. cities. From 2010 to 2016, Fort Worth gained nearly 13,000 net new single-family housing units. No other city in the metro area gained more than 10,000. By contrast, Fort Worth only gained about 7,000 multifamily units in this period.

While a wide variety of residential units are essential to accommodate future growth, the 2017 Economic Development Strategic Plan identified that Fort Worth is continuing to have more housing than jobs, and Fort Worth is at risk of becoming overly dependent on low density residential uses to support its tax base and pay for services. Together with a focused business development effort, sufficient land must be planned for job creation, mixed-use development, and appropriately located higher density housing, all which support a more balanced tax base and improved return on public investment. Add appropriate mixed-use, urban residential, and perhaps even corporate campus in suburban areas.

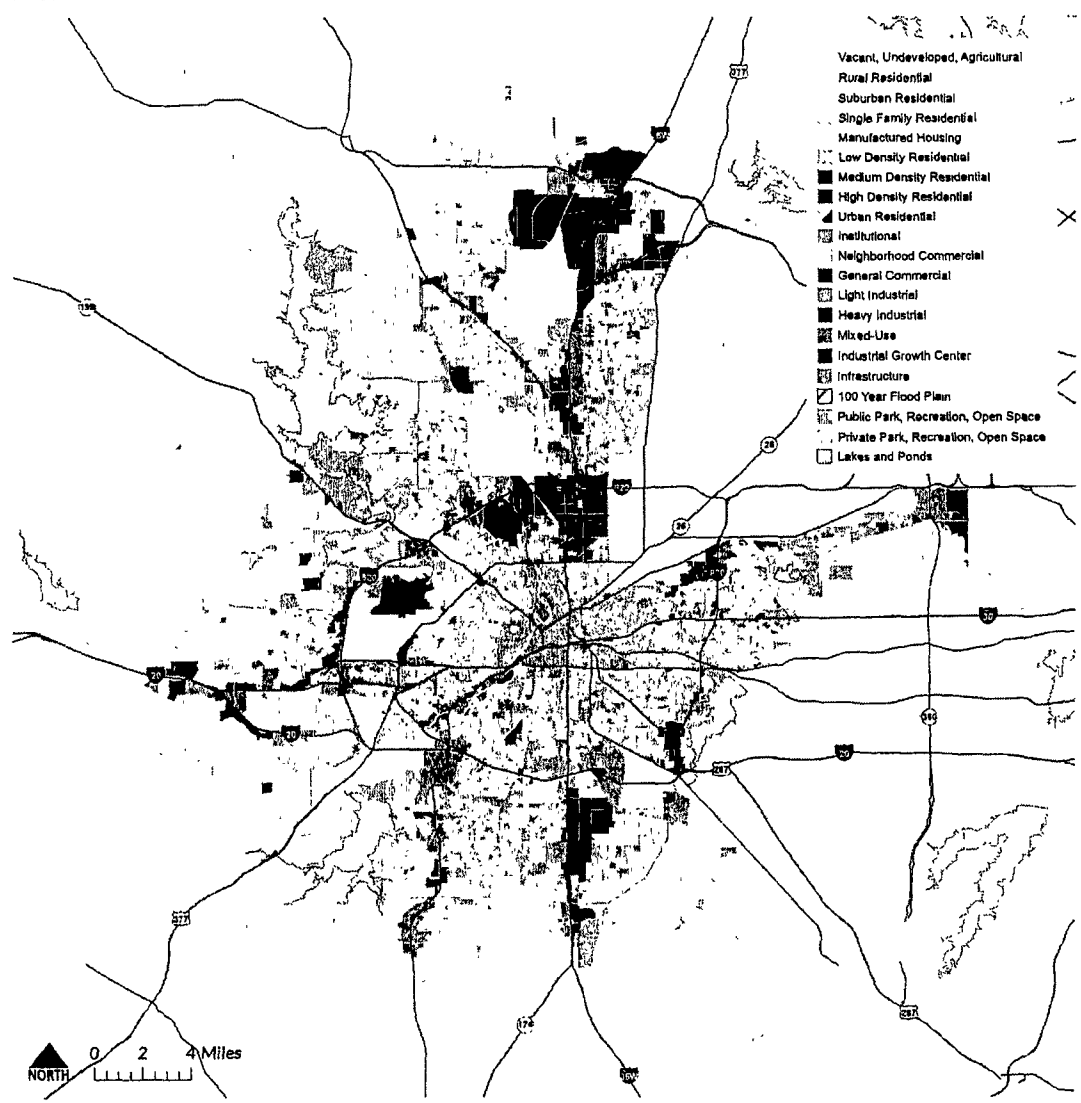
More information may be found in *Appendix C: Future Land Use by Sector*

FUTURE LAND USE BY PERCENTAGE



Source: City of Fort Worth, 2018

FUTURE LAND USE



Source: City of Fort Worth, 2018

CURRENT ZONING

The land within the city limits of Fort Worth is divided into zones that permit certain land uses and prohibit others. Zoning regulations also include development standards such as those addressing building height and setbacks. Zoning districts can be identified in these general categories:

Residential
- One-family detached
- One-family and two-family, detached and attached
- Multifamily

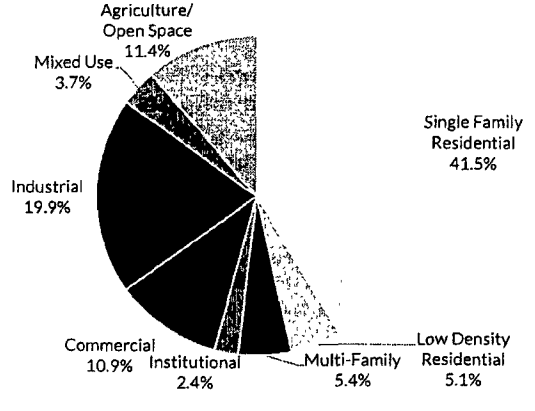
Mixed-Use/Form-Based
- Low and high intensity mixed-use
- Six form-based code areas

Commercial
- Neighborhood, general, and intensive commercial

Industrial
- Light, medium, and heavy industrial

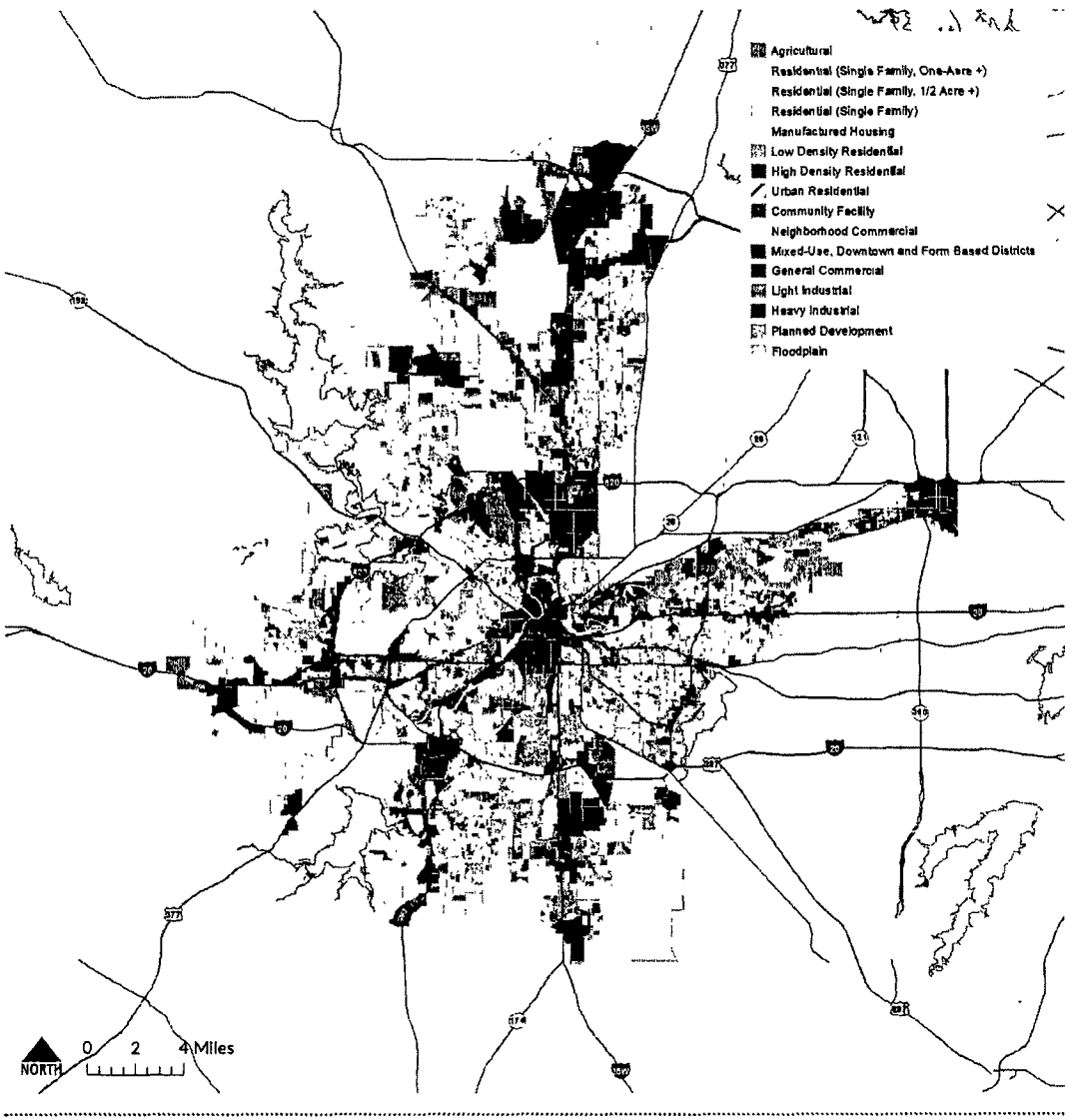
Special Districts & Overlay Districts
- Agricultural, community facilities, manufactured housing, and planned developments
- Eight overlay districts

CURRENT ZONING BY PERCENTAGE



Source: City of Fort Worth, 2018

CURRENT ZONING



Source: City of Fort Worth, 2018

Zoning implements the future land use plan (see Appendix C) which guides the location of appropriate places to live, play, and conduct business. Land use decisions and transportation investments are most effective when they are mutually supportive. Therefore, the City's future land use sector maps depict key transportation features, such as existing and planned passenger rail stations and the City's Master Thoroughfare Plan.

The land use maps and policies are referred to by elected and appointed officials when making decisions regarding zoning, annexation, budgeting, and major public facilities expenditures.

Land uses and development forms are defined and categorized with the appropriate zoning classification. Fort Worth's zoning districts promote a desirable development pattern while discouraging incompatible land uses.

Not all of the developed and vacant land zoned in Fort Worth conforms to the proposed land uses in Appendix C. To address this issue, the City Council established two voluntary processes for initiating changes that promote neighborhood consensus for rezoning:

1. **Council-Initiated Rezoning**
2. **Petition-Based Rezoning**

More information may be found in *Chapter 22: Development Regulations.*

LAND USE AND ZONING CLASSIFICATIONS

LAND USE	DEFINITION	ZONING
SPECIAL		
Vacant, Agricultural	Vacant, agriculture	AG
Rivers, Lakes, Streams, 100 Year Flood Plain	Water features, 100-year flood plain	Not applicable ALL
Infrastructure	Roads, railroads, airports, utilities	Not applicable ALL
Parks, Recreation, Open Space	Public or private recreation, or passive land	Not applicable ALL
RESIDENTIAL		
Rural Residential	1+ acre single-family	A-2.5A, A-43
Suburban Residential	1/2+ acre single-family	A-21
Single-family Residential	3500+ sq. ft. lot single-family	A-10, A-7.5, A-5, AR
Manufactured Housing	Manufactured home parks and subdivisions	MH
Low Density Residential	2500+ sq. ft. lot single-family, two family, patio homes, townhouses, cluster housing,	B, R1, R2
Medium Density Residential	Up to 36 units/acre multifamily	CR, C, D
High Density Residential	>36 units/acre multifamily, mixed-use multifamily in growth centers	UR, MU-1
Institutional	Schools, churches, government, human services, utilities, community centers, day care	Schools and Churches
		ALL, others CF
COMMERCIAL		
Neighborhood Commercial	Retail, services, offices and mixed uses serving daily needs for a local market area	Multifamily Residential, ER, E, MU-1
General Commercial	Retail, services, offices, entertainment mixed uses serving occasional needs for a larger market area	Multifamily Residential, FR, F, G, MU-1, MU-2
Mixed-Use Growth Center	Retail, services, offices, entertainment, mixed uses, and multifamily residential; Community Growth Centers are less intensive, and Regional Growth Centers are more intensive	AR, B, R1, R2, CR, C, D, UR, all Commercial, all Mixed-use/Form-based Code
INDUSTRIAL		
Light Industrial	Warehousing, transportation, light assembly, outside storage	All Commercial, MU-2, I
Heavy Industrial	Heavy manufacturing, outside storage	All Commercial & Industrial
Industrial Growth Center	Industrial and commercial uses serving a large region	All Commercial & Industrial
OTHER		
Special and Hazardous Uses	Bed & breakfast, aviation, recycling centers, refining, cell towers, concrete batch plant	Special Exception

Population Growth and Housing Demand
As the population grows, the demand for residential units will increase. Higher-density housing types will respond to changing demographic and popular market trends, reflecting a greater preference for walkable urban neighborhoods.

Economic Growth
Due to continued population and employment growth, Fort Worth will see a significant amount of land developed for new businesses and industry. Assuming current land use proportions remain consistent over time, approximately 2,000 new acres of commercial and industrial land use could be developed by 2032.

Market Demand
Depending on several related variables, market demand will impact the amount and location of land uses. The future supply of any land use should not exceed the anticipated demand. Reliance on current market demand can unnecessarily restrict future development. For example, the multifamily market Downtown was untapped until multifamily zoning was introduced and found to be successful.

Transportation Access and Infrastructure Availability
Land use decisions, such as the siting of offices, housing, and industry, are influenced by access to transportation and other public infrastructure. Despite the significance of mobility, investment in transportation infrastructure may follow land use decisions, particularly where rapid development occurs. Coordination of future land uses and zoning districts with the Master Thoroughfare Plan helps plan the correct location, classification, and desired capacity of roadways.

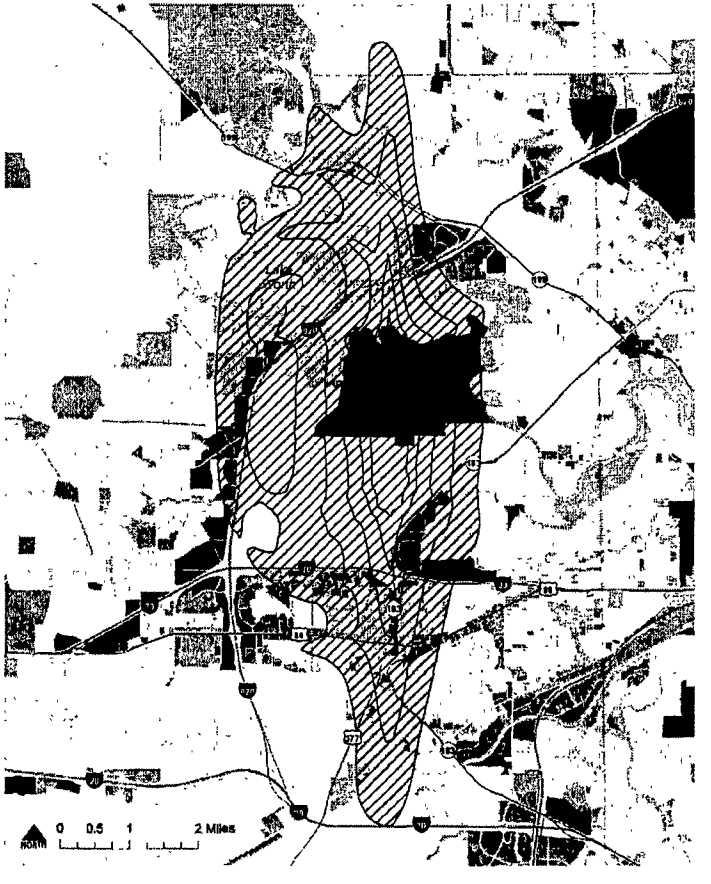
Development Regulations
A property's location within or outside the city limits influences how the land is used:

	WITHIN THE CITY LIMITS	OUTSIDE THE CITY LIMITS
Zoning and Building Codes	YES	NO
Subdivision and Street Standards	YES	YES

More information may be found in *Chapter 22: Development Regulations.*

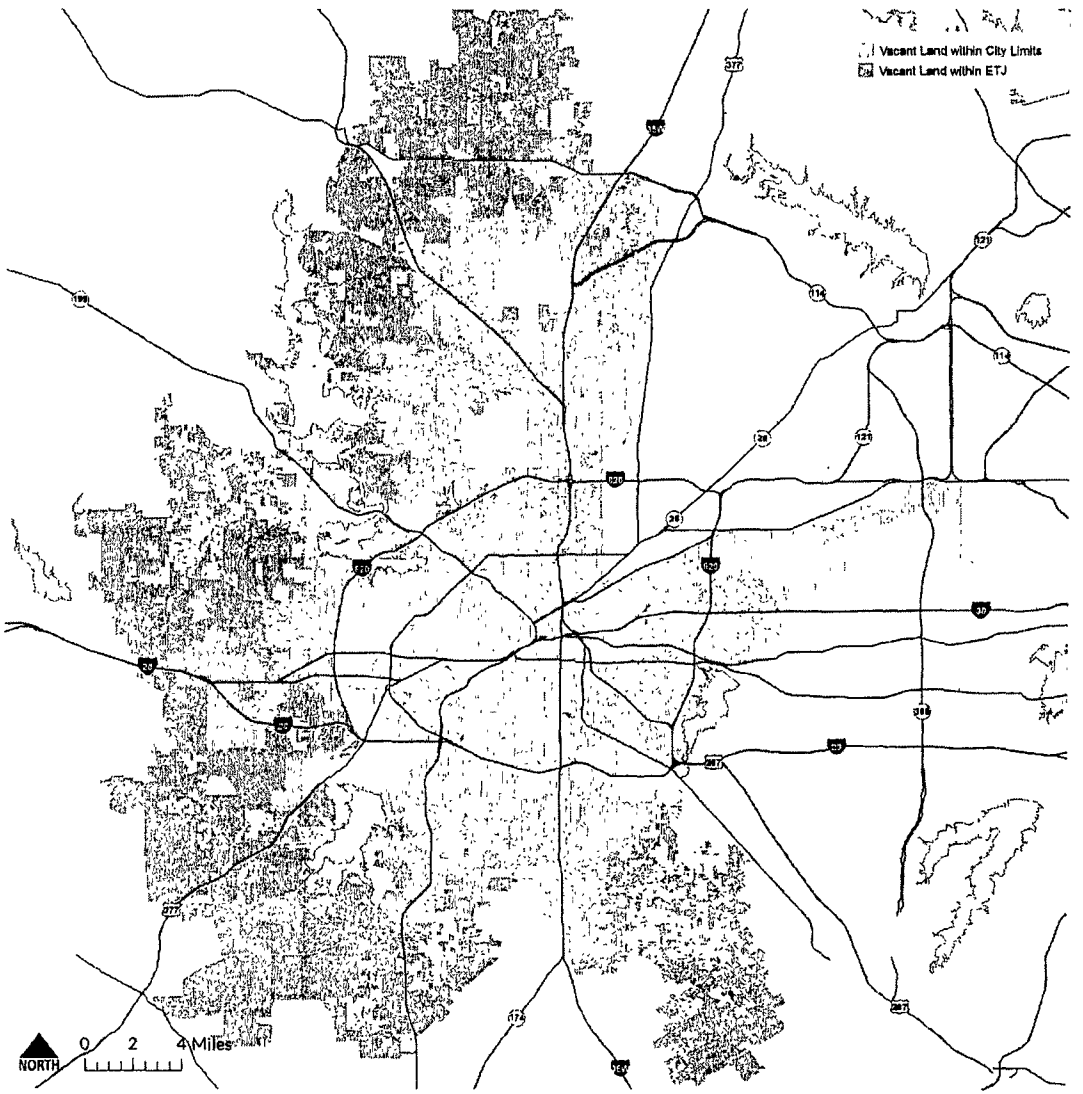
Environmental Constraints
Environmental conditions impact the type of land uses that develop. These constraints include floodplains, soils, slope, gas wells, odors, and noise pollution. A specific example of an environmental constraint impacting land use is airport noise surrounding Naval Air Station Fort Worth Joint Reserve Base.

NOISE CONTOURS AND LAND USE EXAMPLE: NAVAL AIR STATION FORT WORTH JOINT RESERVE BASE



Source: City of Fort Worth, 2018

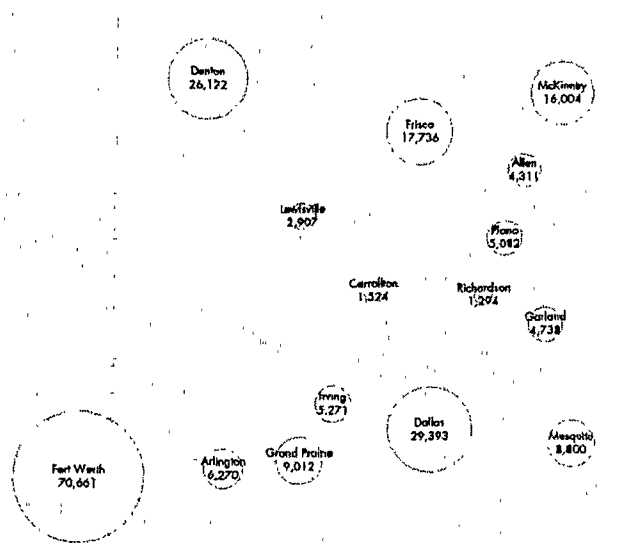
LOCATION OF VACANT LAND



Source: City of Fort Worth, 2018

According to estimates from the North Central Texas Council of Governments (NCTCOG), Fort Worth has more vacant developable land (over 70,000 acres) than any other city in the Dallas-Fort Worth metro area. Fort Worth has more than twice as much vacant land as Dallas and more developable acreage than the four largest cities in Collin County combined (Frisco, McKinney, Plano, and Allen). Fort Worth's vacant developable land provides a unique opportunity for the city to accommodate a significant amount of future growth. Innovative and sustainable strategies such as multiple growth centers, mixed-use and urban residential development, and transit-oriented development will help to ensure that future growth contributes to a strong, financially healthy, and highly livable community.

ACRES OF VACANT LAND, METRO AREA CITIES WITH POPULATIONS OF 100K+



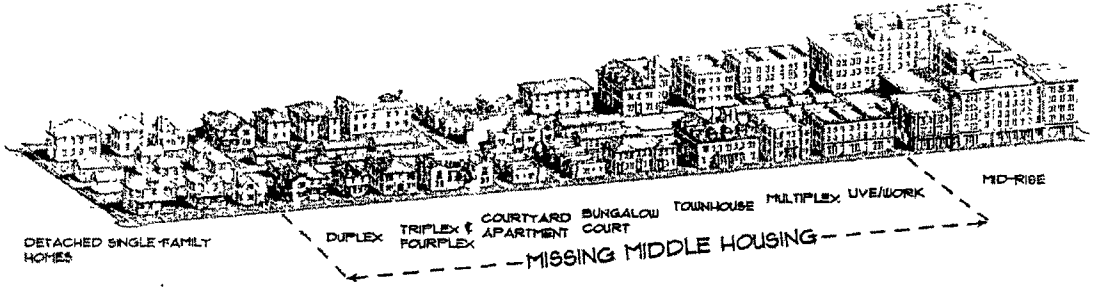
Source: North Central Texas Council of Governments (NCTCOG), 2010 Land Use

HOUSING PREFERENCES

Development patterns have preferred strictly single family homes or large multifamily complexes creating a large physical, social, and economic gap in housing choices. Smaller homes and multifamily dwellings are less costly to rent, purchase, and maintain for consumers. Historically, the limitations smaller scale multifamily housing include zoning barriers, difficult financing, and the production of scale not being as profitable as large multifamily or single family developments.

Changing market demands for walkable, compact communities can be addressed by providing smaller scale multifamily housing projects, dispersed within and compatible with single-family housing. Walkable, compact communities provide common destinations within walking and bicycling distance, increasing transportation choices.

MISSING MIDDLE HOUSING TYPOLOGIES



MARKET SUPPLY & DEMAND

Community Preferences

1 in 5

Number of respondents that prefer to live in an attached home in a walkable community versus living in a detached home in a conventional neighborhood.

Increased Quality of Life

88%

Percent of respondents that agree that there are places to walk to nearby, and also report that they are more satisfied with their quality of life.

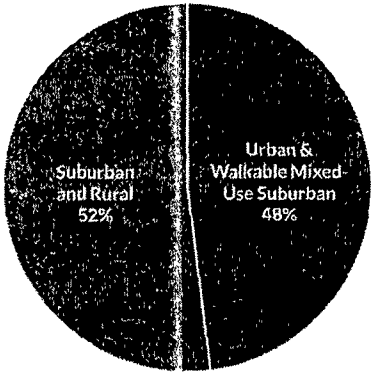
Deciding Where to Live

70%

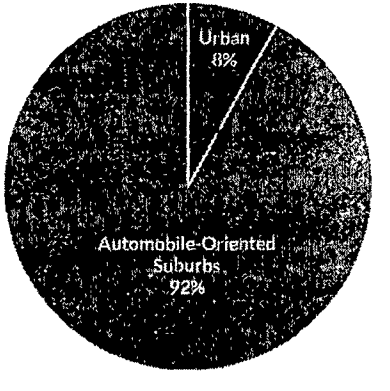
Percent of respondents that said that walkability, a short commute, and proximity to highways are important when deciding where to live.

Source: National Association of Realtors, *2017 Community and Transportation Preferences Survey*

Where do people want to live?



Where do people live in Fort Worth?



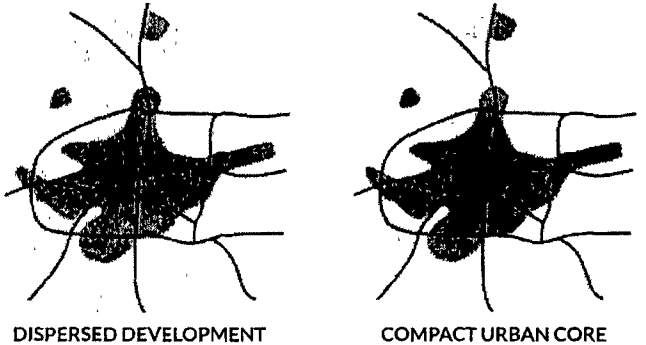
Source: Source: National Association of Realtors Community Preference Survey, 2011.

GROWTH CENTERS

The multiple growth centers concept promotes compact urban land use within designated areas and lower intensities of land use elsewhere. As an alternative to the typical urban/suburban pattern, Fort Worth's Comprehensive Plan advocates for the development of multiple growth centers.

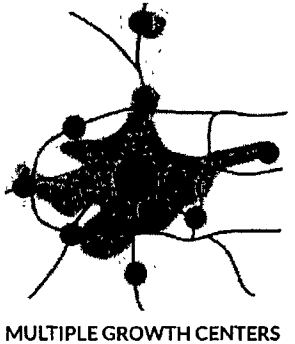
Growth centers are located along highway or rail corridors to facilitate transportation linkages to other growth centers. A network of growth centers can accommodate citywide growth with fewer environmental impacts, less land consumption and traffic generation, and less pollution than a dispersed development pattern. The North Central Texas Council of Governments is also promoting this growth strategy in response to growing concerns over traffic, pollution, and reduced funding for transportation infrastructure.

URBAN DEVELOPMENT PATTERNS



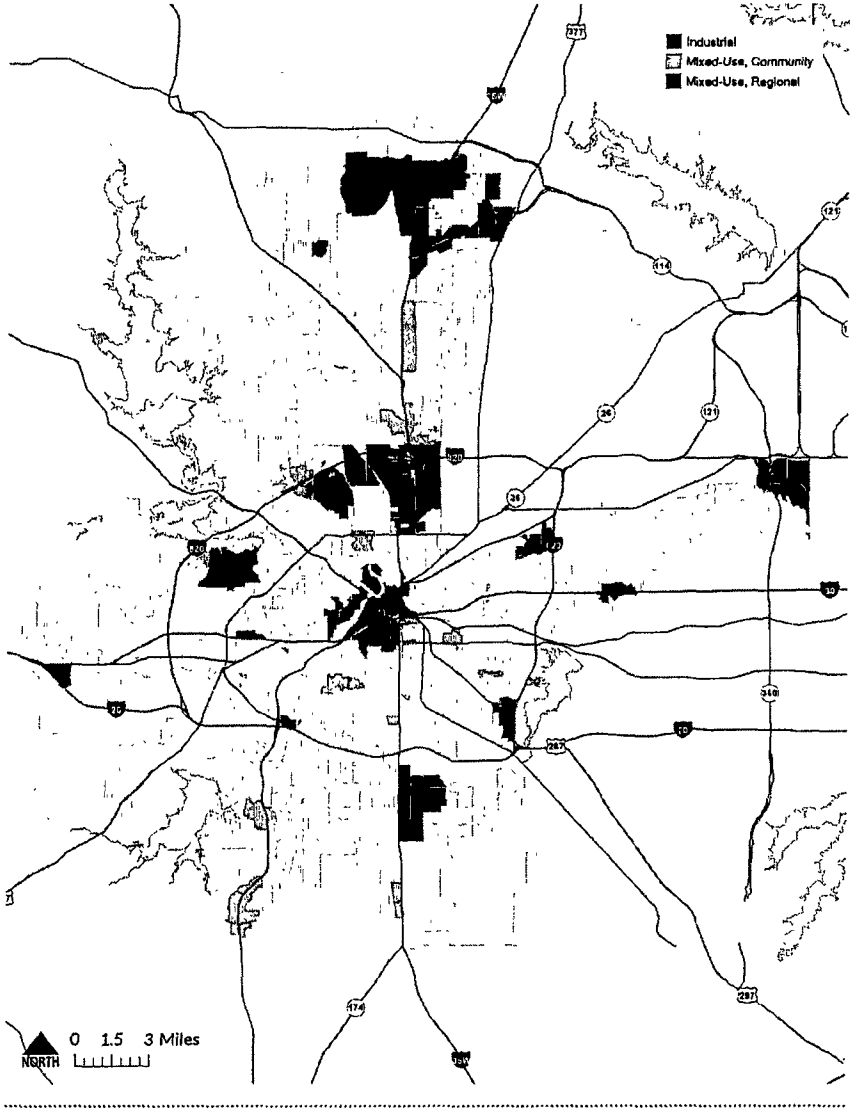
DISPERSED DEVELOPMENT

COMPACT URBAN CORE



MULTIPLE GROWTH CENTERS

INDUSTRIAL AND MIXED-USE GROWTH CENTERS



Source: City of Fort Worth, 2018

INDUSTRIAL GROWTH CENTERS

An industrial growth center will primarily consist of industrial and commercial uses, with a high concentration of jobs, mostly industrial in nature. Other related and supporting uses include office space and services. Residential uses are generally discouraged within industrial growth centers.

Criteria for designation include:

- A high concentration of employees — 10,000+ employees per square mile, and
- The location nearby one or more major transportation facilities, such as an airport, railroad, highway, public transit station, and/or arterial roadway.

INDUSTRIAL GROWTH CENTERS	
Alliance Airport	Meacham Airport
Alliance Gateway East	Loop 820 East / Lake Arlington
Carter Industrial Park	NAS-JRB / Lockheed-Martin
Centreport	Riverbend

MIXED-USE GROWTH CENTERS

Mixed-use growth centers are highly urbanized places containing many characteristics of a downtown including a high concentration of jobs and housing, schools, parks, and other public facilities, public transportation hubs, and pedestrian activity. Its predominant land uses are residential and commercial. Within a small geographic area, different land uses are found side by side or within the same building. These places tend to be bustling and diverse, with a sense of place.

Criteria for designating new mixed-use growth centers are listed below, with centers often having (or planned to have) three or more of the following characteristics:

- A high concentration of employees — 10,000+ employees per square mile.
- A high concentration of residents — 10,000+ residents per square mile.
- One or more major transportation facilities — an airport, railroad, highway, public transit, or arterial roadway.
- An existing or planned transit-oriented development (TOD).
- Major institution(s) — a university, government facility, or hospital.
- Major tourist destination(s) — 100,000+ visitors per year.

Some mixed-use growth centers serve a large region, while others serve local residents. The functions and characteristics of the two different growth center concepts are generally the same, with variations in the size of their service areas and intensity of development.

REGIONAL MIXED-USE GROWTH CENTERS	
Alliance Gateway West	Hulen / Cityview
Centreport	Nance Ranch*
Clear Fork	Near Southside
Cultural District	Ridgmar
Downtown	Walsh Ranch*
Eastchase	

COMMUNITY MIXED-USE GROWTH CENTERS	
Alliance Town Center*	Polytechnic / Texas Wesleyan
Fossil Creek	SH 121 / FM 1187*
La Gran Plaza	Spinks / Huguley
Loop 820 East / Lake Arlington	Stockyards
Marine Creek*	Summer Creek TOD*
Miller / Berry*	Texas Christian University
Near Southeast*	

* Indicates growth centers that do not currently meet the criteria, but have the potential to do so.

BENEFITS OF MIXED-USE AREAS

Urban Villages and Mixed-Use Growth Centers support the concept of sustainable development, seeking to balance access, mobility, affordability, community cohesion, and environmental quality.

The potential benefits of mixed-use growth centers include:

- Additional economic development opportunities
- Protection of single-family neighborhoods
- Development of multifamily housing at appropriate locations
- Convenience for residents and workers
- Reduced reliance upon automobile usage
- Efficiency in the provision of public facilities and services
- Protection of the environment
- Improved health due to increased opportunities for pedestrian and active transportation activities
- Creating a sense of place; fostering community

Return on Public Investment

Prioritizing development within mixed-use growth centers is critical to building a financially sustainable future. Urban infill development uses existing public infrastructure (roadways, water, and sewer) making it less expensive to build and maintain the development long-term. Population density, encouraged by mixed-use centers, allows for the efficient use of public services (police, fire, public transportation); which improves quality of service while reducing expenditures. Overall, mixed-use growth centers and urban villages generate more tax revenue than they consume through use of city services and infrastructure.

CORE PRINCIPLES OF MIXED-USE DEVELOPMENT

Connected Development

vs. Disconnected Development

Compact development allows for a more efficient use of land, natural resources, and existing infrastructure.

Integration of Land Uses

vs. Separation of Single Land Use

A mix of uses increases economic and community vitality, and reduces the need to travel longer distances for everyday needs.

Pedestrians, Bikes, and Public Transit

vs. Only Automobiles

Active transportation alternatives are healthier for residents and cleaner for the environment.

Street-Facing Buildings

vs. Buildings Facing Parking Lots

Buildings set close to the street define the public realm and engage with citizens.

Mixed-use, multifamily, and commercial zoning classifications are most desirable for mixed-use areas because they provide the density of jobs and residential units needed to create a vibrant urban sense of place. Townhouse, duplex, and similar residential zoning classifications are usually acceptable in appropriate locations on the periphery of the mixed-use core.

Urban Residential (UR) Zoning

The City's Urban Residential (UR) zoning classification provides an appropriate transition zone between higher and lower density residential areas. Inappropriate zoning districts for Urban Residential:

- Single-family Residential (less than four units per acre)
- Industrial
- Agricultural

Form-Based Codes

A form-based code is a land development regulation that uses physical form as the organizing principle for the code. A form-based code differs from a conventional zoning regulation by allowing a mixture of appropriate uses within a single district or building. Form-based codes address the relationship between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks. Form-based codes are usually implemented as component of a community-sponsored regulating plan that designates the appropriate form and scale of development within a specific area.

The City of Fort Worth has adopted the following form-based districts:

- Camp Bowie District Inc.
- Berry/University Form-Based Code District
- Stockyards Historic and Form-Based Code District
- Near Southside
- Trinity Lakes

APPROPRIATE ZONING CLASSIFICATIONS FOR MIXED-USE GROWTH CENTERS

ZONING CLASSIFICATIONS	USUALLY ACCEPTABLE	MOST DESIRABLE	
		COMMUNITY	REGIONAL
AG	NO	NO	NO
CF, PD	YES	NO	NO
A-5, A-7.5, A-10, A-21, A-43, A-2.5A	NO	NO	NO
AR, B, R1, R2	YES	NO	NO
CR, C, D, UR	YES	YES	YES
ER, E	YES	YES	YES
MU-1	YES	YES	YES
FR, F, G,	YES	NO	YES
MU-2, H, NS, PI, CB, BU, TL, SY*	YES	YES	YES
I, J, K	NO	NO	NO

*H, NS, PI, CB, BU, and SY are only allowed only in Downtown, Near Southside, Panther Island, Camp Bowie, Berry/University, Trinity Lakes, and the Stockyards, respectively.

MIXED-USE ZONING WITHIN URBAN TRANSECT

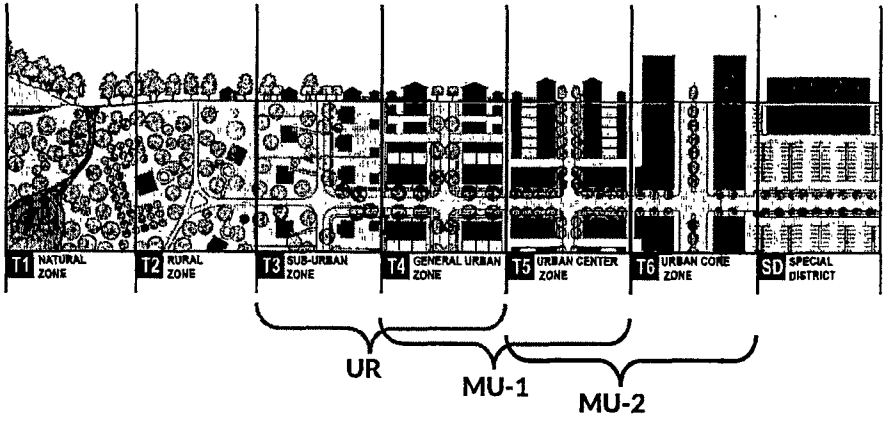


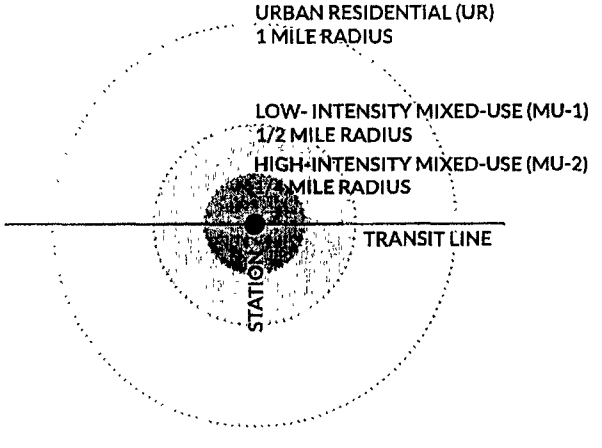
Image Source: Congress for the New Urbanism

ZONING FOR PUBLIC TRANSIT

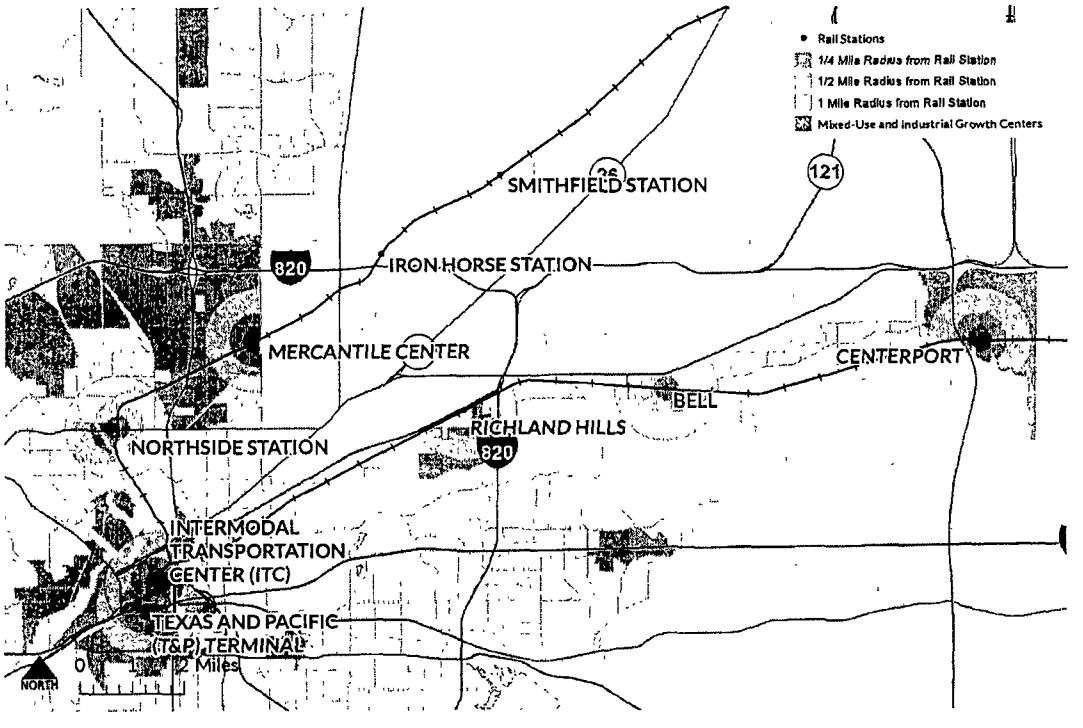
A transit-oriented development (TOD) is a mixed-use area, such an urban village or mixed-use growth center, but designed to incorporate and support a major public transportation connection. Maximizing the concentration of residential, commercial, and recreational uses near the public transportation connection promotes ridership and lowers automobile dependence for people who live and/or work in proximity to the development.

Mixed-use (MU-1&2) and Urban Residential (UR) zoning, or an appropriate form-based zoning classification, benefit a TOD particularly within one-quarter mile of the public transportation connection. These zoning classifications allow for the development of a higher-density "transit core" that is the primary source of ridership to and from the connection. Within one-half mile of the connection, referred to as the "transit neighborhood," compatible higher-density residential should be encouraged as a means to promote housing affordability and variety in available housing types.

SUGGESTED ZONING AROUND PUBLIC TRANSIT



MAJOR COMMUTER RAIL LINES



Source: City of Fort Worth, 2018

In 2015 the North Central Texas Council of Governments conducted a survey of residents regarding public transportation:

67%

Percent of residents would like their community to add or improve access to public transportation.

72%

Percent of residents would consider options besides driving alone to work if it were more convenient.

$10K

The amount individuals could save per year using transit in place of car ownership.

Source: North Central Texas Council of Governments (NCTCOG), 2015 Transit Survey

1 MULTIPLE GROWTH CENTERS

Achieve a multiple growth center development pattern by encouraging higher intensity residential and commercial uses within mixed-use growth centers, and higher intensity industrial and commercial uses within industrial growth centers.

- Increase new residential units in mixed-use growth centers, urban villages, and transit-oriented development areas so that at least one-third of new residential development occurs in these locations.

2 DIRECT CONNECTIONS

Improve land use efficiency, mobility, and air quality.

- Encourage developments that create a network of interconnected local streets and trails that facilitate more direct pedestrian, bicycle, and vehicle access between nearby uses and destinations.

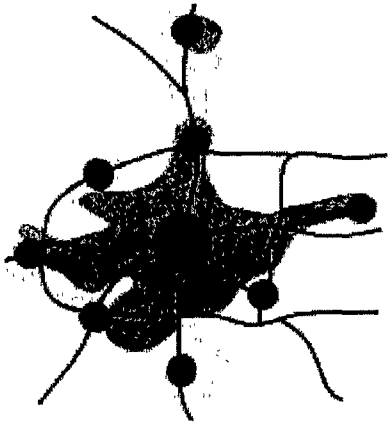
3 ZONING CONFORMITY

Ensure that the City's zoning regulations and districts generally conform to the adopted Comprehensive Plan.

- Improve the percentage of zoning decisions that are consistent with the Comprehensive Plan (80% in 2017).

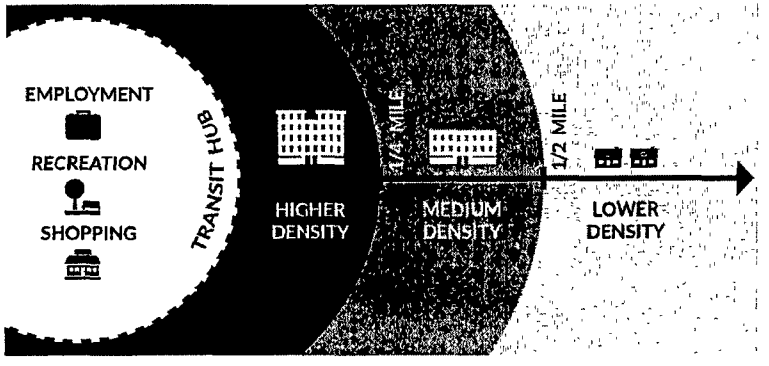
POLICIES

- Identify and designate on future land use maps regional and community mixed-use growth centers in rapidly developing areas, based on proximity to future rail transit and key transportation intersections.
- Accommodate higher density residential and mixed uses in transit-oriented developments, urban villages, and designated mixed-use growth centers.
- Include projects in future Capital Improvement Programs that support the growth center concept, transit-oriented development, and urban villages.



Multiple Growth Center Development Pattern

- Adopt a sustainable development policy that promotes the following:
  1. Land use and transportation practices that promote economic development while using limited resources in an efficient manner;
  2. Transportation decision-making based on land use, traffic congestion concerns, vehicle miles traveled, and the viability of alternative transportation modes; and
  3. Balance among accessibility, affordability, mobility, community cohesion, and environmental quality. (For more information, see Chapter 11: Transportation and Chapter 18: Environmental Quality.)
- Link growth centers with major thoroughfares, public transportation, trails, and linear parks.
- Locate multifamily units within walking distance of public transportation, employment, recreation, and/or shopping to increase accessibility and decrease vehicular traffic.

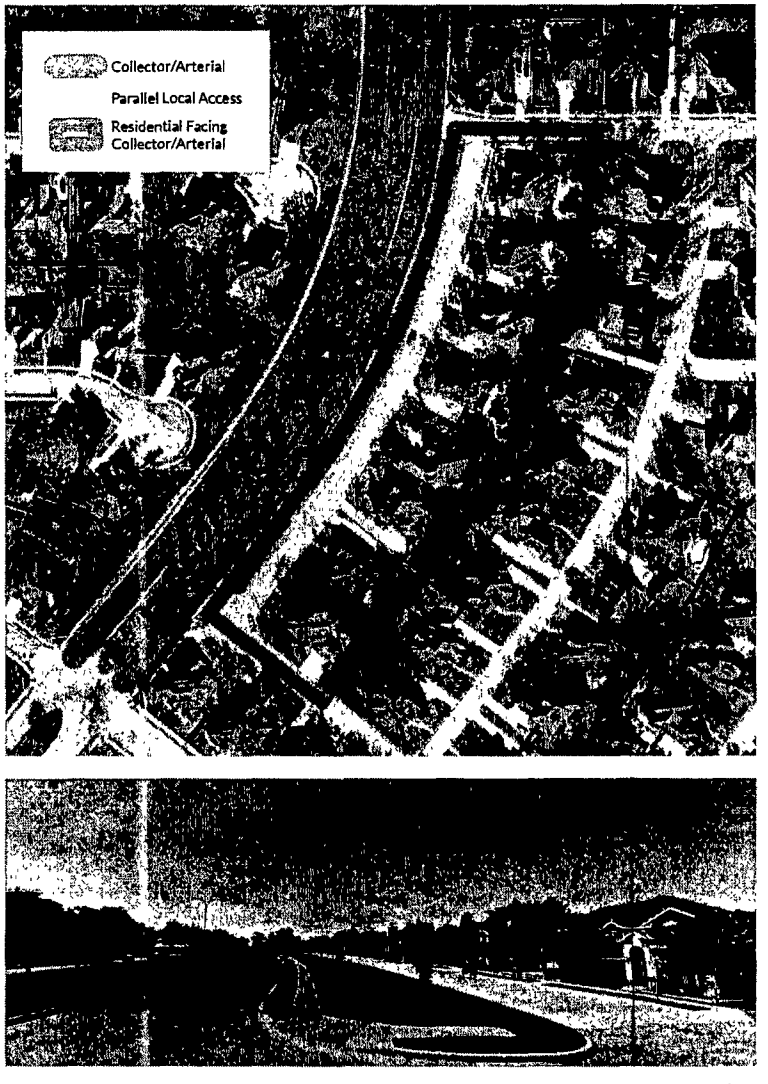


Distance from Public Transit

- Encourage Urban Residential and Low Density Residential as transitional uses between Single-Family Residential and high density uses.
- Encourage small-lot single-family zoning districts (i.e. AR and A-5) on the periphery of mixed-use growth centers, where the City seeks to concentrate employment and public services.
- Coordinate future land uses and development types and intensity with the Complete Streets policy, Master Thoroughfare Plan, Active Transportation Plan, and Transit-Oriented Development (TOD) Plans.
- Provide interconnectivity of streets and trails, especially within residential subdivisions, to reduce vehicle trips on arterial streets, increase efficiency, reduce air pollution, distribute traffic, improve access to public places, improve efficiency in providing services and deliveries, and ensure access for emergency services.
- Encourage clustering of development sites within new subdivisions to avoid steep slopes (greater than 15%) and to conserve 100-year floodplains, existing tree cover, wildlife habitat, storm water detention areas, riparian buffers along natural waterways, and archeologically significant sites.

POLICIES (CONT.)

- Encourage the use of parallel local access streets along collector and minor arterial roadways to allow the front façade of homes to face the street without the need for multiple driveway curb-cuts on the main street, thereby preserving traffic safety while increasing the pedestrian friendliness of the collector or minor arterial.
- To protect water quality and provide for connected green spaces, encourage parks, bike trails, and open space within floodplains and along adjacent water bodies.
- Encourage the provision of open space within new developments, with the goal of linking open spaces within adjoining subdivisions.
- Locate public neighborhood parks within easy access of residents (less than one-half mile).
- Promote appropriate infill development of vacant lots, old commercial centers (greyfields), and contaminated sites (brownfields) within developed areas, particularly in the central city.
- Provide for and maintain interconnectivity of streets and trails, especially within residential subdivisions, to reduce vehicle trips on arterial streets, increase efficiency, reduce air pollution, distribute traffic, improve access to public places, improve efficiency in providing services and deliveries, and ensure access for emergency services.
- Promote appropriate infill development of vacant lots within developed areas, which will efficiently utilize existing infrastructure, particularly in the central city.
- Promote appropriate infill of old commercial centers (greyfields), and contaminated sites (brownfields) within developed areas, particularly in the central city.
- Identify and designate on future land use maps new industrial growth centers in rapidly developing areas, based on proximity to existing infrastructure and key transportation intersections.
- Promote appropriate uses within the NAS-JRB Overlay.
- Encourage urban agriculture with the purpose of increasing access to fresh food, providing income for people who want to grow and sell produce, and contributing to urban food security and nutritious, especially for residents within food deserts.



Parallel Local Access Streets along Collector and Minor Arterial Roadways