

II. LAND USE ASSUMPTIONS

A. Purpose and Overview

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

In accordance with Chapter 395, information from the following sources was compiled to complete the land use assumptions:

- City of Fort Worth 2017 Transportation Impact Fee Study
- City of Fort Worth Comprehensive Plan
- Tarrant County Appraisal District (TAD)
- Denton County Appraisal District (DCAD)
- Parker County Appraisal District (PCAD)
- North Central Texas Council of Governments (NCTCOG)
- City of Fort Worth staff

The Land Use Assumptions include the following components:

- **Land Use Assumptions Methodology** – An overview of the general methodology used to generate the land use assumptions.
- **Transportation Impact Fee Service Areas** – Explanation of the division of Fort Worth into service areas for transportation facilities.
- **Residential and Employment**– Data on residential and employment growth within the service area over the next ten years (2022 – 2032).
- **Land Use Assumptions Summary** – A synopsis of the land use assumptions.

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

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

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

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

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

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

The above categories are used in the development of the assumptions for impact fees; however, expanded classifications used in the assessment of impact fees are found in the Land Use / Vehicle-Mile Equivalency Table.

B. Transportation Impact Fee Service Areas

The geographic boundary of the proposed impact fee service areas for transportation facilities is shown in **Exhibit 1**. The service areas in the 2022 Transportation Impact Fee Study are consistent with those in the previous Transportation Impact Fee Study, with only some modifications necessary in order to include annexations occurring since the previous study. The City of Fort Worth is divided into twenty-eight (28) service areas, each based upon the six (6) mile limit as required in Chapter 395. For transportation facilities, the service areas are limited to those areas within the current corporate limits. Therefore, areas within the extraterritorial jurisdiction (ETJ) (as of June 30, 2022) are excluded from this study. No impact fees are collected in seven (7) of these Service Areas because no capacity related transportation improvement projects have been designated. Two current Fee service areas L and W are being added as no-fee service areas, bringing the new total to nine (9). Service areas L and W were moved to “no-fee” status due to limited potential for further TIP projects and limited ongoing growth. The roadway projects proposed in the 2017 study have been completed. These nine (9) “no-fee” service areas were not analyzed in the 2022 Transportation Impact Fee Study. It should be noted that at locations where service area boundaries follow a City thoroughfare facility, the proposed boundary is intended to follow

the centerline of the roadway, unless otherwise noted. In cases where a service area boundary follows the City Limits, only those portions of the transportation facility within the City Limits are included in the service area.

Ultimate Service Area Boundaries

The 2022 Transportation Impact Fee study includes an updated approach to service area boundaries. As part of this study, Ultimate Service Area boundaries have been established. The intent of establishing Ultimate Service areas is to define the maximum future extents of existing service areas per the 6-mile limit in Chapter 395, to outline where new service areas may exist in the future, and to accommodate the assessment of impact fees to developments that are annexed into the City after the adoption of this study. With the updated methodology, developments that annex into the ultimate boundaries of an existing service area will be assessed according to the current collection rate of the existing service area. The existing service area boundary will then be updated to reflect the annexation in the next update. For example, a development that is annexed into the ultimate service area boundary of Service Area E but is not currently within the existing service area boundary of Service Area E, will be assessed at the current impact fee vehicle-mile rate in Service Area E. Master Thoroughfare Plan (MTP) roadways within the Ultimate Service Area boundaries, but outside the City limits, will not be eligible for City participation until after annexation and assessment. The Ultimate Service Area Boundaries are shown in **Exhibit 2**.

C. Land Use Assumptions Methodology

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

- Character, type, density, and quantity of existing development;
- Current zoning plans;
- Future Land Use Plan (as currently adopted);
- Growth trends;
- Location of vacant land;
- Physical restrictions (i.e. flood plains, railroads); and
- Physical carrying capacity of Fort Worth.

The following was the process used to develop the land use assumptions:

Step 1: Determine Base Year (2022)

Existing residential and employment estimates were obtained using the 2017 Transportation Impact Fee Study, recent building permit data (2017 – 2022), and an aerial survey of existing development. For single-family and multi-family residential units, the number of units were simply counted from the building permit data. However, if the number of multi-family units was not available through the inventory, a density calculation was performed based on the building permit's livable building square footage. A conversion of square footage per unit was utilized to determine the number of units.

To estimate employment square footage, the livable building square footage data were utilized. Building footprint data and aerials were utilized to supplement the building square footage if the building permit data lacked square footage information.

Step 2. Determine 10-Year Growth Projections

For the remaining undeveloped areas, assumptions based upon the City's Future Land Use Map (**Exhibit 3**) were used to estimate the growth potential of land within the Transportation Impact Fee study area for both residential and employment land uses. As a basis for determining the 10-year growth projections, recent plats (preliminary and final) and Pre-Development Conferences (PDCs) were obtained from City staff. This information was used to identify areas of growth in each service area. The Fort Worth Comprehensive Plan land use in the identified growth areas was used in combination with the plats, PDCs and reasonable density estimates to determine the number of dwelling units and square feet of employment over the next ten years.

The 10-Year Growth was calculated in three basic steps.

- 1) Determine the future land use for study area parcels based on previous planning efforts completed by the City.
- 2) Determine the number of dwelling units and amount of employment building space that could occupy every parcel – i.e. the parcel's "Carrying Capacity" – based on the plat, PDC, or the future land use development types.

- 3) Calculate the total number of residential dwelling units and employment square feet within the parcels expected to develop by 2032 in each service area.

Following completion of the 10-year growth projections, discussions were held with representatives from involved City departments (Planning and Development & Transportation and Public Works) to verify the identified growth areas and to refine future land use categories in each service area. In some service areas where rapid growth is anticipated, residential projections were adjusted to reflect growth similar to or slightly more aggressive than the growth trend over the previous five years (2017-2022).

Step 3. Compare to Historic Growth and Regional Growth Projections

Research of historical building permits was performed to compare the projected ten-year growth to the year 2032 with previous growth trends in the City of Fort Worth over the last five years. During the last five years, approximately 41,311 residential units and 54.4 million square feet of employment were developed in fee-eligible service areas. If the next ten years follow a similar pace, an additional 83,000 residential units and 110 million square feet of employment will be developed in the City. It is projected that the next ten years of development will add 108,288 residential dwelling units and 88.9 million square feet of employment in the fee-eligible service areas.

D. Residential and Employment Results

Exhibit 1 presents the existing City limits and the proposed service areas, combined with the Future Land Use Plan (as currently adopted). **Table 1** summarizes the residential and employment projections within the City of Fort Worth for 2022-2032.

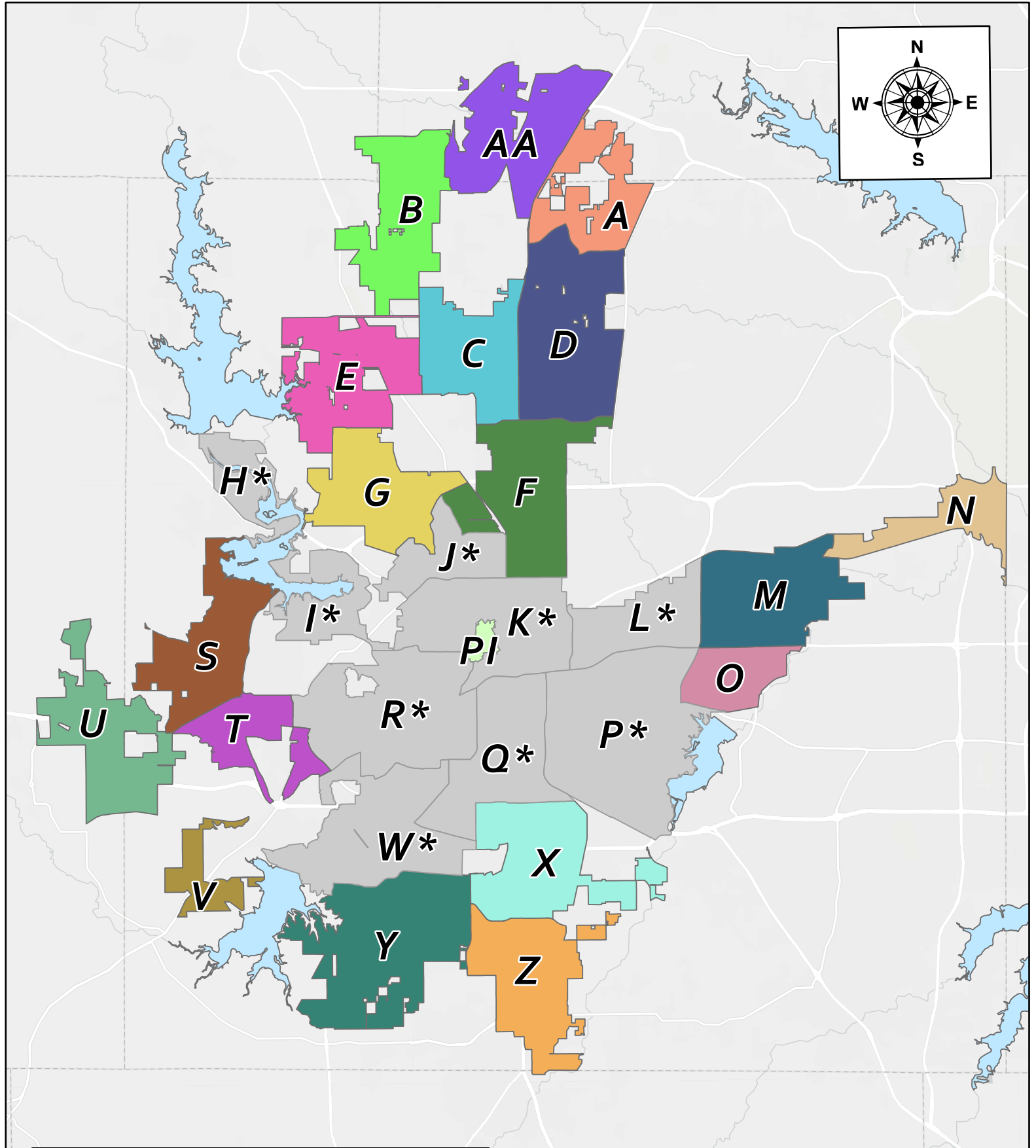
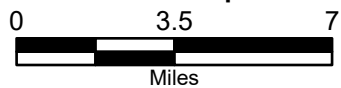


Exhibit 1.
2022 Transportation Impact Fee Study
Proposed Service Areas



July 2022



Legend

Service Area

A	E	PI	Y
AA	F	S	Z
B	G	T	
C	M	U	
D	N	V	
	O	X	
			*Non-Impact Fee Eligible

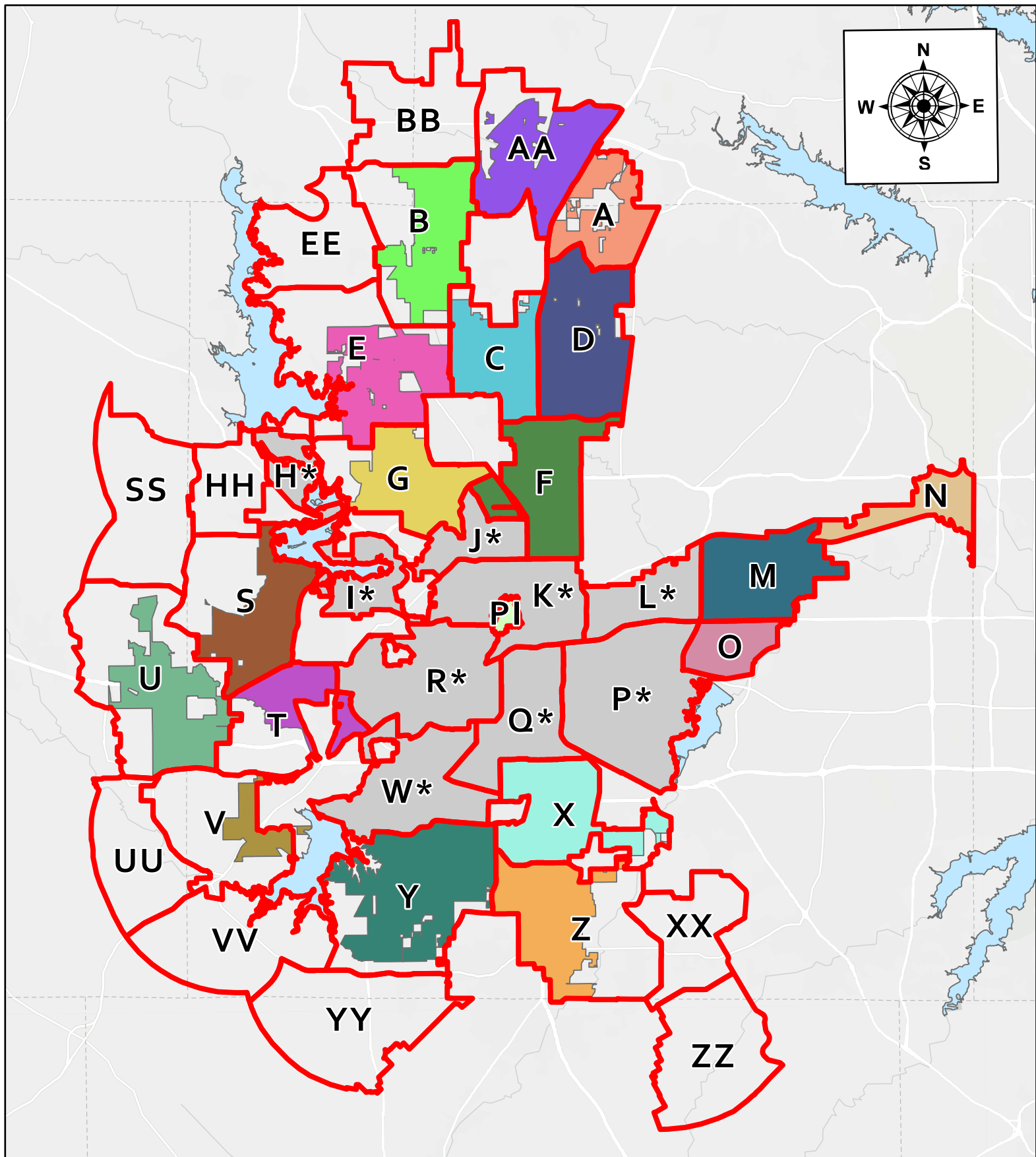
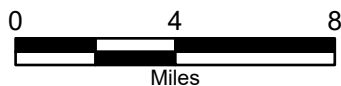


Exhibit 2.
2022 Transportation Impact Fee Study
Ultimate Service Area Boundaries



July 2022



Legend

Service Area

- A
- AA
- B
- C
- D

- E
- F
- G
- M
- N
- O

- PI
- S
- T
- U
- V
- X

- Y
- Z

- *Non-Impact Fee Eligible
- Ultimate Service Areas

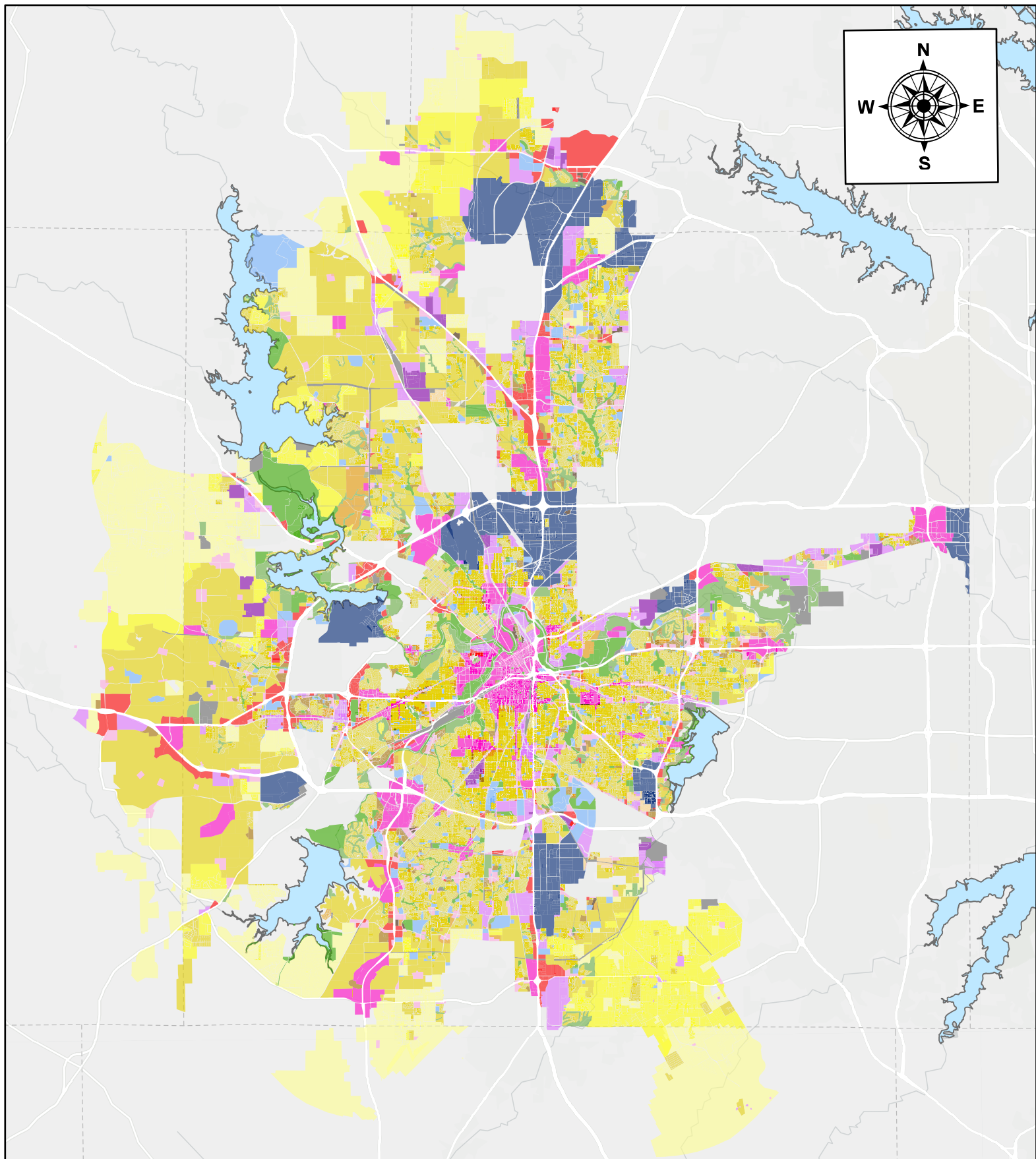


Exhibit 3.
2022 Transportation Impact Fee Study
Future Land Use Plan

0 4 8
Miles

July 2022



Legend

Land Use	Infrastructure	Manufactured Housing	Rural Residential
General Commercial	Institutional	Mixed-Use	Single Family
High Density Residential	Low Density Residential	Neighborhood Commercial	Suburban Residential
Heavy Industrial	Light Industrial	Private Park	Urban Residential
Industrial Growth Center	Medium Density Residential	Public Park	

SareGraph, FAO, METI/NASA, USGS, EPA, NPS

Table 1. Residential and Employment 10-Year Projections

Service Area	Year	Dwelling Units	Employment (Square Feet)			
			Basic	Service	Retail	Total
A	2022	11,361	11,371,000	3,223,000	570,000	15,163,000
	2022-2032	1,858	6,031,000	1,218,000	1,761,000	9,010,000
	2032	13,219	17,402,000	4,441,000	2,331,000	24,173,000
AA	2022	4,400	19,620,000	4,508,000	10,037,000	34,165,000
	2022-2032	3,584	8,626,000	2,106,000	2,867,000	13,599,000
	2032	7,984	28,246,000	6,614,000	12,904,000	47,764,000
B	2022	6,717	1,758,000	1,663,000	430,000	3,851,000
	2022-2032	7,955	3,009,000	1,033,000	1,550,000	5,592,000
	2032	14,672	4,767,000	2,696,000	1,980,000	9,443,000
C	2022	17,397	5,238,000	1,466,000	1,745,000	8,449,000
	2022-2032	11,122	2,936,000	1,418,000	1,859,000	6,213,000
	2032	28,519	8,174,000	2,884,000	3,604,000	14,662,000
D	2022	56,877	1,928,000	3,787,000	3,109,000	8,824,000
	2022-2032	8,033	617,000	2,237,000	2,276,000	5,130,000
	2032	64,910	2,545,000	6,024,000	5,385,000	13,954,000
E	2022	11,079	1,064,000	449,000	347,000	1,860,000
	2022-2032	15,013	1,809,000	2,442,000	1,152,000	5,403,000
	2032	26,092	2,873,000	2,891,000	1,499,000	7,263,000
F	2022	17,996	21,490,000	6,595,000	4,991,000	33,076,000
	2022-2032	564	4,955,000	807,000	1,183,000	6,945,000
	2032	18,560	26,445,000	7,402,000	6,174,000	40,021,000
G	2022	15,410	1,475,000	1,680,000	1,401,000	4,556,000
	2022-2032	6,573	777,000	431,000	555,000	1,763,000
	2032	21,983	2,252,000	2,111,000	1,956,000	6,319,000
M	2022	11,570	1,338,000	1,542,000	1,793,000	4,673,000
	2022-2032	2,633	226,000	254,000	365,000	845,000
	2032	14,203	1,564,000	1,796,000	2,158,000	5,518,000
N	2022	5,020	7,641,000	5,367,000	2,078,000	15,086,000
	2022-2032	1,186	126,000	175,000	217,000	518,000
	2032	6,206	7,767,000	5,542,000	2,295,000	15,604,000
O	2022	6,327	253,000	418,000	609,000	1,280,000
	2022-2032	620	0	133,000	190,000	323,000
	2032	6,947	253,000	551,000	799,000	1,603,000

Table 1 (Continued). Residential and Employment 10-Year Projections

Service Area	Year	Dwelling Units	Employment (Square Feet)			
			Basic	Service	Retail	Total
PI	2022	240	1,534,000	1,000	129,000	1,664,000
	2022-2032	1,000	50,000	200,000	200,000	450,000
	2032	1,240	1,584,000	201,000	329,000	2,114,000
S	2022	8,158	29,000	596,000	1,576,000	2,201,000
	2022-2032	3,420	1,348,000	950,000	1,116,000	3,414,000
	2032	11,578	1,377,000	1,546,000	2,692,000	5,615,000
T	2022	5,529	808,000	867,000	1,807,000	3,482,000
	2022-2032	285	740,000	332,000	483,000	1,555,000
	2032	5,814	1,548,000	1,199,000	2,290,000	5,037,000
U	2022	4,770	0	250,000	0	250,000
	2022-2032	29,631	1,275,000	5,096,000	6,105,000	12,476,000
	2032	34,401	638,000	2,923,000	3,053,000	6,614,000
V	2022	941	0	2,000	0	2,000
	2022-2032	2,053	0	6,000	9,000	15,000
	2032	2,994	0	8,000	9,000	17,000
X	2022	8,811	10,977,000	3,472,000	2,641,000	17,090,000
	2022-2032	1,208	3,997,000	680,000	1,020,000	5,697,000
	2032	10,019	14,974,000	4,152,000	3,661,000	22,787,000
Y	2022	23,752	564,000	1,367,000	1,250,000	3,181,000
	2022-2032	12,640	17,000	2,656,000	3,084,000	5,757,000
	2032	36,392	581,000	4,023,000	4,334,000	8,938,000
Z	2022	7,437	9,308,000	3,152,000	1,846,000	14,306,000
	2022-2032	3,130	3,999,000	1,747,000	2,277,000	8,023,000
	2032	10,567	13,307,000	4,899,000	4,123,000	22,329,000