



LAND USE ASSUMPTIONS 2024 - 2025



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PURPOSE AND OVERVIEW

To accurately determine the costs associated with providing infrastructure services to new and existing development, a study must be conducted to determine the type, amount, and location of existing development and expected growth. This study is called the Land Use Assumptions (LUA), and is the first step in the impact fee update process. Impact fees are levied against new development to pay for the off-site construction or expansion of infrastructure that is necessitated by the additional impact caused by the new development.

As defined by Chapter 395 of the Texas Local Government Code, impact fees are “a charge or assessment imposed by a political subdivision against new development in order to generate revenue for funding or recouping the costs of capital improvements or facility expansions necessitated by and attributable to the new development,” and that “a political subdivision imposing an impact fee shall update the land use assumptions and capital improvements plan at least every five years.”



STUDY PROCESS

This report documents the practical approach that was taken to determine Land Use Assumptions. The residential and non-residential growth projections formulated in this report were performed using reasonable and generally accepted forecasting and planning principles. The following data and procedures were used in developing this report:

Study Data

- Existing land uses and non-residential square footages (source: Collin Central Appraisal District).
- Existing zoning map and development regulations (source: City of McKinney).
- ONE McKinney 2040 Comprehensive Plan - Future Land Use Plan (source: City of McKinney).
- Historical population information (source: City of McKinney, U.S. Census Bureau).
- Texas Demographic Center population projection program (2020-2060).
- Proposals for residential and non-residential developments that have been approved by the City but not yet constructed (source: City of McKinney).

Primary Steps

1. Update service area boundaries in accordance with State Law requirements.
2. Determine baseline conditions for 2024 population and non-residential square footage.
3. Project the ultimate buildout population and non-residential square footage.
4. Project population and non-residential square footage growth for the next ten years.



SERVICE AREA MAPS

What is a Service Area?

As defined by Local Government Code Chapter 395, a “service area” may include all or part of the land within the political subdivision or its Extraterritorial Jurisdiction (ETJ) to be served by the capital improvements or facilities expansions specified in the Capital Improvements Plan, except roadway facilities and storm water, drainage, and flood control facilities.

For roadway facilities, a service area is limited to an area within the corporate boundaries of the political subdivision and shall not exceed 6 miles. Roadway service area boundaries generally follow existing and future major thoroughfares. Also, roadway service areas help to maintain efficiencies in accounting and administration of roadway impact fees.

Exhibit “A” shows the 2024 Roadway Service Area Map. The 2024 Roadway Service Area Map includes the same 13 Service Areas that the City of McKinney recognized during the

2019 Impact Fee Update. Slight changes have been made to align service area boundaries with newly constructed roadways and the Master Thoroughfare Plan that was amended in 2024 as part of the ONE McKinney 2040 Comprehensive Plan.

Exhibit “B” shows the 2024 Utility Service Area Map. Minor changes have been made to reflect changes in the ETJ boundary that have taken effect since the last impact fee update that was completed in 2019.

For the purpose of further analysis and geographic specificity, sub-service areas were created to assist with the classification of existing population and non-residential square footages, and distribution of future projections. The sub-service areas are smaller boundary entities that nest within their larger service area counterparts.

“Roadway service areas represent areas of similar traffic generation characteristics”



EXHIBIT A: ROADWAY SERVICE AREAS

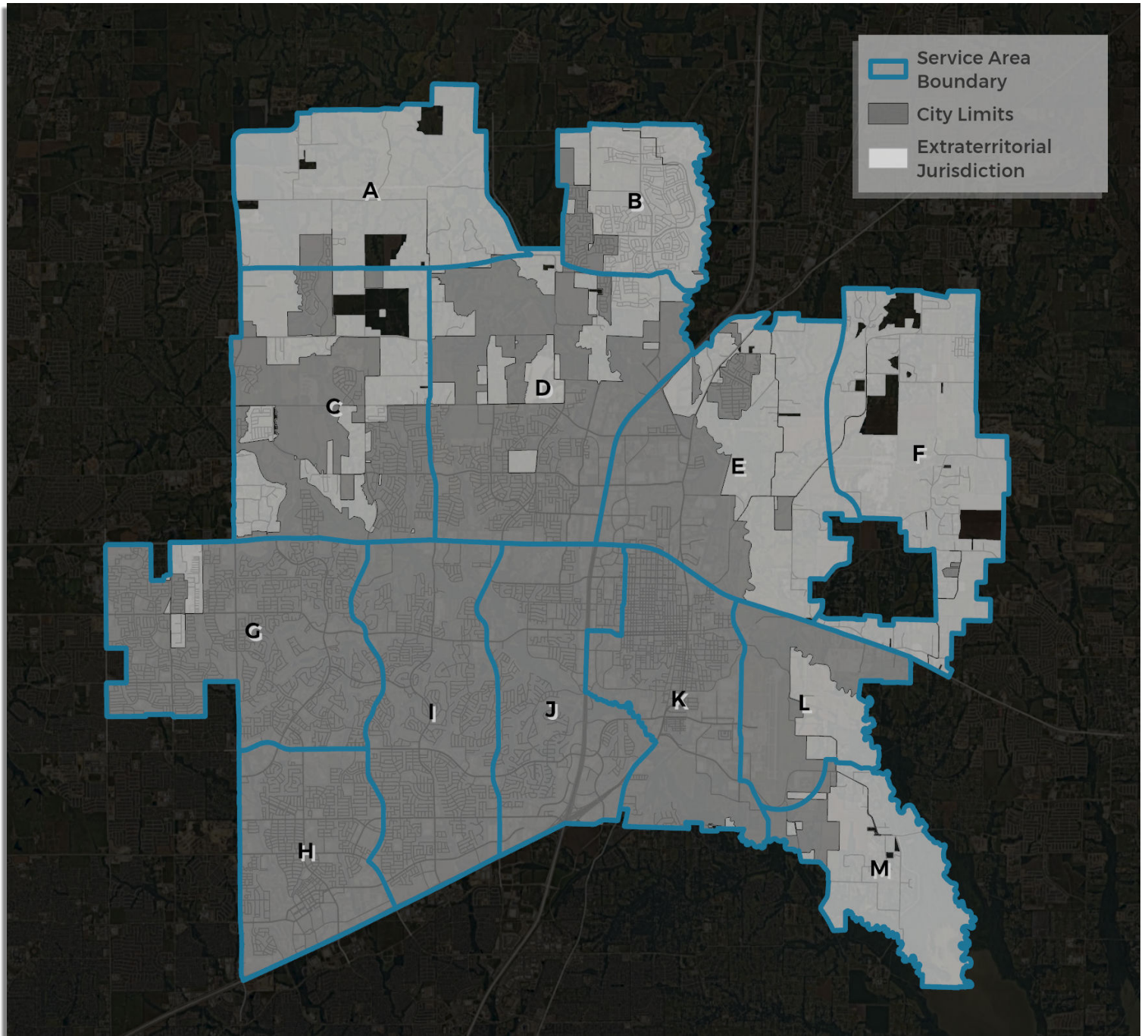


EXHIBIT B: WATER SERVICE AREA

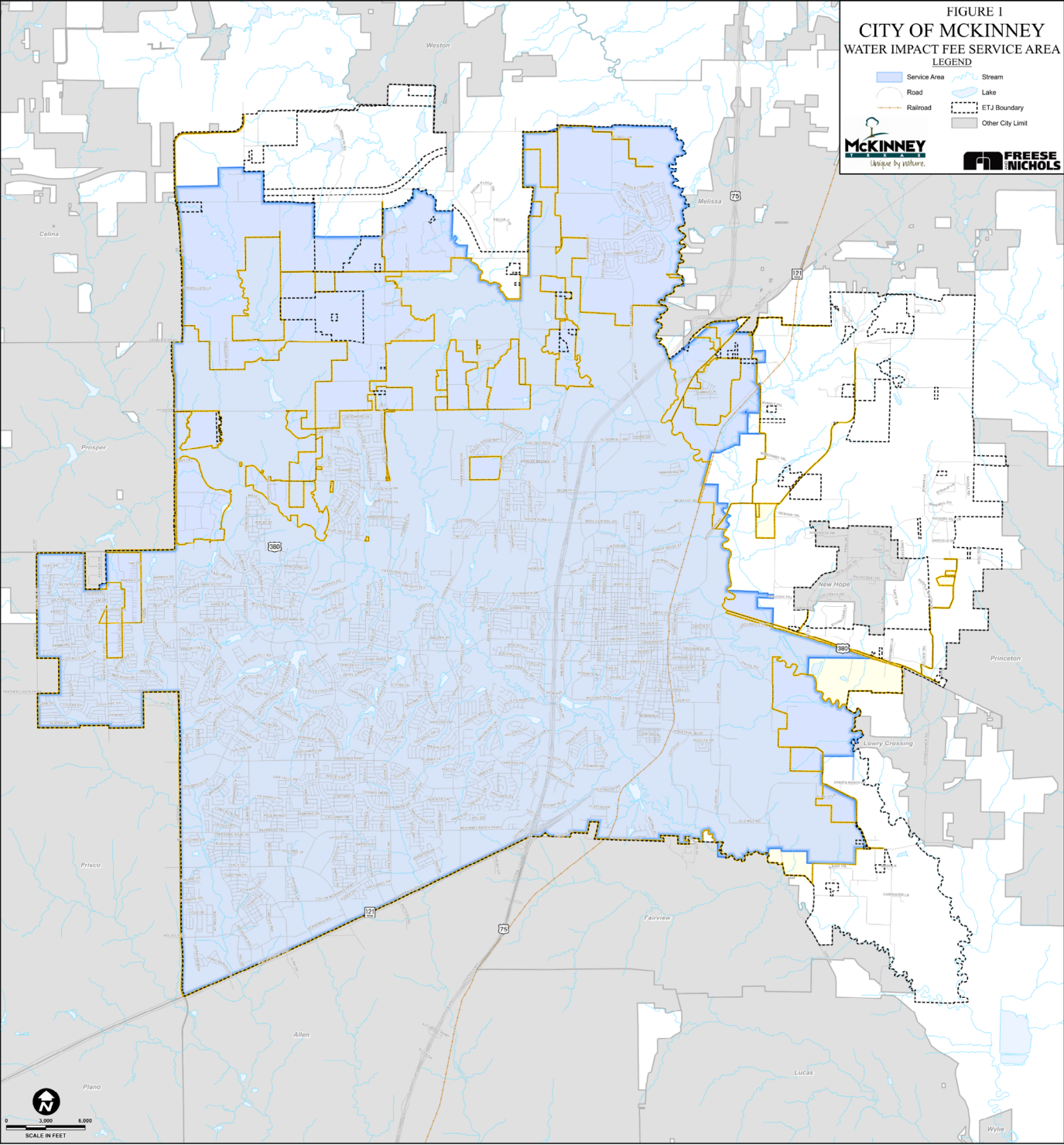
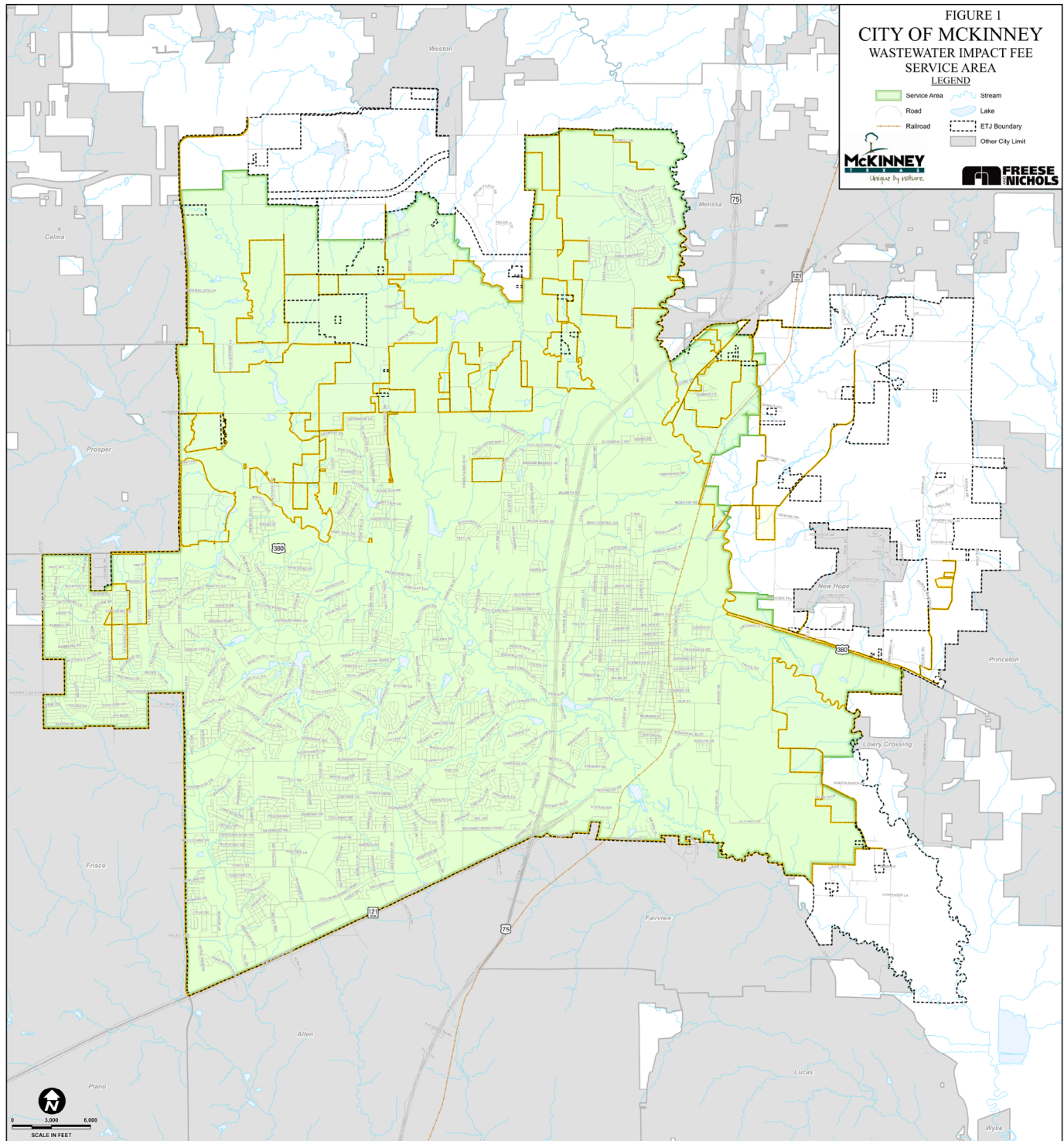


EXHIBIT C: WASTEWATER SERVICE AREA



BASELINE DATA



Population

The baseline population in McKinney (including ETJ) as of January 1, 2024 has been estimated at 237,387.

Table 1 shows the population history for the full Planning Area (City limits in addition to Service Areas outside City Limits) for McKinney from the 2010 U.S. Census through the estimate for January 1, 2024. Using the official 2010 U.S. Census population as starting point, City Planning Staff estimated a population figure each year based on an analysis of building permit data for the previous years as well as on commonly accepted assumptions for occupancy rates and household sizes.

Table 1 illustrates that McKinney has been experiencing continual residential growth over the last fifteen years. This general trend of population growth is expected to continue throughout the ten year forecast of this study.

McKinney's population estimate was spatially distributed among the thirteen roadway service areas. To do this, City building permit data was used in conjunction with data from the 2010 Census to determine the location of McKinney's population. This permit data was subsequently converted into population using a "persons per dwelling unit figure" for single-family and multi-family housing types that is annually updated. For single-family, the average household size used is 3.07*. For multi-family, the average household size used is 2.08*.

YEAR	POPULATION	% GROWTH
2010	135,038	-
2011	137,406	1.8%
2012	141,330	2.9%
2013	145,511	3.0%
2014	153,807	5.7%
2015	159,100	3.4%
2016	166,569	4.7%
2017	174,141	4.5%
2018	184,420	5.9%
2019	193,012	4.7%
2020	203,138	5.2%
2021	207,510	2.2%
2022	217,338	4.7%
2023	224,814	3.4%
2024	237,387	5.6%

TABLE 1: POPULATION HISTORY

"McKinney has been experiencing continual residential growth over the last 15 years"

Non-Residential Square Footages

It is also necessary to establish a baseline figure for the square footage of non-residential uses currently in McKinney. For roadway impact fees, building square footage is the most common independent variable for the estimation of non-residential vehicle trips generated in the Institute of Transportation Engineers (ITE) Trip Generation Manual. Building square footage is closely tied to trip generation and is known at the time of assessment for an impact fee for a proposed development.

The building square footages were categorized into three commonly used land use classifications. Each classification has unique trip making characteristics.

Basic: Higher impact land uses that generate goods and services that are typically used and sold outside of McKinney, such as manufacturing, construction, transportation, warehousing, and other industrial uses.

Service: Land uses that provide personal and professional services, such as government facilities, schools, medical offices, and other professional offices.

Retail: Land uses where the retail sale of goods primarily serves households, and whose location choice is oriented towards a local market. Examples include restaurants, grocery, and clothing stores.

Baseline square footage of Basic, Service, and Retail uses are determined using data from Collin Central Appraisal District (CAD). Collin CAD provides land use and square footage data for all existing non-residential uses within McKinney and its ETJ. Using this data, a summary table of all non-residential use categories within each service area was created. These figures act as the baseline conditions for non-residential square footages.

SERVICE AREA	RESIDENTIAL		NON-RESIDENTIAL SQUARE FEET		
	Population	Dwelling Units	Basic	Service	Retail
A	340	115	31,336	15,344	47,015
B	13,688	4,625	2,400	14,755	33,387
C	14,530	5,225	315,779	807,692	268,911
D	16,655	6,007	46,816	3,711,760	1,358,895
E	5,152	1,809	6,373,313	1,638,113	1,290,665
F	2,486	840	837,719	299,129	74,845
G	52,876	18,546	1,824,972	2,364,959	1,442,441
H	38,972	15,629	749,636	4,826,352	2,227,024
I	43,263	15,399	746,736	2,512,967	1,505,393
J	27,818	10,875	2,451,443	2,681,289	4,444,634
K	20,998	7,902	7,447,412	5,352,710	2,056,030
L	80	27	1,780,842	4,269	10,284
M	530	179	71,120	63,896	0
TOTAL	237,387	87,178	22,679,524	24,293,235	14,759,524

TABLE 2: BASELINE CONDITIONS

ULTIMATE BUILDOUT PROJECTIONS



Overview

An ultimate buildout projection is needed to determine the potential for additional growth that is available in the undeveloped areas of the city and ETJ. The ultimate buildout projection is broken into the same sub-categories as the baseline data (population, dwelling units, basic, service, and retail). The buildout projection adds the undeveloped areas to the baseline data. The undeveloped areas are calculated using the two following categories: zoning projections and Future Land use Projections.

Zoning Projection

Staff analyzed the zoning districts for all parcels within city limits that were considered undeveloped*. Base zoning districts were given an associated land use category (single-family, multi-family, basic, service, or retail). The Planned Development (PD) districts were reviewed and assigned one or more land use categories. In instances where multiple land uses existed in one zoning, the anticipated acreage of the different uses were applied. The land use acreages for each of these zonings were then multiplied by standard metrics from existing conditions to determine the extent of additional growth that is possible. The standard metrics includes an average persons per dwelling unit for single-family and multi-family developments, and typical floor-area-ratio (FAR) for non-residential uses.

Future Land Use Plan Projection

Undeveloped areas located within the ETJ are not subject to the City's zoning regulations. The Future Land Use Plan (FLUP) identifies the land use at the time of development in the future. The ultimate buildout projection for the area within the ETJ is calculated based on an analysis of the FLUP. Additionally, areas within city limits that are zoned "AG - Agricultural District" are anticipated to rezone and develop in accordance with the FLUP designated land uses. The areas where the FLUP is applied were categorized by the Placetypes outlined in the ONE McKinney 2040 Comprehensive Plan. The Placetype acreages were multiplied using a calculation that determines anticipated population and square footages for non-residential uses. Since Placetypes are not land-use-specific, the calculator applies anticipated percentages to determine the associated acreage of a Placetype that will fall into one of the land use categories (residential, basic, service, retail).

SERVICE AREA	RESIDENTIAL		NON-RESIDENTIAL SQUARE FEET		
	<i>Population</i>	<i>Dwelling Units</i>	<i>Basic</i>	<i>Service</i>	<i>Retail</i>
A	49,469	21,931	7,189,526	4,620,344	2,245,322
B	27,542	9,350	2,400	242,520	672,613
C	71,102	26,079	453,679	1,353,369	2,926,148
D	71,212	29,526	117,607	5,334,557	5,788,110
E	33,328	13,451	13,588,294	3,132,013	3,396,362
F	13,473	4,555	1,337,605	694,173	978,957
G	54,782	19,448	2,521,189	2,682,345	2,352,482
H	49,691	21,263	849,217	5,991,363	2,930,630
I	48,816	17,890	998,854	2,842,939	3,494,557
J	32,907	13,564	3,229,674	2,981,346	5,403,831
K	28,718	12,282	10,097,255	5,791,648	2,524,904
L	53	18	10,205,172	733,862	53,128
M	1,054	357	4,777,760	631,494	92,812
TOTAL	482,149	189,714	55,368,232	37,031,973	32,859,856

TABLE 3: BUILDOUT CONDITIONS

$$\left[\begin{array}{c} \text{Baseline} \\ \text{Conditions} \end{array} \right] + \left[\begin{array}{c} \text{Zoning} \\ \text{Projection} \end{array} \right] + \left[\begin{array}{c} \text{FLUP} \\ \text{Projection} \end{array} \right] = \left[\begin{array}{c} \text{Ultimate} \\ \text{Buildout} \end{array} \right]$$

“An ultimate buildout projection is needed to determine the potential for additional growth”

10-YEAR GROWTH ASSUMPTIONS

This study considers the years 2024-2034. Acknowledging that the parameters of the study (city limits, Master Thoroughfare Plan, Comprehensive Plan, zoning maps, existing development, etc.) are changing constantly, this study is based on conditions as they were on January 1, 2024.

Population Projections

The following methods were used in projecting the population of McKinney in 2034. An explanation of why these methods were chosen follows their description.

Gompertz Method

The Gompertz growth curve is an extrapolation method that generally fits the growth pattern of McKinney over the last few years. It assumes that, during the total growth period of a geographic area, the growth is slow in the beginning, then increases exponentially for a period of time, and then tapers off as the population approaches an upper growth limit. Using the ultimate population (482,149) from the ultimate buildout projections as the upper growth limit, a Gompertz curve has been plotted and used in part to project the population in 2034.

Ratio Method

Projections for larger geographic areas (i.e. counties or regions) are more reliable than projections for smaller areas (i.e. cities) since a larger population base is less likely to exhibit short term variations. For this reason, the

ratio method has also been utilized. This method operates under the assumption that if a relationship between a city's population and its larger geographic area has a generally fixed ratio, the population of the city can be related and projected based on the population projection of the larger area. The ratio method uses McKinney's share of Collin County's growth.

The Texas Demographic Center's Population Projections Program produces projections for the state, and all counties in the state by age, sex and race/ethnicity. These projections contain the anticipated population for Collin County for every year from 2020 to 2060. Using the ratio methods described above, and for the purposes of the Land Use Assumptions, McKinney's population was projected out to 2034.

In previous iterations of Land Use Assumptions, the population for McKinney was determined using a combination of the Ratio and Gompertz method. While the combination of these two methods were considered in developing the

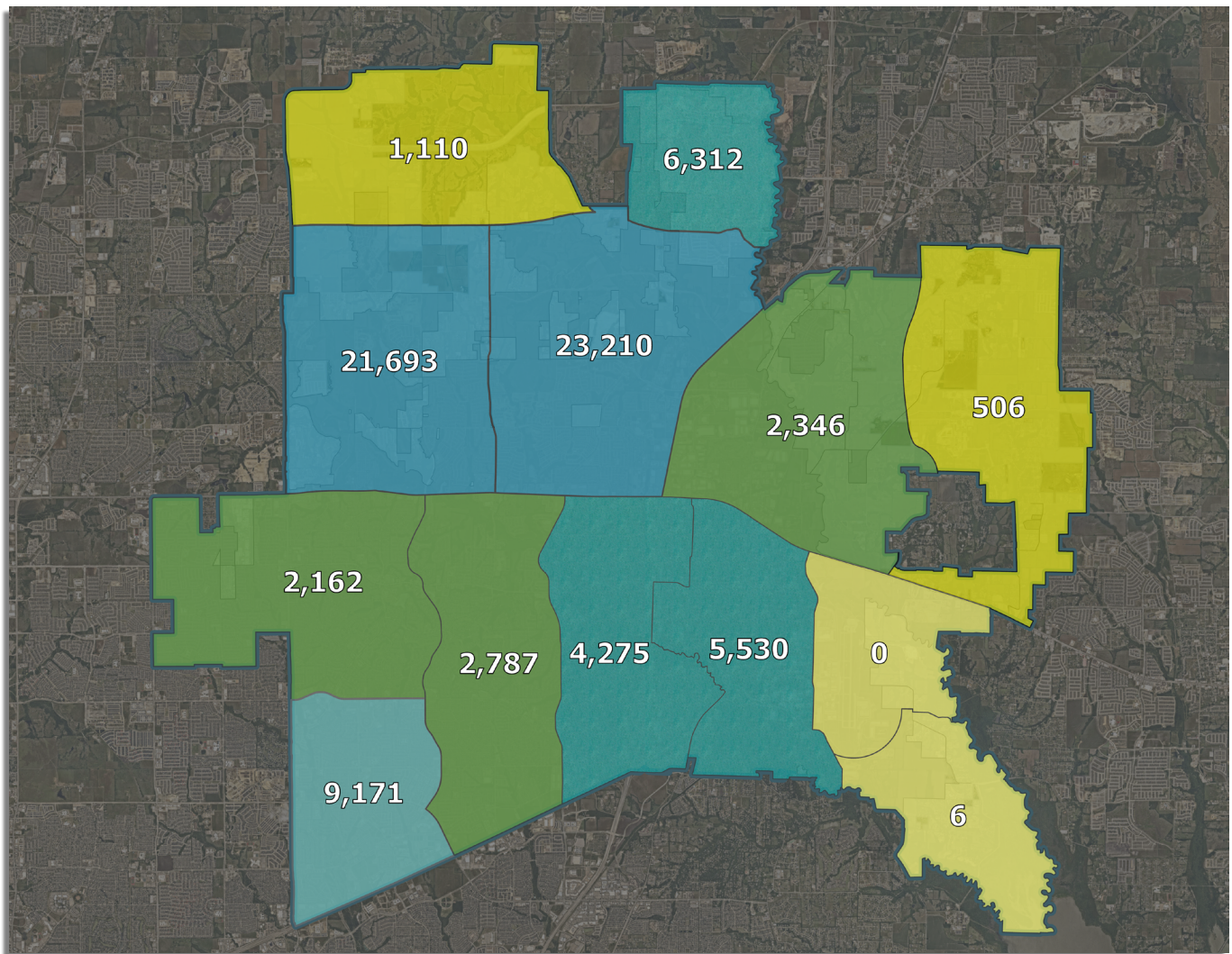


EXHIBIT D: PROJECTED POPULATION GROWTH

city's population projection, the projection did not adequately reflect current population trends within the city. It was determined that the Gompertz method is the best method to capture recent population growth trends and provide a balanced approach for population projections. Using the Gompertz model, it is anticipated that the population will be 316,495 for McKinney in 2034; a growth of 79,108 from the 2024 population of 237,387.*

Once the population was projected for the ten year window, distribution was completed using the spatial data generated during the buildout

projection. The existing level of developed area in a sub-service area was calculated as well as the sub-service area's remaining growth potential. Then, using common Planning practices, the sub-service area's population was structured to reflect conditions for that area likely to exist in 2034. These incremental percentage increases generate additional population, and are influenced by the sub-service areas buildout potential and location.



10-YEAR GROWTH ASSUMPTIONS

Non-Residential Projections

To forecast the amount of growth in Basic, Service, and Retail land use categories over the ten year period of the study, a combination of methods were utilized. The previous five years of non-residential square footages were analyzed to identify existing trends. The most consistent and noticeable trends were the land use categories relationship's with population and historical growth.

Basic: It is assumed that the anticipated rate of growth of uses in the basic category will not follow population but, instead, will grow at the same rate as it has since the 2012-2013 Impact Fee Update. An average of the Basic square footage constructed for the previous eleven years was used to project growth over the next ten years. The calculation results in an additional 10,229,982 square feet of Basic is expected by 2034. The majority of the growth will be located in the industrial areas of the city as shown on the comprehensive plan.

Service: A combination of methods was used to determine the amount of growth for Services in McKinney including, the current square footage per person and historical levels of Service uses. Some Service use can be tied to population growth (i.e. neighborhood offices, churches, and schools), while other uses are not as dependent on population (i.e. large office parks, government centers, etc.) and are typically located in clusters throughout the city. Using these methods, it is

anticipated that an additional 8,416,832 square feet of Service is expected by 2034. The majority of the service development is located around residential growth and McKinney's airport.

Retail: It is assumed that as McKinney's population increases, the anticipated growth of uses in the Retail category will follow. To determine the amount of Retail growth in McKinney, a ratio of the current square feet of Retail space to population was determined. This ratio was multiplied by the population growth to determine the anticipated amount of growth over the next ten years. The calculation results in an additional 4,985,630 square feet of Retail by 2034. The majority of the retail growth will be located on undeveloped land near the anticipated residential growth areas.

Once the square footages were projected for the ten year window, distribution was completed using the spatial data generated during the buildout determination process. The existing level of developed area in a sub-service area was calculated as well as the sub-service area's remaining non-residential growth potential. Then, using common Planning practices the sub-service area's buildout potential was determined based on current growth patterns and developments to reflect conditions that are likely to exist in 2034. These changes generate additional square footages for the three land uses and are shown in Table 4.



SERVICE AREA	RESIDENTIAL		NON-RESIDENTIAL SQUARE FEET		
	<i>Population</i>	<i>Dwelling Units</i>	<i>Basic</i>	<i>Service</i>	<i>Retail</i>
A	1,110	375	0	0	0
B	6,313	2,150	0	196,835	43,605
C	21,693	8,202	137,900	968,989	1,031,213
D	23,210	9,624	60,158	2,412,742	1,165,075
E	2,346	1,068	3,561,228	466,539	198,981
F	506	171	0	38,761	73,915
G	2,162	925	173,804	450,620	739,505
H	9,171	4,387	108,825	771,644	555,027
I	2,787	1,290	96,936	1,341,799	576,280
J	4,275	2,120	338,878	534,824	395,067
K	5,530	2,604	2,028,771	797,023	136,242
L	0	0	3,336,078	371,350	42,844
M	6	2	387,404	65,706	27,877
TOTAL	79,108	32,918	10,229,982	8,416,832	4,985,630

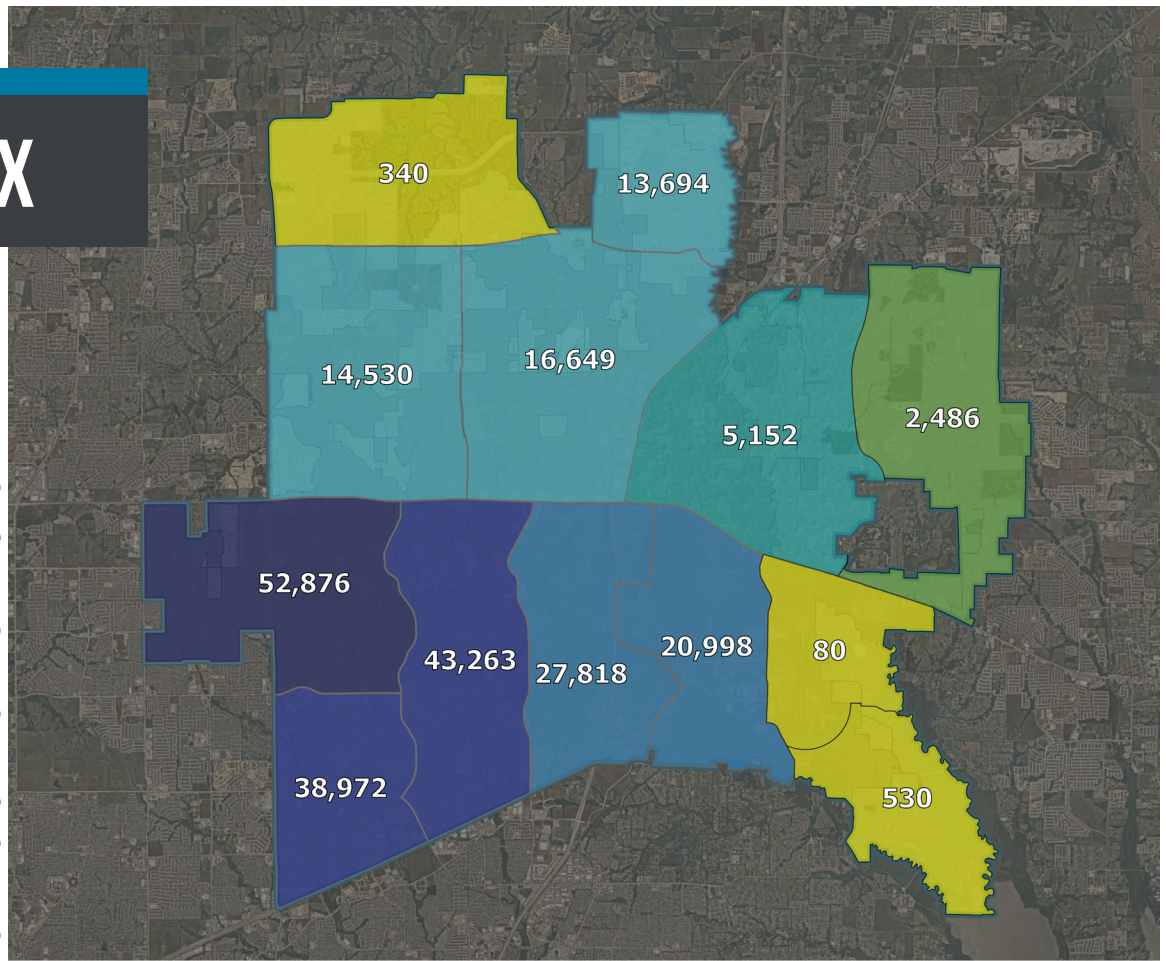
TABLE 4: PROJECTED GROWTH

SERVICE AREA	RESIDENTIAL		NON-RESIDENTIAL SQUARE FEET		
	<i>Population</i>	<i>Dwelling Units</i>	<i>Basic</i>	<i>Service</i>	<i>Retail</i>
A	1,450	490	31,336	15,344	47,015
B	20,001	6,775	2,400	211,590	76,992
C	36,222	13,427	453,679	2,051,491	1,300,124
D	39,865	15,631	114,662	6,170,226	2,523,970
E	7,498	2,877	9,934,541	2,104,652	1,489,646
F	2,992	1,011	837,719	337,890	148,760
G	55,038	19,471	1,998,776	2,815,579	2,181,946
H	48,143	20,016	858,461	5,597,996	2,782,051
I	46,050	16,689	843,672	3,534,232	2,081,673
J	32,093	12,995	2,790,321	3,216,113	4,839,701
K	26,528	10,506	9,476,183	6,149,733	2,192,272
L	80	27	5,109,232	375,619	53,128
M	536	181	458,524	129,602	27,877
TOTAL	316,495	120,096	32,909,506	32,710,067	19,745,154

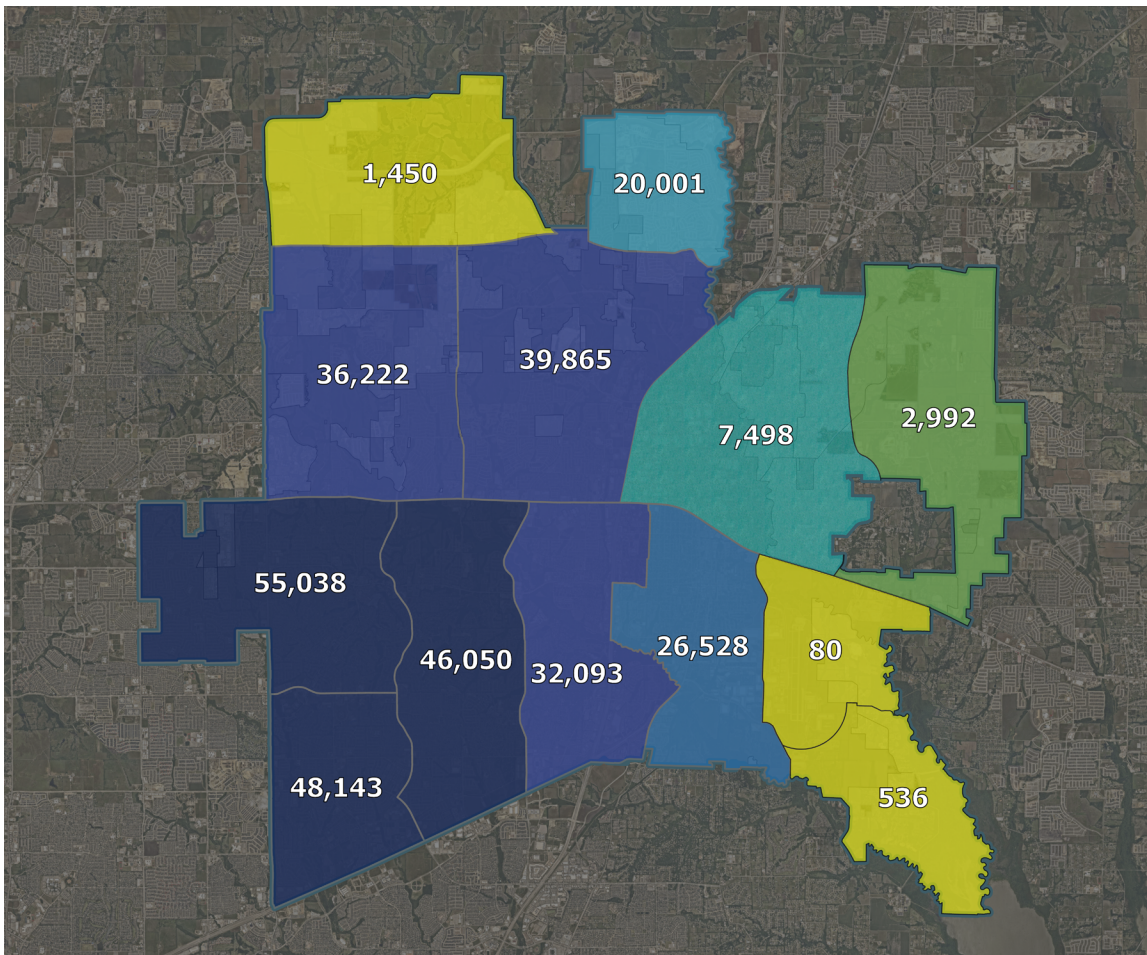
TABLE 5: 2034 BASELINE CONDITIONS

APPENDIX

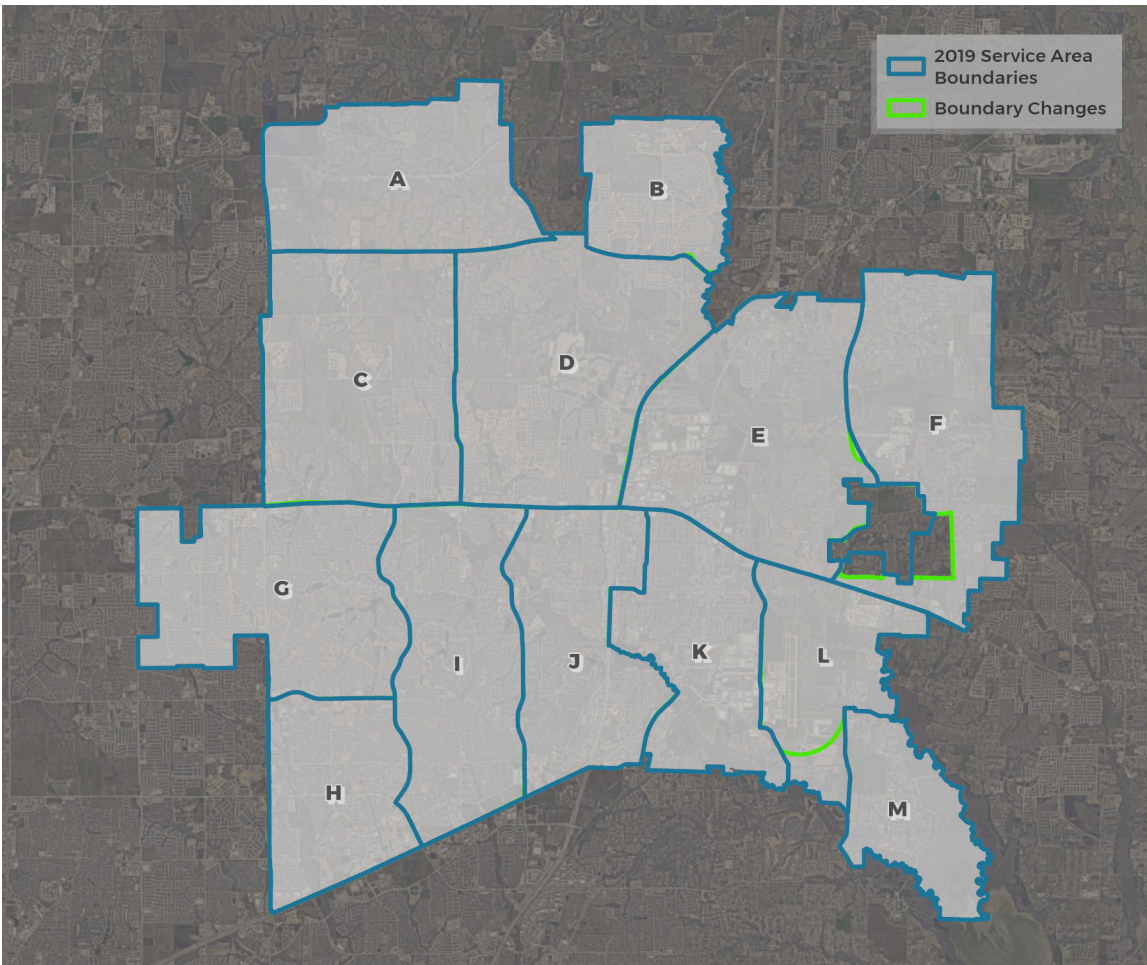
2024 POPULATION DISTRIBUTION



2024 POPULATION DISTRIBUTION



SERVICE AREA CHANGES



SUBSERVICE AREAS

