



Planning for the Future

The Future Mobility Study is an opportunity to identify transportation needs and develop a plan to accommodate population and employment growth in the eastern part of the County.

The study includes Dallas, Rockwall and Hunt counties to help ensure a regional approach to transportation planning.

- ▶ AUGUST 2020 – RESEARCH AND PLANNING**
The initial phase of the study began in August 2020 and focused on preliminary data collection and analysis as well as public and stakeholder outreach.
- ▶ OCTOBER 2020 – STAKEHOLDER MEETINGS**
The study team began meeting with city and county representatives to gather additional information such as transportation planning efforts and current and future developments.
- ▶ FEBRUARY 2021 – TECHNICAL WORK SESSIONS**
Two technical work sessions were held to present study data and gather initial input from city and county representatives.
- ▶ MAY 2021 – PUBLIC MEETINGS**
Information shared at the technical work sessions was presented for public review and comment in a series of virtual and in-person public meetings.



Data Collection and Analysis

POPULATION AND EMPLOYMENT GROWTH

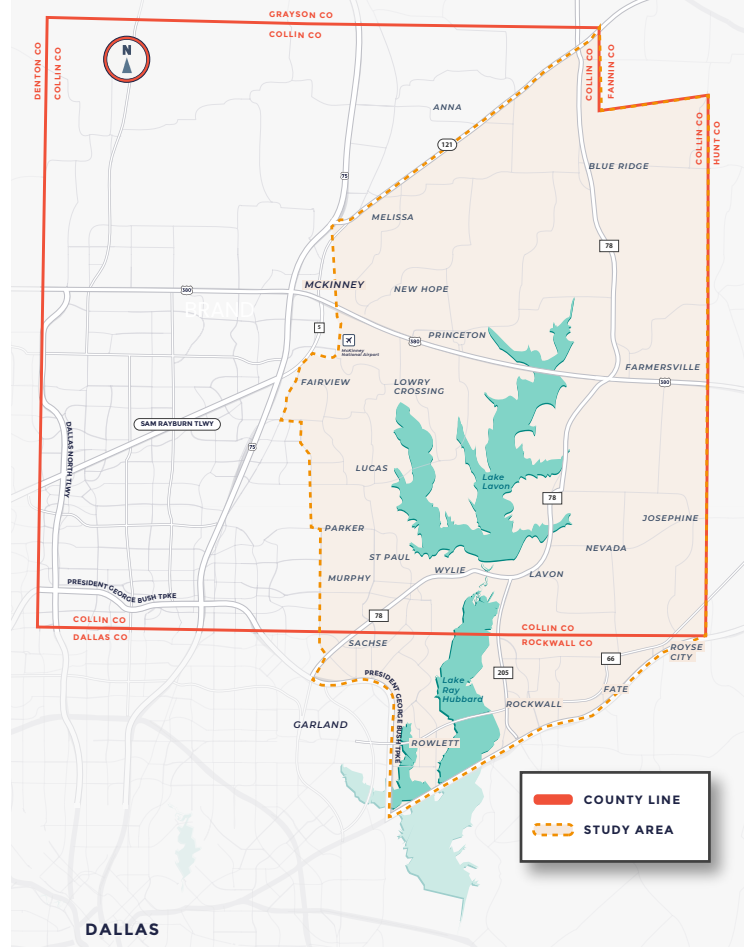
Population projections were collected from a variety of sources, including the US Census Bureau for historic data through 2010, and the Texas Demographic Center, North Central Texas Council of Governments (NCTCOG), Texas Water Development Board and Collin County Mobility Plan for future projections. All sources show a similar trend – that the population of Collin County will continue to grow at a rapid rate.



According to data from the Texas Water Development Board, population for many of the cities in the eastern part of the County will be near or exceed 100,000 people by 2070.

Employment growth is also an important factor to consider since jobs will attract new residents as well as commuters. The study found that employment growth in the study area is consistent with population projections and in some areas, employment is actually growing at a much higher rate than the population.

FUTURE MOBILITY STUDY AREA



In the last 20 years, Collin County's population has doubled to more than 1 million people. The County's high growth rate is expected to continue and could reach 2.1 – 3.4 million at buildout. Historical data and growth projections show that the County is growing from the southwest to the

northeast and east. Developing a cohesive roadway network and planning for future roadway corridors can require years of advance planning and development which is why the County must plan now for growth it expects in 30 years and beyond.

EXPECTED POPULATION GROWTH

CITY	POPULATION INCREASE
ROCKWALL	more than 160%
FATE & JOSEPHINE	more than 200%
PRINCETON & ROYSE CITY	more than 700%
LAVON	more than 1000%
FARMERSVILLE & NEVADA	almost 2000%

ENVIRONMENTAL CONSTRAINTS

The study utilized publicly available data to identify land use, major utility corridors, public parks and recreation areas, conservation and environmentally sensitive areas, and natural features.

Notable constraints within the study area include:

Lavon Lake

Lake Ray Hubbard

US Army Corps of Engineers (USACE) land

Several oil and gas pipelines

Several Soil Conservation Site Reservoirs

Many other smaller lakes

EXISTING MAJOR ROADWAYS

In the study area, few major roadways currently exist. Major north-south roadways include FM 1378 (also known as Country Club Road), SH 78 and SH 205. Major east-west roadways include US 380, FM 6 and US 66. Most of the major existing roadways within the study area are two lane roadways, while only about 20% of these major roadways are six lanes wide. These two-lane roadways will not meet the demands of the future, projected population in the area.

The study also compared freeways in Collin, Dallas, Tarrant, Denton, Hunt and Rockwall Counties. By the year 2050, Collin County's population could be equal to or greater than Dallas County's population in 2017 with less infrastructure to support projected growth.

SAFETY AND CRASH ANALYSIS

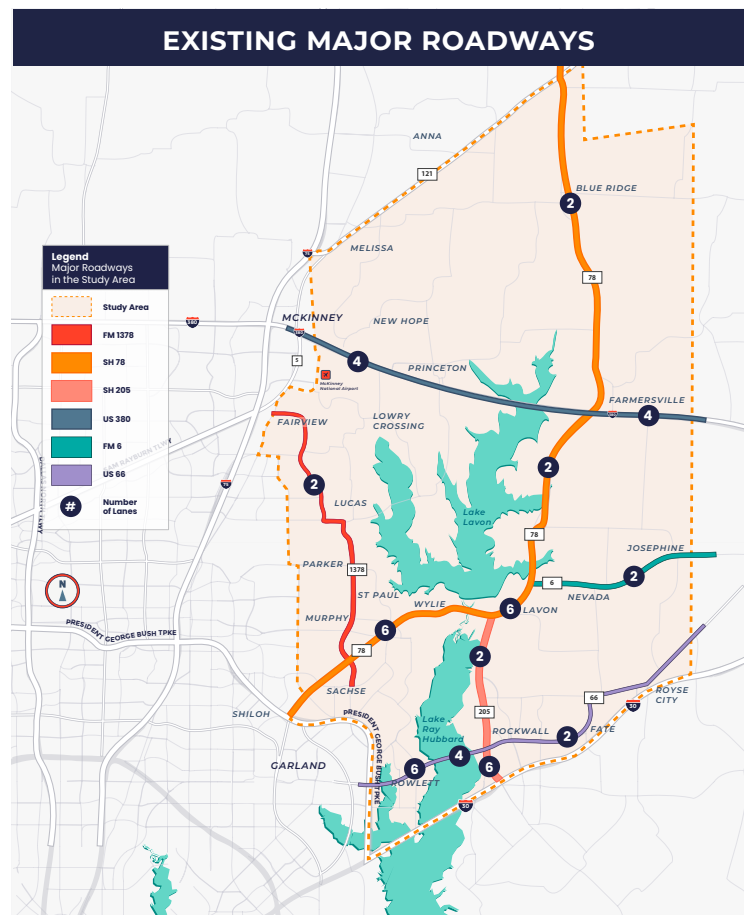
A safety and crash analysis for the study area was completed using TxDOT's Crash Records Information System (CRIS). The study team analyzed five years of crash data from 2015-2019 and found that more than 15,000 crashes were reported in the study area.

As population continues to increase and roadways become more congested, crash frequency is expected to increase as well.

COMMERCIAL AND RESIDENTIAL DEVELOPMENTS

The eastern part of Collin County has become an attractive location for commercial and residential developers. Data was collected about planned developments, active zoning areas, preliminary plat requests and requests for zoning changes.

The data was mapped to identify areas of development that could limit future transportation options. The area between Lavon and Rockwall showed a significant increase in planned residential developments. So, while these areas may appear very rural today, they will become more developed and will place an even heavier burden on existing transportation infrastructure.



- ▶ **+ 50% OF CRASHES RESULTED FROM SIMILAR CAUSES**
Over half of the crashes were related to intersections resulting from distracted driving, speeding or left turning vehicles.
- ▶ **1/3 OF CRASHES RESULTED IN INJURY**
While most of these crashes were rear end crashes, alarmingly one-third of crashes in the study area resulted in an injury.
- ▶ **20% INCREASE IN CRASHES**
Crashes in the study area increased by 20% from 2015-2019.

ORIGIN-DESTINATION TRAFFIC STUDY

An Origin-Destination (O&D) Traffic Study was conducted to better understand travel patterns in the study area, such as where people begin their trip, where they end their trip, the routes they take and the time of day they travel.

Anonymous data points were collected from mobile devices that traveled along SH 78 and SH 205. Using this new technology, the study team was able to collect and analyze data from various time periods, including prior to and during COVID-19 for comparison. The data generated 2.3 million trips and captured 155,000 unique vehicles.

Despite the majority of the study area being in Collin County, 40% of trips along SH 78 and SH 205 originated in Collin County, 40% in Rockwall County and 20% in Dallas County.

- ▶ IMPROVEMENTS NEEDED TO MEET DEMAND**
The SH 78 corridor is largely serving as a long-distance connection with up to 60% of the current trips over 10-miles long. Since SH 78 varies between two to six lanes, as traffic volumes increase, additional capacity or redundancy in adjacent roadways may be needed to meet the regional demand.
- ▶ SHORT TRIPS CONTRIBUTE TO PEAK CONGESTION**
As future development is realized along the corridor, short trips will likely increase as motorists will not have to travel as far to access shops and restaurants. This will likely increase turning vehicles and congestion and thus increase travel times for both short and long-distance trips.
- ▶ FUTURE GROWTH WILL INCREASE TRAVEL DEMAND**
While this analysis primarily looked at north-south movements, it is clear that due to limited east-west access across Lavon Lake and Lake Ray Hubbard, SH 78 between the lakes is a critical roadway link and a pinch point for traffic. Once vehicles east of Lavon Lake move through the point between the lakes, many trips use FM 544 to get to the interchange of PG&T and US 75 and other major business corridors. This demand will only increase as population grows in east Collin County.



Public and Stakeholder Outreach

STAKEHOLDER MEETINGS

The study team conducted 22 meetings with agencies, cities and counties to discuss the study purpose and scope, tentative timeline, transportation planning efforts, current and future developments, possible constraints and best methods for engaging the public.

TECHNICAL WORK SESSIONS

Two virtual technical work sessions were held in February 2021 to present study data, including results of the origin-destination traffic study, crash analysis and constraints mapping.

Thirty-four people participated and provided initial feedback on transportation needs in the study area.

PUBLIC MEETINGS

Due to COVID-19, public meetings were held in multiple formats to provide a variety of options.

An interactive, virtual public meeting was available on the study website from Monday, May 3, 2021 to Friday, June 4, 2021. During this time, the study website received 2,300 unique visitors and 7,500 page views.

A live presentation of the study materials was held via Zoom on Tuesday, May 4, 2021. Thirty-six people participated in the live presentation.

An in-person public meeting was held on Thursday, May 6, 2021 from 4:00 p.m. to 8:00 p.m., at the Lavon City Hall Community Gym. Sixty people attended the in-person meeting.

Input from the public was collected through an online survey as well as mail and email. The online survey received 244 responses.



OUTREACH ACTIVITIES

2,300

VIRTUAL MEETING ATTENDEES

36

LIVE PRESENTATION ATTENDEES

60

IN-PERSON MEETING ATTENDEES

244

SURVEY RESPONSES

WHAT WE HEARD: OUTREACH THEMES



GROWTH



Survey Question:
Which type of population growth do you feel is most likely to occur in the study area?

Many city and county representatives, particularly in the southeast portion of the County, recognize that transportation improvements are needed to accommodate population and employment growth.



SURVEY RESPONSES

50%

RAPID GROWTH

24%

MODERATE GROWTH

20%

EXPONENTIAL GROWTH

5%

SLOW SUSTAINED GROWTH

CONNECTIVITY



Survey Question:
What types of transportation improvements are you most interested in for the study area? (check all that apply)

In addition to north-south connectivity, east-west connectivity continues to be a challenge in the study area due to environmental constraints such as Lavon Lake and Lake Ray Hubbard.



SURVEY RESPONSES

70%

IMPROVEMENTS TO THOROUGHFARES

47%

CITY STREETS

35%

FREEWAYS

22%

OTHER

8%

NO IMPROVEMENTS NEEDED

TRAFFIC CONGESTION

Most of the major roadways in the study area are two lanes wide with only 20% of the roadways six lanes wide.

Many comments from the public noted long wait times at traffic signals and lack of alternative routes to avoid traffic delays.



Traffic congestion was listed as the top concern for survey respondents.

OTHER CONCERNS

City and county representatives noted concerns about funding and a desire to balance improvements with maintaining a "small town feel."

Comments from the public also included concerns about safety and potential property and environmental impacts.



Recommendations and Next Steps

Based on data presented in this initial phase of the study, including the increased growth that is expected for the study area, it is recommended that Collin County begin to identify improvements and route studies to support future project implementation decisions, preserve land needed for improvements, and determine the potential use of federal funding.