Caldwell County
ROAD BOND







City of Luling

TRANSPORTATION PLAN

AUGUST 2026

Acknowledgements

Lead Agency

Caldwell County

Agency Stakeholders

City of Luling Advisory Committee

Luing Community Stakeholder Committee

Caldwell County

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Chapter 1:
Introduction

Over the last few years, the City of Luling ("The City") has experienced increasing vehicular and truck through-traffic along its roads. Its strategic location at the crossroads of three major highways, US 183, US 90, and SH 80, that connect many cities in Central Texas with those along the Gulf Coast has fueled this growth, as rising population numbers and new commercial developments within Caldwell County generate greater vehicle trips through the City.

These major highways are located on TxDOT's Highway Freight Network and connect to I-10 at the City's southern limits, contributing to high volumes of truck traffic passing through the City. Additionally, the resurgence of oil and natural gas production in the Eagle Ford Shale Region, south of Caldwell County since the 2010s, has contributed to truck traffic increase through Luling.

The increased traffic growth not only brings slower travel times but has led to increased crashes at intersections of major roadways. This study is therefore timely to identify issues that have emerged using more recent and newly collected data such as traffic counts, crash statistics, demographic trends, and traffic modeling, and develop strategies to address them.

1.1 STUDY BACKGROUND

In November 2024, voters approved the Caldwell County Road Bond Program, adopting 32 projects aimed at enhancing transportation across the County over the next several years. The Luling Transportation Plan Update was identified as one of four key planning and corridor studies funded by this program. The study is conducted through a partnership between the City of Luling and Caldwell County, with the goal of creating a safe and connected transportation system in Luling.

This study builds on the previous 2019 Luling Transportation Study that was led by the Capital Area Metropolitan Planning Organization (CAMPO). That study identified a series of roadway, sidewalk, and traffic signal improvements along Hackberry Avenue and at the Magnolia Ave / Pierce Street Intersection in the near- to mid-term. Additionally, the plan developed a schematic long-term alternative route that would help relieve congestion at key intersections in Central Luling caused by through-traffic while maintaining visibility of downtown Luling.

1.2 GOALS AND OBJECTIVES

This study is anchored in a vision for a safe, connected transportation system in Luling that benefits all roadway users and improves the quality of life for residents. To achieve this, this study has set out four goals and their respective objectives shown in **Figure 1**. Not coincidentally, these are similar goals and objectives that guided the 2019 Transportation Study. Together with the community and stakeholders, they were selected for this study given their continuing relevance to Luling's context today.

Figure 1: Study Goals and Objectives



Goal 1: Identify needed safety improvements
- Analyze current traffic movements, crash trends, and pedestrian activity.
- Assess safety and operational issues along the Union Pacific Railroad corridor and its crossings.
- Understand local emergency response patterns and impacts of the hurricane evacuation route.



Goal 2: Enhance mobility in Luling for all modes of local and through traffic
- Analyze how local, freight, and recreational travelers move through downtown.
- Improve public and emergency services access across the railroad tracks.
- Expand walking and biking options for all ages and abilities.
- Identify near-, mid-, and long-term mobility improvements.



Goal 3: Evaluate the feasibility of an alternate route for through traffic
- Develop and evaluate three relief route alignments west of central Luling from Austin St. (SH 80) to Pierce St. (US 90).
- Assess how future growth scenarios affect the viability of each alignment.



Goal 4: Incorporate tools to promote unique character of downtown and economic development opportunities
- Assess how transportation changes may affect local businesses.
- Analyze visitor patterns to support strategies that strengthen downtown's character and economic vitality.

1.3 STUDY AREA

The area within the limits of the City of Luling is the defined study area for this study (**Figure 2**). However, in the development of the long-term relief route option between SH 80 / San Marcos Hwy and US 90, areas west of the city limits were studied, where relevant. Additionally, more detailed analyses were conducted on select roadways and intersections in Central Luling where a greater number of issues had been observed and reported. These include:

- US 183 / Magnolia Avenue
- SH 80 / San Marcos Hwy and SH 80 / Austin St
- US 90 / Pierce Street and US 183 / E Pierce St
- Hackberry Avenue

Figure 2: City Limits



1.4 STUDY PHASES AND TIMELINE

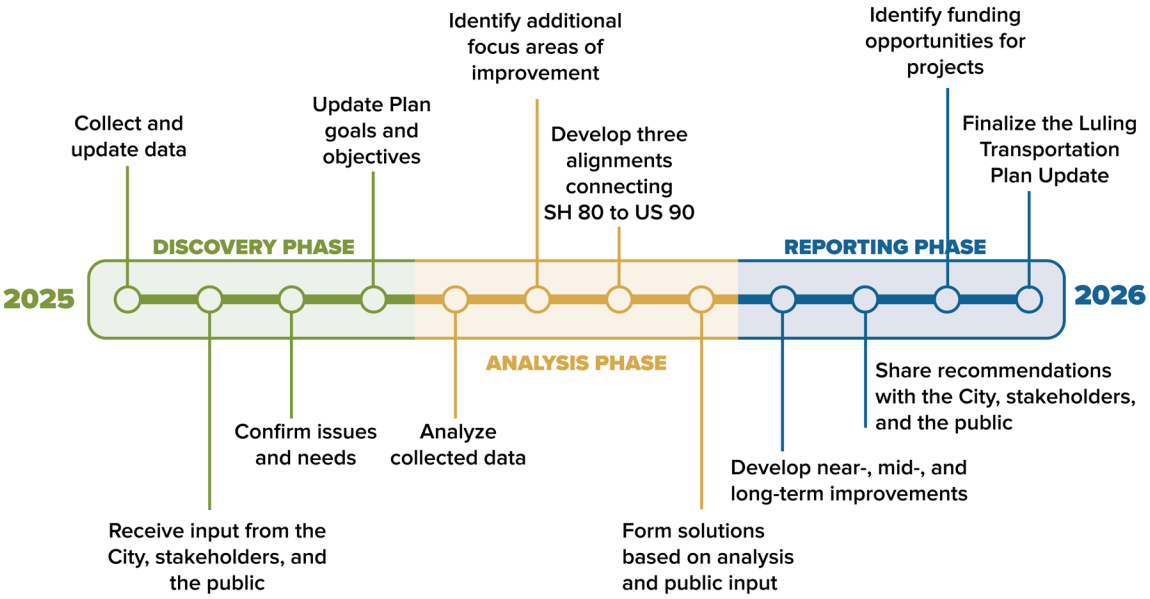
This study was initiated in Fall 2025 and divided into three phases (**Figure 3**). The period from late 2025 to early 2026 was the Discovery Phase, comprising data collection and discussions with stakeholders and the community to determine goals and objectives as well as identify pertinent issues and challenges. The findings from this phase are substantiated in **Chapter 2.**

Information from the Discovery Phase fed into the Analysis Phase where data was processed to develop alignment alternatives for the relief route and potential improvement projects within the City. **Chapters 4 and 5** dive deeper into the technical analysis and outcomes.

Finally, the Reporting Phase consolidates findings and proposed recommendations and defines actionable steps that the City can take. **Chapter 6** lays out the implementation plan and documents potential funding and financing sources.

At key milestones across all phases, this study provided opportunities for the community and stakeholders to provide feedback and share their ideas. **Chapter 3** summarizes the engagement efforts undertaken over the duration of this study.

Figure 3: Study Phases and Actions



Chapter 2:

Understanding Existing Conditions

The first step of this plan update process was to review current conditions in the City. This entailed analyzing numerous data sources to develop a deep understanding of past planning efforts, community context, development patterns, traffic movements, safety, and environmental conditions. A comprehensive report of this analysis can be found in **Appendix A.**

2.1 REVIEW OF PLANNING EFFORTS

This study reviewed relevant plans published by various state, regional, county, and city agencies to understand strategic transportation priorities relevant to Luling and projects slated for implementation in the upcoming years. Examples of agencies include Texas Department of Transportation (TxDOT), the Capital Area Metropolitan Planning Organization (CAMPO), Caldwell County, and the City of Luling.

2.1.1 City of Luling Master Plan

The City's Master Plan was last updated in 2011 when addressing traffic congestion was already a key focus. Back then, highway intersections within the city limits were experiencing high volumes of traffic, leading to other secondary issues such as traffic detouring to side streets and higher rates of crashes.

Walkability and revitalizing Downtown were other key goals of the Master Plan. The plan emphasized creating a "walkable community" in Luling by developing a network of walkways, sidewalks, trails throughout the community and boulevards lined with sidewalks, lighting, and landscaping along Magnolia Ave, Davis St, and Pierce St. Other recommended strategies included providing bike and pedestrian paths from Downtown to parks on the north and south sides and providing crosswalks to facilitate pedestrian movement within Downtown. In terms of transportation, the Master Plan also proposed three bypass routes to connect US 183 from the North to I-10 at the South, although none of these has been implemented. The plan also highlighted TxDOT's planned signalization change at the intersection of US 183 / Magnolia Ave and US 90 / Pierce St to split-phased operations that would support protected left turns. This phasing remains in place and has helped to facilitate left turn movements.

2.1.2 TxDOT Long Range Transportation Plan and Caldwell County 2024 Transportation Plan

In regional and state-level transportation plans, several major roadways that pass through the City were identified as keys corridor to facilitate intra- and interregional freight and vehicular movements.

Connecting Texas 2050, TxDOT's Long Range Transportation Plan classified US 183 as a potential corridor of statewide significance (**Figure 4**) where a comprehensive study would be necessary to identify needs and develop implementation strategies.

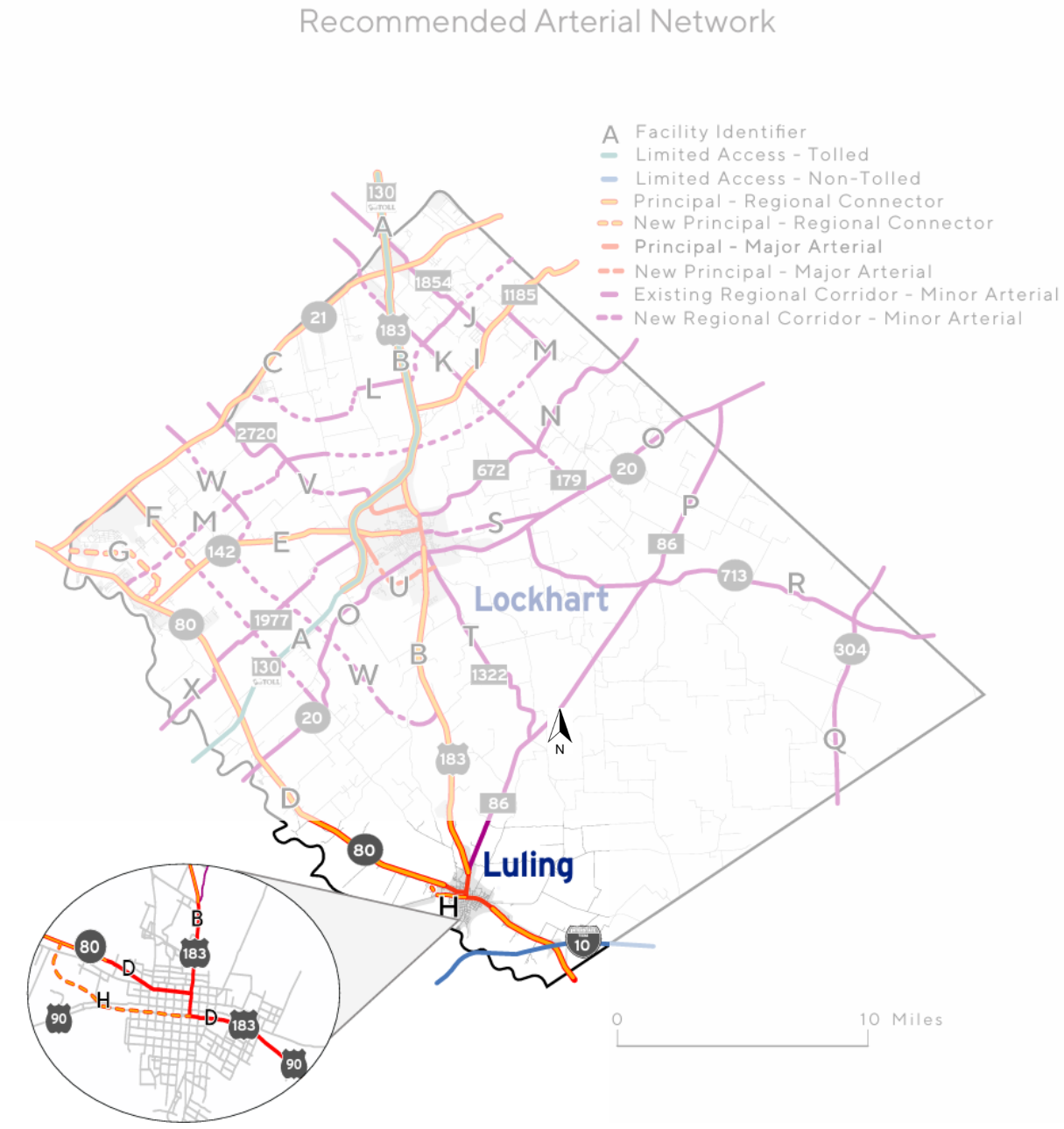
The Recommended Arterial Network in Caldwell County's 2024 Transportation (**Figure 5**) Plan upgraded segments of US 183, SH 80, and US 90 leading into and out of Luling from a Major Arterial to Regional Connector. The plan has since led to the ongoing SH 80 Corridor Study and US 183 Turn Lane Addition projects initiated under the 2024 Caldwell County Road Bond Program to accommodate the growing traffic volumes on these highways.

Figure 4: Corridors of Statewide Significance in Connecting Texas 2050



Source: Connecting Texas 2050

Figure 5: Recommended Arterial Network from the 2024 Caldwell County Transportation Plan



Source: 2024 Caldwell County Transportation Plan

2.2 COMMUNITY CONTEXT AND DEVELOPMENT GROWTH

This section provides an assessment of the community characteristics and context within the City of Luling, including current population profiles, projected trends in population and employment growth, and trends in the oil and gas industry. The analysis draws on data from the U.S. Census, CAMPO's Travel Demand Model, and the Texas Railroad Commission.

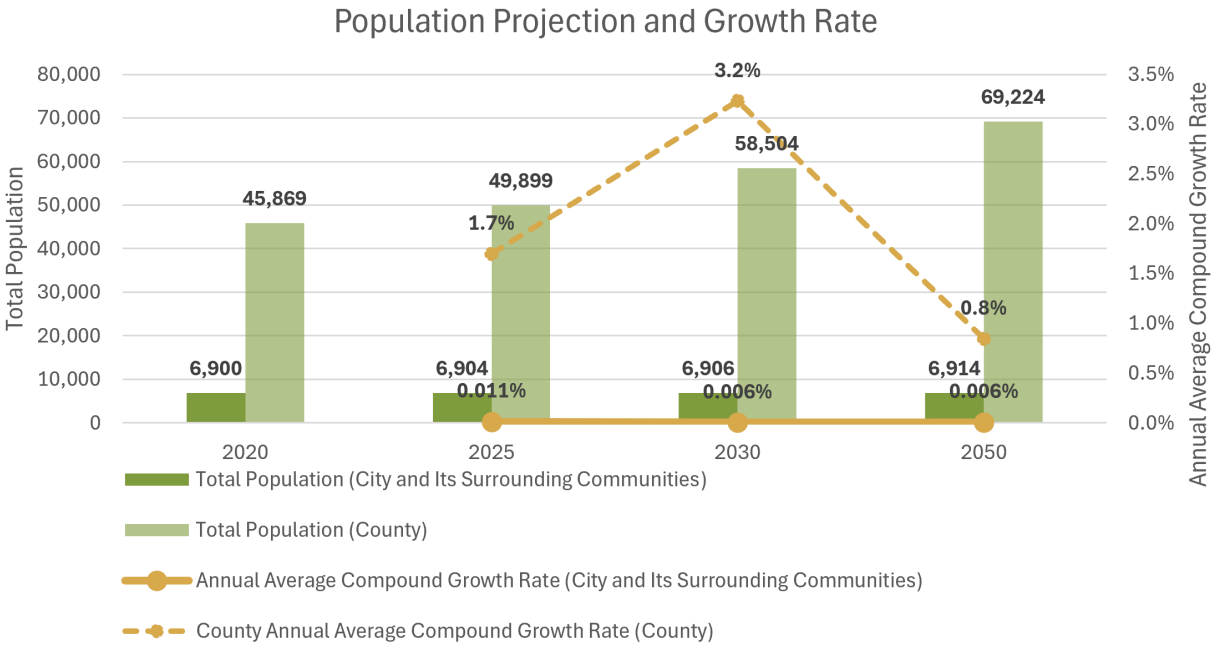
2.2.1 Demographics and Future Growth

Based on five-year estimates from the American Community Survey (ACS), the City was home to 5,531 residents in 2024, representing about 12 percent of the county's total population.

Data from CAMPO's Travel Demand Model estimates low population growth in the City and surrounding communities, with population numbers projected to increase at an annual growth rate of less than 0.02 percent (**Figure 6**). Employment is projected to see modest growth as well, rising from 2,367 jobs in 2020 to around 2,450 jobs by 2050 (**Figure 7**). The largely stable population and employment rates in the City and its surrounding communities suggest that future transportation needs may likely center around maintaining and enhancing existing infrastructure and improving access to existing amenities and employment centers.

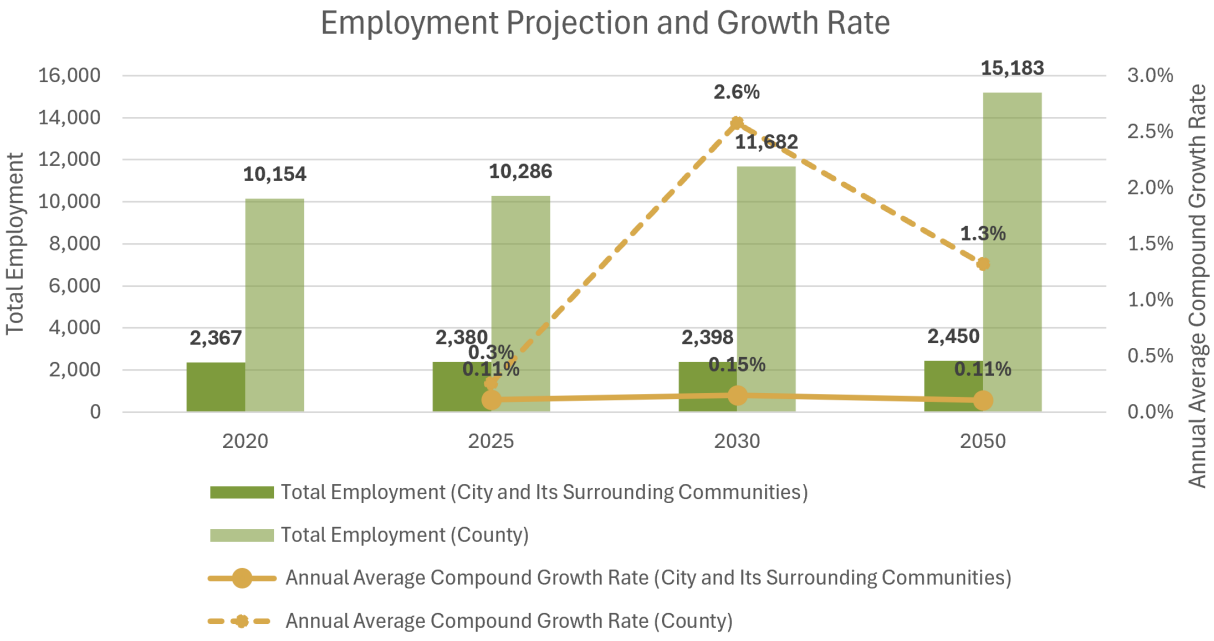
In contrast, the County's population and employment growth is projected to outpace the City and its surrounding communities. Between 2025 and 2030, the countywide annual compound growth rates are estimated to reach approximately 3.2 percent for population and 2.6 percent for employment, before falling back down to 1.0 percent and around 1.5 percent respectively. Overall, this pattern suggests that future growth is likely to occur primarily outside of the City and its surrounding area. The rest of the County will accommodate a larger share of new residential developments and jobs, potentially increasing travel demand, including commuting, along regional corridors that connect Luling and its surrounding communities to other parts of the region.

Figure 6: Population Projection and Growth Rate



Source: CAMPO's Travel Demand Model

Figure 7: Employment Projection and Growth Rate



Source: CAMPO 2050 Travel Demand Model

2.2.2 Socioeconomic Profile

Race and Ethnicity

Fifty percent of Luling's residents identify as non-white, slightly higher than the countywide average of 42 percent. More than half of the population in neighborhoods in the northern half of the City along US 183, as well as areas to the east along the US 183 / US 90 corridor identify as non-white (Hispanic/Latino and Non-Hispanic/Latino) (**Figure 8**). The predominant ethnicity is Hispanic or Latino, comprising approximately 56 percent of the City's population.

Age

The median age in the City of Luling is around 50 years old, reflecting a community with a significant older adult population (**Figure 9**). Approximately 27 percent of residents are aged 65 years or older, higher than the Caldwell County average of 15 percent.

Median Household Income

The City's median household income is $55,733, notably lower than the county median of $68,503. Areas along the outer edges of the City have generally higher median household incomes relative to those living along US 183 on the east side of the City (**Figure 10**).

Limited English-Speaking Proficiency

Compared to Caldwell County where approximately seven percent of residents have limited English proficiency, the City of Luling has nearly doubled that share, at about 13 percent. As shown in **Figure 11**, the distribution of residents with limited English proficiency is uneven across Luling. South of US 90, only about two percent of residents have limited English proficiency. In contrast, more than 26 percent of residents in neighborhoods north of US 90.

Figure 8: Non-White Population

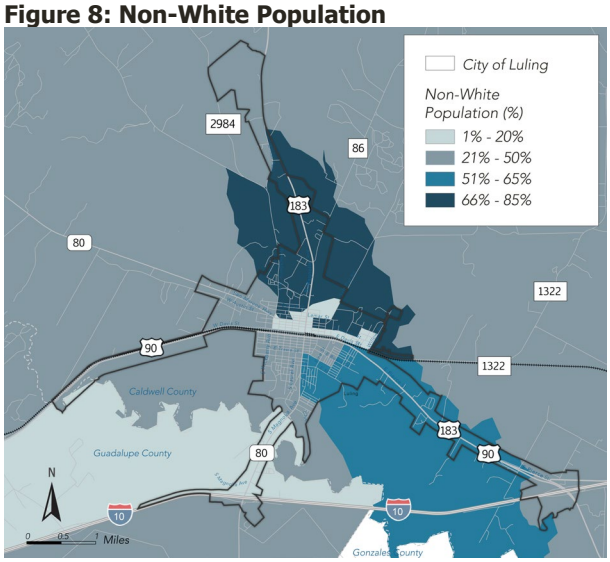


Figure 9: Elderly Population

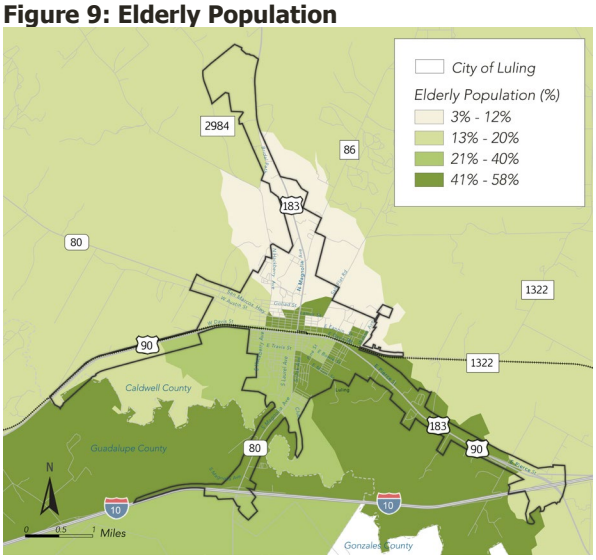


Figure 10: Median Household Income

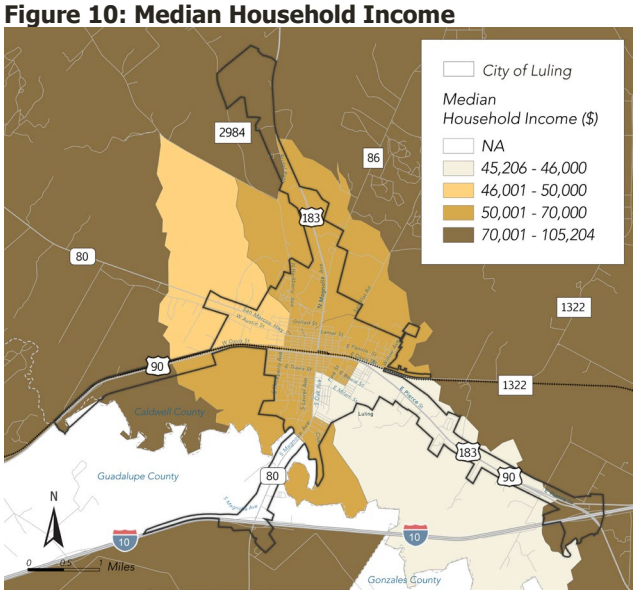
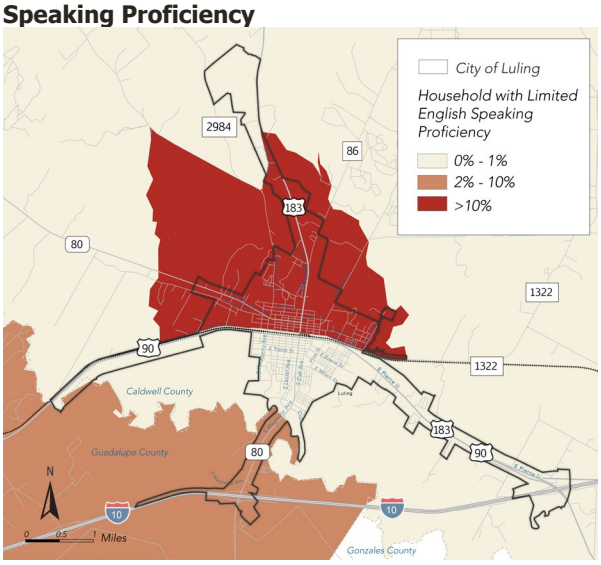


Figure 11: Household with Limited English-Speaking Proficiency



Source: 2023 5-Year ACS, U.S. Census Bureau

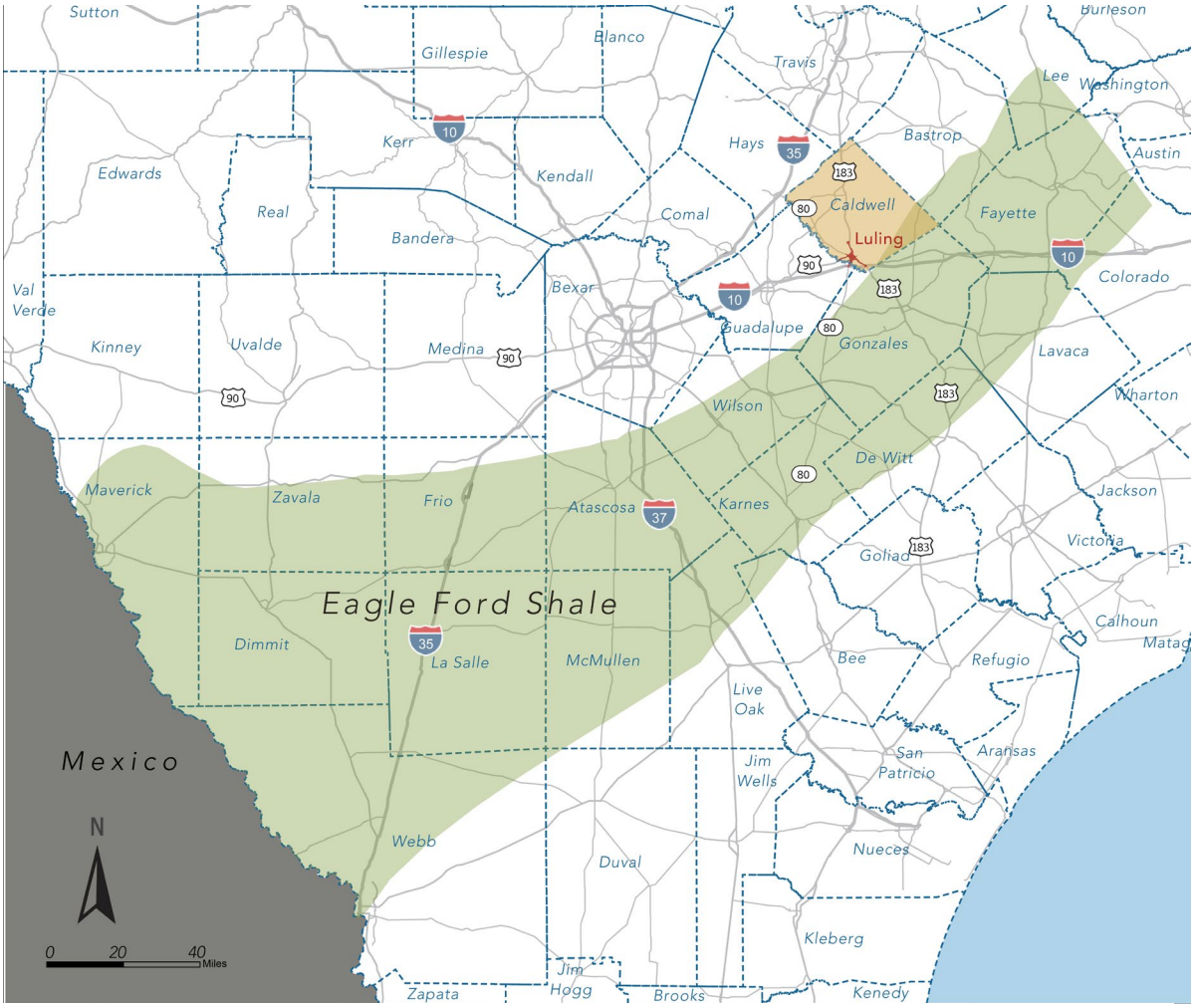
Note: Data was extracted for the smallest geographic level available in the 2023 ACS 5-Year Estimates. Race, age, and household income were available at the block group level while English-speaking proficiency data was only available at the census tract level. For Median Household Income, the 2023 ACS 5-Year Estimates do not provide data for block groups with insufficient sample sizes.

2.2.3 Oil Industry Growth in Eagle Ford Shale Region

The Eagle Ford Shale (**Figure 12)** is a major hydrocarbon-producing geological formation capable of yielding both natural gas and oil at higher rates than many traditional shale fields. Rising oil prices in the early 2010s led to a substantial increase in drilling activity and production across the region.

Although the subsequent decline and stabilization of oil prices led to fewer drilling permits issued after 2014, overall oil and gas production has remained consistently high in recent years (**Figure 13 and Figure 14**). In fact, production has been on the rise again since 2021. Workers and freight traveling between San Marcos/Austin and the Eagle Ford Shale region typically pass through Luling via SH 80 or US 183, potentially contributing to higher volumes of traffic within the City.

Figure 12: Eagle Ford Shale Region



Source: The Railroad Commission of Texas

Figure 13: Drilling Permits Issued vs. Oil Production in the Eagle Ford Shale Region

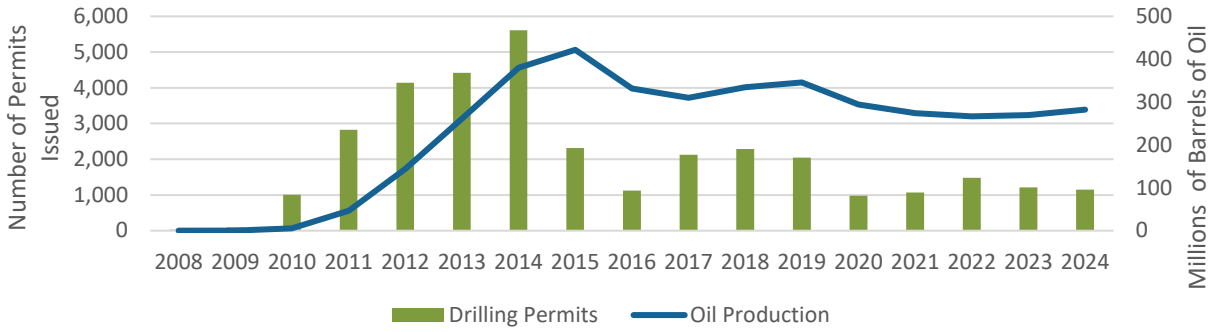
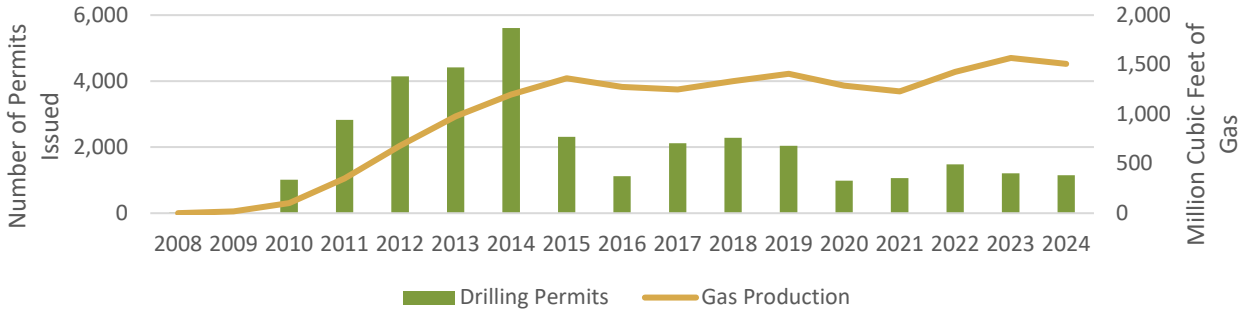


Figure 14: Drilling Permits Issued vs. Gas Production in the Eagle Ford Shale Region



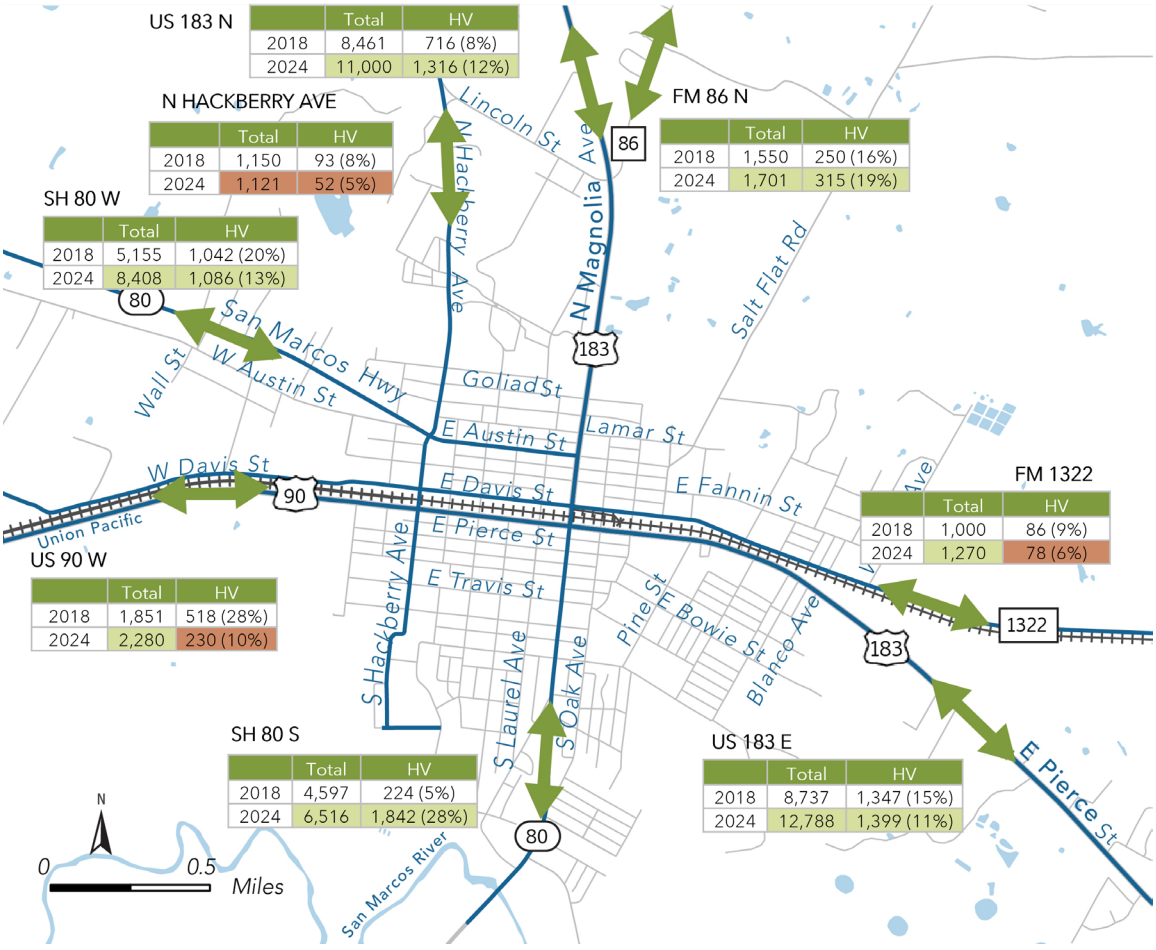
Source: Railroad Commission of Texas Major Oil and Gas Formations

2.3 TRAFFIC

2.3.1 Traffic Growth on Major Roadways

The City has experienced increase in traffic from 2018 to 2024, especially along the major roadways. A shown in **Figure 15** The highest traffic growth rate was observed on SH 80 / San Marcos Hwy west of Wall Street where AADT growth was about 63 percent, followed by US 183 / E Pierce St east of Blanco Avenue where AADT growth was 46 percent, and SH 80 / Magnolia Ave south of San Marcos River where AADT growth was 42 percent. For the locations not along US 183 and SH 80, traffic volumes were fairly low, and growth was steady from 2018 to 2024. Overall, the data shows an increasing trend of traffic in and out of Luling, which can be attributed to population growth in the region, new residential developments around Luling, and consistently high levels of natural gas and oil production in the Eagle Ford Shale Region.

Figure 15: AADT (2018 and 2024)



Note: Percentages reflect proportion of heavy vehicles of total vehicles (Bidirectional traffic) along the roadway.

Source: TxDOT Statewide Traffic Analysis and Reporting System (STARS II)

2.3.2 Travel Flow Analysis

To better understand travel conditions and the common routes of travel through Luling for both automobiles and heavy vehicles, historical travel activity based on GPS data for Fridays in 2019 and 2024 were obtained from the Regional Integrated Transportation Information System (RITIS) platform and analyzed. **Figure 16** shows the traffic distribution of total and heavy vehicles on the four pairs of roadways with the highest combined bidirectional traffic, namely US 183 E – US 183 N (green), US 183 N – SH 80 S (red), SH 80 W – US 183 E (yellow), and FM 86 – SH 80 S (blue). The percentages in each of the tables in the figure indicate the estimated proportion of one-way traffic from the origin roadway and to the destination roadway. Using the table for SH 80 W – US 183 E (yellow) as an example, the analysis revealed that of all traffic originating from SH 80 W in 2024, 60 percent were bound for US 183 E. The remaining 40 percent of traffic were bound for other destinations such as US 183 north, SH 80 south, within Luling etc. Conversely, for the reverse direction, US 183 E – SH 80 W (yellow), the analysis showed that 39 percent of total trips in 2024 were bound for US 183 E.

In the 2019 study, SH 80 W – US 183 E (yellow) and US 183 E – US 183 N (green) had been identified as corridors with the heaviest bidirectional traffic. This analysis reaffirmed that observation and further revealed the emergence of a new high traffic corridor and traffic flow route, SH 80 S – US 183 N (red) and another high traffic flow route FM 86 – SH 80 S.

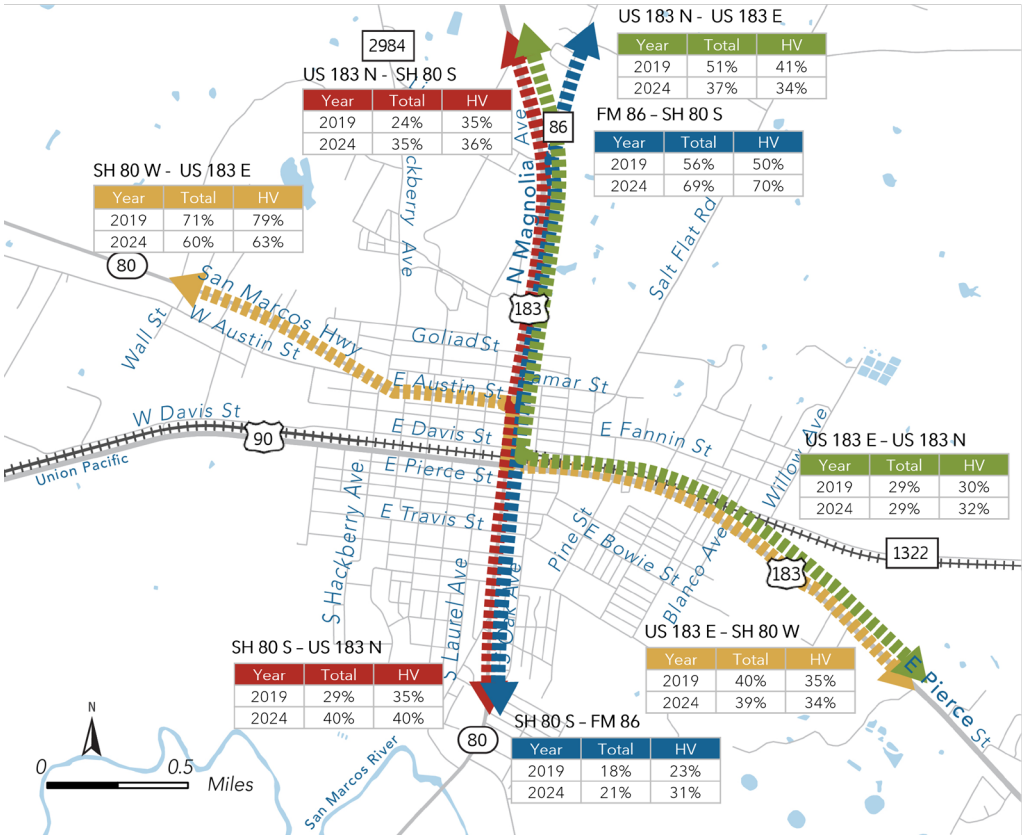


Figure 16: Origin-Destination Traffic Distribution (Friday Average) for Total and Heavy Vehicles on Major Routes

Source: Regional Integrated Transportation Information System (RITIS)

2.4 SAFETY

Crash data within the City limits for the eight-year period from 2018 to 2025 was extracted from TxDOT's Crash Records Information System (CRIS). Of the 1,261 recorded crashes, six were fatal crashes, 34 were serious injury crashes, and 103 were minor injury crashes. Overall, about three percent of the recorded crashes were fatal or serious injury crashes. 2025 recorded the highest number of fatal or serious injury crashes (8) and minor injury crashes (22) (**Figure 17**).

The majority of the crashes occurred on state roads, with greater concentration in the downtown area (**Figure 18**). Further, 22 crashes (55 percent) of these crashes were intersection related. Most of these intersection related crashes were concentrated at the intersection of major roadways such as I-10/SH 80, I-10/US 183, FM 86/US 183, and near SH 80/US 90.

Further analysis was conducted for the manner of collision and lighting conditions for fatal and serious injury crashes. The most common manner of collision was single motor vehicle crashes (48 percent) followed by angle (23 percent) and rear end crashes (18 percent). The majority of crashes occurred in daylight (67 percent). Two crashes involved a pedestrian and a bicyclist, the former leading to a fatal injury while the latter a serious injury. The bicyclist crash occurred at the intersection of S Cedar Avenue and US 90 with vehicle failing to yield at stop sign contributing to the crash. The pedestrian crash occurred just north of the intersection of FM 86 and US 183 with the contributing factor being driver inattention and pedestrian failing to yield right of way to vehicle. Eight crashes involving a train or occurring at a railroad crossing took place from 2018 to 2025, of which one resulted in serious injuries while the remaining seven led to minor injuries. The serious injury railroad crash occurred at the intersection of S Oak Avenue with US 183 with driving under influence and over the speed limit identified as the crash contributing factor.

Figure 17: Vehicular Crashes and Crash Severity

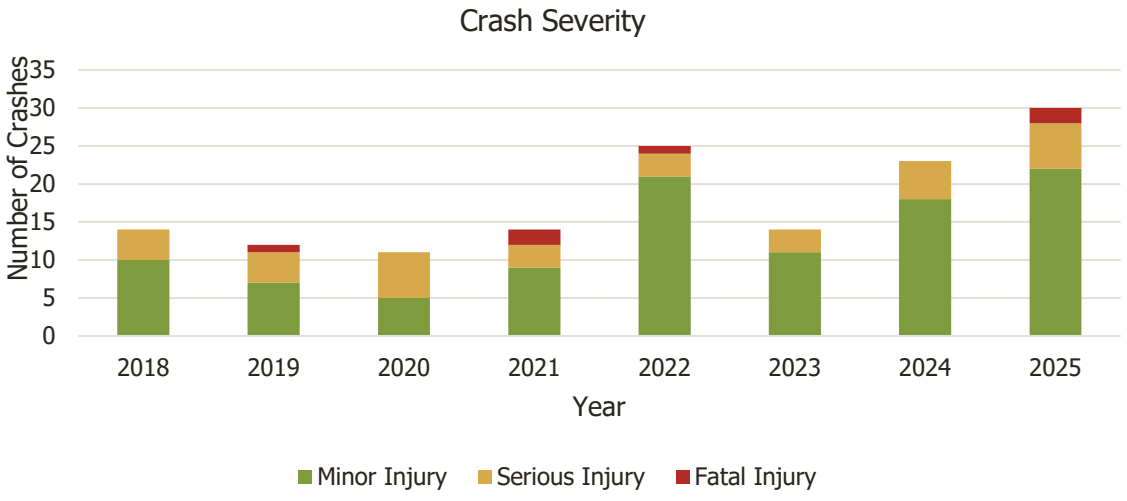


Figure 18: Crash Heat Map and Location of Fatal and Serious Injury Crashes from 2018 to 2025



Source: TxDOT's Crash Records Information System (CRIS)

2.5 FREIGHT

Luling's transportation network not only has to support daily trips by residents and visitors, but also sustain the high volumes of freight traffic that passes through the City.

According to Texas Delivers 2050, TxDOT's Long-Range Freight Plan, trucks carried more freight than any other modes in 2019, and this trend is expected to continue to 2050 – approximately 45 percent of total tonnage. The highways that cut through the City are designated as key freight corridors that are intended to facilitate the efficient movement of freight. I-10 to the south of the City is designated by the Federal Highway Administration as part of the Primary Highway Freight System, the network of highways which are deemed as most critical to U.S. freight movements. Connecting to I-10 are US 183, US 90, and SH 80, which are part of the Texas Highway Freight Network, a network prioritized by the state for freight movements (**Figure 19**). The increase in heavy vehicles traveling through Downtown not only worsens congestion but can also lead to greater safety risks.

Besides truck traffic, the Union Pacific Railroad tracks that bisect the City from east to west further contribute to traffic issues within the City. According to the Federal Railroad Administration, the railroad crossings experience approximately 13 trains passing through per day during daytime and 12 in the night. Each time a train passes through, gates will have to be closed for about four to five minutes, thus delaying traffic traveling north to south and vice versa.

Figure 19: Freight Network and Railroad Crossings



Source: TxDOT Freight Network, FRA Rail Network

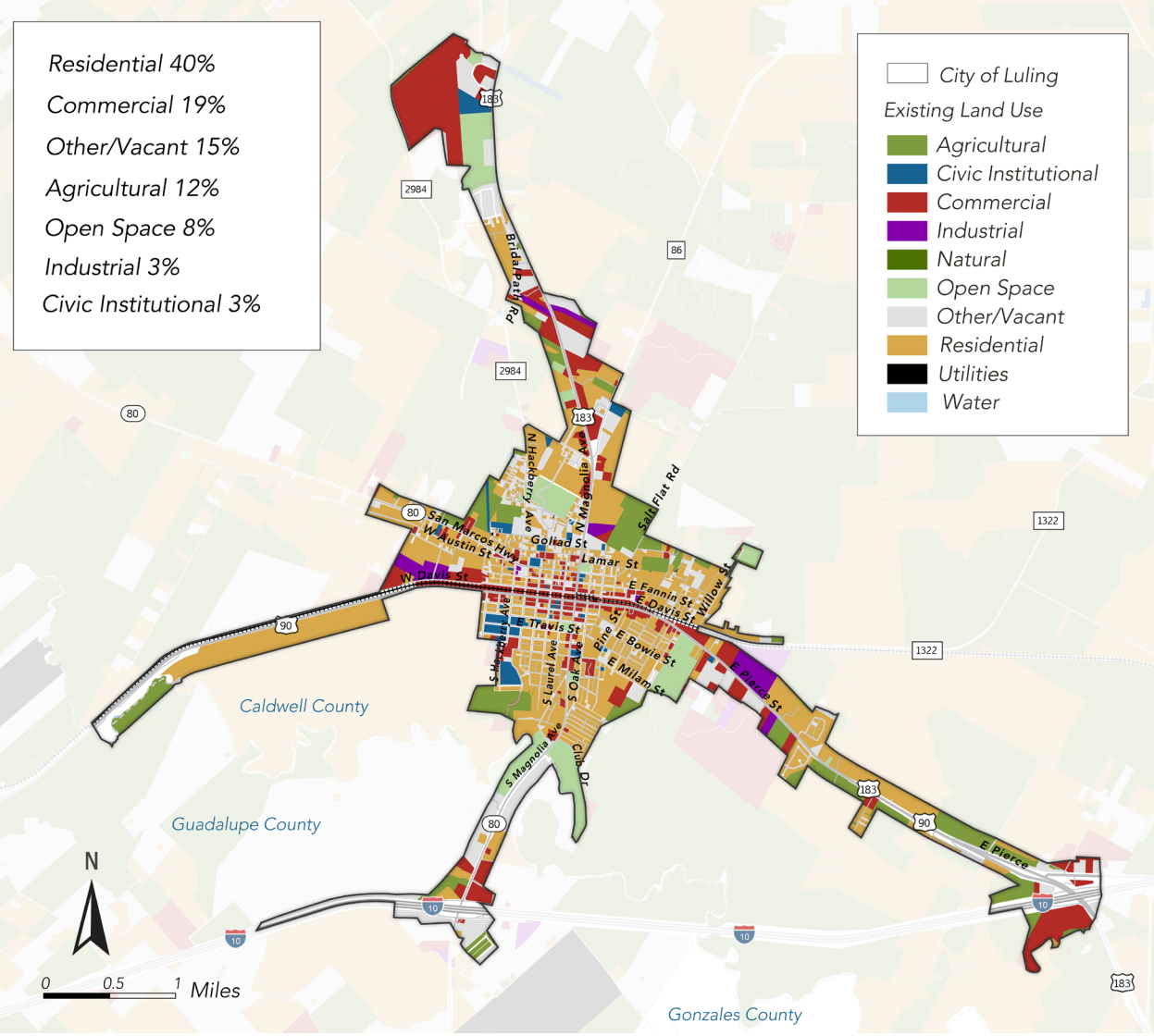
2.6 ENVIRONMENTAL CONDITIONS

Environmental conditions were analyzed within the City of Luling using publicly available geographic information system (GIS) layers, aerial imagery, and other data obtained from the various resource agencies (**Figure 21**).

2.6.1 Land Use

Land use within the City of Luling is primarily residential with many suburban neighborhoods and large rural residences, followed by commercial, agricultural and vacant land, and some limited civic and industrial land use (**Figure 20**).

Figure 20: Existing Land Use



Source: UrbanFootprint Existing Land Use

2.6.2 Environmental Resources and Floodplains

Federal Emergency Management Agency (FEMA) 100-year and 500-year floodplains are located within the southern and western areas of Luling. Luling is located within the Post Oak Savanna ecoregion of Texas which is characterized by oak forest, prairie grassland, and agricultural lands. There are seven Texas Parks and Wildlife Department (TPWD) elemental occurrences (EOs) within Luling. The United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) identifies 49 freshwater ponds and 13 riverine wetlands which include Plum Creek, Salt Branch, San Marcos River, and Seals Creek and several unnamed streams, within Luling.

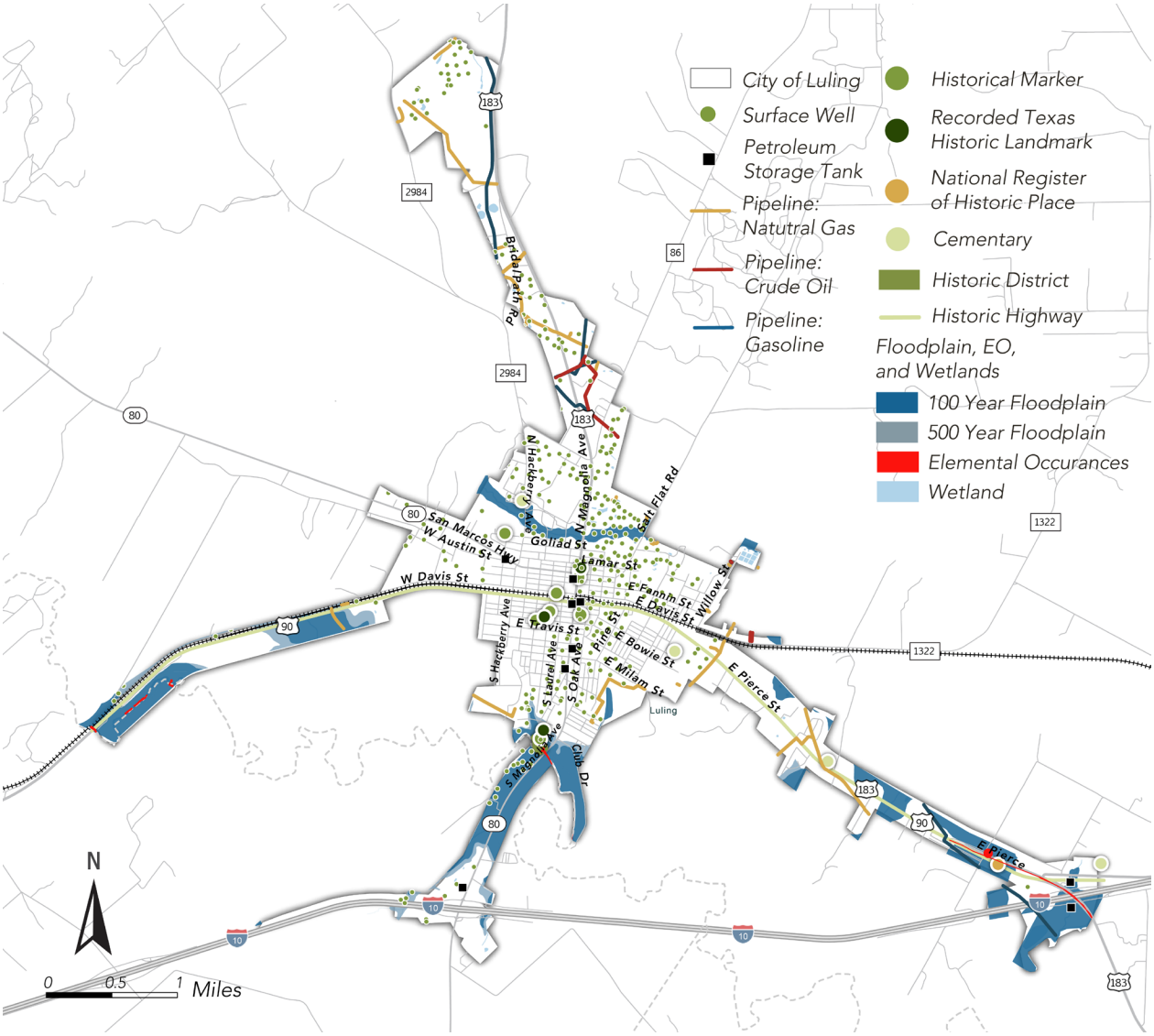
2.6.3 Utilities

The Railroad Commission (RRC) of Texas identified 348 surface wells in Luling and 79 pipelines (23 crude oil, 21 gasoline, and 35 natural gas) in primarily northern and eastern Luling. Additionally, there exist nine petroleum storage tanks in the southern and central portions of Luling.

2.6.4 Cultural and Historical Resources

Three Recorded Texas Historic Landmarks (RTHLs) are located within Luling as identified by the Texas Department of Transportation (TxDOT) Historic Resources Aggregator, including the Fritz Zedler Home, Francis-Ainsworth House, and William Johnson Cabin. The Texas Historical Commission (THC) Historic Sites Atlas identified three cemeteries – City Cemetery, Luling Jewish Cemetery, and Lone Oak Cemetery; 11 historical markers, primarily located in downtown Luling; one National Register of Historic Places (NRHP)-listed bridge in southeastern Luling; the Zedler Mill NRHP Historic District in southern Luling; and the Old Spanish Trail historic highway route which runs through central Luling.

Figure 21: Environmental Conditions



Source: FEMA National Flood Hazard Layer, TPWD Texas Natural Diversity Database, USFWS National Wetlands Inventory, Railroad Commission of Texas Public GIS Viewer, Texas Commission on Environmental Quality, TxDOT Historic Resources Aggregator, Texas Historical Commission Texas Historic Sites Atlas

Chapter 3:
Engaging with the Public

Public engagement is a core component of the plan update which aims to provide clear, informative, and timely communication as well as offer meaningful participation opportunities to stakeholders and the public. It is an essential step to build trust between the City and various stakeholders of the project to set up the study for success.

As part of this study, Caldwell County and the City of Luling sought feedback from a variety of stakeholder representatives and members of the public. From meetings with City leadership (Luling Advisory Committee) and stakeholder meetings to public surveys and open house public meetings, the feedback gathered during this process has helped to guide the direction of this study and informed its recommendations.

This chapter summarizes the various forms of engagement conducted throughout the study and their key findings. Additional information regarding engagement activities is available in the Public Engagement Technical Memo (**Appendix B**).

3.1 ENGAGEMENT STRUCTURE AND TIMELINE

This study's public engagement efforts were divided into three different forums – Luling Advisory Committee (LAC) Meetings, Stakeholder Meetings, and Public Meetings. These meetings provide opportunities for community members and stakeholders to learn more about the planning effort and provide feedback. An overview of the public engagement timeline is described in **Table 1**. All meetings were held at the Zedler Mill Pavilion.

Table 1: Public Engagement Timeline

LAC and Stakeholder Committee Meetings #1	February 5, 2026
Public Meetings #1 and #2	March 26, 2026
LAC and Stakeholder Committee Meetings #2	April 13, 2026
LAC and Stakeholder Committee Meetings #3	June 16, 2026
Public Meetings #3 and #4	July 14, 2026
LAC Meeting #4	August 14, 2026

3.1.1 LAC and Stakeholder Committees

The Luling Advisory Committee (LAC) and a Stakeholder Committee were established to provide a structured forum for collaboration among City and County Leadership, agency partners, community organizations, business interests, elected officials, and other key stakeholders throughout the planning process.

The LAC comprised representation from the City and the County including the Mayor, City Manager, Police Chief, and leadership from various city departments including Public Works, Planning and Code Enforcement, Economic Development, and Precinct 2 County Commissioner Rusty Horne.

The stakeholders included representatives from Luling Independent School District (ISD), the Chamber of Commerce, and other community members identified by the City and County.

These committees reviewed project information, discussed key issues and opportunities, provided feedback on technical analyses, validated findings, and helped guide the development of goals, strategies, and recommendations.

3.1.2 Public Meetings

A total of four public meetings were conducted to understand the desires and challenges of the community and to engage them in prioritizing recommendations developed for this plan. These public meetings were held around noon and in the evenings and were open to all members of the public. To provide other means of participation in these public meetings, online surveys were published with the same activities as those at the public meetings.

3.2 WHAT WE HEARD FROM THE LAC AND STAKEHOLDER COMMITTEE MEETINGS

3.2.1 LAC and Stakeholder Committee Meeting #1

The first committee meetings were on February 5, 2026. A presentation was given to the committees to review existing conditions information and facilitate discussions regarding input on existing transportation issues, the plan's Goals and Objectives, and the Relief Route study area. Local perspectives from the LAC and Stakeholders help provide greater depth and nuance to the issues surfaced from the existing conditions analysis conducted earlier.

The primary issues discussed by both committees included:

- The amount of truck traffic traveling through downtown.
- The need for a relief route/bypass around Luling to the west and northeast sides of the City.
- The number of trains per day causing traffic delays and safety concerns at crossings.
- Congestion at key downtown intersections and corridors such as Magnolia St./US 183 at Pierce St./US 90, Austin St./SH 80 at Magnolia St./US 183, Magnolia St./US 183 at Davis St., and US 183 at US 90 near I-10.
- Overall pedestrian and student safety throughout town.
- The need for more sidewalk connections and to improve existing deficiencies.
- Safety concerns from the Plum Creek bridge to the I-10 interchange.
- Mobility and response times of emergency services.
- Pavement deterioration on various streets downtown.



LAC Meeting #1

3.2.2 LAC and Stakeholder Committee Meeting #2

The second round of committee meetings were held on April 13, 2026. The focus of this meeting was to present and select three of the four preliminary Relief Route Option A alignments to be advanced for further analysis and determine focus areas for which improvement projects would be developed.

The key decisions from this meeting included:

- Alignments E, F, and G were chosen to move forward to a more detailed technical analysis – described in **Chapter 4**. These alignments were displayed as alignments "A1," "A2," and "A3" at Public Meetings #3 and #4.
- The County suggested that a planning-level evaluation of a variation of Option C from the 2019 Plan (Northeast Relief Route) should be completed to understand what traffic impacts it would have on congestion in the downtown area, in comparison to the Option A alignments.
- Improvement projects for four Focus Areas shall be developed – described in **Chapter 5**.

3.2.3 LAC and Stakeholder Committee Meeting #3

The third round of committee meetings was held on June 16, 2026. The primary objectives were to establish consensus on project implementation timeframes for the near-, mid-, and long-term horizons; select a preferred Option A alignment; and prioritize projects within each Focus Area. The stakeholders and LAC generally prioritized the improvement projects in the same way except for those in Focus Area 3. For the Relief Route Alignment Alternative, the stakeholders preferred the alternative that was shorter and closer to the City, Alternative A1, while the LAC preferred the alternative that was further west of the City, Alternative A3. Discussions of their feedback are detailed in **Chapters 4 and 5**.

3.2.4 LAC Meeting #4

The final LAC meeting was on August 13, 2026. The primary objective was to allow the LAC to ask questions and provide feedback on the draft Plan before the final Plan was produced.

3.3 WHAT WE HEARD FROM THE PUBLIC MEETINGS

3.3.1 Public Meetings #1 and #2

Public Meetings #1 and #2 were held on Thursday, March 26, 2026, from 11am to 1pm and from 5pm to 7pm, respectively. These two meetings introduced the study goals, timeline, and milestones and offered opportunities for community members to identify transportation issues that were important to them and to share in detail challenges they encounter in the City. The online survey for this public meeting was open from March 26, 2026 to May 22, 2026.

Similar to LAC and Stakeholder Meeting #1, input from the public complemented and augmented findings discussed in **Chapter 1**. **Figure 22** shows the top five issues identified by the public and describes the primary issues of the city's transportation network raised by the public. The highest ranked issues include safe roadway conditions (#1), first responder response times and volume of freight trucks (#2), congestion from through traffic (#4), and safe routes to and from school (#5).. The major roadways, including US 183 / Magnolia Ave and Hackberry Ave were key locations where they faced transportation challenges.

3.3.2 Public Meetings #3 and #4

Public Meetings #3 and #4 were both held on Tuesday, July 14, 2026, from 11am to 1pm and from 5pm to 7pm, respectively. Similar to the activity for LAC and Stakeholder Meeting #3, the primary goals of these two meetings were to have community members prioritize the preliminary set of alignment alternatives for the Relief Route and proposed improvement projects within the identified Focus Areas. The online survey for this public meeting was open from July 14, 2026 to July 28, 2026.

Similar to LAC and Stakeholder Meeting #3, input from the public and stakeholders complemented and augmented findings discussed in **Chapters 4 and 5**. **Figure 22** summarizes the preferences of community members for improvement projects.



Public Meetings #1 and #2

Figure 22: Issues Identified by the Public

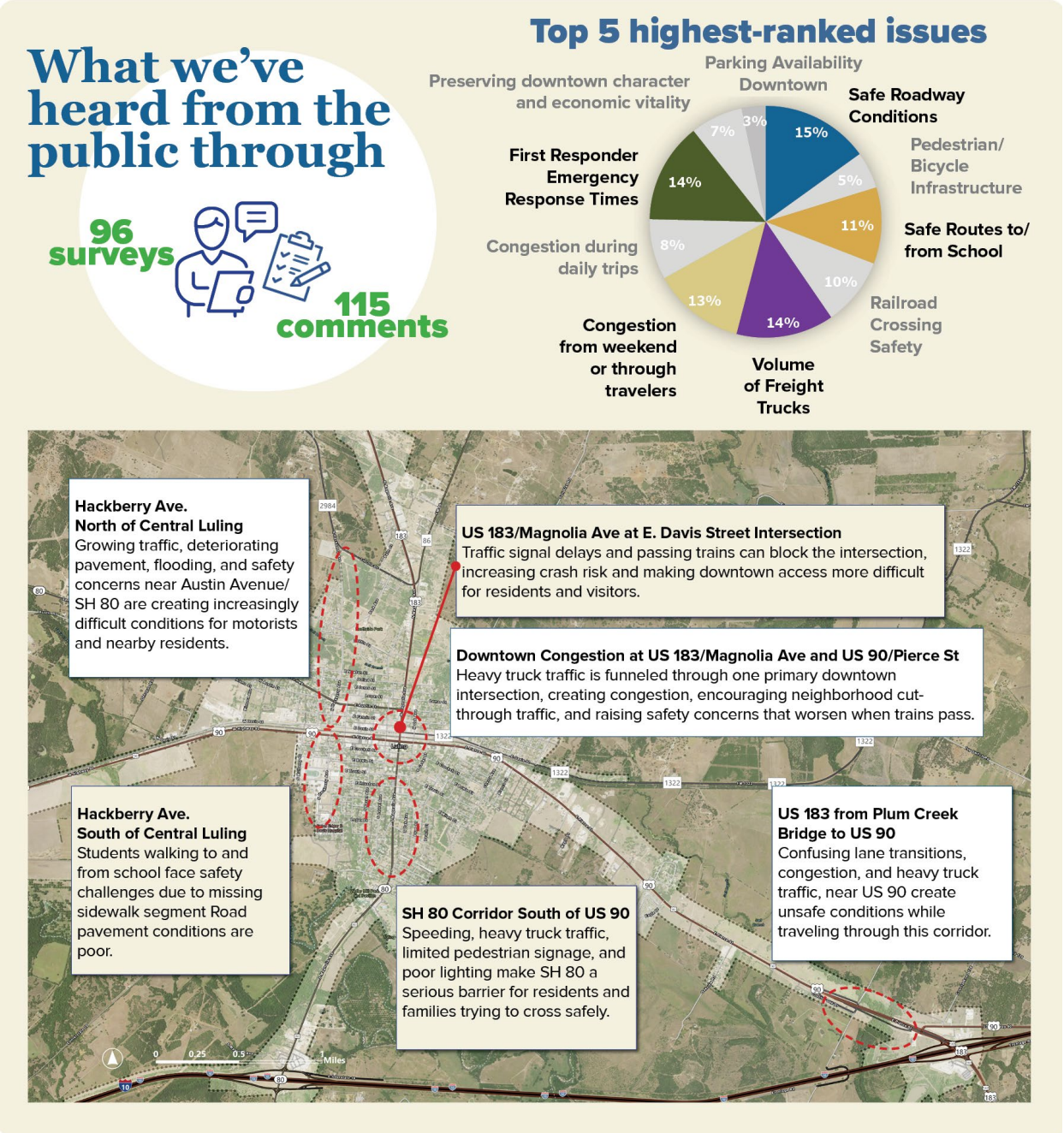
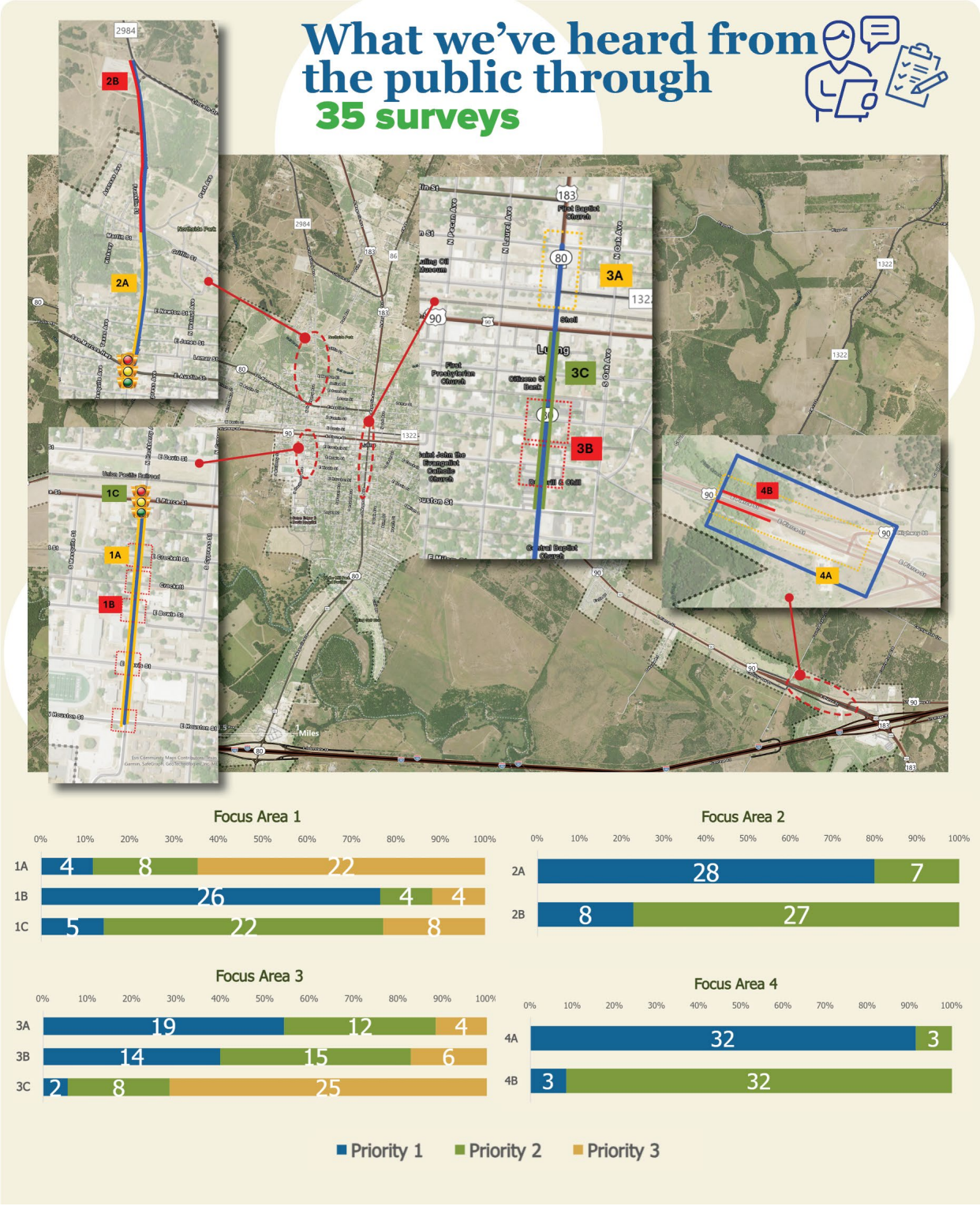
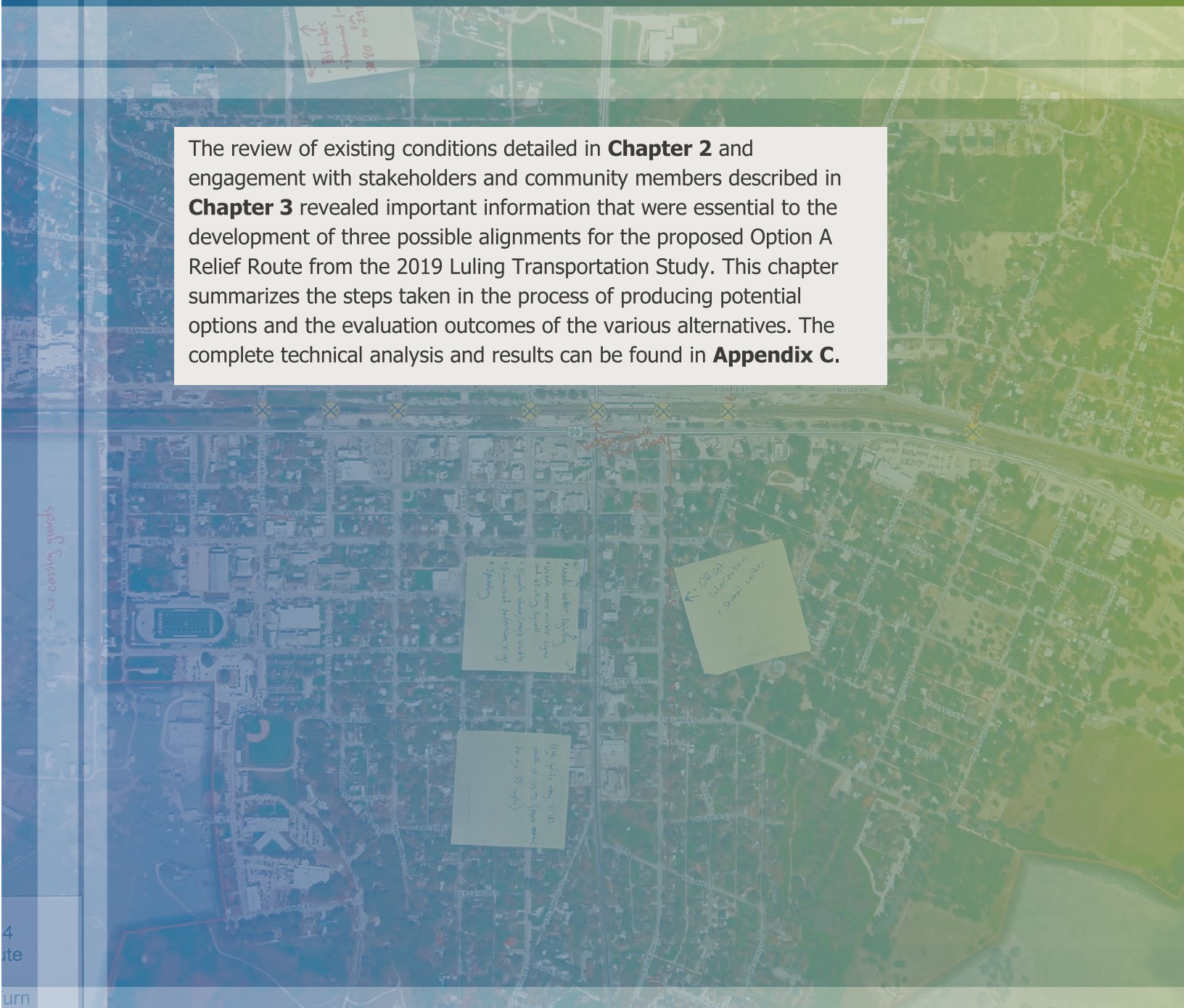


Figure 23: Community Preferences for Improvement Projects



Chapter 4:
Developing Relief Route Alignments

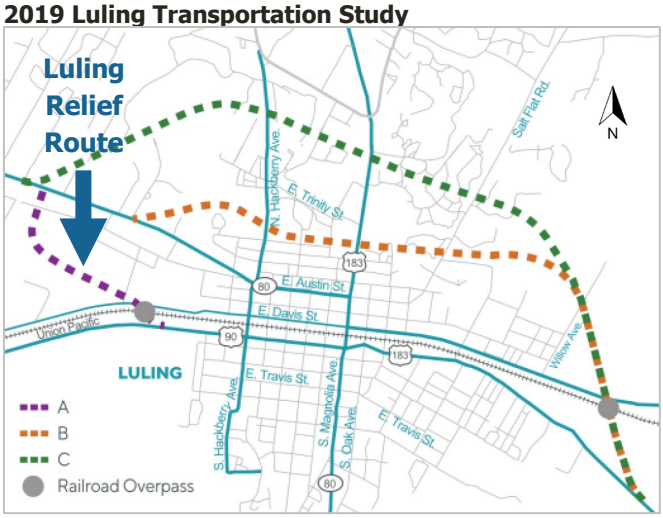
The review of existing conditions detailed in **Chapter 2** and engagement with stakeholders and community members described in **Chapter 3** revealed important information that were essential to the development of three possible alignments for the proposed Option A Relief Route from the 2019 Luling Transportation Study. This chapter summarizes the steps taken in the process of producing potential options and the evaluation outcomes of the various alternatives. The complete technical analysis and results can be found in **Appendix C.**



4.1 RELIEF ROUTE OPTION A ALIGNMENT ALTERNATIVES

The 2019 Luling Transportation Study evaluated three broad relief route alignments to divert traffic, particularly truck traffic, away from congested intersections of Central Luling. The recommended Option A relief route ("Relief Route") from the 2019 Transportation Study was the connection between SH 80 / San Marcos Hwy and US 90 west of Central Luling marked by the dashed purple line in **Figure 24.** As this line only provided an indicative and approximate location of the Relief Route, this current study sought to explore the universe of feasible alignment alternatives that could connect SH 80 / San Marcos Hwy and US 90.

Figure 24: Long-term Recommendations from the 2019 Luling Transportation Study



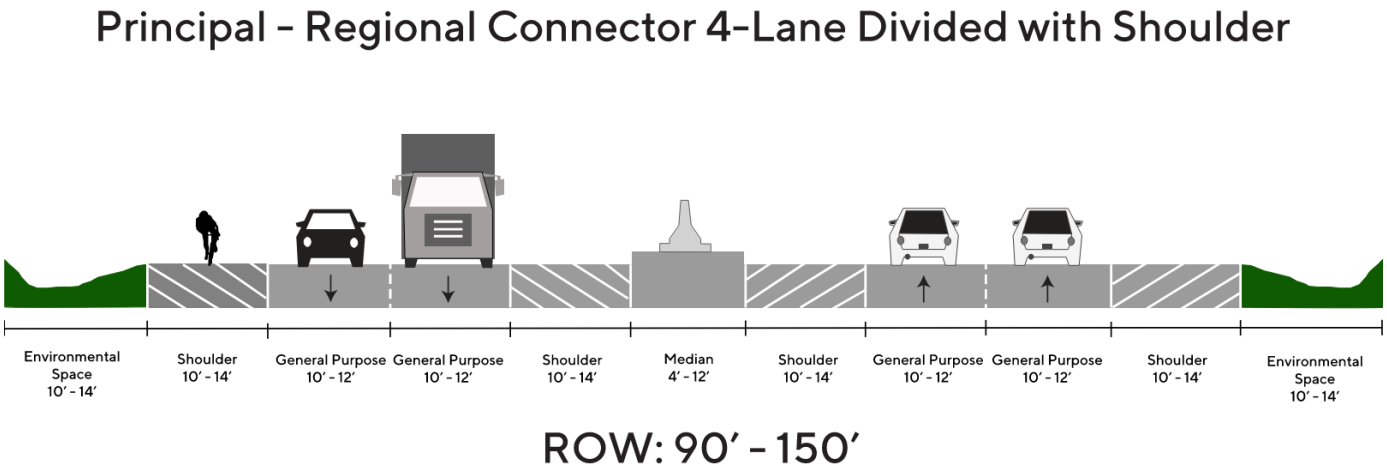
4.1.1 Developing Alignment Alternatives

To develop the universe of possible alignment alternatives, the following list of criteria were evaluated:

4.1.1.1 Roadway Configuration

The proposed roadway configuration for this type of facility shall meet the following standards of a Principal Regional Connector illustrated in **Figure 25**.

Figure 25: Proposed Typical Section



Source: 2024 Caldwell County Transportation Plan

4.1.1.2 Stakeholder Input

At Stakeholder Committee Meeting #1 held on February 5, 2026, stakeholders continued to express the need for a relief route west of Central Luling, highlighting the use of the existing ROW along River Park Road (County Road 105) or Scenic View Road (County Road 121) as an alignment alternative.

4.1.1.3 Environmental Constraints

Avoiding the 100- and 500-year floodplains, ponds, wetlands, and river or stream crossings was a key consideration. Known cemeteries, historical sites, community facilities, cultural resources, petroleum storage tanks, surface wells, and pipelines were avoided as well.

4.1.1.4 ROW and Property Impacts

Alignments were routed to run parallel to parcel boundaries and avoid existing dwellings.

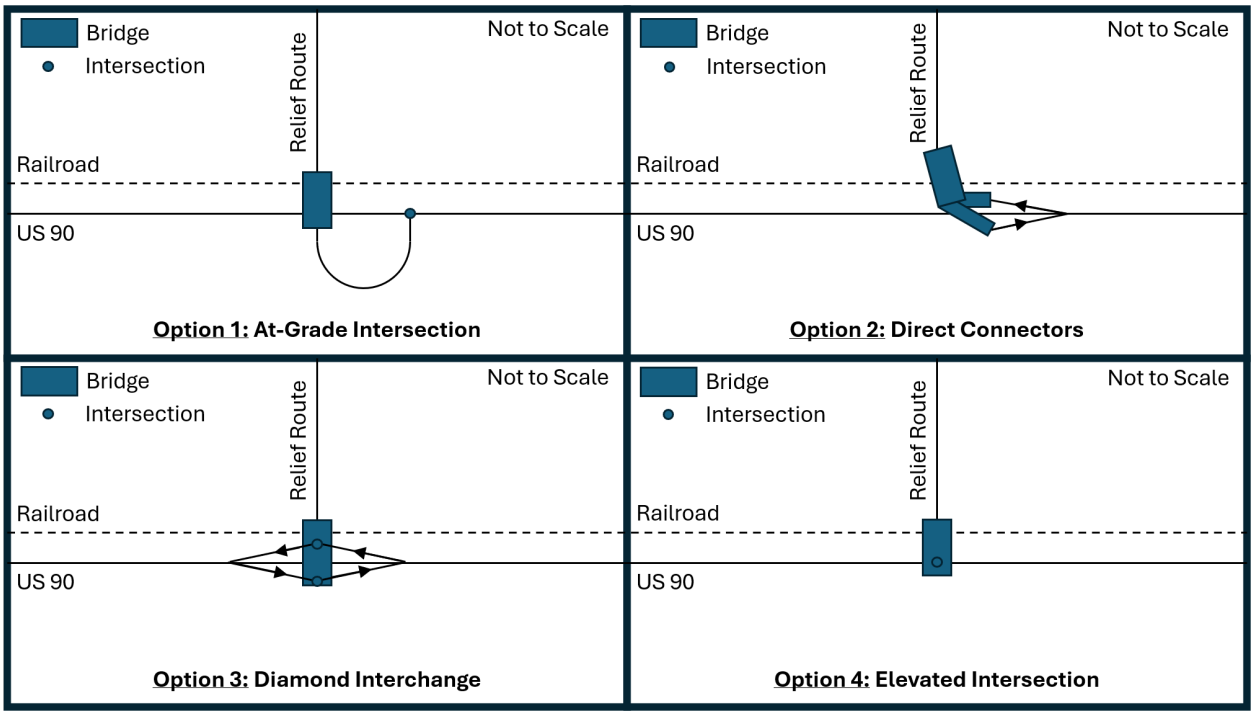
4.1.1.5 Connectivity with the Existing Roadway Network

Alignments were routed along existing roadways or away from existing intersections and driveways where possible to reduce potential access management and intersection-spacing issues

4.1.1.6 Feasibility of a Grade-Separated Railroad Crossing

The existing Union Pacific (UP) railroad runs parallel to US 90 at an offset of approximately 100 feet. Four grade-separated options for connections to US 90 are shown in **Figure 26**. Further detailed studies will be necessary to determine the most suitable railroad crossing option.

Figure 26: Illustrated Options for Relief Route Connections to US 90



4.1.2 Evaluating Preliminary List of Alignment Alternatives

Of the seven potential alignment alternatives developed and evaluated, Alternatives A, E, F, and G advanced as preferable options as they had relatively smaller impact on properties **(Figure 27** and **Table 2).** The coloration in the table indicates the performance of each alignment for each category, with green being best and red being worst. The total score in the rightmost column is the sum of the scores for each row, assuming a score of "1" for green cells, a score of "0" for yellow cells, and a score of "-1" for red cells.

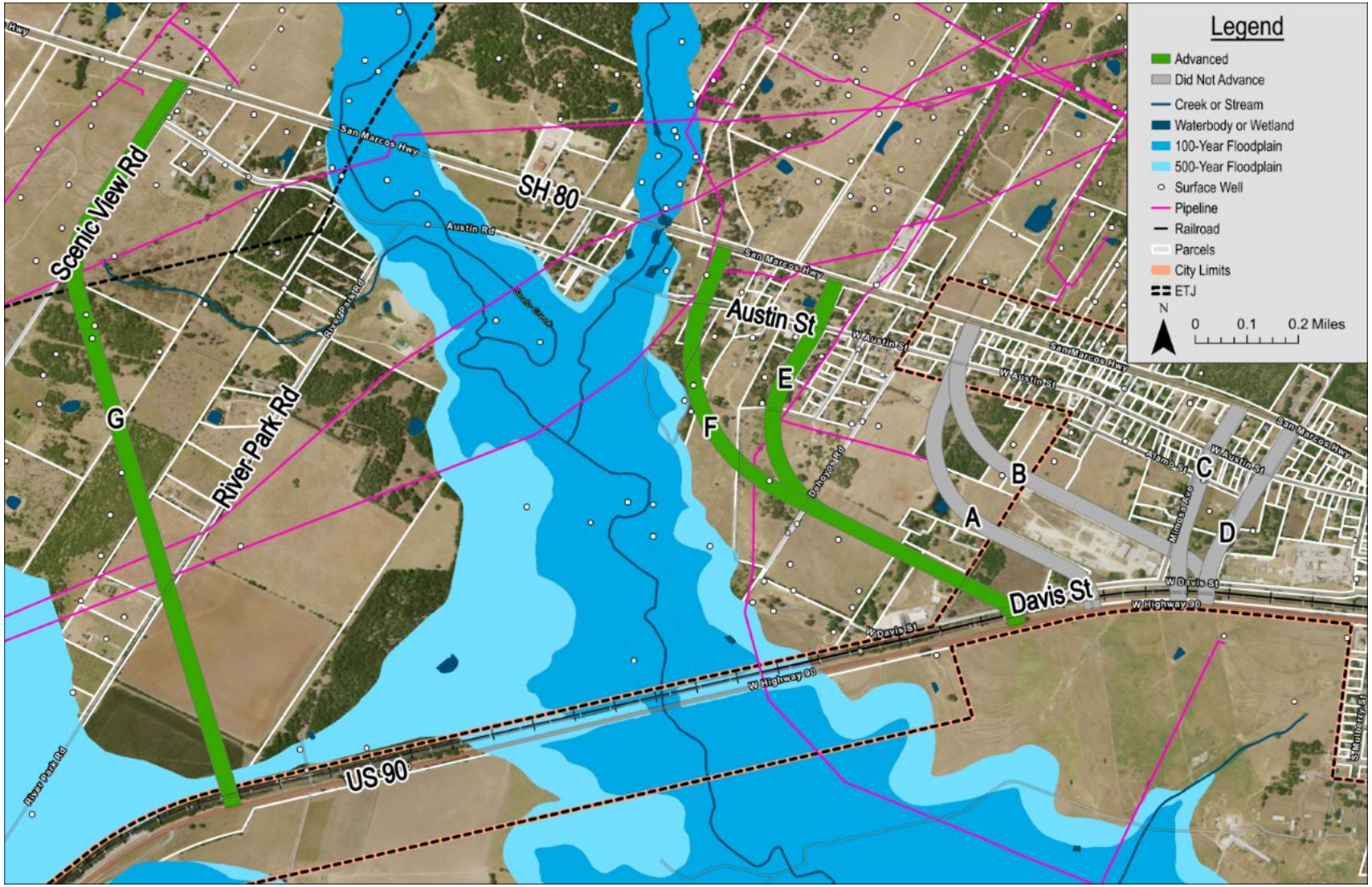
To further narrow the selection down, the four preferred options were presented to the LAC and stakeholders at the second committee meetings held on April 14th 2026. Alternative A was eliminated due to the number of potential displacements, its proximity to downtown Luling, and potential impacts on residential and industrial land uses. For the remaining three alternatives, E, F, and G, this study proceeded to conduct a deeper analysis of these alternatives with additional criteria and performance measures. Alignments E, F, and G were renamed to **A1, A2, and A3**, respectively, to reduce any confusion with the public and to be consistent with "Option A's" naming convention.

Table 2: Preliminary Alignment Alternatives Evaluation

Alignment Alternative	Length (miles)	Environmental Constraints	Right of Way and Property Impacts	Connectivity with the Existing Roadway Network	Railroad Crossing	Total Score
A	0.7	Adjacent to body of water/wetland Intersects 1 pipeline	2 potential displacements	Compatible with existing roadway network	Each alignment can accommodate a grade-separation across the railroad to US 90.	**2**
B	0.8	None	3 potential displacements	Close proximity to Central Luling may disrupt access to properties along US 90		**0**
C	0.4	Intersects 1 surface well	3 potential displacements	Close proximity to Central Luling may disrupt access to properties along US 90 and create a barrier for local traffic and pedestrians		**0**
D	0.4	None	4 potential displacements			**0**
E	0.9	Adjacent to body of water/wetland Intersects 1 pipeline	1 potential displacement	Compatible with existing roadway network		**2**
F	1.0	Adjacent to floodplain Intersects 3 surface wells Intersects 3 pipelines	0 potential displacements*	Compatible with existing roadway network		**2**
G	1.5	Passes over floodplain Intersects five surface wells Intersects 3 pipelines	0 potential displacements	Farthest west from Central Luling. Compatible with existing roadway network		**2**

**Entire parcel needed but no habitable structure is impacted Note: Green = Score of 1, Yellow = Score of 0, Red = Score of -1*

Figure 27: Alignment Alternatives Considered by the LAC and Stakeholder Committee



4.1.3 Technical Analysis of Alignment Alternatives A1, A2, and A3

Following the collective decision made by the LAC and stakeholder committee, alignment alternatives A1, A2, and A3 (renamed from E, F, and G, respectively, in **Table 2**) were further analyzed to evaluate the extent of congestion reduction and improved mobility compared to a scenario in which no relief route was built in 2050 ("No Build"). The evaluation process included the following steps:

- Collecting traffic counts at key intersections
- Analyzing CAMPO Travel Demand Model (TDM) 2025 Existing and 2050 No Build scenarios,
- Developing future-year traffic forecasts,
- Coding and testing alternative alignments (2050 Build scenarios), and
- Reviewing community and agency feedback.

Detailed evaluation and performance information can be viewed in the Alternatives Analysis Technical Memorandum in **Appendix B**.

4.1.3.1 Traffic Data Collection

Traffic counts were collected at selected key intersections within the City on Friday afternoon, April 17, 2026 (**Figure 28**). The collected data were compared against Average Annual Daily Traffic (AADT) figures from TxDOT to provide a better picture of the traffic volume increases over time. To estimate future travel patterns, the analysis utilized CAMPO's Regional Travel Demand Model (TDM) 2050 data as a base for simulations. Traffic counts and simulation findings shed light on roadways with higher usage that will require more attention.

4.1.3.2 Establishing the Annual Growth Rate for Traffic Forecast

To support the Synchro analysis, a growth rate was developed using both historical trends and TDM forecasts for the study area. Based on the combined assessment of historical trends and modeled future demographic and traffic conditions, a 3 percent annual growth rate was selected to develop the 2050 traffic forecasts used in this evaluation.

4.1.3.3 Performance Measures

This study utilized a range of technical performance measures listed below to provide a consistent basis for comparing all three alternatives and determining their relative effectiveness as a relief route. Planning-level cost estimates for each alignment alternative were computed to provide an approximate indication of the financial outlays associated with each alignment alternative.

1. Estimated Daily Traffic Entering Key Intersections
2. Relief Route Traffic Volume
3. Average Cross-Town Travel Time, PM Peak
4. Vehicle Miles Traveled (VMT), Daily
5. Vehicle Hours Traveled (VHT), Daily
6. Intersection Performance measured using Time Delay and Level of Service (LOS), Friday PM
7. Planning-level Cost Estimate

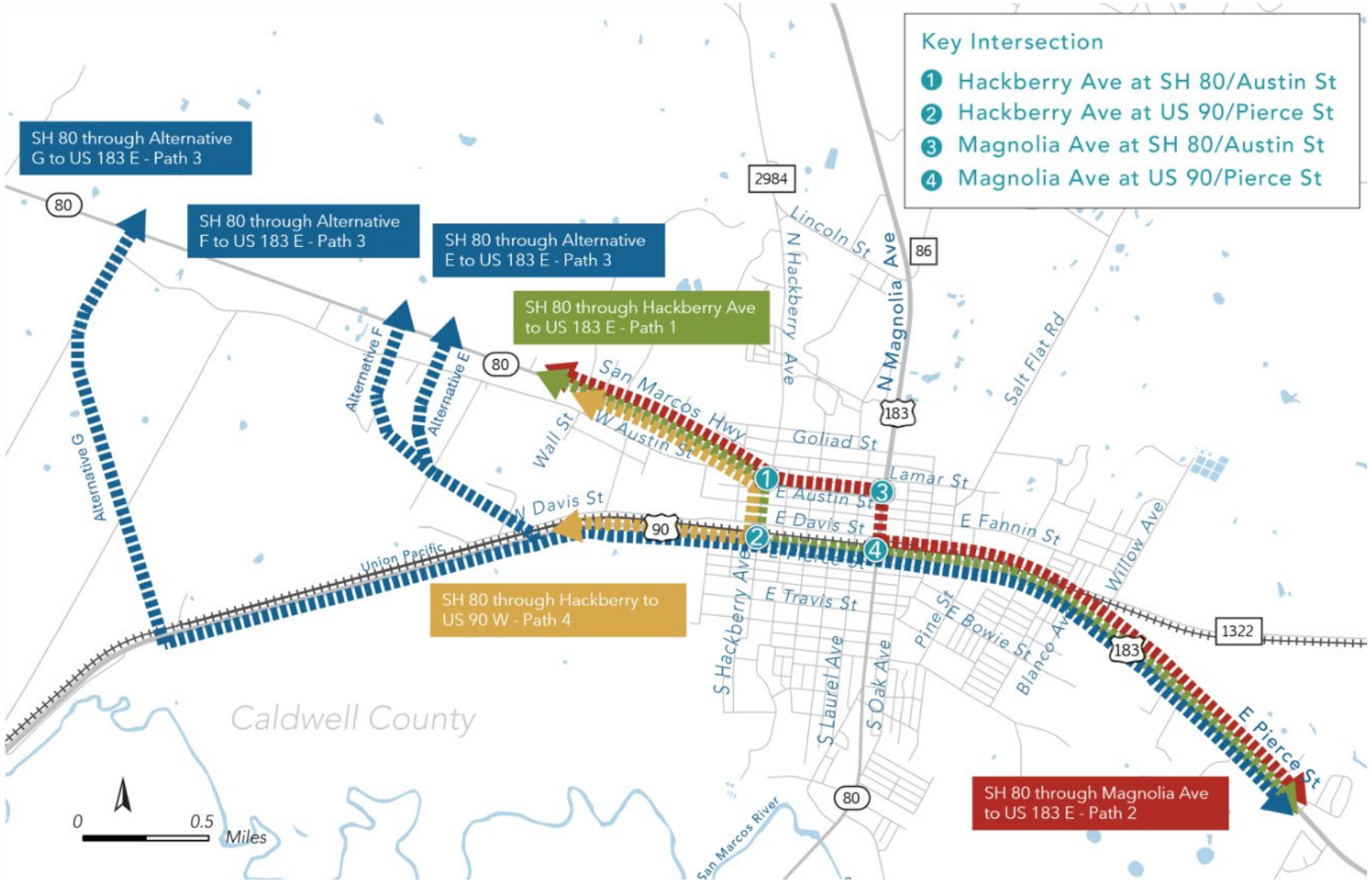
For measures 1 through 6, the proportion of truck traffic was also estimated using figure extracted from the CAMPO TDM.

4.1.3.4 Evaluation Outcomes

Several key findings emerged from the comparison between the No Build Scenario and the three Alternatives ("Build alternatives") and are summarized below:

- Compared to the No Build Scenario, all Build alternatives were observed to reduce the total estimated daily traffic entering key intersection between the range of approximately 100 to 2,600 vehicles.
- All Build alternatives appear to primarily serve trips between SH 80 / San Marcos Hwy and US 90 W. Because travel through the existing street network continues to provide a practical route, **only a small share of regional traffic is diverted to the relief route**.
- PM peak cross-town travel time results indicate that the Build alternatives **generate time savings of about 8 to 10 seconds**, leaving travel times almost identical across all three options (compared to the 2050 No Build scenario).
- The Build alternatives **do not improve LOS performances at key intersections compared to the No Build Scenario** except at the US 183 / Magnolia Ave and SH 80 / Austin St intersection where the LOS performance is expected to improve from F to E.

Figure 28: Analysis Paths and Key Intersections



4.2 LONG-TERM RELIEF ROUTE OPTION ("NORTHEAST ALIGNMENT")

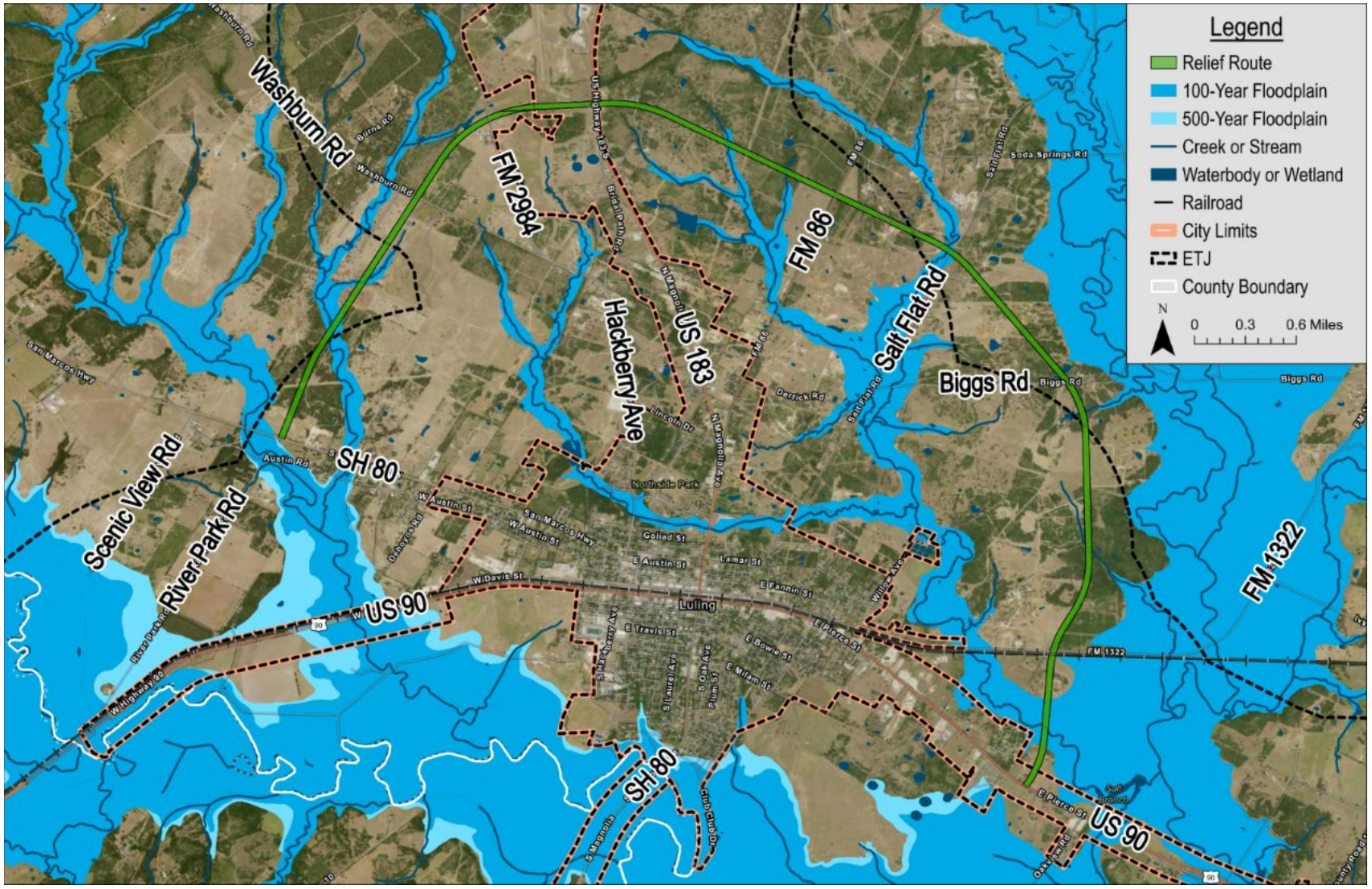
In the previous section, the results of the analysis for the Option A relief route identified in the 2019 Luling Transportation Study showed some improvement to the LOS at one of the City's key intersection, SH 80 / Austin St and US 183 / Magnolia Ave, as well as some reduction in traffic passing through this intersection as compared to the 2050 No Build Scenario. On the contrary, even though the estimated daily traffic passing through the other three key intersections downtown are estimated to be lower relative to the 2050 No Build Scenario, no improvements to the LOS at those intersections are expected relative to the No Build Scenario.

Given that the alignment alternatives would only result in better LOS at one of four key intersections in the City, overall congestion relief downtown is unlikely in the long term. Thus, this study further analyzed a northeastern relief route to evaluate its potential on diverting traffic away from downtown. This northeastern alignment was chosen as it corresponds to the Option C relief route that had previously been evaluated in the 2019 Luling Transportation Study (**Figure 24**) as a potential relief route alignment.

The goal of this secondary analysis was not to identify alignment alternatives as was carried out for Option A. Instead, this analysis provided an estimated level of traffic diversion that the alignment shown in green in **Figure 29** could generate. For this analysis, a best-fit alignment was determined through a basic assessment of environmental constraints, impacts to existing right-of-way and properties, and its connectivity with the existing road network. The detailed results of the traffic analysis and cost estimates can be found in **Appendix C**.

Results from this analysis revealed that the northeastern alignment could divert approximately 60 percent (9,640 vpd) of US 183 E traffic projected for 2050 away from downtown, with the majority of this traffic being redirected to US 183 N. While this suggests smoother traffic flow downtown, the northeast alignment would likely make cross-town journeys longer, incur higher probable construction and ROW costs, and affect existing properties and the environment to a greater extent. Detailed studies will need to be conducted to examine in depth its impacts and to assess its viability as a long-term relief route for the City.

Figure 29: Northeast Alignment



4.3 COMMUNITY AND STAKEHOLDER ENGAGEMENT

Results of the technical analyses were presented at LAC and Stakeholder Meeting 3 and Public Meetings 3 and 4. At these meetings, the community was asked to prioritize and select their preferred Alignment Alternative out of the three. For those who could not attend the Public Meetings in person, an online survey with the same questions was made available for them to participate. The results show that the preferred Alignment Alternative was A3, which runs west of Rocky Creek and is furthest away from Central Luling **(Table 3)**. Members of the Stakeholder Committee expressed preference for Alignment Alternative A2 as it was closer to the City and could increase the likelihood of drivers choosing to utilize the Relief Route.

Table 3: Top Preference for Alignment Alternatives Based on Number of Votes

Alignment	Stakeholder Committee	LAC	Public Meetings
A1			
A2	X		
A3		X	X

Chapter 5:
Focus Areas & Improvement Projects

In addition to the relief route alignments, other potential improvement measures were identified at four Focus Areas across the City to improve safety and mobility for all roadway users as well as foster downtown economic development. Focus Areas are locations facing issues related to safety and mobility as revealed by data analyses and community and stakeholder feedback. In each Focus Area, measures applicable to different streets or intersections have been grouped into separate improvement projects, which are described and illustrated in this chapter. The complete technical analysis and results can be found in **Appendix C**.

5.1 FACTORS FOR CONSIDERATION

In the process of developing improvement projects, the study conducted a qualitative assessment to determine each project's alignment with the study's goals. Additionally, quantitative evaluations were conducted to estimate each measure's impact on traffic flow (using the intersection's 2050 LOS as a metric), safety, and cost.

- **Safety:** safety benefits of these projects can be quantified by examining the Crash Modification Factor (CMF) for each measure which estimates the anticipated change in number of crashes after implementing a measure at a specific site. All selected measures are drawn from best practices and guides developed by the Federal Highway Administration and the National Association of City Transportation Officials and have proven to be successful in reducing crash frequency.
- **Intersection LOS:** the LOS was analyzed at relevant intersections using Synchro 12.
- **Cost:** Probable construction costs were estimated using figures obtained from various sources such as TxDOT statewide bid item averages and recent projects of similar scale and nature.

5.2 FOCUS AREAS AND IMPROVEMENT PROJECTS

5.2.1 Focus Area 1 – S Hackberry Ave

Focus Area 1 runs along S Hackberry Ave from US 90 / Pierce St to Houston St (**Figure 30**). This street was identified as a focus area given the high volume of pedestrians, especially students from Luling High School and Leonard Shanklin Elementary School, and vehicular traffic during school hours.

Improvement projects within this focus area seek to enhance safety and mobility of pedestrians as they travel to and from this neighborhood north towards Downtown (**Table 4**). These projects also augment the planned safety improvements on N Hackberry Ave from US 90 / Pierce St to SH 80 / Austin St under the Road Bond Program.

Figure 30: Focus Area 1 and Improvement Projects

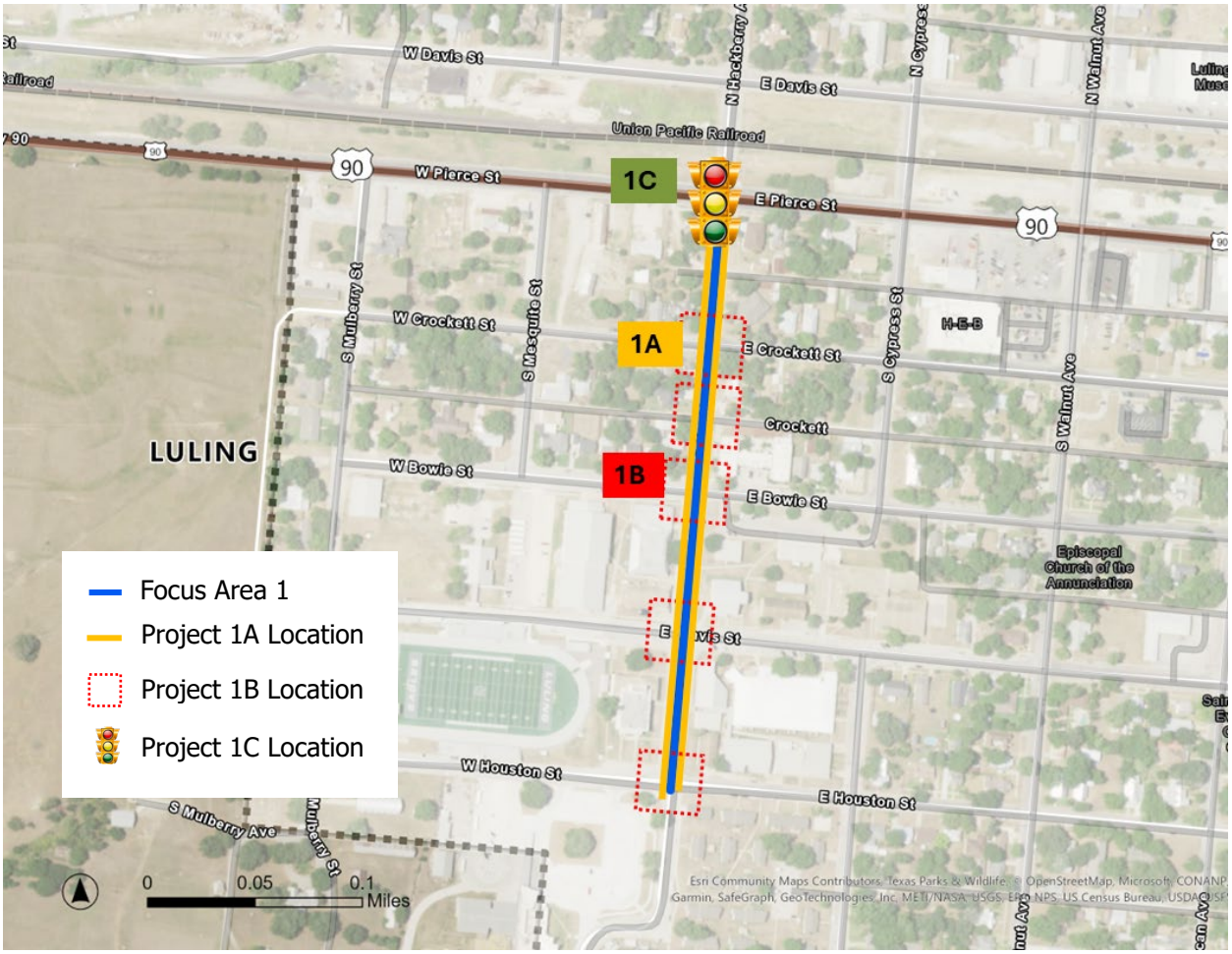
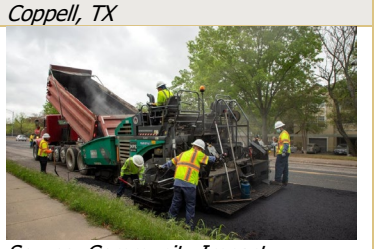
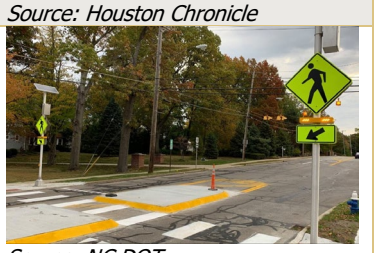


Table 4: Description of Improvement Projects in Focus Area 1

PROJECT ID	DESCRIPTION	EXAMPLES OF IMPROVEMENTS
1A	**ADA-compliant Sidewalks and Curb Ramps** These improvements provide a wide and flat surface that enables a more comfortable and safer experience traveling along the streets and navigating across streets. This is especially beneficial to people with disabilities, older adults, people with vision impairments, those using strollers or mobility devices, etc.	 *Source: ArdmoreRoderick and City of Coppell, TX*
1B	**Repave Hackberry Ave from US 90 to Houston St** Repaving entails milling the old surface and applying new asphalt, compacting it, and finishing with striping. This is recommended due to the current pavement conditions and the amount of striping recommended for this focus area. Creating smooth surfaces reduces risk of crashes caused by potholes, cracks, or uneven surfaces.	 *Source: Community Impact*
	School Zone Flashers School zone flashers are flashing warning devices installed near schools to alert drivers of reduced speed limits during school hours. These help to reduce speeds and make drivers more aware of pedestrians, especially children.	 *Source: Houston Chronicle*
	High Visibility Crosswalk Striping and Signage Crossing roadways can be made safer for pedestrians with large reflective signs that indicate where a driver should stop or yield to pedestrians. Crosswalks can also be made more visible using patterns, pedestrian islands, or highly reflective crosswalk markings.	 *Source: NC DOT*
	Pedestrian Safety Lighting Lighting can help drivers visually identify pedestrians more easily by illuminating them with positive contrast. Lighting also helps drivers look out for roadway edges and other vehicles or objects on roadways.	 *Source: Fonroche Lighting America*

1C	**New traffic signal at US 90 / Pierce St** A signalized intersection at US 90 / Pierce St and S Hackberry Ave enables pedestrians to cross US 90 / Pierce St more easily, encouraging active transportation and improving safety. Signals can also improve traffic operations and facilitate safer vehicular movements at this intersection, especially those turning out of Hackberry Ave onto US 90 / Pierce St or crossing US 90 / Pierce St.	 *Source: LSC Tech*

5.2.2 Focus Area 2 – N Hackberry Ave

Focus Area 2 runs along N Hackberry Ave from SH 80 / Austin St to FM 2984 / Lincoln St (**Figure 31**). This section of Hackberry Ave is highly utilized, particularly as an alternative route to US 183 / Magnolia Ave for trucks and cars traveling north and south. Driving conditions of the roadway today are not comfortable or safe, especially at night, given the absence of edge striping and potholes that are located along the roadway. The unsignalized intersection at SH 80 / Austin St also poses safety risks to drivers crossing or turning on to SH 80 / Austin St due to the high volume of east-west traffic.

Proposed projects within this focus area thus aim to improve the driving conditions and improve safety along N Hackberry Ave (**Table 5**). Similar to Focus Area 1, the projects in this focus area will connect to the planned safety improvements on N Hackberry Ave from US 90 / Pierce St to SH 80 / Austin St. Once implemented, the projects from these two focus areas and the 2024 Road Bond Program would make Hackberry Ave more comfortable and safer for all roadway users to travel on.

Figure 31: Focus Area 2 and Improvement Projects

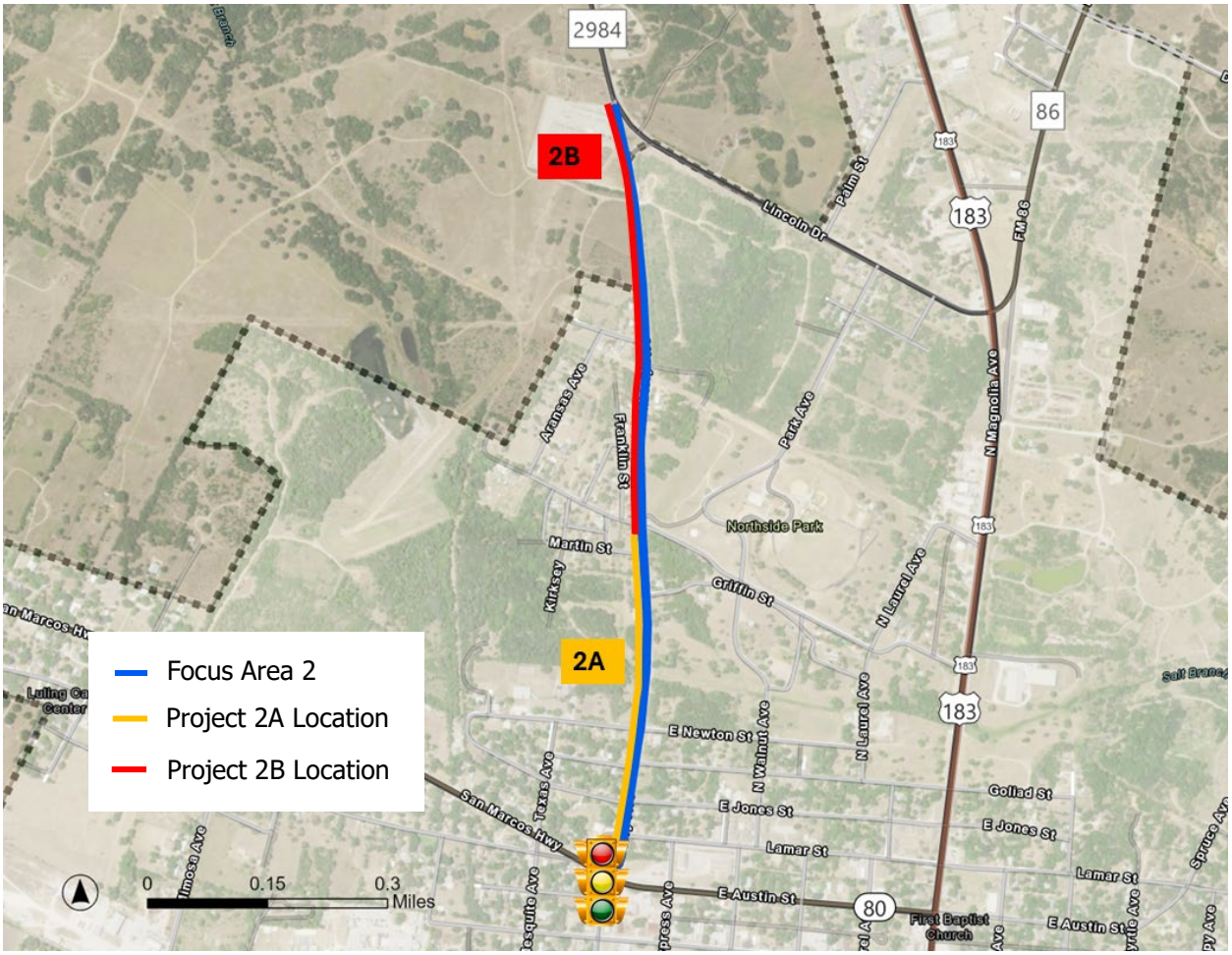
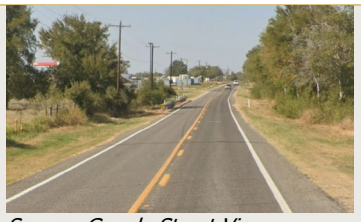


Table 5: Description of Improvement Projects in Focus Area 2

PROJECT ID	DESCRIPTION	EXAMPLES OF IMPROVEMENTS
2A	**SH 80 / Austin St to Trinity St: Reconstruct with striped center and edge lines** Reconstructing the road with asphalt and adding stripes help to define travel lanes, improve driver guidance, thereby making the driving experience safer and more comfortable.	 *Source: Google Street View*
	New signal at intersection of N. Hackberry Ave and SH 80 / Austin St A signalized intersection at N Hackberry Ave and SH 80 / Austin St improves traffic operations by providing a more predictable sequence of movements at the intersection and increases safety for vehicular movements turning out of Hackberry Ave onto or crossing SH 80 / Austin St.	 *Source: LSC Tech*
2B	**Trinity St to FM2984 / Lincoln St: Reconstruct with striped center and edge lines** *Refer to 2A above*	*Refer to 2A above*

5.2.3 Focus Area 3 – Magnolia Ave (US 183)

Focus Area 3 comprises one of the main thoroughfares in downtown Luling, US 183 / Magnolia Ave from Fannin St to Milam St (**Figure 32**). High volumes of truck and vehicular traffic are observed along this roadway daily, which can make east-west crossings difficult for pedestrians. North of US 90 / Pierce St, US 183 / Magnolia Ave is a barrier to downtown visitors who want to cross and access retail stores and food establishments on either side of the road. Similarly to the south of US 90 / Pierce St, pedestrians face challenges trying to cross the roadway. Travis St, in particular, has larger volumes of pedestrian traffic as students and residents cross US 183 / Magnolia Ave to access Longer Park and the schools further west.

Proposed projects within this focus area are targeted at creating greater visibility and slowing vehicular traffic to improve safety for pedestrians (**Table 6**). The projects to the north of US 90 / Pierce St would complement the existing Road Bond Program project that plans to improve traffic flow at the intersection of US 90 / Pierce St and US 183 / Magnolia Ave.

Figure 32: Focus Area 3 and Improvement Projects

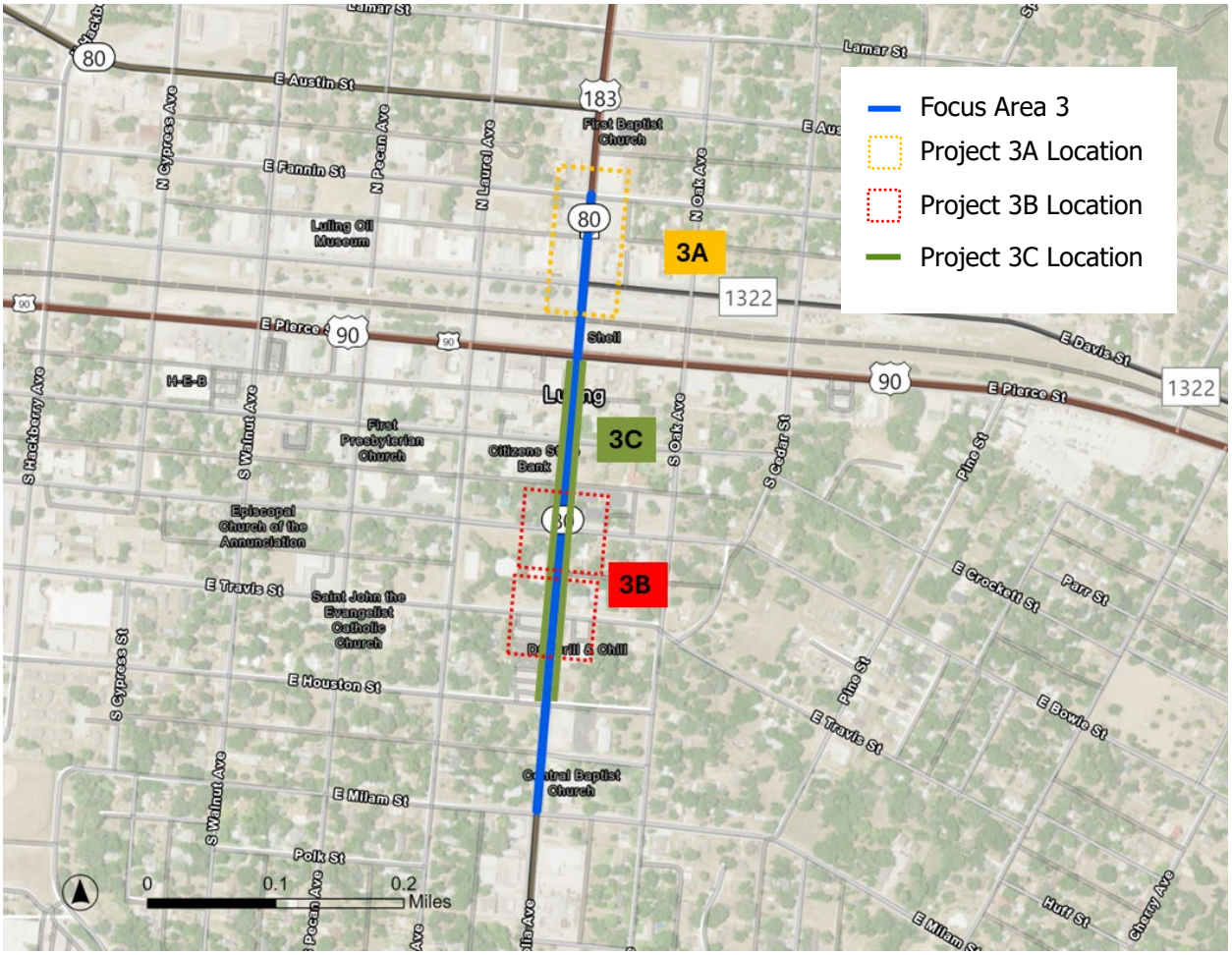
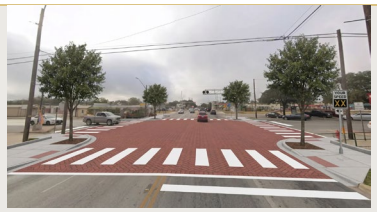


Table 6: Description of Improvement Projects in Focus Area 3

Project ID	Description	Examples of Improvements
3A	**Patterned Intersection and "Do Not Block Intersection" Signage** Patterned intersections increase visibility of pedestrian crossings to drivers and improve overall pedestrian safety. Well-designed patterned intersections can also make the area more visually appealing and serve as an entry point of reference into Downtown Luling.	 *Source: HDR*
	High Visibility Crosswalk Striping and Pedestrian Signage These crosswalks make pedestrian crossings more noticeable to drivers, thereby reducing crash risk and improving pedestrian safety.	 *Source: Federal Highway Administration (FHWA)*
	Dynamic Speed Feedback Signs These signs display the real-time speed of a vehicle, which can signal to the driver to slow down. Reduced speeds generally lower the risk of crashes and, should it occur, reduce the severity of crashes.	 *Source: Montgomery County Department of Transportation*
3B	**Pedestrian Hybrid Beacon (PHB) at E. Travis St** PHBs are designed to help pedestrians cross roadways safely at midblock or uncontrolled intersections. They are not lit until a pedestrian activates the signal. Once activated, the signal turns red temporarily, directing motorists to come to a stop.	 *Source: Timmons Group*
	High Visibility Crosswalk Striping and Pedestrian Signage Crossing roadways can be made safer for pedestrians using large reflective signs that indicate where crosswalks are located and crosswalk striping designs that draw drivers' attention.	 *Source: Federal Highway Administration (FHWA)*
	Dynamic Feedback Signs *Refer to 3A above*	*Refer to 3A above*

3C	**Pedestrian Safety Lighting** Lighting can help drivers visually identify pedestrians more easily by illuminating them with positive contrast. Lighting also helps drivers look out for roadway edges and other vehicles or objects on roadways.	 *Source: Fonroche Lighting America*

5.2.4 Focus Area 4 – Intersection of US 183 / E Pierce St and US 90

Focus Area 4 is located at the intersection of US 183 / E Pierce St and US 90 between Plum Creek Bridge and I-10 (**Figure 33**). US 183 / E Pierce St southbound currently narrows from two continuous lanes before Plum Creek Bridge to one continuous lane at the bridge. Drivers heading toward I-10 typically mistake the left turn lane after the bridge for a continuous lane and end up merging to travel south. Additionally, the left turn signal timing at the intersection does not provide sufficient time for the left-turn demand, leading to drivers speeding through the intersection and / or running red lights. Both behaviors are likely to result in greater risks of crashes.

Proposed projects in this focus area seek to improve safety for drivers by adjusting traffic signal timing and expanding the roadway (**Table 7**). These projects would complement the planned improvement works to US 183 from Magnolia Ave to Plum Creek Bridge under the 2024 Road Bond Program.

Figure 33: Focus Area 4 and Improvement Projects

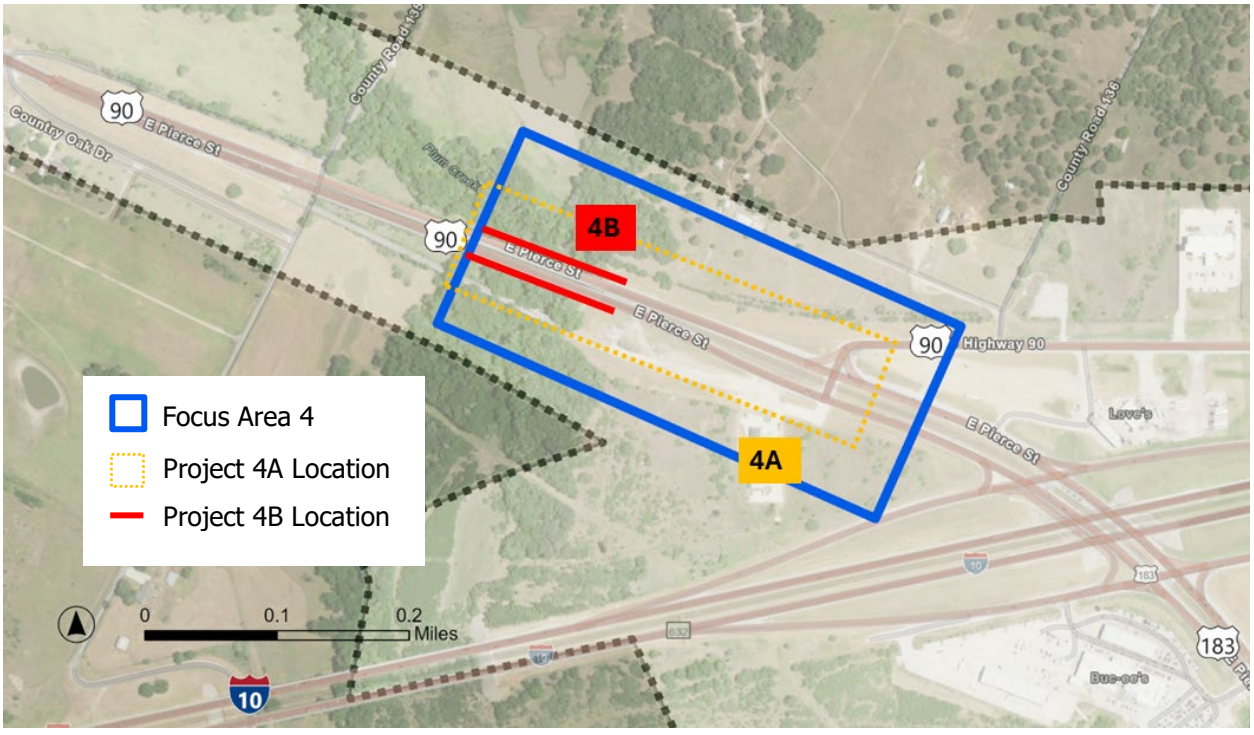


Table 7: Description of Improvement Projects in Focus Area 4

Project ID	Description	Examples of Improvements
4A	**Roadway Widening and Restriping of Southbound US 183 to Accommodate Two Continuous Through Lanes from Plum Creek Bridge to US 90 / US 183 Intersection** Creating two continuous through lanes with clear striping facilitates smoother southbound traffic flow along US 183 by reducing unsafe last-minute weaving maneuvers by drivers.	 *Source: STV Inc.*
	Update Intersection Pavement Markings and Signal Timing Clear markings and longer left-turn signal timings can improve the operational efficiency of this intersection while allowing drivers to make turns onto US 90 more safely.	 *Source: Crexi*
4B	**Safety Lighting along Plum Creek Bridge** Lighting can help drivers be more aware of roadway edges and notice upcoming intersections more easily.	 *Source: Gen X Lighting Solutions*

5.3 COMMUNITY AND STAKEHOLDER ENGAGEMENT

At the LAC and Stakeholder Meeting 3 and Public Meetings 3 and 4, community members, stakeholders, and the LAC were invited to prioritize these improvement projects by ranking projects within each Focus Area according to their preference. The same activity was made available on the online survey for those who could not attend the Public Meetings in person. Results from this exercise revealed a broad consensus across all groups on the highest priority Improvement Project in each Focus Area **(Table 8).** Stakeholder Committee members, which included representatives from Luling ISD, preferred Project 3B and greater emphasis on developing safe crossings on Travis St. across SH 80 / Magnolia Ave for students traveling to and from the school.

Table 8: Top preference for Improvement Projects based on number of votes

Project ID	Stakeholder	LAC	Public Meetings
Focus Area 1: S. Hackberry Ave. from US 90 / Pierce St. to Houston St.			
1A	X	X	
1B			X
1C			
Focus Area 2: N. Hackberry Ave. from FM 2984 / Lincoln Dr. to SH 80 / Austin St.			
2A	X	X	X
2B			
Focus Area 3: US 183 and SH 80 / Magnolia Ave from E. Fannin St. to E Milam St.			
3A		X	X
3B	X		
3C			
Focus Area 4: Intersection of US 183 / E Pierce St. and US 90			
4A	X	X	X
4B			

Chapter 6:
Recommendations and Implementation

The assessments of the long-term Relief Route as well as improvement projects within Focus Areas have shown that more than a handful of these options are desired by the community and can bring benefits to the City and its residents. While it would be ideal to implement as many of these options as possible, it is necessary to prioritize and phase their implementation so that the City's budget and resources are utilized in a responsible and prudent manner. This chapter documents the final scoring and prioritization of Alignment Alternatives and Improvement Projects to produce this plan's final recommendations and their respective implementation strategies.

6.1 SCORING AND PRIORITIZATION

To narrow the list of options down to one improvement project from each Focus Area and the best performing Relief Route Alignment Alternative, this study scored and compared the options using two sets of criteria – one to compare among Relief Route alignment alternatives and another to compare among improvement projects within each Focus Area.

6.1.1 Relief Route Alignment

Each of the Relief Route Alignment Alternatives was scored against a range of criteria pertaining to technical performance, cost, as well as community preference represented by the number of instances the Alignment Alternative was selected as the preferred option. From zero to two, the best performing alternative for each criterion scored two points while the worst performing scored zero. The scores were then weighted and summed as shown in **Table 9**.

Table 9: Relief Route Alignment Alternatives Score Matrix

Weight	Criteria	A1	A2	A3
Technical Factors (30%)	Environmental Constraints	Adjacent to body of water/wetland; 1 pipeline	Adjacent to floodplain; 3 pipelines; 3 surface wells	Passes through floodplain; 3 pipelines; 5 surface wells
	No. of potential displacements	1	None	None
	No. of vehicles diverted from SH 80 to US 90 (including heavy vehicles)	1,860	2,230	2,650
	Average cross-town travel time (min:sec)	5:08	5:17	7:11
	US 90 / Magnolia Ave Intersection Performance (Level of Service)	D	D	D
Cost (30%)	Estimated cost	$24.3M	$26.6M	$39.1M
Community Support (40%)	No. of times selected as preferred option by the public	2	12	26
	Total Weighted Score	**1.8**	**2.2**	**2.0**

Legend:	0	+1	+2

6.1.2 Improvement Projects

To compare the diverse nature of the projects, this study scored each project using the following criteria:

Alignment with Study Goals and Objectives: Improvement projects that can address multiple goals and objectives scored better as these can help optimize the use of limited City resources.

Alignment with local and regional planning efforts: Improvement projects that support goals of other planning efforts, namely the City's 2012 Comprehensive Plan, the 2019 Transportation Study, and the County's 2024 Transportation Plan, scored better as they would be able to address planning concerns at different scales and priorities. Additionally, it helps to position the City better for future grant applications.

Congruency with ongoing bond program: Improvement projects from this study that overlap or have synergies with projects initiated under the ongoing bond program are preferred as they can amplify the benefits from the program and lead to more efficient use of City's resources.

Community preference: Improvement projects which the community has indicated as their preference during stakeholder and public meetings scored better as they are more likely able to address concerns most pressing to the community. Alignment with community members also reflects greater likelihood of support and acceptance by the public during implementation.

Costs (Planning-level): The planning, design, and construction cost of implementing each improvement project can influence its feasibility. Improvement projects that are cheaper are generally preferred as it suggests quicker and easier implementation. However, it should be noted that a higher cost may be attributed to a larger project scale and may yield even greater benefits in the long-term.

Table 10: Improvement Projects Score Matrix

Project ID	Number of study goals and objectives met	Number of local and regional plans aligned with	Congruent with ongoing bond program (Yes/No)	Number of community members identifying as top priority	Planning-Level Cost Estimates* *(In 2026 Dollars)*	Total Score
Focus Area 1 – S Hackberry Ave						
1A	2	2	✓	15	$142,000	9
1B	1	2	✓	26	$1.59M	6
1C	2	2	✓	5	$635,000	7
Focus Area 2 – N Hackberry Ave						
2A	3	3	✓	39	$14M	9
2B	2	2	✓	8	$4.8M	4
Focus Area 3 – US 183 / Magnolia Ave						
3A	3	3	✓	25	$196,000	9
3B	2	-	-	19	$328,000	2
3C	2	-	-	2	$58,000	3
Focus Area 4 – Intersection of US 90 and US 183 / E Pierce St						
4A	3	1	✓	43	$396,000	8
4B	1	1	-	3	$92,000	4

Legend:	0	+1	+2

6.2 RECOMMENDED RELIEF ROUTE AND IMPROVEMENT PROJECTS

The evaluation in **Chapter 4** showed that the three alternatives did not reveal a significant difference among them in terms of performance outcomes. Hence, even though Relief Route Alignment Alternative A2 scored the highest of the three, it is not the recommended alternative. Instead, the LAC were in agreement that Alternative A3 would be the recommended alignment, as its location further west of the City would better serve the transportation needs of the City in the long term as it expands westwards.

For each of the four Focus Areas, the highest scoring option was selected as the recommended Improvement Project. The recommended projects were best aligned with local and regional planning efforts and would augment ongoing infrastructure improvements to yield greater benefits for the City.

Table 11: Final Recommendations

Area	Recommended Option
Relief Route	Alternative A3
Focus Area 1	Project 1A
Focus Area 2	Project 2A
Focus Area 3	Project 3A
Focus Area 4	Project 4A

6.3 PHASED IMPLEMENTATION

Successful implementation of the recommendations will require close coordination and collaboration across various local, regional, and state agencies. Additionally, managing expenditures and spending within the City's budget will also be a critical component. Setting up a phased implementation framework and classifying recommendations as near-, mid-, and long-term will therefore contribute to moving these projects forward in a feasible and fiscally responsible manner. The following defines each category and describes relevant and possible next steps that the City should undertake.

6.3.1 Near-term (0-5 years)

Recommendations in this category can be implemented in the next few years as they are generally of lower costs, have synergies with existing infrastructure projects, and/or require a simpler approval process.

Incorporate recommendations within existing projects: The City should examine the progress of other ongoing projects within the City, i.e. existing bond projects, and study how recommendations from this study can be implemented at the same time to minimize wasteful construction activity at the same location.

Appoint lead agency: The City should begin identifying lead departments or agencies and potential regional or state partners, if relevant, to initiate the development of these projects. The lead entity would define the scope of the proposed improvement works and chart out next steps for implementation.

Determine appropriate financing mechanisms: To implement early phases of the project, i.e. planning, design, and preliminary engineering, the City should start considering possible approaches to finance them, e.g. bond measures or Tax Increment Reinvestment Zone (TIRZ) as described in **Section 6.5.**

6.3.2 Mid-term (6-10 years)

Mid-term projects generally incur a higher cost that will likely require some form of external funding support. These projects also tend to involve other agencies and require more extensive coordination and collaboration, all of which can lead to longer project implementation durations.

Create collaboration framework: The City should identify and create partnerships with relevant regional and state agencies such as CAMPO, TxDOT, UPRR, and Caldwell County. Together, they should form a feasible collaborative structure that would facilitate downstream project development.

Identify lead agency: The lead agency should drive conversations within the partnership that aim to lay out a high-level roadmap for these projects. This roadmap can show other types of studies that will be necessary to determine the feasibility of the projects, define the project scope, or further divide the project into more manageable phases and easier implementation.

Research funding opportunities: The City should explore with its partners other funding sources and initiate preparation work to obtain these funds. For example, incorporating projects into regional and state level transportation plans, monitoring announcements of grant opportunities, upskilling staff and acquire necessary project management qualifications, setting aside budget for future match requirements, and other efforts that would strengthen their grant applications downstream.

6.3.3 Long-term (More than 10 years)

Long-term projects typically require heavy financial investment over a long period of time and necessitate more in-depth studies as it impacts a larger area.

Source for funding: Building on this study, the City should start identifying other funding sources that can support preliminary engineering studies. Developing the recommendations in greater detail will reveal the practical issues and constraints that the City will need to resolve and navigate. To set the project up for federal and state funding, the City should conduct similar types of preparation work as discussed for mid-term projects.

Establish partnerships: Depending on the type of constraints or issues, the City should initiate conversations with key project partners and potential impacted parties early to allow sufficient time for resolving issues. This may entail reaching out to TxDOT for projects on state roadway and/or UPRR for projects affecting the railroad.

6.4 SUPPORTING POLICY CONSIDERATIONS

Beyond implementing these improvement projects, the City can adopt other complementary policies to enhance the projects' effectiveness and generate other associated benefits for residents. One important step is to align with regional, statewide, and national frameworks to leverage broader planning efforts. The following lays out several of these important frameworks that not only support the goals and objectives of this Plan, but can be utilized when making future transportation decisions.

Best Practices: Adopt and use guidance and standards from American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration (FHWA), Texas Department of Transportation (TxDOT), and the National Association of City Transportation Officials (NACTO), to design and construct safe, context-sensitive transportation infrastructure.

Complete Streets: Adopt a Complete Streets policy to accommodate all users, regardless of mode, age, or ability in transportation infrastructure. This includes designing streets that support active transportation modes and infrastructure.

Vision Zero: Commit to a Vision Zero strategy to eliminate traffic fatalities and serious injuries. This policy emphasizes safe street design, speed management, and community engagement. Adopting a Vision Zero policy can position the City of Luling for funding opportunities for safety improvements.

Equity in Transportation: Prioritize future transportation investments in underserved neighborhoods and address disparities in access to safe and convenient mobility options. Provide connectivity to community needs including groceries and healthcare facilities.

Regional Alignment: Align local policies and plans with regional plans developed by the Capital Area Metropolitan Planning Organization (CAMPO), including the Regional Active Transportation Plan and the 2050 Regional Transportation Plan.

Connectivity and Accessibility: Promote policies that support a connected network of sidewalks, bicycle facilities, and trails that link destinations such as neighborhoods, schools, parks, public services, and jobs.

Sustainability and Health: Promote policies that support transportation infrastructure as a means to reduce greenhouse gas emissions and promote public health through increased physical activity.

6.5 IMPLEMENTATION STRATEGIES

To advance transportation infrastructure throughout the City and position projects for future funding, the City of Luling should consider a range of specific practical steps that translate policy into action. These strategies should be responsive to local context, community needs, and opportunities for coordination with local and regional partners.

Capital Improvement Program (CIP): Include active transportation infrastructure in existing and future CIP projects. Incorporate resiliency into CIP programming. Funding agencies want assurance that projects fit within a larger vision and are not standalone requests.

Local Planning Efforts: Develop and frequently maintain local planning documents on ordinances such as the comprehensive plan, thoroughfare plan, subdivision ordinance, zoning ordinance, and CIP.

Safe Routes to School: Partner with Luling Independent School District to identify and improve walking and biking routes for students. This includes infrastructure improvements such as sidewalks, bicycle facilities, crosswalks, signage, and traffic calming measures.

ADA Transition Plan: Develop and adopt an ADA Transition Plan that defines City timelines for investment in accessible transportation improvements.

Public Engagement: Periodically engage residents in the planning and implementation process through surveys, workshops, and public meetings to gather input and build community support. Documentation of community engagement is important as funding agencies like to see public backing and want assurance.

Active Transportation Audits: Conduct periodic audits to identify gaps and deficiencies in the sidewalk and bicycle network. Prioritize repairs and new construction in areas with high pedestrian activity.

Regional and Local Coordination: Build strong relationships and collaborate with CAMPO and Caldwell County to develop regional connectivity and leverage planning resources.

State and Regional Planning: Incorporate transportation current and future into State and Regional plans as funding agencies require projects to be reflected in adopted transportation plans that demonstrate consensus at the State and Regional levels.

Develop a Grant Calendar: Track recurring programs and application cycles. Knowing application windows in advance allows City staff to prepare supporting materials well before deadlines.

"Shovel Readiness": Funding agencies often score projects that are "shovel ready" higher because they can be delivered quickly. Consider completing project elements such as traffic warrants, preliminary engineering, environmental and ROW assessments, utility coordination, and cost estimates in advance.

6.6 FUNDING SOURCES

Implementing transportation infrastructure requires strategic investment and access to diverse funding sources. The City can leverage federal, state, and regional, programs to support planning, design, and construction of facilities. Understanding the purpose and eligibility criteria of each funding mechanism is essential for successful grant applications and long-term financial planning. The following lists funding opportunities to guide future implementation efforts.

6.6.1 Federal

Safe Streets and Roads for All (SS4A): A federal initiative that funds comprehensive safety action plans and implementation projects aimed at preventing roadway fatalities and injuries.

Congestion Mitigation and Air Quality (CMAQ) Program: A federally funded transportation program that provides funding for projects that reduce traffic congestion and improve air quality, particularly in areas that do not meet or are working to maintain federal air quality standards.

Rebuilding American Infrastructure with Sustainability and Equity (RAISE): A competitive federal grant program that supports infrastructure projects with significant local and regional impact, including grade separations, and multimodal, freight mobility, and safety projects.

Railroad Crossing Elimination (RCE) Grant Program: Provides federal funding through the Federal Railroad Administration (FRA) for projects that improve safety and mobility at highway-rail or pathway-rail crossings, including grade separations, crossing closures, track relocations, warning devices, and related planning, environmental, design, and construction activities.

Consolidated Rail Infrastructure and Safety Improvements (CRISI) Program: Provides federal funding through the FRA for highway-rail grade crossing improvement projects, including improvements that reduce conflicts between trains and roadway users.

6.6.2 State and Regional

TxDOT Transportation Alternatives Set-Aside: A state-level program that allocates federal Transportation Alternatives Program (TAP) funds for active transportation, including Safe Routes to School, and safety projects. Cities can apply for funding through TxDOT's competitive process.

TxDOT Highway Safety Improvement Program (HSIP): A federal program managed by TxDOT aimed at reducing fatalities and serious injuries on all public roads. Cities can partner with TxDOT to pursue safety mitigation measures that address vehicular and active transportation crashes.

CAMPO Funding: CAMPO offers funding opportunities through various federal programs such as Carbon Reduction Program (CRP), Surface Transportation Block Grant (STBG), Transportation Alternative Set-Aside (TASA). Active transportation projects that align with CAMPO's goals may receive support.

TxDOT Texas Off-System Rail Grade Separation State Fund Program: The Texas Legislature established the Off-System Rail Grade Separation State Fund Program in 2025 to support rail grade separation projects located on local roadways (not state highways). Projects must improve safety, reduce congestion, or support economic development.

Texas Community Development Block Grant (TxCDBG) Fund: Provides federal CDBG funds, administered by the state, to help small rural cities and eligible counties develop viable communities through public facilities, housing, infrastructure, and economic development improvements. Eligible projects include roadway and drainage improvements and planning and capacity-building projects like comprehensive plans.

6.6.3 Local

Local Bonds: The City and County can issue bonds to finance active transportation, roadway, and rail infrastructure projects; bond measures may require voter approval.

Certificates of Obligation: Certificates of Obligation may be utilized by the City for urgent and publicly supported projects without the requirement of a bond election.

Transportation Impact Fee (TIF): A one-time charge assessed on new development to help pay for roadway, intersection, sidewalk, bicycle and pedestrian, traffic signal, or other transportation improvements needed to serve the added travel demand created by that development.

Tax Increment Reinvestment Zone (TIRZ): A designated area created by the city to help fund public improvements and encourage private investment by capturing the growth in property tax revenue within the zone. Taxes on the original base value continue going to the participating taxing entities, while some or all of the additional tax revenue from increased property values—the "tax increment"—is deposited

into a fund that can be used for eligible improvements within the TIRZ, such as infrastructure, streets, utilities, drainage, or redevelopment projects.

Public-Private Partnerships: Collaborate with private entities, nonprofits, and developers to fund and implement active transportation projects. Partnerships can leverage resources and expertise to achieve shared mobility goals.

As this chapter has laid out in detail, implementing the recommended projects from this plan will require other supplementary policies and strategies. More importantly, the City will have to coordinate and collaborate closely with other agencies and combine diverse funding sources and financing mechanisms to enable successful implementation. **Table 12** summarizes the key implementation steps associated with each recommendation.

Table 12: Overall Project Implementation Matrix

Recommendation	Implementation Timeline	Construction Cost Estimates *(in 2026 dollars)*	Potential Funding Sources and Financing Mechanisms	Agencies Involved
1A	Near	$142,000	• TxCDBG, • TxDOT TASA • Local Bonds • SS4A • City Budget	State of Texas, City of Luling, Caldwell County
2A	Mid	$14M	• TxCDBG, TxDOT TASA • Local Bond • STBG • SS4A	State of Texas, City of Luling, TxDOT, Caldwell County
3A	Near	$196,000	• City Budget • Local Bonds • Downtown TIRZ	TxDOT, EDC, City of Luling, Caldwell County
4A	Mid	$396,000	• TxDOT TASA • RAISE Grant	TxDOT, City of Luling
Relief Route Alignment A3 (including grade-separation)	Long	$39.1M	• TxDOT Texas Off-System Rail Grade Separation State Fund Program • RAISE • RCE • CRISI	FHWA, FRA, TxDOT, CAMPO, Caldwell County, City of Luling

7 Appendices

APPENDIX A: DATA COLLECTION & ASSESSMENT TECHNICAL MEMO

APPENDIX B: PUBLIC ENGAGEMENT TECHNICAL MEMO

APPENDIX C: ALTERNATIVES ANALYSIS TECHNICAL MEMO

Appendix A:
Data Collection and Assessment Technical Memorandum

City of Luling Transportation Plan Update

April 2, 2026

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Introduction

Over the last few years, the City of Luling ("The City") has experienced increasing vehicular and truck through-traffic along its roads. Fueling the City's growth is its strategic location at the crossroads of three major highways, US 183, US 90, and SH 80, that connect many cities in Central Texas and those along the Gulf Coast. Rising population numbers and new commercial developments within Caldwell County and other surrounding counties have generated greater number of trips through the City.

These highways are also located on TxDOT's Highway Freight Network and connect to I-10 at the City's southern limits, contributing to high volumes of truck traffic passing through the City as well. Additionally, the resurgence of oil and natural gas production in the Eagle Ford Shale Region south of Caldwell County since the 2010s has also contributed to truck traffic increase through Luling.

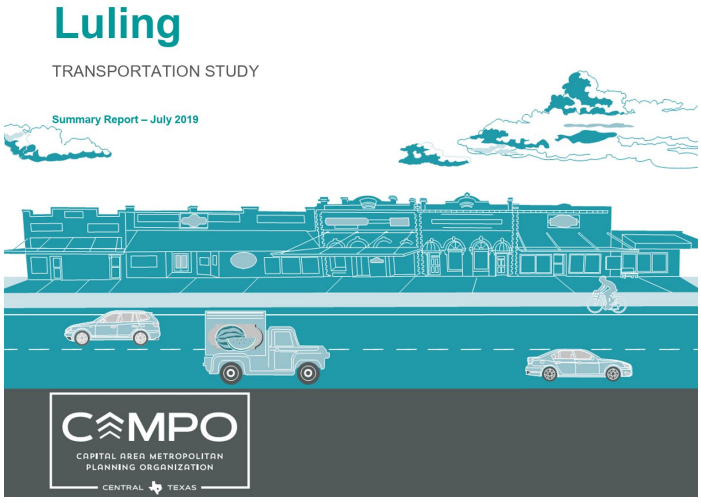
The increased traffic growth not only brings about slower travel times within the City but has also led to more instances of crashes at highway intersections. This plan update is therefore timely to review the existing issues faced by the City and develop strategies to address these issues.

STUDY BACKGROUND

In November 2024, voters approved the Caldwell County Road Bond Program, adopting 32 projects aimed at enhancing transportation networks across the County over the next several years. The Luling Transportation Plan Update was identified as one of four key planning and corridor studies funded by this program. The study is conducted through a partnership between the City of Luling and Caldwell County, with the goal of creating a safe and connected transportation system in Luling.

Luling's transportation plan was last updated in 2019 and was led by the Capital Area Metropolitan Planning Organization (CAMPO). That study identified a series of roadway, sidewalk, and traffic signal improvements along Hackberry Avenue and at the Magnolia Ave / Pierce Street Intersection in the near- to mid-term. Additionally, the plan developed a schematic long-term alternative route that would help relieve congestion in Central Luling caused by through-traffic while maintaining visibility of downtown Luling.

Figure 1: 2019 Luling Transportation Study



Building on the 2019 study, the current plan update aims to identify safety improvements, enhance mobility in downtown Luling for all modes of local and through-traffic, develop and evaluate the feasibility of three alignments from the Option A relief route recommended in the 2019 study, and promote the unique character of downtown and economic development opportunities.

PURPOSE OF THIS MEMO

The purpose of this Data Collection and Assessment Technical Memo is to compile and summarize the findings from analyses of existing conditions and to document the preliminary alignment options of the alternative route. These findings are important in understanding the trends, constraints, and key problem areas that require focused attention. The information from this memo will be shared with the public for verification and will later be used as a basis to inform policy and design strategy recommendations.

Methodology

This memo first reviewed a series of existing local, county, and state plans to identify relevant policies and projects that may impact or have synergies with this study. **Table 1** shows the full list of plans reviewed for this memo.

Table 1: Plans Reviewed

Data Type	Data Source
2019 Luling Transportation Plan	CAMPO, City of Luling
City of Luling Master Plan	City of Luling
City of Luling Zoning	City of Luling
City of Luling Capital Projects	City of Luling
CAMPO 2050 Regional Transportation Plan	CAMPO
CAMPO 2025-2028 TIP	CAMPO
Caldwell County 2024 Transportation Plan	Caldwell County
Caldwell County Road Bond Projects	Caldwell County
TxDOT 2026 UTP and 2025-2028 STIP	TxDOT
TxDOT Long Range Transportation Plan and Statewide Active Transportation Plan	TxDOT
TxDOT Letting Schedule	TxDOT

Additionally, this memo uses data from a range of federal, state, regional, and local agencies that provide an understanding of the existing and projected population and employment trends, local and regional travel patterns, freight movements, traffic and safety issues, and environmental constraints. The full list of data sources is compiled in the following table.

Table 2: Data and Sources Analyzed

Data	Data Source
Demographic and Employment	U.S. Census American Community Survey (ACS)
CAMPO 2050 Travel Demand Model	CAMPO
Current and Historical Average Annual Daily Traffic (AADT)	TxDOT Statewide Traffic Analysis and Reporting System (STARS II)
Crash Data	TxDOT Crash Records Information System (CRIS)
Drilling Permits	The Railroad Commission of Texas
Oil and Gas Production	The Railroad Commission of Texas
Travel Activity	Regional Integrated Transportation Information System (RITIS) platform
Elemental Occurrence (EO)	Texas Parks and Wildlife Department (TPWD)
Floodplain	Federal Emergency Management Agency (FEMA)

National Wetlands Inventory (NWI)	U.S. Fish and Wildlife Service (USFWS)
Utility	Railroad Commission (RRC) of Texas
Petroleum Storage Tank (PST)	Texas Commission on Environmental Quality (TCEQ)
Recorded Texas Historic Landmark (RTHL)	TxDOT Historic Resources Aggregator
Cemetery, Historical Markers, National Register of Historic Places (NRHP) Historic Districts, and Historic Highway Route	Texas Historical Commission (THC) Atlas

Summary of Findings

REVIEW OF PLANS

To gather background information on past and existing planning efforts in Luling and the surrounding area, this memo conducted a review of plans published by the Texas Department of Transportation (TxDOT), CAMPO, Caldwell County, and the City of Luling – refer to Table 2. These plans identified strategic priorities and projects slated for implementation in the upcoming years, which this study should consider as they may impact the transportation network in Luling.

While most plans did not mention roadways or projects in Luling or the surrounding area, several key findings emerged from TxDOT's Long Range Transportation Plan, CAMPO's 2050 Regional Transportation Plan, and Caldwell County's 2024 Transportation Plan.

City of Luling Master Plan

The City's Master Plan was last updated in 2011 and developed recommendations pertaining a variety of themes including Land Use, Housing, Economic Development, Streets and Drainage etc. In 2011, the City was already experiencing traffic congestion at highway intersections within the city limits that led to other secondary issues such as traffic detouring to side streets or bypassing the City altogether and higher rates of crashes. Recommendations to address congestion included the construction of a bypass route around Luling that connects US 183 to the north and SH 80 to the south, which differs from the recommended alignment of the east-west relief route in the 2019 Luling Transportation Plan.

Besides addressing traffic congestion, the Master Plan also emphasized creating a "walkable community" in Luling as a goal with developing a network of walkways, sidewalks, trails throughout the community and boulevards lined with sidewalks, lighting, and landscaping as key objectives. Additionally, the revitalization of Downtown was highlighted as another key focus. Recommended strategies included providing bike and pedestrian paths from Downtown to parks on the north and south sides and providing adequate cross walks to facilitate pedestrian movement, increasing programming within Downtown, implementing a branding strategy and executing a marketing campaign, as well as developing public spaces to retain interest of visitors.

TxDOT Long Range Transportation Plan

US 183 was identified as a potential corridor of statewide significance in *Connecting Texas 2050*, TxDOT's Long Range Transportation Plan (**Figure 2**). Through stakeholder and public input, this roadway that passes through Luling from the north to the east was listed as a corridor where a comprehensive study would be necessary to identify needs and develop implementation strategies. The study could result in transportation improvements that potentially increase in capacity, generating more traffic entering and exiting Luling.

Figure 2: Corridors of Statewide Significance in Connecting Texas 2050



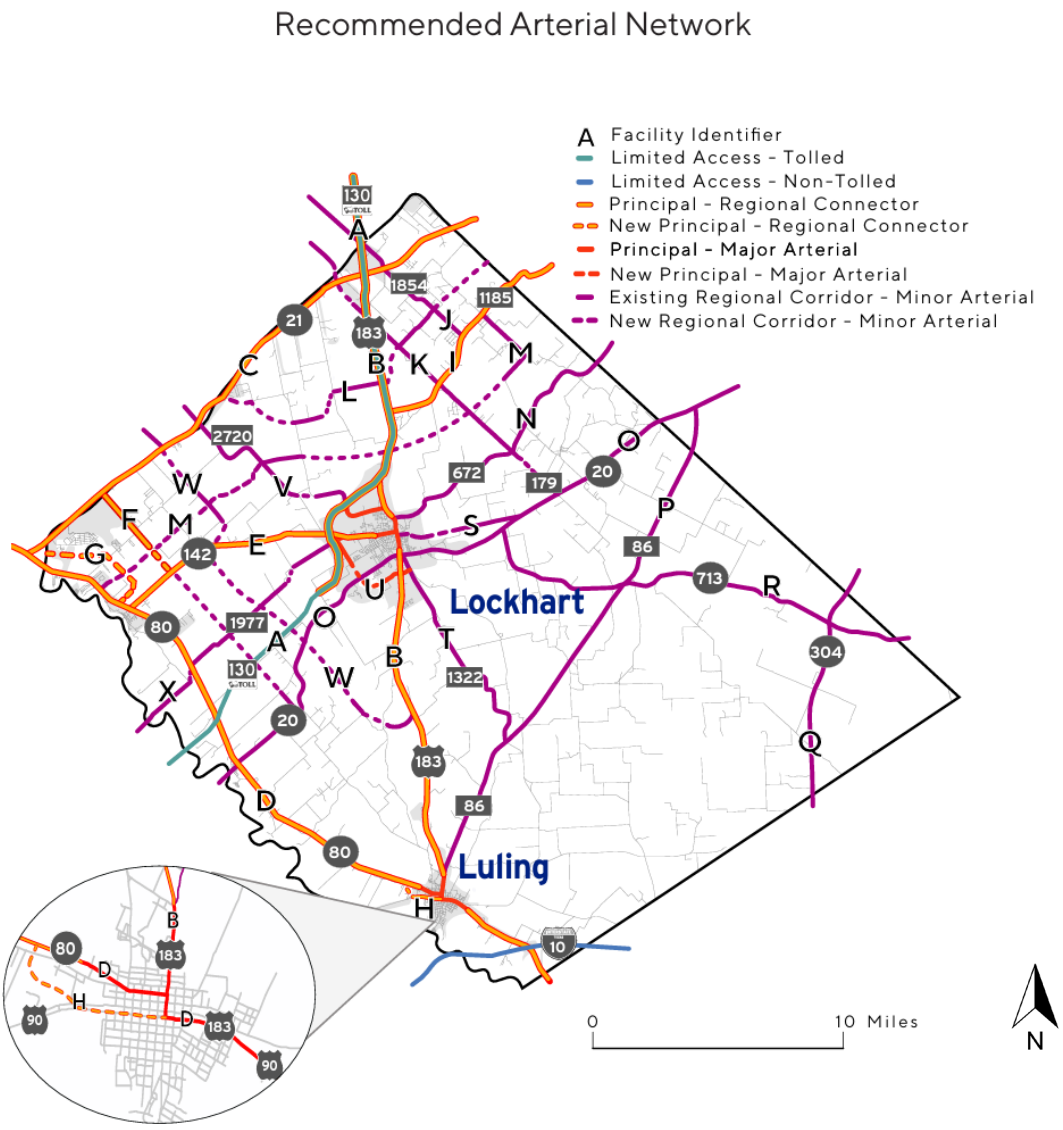
Source: Connecting Texas 2050

Caldwell County 2024 Transportation Plan

The Recommended Arterial Network in the 2024 Transportation Plan by Caldwell County has proposed to upgrade segments of US 183, SH 80, and US 90 leading into and out of Luling from a Major Arterial to Regional Connector. The upgrade has led to the initiation of the SH 80 Corridor Study and US 183 Turn Lane Addition that entails design and safety improvements to accommodate the growing traffic volumes on these highways.

The Transportation Plan also highlights a new alignment for SH 80 through Luling, connecting to US 90 west of the City and US 183 on the east side (**Figure 3**). The alignment follows the relief route option recommended in the 2019 Luling Transportation Plan. This study will develop more detailed alignment options informed by further analyses and input from stakeholders and the public. The section at the end of this memo will outline the alternatives for this alignment and the factors considered for each alternative.

Figure 3: Recommended Arterial Network from the 2024 Caldwell County Transportation Plan



Source: 2024 Caldwell County Transportation Plan

CAMPO 2050 Regional Transportation Plan

The CAMPO 2050 Regional Transportation Plan includes a list of priority projects, activities, and programs that advance goals related to safety, mobility, economic development, equity, innovation, and stewardship within the six-county region. Within Luling, two projects were identified. Capital Area Rural Transportation Service (CARTS) has proposed a Lockhart-Luling Connector Service by 2030 and an Intermodal Station in Luling by 2035. These projects have been identified as fiscally constrained projects where local sponsors, i.e. CARTS, have demonstrated an ability to fund the projects within the time frame of the RTP or have been prioritized for federal funding. As this study examines areas for improvements within Luling, the transit route and intermodal station should be considered to optimize first- and last-mile access and connections for pedestrians and cyclists to CARTS' transit service.

Figure 4: Transit Projects Identified for Luling in CAMPO 2050 RTP

MPO ID	Sponsor	Co Sponsor	County	Roadway/ Facility	Limits From/At	Limits To	CSJ	Description	Total Cost	Let Year	100% Local
33-00004-00	CARTS		Caldwell	CARTS Luling Intermodal Station	City of Luling			Construction of new Luling Intermodal Station with park-and-ride facility	$ 3,000,000	2035	No
33-00006-00	CARTS		Caldwell	Lockhart-Luling Connector Service	Lockhart	Luling		Lockhart-Luling Connector Service	$ 125,000	2030	No

Source: CAMPO 2050 Regional Transportation Plan

COMMUNITY CONTEXT AND DEVELOPMENT GROWTH

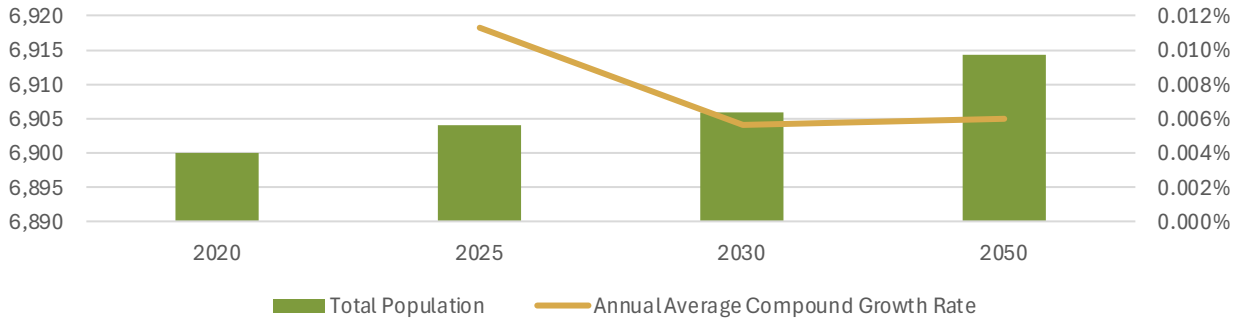
This section provides an assessment of the community characteristics and context within the City of Luling, including current population profiles, projected trends in population and employment growth, and trends in the oil and gas industry. The analysis draws on data from the U.S. Census, CAMPO's Travel Demand Model, and the Texas Railroad Commission.

Demographics and Future Growth

Based on five-year estimates from the American Community Survey (ACS), the City of Luling was home to 5,531 residents in 2024, representing about 12 percent of the total population of Caldwell County. Population growth in the City and the surrounding communities is not expected to be substantial. Based on data from CAMPO's Travel Demand Model, population numbers are projected to remain largely stable, increasing at an annual growth rate of less than 0.02% (**Figure 5**).

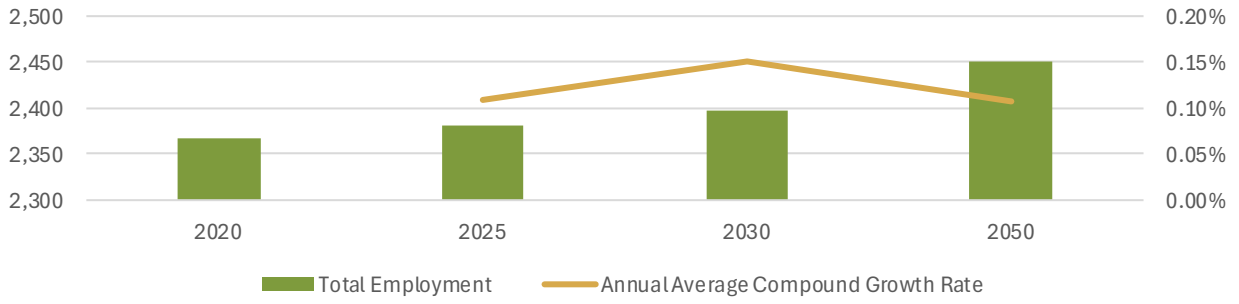
Employment is projected to see modest growth as well, rising from 2,367 jobs in 2020 to around 2,450 jobs by 2050 (**Figure 6**). The largely stable population and employment growth in the area suggests that future transportation needs may likely center around maintaining and enhancing existing infrastructure and improving access to existing amenities and employment centers.

Figure 5: Population Projection and Growth Rate



Source: CAMPO's Travel Demand Model

Figure 6: Employment Projection and Growth Rate

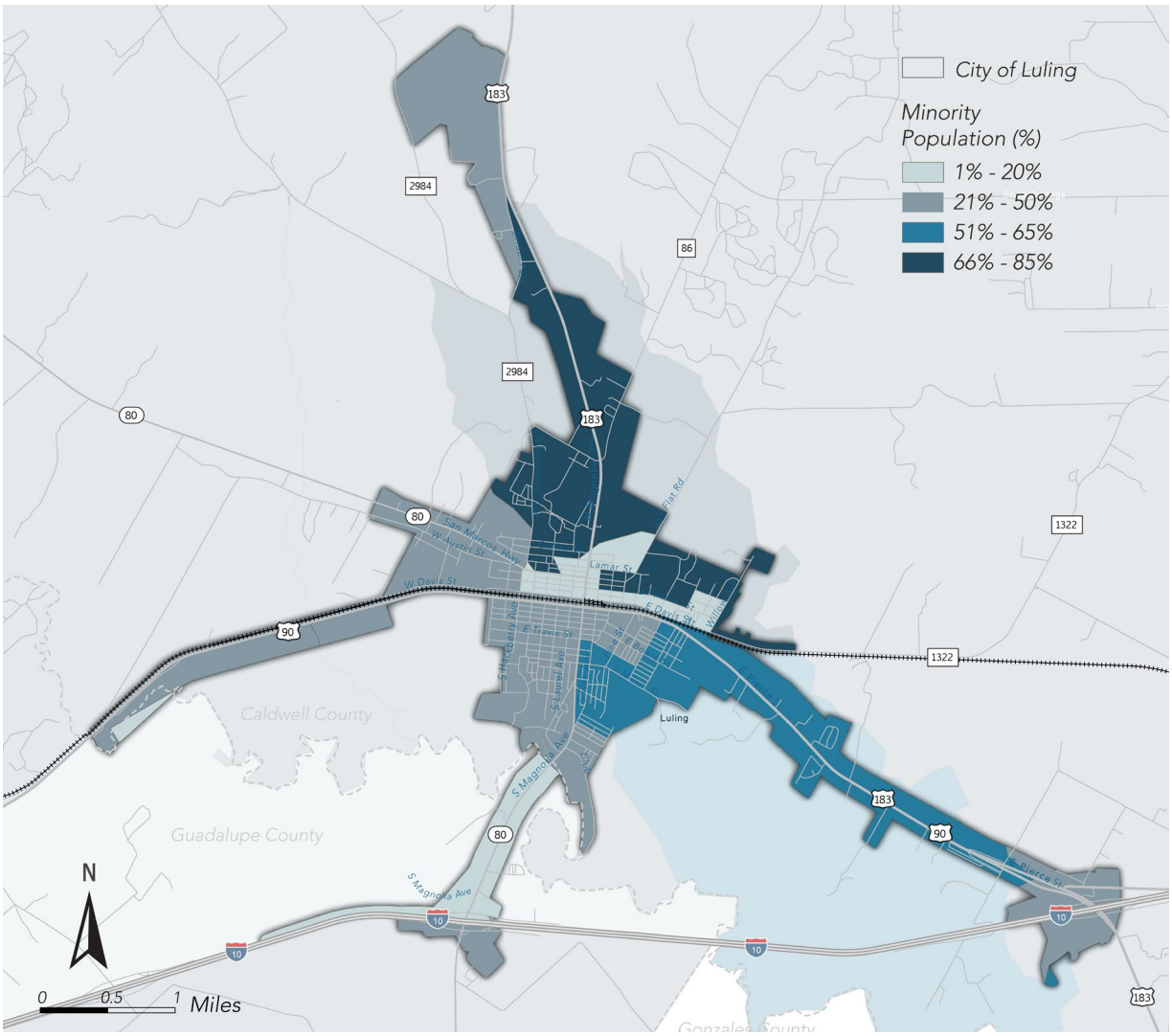


Source: CAMPO 2050 Travel Demand Model

MINORITY POPULATION

Nearly half of Luling's residents identify as non-white, a proportion slightly higher than the countywide average of 42 percent. Black or African American residents make up about 9 percent of the community. As shown in **Figure 7**, neighborhoods in the northern portion of the City along US 183, as well as areas to the east along the US 183/US 90 corridor, have particularly high concentrations of minority residents, with more than half of the population in these areas identifying as non-white. The predominant ethnicity is Hispanic or Latino, comprising approximately 56 percent of the City's population.

Figure 7: Minority Population



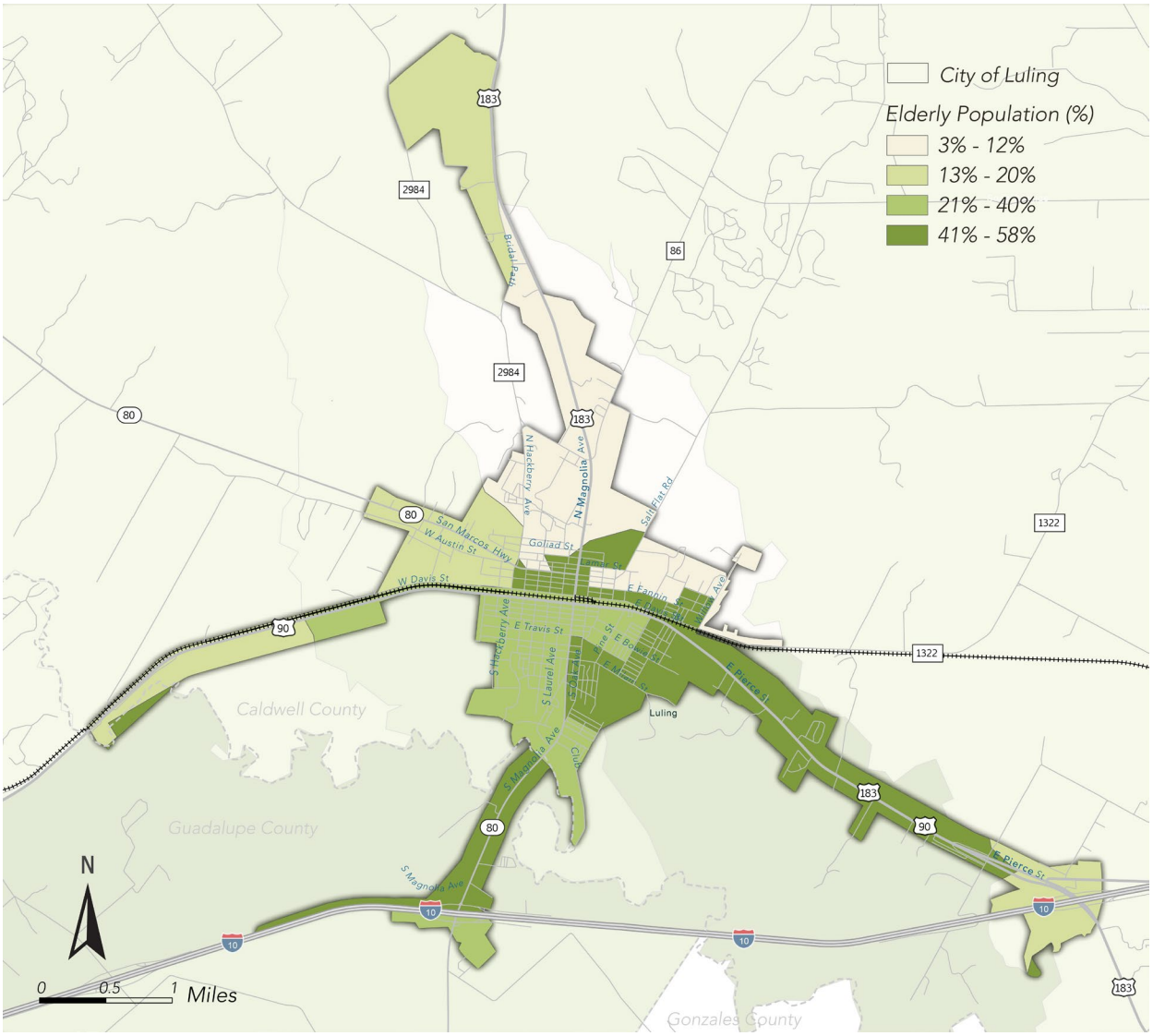
Source: 2023 5-Year ACS, U.S. Census Bureau

MEDIAN AGE

The median age in the City of Luling is around 50 years old, reflecting a community with a significant older adult population. Approximately 27 percent of residents are aged 65 years or older, higher than the Caldwell County average of 15 percent, highlighting the importance of planning for the needs of older adults, including accessible transportation and infrastructure.

As shown in **Figure 8**, the highest concentrations of elderly residents are in the downtown area, along the US 183 and US 90 corridors to the east, and in the southern portion of the City near SH 80.

Figure 8: Elderly Population

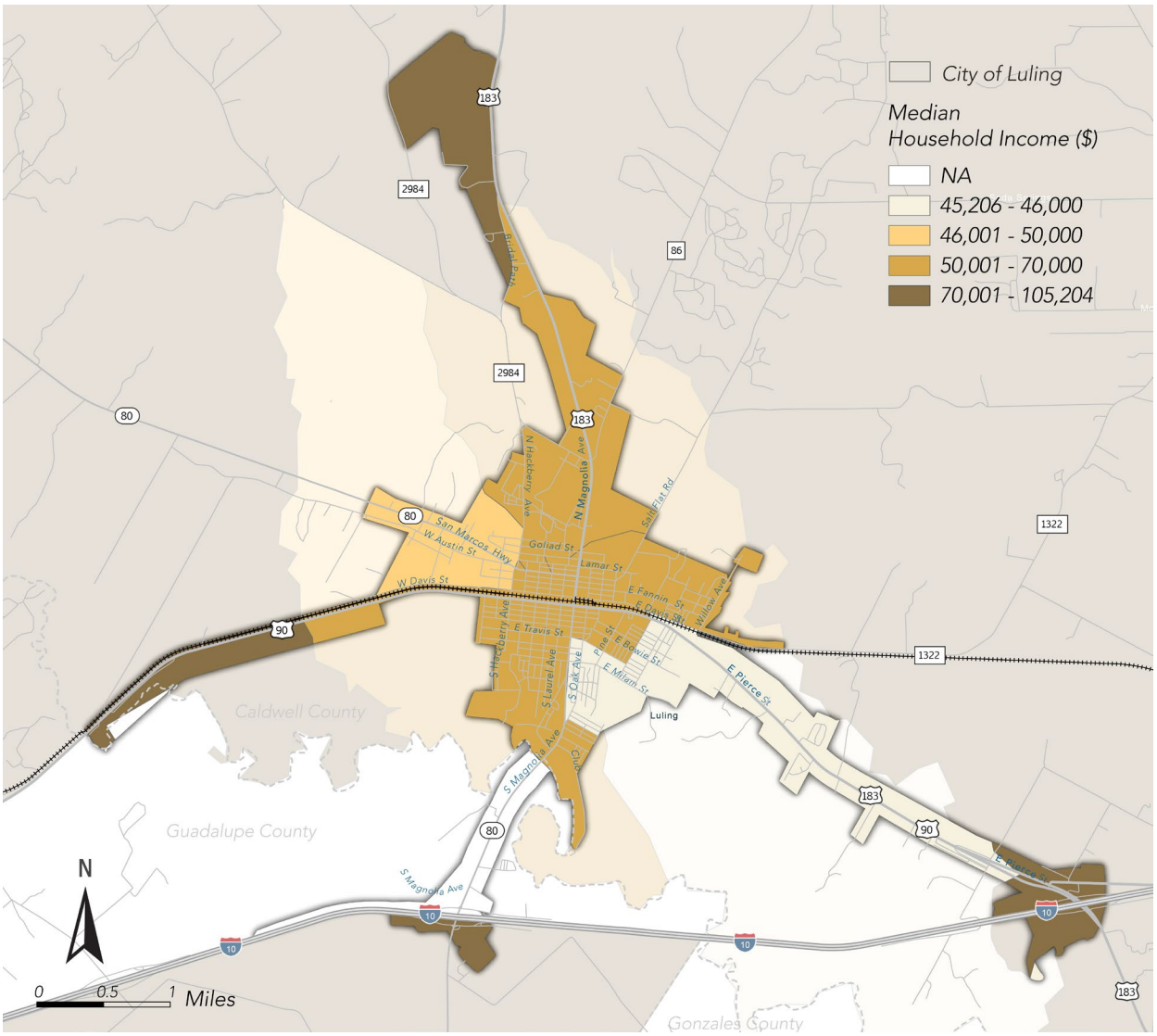


Source: 2023 5-Year ACS, U.S. Census Bureau

MEDIAN INCOME

The City of Luling has a median household income of $55,733, which is notably lower than the Caldwell County median of $68,503. As illustrated in **Figure 9**, most neighborhoods within the City report median household incomes ranging between $50,000 and $70,000. However, incomes in the western and eastern portions of the City trend lower while areas along the outer edges of the City generally have higher median incomes. Improving access of lower-income communities to employment centers, education, healthcare, and other essential services can help to reduce their economic burdens.

Figure 9: Median Household Income

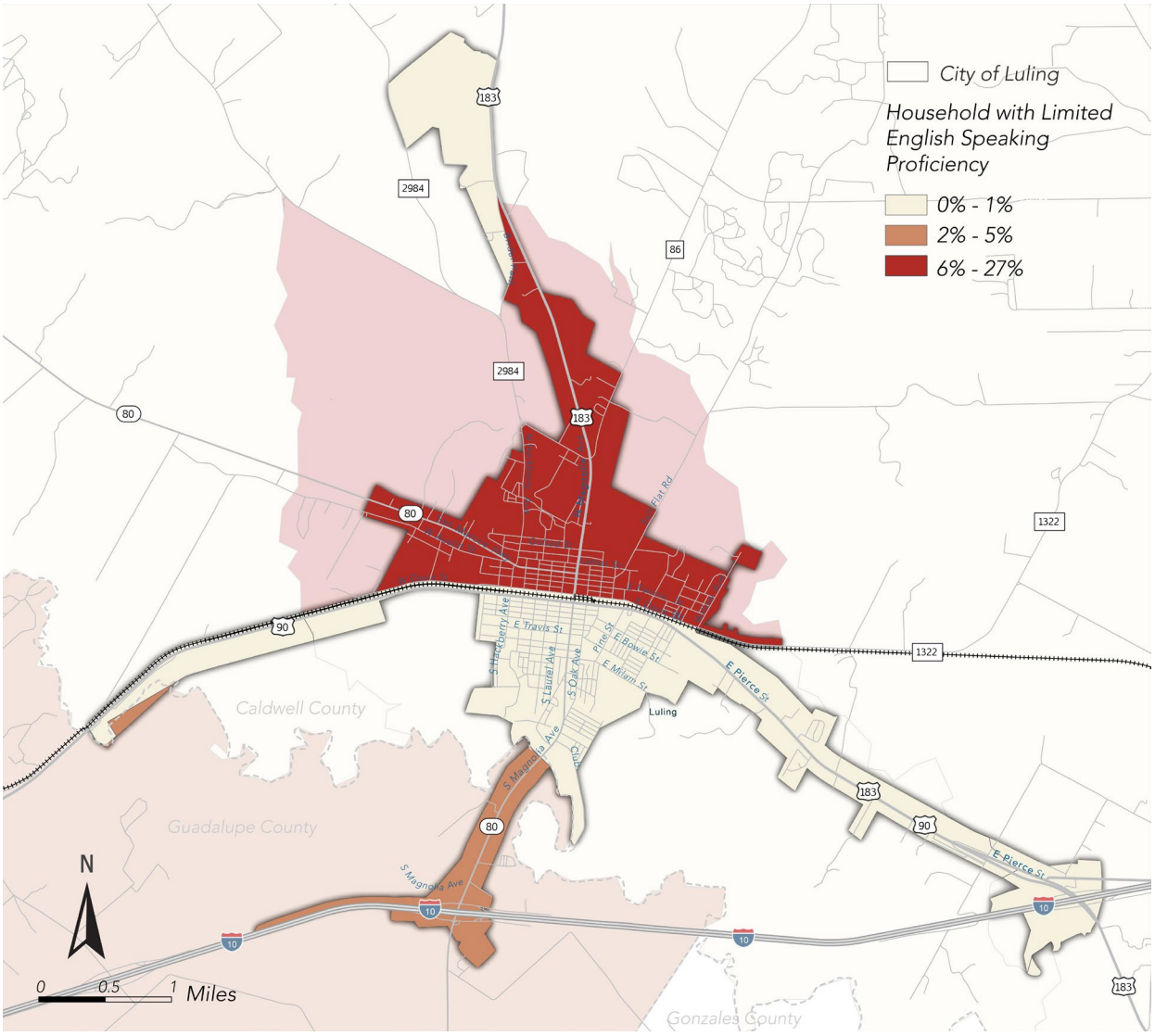


Source: 2023 5-Year ACS, U.S. Census Bureau

LIMITED ENGLISH-SPEAKING PROFICIENCY

Compared to Caldwell County where approximately 7 percent of residents have limited English proficiency, the City of Luling has nearly doubled that share, at about 13 percent. As shown in **Figure 10**, the distribution of residents with limited English proficiency is uneven across Luling. South of US 90, only about 2 percent of residents are identified as having limited English proficiency. In contrast, neighborhoods north of US 90 have substantially higher concentrations, with more than 26 percent of residents having limited proficiency in English. This highlights the need for communication strategies that improve access to information about the transportation system and the overall study for this group of residents, for example - developing surveys and informational materials in other languages.

Figure 10: Household with Limited English-Speaking Proficiency

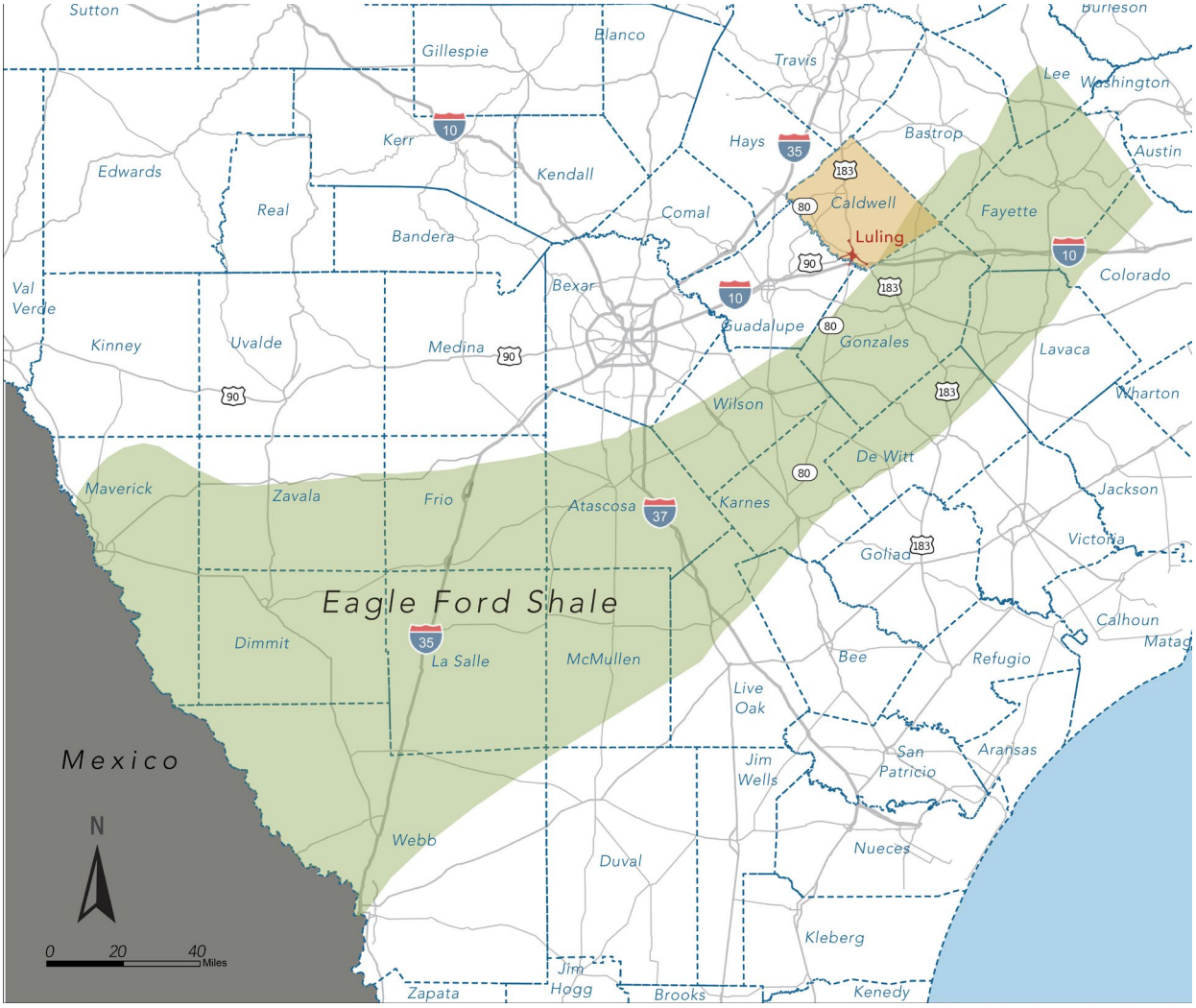


Source: 2023 5-Year ACS, U.S. Census Bureau

Oil Industry Growth in Eagle Ford Shale Region

The Eagle Ford Shale (**Figure 11**) is a major hydrocarbon-producing geological formation capable of yielding both natural gas and oil at higher rates than many traditional shale fields. Rising oil prices in the early 2010s led to a substantial increase in drilling activity and production across the region.

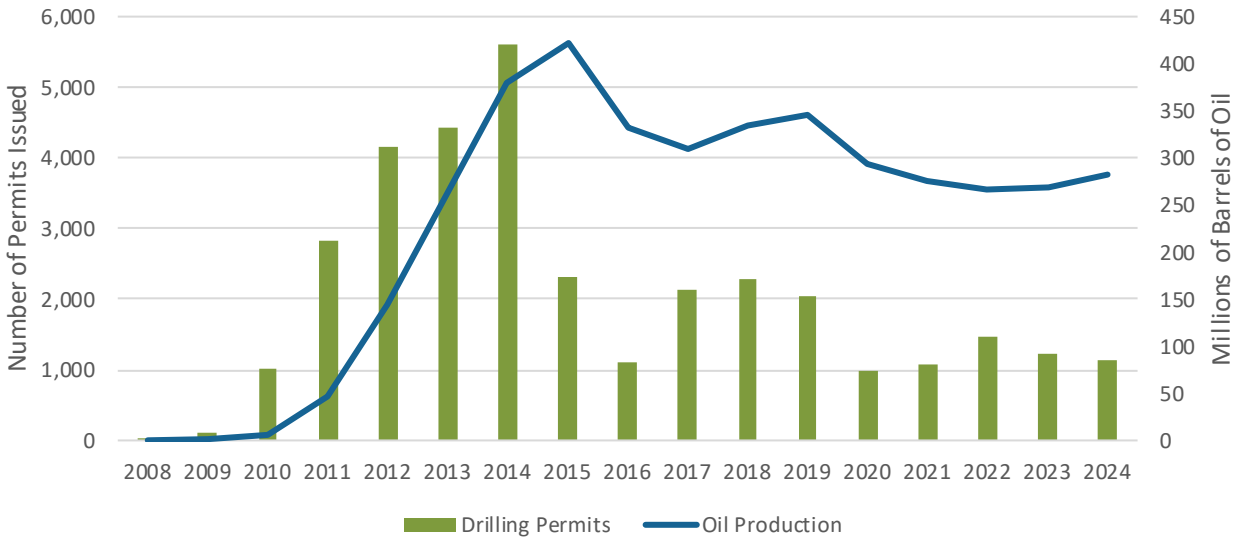
Figure 11: Eagle Ford Shale Region



Source: The Railroad Commission of Texas

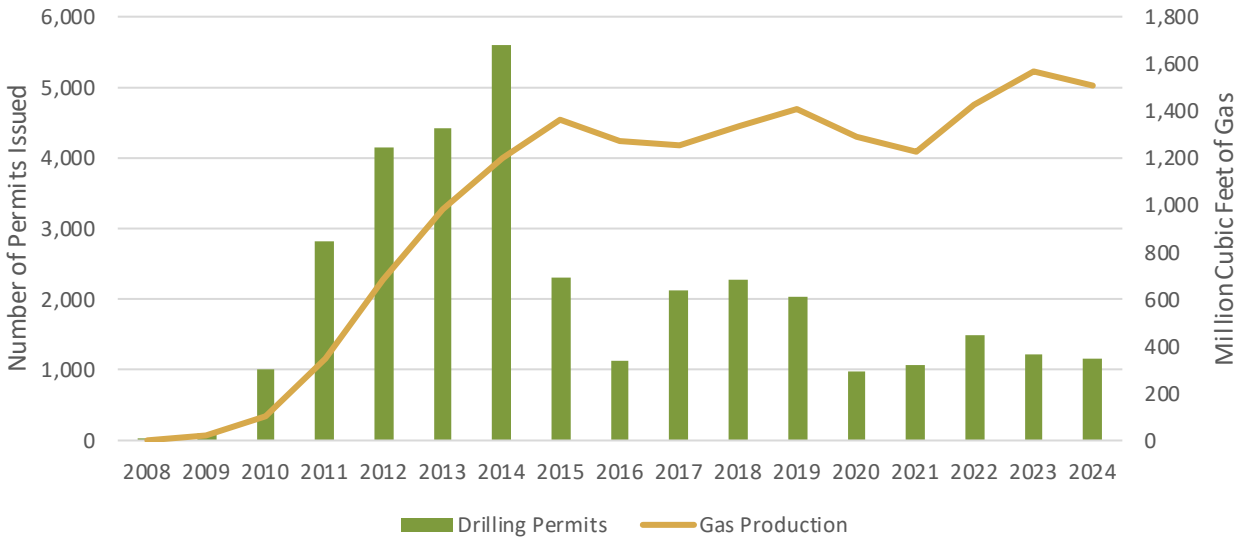
Although the subsequent decline and stabilization of oil prices led to fewer drilling permits issued after 2014, overall oil and gas production has remained consistently high in recent years (**Figure 12 and Figure 13**). In fact, production has been on the rise again since 2021. Workers and freight traveling between San Marcos/Austin and the Eagle Ford Shale region typically pass through Luling via SH 80 or US 183, potentially contributing to higher volumes of traffic within the City.

Figure 12: Drilling Permits Issued vs. Oil Production in the Eagle Ford Shale Region



Source: Railroad Commission of Texas Major Oil and Gas Formations

Figure 13: Drilling Permits Issued vs. Gas Production in the Eagle Ford Shale Region



Source: Railroad Commission of Texas Major Oil and Gas Formations

TRAFFIC

Traffic Growth on Major Roadways

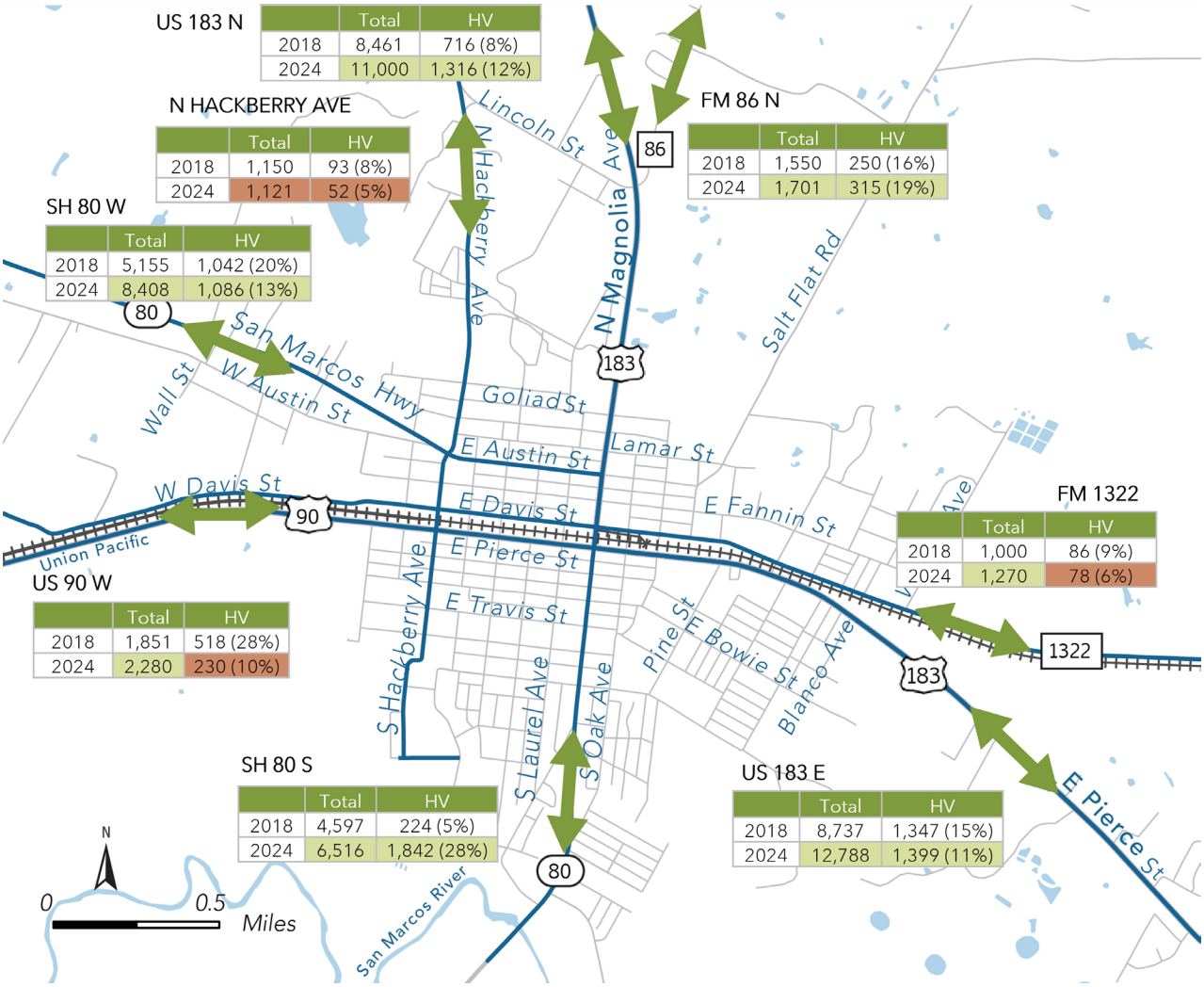
Historical and existing traffic counts were collected to better understand the traffic characteristics of the area. Average Annual Daily Traffic (AADT) counts from 2018 to 2024 were extracted for roadways entering and exiting the City from the TxDOT Statewide Traffic Analysis and Reporting System (STARS II), as shown in **Figure 14.**

It was observed that US 183 east had the highest AADT of about 12,800 vehicles per day (vpd) in 2024, followed by US 183 north which had AADT of 11,000 vpd. SH 80 south had AADT of about 6,500 vpd, and SH 80 west had AADT of about 8,400 vpd. For heavy vehicles (HV), SH 80 south had the highest HV of about 1,850 vpd, followed by US 183 east having HV of about 1,400 vpd, and US 183 north having HV of about 1,300 vpd. **Figure 15** shows the traffic AADT trends from 2018 to 2024 for the following roadways:

- US 183 east of Blanco Avenue;
- US 183 north of FM 86;
- SH 80 west of Wall Street;
- SH 80 south of San Marcos River;
- US 90 west of Davis Street;
- FM 86 north of US 183/Lincoln Street;
- Hackberry Avenue north of Lincoln Street; and
- FM 1322 east of Willow Avenue

The highest traffic growth rate from 2018 to 2024 was observed for SH 80 west of Wall Street where AADT growth was about 63%, followed by US 183 east of Blanco Avenue where AADT growth was 46%, and SH 80 south of San Marcos River where AADT growth was 42%. For the locations not along US 183 and SH 80, traffic volumes were fairly low, and growth was steady from 2018 to 2024. Overall, due to population growth in the region, combined with new residential developments, and consistently high levels of natural gas and oil production in the Eagle Ford Shale Region, the data shows an increasing trend of traffic entering and exiting Luling.

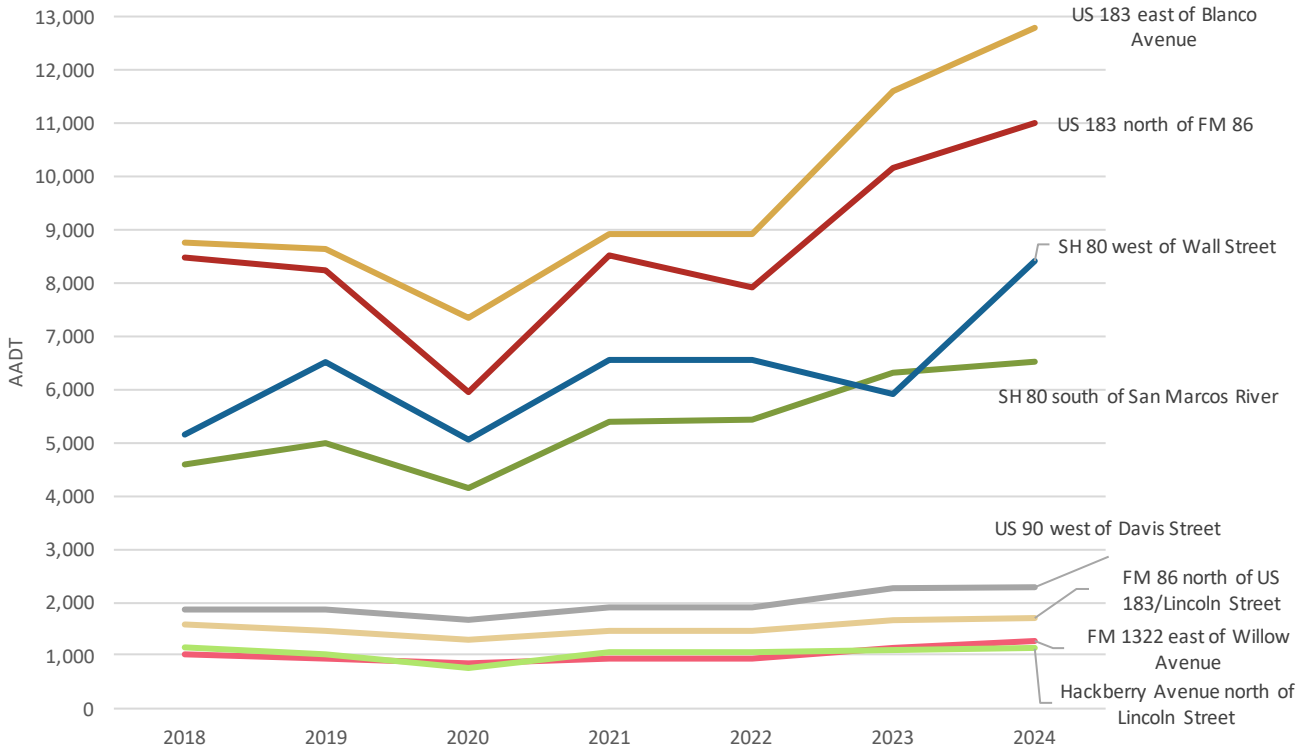
Figure 14: AADT (2018 and 2024)



Note: Percentages reflect proportion of heavy vehicles of total vehicles (Bidirectional traffic) along the roadway.

Source: TxDOT Statewide Traffic Analysis and Reporting System (STARS II)

Figure 15: Traffic AADT Trends from 2018 to 2024 for Roadways



Source: TxDOT Statewide Traffic Analysis and Reporting System (STARS II)

Travel Flow Analysis

To better understand travel conditions and the common routes of travel through Luling for both automobiles and heavy vehicles, historical travel activity data obtained from Regional Integrated Transportation Information System (RITIS) platform was analyzed. While AADT data reflects actual counts of traffic volumes collected at specific points along the roadways, data from RITIS is based on INRIX datas and derived from GPS data collected through mobile devices, connected cars, fleet vehicles, and trucks. RITIS data further supports traffic analytics like origin-destination flow analysis that can provide route patterns.

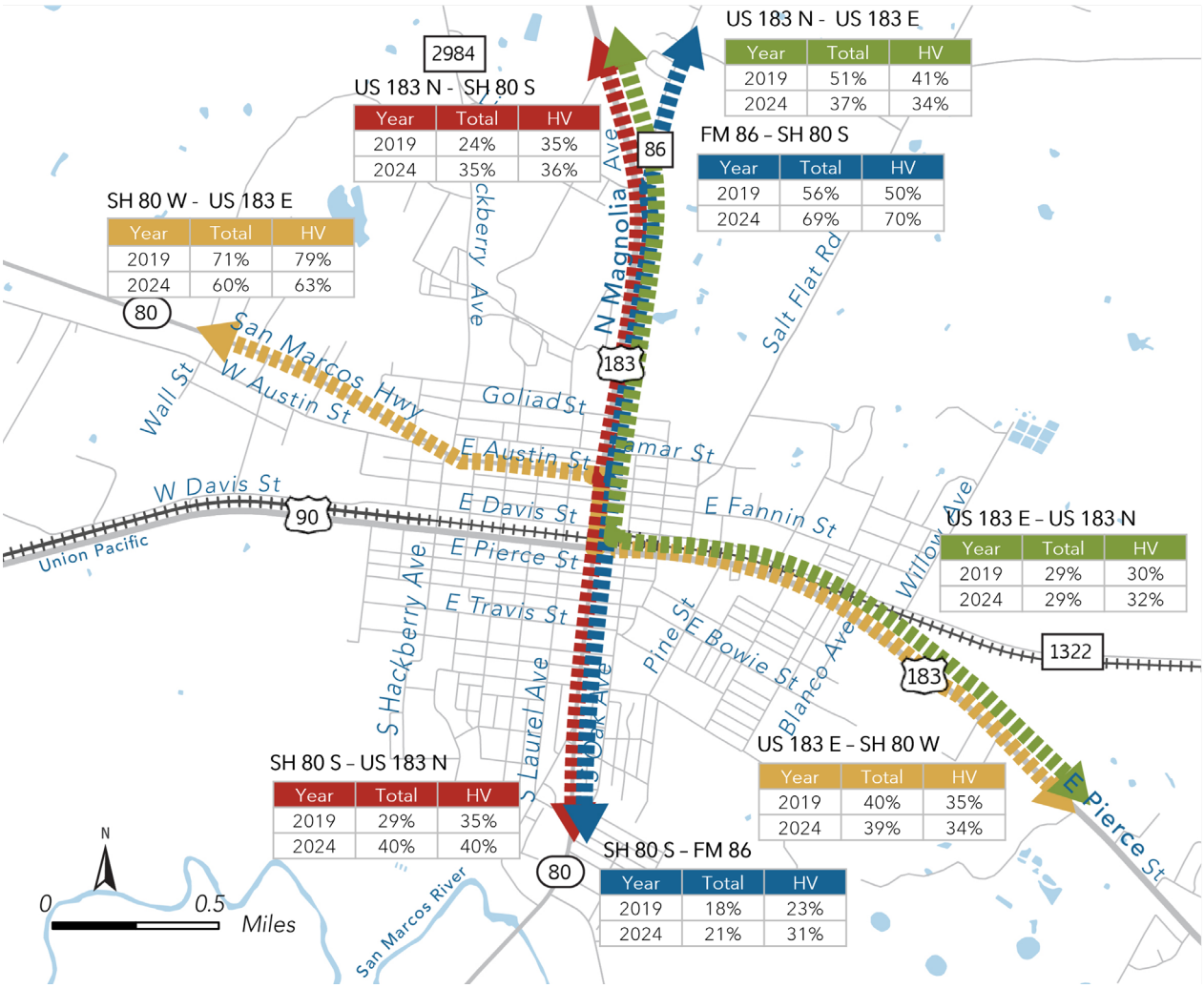
RITIS data was extracted for Fridays in 2019 and 2024 as data for 2018 was not available at the time of extraction. The data was classified into two categories - *total vehicles* and *heavy vehicles*. Friday was chosen because traffic volumes were highest during the week.

Figure 16 shows the traffic distribution of total and heavy vehicles on the four pairs of roadways with the highest combined two-way traffic, namely US 183 E – US 183 N (green), US 183 N – SH 80 S (red), SH 80 W – US 183 E (yellow), and FM 86 – SH 80 S (blue). The percentages in each of the tables in the figure indicate the estimated proportion of one-way traffic from the origin roadway and to the destination roadway. Using the table for SH 80 W – US 183 E (yellow) as an example, the analysis revealed that of all traffic originating from SH 80 W in 2024, 60% were bound for US 183 E. The remaining 40% of traffic were bound for other destinations such as US 183 north, SH 80 south, within Luling etc. Conversely, for the

reverse direction, US 183 E – SH 80 W (yellow), the analysis showed that 39% of total trips in 2024 were bound for US 183 E. The full breakdown of traffic distribution can be found in **Appendix B**.

In the 2019 study, SH 80 W – US 183 E (yellow) and US 183 E – US 183 N (green) had been identified as corridors with the heaviest bidirectional traffic. This analysis reaffirmed that observation and further revealed the emergence of one additional high traffic corridor and traffic flow route, SH 80 S – US 183 N (red) and another high traffic flow route FM 86 – SH 80 S.

Figure 16: Origin-Destination Traffic Distribution (Friday Average) for Total and Heavy Vehicles on Major Routes



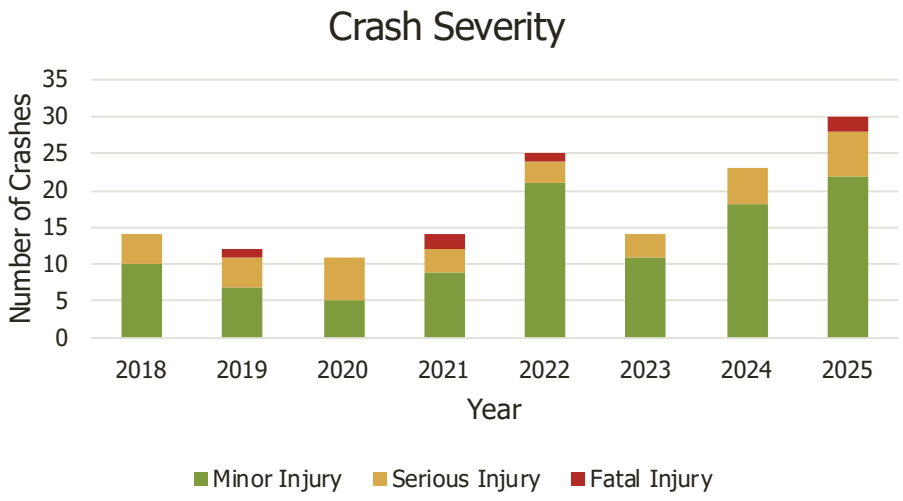
Source: Regional Integrated Transportation Information System (RITIS)

SAFETY

Crash data within the City limits for the eight-year period from 2018 to 2025 was extracted from TxDOT's Crash Records Information System (CRIS). There were a total of 1,261 crashes recorded, of which six were fatal crashes, 34 were serious injury crashes, and 103 were minor injury crashes. Overall, about three percent of the recorded crashes were fatal or serious injury crashes. 2025 recorded the highest number of fatal or serious injury crashes (8) and minor injury crashes (22) (**Figure 17**).

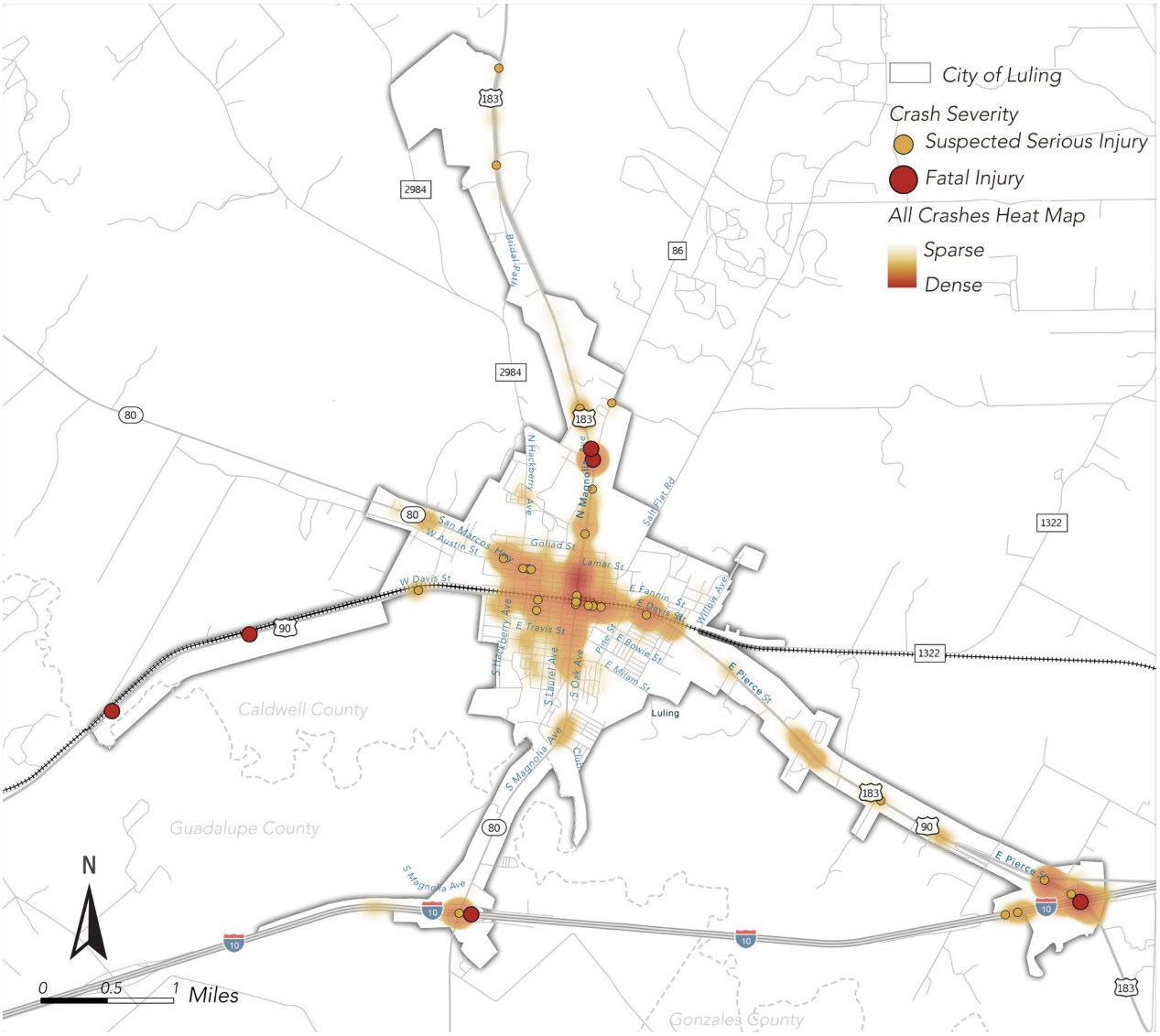
The majority of the crashes occurred on state roads, with greater concentration in the downtown area (**Figure 18**). Further, 22 crashes (55%) of these crashes were intersection related. Most of these intersection related crashes were concentrated at the intersection of major roadways such as I-10/SH80, I-10/US183, FM 86/US 183, and near SH80/US 90.

Figure 17: Vehicular Crashes and Crash Severity



Source: TxDOT's Crash Records Information System (CRIS)

Figure 18: Crash Heat Map and Location of Fatal and Serious Injury Crashes



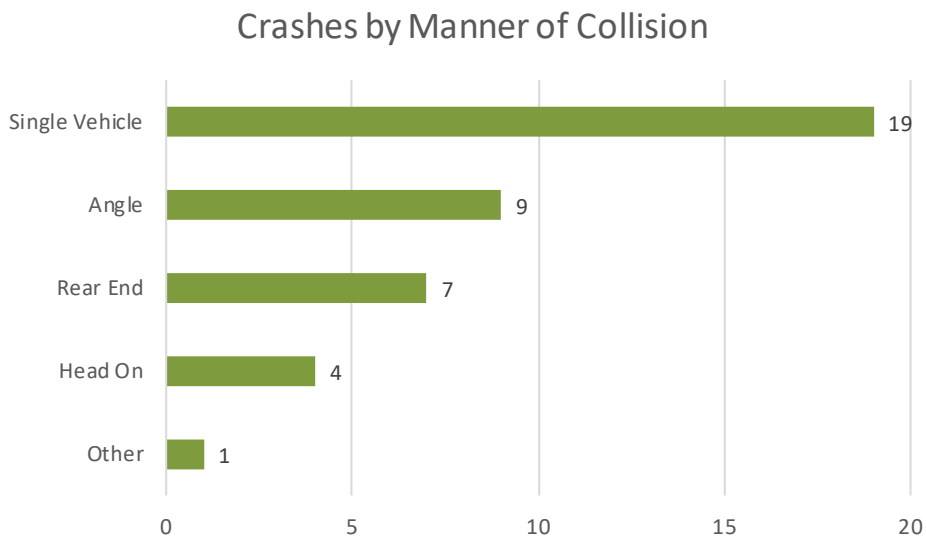
Source: TxDOT's Crash Records Information System (CRIS)

Further analysis was conducted for the manner of collision and lighting conditions for fatal and serious injury crashes. 19 crashes were single motor vehicle crashes (48%), nine crashes were angle crashes (23%); seven crashes were rear end crashes (18 percent), and four crashes were head on crashes (10%) as shown in **Figure 19**. Two crashes involved pedestrians or bicyclists, one leading to a fatal injury while the other a serious injury.

In terms of lighting conditions, 27 crashes occurred in daylight (67%), seven crashes occurred in dark and unlighted conditions (17%), five crashes occurred in dark and lighted conditions (13%), and one crash occurred at dawn (3%) as shown in **Figure 20**.

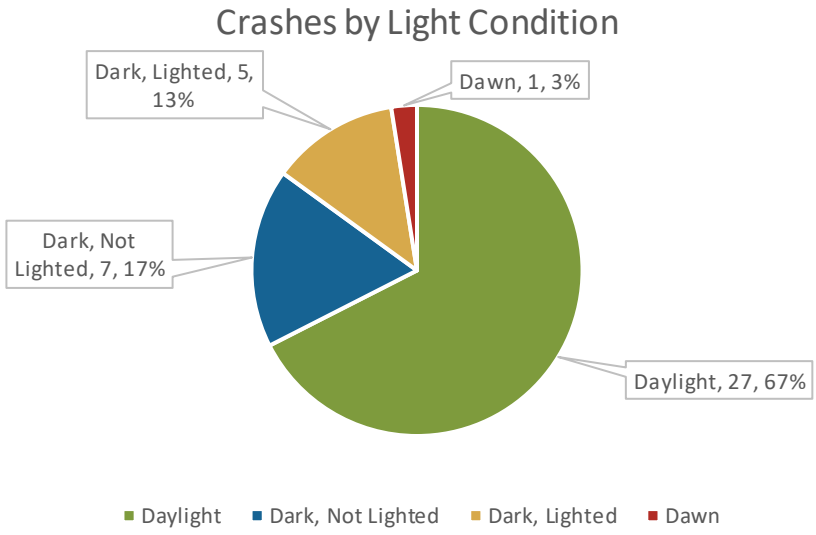
Finally, there were eight incidents from 2018 to 2025 that involved a train or occurred at a railroad crossing, of which one resulted in serious injuries while the remaining seven led to minor injuries.

Figure 19: Fatal and Serious Injury Crashes by Manner of Collision



Source: TxDOT's Crash Records Information System (CRIS)

Figure 20: Fatal and Serious Injury Crashes by Light Condition



Source: TxDOT's Crash Records Information System (CRIS)

FREIGHT

Luling's transportation network not only has to support daily trips by residents and visitors, but also sustain the high volumes of freight traffic that passes through the City.

According to Texas Delivers 2050, TxDOT's Long-Range Freight Plan, trucks carried more freight than any other modes in 2019, and this trend is expected to continue to 2050 – approximately 45% of total tonnage. The highways that cut through the City are designated as key freight corridors that are intended to facilitate the efficient movement of freight. I-10 to the south of the City is designated by the Federal Highway Administration as part of the Primary Highway Freight System, the network of highways which are deemed as most critical to U.S. freight movements. Connecting to I-10 are US 183, US 90, and SH 80, which are part of the Texas Highway Freight Network, a network prioritized by the state for freight movements (**Figure 21**). The increase in heavy vehicles traveling through Downtown not only worsens congestion but can also lead to greater safety risks.

Besides truck traffic, the Union Pacific Railroad tracks that bisect the City from east to west further contribute to traffic issues within the City. According to the Federal Railroad Administration, the railroad crossings experience approximately 13 trains passing through per day during daytime and 12 in the night. Each time a train passes through, gates will have to be closed for about four to five minutes, thus delaying traffic traveling north to south and vice versa.

Figure 21: Freight Network and Railroad Crossings



Source: TxDOT Freight Network, FRA Rail Network

ENVIRONMENTAL CONDITIONS

Environmental conditions were analyzed within the City of Luling using publicly available geographic information system (GIS) layers, aerial imagery, and other data obtained from the various resource agencies (**Figure 22**).

Land Use

Land use within the City of Luling is primarily residential with many suburban neighborhoods and large rural residences, followed by agricultural and vacant land, and some limited commercial and industrial land use.

Environmental Resources and Floodplains

Federal Emergency Management Agency (FEMA) 100-year and 500-year floodplains are located within the southern and western areas of Luling. Luling is located within the Post Oak Savanna ecoregion of Texas which is characterized by oak forest, prairie grassland, and agricultural lands. There are seven Texas Parks and Wildlife Department (TPWD) elemental occurrences (EOs) within Luling. The United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) identifies 49 freshwater ponds and 13 riverine wetlands which include Plum Creek, Salt Branch, San Marcos River, and Seals Creek and several unnamed streams, within Luling.

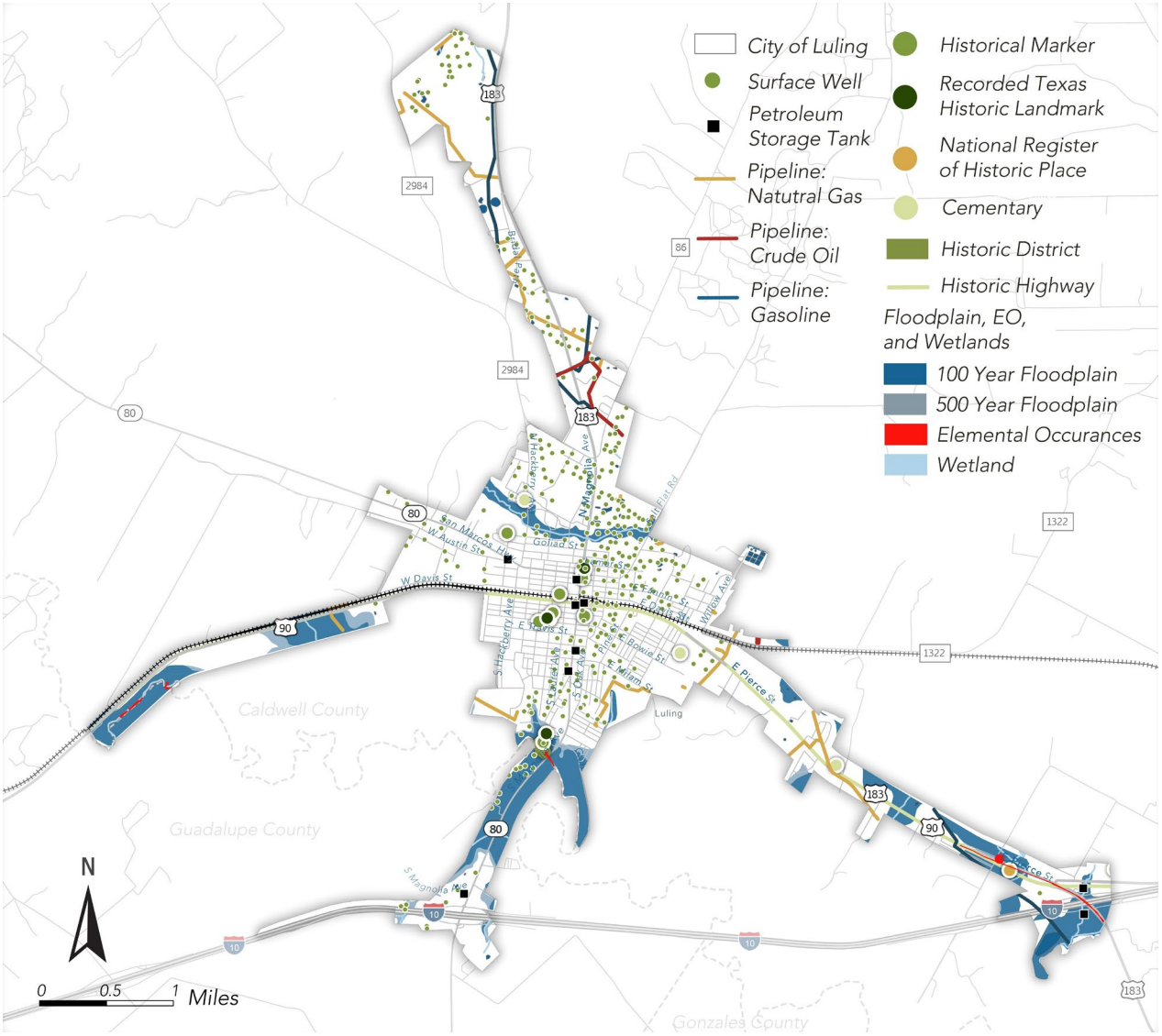
Utilities

The Railroad Commission (RRC) of Texas identified 348 surface wells in Luling and 79 pipelines (23 crude oil, 21 gasoline, and 35 natural gas) in primarily northern and eastern Luling. Additionally, Texas Commission on Environmental Quality (TCEQ) petroleum storage tank (PST) data was reviewed for the areas: Nine PSTs are in the southern and central portions of Luling.

Cultural and Historical Resources

Three Recorded Texas Historic Landmarks (RTHLs) are located within Luling as identified by the Texas Department of Transportation (TxDOT) Historic Resources Aggregator, including the Fritz Zedler Home, Francis-Ainsworth House, and William Johnson Cabin. The Texas Historical Commission (THC) Historic Sites Atlas identified three cemeteries – City Cemetery, Luling Jewish Cemetery, and Lone Oak Cemetery; 11 historical markers, primarily located in downtown Luling; one National Register of Historic Places (NRHP)-listed bridge in southeastern Luling; the Zedler Mill NRHP Historic District in southern Luling; and the Old Spanish Trail historic highway route which runs through central Luling.

Figure 22: Environmental Conditions



Source: FEMA National Flood Hazard Layer, TPWD Texas Natural Diversity Database, USFWS National Wetlands Inventory, Railroad Commission of Texas Public GIS Viewer, Texas Commission on Environmental Quality, TxDOT Historic Resources Aggregator, Texas Historical Commission Texas Historic Sites Atlas

OPTION A ALIGNMENT ALTERNATIVES

This report provides an overview of the preliminary alignments developed for the proposed Luling relief route. It builds on the 2019 Luling Transportation Study and the recommended Option A connection later incorporated into the 2024 Caldwell County Transportation Plan, which forms the basis for this evaluation. The report outlines the project context, proposed roadway configuration, and design considerations, followed by a description of the methodology used to screen and refine alignment options. It also summarizes environmental constraints, right of way (ROW) considerations, roadway network connectivity, and railroad-crossing feasibility factors that influenced each alignment's development.

Relief Route Context

The 2019 Luling Transportation Study evaluated three potential relief routes to divert traffic, particularly truck traffic, away from congested areas of Central Luling. The recommended Option A relief route from the 2019 study, as shown in **Figure 23**, provides a new connection between SH 80 and US 90 west of Central Luling. The 2024 Caldwell County Transportation Plan includes the Option A relief route as a future project, as shown in **Figure 24** and **Table 3**.

The current Luling Transportation Plan Update will build on the Option A relief route by identifying up to three feasible alignments in the general location of the Option A relief route. Specifically, the alignments are to travel west of Central Luling, connect SH 80 and US 90, and provide a grade-separated railroad crossing. The alignments will be analyzed and refined down to one alignment that can be carried forward to a schematic design and ultimately construction in the future.

Figure 23: Long-term Recommendations from the 2019 Luling Transportation Study



Figure 24: Recommended Arterial Network from the 2024 Caldwell County Transportation Plan

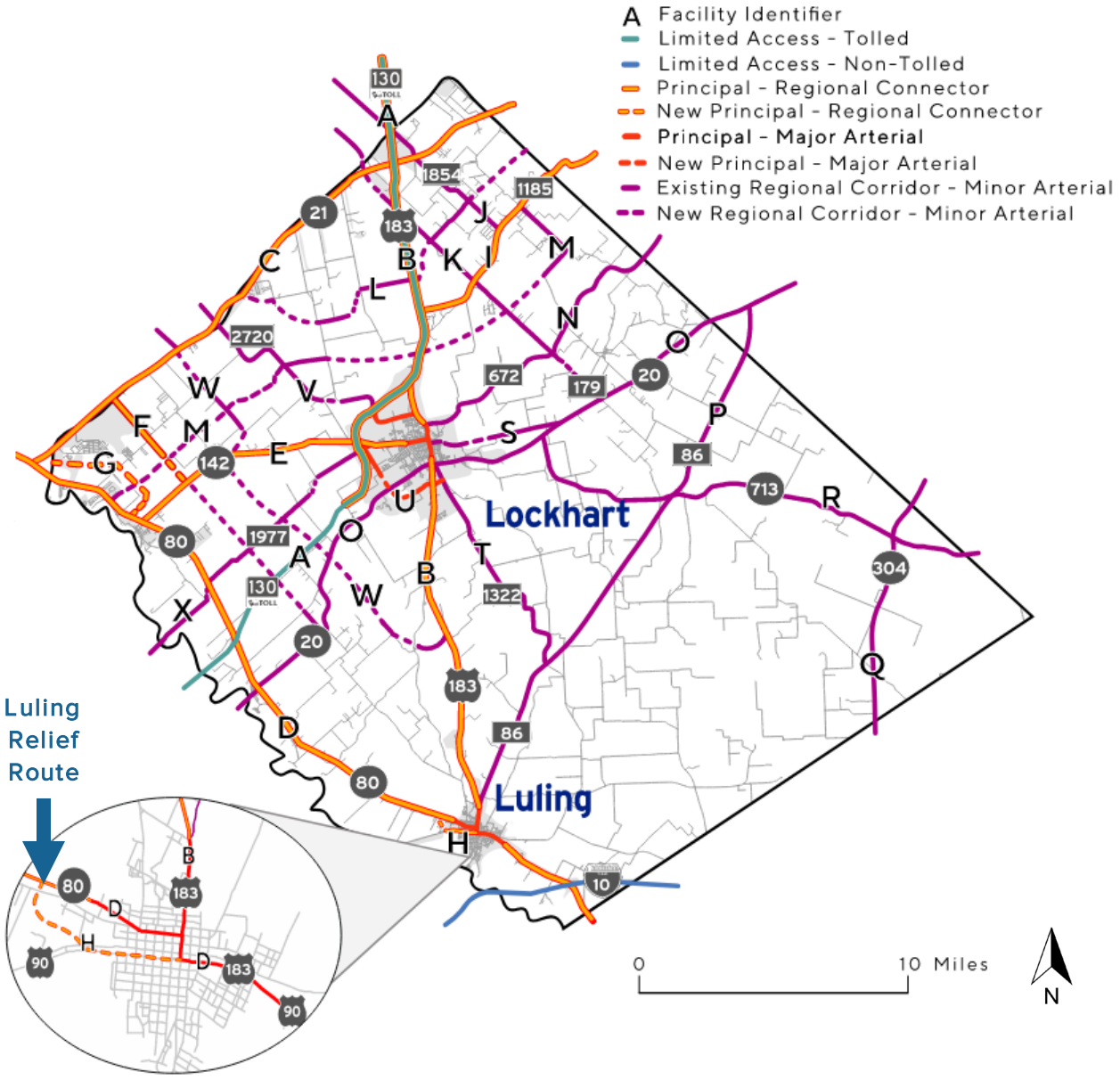


Table 3: Recommended Projects from the 2024 Caldwell County Transportation Plan

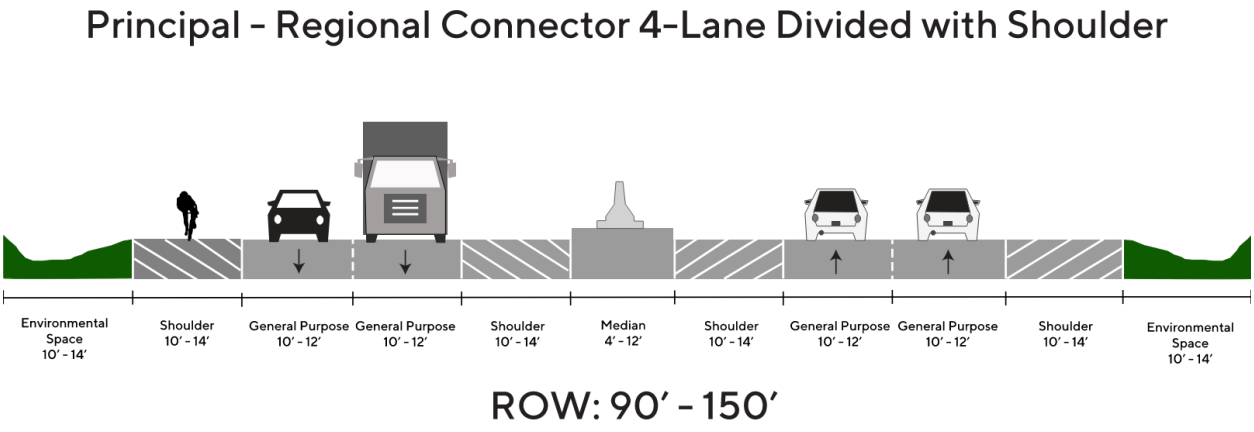
Facility (Facility Identifier)	From	To	Current - 2018			Future - 2045		
			Design Type	Functional Classifciation	Number of Lanes	Design Type	Functional Classification	Number of Lanes
New Facility (G)	Hays County Line	SH 80	New Facility	New Facility	New Facility	Undivided	Principal - Regional Connector	4
Luling Relief Route (H)	SH 80	US 90	New Facility	New Facility	New Facility	Undivided	Principal - Regional Connector	4
	New Facility	US 183	Undivided	Major Collector	2	Undivided	Principal - Regional Connector	4

Proposed Roadway Configuration

The Luling Relief Route is identified as a Principal-Regional Connector in the 2024 Caldwell County Transportation Plan, as shown in **Table 3**. The proposed roadway configuration for this type of facility includes the following and is shown in **Figure 25**:

- A 4- to 12-foot-wide median with physical separation
- 10- to 14-foot-wide shoulders on both sides of each direction of travel
- Two 10- to 12-foot-wide lanes in each direction of travel
- Environmental space between the edge of pavement and ROW line
- 90- to 150-foot-wide ROW width

Figure 25: Proposed Typical Section



The widest ROW dimension was used to be conservative when assessing potential impacts to surroundings. A design speed of 45 miles per hour (MPH) was chosen for the proposed facility, which is the highest design speed recognized by Texas Department of Transportation (TxDOT) for low-speed rural

town, suburban, urban, and urban core facilities. This design speed results in a minimum horizontal curve radius of 1,039 feet, assuming a normal crown roadway with 2% cross slope[1].

Preliminary Alignment Development

The development of alignment alternatives considered stakeholder input (from the mayor, city manager, City and County staff, the police chief, Luling ISD, Luling Chamber of Commerce, and The Luling Foundation), environmental constraints, existing ROW and property impacts, connectivity with the existing roadway network, and feasibility of a grade-separated railroad crossing.

STAKEHOLDER INPUT

Stakeholder input was considered in developing the alignments. At a stakeholder meeting held on February 5, 2026, stakeholders continued to express the need for a relief route west of Central Luling. Comments also included using existing ROW along River Park Road (County Road 105) or Scenic View Road (County Road 121) as an alignment alternative. An alignment further west of the Option A recommendation in the 2019 Plan was developed.

ENVIRONMENTAL CONSTRAINTS

An effort was made to avoid the 100- and 500-year floodplains, ponds, wetlands, and river or stream crossings. In locations where floodplain crossings were unavoidable, measures were taken to cross the floodplain perpendicularly to minimize impacts and construction costs. Impacts to known cemeteries, historical sites, community facilities, cultural resources, and petroleum storage tanks were avoided. An effort was made to avoid surface wells and pipelines; however, these are impacted by some alignments. Luling is outside of the recharge zone for the Edwards Aquifer but is located within the recharge zone for the Carrizo-Wilcox Aquifer. Aerial imagery and publicly available geospatial data were used to assess environmental constraints. No field reconnaissance was performed for this assessment.

RIGHT OF WAY AND PROPERTY IMPACTS

A major focus in developing alignments was to attempt to minimize impacts to properties within the study area. Alignments were routed to run parallel to parcel boundaries and avoid existing dwellings; and ROW for existing roadways was used where possible. Parcel data obtained from Texas Geographic Information Office (Q4 2025) was used to approximate parcel boundaries.

CONNECTIVITY WITH THE EXISTING ROADWAY NETWORK

An effort was made to minimize possible incompatibilities with the existing roadway network and property access. This includes potential increase in congestion and negative impacts to local circulation, reduction in roadway safety, and creating a barrier to crossing for all modes of transportation.

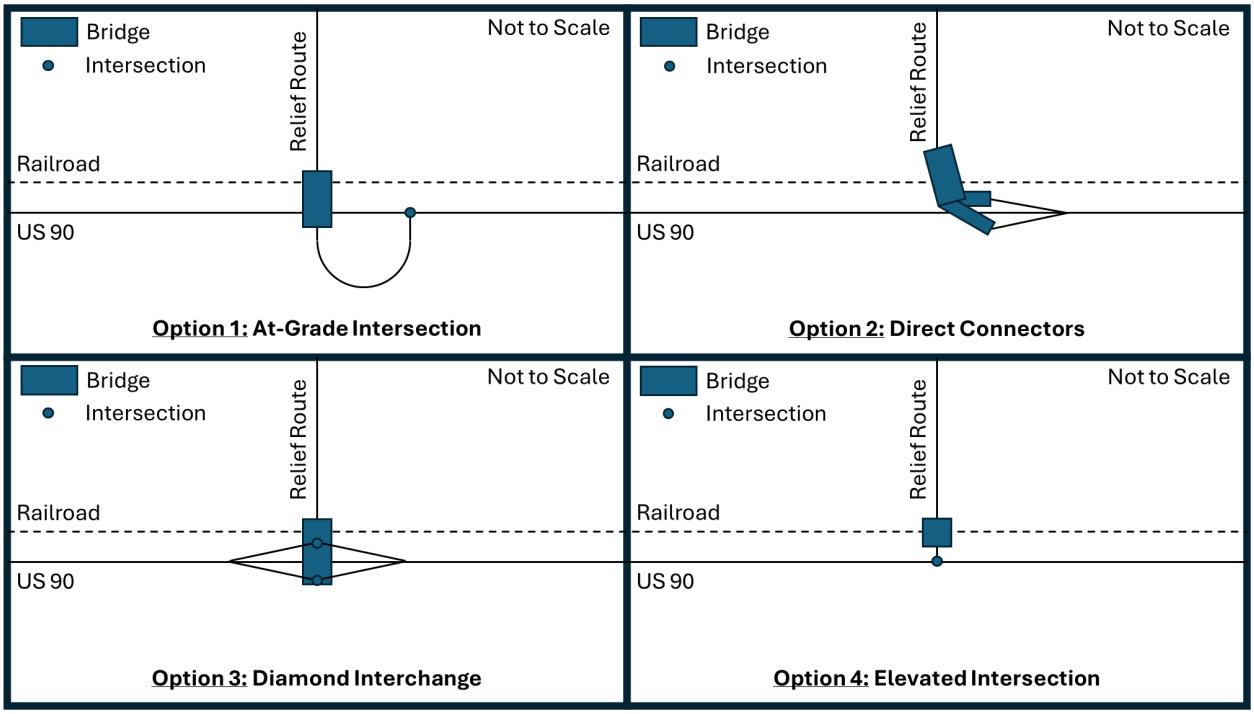
FEASIBILITY OF A GRADE-SEPARATED RAILROAD CROSSING

The existing Union Pacific railroad runs parallel to US 90 at an offset of approximately 100 feet. TxDOT commonly cites 23.5 feet as the minimum bridge clearance allowed over a railroad, and 100 feet is not enough distance to descend back to ground level. There are four apparent options for connections to US 90, shown in **Figure 26** and described below:

[1] TxDOT Roadway Design Manual Table 4-4 (November 2024)

Option 1: The proposed roadway passes over US 90 and then loops back on the south side of US 90 while descending to an at-grade intersection.
Option 2: The proposed roadway transitions to direct connectors that serve the westbound US 90 to westbound SH 80 and eastbound SH 80 to eastbound US 90 movements. Eastbound to westbound movements would not be served.
Option 3: The proposed roadway connects to a diamond interchange with US 90. Turning movements would take place at elevated intersections that are accessed by ramps that travel parallel to the US 90 through lanes below.
Option 4: The proposed roadway connects to US 90 at an elevated intersection. All lanes on US 90 would be raised to connect with the proposed roadway at the elevated intersection.

Figure 26: Illustrated Options for Relief Route Connections to US 90



Recommended Preliminary Alignments

The preliminary alignment evaluation narrowed the set of alignments from seven to four based on the results of the preliminary alignment evaluation, which is shown in **Table 4**. However, only three alignments will be advanced to a more detailed evaluation in the Alternatives Analysis phase of the planning process.

The coloration in the table indicates the performance of the alignment in a given category, with green being best and red being worst. The total score in the rightmost column is the sum of the scores for each row, assuming a score of "1" for green cells, a score of "0" for yellow cells, and a score of "-1" for red cells. Since there was a four-way tie for first place, four alignments will be carried forward to the Alternatives Analysis phase of this study, which will include a more detailed analysis with additional criteria and performance measures.

The full set of preliminary alignments are shown in **Figure 27**. Those that were eliminated in the preliminary alignment evaluation are shown in gray and those that should be considered for further consideration and discussion are shown in green. **Only three alignments will be advanced to a more detailed evaluation in the Alternatives Analysis phase of the planning process.**

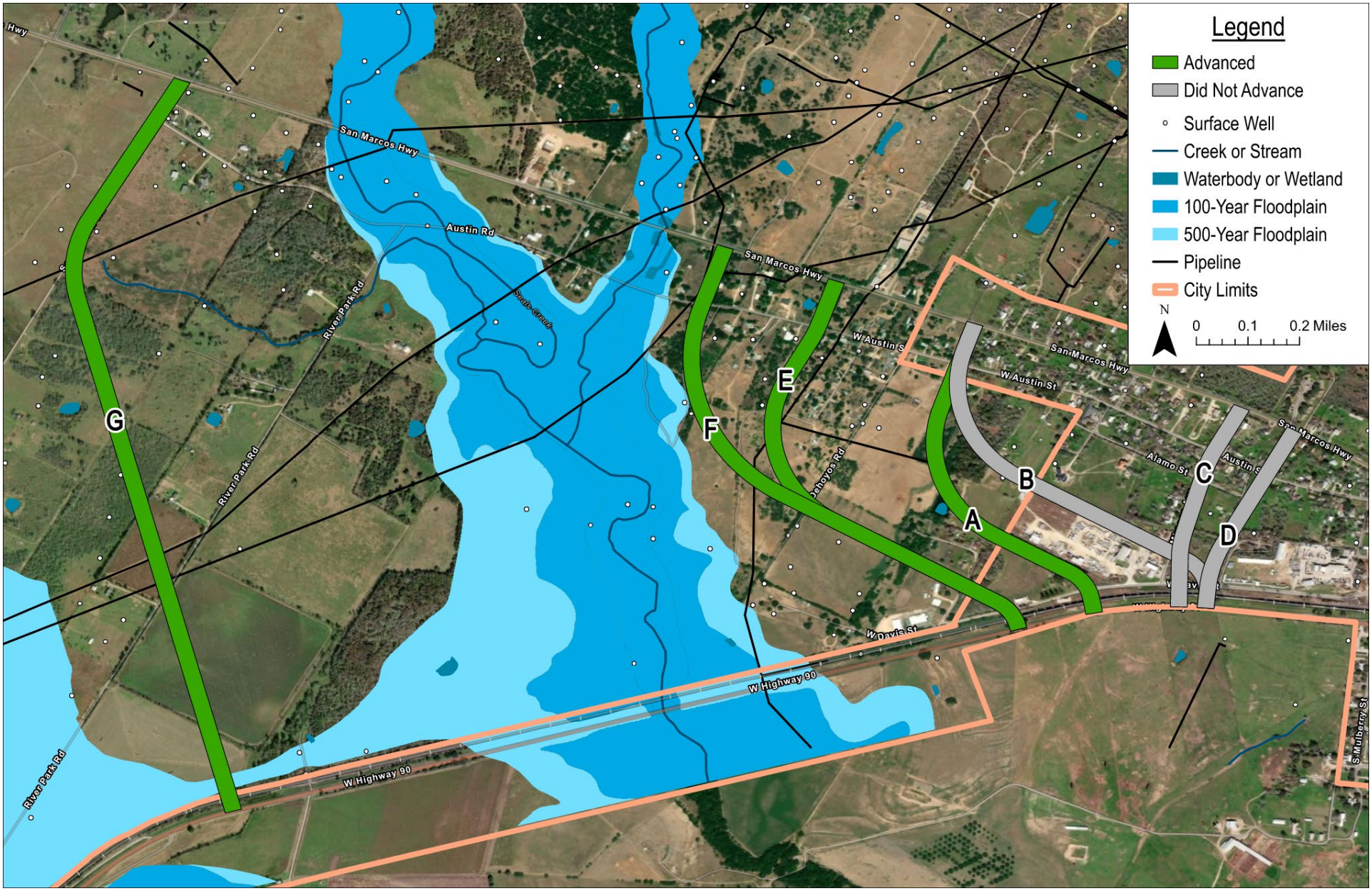
Table 4: Preliminary Alignment Evaluation

Alignment	Length (miles)	Environmental Constraints	Right of Way and Property Impacts	Connectivity with the Existing Roadway Network	Railroad Crossing	Total Score
A	0.7	Adjacent to body of water/wetland Intersects 1 pipeline	2 potential displacements	Compatible with existing roadway network	Each of the options for connections to US 90 can be accommodated with this alignment	**2**
B	0.8	None	3 potential displacements	Close proximity to Central Luling may disrupt access to properties along US 90	Each of the options for connections to US 90 can be accommodated with this alignment	**0**
C	0.4	Intersects 1 surface well	3 potential displacements	Close proximity to Central Luling may disrupt access to properties along US 90 and create a barrier for local traffic and pedestrians	Each of the options for connections to US 90 can be accommodated with this alignment	**0**
D	0.4	None	4 potential displacements	Close proximity to Central Luling may disrupt access to properties along US 90 and create a barrier for local traffic and pedestrians	Each of the options for connections to US 90 can be accommodated with this alignment	**0**
E	0.9	Adjacent to body of water/wetland Intersects 1 pipeline	1 potential displacement	Compatible with existing roadway network	Each of the options for connections to US 90 can be accommodated with this alignment	**2**
F	1.0	Adjacent to floodplain Intersects 3 surface wells Intersects 3 pipelines	0 potential displacements*	Compatible with existing roadway network	Each of the options for connections to US 90 can be accommodated with this alignment	**2**
G	1.5	Passes over floodplain Intersects five surface wells Intersects 3 pipelines	0 potential displacements	Farthest west from Central Luling. Compatible with existing roadway network	Each of the options for connections to US 90 can be accommodated with this alignment	**2**

*Entire parcel needed but no habitable structure is impacted

Note: Green = Score of 1, Yellow = Score of 0, Red = Score of -1

Figure 27: Preliminary Alignment



Appendix A – Traffic Counts

Location	Location ID	2018	2019	2020	2021	2022	2023	2024
		AADT	AADT	AADT	AADT	AADT	AADT	AADT
SH 80 south of San Marcos River	95H29	4,597	4,968	4,143	5,388	5,410	6,326	6,516
SH 80 south of Nolan Street	28D9	4,344	5,098	4,439	5,149	5,149	8,136	10,613
SH 80 south of US 90	28T17	6,466	5,653	5,698	5,710	5,710	7,654	10,518
SH 80 north of US 90	28T19	14,628	14,448	11,881	14,881	13,863	14,838	17,315
SH 80 north of E Davis Street	28T21	13,527	13,412	12,425	13,814	12,869	15,904	17,210
US 183 north of E Austin Street	28T22	12,283	11,607	9,865	11,955	11,137	13,722	14,144
US 183 south of Lincoln Street	28H48	11,606	11,337	8,482	11,677	10,878	13,416	13,890
US 183 north of FM 86	28H47	8,461	8,250	5,945	8,498	7,917	10,165	11,000
US 90 west of Davis Street	28H54	1,851	1,881	1,667	1,900	1,900	2,250	2,280
US 90 west of SH 80	28T18	6,356	5,727	4,407	5,784	5,784	5,724	6,628
US 90 east of S Oak Avenue	28T16	11,429	10,400	10,285	10,712	10,712	13,602	11,918
US 183 east of Blanco Avenue	28H49	8,737	8,635	7,340	8,894	8,894	11,602	12,788
SH 80 west of Wall Street	28H55	5,155	6,494	5,052	6,559	6,559	5,927	8,408
SH 80 west of US 183	28T23	5,346	6,781	5,532	6,849	6,849	6,007	8,356
FM 1322 east of SH 80	28T20	1,670	1,538	1,139	1,553	1,553	1,481	1,779
FM 1322 east of Willow Avenue	28H29	1,000	939	850	948	948	1,140	1,270
Hackberry Avenue north of Lincoln Street	28H45	1,150	1,030	763	1,040	1,040	1,101	1,123
FM 86 north of US 183/Lincoln Street	28H30	1,586	1,458	1,293	1,473	1,473	1,668	1,701

Location	Location ID	2018	2019	2020	2021	2022	2023	2024
		HV	HV	HV	HV	HV	HV	HV
SH 80 south of San Marcos River	95H29	224	425	895	1,199	1,201	1,814	1,842
SH 80 south of Nolan Street	28D9	925	436	928	1,174	1,174	2,074	2,427
SH 80 south of US 90	28T17	1,234	1,141	1,063	1,235	1,235	2,003	2,414
SH 80 north of US 90	28T19	1,418	1,549	1,019	1,168	938	1,294	1,675
SH 80 north of E Davis Street	28T21	-	-	1,047	1,114	904	1,347	1,671
US 183 north of E Austin Street	28T22	1,134	1,173	923	1,023	835	1,237	1,498
US 183 south of Lincoln Street	28H48	1,056	1,139	856	1,010	829	1,221	1,481
US 183 north of FM 86	28H47	716	773	732	856	710	1,064	1,316
US 90 west of Davis Street	28H54	518	564	194	207	206	229	230
US 90 west of SH 80	28T18	-	-	354	435	435	431	486
US 90 east of S Oak Avenue	28T16	1,617	1,648	1,558	1,794	1,791	2,858	2,617
US 183 east of Blanco Avenue	28H49	1,347	1,457	1,024	1,183	1,182	1,266	1,399
SH 80 west of Wall Street	28H55	1,042	570	853	1,000	999	869	1,086
SH 80 west of US 183	28T23	1,072	598	890	1,023	1,024	875	1,082
FM 1322 east of SH 80	28T20	115	205	176	324	339	126	178
FM 1322 east of Willow Avenue	28H29	86	161	155	248	264	62	78
Hackberry Avenue north of Lincoln Street	28H45	93	167	147	259	52	51	52
FM 86 north of US 183/Lincoln Street	28H30	263	277	247	266	179	289	315

Appendix B – Origin-Destination Traffic Distribution based on RITIS Data

Time Period - 2024 (All Months) - Friday												
All Vehicles												
Origin	Outgoing Trips from Origin (2024)	Destinations										
		1. Hackberry Ave North	2. US 183 North	3. FM 86 North	4. FM 1322 East	5. US 183 East	6. SH 80 South	7. US 90 West	8. SH 80 West	9. Other*	External to External	External to Internal
1. Hackberry Ave North	299	-	1%	3%	1%	23%	10%	4%	3%	**32%**	77%	23%
2. US 183 North	9294	0%	-	0%	0%	**37%**	35%	1%	1%	7%	81%	19%
3. FM 86 North	1961	1%	1%	-	0%	4%	**69%**	3%	2%	4%	83%	17%
4. FM 1322 East	433	0%	8%	0%	-	8%	10%	5%	13%	**16%**	61%	39%
5. US 183 East	10066	1%	29%	1%	0%	-	1%	4%	**39%**	6%	80%	20%
6. SH 80 South	5807	1%	**40%**	21%	1%	2%	-	1%	7%	9%	81%	19%
7. US 90 West	1213	1%	8%	4%	4%	21%	5%	-	3%	**31%**	76%	24%
8. SH 80 West	5637	0%	1%	1%	1%	**60%**	8%	1%	-	9%	81%	19%

*Other locations w

Time Period - 2024 (All Months) - Friday												
Heavy Vehicles												
Origin	Outgoing Trips from Origin (2024)	Destinations										
		1. Hackberry Ave North	2. US 183 North	3. FM 86 North	4. FM 1322 East	5. US 183 East	6. SH 80 South	7. US 90 West	8. SH 80 West	9. Other	External to External	External to Internal
1. Hackberry Ave North	126	-	2%	2%	1%	**47%**	13%	1%	3%	13%	80%	20%
2. US 183 North	1950	0%	-	0%	0%	34%	**36%**	2%	2%	10%	84%	16%
3. FM 86 North	552	0%	1%	-	0%	5%	**70%**	3%	3%	7%	88%	12%
4. FM 1322 East	57	0%	**23%**	0%	-	16%	16%	2%	21%	11%	88%	12%
5. US 183 East	2186	3%	32%	1%	1%	-	1%	12%	**34%**	6%	89%	11%
6. SH 80 South	1493	1%	**40%**	31%	1%	2%	-	3%	5%	8%	91%	9%
7. US 90 West	388	0%	9%	4%	2%	**44%**	9%	-	5%	16%	90%	10%
8. SH 80 West	1332	0%	2%	2%	1%	**63%**	11%	2%	-	8%	88%	12%

Time Period - 2019 (All Months) - Friday												
All Vehicles												
Origin	Outgoing Trips from Origin (2019)	Destinations										
		1. Hackberry Ave North	2. US 183 North	3. FM 86 North	4. FM 1322 East	5. US 183 East	6. SH 80 South	7. US 90 West	8. SH 80 West	9. Other	External to External	External to Internal
1. Hackberry Ave North	215	-	4%	2%	2%	15%	13%	3%	8%	**35%**	82%	18%
2. US 183 North	5561	0%	-	0%	1%	**51%**	24%	1%	1%	11%	89%	11%
3. FM 86 North	1174	1%	1%	-	0%	16%	**56%**	2%	1%	10%	88%	12%
4. FM 1322 East	509	1%	7%	0%	-	7%	7%	6%	10%	**42%**	80%	20%
5. US 183 East	8510	0%	29%	2%	0%	-	2%	3%	**40%**	11%	88%	12%
6. SH 80 South	3601	1%	29%	18%	1%	2%	-	1%	7%	23%	82%	18%
7. US 90 West	876	1%	7%	3%	2%	18%	4%	-	2%	**39%**	76%	24%
8. SH 80 West	4947	0%	1%	0%	1%	**71%**	5%	0%	-	11%	91%	9%

Time Period - 2019 (All Months) - Friday												
Heavy Vehicles												
Origin	Outgoing Trips from Origin (2019)	Destinations										
		1. Hackberry Ave North	2. US 183 North	3. FM 86 North	4. FM 1322 East	5. US 183 East	6. SH 80 South	7. US 90 West	8. SH 80 West	9. Other	External to External	External to Internal
1. Hackberry Ave North	36	-	3%	3%	0%	**39%**	14%	0%	8%	17%	83%	17%
2. US 183 North	1228	0%	-	0%	1%	**41%**	35%	2%	1%	8%	88%	12%
3. FM 86 North	420	1%	0%	-	0%	28%	**50%**	3%	2%	8%	93%	7%
4. FM 1322 East	68	1%	21%	0%	-	6%	4%	13%	4%	**28%**	78%	22%
5. US 183 East	1915	0%	30%	5%	0%	-	2%	6%	**35%**	11%	90%	10%
6. SH 80 South	1028	0%	**35%**	23%	0%	2%	-	1%	7%	13%	83%	17%
7. US 90 West	185	1%	7%	3%	1%	**48%**	4%	-	1%	18%	82%	18%
8. SH 80 West	912	0%	1%	1%	0%	**79%**	7%	0%	-	5%	93%	7%

Appendix C – Fatal and Injury Crashes Data

Crash ID	Crash Date	Crash Severity	First Harmful Event	Light Condition	Manner of Collision	Railroad Flag	Surface Condition
16199931	1/10/2018	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	2 - DARK, NOT LIGHTED	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
16209136	1/16/2018	SUSPECTED SERIOUS INJURY	OVERTURNED	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	6 - ICE
16268290	2/13/2018	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	2 - WET
16335439	3/29/2018	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
16357085	4/15/2018	SUSPECTED SERIOUS INJURY	ANIMAL	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
16357146	4/15/2018	POSSIBLE INJURY	FIXED OBJECT	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
16380782	4/30/2018	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
16395982	5/7/2018	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
16434063	5/11/2018	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
16417844	5/12/2018	SUSPECTED SERIOUS INJURY	FIXED OBJECT	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
16434047	5/25/2018	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
16443377	6/1/2018	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - BOTH GOING STRAIGHT	No	1 - DRY
16457238	6/9/2018	POSSIBLE INJURY	ANIMAL	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
16491039	6/13/2018	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
16511094	6/26/2018	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	5 - DAWN	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY

16511098	7/2/2018	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
16587213	8/22/2018	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
16601621	8/31/2018	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
16607239	9/2/2018	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
16660082	9/9/2018	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
16661512	10/4/2018	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
16679243	10/15/2018	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	ANGLE - BOTH GOING STRAIGHT	No	2 - WET
16751853	11/21/2018	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	2 - WET
16814237	12/18/2018	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	2 - WET
16819030	12/23/2018	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
16824676	12/31/2018	POSSIBLE INJURY	FIXED OBJECT	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - TURNING RIGHT	No	1 - DRY
16891517	1/27/2019	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
16904086	2/15/2019	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	5 - DAWN	ANGLE - BOTH GOING STRAIGHT	No	2 - WET
16926736	3/1/2019	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
16970894	3/25/2019	SUSPECTED MINOR INJURY	OVERTURNED	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
17082495	4/29/2019	FATAL INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
17081934	5/5/2019	POSSIBLE INJURY	PEDESTRIAN	1 - DAYLIGHT	ONE MOTOR VEHICLE - BACKING	No	1 - DRY
17081936	5/17/2019	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY

17113038	5/23/2019	POSSIBLE INJURY	FIXED OBJECT	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
17113049	5/31/2019	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
17135127	5/31/2019	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
17113043	6/1/2019	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
17129952	6/14/2019	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
17195549	7/9/2019	SUSPECTED MINOR INJURY	FIXED OBJECT	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
17241857	8/11/2019	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE BACKING	No	1 - DRY
17243232	8/19/2019	POSSIBLE INJURY	OVERTURNED	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
17264359	8/22/2019	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
17276550	8/29/2019	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	2 - DARK, NOT LIGHTED	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
17264374	8/31/2019	SUSPECTED SERIOUS INJURY	PEDALCYCLIST	1 - DAYLIGHT	ONE MOTOR VEHICLE - TURNING LEFT	No	1 - DRY
17297166	9/13/2019	POSSIBLE INJURY	RR TRAIN	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	Yes	1 - DRY
17345971	10/13/2019	SUSPECTED MINOR INJURY	PARKED CAR	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
17362625	10/21/2019	POSSIBLE INJURY	ANIMAL	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
17382480	11/2/2019	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
17409350	11/9/2019	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	2 - DARK, NOT LIGHTED	OPPOSITE DIRECTION - BOTH GOING STRAIGHT	Yes	1 - DRY
17451519	11/29/2019	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	2 - WET
17510328	1/11/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY

17565644	2/11/2020	SUSPECTED MINOR INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - TURNING LEFT	No	2 - WET
17593850	2/16/2020	SUSPECTED MINOR INJURY	PARKED CAR	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
17594059	2/21/2020	SUSPECTED SERIOUS INJURY	FIXED OBJECT	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
17639957	3/22/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
17662869	4/21/2020	SUSPECTED SERIOUS INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
17678481	5/4/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
17707205	5/21/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	2 - DARK, NOT LIGHTED	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
17732087	6/9/2020	POSSIBLE INJURY	OVERTURNED	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
17734480	6/14/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
17745793	6/22/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
17748247	6/23/2020	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	2 - WET
17774546	6/24/2020	SUSPECTED MINOR INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
17768604	7/12/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
17771676	7/15/2020	SUSPECTED SERIOUS INJURY	OVERTURNED	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
17801641	8/4/2020	POSSIBLE INJURY	OVERTURNED	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
17806960	8/4/2020	SUSPECTED MINOR INJURY	FIXED OBJECT	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
17803369	8/6/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH RIGHT TURN	No	1 - DRY
17818526	8/10/2020	POSSIBLE INJURY	OVERTURNED	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY

17816344	8/15/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
17824287	8/17/2020	POSSIBLE INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
17836807	8/24/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
17871083	9/21/2020	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	2 - WET
17887881	9/29/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
17928919	10/16/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
17935737	10/26/2020	SUSPECTED SERIOUS INJURY	OVERTURNED	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
17990730	11/16/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
17979553	11/22/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
17979525	11/23/2020	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
17982838	11/24/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE RIGHT TURN-ONE STOPPED	No	1 - DRY
17993792	11/24/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
18004179	12/4/2020	POSSIBLE INJURY	ANIMAL	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
18018979	12/17/2020	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
18178475	3/14/2021	FATAL INJURY	FIXED OBJECT	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
18197509	3/26/2021	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
18178529	3/28/2021	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
18212579	4/18/2021	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY

18226528	4/20/2021	SUSPECTED MINOR INJURY	OVERTURNED	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
18241026	5/6/2021	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
18263471	5/10/2021	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
18264239	5/13/2021	POSSIBLE INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
18275505	5/19/2021	SUSPECTED MINOR INJURY	FIXED OBJECT	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
18275466	5/25/2021	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
18313113	6/16/2021	FATAL INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
18343265	6/19/2021	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
18351650	6/29/2021	SUSPECTED SERIOUS INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	2 - WET
18358013	7/11/2021	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
18406279	7/29/2021	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
18406287	7/31/2021	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
18419494	8/15/2021	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	2 - WET
18445969	8/22/2021	SUSPECTED MINOR INJURY	FIXED OBJECT	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
18472691	8/28/2021	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
18455532	8/29/2021	SUSPECTED MINOR INJURY	RR TRAIN	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	Yes	1 - DRY
18496008	9/22/2021	POSSIBLE INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
18508065	10/1/2021	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY

18654886	12/9/2021	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
18670715	12/14/2021	POSSIBLE INJURY	RR TRAIN	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	Yes	1 - DRY
18671660	12/29/2021	SUSPECTED MINOR INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
18675064	1/1/2022	SUSPECTED MINOR INJURY	OVERTURNED	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
18707120	1/13/2022	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
18710678	1/21/2022	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
18713045	1/24/2022	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	2 - WET
18727302	1/28/2022	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
18727116	1/29/2022	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
18768861	2/18/2022	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
18764544	2/21/2022	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	2 - DARK, NOT LIGHTED	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
18793659	3/13/2022	SUSPECTED MINOR INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
18824116	3/26/2022	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OTHER	No	1 - DRY
18841334	4/4/2022	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	2 - DARK, NOT LIGHTED	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
18866203	4/9/2022	FATAL INJURY	FIXED OBJECT	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
18860054	4/18/2022	SUSPECTED MINOR INJURY	OVERTURNED	1 - DAYLIGHT	ONE MOTOR VEHICLE - TURNING LEFT	No	1 - DRY
18890440	4/28/2022	SUSPECTED SERIOUS INJURY	FIXED OBJECT	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
18892566	4/29/2022	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY

18899808	5/7/2022	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
18909482	5/7/2022	SUSPECTED MINOR INJURY	PEDESTRIAN	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
18912942	5/8/2022	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
18915479	5/13/2022	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
18936921	5/19/2022	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
18963597	6/15/2022	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
18966949	6/17/2022	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
18991904	6/24/2022	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
19049773	7/9/2022	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19013519	7/10/2022	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19068351	7/28/2022	POSSIBLE INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
19068346	8/7/2022	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19066296	8/16/2022	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
19074053	8/20/2022	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
19081685	8/22/2022	SUSPECTED MINOR INJURY	FIXED OBJECT	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	2 - WET
19081680	8/26/2022	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
19105680	9/10/2022	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
19175143	10/6/2022	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY

19166949	10/12/2022	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
19220356	10/30/2022	SUSPECTED MINOR INJURY	FIXED OBJECT	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
19225293	11/2/2022	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
19230658	11/13/2022	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19275673	12/5/2022	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19279333	12/12/2022	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19302114	12/19/2022	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19315508	12/24/2022	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
19312046	12/31/2022	SUSPECTED MINOR INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
19399367	2/10/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	2 - DARK, NOT LIGHTED	ANGLE - ONE STRAIGHT-ONE BACKING	No	1 - DRY
19399246	2/20/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19420825	3/5/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19433097	3/6/2023	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19449060	3/19/2023	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
19486869	3/23/2023	POSSIBLE INJURY	RR TRAIN	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	Yes	1 - DRY
19464167	3/25/2023	SUSPECTED SERIOUS INJURY	FIXED OBJECT	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
19486066	4/3/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH GOING STRAIGHT-SIDESWIPE	No	1 - DRY
19492127	4/11/2023	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY

19503924	4/21/2023	POSSIBLE INJURY	ANIMAL	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
19514054	4/26/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19517083	4/29/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	5 - DAWN	ANGLE - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
19528104	5/3/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19581008	5/27/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
19582176	6/3/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19601421	6/15/2023	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19620200	6/21/2023	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
19652789	7/6/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19684347	7/27/2023	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
19684361	7/31/2023	SUSPECTED SERIOUS INJURY	OVERTURNED	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
19706466	8/6/2023	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19703803	8/14/2023	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
19739858	8/28/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19777787	9/11/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19797957	10/2/2023	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	2 - DARK, NOT LIGHTED	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
19798078	10/8/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19822318	10/20/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY

19857830	11/2/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	2 - DARK, NOT LIGHTED	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
19849527	11/4/2023	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	2 - DARK, NOT LIGHTED	ANGLE - BOTH GOING STRAIGHT	No	2 - WET
19868393	11/14/2023	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
19899145	12/2/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
19907904	12/5/2023	POSSIBLE INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - TURNING RIGHT	No	1 - DRY
19914218	12/6/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
19952222	12/16/2023	SUSPECTED MINOR INJURY	FIXED OBJECT	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
19963984	12/18/2023	POSSIBLE INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
19952225	12/24/2023	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
19987424	1/8/2024	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	6 - DUSK	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
19995669	1/23/2024	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	ANGLE - BOTH GOING STRAIGHT	No	2 - WET
19996490	1/26/2024	POSSIBLE INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	2 - WET
20013777	1/30/2024	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
20044771	2/13/2024	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20116256	4/2/2024	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20181030	4/24/2024	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20182556	5/7/2024	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	6 - DUSK	SAME DIRECTION - ONE STRAIGHT-ONE RIGHT TURN	No	1 - DRY
20178985	5/10/2024	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY

20182572	5/13/2024	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
20199194	5/14/2024	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20214019	5/22/2024	SUSPECTED MINOR INJURY	PARKED CAR	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
20214026	5/24/2024	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20223364	5/29/2024	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
20244666	6/16/2024	SUSPECTED MINOR INJURY	PARKED CAR	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
20246328	6/18/2024	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20261321	6/22/2024	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20263259	6/23/2024	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
20274134	6/28/2024	SUSPECTED MINOR INJURY	FIXED OBJECT	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
20274147	7/2/2024	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
20274201	7/6/2024	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	2 - DARK, NOT LIGHTED	OPPOSITE DIRECTION - BOTH GOING STRAIGHT	No	2 - WET
20278284	7/6/2024	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	2 - DARK, NOT LIGHTED	OPPOSITE DIRECTION - BOTH GOING STRAIGHT	No	2 - WET
20292059	7/12/2024	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	5 - DAWN	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
20292054	7/15/2024	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
20312156	7/28/2024	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	2 - WET
20335163	8/9/2024	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20370863	8/21/2024	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY

20370825	8/29/2024	POSSIBLE INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
20375596	8/30/2024	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20375771	9/2/2024	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
20391840	9/9/2024	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
20391822	9/11/2024	SUSPECTED MINOR INJURY	FIXED OBJECT	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	Yes	1 - DRY
20391859	9/15/2024	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH RIGHT TURN	No	1 - DRY
20402039	9/18/2024	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20425416	10/1/2024	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
20425506	10/3/2024	POSSIBLE INJURY	FIXED OBJECT	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - TURNING RIGHT	No	1 - DRY
20430311	10/6/2024	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
20446237	10/8/2024	SUSPECTED MINOR INJURY	ANIMAL	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
20469549	10/27/2024	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20497365	11/9/2024	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH GOING STRAIGHT-SIDESWIPE	No	1 - DRY
20620098	1/18/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20672218	2/6/2025	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
20648222	2/7/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
20685297	2/18/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE RIGHT TURN	No	1 - DRY
20686949	2/24/2025	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY

20697562	2/27/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
20685220	3/1/2025	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE LEFT TURN-ONE STOPPED	No	1 - DRY
20695130	3/5/2025	SUSPECTED MINOR INJURY	PEDALCYCLIST	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
20697559	3/7/2025	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
20713101	3/10/2025	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
20720115	3/13/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20713093	3/14/2025	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
20713105	3/17/2025	POSSIBLE INJURY	FIXED OBJECT	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
20768957	4/7/2025	POSSIBLE INJURY	OTHER NON COLLISION	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
20769061	4/14/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
20769216	4/14/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE BACKING	No	1 - DRY
20768966	4/16/2025	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE RIGHT TURN	No	1 - DRY
20768970	4/19/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH GOING STRAIGHT-SIDESWIPE	No	1 - DRY
20792523	5/1/2025	SUSPECTED SERIOUS INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
20798562	5/4/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
20797153	5/7/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - BOTH GOING STRAIGHT-REAR END	No	1 - DRY
20803484	5/9/2025	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
21018533	5/12/2025	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY

20888687	6/22/2025	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20896910	6/28/2025	SUSPECTED SERIOUS INJURY	FIXED OBJECT	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	Yes	1 - DRY
20892487	6/29/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20894280	6/29/2025	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
20896862	6/29/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20941615	7/19/2025	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
20941633	7/25/2025	POSSIBLE INJURY	RR TRAIN	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	Yes	1 - DRY
20973135	8/9/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
20965493	8/10/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
20973118	8/20/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
20990515	8/29/2025	FATAL INJURY	PEDESTRIAN	2 - DARK, NOT LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
21000182	8/29/2025	SUSPECTED SERIOUS INJURY	FIXED OBJECT	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
21038956	9/21/2025	SUSPECTED MINOR INJURY	FIXED OBJECT	3 - DARK, LIGHTED	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
21084362	10/20/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
21116393	10/29/2025	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
21116552	11/2/2025	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
21130255	11/3/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
21121284	11/4/2025	SUSPECTED SERIOUS INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY

21116520	11/5/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	SAME DIRECTION - ONE STRAIGHT-ONE STOPPED	No	1 - DRY
21143268	11/20/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	OPPOSITE DIRECTION - ONE STRAIGHT-ONE LEFT TURN	No	1 - DRY
21157980	12/2/2025	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
21180850	12/2/2025	SUSPECTED MINOR INJURY	MOTOR VEHICLE IN TRANSPORT	1 - DAYLIGHT	ANGLE - BOTH GOING STRAIGHT	No	1 - DRY
21202976	12/22/2025	FATAL INJURY	FIXED OBJECT	1 - DAYLIGHT	ONE MOTOR VEHICLE - GOING STRAIGHT	No	1 - DRY
21203048	12/27/2025	POSSIBLE INJURY	MOTOR VEHICLE IN TRANSPORT	3 - DARK, LIGHTED	SAME DIRECTION - BOTH GOING STRAIGHT-SIDESWIPE	No	1 - DRY

Caldwell County
ROAD BOND

Appendix B: Public Engagement Technical Memorandum

City of Luling Transportation Plan Update

August 28, 2026

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Introduction

Public engagement is a core component of the Luling Transportation Plan update, which aims to provide clear, informative, and timely communication as well as offer meaningful participation opportunities to stakeholders and the public. It is an essential step to build trust between the City and various stakeholders of the project to set up the study for success.

There are many challenges and opportunities that the City of Luling's transportation network will face over the next 25 years (2050). To help plan for these future challenges and opportunities, Caldwell County and the City of Luling sought feedback from a variety of stakeholder representatives and members of the public. There were numerous opportunities to provide feedback, from meetings with City Leadership (Luling Advisory Committee) and stakeholders to public surveys and open houses. The feedback gathered during the planning process will help the City better prepare for the challenges ahead and continue to serve its goals of safety, mobility, identifying a relief route around downtown, and promoting the unique character of downtown and economic development opportunities.

PURPOSE OF THIS MEMORANDUM

This technical memorandum focuses on the three different forums – Luling Advisory Committee (LAC) meetings, stakeholder meetings, and public meetings – that took place during the planning and development of the plan update and how the input received was used to develop the final plan. These meetings provide opportunities for community members and stakeholders to learn more about the planning effort and provide feedback. The following sections describe the objectives, implementation, and findings from each of these forums in detail.

An overview of the public engagement timeline is described below. All meetings were held at the Zedler Mill Pavilion.

LAC and Stakeholder Committee Meetings #1	February 5, 2026
Public Meetings #1 and #2	March 26, 2026
LAC and Stakeholder Committee Meetings #2	April 13, 2026
LAC and Stakeholder Committee Meetings #3	June 16, 2026
Public Meetings #3 and #4	July 14, 2026
LAC Meeting #4	August 11, 2026

Luling Advisory Committee (LAC) and Stakeholder Committee Meetings

PURPOSE OF THE COMMITTEES



Meaningful stakeholder engagement was a fundamental component of this transportation planning effort. The Luling Advisory Committee and a stakeholder committee were established to provide a structured forum for collaboration among City and County Leadership, agency partners, community organizations, business interests, elected officials, and other key stakeholders throughout the planning process. These committees helped ensure that the plan was informed by local knowledge, community priorities, and the perspectives of those who will ultimately be affected by future transportation investments.

In addition, committee members reviewed project information, discussed key issues and opportunities, provided feedback on technical analyses, and helped guide the development of goals, strategies, and recommendations. Their participation helped validate project findings, identify emerging concerns, and ensure that the planning process remained responsive to local needs and aspirations.

Both committees meet on the same days at two different times. The LAC met from 2 p.m. to 4 p.m. and the stakeholder committee met from 5 p.m. to 7 p.m. The LAC was convened one final time in August 2026 to review the draft plan document. In total the committees met seven times throughout the course of this process. Materials from all LAC and stakeholder committee meetings can be viewed in **Appendix A**.

Luling Advisory Committee

The Luling Advisory Committee comprised representation from the City and the County including the mayor, city manager, police chief, and leadership from various city departments including public works, planning and code enforcement, economic development, and Precinct 2 county commissioner Rusty Horne. LAC meetings were conducted throughout the planning process for the LAC to provide direction and guidance to the project team on the plan's development and recommendations.

Stakeholder Committee

Complementing LAC meetings were stakeholder meetings, which were held three times during the plan update process. The stakeholders included representatives from Luling Independent School District (LISD), the Chamber of Commerce, and other community members identified by the City and County. These meetings offer space for stakeholders to share their experiences and priorities, providing diverse perspectives to the plan.

LAC AND STAKEHOLDER COMMITTEE MEETINGS #1

Objectives

The first committee meetings were on February 5, 2026. This meeting served as a kick-off meeting to the project. The purpose of this meeting is to communicate the project's schedule, milestones, scope of work and the importance of their role in the planning process. Additionally, time was allocated to discuss preliminary results from the existing conditions evaluation and obtain input from the committees on existing transportation issues within the City and confirm the goals and objectives from Luling's 2019 Transportation Plan (2019 Plan). The primary scope elements for this project include the following:

- Evaluate existing conditions.
- Conduct public engagement including four public meetings and seven committee meetings.
- Develop up to three preliminary alignments and one recommended alignment from Option A of the 2019 Plan based on committee and public input.
- Identify up to five focus areas for potential projects based on committee and public input.
- Identifying up to three projects for each focus area based on committee and public input
- Develop an implementation plan and a final report.

Implementation

A presentation was given to the committees to review existing conditions information and facilitate discussions regarding input on existing transportation issues, the plan's goals and objectives, and the Option A study area. Maps of the City were provided to the committees to mark up and provide input. Flipcharts and printed maps were used to take notes. Goals and Objectives were reviewed one-by-one to allow the committee to provide feedback or confirm.

Findings

The input received from the LAC and Stakeholder Committee was used in conjunction with input received from the community from public meetings #1 and #2 to understand the issues in Luling and to ultimately identify focus areas and proposed projects.

The primary issues discussed by both committees included:

- The amount of truck traffic traveling through downtown.
- The need for a relief route/bypass around Luling to the west and northeast sides of the City.
- The number of trains per day, which are causing traffic delays and safety concerns at crossings.
- Congestion at key downtown intersections and corridors such as Magnolia St./US 183 at Pierce St./US 90, Austin St./SH 80 at Magnolia St./US 183, Magnolia St./US 183 at Davis St., and US 183 at US 90 near I-10.
- Overall pedestrian and student safety throughout town.
- The need for more sidewalk connections and to improve existing deficiencies.
- Safety concerns from the Plum Creek bridge to the I-10 interchange.
- Mobility and response times of emergency services.
- Pavement deterioration on various streets downtown.

Overall, the goals and objectives from the 2019 Plan remained generally the same. Tweaks were made to the objectives to make them action-focused in achieving their respective Goals. In general, both committees were supportive of and agreed to move forward with the same goals and objectives described in the 2019 Plan, however there were changes to Goal #2, "Enhance mobility in downtown Luling for local and through traffic." There were several discussions in both committee meetings about other modes of transportation, including walking and biking. "All modes" has been added to Goal #2 to account for this. Due to this addition, an objective has been added to reflect walking and biking. Lastly the word "downtown" was removed as this plan is for all of Luling, not just the downtown area. Changes to Goal #2 are reflected below:

Goal 2: Enhance mobility in Luling for all modes of local and through traffic
- Analyze how local, freight, and recreational travelers move through downtown.
- Improve public and emergency services access across the railroad tracks.
- Expand walking and biking options for all ages and abilities.
- Identify near-, mid-, and long-term mobility improvements.

LAC AND STAKEHOLDER COMMITTEE MEETINGS #2

Objective

The second round of committee meetings were held on April 13, 2026. The objectives of this meeting were to share the feedback of public meetings #1 and #2 and the community survey (discussed later in this memorandum), present and discuss the preliminary Option A alignments that were developed, and the five preliminary focus areas respectively. The focus was to get approval to move forward with the three preliminary Option A alignments for detailed technical analysis and develop projects for each focus area.

Implementation

A presentation was given to the committees to review the results of the public meeting #1 and #2 and preliminary Option A alignments (**Figure 1**) and focus areas (**Figure 2**). Maps of the alignments and focus areas were provided to the committees for detailed review and to mark-up and comment on as needed. Flip charts were used to record discussion points.

A map and matrix of impacts was presented to the committees showing describing seven total alternatives ("A"-"G"). Three of the seven were omitted due to elements such as potential displacements and incompatibility of the roadway network or land uses. The committees were shown four viable alignments ("D-G") and were asked to choose three to move forward with detailed traffic analysis.

The five focus areas were presented to the committees each with justification of why they were chosen (which were based on input from the LAC, stakeholders, and the public) and potential projects considerations for each. The five focus areas presented were as follows:

- **Focus Area 1:** South Hackberry Avenue from SH 80/East Austin Street to East Travis Street
- **Focus Area 2:** North Hackberry Avenue from Bridal Path Road to SH 80/East Austin Street to East Travis Street
- **Focus Area 3:** SH 80/Magnolia Street from East Fannin Street to East Milam Street
- **Focus Area 4:** Luling Core (Davis Street/Laurel Streed/Travis Street/Cypress Street)
- **Focus Area 5:** US 90/I-10 access road

Figure 1: Option A Preliminary Alignments

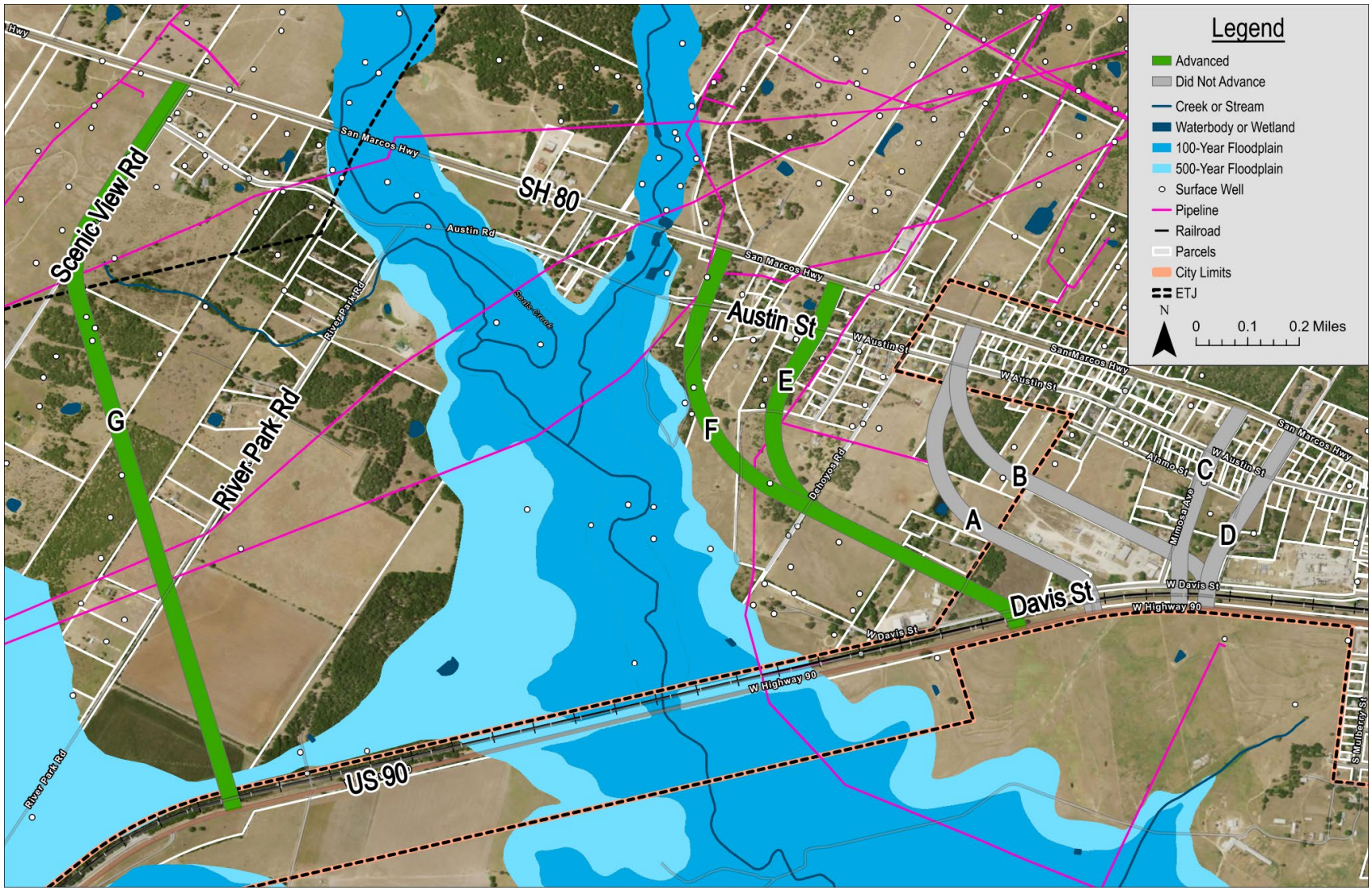
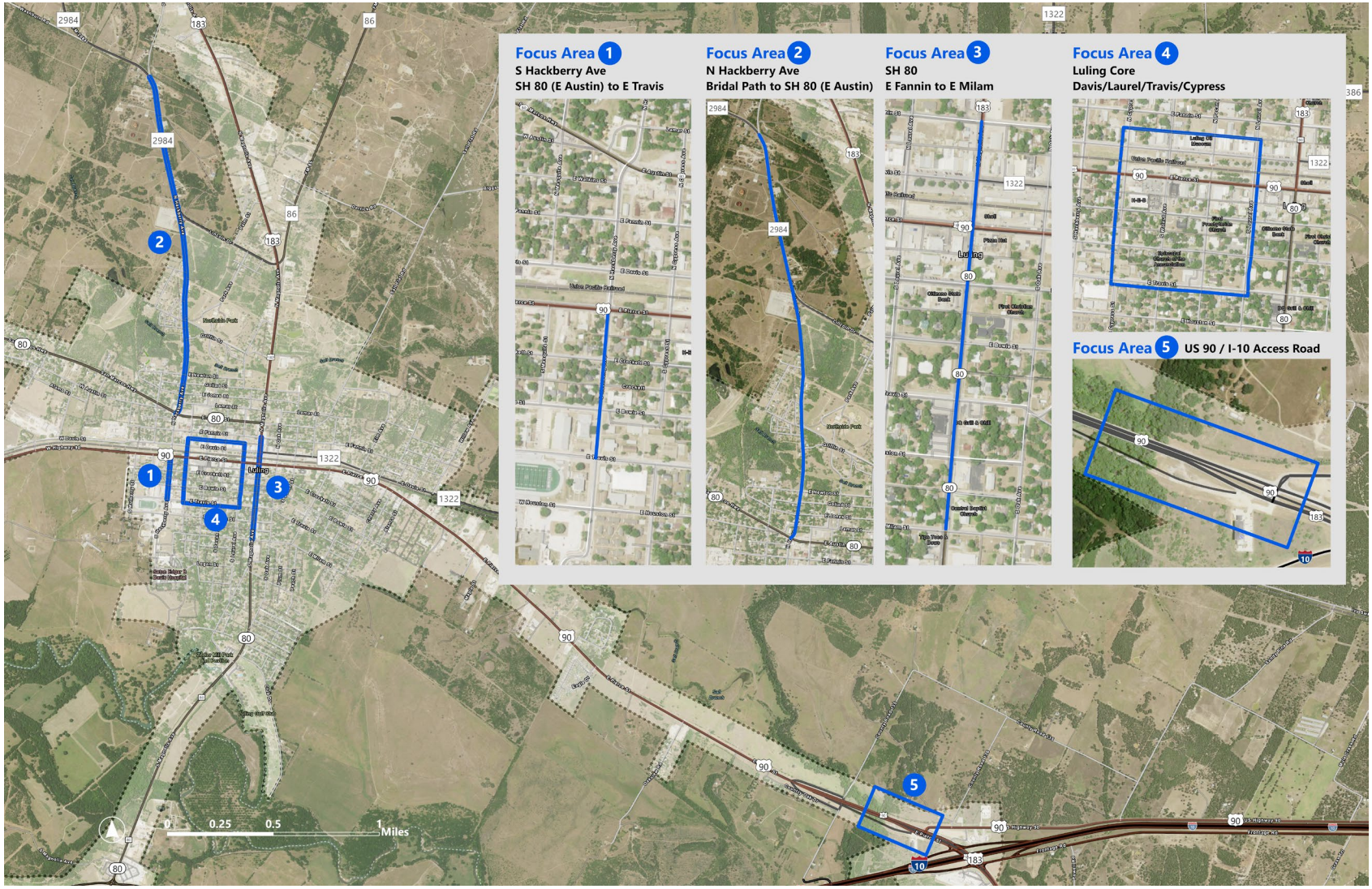


Figure 2: Preliminary Focus Areas



Findings

After a detailed discussion of the four preliminary Option A alignments and a review of their benefits and constraints, Alignments E, F, and G were chosen to move forward to a more detailed technical analysis. These alignments were displayed as alignments "A1," "A2," and "A3" at public meetings #3 and #4.

The LAC and Stakeholders agreed with the selection of the five focus areas, however it was recommended by the LAC to reduce the northern limit of Focus Area 2 (N. Hackberry Ave.) from Bridal Path Road to FM 2984/Lincoln Street at FM 2984 is a TxDOT roadway that is already in good condition. This focus area was revised.

In addition, due to the amount of discussion from the LAC, Stakeholders, and public, the County suggested that a planning-level evaluation of a variation of Option C from the 2019 Plan (Northeast Relief Route) should be completed to understand what traffic impacts it would have on congestion in the downtown area, in comparison to the Option A alignments. Due to budget limitations, Focus Area 4 (Luling Core) was chosen to be forfeited. Consequently, Focus Area 5 was renamed Focus Area 4, and this change was carried forward through all public meeting materials.

LAC AND STAKEHOLDER COMMITTEE MEETINGS #3

Objectives

The third round of committee meetings was held on June 16, 2026. During these meetings, the committees reviewed the analysis results for the Option A alignments and the Northeast Alignment, as well as the preliminary projects identified within each focus area. The primary objectives were to establish consensus on project implementation timeframes for the near-, mid-, and long-term horizons; select a preferred Option A alignment; and prioritize projects within each focus area. This meeting was the final meeting for the stakeholder committee.

Implementation

A presentation was provided to both committees that summarized the final survey results from public meetings #1 and #2 and reviewed Option A alignment alternatives E, F, and G. The presentation also included an evaluation of the Northeast Alignment for comparison purposes and a review of all proposed projects within each focus area.

Each Option A alignment was discussed in detail, and committee members were asked to identify the alignment that best met the needs of a future relief route. The Northeast Alignment was not available for selection asked to be because it was developed solely as a comparative alternative. Similarly, projects within each focus area were reviewed in detail, and committee members were asked to prioritize projects based on their perceived importance and community needs.

Maps of the Option A alignments and focus areas were provided for detailed review. Committee members were encouraged to mark up the maps and provide comments as needed. Flip charts were used to record discussion points.

Findings

Both committees agreed unanimously to the implementation timeframes of near-term (0-5 years); mid-term (6-10 years); and long-term (11-20 years).

For the Option A alignments, the LAC identified Alignment G as their preferred alternative. Stakeholder Committee members indicated that both Alignments F and G were their most favorable options. The committees also reached agreement on the prioritization and implementation timeframes for projects within Focus Areas 1, 2, and 4. Priorities within Focus Area 3 were more varied between the two committees.

Table 1 summarizes the alignment preferences and project prioritizations identified by each committee. Additional technical information regarding the Option A alignments and focus area projects is provided in the committee presentation materials included in **Appendix A**.

Table 1: Alignments and Project Prioritization

	Preferred Alignment	Priority #1	Priority #2	Priority #3	Timeframe	Comments
Option A Alignment Alternatives						
Alignment E		-			Long-term	-
Alignment F	X					-
Alignment G	X					-
Focus Area 1: S Hackberry Ave. from SH 80 / E Austin St. to E Travis St.						
Project 1A	-	X			Near-term	-
Project 1B			X		Near-term	Extended limits to Houston St. and added repaving of S. Hackberry Ave.
Project 1C				X	Mid-term	-
Focus Area 2: N Hackberry Ave. from Bridal Path Rd. to SH 80/E Austin St.						
Project 2A	-	X			Near-term	Revised roadway reconstruction limits from Austin St. (SH 80/Austin St. to Trinity St. and include signal at (SH 80/Austin St.
Project 2B			X	-	Mid-term	Revised roadway reconstruction limits from Trinity St. to FM 2984 (Lincoln St.).
Focus Area 3: US 183/Magnolia Ave from E Fannin St. to E Milam St.						
Project 3A	-	X		X	Near-term	Projects supported by both committees but prioritized differently.
Project 3B		X	X		Near-term	
Project 3C			X	X	Near-term	
Focus Area 4: Intersection of US 183/E Pierce St. and US 90						
Project 4A	-	X		-	Mid-term	Combined projects 4A and 4B and make Priority #1.
Project 4B						
Project 4C			X	-	Near-term	-

X = Selected by both committees.
X = Selected by the Stakeholder Committee only.

LAC MEETING #4

Objectives

The final LAC meeting was on August 11, 2026. This meeting served as an opportunity to review the results of public meetings #3 and #4 and the online survey, and the draft transportation plan and its recommendations in detail. The primary objective was to allow the LAC to ask questions and provide feedback on the draft plan before the final plan was produced.

Implementation

A presentation was provided to the LAC that summarized the results of public meetings #3 and #4 and the online survey and covered the final recommendations, prioritization of projects, and the implementation plan.

Findings

Overall, the LAC agreed to Alignment A3 as the recommended relief route and projects 1A, 2A, 3A, and 4A as the recommended projects. In addition, the LAC agreed to the implementation plan (**Table 2**) that was presented which included project implementation timeline, costs, funding sources, and agency coordination.

Table 2: Project Implementation Plan

Recommendation	Implementation Timeline	Cost Estimates	Potential Funding Sources	Agencies Involved
1A	Near-term	$142,000	• TxCDBG, • TxDOT TASA • Local Bonds • SS4A • City Budget	State of Texas, City of Luling, Caldwell County
2A	Mid-term	$14M	• TxCDBG, TxDOT TASA • Local Bond • STBG • SS4A	State of Texas, City of Luling, TxDOT, Caldwell County
3A	Near-term	$59,000	• City Budget • Local Bonds • Downtown TIRZ	TxDOT, EDC, City of Luling, Caldwell County
4A	Mid-term	$396,000	• TxDOT TASA • RAISE Grant	TxDOT, City of Luling
Relief Route Alignment A3	Long-term	$39.1M	• TxDOT Texas Off-System Rail Grade Separation State Fund Program • RAISE • RCE • CRISI	FHWA, FRA, TxDOT, CAMPO, Caldwell County, City of Luling

Public Meetings

Involving the community at key stages of the plan update enables them to shape the recommendations of the plan. Throughout this process, a total of four public meetings were conducted to understand the desires and challenges of the community and to engage them in prioritizing recommendations developed for this plan. The following sections describe each set of public meetings in greater detail. All public meeting materials and survey results can be viewed in **Appendix B** and **Appendix C**, respectively.

PUBLIC MEETINGS #1 AND #2



Objectives

Public Meetings 1 and 2 were held on Thursday, March 26, 2026, from 11am to 1pm and from 5pm to 7pm, respectively. As the first opportunity for community members to engage with the project, these two meetings introduced the study goals, timeline, and milestones; recapped outcomes from the 2019 Luling Transportation Study; and offered opportunities for community members to identify transportation issues that were important to them and to share in detail challenges they encounter in the City.

Implementation

The meetings were advertised using digital channels, including posts on Facebook, Instagram, and Nextdoor; a media release on Thursday, March 26; a banner on the Caldwell County Road Bond Program website; and emails to stakeholders asking them to promote the event to their networks. Meeting flyers were also distributed in-person at the local public facilities such as the library, civic center, and other local businesses.

The meetings used a series of 36-inch by 48-inch display boards to present information about the study and invite community members to indicate if they agreed with the study's goals and objectives. Large maps were also provided for participants to mark out areas of concern and place adhesive notes with descriptions of the issues they face.

Findings

In total, community members (including members the LAC and Stakeholders) filled out 96 surveys and submitted 115 comments online and in-person. The results showed that the community generally agreed with the study's goals and objectives. When asked about the issues of priority, the following emerged as the top five:

- Safe roadway conditions.
- First responder emergency response times.
- Volume of freight trucks.
- Congestion from weekend or through travelers.
- Safe routes to and from school.

Specifically, the community raised concerns at the various locations within the city shown in **Table 2** below.

Table 3: Location-Specific Transportation Issues Within the City

Location	Issues
US 183 at E Davis St.	Blocked intersection prevents east-west movements
Railroad crossings at N. Cedar Ave. & Elm Ave.	Steep grades, high-centered trucks, congestion
SH 80 at the San Marcos River bridge	Low lighting, poor visibility, pavement conditions
US 183 from Plum Creek bridge to US 90	Safety concerns, lane confusion
Hackberry Ave. north of central Luling	Increasing traffic, safety, pavement conditions
Hackberry Ave. south of central Luling	Student safety, pavement conditions
SH 80 Corridor south of US 90	Pedestrian/student crossing barrier, safety, lighting, speeding, needs pedestrian signage, high truck traffic
SH 80 northwest of central Luling	Sight distance, speeding, safety concerns for vehicles stopped to turn left, truck traffic, fatality location
US 183/US 90/I-10 interchange area	Congestion, safety concerns, lane continuity, heavy traffic overall, conflict points
S Oak Ave. & E Travis St.	Offset intersection, safety concerns

This input from community members was essential to the study as it helped guide the selection of focus areas and potential improvement projects within each area.

PUBLIC MEETINGS #3 AND #4

Objectives

Public meetings #3 and #4 were both held on Tuesday, July 14, 2026, from 11 a.m. to 1 p.m. and from 5 p.m. to 7 p.m., respectively. Aside from providing an update on the progress of the study, the primary intentions of these two meetings were to present and have community members prioritize the preliminary set of alignment alternatives for the relief route and proposed improvement projects within the identified focus areas.



Implementation

Prior to July 14, the meetings were advertised through a range of digital channels including a formal press release, a news blast to those on the Caldwell County Road Bond Program mailing list, the Caldwell County Road Bond program webpage, and two posts on the Caldwell County Road Bond Program Facebook page. Two days before the meetings, a dynamic messaging sign was placed along southbound SH 80/Magnolia Avenue just north of South Oak Avenue to advertise the meeting date, time, and venue. A combined total of 24 community members attended these two meetings where they were handed survey sheets to rank the relief route alignments and improvement projects presented on 36-inch by 48-inch activity boards. On the board showing the relief route alignment alternatives, results of the long-term Northeast Alignment relief route option were also presented for community members to provide comments, if any. An online survey with the same ranking

exercise at the in-person meetings was posted on the Road Bond Program webpage to enable participation by those unable to attend in person.

Findings

At LAC and Stakeholder meeting #3 and public meetings #3 and #4, community members, stakeholders, and the LAC were invited to prioritize these improvement projects by ranking projects within each focus area according to their preference. The same activity was made available on the online survey for those who could not attend the public meetings in person. Results from this exercise revealed a broad consensus across all groups on the highest priority improvement projects within each focus area.

In total, 35 surveys and 15 comments were submitted (including members the LAC and Stakeholder Committee) online and in-person at the meetings. The results showed that Alignment A3 was chosen as the relief route alignment that would benefit the community the most. Projects 1B, 2A, 3A, and 4A had clear consensus as priority #1. The Option A alignment alternatives and focus areas and their projects as shown to the public are depicted in Figure 3 and Figure 4, respectively. The number of votes associated with each can be viewed in **Table 2**.

Table 4: Number of Votes from the LAC, Stakeholders, and Community Survey

	Preferred Alignment	Priority #1	Priority #2	Priority #3
Option A Alignment Alternatives				
Alignment A1	2			
Alignment A2	12			
Alignment A3	26			
None of these	6			
Focus Area 1: S Hackberry Ave. from US 90/Pierce St. to Houston St.				
Project 1A		15	8	22
Project 1B		26	15	4
Project 1C		5	22	19
Focus Area 2: N Hackberry Ave. from FM 2984/Lincoln Dr. to SH 80/Austin St.				
Project 2A		39	7	
Project 2B		8	38	
Focus Area 3: SH 80/Austin St. from E Fannin St. to E Milam St.				
Project 3A		25	12	9
Project 3B		19	21	6
Project 3C		2	13	31
Focus Area 4: Intersection of US 183/E Pierce St. and US 90				
Project 4A		43	3	
Project 4B		3	43	

In addition, the comments provided from the public reemphasized the need for practical, near- and long-term solutions for local congestion, a relief route around town, safety, and infrastructure improvements.

Figure 3: Final Option A Alignment Alternatives

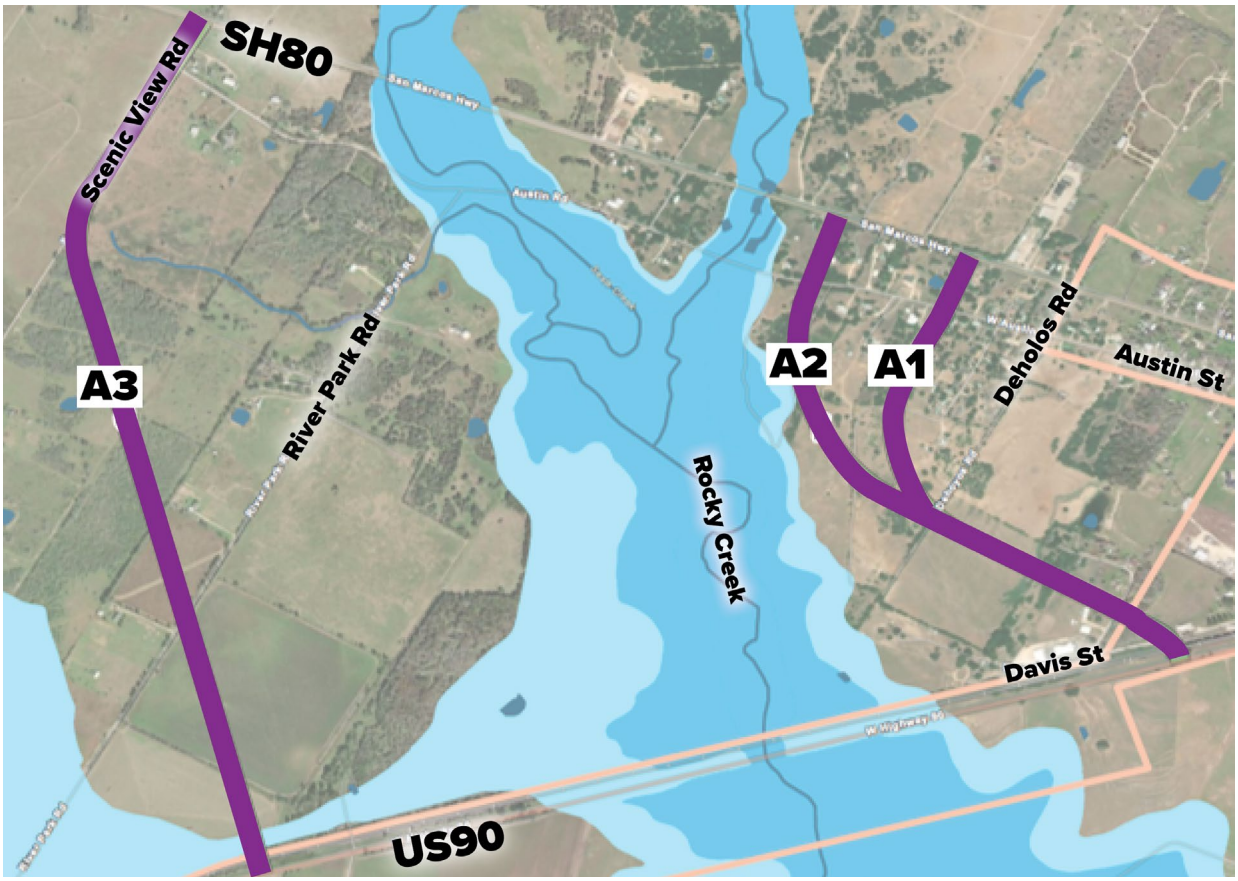


Figure 4: Final Focus Areas and Projects

Focus Area 1

S. Hackberry Ave from US 90/E. Pierce St to E. Houston St.



Project ID	Project Description
1A	ADA-compliant Sidewalks and Curb Ramps
1B	Repave Hackberry Ave from US 90 / Pierce St to Houston St
	School Zone Flashers
	High Visibility Signage and Crosswalk Striping
	Pedestrian Safety Lighting
1C	New Traffic Signal at US 90 / Pierce St

Focus Area 2

N. Hackberry Ave from FM2984 to SH80/Austin St



Project ID	Project Description
2A	SH 80 / Austin St to Trinity St: Reconstruct with striped center and edge lines
	New signal at intersection of N. Hackberry Ave and SH 80
2B	Trinity St to Lincoln St (FM 2984): Reconstruct with striped center and edge lines

Tell us what you think!
On your survey sheet, rank these projects based on your preference.

Focus Area 3

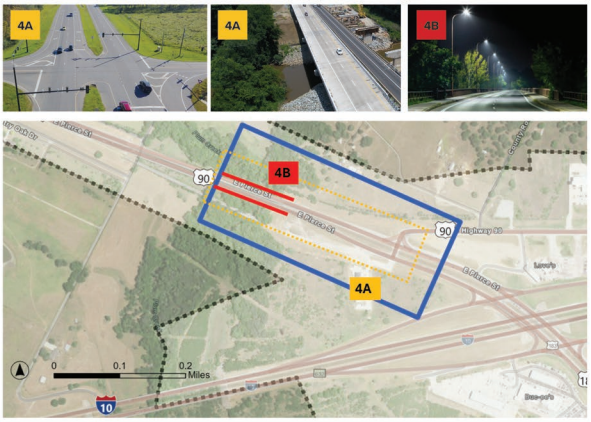
SH80/Austin St from E. Fannin St to E Milam St.



Project ID	Project Description
3A	Patterned Intersection and "Do Not Block Intersection" Signage
	High Visibility Crosswalks
	Dynamic Speed Feedback Signs
3B	Pedestrian Hybrid Beacon at E. Travis Street
	High Visibility Crosswalk Striping and PedestrianSignage
	Dynamic Speed Feedback Signs
3C	Pedestrian Safety Lighting

Focus Area 4

US183 and US90 Intersection



Project ID	Project Description
4A	Roadway Widening and Restriping of Southbound US 183 to Accommodate Two Continuous Through Lanes from Plum Creek Bridge to US 90 / US 183 Intersection
	Update Intersection Pavement Markings and Signal Timing
4B	Safety Lighting along Plum Creek Bridge

Tell us what you think!
On your survey sheet, rank these projects based on your preference.

Conclusion

The public engagement process conducted as part of the City of Luling Transportation Plan Update provided multiple opportunities for residents, business owners, stakeholders, agency partners, and local officials to participate in the development of the plan. Through four public meetings, seven committee meetings, and online and in-person surveys, valuable input was gathered regarding transportation issues within the city limits, community priorities, relief route alternatives, and potential improvement projects. The feedback received throughout the process consistently highlighted concerns related to safety, mobility, truck traffic, the number of trains; emergency response access, pedestrian connectivity, and congestion downtown.

Input from the LAC, stakeholder committee, and the community directly informed the identification of focus areas and transportation projects; evaluation of relief route alternatives, and prioritization of transportation projects. The engagement process also helped validate technical findings and ensured that proposed recommendations reflected local knowledge and community needs. As a result, the final transportation plan represents a collaborative vision for addressing Luling's transportation challenges while supporting the City's long-term goals for safety, mobility, economic development, and identifying a relief route around town.

Appendices

APPENDIX A:
Luling Advisory Committee (LAC) and Stakeholder Committee Meeting Materials

APPENDIX B:
Public Engagement Materials

APPENDIX C:
Survey Results and Community Input

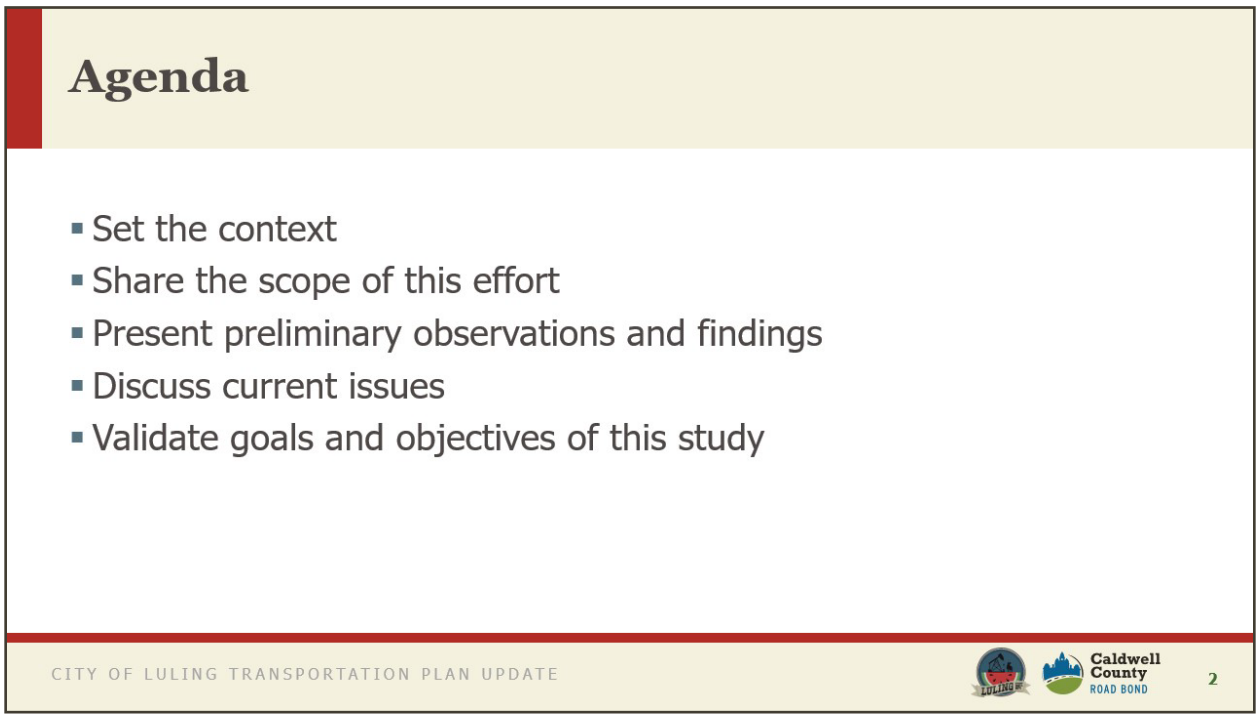
Appendix A

Luling Advisory Committee (LAC) and Stakeholder Committee Meeting Material

LAC AND STAKEHOLDER COMMITTEE MEETING #1

Presentation



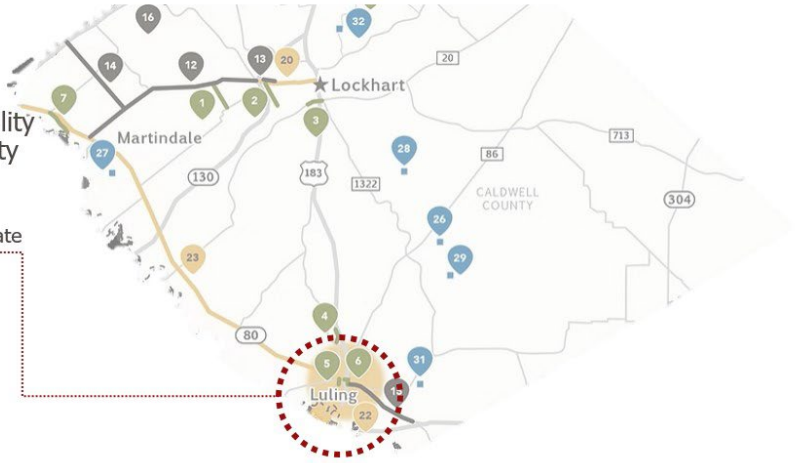


CONTEXT

2024 Caldwell County Bond Project

Approved in Nov 2024:
$150 million bond-funded investment to improve mobility and safety in Caldwell County

22. Luling Transportation Plan Update
Plan Cost: $150,000



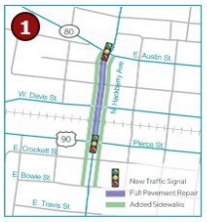
CITY OF LULING TRANSPORTATION PLAN UPDATE

4

2019 Transportation Plan Recommendations

1. Recommended short-term improvements entail works along
2. Hackberry Avenue and Magnolia Ave / Pierce Street

3. Recommended long-term improvement option was Option A







Scope of this update

- Update and build on the 2019 study to identify and prioritize **system-wide improvements**.
- Incorporate **new data** – traffic, crash, demographics, travel demand, development growth
- Conduct **community and stakeholder engagement** sessions for input
- Key outcomes: **focus areas** for improvement and **three potential options** for an alternate route that diverts through traffic downtown along US183.
- **Identify funding opportunities** to implement future projects.

Study Schedule

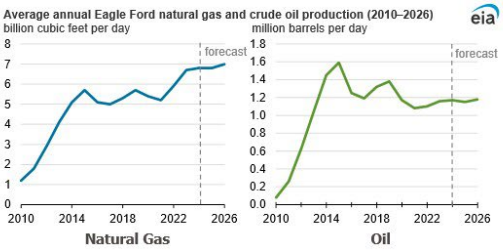
	Jan	Feb	Mar	Apr	May	Jun	July	Aug
Stakeholder and LAC Meetings		■	■			■		■
Public Meetings			■				■	
Data Collection and Assessment		■	■	■				
Alternatives Analysis		■	■	■	■			
Study Report					■	■	■	■

OBSERVATIONS AND FINDINGS

#1

Population growth and development within the region contributing to the increase in traffic

1 Increasing natural gas production in the Eagle Ford Shale Region



2 Growing population and new developments in surrounding region

3



Year	Caldwell County
2017	~40,500
2024	~52,000 (+29% from 2017)
2050	~71,000 (+39% from 2024)



- New residential developments in Caldwell, Guadalupe, and Hay Counties
- Largest Buc-ee's opened in 2024

CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 8

#2

Increasing number of trips through the city

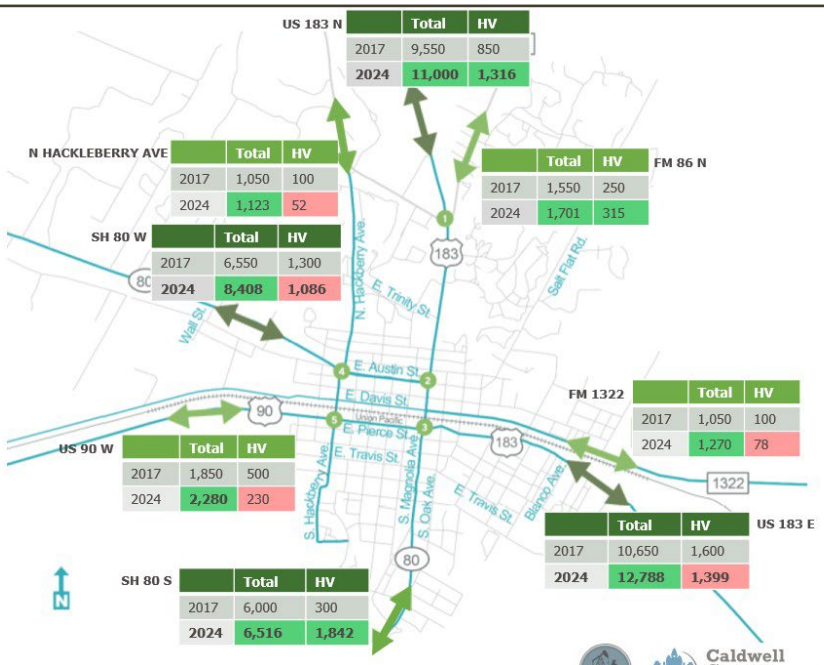
Average Daily Traffic Volumes

2017 figures: taken from 2019 study which were estimated from Streetlight data

2024 figures: AADT volumes extracted from TxDOT's website

HV = Heavy Vehicles

CITY OF LULING
TRANSPORTATION PLAN UPDATE



9

#2

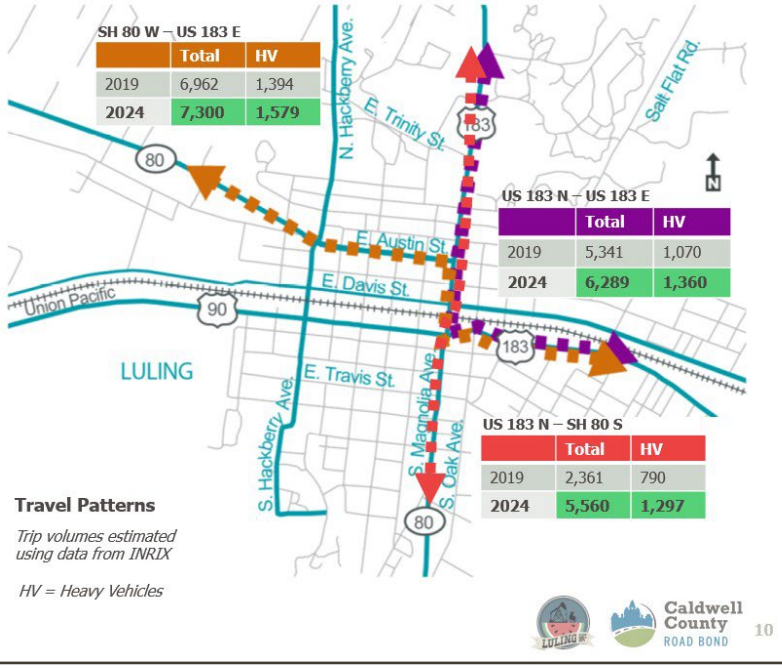
New emerging trip pattern from US 183 N to SH 80 S

Travel Patterns

Trip volumes estimated using data from INRIX

HV = Heavy Vehicles

CITY OF LULING
TRANSPORTATION PLAN UPDATE

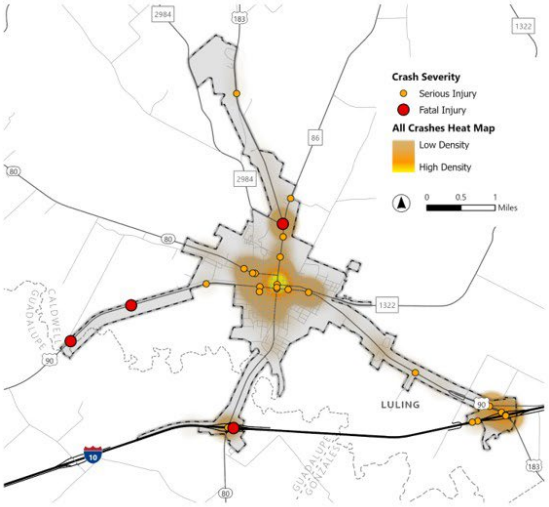


10

#3

Crashes are concentrated at the intersections of major roads

- Crashes that lead to severe or fatal injuries (KA crashes) occur primarily on state roads, with a greater concentration in Downtown.
- Intersections of major roadways, e.g. FM86/US183, I-10/SH80, US183/I-10, appear to be more prone to KA crashes.



Crash data for 2018-2024 obtained from TxDOT

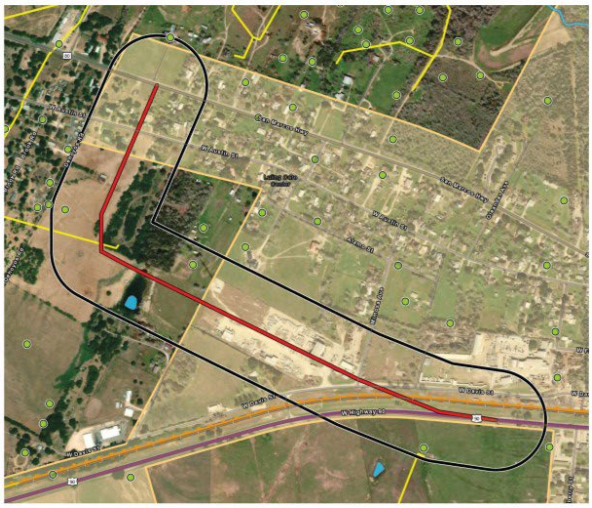
CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 11

#4

Recommended Long-Term Improvement - Option A

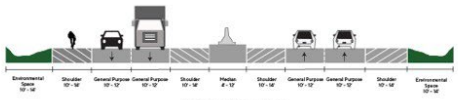
New Connection from SH 80 to US 90



Option A: 500-foot Buffer

- 4 surface wells
- 1 freshwater pond
- 2 natural gas pipelines,
- 1 historic highway route (Old Spanish Trail).

Principal - Regional Connector 4-Lane Divided with Shoulder



ROW: 90' - 150'

CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 12

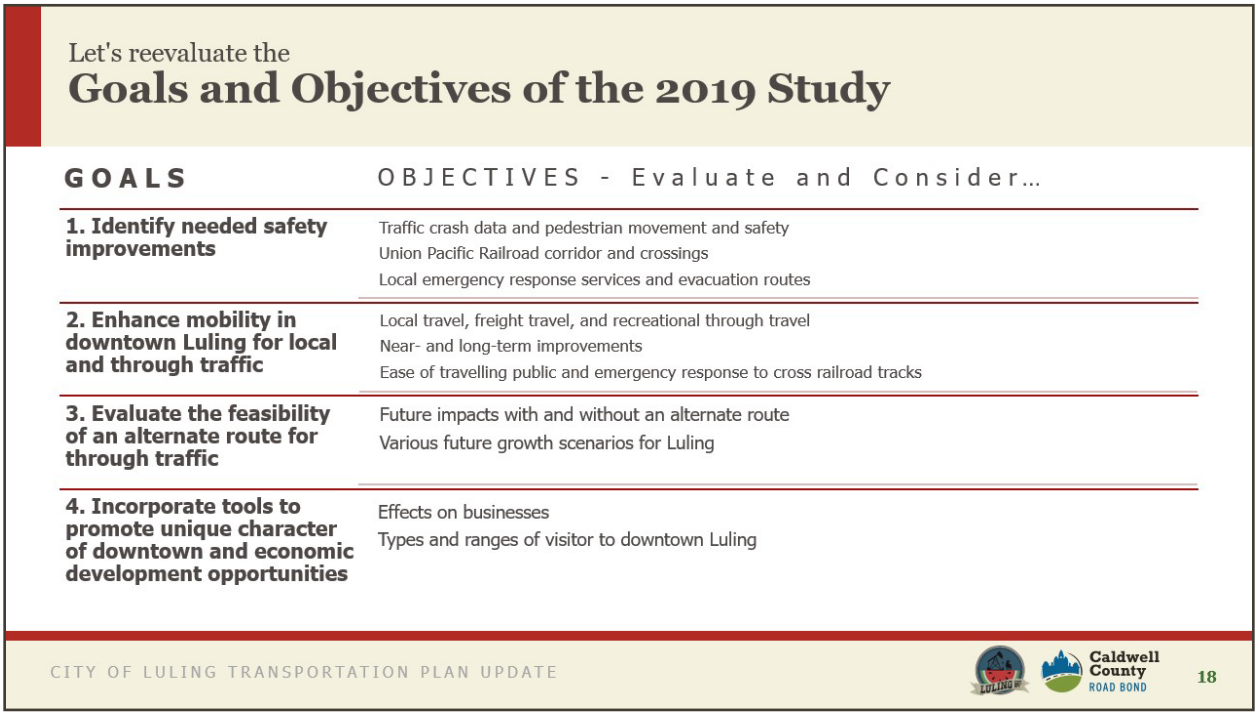
DISCUSSION: CURRENT ISSUES

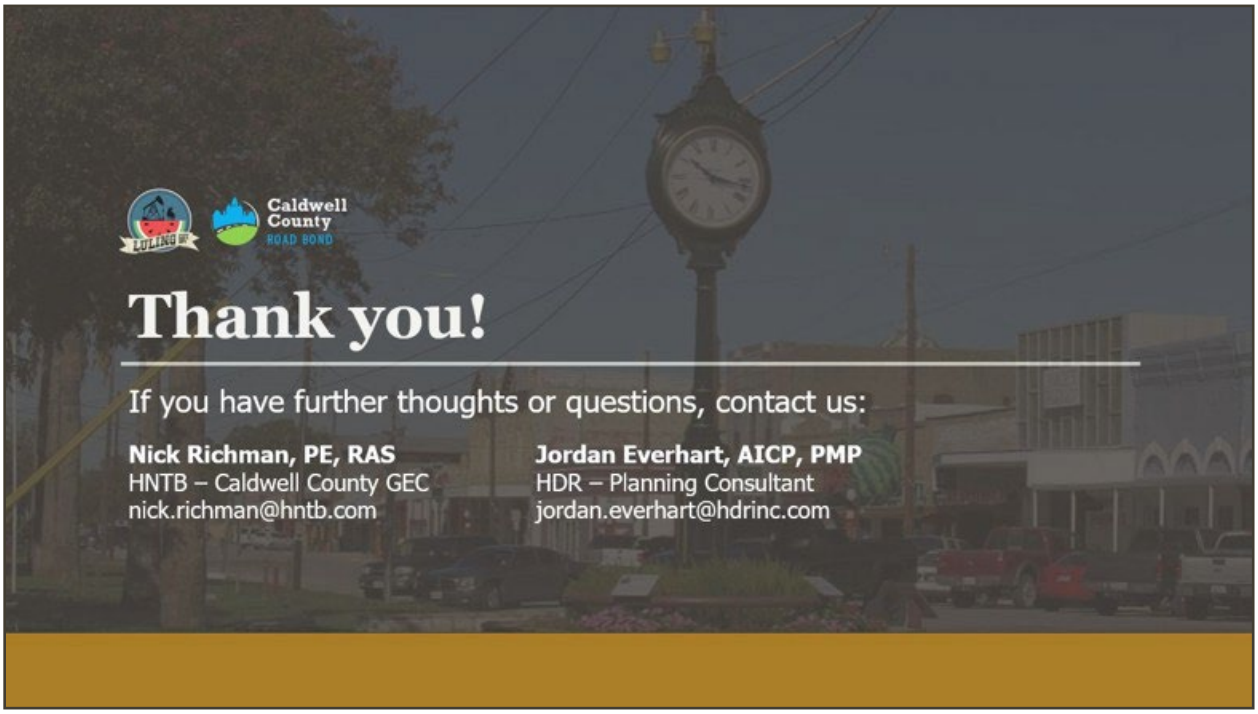



City of Luling
County Boundary
Interstate
US Highway
State Highway
Local Road
Railroads
River/Stream


Option A
City of Luling
County Boundary
Interstate
US Highway
State Highway
Local Road
Railroads
River/Stream
Lake/Pond


DISCUSSION: GOALS AND OBJECTIVES
Caldwell County ROAD BOND

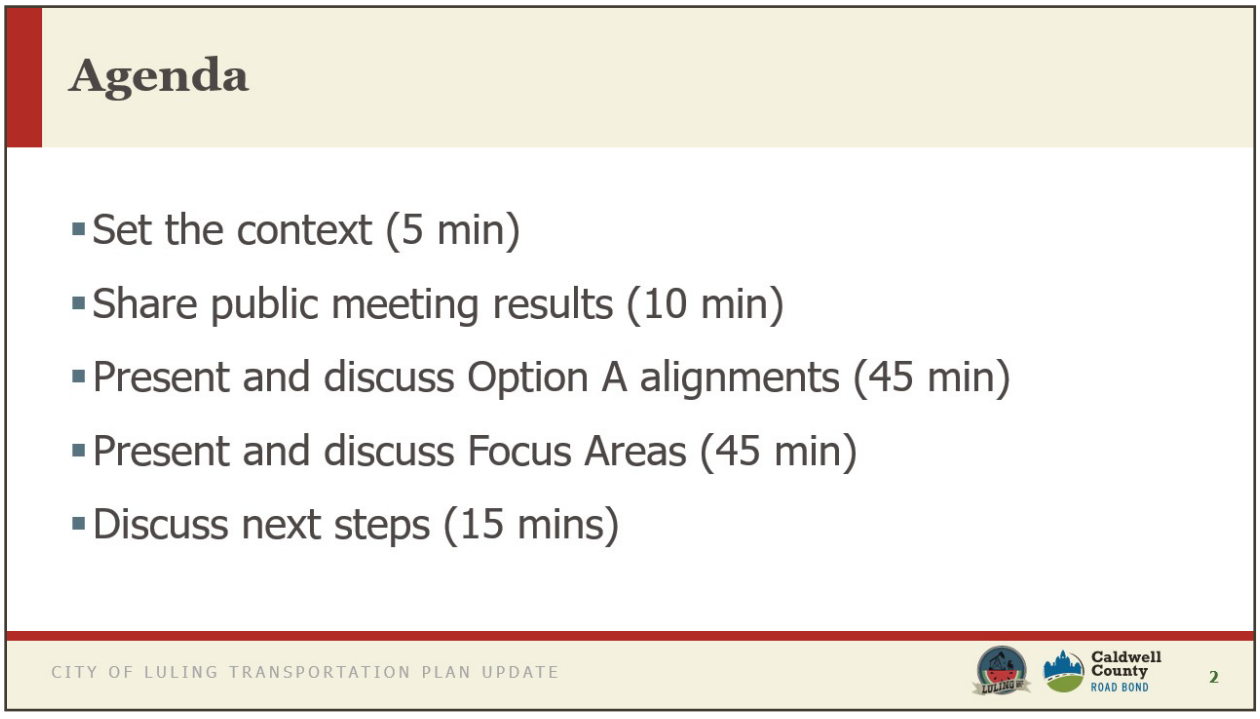

Let's reevaluate the
Goals and Objectives of the 2019 Study
GOALS
OBJECTIVES - Evaluate and Consider…
1. Identify needed safety improvements
Traffic crash data and pedestrian movement and safety
Union Pacific Railroad corridor and crossings
Local emergency response services and evacuation routes
2. Enhance mobility in downtown Luling for local and through traffic
Local travel, freight travel, and recreational through travel
Near- and long-term improvements
Ease of travelling public and emergency response to cross railroad tracks
3. Evaluate the feasibility of an alternate route for through traffic
Future impacts with and without an alternate route
Various future growth scenarios for Luling
4. Incorporate tools to promote unique character of downtown and economic development opportunities
Effects on businesses
Types and ranges of visitor to downtown Luling
CITY OF LULING TRANSPORTATION PLAN UPDATE
Caldwell County ROAD BOND
18


Caldwell County
ROAD BOND
Thank you!
If you have further thoughts or questions, contact us:
Nick Richman, PE, RAS
HNTB – Caldwell County GEC
nick.richman@hntb.com
Jordan Everhart, AICP, PMP
HDR – Planning Consultant
jordan.everhart@hdrinc.com

LAC AND STAKEHOLDER COMMITTEE MEETING #2

Presentation





Context

Scope of this update

- Update and build on the 2019 study to identify and prioritize **system-wide improvements**.
- Incorporate **new data** – traffic, crash, demographics, travel demand, development growth
- Conduct **community and stakeholder engagement** sessions for input
- Key outcomes: **focus areas** for improvement and **three potential options** for an alternate route that diverts through traffic downtown along US183.
- **Identify funding opportunities** to implement future projects.

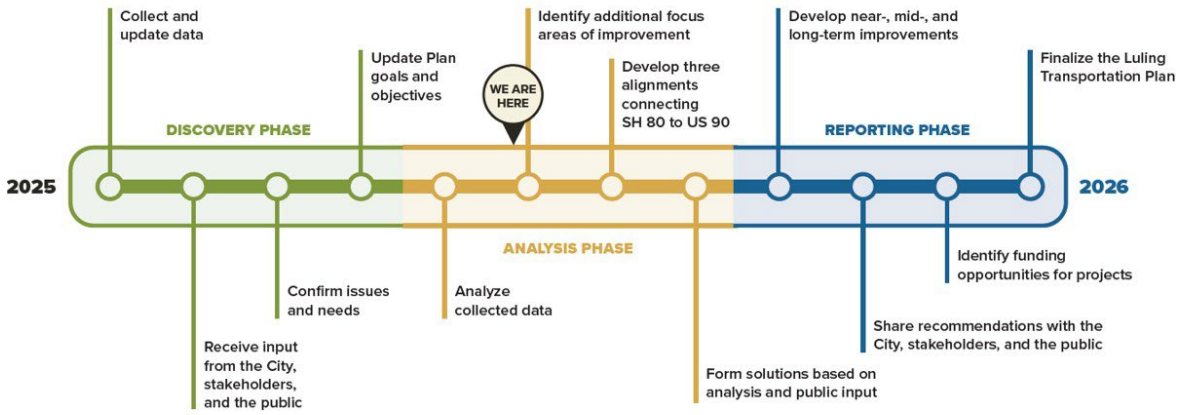
Study Schedule

	Jan	Feb	Mar	Apr	May	Jun	July	Aug
Stakeholder and LAC Meetings		■		■		■		■
Public Meetings			■				■	
Data Collection and Assessment		■	■	■				
Alternatives Analysis			■	■	■	■		
Study Report					■	■	■	■

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 4

Study Process



Decision Points

- Which three Option A alternatives should the Plan move forward with?
- Should the Plan reevaluate an additional relief route northwest of Luling as a long-term alternative?
- Approval to continue evaluating presented Focus Areas.

Public Meeting Results

Confirmation of Goals and Objectives

Goal 1: Identify needed safety improvements
- Analyze current traffic movements, crash trends, and pedestrian activity.
- Assess safety and operational issues along the Union Pacific Railroad corridor and its crossings.
- Understand local emergency response patterns and impacts of the hurricane evacuation route.

Goal 2: Enhance mobility in downtown Luling for all modes of local and through traffic
- Analyze how local, freight, and recreational travelers move through downtown.
- Improve public and emergency services access across the railroad tracks.
- Expand walking and biking options for all ages and abilities.
- Identify near-, mid-, and long-term mobility improvements.

Goal 3: Evaluate the feasibility of an alternate route for through traffic
- Develop and evaluate three relief route alignments west of central Luling from Austin St. (SH 80) to Pierce St. (US 90).
- Assess how future growth scenarios affect the viability of each alignment.

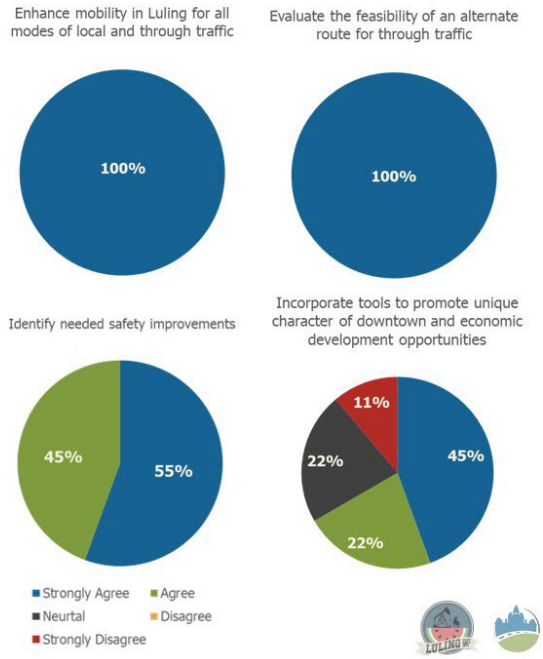
Goal 4: Incorporate tools to promote unique character of downtown and economic development opportunities
- Assess how transportation changes may affect local businesses.
- Analyze visitor patterns to support strategies that strengthen downtown's character and economic vitality.

Additional suggestions:
- School signage, lighting, visibility and signals.
- The need for a truck route
- Electric Vehicle (EV) Charging Station

CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 8

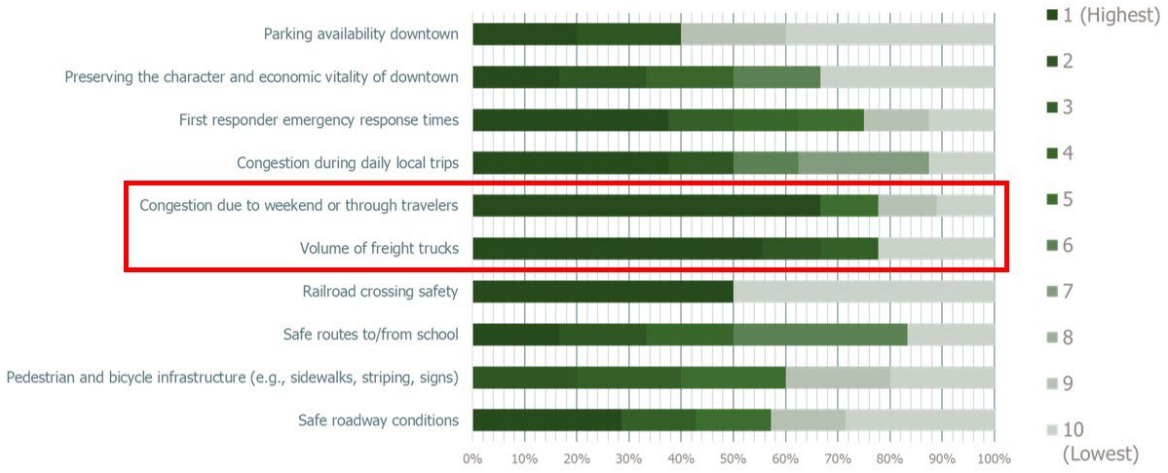
Survey - Confirmation of Goals and Objectives



CITY OF LULING TRANSPORTATION PLAN UPDATE

9

Survey - Issue Priorities



CITY OF LULING TRANSPORTATION PLAN UPDATE

10

Dot Activity - Issues that are most important to Luling



CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 11

What we heard - Summary

- Need for an overpass/relief route for trucks and emergency vehicles
- Train-related congestion and delays
- Heavy truck traffic and truck routing issues
- Cut-through traffic and neighborhood impacts
- Congestion and signal operations along US183, SH80, and US183/US90 near Buc-ee's
- Pedestrian safety and sidewalk gaps
- School safety and student movements
- Roadway conditions, lighting, and maintenance issues

CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 12

What we heard - Locations

- **US183 at E. Davis St.**
  - Blocked intersection, prevents east-west movements
- **Railroad Crossings at N. Cedar Ave. & Elm Ave.**
  - Steep grades, high-centered trucks, congestion
- **San Marcos River Bridge**
  - Low lighting, poor visibility, pavement conditions
- **US183 from Plum Creek Bridge to US90**
  - Safety, side-swipe collisions, lane confusion
- **Hackberry Ave. North of Central Luling**
  - Increasing traffic, safety, pavement conditions

CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 13

What we heard - Locations

- **Hackberry Ave. South of Central Luling**
  - Student safety, pavement conditions
- **SH80 Corridor South of US 90**
  - Pedestrian/student crossing barrier, safety, lighting, speeding, lack of pedestrian signage, high truck traffic
- **SH80 Northwest of Central Luling**
  - Sight distance, speeding, safety concerns for vehicles stopped to turn left, truck traffic, fatality location
- **US183/US 90/I-10 Interchange Area**
  - Congestion, safety concerns, lane continuity, heavy traffic overall, conflict points
- **S. Oak Ave. & E. Travis St.**
  - Offset intersection, safety concerns

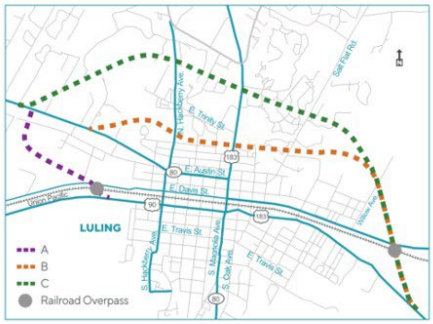
CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 14

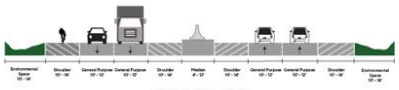
Option A Alignment Alternatives

Basis for Alternatives Development

- **Option A** was the recommended long-term recommendation in the 2019 Plan.
- 2024 Caldwell County Transportation Plan
- Environmental constraints
- City, County, and Stakeholder input
- Right of Way and property impacts
- Displacements
- Connectivity with the existing roadway network
- Potential US 90 intersection types



Principal - Regional Connector 4-Lane Divided with Shoulder



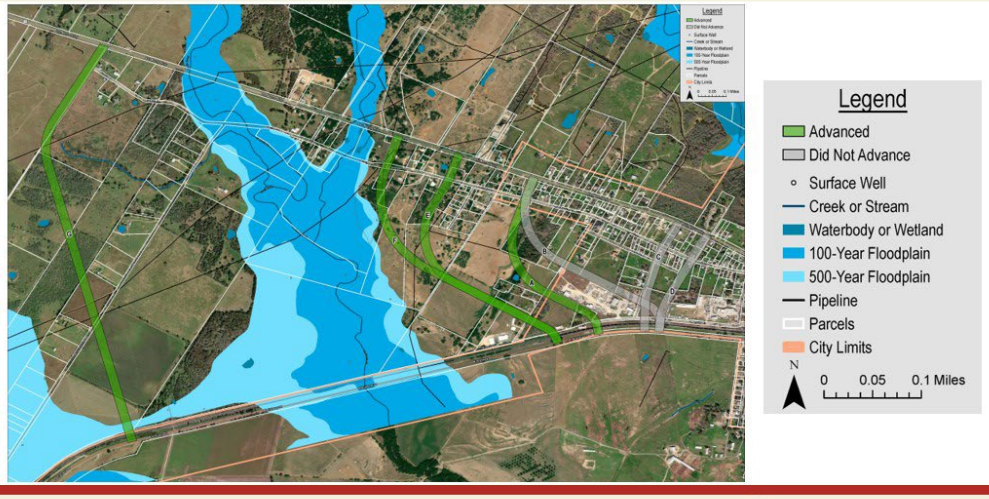
ROW: 90' - 150'

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND

16

Option A Alternatives



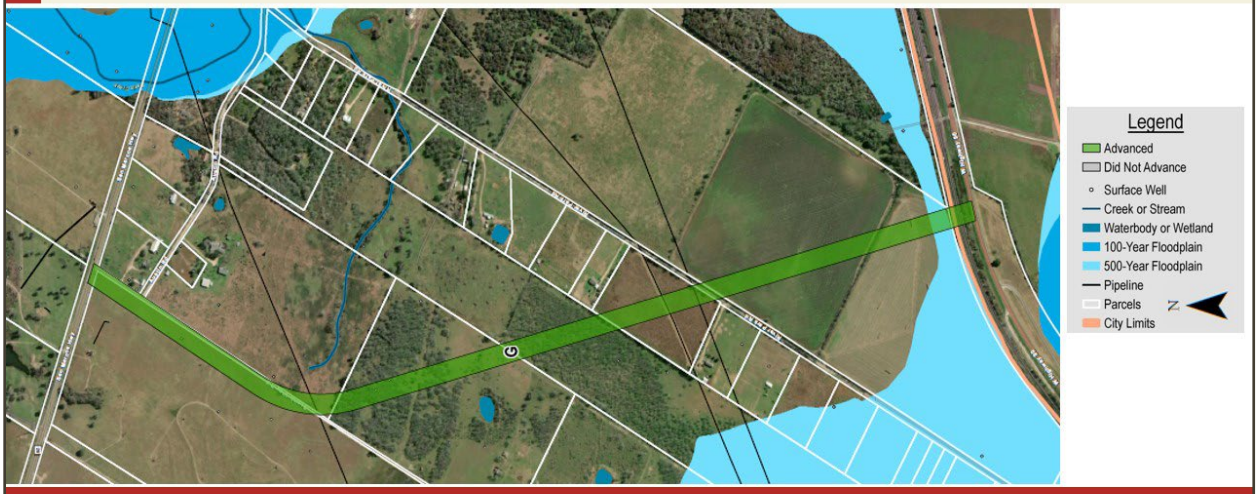
CITY OF LULING TRANSPORTATION PLAN UPDATE 17

Alternatives A - F



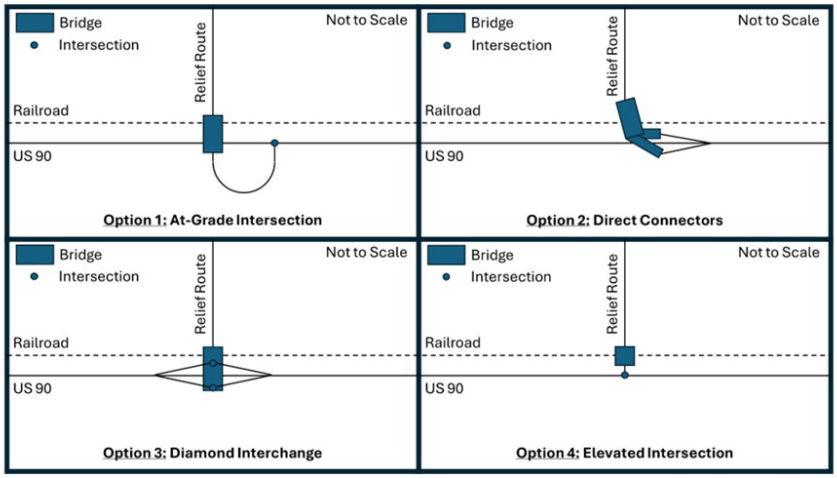
CITY OF LULING TRANSPORTATION PLAN UPDATE 18

Alternative G



CITY OF LULING TRANSPORTATION PLAN UPDATE
Caldwell County ROAD BOND
19

US 90 Intersection Options



CITY OF LULING TRANSPORTATION PLAN UPDATE
Caldwell County ROAD BOND
20

Alternatives Evaluation

Alignment	Length (miles)	Environmental Constraints	Right of Way and Property Impacts	Connectivity with the Existing Roadway Network	Railroad Crossing	Total Score
A	0.7	Adjacent to body of water/wetland Intersects 1 pipeline	2 potential displacements	Compatible with existing roadway network	Each of the options for connections to US 90 can be accommodated with this alignment	2
B	0.8	None	3 potential displacements	Close proximity to Central Luling may disrupt access to properties along US 90	Each of the options for connections to US 90 can be accommodated with this alignment	0
C	0.4	Intersects 1 surface well	3 potential displacements	Close proximity to Central Luling may disrupt access to properties along US 90 and create a barrier for local traffic and pedestrians	Each of the options for connections to US 90 can be accommodated with this alignment	0
D	0.4	None	4 potential displacements	Close proximity to Central Luling may disrupt access to properties along US 90 and create a barrier for local traffic and pedestrians	Each of the options for connections to US 90 can be accommodated with this alignment	0
E	0.9	Adjacent to body of water/wetland Intersects 1 pipeline	1 potential displacement	Compatible with existing roadway network	Each of the options for connections to US 90 can be accommodated with this alignment	2
F	1.0	Adjacent to floodplain Intersects 3 surface wells Intersects 3 pipelines	0 potential displacements*	Compatible with existing roadway network	Each of the options for connections to US 90 can be accommodated with this alignment	2
G	1.5	Passes over floodplain Intersects five surface wells Intersects 3 pipelines	0 potential displacements	Farthest west from Central Luling. Compatible with existing roadway network	Each of the options for connections to US 90 can be accommodated with this alignment	2

*Entire parcel needed but no habitable structure is impacted
Note: Green = Score of 1, Yellow = Score of 0, Red = Score of -1

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 21

Decision Points

- Which three alternatives should the Plan move forward with?
- Should the Plan reevaluate an additional relief route northeast of Luling as a long-term alternative?

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 22

Focus Areas

Existing Planned Projects

- N. Hackberry Ave. from SH 90 (Pierce Street) to SH 80 - **2024 Bond**
- N. Magnolia Ave. (US 183) Turn Lane Addition - **2024 Bond**
- US 183 Turn Lane Addition - **2024 Bond**
- US 90/E Pierce St at N Cedar Ave. - **CAMPO 2025 Regional Safety Action Plan (RSAP)**
- Intersection US 183 at E Davis St. - **CAMPO 2025 RSAP**
- SH 80 from 650' east of Oleander Ave to 80' east of N. Walnut Ave - **CAMPO 2025 RSAP**

Preliminary Focus Areas

- S. Hackberry Ave. from SH 80 (E. Austin St.) to E. Travis St.
- N. Hackberry Ave. from Bridal Path Rd. to SH 80 (E. Austin St.)
- SH 80 from E Fannin St. to E. Milam St.
- Luling Core within Davis St., Laurel St., Travis St., and Cypress St.
- US 183 at SH 90/I-10 Access Road

CITY OF LULING TRANSPORTATION PLAN UPDATE
Caldwell County ROAD BOND 25

Preliminary Focus Areas

Existing Planned Projects
Preliminary Focus Areas



CITY OF LULING
TRANSPORTATION PLAN UPDATE
Caldwell County ROAD BOND 26



CITY OF LULING
TRANSPORTATION PLAN UPDATE

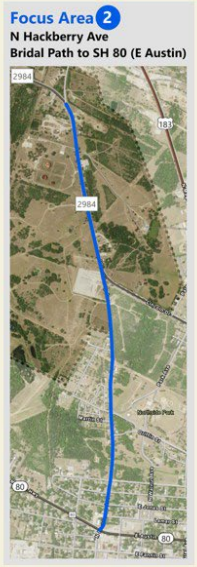
Preliminary Focus Area 1

S. Hackberry Ave. from SH 80 (E. Austin Ave) to E. Travis St.

Considerations

- Barrier elimination and connectivity across railroad, Davis St., and US 90
- Intersection improvements at Davis St. and US 90
- Sidewalk and ADA improvements
- School/neighborhood/Downtown connectivity
- Safety treatments and countermeasures including signage and striping
- Pavement improvements south SH 90

Caldwell County ROAD BOND 27



CITY OF LULING
TRANSPORTATION PLAN UPDATE

Preliminary Focus Area 2

N. Hackberry Ave. from Bridal Path Rd. to E. Davis St.

Considerations

- Parallel route to US 183 to Downtown
- Alternate truck route
- Roadway pavement and capacity improvements
- Skewed intersection at SH 80 (E. Austin Ave.)
- Intersection improvements
- Safety treatments and countermeasures including signage and striping

Caldwell County ROAD BOND 28



Preliminary Focus Area 3

SH 80 from E. Fannin St. to E. Milam St.

Considerations

- Barrier elimination and connectivity across SH 80 between schools, public facilities, and neighborhoods
- East-west crossing considerations at E. Fannin St. and East Davis St.
- Intersection improvements
- Safety treatments and countermeasures including signage, striping, and lighting.
- Traffic calming measures
- Opportunities for queuing and congestion relief

CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 29



Preliminary Focus Area 4

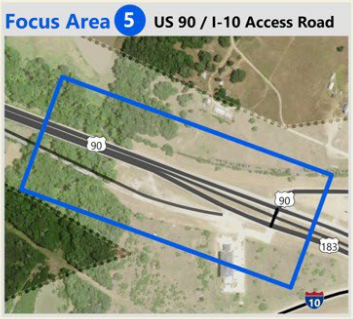
Luling Core (Davis St./Laurel St./Travis St./Cypress St.)

Considerations

- Mobility and connectivity between schools, Downtown, H-E-B and neighborhoods.
- Supports Goal #4 (economic development opportunities)
- Improve pedestrian crossings at railroads
- Sidewalk and ADA improvements
- Safety treatments and countermeasures including signage and striping
- Downtown considerations for improving circulation and the pedestrian experience

CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 30



Preliminary Focus Area 5

US 90/I-10 Access Road

Considerations

- Intersection improvements to facilitate traffic flow to/from US 90.
- Opportunities for queuing and congestion relief
- Safety treatments and countermeasures
- Mobility and circulation considerations
- Lane continuity considerations
- Intersection improvements

CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 31

Decision Point

- Decide of which Focus Areas to move forward.
- Approval to continue evaluating the presented Focus Areas to develop near-, mid- and long-term improvements.

CITY OF LULING TRANSPORTATION PLAN UPDATE

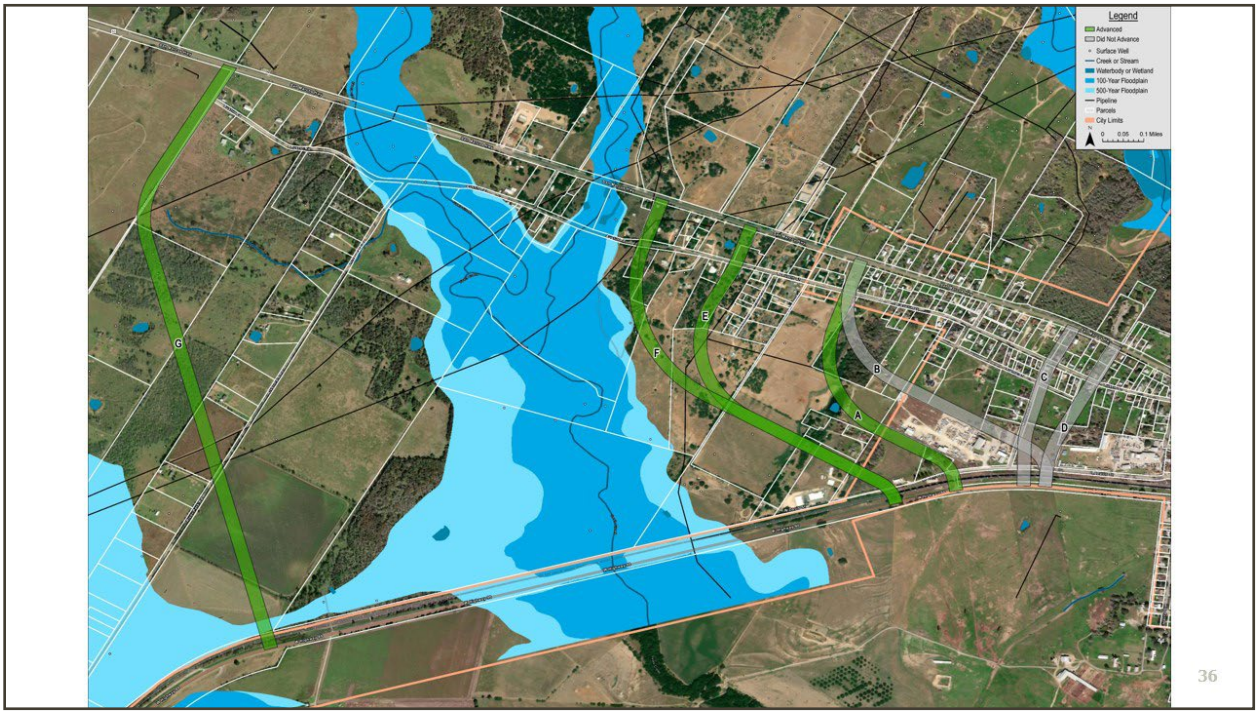
Caldwell County ROAD BOND 32

Next Steps

Next steps

- Develop projects (up to 3) for each Focus Area
- Model Option A alignments
- LAC/Stakeholder Meeting #3 – June 11, 2026
- Public Meetings #2 and #3 – Early July 2026

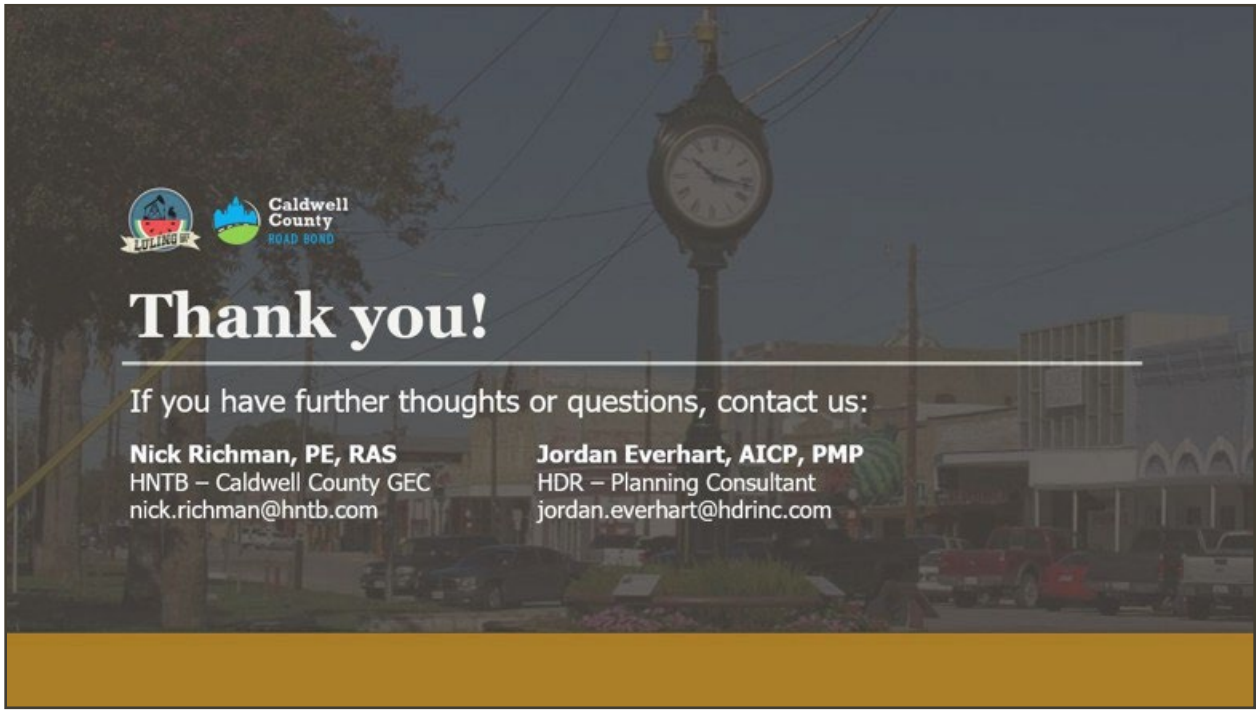
Maps


Legend
Advanced
Did Not Advance
Surface Well
Creek or Stream
Waterbody or Wetland
100-Year Floodplain
500-Year Floodplain
Pipeline
Parcels
City Limits
A
B
C
D
E
F
G
36

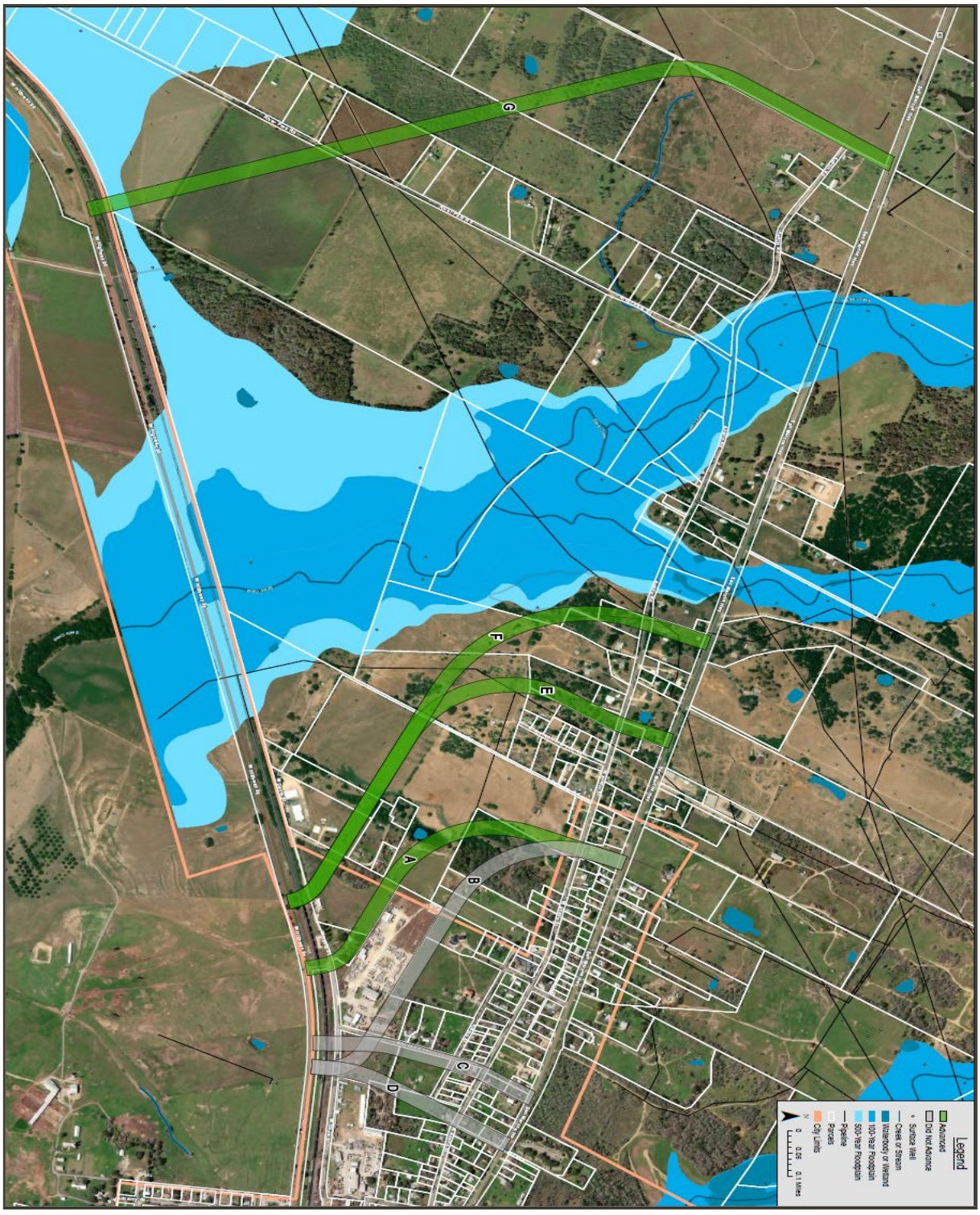

Focus Area 1
S Hackberry Ave
SH 80 (E Austin) to E Travis
Focus Area 2
N Hackberry Ave
Bridal Path to SH 80 (E Austin)
Focus Area 3
SH 80
E Fannin to E Milam
Focus Area 4
Luling Core
Davis/Laurel/Travis/Cypress
Focus Area 5 US 90 / I-10 Access Road
0 0.25 0.5 1 Miles
37


City of Luling
County Boundary
Interstate
US Highway
State Highway
Local Road
Railroads
River/Stream
Lake/Pond
Project Location
CALDWELL COUNTY
GUADALUPE COUNTY

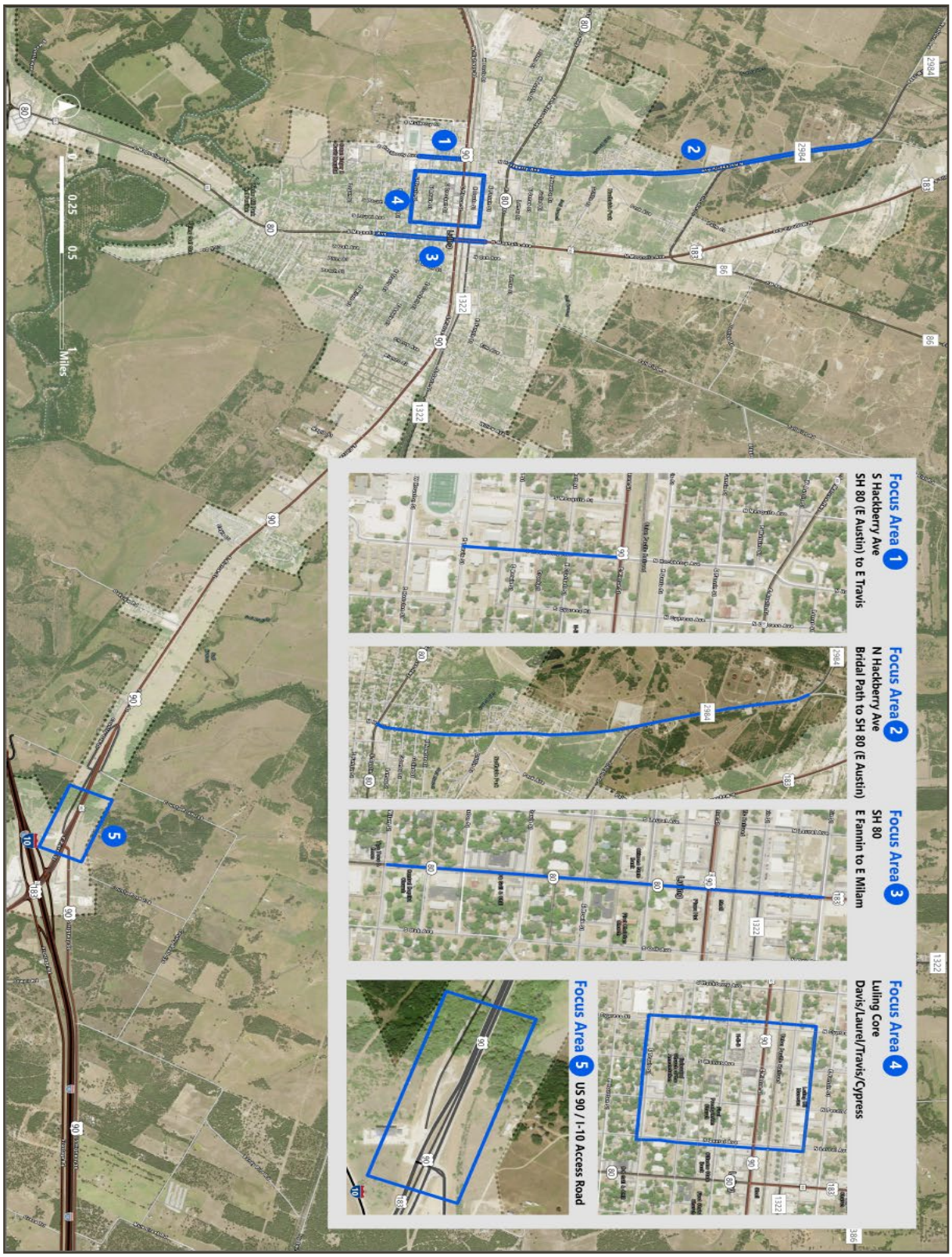

City of Luling
County Boundary
Interstate
US Highway
State Highway
Local Road
Railroads
River/Stream


Caldwell County
ROAD BOND
Thank you!
If you have further thoughts or questions, contact us:
Nick Richman, PE, RAS
HNTB – Caldwell County GEC
nick.richman@hntb.com
Jordan Everhart, AICP, PMP
HDR – Planning Consultant
jordan.everhart@hdrinc.com

Meeting #2: Map of Evaluated Relief Routes



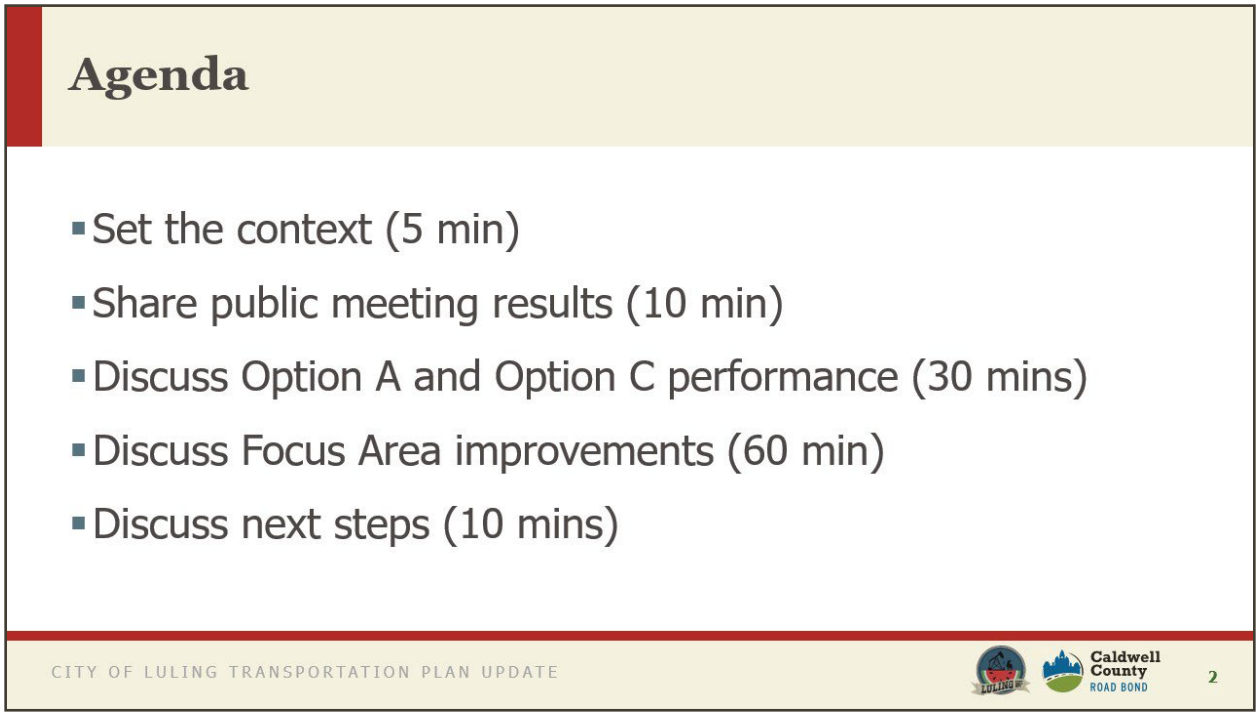
Meeting #2: Map of Preliminary Focus Areas



LAC AND STAKEHOLDER COMMITTEE MEETING #3

Presentation





Context

Caldwell County ROAD BOND

Scope and Study Process

- Update and build on the 2019 study to identify and prioritize **system-wide improvements**.
- Incorporate **new data** – traffic, crash, demographics, travel demand, development growth
- Conduct **community and stakeholder engagement** sessions for input
- Key outcomes: **focus areas** for improvement and **three potential options** for an alternate route that diverts through traffic downtown along US183.
- **Identify funding opportunities** to implement future projects.

Study Schedule

	Jan	Feb	Mar	Apr	May	Jun	July	Aug
Stakeholder and LAC Meetings		■		■		■		■
Public Meetings			■				■	
Data Collection and Assessment		■	■	■				
Alternatives Analysis			■	■	■	★		
Study Report					■	■	■	■

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 4

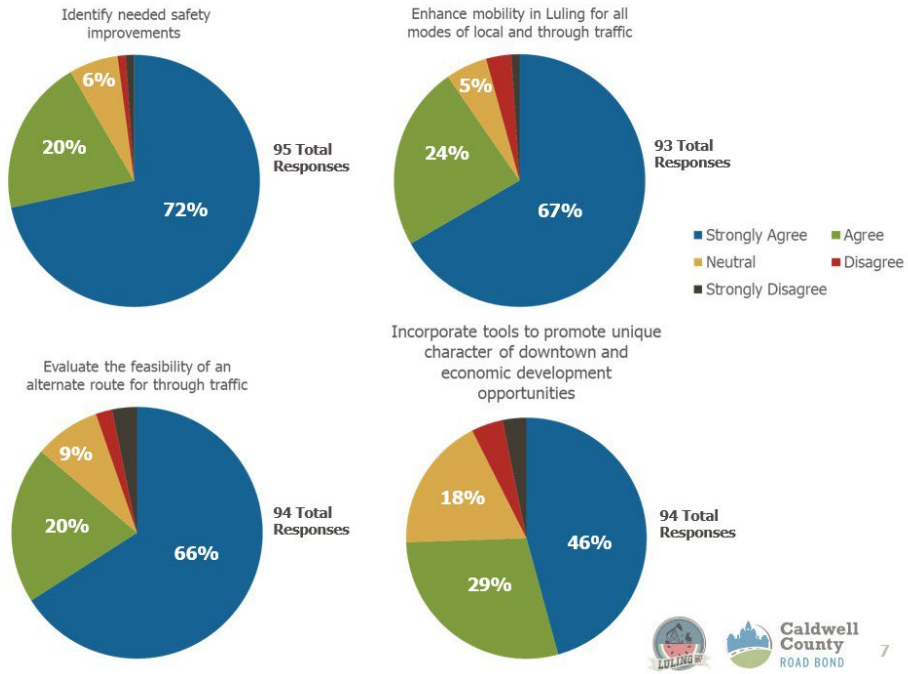
Decision Points

- Approval of recommended Option A alternative.
- Approval of Focus Area improvements.
- Approval of improvement timeframes:
  - Short-term (0-5 years)
  - Mid-term (6-10 years)
  - Long-term (11-20 years)

Public Meeting Results

Survey - Confirmation of Goals and Objectives

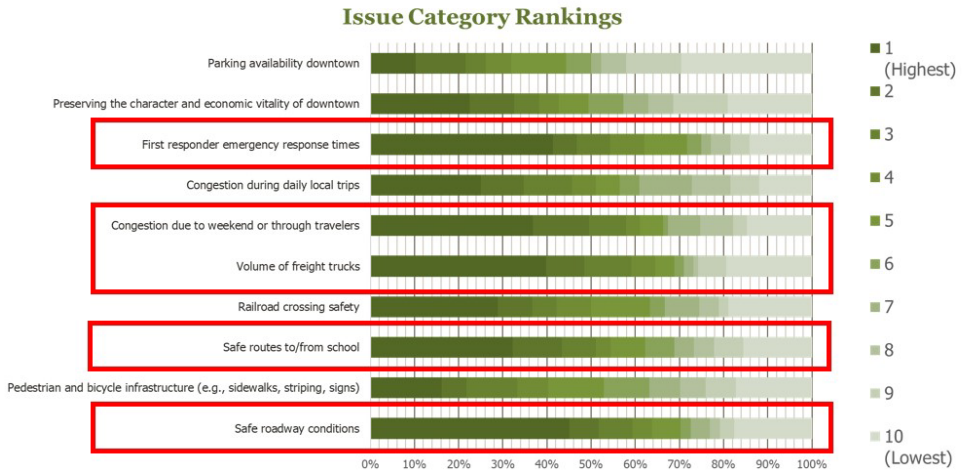
96 surveys submitted



CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 7

Survey - Issue Priorities



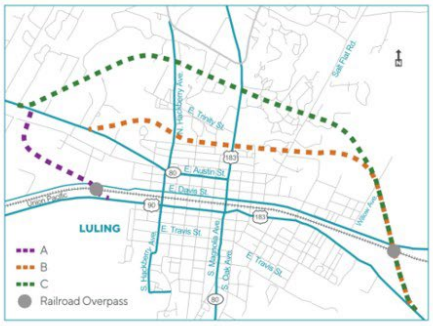
CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 8

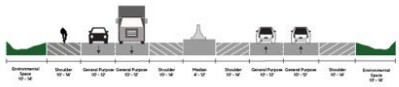
Option A Alignment Alternatives

Basis for Alternatives Development

- **Option A** was the recommended long-term recommendation in the 2019 Plan.
- 2024 Caldwell County Transportation Plan
- Environmental constraints
- City, County, and Stakeholder input
- Right of Way and property impacts
- Displacements
- Connectivity with the existing roadway network
- Potential intersection types at US 90



Principal - Regional Connector 4-Lane Divided with Shoulder



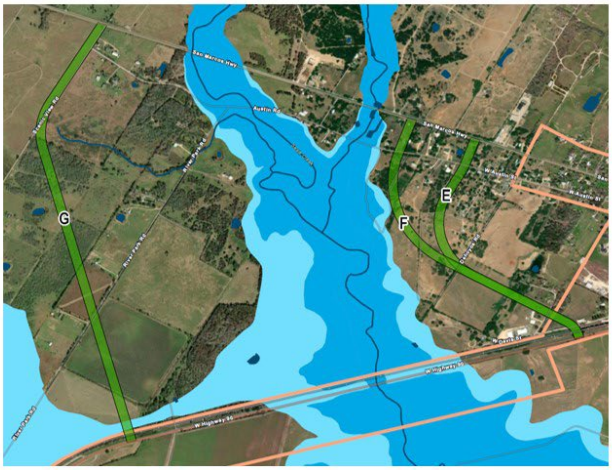
ROW: 90' - 150'

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND

10

Option A Alternatives



Legend
- Alignments
- City Limits
- 100-Year Floodplain
- 500-Year Floodplain
- Creek or Stream
- Waterbody or Wetland

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 11

Option A Alternatives - Evaluation

Alignment	Length (miles)	Environmental Constraints	Right of Way and Property Impacts	Connectivity with the Existing Roadway Network	Railroad Crossing	Total Score
A	0.7	Adjacent to body of water/wetland Intersects 1 pipeline	2 potential displacements	Compatible with existing roadway network	Each of the options for connections to US 90 can be accommodated with this alignment	2
B	0.8	None	3 potential displacements	Close proximity to Central Luling may disrupt access to properties along US 90	Each of the options for connections to US 90 can be accommodated with this alignment	0
C	0.4	Intersects 1 surface well	3 potential displacements	Close proximity to Central Luling may disrupt access to properties along US 90 and create a barrier for local traffic and pedestrians	Each of the options for connections to US 90 can be accommodated with this alignment	0
D	0.4	None	4 potential displacements	Close proximity to Central Luling may disrupt access to properties along US 90 and create a barrier for local traffic and pedestrians	Each of the options for connections to US 90 can be accommodated with this alignment	0
E	0.9	Adjacent to body of water/wetland Intersects 1 pipeline	1 potential displacement	Compatible with existing roadway network	Each of the options for connections to US 90 can be accommodated with this alignment	2
F	1.0	Adjacent to floodplain Intersects 3 surface wells Intersects 3 pipelines	0 potential displacements*	Compatible with existing roadway network	Each of the options for connections to US 90 can be accommodated with this alignment	2
G	1.5	Passes over floodplain Intersects five surface wells Intersects 3 pipelines	0 potential displacements	Farthest west from Central Luling. Compatible with existing roadway network	Each of the options for connections to US 90 can be accommodated with this alignment	2

*Entire parcel needed but no habitable structure is impacted
Note: Green = Score of 1, Yellow = Score of 0, Red = Score of -1

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 12

Option A Alternatives - Performance

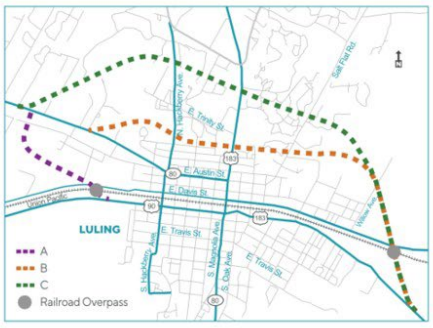
Performance Measure	Units	No-Build 2050	Alt. E 2050	Alt. F 2050	Alt. G 2050
US80 Total Traffic	Vehicles Per Day	9,390	9,990	10,060	10,780
Total Traffic Diverted from SH 80 to US 90	Vehicles Per Day	-	1,860 (19%)	2,230 (20%)	2,650 (25%)
Heavy Vehicles Diverted (Approx. 10%)	Vehicles Per Day	-	~190	~220	~270
Average Cross-town Distance (SH 80 W to US 90 E)	Miles	-	3.74	3.86	5.66
Average Cross-town Travel Time	Minutes	4:32	05:08	05:17	07:11
Magnolia/US 90 Intersection Performance	Level of Service	D	D	D	D
Cost	USD	$0	$24.3M	$26.6M	$39.1M

- Alternative G diverts the most traffic around Downtown.
- Diverted traffic must still travel along US90 (Pierce St.) and pass through the Magnolia/US90 intersection.
- All alternatives increase cross-town travel time but create a reliable trip due to the railroad grade separation.

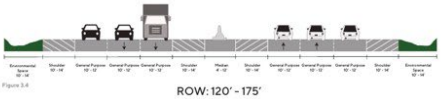
Option C Evaluation

Basis for Option C Evaluation

- **Option C** was evaluated in the 2019 Plan.
- "Best fit" alignment
- Environmental constraints
- City, County, and Stakeholder input
- Right of Way and property impacts
- Displacements
- Connectivity with the existing roadway network
- Basic traffic diversion



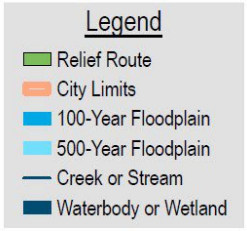
Limited Access



ROW: 120' - 175'

Option C Alternative





Option C – Evaluation and Performance

Length	Environmental Constraints	Right of Way and Property Impacts	Connectivity with the Existing Roadway Network	Railroad Crossing
8.2 miles	Passes over floodplain in five locations. Passes over 1 body of water. Intersects 27 surface wells.	4 anticipated displacements*	Compatible with existing roadway network and provides additional relief not provided by other options.	Avoids issue of interchange immediately adjacent to railroad.

* Three due to loss of access; only one physical impact.

Performance Measure	Units	No-Build 2050	Option C 2050
US183-E Total Traffic	Vehicles Per Day	16,500	16,370
US183-E Total Traffic Diverted Away from Downtown	Vehicles Per Day	-	9,640 (59%)
Heavy Vehicles Diverted (Approx. 10%)	Vehicles Per Day	-	~960
Cost	USD	$0	$251.1M

Option C – Performance Summary

- The estimated volume of daily traffic on Option C ranges from 720 vehicles per day (VPD) west of US183 N and 9,640 VPD east of US183 N.
- This means majority of users of Option C are traveling to/from US183 N, FM 86, and US183 E.
- Option C relieves Downtown turning movements:
  - 63% and 80% of **westbound right turn traffic** at Magnolia/US90 and Hackberry/US 90, respectively.
  - 38% and 40% of **southbound left turn** traffic at Magnolia/US90 and Hackberry/US 90, respectively.
  - 37% and 55% **northbound and southbound through** traffic at Magnolia/SH 80 and Hackberry/SH 80, respectively.

Focus Area Improvements

Goals and Objectives – paradigm for improvements

Goal 1: Identify needed safety improvements
- Analyze current traffic movements, crash trends, and pedestrian activity.
- Assess safety and operational issues along the Union Pacific Railroad corridor and its crossings.
- Understand local emergency response patterns and impacts of the hurricane evacuation route.

Goal 2: Enhance mobility in downtown Luling for all modes of local and through traffic
- Analyze how local, freight, and recreational travelers move through downtown.
- Improve public and emergency services access across the railroad tracks.
- Expand walking and biking options for all ages and abilities.
- Identify near-, mid-, and long-term mobility improvements.

Goal 3: Evaluate the feasibility of an alternate route for through traffic
- Develop and evaluate three relief route alignments west of central Luling from Austin St. (SH 80) to Pierce St. (US 90).
- Assess how future growth scenarios affect the viability of each alignment.

Goal 4: Incorporate tools to promote unique character of downtown and economic development opportunities
- Assess how transportation changes may affect local businesses.
- Analyze visitor patterns to support strategies that strengthen downtown's character and economic vitality.

CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 20

Focus Areas

— Preliminary Focus Areas



CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 21

Focus Area 1

S. Hackberry Ave. from US 90 (E. Pierce St) to E. Travis St



Proposed Improvements

a. Install ADA compliant sidewalks and ramps.

b. Install/update signing and striping; install school zone back flashers, high visibility pedestrian crosswalks, and safety lighting improvements.

c. Install new signal, signing, and striping at US 90 and Hackberry Ave.



Example improvements

CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 22

Focus Area 1

S. Hackberry Ave. from US 90 (E. Pierce St) to E. Travis St



CITY OF LULING
TRANSPORTATION PLAN UPDATE

Proposed Improvements

a. Install ADA compliant sidewalks and ramps.

b. Install/update signing and striping; install school zone back flashers, high visibility pedestrian crosswalks, and safety lighting improvements.

c. Install new signal, signing, and striping at US 90 and Hackberry Ave.

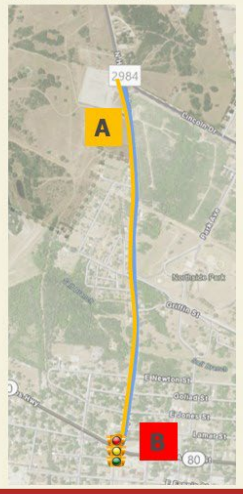
Assessment of Improvements

	1A	1B	1C
Goal 1: Safety	✓	✓	✓
Goal 2: Mobility	✓	-	-
Goal 3: Relief Route	-	-	-
Goal 4: Economic Development	-	-	✓
Community Support	✓	✓	-
Intersection LOS	-	-	"F" to "C"
Cost	$116,100	$180,500	$634,700
Timeframe	Near-term	Near-term	Mid-term

Caldwell County ROAD BOND 23

Focus Area 2

N. Hackberry Ave. from Lincoln Dr. to SH80



CITY OF LULING
TRANSPORTATION PLAN UPDATE

Proposed Improvements

a. Reconstruct with **concrete** and striped center divider and edge lines from Lincoln Dr to Creek; reconstruct with **concrete** and existing 2-lane curb and gutter with divider lines from Creek to SH80.

b. Install new signal, signing, and striping at N. Hackberry Ave. and SH80.



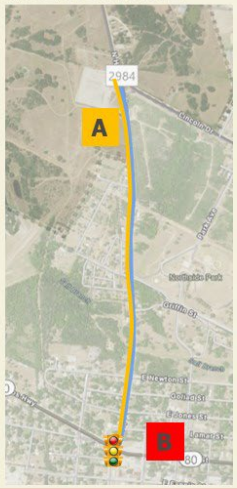


Example improvements

Caldwell County ROAD BOND 24

Focus Area 2

N. Hackberry Ave. from Lincoln Dr to SH80



Proposed Improvements

a. Reconstruct with **concrete** and striped center divider and edge lines from Lincoln Dr to Creek; reconstruct with **concrete** and existing 2-lane curb and gutter with divider lines from Creek to SH80.

b. Install new signal, signing, and striping at N. Hackberry Ave. and SH80.

Assessment of Improvements

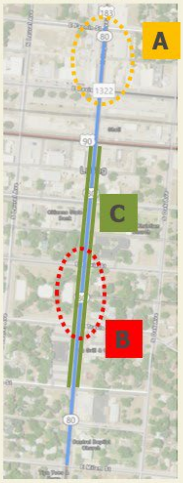
	2A	2B
Goal 1: Safety	✓	✓
Goal 2: Mobility	✓	✓
Goal 3: Relief Route	✓	-
Goal 4: Economic Development	-	-
Community Support	✓	✓
Intersection LOS	-	"F" to "C"
Cost	$16.8M	$643,700
Timeframe	Long-term	Mid-term

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 25

Focus Area 3

SH 80 from E Fannin St to E Milam St



Proposed Improvements

a. Install high visibility pedestrian crosswalks, patterned intersection, and "Do Not Block Intersection" signage on Magnolia Ave at E. Davis and E. Fannin; install new dynamic speed feedback sign.

b. Install HAWK signal at E Travis St and high visibility crosswalk striping at E Travis St and E Bowie St. Add "High Pedestrian Area" signage.

c. Install pedestrian safety lighting.











Example improvements

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 26

Focus Area 3

SH 80 from E Fannin St to E Milam St



Proposed Improvements

a. Install high visibility pedestrian crosswalks, patterned intersection, and "Do Not Block Intersection" signage on Magnolia Ave at E. Davis and E. Fannin; install new dynamic speed feedback sign.

b. Install HAWK signal at E Travis St and high visibility crosswalk striping at E Travis St and E Bowie St. Add "High Pedestrian Area" signage.

c. Install pedestrian safety lighting.

Assessment of Improvements

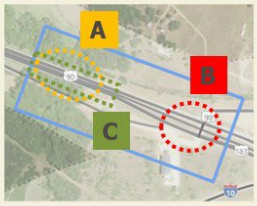
	3A	3B	3C
Goal 1: Safety	✓	✓	-
Goal 2: Mobility	✓	✓	✓
Goal 3: Relief Route	-	-	-
Goal 4: Economic Development	✓	-	-
Community Support	✓	✓	✓
Cost	$59,200	$327,600	$57,600
Timeframe	Near-term	Mid-term	Near-term

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 27

Focus Area 5

US 90 / I-10 Access Road



Proposed Improvements

a. Restripe pavement for southbound approach at Plum Creek Bridge to provide two continuous lanes.

b. Upgrade SB approach at US 183 / E US 90 intersection, upgrade pavement markings, signal timing improvements.

c. Install lighting along Plum Creek Bridge to improve nighttime visibility





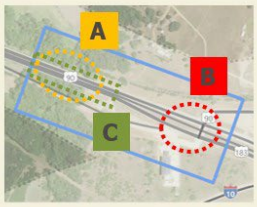


Example improvements

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 28

Focus Area 5
US 90 / I-10 Access Road



CITY OF LULING
TRANSPORTATION PLAN UPDATE

Proposed Improvements

a. Restripe pavement for southbound approach at Plum Creek Bridge to provide two continuous lanes.

b. Upgrade SB approach at US 83 / E US 90 intersection, upgrade pavement markings, signal timing improvements.

c. Install lighting along Plum Creek Bridge to improve nighttime visibility

Assessment of Improvements

	5A	5B	5C
Goal 1: Safety	-	-	✓
Goal 2: Mobility	✓	✓	-
Goal 3: Relief Route	✓	✓	-
Goal 4: Economic Development	-	-	-
Community Support	✓	✓	✓
Intersection LOS	-	"D" to "B/C"	-
Cost	$57,600	$338,000	92,200
Timeframe	Near-term	Mid-term	Near-term

Caldwell County ROAD BOND 29

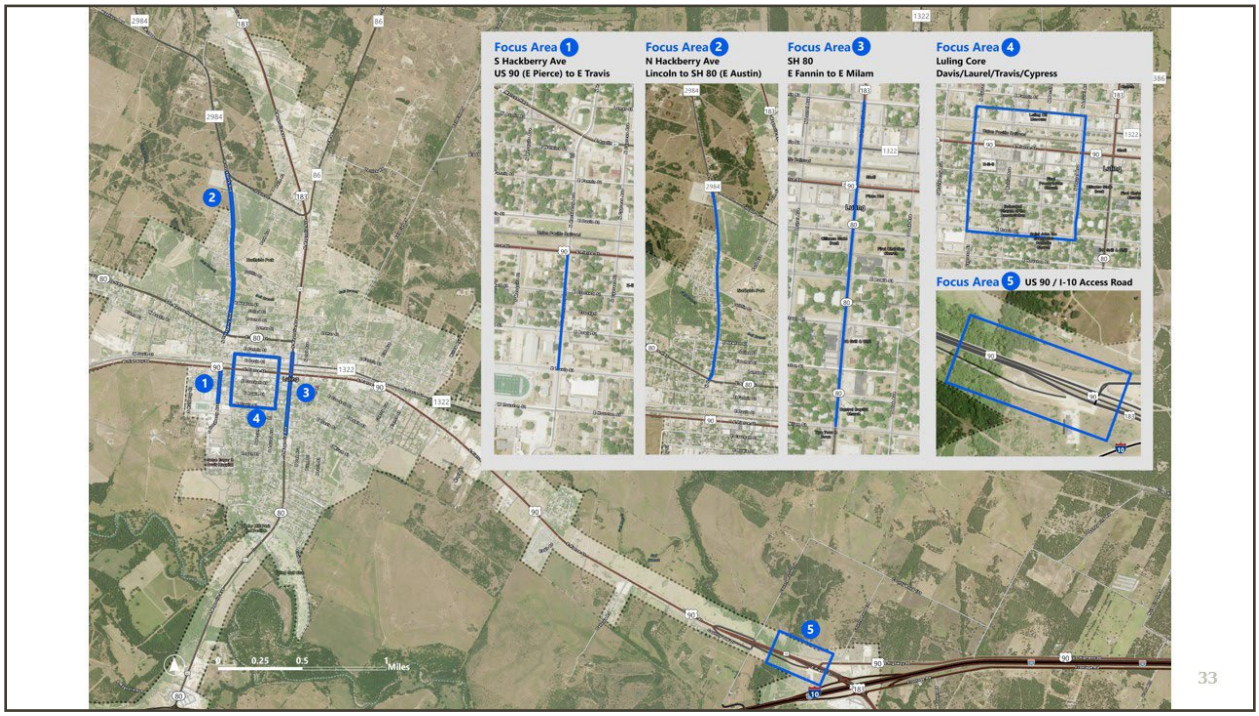
Next Steps

Caldwell County ROAD BOND

Next steps

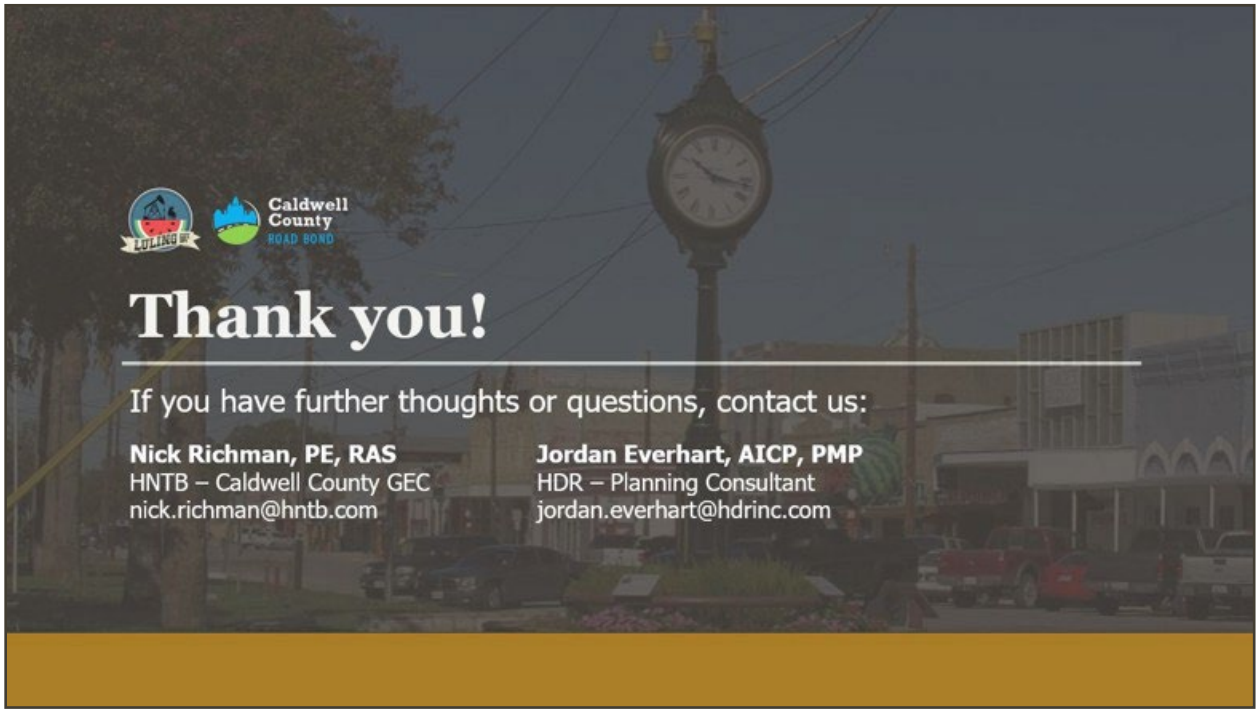
- Draft Alternatives Analysis Report – June 23rd
- Public Meetings #2 and #3 – July 14th
- LAC Meeting #4 – August 11th
- Draft Study Report – August 3rd

Maps


Focus Area 1
S Hackberry Ave
US 90 (E Pierce) to E Travis
Focus Area 2
N Hackberry Ave
Lincoln to SH 80 (E Austin)
Focus Area 3
SH 80
E Fannin to E Milam
Focus Area 4
Luling Core
Davis/Laurel/Travis/Cypress
Focus Area 5
US 90 / I-10 Access Road
0.25
0.5
1 Miles
33


City of Luling
County Boundary
Interstate
US Highway
State Highway
Local Road
Railroads
River/Stream
Lake/Pond
Project Location
CALDWELL COUNTY
GUADALUPE COUNTY


City of Luling
County Boundary
Interstate
US Highway
State Highway
Local Road
Railroads
River/Stream


Caldwell County
ROAD BOND
Thank you!
If you have further thoughts or questions, contact us:
Nick Richman, PE, RAS
HNTB – Caldwell County GEC
nick.richman@hntb.com
Jordan Everhart, AICP, PMP
HDR – Planning Consultant
jordan.everhart@hdrinc.com

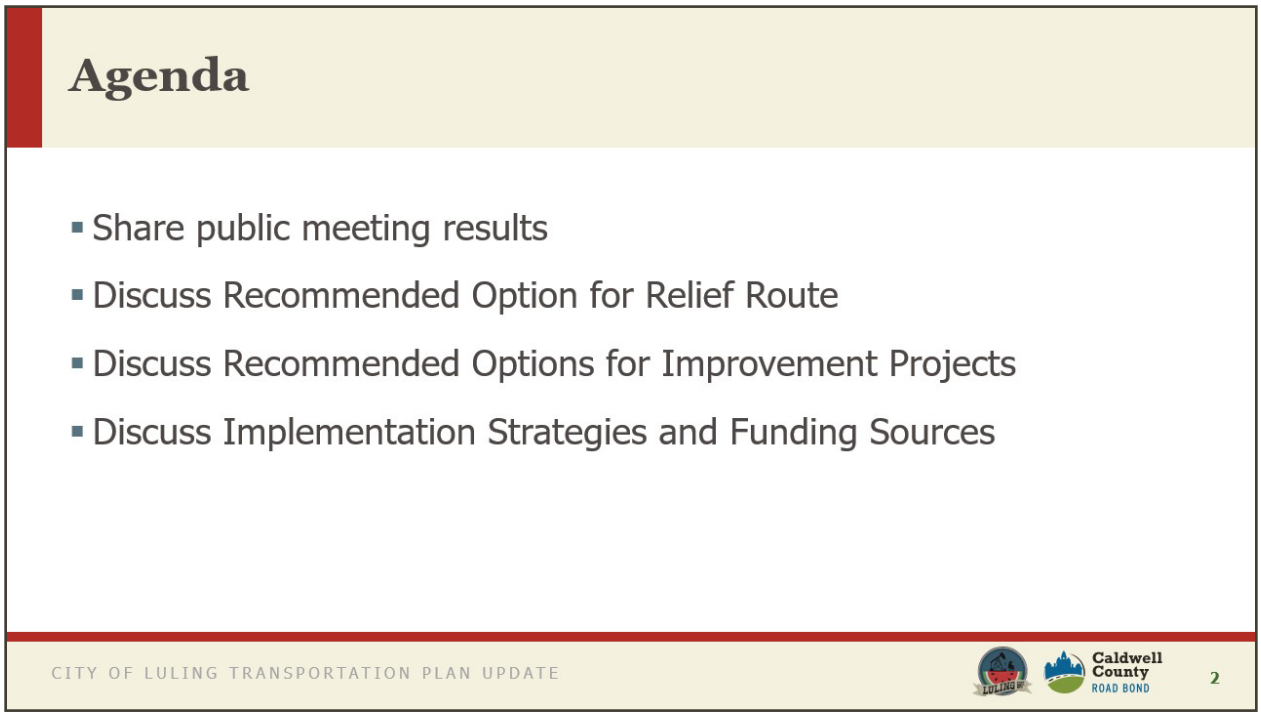
Meeting #3: Map of Option C (Northeast) Alignment



LAC MEETING #4

Presentation





Context

Caldwell County ROAD BOND

Scope and Study Process

- Update and build on the 2019 study to identify and prioritize **system-wide improvements**.
- Incorporate **new data** – traffic, crash, demographics, travel demand, development growth
- Conduct **community and stakeholder engagement** sessions for input
- Key outcomes: **focus areas** for improvement and **three potential options** for an alternate route that diverts through traffic downtown along US183.
- **Identify funding opportunities** to implement future projects.

Study Schedule

	Jan	Feb	Mar	Apr	May	Jun	July	Aug
Stakeholder and LAC Meetings		■		■		■		■
Public Meetings			■				■	
Data Collection and Assessment		■	■	■				
Alternatives Analysis			■	■	■	■		
Study Report					■	■	■	★

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 4

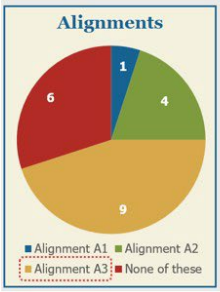
Decision Points

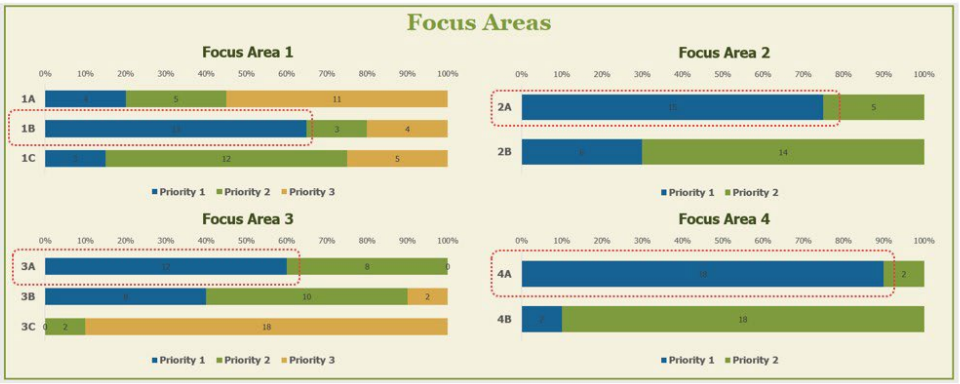
- Agreement on recommended **Alternative Alignment** option
- Agreement on top priority **Improvement Project** for each Focus Area
- Agreement on proposed **Implementation Plan**

Public Meeting Results

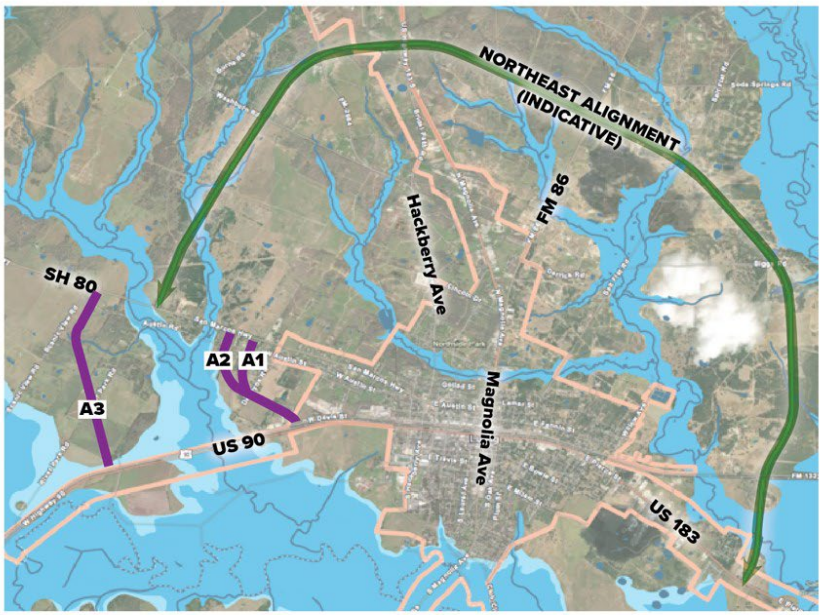
Survey Results

Response Formats	
Paper	Online
18	2





Recap: Relief Route Alignments



Recap: Improvement Projects

Focus Area 1

S. Hackberry Ave from US 90/E. Pierce St to E. Houston St.



Project ID	Project Description
1A	ADA-compliant Sidewalks and Curb Ramps
1B	Repave Hackberry Ave from US 90 / Pierce St to Houston St
	School Zone Flashers
	High Visibility Signage and Crosswalk Striping
	Pedestrian Safety Lighting
1C	New Traffic Signal at US 90 / Pierce St

Focus Area 2

N. Hackberry Ave from FM2984 to SH80/Austin St



Project ID	Project Description
2A	SH 80 / Austin St to Trinity St: Reconstruct with striped center and edge lines
	New signal at intersection of N. Hackberry Ave and SH 80
2B	Trinity St to Lincoln St (FM 2984): Reconstruct with striped center and edge lines

CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 9

Recap: Improvement Projects

Focus Area 3

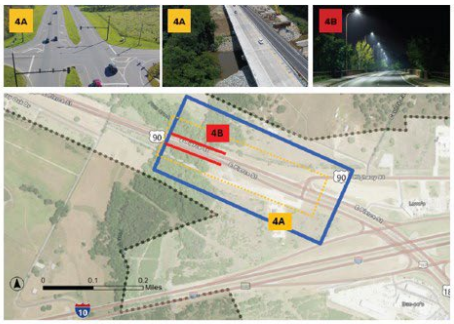
SH80/Austin St from E. Fannin St to E Milam St.



Project ID	Project Description
3A	Patterned Intersection and "Do Not Block Intersection" Signage
	High Visibility Crosswalks
	Dynamic Speed Feedback Signs
3B	Pedestrian Hybrid Beacon at E. Travis Street
	High Visibility Crosswalk Striping and PedestrianSignage
	Dynamic Speed Feedback Signs
3C	Pedestrian Safety Lighting

Focus Area 4

US183 and US90 Intersection



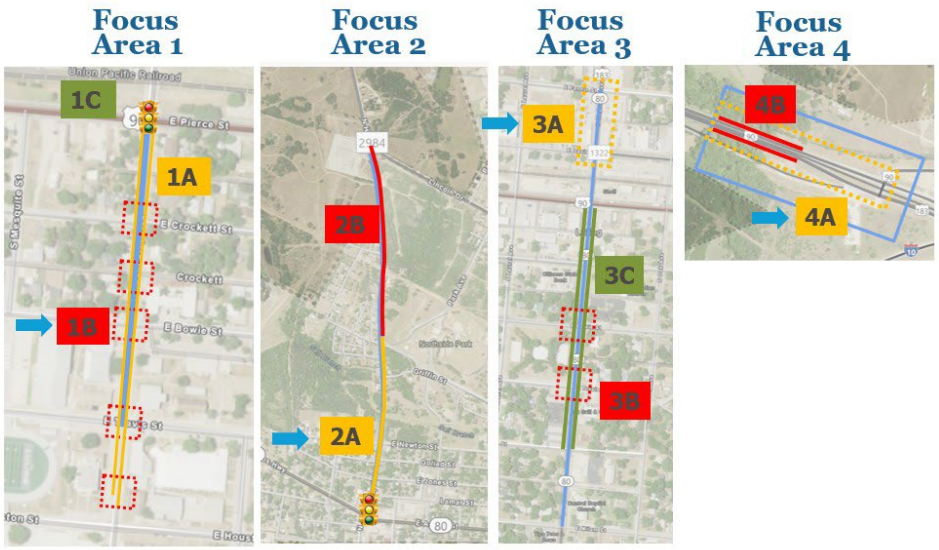
Project ID	Project Description
4A	Roadway Widening and Restriping of Southbound US 183 to Accommodate Two Continuous Through Lanes from Plum Creek Bridge to US 90 / US 183 Intersection
	Update Intersection Pavement Markings and Signal Timing
4B	Safety Lighting along Plum Creek Bridge

Tell us what you think!

CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 10

Recap: Improvement Projects



CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 11

Scoring and Prioritization

Recommending Alignment Alternative A3

- Alignments were evaluated against three groups of factors.
- A2 performs slightly better than A3 in terms of technical performance – but all alternatives do not differ substantially.

Recommended option: A3

- A3 is more favored by the community.
- A3 is located further west but better supports city's long-term growth as it expands westwards.

Weight	Criteria	A1	A2	A3
Technical Factors (30%)	Environmental Constraints	Adjacent to body of water/wetland; 1 pipeline	Adjacent to floodplain; 3 pipelines; 3 surface wells	Passes through floodplain; 3 pipelines; 5 surface wells
	No. of potential displacements	1	None	None
	No. of vehicles diverted from SH 80 to US 90 (including heavy vehicles)	1,860	2,230	2,650
	Average cross-town travel time (min:sec)	5:08	5:17	7:11
	US 90 / Magnolia Ave Intersection Performance (Level of Service)	D	D	D
Cost (30%)	Estimated cost	$24.3M	$26.6M	$39.1M
Community Support (40%)	No. of times selected as preferred option by the public	1	8	15
	Total Weighted Score	1.8	2.2	2.0

Legend: 0 | +1 | +2

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 13

Recommending Four Improvement Projects

- In each Focus Area, the recommended improvement project was the one that was most aligned with the study goals, local and regional plans, ongoing bond program, and community preferences.

Recommended options: 1A, 2A, 3A, 4A

Project ID	Number of study goals and objectives met	Number of local and regional plans aligned with	Congruent with ongoing bond program (Yes/No)	Number of community members identifying as top priority	Planning-Level Cost Estimates* *(In 2050 Dollars)*	Total Score
Focus Area 1 – S Hackberry Ave						
1A	2	2	✓	4	$142,000	9
1B	1	2	✓	12	$1.59M	6
1C	2	2	✓	3	$635,000	7
Focus Area 2 – N Hackberry Ave						
2A	3	3	✓	13	$14M	9
2B	2	2	✓	5	$4.8M	4
Focus Area 3 – US 183 / Magnolia Ave						
3A	3	3	✓	12	$196,000	9
3B	2	-	-	7	$328,000	2
3C	2	-	-	0	$58,000	3
Focus Area 4 – Intersection of US 90 and US 183 / E Pierce St						
4A	3	1	✓	17	$396,000	8
4B	1	1	-	2	$92,000	4

Legend: 0 | +1 | +2

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 14

Implementation Plan

Phased Implementation

What should be done for each classification of projects?

Near-term (0-5 years) 1A 3A

a. Incorporate recommendations within existing projects
b. Appoint lead agency
c. Determine appropriate financing mechanisms

Mid-term (6-10 years) 2A 4A

a. Create collaboration framework to partner with other agencies
b. Identify appropriate lead agency for project
c. Research funding opportunities and initiate preparation work

Long-term (>10 years) A3

a. Source for funding
b. Establish partnerships early

CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 16

Implementation Strategies

What are some specific action items that the City can undertake?

Possible Implementation Strategies

a. Incorporate projects into Capital Improvement Program
b. Develop and maintain local planning documents
c. Establish Safe Routes to School program
d. Develop ADA Transition Plan
e. Conduct Active Transportation Audit
f. Build relationships and collaborate with CAMPO and Caldwell County
g. Incorporate projects into State and Regional Plans
h. Create a Grant Calendar
i. Initiate early project work to improve "shovel readiness"

CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 17

Supporting Policy Considerations

What other complementary policy frameworks should be developed and adopted by the City to expand the benefits of these projects?

Possible Policies

a. Best practices from AASHTO, FHWA, TxDOT, NACTO
b. Complete Streets
c. Vision Zero
d. Equity in Transportation
e. Regional Alignment
f. Connectivity and Accessibility
g. Sustainability and Health

CITY OF LULING
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 18

Funding Sources

What are the various funding sources at the federal, state, and local level that we can tap into?

Federal

a. Safe Streets and Roads for All (SS4A)
b. Congestion Mitigation and Air Quality (CMAQ) Program
c. Rebuilding American Infrastructure with Sustainability and Equity (RAISE)
d. Railroad Crossing Elimination (RCE) Grant Program
e. Consolidated Rail Infrastructure and Safety Improvements (CRISI) Program

State and Regional

a. TxDOT Transportation Alternatives Set Aside (TASA)
b. TxDOT Highway Safety Improvement Program (HSIP)
c. CAMPO Funding
d. TxDOT Texas Off-System Rail Grade Separation State Fund Program
e. Texas Community Development Block Grant (TxCDBG) Fund

Local

a. Local Bonds
b. Certificates of Obligation
c. Transportation Impact Fee
d. Tax Increment Reinvestment Zone (TIRZ)
e. Public-private Partnerships

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 19

Implementation Matrix

Recommendation	Implementation Timeline	Cost Estimates	Potential Funding Sources and Financing Mechanisms	Agencies Involved
1A	Near	$142,000	• TxCDBG • TxDOT TASA • Local Bonds • SS4A • City Budget	State of Texas, City of Luling, Caldwell County
2A	Mid	$14M	• TxCDBG, TxDOT TASA • Local Bond • STBG • SS4A	State of Texas, City of Luling, TxDOT, Caldwell County
3A	Near	$196,000	• City Budget • Local Bonds • Downtown TIRZ	TxDOT, EDC, City of Luling, Caldwell County
4A	Mid	$396,000	• TxDOT TASA • RAISE Grant	TxDOT, City of Luling
Relief Route Alignment A3 (including grade-separation)	Long	$39.1M	• TxDOT Texas Off-System Rail Grade Separation State Fund Program • RAISE • RCE • CRISI	FHWA, FRA, TxDOT, CAMPO, Caldwell County, City of Luling

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND 20

Next Steps

Next steps

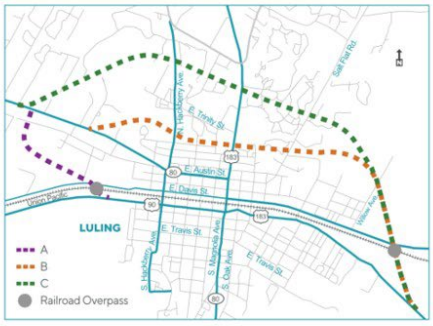
- Draft Study Report submitted – August 3rd
- Refine and Complete Final Study Report – August 20th

Maps

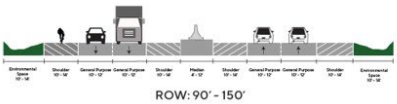
Caldwell County ROAD BOND

Basis for Alternatives Development

- **Option A** was the recommended long-term recommendation in the 2019 Plan.
- 2024 Caldwell County Transportation Plan
- Environmental constraints
- City, County, and Stakeholder input
- Right of Way and property impacts
- Displacements
- Connectivity with the existing roadway network
- Potential intersection types at US 90



Principal - Regional Connector 4-Lane Divided with Shoulder



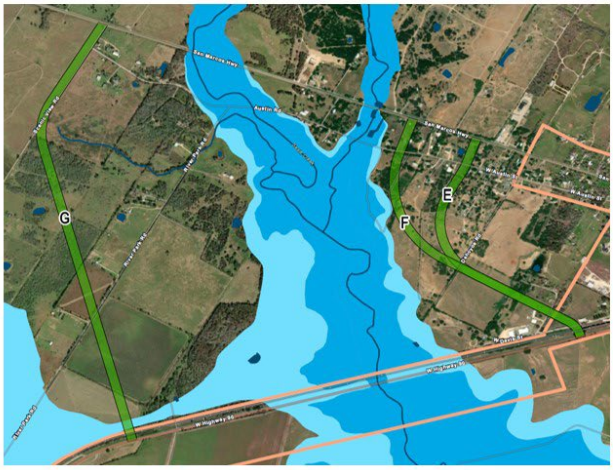
ROW: 90' - 150'

CITY OF LULING TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND

24

Option A Alternatives



Legend
- Alignments
- City Limits
- 100-Year Floodplain
- 500-Year Floodplain
- Creek or Stream
- Waterbody or Wetland

Option A Alternatives - Evaluation

Alignment	Length (miles)	Environmental Constraints	Right of Way and Property Impacts	Connectivity with the Existing Roadway Network	Railroad Crossing	Total Score
A	0.7	Adjacent to body of water/wetland Intersects 1 pipeline	2 potential displacements	Compatible with existing roadway network	Each of the options for connections to US 90 can be accommodated with this alignment	2
B	0.8	None	3 potential displacements	Close proximity to Central Luling may disrupt access to properties along US 90	Each of the options for connections to US 90 can be accommodated with this alignment	0
C	0.4	Intersects 1 surface well	3 potential displacements	Close proximity to Central Luling may disrupt access to properties along US 90 and create a barrier for local traffic and pedestrians	Each of the options for connections to US 90 can be accommodated with this alignment	0
D	0.4	None	4 potential displacements	Close proximity to Central Luling may disrupt access to properties along US 90 and create a barrier for local traffic and pedestrians	Each of the options for connections to US 90 can be accommodated with this alignment	0
E	0.9	Adjacent to body of water/wetland Intersects 1 pipeline	1 potential displacement	Compatible with existing roadway network	Each of the options for connections to US 90 can be accommodated with this alignment	2
F	1.0	Adjacent to floodplain Intersects 3 surface wells Intersects 3 pipelines	0 potential displacements*	Compatible with existing roadway network	Each of the options for connections to US 90 can be accommodated with this alignment	2
G	1.5	Passes over floodplain Intersects five surface wells Intersects 3 pipelines	0 potential displacements	Farthest west from Central Luling. Compatible with existing roadway network	Each of the options for connections to US 90 can be accommodated with this alignment	2

*Entire parcel needed but no habitable structure is impacted
Note: Green = Score of 1, Yellow = Score of 0, Red = Score of -1

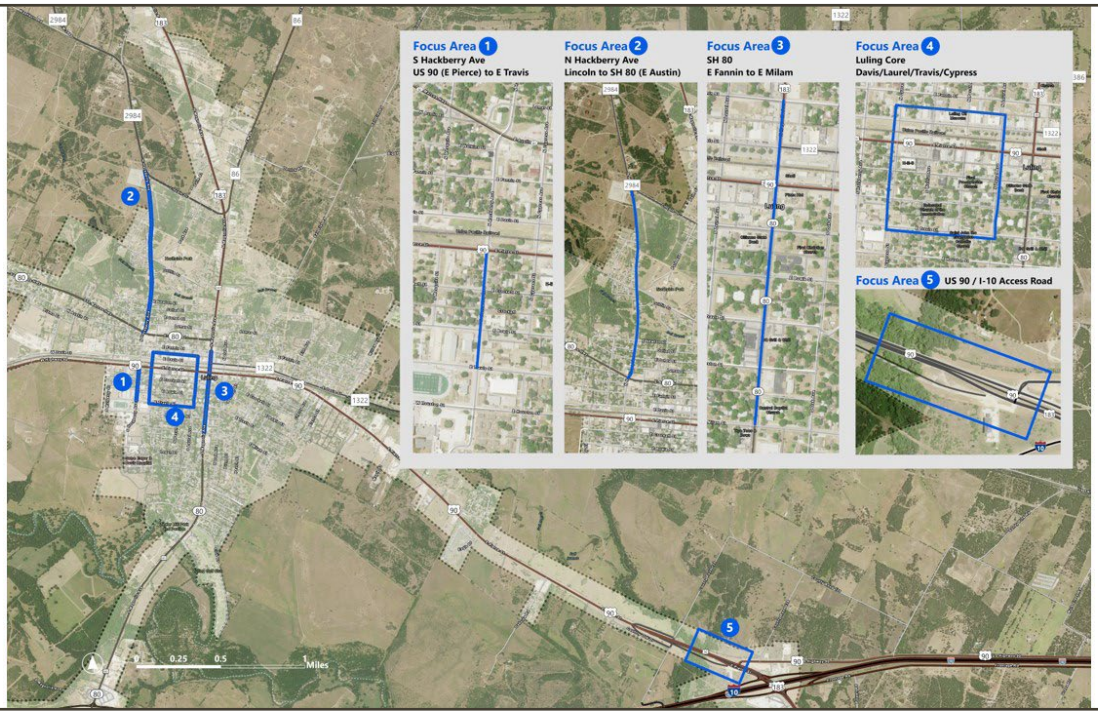
Option A Alternatives - Performance

Performance Measure	Units	No-Build 2050	Alt. E 2050	Alt. F 2050	Alt. G 2050
US80 Total Traffic	Vehicles Per Day	9,390	9,990	10,060	10,780
Total Traffic Diverted from SH 80 to US 90	Vehicles Per Day	-	1,860 (19%)	2,230 (20%)	2,650 (25%)
Heavy Vehicles Diverted (Approx. 10%)	Vehicles Per Day	-	~190	~220	~270
Average Cross-town Distance (SH 80 W to US 90 E)	Miles	-	3.74	3.86	5.66
Average Cross-town Travel Time	Minutes	4:32	05:08	05:17	07:11
Magnolia/US 90 Intersection Performance	Level of Service	D	D	D	D
Cost	USD	$0	$24.3M	$26.6M	$39.1M

- Alternative G diverts the most traffic around Downtown.
- Diverted traffic must still travel along US90 (Pierce St.) and pass through the Magnolia/US90 intersection.
- All alternatives increase cross-town travel time but create a reliable trip due to the railroad grade separation.

CITY OF LULING TRANSPORTATION PLAN UPDATE

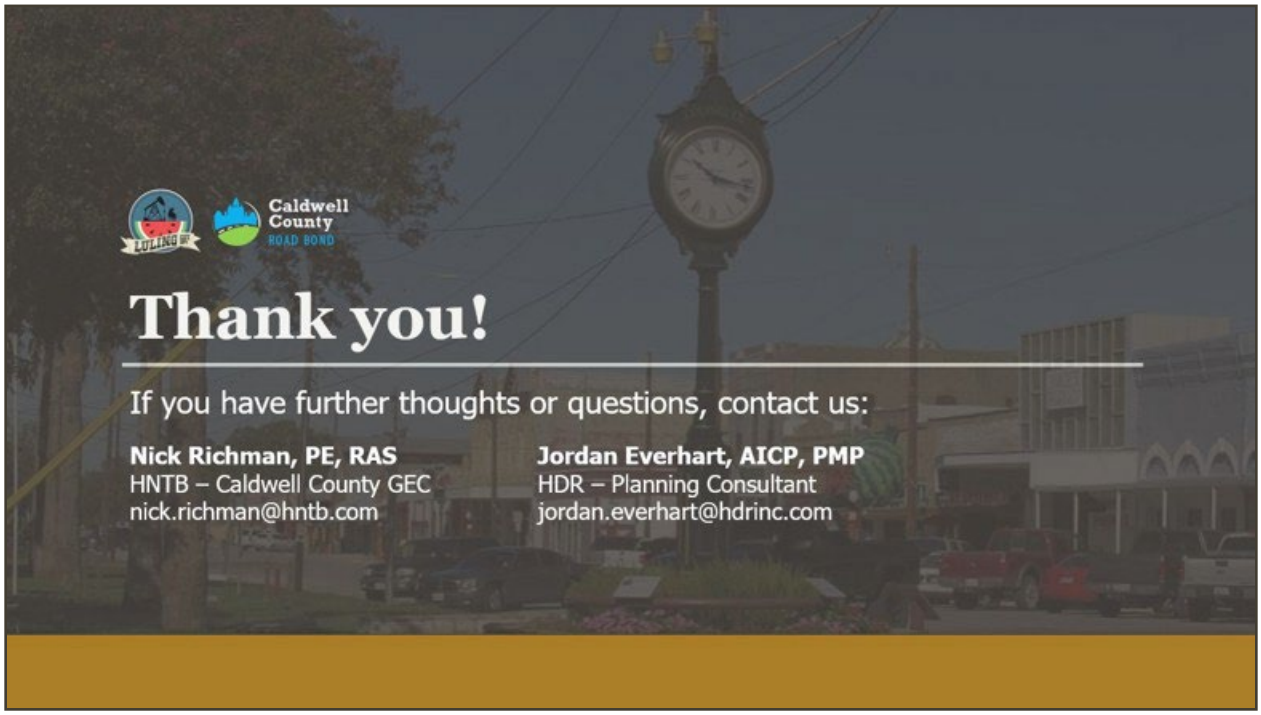
Caldwell County ROAD BOND 27



28


City of Luling
County Boundary
Interstate
US Highway
State Highway
Local Road
Railroads
River/Stream
Lake/Pond
Project Location
CALDWELL COUNTY
GUADALUPE COUNTY


City of Luling
County Boundary
Interstate
US Highway
State Highway
Local Road
Railroads
River/Stream


Caldwell County
ROAD BOND
Thank you!
If you have further thoughts or questions, contact us:
Nick Richman, PE, RAS
HNTB – Caldwell County GEC
nick.richman@hntb.com
Jordan Everhart, AICP, PMP
HDR – Planning Consultant
jordan.everhart@hdrinc.com

Appendix B
Public Engagement Materials

PUBLIC MEETINGS #1 AND #2

Meeting Invitation Flyer – English



City of Luling
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND

JOIN US!

Join us at an open house-style public meeting to learn more about the **Luling Transportation Plan Update** and share your thoughts.

DATE AND TIME

Thursday, March 26

MEETING 1: **11 a.m. - 1 p.m.**

MEETING 2: **5 p.m. - 7 p.m.**

**The meetings will be identical; they are being offered at different times for your convenience.*

LOCATION

Zedler Mill
1170 S. Laurel Avenue
Luling, TX 78648

Caldwell County is partnering with the City of Luling to **update the 2019 Luling Transportation Plan**. This plan provides a vision for a safe, connected transportation system in Luling.

The updated Plan will:

- **Evaluate** the current transportation system.
- **Develop*** alignments to divert traffic around downtown between SH 80 and US 90, and evaluate the pros and cons of each.
- **Identify** focus areas for safety and mobility improvements.
- **Align** with other transportation planning.

**All alignments will be evaluated objectively with documented positive and negative impacts. The City of Luling, stakeholders, and the public will have the opportunity to provide input on each alignment.*

STAY INVOLVED

SHARE FEEDBACK

Please share your comments, questions, and feedback with the project team.

RECEIVE PROJECT UPDATES

Sign up at caldwellroadbond.com/updates or send us an email with "Luling Transportation Plan updates" in the subject line.

EMAIL

info@caldwellroadbond.com

CALL

(512) 813-1835

VISIT THE WEBSITE

caldwellroadbond.com/projects/LulingTransportationPlan

Meeting Invitation Flyer - Spanish

Ciudad de Luling

ACTUALIZACIÓN DEL PLAN DE TRANSPORTE

Caldwell County ROAD BOND

¡ÚNASE A NOSOTROS!

Únase a nosotros en una reunión pública de estilo jornada de puertas abiertas para conocer más sobre la actualización del **Plan de Transporte de Luling** y compartir sus opiniones.

FECHA Y HORA

Jueves, 26 de Marzo

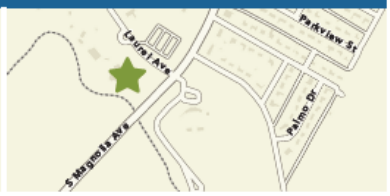
REUNIÓN 1: **11 a.m. - 1 p.m.**

REUNIÓN 2: **5 p.m. - 7 p.m.**

**Las reuniones serán idénticas; se ofrecen en diferentes horarios para su conveniencia.*

UBICACIÓN

Zedler Mill
1170 S. Laurel Avenue
Luling, TX 78648



El condado de Caldwell se está asociando con la ciudad de Luling para **actualizar el Plan de Transporte de Luling 2019**. Este plan ofrece una visión para un sistema de transporte seguro y conectado en Luling.

El Plan actualizado consistirá en:

- **Evaluar** el sistema de transporte actual.
- **Desarrollar*** trazados para desviar el tráfico alrededor del centro entre la SH 80 y la US 90.
- **Identificar** áreas de enfoque para mejorar la seguridad y la movilidad.
- **Alinearse** con otros esfuerzos de planificación del transporte en la región.

**Todas las alineaciones serán evaluadas objetivamente con impactos positivos y negativos documentados. La Ciudad de Luling, las partes interesadas y el público tendrán la oportunidad de brindar comentarios sobre cada alineación.*

MANTÉNGASE INVOLUCRADO

COMPARTA SUS OPINIONES

Por favor, comparta sus comentarios, preguntas y comentarios con el equipo del proyecto.

RECIBA ACTUALIZACIONES DEL PROYECTO

Regístrase en caldwellroadbond.com/updates o mándenos un correo electrónico con "Actualizaciones del Plan de Transporte de Luling" en el asunto.

CORREO ELECTRÓNICO

info@caldwellroadbond.com

LLAME AL

(512) 813-1835

VISITE LA PÁGINA WEB

caldwellroadbond.com/projects/LulingTransportationPlan

Community Survey #1 – English

Luling Transportation Plan Update

Community Survey
Caldwell County is partnering with the City of Luling to update the 2019 Luling Transportation Plan. This plan provides a vision for a safe, connected transportation system in Luling.

We want to hear from you about your transportation experiences in Luling. Please take a few minutes to tell us about yourself and provide feedback. Your input will help us as we put the Transportation Plan into motion.

1. What brings you to Luling? (Select all that apply)
   - ☐ I live here
   - ☐ I work here
   - ☐ I am visiting
     - How often do you visit?_____
   - ☐ I am passing through to another destination
     - How often do you drive through Luling?_____
     - Where are you headed to? _____
   - ☐ Other (please specify)_____

2. As you travel through Luling, what issues are most important to you?

Please rank the following issues on a scale of 1 to 10 according to your level of importance. **1 = MOST IMPORTANT; 10 = LEAST IMPORTANT.**

Safe roadway conditions	_____	Congestion due to weekend or through travelers	_____
Pedestrian and bicycle infrastructure (e.g., sidewalks, striping, signs)	_____	Congestion during daily local trips	_____
Safe routes to/from school	_____	First responder emergency response times	_____
Railroad crossing safety	_____	Preserving the character and economic vitality of downtown	_____
Volume of freight trucks	_____	Parking availability downtown	_____

Other (please specify) _____

_____

_____

3. Do you agree with the Transportation Plan's goals?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Identify needed safety improvements	☐	☐	☐	☐	☐
Enhance mobility in Luling for all modes of local and through traffic	☐	☐	☐	☐	☐
Evaluate the feasibility of an alternate route for through traffic	☐	☐	☐	☐	☐
Incorporate tools to promote the unique character of downtown and economic development opportunities	☐	☐	☐	☐	☐

4. Do you have any additional feedback about the transportation system or the goals of the Plan?

_____

_____

_____

_____

_____

_____

_____

_____

Thank you for your participation!

RECEIVE PROJECT UPDATES
Sign up at caldwellroadbond.com/updates or send us an email with "Luling Transportation Plan updates" in the subject line.

EMAIL
info@caldwellroadbond.com

VISIT THE WEBSITE
caldwellroadbond.com/projects/LulingTransportationPlan

Community Survey #1 – Spanish

Actualización del Plan de Transporte de Luling

Encuesta comunitaria

El condado de Caldwell se ha asociado con la ciudad de Luling para actualizar el Plan de Transporte de Luling de 2019. Este plan ofrece una visión para un sistema de transporte seguro y conectado en Luling.

Queremos conocer su opinión sobre sus experiencias de transporte en Luling. Por favor dedique unos minutos a contarnos sobre usted y a darnos su opinión. Sus comentarios nos ayudarán a poner en marcha el Plan de Transporte.

1. ¿Qué le trae a Luling? (Seleccione todas las opciones que correspondan)

- ☐ Vivo aquí
- ☐ Trabajo aquí
- ☐ Estoy de visita
  - ¿Con qué frecuencia visita la ciudad? _____
- ☐ Estoy de paso hacia otro destino
  - ¿Con qué frecuencia pasa por Luling?_____
  - ¿A dónde se dirige? _____

• Otro (especifique)_____

2. Al viajar por Luling, ¿qué cuestiones le parecen más importantes?

Clasifique las siguientes cuestiones en una escala del 1 al 10 según su nivel de importancia. **1 = MÁS IMPORTANTE; 10 = MENOS IMPORTANTE.**

Condiciones seguras en las carreteras	_____	Congestión debido a viajeros de fin de semana	_____
Infraestructura para peatones y ciclistas (por ejemplo, aceras, señalización horizontal, señales)	_____	Congestión durante los viajes locales diarios	_____
Rutas seguras hacia y desde la escuela	_____	Tiempos de respuesta de los servicios de emergencia	_____
Seguridad en los cruces ferroviarios	_____	Preservación del carácter y la vitalidad económica del centro de la ciudad	_____
Volumen de camiones de carga	_____	Disponibilidad de estacionamiento en el centro de la ciudad	_____

Otros (especifique) _____

_____

3. ¿Está de acuerdo con los objetivos del Plan de Transporte?

	Totalmente de acuerdo	De acuerdo	Neutral	En desacuerdo	Totalmente en desacuerdo
Identificar las mejoras necesarias en materia de seguridad	☐	☐	☐	☐	☐
Mejorar la movilidad en Luling para todos los modos de tráfico local y de paso	☐	☐	☐	☐	☐
Evaluar la viabilidad de una ruta alternativa para el tráfico de paso	☐	☐	☐	☐	☐
Incorporar herramientas para promover el carácter único del centro de la ciudad y las oportunidades de desarrollo económico	☐	☐	☐	☐	☐

4. ¿Tiene otros comentarios sobre el sistema de transporte o los objetivos del Plan?

_____
_____
_____
_____
_____

¡Gracias por su participación!

RECIBE ACTUALIZACIONES DEL PROYECTO

Regístrate en caldwellroadbond.com/updates o envíanos un correo electrónico con el asunto "Actualizaciones del Plan de Transporte de Luling"

CORREO ELECTRÓNICO

info@caldwellroadbond.com

VISITA EL SITIO WEB

caldwellroadbond.com/projects/LulingTransportationPlan

Survey Link on Caldwell County 2024 Bond Website



Meeting Display Boards



City of Luling
TRANSPORTATION PLAN UPDATE

Caldwell County
ROAD BOND

How can I share feedback and learn more?

We want to hear from you! There are various ways to share your feedback:

- Take a short survey
- Email us at info@caldwellroadbond.com
- Complete a comment form
- Visit caldwellroadbond.com/projects/lulingtransportationplan
- Call us at 512-813-1835
- Mail comments to Luling Transportation Plan, c/o CD&P PO Box 5459 Austin, TX 78756

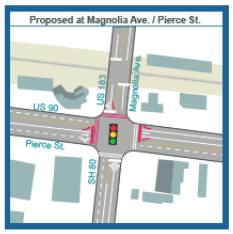
EMAIL info@caldwellroadbond.com
CALL (512) 813-1835
VISIT THE WEBSITE caldwellroadbond.com/projects/LulingTransportationPlan
SCAN THE QR CODE

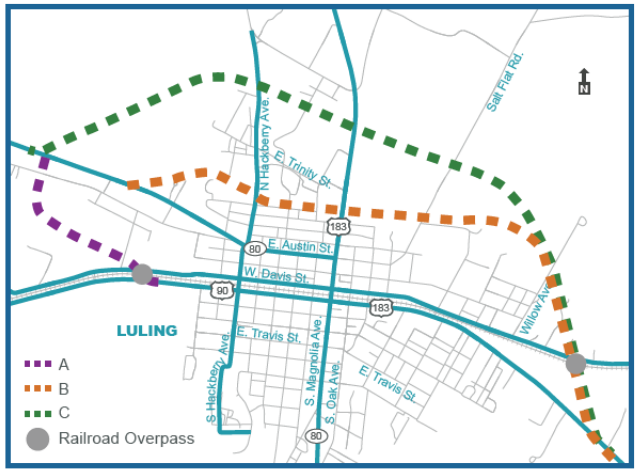
City of Luling
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND

What were the recommendations from the 2019 Transportation Plan?







GRAPHICS FROM THE 2019 PLAN

NEAR-TERM:

- ☑ Install intersection improvements at Magnolia Ave. and Pierce St.
- ☑ Reconstruct Hackberry Ave. with new pavement, striping, sidewalks, and signals (2024 Caldwell County Bond Project).
- ☑ Construct sidewalks along Magnolia Ave. between Pierce St. and Davis St.

LONG-TERM:

- ☑ Construct a new roadway connection to the west of central Luling from Austin St. (SH 80) to Pierce St. (US 90).

EMAIL ✉ info@caldwellroadbond.com
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VISIT THE WEBSITE caldwellroadbond.com/projects/LulingTransportationPlan
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Caldwell County ROAD BOND

City of Luling
TRANSPORTATION PLAN UPDATE

Caldwell County
ROAD BOND

What issues are the most important to you?

SAFE ROADWAY CONDITIONS

DAILY LOCAL TRIPS

CONGESTION DUE TO WEEKEND OR THROUGH TRAVELERS

VOLUME OF FREIGHT TRUCKS

FIRST RESPONDER EMERGENCY RESPONSE TIMES

PARKING AVAILABILITY DOWNTOWN

RAILROAD CROSSING SAFETY

PEDESTRIAN AND BICYCLE INFRASTRUCTURE
(E.G., SIDEWALKS, STRIPING, SIGNS)

PRESERVING THE CHARACTER AND ECONOMIC VITALITY OF DOWNTOWN

SAFE ROUTES TO/FROM SCHOOL

Are there other transportation issues that need to be included?
Please list them here.

EMAIL
info@caldwellroadbond.com

CALL
(512) 813-1835

VISIT THE WEBSITE
caldwellroadbond.com/projects/LulingTransportationPlan

SCAN THE QR CODE

Caldwell County
ROAD BOND

City of Luling
TRANSPORTATION PLAN UPDATE

Caldwell County
ROAD BOND

What are the goals and objectives of the Luling Transportation Plan Update?

Goal 1: Identify needed safety improvements
- Analyze current traffic movements, crash trends, and pedestrian activity.
- Assess safety and operational issues along the Union Pacific Railroad corridor and its crossings.
- Understand local emergency response patterns and impacts of the hurricane evacuation route.

Goal 2: Enhance mobility in Luling for all modes of local and through traffic
- Analyze how local, freight, and recreational travelers move through downtown.
- Improve public and emergency services access across the railroad tracks.
- Expand walking and biking options for all ages and abilities.
- Identify near-, mid-, and long-term mobility improvements.

Goal 3: Evaluate the feasibility of an alternate route for through traffic
- Develop and evaluate three relief route alignments west of central Luling from Austin St. (SH 80) to Pierce St. (US 90).
- Assess how future growth scenarios affect the viability of each alignment.

Goal 4: Incorporate tools to promote unique character of downtown and economic development opportunities
- Assess how transportation changes may affect local businesses.
- Analyze visitor patterns to support strategies that strengthen downtown's character and economic vitality.

Are there any additional goals or objectives that need to be included?
Please list them here.

EMAIL
info@caldwellroadbond.com

CALL
(512) 813-1835

VISIT THE WEBSITE
caldwellroadbond.com/projects/LulingTransportationPlan

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Caldwell County
ROAD BOND

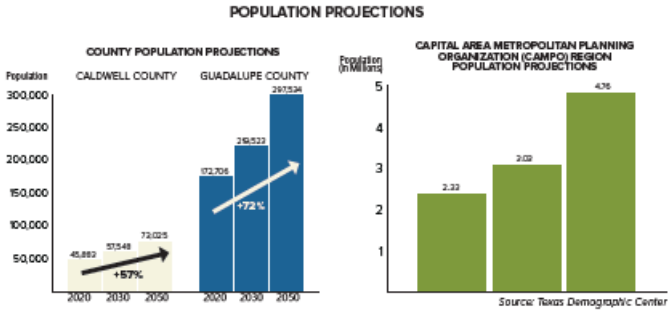
City of Luling
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND

Why is Luling updating their Transportation Plan?

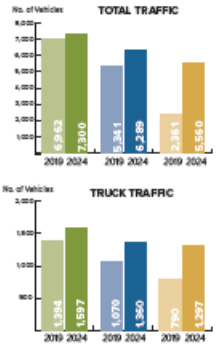
1 Population Growth

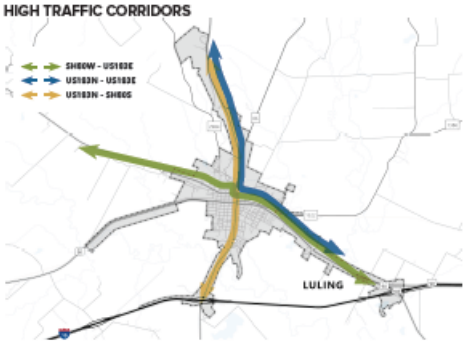
- Local and regional growth contribute to increased through-traffic in Luling.



2 Travel Patterns

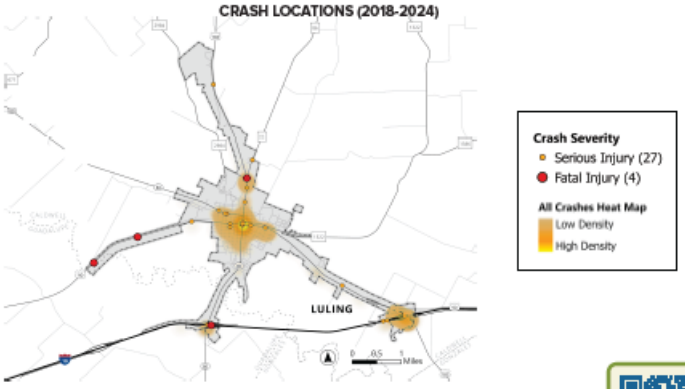
- The **SH 80W - US 183E** and **US 183N - US 183E** corridors experienced the highest volumes of total and truck traffic.
- From 2019 to 2024, the **SH 80S - US 183N** corridor has experienced a 135% increase in total traffic.





3 Safety

- From 2018 to 2024, there were 31 severe or fatal injury crashes in Luling.
- These crashes primarily occur on state roads and at major roadway intersections.

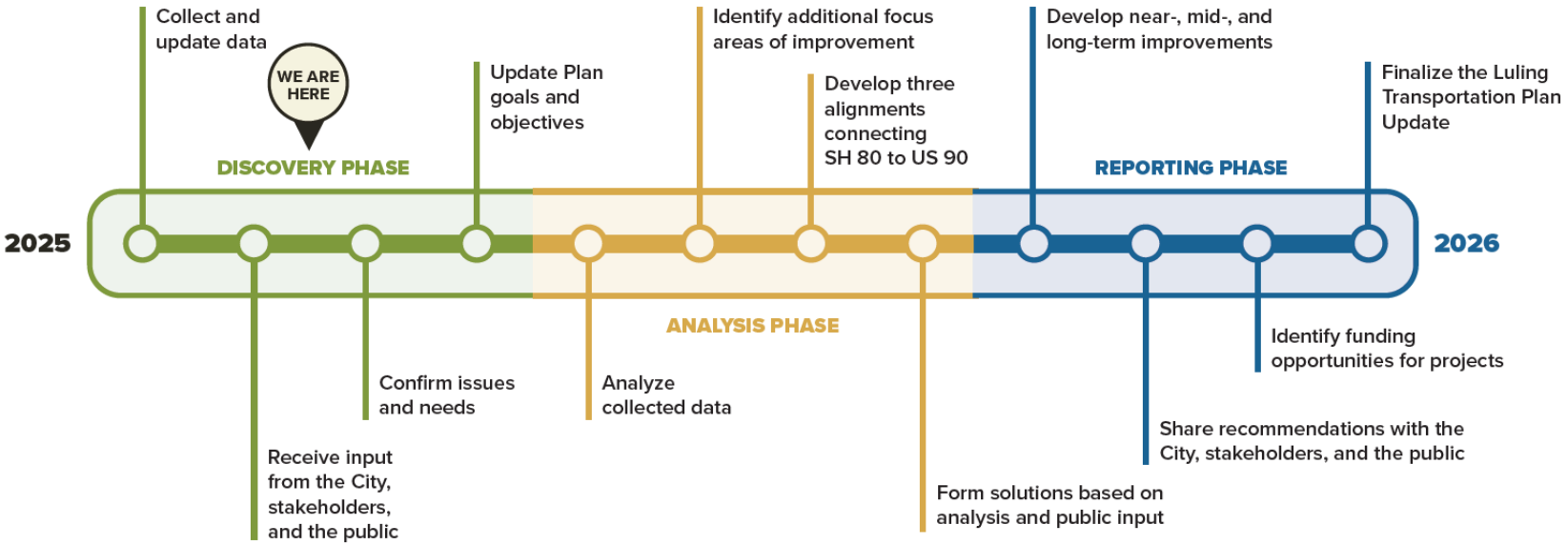


EMAIL info@caldwellroadbond.com
CALL (512) 813-1835
VISIT THE WEBSITE caldwellroadbond.com/projects/LulingTransportationPlan
SCAN THE QR CODE

City of Luling
TRANSPORTATION PLAN UPDATE

Caldwell County
ROAD BOND

What is the process to update the Plan?



EMAIL ✉ info@caldwellroadbond.com
CALL (512) 813-1835
VISIT THE WEBSITE caldwellroadbond.com/projects/LulingTransportationPlan
SCAN THE QR CODE

PUBLIC MEETINGS #3 AND #4

Press Release

FOR IMMEDIATE RELEASE

June 25, 2026

CONTACT: Miles Smith, Caldwell County Director of Communications

miles.smith@co.caldwell.tx.us | (513) 801-9736

Caldwell County and City of Luling Seek Community Input on Transportation Plan

LULING, TEXAS, (June 26, 2026) – Caldwell County is partnering with the City of Luling to update the Luling Transportation Plan. The update will build on the transportation plan adopted in 2019 and incorporate newly collected data, including traffic counts, crash statistics, demographic trends, and modeling, to help identify and prioritize future transportation improvements.

As part of the planning process, the project team is seeking community feedback on transportation needs, challenges, and opportunities throughout Luling. Community members are invited to attend one of two open house meetings on **Tuesday, July 14, 2026**, to learn more about the project, review preliminary recommendations, and provide feedback. Both meetings will be held at **Zedler Mill, 1170 S. Laurel Avenue, Luling, TX 78648**.

Open house sessions will be offered from 11 a.m. to 1 p.m. and from 5 to 7 p.m. Both sessions will feature the same information and will be conducted in a come-and-go format.

Meeting materials and an online comment opportunity will be available beginning July 14. Public comments will be accepted through Friday, Aug. 14, 2026.

For more information about the Luling Transportation Plan Update or to submit comments, contact the Road Bond Engagement Team at (512) 813-1835 or info@caldwellroadbond.com.

About the Caldwell County Road Bond Program

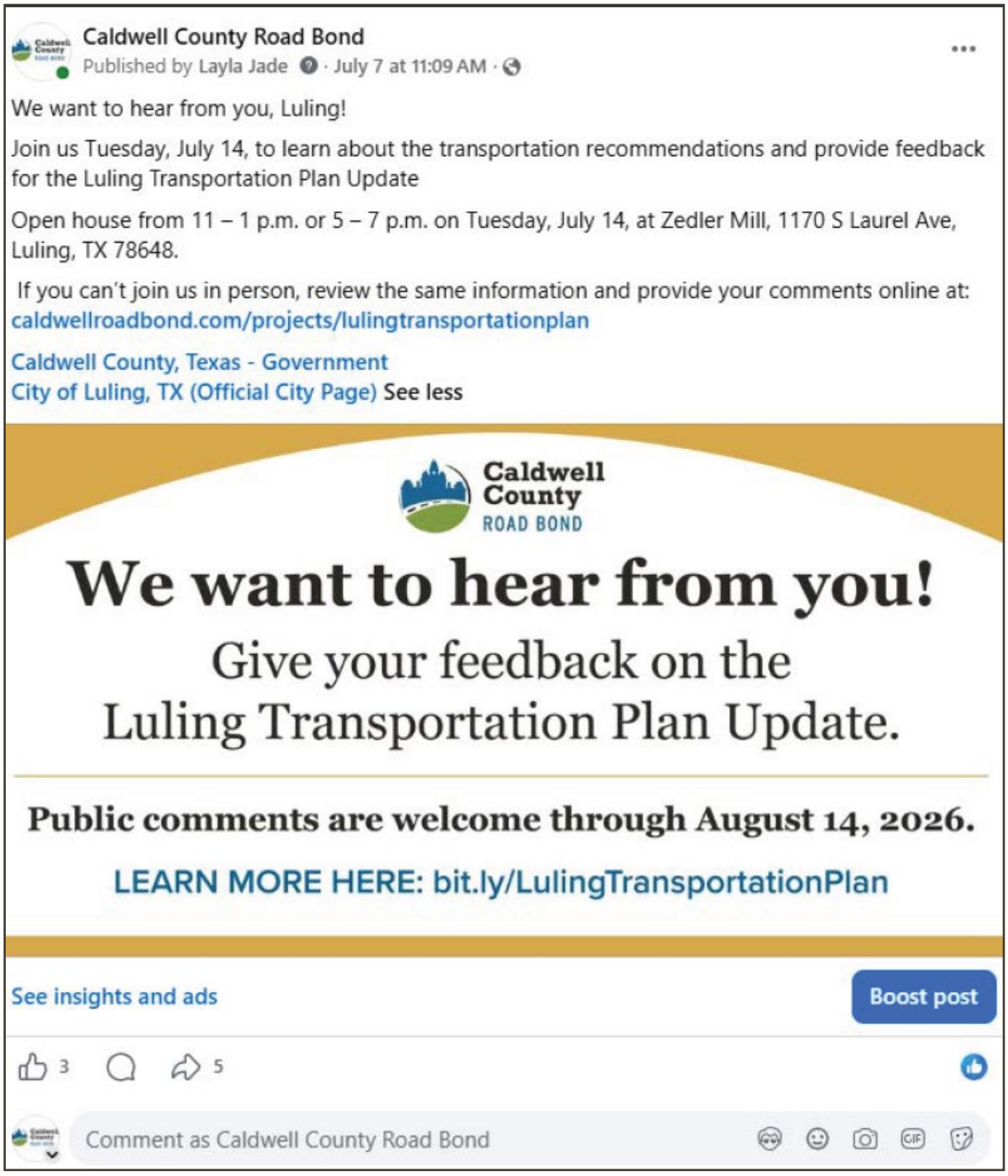
The $150 million Road Bond Program, passed in November 2024, aims to enhance the safety and mobility of Caldwell County's roadways. Over the next five years, the 32 projects within the program will include improvements to existing roadways, planning and construction of new roads, and enhancements to bridges and low-water crossings.

###

Facebook Post – July 1



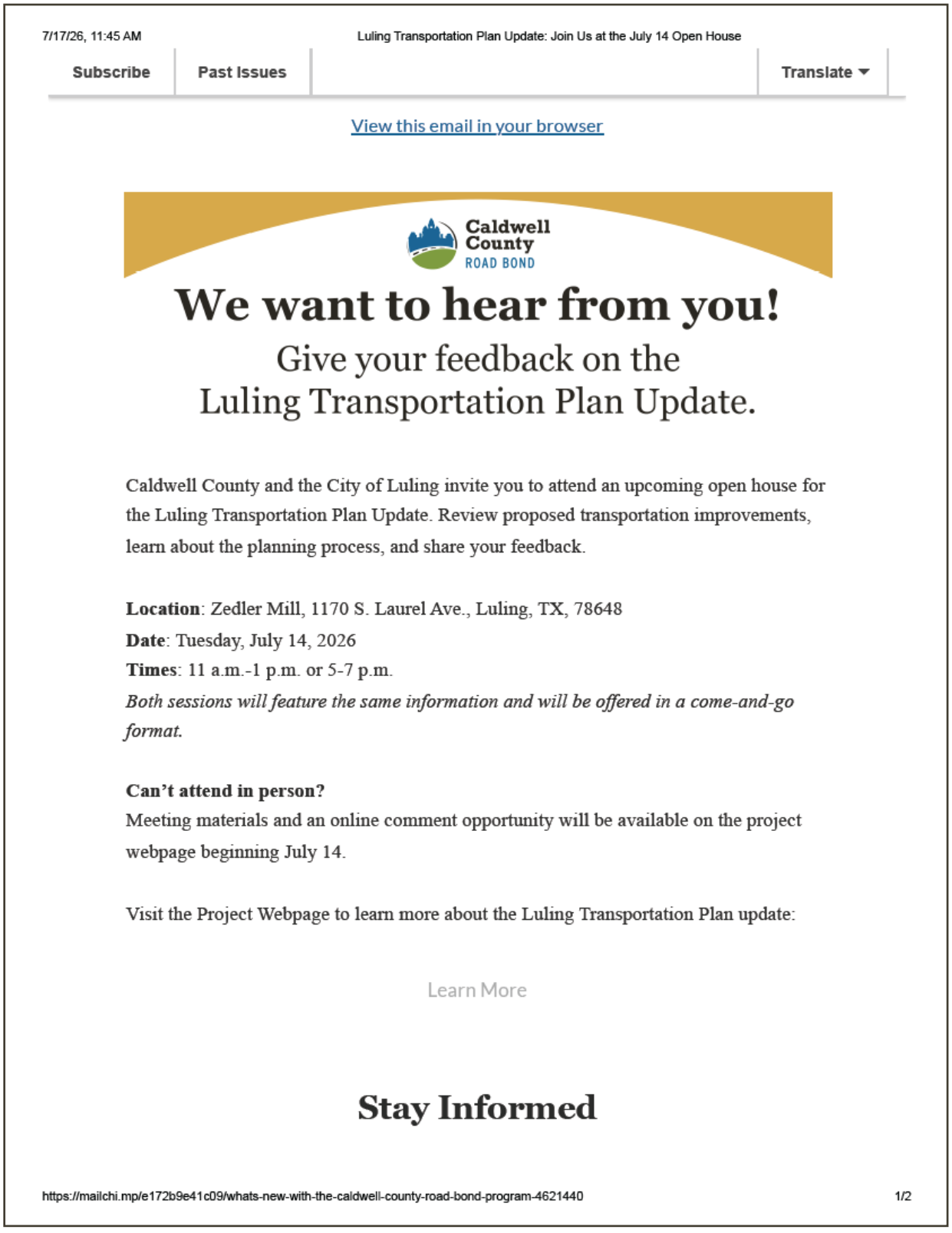
Facebook Post – July 7



Survey Link on Caldwell County 2024 Bond Website



Email Newsletter



7/17/26, 11:45 AM Luling Transportation Plan Update: Join Us at the July 14 Open House

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View this email in your browser

Caldwell County ROAD BOND

We want to hear from you!

Give your feedback on the Luling Transportation Plan Update.

Caldwell County and the City of Luling invite you to attend an upcoming open house for the Luling Transportation Plan Update. Review proposed transportation improvements, learn about the planning process, and share your feedback.

Location: Zedler Mill, 1170 S. Laurel Ave., Luling, TX, 78648
Date: Tuesday, July 14, 2026
Times: 11 a.m.-1 p.m. or 5-7 p.m.
Both sessions will feature the same information and will be offered in a come-and-go format.

Can't attend in person?
Meeting materials and an online comment opportunity will be available on the project webpage beginning July 14.

Visit the Project Webpage to learn more about the Luling Transportation Plan update:

Learn More

Stay Informed

https://mailchi.mp/e172b9e41c09/whats-new-with-the-caldwell-county-road-bond-program-4621440 1/2

7/17/26, 11:45 AM Luling Transportation Plan Update: Join Us at the July 14 Open House

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involved and receive updates on the Road Bond Program.

info@caldwellroadbond.com (512) 813-1835 caldwellroadbond.com

PROFESSIONAL

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Our mailing address is:

Want to change how you receive these emails?
You can update your preferences or unsubscribe

INTUIT mailchimp

https://mailchi.mp/e172b9e41c09/whats-new-with-the-caldwell-county-road-bond-program-4621440 2/2

Digital Road Advertisement



Community Survey #2 – English

Caldwell County ROAD BOND

Luling Transportation Plan Update
Public Meeting JULY 2026

Community Survey

Using input from the community during the first round of outreach, sets of projects and relief route alignments were developed to address current and future transportation needs in Luling. As you go through the boards at this meeting, please share your thoughts by answering the questions below.

Relief Route Alignments

1. *Which potential alignment alternative for Option A, if any, do you believe would best serve Luling's transportation needs?* ***SELECT ONLY ONE.***

Alignment	Summary Description	Select Only One
Alignment A1	Length of 0.9 miles; one (1) potential displacement; estimated 1,860 vehicles per day (145 trucks) diverted in year 2050; estimated cost $24.3M.	☐
Alignment A2	Length of 1 mile; no displacements; estimated 2,230 vehicles per day (147 trucks) diverted in year 2050; estimated cost $26.6M.	☐
Alignment A3	Length of 1.5 miles; no displacements; estimated 2,650 vehicles per day (143 trucks) diverted in year 2050; estimated cost $39.1M.	☐
None of these	-	☐

Focus Area and Improvement Projects

2. *Please rank the listed projects in order of priority. Check "Priority #1" box for the project you feel is most important, followed by "Priority #2," "Priority #3," as applicable.* ***PLEASE USE EACH PRIORITY RANKING ONLY ONCE*** *within each Focus Area.*

Focus Area 1 | S. Hackberry Ave. from US 90/Pierce St. to Houston St.

Project ID	Project Description	Priority #1	Priority #2	Priority #3
1A	• Install ADA compliant sidewalks and curb ramps.	☐	☐	☐
1B	• Repave Hackberry Ave. • Install school zone back flashers. • Install high visibility signage and crosswalks striping. • Install pedestrian safety lighting.	☐	☐	☐
1C	Install new signal at US90/E. Pierce St.	☐	☐	☐

Focus Area 2 | N. Hackberry Ave. from FM 2984/Lincoln St. to SH 80/Austin St.

Project ID	Project Description	Priority #1	Priority #2
2A	• Reconstruct with striped center and edge lines from SH 80/Austin St. to Trinity St. • Install new signal at N. Hackberry Ave. and SH 80/Austin St.	☐	☐
2B	• Reconstruct with striped center and edge lines from Trinity St. to FM 2984.	☐	☐

Focus Area 3 | SH 80/Austin St. from E. Fannin St. to E Milam St.

Project ID	Project Description	Priority #1	Priority #2	Priority #3
3A	• Install high visibility crosswalks. • Install patterned intersection and "Do Not Block Intersection" signage. • Install new dynamic speed feedback sign.	☐	☐	☐
3B	• Install Pedestrian Hybrid Beacon signal at E. Travis St. • Install high visibility crosswalk striping and pedestrian signage. • Install new dynamic speed feedback sign.	☐	☐	☐
3C	• Install pedestrian safety lighting.	☐	☐	☐

Focus Area 4 | Intersection of US 183 and US 90

Project ID	Project Description	Priority #1	Priority #2
4A	• Restripe southbound lanes for two continuous lanes from Plum Creek Bridge to the US 183 and US 90 intersection. • Widen southbound approach at US 183 and US 90 intersection for two continuous through lanes. • Update intersection pavement markings and signal timing.	☐	☐
4B	• Install safety lighting along Plum Creek Bridge.	☐	☐

Additional Feedback

3. Do you have any comments or suggestions about the Northeast Alignment, the Option A alignment alternatives or the focus areas and projects presented?

Community Survey #2 – Spanish

Caldwell County ROAD BOND

Actualización del Plan de Transporte de Luling
Reunión pública JULIO 2026

Encuesta Comunitaria

Utilizando los comentarios de la comunidad obtenidos durante la primera ronda de participación, se desarrollaron proyectos y alineaciones de rutas de alivio para atender las necesidades actuales y futuras de transporte en Luling. Mientras revisa los materiales en esta reunión, por favor comparta sus opiniones respondiendo a las preguntas que aparecen a continuación.

Alternativas de alineaciones para la ruta de alivio

1. *De las posibles alternativas de alineación de la Opción A, ¿cuál considera que respondería mejor a las necesidades de transporte de Luling?* ***SELECCIONE SOLO UNA.***

Alineación	Descripción General	Seleccione Solo Una
Alineación A1	Longitud de 0.9 millas; un (1) posible desplazamiento; se estima que desviaría 1,860 vehículos por día (145 camiones) para el año 2050; costo estimado de $24.3 millones.	☐
Alineación A2	Longitud de 1 milla; sin desplazamientos; se estima que desviaría 2,230 vehículos por día (147 camiones) para el año 2050; costo estimado de $26.6 millones.	☐
Alineación A3	Longitud de 1.5 millas; sin desplazamientos; se estima que desviaría 2,650 vehículos por día (143 camiones) para el año 2050; costo estimado de $39.1 millones.	☐
Ninguna	-	☐

Áreas de Enfoque y Proyectos de Mejora

2. *Ordene los proyectos indicados según su nivel de prioridad. Marque la casilla "Prioridad #1" para el proyecto que considere más importante, seguida de "Prioridad #2", "Prioridad #3", según corresponda. **UTILICE CADA NIVEL DE PRIORIDAD SOLO UNA VEZ** dentro de cada Área de Enfoque.*

Área de Enfoque 1 | S. Hackberry Ave. desde la US 90/Pierce St. hasta la Houston St.

ID del Proyecto	Descripción del Proyecto	Prioridad #1	Prioridad #2	Prioridad #3
1A	• Instalar banquetas y rampas de acceso que cumplan con los requisitos de la ADA.	☐	☐	☐
1B	• Repavimentar Hackberry Ave. • Instalar luces intermitentes en la zona escolar. • Instalar señalización de alta visibilidad y marcar cruces peatonales de alta visibilidad. • Instalar iluminación para la seguridad de los peatones.	☐	☐	☐
1C	Instalar una nueva señal en US90/E. Pierce St.	☐	☐	☐

Área de Enfoque 2 | N. Hackberry Ave. desde la FM 2984/Lincoln St. hasta la SH 80/Austin St.

ID del Proyecto	Descripción del Proyecto	Prioridad #1	Prioridad #2
2A	• Reconstruir la carretera con líneas pintadas centrales y de borde desde la SH 80/Austin St. hasta Trinity St. • Instalar un nuevo semáforo en N. Hackberry Ave. y SH 80/Austin St.	☐	☐
2B	• Reconstruir con líneas pintadas centrales y de borde desde Trinity St. hasta FM 2984.	☐	☐

Área de Enfoque 3 | SH 80/Austin St. desde la E. Fannin St. hasta la E Milam St.

ID del Proyecto	Descripción del Proyecto	Prioridad #1	Prioridad #2	Prioridad #3
3A	• Instalar cruces peatonales de alta visibilidad. • Instalar un tratamiento decorativo en la intersección y señales de "No bloquee la intersección". • Instalar una nueva señal dinámica de retroalimentación de velocidad.	☐	☐	☐
3B	• Instalar una señal peatonal híbrida en E. Travis S. • Instalar marcas de alta visibilidad en los cruces peatonales y señalización para peatones. • Instalar una nueva señal dinámica de retroalimentación de velocidad.	☐	☐	☐
3C	• Instalar iluminación para la seguridad de los peatones.	☐	☐	☐

Área de Enfoque 4 | Intersección entre US 183 y US 90

ID del Proyecto	Descripción del Proyecto	Prioridad #1	Prioridad #2
4A	• Modificar la distribución de carriles en dirección sur para proporcionar dos carriles continuos desde el puente sobre Plum Creek hasta la intersección de la US 183 y la US 90. • Ampliar los carriles en dirección sur al llegar a la intersección de la US 183 y la US 90 para proporcionar dos carriles continuos. • Actualizar las marcas de pavimento y la sincronización de los semáforos en la intersección.	☐	☐
4B	• Instalar iluminación de seguridad a lo largo del puente sobre Plum Creek.	☐	☐

Comentarios Adicionales

3. *¿Tiene algún comentario o sugerencia sobre la Alineación Noreste, las alternativas de alineación de la Opción A o las áreas de enfoque y proyectos presentados?*

Meeting Display Boards



City of Luling
TRANSPORTATION PLAN UPDATE

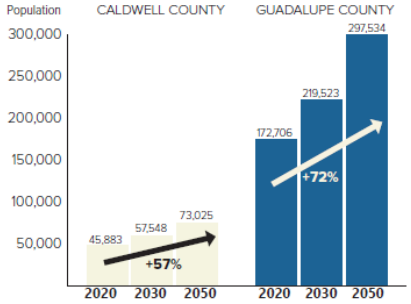
Caldwell County ROAD BOND

Why is Luling updating their Transportation Plan?

1 Population Growth

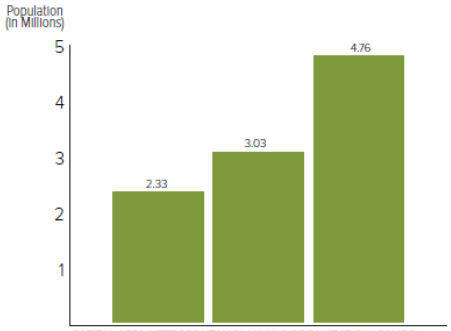
- Local and regional growth contribute to increased through-traffic in Luling.

POPULATION PROJECTIONS



COUNTY POPULATION PROJECTIONS

Source: Texas Demographic Center

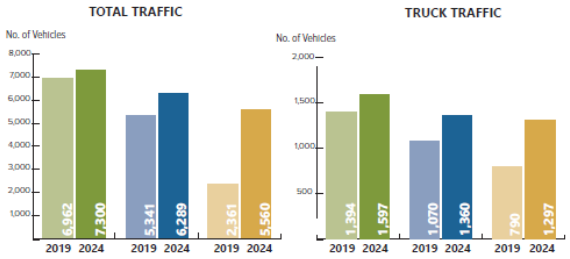


CAPITAL AREA METROPOLITAN PLANNING ORGANIZATION (CAMPO) REGION POPULATION PROJECTIONS

Source: Texas Demographic Center

2 Travel Patterns

- **SH 80W - US 183E** and **US 183N - US 183E** experienced the highest volumes of total and truck traffic.
- From 2019 to 2024, the **SH 80S - US 183N** corridor has experienced a 135% increase in total traffic.



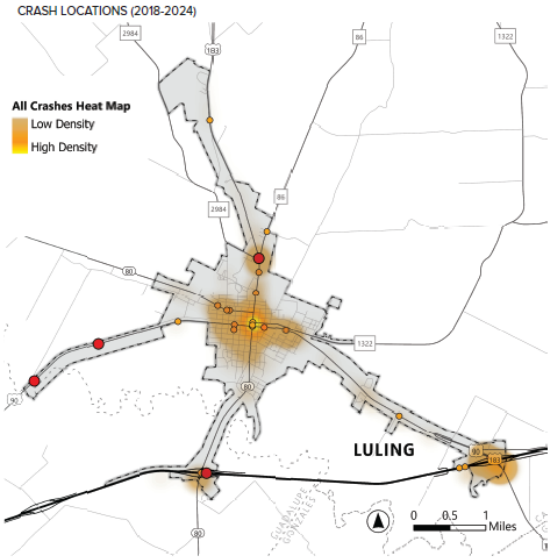
HIGH TRAFFIC CORRIDORS



3 Safety

- From 2018 to 2024, there were 31 severe or fatal injury crashes in Luling.
- These crashes primarily occur on state roads and at major roadway intersections.

CRASH LOCATIONS (2018-2024)



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City of Luling
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND

What are the goals and objectives of the Luling Transportation Plan Update?

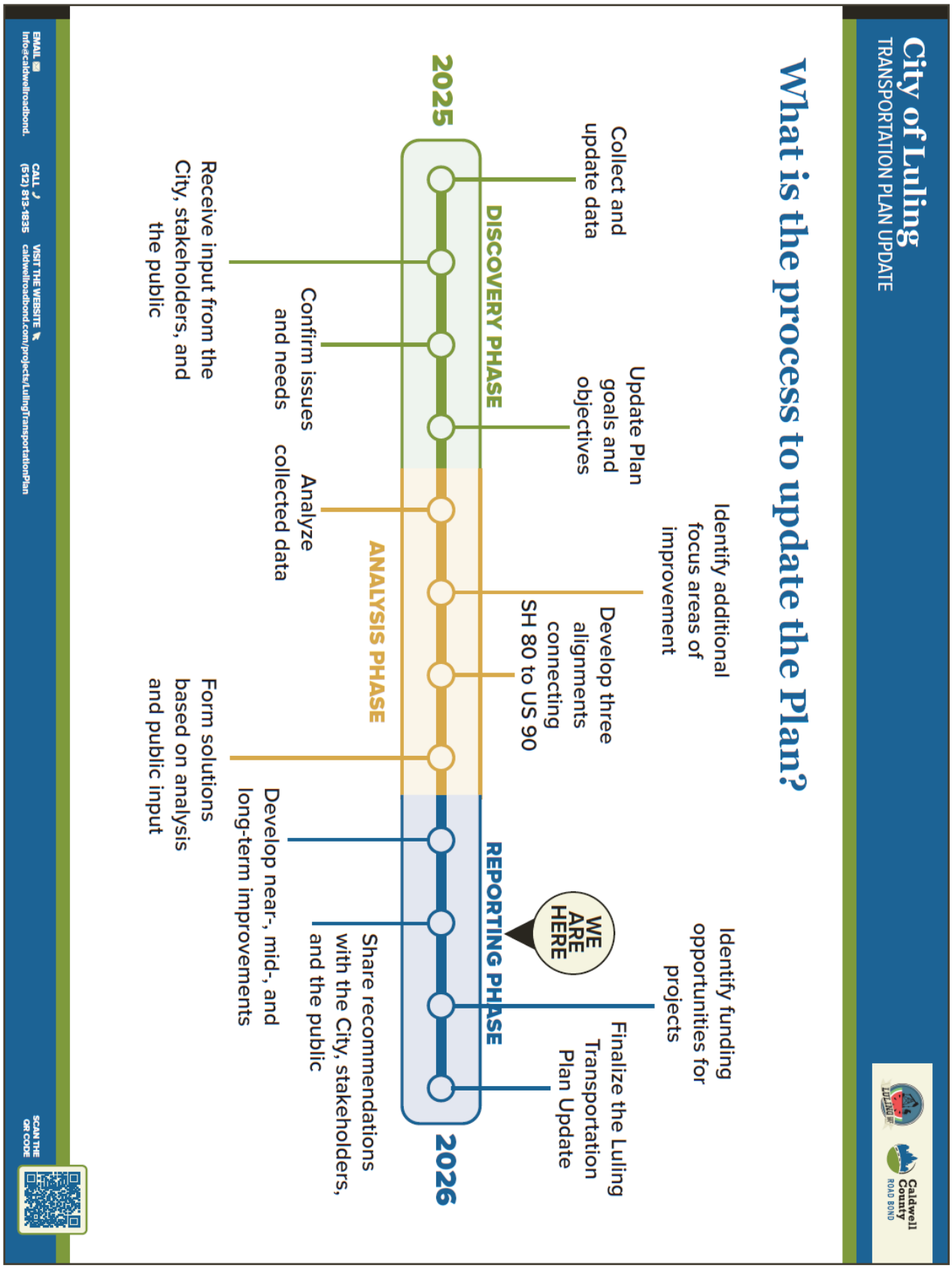
Goal 1: Identify needed safety improvements
- Analyze current traffic movements, crash trends, and pedestrian activity.
- Assess safety and operational issues along the Union Pacific Railroad corridor and its crossings.
- Understand local emergency response patterns and impacts of the hurricane evacuation route.

Goal 2: Enhance mobility in Luling for all modes of local and through traffic
- Analyze how local, freight, and recreational travelers move through downtown.
- Improve public and emergency services access across the railroad tracks.
- Expand walking and biking options for all ages and abilities.
- Identify near-, mid-, and long-term mobility improvements.

Goal 3: Evaluate the feasibility of an alternate route for through traffic
- Develop and evaluate three relief route alignments west of central Luling from Austin St. (SH 80) to Pierce St. (US 90).
- Assess how future growth scenarios affect the viability of each alignment.

Goal 4: Incorporate tools to promote unique character of downtown and economic development opportunities
- Assess how transportation changes may affect local businesses.
- Analyze visitor patterns to support strategies that strengthen downtown's character and economic vitality.

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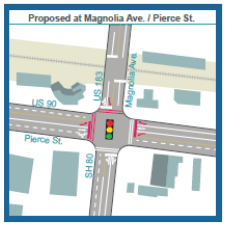

City of Luling
TRANSPORTATION PLAN UPDATE
Caldwell County
ROAD BOND
What is the process to update the Plan?
2025
2026
DISCOVERY PHASE
ANALYSIS PHASE
REPORTING PHASE
WE ARE HERE
Collect and update data
Update Plan goals and objectives
Identify additional focus areas of improvement
Develop three alignments connecting SH 80 to US 90
Identify funding opportunities for projects
Finalize the Luling Transportation Plan Update
Receive input from the City, stakeholders, and the public
Confirm issues and needs
Analyze collected data
Form solutions based on analysis and public input
Develop near-, mid-, and long-term improvements
Share recommendations with the City, stakeholders, and the public
EMAIL
Info@caldwellroadbond.
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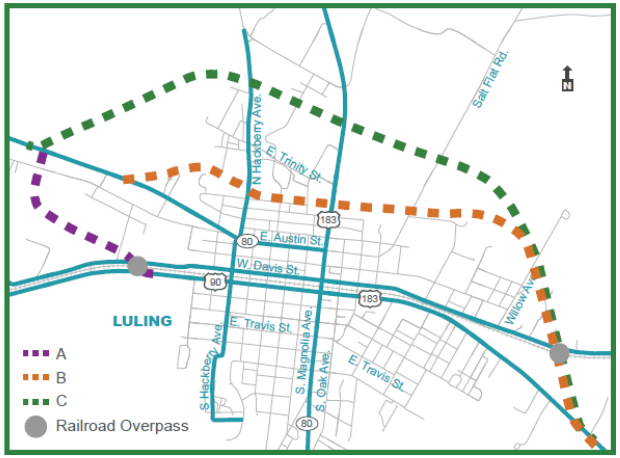
City of Luling
TRANSPORTATION PLAN UPDATE

Caldwell County
ROAD BOND

What were the recommendations from the 2019 Transportation Plan?







GRAPHICS FROM THE 2019 PLAN

NEAR-TERM:

- ☑ Install intersection improvements at Magnolia Ave. and Pierce St.
- ☑ Reconstruct Hackberry Ave. with new pavement, striping, sidewalks, and signals (2024 Caldwell County Bond Project).
- ☑ Construct sidewalks along Magnolia Ave. between Pierce St. and Davis St.

LONG-TERM:

- ☑ Construct a new roadway connection to the west of central Luling from Austin St. (SH 80) to Pierce St. (US 90).

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City of Luling
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND

Public Engagement Progress

Between February and July 2026, this study has organized:

3 Luling Advisory Committee Meetings

February, April, and June 2026

- Establish priorities and needs
- Review public input
- Assess improvement projects
- Evaluate relief route alternatives





3 Stakeholder Meetings

February, April, and June 2026

- Identify community priorities and transportation needs
- Review input from public meetings
- Evaluate relief route alternatives and improvement projects

2 Public Meetings

March 2026

- Gather community input
- Validate study's goals and objectives
- Share project findings and study progress

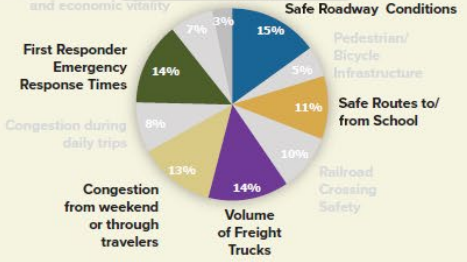


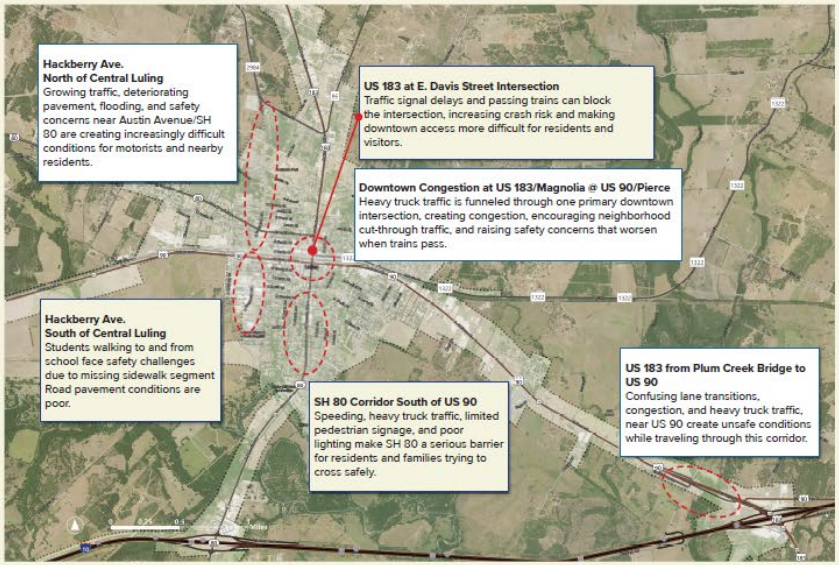
What we've heard from the public through

96 surveys

115 comments

Top 5 highest-ranked issues





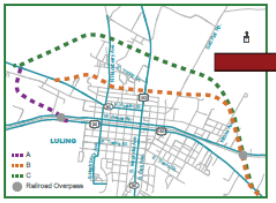
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City of Luling
TRANSPORTATION PLAN UPDATE

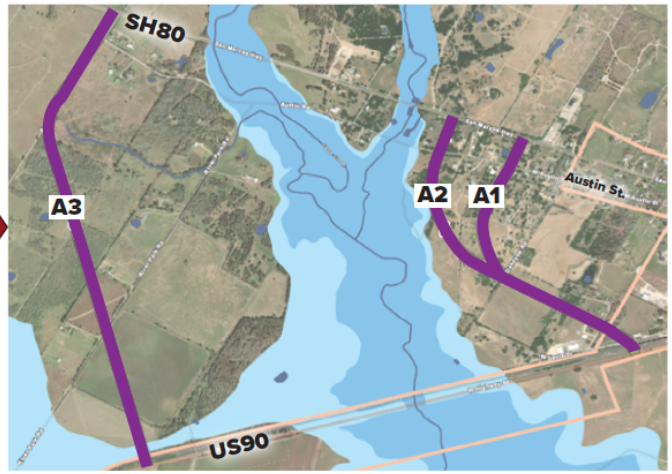
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Relief Route Analysis Findings



Options in 2019 Luling Transportation Study

Option A (in purple) was the selected alignment in the 2019 Transportation Study. This study analyzed three possible alternatives along this alignment.

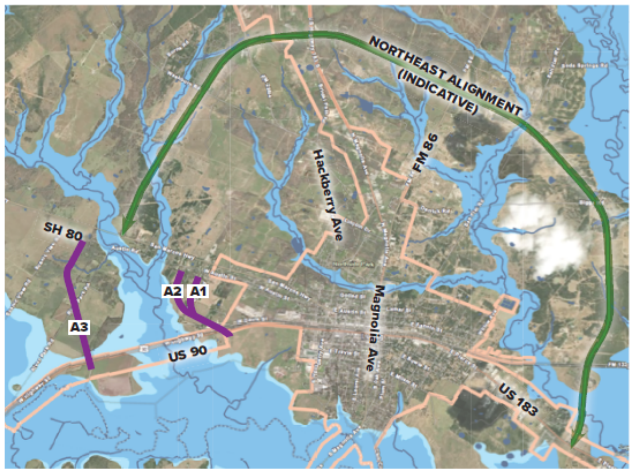


Option A Alignment Alternatives

- Alternative A3 diverts the most traffic around Downtown.
- Diverted traffic must still travel along US 90/Pierce St and pass through the US 90/Pierce St & US 183/Magnolia Ave intersection.
- All three increase cross-town travel time but create a reliable trip due to the railroad grade separation.

Analysis comparing no-build to the three alternatives

Criteria	No Build (2050)	A1 (2050)	A2 (2050)	A3 (2050)
Length (miles)	-	0.9	1.0	1.5
Environmental Constraints	-	Adjacent to body of water/ wetland; 1 pipeline	Adjacent to floodplain; 3 pipelines; 3 surface wells	Passes through floodplain; 3 pipelines; 5 surface wells
No. of potential displacements	None	1	None	None
No. of vehicles per day on SH 80	9,390	9,990	10,060	10,780
No. of vehicles diverted from SH 80 to US 90	-	1,860	2,230	2,650
No. of heavy vehicles diverted	-	145	147	143
Average cross-town travel time (min:sec)	4:32	5:08	5:17	7:11
US 90 / Magnolia Ave Intersection Performance (Level of Service)	D	D	D	D
Cost (USD)	-	$24.3M	$26.6M	$39.1M



Northeast Alignment (Long-term)

Given current traffic patterns, Option A alternatives are unlikely to substantially mitigate congestion downtown in the long term. This study thus conducted a high-level analysis to estimate the level of traffic diversion along a northeastern alignmeent that corresponds to **Option C** (in green) from the 2019 Luling Transportation Study.

- **Benefit:** could divert approx. 60% of traffic in 2050 away from downtown.
- **Disadvantages:** makes cross-town journeys longer, costs more, and affects existing properties.

Further study is required to assess its viability as a long-term relief route.

Tell us what you think!

On your survey sheet, rank these alternatives based on your preference.

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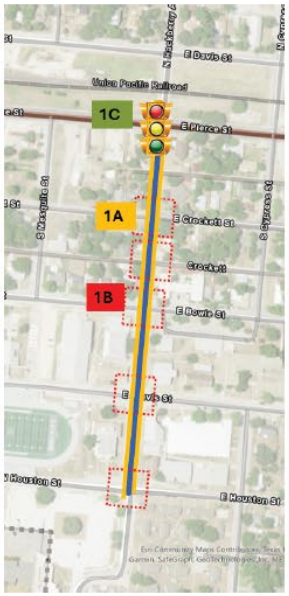
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City of Luling
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND

Focus Area 1

S. Hackberry Ave from US 90/E. Pierce St to E. Houston St.











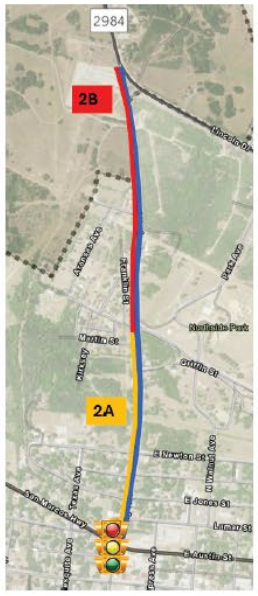




Project ID	Project Description
1A	ADA-compliant Sidewalks and Curb Ramps
1B	Repave Hackberry Ave from US 90 / Pierce St to Houston St
	School Zone Flashers
	High Visibility Signage and Crosswalk Striping
	Pedestrian Safety Lighting
1C	New Traffic Signal at US 90 / Pierce St

Focus Area 2

N. Hackberry Ave from FM2984 to SH80/Austin St







Project ID	Project Description
2A	SH 80 / Austin St to Trinity St: Reconstruct with striped center and edge lines
	New signal at intersection of N. Hackberry Ave and SH 80
2B	Trinity St to Lincoln St (FM 2984): Reconstruct with striped center and edge lines

Tell us what you think!
On your survey sheet, rank these projects based on your preference.

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City of Luling
TRANSPORTATION PLAN UPDATE

Caldwell County ROAD BOND

How can I share feedback and learn more?

We want to hear from you! There are various ways to share your feedback:

- Take a short survey
- Email us at info@caldwellroadbond.com
- Complete a comment form
- Visit caldwellroadbond.com/projects/lulingtransportationplan
- Call us at 512-813-1835
- Mail comments to Luling Transportation Plan, c/o CD&P PO Box 5459 Austin, TX 78756

EMAIL info@caldwellroadbond.com
CALL (512) 813-1835
VISIT THE WEBSITE caldwellroadbond.com/projects/LulingTransportationPlan
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Appendix C

Survey Results and Community Input

PUBLIC MEETINGS #1 AND #2

Feedback Variety

Response Formats		
Paper	**Online**	**Comment Cards**
6	**90**	**3**

Comment Card Responses

ID	Comment
CC01	1) Bypass for Big Trucks & Emergency Vehicles 2) More police presence monitoring traffic 3) Sidewalks in town to keep children of busy streets
CC02	Sidewalks in town Certain intersections need work Speeding by vehicles & semis in town Semis cut through neighborhoods
CC03	Luling's haydays are over. Traffic plans should not focus on satisfying downtown merchants. Traffic congestion, noise and safety are the main current problems. Traffic and noise thru town is making living in Luling uncomfortable.

Survey – Feedback

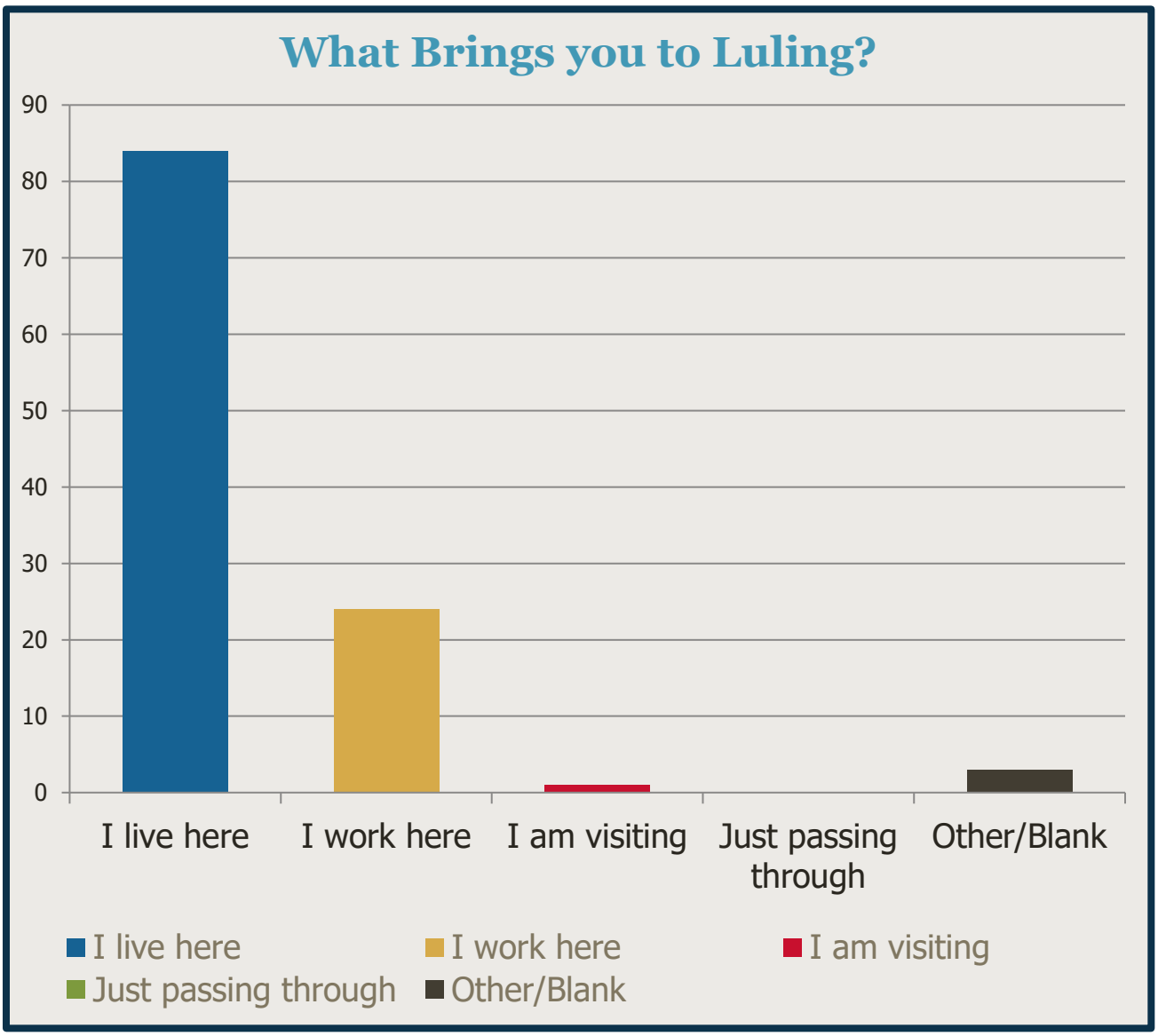
Origin	Survey ID	Date	4. Do you have any additional feedback about the transportation system or the goals of the Plan?
Online Survey	6503809259797508144	3/26/2026	We just need to have large trucks re-routed. They need to stay on IH-10 and not bypass the check station.
Online Survey	6503735579612062566	3/26/2026	Sooner than later would be best. We started this in 2019…
Paper Survey	PS02	3/26/2026	Improve traffic control; sidewalk to and from school

Origin	Survey ID	Date	4. Do you have any additional feedback about the transportation system or the goals of the Plan?
Paper Survey	PS04	3/26/2026	Enforce a truck route (CMV); re-evaluate the 2019 options - do not see that any one of them will solve issues. Please consider different by-pass options.
Paper Survey	PS06	3/26/2026	The best & safest plan is to use a route around Luling. Large truck loads are very problematic thru town. Go around! Have 1 or 2 easy exits into town. Limit development around the new route.
Online Survey	6529856337915310091	4/25/2026	There are two particular roads that have desperately needed paving since as long as i can remember in the early 70's. The roads are: Hackberry and Bridal Path. The patchwork that is performed on these roads just isn't cutting up. They are relatively short roads so i would think repaving could be accomplished quickly and easily. I would really love it if someone took this matter seriously. I'm tired of swerving to miss potholes and tearing up my truck. Thank you!!
Online Survey	6531895007817338877	4/28/2026	Left turn lane needs to be installed on East Pierce Street for drivers traveling towards I 10 (Buccees). It's very difficult and dangerous to get into businesses during busy hours.
Online Survey	6537529690203606876	5/4/2026	Put the traffic lights back on Pierce St. Tyey helped with the flow of traffic's. They took them down in the early 80's and traffic has increased since.?
Online Survey	6537546283714171615	5/4/2026	Fix truck route road from Sh 80 to US 90
Online Survey	6537549759214781157	5/4/2026	Sorry, I haven't seen any goals set forth.
Online Survey	6537554374419985738	5/4/2026	Need alternative routes that would disrupt as little private property as possible
Online Survey	6537559063216572950	5/4/2026	An alternate truck route would be great. Add "do not block intersection "signage on side streets near main roads.
Online Survey	6537584950945030421	5/4/2026	Add back more traffic lights on Pierce Street, currently cars and trucks block most intersections approaching signal lights, Create intersection blocks with signage saying " do not block intersections.
Online Survey	6537824212315469160	5/5/2026	No
Online Survey	6537867809018306859	5/5/2026	Thank you for any improvement being considered. Trains blocking traffic is always a problem.
Online Survey	6537919669631160040	5/5/2026	Downtown intersection at David and Magnolia is dangerous for pedestrians and vehicles. Intersection at Magnolia and Travis is dangerous for pedestrians. Especially school kids crossing to Dairy Queen or Park.
Online Survey	6537937311424684508	5/5/2026	Ideally to reroute freight trucks around the main intersections in Luling.

Origin	Survey ID	Date	4. Do you have any additional feedback about the transportation system or the goals of the Plan?
Online Survey	6537960917026520239	5/5/2026	Luling is a town where many destinations are within walking distance, and we are fortunate to live in a place where so much is close together and should be easily walkable. While many of the roads are wide, the lack of sidewalks and pedestrian infrastructure still makes it unsafe to walk. In many areas, pedestrians are forced to walk directly in the roadway alongside fast moving traffic, without any dedicated space or protection. This is not only a concern for children walking to and from school, but for all residents, including families, elderly individuals, and anyone who would choose to walk for health, transportation, or recreation. The issue is not distance, it is safety. I strongly encourage the county to prioritize continuous sidewalks along key corridors and residential areas, safe crossings with clearly marked crosswalks and traffic calming measures, and better connectivity between neighborhoods, schools, parks, and downtown so residents can move through town safely without relying on a vehicle for short trips.
Online Survey	6537994215526817603	5/5/2026	Have safety routes for kids walking to school.
Online Survey	6538030734719478485	5/5/2026	Our roads are in extreme disrepair . Potholes everywhere. We really need a full time patch crew on that.
Online Survey	6538035223632126539	5/5/2026	Yes, the Sidewalks are in terrible shape. I'm Disabled and rely on a Mobility Scooter to get around Town. There are many Sidewalks that have ramps to access them on one end, and nothing on the other. Some are extremely uneven and have huge cracks.
Online Survey	6538044516819383294	5/5/2026	Truck routes need to be enforced
Online Survey	6538064434851826079	5/5/2026	Wish there was room for an overpass
Online Survey	6538137324319759709	5/5/2026	N/A
Online Survey	6538220869717219025	5/5/2026	Not much has changed since the 70s
Online Survey	6538359396824345027	5/5/2026	There were 3 routes for a bypass presented during a recent community meeting. 2 of those go directly through my home on Davis St. I am NOT in favor of this route! There needs to be more research done to find a route that doesn't impact peoples' homes.
Online Survey	6538421774371452240	5/5/2026	Davis & US Hwy 90 intersection
Online Survey	6538698010137634822	5/6/2026	I would not support any plan to use Davis St as an alternative route. If this is in such plans I ask to be bought out as I will move to a different part of town where traffic will be less. Absolutely disgusting you are trying to reroute out of town traffic through our st and home.
Online Survey	6538753506814568844	5/6/2026	The City of Luling shows more interest in growing economic development and parks than taking care of the employees, streets, negotiating its infrastructure.

Origin	Survey ID	Date	4. Do you have any additional feedback about the transportation system or the goals of the Plan?
Online Survey	6538772442114211450	5/6/2026	We need to have a bypass for freight.
Online Survey	6539313696813119661	5/6/2026	Neighborhood streets are falling apart while the city focuses on txdot maintain right of way. The clutter from garage sales that seem to stay open nonstop are not aesthetically pleasing to anyone, even those passing through. Old broke pump jacks and oil field parts at their yards needs to be hidden from public sight so that the drive through doesn't look like we are in a 3rd world country. The city's focus needs to be on city infrastructure and well being of the citizens of Luling not those passing through.
Online Survey	6546903026814022706	5/15/2026	It has been nice to see the constables pulling over the individuals stopping on the railroad tracks and blocking the box. It would be nice if TXDOT could coordinate the lights at Austin and N. Magnolia and S. Magnolia and E. Pierce St. so that it doesn't back up even on weekdays but much worse on Fridays and Sundays.
Online Survey	6552654997229214630	5/22/2026	A sound Barrier Wall needs to be placed for Riverside Grove Subdivision on hwy 183 or the traffic loop needs to re-enter hwy 183 closer to Plum Creek.

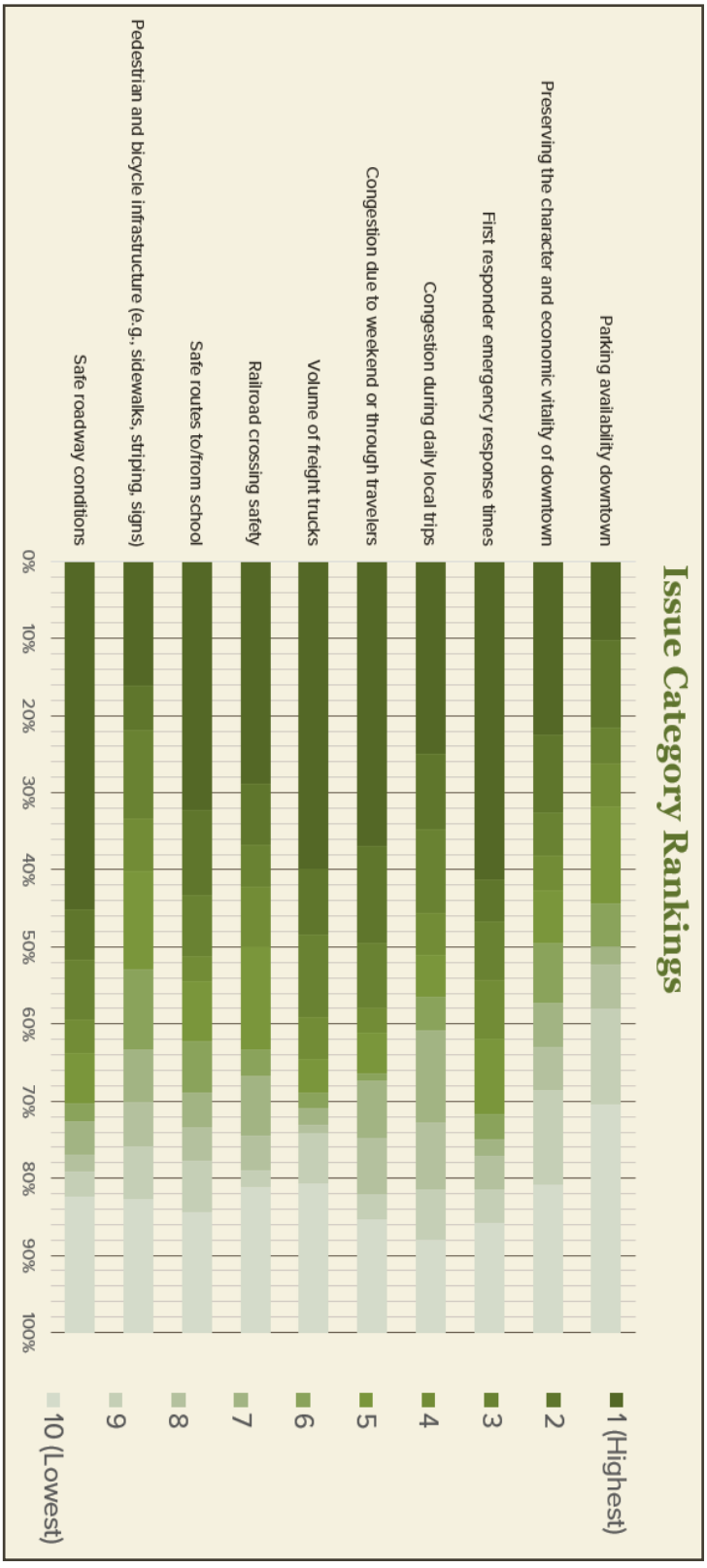
Survey – Respondent Locality



What brings you to Luling?

I live here	I work here	I am visiting	Just passing through	Other/Blank
84	24	1	0	3

Survey – Issue Category Rankings

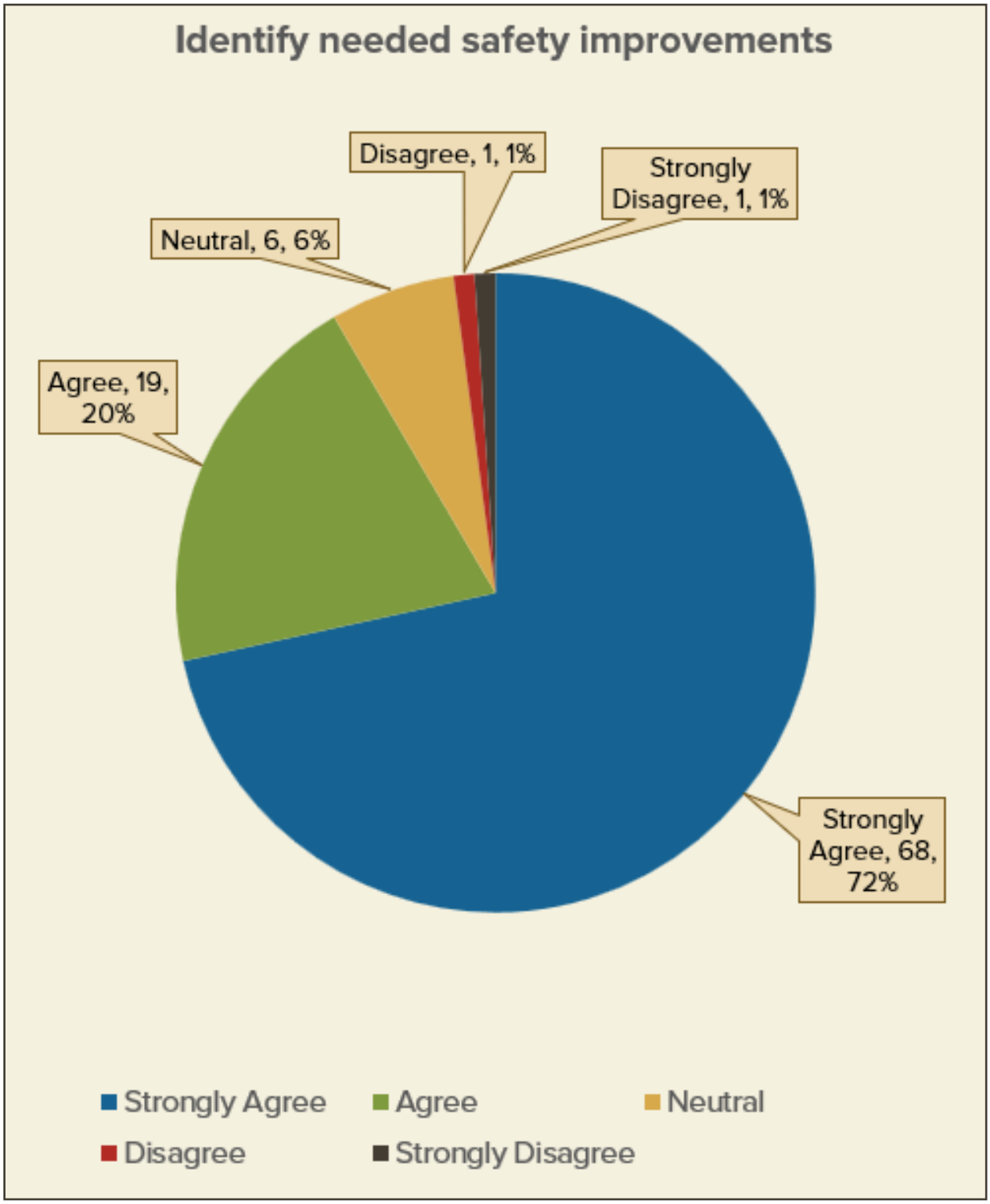


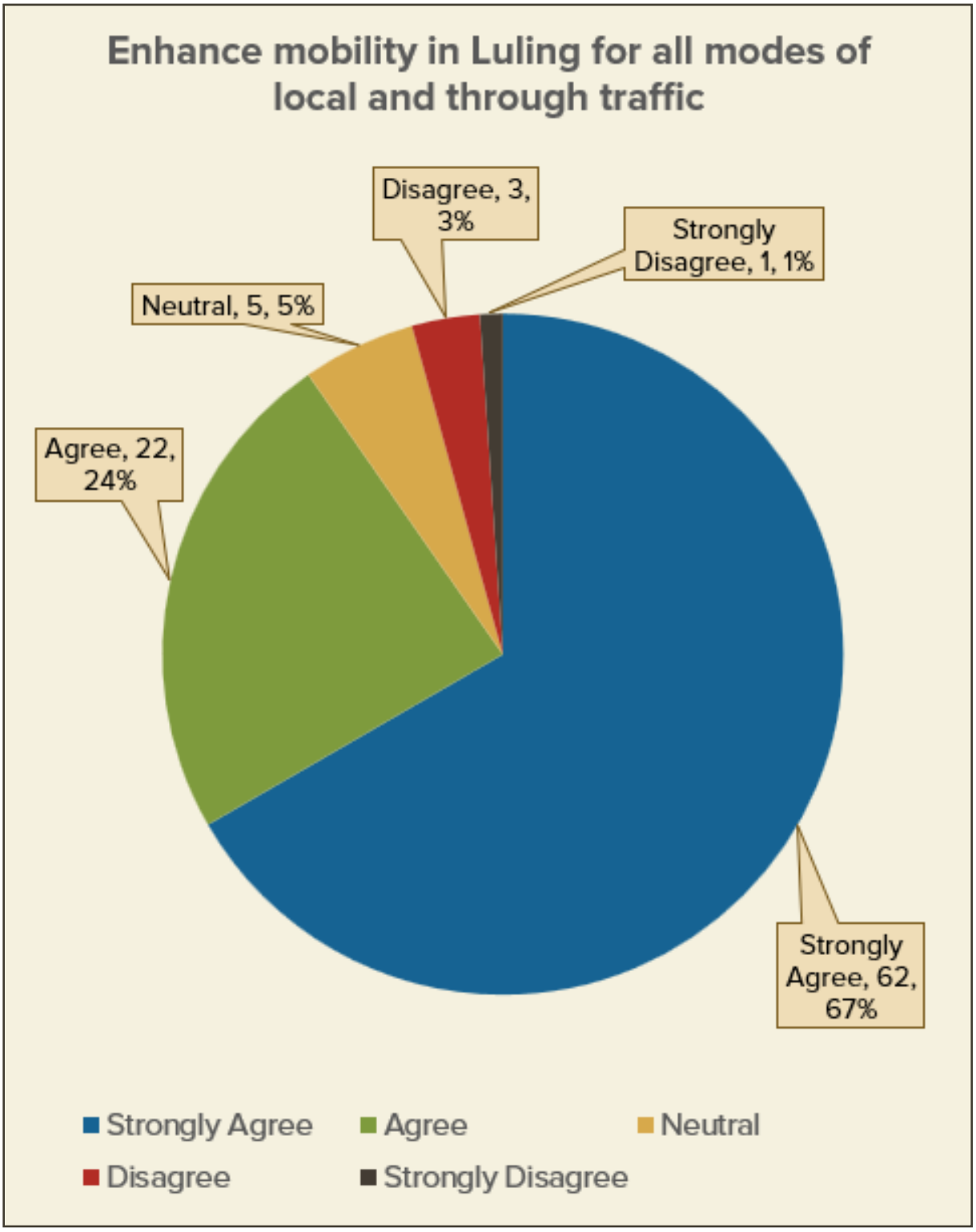
Rank Quantities

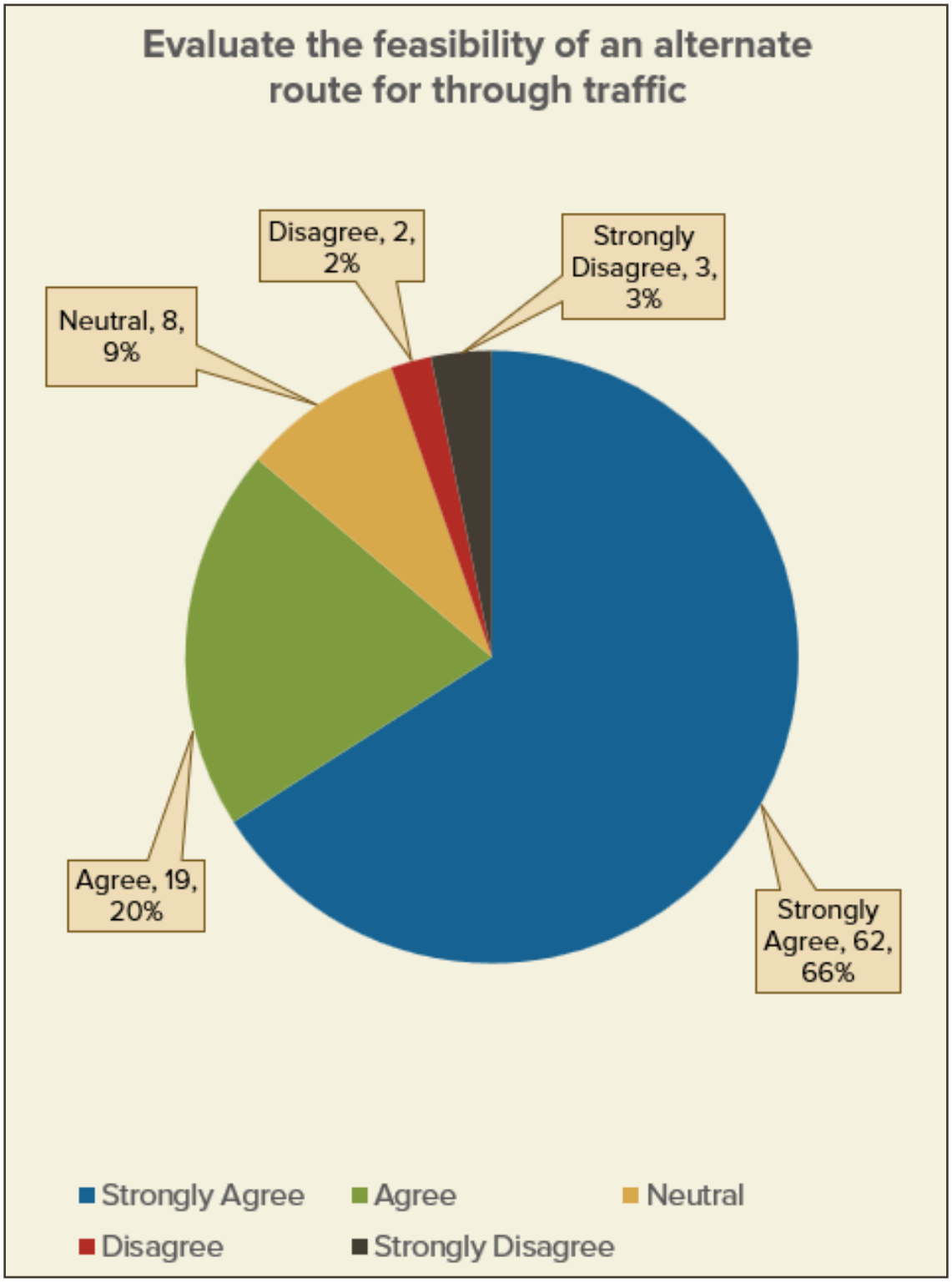
Issue Categories

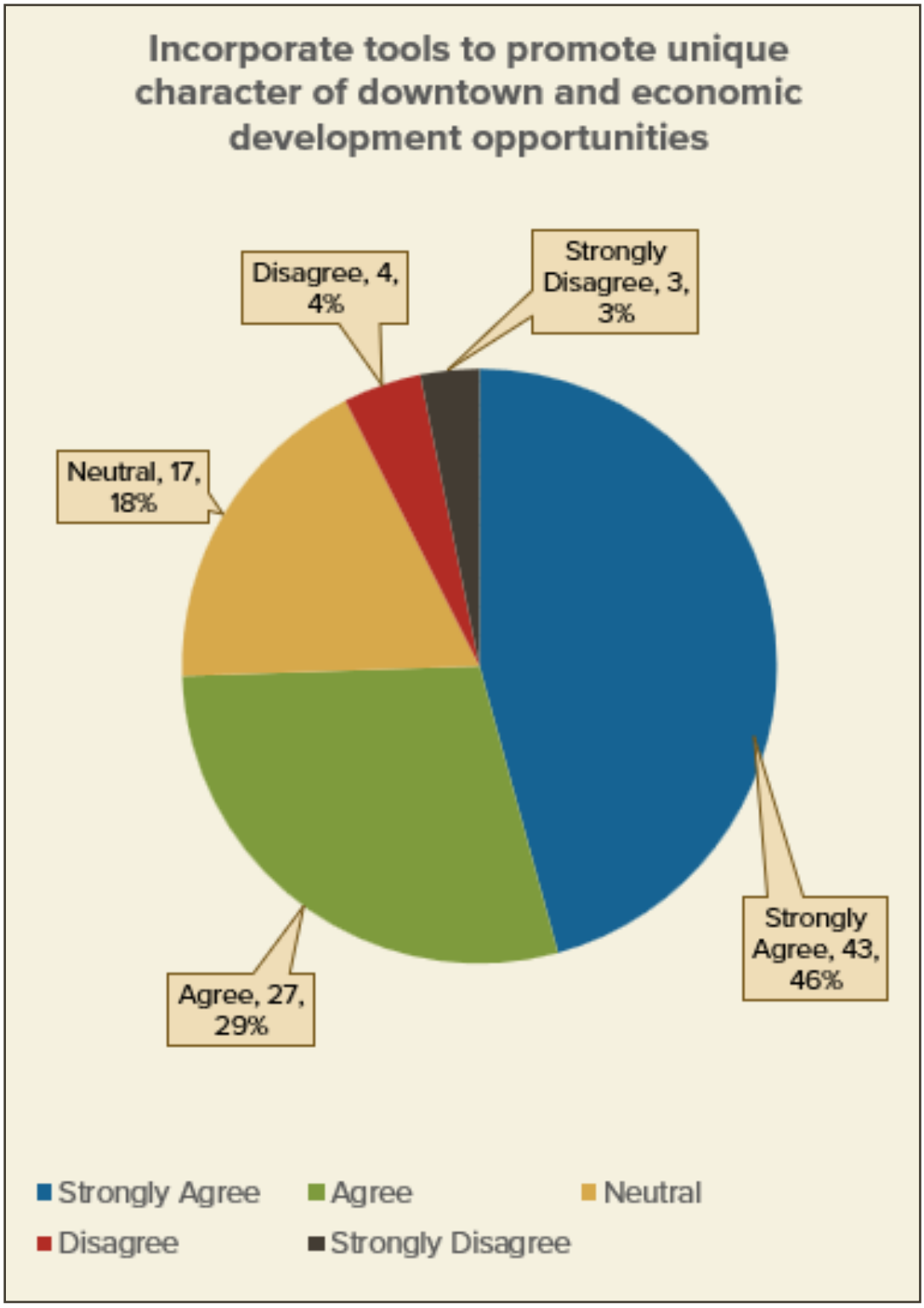
	Safe roadway conditions	Pedestrian and bicycle infrastructure (e.g., sidewalks, striping, signs)	Safe routes to/from school	Railroad crossing safety	Volume of freight trucks	Congestion due to weekend or through travelers	Congestion during daily local trips	First responder emergency response times	Preserving the character and economic vitality of downtown	Parking availability downtown
1 (Highest)	41	14	29	26	37	35	23	38	20	9
2	6	5	10	7	8	12	9	5	9	10
3	7	10	7	5	10	8	10	7	5	4
4	4	6	3	7	5	3	5	7	4	5
5	6	11	7	12	4	5	5	9	6	11
6	2	9	6	3	2	1	4	3	7	5
7	4	6	4	7	2	7	11	2	5	2
8	2	5	4	4	1	7	8	4	5	5
9	3	6	6	2	6	3	6	4	11	11
10 (Lowest)	16	15	14	17	18	14	11	13	17	26
Total Votes	**91**	**87**	**90**	**90**	**93**	**95**	**92**	**92**	**89**	**88**

Survey – Goal Agreement




Enhance mobility in Luling for all modes of local and through traffic
Disagree, 3, 3%
Strongly Disagree, 1, 1%
Neutral, 5, 5%
Agree, 22, 24%
Strongly Agree, 62, 67%
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree


Evaluate the feasibility of an alternate route for through traffic
Disagree, 2, 2%
Strongly Disagree, 3, 3%
Neutral, 8, 9%
Agree, 19, 20%
Strongly Agree, 62, 66%
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree


Incorporate tools to promote unique character of downtown and economic development opportunities
Disagree, 4, 4%
Strongly Disagree, 3, 3%
Neutral, 17, 18%
Strongly Agree, 43, 46%
Agree, 27, 29%
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

Goal Agreement

Identify needed safety improvements	
Strongly Agree	68
Agree	19
Neutral	6
Disagree	1
Strongly Disagree	1
Total Votes	**95**

Enhance mobility in Luling for all modes of local and through traffic	
Strongly Agree	62
Agree	22
Neutral	5
Disagree	3
Strongly Disagree	1
Total Votes	**93**

Evaluate the feasibility of an alternate route for through traffic	
Strongly Agree	62
Agree	19
Neutral	8
Disagree	2
Strongly Disagree	3
Total Votes	**94**

Incorporate tools to promote unique character of downtown and economic development opportunities	
Strongly Agree	43
Agree	27
Neutral	17
Disagree	4
Strongly Disagree	3
Total Votes	**94**

Issues Activity Board Responses



Mapped Comments




City of Luling
Luling Transportation Plan Update
City of Luling
County Boundary
Interstate
US Highway
State Highway
Local Road
Railroads
River/Stream
0
0
0.1mi
500Feet
There are potholes and a need for pavement improvements along Magnolia Avenue between SH 80 and FM 2057 north of Centra Luling.
Riding bicycles and scooters on sidewalks is dangerous for people that walk along E Davis Street.
Southbound traffic on US 183 backs up all the way past Cedar Street when a train comes through.
The intersection of E Davis Street and US 183 needs a "Do Not Block Intersection" sign.
There is a high center on the railroad crossings along N Cedar Avenue and Elm Avenue.
Trucks get stuck at the Elm Avenue railroad crossing east of Centra Luling. The crossing is at a higher grade and cracks can't help.
Wilcrest Estates and mobile homes are not connected to water on US 183 northbound near I-10.
Friday through Sunday, the busiest congestion is 3:30PM to 6:45PM & busy Monday through Friday. Friday is the busiest.
There is a lack of sidewalks along S Magnolia Avenue and E Houston Street. Pedestrians are forced to walk in the road.
There are no crossing guards for students walking to/from school.
The city would benefit from a safe routes to school plan.
More sidewalks are needed throughout town.
Northbound traffic on SH 80 backs up all the way past E Miram Street when a train comes through.
Hills cross SH 80 near the E Travis Street intersection and there is a lot of truck traffic.
There is a lack of sidewalks along S Magnolia Avenue and E Houston Street. Pedestrians are forced to walk in the road.
Poor visibility at the intersection of E Houston Street and Central Avenue need better lighting, more visible signs (that are standing), trees obscured by trees on the roadside, and signalized intersection due to speeding is common in this section of road between US 90 and E Miram Street.
There have been several crashes at the intersection between S Oak Avenue and E Travis Street.
Sidewalks to school are needed along Avenue and SH 80.
High speeds along SH 80 south of US 90 Alternate. Signs are not speed limit cases to lumber south.
The N Oak Avenue railroad crossing is currently blocked by barricades.
Trucks are not allowed on US 183/SH 80. Enforcement is needed.

PUBLIC MEETINGS #3 AND #4

Survey – Feedback Variety

Response Formats		
Paper	**Online**	**Comment Card**
18	**17**	**1**

Comment Card Responses

ID	Comment
CC01	A radio beacon covering the greater area with signal having a loop instructing trucks for 183 southbound to I-10. Take 80/I-10 northbound through Luling use Hwy 80. Eastbound use 90, westbound use 90, etc. Goal to reduce # of trucks turning which really slows the movement through the 183/90 intersection.

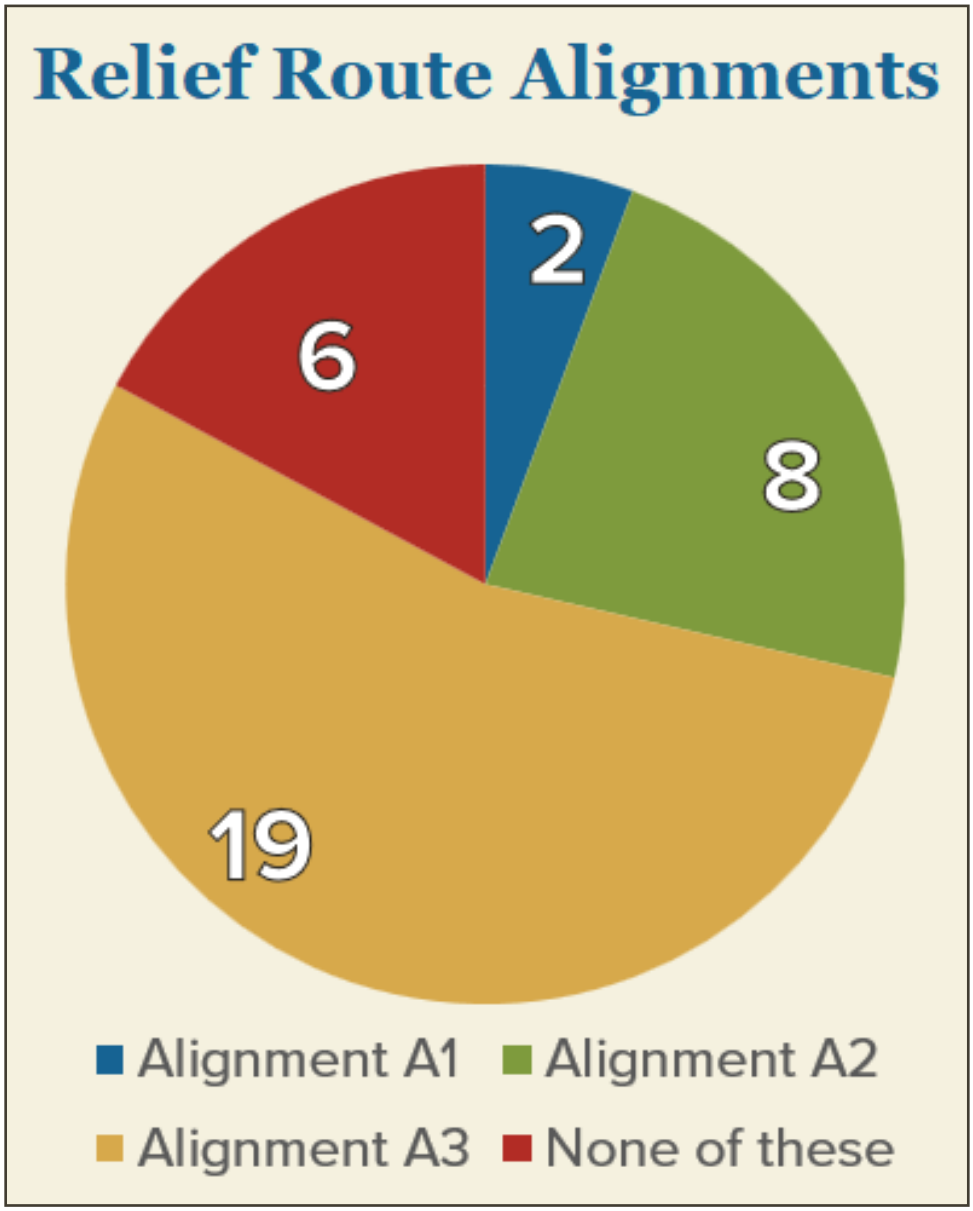
Survey – Additional Feedback

Origin	Survey ID	Date	Additional Feedback
			Do you have and comments or suggestions about the Northeast Alignment, the Option A alignment alternatives or the focus areas and projects presented?
Paper Survey	PS01	7/14	Speed limit on 90 need reduced from the Police department to Plum Creek Bridge to 55 mph. Subdivision in between have difficulty getting on to 90.
Paper Survey	PS02	7/14	Focus Area 1 - 1C - Suggestion - Place a 4-way stop intersection here instead of signal lights.
Paper Survey	PS03	7/14	This study to focus on routes to divert traffic from 80 → 90 or I-10 was a waste of time & money considering the heaviest traffic isues come from the N on 183. There should have been a better long-term vision to have a one and done solution that didn't waste taxpayer money on a short term answer to the smaller problem. Focus on all impact - from the W and N.

Origin	Survey ID	Date	Additional Feedback Do you have and comments or suggestions about the Northeast Alignment, the Option A alignment alternatives or the focus areas and projects presented?
Paper Survey	PS05	7/14	4a - Add flashing yellow to left turns Add - Uturn lanes 3A Do not block on more intersections 4A Loves to IH-10 frontage for W. bound; currently they have to go to U-turn light by hotel
Paper Survey	PS06	7/14	Options that don't significantly reduce traffic thru the Magnolia intersection should be no-go. Need more analysis of the Northeast Alignment which appears to have potential benefit.
Paper Survey	PS07	7/14	Pedestrian walkways over Magnolia at Davis St.
Paper Survey	PS08	7/14	No comments at this time; it is a well thought out plan. However, my concerns are w/ SH 80 NB towards San Marcos. I would like for it to be expanded to 4 lanes or use the "2 mile" passing lanes at safe areas of SH 80.
Paper Survey	PS09	7/14	It would be helpful if it is emphasized the time frame for these various projects. Many people think all of them are happening next week!!
Paper Survey	PS10	7/14	Enforce truck routes, look @ utilizing Highsmith Rd to move traffic from Hwy 90 to IH-10. Alignment A-3 if it continues past Hwy 90 and connects IH-10
Paper Survey	PS13	7/14	Own property by sewer plant - don't want road there
Paper Survey	PS14	7/14	I own property close to sewer plant - would not want road to go through there -
Online Survey	6623904890318082018	8/12	All of Hackberry from 80 to 2984 should be repaved with curbs. Also, widen Bridle Path from 2984 to 183.
Online Survey	6623914031798013020	8/12	Please fix Hackberry, it's a heavily trafficked road and possibly a stop sign or signal where it intersects with 80.
Online Survey	6625645323547458815	8/14	A protected left turn signal is needed at the intersection while heading South on North Magnolia and turning East on Austin. This is a dangerous intersection and a true concern, plus there's a school there which should make it top priority. Trucks headed west on Austin on the North bound side of Magnolia block visibility. Thank you

Survey – Alignment and Project Voting Results

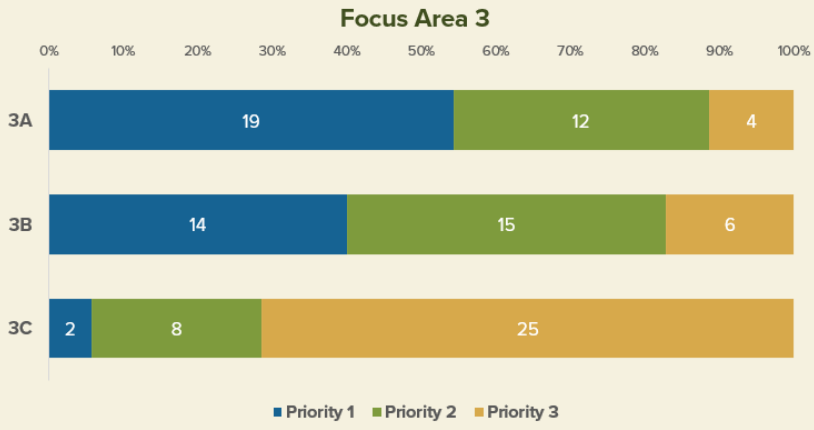
Relief Route Option A Alignments	
	Votes
Alignment A1	2
Alignment A2	8
Alignment A3	19
None of these	6

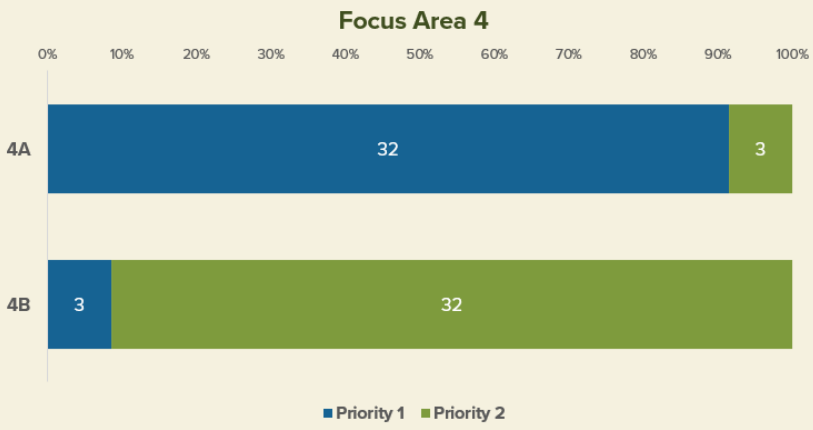

Relief Route Alignments
2
8
19
6
Alignment A1
Alignment A2
Alignment A3
None of these

Focus Area 1	1A	1B	1C
Priority 1	4	26	5
Priority 2	8	4	22
Priority 3	22	4	8

Focus Area 2	2A	2B
Priority 1	28	8
Priority 2	7	27

Focus Areas





Focus Area 3	3A	3B	3C
Priority 1	19	14	2
Priority 2	12	15	8
Priority 3	4	6	25

Focus Area 4	4A	4B
Priority 1	32	3
Priority 2	3	32

Caldwell County
ROAD BOND

Appendix C: Alternatives Analysis Technical Memorandum

City of Luling Transportation Plan Update

August 28, 2026

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Introduction

This Alternatives Analysis Technical Memorandum documents the methodology and findings of the analysis conducted to identify and evaluate potential Relief Route Alignment Alternatives that build on the recommended alignment in the 2019 Luling Transportation Study as well as to develop other Improvement Projects within the City of Luling ("the City") and its extraterritorial jurisdiction (ETJ).

The analysis of the relief route alternative alignments revealed that the alignments that were evaluated would likely result in marginal improvements to congestion downtown. An additional high-level analysis was conducted for a long-term relief route option that traverses the area northeast of the City. This analysis showed that this alignment could lead to greater diversion of traffic away from downtown Luling in the long-term.

Complementing the relief route analysis are the proposed Improvement Projects along key streets and intersections within the City. These aim to improve pedestrian safety and strengthen the downtown character, both of which are goals of this study.

The first section of the memorandum describes the methodology employed for analyses and the data sources used, including online data portals of public agencies, traffic data collection, and direct input from the community. The subsequent sections dive deeper into the approach and outcomes of the Relief Route Alignment Alternatives analysis as well as the detailing the Improvement Projects within four identified Focus Areas.

Findings from the analyses will be presented to the LAC, stakeholders, and the community in the upcoming public meetings for their input. Feedback received will play a role in determining the plan's final recommendations.

Overall Methodology

The following section details the steps taken and factors that informed the two elements of this study – development of possible alignments for the proposed Option A relief route from the 2019 Luling Transportation Study and identification of improvement projects along specific streets and intersections within the City.

EXISTING CONDITIONS REVIEW

In the previous phase of this study, data from a variety of sources were collected and analyzed to provide an understanding of past and ongoing planning efforts as well as existing conditions pertaining to community context, traffic and safety, and the environment. Detailed information about the data analysis and findings are documented in the Data Collection and Assessment Memorandum. The following provides a summary of the data analyzed from that memorandum.

2019 Luling Transportation Study and Ongoing Caldwell County Bond Projects

Most of the near-term recommendations from the 2019 Luling Transportation Study are being implemented through the current 2024 Caldwell County Bond Program. These projects include roadway and sidewalk improvements on S. Hackberry Avenue between SH 80 / Austin St and W. Davis St, and roadway and intersection improvements along SH 80 / Austin St and US 183 / Magnolia Avenue and at US 183 / Magnolia Avenue and US 90 / Pierce St. These two programs identify what future recommendations could be made to improve the mobility, connectivity, and safety of Luling's transportation network.

Safety

Crash data from 2018 to 2025 were extracted from TxDOT's Crash Records Information System and spatially mapped to reveal roadways and intersections within the City that have experienced higher crash rates. The crashes were then further analyzed to understand the manner of collision, lighting conditions, and number and severity of injuries, etc.

Community Context and Environmental Conditions

To understand the profile of residents in Luling and the physical constraints that the relief route alignments and improvement projects will need to account for, demographic, socioeconomic, and environmental data from U.S. Census Bureau and other federal and state sources were obtained and analyzed.

TRAFFIC DATA COLLECTION

Traffic counts were collected 24-hour counts at selected key intersections / locations within the City on Friday, April 17, 2026. As recommended by the City, and consistent with 2019 Luling Transportation Study, Friday was selected as the representative analysis day. Historical traffic data and findings indicated that Friday experienced the highest traffic volumes within the study area. As the study focused on congestion mitigation, the evaluation of the proposed relief route was conducted using Friday traffic conditions to assess its operational impacts and benefits under peak demand conditions.

The collected Average Daily Traffic (ADT) were compared against Average Annual Daily Traffic (AADT) figures from TxDOT to provide a better picture of the increase in traffic volume over time. To estimate future travel patterns, the analysis utilized Capital Area Metropolitan Planning Organization's (CAMPO)

Regional Travel Demand Model (TDM) as a base for simulations. Traffic counts and simulation findings shed light on roadways with higher usage that will require more attention.

The TxDOT Statewide Planning Map, TxDOT Traffic Count Database System (TCDS) and Google Earth aerial imagery were utilized to assess the existing characteristics of the roadways within the study area. The specific details of these roadways are as follows:

US 90 / Pierce St is a four-lane undivided roadway classified as Principal Arterial – Other east of SH 80 / Austin St and Major Collector west of SH 80 / Austin St, with a posted speed limits ranging from 35 miles per hour (mph) to 65 mph. According to TCDS, the 2024 AADT ranges from 2,280 vehicles per day (vpd) west of Hackberry Ave, to 6,628 vpd west of US 183 / Magnolia Ave, and 11,918 vpd east of US 183 / Magnolia Ave. The collected ADT was 3,239 vpd west of Hackberry Ave, 6,560 vpd west of US 183 / Magnolia Ave, and 16,055 vpd east of US 183 / Magnolia Ave with a daily truck percentage ranging from 9% to 18%. The daily truck percentage from the 2025 TDM was observed to range from 8% to 20%.

SH 80 / Austin St is a two-lane undivided roadway classified as Minor Arterial with a posted speed limit ranging from 35 mph to 65 mph. According to TCDS, the 2024 AADT is approximately 8,408 west of Hackberry Ave and 8,356 vpd west of US 183 / Magnolia Ave. The collected ADT was 9,985 vpd west of Hackberry Ave and 8,972 vpd west of US 183 / Magnolia Ave, with a daily truck percentage ranging from 10% to 11%. The daily truck percentage from the 2025 TDM was observed to range from 7% to 25%.

US 183 / Magnolia Ave is a four-lane undivided roadway classified as Principal Arterial – Other north of US 90 / Pierce St and Major Collector south of US 90 / Pierce St, with a posted speed limit ranging from 35 mph to 65 mph. According to TCDS, the 2024 AADT ranges from 10,518 south of US 90 / Pierce St to 17,315 vpd north of US 90 / Pierce St. The collected ADT was 11,053 vpd south of US 90 / Pierce St and 17,359 vpd north of SH 80 / Austin St with a daily truck percentage ranging from 7% to 9%. The daily truck percentage from the 2025 TDM was observed to range from 10% to 11%.

Hackberry Ave is a two-lane undivided roadway classified as Major Collector with a posted speed limit of 30 mph. The collected ADT north of SH 80 / Austin St was observed to be 1,862 vpd with a daily truck percentage of 2%. The daily truck percentage from the 2025 TDM was observed to be 16%.

STAKEHOLDER AND COMMUNITY ENGAGEMENT

Input from the community and key stakeholders about the challenges faced in the City is an important factor for consideration in this analysis. To obtain feedback that is representative of the community's desires and needs, three stakeholder meetings, three Luling Advisory Committee (LAC) meetings, and two community open houses were held between February and June 2026.

Stakeholder Committee and Luling Advisory Committee Meetings

The LAC meetings included staff members of the various City departments, the City Manager, the Mayor of Luling, as well as the Caldwell County Precinct 2 Commissioner.

Stakeholder meetings were held separately from the LAC meetings and comprised residents appointed by the Commissioner and City staff, as well as the representatives from the Luling Independent School District (ISD).

Across these meetings, the various representatives shared challenges they have encountered or heard from the community that might not have surfaced from other data sources, suggested areas for improvements, and validated findings from the Data Collection Memo.

Community Open Houses

Two community open houses were held in March 2026 to gain a better understanding of safety and mobility challenges faced by the community in Luling and to also solicit ideas and suggestions to address these challenges. Activities at the open houses further allowed attendees to map locations of issues and possible improvement opportunities, which supported the identification of focus areas discussed in the next section.

Analysis: Relief Route Option

Synthesizing findings from the review of existing conditions and input from stakeholders and community members, this study identified three alternative alignments for the Option A relief route and ten improvement projects across four focus areas with the most pertinent issues and challenges.

This section first describes the identified relief route alignments and evaluates them against a range of technical performance metrics. Thereafter, the various improvement projects within each focus area are discussed and evaluated against the study's goals and objectives as well as other feasibility metrics.

RELIEF ROUTE ALIGNMENTS

Relief Route Context

The 2019 Luling Transportation Study evaluated three potential relief routes to divert traffic, particularly truck traffic, away from congested areas of Central Luling. The recommended Option A relief route ("Relief Route") from the 2019 Transportation Study, shown in purple in **Figure 1**, provides a new connection between SH 80 / San Marcos Hwy and US 90 west of Central Luling. The 2024 Caldwell County Transportation Plan includes this Relief Route as a new Principal-Regional Connector, as shown in **Figure 2**.

This current plan update builds on the Relief Route by identifying three feasible alignment alternatives in its general location. Specifically, the alignment alternatives are to travel west of Central Luling, connect SH 80 / San Marcos Hwy and US 90, and provide a grade-separated railroad crossing.

Alignment Configuration

Since the Relief Route was identified as a Principal-Regional Connector in the 2024 Caldwell County Transportation Plan (**Table 1**), the proposed roadway configuration for this type of facility shall meet the following standards (also illustrated in **Figure 3**):

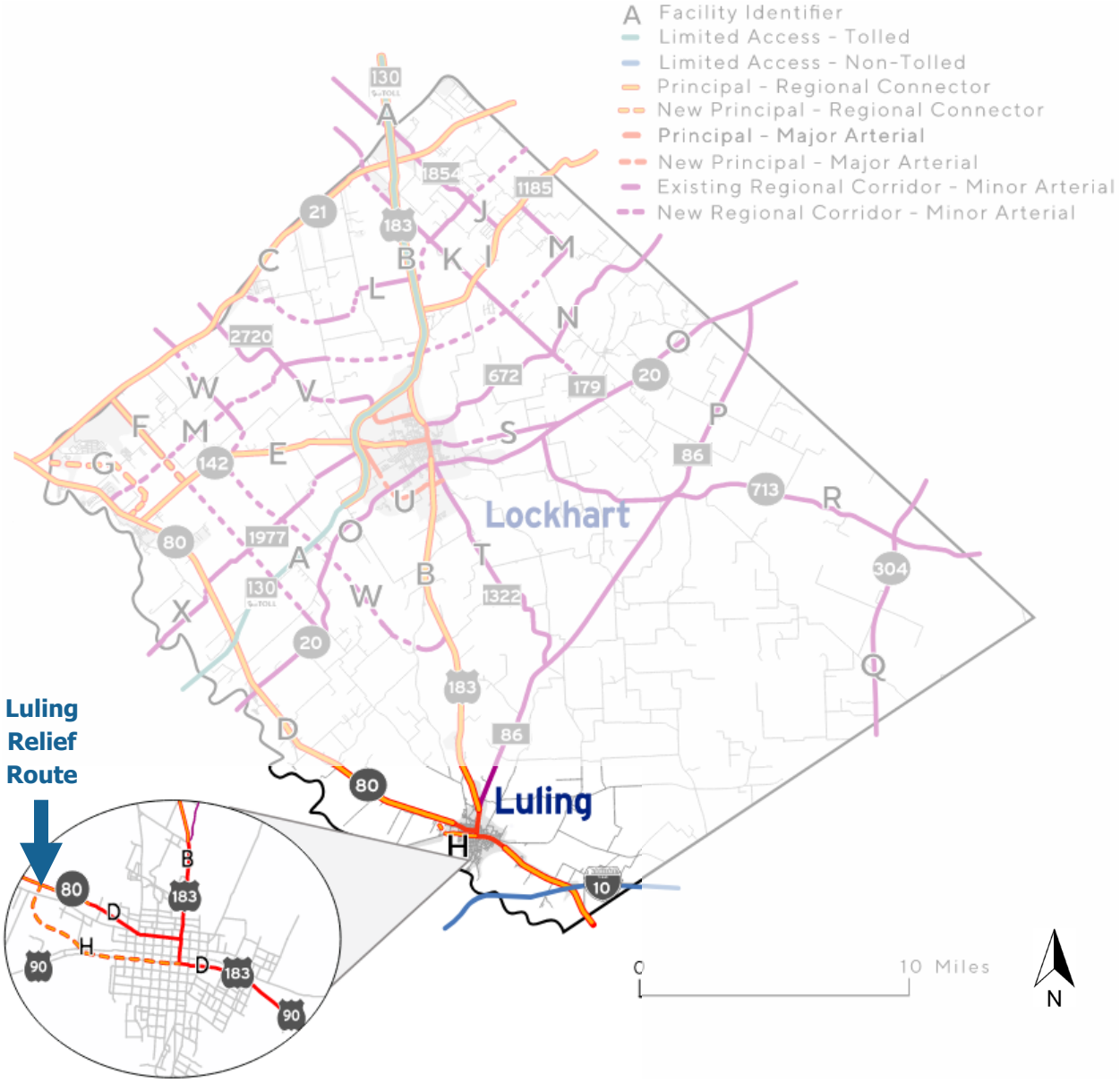
- 90- to 150-foot-wide right-of-way (ROW) width
- A 4- to 12-foot-wide median with physical separation
- 10- to 14-foot-wide shoulders on both sides of each direction of travel
- Two 10- to 12-foot-wide general purpose lanes in each direction of travel
- Environmental space between the edge of pavement and ROW line

Figure 1: Long-term Recommendations from the 2019 Luling Transportation Study



Source: 2019 Luling Transportation Study

Figure 2: Recommended Arterial Network



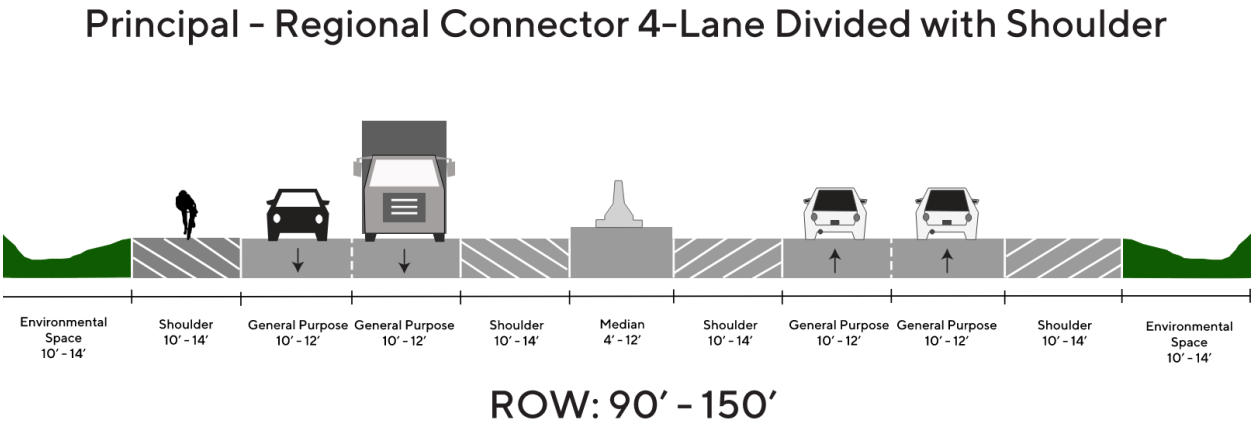
Source: 2024 Caldwell County Transportation Plan

Table 1: Recommended Project from the 2024 Caldwell County Transportation Plan

Facility (Facility Identifier)	From	To	Current – 2018			Future - 2045		
			Design Type	Functional Classification	Number of Lanes	Design Type	Functional Classification	Number of Lanes
Luling Relief Route (H)	SH 80	US 90	New Facility	New Facility	New Facility	Undivided	Principal – Regional Connector	4
	New Facility	US 183	Undivided	Major Collector	2	Undivided	Principal-Regional Connector	4

Source: 2024 Caldwell County Transportation Plan

Figure 3: Image of Proposed Typical Section



Source: 2024 Caldwell County Transportation Plan

Developing Alignment Alternatives

To develop an initial universe of possible alignment alternatives, the study analyzed a variety of data, including environmental constraints, existing ROW and property impacts, connectivity with the existing roadway network, and feasibility of a grade-separated railroad crossing. This section describes and explains factors that were considered during the development process.

Stakeholder Input

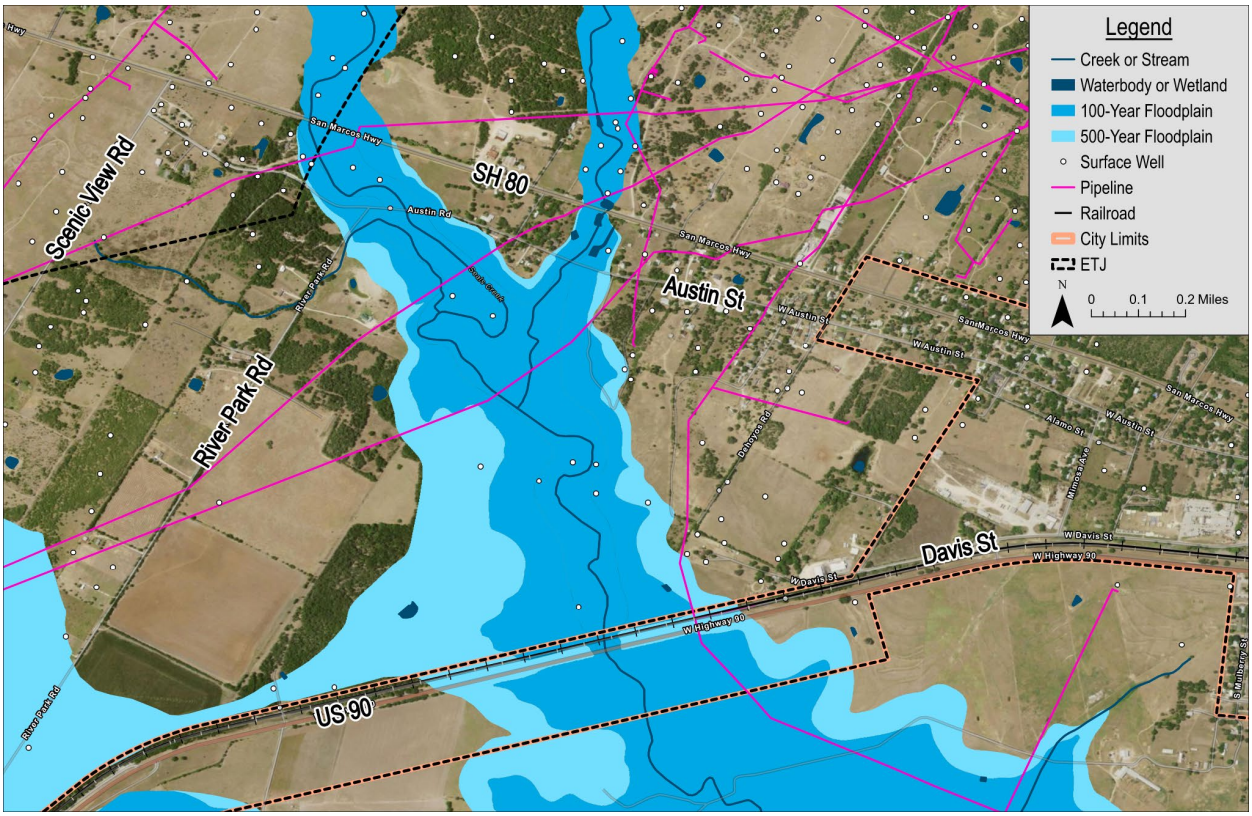
At the first stakeholder meeting in February 2026, stakeholders expressed the need for a relief route west of Central Luling, highlighting the use of the existing ROW along River Park Road (County Road 105) or Scenic View Road (County Road 121) as an alignment alternative.

Environmental Constraints

Avoiding the 100- and 500-year floodplains, ponds, wetlands, and river or stream crossings was a key consideration. In locations where floodplain crossings were unavoidable, measures were taken to cross the floodplain perpendicularly to minimize impacts and construction costs. Impacts to known cemeteries, historical sites, community facilities, cultural resources, and petroleum storage tanks were avoided. As

much as possible, surface wells and oil/gas/hazardous liquid pipelines were avoided as well; however, some alignments would impact several of these wells and pipelines. Luling is outside of the Edwards Aquifer recharge zone but is located within the recharge zone for the Carrizo-Wilcox Aquifer. Aerial imagery and publicly available geospatial data were used to assess environmental constraints. No field reconnaissance was performed for this assessment. Environmental constraints are shown in **Figure 4**.

Figure 4: Environmental Constraints



ROW and Property Impacts

A major focus in developing alignment alternatives was to minimize impacts to properties within the study area. Alignments were routed to run parallel to parcel boundaries and avoid existing dwellings. ROW for existing roadways was used, where possible. Parcel data obtained from Texas Geographic Information Office (TxGIO) (Q4 2025) was used to approximate parcel boundaries. Parcel boundaries are shown in **Figure 5**.

Figure 5: Parcel Boundaries



Connectivity with the Existing Roadway Network

Minimizing incompatibility with the existing roadway network and property access was another consideration. Alignments were routed along existing roadways or away from existing intersections and driveways where possible to reduce potential access management and intersection-spacing issues. Special consideration was given to the location of the proposed US 90 interchange because this interchange would be grade separated and therefore has a large potential impact on connectivity and access.

Feasibility of a Grade-Separated Railroad Crossing

The existing Union Pacific (UP) railroad runs parallel to US 90 at an offset of approximately 100 feet. TxDOT commonly cites 23.5 feet as the minimum bridge clearance allowed over a railroad, and 100 feet is not enough distance to bring the bridge down to ground level. Given these constraints, four grade-separated options for connections to US 90 are shown in **Figure 6** and described below. For each alignment alternative, a broad feasibility assessment of all railroad crossing options was conducted. After the preferred alignment alternative for the Relief Route has been selected, further detailed studies will be necessary to determine the most suitable railroad crossing option.

Option 1: The proposed roadway passes over the UP railroad and US 90 and then loops back on the south side of US 90 while descending to an at-grade intersection.

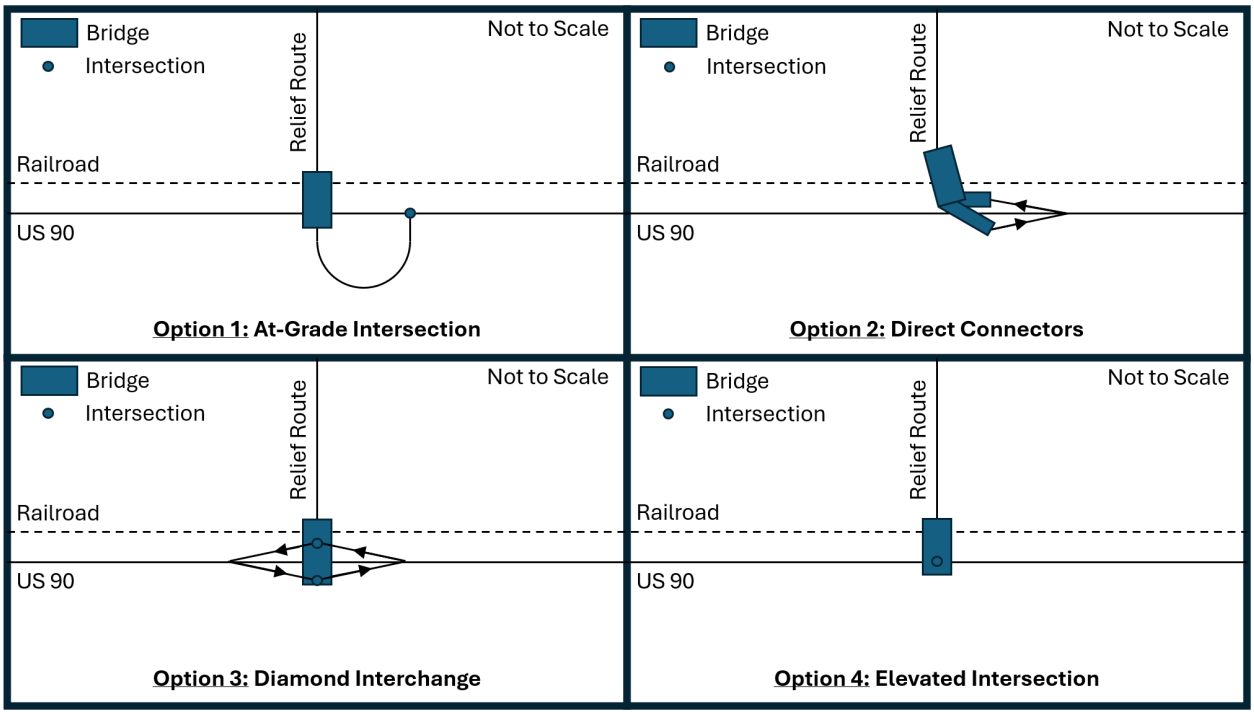
Option 2: The proposed roadway passes over the UP railroad and transitions to direct connectors that serve the westbound US 90 to westbound SH 80 / San Marcos Hwy and

eastbound SH 80 / San Marcos Hwy to eastbound US 90 movements. Only two direct connectors are provided, one from westbound US 90 and one to eastbound US 90, and no intersection is provided for other movements. As a result, movements from eastbound US 90 and movements to westbound US 90 are not served.

Option 3: The proposed roadway passes over the UP railroad and over US 90 where it connects to a diamond interchange with US 90. Turning movements would take place at elevated intersections that are accessed by ramps that travel parallel to the US 90 through lanes below.

Option 4: The proposed roadway connects to US 90 at an elevated intersection. All lanes on US 90 would be raised to connect with the proposed roadway at the elevated intersection.

Figure 6: Illustrated Options for Relief Route Connections to US 90



Identifying Three Preliminary Alignment Alternatives

From a set of seven alignment alternatives that were developed and evaluated, four advanced to the LAC and stakeholders as preferable options as they had relatively smaller impact on properties (**Figure 7 and Table 2).** The coloration in the table indicates the performance of each alignment for each category, with green being best and red being worst. The total score in the rightmost column is the sum of the scores for each row, assuming a score of "1" for green cells, a score of "0" for yellow cells, and a score of "-1" for red cells. The highest possible total score is 5 and the lowest possible total score is -5. The cutoffs between red, yellow, and green performance were selected by the project team based on the relative differences between the alternatives. A parcel was counted as a displacement if a habitable structure within the parcel boundaries intersects the alternative's proposed ROW.

On April 14th, 2026, evaluation results for the four preferred options, alignment alternatives A, E, F, and G, were presented to the LAC and stakeholders. The majority of the LAC and stakeholders agreed to conduct a deeper analysis with additional criteria and performance measures for alternatives E, F, and G. Alternative A was eliminated due to the number of potential displacements, its proximity to downtown Luling, and potential impacts on residential and industrial land uses.

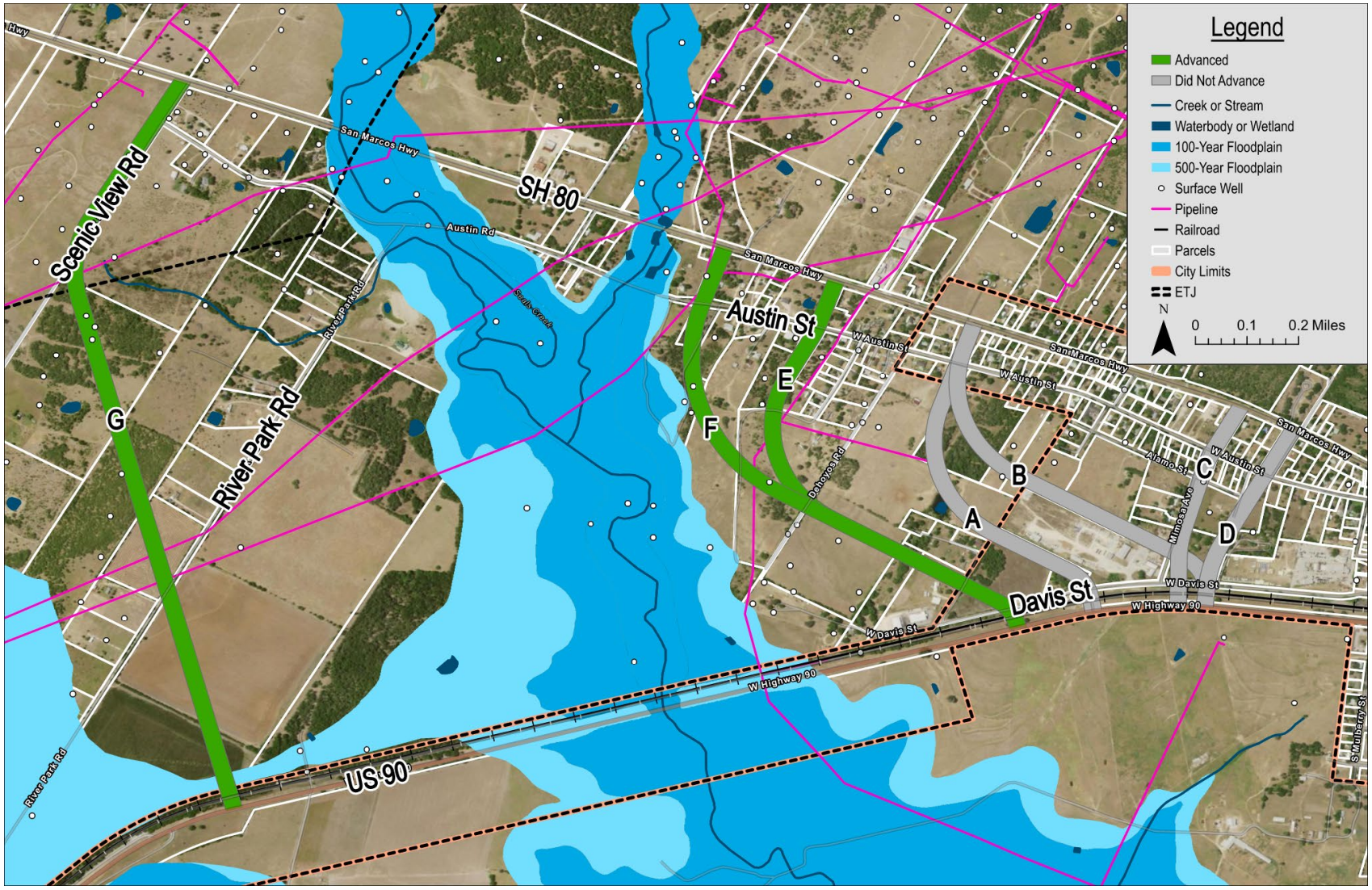
Following this analysis, these three preliminary alignments will be presented to the community for feedback at the two upcoming public meetings on July 14, 2026. Feedback from these meetings will then inform the selection of one of the three preliminary alignments as the final recommendation.

Table 2: Preliminary Alignment Evaluation

Alignment Alternative	Length (miles)	Environmental Constraints	Right of Way and Property Impacts	Connectivity with the Existing Roadway Network	Railroad Crossing	Total Score
A	0.7 (Score = 0)	Adjacent to body of water/wetland Intersects 1 pipeline (Score = 1)	2 potential displacements (Score = 0)	Compatible with existing roadway network (Score = 1)	Each of the options for connections to US 90 can be accommodated (Score = 0)	**2**
B	0.8 (Score = 0)	None (Score = 1)	3 potential displacements (Score = -1)	Close proximity to Central Luling may disrupt access to properties along US 90 (Score = 0)	Each of the options for connections to US 90 can be accommodated (Score = 0)	**0**
C	0.4 (Score = 1)	Intersects 1 surface well (Score = 1)	3 potential displacements (Score = -1)	Close proximity to Central Luling may disrupt access to properties along US 90 and create a barrier for local traffic and pedestrians (Score = -1)	Each of the options for connections to US 90 can be accommodated (Score = 0)	**0**
D	0.4 (Score = 1)	None (Score = 1)	4 potential displacements (Score = -1)	Close proximity to Central Luling may disrupt access to properties along US 90 and create a barrier for local traffic and pedestrians (Score = -1)	Each of the options for connections to US 90 can be accommodated (Score = 0)	**0**
E	0.9 (Score = 0)	Adjacent to body of water/wetland Intersects 1 pipeline (Score = 1)	1 potential displacement (Score = 0)	Compatible with existing roadway network (Score = 1)	Each of the options for connections to US 90 can be accommodated (Score = 0)	**2**
F	1.0 (Score = 0)	Adjacent to floodplain Intersects 3 surface wells Intersects 3 pipelines (Score = 0)	0 potential displacements* (Score = 1)	Compatible with existing roadway network (Score = 1)	Each of the options for connections to US 90 can be accommodated (Score = 0)	**2**
G	1.5 (Score = 0)	Passes over floodplain Intersects five surface wells Intersects 3 pipelines (Score = 0)	0 potential displacements (Score = 1)	Farthest west from Central Luling. Compatible with existing roadway network (Score = 1)	Each of the options for connections to US 90 can be accommodated (Score = 0)	**2**

**Entire parcel needed but no habitable structure is impacted.*

Figure 7: Preliminary Alignments



Technical Analysis of Alignment Alternatives E, F, and G

Following the collective decision made by the LAC and stakeholders, alignment Alternatives E, F, and G were further analyzed to evaluate the extent of congestion reduction and improved mobility. The evaluation process included several steps – analyzing CAMPO TDM 2025 Existing and 2050 No Build scenarios, developing future-year traffic forecasts, coding and testing alternative alignments (2050 Build scenarios), and reviewing community and agency feedback.

To provide a consistent basis for comparing all three alternatives and determining their relative effectiveness as a relief route, this study utilized a range of technical performance measures described in the following section. Performance measures include various outputs extracted from the CAMPO TDM, as well as key intersection performance metrics obtained from Synchro. Finally, planning-level cost estimates for each alternative were computed to provide an approximate indication of the financial outlays associated with each alternative. A summary of the results can be found in **Table 4.**

Traffic Forecast

To support the Synchro analysis, a growth rate was developed using both historic trends and TDM forecasts for the study area. Historic population, employment, and TxDOT TCDS traffic count data were reviewed to understand historic demographic patterns in Caldwell County. In addition, demographic data and vehicular volumes from the CAMPO TDM for 2025 Existing and 2050 No Build scenarios were analyzed to quantify expected future growth. Based on the combined assessment of historic trends and modeled future conditions, a 3% annual growth rate was selected to develop the 2050 traffic forecasts used in this evaluation.

For each alternative, traffic projections were developed from the 2050 traffic forecast by incorporating traffic diversion patterns identified through TDM model runs. The traffic projections are attached in **Appendix A**.

Performance Measures

Several performance measures were extracted from TDM model runs and Synchro analysis. Measure 1 and 2 represent volumes indicators providing insight into the extent of traffic diversions and utilization of relief route options. Measure 3,4, and 5 are path-level performance measures. Four paths were evaluated to infer the outcomes on differences in travel patterns. The four paths are listed below and shown in **Figure 7**

- Path 1: SH 80 / San Marcos Highway through Hackberry Ave to US 183 / E Pierce St
- Path 2: SH 80 / San Marcos Highway through US 183 / Magnolia Ave to US 183 / E Pierce St
- Path 3: SH 80 / San Marcos Highway through Alternatives E, F, and G to US 183 / E Pierce St
- Path 4: SH 80 / San Marcos Highway through Hackberry Ave to US 90 W

While the exiting routes (Path 1,2, and 4) share the same origin point, Path 3 represents the proposed relief route with a different origin point serving the same demand. A different origin point was required for each of the three alternative relief route (Path 3) to extract the corresponding operational performance measures and travel benefits respectively. Measure 6 represents the PM peak hour operational performance from Synchro analysis and Measure 7, the corresponding planning-level cost estimates.

Performance measures were developed for each Build Alternative (E, F, and G) and evaluated relative to the No Build scenario, where no relief route exists. In certain cases, measures were compared across the Build Alternatives in addition to comparisons with the No Build scenario.

Measure 1: Estimated Daily Traffic Entering Key Intersections
This measure captures the total number of vehicles entering major intersections within the study area based on TDM. The analysis evaluates how each alternative redistributes traffic by comparing daily volumes at the following key intersections used for this analysis.

- US 183 / Magnolia Ave at SH 80 / Austin St
- US 183 / Magnolia Ave at US 90 / Pierce St
- Hackberry Ave at SH 80 / Austin St
- Hackberry Ave at US 90 / Pierce St

These intersections serve as primary access points into central Luling, so changes in traffic volumes provide a clear indication of how effectively each alignment reduces traffic volumes on the downtown network.

Measure 2: Relief Route Volume
Relief route volume from TDM represents the number of vehicles expected to use the proposed relief route under each alternative. This measure assesses the extent to which each alignment alternative affects the through traffic and regional travelers' choices. Higher volumes indicate increased attractiveness of relief route and changes in travel patterns with route choices within the study area.

Measure 3: Average Cross-Town Travel Time, PM Peak
This performance measure from the TDM reflects the time required to travel between the western and eastern City limits during the PM peak period, when traffic demand is highest. This measure provides insight into the overall delay / travel time savings for both local and regional trips under each alternative. Reductions in cross-town travel time under each alternative suggest the effectiveness of the relief route in providing an attractive route alternative.

Measure 4: Vehicle Miles Traveled (VMT), Daily
Daily VMT from the TDM quantifies the total number of miles driven by all vehicles within the alternative model network along the study path. It is a path-level indicator of travel efficiency and can highlight whether an alternative shortens or lengthens typical trip distances. Higher VMT may indicate longer travel paths or increased regional activity. Daily VMTs for the four paths shown in **Figure 8** were compared.

Measure 5: Vehicle Hours Traveled (VHT), Daily
Daily VHT from the TDM measures the total time spent by all vehicles traveling within the network along the study path. It is a direct indicator of congestion and delay. Lower VHT values suggest smoother traffic flow and improved travel speeds, while higher values indicate increased congestion or bottlenecks. Similar to VMT, four paths were analyzed and compared.

Measure 6: Intersection Performance, Friday PM
Intersection performance measure evaluates how the key intersections operate during the Friday PM peak hour. For Synchro analysis, collected counts were processed and diversions were applied as per the TDM alternative runs to obtain the corresponding PM Peak hours. Intersection performance measured through control delay and Level of Service (LOS) helps to identify whether the relief route alternatives

effectively reduce congestion in downtown area during peak hour conditions. The LOS is a measure of effectiveness used to evaluate traffic operations based on control delay and then given a letter score based on criteria for an intersection. These scores range from LOS A, which represents the least congested operational conditions, to LOS F, considered the most congested operational conditions. The specific thresholds and definitions of each LOS category for signalized and unsignalized intersections, are listed in **Table 3**.

Table 3: Intersection LOS Descriptions

Control Delay (sec/veh)			
LOS	**Signalized Intersections**	**Unsignalized Intersections**	**Description**
A	≤ 10	≤ 10	Very low vehicle delays, short cycle length/exceptionally favorable signal progression.
B	>10 & ≤20	>10 & ≤15	Low vehicle delays, short cycle length/highly favorable signal progression, more vehicular stops than LOS A.
C	>20 & ≤35	>15 & ≤25	Favorable signal progression/moderate cycle length, potential cycle failures, significant number of vehicular stops.
D	>35 & ≤55	>25 & ≤35	Ineffective signal progression/long cycle length, many vehicular stops, noticeable cycle failures.
E	>55 & ≤80	>35 & ≤50	Ineffective signal progression, long cycle length, frequent cycle failures.
F	> 80	> 50	Poor signal progression, long cycle length, cycle failures during most cycles.

Source: HCM 7th Edition, Transportation Research Board – Exhibit 19-8, 20-2, 21-8

Measure 7: Planning-level Cost Estimate

To estimate a rough order-of-magnitude construction and right-of-way cost, TxDOT statewide bid item averages from December 2025 to June 2026 for major cost items such as excavation, embankment, pavement, bridge, illumination, and traffic signals were used. Percentages of total cost were used to estimate the cost of traffic control, a stormwater pollution prevention plan (SW3P), drainage, and mobilization. Estimates include right-of-way costs and a 30% contingency due to the conceptual nature of the alignments.

Figure 8: Analysis Paths and Key Intersections

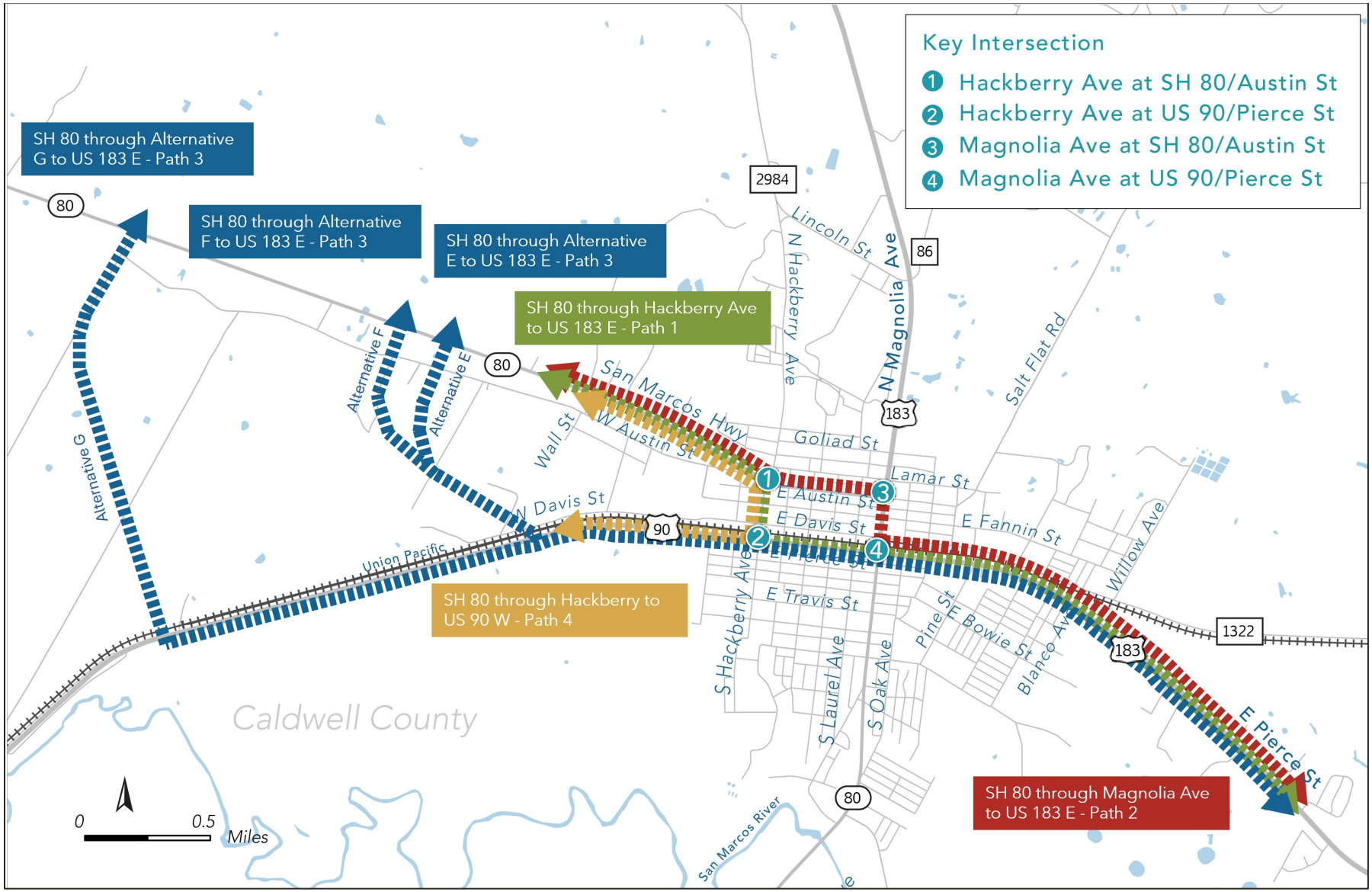


Table 4: Results of Technical Analysis by Performance Measure

Green The alternative leads to better outcomes than the 2050 No-Build Scenario.
Orange The alternative leads to similar or equal outcomes to the No-Build Scenario.
Red The alternative leads to worse outcomes than the 2050 No-Build Scenario.

Measure	Performance Measure	Unit(s)	Location – Path / Key Intersection	2025 Existing	2050 No Build	2050 Alternative E	2050 Alternative F	2050 Alternative G
1	Estimated Daily Traffic Entering Key Intersections	Total (vpd)	US 183 / Magnolia Avenue at SH 80 / Austin St	16,901	29,059	28,292 (-2.6%)^	28,422 (-2.2%)^	28,098 (-3.3%)^
		Truck (vpd)		1,641	4,746	4,748 (0.0%)^	4,746 (0.0%)^	4,747 (0.0%)^
		Total (vpd)	US 183 / Magnolia Avenue at US 90 / Pierce St	21,789	30,079	29,785 (-1.0%)^	29,983 (-0.3%)^	29,809 (-0.9%)^
		Truck (vpd)		2,949	3,991	4,008 (0.4%)^	4,023 (0.8%)^	4,050 (1.5%)^
		Total (vpd)	Hackberry Avenue at SH 80 / Austin St	7,432	14,270	12,513 (-12.3%)^	12,269 (-14.0%)^	11,663 (-18.3%)^
		Truck (vpd)		1,598	2,447	2,309 (-5.6%)^	2,306 (-5.8%)^	2,286 (-6.6%)^
		Total (vpd)	Hackberry Avenue at US 90 / Pierce St	10,181	10,252	8,784 (-14.3%)^	8,970 (-12.5%)^	8,119 (-20.8%)^
		Truck (vpd)		1,637	705	565 (-19.9%)^	565 (-19.9%)^	564 (-20.0%)^
2	Relief Route Volume	Total (vpd)	-	-	-	1,862	2,229	2,652
		Truck (vpd)	-	-	-	145	147	143

Measure	Performance Measure	Unit(s)	Location – Path / Key Intersection	2025 Existing	2050 No Build	2050 Alternative E	2050 Alternative F	2050 Alternative G
3	Average cross-town travel time, PM	mm: ss	SH 80 / San Marcos Hwy through Hackberry Ave to US 183 / E Pierce St - Path 1	04:01	04:32	04:24 (-2.9%)^	04:22 (-3.6%)^	04:23 (-3.2%)^
			SH 80 / San Marcos Hwy through US 183 / Magnolia Ave to US 183 / E Pierce St - Path 2	04:03	04:32	04:24 (-2.8%)^	04:22 (-3.5%)^	04:23 (-3.2%)^
			SH 80 / San Marcos Hwy through Relief Route to US 183 / E Pierce St - Path 3	-	-	05:08	05:17	07:11
			SH 80 / San Marcos Hwy through Hackberry to US 90 W - Path 4	02:19	02:32	02:19 (-8.3%)^	02:18 (-9.0%)^	02:16 (-10.5%)^
4	Vehicle Miles Travelled (VMT), Daily	Vehicle-Miles	SH 80 / San Marcos Hwy through Hackberry Ave to US 183 / E Pierce St - Path 1	11,910	36,987	35,960 (-2.8%)^	35,871 (-3.0%)^	35,933 (-2.8%)^
			SH 80 / San Marcos Hwy through US 183 / Magnolia Ave to US 183 / E Pierce St - Path 2	11,287	41,616	40,524 (-2.6%)^	40,319 (-3.1%)^	40,434 (-2.8%)^
			SH 80 / San Marcos Hwy through Relief Route to US 183 / E Pierce St - Path 3	-	-	36,230	37,141	42,157
			SH 80 / San Marcos Hwy through Hackberry to US 90 W - Path 4	4,617	13,431	11,255 (-16.2%)^	11,232 (-16.4%)^	10,580 (-21.2%)^
5	Vehicle Hours Travelled (VHT), Daily	Vehicle-Hours	SH 80 / San Marcos Hwy through Hackberry Ave to US 183 / E Pierce St - Path 1	266	862	827 (-4.0%)^	823 (-4.5%)^	826 (-4.2%)^
			SH 80 / San Marcos Hwy through US 183 / Magnolia Ave to US 183 / E Pierce St - Path 2	251	990	953 (-3.8%)^	945 (-4.5%)^	949 (-4.2%)^
			SH 80 / San Marcos Hwy through Relief Route to US 183 / E Pierce St - Path 3	-	-	815	834	921
			SH 80 / San Marcos Hwy through Hackberry to US 90 W - Path 4	115	328	263 (-19.9%)^	260 (-20.7%)^	246 (-25.1%)^

Measure	Performance Measure	Unit(s)	Location – Path / Key Intersection	2025 Existing	2050 No Build	2050 Alternative E	2050 Alternative F	2050 Alternative G
6	Intersection Performance, Friday PM	Control Delay (Seconds / vehicle)	US 183 / Magnolia Ave & US 90 / Pierce St - Signalized	55.5	43.5	45.8 (5.3%)^	48.9 (12.4%)^	46.6 (7.1%)^
		Level of Service		E	D	D	D	D
		Control Delay (Seconds / vehicle)	US 183 / Magnolia Ave & SH 80 / Austin St - Signalized	17.1	92.2	61.8 (-32.9%)^	61.8 (-32.9%)^	61.8 (-32.9%)^
		Level of Service		B	F	E	E	E
		Control Delay (Seconds / vehicle)	Hackberry Ave & US 90 / Pierce St * - Unsignalized	20.5	1,020.3#	433.8# (-57.5%)^	611.0# (-40.1%)^	373.0# (-63.4%)^
		Level of Service		C	F	F	F	F
		Control Delay (Seconds / vehicle)	Hackberry Ave & SH 80 / Austin St * - Unsignalized	49.2	>3,000+	>3,000+	>3,000+	2,288.3
		Level of Service		E	F	F	F	F
7	Planning-level Cost Estimate (Probable Construction and ROW Costs)	USD *(in 2026 dollars)*	-	-	-	$25.0M	$27.3M	$39.5M

** Worst approach Values at Unsignalized Intersections*
+ Value is excessive or exceeds Synchro limits
Delay greater than 300 seconds
^ Percentage differences shown for 2050 Build alternative scenarios are relative to 2050 No Build Conditions

Analysis Findings for Relief Route Option A

The data in **Table 4** shows how Alternatives E, F, and G ("Build alternatives") compare to each other as well as to a scenario in which no relief route is built in 2050 ("No Build"). The Synchro reports are attached to **Appendix B**. In addition, certain inferences discussed in the following section are derived from comparisons between the Build Alternatives themselves. Several key findings emerged from the data and are summarized below:

Measure 1: Estimated daily traffic entering key intersections

The estimated daily entering traffic extracted across key intersections indicates that the variations between E, F and G are minimal at intersections along Magnolia Avenue. However, slightly greater traffic reductions and congestion relief are observed at intersections along Hackberry Avenue. For instance, at the Magnolia Ave and US 90 / Pierce St intersection, the 2050 No Build volume of 30,079 vehicles is only slightly mitigated by the three Build alternatives, representing a minor reduction of less than 1%. In contrast, the Hackberry Avenue and US 90/Pierce Street intersection experiences greater reduction in total traffic volumes, with congestion relief ranging from approximately 13 to 21 percent across the Build Alternatives compared to the No Build condition. Among the alternatives, Alternative F provides the least traffic congestion relief, while Alternative G yields the greatest reduction in intersection total traffic volumes.

Truck traffic volumes exhibit a similar trend, with little to no relief observed at intersections along Magnolia Avenue. However, greater reductions occur at intersections along Hackberry Avenue, where truck traffic decreases by approximately 20 percent at the Hackberry Avenue and Pierce Street / SH 90 intersection and by about 6 to 7 percent at the Hackberry Avenue and Austin Street / SH 80 intersection compared to the No Build condition.

Measure 2: Relief Route Volume

Daily traffic volumes on the relief route remain low across all the alternatives, ranging from approximately 1,862 vpd under Alternative E to 2,652 vpd under Alternative G. Among the alternatives, Alternative G attracts highest traffic volumes, while Alternatives E and F attract fewer users.

To better understand the users' travel patterns, origin- destination analysis outputs were extracted for each alternative. The results indicate that all three alternatives have limited appeal for cross-town travelers and primarily serve trips between SH 80 / San Marcos Hwy and US 90 W. Because the existing street network continues to provide a practical and competitive route for many origin-destination pairs, only a small proportion of regional traffic is diverted to the proposed relief route. Consequently, the relief route functions primarily as a localized connection rather than a major regional bypass.

A similar pattern is observed for truck traffic. Daily truck volumes on the relief route are relatively low, ranging from approximately 143 to 147 trucks per day across the three alternatives. Given that truck relief is a primary objective of the study, these findings suggest that relatively few cross-town trucks are expected to use the relief route.

Measure 3: Average cross-town travel time, PM Peak

The PM peak cross-town travel time results indicate that the build alternatives do not create a significant operational difference compared to the 2050 No Build scenario. Along the primary local corridors, travel times for traffic traveling from SH 80 (San Marcos Highway) to US 183/E. Pierce Street via Hackberry Avenue (Path 1) and via Magnolia Avenue (Path 2) are both estimated at 4 minutes and 32 seconds

under No Build conditions. The Build alternatives reduce the travel time by 8 to 10 seconds, resulting in travel times that remain nearly identical across all three options.

Additionally, travel times through the relief route (Path 3) were compared with those along the existing cross-town paths (Paths 1 and 2). The analysis indicates that the relief route does not offer a travel time advantage. Relative to Paths 1 and 2, Path 3 increases travel time by approximately 44 seconds (17 percent) under Alternative E, 55 seconds (21 percent) under Alternative F and nearly 3 minutes (64 percent) under Alternative G. The higher travel time observed under Alternative G is largely a result of its longer route length rather than congestion-related delays.

Measure 4: Vehicle Miles Traveled (VMT), Daily

Consistent with the previous measure (Measure 3), the VMT results indicate that alternatives produce only minimal change compared to the No Build baseline. Along the cross-town paths (Paths 1 and 2), VMT decreases by approximately 3 percent under all alternatives. For instance, for the traffic travelling from SH 80 (San Marcos Highway) to US 183/E. Pierce Street via Hackberry Avenue (Path 1) and via Magnolia Avenue (Path 2), VMT decreases from 36,987 vehicle-miles under No Build condition to between 35,871 and 35,960 vehicle-miles under all alternatives. Similarly, for traffic via Magnolia Avenue (Path 2), VMT decreases from 41,616 vehicle-miles under No Build condition to between 40,319 and 40,524 vehicle-miles under all alternatives. The differences among the three alternatives along the two primary paths are minimal.

VMT on the relief route (Path 3) ranges from 36,230 vehicle-miles under Alternative E to 42,157 vehicle-miles under Alternative G, with Alternative G generating the highest VMT due to higher traffic volumes and longer travel distance compared to other alternatives. Compared to Paths 1 and 2, Alternative E and F (Path 3) result in similar or slightly lower VMT despite longer travel distances. This can be attributed to relatively low traffic volumes despite their longer route than Path 1 and 2.

For Path 4 (SH 80 through Hackberry Avenue to US 90 West), the VMT under all the alternatives are approximately 16 to 21 percent lower than the No Build condition. This reduction can be attributed to the availability of a more direct route that shortens travel distances for a portion of trips that would otherwise use Hackberry Avenue.

Measure 5: Vehicle Hours Traveled (VHT), Daily

Like other measures (Measure 3 and 4), VHT for Path 1 and Path 2, the alternatives show that users spend about the same amount of time on the roads, saving only approximately 35 to 45 vehicle hours (approximately 4 percent decrease) compared to the No Build scenario. Compared to Paths 1 and 2, Alternative E and F (Path 3) result in similar or slightly lower VHT despite longer travel distances. This can be attributed to relatively lower traffic volumes despite their longer routes than Path 1 and 2. On Path 3, Alternative G records the highest travel time at 921 vehicle-hours traveled. This can be attributed to longer travel distances compared to other two alternatives.

On Path 4, all alternatives have daily VHT values that are within a 17 vehicle hours range of each other. However, Path 4 when compared against no-build, saves approximately 20 to 25 percent vehicle hours. Ultimately, none of the Build alternatives deliver benefit to travel time savings on regional trips (cross-town travel).

Measure 6: Intersection Performance, Friday PM

Intersection performance measures extracted from Synchro for the key intersections in the study. TxDOT design guidelines specify that intersection improvements in Urban region should operate at LOS D or better for at least 20 years after completion. US 183 / Magnolia Ave and US 90 / Pierce St intersection operates at LOS E for existing scenario and LOS D for all future scenarios with traffic signal timing optimization. The operations of the intersection may be further improved with any improvements detailed briefly under Focus Areas & Improvement Projects section below.

US 183 / Magnolia Ave and SH 80 / Austin St intersection operates at LOS B for 2025 existing conditions and LOS F for 2050 No Build conditions. Analysis indicates that the proposed relief route provides minimal or no traffic diversion at this intersection during PM peak. Based on 2024 Caldwell County Bond Program, a center-turn lane improvement at SH 80/Austin Street was introduced and analyzed, but the intersection still performs at LOS E, at capacity in 2050. To operationally improve this intersection further, a westbound right-turn lane has been identified as an operational enhancement that will improve intersection performance and reduce delays. With this improvement, the intersection is expected to operate at LOS D for the three alternatives in 2050.

Hackberry Ave and US 90 / Pierce St intersection operates at LOS C for 2025 existing conditions and LOS F for 2050 No Build and Build alternatives scenarios. Hackberry Ave and SH 80 / Austin St operates at LOS E for 2025 existing conditions and LOS F for 2050 No Build and Build alternatives scenarios. The operations of the intersection may be further improved with any improvements detailed briefly under Focus Areas & Improvement Projects section below.

LONG-TERM RELIEF ROUTE OPTION ("NORTHEAST ALIGNMENT")

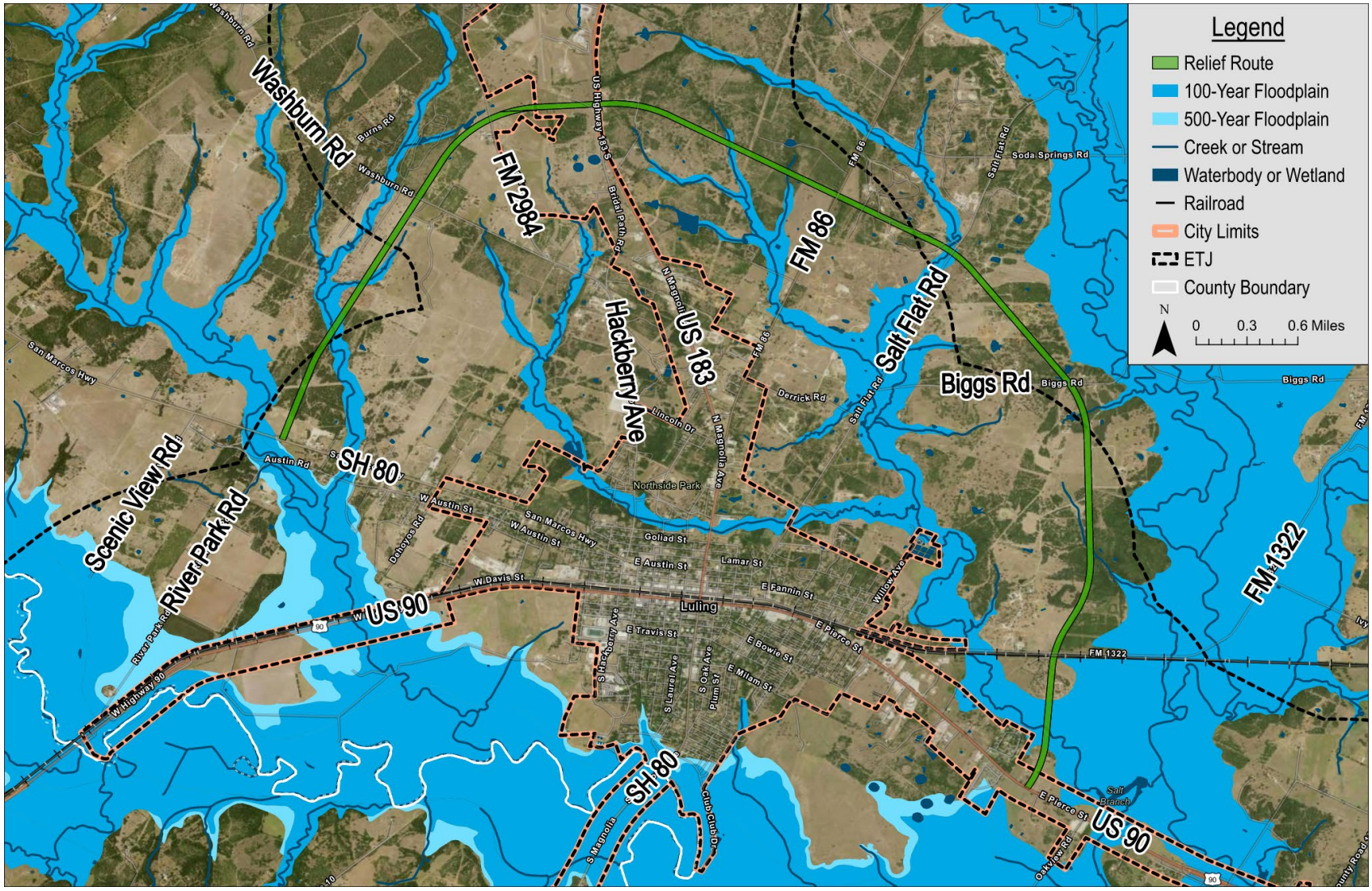
In the previous section, the results of the analysis for the Option A relief route identified in the 2019 Luling Transportation Study showed some improvement to the LOS at one of the City's key intersection, SH 80 / Austin St and US 183 / Magnolia Ave, as well as some reduction in traffic passing through this intersection as compared to the 2050 No Build Scenario (Measure 1 in **Table 4**). On the contrary, even though the estimated daily traffic passing through the other three key intersections downtown are estimated to be lower relative to the 2050 No Build Scenario, no improvements to the LOS at those intersections are expected relative to the No Build Scenario.

Given that the alignment alternatives would only result in better LOS at one of four key intersections in the City, overall congestion relief downtown is unlikely in the long term. Thus, this study further analyzed a northeastern relief route to evaluate its potential on diverting traffic away from downtown. This northeastern alignment was chosen as it corresponds to the Option C relief route that had previously been evaluated in the 2019 Luling Transportation Study (**Figure 1**) as a potential relief route alignment.

The goal of this secondary analysis was not to identify alignment alternatives as was carried out for Option A. Instead, this analysis provided an estimated level of traffic diversion that the alignment shown in green in **Figure 9** could generate. For this analysis, a best-fit alignment was determined through a basic assessment of environmental constraints, impacts to existing right-of-way and properties, and its connectivity with the existing road network. The detailed results of the traffic analysis and cost estimates can be found in **Appendix C**.

Results from this analysis revealed that the northeastern alignment could divert approximately 60% (9,640 vpd) of US 183 E traffic projected for 2050 away from downtown, with the majority of this traffic being redirected to US 183 N. While this suggests smoother traffic flow downtown, the northeast alignment would likely make cross-town journeys longer, incur higher probable construction and ROW costs, and affect existing properties and the environment to a greater extent. Detailed studies will need to be conducted to examine in depth its impacts and to assess its viability as a long-term relief route for the City.

Figure 9: Northeast Alignment



Analysis: Focus Areas & Improvement Projects

In addition to the relief route alignments, other potential measures were identified at four Focus Areas (**Figure 10**) across the City to improve safety and mobility for all roadway users as well as foster downtown economic development. Focus Areas are locations facing issues related to safety and mobility as revealed by data analyses and community and stakeholder feedback. The following sections first describe each Focus Area and the proposed improvement projects within each Focus Area.

FACTORS FOR CONSIDERATION

In the process of developing projects, the study conducted a qualitative assessment to determine each project's alignment with the study's goals:

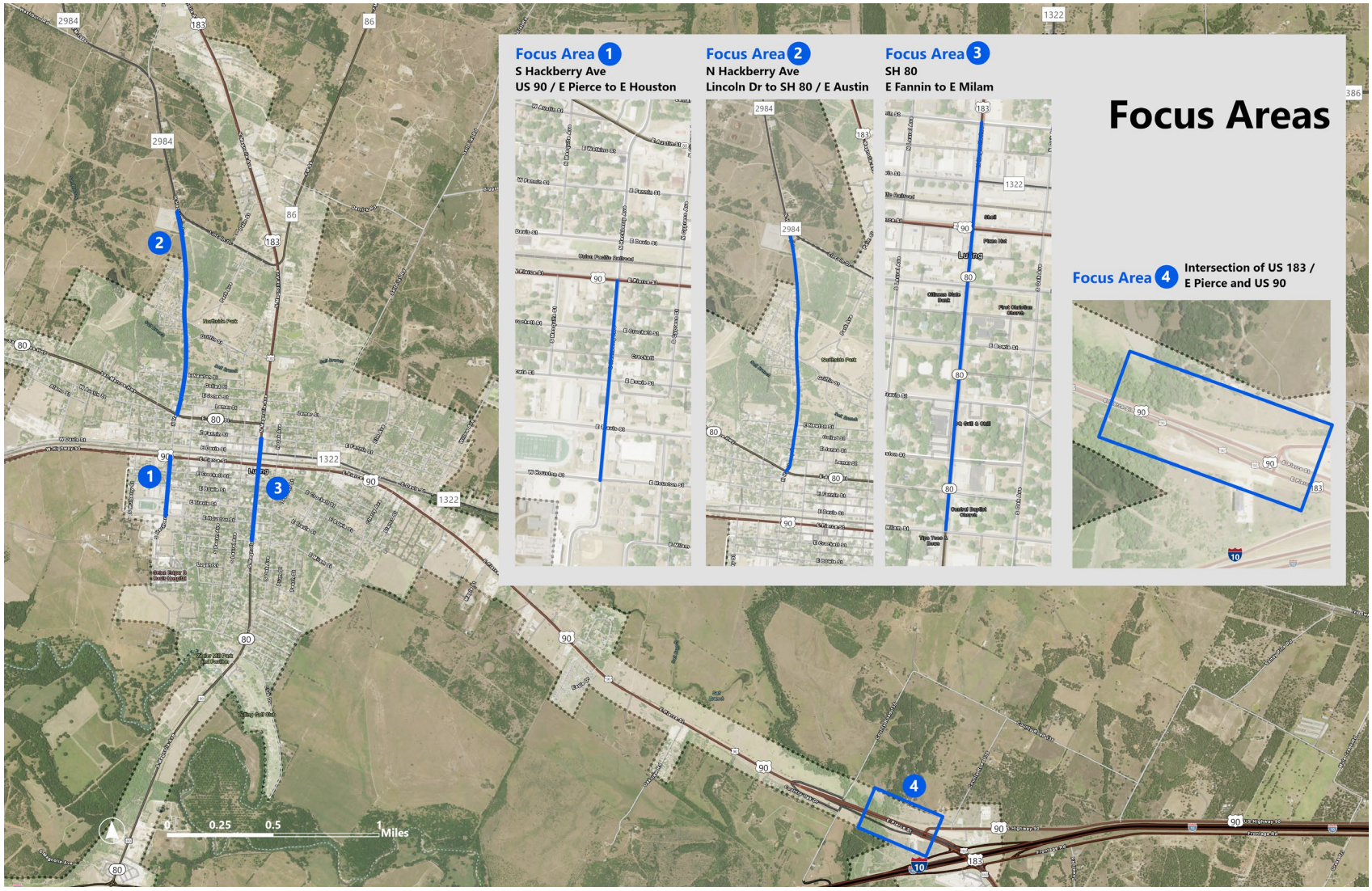
- **Goal 1:** Identify Safety Improvements
- **Goal 2**: Enhance Mobility for All Modes of Traffic
- **Goal 3**: Evaluate Feasibility of an Alternate Route for Through Traffic
- **Goal 4**: Promote Downtown and Economic Development Opportunities

Additionally, quantitative evaluations were conducted to estimate each measure's impact on traffic flow (using the intersection's 2050 LOS as a metric), safety, and cost.

- **Safety:** Potential safety benefits were qualitatively identified based on stakeholder input and concerns, using Crash Modification Factors (CMFs) that indicate the expected magnitude of safety benefits associated with potential improvements selected for each of the focus areas. A CMF less than 1.0 indicates a reduction in crashes, while a CMF greater than 1.0 indicates a potential increase in crashes. CMF can also be defined as a fraction of anticipated change in number of crashes after implementing a measure at a specific site to the number of crashes with no improvement. All selected measures are drawn from best practices and guides developed by the Federal Highway Administration (FHWA) and the National Association of City Transportation Officials and have proven to be successful in reducing crash frequency. CMFs for all project improvements are provided in detail in **Appendix E**.
- **Intersection LOS:** The LOS was analyzed at relevant intersections using Synchro 12. For specific improvements, only a high-level operational analysis was performed. Certain improvements as identified in **Table 5** through **Table 8** were evaluated by applying it to the No Build conditions and compared against the resulting performance measures to the No Build scenario without improvements.
- **Cost:** Probable construction costs were estimated using figures obtained from various sources such as TxDOT statewide bid item averages and recent projects of similar scale and nature.

The remaining section describes each focus area and illustrates its respective improvements in greater detail. **Table 9** provides a summary of the evaluation, and further details of each project's cost estimates and crash modification factors can be found in **Appendix D** and **Appendix E,** respectively**.**

Figure 10: Location of Focus Areas



FOCUS AREAS AND IMPROVEMENT PROJECTS

Focus Area 1 – S Hackberry Ave

Focus Area 1 runs along S Hackberry Ave from US 90 / Pierce St to Houston St (**Figure 11**). This street was identified as a focus area given the high volume of pedestrians, especially students from Luling High School and Leonard Shanklin Elementary School, and vehicular traffic during school hours.

Proposed projects within this focus area seek to enhance safety and mobility of pedestrians as they travel to and from this neighborhood north towards Downtown (**Table 5**). These projects also augment the planned safety improvements on N Hackberry Ave from US 90 / Pierce St to SH 80 / Austin St under the Road Bond Program.

Figure 11: Focus Area 1 and Proposed Improvement Projects

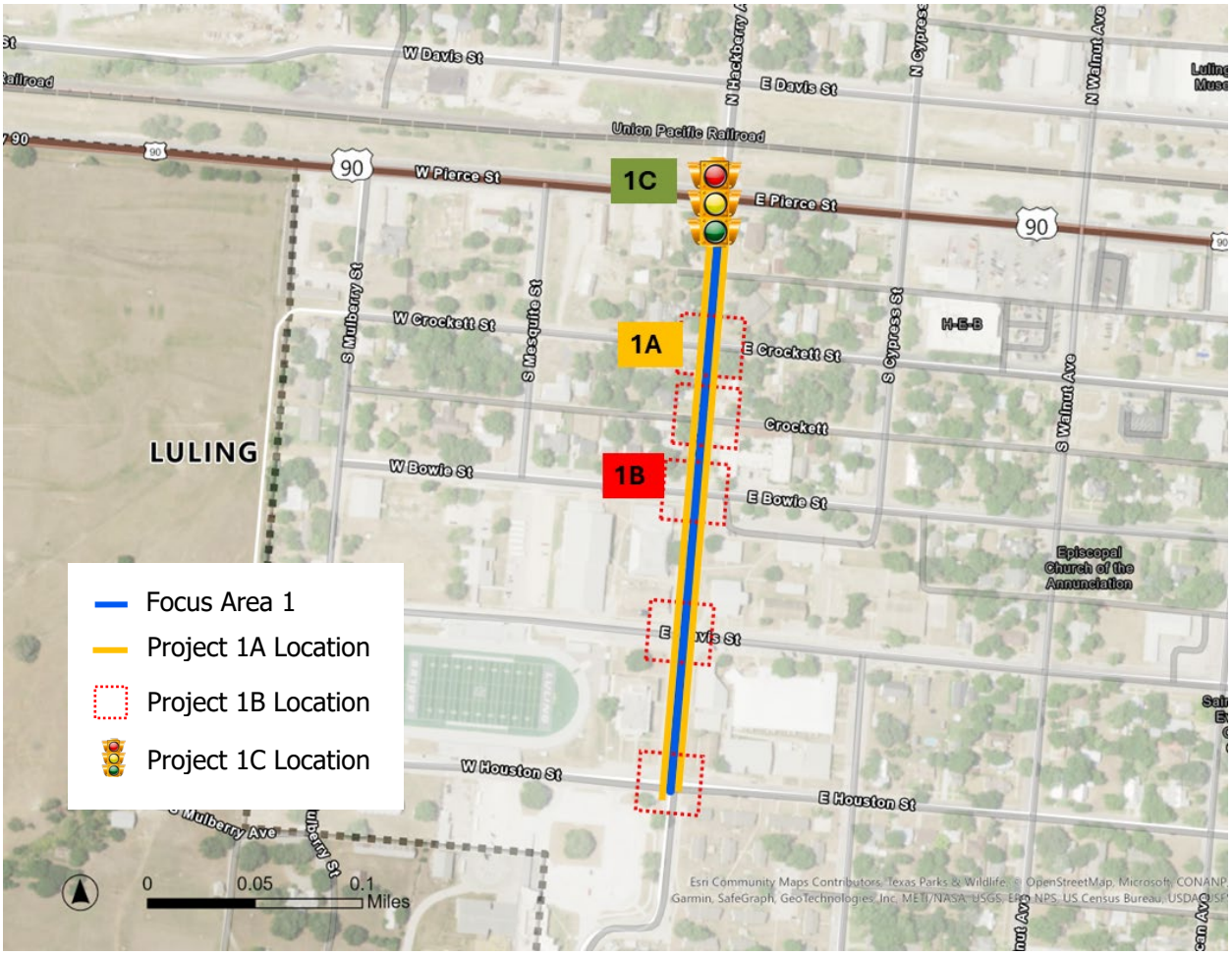


Table 5: Description of Proposed Improvement Projects in Focus Area 1

Project ID	Description	Examples Of Improvements
1A	**Americans with Disabilities Act (ADA)-compliant Sidewalks and Curb Ramps** These improvements provide a wide and flat surface that enables a more comfortable and safer experience traveling along the streets and navigating across streets. This is especially beneficial to people with disabilities, older adults, people with vision impairments, those using strollers or mobility devices, etc.	 *Source: ArdmoreRoderick and City of Coppell, TX*
1B	**Repave Hackberry Ave from US 90 to Houston St** Repaving entails milling the old surface and applying new asphalt, compacting it, and finishing with striping. This is recommended due to the current pavement conditions and the amount of striping recommended for this focus area. Creating smooth surfaces reduces risk of crashes caused by potholes, cracks, or uneven surfaces.	 *Source: Community Impact*
	School Zone Flashers School zone flashers are flashing warning devices installed near schools to alert drivers of reduced speed limits during school hours. These help to reduce speeds and make drivers more aware of pedestrians, especially children.	 *Source: Houston Chronicle*
	High Visibility Crosswalk Striping and Signage Crossing roadways can be made safer for pedestrians with large reflective signs that indicate where a driver should stop or yield to pedestrians. Crosswalks can also be made more visible using patterns, pedestrian islands, or highly reflective crosswalk markings.	 *Source: NC DOT*
	Pedestrian Safety Lighting Lighting can help drivers visually identify pedestrians more easily by illuminating them with positive contrast. Lighting also helps drivers look out for roadway edges and other vehicles or objects on roadways.	 *Source: Fonroche Lighting America*

1C	**New traffic signal at US 90 / Pierce St** A signalized intersection at US 90 / Pierce St and S Hackberry Ave enables pedestrians to cross US 90 / Pierce St more easily, encouraging active transportation and improving safety. Signals can also improve traffic operations and facilitate safer vehicular movements at this intersection, especially those turning out of Hackberry Ave onto US 90 / Pierce St or crossing US 90 / Pierce St.	 *Source: LSC Tech*

Focus Area 2 – N Hackberry Ave

Focus Area 2 runs along N Hackberry Ave from SH 80 / Austin St to FM 2984 / Lincoln St (**Figure 12**). This section of Hackberry Ave is highly utilized, particularly as an alternative route to US 183 / Magnolia Ave for trucks and cars traveling north and south. Given the absence of edge striping and potholes that are located along the roadway, several community members at the public meeting shared that driving conditions of the roadway today are uncomfortable and unsafe. They also highlighted challenges crossing or turning on to SH 80 / Austin St from Hackberry Ave at the unsignalized intersection due to the high volume of east-west traffic.

Proposed projects within this focus area aim to improve the driving conditions and improve safety along N Hackberry Ave (**Table 6**). Similar to Focus Area 1, the projects in this focus area will connect to the planned safety improvements on N Hackberry Ave from US 90 / Pierce St to SH 80 / Austin St. Once implemented, the projects from these two focus areas and the 2024 Road Bond Program would make Hackberry Ave more comfortable and safer for all roadway users to travel on.

Figure 12: Focus Area 2 and Proposed Improvement Projects

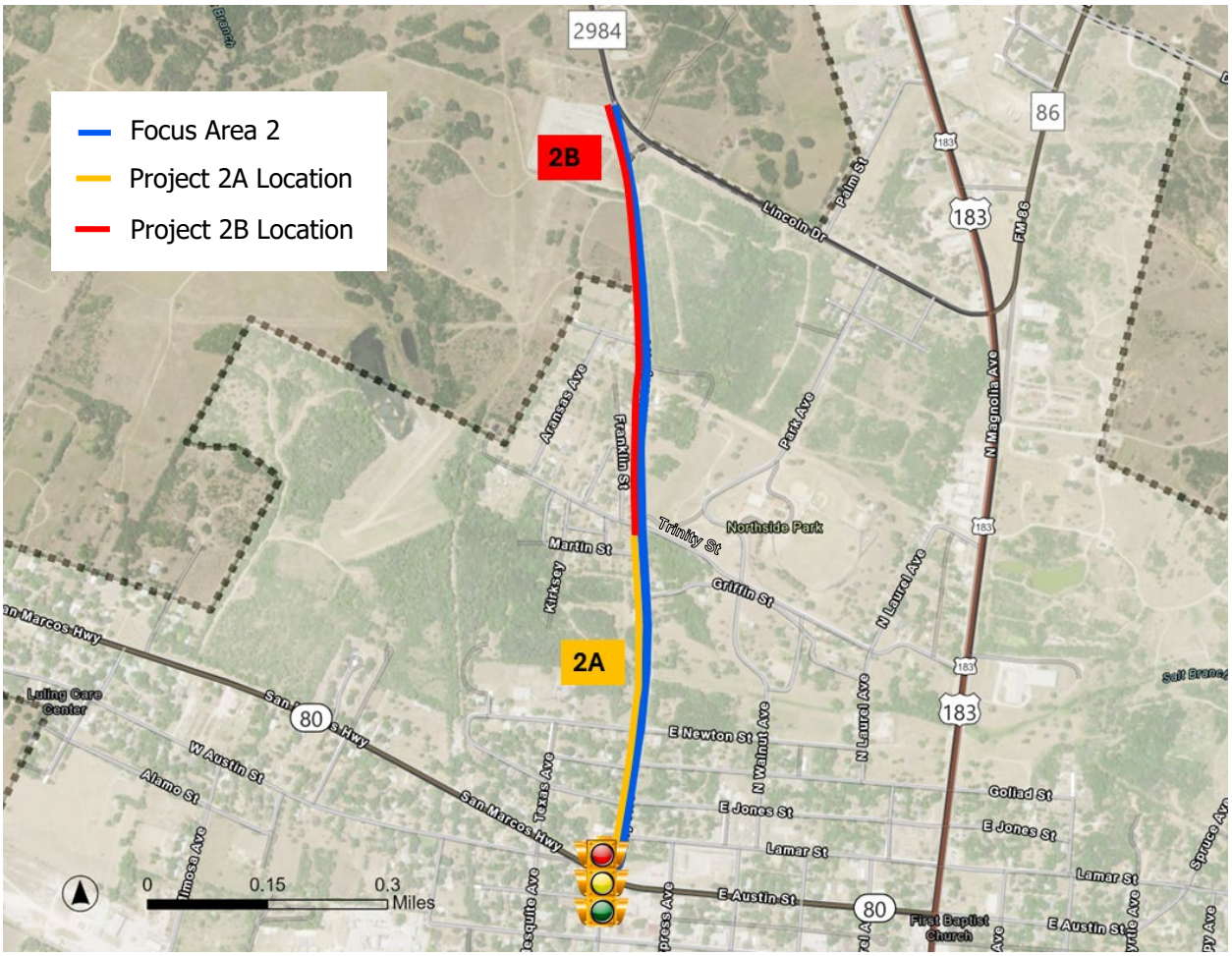


Table 6: Description of Proposed Improvement Projects in Focus Area 2

Project ID	Description	Examples Of Improvements
2A	**SH 80 / Austin St to Trinity St: Reconstruct with striped center and edge lines** Reconstructing the road with asphalt and adding stripes help to define travel lanes, improve driver guidance, thereby making the driving experience safer and more comfortable.	 *Source: Google Street View*
	New signal at intersection of N. Hackberry Ave and SH 80 / Austin St A signalized intersection at N Hackberry Ave and SH 80 / Austin St improves traffic operations by providing a more predictable sequence of movements at the intersection and increases safety for vehicular movements turning out of Hackberry Ave onto or crossing SH 80 / Austin St.	 *Source: LSC Tech*
2B	**Trinity St to FM2984 / Lincoln St: Reconstruct with striped center and edge lines** *Refer to 2A above*	*Refer to 2A above*

Focus Area 3 – Magnolia Ave (US 183)

Focus Area 3 comprises one of the main thoroughfares in downtown Luling, US 183 / Magnolia Ave from Fannin St to Milam St (**Figure 13**). High volumes of truck and vehicular traffic are observed along this roadway daily, which can make east-west crossings difficult for pedestrians. North of US 90 / Pierce St, US 183 / Magnolia Ave is a barrier to downtown visitors who want to cross and access retail stores and food establishments on either side of the road. Similarly to the south of US 90 / Pierce St, pedestrians face challenges trying to cross the roadway. Travis St, in particular, has larger volumes of pedestrian traffic as students and residents cross US 183 / Magnolia Ave to access Longer Park and the schools further west.

Proposed projects within this focus area are targeted at creating greater visibility and slowing vehicular traffic to improve safety for pedestrians (**Table 7**). The projects to the north of US 90 / Pierce St would complement the existing Road Bond Program project that plans to improve traffic flow at the intersection of US 90 / Pierce St and US 183 / Magnolia Ave.

Figure 13: Focus Area 3 and Proposed Improvement Projects

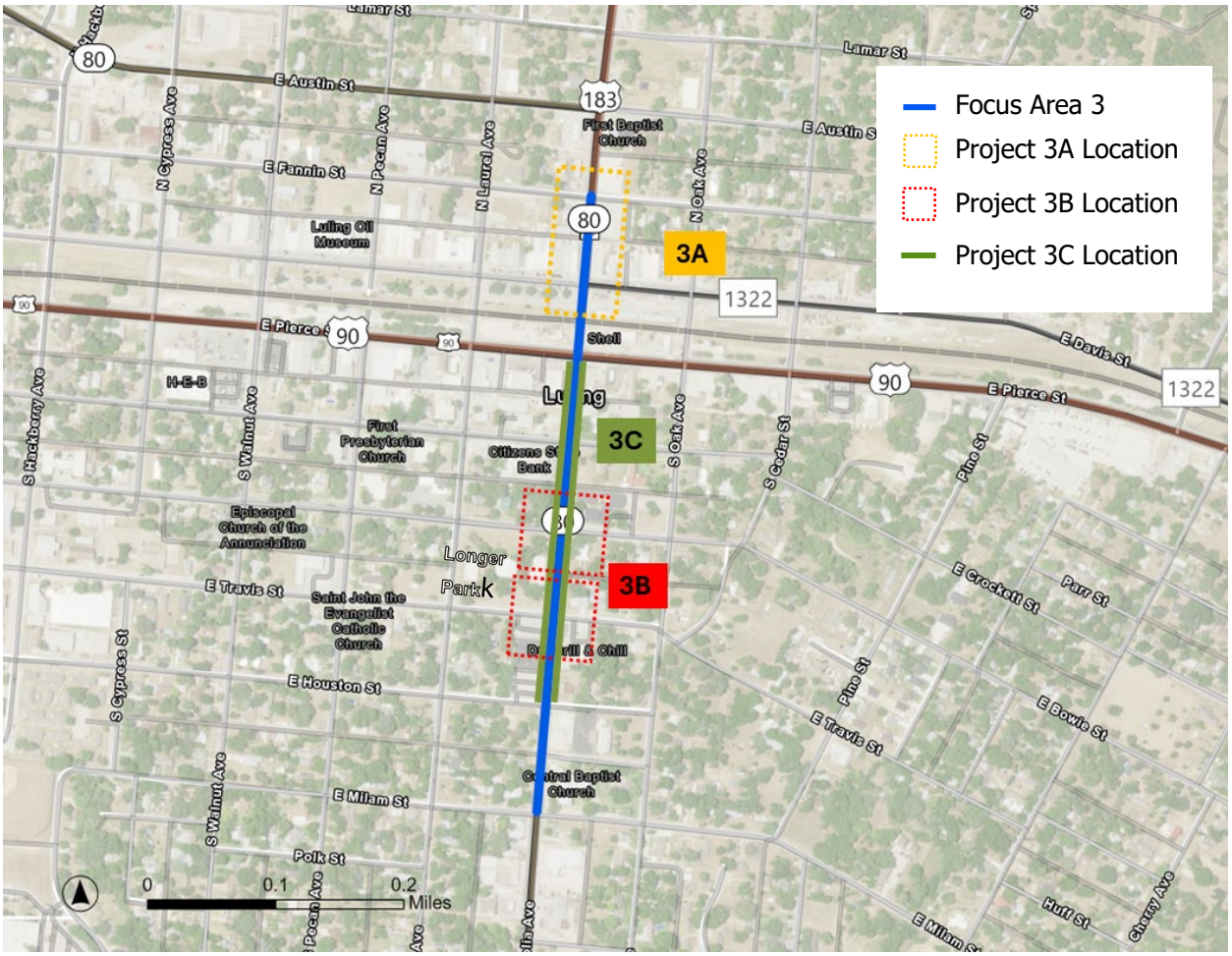


Table 7: Description of Proposed Improvement Projects in Focus Area 3

Project ID	Description	Examples Of Improvements
3A	**Patterned Intersection and "Do Not Block Intersection" Signage** Patterned intersections increase visibility of pedestrian crossings to drivers and improve overall pedestrian safety. Well-designed patterned intersections can also make the area more visually appealing and serve as an entry point of reference into Downtown Luling.	 *Source: HDR*
	High Visibility Crosswalk Striping and Pedestrian Signage These crosswalks make pedestrian crossings more noticeable to drivers, thereby reducing crash risk and improving pedestrian safety.	 *Source: Federal Highway Administration (FHWA)*
	Dynamic Speed Feedback Signs These signs display the real-time speed of a vehicle, which can signal to the driver to slow down. Reduced speeds generally lower the risk of crashes and, should it occur, reduce the severity of crashes.	 *Source: Montgomery County Department of Transportation*
3B	**Pedestrian Hybrid Beacon (PHB) at E. Travis St** PHBs are designed to help pedestrians cross roadways safely at midblock or uncontrolled intersections. They are not lit until a pedestrian activates the signal. Once activated, the signal turns red temporarily, directing motorists to come to a stop.	 *Source: Timmons Group*
	High Visibility Crosswalk Striping and Pedestrian Signage Crossing roadways can be made safer for pedestrians using large reflective signs that indicate where crosswalks are located and crosswalk striping designs that draw drivers' attention.	 Source: Federal Highway Administration (FHWA)
	Dynamic Feedback Signs *Refer to 3A above*	*Refer to 3A above*

3C	**Pedestrian Safety Lighting** Lighting can help drivers visually identify pedestrians more easily by illuminating them with positive contrast. Lighting also helps drivers look out for roadway edges and other vehicles or objects on roadways.	 *Source: Fonroche Lighting America*

Focus Area 4 – Intersection of US 183 / E Pierce St and US 90

Focus Area 4 is located at the intersection of US 183 / E Pierce St and US 90 between Plum Creek Bridge and I-10 (**Figure 14**). US 183 / E Pierce St southbound currently narrows from two continuous lanes before Plum Creek Bridge to one continuous lane at the bridge. Drivers heading toward I-10 typically mistake the left turn lane after the bridge for a continuous lane and end up merging to travel south. Additionally, the left turn signal timing at the intersection does not provide sufficient time for the left-turn demand, leading to drivers speeding through the intersection and / or running red lights. Both behaviors are likely to result in greater risks of crashes.

Proposed projects in this focus area seek to improve safety for drivers by adjusting traffic signal timing and expanding the roadway (**Table 8**). These projects would complement the planned improvement works to US 183 from Magnolia Ave to Plum Creek Bridge under the 2024 Road Bond Program.

Figure 14: Focus Area 4 and Proposed Improvement Projects

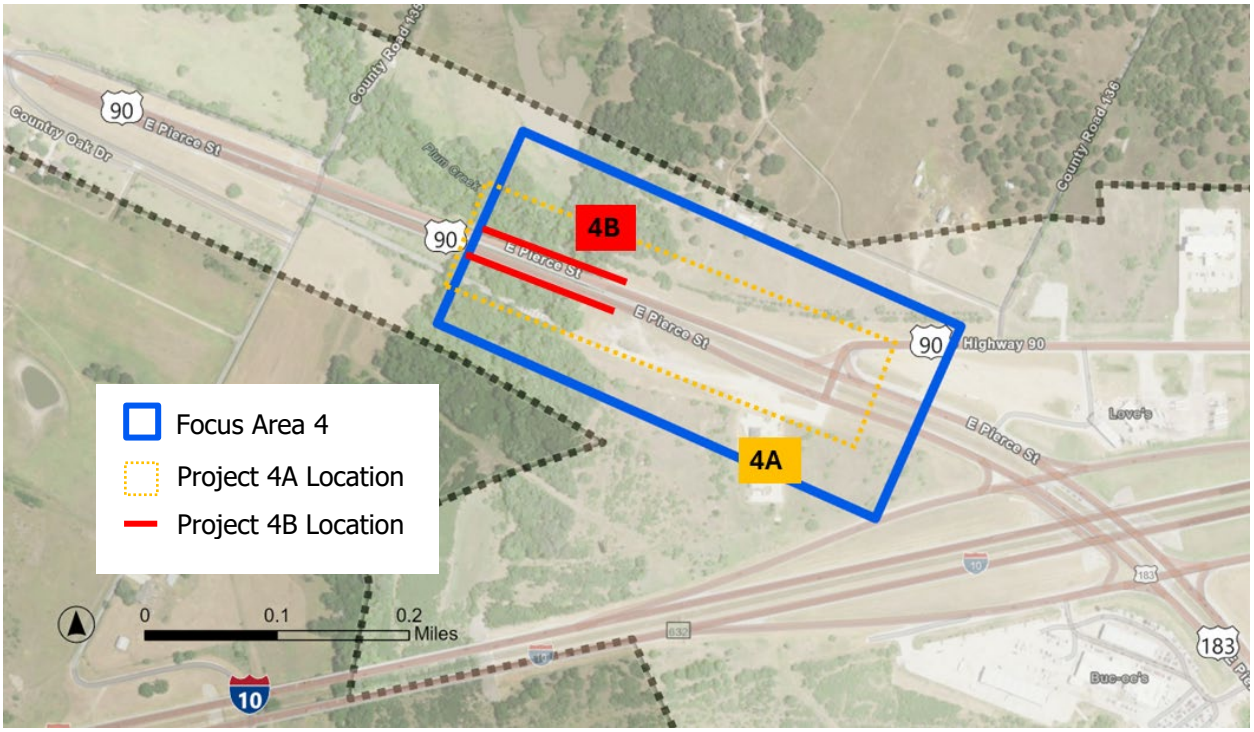


Table 8: Description of Proposed Improvement Projects in Focus Area 4

Project ID	Description	Examples Of Improvements
4A	**Roadway Widening and Restriping of Southbound US 183 to Accommodate Two Continuous Through Lanes from Plum Creek Bridge to US 90 / US 183 Intersection** Creating two continuous through lanes with clear striping facilitates smoother southbound traffic flow along US 183 by reducing unsafe last-minute weaving maneuvers by drivers.	 *Source: STV Inc.*
	Update Intersection Pavement Markings and Signal Timing Clear markings and longer left-turn signal timings can improve the operational efficiency of this intersection while allowing drivers to make turns onto US 90 more safely.	 *Source: Crexi*
4B	**Safety Lighting along Plum Creek Bridge** Lighting can help drivers be more aware of roadway edges and notice upcoming intersections more easily.	 *Source: Gen X Lighting Solutions*

Table 9: Assessment of Proposed Improvement Projects

Project ID	Description	Goal 1	Goal 2	Goal 3	Goal 4	2050 Intersection LOS	Planning-Level Cost Estimates* *(IN 2026 DOLLARS)*
FOCUS AREA 1 – S HACKBERRY AVE							
1A	ADA-compliant Sidewalks and Curb Ramps	✓	✓			-	$142,000
1B	Repaving, School Zone Flashers, Signage, Striping, Lighting	✓				-	$1.59M
1C	New Signal at US 90 / Pierce St	✓			✓	"F" to "C"	$635,000
FOCUS AREA 2 – N HACKBERRY AVE							
2A	Roadway Reconstruction from Trinity St to SH 80 / Austin St and New Signal at SH 80 / Austin St	✓	✓	✓		"F" to "C"	$14M
2B	Roadway Reconstruction from Trinity St to FM 2984 / Lincoln St	✓	✓			-	$4.8M
FOCUS AREA 3 – US 183 / MAGNOLIA AVE							
3A	High Visibility Crosswalks, Patterned Intersection, and Dynamic Speed Feedback Sign from Fannin St to Davis St	✓	✓		✓	-	$196,000
3B	PHB at Travis St, Crosswalk, Signage, Dynamic Speed Feedback Sign	✓	✓			-	$328,000
3C	Lighting	✓	✓			-	$58,000
FOCUS AREA 4 – INTERSECTION OF US 90 AND US 183 / E PIERCE ST							
4A	Restriping, Lane Reconfiguration, Intersection Pavement Markings and Signal Timing Update	✓	✓	✓		"D" to "B/C"	$396,000
4B	Lighting along Plum Creek Bridge	✓				-	$92,000

**Opinion of probable construction costs (in 2026 dollars)*

Study Goals

Goal 1: Identify Safety Improvements

Goal 2: Enhance Mobility for All Modes of Traffic

Goal 3: Evaluate Feasibility of an Alternate Route for Through Traffic

Goal 4: Promote Downtown and Economic Development Opportunities

Conclusion and Next Steps

This memorandum documented the processes and summarized the findings of two principal analyses for the Relief Route and Improvement Projects within the City and its ETJ.

The Relief Route analysis revealed that the three alternatives developed for the preferred alignment in the 2019 Luling Transportation Study, Option A, would likely result in marginal improvements to congestion downtown in the long term. The Northeast Alignment, also Option C in the 2019 Luling Transportation Study, was found to potentially divert more through traffic away from Luling, which can contribute to congestion relief in Luling. Further study will be necessary to develop possible alternatives along the Northeast Alignment before more detailed analyses can be conducted to evaluate its viability as a relief route and its impact on the City.

In addition to congestion relief, other Improvement Projects within identified Focus Areas were developed with the goal of improving safety and mobility for all roadway users and fostering economic development. Input from the public, City staff, and stakeholders were integral in surfacing mobility challenges and needs across the City. Improvement Projects discussed in this memo are therefore targeted at addressing these issues.

Moving forward, the three preliminary alignment alternatives of the Relief Route and the Improvement Projects will be presented to stakeholders and community members at upcoming meetings for feedback. The final phase of this study will use the feedback to determine the recommended Relief Route alignment and prioritize the implementation of Improvement Projects.

Appendices

APPENDIX A:
Traffic Line Diagrams

APPENDIX B:
Synchro Analysis Reports

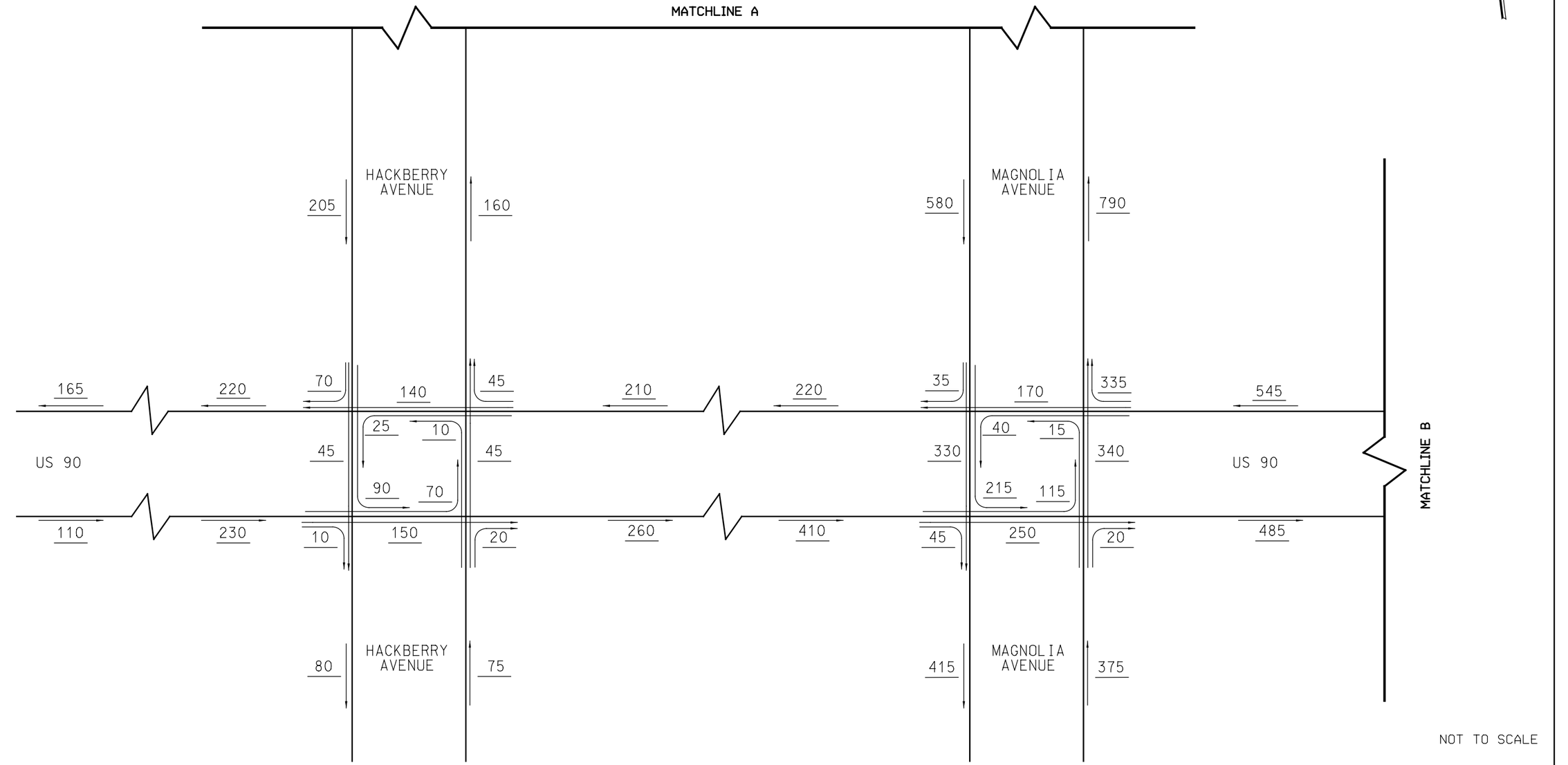
APPENDIX C:
Planning-Level Cost Estimates - Alignments

APPENDIX D:
Planning-Level Cost Estimates - Focus Areas

APPENDIX E:
Crash Modification Factors

APPENDIX A: TRAFFIC LINE DIAGRAMS

2026 EXISTING VOLUMES



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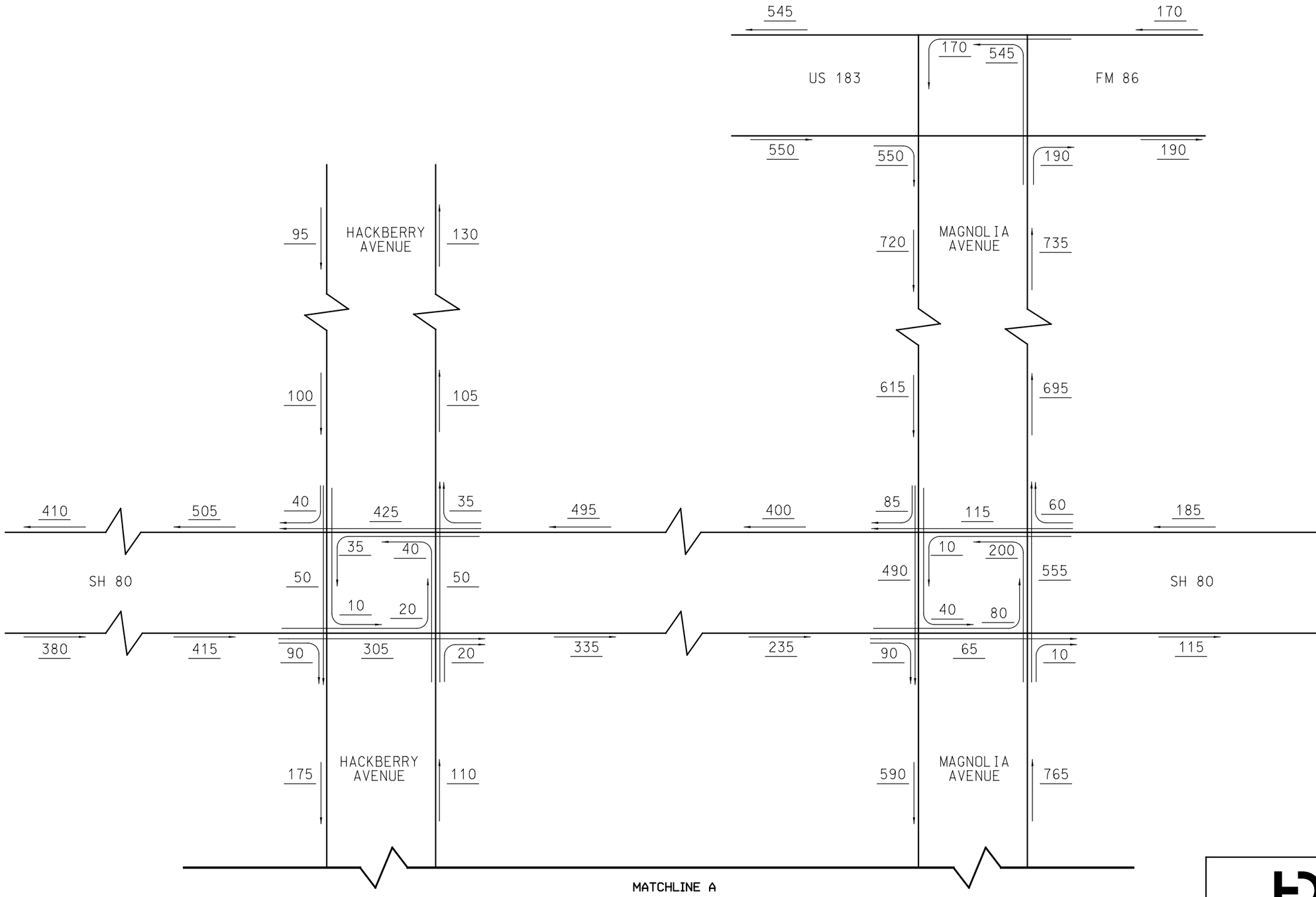
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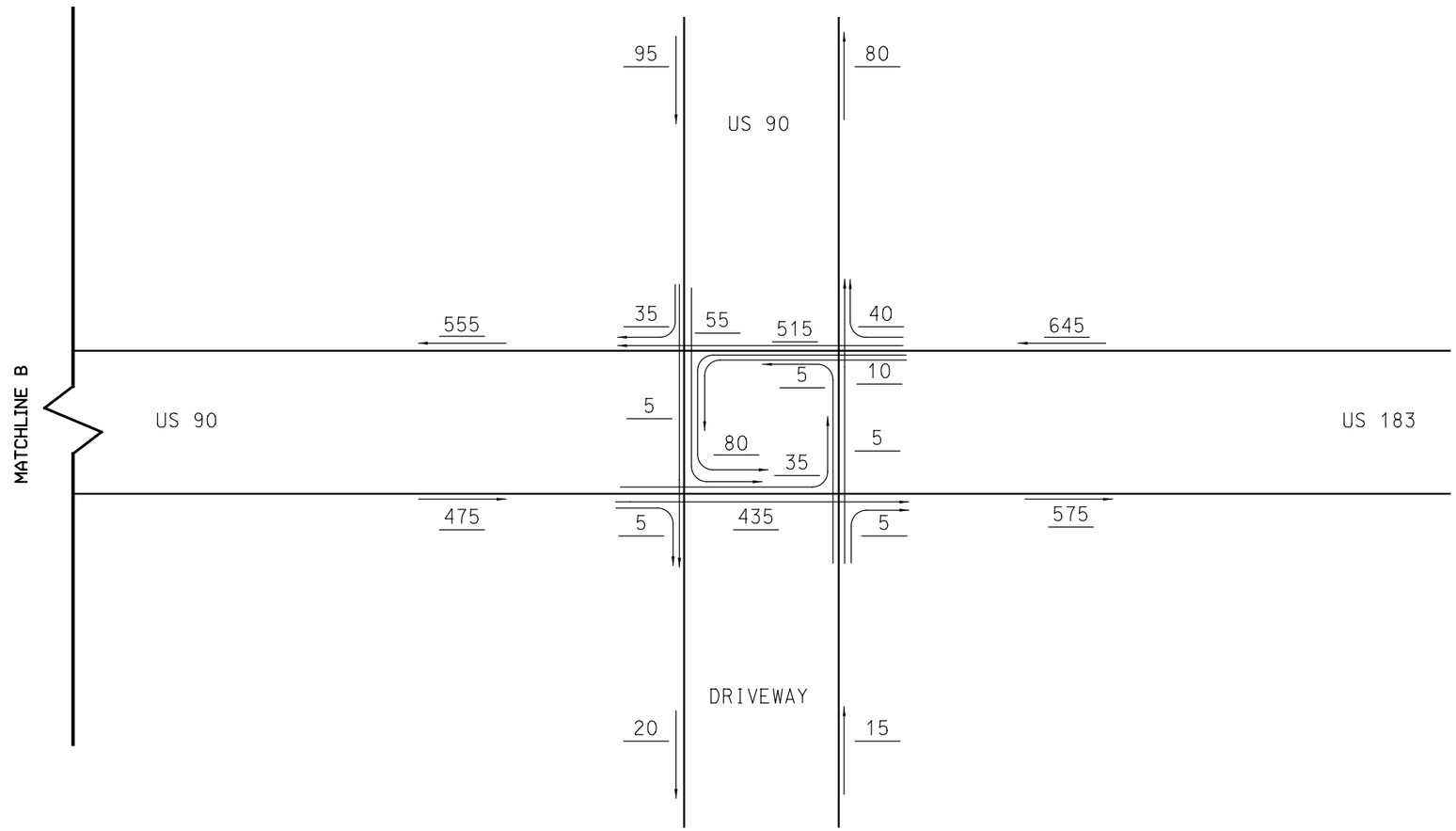
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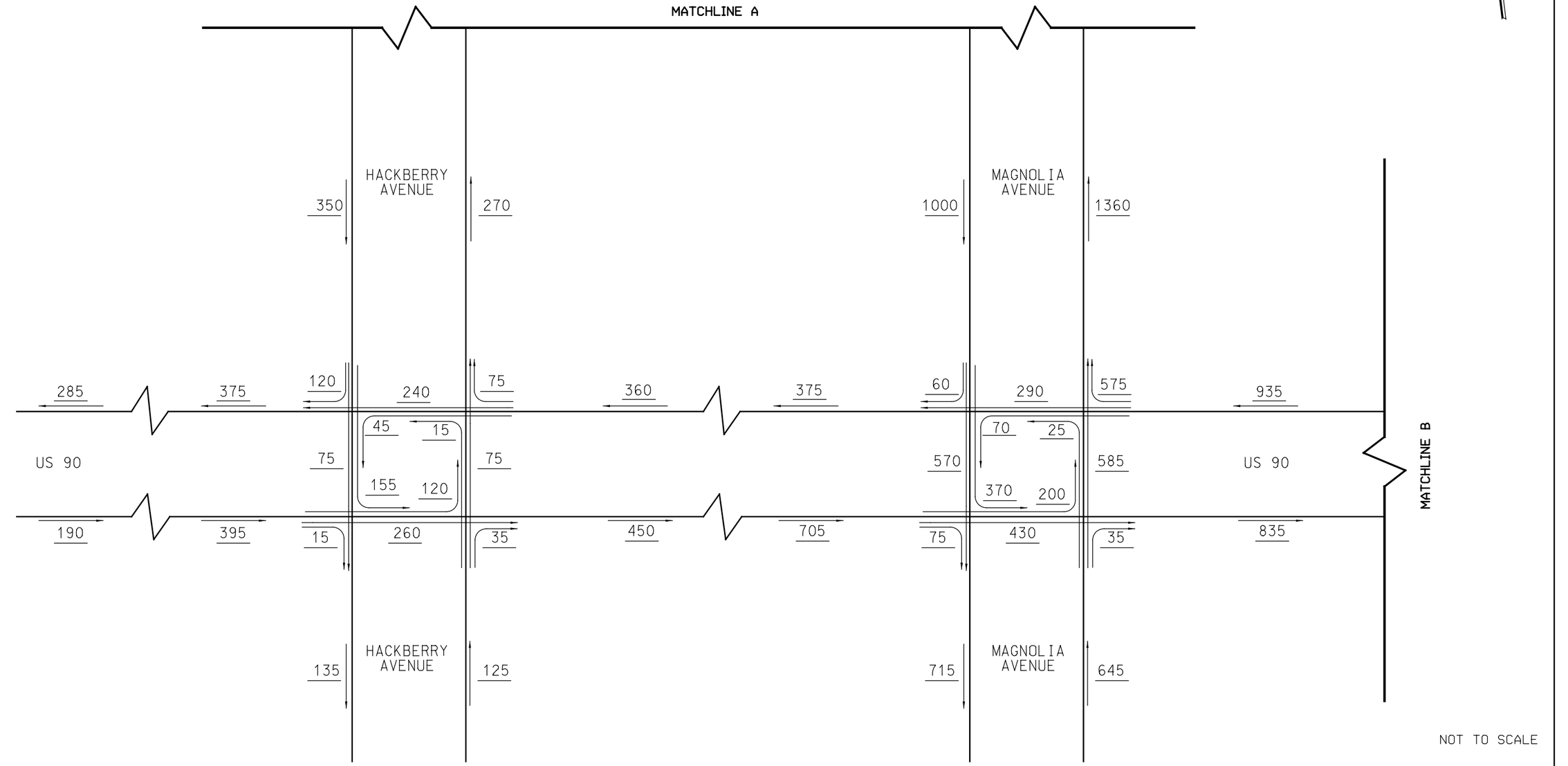
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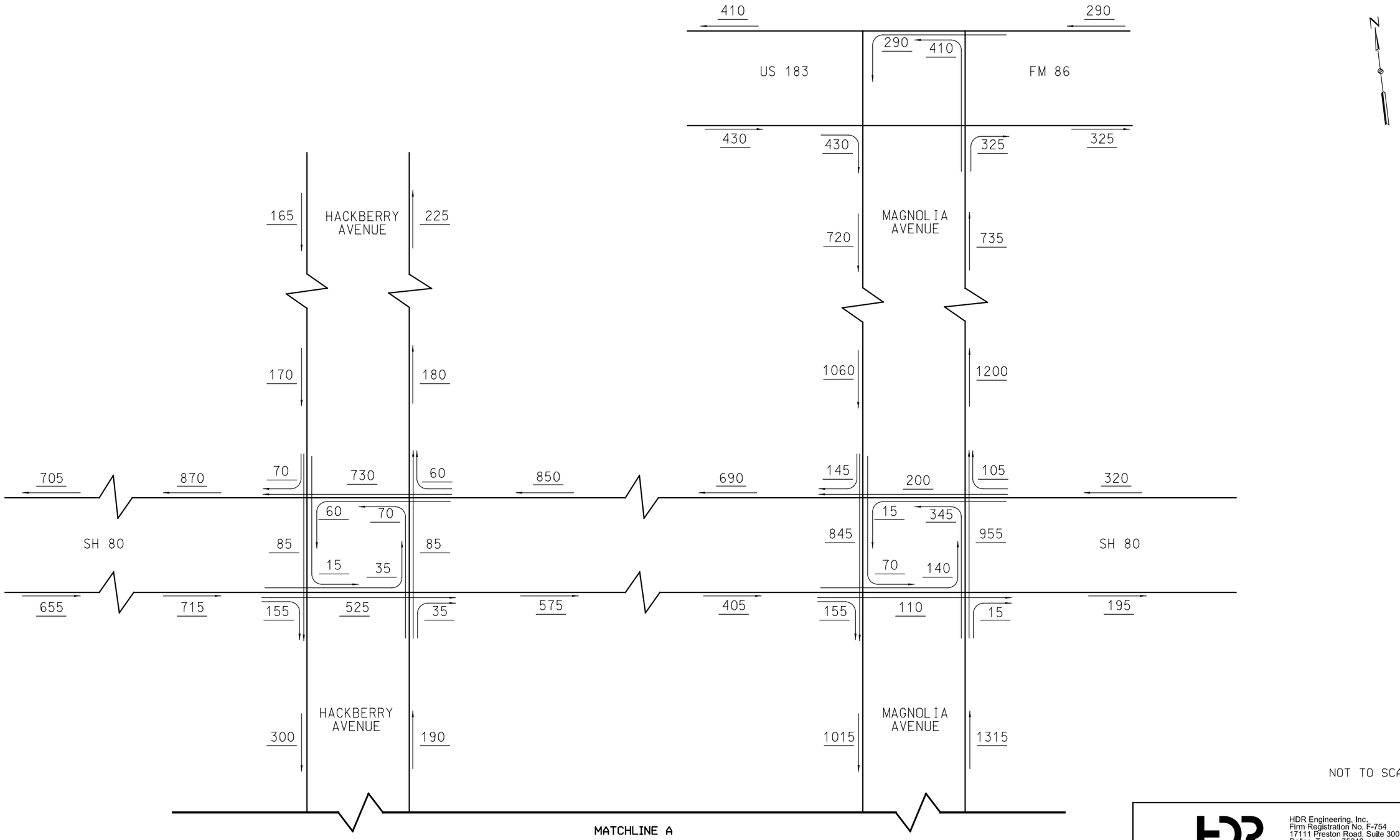
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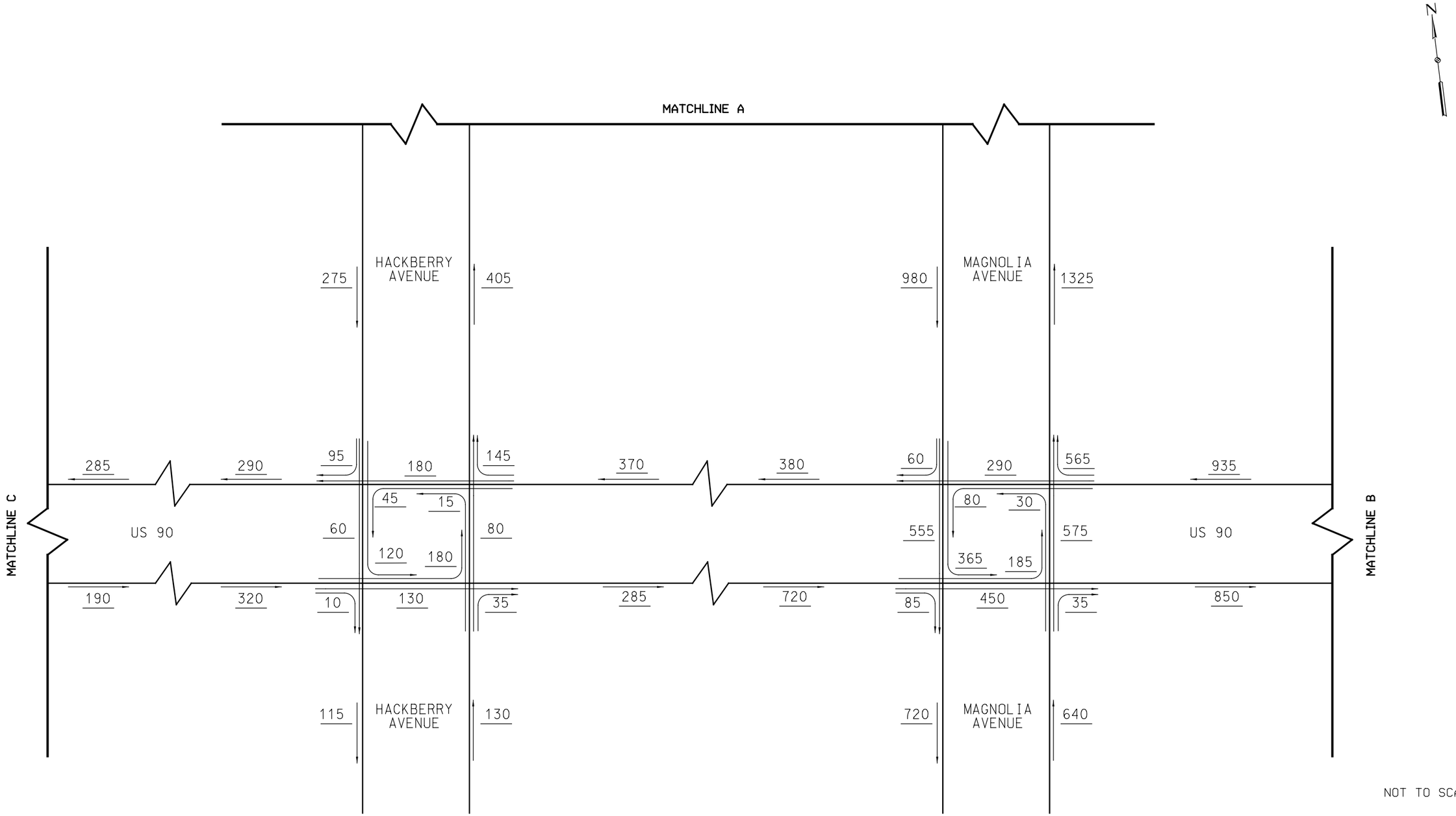
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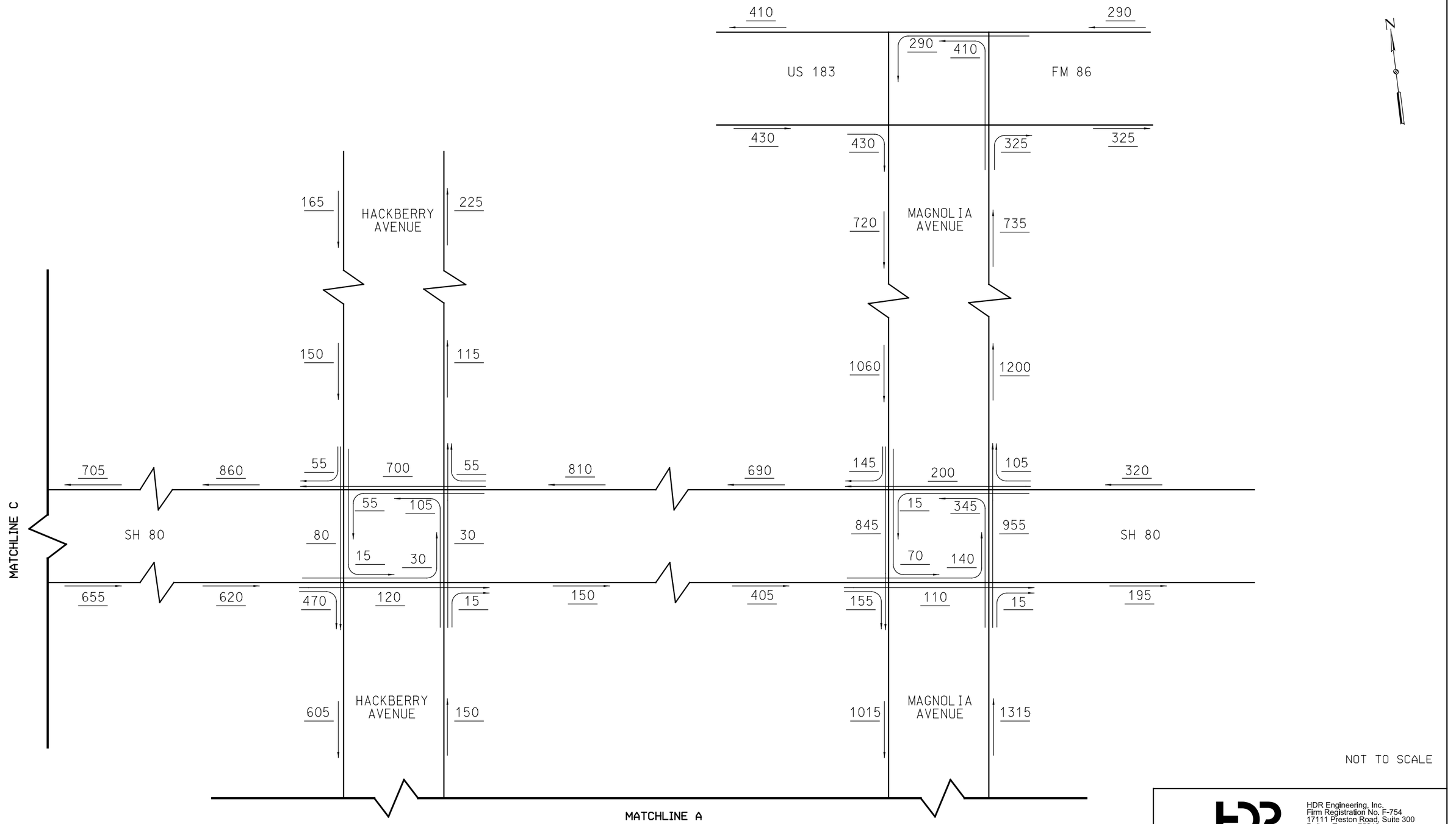
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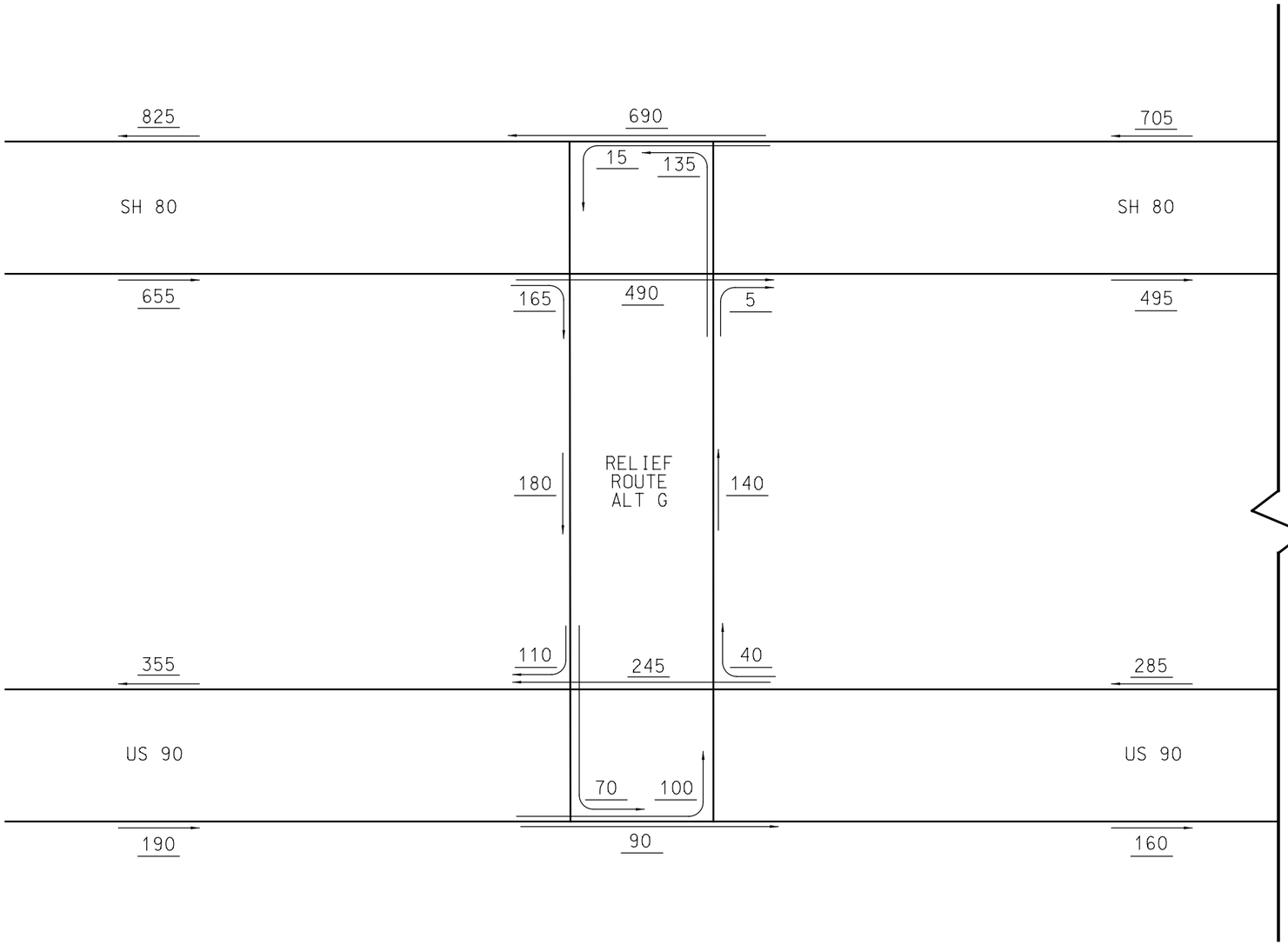
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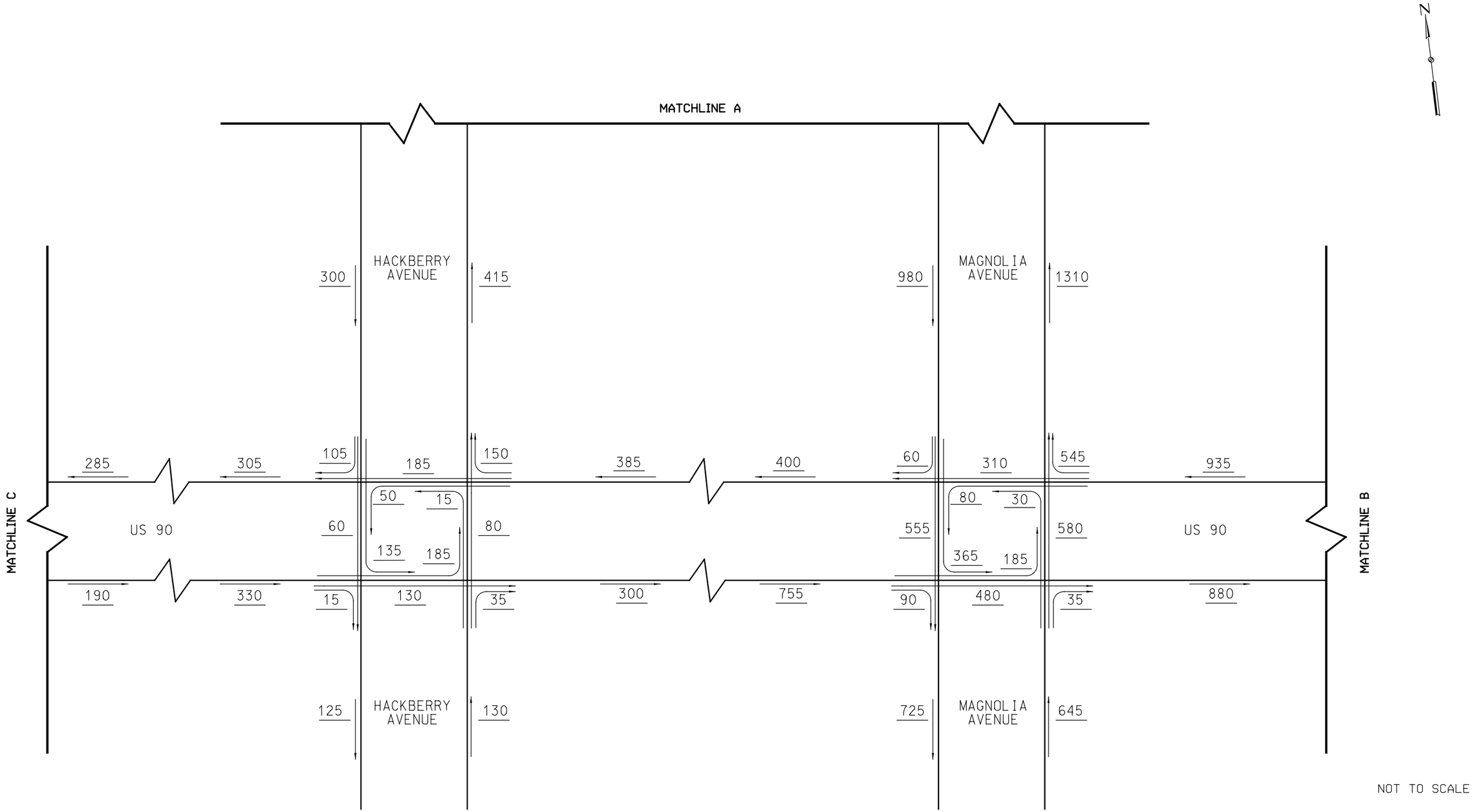
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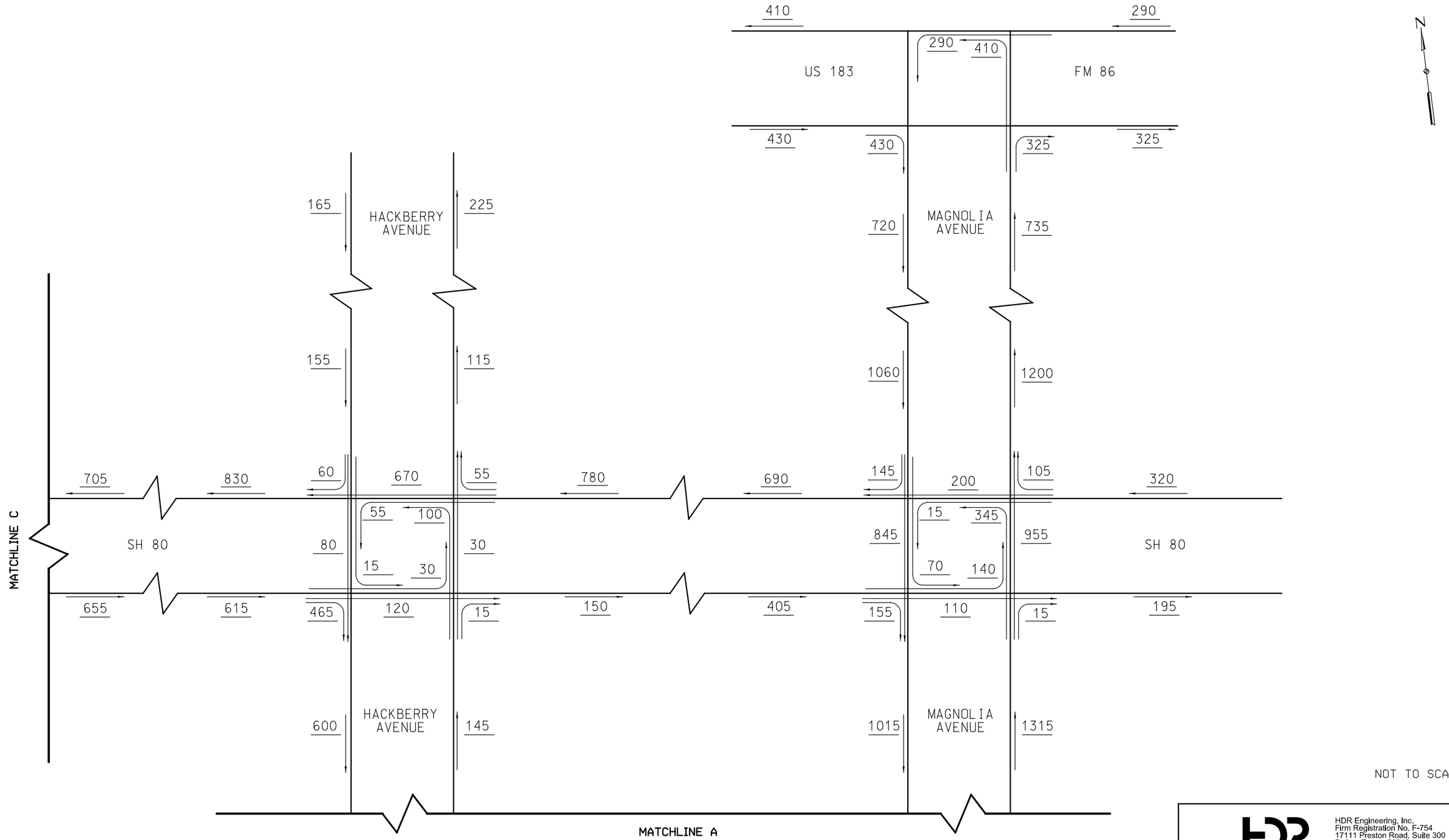
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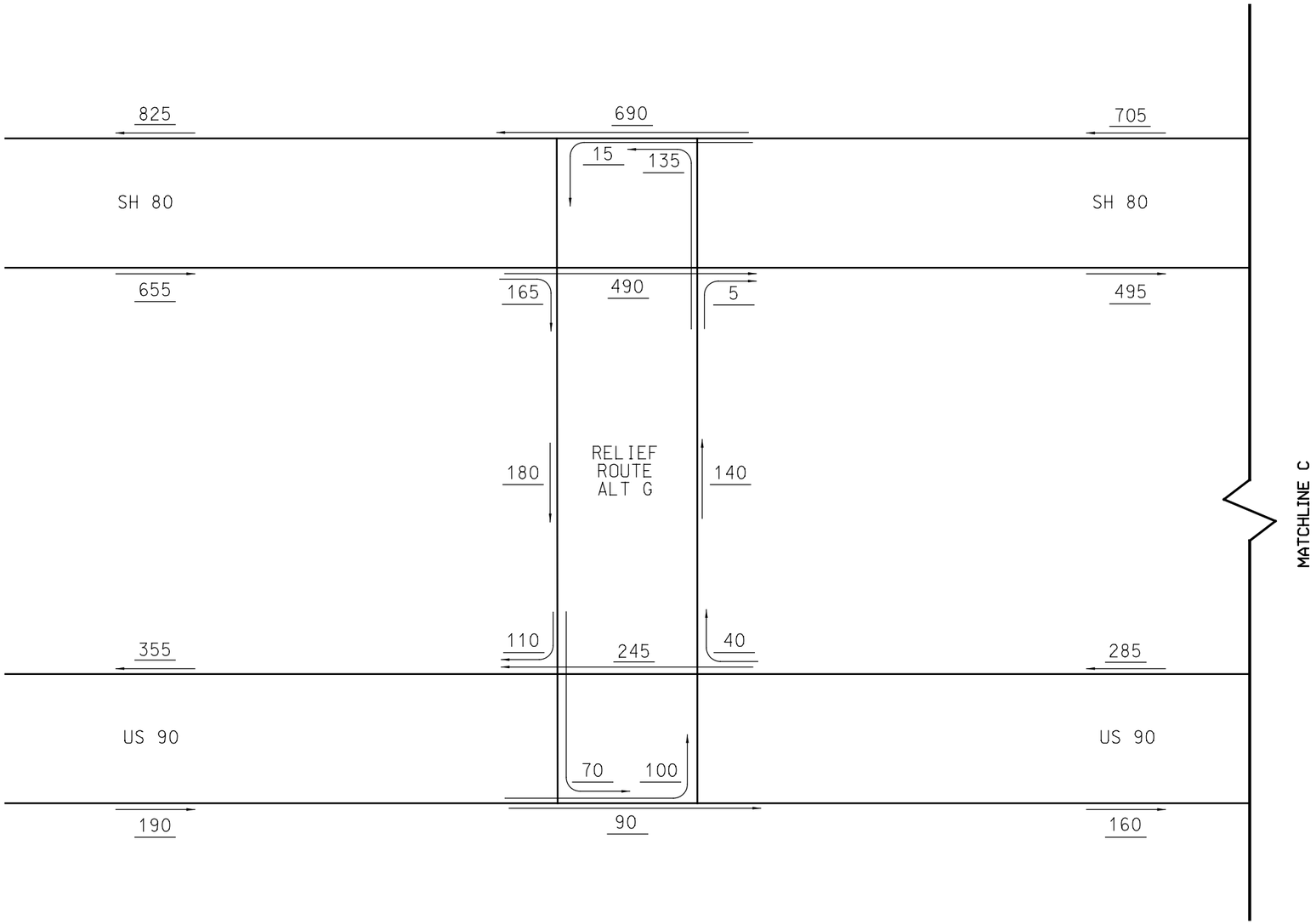
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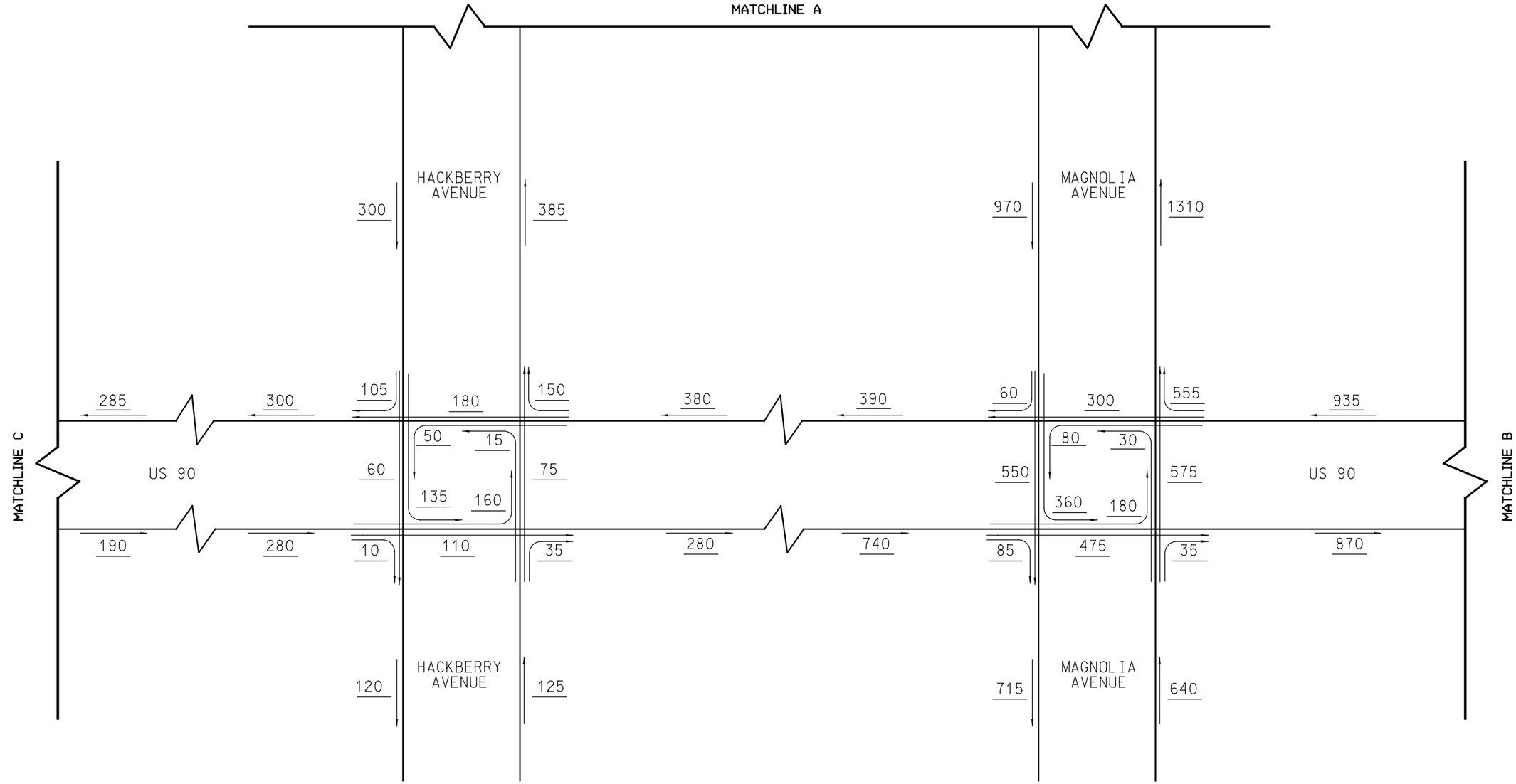
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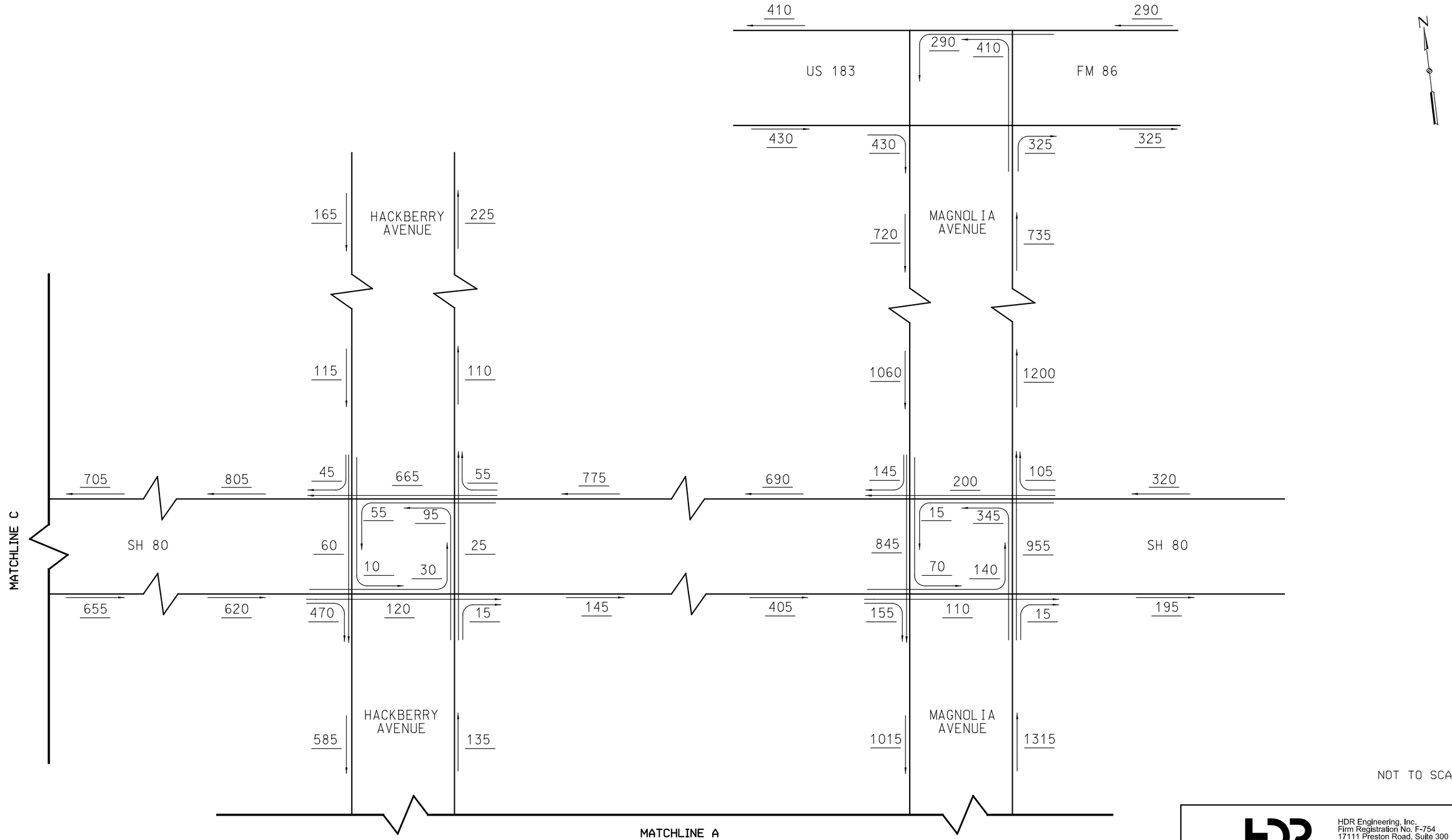
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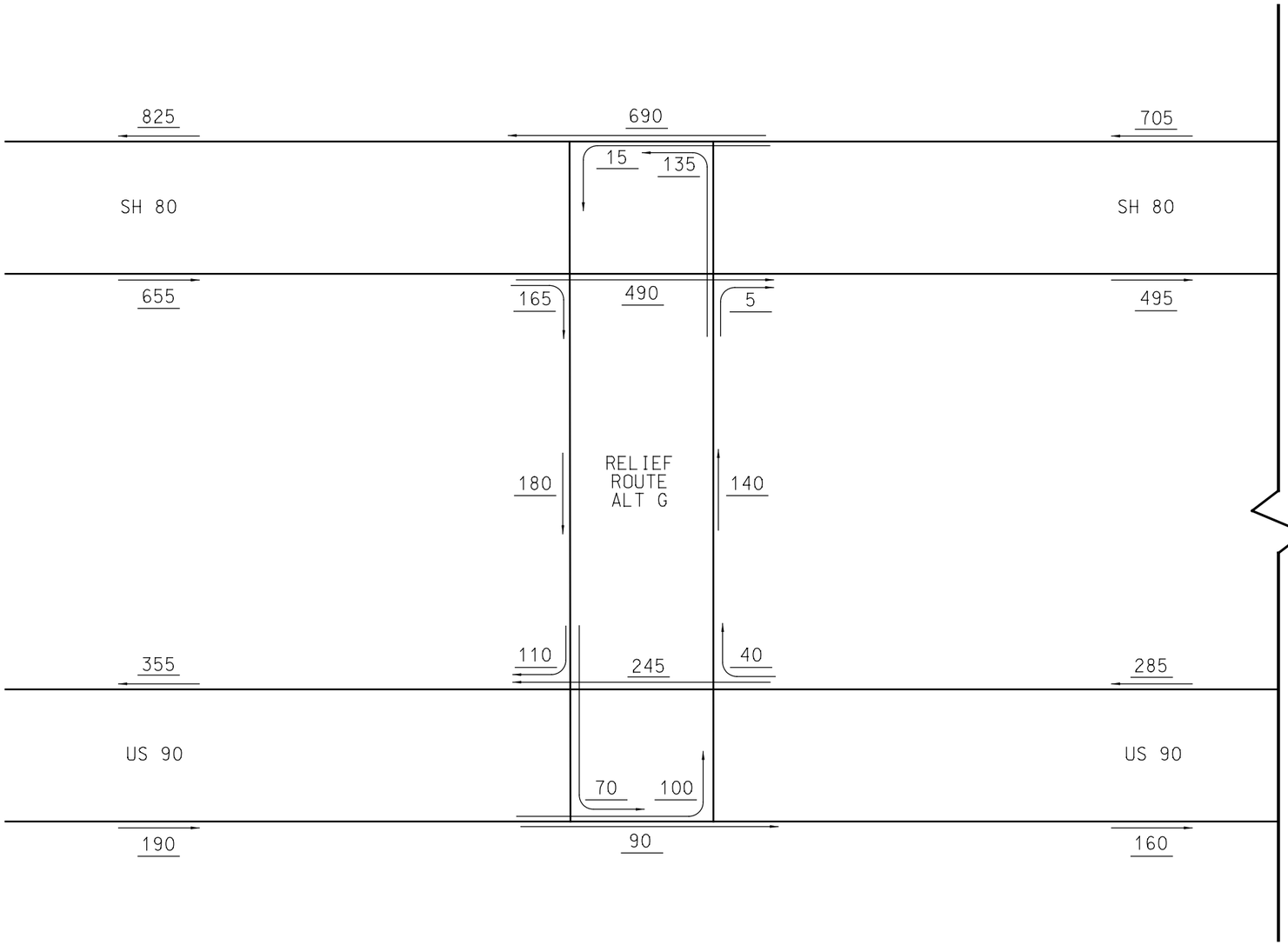
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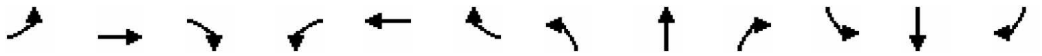
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APPENDIX B: SYNCHRO ANALYSIS REPORTS

2026 EXISTING SYNCHRO RESULTS

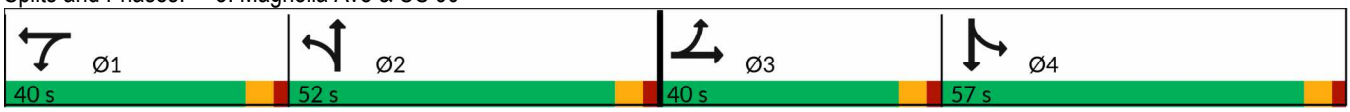


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	250	45	40	170	335	15	340	20	215	330	35
Future Volume (vph)	115	250	45	40	170	335	15	340	20	215	330	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.984			0.908			0.992			0.991	
Flt Protected		0.986			0.996			0.998			0.982	
Satd. Flow (prot)	0	3304	0	0	3080	0	0	3372	0	0	3314	0
Flt Permitted		0.986			0.996			0.998			0.982	
Satd. Flow (perm)	0	3304	0	0	3080	0	0	3372	0	0	3314	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			188			3			3	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		2206			1800			635			1010	
Travel Time (s)		43.0			35.1			12.4			19.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	128	278	50	44	189	372	17	378	22	239	367	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	456	0	0	605	0	0	417	0	0	645	0
Turn Type	Split	NA		Split	NA		Split	NA		Split	NA	
Protected Phases	3	3		1	1		2	2		4	4	
Permitted Phases												
Total Split (s)	40.0	40.0		40.0	40.0		52.0	52.0		57.0	57.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Act Effct Green (s)		26.0			27.7			24.7			35.7	
Actuated g/C Ratio		0.19			0.20			0.18			0.26	
v/c Ratio		0.73			0.79			0.69			0.76	
Control Delay (s/veh)		62.4			46.2			62.0			55.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		62.4			46.2			62.0			55.3	
LOS		E			D			E			E	
Approach Delay (s/veh)		62.4			46.2			62.0			55.3	
Approach LOS		E			D			E			E	
Queue Length 50th (ft)		204			194			188			284	
Queue Length 95th (ft)		324			328			295			425	
Internal Link Dist (ft)		2126			1720			555			930	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		844			923			1161			1265	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.54			0.66			0.36			0.51	

Intersection Summary			
Area Type:	Other		
Cycle Length: 189			
Actuated Cycle Length: 139.1			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay (s/veh): 55.5		Intersection LOS: E	
Intersection Capacity Utilization 75.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 5: Magnolia Ave & US 90

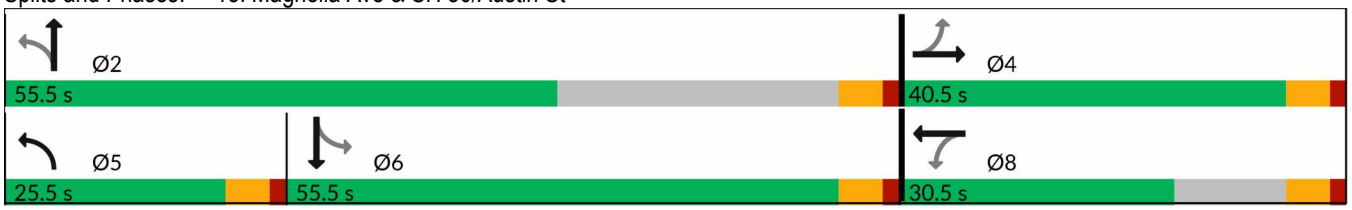


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	65	90	10	115	60	200	555	10	40	490	85
Future Volume (vph)	80	65	90	10	115	60	200	555	10	40	490	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.948			0.956			0.998			0.979	
Flt Protected		0.983			0.997			0.987			0.997	
Satd. Flow (prot)	0	1670	0	0	1708	0	0	3355	0	0	3324	0
Flt Permitted		0.809			0.978			0.636			0.856	
Satd. Flow (perm)	0	1375	0	0	1676	0	0	2162	0	0	2854	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			20			2			18	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		2182			1299			1010			967	
Travel Time (s)		42.5			25.3			19.7			18.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	89	72	100	11	128	67	222	617	11	44	544	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	261	0	0	206	0	0	850	0	0	682	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	40.5	40.5		30.5	30.5		25.5	55.5		55.5	55.5	
Total Lost Time (s)		5.5			5.5			5.5			5.5	
Act Effct Green (s)		21.2			21.2			38.9			38.9	
Actuated g/C Ratio		0.30			0.30			0.54			0.54	
v/c Ratio		0.62			0.40			0.73			0.44	
Control Delay (s/veh)		28.2			22.5			17.3			11.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		28.2			22.5			17.3			11.0	
LOS		C			C			B			B	
Approach Delay (s/veh)		28.2			22.5			17.3			11.0	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		91			67			134			83	
Queue Length 95th (ft)		188			139			263			158	
Internal Link Dist (ft)		2102			1219			930			887	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		725			879			2030			2073	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.36			0.23			0.42			0.33	

Intersection Summary			
Area Type:	Other		
Cycle Length: 121.5			
Actuated Cycle Length: 71.8			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay (s/veh): 17.1		Intersection LOS: B	
Intersection Capacity Utilization 80.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 13: Magnolia Ave & SH 80/Austin St



Intersection	
Int Delay, s/veh	8.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	150	10	25	140	45	10	45	20	90	45	70
Future Vol, veh/h	70	150	10	25	140	45	10	45	20	90	45	70
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	78	167	11	28	156	50	11	50	22	100	50	78

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	206	0	0	178	0	0	486	589	89	500	569	103
Stage 1	-	-	-	-	-	-	328	328	-	236	236	-
Stage 2	-	-	-	-	-	-	158	261	-	264	333	-
Critical Hdwy	4.22	-	-	4.22	-	-	7.62	6.62	7.02	7.62	6.62	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	6.62	5.62	-	6.62	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.62	5.62	-	6.62	5.62	-
Follow-up Hdwy	2.26	-	-	2.26	-	-	3.56	4.06	3.36	3.56	4.06	3.36
Pot Cap-1 Maneuver	1334	-	-	1367	-	-	455	411	939	445	422	920
Stage 1	-	-	-	-	-	-	648	636	-	735	699	-
Stage 2	-	-	-	-	-	-	817	681	-	707	632	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1334	-	-	1367	-	-	337	377	939	350	387	920
Mov Cap-2 Maneuver	-	-	-	-	-	-	337	377	-	350	387	-
Stage 1	-	-	-	-	-	-	608	597	-	719	684	-
Stage 2	-	-	-	-	-	-	678	666	-	594	593	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.56	1	15.07	20.52
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	441	1007	-	-	320	-	-	456
HCM Lane V/C Ratio	0.189	0.058	-	-	0.02	-	-	0.5
HCM Ctrl Dly (s/v)	15.1	7.9	0.2	-	7.7	0.1	-	20.5
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.7	0.2	-	-	0.1	-	-	2.7

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	305	90	35	425	35	40	50	20	10	50	40
Future Vol, veh/h	20	305	90	35	425	35	40	50	20	10	50	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	22	339	100	39	472	39	44	56	22	11	56	44

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	511	0	0	439	0	0	1011	1022	389	981	1053	492
Stage 1	-	-	-	-	-	-	433	433	-	569	569	-
Stage 2	-	-	-	-	-	-	578	589	-	411	483	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.16	6.56	6.26	7.16	6.56	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.56	-	6.16	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.56	-	6.16	5.56	-
Follow-up Hdwy	2.254	-	-	2.254	-	-	3.554	4.054	3.354	3.554	4.054	3.354
Pot Cap-1 Maneuver	1034	-	-	1100	-	-	214	232	651	225	223	569
Stage 1	-	-	-	-	-	-	593	575	-	500	499	-
Stage 2	-	-	-	-	-	-	495	489	-	610	546	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1034	-	-	1100	-	-	136	214	651	152	205	569
Mov Cap-2 Maneuver	-	-	-	-	-	-	136	214	-	152	205	-
Stage 1	-	-	-	-	-	-	576	558	-	475	474	-
Stage 2	-	-	-	-	-	-	383	465	-	515	530	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.41	0.59	49.23	28.28
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	197	83	-	-	125	-	-	263
HCM Lane V/C Ratio	0.621	0.021	-	-	0.035	-	-	0.422
HCM Ctrl Dly (s/v)	49.2	8.6	0	-	8.4	0	-	28.3
HCM Lane LOS	E	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	3.6	0.1	-	-	0.1	-	-	2

2050 NO BUILD SYNCHRO RESULTS

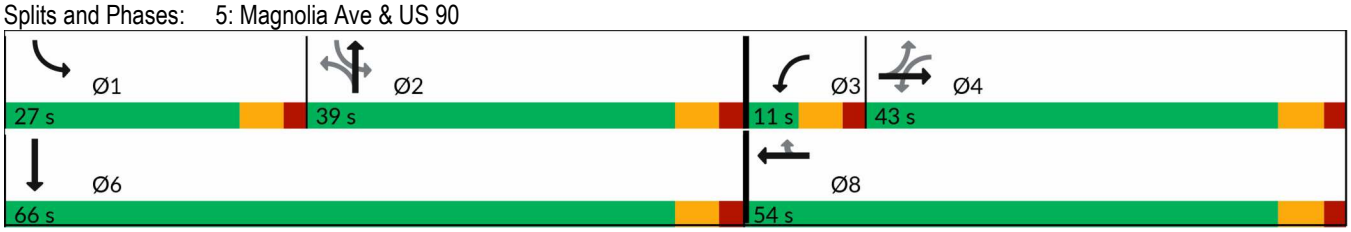
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	430	75	70	290	575	25	585	35	370	570	60
Future Volume (vph)	200	430	75	70	290	575	25	585	35	370	570	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	450		0
Storage Lanes	0		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			50		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.984				0.850		0.992			0.986	
Flt Protected		0.986		0.950				0.998		0.950		
Satd. Flow (prot)	0	3304	0	1703	1792	1524	0	3372	0	1703	3358	0
Flt Permitted		0.753		0.185				0.895		0.174		
Satd. Flow (perm)	0	2523	0	332	1792	1524	0	3024	0	312	3358	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11				452		5			13	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		376			726			635			1010	
Travel Time (s)		7.3			14.1			12.4			19.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	222	478	83	78	322	639	28	650	39	411	633	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	783	0	78	322	639	0	717	0	411	700	0
Turn Type	Perm	NA		D.P+P	NA	Perm	Perm	NA		D.P+P	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			4		8	2			2		
Total Split (s)	43.0	43.0		11.0	54.0	54.0	39.0	39.0		27.0	66.0	
Total Lost Time (s)		6.0		6.0	6.0	6.0		6.0		6.0	6.0	
Act Effct Green (s)		37.2		41.1	45.7	45.7		31.1		52.2	58.2	
Actuated g/C Ratio		0.32		0.35	0.39	0.39		0.27		0.45	0.50	
v/c Ratio		0.96		0.44	0.46	0.73		0.88		1.05	0.41	
Control Delay (s/veh)		62.7		31.7	28.7	13.9		54.1		88.4	19.0	
Queue Delay		0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay (s/veh)		62.7		31.7	28.7	13.9		54.1		88.4	19.0	
LOS		E		C	C	B		D		F	B	
Approach Delay (s/veh)		62.7			19.8			54.1			44.7	
Approach LOS		E			B			D			D	
Queue Length 50th (ft)		314		38	180	116		276		~282	171	
Queue Length 95th (ft)		#456		71	264	270		#375		#486	218	
Internal Link Dist (ft)		296			646			555			930	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)										450		
Base Capacity (vph)		816		176	745	897		868		393	1751	
Starvation Cap Reductn		0		0	0	0		0		0	0	
Spillback Cap Reductn		0		0	0	0		0		0	0	
Storage Cap Reductn		0		0	0	0		0		0	0	
Reduced v/c Ratio		0.96		0.44	0.43	0.71		0.83		1.05	0.40	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 116			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay (s/veh): 43.3		Intersection LOS: D	
Intersection Capacity Utilization 93.9%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Magnolia Ave & US 90



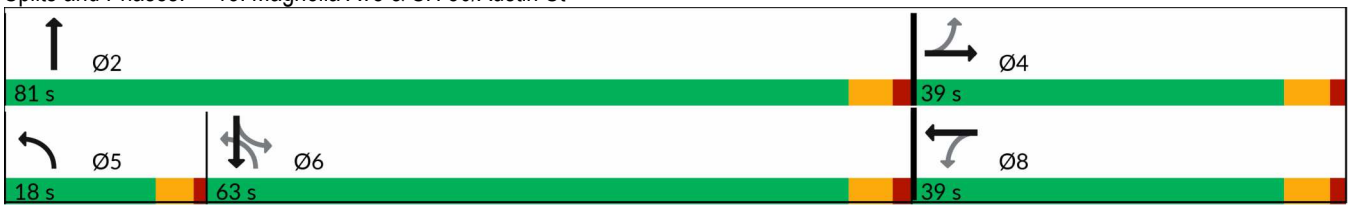
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	110	155	15	200	105	345	955	15	70	845	145
Future Volume (vph)	140	110	155	15	200	105	345	955	15	70	845	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		150	0		150	400		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.948			0.956			0.998			0.979	
Flt Protected		0.983			0.998		0.950				0.997	
Satd. Flow (prot)	0	1670	0	0	1710	0	1703	3399	0	0	3324	0
Flt Permitted		0.520			0.964		0.126				0.751	
Satd. Flow (perm)	0	884	0	0	1652	0	226	3399	0	0	2504	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			20			3			20	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		2185			1299			1010			967	
Travel Time (s)		42.6			25.3			19.7			18.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	156	122	172	17	222	117	383	1061	17	78	939	161
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	450	0	0	356	0	383	1078	0	0	1178	0
Turn Type	Perm	NA		Perm	NA		D.P+P	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			6			6		
Total Split (s)	39.0	39.0		39.0	39.0		18.0	81.0		63.0	63.0	
Total Lost Time (s)		5.5			5.5		4.5	5.5			5.5	
Act Effct Green (s)		33.5			33.5		72.0	75.5			57.5	
Actuated g/C Ratio		0.28			0.28		0.60	0.63			0.48	
v/c Ratio		1.70			0.75		1.27	0.50			0.97	
Control Delay (s/veh)		357.9			48.3		171.1	13.1			50.9	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay (s/veh)		357.9			48.3		171.1	13.1			50.9	
LOS		F			D		F	B			D	
Approach Delay (s/veh)		357.9			48.3			54.5			50.9	
Approach LOS		F			D			D			D	
Queue Length 50th (ft)		~501			239		~285	221			450	
Queue Length 95th (ft)		#709			354		#481	272			#618	
Internal Link Dist (ft)		2105			1219			930			887	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)							400					
Base Capacity (vph)		265			475		301	2140			1210	
Starvation Cap Reductn		0			0		0	0			0	
Spillback Cap Reductn		0			0		0	0			0	
Storage Cap Reductn		0			0		0	0			0	
Reduced v/c Ratio		1.70			0.75		1.27	0.50			0.97	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.70			
Intersection Signal Delay (s/veh): 92.2		Intersection LOS: F	
Intersection Capacity Utilization 116.0%		ICU Level of Service H	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 13: Magnolia Ave & SH 80/Austin St



Intersection	
Int Delay, s/veh	154.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	120	260	15	45	240	75	15	75	35	155	75	120
Future Vol, veh/h	120	260	15	45	240	75	15	75	35	155	75	120
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	133	289	17	50	267	83	17	83	39	172	83	133

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	350	0	0	306	0	0	839	1014	153	861	981	175
Stage 1	-	-	-	-	-	-	564	564	-	408	408	-
Stage 2	-	-	-	-	-	-	275	450	-	453	572	-
Critical Hdwy	4.22	-	-	4.22	-	-	7.62	6.62	7.02	7.62	6.62	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	6.62	5.62	-	6.62	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.62	5.62	-	6.62	5.62	-
Follow-up Hdwy	2.26	-	-	2.26	-	-	3.56	4.06	3.36	3.56	4.06	3.36
Pot Cap-1 Maneuver	1177	-	-	1224	-	-	252	231	853	243	241	826
Stage 1	-	-	-	-	-	-	468	497	-	580	585	-
Stage 2	-	-	-	-	-	-	697	560	-	546	493	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1177	-	-	1224	-	-	111	193	853	~ 118	202	826
Mov Cap-2 Maneuver	-	-	-	-	-	-	111	193	-	~ 118	202	-
Stage 1	-	-	-	-	-	-	410	435	-	554	558	-
Stage 2	-	-	-	-	-	-	474	535	-	369	432	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.92	1.19	45.21	$ 521.11
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	221	1016	-	-	337	-	-	192
HCM Lane V/C Ratio	0.627	0.113	-	-	0.041	-	-	2.029
HCM Ctrl Dly (s/v)	45.2	8.4	0.5	-	8.1	0.3	-	$ 521.1
HCM Lane LOS	E	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	3.7	0.4	-	-	0.1	-	-	29.6

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	35	525	155	60	730	60	70	85	35	15	85	70
Future Vol, veh/h	35	525	155	60	730	60	70	85	35	15	85	70
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	39	583	172	67	811	67	78	94	39	17	94	78

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	878	0	0	756	0	0	1739	1758	669	1686	1811	844
Stage 1	-	-	-	-	-	-	747	747	-	978	978	-
Stage 2	-	-	-	-	-	-	992	1011	-	708	833	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.16	6.56	6.26	7.16	6.56	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.56	-	6.16	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.56	-	6.16	5.56	-
Follow-up Hdwy	2.254	-	-	2.254	-	-	3.554	4.054	3.354	3.554	4.054	3.354
Pot Cap-1 Maneuver	753	-	-	837	-	-	~ 67	~ 83	450	73	~ 77	357
Stage 1	-	-	-	-	-	-	399	414	-	296	324	-
Stage 2	-	-	-	-	-	-	291	312	-	419	378	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	753	-	-	837	-	-	-	~ 63	450	-	~ 59	357
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 63	-	-	~ 59	-
Stage 1	-	-	-	-	-	-	362	376	-	250	273	-
Stage 2	-	-	-	-	-	-	125	263	-	260	343	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.49	0.68		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	84	-	-	125	-	-	-
HCM Lane V/C Ratio	-	0.052	-	-	0.08	-	-	-
HCM Ctrl Dly (s/v)	-	10	0	-	9.7	0	-	-
HCM Lane LOS	-	B	A	-	A	A	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-	0.3	-	-	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

2050 BUILD ALT E SYNCHRO RESULTS

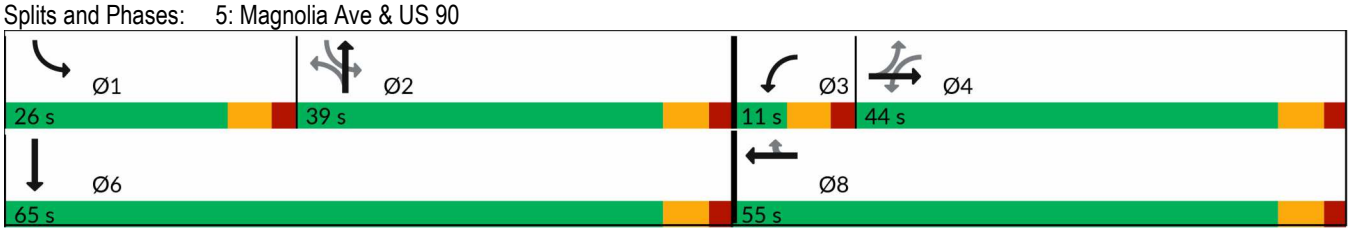
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	450	85	80	290	565	30	575	35	365	555	60
Future Volume (vph)	185	450	85	80	290	565	30	575	35	365	555	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	450		0
Storage Lanes	0		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			50		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.982				0.850		0.992			0.985	
Flt Protected		0.987		0.950				0.998		0.950		
Satd. Flow (prot)	0	3301	0	1703	1792	1524	0	3372	0	1703	3355	0
Flt Permitted		0.765		0.178				0.882		0.179		
Satd. Flow (perm)	0	2558	0	319	1792	1524	0	2980	0	321	3355	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13				442		5			13	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		376			726			635			1010	
Travel Time (s)		7.3			14.1			12.4			19.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	206	500	94	89	322	628	33	639	39	406	617	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	800	0	89	322	628	0	711	0	406	684	0
Turn Type	Perm	NA		D.P+P	NA	Perm	Perm	NA		D.P+P	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			4		8	2			2		
Total Split (s)	44.0	44.0		11.0	55.0	55.0	39.0	39.0		26.0	65.0	
Total Lost Time (s)		6.0		6.0	6.0	6.0		6.0		6.0	6.0	
Act Effct Green (s)		38.0		43.0	49.0	49.0		31.7		51.7	57.7	
Actuated g/C Ratio		0.32		0.36	0.41	0.41		0.27		0.44	0.49	
v/c Ratio		0.97		0.51	0.44	0.71		0.89		1.09	0.42	
Control Delay (s/veh)		64.1		34.4	27.6	13.0		56.0		102.7	20.2	
Queue Delay		0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay (s/veh)		64.1		34.4	27.6	13.0		56.0		102.7	20.2	
LOS		E		C	C	B		E		F	C	
Approach Delay (s/veh)		64.1			19.4			56.0			50.9	
Approach LOS		E			B			E			D	
Queue Length 50th (ft)		317		42	177	112		274		~282	169	
Queue Length 95th (ft)		#456		78	260	261		#375		#484	217	
Internal Link Dist (ft)		296			646			555			930	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)										450		
Base Capacity (vph)		827		173	739	888		832		372	1674	
Starvation Cap Reductn		0		0	0	0		0		0	0	
Spillback Cap Reductn		0		0	0	0		0		0	0	
Storage Cap Reductn		0		0	0	0		0		0	0	
Reduced v/c Ratio		0.97		0.51	0.44	0.71		0.85		1.09	0.41	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 118.7			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.09			
Intersection Signal Delay (s/veh): 45.8		Intersection LOS: D	
Intersection Capacity Utilization 93.9%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Magnolia Ave & US 90



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	110	155	15	200	105	345	955	15	70	845	145
Future Volume (vph)	140	110	155	15	200	105	345	955	15	70	845	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		150	0		150	400		0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	25		50	25		50	50		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.912			0.956			0.998			0.979	
Flt Protected	0.950				0.998		0.950				0.997	
Satd. Flow (prot)	1703	1635	0	0	1710	0	1703	3399	0	0	3324	0
Flt Permitted	0.195				0.971		0.128				0.751	
Satd. Flow (perm)	350	1635	0	0	1664	0	229	3399	0	0	2504	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		57			18			3			21	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		2182			1299			1010			967	
Travel Time (s)		42.5			25.3			19.7			18.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	156	122	172	17	222	117	383	1061	17	78	939	161
Shared Lane Traffic (%)												
Lane Group Flow (vph)	156	294	0	0	356	0	383	1078	0	0	1178	0
Turn Type	D.P+P	NA		Perm	NA		D.P+P	NA		Perm	NA	
Protected Phases	7	4			8		5	2			6	
Permitted Phases	8			8			6			6		
Total Split (s)	10.0	36.0		26.0	26.0		20.0	84.0		64.0	64.0	
Total Lost Time (s)	4.5	5.5			5.5		5.5	5.5			5.5	
Act Effct Green (s)	27.0	30.5			20.5		72.2	77.7			57.7	
Actuated g/C Ratio	0.23	0.26			0.17		0.61	0.65			0.48	
v/c Ratio	1.11	0.64			1.18		1.20	0.49			0.96	
Control Delay (s/veh)	145.8	38.9			152.1		144.6	11.4			48.2	
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	
Total Delay (s/veh)	145.8	38.9			152.1		144.6	11.4			48.2	
LOS	F	D			F		F	B			D	
Approach Delay (s/veh)		76.0			152.1			46.3			48.2	
Approach LOS		E			F			D			D	
Queue Length 50th (ft)	~117	173			~337		~283	214			463	
Queue Length 95th (ft)	#235	276			#538		#489	263			#638	
Internal Link Dist (ft)		2102			1219			930			887	

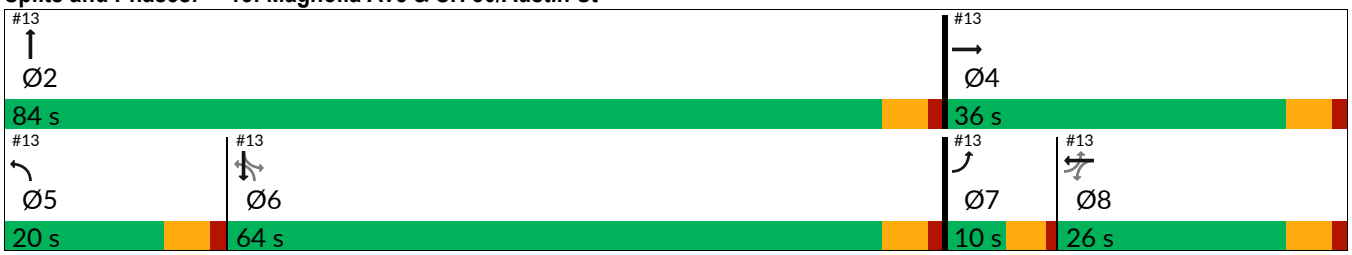
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)							400					
Base Capacity (vph)	141	461			301		318	2240			1240	
Starvation Cap Reductn	0	0			0		0	0			0	
Spillback Cap Reductn	0	0			0		0	0			0	
Storage Cap Reductn	0	0			0		0	0			0	
Reduced v/c Ratio	1.11	0.64			1.18		1.20	0.48			0.95	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 119.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay (s/veh): 61.8	Intersection LOS: E
Intersection Capacity Utilization 108.3%	ICU Level of Service G
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 13: Magnolia Ave & SH 80/Austin St



Intersection	
Int Delay, s/veh	116.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	180	130	10	45	180	145	15	80	35	120	60	95
Future Vol, veh/h	180	130	10	45	180	145	15	80	35	120	60	95
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	200	144	11	50	200	161	17	89	39	133	67	106

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	361	0	0	156	0	0	783	1011	78	897	936	181
Stage 1	-	-	-	-	-	-	550	550	-	381	381	-
Stage 2	-	-	-	-	-	-	233	461	-	517	556	-
Critical Hdwy	4.22	-	-	4.22	-	-	7.62	6.62	7.02	7.62	6.62	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	6.62	5.62	-	6.62	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.62	5.62	-	6.62	5.62	-
Follow-up Hdwy	2.26	-	-	2.26	-	-	3.56	4.06	3.36	3.56	4.06	3.36
Pot Cap-1 Maneuver	1166	-	-	1393	-	-	277	232	954	228	257	819
Stage 1	-	-	-	-	-	-	477	504	-	603	602	-
Stage 2	-	-	-	-	-	-	737	554	-	499	501	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1166	-	-	1393	-	-	137	182	954	~ 99	202	819
Mov Cap-2 Maneuver	-	-	-	-	-	-	137	182	-	~ 99	202	-
Stage 1	-	-	-	-	-	-	391	414	-	578	578	-
Stage 2	-	-	-	-	-	-	545	531	-	309	411	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	5.08	1.03	47.05	$ 433.77
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	222	1115	-	-	270	-	-	169
HCM Lane V/C Ratio	0.65	0.172	-	-	0.036	-	-	1.811
HCM Ctrl Dly (s/v)	47	8.7	0.4	-	7.7	0.2	-	$ 433.8
HCM Lane LOS	E	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	4	0.6	-	-	0.1	-	-	22.2

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	28.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	120	470	55	700	55	105	30	15	15	80	55
Future Vol, veh/h	30	120	470	55	700	55	105	30	15	15	80	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	33	133	522	61	778	61	117	33	17	17	89	61

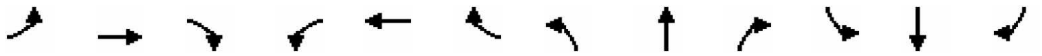
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	839	0	0	656	0	0	1406	1422	394	1147	1653	808
Stage 1	-	-	-	-	-	-	461	461	-	931	931	-
Stage 2	-	-	-	-	-	-	944	961	-	217	722	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.16	6.56	6.26	7.16	6.56	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.56	-	6.16	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.56	-	6.16	5.56	-
Follow-up Hdwy	2.254	-	-	2.254	-	-	3.554	4.054	3.354	3.554	4.054	3.354
Pot Cap-1 Maneuver	779	-	-	913	-	-	~ 114	133	646	173	96	375
Stage 1	-	-	-	-	-	-	573	558	-	315	340	-
Stage 2	-	-	-	-	-	-	309	329	-	777	425	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	779	-	-	913	-	-	-	108	646	100	~ 78	375
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	108	-	100	~ 78	-
Stage 1	-	-	-	-	-	-	530	517	-	275	297	-
Stage 2	-	-	-	-	-	-	158	288	-	655	394	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.48	0.63		$ 322.71
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	75	-	-	120	-	-	113
HCM Lane V/C Ratio	-	0.043	-	-	0.067	-	-	1.472
HCM Ctrl Dly (s/v)	-	9.8	0	-	9.2	0	-	$ 322.7
HCM Lane LOS	-	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	-	0.1	-	-	0.2	-	-	11.9

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

2050 BUILD ALT F SYNCHRO RESULTS



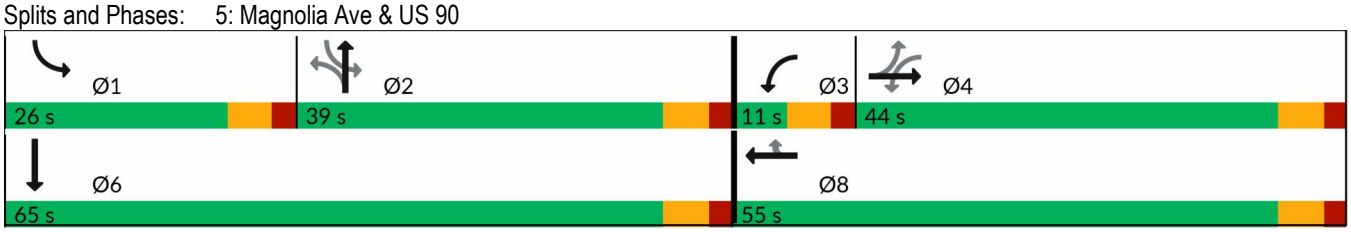
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	480	90	80	310	545	30	580	35	365	555	60
Future Volume (vph)	185	480	90	80	310	545	30	580	35	365	555	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	450		0
Storage Lanes	0		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			50		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.982				0.850		0.992			0.985	
Flt Protected		0.988		0.950				0.998		0.950		
Satd. Flow (prot)	0	3304	0	1703	1792	1524	0	3372	0	1703	3355	0
Flt Permitted		0.764		0.157				0.882		0.176		
Satd. Flow (perm)	0	2555	0	281	1792	1524	0	2980	0	315	3355	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13				441		5			13	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		376			726			635			1010	
Travel Time (s)		7.3			14.1			12.4			19.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	206	533	100	89	344	606	33	644	39	406	617	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	839	0	89	344	606	0	716	0	406	684	0
Turn Type	Perm	NA		D.P+P	NA	Perm	Perm	NA		D.P+P	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			4		8	2			2		
Total Split (s)	44.0	44.0		11.0	55.0	55.0	39.0	39.0		26.0	65.0	
Total Lost Time (s)		6.0		6.0	6.0	6.0		6.0		6.0	6.0	
Act Effct Green (s)		38.0		43.0	49.0	49.0		31.8		51.8	57.8	
Actuated g/C Ratio		0.32		0.36	0.41	0.41		0.27		0.44	0.49	
v/c Ratio		1.02		0.55	0.47	0.68		0.90		1.09	0.42	
Control Delay (s/veh)		75.4		37.3	28.3	11.8		56.5		104.7	20.1	
Queue Delay		0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay (s/veh)		75.4		37.3	28.3	11.8		56.5		104.7	20.1	
LOS		E		D	C	B		E		F	C	
Approach Delay (s/veh)		75.4			19.4			56.5			51.6	
Approach LOS		E			B			E			D	
Queue Length 50th (ft)		~361		42	192	93		276		~285	169	
Queue Length 95th (ft)		#491		78	279	233		#380		#486	217	
Internal Link Dist (ft)		296			646			555			930	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)										450		
Base Capacity (vph)		826		161	739	888		832		371	1673	
Starvation Cap Reductn		0		0	0	0		0		0	0	
Spillback Cap Reductn		0		0	0	0		0		0	0	
Storage Cap Reductn		0		0	0	0		0		0	0	
Reduced v/c Ratio		1.02		0.55	0.47	0.68		0.86		1.09	0.41	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 118.8			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.09			
Intersection Signal Delay (s/veh): 48.9		Intersection LOS: D	
Intersection Capacity Utilization 96.1%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Magnolia Ave & US 90



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	110	155	15	200	105	345	955	15	70	845	145
Future Volume (vph)	140	110	155	15	200	105	345	955	15	70	845	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		150	0		150	400		0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	25		50	25		50	50		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.912			0.956			0.998			0.979	
Flt Protected	0.950				0.998		0.950				0.997	
Satd. Flow (prot)	1703	1635	0	0	1710	0	1703	3399	0	0	3324	0
Flt Permitted	0.195				0.971		0.128				0.751	
Satd. Flow (perm)	350	1635	0	0	1664	0	229	3399	0	0	2504	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		57			18			3			21	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		2182			1299			1010			967	
Travel Time (s)		42.5			25.3			19.7			18.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	156	122	172	17	222	117	383	1061	17	78	939	161
Shared Lane Traffic (%)												
Lane Group Flow (vph)	156	294	0	0	356	0	383	1078	0	0	1178	0
Turn Type	D.P+P	NA		Perm	NA		D.P+P	NA		Perm	NA	
Protected Phases	7	4			8		5	2			6	
Permitted Phases	8			8			6			6		
Total Split (s)	10.0	36.0		26.0	26.0		20.0	84.0		64.0	64.0	
Total Lost Time (s)	4.5	5.5			5.5		5.5	5.5			5.5	
Act Effct Green (s)	27.0	30.5			20.5		72.2	77.7			57.7	
Actuated g/C Ratio	0.23	0.26			0.17		0.61	0.65			0.48	
v/c Ratio	1.11	0.64			1.18		1.20	0.49			0.96	
Control Delay (s/veh)	145.8	38.9			152.1		144.6	11.4			48.2	
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	
Total Delay (s/veh)	145.8	38.9			152.1		144.6	11.4			48.2	
LOS	F	D			F		F	B			D	
Approach Delay (s/veh)		76.0			152.1			46.3			48.2	
Approach LOS		E			F			D			D	
Queue Length 50th (ft)	~117	173			~337		~283	214			463	
Queue Length 95th (ft)	#235	276			#538		#489	263			#638	
Internal Link Dist (ft)		2102			1219			930			887	

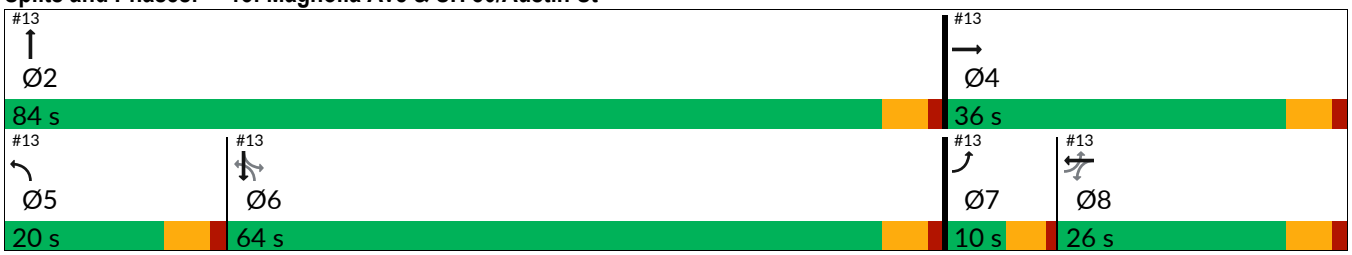
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)							400					
Base Capacity (vph)	141	461			301		318	2240			1240	
Starvation Cap Reductn	0	0			0		0	0			0	
Spillback Cap Reductn	0	0			0		0	0			0	
Storage Cap Reductn	0	0			0		0	0			0	
Reduced v/c Ratio	1.11	0.64			1.18		1.20	0.48			0.95	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 119.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay (s/veh): 61.8	Intersection LOS: E
Intersection Capacity Utilization 108.3%	ICU Level of Service G
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 13: Magnolia Ave & SH 80/Austin St



Intersection	
Int Delay, s/veh	168.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	185	130	15	50	185	150	15	80	35	135	60	105
Future Vol, veh/h	185	130	15	50	185	150	15	80	35	135	60	105
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	206	144	17	56	206	167	17	89	39	150	67	117

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	372	0	0	161	0	0	811	1047	81	928	972	186
Stage 1	-	-	-	-	-	-	564	564	-	400	400	-
Stage 2	-	-	-	-	-	-	247	483	-	528	572	-
Critical Hdwy	4.22	-	-	4.22	-	-	7.62	6.62	7.02	7.62	6.62	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	6.62	5.62	-	6.62	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.62	5.62	-	6.62	5.62	-
Follow-up Hdwy	2.26	-	-	2.26	-	-	3.56	4.06	3.36	3.56	4.06	3.36
Pot Cap-1 Maneuver	1155	-	-	1387	-	-	264	220	951	217	244	812
Stage 1	-	-	-	-	-	-	468	497	-	587	590	-
Stage 2	-	-	-	-	-	-	723	541	-	492	493	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1155	-	-	1387	-	-	124	171	951	~ 88	190	812
Mov Cap-2 Maneuver	-	-	-	-	-	-	124	171	-	~ 88	190	-
Stage 1	-	-	-	-	-	-	380	404	-	560	563	-
Stage 2	-	-	-	-	-	-	522	516	-	299	401	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	5.1	1.11	54.37	$ 611.06
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	208	1102	-	-	287	-	-	151
HCM Lane V/C Ratio	0.695	0.178	-	-	0.04	-	-	2.204
HCM Ctrl Dly (s/v)	54.4	8.8	0.4	-	7.7	0.2	-	$ 611.1
HCM Lane LOS	F	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	4.4	0.6	-	-	0.1	-	-	27.3

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	26.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	120	465	55	670	55	100	30	15	15	80	60
Future Vol, veh/h	30	120	465	55	670	55	100	30	15	15	80	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	33	133	517	61	744	61	111	33	17	17	89	67

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	806	0	0	650	0	0	1369	1386	392	1114	1614	775
Stage 1	-	-	-	-	-	-	458	458	-	897	897	-
Stage 2	-	-	-	-	-	-	911	928	-	217	717	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.16	6.56	6.26	7.16	6.56	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.56	-	6.16	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.56	-	6.16	5.56	-
Follow-up Hdwy	2.254	-	-	2.254	-	-	3.554	4.054	3.354	3.554	4.054	3.354
Pot Cap-1 Maneuver	802	-	-	917	-	-	121	140	648	182	102	392
Stage 1	-	-	-	-	-	-	575	560	-	329	353	-
Stage 2	-	-	-	-	-	-	323	342	-	777	428	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	802	-	-	917	-	-	-	114	648	108	~ 83	392
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	114	-	108	~ 83	-
Stage 1	-	-	-	-	-	-	534	520	-	289	310	-
Stage 2	-	-	-	-	-	-	168	300	-	657	397	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.47	0.65		285.1
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	76	-	-	125	-	-	123
HCM Lane V/C Ratio	-	0.042	-	-	0.067	-	-	1.395
HCM Ctrl Dly (s/v)	-	9.7	0	-	9.2	0	-	285.1
HCM Lane LOS	-	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	-	0.1	-	-	0.2	-	-	11.6

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

2050 BUILD ALT G SYNCHRO RESULTS

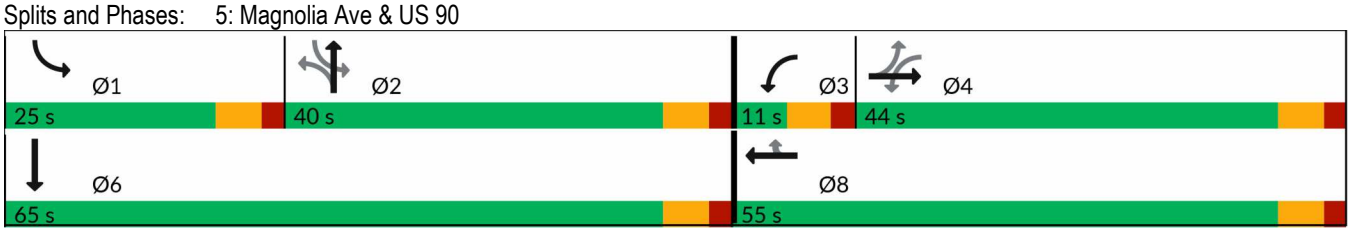
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	475	85	80	300	555	30	575	35	360	550	60
Future Volume (vph)	180	475	85	80	300	555	30	575	35	360	550	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	450		0
Storage Lanes	0		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			50		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.983				0.850		0.992			0.985	
Flt Protected		0.988		0.950				0.998		0.950		
Satd. Flow (prot)	0	3308	0	1703	1792	1524	0	3372	0	1703	3355	0
Flt Permitted		0.768		0.168				0.883		0.184		
Satd. Flow (perm)	0	2571	0	301	1792	1524	0	2983	0	330	3355	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				425		5			14	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		376			726			635			1010	
Travel Time (s)		7.3			14.1			12.4			19.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	200	528	94	89	333	617	33	639	39	400	611	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	822	0	89	333	617	0	711	0	400	678	0
Turn Type	Perm	NA		D.P+P	NA	Perm	Perm	NA		D.P+P	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			4		8	2			2		
Total Split (s)	44.0	44.0		11.0	55.0	55.0	40.0	40.0		25.0	65.0	
Total Lost Time (s)		6.0		6.0	6.0	6.0		6.0		6.0	6.0	
Act Effct Green (s)		38.0		43.0	49.0	49.0		32.0		51.1	57.1	
Actuated g/C Ratio		0.32		0.36	0.41	0.41		0.27		0.43	0.48	
v/c Ratio		0.98		0.53	0.45	0.70		0.88		1.10	0.42	
Control Delay (s/veh)		67.3		35.3	27.7	13.3		53.8		105.9	20.2	
Queue Delay		0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay (s/veh)		67.3		35.3	27.7	13.3		53.8		105.9	20.2	
LOS		E		D	C	B		D		F	C	
Approach Delay (s/veh)		67.3			19.8			53.8			52.0	
Approach LOS		E			B			D			D	
Queue Length 50th (ft)		330		42	185	116		271		~275	166	
Queue Length 95th (ft)		#474		78	269	263		#353		#475	214	
Internal Link Dist (ft)		296			646			555			930	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)										450		
Base Capacity (vph)		835		169	743	881		862		363	1684	
Starvation Cap Reductn		0		0	0	0		0		0	0	
Spillback Cap Reductn		0		0	0	0		0		0	0	
Storage Cap Reductn		0		0	0	0		0		0	0	
Reduced v/c Ratio		0.98		0.53	0.45	0.70		0.82		1.10	0.40	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 118.1			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay (s/veh): 46.6		Intersection LOS: D	
Intersection Capacity Utilization 94.7%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Magnolia Ave & US 90



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	110	155	15	200	105	345	955	15	70	845	145
Future Volume (vph)	140	110	155	15	200	105	345	955	15	70	845	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		150	0		150	400		0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	25		50	25		50	50		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.912			0.956			0.998			0.979	
Flt Protected	0.950				0.998		0.950				0.997	
Satd. Flow (prot)	1703	1635	0	0	1710	0	1703	3399	0	0	3324	0
Flt Permitted	0.195				0.971		0.128				0.751	
Satd. Flow (perm)	350	1635	0	0	1664	0	229	3399	0	0	2504	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		57			18			3			21	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		2182			1299			1010			967	
Travel Time (s)		42.5			25.3			19.7			18.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	156	122	172	17	222	117	383	1061	17	78	939	161
Shared Lane Traffic (%)												
Lane Group Flow (vph)	156	294	0	0	356	0	383	1078	0	0	1178	0
Turn Type	D.P+P	NA		Perm	NA		D.P+P	NA		Perm	NA	
Protected Phases	7	4			8		5	2			6	
Permitted Phases	8			8			6			6		
Total Split (s)	10.0	36.0		26.0	26.0		20.0	84.0		64.0	64.0	
Total Lost Time (s)	4.5	5.5			5.5		5.5	5.5			5.5	
Act Effct Green (s)	27.0	30.5			20.5		72.2	77.7			57.7	
Actuated g/C Ratio	0.23	0.26			0.17		0.61	0.65			0.48	
v/c Ratio	1.11	0.64			1.18		1.20	0.49			0.96	
Control Delay (s/veh)	145.8	38.9			152.1		144.6	11.4			48.2	
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	
Total Delay (s/veh)	145.8	38.9			152.1		144.6	11.4			48.2	
LOS	F	D			F		F	B			D	
Approach Delay (s/veh)		76.0			152.1			46.3			48.2	
Approach LOS		E			F			D			D	
Queue Length 50th (ft)	~117	173			~337		~283	214			463	
Queue Length 95th (ft)	#235	276			#538		#489	263			#638	
Internal Link Dist (ft)		2102			1219			930			887	

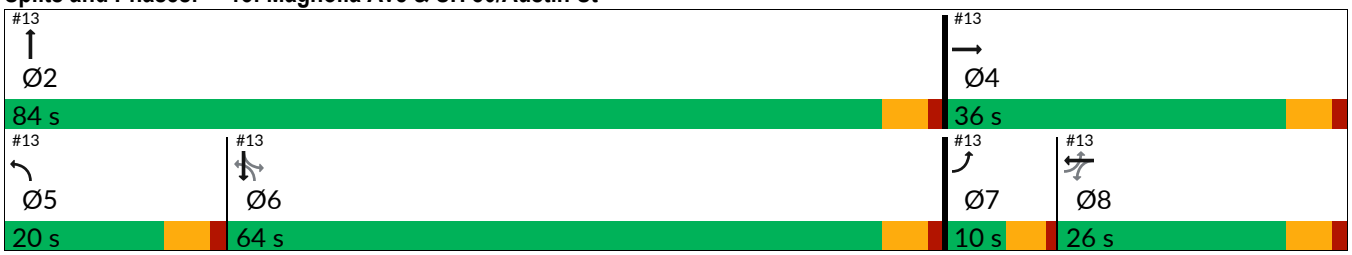
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)							400					
Base Capacity (vph)	141	461			301		318	2240			1240	
Starvation Cap Reductn	0	0			0		0	0			0	
Spillback Cap Reductn	0	0			0		0	0			0	
Storage Cap Reductn	0	0			0		0	0			0	
Reduced v/c Ratio	1.11	0.64			1.18		1.20	0.48			0.95	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 119.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay (s/veh): 61.8	Intersection LOS: E
Intersection Capacity Utilization 108.3%	ICU Level of Service G
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 13: Magnolia Ave & SH 80/Austin St



Intersection	
Int Delay, s/veh	109.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	160	110	10	50	180	150	15	75	35	135	60	105
Future Vol, veh/h	160	110	10	50	180	150	15	75	35	135	60	105
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	178	122	11	56	200	167	17	83	39	150	67	117

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	367	0	0	133	0	0	728	961	67	853	883	183
Stage 1	-	-	-	-	-	-	483	483	-	394	394	-
Stage 2	-	-	-	-	-	-	244	478	-	458	489	-
Critical Hdwy	4.22	-	-	4.22	-	-	7.62	6.62	7.02	7.62	6.62	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	6.62	5.62	-	6.62	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.62	5.62	-	6.62	5.62	-
Follow-up Hdwy	2.26	-	-	2.26	-	-	3.56	4.06	3.36	3.56	4.06	3.36
Pot Cap-1 Maneuver	1160	-	-	1420	-	-	304	248	970	246	276	815
Stage 1	-	-	-	-	-	-	523	541	-	591	593	-
Stage 2	-	-	-	-	-	-	726	544	-	541	538	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1160	-	-	1420	-	-	156	199	970	~ 120	222	815
Mov Cap-2 Maneuver	-	-	-	-	-	-	156	199	-	~ 120	222	-
Stage 1	-	-	-	-	-	-	440	455	-	565	567	-
Stage 2	-	-	-	-	-	-	525	520	-	357	452	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	5.09	1.11	37.13	$ 373.02
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	246	1117	-	-	289	-	-	197
HCM Lane V/C Ratio	0.565	0.153	-	-	0.039	-	-	1.689
HCM Ctrl Dly (s/v)	37.1	8.7	0.4	-	7.6	0.2	-	$ 373
HCM Lane LOS	E	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	3.2	0.5	-	-	0.1	-	-	22.5

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	199.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	120	470	55	665	55	95	25	15	10	60	45
Future Vol, veh/h	30	120	470	55	665	55	95	25	15	10	60	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	33	133	522	61	739	61	106	28	17	11	67	50

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	800	0	0	656	0	0	1356	1383	394	1106	1614	769
Stage 1	-	-	-	-	-	-	461	461	-	892	892	-
Stage 2	-	-	-	-	-	-	894	922	-	214	722	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.16	6.56	6.26	7.16	6.56	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.56	-	6.16	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.56	-	6.16	5.56	-
Follow-up Hdwy	2.254	-	-	2.254	-	-	3.554	4.054	3.354	3.554	4.054	3.354
Pot Cap-1 Maneuver	806	-	-	913	-	-	124	141	646	185	102	395
Stage 1	-	-	-	-	-	-	573	558	-	331	355	-
Stage 2	-	-	-	-	-	-	330	344	-	779	425	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	806	-	-	913	-	-	~ 20	115	646	116	83	395
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 20	115	-	116	83	-
Stage 1	-	-	-	-	-	-	532	518	-	291	312	-
Stage 2	-	-	-	-	-	-	199	302	-	667	395	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.47	0.65	$ 2288.27	155.35
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	28	75	-	-	126	-	-	125
HCM Lane V/C Ratio	5.452	0.041	-	-	0.067	-	-	1.026
HCM Ctrl Dly (s/v)	$ 2288.3	9.7	0	-	9.2	0	-	155.4
HCM Lane LOS	F	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	18.4	0.1	-	-	0.2	-	-	7.1

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

APPENDIX C: PLANNING-LEVEL COST ESTIMATES

ALIGNMENTS

Luling Transportation Plan Alignments Construction Cost Summary				
	Alignment E	**Alignment F**	**Alignment G**	**Option C (NE Alignment)**
Design (not included in contingency or total)	$ 1,251,538	$ 1,367,624	$ 2,017,151	$ 12,934,988
Roadway	$ 10,680,015	$ 12,050,477	$ 17,079,469	$ 91,552,084
Bridge	$ 4,095,000	$ 4,095,000	$ 6,734,000	$ 61,152,000
Pedestrian	$ -	$ -	$ -	$ -
Project Costs Not Quantifiable (Traffic Control, SW3P, Drainage, Mobilization)	$ 3,915,410	$ 4,278,580	$ 6,310,600	$ 40,466,610
Contingency (30%)	$ 5,607,128	$ 6,127,217	$ 9,037,221	$ 57,951,208
Total	$ 24,297,553	$ 26,551,274	$ 39,161,290	$ 251,121,903
ROW Cost (land)	$ 200,352	$ 227,029	$ 330,105	$ 2,125,182
Displacement Cost	$ 514,000	$ 514,000	$ -	$ 2,056,000
Total with ROW and Displacement Costs	**$ 25,011,904**	**$ 27,292,303**	**$ 39,491,395**	**$ 255,303,085**

ROW Cost (sf)	$ 0.28
Displacement Cost	$ 514,000

Annual Scope & Estimate Documentation

Date:	7/1/2026	**Consultant (if applicable):**	HDR
District:		**TxDOT Project Manager:**	
County:		**TxDOT Project Manager Office:**	
Proj Class:		**CCSJ:**	**CSJ:**
Highway:	Alignment E	**Construct Categories:**	
UTP Authority:		**FY of Current Costs:**	2026 **Est Let FY:**
Project Length:	0.9	**Bid Item Cost per Mile:**	$26,997,281

Current Project Information	Revised Project Information
Limits From: US 90	
Limits To: SH 80	
Project Description:	**Project Description:**
Luling Relief Route - Alignment E	New roadway construction

Estimate:

I.	**Design**	$1,190,580.09	(Not included in ASED total)
II.	**Roadway Bid Items**	$10,680,015.21	
III.	**Bridge Bid Items**	$4,095,000.00	
IV.	**Pedestrian Bid Items**	$0.00	
V.	**Joint Bid Utility Items** (in CST Contract under ROW CSJ)	$0.00	(Not included in UTP Inflated Construction Estimate)
VI.	**Project Costs Not Quantifiable**	$3,915,410.00	
VII.	**Project Cost Risk Contingency = 30%**	$5,607,127.56	
	Letting Estimate	**$24,297,552.78**	
VIII.	**Force Accounts** (including toll Integration)	$0.00	
IX.	**Project Incentives/Disincentives**	$0.00	
X.	**Change Order Contingency 0.00%**	$0.00	(Not included in UTP Inflated Construction Estimate)
XI.	**Utility Costs** (Not Joint Bid Utilities in CST Contract)	$0.00	(Not included in ASED total)
XII.	**Right of Way Costs**	$0.00	(Not included in ASED total)

☐ **New Project** **Current ASED Total** (Construction Estimate) **$24,297,552.78**

Estimate Type Feasibility **Last ASED Total**

Feasibility % Complete 30% **Percent Change** [(Current-Last Yr's)/Last Yr's]

Total Cost of Locally Funded Bid Items $0.00 (i.e. Cat 3 LOCAL)

Total CMAQ Eligible Costs $0.00

Inflation Percentage 0% **Inflation Amount** $0.00 4% per year, max 12%

UTP Inflated Construction Estimate $24,297,552.78

Explanation of Change from Last Year's Total

Ashton Strong (PDO Schematic)	**Date**	**Travis Campbell**	**Date**
Area Engineer/Design Supervisor		**Director of TP&D**	

TxDOT

Roadway Bid Items

Item No.	Description Code	Description	Unit	Quantity	Unit Price	Amount
Roadway items						
1	100-7002	PREPARING ROW	STA	**48**	**$ 4,815.00**	$ 231,120.00
2	110-7001	EXCAV (ROADWAY)	CY	**39,056**	**$ 10.00**	$ 390,557.04
3	132-7006	EMBANK (FNL)(DC)(TY C)	CY	**19,528**	**$ 9.00**	$ 175,750.67
4	260-7003	LIME (QUICKLIME (SLURRY))	TON	**1,247**	**$ 340.00**	$ 423,980.00
5	260-7007	LIME TRT (EXST MATL)(8")	SY	**62,978**	**$ 3.00**	$ 188,934.00
6	310-7001	PRIME COAT (AE-P)	GAL	**15,745**	**$ 5.00**	$ 78,722.50
7	341-7002	D-GR HMA TY-B SAC-B PG64-22	TON	**13,856**	**$ 129.00**	$ 1,787,424.00
8	360-7007	CONC PVMT (CRCP) (13")	SY	**58,584**	**$ 105.00**	$ 6,151,320.00
9	450-7024	RAIL (TY SSTR)	LF	**900**	**$ 74.00**	$ 66,600.00
						$ -
Illumination						
10		ILLUMINATION	LF	**4,770**	**$ 80.00**	$ 381,600.00
						$ -
Pave Markings						
11	666-7175	RE PM TY II (W) 6" (SLD)	LF	**19,081**	**$ 0.21**	$ 4,007.01
Traffic Signals						
12		TRAFFIC SIGNAL	Intersection	**2**	**$ 400,000.00**	$ 800,000.00
					Total	**$ 10,680,015.21**

Bridge Bid Items

Item No.	Description Code	Description	Unit	Quantity	Unit Price	Amount
13		BRIDGE	SF	**23,400**	**$ 175.00**	$ 4,095,000.00
					Total	**$ 4,095,000.00**

Project Costs Not Quantifiable

Description	Amount
TRAFFIC CONTROL (5%)	$ 738,760.00
SW3P (5%)	$ 738,760.00
DRAINAGE (5%)	$ 738,760.00
10% Prep ROW 10%(Roadway + Bridge + Pedestrian + Allowances)	
10% Mobilization (Roadway + Bridge + Pedestrian + Allowances + Prep ROW)	$ 1,699,130.00
Total	**$ 3,915,410.00**

Annual Scope & Estimate Documentation

Date:	7/1/2026	**Consultant (if applicable):**	HDR
District:		**TxDOT Project Manager:**	
County:		**TxDOT Project Manager Office:**	
Proj Class:		**CCSJ:**	**CSJ:**
Highway:	Alignment F	**Construct Categories:**	
UTP Authority:		**FY of Current Costs:**	2026 **Est Let FY:**
Project Length:	1	**Bid Item Cost per Mile:**	$26,551,274

Current Project Information	Revised Project Information
Limits From: US 90	
Limits To: SH 80	
Project Description: **Luling Relief Route - Alignment F**	**Project Description:** New roadway construction

Estimate:

I.	**Design**	$1,301,012.43	(Not included in ASED total)
II.	**Roadway Bid Items**	$12,050,477.00	
III.	**Bridge Bid Items**	$4,095,000.00	
IV.	**Pedestrian Bid Items**	$0.00	
V.	**Joint Bid Utility Items** (in CST Contract under ROW CSJ)	$0.00	(Not included in UTP Inflated Construction Estimate)
VI.	**Project Costs Not Quantifiable**	$4,278,580.00	
VII.	**Project Cost Risk Contingency = 30%**	$6,127,217.10	
	Letting Estimate	**$26,551,274.10**	
VIII.	**Force Accounts** (including toll Integration)	$0.00	
IX.	**Project Incentives/Disincentives**	$0.00	
X.	**Change Order Contingency 0.00%**	$0.00	(Not included in UTP Inflated Construction Estimate)
XI.	**Utility Costs** (Not Joint Bid Utilities in CST Contract)	$0.00	(Not included in ASED total)
XII.	**Right of Way Costs**	$0.00	(Not included in ASED total)

☐ **New Project** **Current ASED Total** (Construction Estimate) **$26,551,274.10**

Estimate Type Feasibility **Last ASED Total**

Feasibility % Complete 30% **Percent Change** [(Current-Last Yr's)/Last Yr's]

Total Cost of Locally Funded Bid Items $0.00 (i.e. Cat 3 LOCAL)

Total CMAQ Eligible Costs $0.00

Inflation Percentage 0% **Inflation Amount** $0.00 4% per year, max 12%

UTP Inflated Construction Estimate $26,551,274.10

Explanation of Change from Last Year's Total

Ashton Strong (PDO Schematic)	**Date**	**Travis Campbell**	**Date**
Area Engineer/Design Supervisor		**Director of TP&D**	

TxDOT

Roadway Bid Items

Item No.	Description Code	Description	Unit	Quantity	Unit Price	Amount
Roadway items						
1	100-7002	PREPARING ROW	STA	**55**	**$ 4,815.00**	$ 264,825.00
2	110-7001	EXCAV (ROADWAY)	CY	**44,514**	**$ 10.00**	$ 445,136.30
3	132-7006	EMBANK (FNL)(DC)(TY C)	CY	**22,257**	**$ 9.00**	$ 200,311.33
4	260-7003	LIME (QUICKLIME (SLURRY))	TON	**1,422**	**$ 340.00**	$ 483,480.00
5	260-7007	LIME TRT (EXST MATL)(8")	SY	**71,779**	**$ 3.00**	$ 215,337.00
6	310-7001	PRIME COAT (AE-P)	GAL	**17,945**	**$ 5.00**	$ 89,723.75
7	341-7002	D-GR HMA TY-B SAC-B PG64-22	TON	**15,792**	**$ 129.00**	$ 2,037,168.00
8	360-7007	CONC PVMT (CRCP) (13")	SY	**66,771**	**$ 105.00**	$ 7,010,955.00
9	450-7024	RAIL (TY SSTR)	LF	**900**	**$ 74.00**	$ 66,600.00
						$ -
Illumination						
10		ILLUMINATION	LF	**5,405**	**$ 80.00**	$ 432,400.00
						$ -
Pave Markings						
11	666-7175	RE PM TY II (W) 6" (SLD)	LF	**21,622**	**$ 0.21**	$ 4,540.62
Traffic Signals						
12		TRAFFIC SIGNAL	Intersection	**2**	**$ 400,000.00**	$ 800,000.00
					Total	**$ 12,050,477.00**

Bridge Bid Items

Item No.	Description Code	Description	Unit	Quantity	Unit Price	Amount
13		BRIDGE	SF	**23,400**	**$ 175.00**	$ 4,095,000.00
					Total	**$ 4,095,000.00**

Project Costs Not Quantifiable

Description	Amount
TRAFFIC CONTROL (5%)	$ 807,280.00
SW3P (5%)	$ 807,280.00
DRAINAGE (5%)	$ 807,280.00
10% Prep ROW 10%(Roadway + Bridge + Pedestrian + Allowances)	
10% Mobilization (Roadway + Bridge + Pedestrian + Allowances + Prep ROW)	$ 1,856,740.00
Total	**$ 4,278,580.00**

Annual Scope & Estimate Documentation

Date:	7/1/2026	**Consultant (if applicable):**	HDR
District:		**TxDOT Project Manager:**	
County:		**TxDOT Project Manager Office:**	
Proj Class:		**CCSJ:**	**CSJ:**
Highway:	Alignment G	**Construct Categories:**	
UTP Authority:		**FY of Current Costs:**	2026 **Est Let FY:**
Project Length:	1.5	**Bid Item Cost per Mile:**	$26,107,527

Current Project Information	Revised Project Information
Limits From: US 90	
Limits To: SH 80	
Project Description:	**Project Description:**
Luling Relief Route - Alignment G	New roadway construction

Estimate:

I.	**Design**	$1,918,903.20	(Not included in ASED total)
II.	**Roadway Bid Items**	$17,079,469.10	
III.	**Bridge Bid Items**	$6,734,000.00	
IV.	**Pedestrian Bid Items**	$0.00	
V.	**Joint Bid Utility Items** (in CST Contract under ROW CSJ)	$0.00	(Not included in UTP Inflated Construction Estimate)
VI.	**Project Costs Not Quantifiable**	$6,310,600.00	
VII.	**Project Cost Risk Contingency = 30%**	$9,037,220.73	
	Letting Estimate	**$39,161,289.83**	
VIII.	**Force Accounts** (including toll Integration)	$0.00	
IX.	**Project Incentives/Disincentives**	$0.00	
X.	**Change Order Contingency 0.00%**	$0.00	(Not included in UTP Inflated Construction Estimate)
XI.	**Utility Costs** (Not Joint Bid Utilities in CST Contract)	$0.00	(Not included in ASED total)
XII.	**Right of Way Costs**	$0.00	(Not included in ASED total)

☐ **New Project** **Current ASED Total** (Construction Estimate) **$39,161,289.83**

Estimate Type Feasibility **Last ASED Total**

Feasibility % Complete 30% **Percent Change** [(Current-Last Yr's)/Last Yr's]

Total Cost of Locally Funded Bid Items $0.00 (i.e. Cat 3 LOCAL)

Total CMAQ Eligible Costs $0.00

Inflation Percentage 0% **Inflation Amount** $0.00 4% per year, max 12%

UTP Inflated Construction Estimate $39,161,289.83

Explanation of Change from Last Year's Total

Ashton Strong (PDO Schematic)	**Date**	**Travis Campbell**	**Date**
Area Engineer/Design Supervisor		**Director of TP&D**	

TxDOT

Roadway Bid Items

Item No.	Description Code	Description	Unit	Quantity	Unit Price	Amount
Roadway items						
1	100-7002	PREPARING ROW	STA	**79**	**$ 4,815.00**	$ 380,385.00
2	110-7001	EXCAV (ROADWAY)	CY	**64,355**	**$ 10.00**	$ 643,554.07
3	132-7006	EMBANK (FNL)(DC)(TY C)	CY	**32,178**	**$ 9.00**	$ 289,599.33
4	260-7003	LIME (QUICKLIME (SLURRY))	TON	**2,055**	**$ 340.00**	$ 698,700.00
5	260-7007	LIME TRT (EXST MATL)(8")	SY	**103,774**	**$ 3.00**	$ 311,322.00
6	310-7001	PRIME COAT (AE-P)	GAL	**25,944**	**$ 5.00**	$ 129,717.50
7	341-7002	D-GR HMA TY-B SAC-B PG64-22	TON	**22,831**	**$ 129.00**	$ 2,945,199.00
8	360-7007	CONC PVMT (CRCP) (13")	SY	**96,534**	**$ 105.00**	$ 10,136,070.00
9	450-7024	RAIL (TY SSTR)	LF	**1,480**	**$ 74.00**	$ 109,520.00
						$ -
Illumination						
10		ILLUMINATION	LF	**7,860**	**$ 80.00**	$ 628,800.00
						$ -
Pave Markings						
11	666-7175	RE PM TY II (W) 6" (SLD)	LF	**31,439**	**$ 0.21**	$ 6,602.19
Traffic Signals						
12		TRAFFIC SIGNAL	Intersection	**2**	**$ 400,000.00**	$ 800,000.00
					Total	**$ 17,079,469.10**

Bridge Bid Items

Item No.	Description Code	Description	Unit	Quantity	Unit Price	Amount
13		BRIDGE	SF	**38,480**	**$ 175.00**	$ 6,734,000.00
					Total	**$ 6,734,000.00**

Project Costs Not Quantifiable

Description	Amount
TRAFFIC CONTROL (5%)	$ 1,190,680.00
SW3P (5%)	$ 1,190,680.00
DRAINAGE (5%)	$ 1,190,680.00
10% Prep ROW 10%(Roadway + Bridge + Pedestrian + Allowances)	
10% Mobilization (Roadway + Bridge + Pedestrian + Allowances + Prep ROW)	$ 2,738,560.00
Total	**$ 6,310,600.00**

APPENDIX D: PLANNING-LEVEL COST ESTIMATES

FOCUS AREAS

Luling Transportation Plan Focus Areas 1 and 2 Roadway Construction Cost Summary			
	Focus Area 1 Repave S. Hackberry Ave. (US 90 to Houston St.)	**Focus Area 2A** Reconstruct N. Hackberry Ave. (Trinity St. to SH 80)	**Focus Area 2B** Reconstruct N. Hackberry Ave. (FM2984 to Trinity St.)
Design (not included in contingency or total)	$ 69,916	$ 689,643	$ 234,916
Roadway	$ 825,387	$ 1,944,075	$ 2,608,552
Bridge	$ -	$ 5,915,000	$ -
Pedestrian	$ -	$ 282,507	$ 306,720
Project Costs Not Quantifiable (Traffic Control, SW3P, Drainage, Mobilization)	$ 218,730	$ 2,157,530	$ 772,570
Contingency (30%)	$ 313,235	$ 3,089,733	$ 1,106,353
Total	$ 1,357,352	$ 13,388,845	$ 4,794,194
ROW Cost (land)	$ -	$ -	$ -
Displacement Cost	$ -	$ -	$ -
Total with ROW and Displacement Costs	**$ 1,357,352**	**$ 13,388,845**	**$ 4,794,194**

PROJECT ESTIMATE								
City of Luling								
Focus Area 1		**S. Hackberry Ave. from US 90/E. Pierce St to E. Houston St**						
Project	**Improvement**	**Item Description**	**TxDOT Bid Code**	**Price**	**Unit**	**Qty**	**Total**	**Total (20% Contigency)**
1A	ADA-compliant sidewalks		531-7002	$ 7.20	SF	9,880	$71,136	$85,400
	Curb ramp improvements		531-7005/531-7006	$ 2,500.00	EA	19	$47,500	$57,000
	Project Total						**$118,636**	**$142,400**
1B	Pavement Resurfacing			-	EA	1	-	$1,357,400*
	Pavement Restriping (Center Line)	PAVEMENT SLER 6"	666-7347	$ 0.15	LF	2,386	$358	$400
		PREFAB PM TY B (Y)(6")(SLD)	668-7051	$ 9.36	LF	2,386	$22,333	$26,800
		PAV SURF PREP FOR MRK (6")	678-7002	$ 0.06	LF	2,386	$143	$200
	Pavement Restriping (Edge Line)	PAVEMENT SLER 6"	666-7347	$ 0.15	LF	2,386	$358	$400
		PREFAB PM TY B (W)(6")(SLD)	668-7009	$ 6.65	LF	2,386	$15,867	$19,000
		PAV SURF PREP FOR MRK (6")	678-7002	$ 0.06	LF	2,386	$143	$200
	Stop-Bar Restriping	PAVEMENT SLER 24"	666-7352	$ 1.61	LF	192	$309	$400
		PREFAB PM TY B (W)(24")(SLD)	668-7021	$ 32.50	LF	192	$6,240	$7,500
		PAV SURF PREP FOR MRK (24")	678-7008	$ 0.86	LF	192	$165	$200
	Install/refresh signs		636-7010	$ 1,070.00	EA	25	$26,750	$32,100
	School zone back flashers			$ 16,000.00	EA	2	$32,000	$38,400
	High Visibility Crosswalks			$ 2,600.00	EA	16	$41,600	$49,900
	Install/improve lighting			$ 4,000.00	EA	11	$44,000	$52,800
	Project Total						**$190,266**	**$1,585,700**
1C	New traffic signal			$ 500,000.00	EA	1	$500,000	$600,000
	High Visibility Crosswalks			$ 2,600.00	EA	4	$10,400	$12,500
	Install/improve lighting			$ 4,000.00	EA	4	$16,000	$19,200
	Curb ramp improvements		531-7005/531-7006	$ 2,500.00	EA	1	$2,500	$3,000
	Project Total						**$528,900**	**$634,700**

** 30% Contingency*

PROJECT ESTIMATE							
City of Luling							
Focus Area 2		**N. Hackberry Ave. from FM2984/Lincoln St to SH80/Austin Ave.**					
Project	**Improvement**	**TxDOT Bid Code**	**Price**	**Unit**	**Qty**	**Total**	**Total (20% Contigency)**
2A	Reconstruct roadway with sidewalks (Trinity St. to SH80/Ausin Ave.)		-	EA	1	-	$13,388,800*
	Dynamic speed feedback signs		$ 10,000.00	EA	2	$20,000	$24,000
	Install/refresh signs	636-7010	$ 1,070.00	EA	5	$5,350	$6,400
	Signal warning flasher installations (on SB approach for N Hackberry Ave and SH80/E Austin intersection)	685-7004	$7,812	EA	1	$7,812	$9,400
	New traffic signal		$ 500,000.00	EA	1	$500,000	$600,000
	High Visibility Crosswalks		$ 2,600.00	EA	4	$10,400	$12,500
	Install/improve lighting		$ 4,000.00	EA	4	$16,000	$19,200
	Curb ramp improvements	531-7005/531-7006	$ 2,500.00	EA	4	$10,000	$12,000
	Project Total					**$569,562**	**$14,072,300**
2B	Reconstruct roadway with sidewalks (FM2984/Lincoln St. to Trinity St.)		-	EA	1	-	$4,794,200*
	Install/refresh signs	636-7010	$ 1,070.00	EA	5	$5,350	$6,400
	Project Total					**$5,350**	**$4,800,600**

** 30% Contingency*

PROJECT ESTIMATE								
City of Luling								
Focus Area 3		**SH80/Austin Ave. from E. Fannin St to E. Milam St**						
Project	**Improvement**	**Item Description**	**TxDOT Bid Code**	**Price**	**Unit**	**Qty**	**Total**	**Total (20% Contigency)**
3A	Brick Pattern Intersections	RMV (4") TRT/UNTRT BASE & ASPH PAV	105-7024	$ 3.55	SY	1,095	$3,887	$4,700
		LANDSCAPE PAVERS	528-7001	$ 119.81	SY	1,095	$131,192	$157,400
	Curb ramp improvements		531-7005/531-7006	$ 2,500.00	EA	1	$2,500	$3,000
	Install/refresh signs		636-7010	$ 1,070.00	EA	4	$4,280	$5,100
	Stop-Bar Restriping	PAVEMENT SLER 24"	666-7352	$ 1.61	LF	48	$77	$100
		PREFAB PM TY B (W)(24")(SLD)	668-7021	$ 32.50	LF	48	$1,560	$1,900
		PAV SURF PREP FOR MRK (24")	678-7008	$ 0.86	LF	48	$41	$100
	Dynamic speed feedback signs			$ 10,000.00	EA	2	$20,000	$24,000
	Project Total						**$163,538**	**$196,300**
3B	Install HAWK (PHB)			$ 250,000.00	EA	1	$250,000	$300,000
	High Visibility Crosswalks			$ 2,600.00	EA	8	$20,800	$25,000
	Install/refresh signs		636-7010	$ 1,070.00	EA	2	$2,140	$2,600
	Project Total						**$272,940**	**$327,600**
3C	Install/improve lighting			$ 4,000.00	EA	12	$48,000	$57,600
	Project Total						**$48,000**	**$57,600**

PROJECT ESTIMATE								
City of Luling								
Focus Area 4		**US183 and US90 Intersection**						
Project	**Improvement**	**Item Description**	**TxDOT Bid Code**	**Price**	**Unit**	**Qty**	**Amount**	**Amount (with 20% Contigency)**
4A	Pavement Restriping (Center Line) for SB Approach	PAVEMENT SLER 6"	666-7347	$ 0.15	LF	1,650	$248	$300
		PREFAB PM TY B (W)(6")(BRK)	668-7008	$ 10.00	LF	1,650	$16,500	$19,800
		PAV SURF PREP FOR MRK (6")	678-7002	$ 0.06	LF	1,650	$99	$100
	Pavement Restriping (Edge Line) for SB Approach	PAVEMENT SLER 6"	666-7347	$ 0.15	LF	3,300	$495	$600
		PREFAB PM TY B (W)(6")(SLD)	668-7009	$ 6.65	LF	3,300	$21,945	$26,300
		PAV SURF PREP FOR MRK (6")	678-7002	$ 0.06	LF	3,300	$198	$200
	Install/refresh signs		636-7010	$ 1,070.00	EA	8	$8,560	$10,300
	Pavement Restriping (Center Line) for Intersection	PAVEMENT SLER 6"	666-7347	$ 0.15	LF	1,110	$167	$200
		PREFAB PM TY B (W)(6")(BRK)	668-7008	$ 10.00	LF	1,110	$11,100	$13,300
		PAV SURF PREP FOR MRK (6")	678-7002	$ 0.06	LF	1,110	$67	$100
	Pavement Restriping (Edge Line) for Intersection	PAVEMENT SLER 6"	666-7347	$ 0.15	LF	2,220	$333	$400
		PREFAB PM TY B (W)(6")(SLD)	668-7009	$ 6.65	LF	2,220	$14,763	$17,700
		PAV SURF PREP FOR MRK (6")	678-7002	$ 0.06	LF	2,220	$133	$200
	Stop-Bar Restriping	PAVEMENT SLER 24"	666-7352	$ 1.61	LF	72	$116	$100
		PREFAB PM TY B (W)(24")(SLD)	668-7021	$ 32.50	LF	72	$2,340	$2,800
		PAV SURF PREP FOR MRK (24")	678-7008	$ 0.86	LF	72	$62	$100
	Dedicated left turn lanes			$ 250,000.00	EA	1	$250,000	$300,000
	Signal Retiming			$ 2,600.00	EA	1	$2,600	$3,100
	Project Total						**$329,725**	**$395,600**
4B	Install/improve lighting			$ 4,800.00	EA	16	$76,800	$92,200
	Project Total						**$76,800**	**$92,200**

Annual Scope & Estimate Documentation

Date:	7/1/2026	**Consultant (if applicable):**	HDR
District:		**TxDOT Project Manager:**	
County:		**TxDOT Project Manager Office:**	
Proj Class:		**CCSJ:**	**CSJ:**
Highway:	S. Hackberry Ave	**Construct Categories:**	
UTP Authority:		**FY of Current Costs:**	2026 **Est Let FY:**
Project Length:	0.25	**Bid Item Cost per Mile:**	$5,429,410

Current Project Information	Revised Project Information
Limits From: US 90	
Limits To: Houston Street	
Project Description: **Focus Area 1**	**Project Description:** Repave S. Hackberry from US 90 to Houston St.

Estimate:

I.	**Design**	$66,510.27	(Not included in ASED total)
II.	**Roadway Bid Items**	$825,387.22	
III.	**Bridge Bid Items**	$0.00	
IV.	**Pedestrian Bid Items**	$0.00	
V.	**Joint Bid Utility Items** (in CST Contract under ROW CSJ)	$0.00	(Not included in UTP Inflated Construction Estimate)
VI.	**Project Costs Not Quantifiable**	$218,730.00	
VII.	**Project Cost Risk Contingency = 30%**	$313,235.17	
	Letting Estimate	**$1,357,352.39**	
VIII.	**Force Accounts** (including toll Integration)	$0.00	
IX.	**Project Incentives/Disincentives**	$0.00	
X.	**Change Order Contingency 0.00%**	$0.00	(Not included in UTP Inflated Construction Estimate)
XI.	**Utility Costs** (Not Joint Bid Utilities in CST Contract)	$0.00	(Not included in ASED total)
XII.	**Right of Way Costs**	$0.00	(Not included in ASED total)
☐ **New Project**	**Current ASED Total** (Construction Estimate)	**$1,357,352.39**	

Estimate Type Feasibility **Last ASED Total**

Feasibility % Complete 30% **Percent Change** [(Current-Last Yr's)/Last Yr's]

Total Cost of Locally Funded Bid Items $0.00 (i.e. Cat 3 LOCAL)

Total CMAQ Eligible Costs $0.00

Inflation Percentage 0% **Inflation Amount** $0.00 4% per year, max 12%

UTP Inflated Construction Estimate $1,357,352.39

Explanation of Change from Last Year's Total

Ashton Strong (PDO Schematic)	**Date**	**Travis Campbell**	**Date**
Area Engineer/Design Supervisor		**Director of TP&D**	

TxDOT

Roadway Bid Items

Item No.	Description Code	Description	Unit	Quantity	Unit Price	Amount
Roadway items						
1	100-7002	PREPARING ROW	STA	**15**	**$ 4,815.00**	$ 72,225.00
2	344-7020	SP MIXES SP-C SAC-A PG70-22	TON	**922**	**$ 180.00**	$ 165,880.00
3	351-7011	FLEXIBLE PAVEMENT STRUCTURE REPAIR(12")	SY	**2,094**	**$ 250.00**	$ 523,611.11
4	354-7051	PLANE ASPH CONC PAV(2")	SY	**8,378**	**$ 4.00**	$ 33,511.11
5	3006-7001	UNDERSEAL COURSE	GAL	**1,676**	**$ 13.00**	$ 21,782.22
6	3007-7001	BONDING COURSE	GAL	**838**	**$ 10.00**	$ 8,377.78
					Total	**$ 825,387.22**

Project Costs Not Quantifiable

Description	Amount
TRAFFIC CONTROL (5%)	$ 41,270.00
SW3P (5%)	$ 41,270.00
DRAINAGE (5%)	$ 41,270.00
10% Prep ROW 10%(Roadway + Bridge + Pedestrian + Allowances)	
10% Mobilization (Roadway + Bridge + Pedestrian + Allowances + Prep ROW)	$ 94,920.00
Total	**$ 218,730.00**

Annual Scope & Estimate Documentation

Date:	7/1/2026	**Consultant (if applicable):**	HDR
District:		**TxDOT Project Manager:**	
County:		**TxDOT Project Manager Office:**	
Proj Class:		**CCSJ:**	**CSJ:**
Highway:	N. Hackberry Avenue	**Construct Categories:**	
UTP Authority:		**FY of Current Costs:**	2026 **Est Let FY:**
Project Length:	0.55	**Bid Item Cost per Mile:**	$8,716,717

Current Project Information	Revised Project Information
Limits From: FM 2984 (Lincoln Street)	
Limits To: Trinity Street	
Project Description:	**Project Description:**
Focus Area 2	Reconstruct N. Hackberry Ave. from FM 2984 to Trinity Street

Estimate:

I.	**Design**	$234,915.52	(Not included in ASED total)
II.	**Roadway Bid Items**	$2,608,551.80	
III.	**Bridge Bid Items**	$0.00	
IV.	**Pedestrian Bid Items**	$306,720.00	
V.	**Joint Bid Utility Items** (in CST Contract under ROW CSJ)	$0.00	(Not included in UTP Inflated Construction Estimate)
VI.	**Project Costs Not Quantifiable**	$772,570.00	
VII.	**Project Cost Risk Contingency = 30%**	$1,106,352.54	
	Letting Estimate	**$4,794,194.34**	
VIII.	**Force Accounts** (including toll Integration)	$0.00	
IX.	**Project Incentives/Disincentives**	$0.00	
X.	**Change Order Contingency 0.00%**	$0.00	(Not included in UTP Inflated Construction Estimate)
XI.	**Utility Costs** (Not Joint Bid Utilities in CST Contract)	$0.00	(Not included in ASED total)
XII.	**Right of Way Costs**	$0.00	(Not included in ASED total)

☐ **New Project** **Current ASED Total** (Construction Estimate) **$4,794,194.34**

Estimate Type Feasibility **Last ASED Total**

Feasibility % Complete 30% **Percent Change** [(Current-Last Yr's)/Last Yr's]

Total Cost of Locally Funded Bid Items $0.00 (i.e. Cat 3 LOCAL)

Total CMAQ Eligible Costs $0.00

Inflation Percentage 0% **Inflation Amount** $0.00 4% per year, max 12%

UTP Inflated Construction Estimate $4,794,194.34

Explanation of Change from Last Year's Total

Ashton Strong (PDO Schematic) Date	**Travis Campbell Date**
Area Engineer/Design Supervisor	**Director of TP&D**

TxDOT

Roadway Bid Items

Item No.	Description Code	Description	Unit	Quantity	Unit Price	Amount
Roadway items						
1	100-7002	PREPARING ROW	STA	**29**	**$ 4,815.00**	$ 139,635.00
2	110-7001	EXCAV (ROADWAY)	CY	**8,533**	**$ 10.00**	$ 85,333.33
3	132-7006	EMBANK (FNL)(DC)(TY C)	CY	**4,267**	**$ 9.00**	$ 38,400.00
4	260-7003	LIME (QUICKLIME (SLURRY))	TON	**273**	**$ 340.00**	$ 92,820.00
5	260-7007	LIME TRT (EXST MATL)(8")	SY	**13,760**	**$ 3.00**	$ 41,280.00
6	310-7001	PRIME COAT (AE-P)	GAL	**3,440**	**$ 5.00**	$ 17,200.00
7	341-7002	D-GR HMA TY-B SAC-B PG64-22	TON	**3,028**	**$ 129.00**	$ 390,612.00
8	360-7007	CONC PVMT (CRCP) (13")	SY	**12,800**	**$ 105.00**	$ 1,344,000.00
						$ -
Illumination						
9		ILLUMINATION	LF	**2,880**	**$ 80.00**	$ 230,400.00
						$ -
Pave Markings						
10	666-7175	RE PM TY II (W) 6" (SLD)	LF	**2,880**	**$ 0.21**	$ 604.80
Removal						
11	104-7001	REMOV CONC (PAV)	SY	**12,800**	**$ 14.00**	$ 179,200.00
12	105-7052	RMV (0"-12") TRT/UNTRT BASE & ASPH PAV	CY	**2,133**	**$ 11.00**	$ 23,466.67
13	305-7002	SALV, HAUL & STKPL RCL APH PV (0 TO 2")	SY	**12,800**	**$ 2.00**	$ 25,600.00
					Total	**$ 2,608,551.80**

Bridge Bid Items

Item No.	Description Code	Description	Unit	Quantity	Unit Price	Amount
					Total	$ -

Pedestrian Bid Items

Item No.	Description Code	Description	Unit	Quantity	Unit Price	Amount
14	531-7003	CONC SIDEWALKS (6")	SY	**3,840**	**$73.00**	$280,320.00
15	531 7010	CURB RAMPS (TY 7)	EA	**10**	**$2,640.00**	$26,400.00
					Total	**$ 306,720.00**

Project Costs Not Quantifiable

Description	Amount
TRAFFIC CONTROL (5%)	$ 145,770.00
SW3P (5%)	$ 145,770.00
DRAINAGE (5%)	$ 145,770.00
10% Prep ROW 10%(Roadway + Bridge + Pedestrian + Allowances)	
10% Mobilization (Roadway + Bridge + Pedestrian + Allowances + Prep ROW)	$ 335,260.00
Total	**$ 772,570.00**

Annual Scope & Estimate Documentation

Date:	7/1/2026	**Consultant (if applicable):**	HDR
District:		**TxDOT Project Manager:**	
County:		**TxDOT Project Manager Office:**	
Proj Class:		**CCSJ:**	**CSJ:**
Highway:	N. Hackberry Avenue	**Construct Categories:**	
UTP Authority:		**FY of Current Costs:**	2026 **Est Let FY:**
Project Length:	0.45	**Bid Item Cost per Mile:**	$29,752,988

Current Project Information	Revised Project Information
Limits From: Trinity Street	
Limits To: SH 80 (Austin Ave.)	
Project Description: **Focus Area 2**	**Project Description:** Reconstruct N. Hackberry Ave from Trinity St. to SH 80

Estimate:

I.	**Design**	$656,053.39	(Not included in ASED total)
II.	**Roadway Bid Items**	$1,944,074.62	
III.	**Bridge Bid Items**	$5,915,000.00	
IV.	**Pedestrian Bid Items**	$282,506.67	
V.	**Joint Bid Utility Items** (in CST Contract under ROW CSJ)	$0.00	(Not included in UTP Inflated Construction Estimate)
VI.	**Project Costs Not Quantifiable**	$2,157,530.00	
VII.	**Project Cost Risk Contingency = 30%**	$3,089,733.39	
	Letting Estimate	**$13,388,844.67**	
VIII.	**Force Accounts** (including toll Integration)	$0.00	
IX.	**Project Incentives/Disincentives**	$0.00	
X.	**Change Order Contingency 0.00%**	$0.00	(Not included in UTP Inflated Construction Estimate)
XI.	**Utility Costs** (Not Joint Bid Utilities in CST Contract)	$0.00	(Not included in ASED total)
XII.	**Right of Way Costs**	$0.00	(Not included in ASED total)
☐ **New Project**	**Current ASED Total** (Construction Estimate)	**$13,388,844.67**	

Estimate Type Feasibility **Last ASED Total**

Feasibility % Complete 30% **Percent Change** [(Current-Last Yr's)/Last Yr's]

Total Cost of Locally Funded Bid Items $0.00 (i.e. Cat 3 LOCAL)

Total CMAQ Eligible Costs $0.00

Inflation Percentage 0% **Inflation Amount** $0.00 4% per year, max 12%

UTP Inflated Construction Estimate $13,388,844.67

Explanation of Change from Last Year's Total

Ashton Strong (PDO Schematic) Date	**Travis Campbell Date**
Area Engineer/Design Supervisor	**Director of TP&D**

TxDOT

Roadway Bid Items

Item No.	Description Code	Description	Unit	Quantity	Unit Price	Amount
Roadway items						
1	100-7002	PREPARING ROW	STA	**24**	**$ 4,815.00**	$ 115,560.00
2	110-7001	EXCAV (ROADWAY)	CY	**5,067**	**$ 10.00**	$ 50,666.67
3	132-7006	EMBANK (FNL)(DC)(TY C)	CY	**2,533**	**$ 9.00**	$ 22,800.00
4	260-7003	LIME (QUICKLIME (SLURRY))	TON	**162**	**$ 340.00**	$ 55,080.00
5	260-7007	LIME TRT (EXST MATL)(8")	SY	**8,170**	**$ 3.00**	$ 24,510.00
6	310-7001	PRIME COAT (AE-P)	GAL	**2,043**	**$ 5.00**	$ 10,212.50
7	341-7002	D-GR HMA TY-B SAC-B PG64-22	TON	**1,798**	**$ 129.00**	$ 231,942.00
8	360-7007	CONC PVMT (CRCP) (13")	SY	**7,600**	**$ 105.00**	$ 798,000.00
9	450-7024	RAIL (TY SSTR)	LF	**1,300**	**$ 74.00**	$ 96,200.00
10	529-7007	CONC CURB (MONO) (TY II)	LF	**4,720**	**$ 6.00**	$ 28,320.00
11	545 7006	CRASH CUSH ATTEN (INSTL)(L)(N)(TL3)	EA	**4**	**$ 24,169.00**	$ 96,676.00
						$ -
Illumination						
12		ILLUMINATION	LF	**2,360**	**$ 80.00**	$ 188,800.00
						$ -
Pave Markings						
13	666-7175	RE PM TY II (W) 6" (SLD)	LF	**2,360**	**$ 0.21**	$ 495.60
Removal						
14	104-7001	REMOV CONC (PAV)	SY	**10,489**	**$ 14.00**	$ 146,844.44
15	104-7016	REMOV CONC (CURB)	LF	**4,720**	**$ 8.00**	$ 37,760.00
16	105-7052	RMV (0"-12") TRT/UNTRT BASE & ASPH PAV	CY	**1,748**	**$ 11.00**	$ 19,229.63
17	305-7002	SALV, HAUL & STKPL RCL APH PV (0 TO 2")	SY	**10,489**	**$ 2.00**	$ 20,977.78
					Total	**$ 1,944,074.62**

Bridge Bid Items

Item No.	Description Code	Description	Unit	Quantity	Unit Price	Amount
18		BRIDGE	SF	**33,800**	**$ 175.00**	$ 5,915,000.00
					Total	**$ 5,915,000.00**

Pedestrian Bid Items

Item No.	Description Code	Description	Unit	Quantity	Unit Price	Amount
19	531-7003	CONC SIDEWALKS (6")	SY	**3,147**	**$ 73.00**	$ 229,706.67
20	531 7010	CURB RAMPS (TY 7)	EA	**20**	**$ 2,640.00**	$ 52,800.00
					Total	**$ 282,506.67**

Project Costs Not Quantifiable

Description	Amount
TRAFFIC CONTROL (5%)	$ 407,080.00
SW3P (5%)	$ 407,080.00
DRAINAGE (5%)	$ 407,080.00
10% Prep ROW 10%(Roadway + Bridge + Pedestrian + Allowances)	
10% Mobilization (Roadway + Bridge + Pedestrian + Allowances + Prep ROW)	$ 936,290.00
Total	**$ 2,157,530.00**

APPENDIX E: CRASH MODIFICATION FACTORS

Crash Modification Factor (CMF)		
City of Luling		
Focus Area 1 - S. Hackberry Ave. from US 90/E. Pierce St to E. Houston St		
Project	**Improvement**	**CMF**
1A	ADA-compliant sidewalks	0.598*
	Curb ramp improvements	-
1B	Pavement Resurfacing	0.858**
	Pavement Restriping (Center Line)	0.760
	Pavement Restriping (Edge Line)	0.760
	Stop-Bar Restriping	0.770
	Install/refresh signs	0.825
	School zone back flashers	0.950
	High Visibility Crosswalks	0.810
	Install/improve lighting	0.792***
1C	New traffic signal	0.560
	High Visibility Crosswalks	0.810
	Install/improve lighting	0.792***
	Curb ramp improvements	-

Note :

"-" No Standalone CMF available

*CMF represents the safety benefit associated with sidewalk installation only and does not reflect additional benefits attributable to ADA-compliant design features.

**Conservative CMF selected from the available 5-star pavement resurfacing CMFs

***Conservative CMF selected between midblock lighting and intersection lighting treatments

Crash Modification Factor (CMF)		
City of Luling		
Focus Area 2 - N. Hackberry Ave. from FM2984/Lincoln St to SH80/Austin Ave.		
Project	**Improvement**	**CMF**
2A	Pavement reconstruction with sidewalks	0.858*
	Dynamic speed feedback signs	0.950
	Install/refresh signs	0.825
	Signal warning flasher installations (on SB approach for N Hackberry Ave and SH80/E Austin intersection)	0.814**
	New traffic signal	0.560
	High Visibility Crosswalks	0.810
	Install/improve lighting	0.792***
	Curb ramp improvements	
2B	Pavement reconstruction with sidewalks	0.858*
	Install/refresh signs	0.825

Note :

*Conservative CMF selected from the available 5-star pavement resurfacing CMFs

** CMF assumes a signalized intersection as the prior (existing) condition.

***Conservative CMF selected between midblock lighting and intersection lighting treatments

Crash Modification Factor (CMF)		
City of Luling		
Focus Area 3 - SH80/Austin Ave. from E. Fannin St to E. Milam St		
Project	**Improvement**	**CMF**
3A	High Visibility Crosswalks	0.810
	Curb ramp improvements	-
	Install/refresh signs	0.825
	Stop-Bar Restriping	0.770
	Dynamic speed feedback signs	0.950
3B	Install HAWK (PHB)	0.883
	High Visibility Crosswalks	0.810
	Install/refresh signs	0.825
3C	Install/improve lighting	0.792*

Note:

"-" No Standalone CMF available

*Conservative CMF selected between midblock lighting and intersection lighting treatments

Crash Modification Factor (CMF)		
City of Luling		
Focus Area 4 - S. Hackberry Ave. from US 90/E. Pierce St to E. Houston St		
Project	**Improvement**	**CMF**
4A	Pavement Restriping (Center Line) for SB Approach	0.760
	Pavement Restriping (Edge Line) for SB Approach	0.760
	Install/refresh signs	0.825
	Pavement Restriping (Center Line) for Intersection	0.760
	Pavement Restriping (Edge Line) for Intersection	0.760
	Stop-Bar Restriping	0.770
	Dedicated left turn lanes	0.748
	Signal Retiming	-
4B	Install/improve lighting	0.792*

Note :

*Conservative CMF selected between midblock lighting and intersection lighting treatments

Caldwell County
ROAD BOND

City of Luling
TRANSPORTATION PLAN

2026