



**NOTICE OF WORK SESSION AGENDA  
LANCASTER CITY COUNCIL  
MUNICIPAL CENTER CITY COUNCIL CHAMBERS  
211 N. HENRY STREET, LANCASTER, TEXAS**

**Monday, August 17, 2020 - 7:00 PM**



**While a quorum of Councilmembers will be physically present at City Hall, one or more Councilmembers may attend via video or audio link due to the COVID-19 emergency situation.**

**IMPORTANT NOTICE: Due to the COVID-19 (coronavirus) state of emergency and consistent with the Governor's Order regarding modifications to the Texas Open Meetings Act ("TOMA"), and executive orders regarding the public will not be admitted to the physical meeting location.**

**Please click the link below to join the webinar:**

[https://us02web.zoom.us/webinar/register/WN\\_5nVSMAj7RVOnH4j67BBMhg](https://us02web.zoom.us/webinar/register/WN_5nVSMAj7RVOnH4j67BBMhg)

**The meeting will be broadcast live via video at the following address:**

<http://www.lancaster-tx.com/324/Watch-Meetings>

## **CALL TO ORDER**

1. Discuss and receive an update on the 2006 Streetscape Master Plan.
2. Discuss and receive an update on the 2006 Master Thoroughfare Master Plan.
3. Discuss amending the Lancaster Development Code (LDC) to address concrete pavement for residential front yards.
4. Discuss the historical marker located at 220 W. Main St, Lancaster, TX 75146.

## **ADJOURNMENT**

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**EXECUTIVE SESSION:** The City Council reserve the right to convene into executive session on any posted agenda item pursuant to Section 551.071(2) of the Texas Government Code to seek legal advice concerning such subject.

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**ACCESSIBILITY STATEMENT:** Meetings of the City Council are held in municipal facilities are wheelchair-accessible. For sign interpretive services, call the City Secretary's office, 972-218-1311, or TDD 1-800-735-2989, at least 72 hours prior to the meeting. Reasonable accommodation will be made to assist your needs.

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CONFORME A LA SECCION 30.07 DEL CODIGO PENAL (TRASPASAR PORTANDO ARMAS DE FUEGO AL AIRE LIBRE CON LICENCIA) PERSONAS CON LICENCIA BAJO DEL SUB-CAPITULO H, CAPITULO 411, CODIGO DE GOBIERNO (LEY DE PORTAR ARMAS), NO DEBEN ENTRAR A ESTA PROPIEDAD PORTANDO UN ARMA DE FUEGO AL AIRE LIBRE.

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#### **Certificate**

**I hereby certify the above Notice of Meeting was posted at the Lancaster City Hall on August 13, 2020, @ 5:30 p.m. and copies thereof were provided to the Mayor, Mayor Pro-Tempore, Deputy Mayor Pro-Tempore and Council members.**



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Sorangel O. Arenas  
City Secretary



## LANCASTER CITY COUNCIL

### City Council Work Session

1.

**Meeting Date:** 08/17/2020

**Policy Statement:** This request supports the City Council 2019-2020 Policy Agenda

**Goal(s):** Healthy, Safe & Engaged Community  
Sound Infrastructure  
Quality Development

**Submitted by:** Bester Munyaradzi, Senior Planner

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### **Agenda Caption:**

Discuss and receive an update on the 2006 Streetscape Master Plan.

### **Background:**

The City Council during its FY 2017/2018 and 2018/2019 Strategic Planning Session identified the objective to update the Streetscape Master Plan. The current Streetscape Master Plan was developed by Halff Associates and Caye Cook & Associates and was adopted by City Council in 2006.

It is standard and recommended for Master Plans to be updated every ten (10) years at minimum and the adoption of the 2016 Comprehensive Plan necessitates that the Streetscape Master Plan be updated to align.

A Request For Qualifications (RFQs) was issued in August 2018, and proposals from seven (7) firms were received.

In September 2018, Halff Associates was selected out of four (4) firms that were interviewed by City Staff.

On December 17, 2018, at the City Council Work Session, Council received a presentation from Halff Associates Inc. regarding scope of services for the Streetscape Master Plan update.

At the January 14, 2019, City Council Meeting, Council approved a resolution authorizing the award of a contract to Halff Associates to provide an update to the City of Lancaster's Streetscape Master Plan.

On October 7, 2019, Halff Associates presented to the City Council the:

- Background and Purpose of Streetscape Master Plan
- Overview of the Previous Plan
- Streetscape and Gateway Current Trends
- Existing Conditions in Lancaster
- Master Plan Opportunities

After the presentation, the consultants led a visioning discussion and attained the City Council's vision for Streetscapes and gateways in Lancaster.

The Council will receive a presentation from Halff Associates on the Streetscape Master Plan update final draft.

## **Attachments**

Streetscape Master Plan Update Final Draft

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DRAFT 08.03.2020



# CITY OF LANCASTER STREETSCAPE MASTER PLAN



AUGUST 2020 DRAFT



HALFF



## ACKNOWLEDGMENTS

The following individuals are recognized for their significant contributions to the preparation of the City of Lancaster Streetscape Master Plan.

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Clyde C. Hairston	Mayor
Carol Strain - Burk	District 1
Stanley Jaglowski	District 2
Marco Mejia	District 3
Derrick D. Robinson	District 4, Deputy Mayor Pro Tem
Racheal Hill	District 5, Mayor Pro Tem
Nina Morris	District 6

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Bester Munyaradzi, AICP	Senior Planner
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Sean Johnson	Director of Quality of Life & Cultural Services
Shane Shepard	Director of Economic Development

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Kendall Howard, AICP	Project Manager
Justin Sparks, PLA	Landscape Architect
Justin Marston, PLA	Landscape Architect
Swati Appadu	Landscape Designer
Kelsey Ryan	Planner



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## LIST OF ACRONYMS

AASHTO = American Association of State Highway Transportation Officials  
 ASTM = American Society for Testing and Materials  
 DFW = Dallas-Fort Worth  
 ESRI = Environmental Systems Research Institute  
 FHWA = Federal Highway Administration  
 LED = Light-Emitting Diode  
 MEP = Mechanical, Electrical, and Plumbing  
 NCTCOG = North Central Texas Council of Governments  
 RGBW = Red, Green, Blue, White  
 ROW = Right-of-Way  
 TxDOT = Texas Department of Transportation







# CHAPTER 1

# INTRODUCTION

## PLAN BACKGROUND & PURPOSE

## PLAN GOALS & OBJECTIVES

## PLANNING PROCESS

This first chapter presents the context for why the City of Lancaster embarked on an update to the Streetscape Master Plan. The chapter includes an overview of the plan background and purpose, describes the overall planning process, and presents the plan goals and objectives.

## PLAN BACKGROUND & PURPOSE

The City of Lancaster is a growing and dynamic community located at the southern edge of the Dallas-Fort Worth (DFW) Metroplex. The City is a unique combination of suburban residential, historic downtown, scenic creeks and greenbelts, and industrial/manufacturing hubs. Not only is the built and natural environment of Lancaster diverse, so are the people that live and work in the community. One way to reflect the values of a community in the built environment is through streetscapes and monumentation.

**Streetscape:** The physical area and elements within the street right-of-way that define a street which includes pedestrian and vehicular paving, lighting, signalization, signage, utilities, site furnishings, vehicular or pedestrian amenities, and vegetation.

**Monumentation:** An architectural feature used to mark an entry to an area or to identify a place.

In recognition of the importance of streetscapes and monumentation to the community, the City embarked on a Streetscape Master Plan originally in 2006. As Lancaster continued to grow and evolve, city leaders recognized the importance of updating the plan to reflect current trends and in 2019, initiated an update to the streetscape master plan.

The purpose of this Streetscape Master Plan Update is to:

- Update the 2006 Streetscape Master Plan
- Identify recommendations for monumentation and streetscape design standards
- Help the City identify capital projects for monumentation and streetscapes
- Add value through defining quality of life and the City's identity



*The brick entry features in downtown Lancaster are an example of monumentation.*

The resulting streetscape master plan serves as a guide for the City to update development standards and requirements for developers to incorporate monumentation and streetscape features when new development occurs. This plan is divided into six chapters:

- 1. INTRODUCTION** | Discusses purpose and background of the plan.
- 2. COMMUNITY CONTEXT** | Presents existing conditions in Lancaster.
- 3. STREETScape MASTER PLAN NEEDS** | Identifies issues and opportunities for implementing streetscape and monumentation features.
- 4. GATEWAY & STREETScape VISION** | Presents concepts for a hierarchy of streetscape and monumentation to be applied throughout the City.
- 5. GATEWAY & STREETScape DESIGN STANDARDS** | Introduces design standards for the recommended hierarchy of streetscape and monumentation.
- 6. IMPLEMENTATION** | Identifies priority actions and typical cost figures.

## BENEFITS OF STREETScape BEAUTIFICATION & MONUMENTATION

Effective streetscape beautification and monumentation can have significant long-term benefits in a community, including the following:

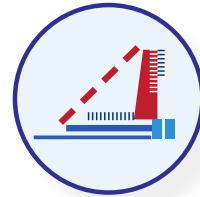
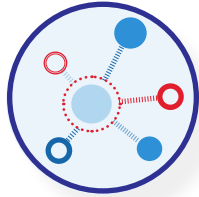
- **Citizen pride** - increases pride residents feel for the City.
- **Relocation benefits** - makes Lancaster a more attractive place for new businesses and residents to locate.
- **Increasing the competitiveness of Lancaster** - makes Lancaster more competitive amongst area communities for attracting new employers.
- **Keeping residents in Lancaster** - helps retain residents as a quality place to live.
- **Health benefits** - linking streetscapes to active recreation facilities can promote overall health of residents.
- **Increases in property values** - quality streetscapes and monumentation can raise the values of surrounding properties.



*The Cedar Crest gateway in Dallas is a major gateway monument into a neighborhood.*

## PLAN GOALS & OBJECTIVES

The overall vision of the Streetscape Master Plan is to provide quality streetscape design, create a unified family of iconic entry monumentation, and promote the local values and identity of Lancaster. The following goals provide a framework for the implementation of the Streetscape Master Plan and each goal is supported by specific, attainable objectives. These goals were developed in coordination with staff and with input from the City Council at the beginning of the planning process.



### GOAL 1

#### PROMOTE AND ENHANCE A CONNECTED COMMUNITY

**Build and reflect upon Lancaster's unique history and character using highly recognizable streetscape design and monumentation.**

### GOAL 2

#### REINFORCE THE IDENTITY OF LANCASTER

**Establish and promote Lancaster's brand through unique, highly recognizable physical improvements to the public environment.**

#### OBJECTIVES

**1.1**

Reflect and reinforce the local vernacular of the City by creating signature streetscapes that strengthen the community's presence in the region and promote a sense of welcome.

**1.2**

Implement city-wide memorable gateways, portals, and intersection improvements which will help improve the image of the City and promote opportunities to attract new talent and retain current residents.

**1.3**

Celebrate Lancaster's unique history by providing accessible and meaningful connections to enhance the safety, comfort, and character of all streets for all people, regardless of disabilities or age.

#### OBJECTIVES

**2.1**

Implement an expansive network of iconic and noticeable hierarchy of monumentation and streetscape features that will reflect and embrace the classic and unlimited potential of Lancaster.

**2.2**

Introduce a family of iconic major and minor monumentation and streetscape elements which signify key destinations and a sense of arrival to Lancaster from adjacent communities.

**2.3**

Develop a unified streetscape theme to enhance a cohesive image of Lancaster through the thoughtful selection and placement of elements to foster variety and interest.

**GOAL 3****ENHANCE QUALITY OF LIFE THROUGH STREETScape DESIGN**

**Ensure all users have access to visible, accessible, high quality streetscape elements that are well maintained and shared by all.**

**OBJECTIVES****3.1**

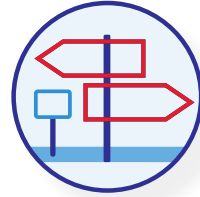
Create pedestrian-friendly corridors to encourage safe walking by incorporating smooth, slip-resistant materials that make streets welcoming for people of all ages and abilities.

**3.2**

Design sustainable features that encourage the preservation of existing trees and plantings by integrating enhancements with the natural landforms to have little impact on the natural environment.

**3.3**

Accommodate healthy trees, plantings, and green stormwater infrastructure best management practices to provide sustainable solutions that reduce stormwater runoff into watersheds.

**GOAL 4****IMPROVE WAYFINDING SYSTEM**

**Improve and install pedestrian scale wayfinding signage to assist pedestrians with navigating throughout the city.**

**OBJECTIVES****4.1**

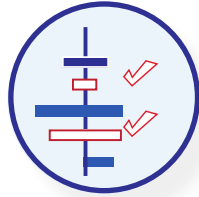
Consider a variety of wayfinding and branding elements that orient users and reflect citizens desires while being cautious about altering the streetscape's character and function.

**4.2**

Identify design treatments that highlight Lancaster's memorable history, modern future, and reinforce the distinct character with a clean, classic and bold look through theming and wayfinding.

**4.3**

Provide clear directional signage at key decision points along pedestrian and bike routes such as trail access points and crossings which distinguish from and also tie to Lancaster's surrounding environment.



## GOAL 5

### DEVELOP AND ADOPT STREETSCAPE STANDARDS

**Establish a benchmark or reference for best management practices of streetscape design goals to design pedestrian-friendly streets.**

#### OBJECTIVES

**5.1**

Develop user-friendly streetscape design standards and guidelines, establishing a model for pedestrian environments to be consistent with the course of population changes that come with consistent growth.

**5.2**

Evaluate existing and future land uses and planning and development trends to determine an appropriate sustainable streetscape improvement in the area.

**5.3**

Utilize context-sensitive solutions, select and develop a planting palette to incorporate a variety of trees and planting that adapt to local site conditions and enhance the seasonal streetscape.



## GOAL 6

### SPUR ECONOMIC OPPORTUNITIES

**Generate interest to attract visitors and retain residents by demonstrating commitment to fostering high standards for quality of life.**

#### OBJECTIVES

**6.1**

Pursue strategic partnerships to help identify Capital Projects and provide a road map that can be used to guide decisions for enhancing Lancaster's streetscape for the future.

**6.2**

Introduce public art installations where appropriate to express diversity and unique qualities of the natural and built environment.

**6.3**

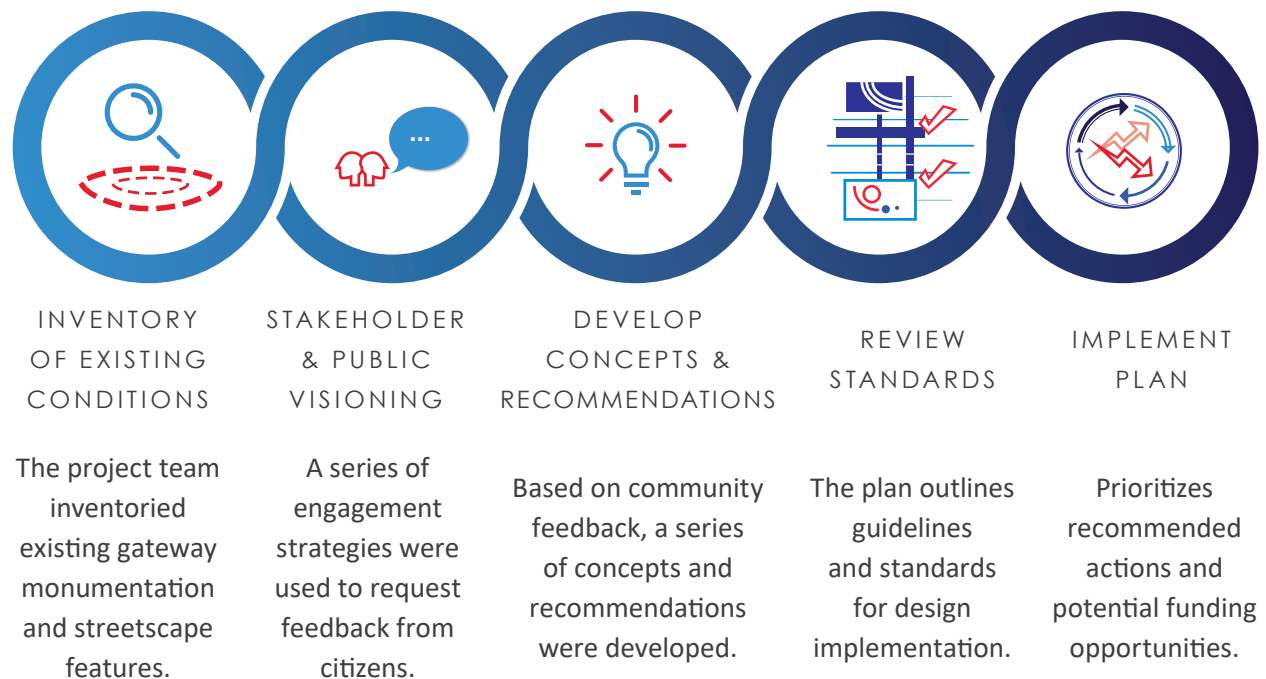
Consider implementing lane diets or road diets to improve mobility, enable active transportation, and minimize traffic congestion for a better-connected streetscape network.



## PLANNING PROCESS

The project team underwent a ten month planning process to develop the updated master plan, as shown in **Figure 1:1** below. This plan builds upon the previous streetscape master plan as well as other planning guidance the City has adopted, including the Comprehensive Plan, Thoroughfare Plan, Trails Plan, and Parks, Recreation and Open Space Master Plan. Throughout the process City staff, focus groups, stakeholders and citizens were actively involved to guide the Plan recommendations. The graphic below represents the steps involved in the planning process

**Figure 1:1 - Planning Process**



*Streetscape design helps to create a consistent, quality look in a community.*







# CHAPTER 2

## COMMUNITY CONTEXT

### REGIONAL CONTEXT

### BUILT & NATURAL ENVIRONMENT

### DEMOGRAPHIC ANALYSIS

### OVERVIEW OF PREVIOUS PLANS

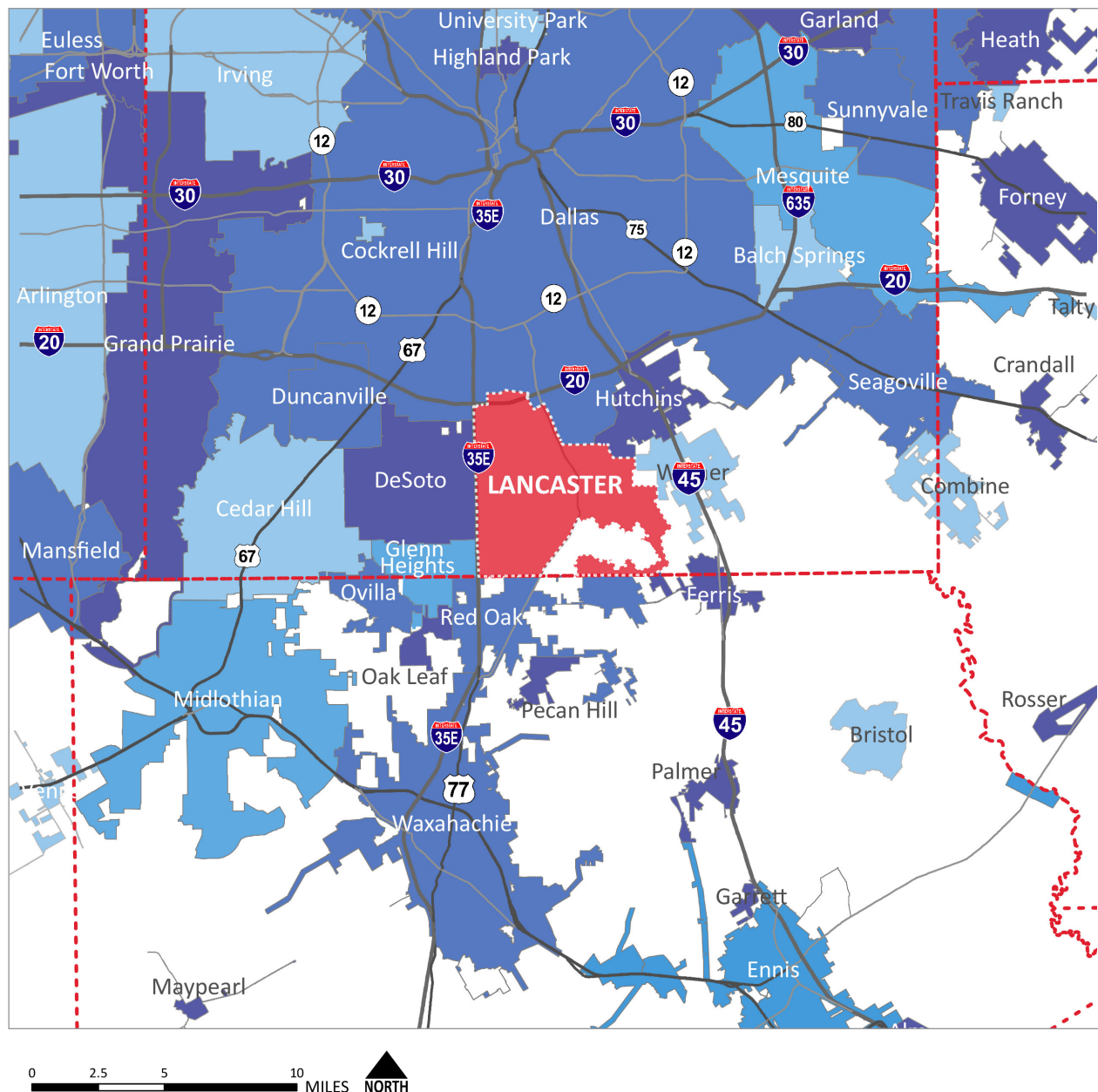
### PUBLIC & STAKEHOLDER ENGAGEMENT

Chapter 2 identifies the characteristics that distinguish Lancaster from other communities. This chapter includes a description of the context for the surrounding natural and built environment that influences Lancaster's streetscape. To understand Lancaster today and in the future, the city's demographics have been analyzed along with growth projections. This chapter also includes a review of relevant plans, and finally a summary of public and stakeholder engagement is included in this chapter.

## REGIONAL CONTEXT

Lancaster is located in southern Dallas County and is part of the DFW Metroplex in Texas. The city is roughly 33.15 square miles and is bordered by IH-35E to the West, IH-20 to the north and the county line to the south. Lancaster, along with surrounding communities, is part of the 'Inland Port' of Dallas and supports significant industrial and logistics businesses. Lancaster's prime location presents opportunities to serve as the 'southern gateway' into the DFW Metroplex. **Figure 2:1** depicts Lancaster's location within the greater region. Key regional employers located within Lancaster include Wal-Mart, Cedar Valley College (partially in Lancaster), AT&T Distribution Center, Swift Transportation, and United National Foods, Inc.

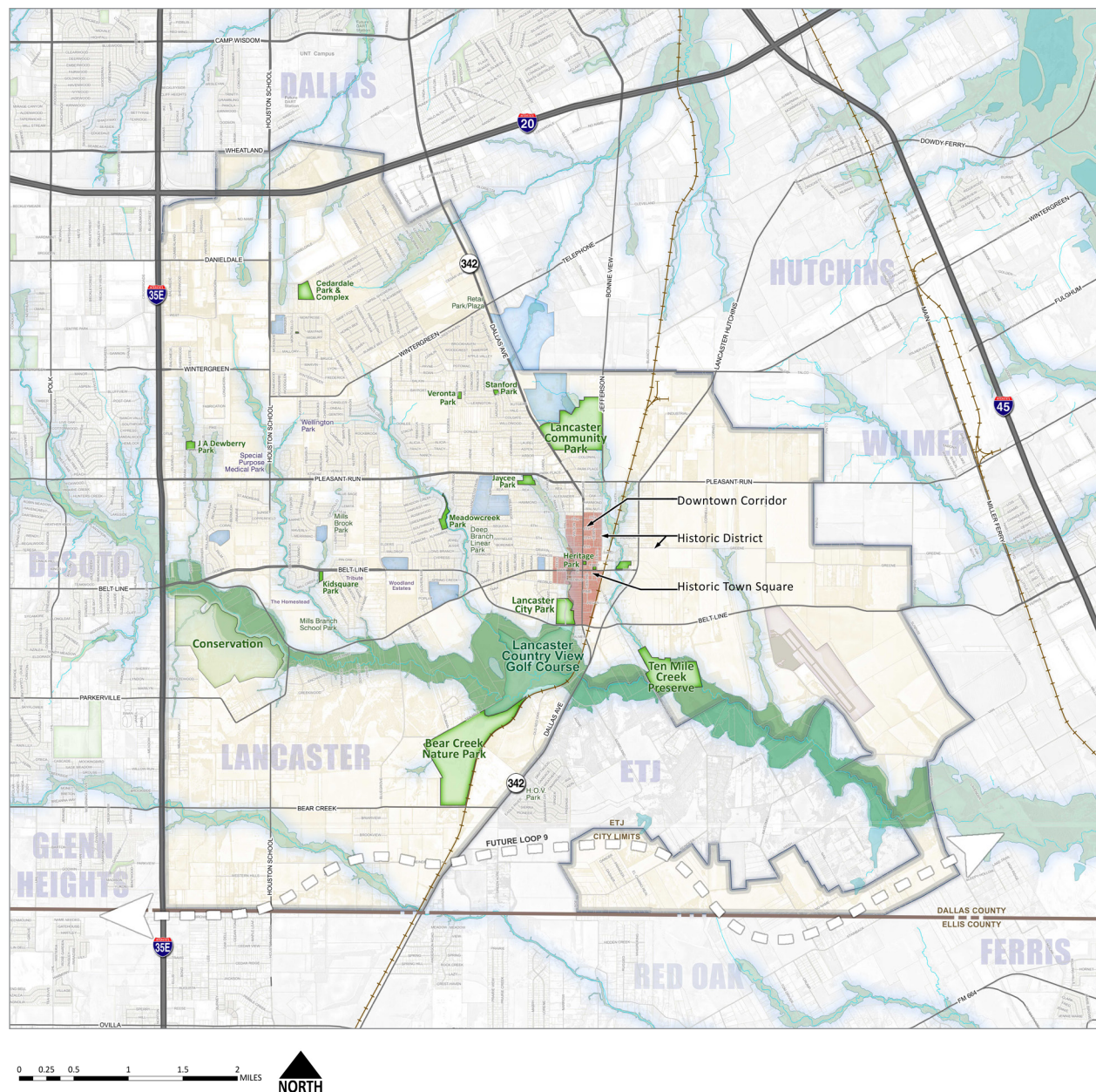
**Figure 2:1 - Regional Context Map**



## BUILT & NATURAL ENVIRONMENT

Lancaster contains many natural features that provide ecological value and appeal. One of the major natural features is the Ten Mile Creek which provides quality recreational opportunities for visitors. Additionally, there are 13 parks in Lancaster. The largest park is Lancaster Community Park, which features an amphitheater, baseball field, football field, soccer field, fishing pier, pavilion, and recreation center. **Figure 2:2** depicts the natural features in Lancaster, including creeks, floodplains, and parks. There is significant vacant land in Lancaster; the majority of vacant land is located in the far southern and far eastern portions of the city, indicating that there is potential for significant new development as the community continues to grow.

**Figure 2:2 - Natural Features in Lancaster**





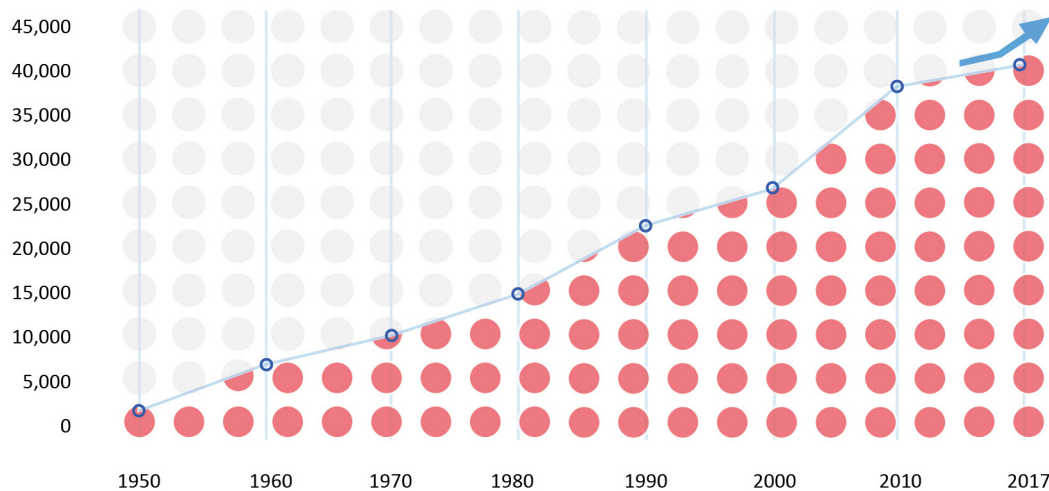
## DEMOGRAPHIC ANALYSIS

### GROWTH TRENDS

The City of Lancaster experienced relatively steady population growth from 1950 to 1960, similar to many of the cities within the DFW Metroplex. In 1950 the population was estimated to be 2,632 and by 1960 the City had grown approximately 185%; in 2010, the population had reached 36,361. This is approximately a 1,281% increase in the past 60+ years. Over the past 20 years, the city has continued on this growth trend, increasing by about 50%. While Lancaster has been continuously growing over the past century, it still only makes up about 1.5% of Dallas County's population. **Figure 2:3** shows the population of Lancaster over the past several decades.

Population projections made by NCTCOG predicts that both the City of Lancaster and Dallas County will experience growth, but at a slower rate than in previous years. The City's population is anticipated to increase by 30.8% by 2045, reaching a population total of 50,849. Dallas County is expected to reach over three million consistent with a 35% increase in population. Decline in the rate of population growth in the future indicates that the city and county will be approaching build out, therefore it is strategic to establish design and development standards to ensure implementation is prioritized in the long-term.

**Figure 2:3 - Historic Population Growth**



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

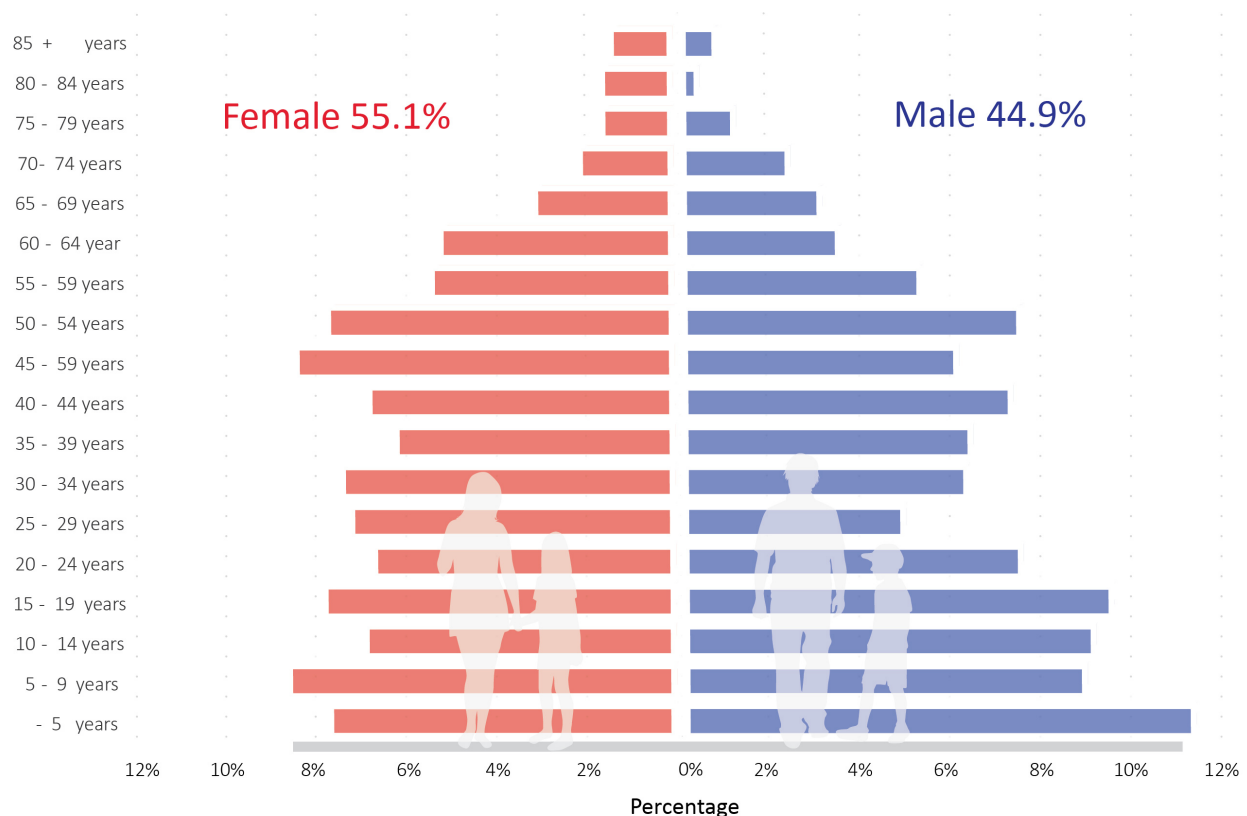
## AGE & GENDER CHARACTERISTICS

As of 2017, the largest population group in Lancaster are individuals under the age of five, followed by those age five to nine. A population with a large percentage of children often indicates a growing community with a lot of families. Additionally, females make up 55.1% of the total population, and outpace their male counterparts in most age cohorts older than 45 years. The median age in Lancaster in 2017 was 32 years, which is lower than the DFW region median of 34.6 years. A younger population with a significant number of children provides considerable impact to the types of parks and recreational programming a city should prioritize. Families with young children seek recreational opportunities and amenities that align with multi-generational needs.



*Lancaster has recently rebuilt several schools, which is needed with the growth in the percentage of children under 18.*

**Figure 2:4 - Population by Age & Gender**

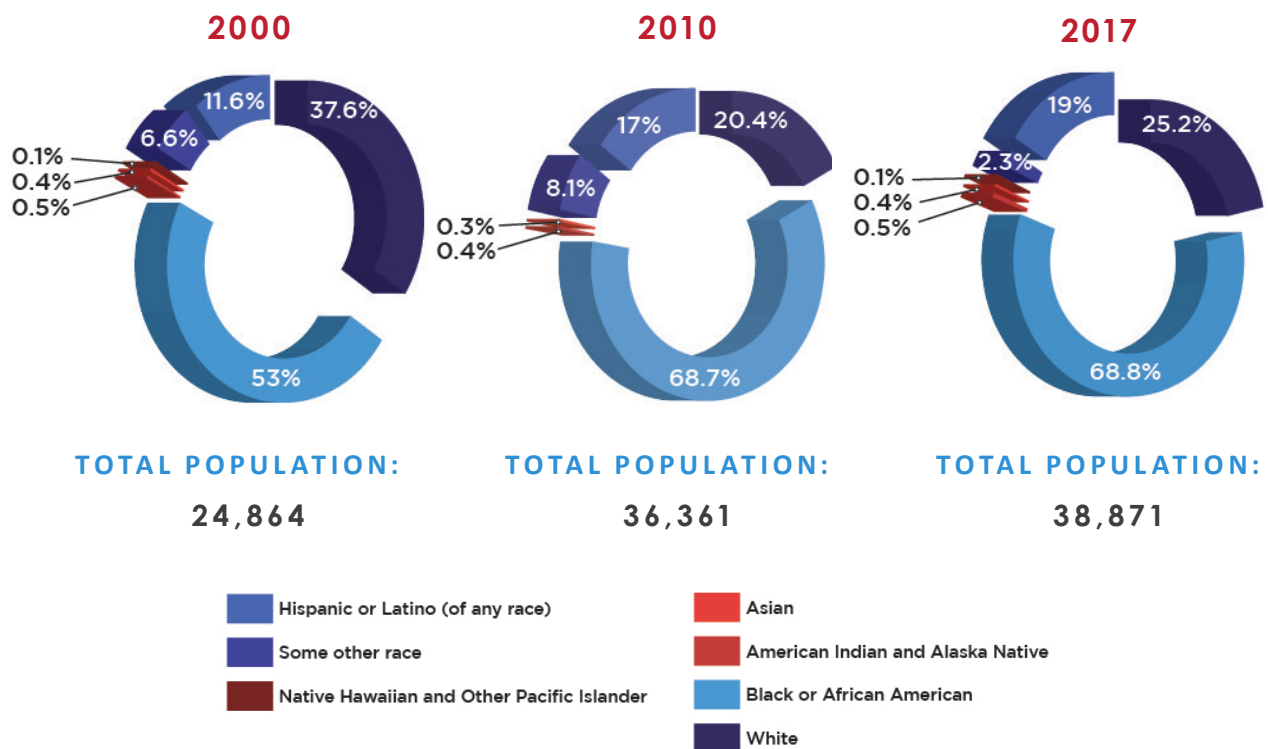


Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

## RACE & ETHNICITY CHARACTERISTICS

Lancaster's population is primarily composed of residents who identify as Black or African American (68.8%) and White (25.2%). Generally, the composition of Lancaster's population has not changed significantly from 2000 to 2017. Since 2000, Lancaster has had a considerable percentage of the population that identifies as Hispanic or Latino ethnicity. From 2000 to 2017 the percentage of Hispanic or Latino residents increased 146%. **Figure 2:5** shows the racial composition from 2000, 2010, and 2017.

**Figure 2:5 - Race and Ethnicity Over Time**



Source: U.S. Census Bureau

## HOUSEHOLD CHARACTERISTICS

The percentage of owner-occupied units has remained greater than renter-occupied units in Lancaster from 2000 to 2017; however, the total percentage has decreased over time. The percentage of renter-occupied housing units has increased 5.2% from 2000 to 2017 to 37%. A large percentage of owner-occupied housing units is consistent with the fact that 73% of Lancaster's households are family households and that a large portion of the population is 34 years old or younger, indicating that there are many young families choosing to purchase single-family homes.

In 2017 the median household income in Lancaster was \$51,628, which is an 18% increase since 2000 but a 2% decrease from 2010. Comparatively, median household income in Dallas County in 2017 was \$53,626 and in the state was \$57,051.

Previously, the City has had a slightly higher median household income than both the city and state. In 2010, Lancaster's median household income was \$52,752 while Dallas County was \$47,974, and Texas was \$49,646. [Table 2:1](#) and [Table 2:2](#) show key household characteristics over time.

Individuals living below the poverty level in Lancaster account for 14.8% of the total city population. This percentage has increased gradually since 2000 when 8.1% of the population was impoverished. Compared to both Dallas County and the state of Texas, in 2017, the percentage of people living in poverty was slightly less in Lancaster.

**Table 2:1 - Household Characteristics, 2000-2017**

	2000	2010	2017
Total Housing Units	9,590	13,598	13,741
Occupied Housing Units	9,182	12,120	12,892
Occupied Housing Units (%)	95.7%	89.1%	93.8%
Vacant Housing Units	408	1,478	849
Vacant Housing Units (%)	4.3%	10.9%	6.2%
Owner-occupied Housing Units	6,023	8,133	7,781
Percentage of Owner-occupied Units	65.6%	67.1%	60.4%
Median Mortgage Cost	\$975	\$1,447	\$1,326
Renter-occupied units	3,159	3,987	5,111
Percentage of Renter-occupied units	34.4%	32.9%	39.6%
Median Rent Cost	\$671	\$865	\$967
Total Households	9,182	12,120	12,892
Family Households	75.1%	72.2%	73.2%
Non-Family Households	24.9%	27.8%	26.8%

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



**Table 2:2 - Household Income**

	<b>2000</b>	<b>2010</b>	<b>2017</b>
Less than \$15,000	935	1,476	1,570
\$15,000 to \$24,999	1,025	1,228	1,241
\$25,000 to \$34,999	1,201	1,111	1,483
\$35,000 to 49,999	2,135	2,243	1,846
\$50,000 to \$74,999	2,151	3,042	3,025
\$75,000 to \$99,999	946	1,697	1,697
\$100,000 to \$149,999	609	1,221	1,510
\$150,000 or more	165	372	520
Median Household Income	<b>\$43,773</b>	<b>\$52,752</b>	<b>\$51,628</b>

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

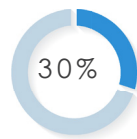


*Lancaster Community Park is a family friendly environment that provides recreational opportunities for all ages.*



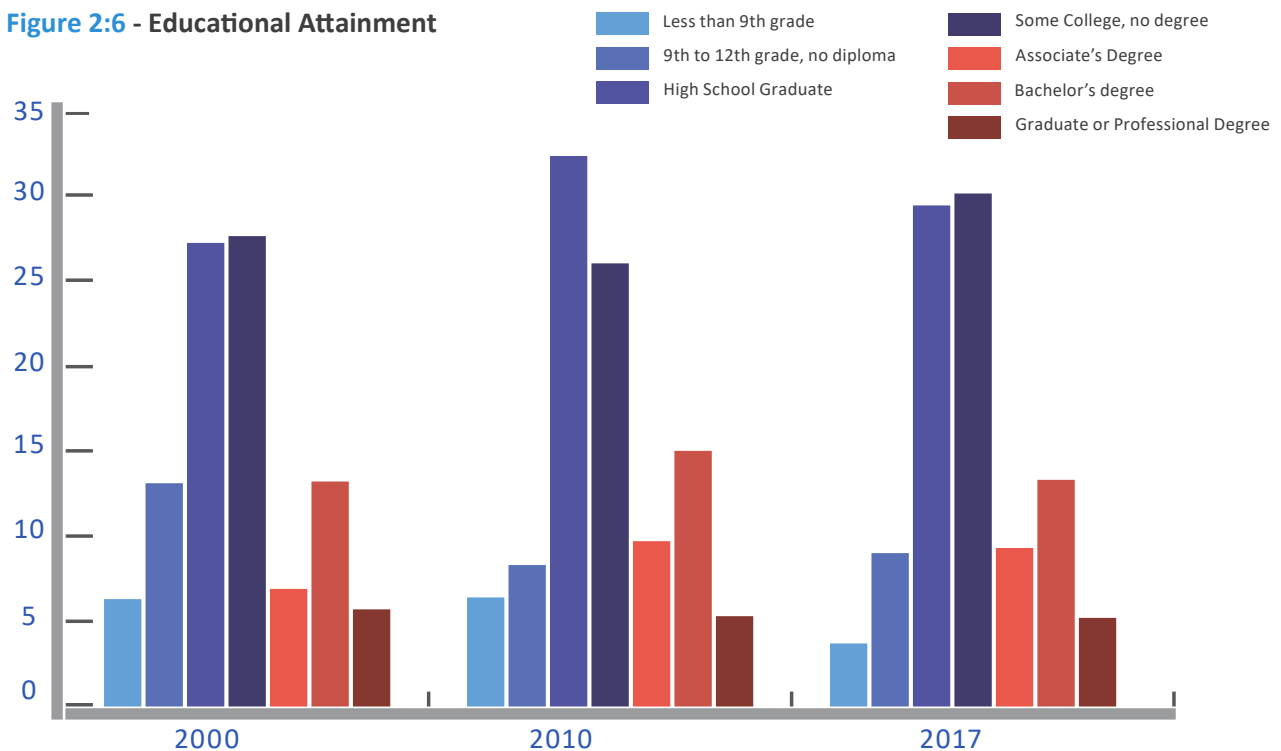
## EDUCATIONAL ATTAINMENT

Of the residents in Lancaster 25 years and older, approximately 29% were high school graduates in 2017: this percentage has fluctuated since 2000 when it was 27% and then 32% in 2010. The educational attainment category that has increased most significantly over the past 20 years are residents who have some college experience. **Figure 2:6** depicts the changes in educational attainment for the population of 25 or older from 2000 to 2017.



30% of residents have some college education which is higher than Dallas County as whole (20% in 2017).

**Figure 2:6 - Educational Attainment**



Source: U.S. Census Bureau

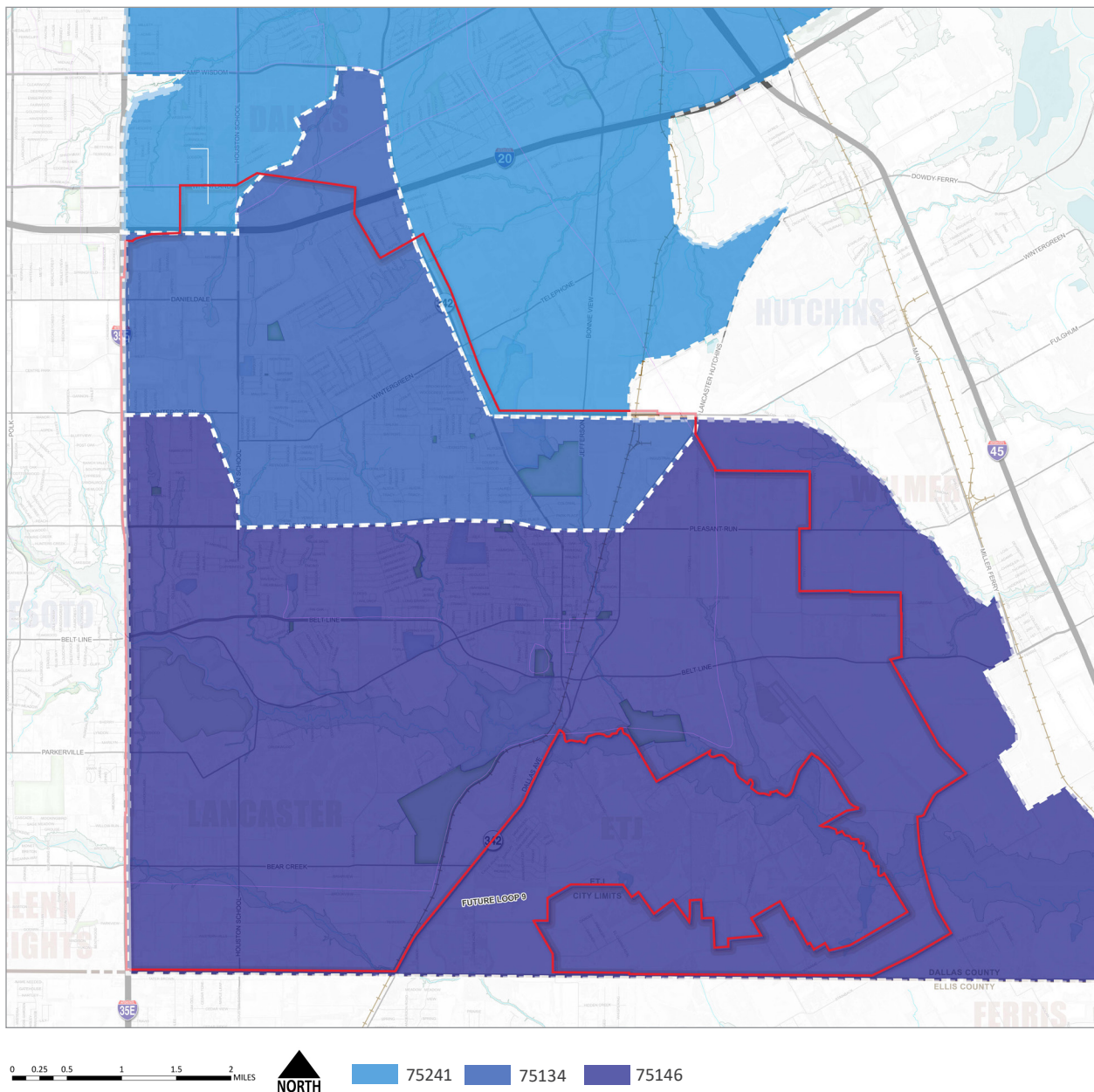


Cedar Valley College provides secondary education options in Lancaster.

## TAPESTRY SEGMENTATION

A demographic and mapping company called the Environmental Science and Research Institute (ESRI) has developed a Tapestry Segmentation profile to characterize residents beyond just what the Census tells us. With Tapestry Segmentation, residential areas within the U.S. are divided into broad market segments based on their socioeconomic and demographic composition and assumptions about how consumer preferences are made. The following represents the most common tapestry segments based on zip codes found in the City of Lancaster. Because such a small portion of zip code 75241 is included in Lancaster, that zip code is not included in the Tapestry discussion.

**Figure 2:7 - Lancaster Zip Codes**





**ZIP CODE 75134****UP AND COMING FAMILIES**

This segment is one of the fastest-growing markets in the Country. It is made up of young families who are ethnically diverse and typically live in new single-family residential developments. Residents tend to have a slightly higher median household income than the average U.S. household. Some of the socioeconomic traits of this zip code are college educated residents, low unemployment, more diverse than the rest of the country, and fiscally responsible. Residents are ambitious and focused on achieving their goals and establishing their lifestyle.

**ZIP CODE 75146****AMERICAN DREAMERS**

American Dreamers primarily own their own single-family homes located outside of the city where housing is more affordable. These households are composed of younger married-couple families with children or grandparents. Typically, the diversity of residents is greater than other segments. A lower percentage of residents have earned a college degree, but the majority has a high school diploma or has some college education. Although labor force participation is high in this segment, unemployment is higher than the national average. These residents are hard working to improve their family's lives.



## OVERVIEW OF PREVIOUS PLANS

### STREETSCAPE MASTER PLAN

Adopted in 2006, the original streetscape master plan for Lancaster had a similar purpose to this plan update. The plan sought to promote a sense of community, establish a unique city identity and develop a unifying streetscape theme in Lancaster. The overarching objectives of the plan included the following:

- Create and Reinforce a Unified Image of Lancaster
- Design for Vehicular and Pedestrian Safety
- Create a Pedestrian Friendly Environment
- Provide Wayfinding Devices
- Provide Landscaped Corridors
- Preserve Existing Trees and Vegetation
- Provide Consistent Standards
- Provide Art and Interest

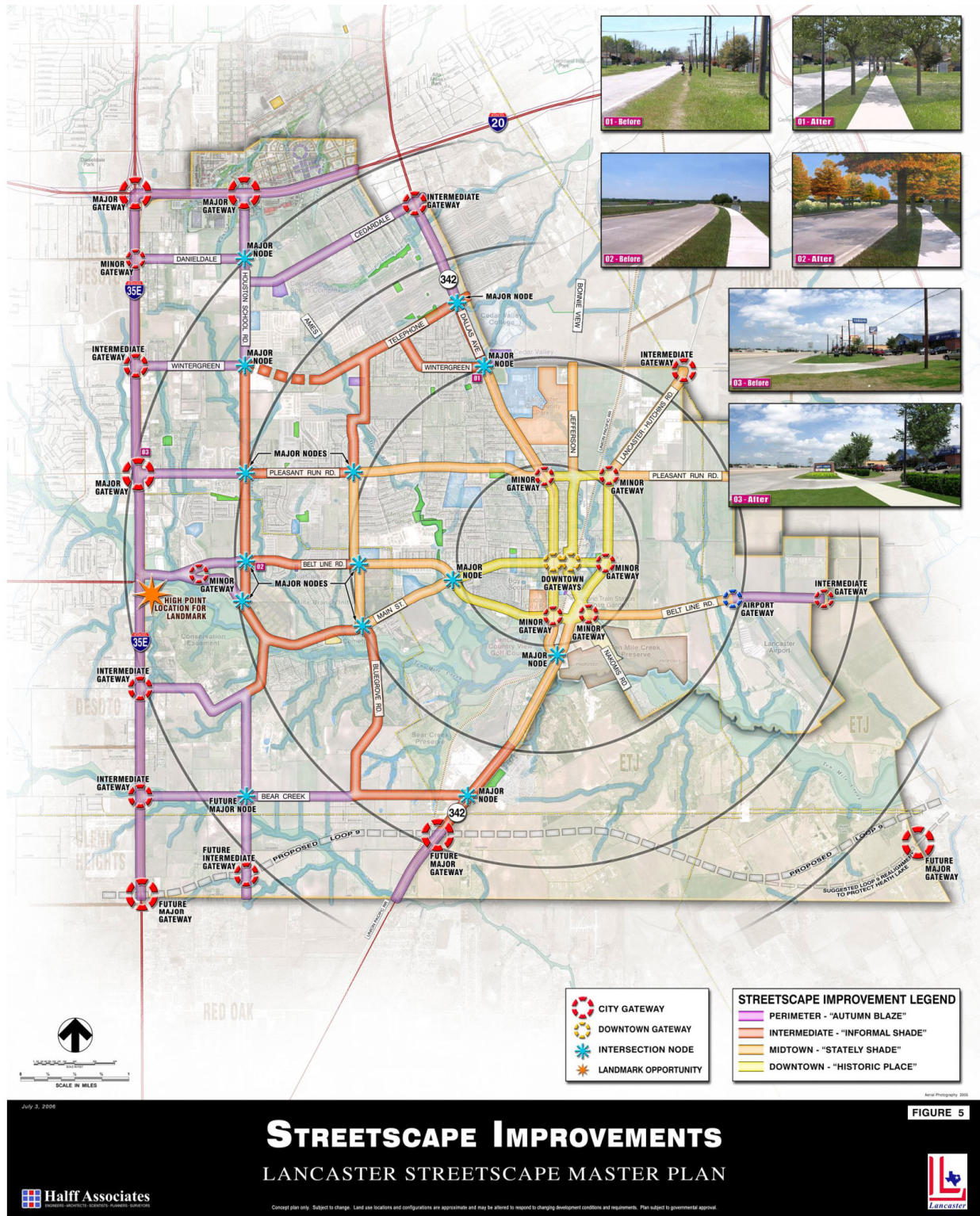


The 2006 plan recommendations proposed a multi-ring approach to the development of streetscapes. Envisioned as a series of rings, the intent was that the intensity of streetscape features would increase the closer you get to downtown. For the perimeter ring, the improvements were meant to be highly visible and vehicular in scale. For the middle ring, the purpose was to use streetscapes to define emerging neighborhoods and greenways. For the inner ring, the streetscapes were meant to define established neighborhoods. Finally, the city core was meant to highlight the historic downtown and Town Square.

As for gateways, the plan proposed a hierarchy of gateways of various scale including city gateways, downtown gateways, intersection nodes, and landmarks. The hierarchy included recommended locations and design considerations for major gateways, intermediate gateways, minor gateways, district-specific gateways in Mills Branch and Downtown, and major nodes.

The facing page depicts the overall recommendation map from the 2006 plan. A discussion of the progress that has been made since the 2006 plan was adopted is included in Chapter 3.





Recommended streetscape improvements and monumentation features from 2006 plan.

## COMPREHENSIVE PLAN

A Comprehensive Plan is an overarching policy document that provides tools to guide future development for a community. This plan helps guide how the community should grow and redevelop, which will eventually create more opportunities for housing and economic development. Chapter 8 of the 2016 Comprehensive Plan focused on community character and design. The overarching policies for Community Character and Design include:

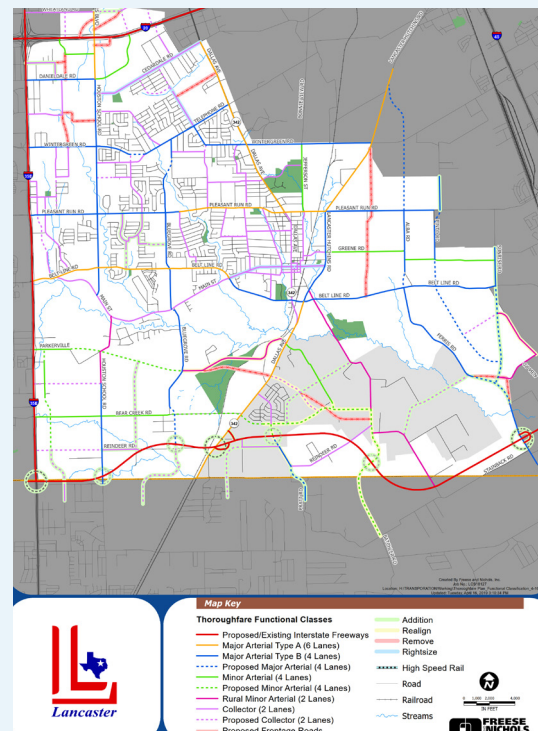
- Policy 1: Use Community Character to create a destination so people choose Lancaster as a place to live, work, play, and visit.
- Policy 2: Insist on quality design in new development.
- Policy 3: Use design themes to identify key areas and districts.
- Policy 4: Community design should be part of Lancaster's marketing strategy.



## THOROUGHFARE PLAN

The 2020 Thoroughfare Plan serves as the city's long-range transportation plan. The plan establishes a classification of roadways based on balancing existing infrastructure with identifying needs for future roadways.

The plan document provides guidance on the location and design of major roadway facilities, connections between these facilities, extensions of roadways and the amount of required right-of-way. The plan provides a thoroughfare classification system that dictates the number of lanes for a roadway and outlines specific design features. One important facility identified on the Plan is the upcoming Loop 9, which will serve as an important regional highway connecting many DFW communities.

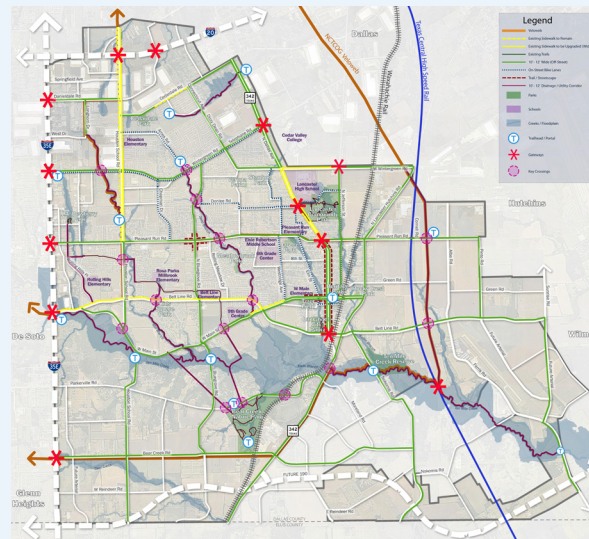




## TRAILS MASTER PLAN

The 2006 Trails Master Plan, which was updated in 2020, identifies needed active transportation corridors. The Trails Master Plan was created to help develop how trails can link destinations, neighborhoods and public facilities with surrounding communities. The underlying goals for the Trails Master Plan include:

- Develop regionally connected trails
- Link communities
- Provide access to users of all abilities
- Provide amenities within trail systems
- Provide access for maintenance and emergency vehicles
- Preserve and enhance corridors
- Update ordinances for future trail development



*Trails master plan map.*

## PARKS, RECREATION, AND OPEN SPACE MASTER PLAN

The 2006 Parks, Recreation and Open Space Master Plan was updated in 2020. The plan creates overarching guidelines for developing recreational facilities in Lancaster. The plan also provides an inventory of existing parks, a detailed needs assessment, and overall recommendations for future facilities. Plan goals include:

- Provide recreational facilities
- Preserve, enhance and improve the look and feel of Lancaster
- Implement a trails system that links open spaces
- Develop mechanisms to help support the city's funding resources



*Lancaster Community Park*

## PUBLIC & STAKEHOLDER ENGAGEMENT

A variety of public and stakeholder engagement methods were used to seek input on the community vision and concepts for streetscapes and monumentation. The City Council provided key feedback at a series of work sessions, all of which were accessible to the public. Additionally, a public online survey was conducted in conjunction with the parks master plan update. This section summarizes the key findings from each of these input methods.

### CITY COUNCIL WORK SESSIONS

During the first City Council vision work session, the council members were asked questions about their vision for Lancaster through a series of four questions. These questions and summarized responses are shown on the following pages.

Question 1: How would you describe Lancaster in one word or phrase?

Great! Quality of life **Home** Growing and determined Diversity  
 Unlimited potential Sense of Unity and togetherness  
**Historic character**  
**Sense of Community** Sense of partnership Small town feel

Question 2: What is your vision for the future of streetscapes, gateways, and branding in Lancaster?

Classic, clean, richness Shining star of Texas  
**Branded and memorable**  
 Maintainable, color pop, simple, seasonal  
**All America City 2019** Lasting and sustainable  
**Clean, beautiful, classic and bold**  
**User-friendly at all scales** Noticeable, consistent, iconic



Question 3: What characteristics of Lancaster are important when considering a 'brand' for the City? Rural character? Small-town feel? Historic, modern, or somewhere in between? Other characteristics?

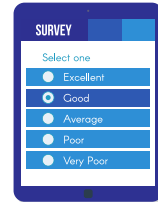
Come grow with us! doors are open  
**Community oriented**  
 Family friendly  
 Historic and modern – where we have been and where we're going  
**Safe** Variety and Diversity of landmarks  
 Business friendly  
**Strength consensus**  
 Time, clock theme, modern, clean and historic  
 Up and coming and determined, goal oriented **Workable**  
 Father of American quarter horse (steedust)  
 Airport, golf course unique to city  
**Sense of welcome**

Question 4: How will branding impact the future of Lancaster?

Changes narrative, changes culture  
 Instills pride, consistent ownership  
**Moving forward** Identity with city  
 Sense of direction  
 Consistent growth  
 Looking forward, not back  
 long-lasting impression  
**Improve image**

## ONLINE COMMUNITY SURVEY

As part of the City's Parks Master Plan that was developed simultaneously with this plan, a public opinion survey was conducted that included questions focused on streetscape needs. A total of 381 survey responses were received over a period of two months. The following charts represent key findings from this survey.

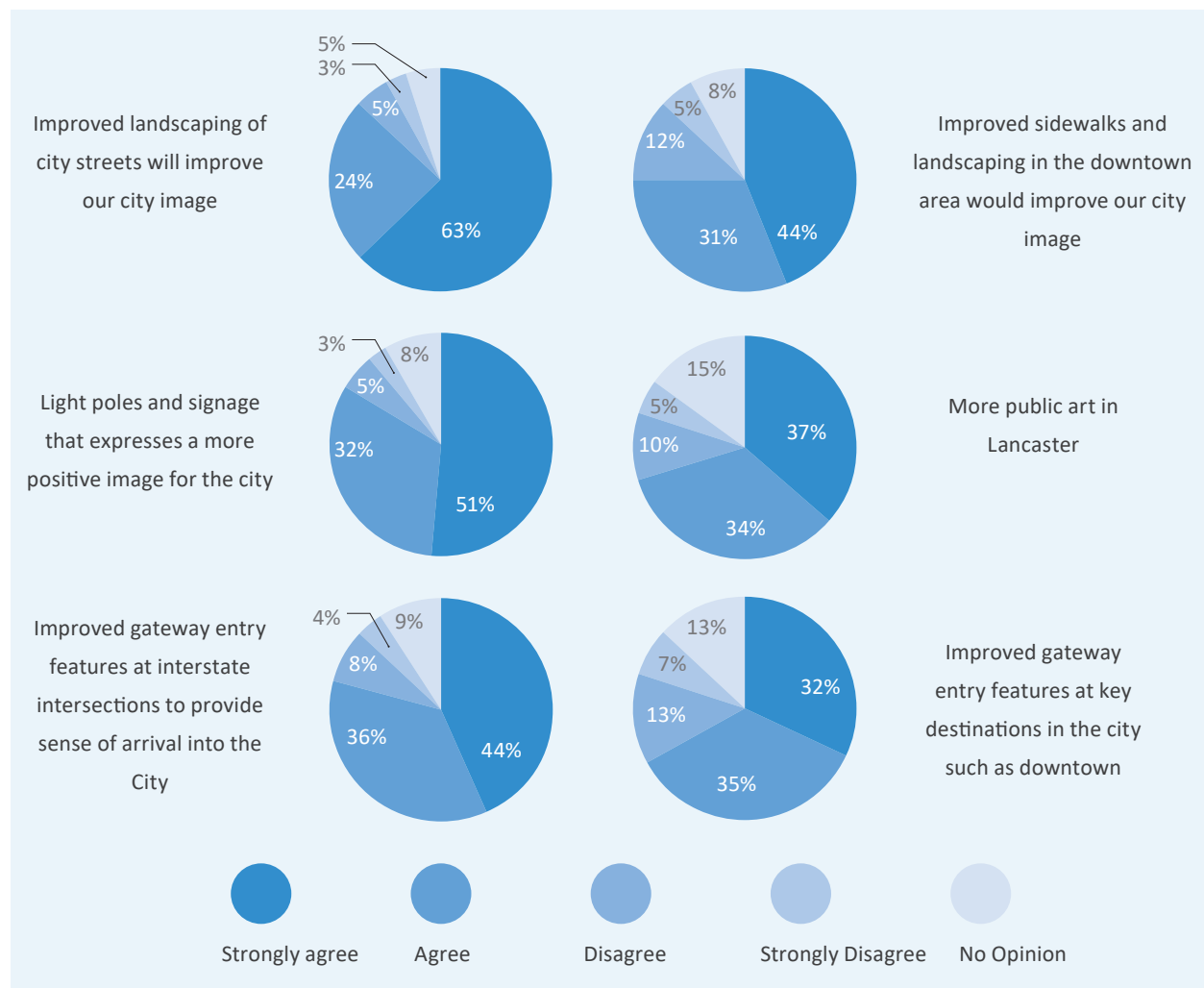


### STREETSCAPE PREFERENCES

Respondents most strongly agreed that enhanced streetscapes and monumentation will improve the image of the City.

**Survey Question:** The City is developing a Streetscape Master Plan that will provide recommendations for beautifying streets and city entry features. How strongly do you agree or disagree with the statement below?

**Figure 2:8 - Survey Results - Streetscape Preferences**



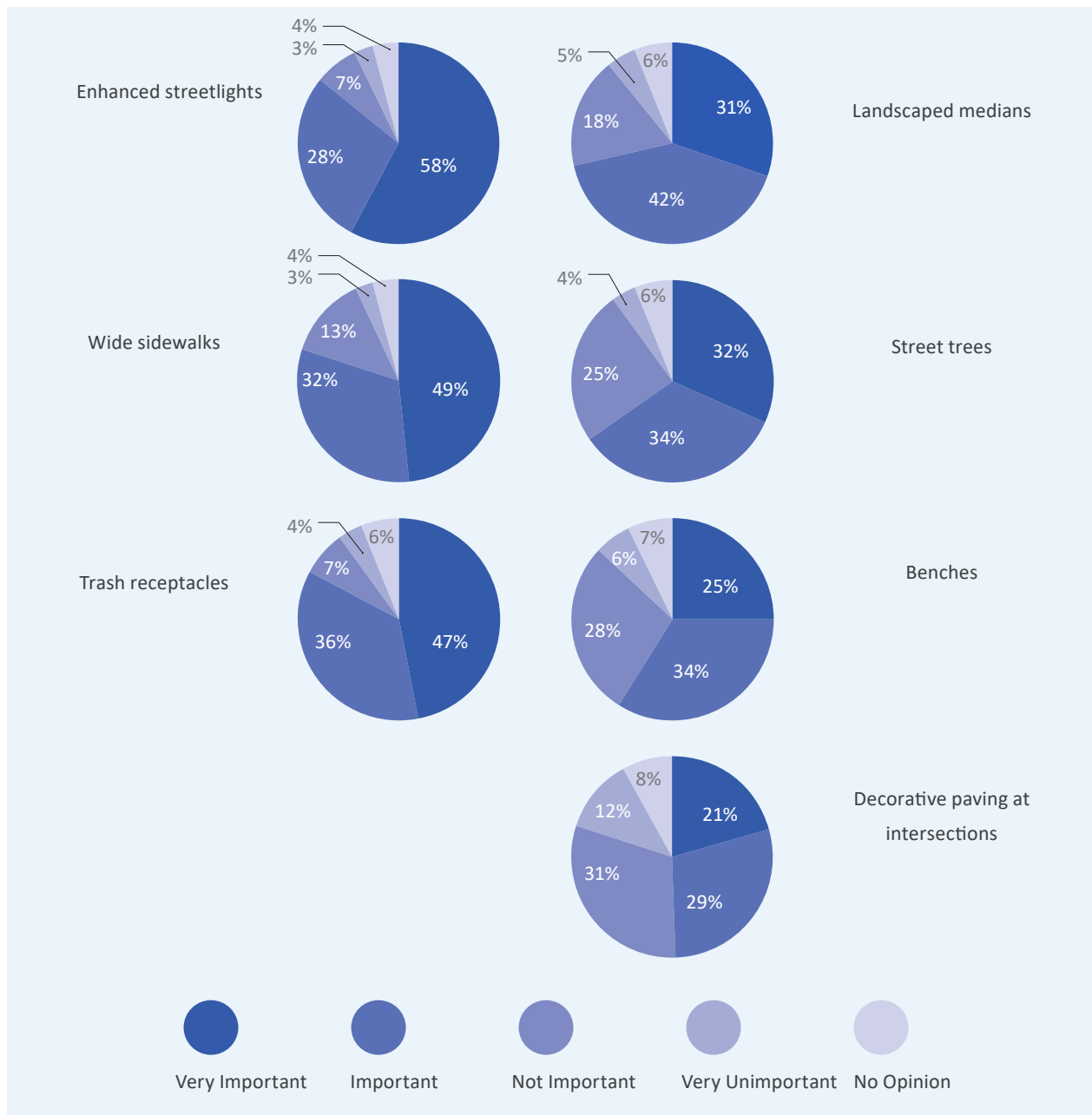
Source: National Service Research November 2019

## STREETSCAPE ELEMENTS

Respondents preferred enhanced streetlights, wide sidewalks, and trash receptacles as the most important streetscape elements to incorporate.

**Survey Question:** Please rate how important it is to add the following streetscape elements to major roadways in the City (For example: Belt Line Rd., Pleasant Run Rd., Houston School Rd., Dallas Ave., Wintergreen Rd., Danieldale Rd.).

**Figure 2:9 - Survey Results - Streetscape Elements**



Source: National Service Research November 2019

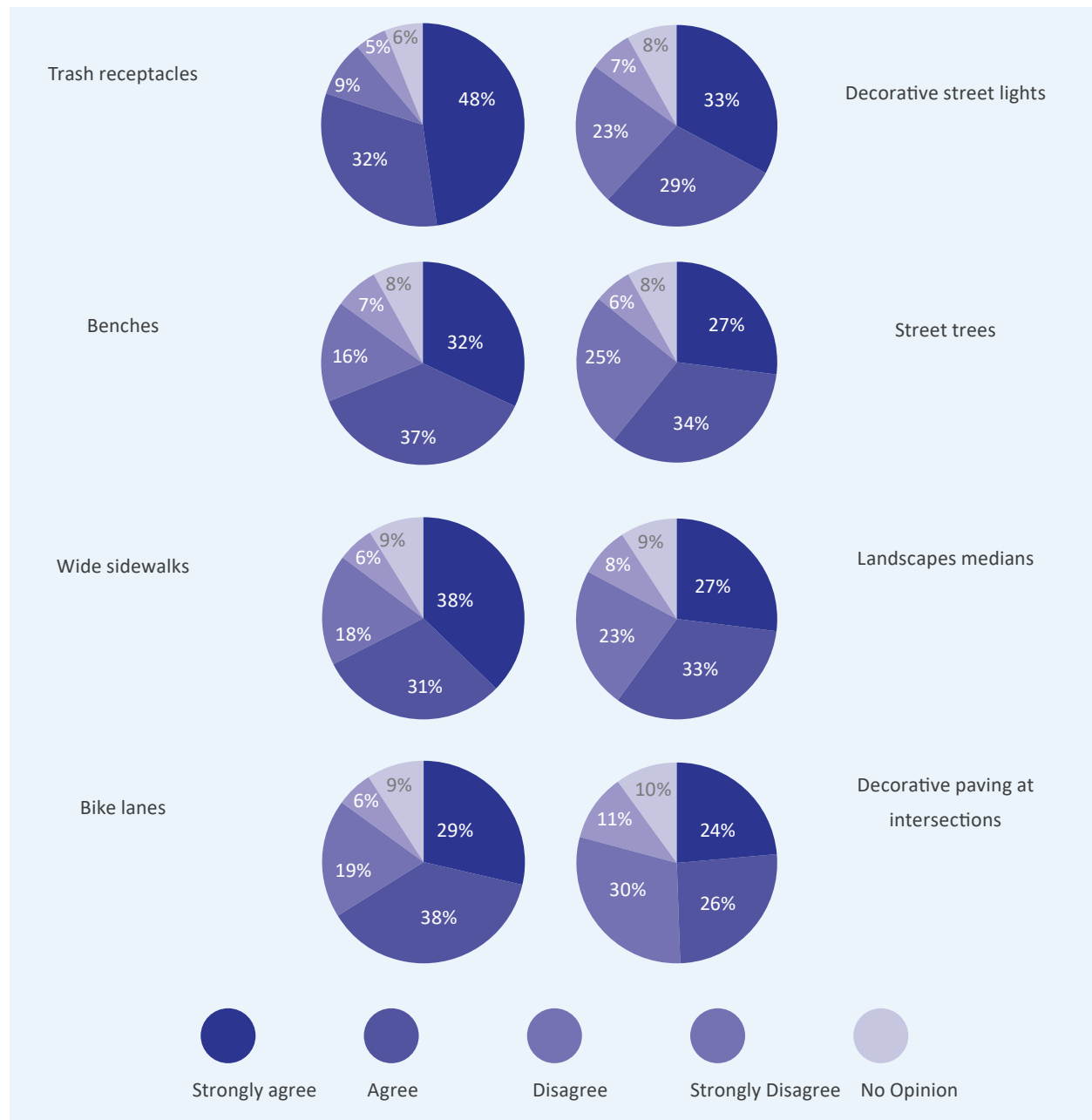


## DOWNTOWN STREETSCAPE ELEMENTS

Specific to Downtown Lancaster, respondents thought trash receptacles, benches, and wide sidewalks were the most important streetscape elements to incorporate.

**Survey Question:** Please rate how important it is to add the following streetscape elements to Downtown?

**Figure 2:10 - Survey Results - Downtown Streetscape Elements**

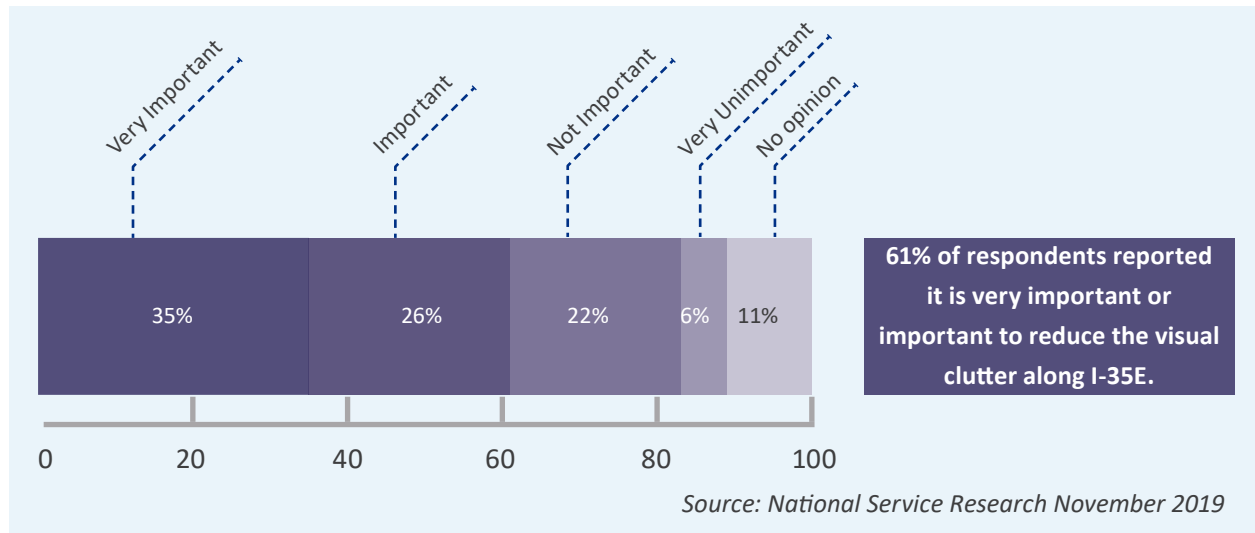


Source: National Service Research November 2019

## VISUAL CLUTTER ALONG I-35E

**Survey Question:** The City of Lancaster has a significant amount of signage and utility poles along Interstate 35E. How important is it to reduce the “visual clutter” along Interstate 35E in Lancaster?

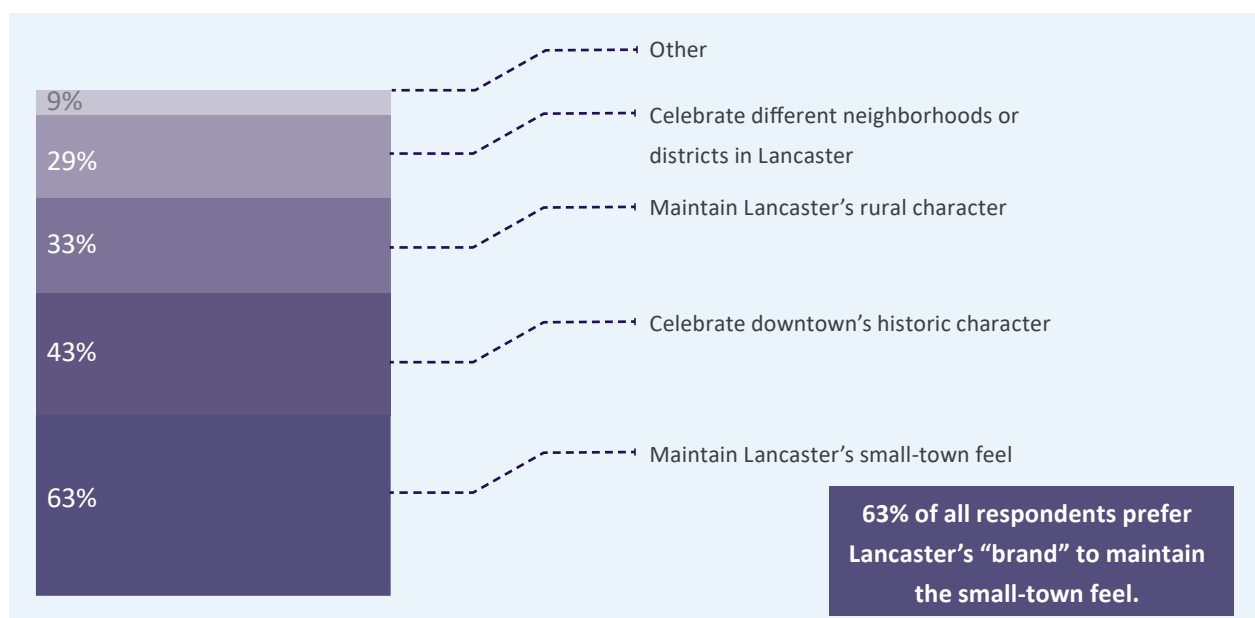
**Figure 2:11 - Survey Results - Visual Clutter Along I-35E**



## LANCASTER “BRAND”

**Survey Question:** As growth and development continues in the DFW area, Lancaster could create a unique “brand” to distinguish itself from other area communities. Which of the following characteristics are important to you when considering a “brand” for the City of Lancaster?

**Figure 2:12 - Survey Results - Lancaster “Brand”**

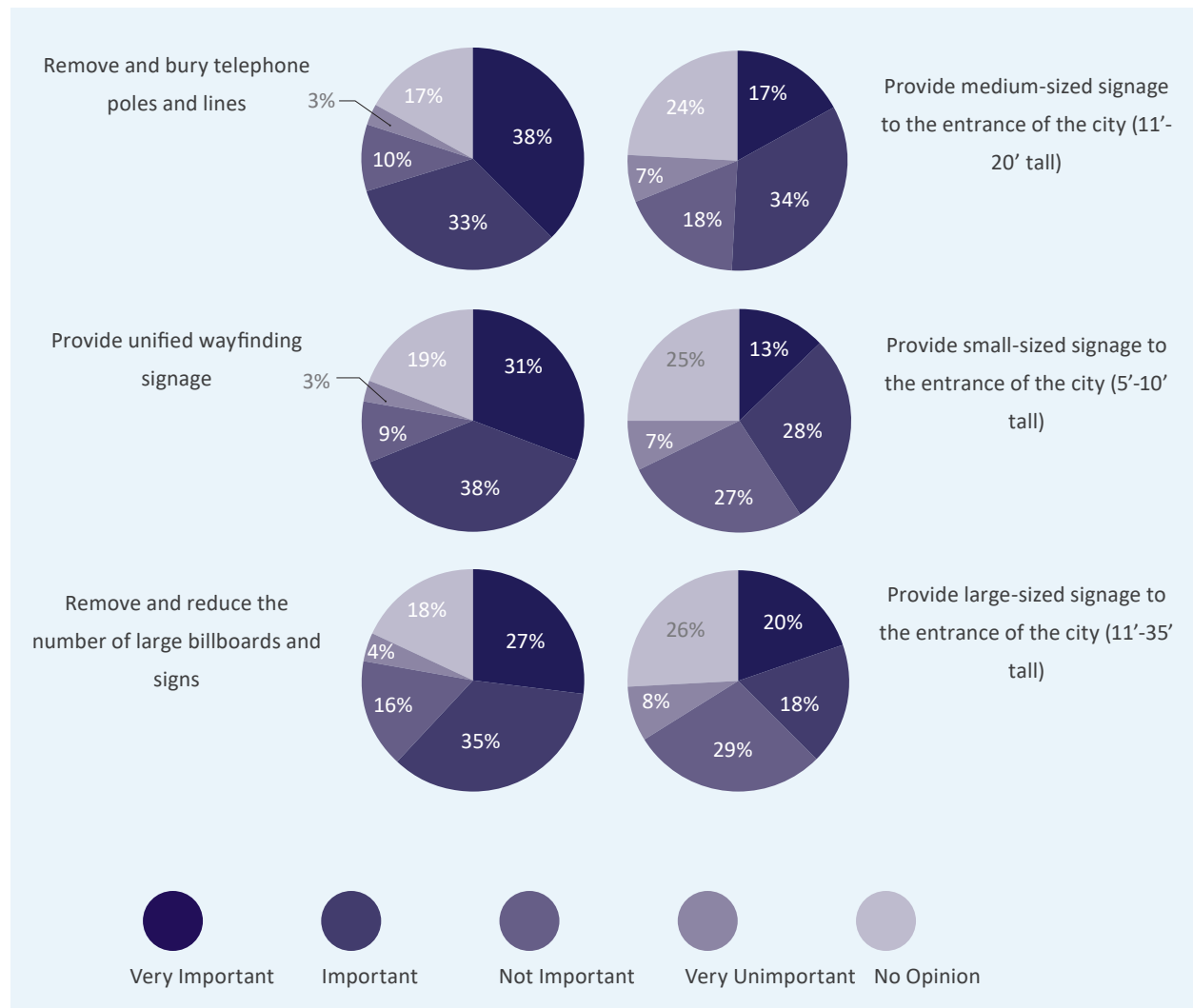


## REDUCING VISUAL CLUTTER

**Survey Question:** The following strategies can help reduce visual clutter along a roadway. Rate each strategy along I-35E in Lancaster?

The charts below summarize how respondents ranked the importance of these Downtown elements.

**Figure 2:13 - Survey Results - Reducing Visual Clutter**



*Responses will add to more than 100% due to multiple responses allowed.  
Source: National Service Research November 2019*



## COMMUNITY SURVEY KEY FINDINGS

**Streetscape Elements:** Along major roadways, the top three improvements survey respondents want to see made are to enhanced streetlights, wide sidewalks, and trash receptacles. Within the downtown area, trash receptacles, benches, and wide sidewalks were the top three elements respondents noted.

**Visual Clutter:** The majority of survey respondents thought it was very important or important to reduce visual clutter along major roadways, including IH-35E. Reducing visual clutter such as utility poles and unsightly signage will require coordination with various entities.

**Lancaster Brand:** The majority of survey respondents want to maintain the City's 'small-town feel' and celebrate the historic character in downtown. These characteristics are most closely aligned with the different character district recommendations discussed in later chapters of the report.



*Downtown Lancaster has a unique look and feel that survey respondents want to maintain.*







# CHAPTER 3

## STREETSCAPE MASTER PLAN NEEDS

EXISTING STREETSCAPE & MONUMENTATION

STREETSCAPE & MONUMENTATION TRENDS

OPPORTUNITIES

Chapter 3 assesses the current conditions of streetscapes and monumentation in Lancaster, discusses current trends, and identifies opportunities based on the assessment of existing conditions and public/stakeholder input. Development standards are also outlined in this chapter.



## EXISTING STREETSCAPE & MONUMENTATION

### CURRENT CONDITIONS

In Lancaster today, there is not a cohesive appearance for monumentation features or streetscapes. Instead, there is an assortment of different entry features and an inconsistent look and feel along the various roadways. This section depicts the current conditions of existing features in the city.

#### BELT LINE ROAD

Belt Line Road is a major roadway that travels through many communities in DFW, which passes by a mix of commercial, single-family residential, and vacant land adjacent to Belt Line. There are sidewalks for a significant portion of the street but no particular distinguishing streetscape features.



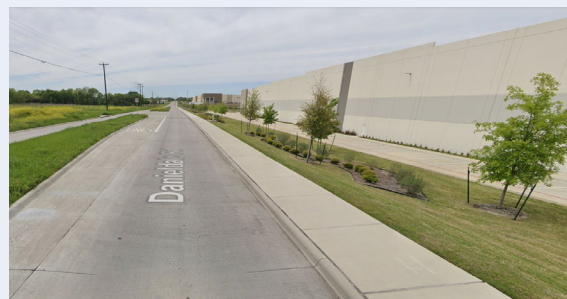
#### DALLAS AVENUE

Dallas Avenue serves as one of the main corridors in Lancaster, providing a direct link into downtown. At some intersections, there have been intersection treatments added (intersection of Wintergreen Road and near Town Square in downtown). Otherwise, the streetscape is very bare, as shown in image number 3. The solid concrete median does not provide any visual interest and is an eyesore. The City received Green Ribbon funding from TxDOT in 2019 and is currently working on a design to improve landscaping along Dallas Avenue from Cedardale Road to Alexander Avenue. This will greatly improve the look and feel of the corridor.



#### DANIELDALE ROAD

There are many industrial warehouses located along Danieldale Road. The City has done a good job requiring landscaping lining the street to provide visual separation from the large industrial buildings.





## HOUSTON SCHOOL ROAD

North of Wintergreen Road, there are large industrial warehouses located along Houston School Road. Similar to Daniieldale Road, the City has been successful in requiring screening landscape and sidewalks along the roadway.



## PLEASANT RUN ROAD

The existing city gateway feature is located at the intersection of Pleasant Run Road and IH-35E. However, as you travel into Lancaster, there are no distinguishing streetscape features along the roadway.



## IH-35E

This major interstate travels north-south through the DFW region and this portion in Lancaster serves as one of the southernmost entrances into the region. There are a total of six major roadway intersections with IH-35E in Lancaster, so there is significant opportunity to create a lasting impression of the City. However, today there are no significant gateways visible from IH-35E in Lancaster. The first impression one gets is of the large, obelisk gateway monument located across the highway in DeSoto. There is also significant visual clutter along the interstate with many commercial signs and billboards.





## DOWNTOWN ENTRY SIGNAGE

Downtown Lancaster is a key destination within the community. The City has made concerted efforts to maintain the historic character of the area by incorporating a red brick motif into entry signage at the four corners of the Town Square and with red brick paving at key crosswalks. Downtown is the most defined part of Lancaster today.

## CITY ENTRY FEATURES

There are various entry features throughout Lancaster of various scales and materials. The major gateway at IH-35E and Pleasant Run Road matches the character that was established in downtown, however, it is much smaller in scale especially when juxtaposed with DeSoto's much larger landmark across the highway.

Other entry features are not consistent, as shown in the images to the right. Some are also partially hidden by overgrown landscaping. There are a few spots within the city that feature the standard pole sign, but they are very small and hard to notice when driving.

There are still opportunities to develop significant entry features along major entrances to the City, including Belt Line Road, Houston School Road, and Bear Creek.





## PROGRESS SINCE 2006 PLAN

The City has made progress on some of the implementation actions from the 2006 plan. [Table 3:1](#) depicts all of the implementation actions (Years 2006-2010 and 2011-2015) from the plan.

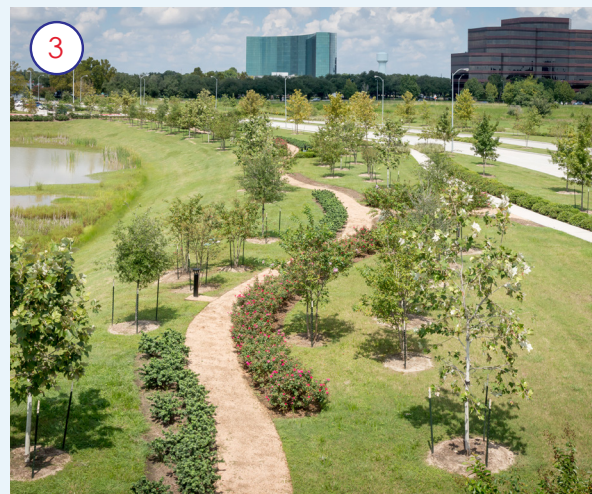
**Table 3:1 - 2006 Plan Implementation Progress**

Category	Implementation Action	Progress Since 2006 Plan
Landmarks	Intersection of IH-35E and Belt Line Rd.	No action.
Major Gateways	IH-35E and Pleasant Run Rd. IH 20 and Houston School Rd. Cedardale and Dallas Ave.	Gateway installed in median at IH-35E and Pleasant Run Rd. No action on other intersections.
Intermediate Gateways	Lancaster-Hutchins Rd. at City Limits Belt Line Rd. at Lancaster Airport Dallas Ave. at Wintergreen IH-35E and Wintergreen IH-35E and Bear Creek	No action.
Minor Gateways	IH-35E at Danieldale Main St. and Belt Line Rd. Lancaster-Hutchins Rd. and Pleasant Run Rd. Dallas Ave. and Pleasant Run Rd. Main St. and Lancaster-Hutchins Rd. Dallas Ave. and Belt Line Rd. State St. and Belt Line Rd. Dallas Ave. and Lancaster-Hutchins Rd.	No action.
Downtown Gateways	Main St. and Dallas Ave. E. Main St. and Henry St. S. Central Ave. and W. Cedar St. N. Central Ave. and E. First St.	Intersection paving added in downtown. Brick entry features added at three intersections in downtown.
Nodes	Belt Line Rd. and Houston School Rd. Pleasant Run Rd. and Houston School Rd. Telephone Rd. and Dallas Ave. N. Main St. and Belt Line Rd. Main St. and Houston School Rd. Main St. and Bluegrove Belt Line Rd. and Bluegrove Pleasant Run Rd. and Bluegrove Wintergreen and Houston School Rd.	Intersection paving added at: - Pleasant Run Rd. and Houston School Rd. - Wintergreen and Houston School Rd.
Major Thoroughfares Parkways/Medians	Belt Line Rd; Houston School Rd; Pleasant Run Rd; Dallas Ave; Lancaster-Hutchins Rd; Main St	Received Green Ribbon Funding for Dallas Ave; Design for Belt Line, Houston School, and Pleasant Run underway.

## STREETSCAPE & MONUMENTATION TRENDS

### STREETSCAPE TRENDS

The images shown below portray general types of streetscape trends that are being designed in the region. **Images 1-4** depict active transportation corridors adjacent to roadways along with supporting amenities like site furnishings and resting points. **Images 5-9** depict xeriscaping or low-maintenance vegetation alternatives that can save watering costs.







*Image 1: Beltline Road, Houston*

*Image 2: North Colony Blvd, The Colony*

*Image 3: Beltline Road, Houston*

*Image 4: Bethany Road, Allen*

*Image 5: North Colony Blvd, The Colony*

*Image 6: Sessom Dr, San Marcos*

*Image 7: North Colony Blvd, The Colony*

*Image 8: Crystal Falls Parkway, Austin*

*Image 9: North Colony Blvd, The Colony*



## MONUMENTATION TRENDS

The images shown below portray general types of monumentation trends that are being designed in the region. The images below depict the types of monumentation features that can vary in size and scale to suit the environment that they are being placed in. Scale, form, and structure help identify entry points and demarcate passages to important features to create interest and enhance the sense of arrival.



*Image 1: Flower Mound*

*Image 2: Cedar Crest Gateway, Dallas*

*Image 3: Cesar Chavez Boulevard, Austin*

*Image 4: Uptown, Dallas*



## FAMILY OF MONUMENTATION TRENDS

Monumentation that has been designed with a consistent theme in mind can help tell a story and establish visual continuity. Direct linkages can be made throughout the city via the simple use of similar materials, form, or color to inform visitors about where they are located in the city.



Images 1-3: Cedar Crest Gateway Bridge, Dallas



## SIGNAGE AND WAYFINDING TRENDS

The images shown below portray signage and wayfinding trends that are related to overall streetscape and monumentation. Directional signage and wayfinding help navigate visitors to easily find their destination on their own without long explanations or too many navigational choices. Signage can be placed along pathways, intersections, and can be designed in many forms or shapes to orient visitors.



Image 1: Stonebriar, Frisco

Image 2: The Gates of Prosper, Prosper

Image 3: Cedar Crest Gateway, Dallas

Image 4: White Rock Creek Trail, Dallas

Image 5: Santa Fe Trestle Trail, Dallas



## DEVELOPMENT STANDARDS

Streetscape and monumentation in Lancaster is regulated by Article 14.800 Landscape Standards and Article 14.1200 Sign Standards of the Lancaster Development Code. The purpose of these landscape standards is to preserve and protect the natural environment of Lancaster and encourage the preservation of large trees. In order to implement the types of streetscape features and monumentation recommended in this master plan, the City should consider making revisions to the Landscape Standards that align with the below considerations.

- **Purpose Statement:** Consider expounding upon the purpose statement, specifically with regards to implementing the intent of the comprehensive plan and streetscape master plan.
- **Definitions:** Just like in Article 14.900 (Tree Preservation), there should be a section added for definitions. It is helpful to have a clear definition of common terms used throughout the article such as buffering, dripline, landscape area, streetyard, etc.
- **Plan Content:** Consider additional requirements for plan content such as plans must be prepared by a licensed landscape architect, maintenance provisions, and descriptive irrigation provisions.
- **Credits:** Consider enhancing tree preservation credits and credits for other landscape amenities above and beyond the minimum requirements.
- **Additional Sections:** Consider adding additional sections such as application of division, artificial lot lines, and hike and bike trail landscaping requirements.



*Gathering area at Bear Creek Nature Park.*

## OPPORTUNITIES

Based on the review of existing conditions, relevant planning documents, and public and stakeholder input, a series of opportunities for streetscape and monumentation features were developed. This section describes the key opportunities depicted in [Figure 3:1](#). More details on the hierarchy of streetscape and monumentation types are included in Chapter 4.

### CITY ENTRANCES

Entrances to the City pose a great opportunity to add gateway monumentation to signify that you are entering Lancaster. A series of major and minor gateways are shown on the Opportunity Map. Major Gateways are key vehicular entrances from the major highways. Minor gateways are smaller interchanges and could represent gateways along trails.

### MAJOR THOROUGHFARES

Belt Line, Pleasant Run, and Houston School are major thoroughfares that represent opportunities for significant streetscape treatments to establish an identity in Lancaster. A hierarchy of streetscape treatments that would be appropriate on these and other corridors is discussed in Chapter 4.

### CHARACTER DISTRICTS

The Trails Master Plan effort identified six areas within the City that are intended to represent general areas of differing character. These districts are important for the streetscape master plan as they can help identify where gateway monumentation and entry signage may be placed to help users transition from one district to the next. The six character districts include:

- **Campus/Commercial Edge** - Represents the area near the I-20/I-35E interchange and near UNT Dallas campus.
- **Residential Heart** - Represents the existing suburban residential neighborhoods within Lancaster.
- **Historic Core** - Represents the historic downtown area.
- **Greenbelt Spine** - Represents the area surrounding Ten Mile Creek.
- **Airport/Industry** - Represents areas in the eastern part of the City that are slated for future industrial uses.
- **Rural South** - Represents the undeveloped portions of the City in the south.

### INTERSECTION TREATMENTS

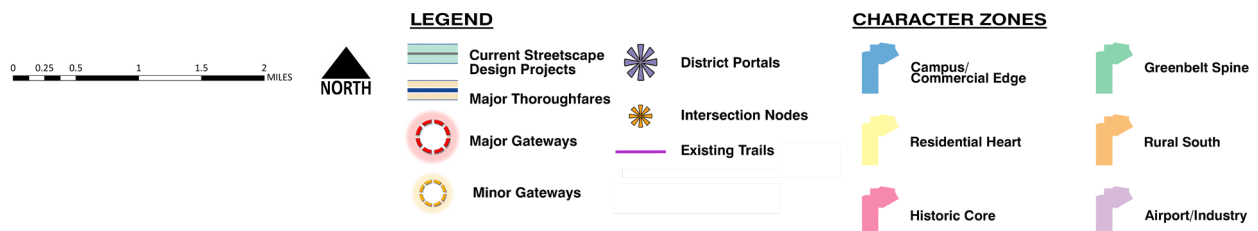
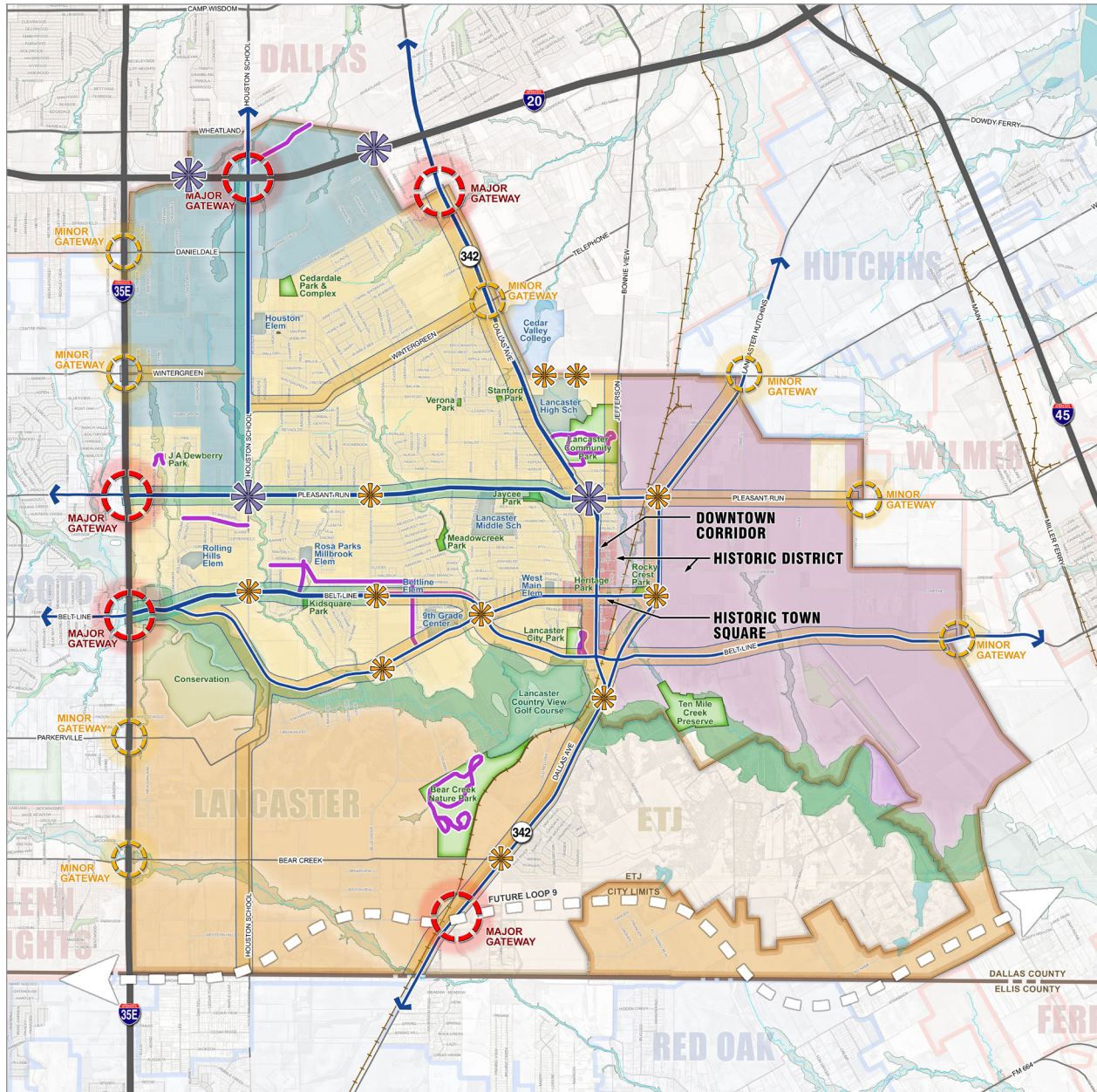
In addition to gateways at the boundaries of the city, this plan also recommends treatments to intersections along major thoroughfares within the city. Although those intersections don't warrant gateway monumentation, there can be improvements to the intersection to make them safer and more aesthetically pleasing, such as adding decorative pavers, landscaping, and crosswalks.

### TRAIL CONNECTIVITY

The Trails Master Plan identified a series of potential trail corridors throughout the city - both adjacent to roadways and away from the roadway, such as along creek corridors. There are opportunities to create gateways at trailheads to signify to trail users when you are entering Lancaster.



Figure 3:1 - Streetscape and Monumentation Opportunity Map







# CHAPTER 4

## GATEWAY & STREETSCAPE VISION

### COMMUNITY IDENTITY & DESIGN

### GATEWAYS & MONUMENTATION FEATURES

### STREETSCAPE FEATURES

Chapter 4 presents the overall vision for monumentation and streetscape features for this master plan based on the public and stakeholder feedback that was received along with the identified needs. The chapter establishes a hierarchy within monumentation and streetscape features and identifies where the most feasible proposed features could occur. Proposed conceptual renderings are also presented to show future opportunities and the visual impact of the introduction of enhanced monumentation and streetscape features in Lancaster.

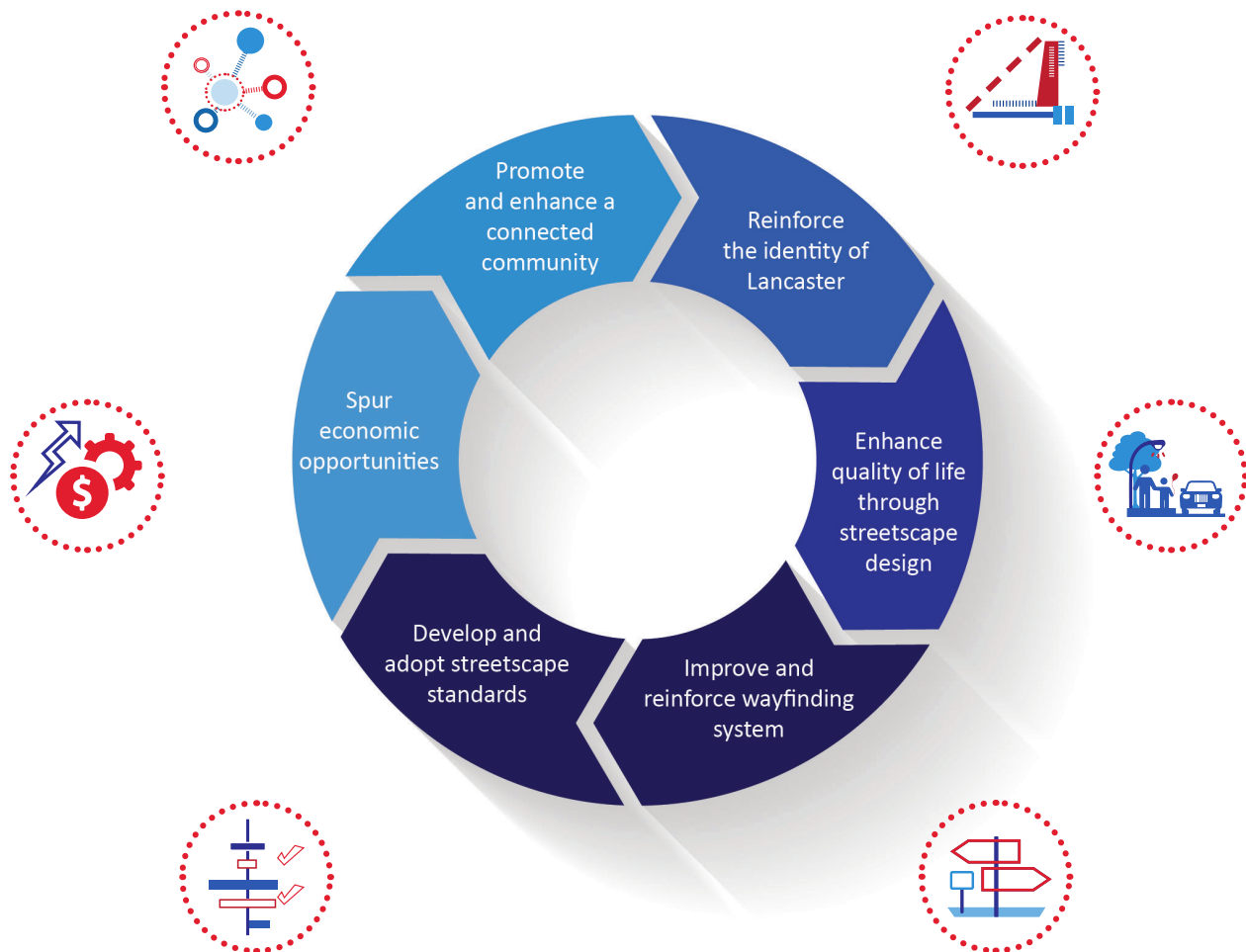
# COMMUNITY IDENTITY & DESIGN

## INTRODUCTION

Over time, urban sprawl and rapid expansion of cities that are often characterized by increased reliance on outside developers have led to a high degree of similar developments in neighborhoods across the United States. Ultimately, this repeated use of indistinguishable forms and development patterns has created communities that have minimal distinct character that sets them apart from other cities.

This Streetscape Master Plan informs and presents an image of what Lancaster wants to be, including preserving and enhancing the character and history of the city while providing safe environments for pedestrian and vehicular activity. When implemented, the recommendations in this plan can help balance multiple modes of transportation, strengthen connections with adjacent communities, and enhance the economic value of properties.

**Figure 4:1 - Plan Goals & Objectives**







*View in Town Square in Downtown Lancaster.*



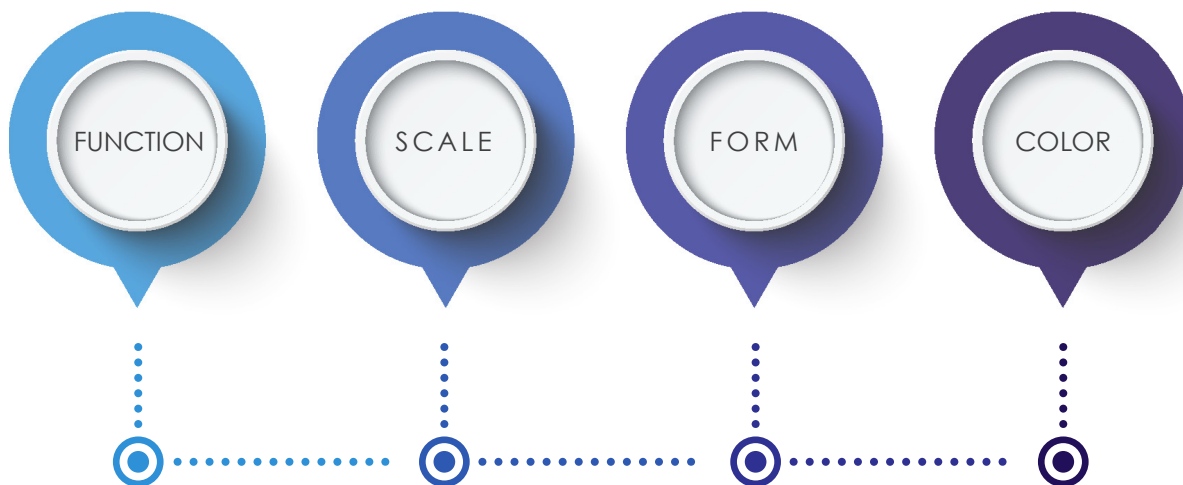
*Unique pavilion structure in Lancaster Community Park.*

## GATEWAYS & MONUMENTATION FEATURES

The plan sets forth recommendations on how to distinguish Lancaster from other communities through the use of gateways and monumentation along major intersections and streets. With proper planning and design, the creation of a system of gateway and monumentation features can form a direct expression of Lancaster's character and effectively communicate necessary directional information to promote self navigation. A gateway and monumentation system will provide the following:

- Enhance and highlight Lancaster's memorable character and modern future.
- Define a sense of place and pride within the community.
- Create a cohesive themed system to ease navigability and provide clear directional signage to users.
- Connect neighborhoods within Lancaster through a series of landmarks.

Four critical elements of gateway and monumentation features are function, scale, form, and materials/colors.



### FUNCTION

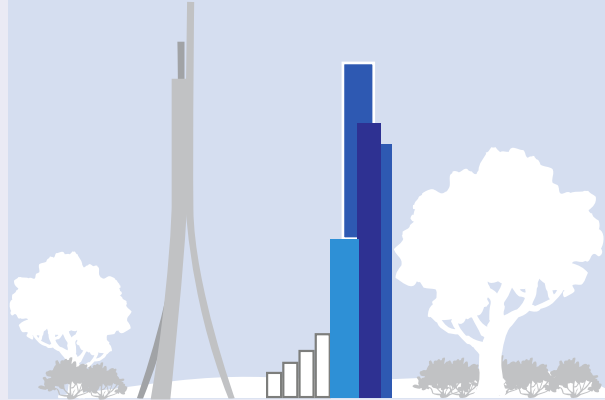
Gateways and monumentation are freestanding vertical cues that serve as transitions, mark changes between surrounding communities, and provide visual cues to demarcate a sense of arrival into Lancaster. These features must be placed with consideration to safety, aesthetics and access for maintenance. Gateways and monumentation should be placed appropriate to its proposed setting and community context to improve navigation, enhance Lancaster's brand, and reinforce the city's identity.





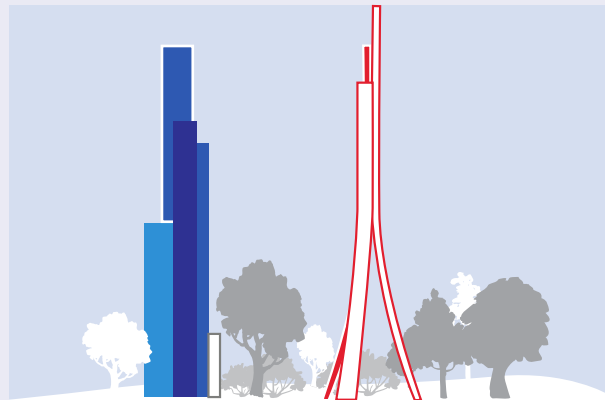
## SCALE

Vertical cues may vary in height and width, and should be contextually placed to directly relate to their immediate surroundings. A smaller scaled version of a monument could be placed at subsequent intersections to reemphasize the gateway that has been introduced at the entrance of the city. This repetition through scale of the same style and form will intentionally introduce a recognizable palette and establish a sense of place in Lancaster.



## FORM

The massing and shapes of gateway and monumentation in Lancaster may come in variations of a selected type of form, and should immediately relate visually to each other to form a cohesive family of elements. The character and form of the gateway monumentation are strongly influenced by existing architecture and the community's vision. Overall the form should be sensitive to its surrounding context and respond to local conditions.



## MATERIALS AND COLORS

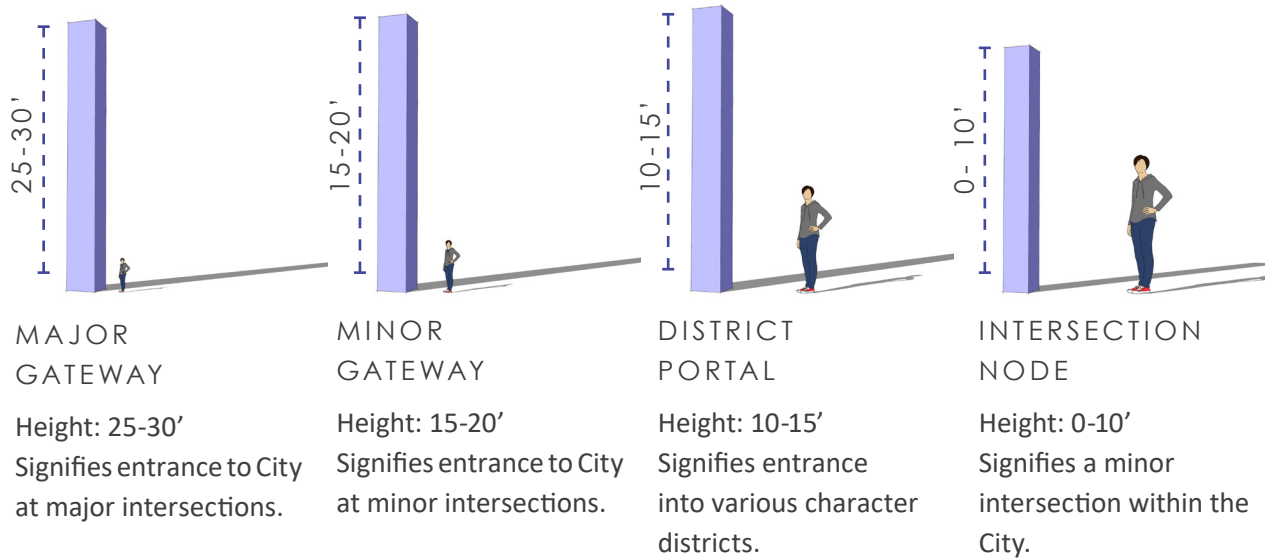
Materials and colors chosen are consistent with existing materials seen commonly throughout Lancaster. Purposeful selection of consistent materials will provide a cohesive look and feel. The repetition of certain textures, colors, and materials will associate with Lancaster.



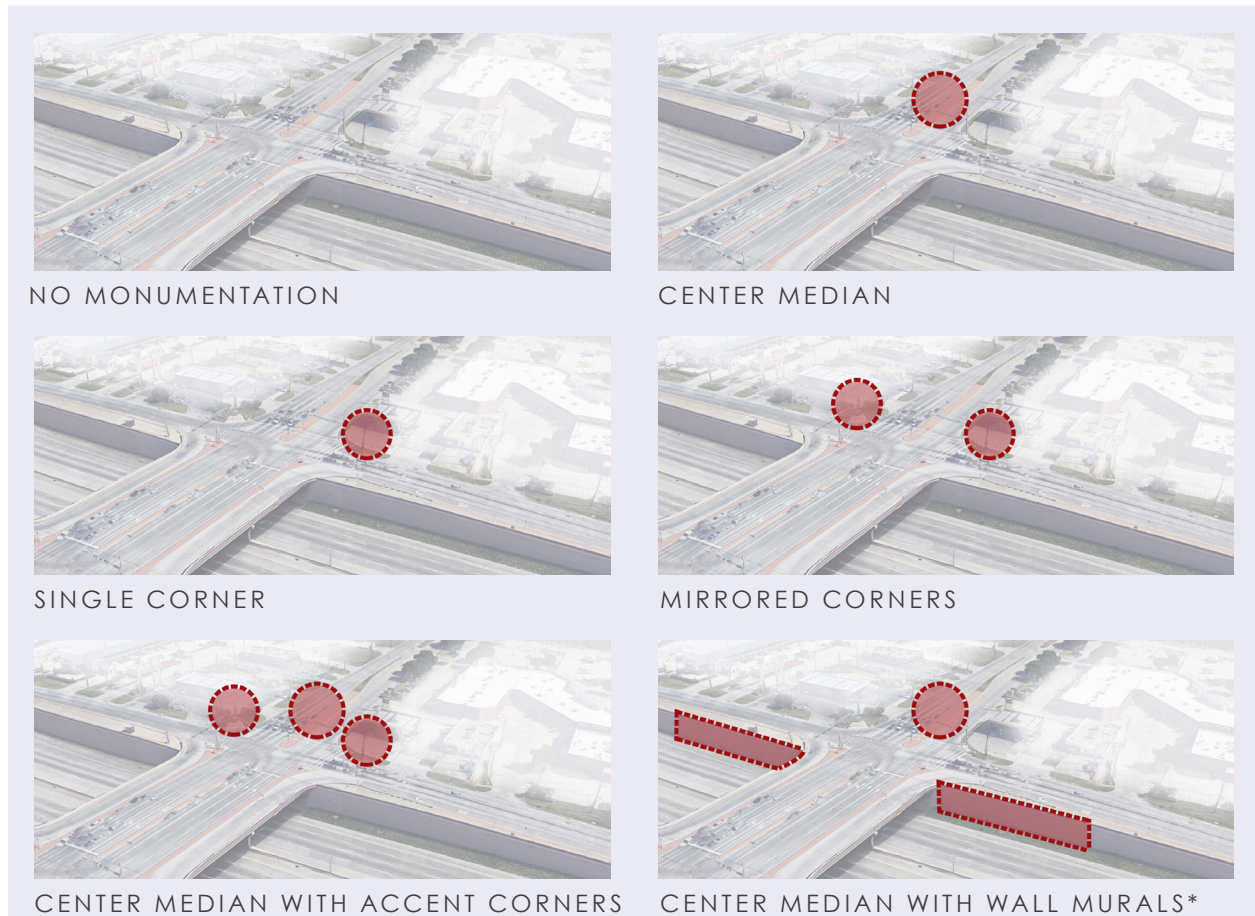


## MONUMENTATION HIERARCHY

As introduced in Chapter 3, the proposed monumentation hierarchy consists of four types: major gateway, minor gateway, district portal, and intersection node; the proposed locations are shown in **Figure 4:2**.

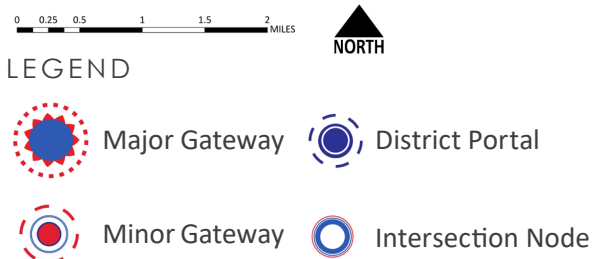
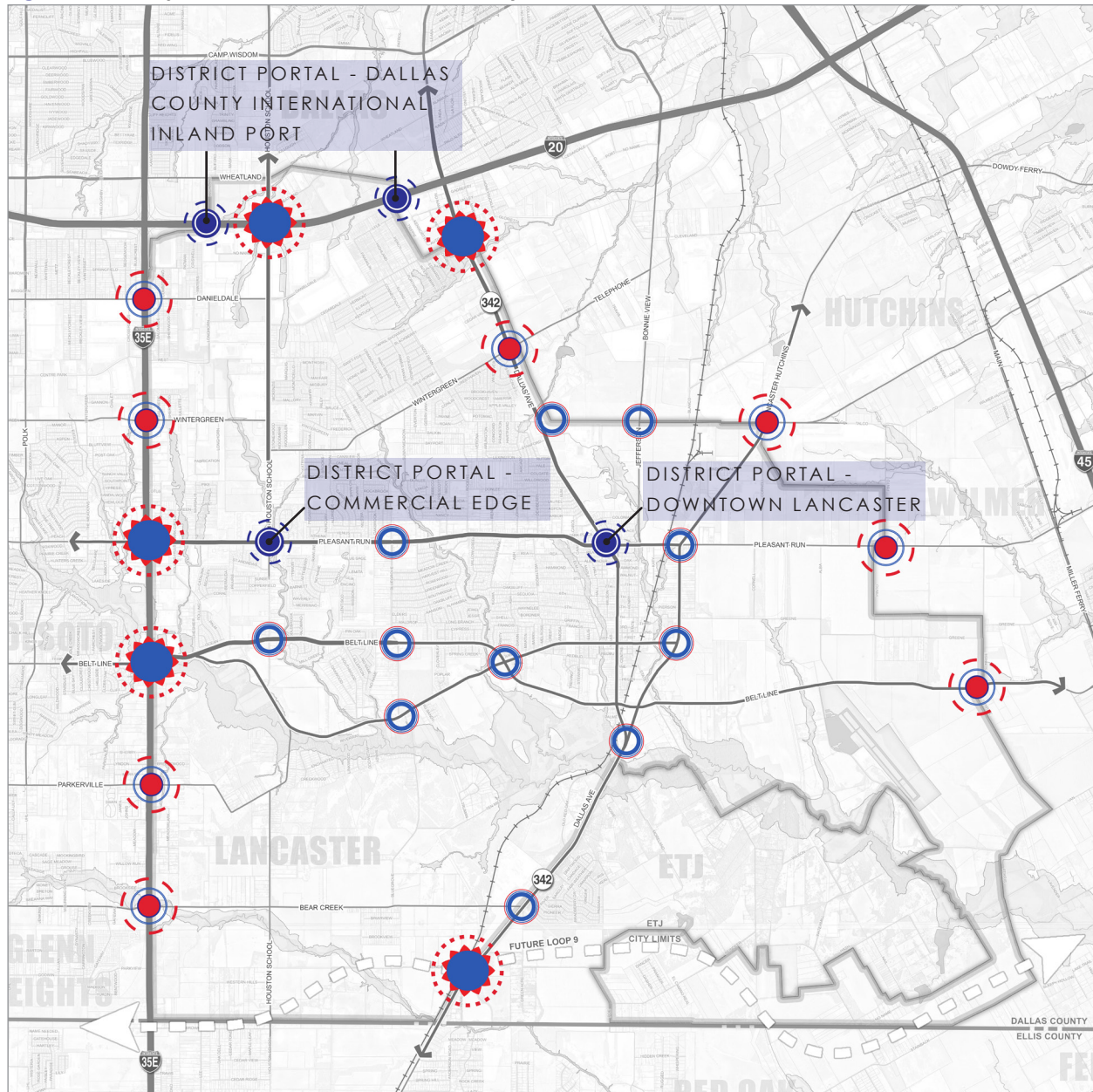


Below are graphics to show potential layout options to locate monuments in Lancaster.



*\*At major gateways along IH-35E only.*

Figure 4:2 - Proposed Monumentation Hierarchy



Generally, TxDOT allows one major monument feature per City within their interstate ROW. If more than one major monument is implemented along IH-35E and IH-20, then they should be placed outside of TxDOT ROW within the city limits.



## MAJOR GATEWAY MONUMENTATION EXAMPLES

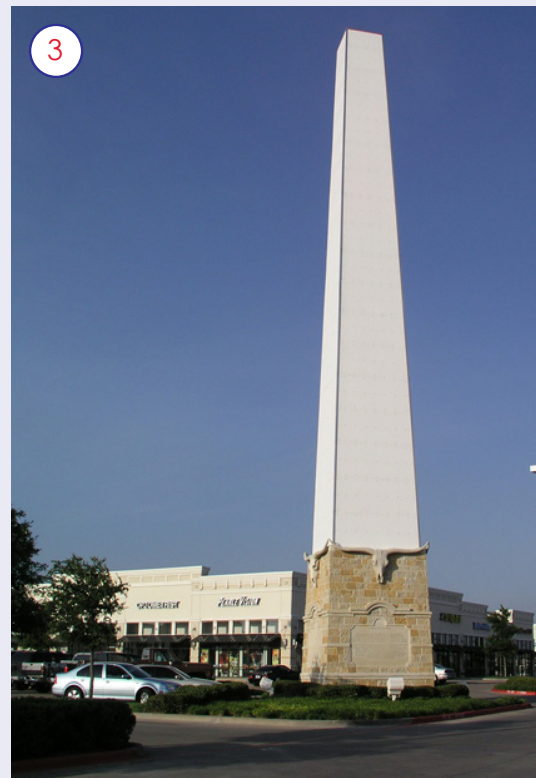
Major gateways should include readily identifiable elements that create a point of reference and can be viewed from long distances to help users determine their location from an unfamiliar area, directing them into Lancaster.



*Image 1: Coppel*

*Image 2: Cedar Crest Gateway, Dallas*

*Image 3: Fort Worth*





## MINOR GATEWAY MONUMENTATION EXAMPLES

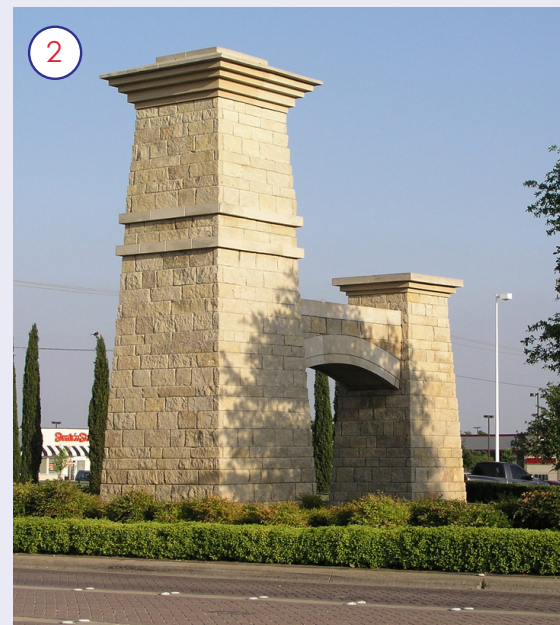
Upon arrival into Lancaster, minor features bring about physical cues to help move in a certain direction or towards a key point of interest. Minor gateway monumentation reflects the character of the major gateway monumentation in the city and serves as a unifying element.



*Image 1: Rio Grande Boulevard, Euless*

*Image 2: Frisco*

*Image 3: Southern Hills, McKinney*





## DISTRICT PORTAL MONUMENTATION EXAMPLES

District portals incorporate specific elements that are placed to signify certain areas or neighborhoods within Lancaster that are distinguished by its character.

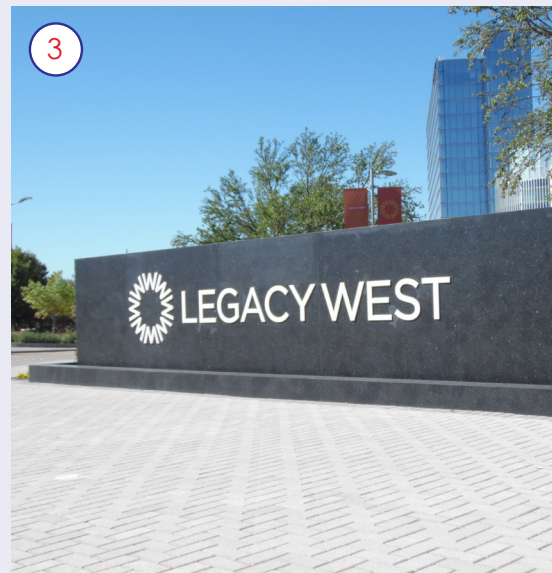


Image 1: Rose District, Broken Arrow, OK

Image 2: Downtown Dallas

Image 3: Legacy West, Plano



## INTERSECTION NODE EXAMPLES

Intersection nodes are characterized by pavement and planting treatments at key intersections. They may also have small monumentation signs that relate to the surrounding area.



Image 1: Rose District, Broken Arrow, OK

Image 2: Oak Street, Roanoke

Image 3: Lovers Lane, Prosper



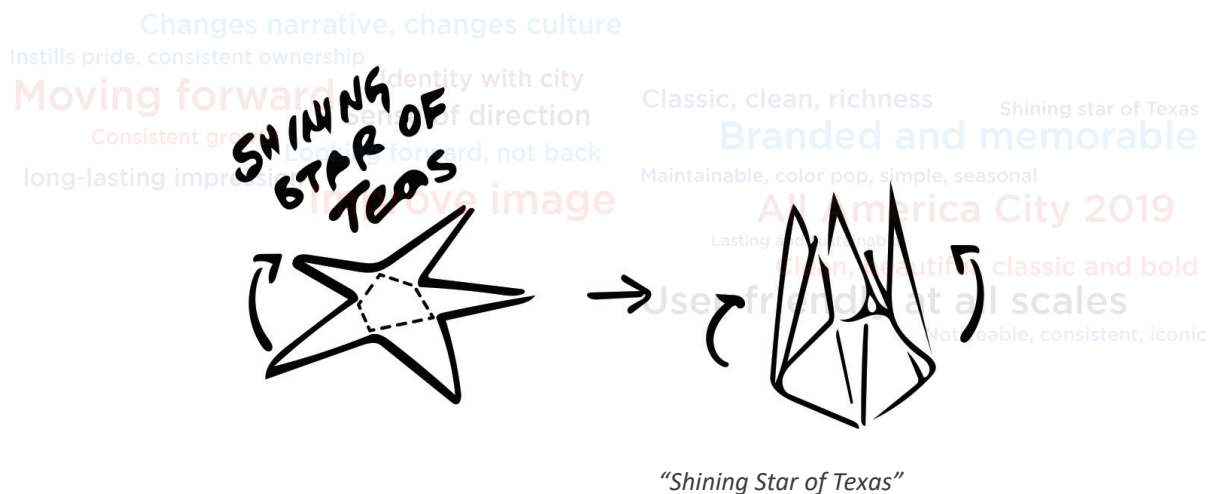
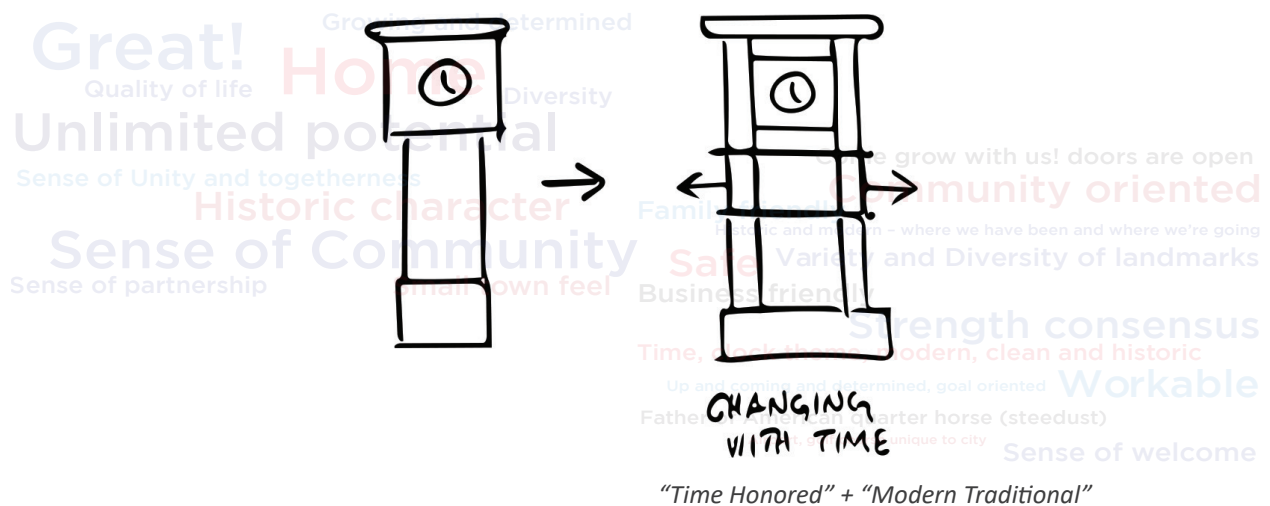
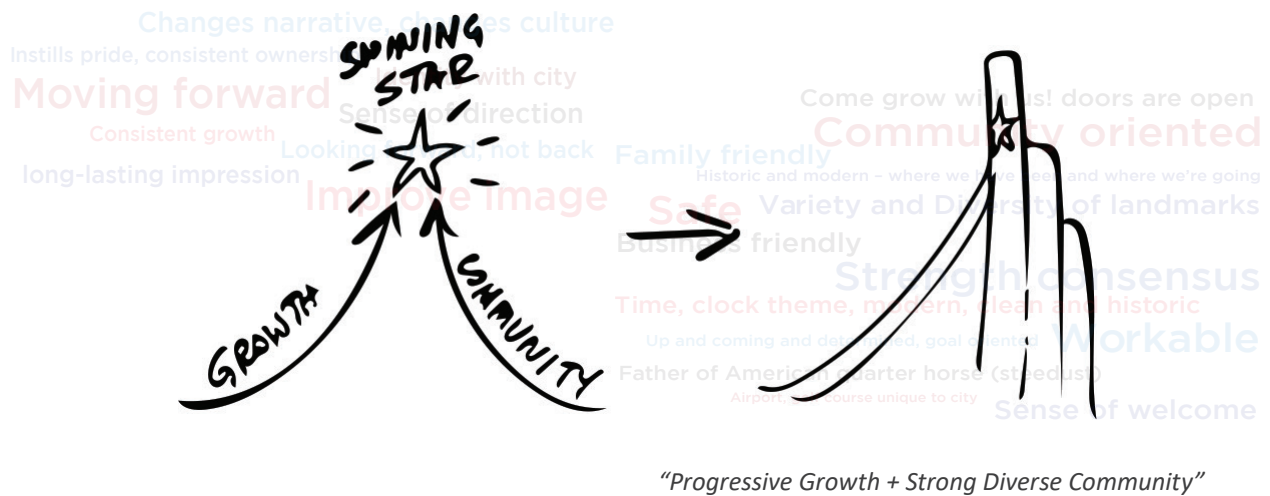
## MONUMENTATION CONCEPT

Understanding the community's desires and reaching a consensus on what they would like to see in Lancaster helps distinguish where to focus planning, design strategies, and solutions that the community actively supports. The gateway monumentation and streetscape concept is derived from the council members committed vision for the future of Lancaster as shown below:



Based on a series of meetings with Council and staff, various concepts were developed to illustrate the fundamental characteristics behind the future of Lancaster's vision. These concept sketches were refined through a progression of work sessions and eventually were vetted through Council and staff members. Comments and feedback were documented and incorporated to help identify a preferred concept capturing Lancaster's story.

Figure 4:3 - Monumentation Concept Development

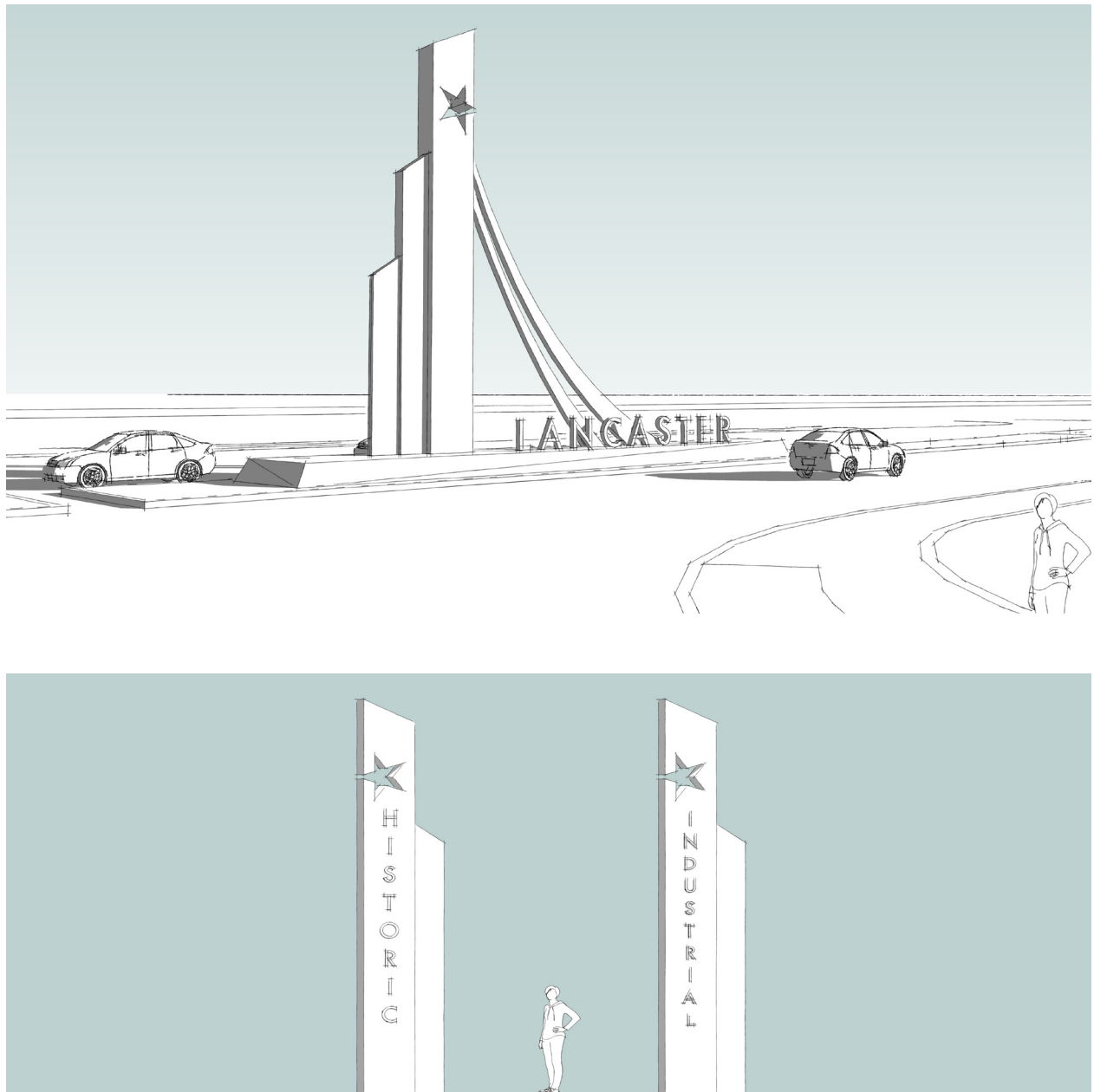




Below is the recommended concept **‘Shining Star’** that was developed based on feedback received at the City Council Work Session. The inspiration behind the development of this concept is:

## PROGRESSIVE GROWTH + STRONG DIVERSE COMMUNITY.

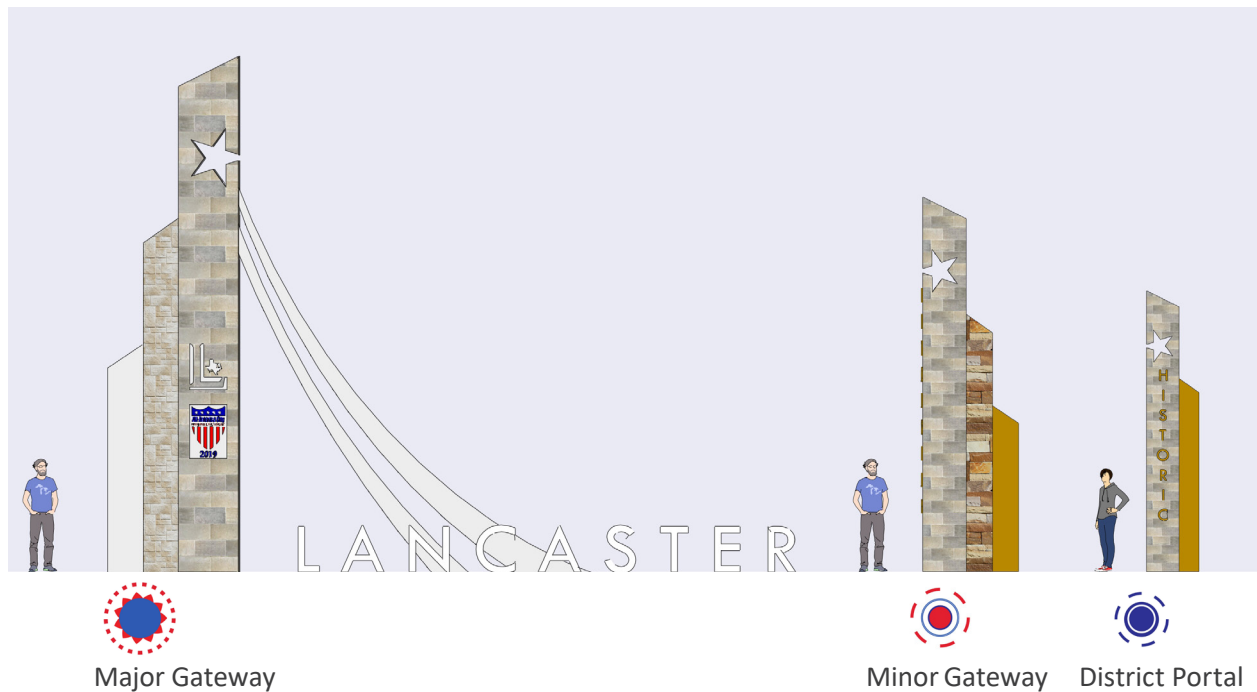
**Figure 4:4 - Concept & Monumentation Family Development**



## FAMILY OF MONUMENTATION FEATURES

The family of monumentation elevation below shows the monumentation features in comparison to each other. The graphic expresses the interrelationship between structures in terms of scale, size and color. The renderings shown on the next few pages illustrate how the monumentation structures would be placed along Lancaster's streets in context with the streetscape. Recommended material finishes and lighting effects have been added to depict a three-dimensional view. Specific standards are discussed in Chapter 5.

**Figure 4:5 - Monumentation Hierarchy**



The major gateways along IH-35E could also be incorporated within the retaining wall of the highway as shown below. This would be considered a distinct landmark in Lancaster.





**Figure 4:6 - Shining Star Major Gateway Concept at Night**



**Figure 4:7 - Minor Monument Concept**





Figure 4:8 - District Portal Concept



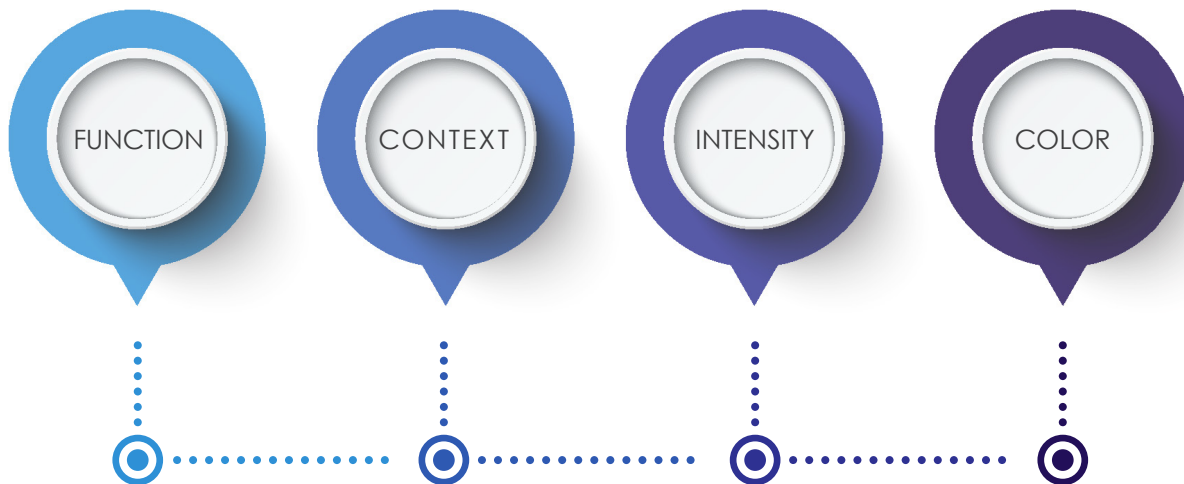
Figure 4:9 - Monumentation Material Palette



## STREETSCAPE FEATURES

Streetscapes are a vital component of a city's public space that can convey Lancaster's aesthetic quality and unique identity. A well planned streetscape can connect landmarks, open spaces, and communities. Planting materials are a vital component of streetscapes and trees play a large role as they provide color and texture to help define separate spaces, entrances, and add aesthetic value. How a streetscape is designed will shape the behavior of how the street will be used by all. Some of factors that must be considered when designing streetscapes include:

- Safety
- Environmental benefits
- Maintenance and coordination with placement of utilities
- Accessibility for all users (motorists, cyclists, and pedestrians)



### FUNCTION

The purpose of each streetscape is developed around the surrounding built environment as well as the anticipated future land uses that the street traverses. A cohesively designed streetscape should be highly visible for pedestrians and drivers, define established neighborhoods and greenways, such as the historic downtown and town square. Special consideration should be given to identifying street needs based upon anticipated development patterns.





## CONTEXT

Lancaster's thoroughfares and streets define what type of streetscape treatment is to be applied in a certain area. Thoroughfare classifications dictate the width and function of streets depending on the volume of vehicular traffic. Plantings can be placed near pedestrian walkways, building facades, or along streets to further provide context.



## INTENSITY

Special consideration should be given to how trees and other plantings are used as it relates to their size, stature, and aesthetic properties. The closer that the trees or plantings are placed, the higher the intensity of the planting which increases the focus of a specific area such as an intersection or neighborhood entry.



## COLOR

Other considerations include the careful selection of specific trees or plants for their seasonal color which can relate to specific neighborhoods and maintain a consistent appearance. Crosswalks at intersection treatments can be enhanced with one selected color and specific type of paving that is maintained throughout the city to visually communicate to the user that they are at an intersection crossing.



## STREETSCAPE HIERARCHY

### MAJOR THOROUGHFARES

Major thoroughfares in Lancaster include Dallas Avenue, Belt Line Road, Houston School Road, and Pleasant Run Road. These roadways are wide, heavily trafficked thoroughfares that carry significant numbers of cars each day. Additionally, these roadways have existing medians which serve as a blank slate for incorporating streetscape plantings.

The four roadways highlighted in [Figure 4:10](#) represent the major thoroughfare segments that have funding for streetscape design improvements. These represent the priority streetscape projects to improve the overall aesthetic in Lancaster.

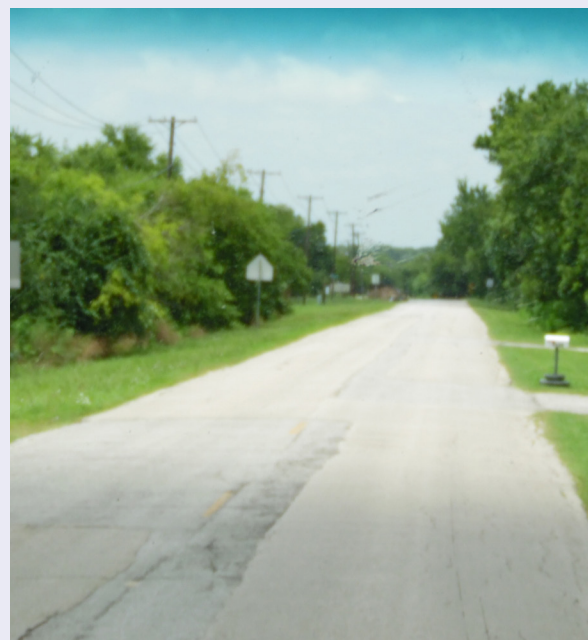
Additionally, there are roadways shown in light blue that represent additional segments that could benefit from streetscape enhancements in the future as growth and development expands in these areas of the City.



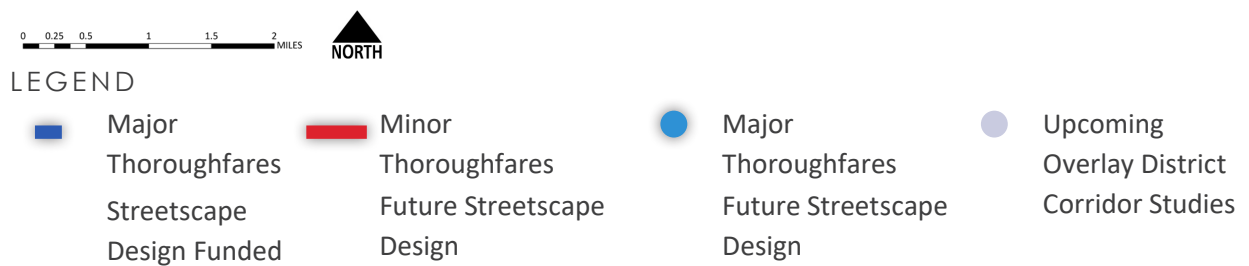
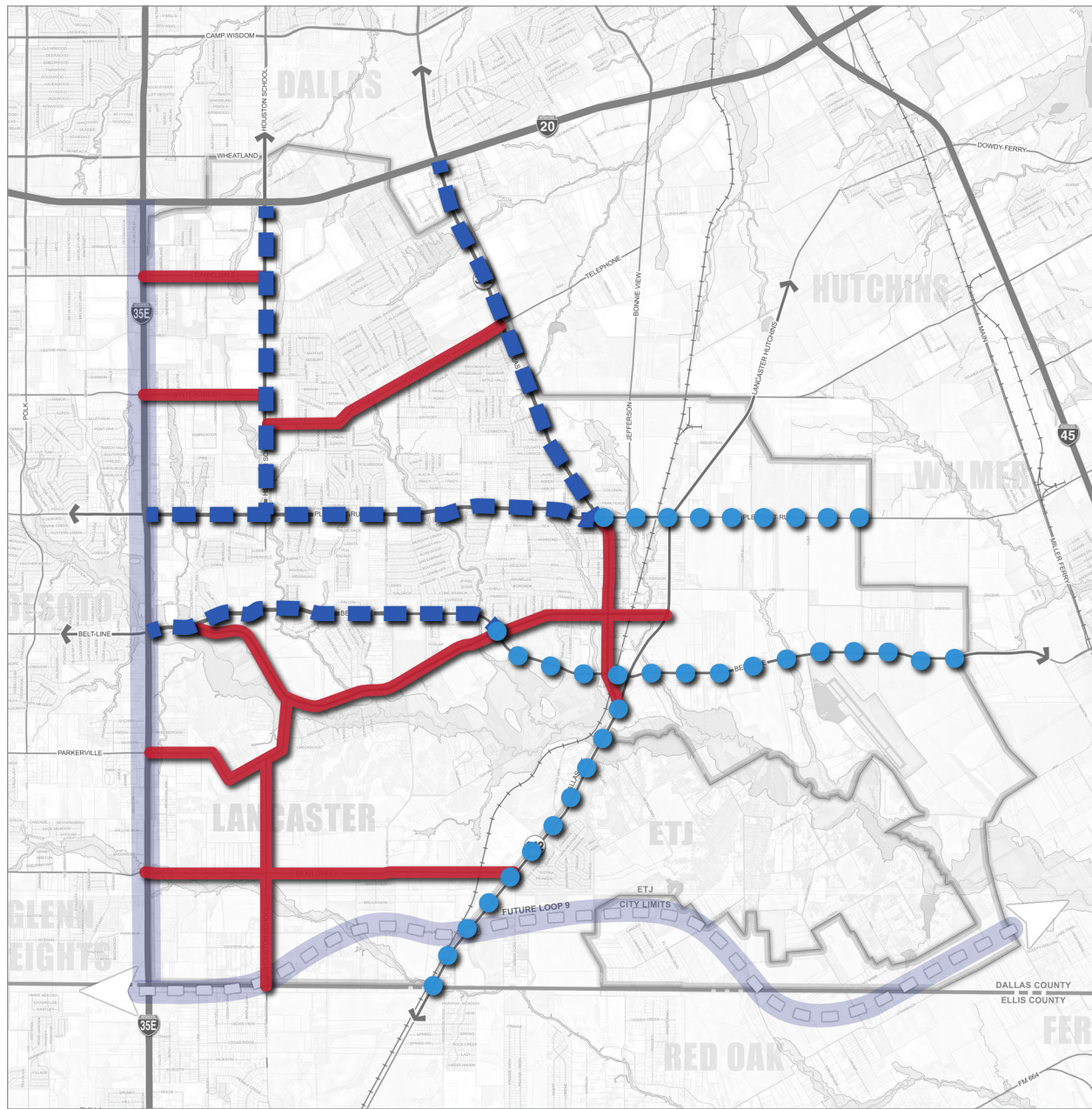
### MINOR THOROUGHFARES

Minor thoroughfares in Lancaster are shown in red in [Figure 4:10](#). These roadways are still significant thoroughfares within the City, but account for fewer traffic volumes than those of the major thoroughfares. Many of these roadways are undivided, meaning that they don't have medians. In this case, streetscape improvements are focused on the landscape buffer areas on either side of the travel lanes.

Although there is no designated funding for streetscape improvements at this time for these roadways, they should be slated for lower-intensity streetscape enhancements when these roads are improved or as funding allows.





**Figure 4:10 - Proposed Streetscape Hierarchy**




## STREETSCAPE FEATURE EXAMPLES

Features of streetscape include pedestrian facilities, plantings, hardscape, lighting, and site furnishings, as shown in the following images.



*Image 1: Sessom Dr, San Marcos*

*Image 2: Paige Road, The Colony*

*Image 3: Oak Street, Roanoke*

*Image 4: Crystal Falls, Austin*





Image 5: Cedar Crest Gateway, Dallas

Image 6: Cedar Crest Bridge, Dallas

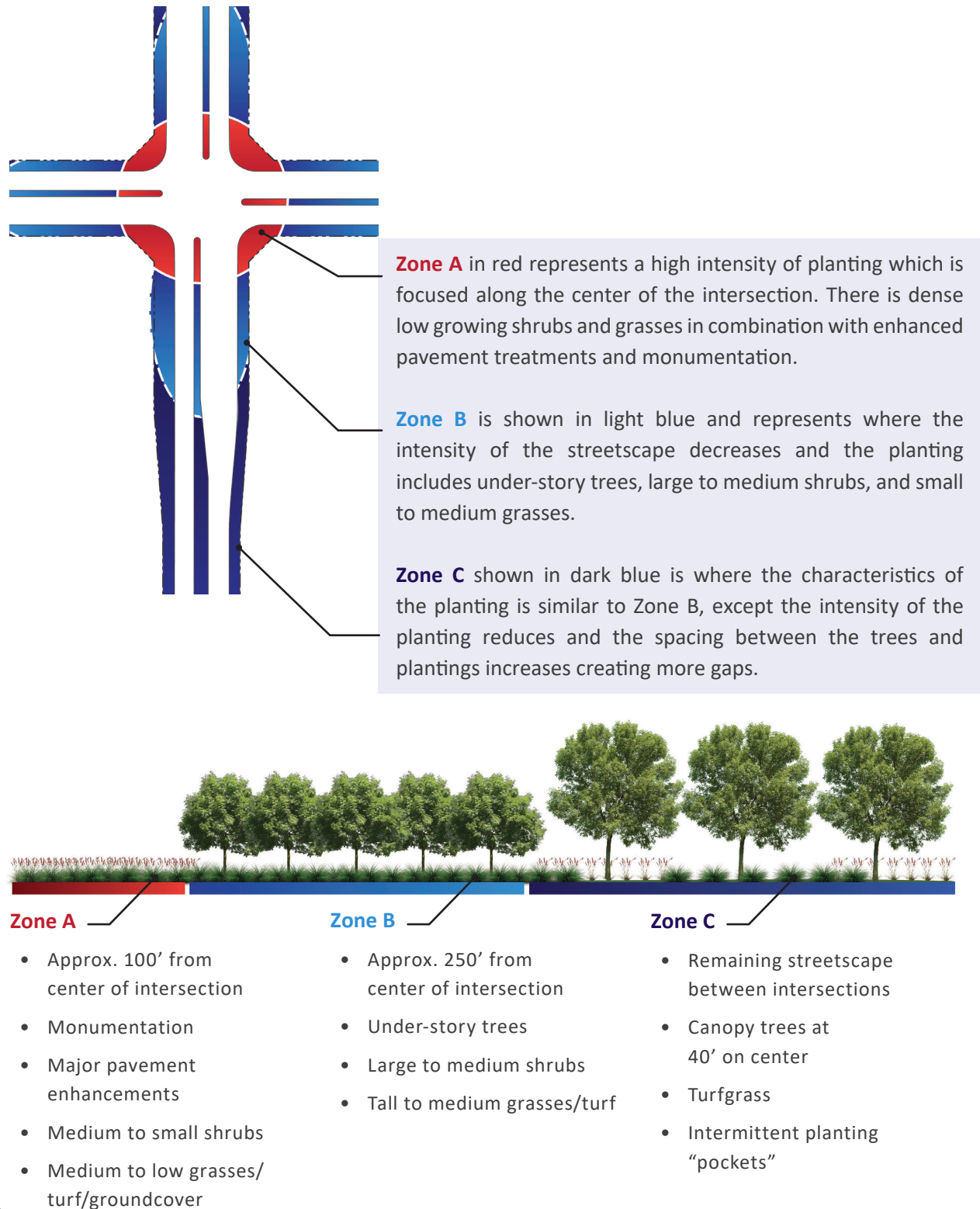
Image 7: Oak Street, Roanoke



## STREETSCAPE DESIGN EXAMPLES

The graphic below illustrates the zones that are located along a typical intersection to depict the intensity of streetscape planting.

**Figure 4:11 - Streetscape Intensity Design**



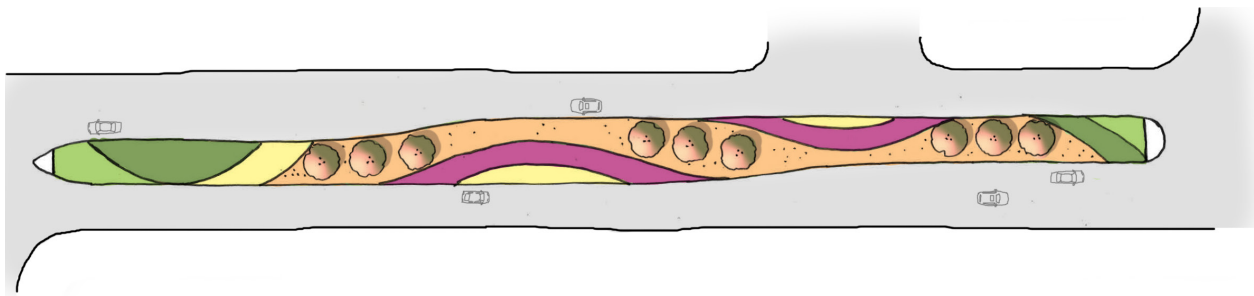
## STREETSCAPE CONCEPT

### HIGH INTENSITY STREETSCAPE AT INTERSECTIONS

The graphic below illustrates a typical high intensity designed streetscape within the median which includes elements such as:

- Emphasis on planting at the ends
- Pockets of planting, shade and ornamental trees
- Xeriscaping
- Reduced mowing

**Figure 4:12 - High Intensity Streetscape Concept**

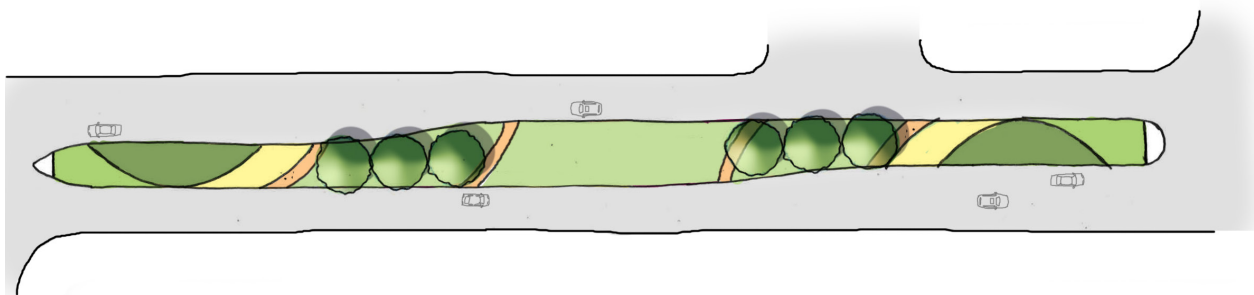


### LOW INTENSITY STREETSCAPE AT INTERSECTIONS

The graphic below illustrates a typical lower intensity designed streetscape within the median which includes elements such as:

- Emphasis on planting at the ends only
- Pockets of shade trees
- Large grassed areas

**Figure 4:13 - Low Intensity Streetscape Concept**



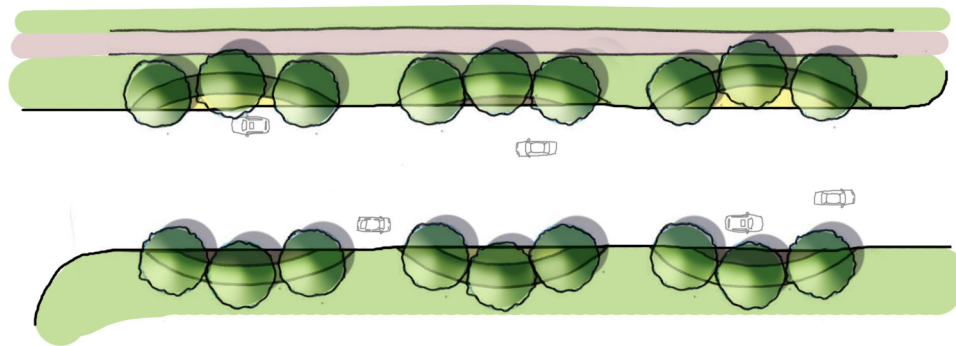


## LANDSCAPE BUFFER AREA STREETSCAPE

The graphic below illustrates the typical treatment for a roadway without medians, which is more common for minor thoroughfares in Lancaster. These treatments include key features such as:

- Regularly spaced shade trees
- Groundcover surrounding the shade trees
- Large grass areas

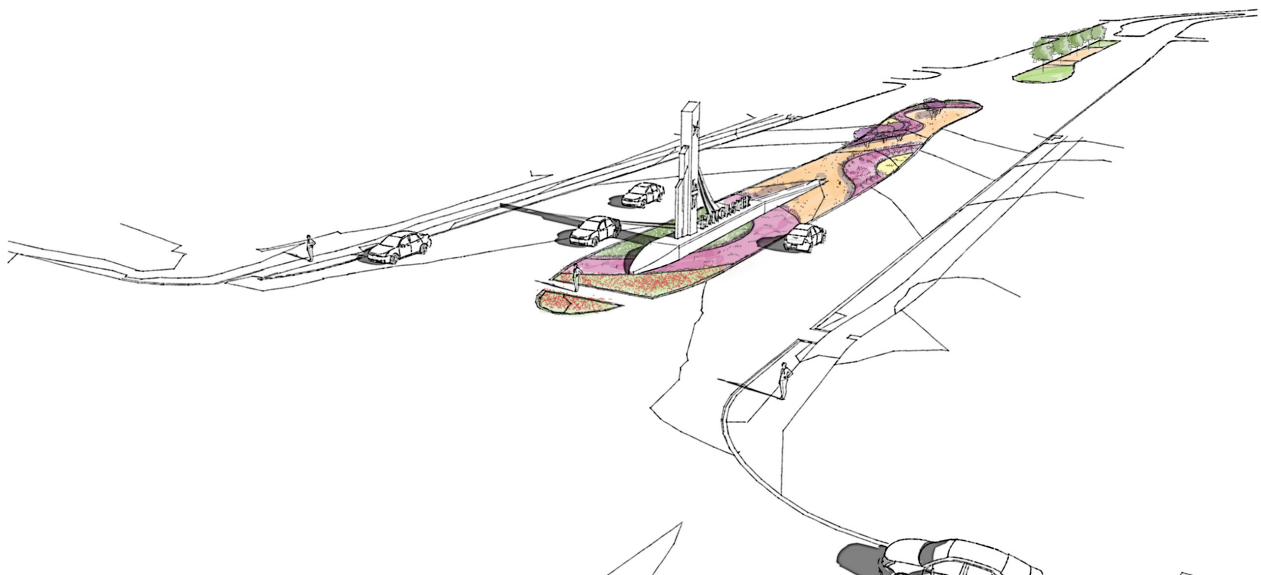
**Figure 4:14 - Landscape Buffer Area Streetscape Concept**



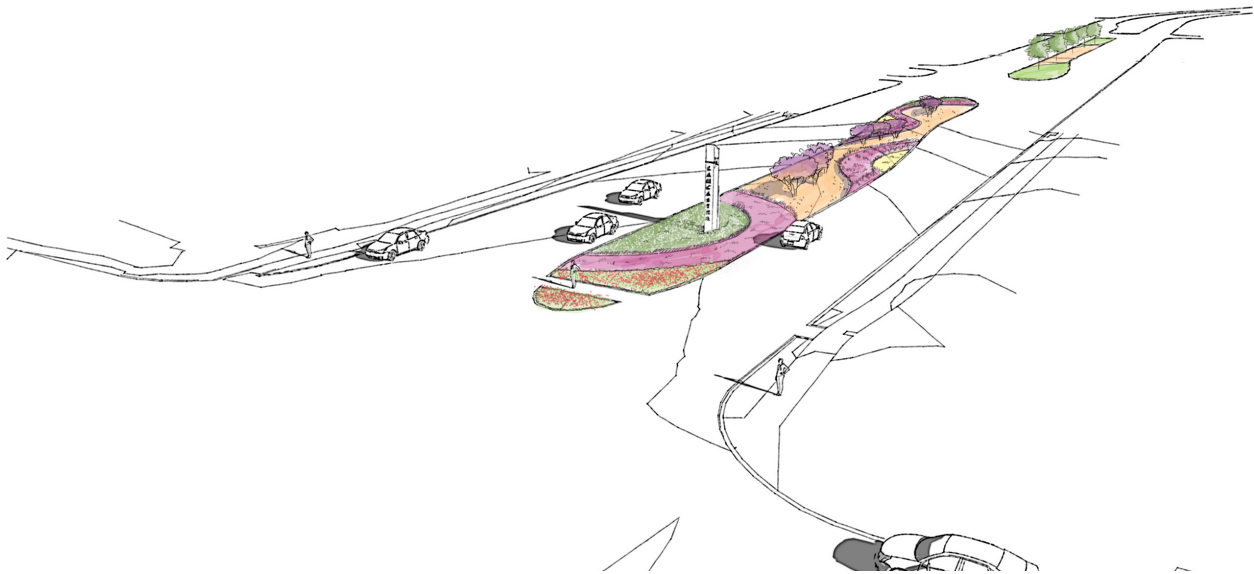
## MONUMENTATION WITH STREETSCAPE CONCEPT SKETCHES

The conceptual sketches below illustrate the relationship between monumentation and streetscape features along a typical streetscape intersection.

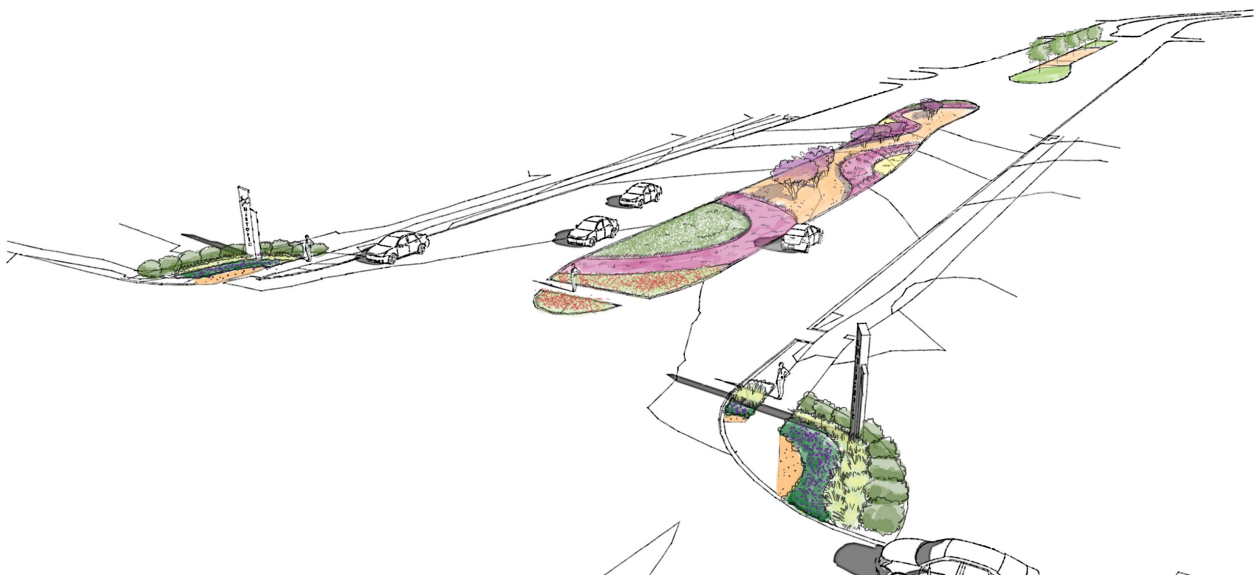
**Figure 4:15 - Major Monument with Streetscape**



**Figure 4:16 - Minor Monument with Streetscape**



**Figure 4:17 - District Portal Monument with Streetscape**





**Figure 4:18 - Major Monument with Streetscape Views**

*Represents the intersection of Pleasant Run Road and IH-35E.*





**Figure 4:19 - Minor Monument with Streetscape Views**

*Represents the intersection of Wintergreen Road and IH-35E.*





**Figure 4:20 - District Portal with Streetscape Views**

*Represents a district portal along Pleasant Run Road.*





**Figure 4:21 - Intersection Node with Streetscape Views**

*Represents an intersection node along Pleasant Run Road.*







# CHAPTER 5

## GATEWAY & STREETSCAPE DESIGN STANDARDS

### MONUMENTATION STANDARDS

### STREETSCAPE STANDARDS

This chapter presents detailed considerations for the recommended monumentation and streetscape design standards. The recommendations presented in this Chapter should be used as guidance to implement development standards. The goal is for these design standards to be incorporated into the City's development regulations to guide future improvements as new development and redevelopment occurs in Lancaster.



# MONUMENTATION STANDARDS

## INTRODUCTION

The intent of this section is to enhance the framework that was provided in the 2006 Streetscape Master Plan and the 2016 Comprehensive Plan to develop more straightforward and integrated guidance that can be used by the City.

As presented in Chapter 4, there are four types of monumentation within the recommended hierarchy: major gateways, minor gateways, district portals, and intersection nodes. This section presents details on design standards for the various components of monuments – scale, materials, lighting, and maintenance, which have been developed based on a review of previous guidance and best practices. For each of these components, specific recommendations are outlined and applicable reference materials are listed for more information.

As shown in **Figure 4:2** and **Table 5:1**, monumentation treatments are recommended for the subsequent intersections in Lancaster. These are meant to be implemented over time, as roadways are constructed or rebuilt, or as new development occurs. Funding opportunities are discussed in Chapter 6.

**Figure 5:1 - Major Monument at Night**



**Table 5:1 - Recommended Monumentation Treatments in Lancaster\***

Major Gateway	Minor Gateway	District Portal	Intersection Nodes
IH-35E & Pleasant Run Rd	IH-35E & Danieldale Rd	IH-20 between IH-35E & Houston School Rd (Dallas Co. International Inland Port)	Dallas Ave & Wintergreen Rd
IH-35E & Belt Line Rd	IH-35E & Wintergreen Rd	IH-20 between Houston School Rd and Dallas Ave (Dallas Co. Intentional Inland Port)	Jefferson Rd & Wintergreen Rd
IH-20 & Houston School Rd	IH-35E & Parkerville Rd	Houston School Rd & Pleasant Run (Commercial Edge)	Pleasant Run Rd & Lancaster Hutchins Rd
Dallas Ave & City Limits	IH-35E & Bear Creek	Pleasant Run Rd & Dallas Ave (Downtown Lancaster)	Pleasant Run Rd & Bluegrove Rd
Loop 9 & 342	Dallas Ave & Wintergreen Rd		Belt Line Rd & Houston School Rd
	Lancaster-Hutchins Rd & City Limits		Belt Line Rd & Bluegrove Rd
	Pleasant Run Rd & City Limits		Belt Line Rd & Main St
	Belt Line Rd & City Limits		Main St & Lancaster Hutchins Rd
			Main St & Bluegrove Rd
			Dallas Ave & Lancaster Hutchins Rd merge
			Dallas Ave & Bear Creek Rd

\*Note: Refer to Figure 4:2 on page 53 for a map depicting these locations.



## MONUMENTATION - SCALE

### OVERVIEW:

Monumentation features should mark entries to key areas of the City and should be designed and installed to be clearly viewed at all times of day. Depending on the monumentation type, the feature should be visible to drivers and pedestrians from various distances. For this reason, the below recommendations for scale have been proposed.

### RECOMMENDATIONS:

- **Major Gateway:** 25' – 30' max height. Meant to signify main entrance into Lancaster. Maximum height meets TxDOT guidance for height of landmarks within their Right-of-Way.
- **Minor Gateway:** 15' – 20' max height. Meant to signify minor entrances into Lancaster.
- **District Portal:** 10' – 15' max height. Meant to signify entrances into character districts of City.
- **Intersection Node:** 0 – 10' max height. Meant to signify a minor intersection within the City.

### REFERENCES:

- TxDOT - Gateway Monument Program Guidelines
- 2006 Lancaster Streetscape Master Plan
- 2016 Comprehensive Plan
- AASHTO - American Association of State Highway Transportation Officials
- International Dark-Sky Association

## MONUMENTATION - MATERIALS

### OVERVIEW:

Proper material selection, high quality installation, and attention to detail are important during the installation of materials. The overall look and feel of the monumentation features should provide clean lines and be well-crafted while providing a unified image for Lancaster. The selected materials shown in the recommended palette should be consistently used for the corresponding structures in the family of monumentation to create a theme that will be carried throughout the City for continuity.

## RECOMMENDATIONS:

The recommended palette includes:

- Brushed bronze architectural feature - brings forth an iconic image to reflect Lancaster's potential.
- Cast stone column - reflects a classic character that can be repeated throughout new developments.
- Oklahoma ledgestone - embraces the colors and tones found in established districts in Lancaster and references the historic brick in an updated manner.
- Brushed aluminum 'Lancaster' back-lit letters - establishes a bold and memorable brand in the city.
- Random ashlar limestone - evokes the exposed limestone formations along the creeks in Lancaster.
- Pin mounted Lancaster city logo - reinforces the civic pride in Lancaster.
- Pin mounted 'All American City' plaque - highlights Lancaster's achievements and consistent growth.

### Brushed Bronze Option (Preferred)



Brushed Bronze



Cast Stone/Cast Concrete



Oklahoma Ledgestone



Brushed Aluminum letters

### Brushed Aluminum Option (Alternate)



Brushed Aluminum



Cast Stone/Cast Concrete



Random ashlar limestone



Brushed Aluminum letters

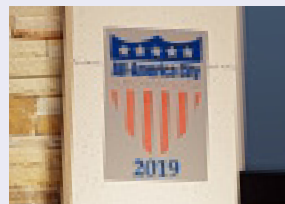
### Lancaster logos



Brushed Aluminum - pin mounted city logo



Brushed Aluminum - pin mounted city logo



'All American City' plaque

## REFERENCES:

- ASTM (American Society for Testing and Materials)



## MONUMENTATION - LIGHTING

### OVERVIEW:

As part of enhancing Lancaster's unique image, the lighting of monimentation features should be of a similar style, look, and color to promote a cohesive look.

### RECOMMENDATIONS:

In order to be visible at night, monuments should be lit in a discreet, subtle and high impact manner, but in a way so as to not distract drivers or produce glare to surrounding areas.

- **Major Gateway:** Monument to have a combination of ground LED lights to wash or flood the structure in light and 'Lancaster' to be back-lit as shown in the below image.
- **Minor Gateway:** Monument to have a combination of ground LED lights to wash or flood the structure in light.
- **District Portal:** Monument to have a combination of ground LED lights to wash or flood the structure in light.
- **Intersection Node:** No lighting is required for intersection treatments.
- Lancaster letters specifications: Beam Angle: 120 degrees, 14W, 700 Max. Lumen, LED Die Colors: RGBW.
- Wall washer accent lighting specifications: 76W (12-LED), 3,000 Max. Lumen, LED Die Colors: RGBW.
- Top of monument, inside star specifications: 2.5W, 125 Max Lumen, and 5W, 250 Max Lumen, LED Die Colors: RGBW.
- Lighting should be installed in accordance with national and local electrical code regulations.
- Wireless bluetooth control is preferred for ease of remote access and maintenance.

### REFERENCES:

- 2006 Lancaster Streetscape Master Plan
- International Dark-Sky Association

**Figure 5:2 - Example of Lighting on Major Monument Feature**



## MONUMENTATION - MAINTENANCE

### OVERVIEW:

The materials used in the monumentation are purposefully durable to be able to withstand wear and tear. However, like most built features, monuments will need to be maintained over time.

### RECOMMENDATIONS:

Key considerations for maintenance standards include:

- Use of removable logos to reflect updated award designations. The City logo may change over time, so using the pin-mounted logos is easier to remove without damaging the surface of the monument.
- Require regular cleaning, including pressure washing on an as needed basis.
- Application of an anti-graffiti coating material that is resistant to graffiti or at least makes it easy to wash off without damaging the underlying materials.
- Reapplication or touch-up of materials when needed should be immediately addressed to prevent unforeseen damage and prevent blight.
- Foundational structure underneath monument should be placed with sufficient reinforcement to withstand minor crashes.
- Use of standardized hardware for lighting and signage to simplify maintenance activities.

### REFERENCES:

- 2006 Lancaster Streetscape Master Plan



# STREETSCAPE STANDARDS

## INTRODUCTION

As presented in Chapter 4, this plan recommends high-intensity streetscape near intersections and low-intensity streetscape along the majority of roadways. This section presents details on design standards for the various components of streetscapes – plantings, furnishings, signage/wayfinding, lighting, and maintenance. As shown in **Figure 4:10** and **Table 5:2**, streetscape treatments are recommended for the following roadways in Lancaster. These are meant to be implemented over time, as funding allows or as roadways are constructed or rebuilt. Funding opportunities are discussed in Chapter 6.

**Table 5:2 - Recommended Streetscape Treatments in Lancaster\***

Roadway	Limits	Treatment Type
Houston School Rd	IH-20 to Pleasant Run Rd	Major Thoroughfare Streetscape Design (Funded)
Pleasant Run Rd	IH-35E to Dallas Ave	Major Thoroughfare Streetscape Design (Funded)
Belt Line Rd	IH-35E to Bluegrove Rd	Major Thoroughfare Streetscape Design (Funded)
Dallas Ave	Cedardale Rd to Alexander Ave	Major Thoroughfare Streetscape Design (Funded)
Pleasant Run Rd	Dallas Ave to Eastern City Limits	Major Thoroughfare Streetscape Design (Future)
Belt Line Rd	Cedardale Rd to Eastern City Limits	Major Thoroughfare Streetscape Design (Future)
Dallas Ave	Belt Line Rd to Southern City Limits	Major Thoroughfare Streetscape Design (Future)
Danieldale Rd	IH-35E to Houston School Rd	Minor Thoroughfare Streetscape Design (Future)
Wintergreen Rd	IH-35E to Houston School Rd	Minor Thoroughfare Streetscape Design (Future)
Wintergreen Rd	Houston School Rd to Dallas Ave	Minor Thoroughfare Streetscape Design (Future)
Main St	Belt Line Rd to Lancaster Hutchins Rd	Minor Thoroughfare Streetscape Design (Future)
Dallas Ave	Alexander Ave to 342	Minor Thoroughfare Streetscape Design (Future)
Parkerville Rd	IH-35E to Main St	Minor Thoroughfare Streetscape Design (Future)
S. Houston School Rd	Parkerville Rd to Southern City Limits	Minor Thoroughfare Streetscape Design (Future)
Bear Creek Rd	IH-35E to 342	Minor Thoroughfare Streetscape Design (Future)

*\*Note: Refer to Figure 4:10 on page 67 for a map depicting these locations.*

## STREETSCAPE - PLANTING

### OVERVIEW:

A key component of streetscapes are the planting materials and trees which can provide environmental benefits, shade, stormwater infrastructure, and a buffer between pedestrians and moving traffic. Well-designed streetscape plantings can also help reduce vehicle speeds. For new developments that may have the potential to create an appropriate setback, wider right of ways should be accommodated to provide maximum space for planting.

This section highlights planting materials for the high-intensity and low-intensity streetscape sections. A full plant listing is also included in the Appendix.

### RECOMMENDATIONS:

- Existing trees within the Right-of-Way should be preserved to maintain the original character of the area. Preservation should also be evaluated on a case-by-case basis.
- Refer to existing codes and requirements that have been developed for the area.
- Existing underground utilities should be located and addressed prior to planting shrubs and trees.
- It is recommended to incorporate native, adaptive, and drought resistant planting as much as possible to reduce mowing frequency and maintenance needs.
- For turf grass use drought resistant and drought tolerant grass that require less frequent mowing and maintenance.
- In historic districts, oak trees and bold plantings can be used to bring color and timeless beauty.
- Planting materials and trees should be spaced out in a continuous manner. Along roadways consider a spacing of 25-40 feet.
- Plantings and trees should be pruned to ensure visibility of signs.

Consider the possibility of tree preservation when a tree's elevation falls within 3' of the proposed road's elevation. Continuity should be achieved by consistency in materials used for the retaining wall. Walls of this type used for tree preservation should be located outside of the drip line of associated trees.

Wall with Oklahoma Ledge stone  
ledge stone pattern.

Within 3' elevation try to  
preserve tree.



**Figure 5:3 -**  
Preservation of  
Existing Trees

## MAJOR THOROUGHFARE STREETSCAPE DESIGN

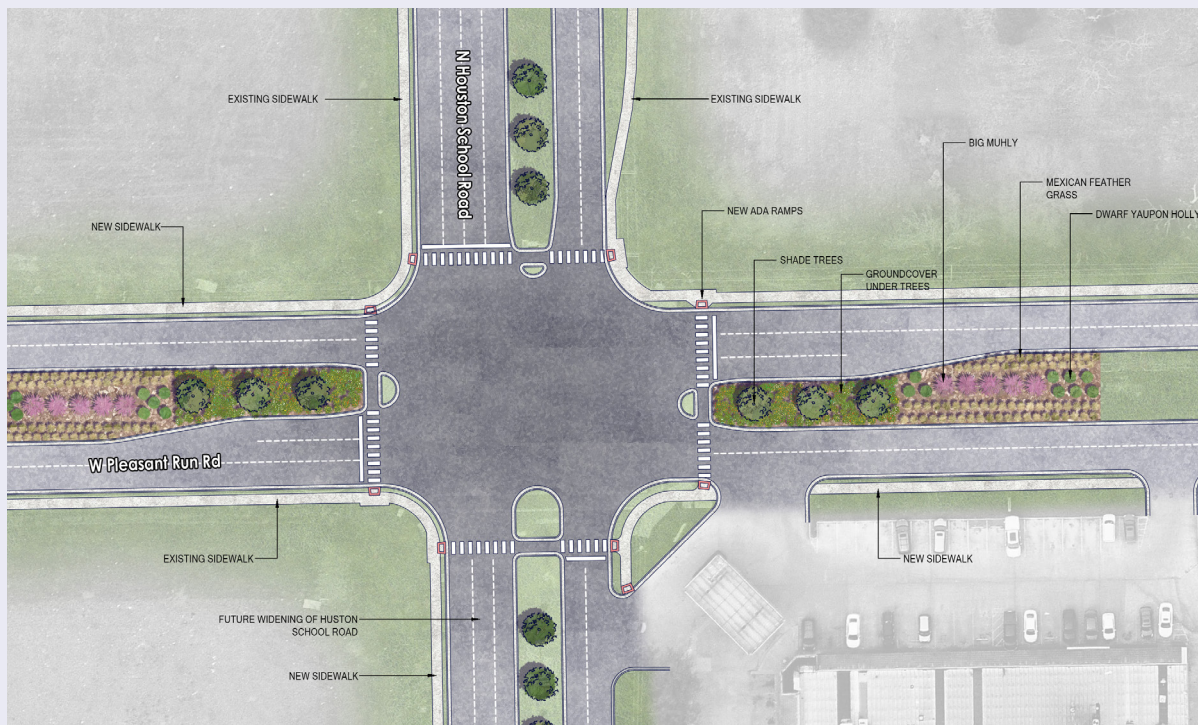
**High-Intensity Streetscape:** These segments should be focused closer to intersections of major thoroughfares (approximately 100 feet on either side of the intersection within the median or within corners of the intersection). Key Features include:

- Xeriscaping for reduced mowing maintenance.
- Pockets of colorful plantings throughout to signal approaching the intersection.
- Pockets of shade where ornamental trees to provide some height.
- Emphasized denser plantings at intersections.

**Low-Intensity Streetscape:** These segments will make up the majority of the streetscapes within medians on major thoroughfares. Key features include:

- Large grassed areas.
- Pockets of shade trees.
- Plantings that have been spaced out.

**Figure 5:4** - Major Thoroughfare Streetscape Design Example





## MINOR THOROUGHFARE STREETSCAPE DESIGN

Many of the roadways identified in this plan for a minor thoroughfare streetscape treatment are undivided roadways, meaning that there is no median. While median plantings can have a significant impact on the overall streetscape, treatments along the landscape buffer area on either side of the travel lanes can also have a positive impact. Referred to in the Lancaster Development Code as ‘streetscape buffer,’ the current code requires a minimum landscape buffer of six feet between back-of-curb and sidewalk for new residential and commercial uses where there is no adjacent on-street parking. It’s within this area that the site furnishings described later in this section are to be placed.

### Landscape Buffer Area:

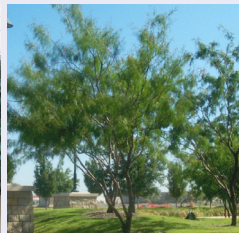
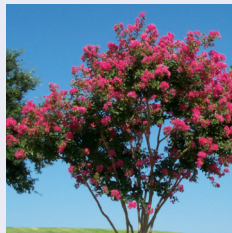
- Groups of shade trees spaced approximately 50 feet; trees should be on the approved plant list per the Lancaster Tree Preservation Ordinance.
- Groundcover surrounding the shade trees.
- Large grass areas.
- Incorporate denser plantings at intersection corners, if applicable.

### OTHER CONSIDERATIONS:

Most thoroughfares in Lancaster are already built, therefore many of these streetscape applications will apply to existing roadways when they are improved or widened. There are some parts of Lancaster that are less developed wherein new roadways are proposed. In the currently undeveloped areas of Lancaster, it is recommended that existing vegetation be preserved as much as possible.

### REFERENCES:

- 2006 Lancaster Streetscape Master Plan
- Lady Bird Johnson Wildflower Center
- Texas A&M AgriLife Extension
- Earth-Kind Landscaping

**Figure 5:5 - Streetscape Planting Palette***More comprehensive list of plantings is included in the Appendix.***GROUNDCOVERS****Asian Jasmine****Purple Wintercreeper****Trailing Rosemary****SHRUBS AND GRASSES****Gregg Salvia****Dwarf Yaupon Holly****Dwarf Burford Holly****Red Yucca****Gulf Muhly Grass****Dwarf Fountain Grass****Mexican Feather Grass****ORNAMENTAL TREES****Yaupon Holly****Desert Willow****Crape Myrtle****SHADE TREES****Chinese Pistache****Shumard Oak****“Allee” Elm****Lacebark Elm**

## STREETSCAPE - FURNISHINGS

### OVERVIEW:

In addition to plantings, the pedestrian realm can further be enhanced by features such as bollards, seating, trash receptacles, and street lighting. These elements are most feasible in areas where pedestrians are already present, such as downtown. All furnishings should be consistent in materials for a uniform look.

### RECOMMENDATIONS:

#### Seating

Opportunities to sit down as necessary for pedestrians of all abilities also invites visitors to stay a while and experience the streetscape environment. There are many types of seating that may be incorporated into the streetscape, such as benches, movable chairs, and seat walls.

- Benches should be all metal ribbon benches set on a brick paving pads (see Figure 5:6).
- Seating should not be placed directly in the pedestrian zone.

#### Trash Receptacles

Trash receptacles should be strategically located in convenient locations that pedestrians can use to keep streetscapes clean.

- Trash receptacles should be located near high pedestrian activity areas such as Downtown Lancaster.
- Trash receptacles should be black metal, ribbon-style with removal liners (see Figure 5:6).
- Trash receptacles should not be placed directly in the pedestrian zone.
- Durability of materials should be considered when selecting materials for trash receptacles.

#### Other Furnishings

In addition to seating and trash receptacles, there are other furnishings that can add to the human-scale of the streetscape environment.

- Large planters filled with colorful plantings in Downtown.
- Bicycle racks should be black metal.
- Informational kiosks in areas of interest such as downtown should use consistent materials as the monumentation features.

### REFERENCES:

- 2006 Lancaster Streetscape Master Plan
- City of Lancaster Landscaping Regulations and Standards



**Figure 5:6 - Streetscape Furnishing Examples**



**Victor Stanley - Bench**

- Model CR-18: A City Sites Series™ bench.
- Length: 6-foot (1.8 meters).
- Color: Black.



**Victor Stanley - Trash Receptacle**

- Model S-45: The “Big One.” Ironsites Series.
- 45-gallon (170 liter) capacity.
- Material: Recycled Solid Steel Bar
- Standard tapered formed lid.
- Bottom recessed pedestal.

## STREETSCAPE - LIGHTING

### OVERVIEW:

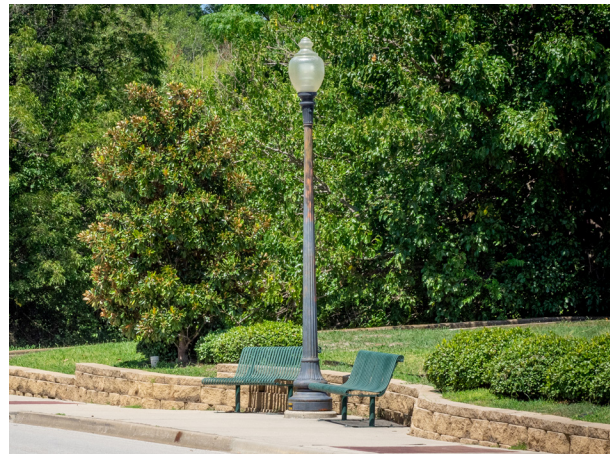
Lighting is critical to ensure both vehicular and pedestrian safety after dark. Lighting also provides visual hierarchy within a streetscape and can help orient drivers and pedestrians. As part of enhancing Lancaster's unique image, effective street and pedestrian scale lighting should also be consistent with the overall aesthetic of the corridor, where lighting of similar style, overall look and color should be used to promote a cohesive theme.

Pedestrian scale lighting illuminates sidewalks, crosswalks, and bike lanes and also provides an increased sense of safety. Pedestrian scale lighting is recommended wherever pedestrian traffic is highest, such as the downtown area, in shopping areas, along trails, and especially at intersections and crossing points as these are the areas with highest rates of conflicts with moving vehicles. Both street and pedestrian lighting should minimize the amount of glare, which typically is achieved through upgrading lighting to LED luminaries with specific angles of the fixture. Additional specifications about the recommended lighting is included in the Appendix.

**Figure 5:7 - Existing Lighting in Lancaster**



*Pedestrian scale lighting at Lancaster Community Park.*



*Pedestrian scale lighting along Lancaster's streetscape.*



*Lighting at West Main Elementary School.*



*Pedestrian Scale lighting in Downtown Lancaster.*

## ARCHITECTURAL AND LANDSCAPE ACCENT LIGHTING

Another type of lighting that is used in streetscapes are accent or landscape lighting which are installed to highlight focal architectural features, sculptures, trees, or landscaped areas. These lighting features create a more attractive and interesting environment for pedestrians.

This plan proposes upgrading existing street lighting to more attractive pole and luminaries with uniform appearance. Any replacement street lights should be standardized and also reflect the individual character of specific districts in Lancaster.

### RECOMMENDATIONS:

- The placement of trees should be coordinated with existing and proposed lighting.
- Light fixtures should be regularly spaced 180 - 220 feet apart.
- Street lights should typically consist of a luminary on a pole 25 to 30 feet high.
- Pedestrian scale light fixtures along pedestrian paths should be 12 to 18 feet high.
- Pedestrian scale light fixtures should be spaced out approximately every 25 feet.
- Light fixtures should be black metal with a decorative luminary.
- Energy efficient and LED best management practices of lighting options are preferred when selecting types of lighting.
- Cut-off lighting is an option to be considered to reduce glare as it allows light patterns to be controlled, minimizing light spill over to surrounding areas and keeps light sources out of a pedestrian's line of sight.
- Dark Sky compliance lighting should be used to minimize light pollution.
- WiFi enabled timed lighting is preferred for remote access.

### REFERENCES:

- 2006 Lancaster Streetscape Master Plan
- Lancaster Development Code
- AASHTO
- FHWA, Lighting Handbook
- International Dark-Sky Association



## STREETSCAPE - SIGNAGE AND WAYFINDING

### OVERVIEW:

The overall goal of brand identity could be implemented through gateway treatments, directional signage, trail system signage, banner programs, printed literature, and website applications. The development of signage and wayfinding play a large role in identifying areas in Lancaster as recognizable destinations. Signage can be used as part of gateway monumentation, place-making treatments, and can be provided at key nodes such as intersections. Symbols and icons can be used that relate to districts, where the use of consistent color schemes and typography will reinforce a sense of place and Lancaster's visual identity and brand.

Destinations within Lancaster that should be directed to via wayfinding signage include parks, recreation centers, City Hall, downtown, and various districts. Banners can also be used as part of a consistent wayfinding system to communicate information to visitors about which area or district they are located.

### RECOMMENDATIONS:

- Directional signs of adequate vehicular scale that are placed at appropriate decision points will assist pedestrians and benefit retail businesses.
- Identification signs could be as minimal as pole mounted icons or banners.
- Directional signage should be placed at key nodes to help vehicular traffic and pedestrians.
- Information on signage should be combined to eliminate the clutter.
- The text on the signage should be visible from a distance by passing vehicles and pedestrians.
- Signage should be offset a minimum of 1 foot from the curb.
- Signage should not be placed in the pedestrian zone.
- Banners should be interchangeable with updated logos or graphics.

### REFERENCES:

- 2006 Lancaster Streetscape Master Plan
- Lancaster Sign Ordinance

**Figure 5:8 - Wayfinding and Signage Examples**



## STREETSCAPE - MAINTENANCE

### OVERVIEW:

The streetscapes should be able to be maintained in a sustainable manner to maximize the expected life cycle for all elements of the streetscape. While trees and plants have numerous benefits for pedestrians, they may also create maintenance challenges. Medians are also subject to damage from vehicular traffic, therefore it is crucial that streetscape planning and design takes into consideration the realities of external environments.

### RECOMMENDATIONS:

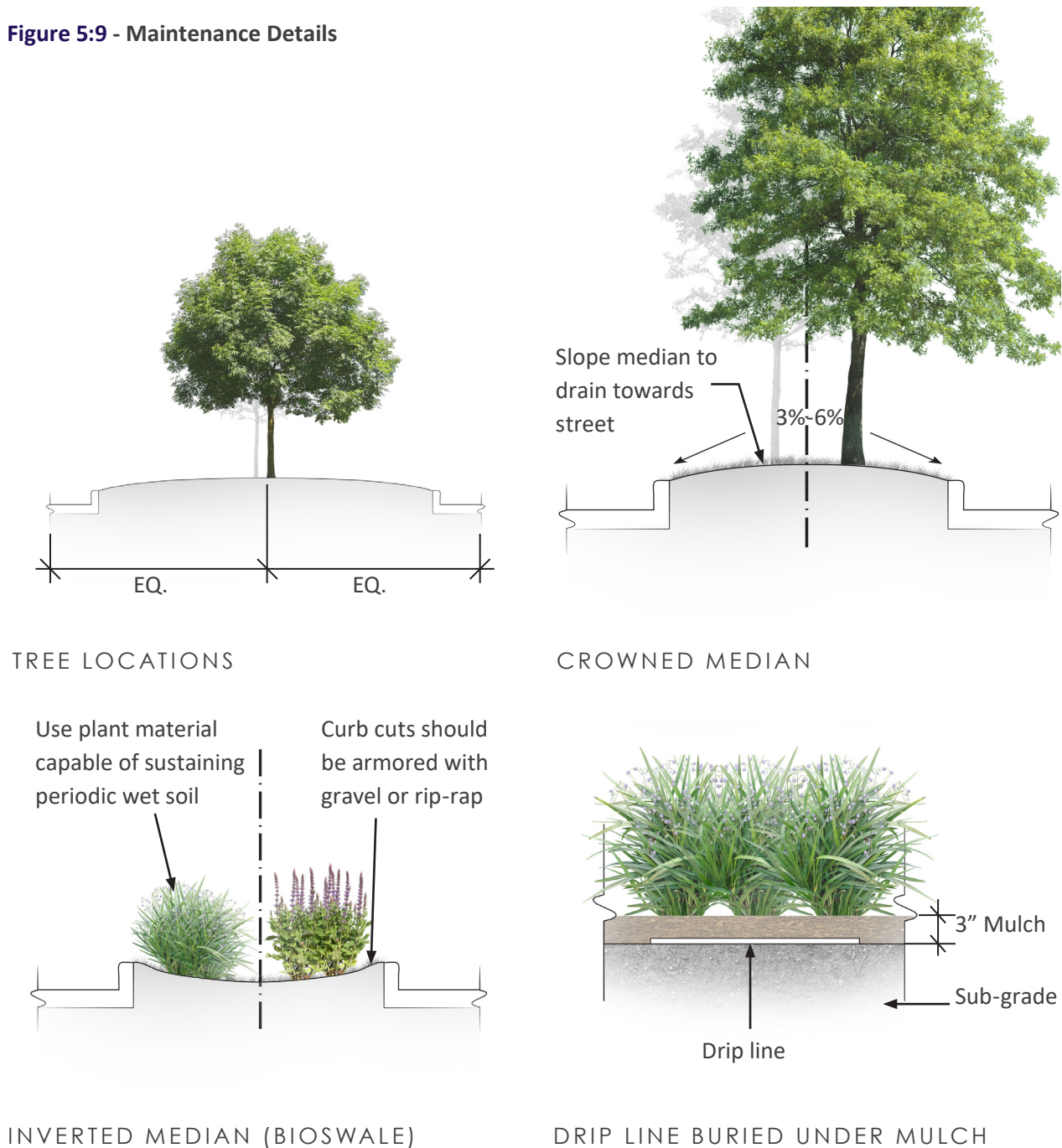
- Lancaster Code indicates that developers should be responsible for the initial maintenance of the streetscape improvements including street trees, entry plantings, and lighting during the period that their neighborhoods are developing and until all lots are occupied.
- Provisions for a homeowners' association should be addressed by the developer where the maintenance will be turned over to the homeowner's association after all lots are occupied.
- Maintenance staff should be engaged in early decision making, and educated about the care of existing and proposed trees and their requirements for protection during construction.
- Drought tolerant and low maintenance planting should be incorporated as much as possible.
- The median maintenance details shown in Figure 5:9 should be incorporated as a standard practice for design and maintenance of streetscape features.

### REFERENCES:

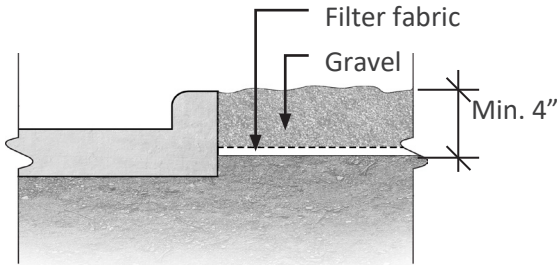
- 2006 Lancaster Streetscape Master Plan
- Lancaster Development Code
- City of Lancaster Landscaping Regulations and Standards

Streetscapes are challenging environments that are subject to damage from environmental factors, vehicles, and are difficult to access for maintenance. It is therefore crucial that streetscape design considers these realities for an efficient, lasting and cost-effective landscape in the long-term. The following eight graphics and drought tolerant plant palette listed previously are guides for consistent planting design which, when applied to medians and planting areas, results in reduced maintenance cost while maintaining a high level of aesthetic quality.

**Figure 5:9 - Maintenance Details**

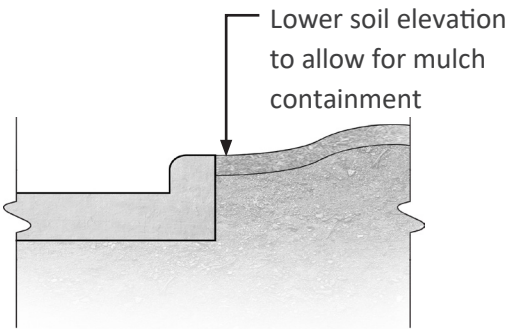




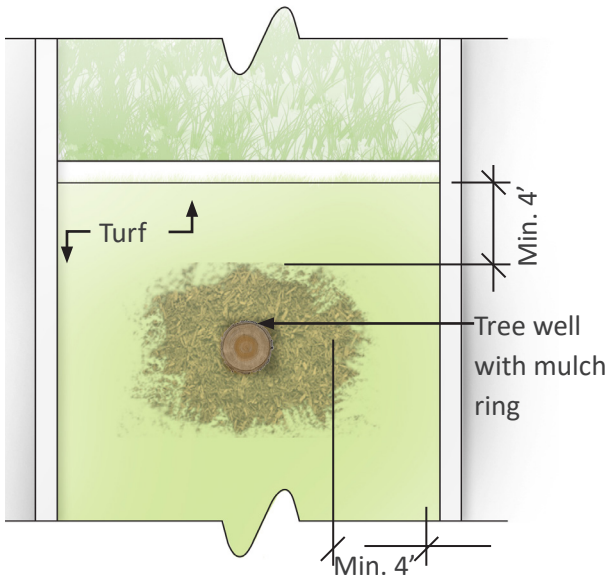


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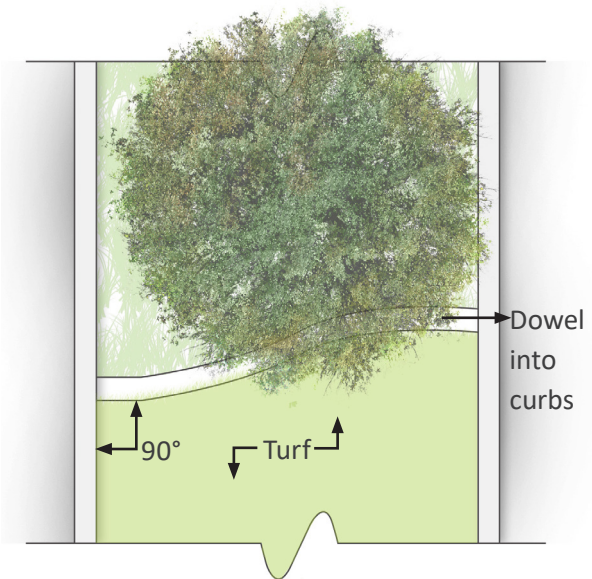
GRAVEL



MULCH FLUSH WITH CURB



MOW AREA



MOW STRIP AT 90 DEGREES

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# CHAPTER 6

## IMPLEMENTATION

### IMPLEMENTATION PLAN

### TYPICAL COST FIGURES

### POTENTIAL FUNDING SOURCES

### UPDATES TO APPLICABLE ORDINANCES

This final chapter presents the implementation priorities for the recommended gateway and streetscape features. Estimates of probable costs and potential funding sources are also discussed. The chapter closes with a discussion of critical elements to administering the master plan.

# IMPLEMENTATION PLAN

## ACTION PLAN

The streetscape and monumentation vision and recommendations presented in Chapters 4 and 5 cannot be achieved all at one time. Rather, the recommendations are prioritized so that the most critical happen in a shorter time-frame and the less critical happen later as funding becomes available or as development occurs. **Table 6:1** on the following pages summarizes the recommendations and the associated timeframes for implementation; the elements included in the table are as follows.

**Timing:** Identifies the recommended time frame for the specific recommendation to be implemented, divided into short, medium, and long-term. It is important to note that development may occur that allows for some monumentation or streetscape recommendations to occur sooner than identified in this table. Factors that influence timing include funding availability, visibility of corridor, and planned roadway improvements.

- **Short-Term:** Most critical recommendations to be implemented over the next five years. This also includes projects that already have funding slated for improvements that can be implemented in the short-term.
- **Medium-Term:** Recommendations that should be initiated in years five to ten of the plan when funding becomes available.
- **Long-Term:** Recommendations that are more complex or most expensive that will be implemented beyond year ten of plan implementation.

**Implementation Considerations:** Lists factors that should be considered when the actions are implemented such as future roadway expansions, ROW or scale restrictions, and coordinating proposed monument and streetscape designs.

**Table 6:1 - Streetscape Master Plan Implementation Plan**

Recommendation	Timing*	Implementation Considerations
<b>MAJOR GATEWAYS</b>		
Implement major gateway at Dallas Ave and City Limits	Short	Green Ribbon project design of median, undeveloped land to the east and west of Dallas Ave
Implement major gateway at IH-35E and Pleasant Run Rd	Medium	TxDOT scale restrictions if within ROW, removal of existing monument, competing monument in DeSoto across IH-35E
Implement major gateway at IH-35E and Belt Line Rd	Medium	TxDOT scale restrictions if within ROW, removal of existing monument, Ten Mile Creek trail wayfinding
Implement major gateway at IH-20 and Houston School Rd	Medium	TxDOT scale restrictions if within ROW
Implement major gateway at Loop 9 and Highway 342	Long	Coordination with NTTA, future Loop 9 corridor study overlay recommendations
<b>MINOR GATEWAYS</b>		
Implement minor gateway at IH-35E and Wintergreen Rd	Medium	Hardscape within median, TxDOT scale restrictions if within ROW
Implement minor gateway at Dallas Ave and Wintergreen Rd	Medium	Corner treatment with new development
Implement minor gateway at IH-35E and Daniieldale Rd	Long	Corner treatment, TxDOT scale restrictions if within ROW
Implement minor gateway at IH-35E and Parkerville Rd	Long	Future roadway expansion, TxDOT scale restrictions if within ROW
Implement minor gateway at IH-35E and Bear Creek Rd	Long	Future roadway expansion, TxDOT scale restrictions if within ROW
Implement minor gateway at Lancaster-Hutchins Rd and City limits	Long	Future roadway expansion, potential corner treatment, undeveloped land

\*Development may occur that allow for some gateway or streetscape recommendations to occur sooner.



**Table 6:1 - Streetscape Master Plan Implementation Plan (continued)**

Recommendation	Timing*	Implementation Considerations
Implement minor gateway at Pleasant Run Rd and eastern City limits	Long	Future roadway expansion, undeveloped land on either side of Pleasant Run Rd
Implement minor gateway at Belt Line Rd and eastern City limits	Long	Future roadway expansion, undeveloped land on either side of Belt Line Rd
<b>DISTRICT PORTALS</b>		
Implement a district portal along IH-20 between IH-35E and Houston School Rd	Short	Dallas County International Inland Port theme, coordination with TxDOT and Dallas County
Implement a district portal along IH-20 between Houston School Rd and Dallas Ave	Short	Dallas County International Inland Port theme, coordination with TxDOT and Dallas County
Implement a district portal at Houston School Rd and Pleasant Run Rd	Medium	Commercial Edge theme, streetscape designs for Pleasant Run Rd and Houston School Rd
Implement a district portal at Pleasant Run Rd and Dallas Ave	Medium	Downtown Lancaster theme, streetscape designs for Pleasant Run and Dallas Ave

*\*Development may occur that allow for some gateway or streetscape recommendations to occur sooner.*

**Table 6:1 - Streetscape Master Plan Implementation Plan (continued)**

Recommendation	Timing*	Implementation Considerations
<b>INTERSECTION NODES</b>		
Implement an intersection node at Dallas Ave and Wintergreen Rd	Short	Adjacent minor gateway, tie in existing brick pavers on east side of Wintergreen Rd
Implement an intersection node at Pleasant Run Rd and Bluegrove Rd	Short	Improve existing crosswalks, Pleasant Run Rd streetscape design
Implement an intersection node at Belt Line Rd and Houston School Rd	Short	Improve existing crosswalks, Belt Line Rd and Houston School Rd streetscape designs
Implement an intersection node at Belt Line Rd and Bluegrove Rd	Short	Improve existing crosswalks, Belt Line Rd streetscape design
Implement an intersection node at Jefferson Rd and Wintergreen Rd	Short	Tie in existing brick pavers along three corners of the intersection
Implement an intersection node at Pleasant Run Rd and Lancaster-Hutchins Rd	Long	Future roadway expansion, Pleasant Run Rd streetscape design
Implement an intersection node at Belt Line Rd and Main St	Long	Future roadway expansion, improve existing crosswalks
Implement an intersection node at Main St and Lancaster-Hutchins Rd	Long	Future roadway expansion, undeveloped land to the east
Implement an intersection node at Main St and Bluegrove Rd	Long	Occur with future development
Implement an intersection node at the Dallas Ave and Lancaster-Hutchins Rd merge	Long	Unique intersection configuration, pedestrian safety
Implement an intersection node at Dallas Ave and Bear Creek Rd	Long	Future roadway expansion, occur with future development

\*Development may occur that allow for some gateway or streetscape recommendations to occur sooner.

**Table 6:1 - Streetscape Master Plan Implementation Plan (continued)**

Recommendation	Timing*	Implementation Considerations
<b>MAJOR THOROUGHFARE STREETScape DESIGN</b>		
Houston School Rd (IH-20 to Pleasant Run Rd)	Short	Visibility, continuous pedestrian facilities, safe intersection crossings, proposed monumentation features
Pleasant Run Rd (IH-35E to Dallas Ave)	Short	Visibility, continuous pedestrian facilities, safe intersection crossings, preservation of existing trees in median, proposed monumentation features
Belt Line Rd (IH-35E to Bluegrove Rd)	Short	Visibility, continuous pedestrian facilities, safe intersection crossings, proposed monumentation features
Dallas Ave (Cedardale Rd to Alexander Ave)	Short	TxDOT requirements (Green Ribbon funding), turn lane removal, visibility, proposed monumentation features
Pleasant Run Rd (Dallas Ave to Eastern City Limits)	Long	Future roadway expansion, visibility, continuous pedestrian facilities, safe intersection crossings, proposed monumentation features
Belt Line Rd (Cedardale Rd to Eastern City Limits)	Long	Future roadway expansion, visibility, continuous pedestrian facilities, safe intersection crossings, proposed monumentation features
Dallas Ave (Belt Line Rd to Southern City Limits)	Long	Future roadway expansion, visibility, proposed monumentation features

*\*Development may occur that allow for some gateway or streetscape recommendations to occur sooner.*



**Table 6:1 - Streetscape Master Plan Implementation Plan (continued)**

Recommendation	Timing*	Implementation Considerations
<b>MINOR THOROUGHFARE STREETScape DESIGN</b>		
Wintergreen Rd (IH-35E to Houston School Rd)	Medium	Plantings within ROW, visibility, proposed monumentation features
Danielsdale Rd (IH-35E to Houston School Rd)	Medium	Plantings within ROW, visibility, proposed monumentation features
Wintergreen Rd (Houston School Rd to Dallas Ave)	Medium	Plantings within ROW, visibility, proposed monumentation features
Main St (Belt Line Rd to Lancaster-Hutchins Rd)	Medium	Plantings within ROW, visibility, proposed monumentation features, preservation of existing trees
Dallas Ave (Alexander Ave to Hwy 342)	Medium	Consistency with streetscape design to the north, visibility, proposed monumentation features
Parkerville Road (IH-35E to Main St)	Long	Future roadway alignment and expansion, visibility, proposed monumentation features
S Houston School Rd (Parkerville Rd to Southern City Limits)	Long	Future roadway expansion, visibility
Bear Creek Rd (IH-35E to Hwy 342)	Long	Future roadway expansion, visibility, proposed monumentation features

*\*Development may occur that allow for some gateway or streetscape recommendations to occur sooner.*

## TYPICAL COST FIGURES

This section provides typical cost figures for developing each of the proposed monumentation features and streetscape sections using the features as described in Chapter 5. It is important to note that these are planning level cost estimates that will change as additional design and engineering occurs. Additionally, inflation should be factored in for future projects to account for potential raises in price of materials.

### MONUMENTATION TYPICAL COST FIGURES

The opinions of probable cost for the different monumentation features include elements related to mobilization, traffic control, architectural features, structural, MEP, and a 25% contingency. These cost ranges represent opinions of probable construction costs; costs may vary depending on the conditions of the specific location and bidding prices.

**Major Monument:** \$300,000 - \$350,000 per feature

**Minor Monument:** \$100,000 - \$150,000 per feature

**District Portal:** \$60,000 - \$75,000 per feature

**Intersection Node (Pavement Treatment):** Approx. \$500,000 (includes removal of existing pavement)

### STREETSCAPE TYPICAL COST FIGURES

To calculate the cost per mile for the streetscape improvements, the following elements were included: existing pavement removal, traffic control, sod, irrigation, mulch, soil mix, plant material, plant bed preparation, root barriers, concrete landscape edge, vegetative watering, maintenance, and a 25% contingency. These cost ranges represent opinions of probable construction costs; costs may vary depending on the conditions of the specific corridor and bidding prices.

#### **Major Thoroughfare Streetscape Design:**

High-Intensity Streetscape Plantings: \$300,000 - \$400,000 per mile

Low-Intensity Streetscape Plantings: \$250,000 - \$300,000 per mile

#### **Minor Thoroughfare Streetscape Design:**

Landscape Buffer Area Plantings: \$200,000 - \$225,000 per mile

## POTENTIAL FUNDING SOURCES

Implementation of the monumentation features and streetscape improvements may be public, private, or developer-initiated strategies. Typically, the City will be responsible for funding streetscape improvements within a median, which may be paid with capital expenditures, and developers are responsible for funding streetscape improvements within the landscape buffer area adjacent to their property. Depending on the location of the monument feature, the cost may be shared by the City and developer. This section describes potential funding sources for local and state funding sources.

### LOCAL FUNDING SOURCES

- **General Fund Expenditures:** This serves as the main operating fund for local governments. Improvements to existing roads could be used with general fund expenditures.
- **Bond Funds:** Municipal bonds are approved by voters through a bond election; if approved, the City takes on debt to finance the improvements included in the bond package. Large capital expenditures like roadways are often funded by bonds. *When establishing capital improvement budgets for street improvements, allocations for incidental paving and planting for gateways and streetscape planting should be included.*
- **Tax Increment Reinvestment Zone (TIRZ):** A TIRZ is a defined area in which the increases in tax revenue is reinvested back into the area for public improvements and development projects that benefit the defined area.

### STATE FUNDING SOURCES

- **TxDOT Green Ribbon Program:** TxDOT administers a statewide program for landscape projects in areas that are in non-attainment for air quality. Eligible projects include planting trees, shrubs, and groundcover along roadways designated on the state highway system to help mitigate the effects of air pollution. No funding match from local governments is required. In Lancaster, the city received Green Ribbon funding for Dallas Avenue in 2019, which is a TxDOT on-system roadway.

### DEVELOPER COSTS

The costs of many of the improvements should be incurred by the developer, including:

- **Underground Utilities:** The cost of installing underground utilities should be incurred by the developer in future developments.
- **Landscape Buffers:** Developers are financially responsible for developing sidewalks, entranceways, and landscape buffers adjacent to their development.



# ADMINISTERING THE MASTER PLAN

## INTERACTIONS WITH DEVELOPMENT COMMUNITY

It is not feasible for the City of Lancaster to implement all of the monumentation and streetscape recommendations by themselves. Rather, the development community will play a critical role in implementing the streetscape and monumentation recommendations over time.

For monumentation, when new development or redevelopment occurs on a tract of land that has a monumentation feature recommended, the City should work with the developer to design a monument feature consistent with the standards set forth in Chapter 5 to share the costs.

For streetscape features, relying on developers to incrementally develop the landscape buffer areas adjacent to their property will take a long time to create a cohesive looking corridor. The City might instead develop a fee in lieu to use for streetscape enhancements so a corridor can be transformed all at one time.

## UPDATES TO APPLICABLE ORDINANCES

The Lancaster Development Code regulates all aspects of development within Lancaster and represents Article 14 of the overall city code of ordinances. The following adjustments to the existing development code language should be considered to more fully implement the recommendations included in this master plan. Additional comments are included in Chapter 3 on page 43.

### LANCASTER DEVELOPMENT CODE

#### Section 14.1203: Specific Sign Regulations.

- Update Monument Signs to reflect maximum height as specified in Chapter 5.

#### Section 14.1208: Maintenance of Signs.

- Add in discussion on maintenance of monument signage consistent with recommended standards in Chapter 5.

#### Section 14.805: Landscape Materials & Standards.

- Consider expanding the approved plant list to include the plantings recommended in Chapter 5 and the Appendix of this master plan.

#### Section 14.909: Street Trees.

- Incorporate recommended standards for street tree spacing within medians and within the landscape buffer for both major and minor thoroughfare streetscape treatments as described in Chapter 5.

## CONCLUSION

This plan serves as an update to the 2006 Streetscape Master Plan. Since 2006, there has been significant development in Lancaster and more areas have been developed. With the upcoming Loop 9 highway construction, additional portions of Lancaster are anticipated to be developed. This plan offers standards for monumentation and streetscape features for future developed areas as well as a means to improve the existing monumentation and streetscape features within already developed areas of the City. Over time, as these recommendations are implemented, the aesthetic quality of Lancaster will be improved and made more consistent.









# APPENDIX

- A - GLOSSARY OF TERMS
- B - SURVEY RESULTS PRESENTATION
- C - RECOMMENDED PLANTING LISTING
- D - RECOMMENDED LIGHTING SPECIFICATIONS

## APPENDIX A - GLOSSARY OF TERMS

The following terms are used throughout this master plan report.

**ACCENT LIGHTING** - Lighting that is installed to highlight focal architectural features, sculptures, trees, or landscaped areas to create a more attractive and interesting environment for pedestrians.

**CHARACTER DISTRICTS** - Six distinct areas of Lancaster intended to represent general areas of differing character as defined by the Trails Master Plan.

**COMMUNITY BRAND** - The identifiable image of a community that is unique to a specific community.

**FORM** - Refers to the shape and massing of a particular monumentation feature or streetscape element.

**FUNCTION** - Refers to the purpose of a monumentation feature or streetscape element.

**GATEWAY** - A passage or point at which a new area is entered and defined by special paving, planting, site furnishings, or architectural features.

- **Major Gateway:** Signifies entrance to the City at major intersections; typically 25' - 30' in height.
- **Minor Gateway:** Signifies entrance to the City at minor intersections; typically 15' - 20' in height.
- **District Portal:** Signifies entrance into various character districts; typically 10' - 15' in height.
- **Intersection Node:** Signifies a minor intersection within the City; typically 0' - 10' in height.

**GROUND COVER** - Low-lying plants that easily spread to cover sections of ground and require minimal maintenance.

**INTENSITY** - Refers to the density and proximity of plantings within a streetscape area.

**LANDSCAPE BUFFER AREA** - The area between a sidewalk and curb that is planted with vegetation including trees and grass.

**LIGHT POLLUTION** - Any adverse effect of man-made light including sky glow, glare, light trespass, light clutter, decreased visibility at night, and energy waste.

**LUMINAIRE** - Refers to a complete lighting fixture, including the pole, fixture, and parts designed to power and distribute light.

**MAJOR THOROUGHFARE** - In Lancaster, represents a four or six-lane major arterial with significant traffic volumes.

**MINOR THOROUGHFARE** - In Lancaster, represents a two or four-lane minor arterial that connect to major arterials.

**MONUMENTATION** - An architectural feature used to mark an entry to an area or to identify a place.

**NODE** - A significant roadway intersection with concentrated activity.

**ORNAMENTAL TREES** - Typically smaller trees that are meant to provide vivid colors and unique designs rather than strictly shade.

**PEDESTRIAN ZONE** - The area of a streetscape that is meant for the exclusive use of pedestrians and that should be free of obstructions.

**RIGHT-OF-WAY** - The area of a roadway between property boundaries in which the vehicular lanes, pedestrian zone, and landscape buffer areas fall.

**SCALE** - The relative height of a feature compared to the surrounding context (e.g. vehicular or pedestrian scale).

**SHADE TREES** - Typically larger trees that are meant to provide shade for pedestrians.

**SHRUBS** - Small to medium-size perennial plant with multiple stems and shorter height than trees.

**SITE FURNISHINGS** - Outdoor furnishings such as benches, trash receptacles, light poles, bollards, or street signs that are for both vehicular and pedestrian benefit.

**STREETSCAPE** - The physical area and elements within the street right-of-way that define a street which includes pedestrian and vehicular paving, lighting, signalization, signage, utilities, site furnishings, vehicular or pedestrian amenities, and vegetation.

- **High-Intensity Streetscape:** Features more dense plants at intersections to signal the approach to a significant intersection.
- **Low-Intensity Streetscape:** Features less dense trees and plantings and instead emphasizes large grassed areas for ease of maintenance.

**VISUAL CLUTTER** - Refers to the concentration of signs, billboards, and utility lines along a view corridor that detracts from the overall aesthetic of an area.

**WAYFINDING** - A system of directional signs and architectural elements that assist travelers in finding destinations in a city.

**XERISCAPING** - An approach to landscaping that greatly reduces or eliminates the need for irrigation.



## APPENDIX B - SURVEY RESULTS PRESENTATION



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## Survey Objectives & Methodology

- **National Service Research (NSR)** completed a comprehensive research study for the City of Lancaster, Texas as part of the Park, Recreation and Open Space Master Plan and the Streetscape Master Plan. An important aspect of the Master Plan was to conduct a demand and needs assessment which involved citizen input. The purpose of the study was to provide citizen feedback for the both Master Plans that will provide guidance based upon citizen needs and priorities.
- Questions for the Streetscape Master Plan survey were included in the Comprehensive Park & Recreation Master Plan citizen needs assessment survey.
- The sampling plan included mailed surveys to 6,000 Lancaster households. Residents had the option of completing the mailed survey or an online survey. The survey was posted on the Lancaster website and various social media sites. The surveys were mailed September 6, 2019. The survey closed November 7, 2019.
- A total of 381 survey responses were received (116 mailed and 265 online). The margin of error of this sample size at a 95% confidence level is plus or minus 5.0%.

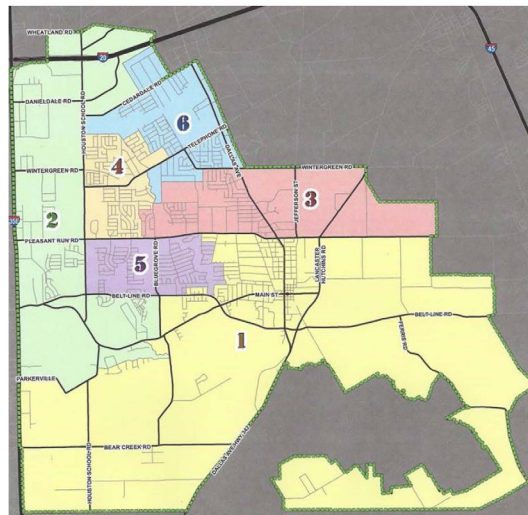
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2019 Lancaster Needs Assessment Survey Conducted by National Service Research November 2019

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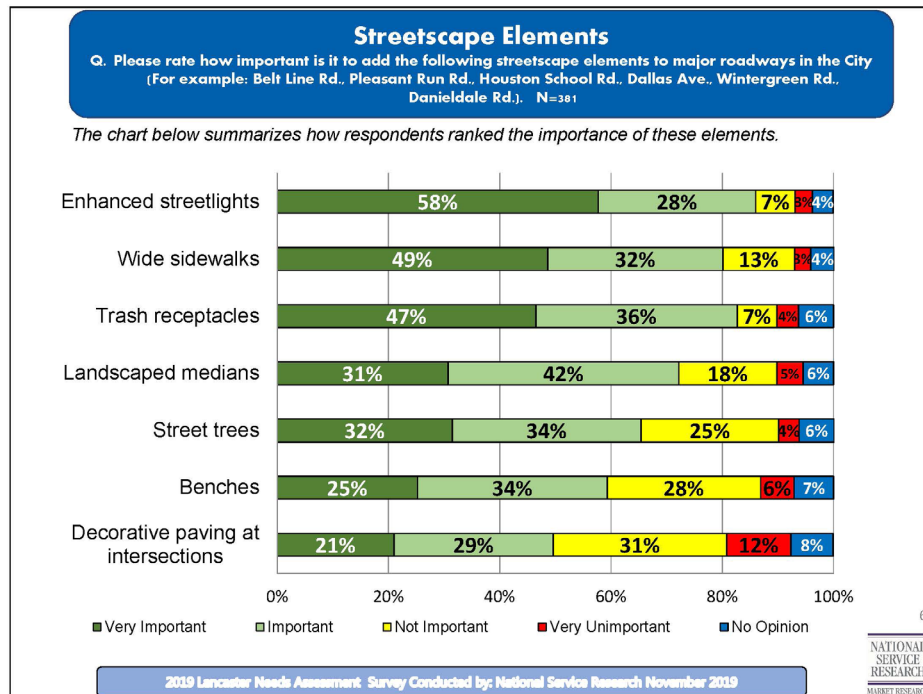
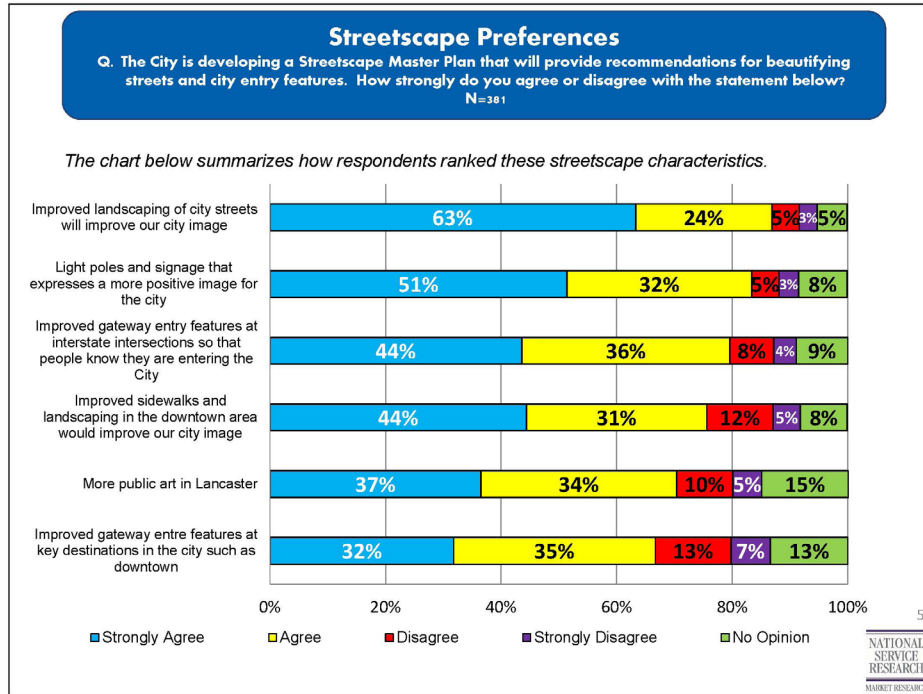
## District of Residence

District	% Response
1	28%
2	11
3	8
4	16
5	18
6	12
Unknown	7

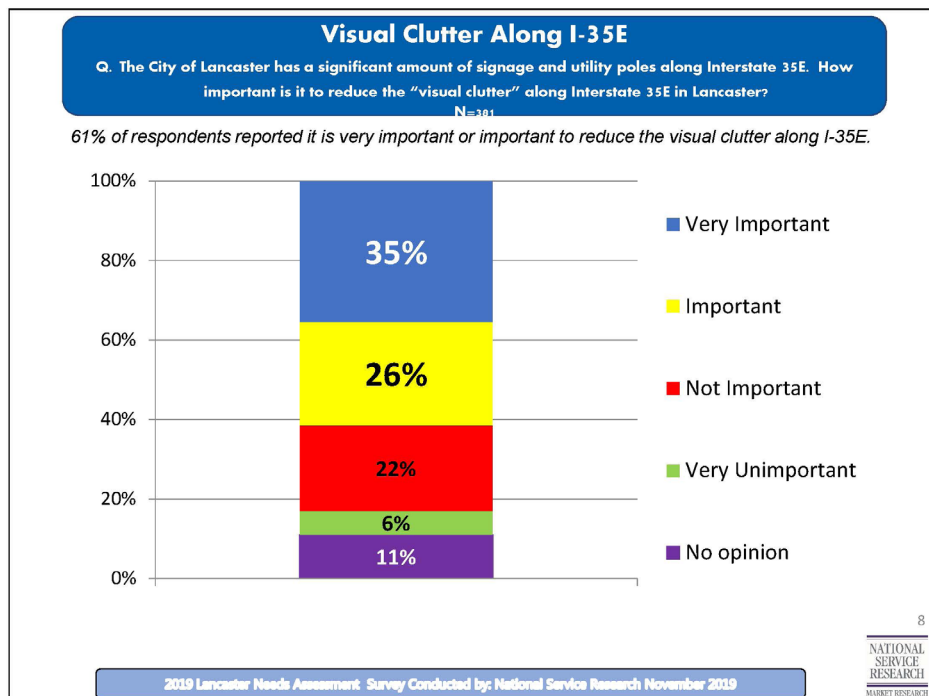
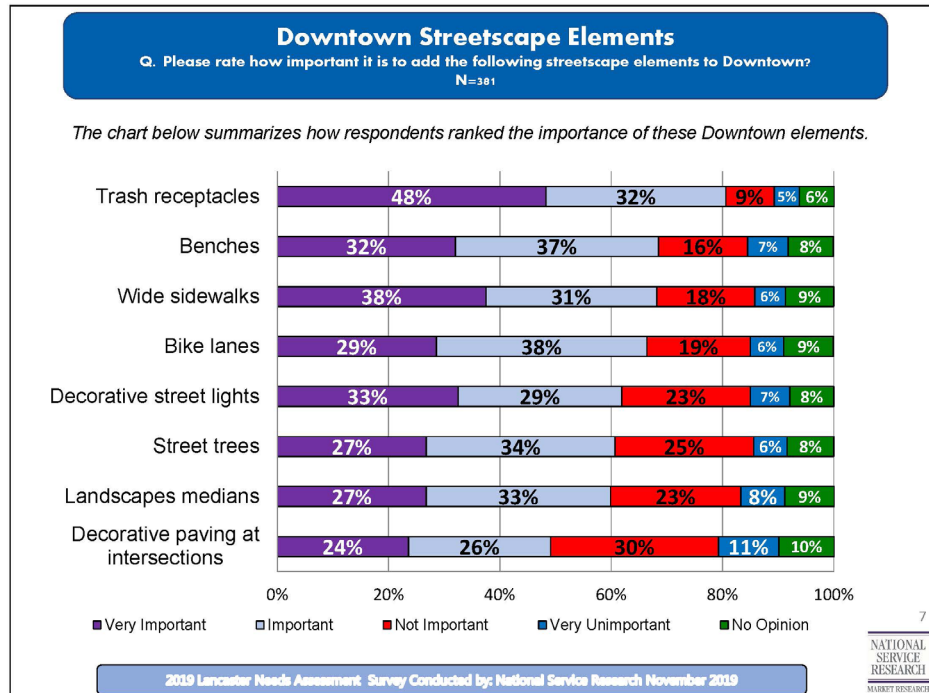


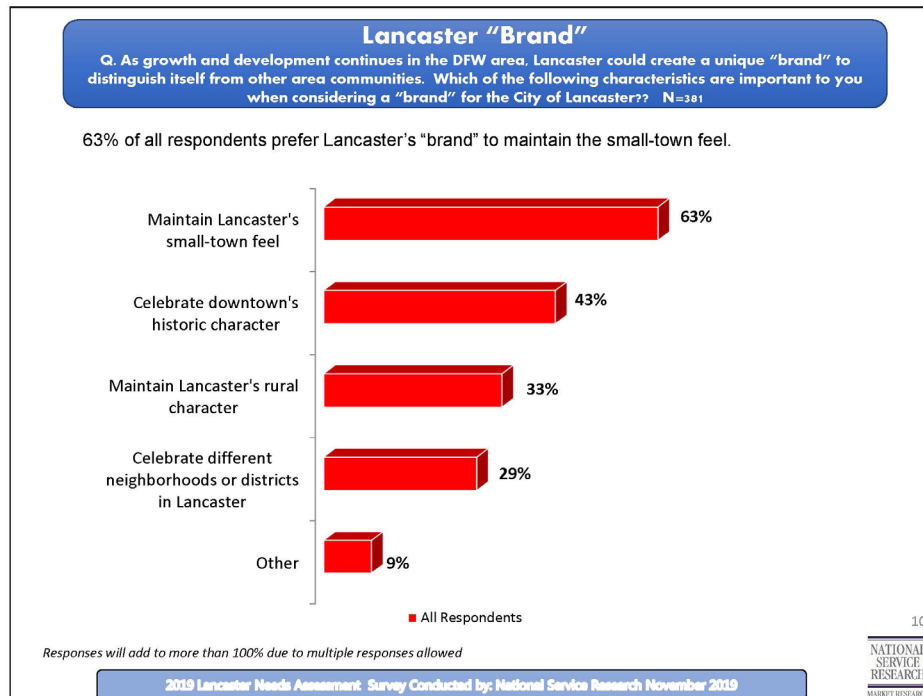
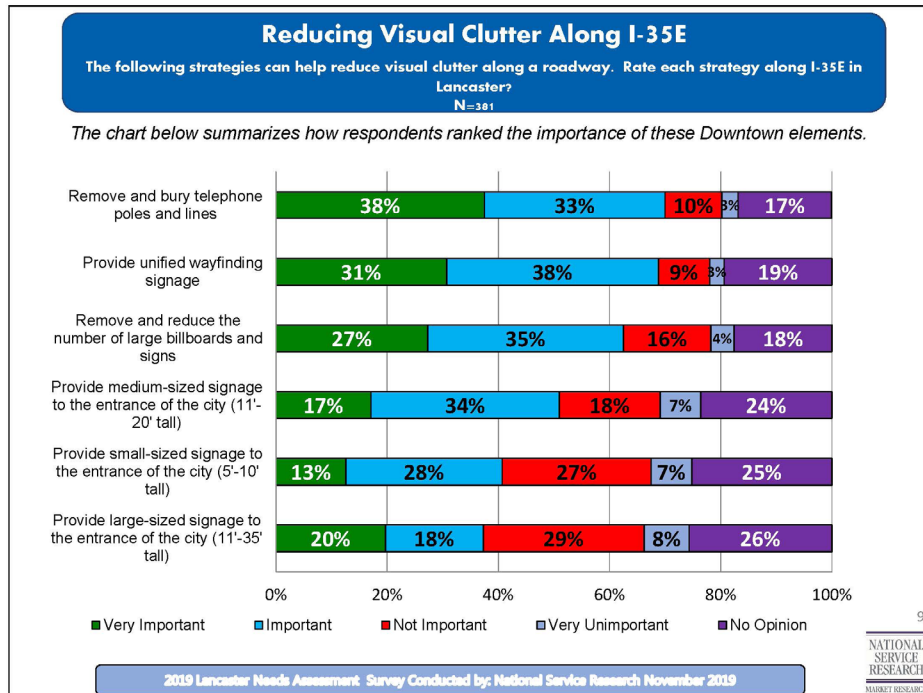
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### Respondent Demographics



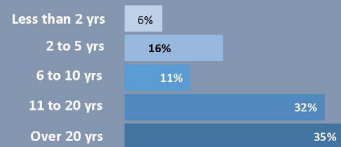
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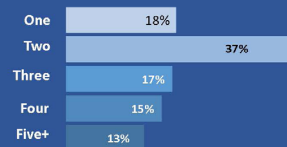
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## Respondent Demographics

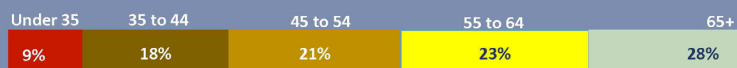
### Length Lived in Lancaster



### Household Size – Mean Household Size 2.79



### Respondent Age – Mean 54.8 years of age



90% of respondents own their home and 10% are renters.

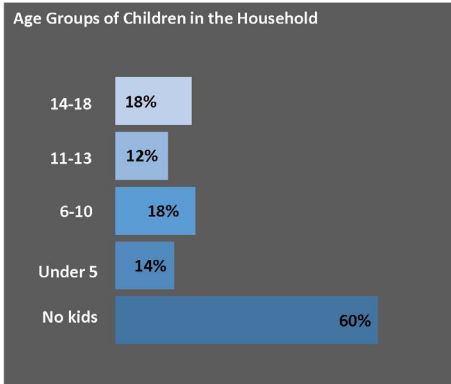
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## Respondent Demographics



*Responses will add to more than 100% due to multiple responses allowed*

2019 Lancaster Needs Assessment: Survey Conducted by National Service Research November 2019

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### National Service Research Background/Contact Information

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web site: [www.nationalserviceresearch.com](http://www.nationalserviceresearch.com)

National Service Research (NSR), founded in 1989, is a full-service market research consulting firm and conducts market studies for the public and private sector. NSR conducts various types of consumer and business research including focus groups and surveys nationwide. NSR's owner and founder, Andrea Thomas, over thirty-five years of professional market research experience.

14

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## APPENDIX C - RECOMMENDED PLANTING LIST

The following plant list is recommended for planting plans as required by the city landscape ordinance, as well as city plantings in the parkways and medians. The plants were chosen because of their natural occurrence in this region of Texas. They can be used as buffers as currently required by the zoning ordinance between residential and other uses, to screen parking, and/or to screen residential areas from major thoroughfares.

The use of native trees and shrubs ensures the following:

- Creates and maintains the unique rural character of Lancaster;
- Ensures a native plant legacy;
- Requires less water use;
- Reduces plant pests and diseases; and,
- Promotes civic responsibility to support indigenous materials of local ecology.

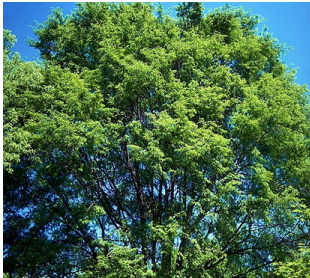
The list is native to Lancaster or to similar ecosystems of Texas. The proper plant must be chosen for the specific location based on its mature size, growth habit, and soil, light and water requirements.

## CANOPY TREES – OVER 30'

(For required Street Yard area per landscape ordinance)

Common Name	Scientific Name
Alligator Juniper	<i>Juniperus deppeana</i>
American Elm	<i>Ulmus Americana</i>
Bald Cypress	<i>Taxodium distichum</i>
Black Jack Oak	<i>Quercus marilandica</i>
Boxelder	<i>Acer negundo</i>
Bur Oak	<i>Quercus macrocarpa</i>
Caddo Maple	<i>Acer baratum</i> or <i>Acer saccharum</i> "October Glory"/"Autumn Flame"
Cedar Elm	<i>Ulmus crassifolia</i>
Callery Pear	<i>Pyrus calleryana</i>
Chinquapin Oak	<i>Quercus muhlenbergii</i>
Chittamwood	<i>Bumelia lanuginosa</i>
Durrand Oak	<i>Quercus durandii</i>
Lacebark Elm	<i>Ulmus parvifolia sempervirens</i>
Eastern Red Cedar	<i>Juniperus virginiana</i>
Honey Locust	<i>Gleditsia triacanthos</i> (thornless)
Live Oak	<i>Quercus virginiana</i>
Mesquite	<i>Prosopis glandulosa</i>
Panache Red Oak	<i>Quercus texana</i> 'Panache'
Pecan	<i>Carya illinoensis</i> "Caddo Sioux" or "Kansa"
Pond Cypress	<i>Taxodium ascendens</i>
Post Oak	<i>Quercus stellata</i>
Red Maple	<i>Acer rubrum</i> or <i>Acer saccharum</i> "October Glory"/"Autumn Flame"
Shumard Red Oak	<i>Quercus shumardii</i>
Sweetgum	<i>Liquidambar styraciflua</i>
Sycamore	<i>Platanus occidentalis</i>
Texas Ash	<i>Fraxinus texensis</i>
Texas Hickory	<i>Carya texana</i>
Texas Red Oak	<i>Quercus texana</i>
Trident Maple	<i>Acer rubrum</i> "trilobum"
Walnut	<i>Juglans nigra</i>
Western Soapberry	<i>Sapindus drummondii</i>
White Oak	<i>Quercus alba</i>
Winged Elm	<i>Ulmus alatus</i>





Lacebark Elm  
*Ulmus parvifolia*  
*sempervirens*  
Minimum spacing: 30' O.C.  
50' - 70' H / 40' - 60' W - Typ.



Eastern Red Cedar  
*Juniperus virginiana*  
Minimum spacing: 30' O.C.  
50' - 70' H / 40' - 60' W - Typ.



Pecan  
*Carya illinoensis* "Caddo  
Sioux" or "Kansa"  
Minimum spacing: 24" O.C.  
3' H&W



Live Oak  
*Quercus virginiana*  
Minimum spacing: 30' O.C.  
40' - 60' H / 30' - 40' W - Typ.



Post Oak  
*Quercus stellata*  
Minimum spacing: 30' O.C.  
40' - 60' H / 30' - 40' W - Typ.



Red Maple  
*Acer rubrum* "October  
Glory"  
Minimum spacing: 30' O.C.  
40' - 60' H / 30' - 40' W - Typ.



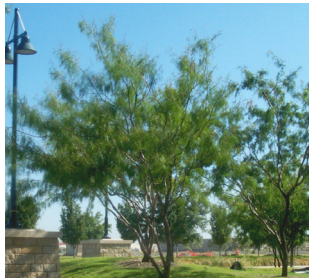
Shumard Red Oak  
*Quercus shumardii*  
Minimum spacing: 30' O.C.  
40' - 60' H / 30' - 40' W - Typ.



Sweetgum  
*Liquidambar styraciflua*  
Minimum spacing: 30' O.C.  
40' - 60' H / 30' - 40' W - Typ.

## UNDERSTORY TREES - UNDER 30'

Common Name	Scientific Name
Ashe Juniper	<i>Juniperus ashei</i>
American Holly	<i>Ilex opaca</i> and cv.
Texas Buckeye	<i>Aesculus arguta</i>
Carolina Buckthorn	<i>Rhamnus carolinanna</i>
Cherry Laurel	<i>Prunus caroliniana</i>
Chilopsis linearis	<i>Dessert willow</i>
Chitalpa, Chilopsis	<i>Catalpa</i>
Desert Willow	<i>Chilopsis linearis</i>
Eastern Red Cedar	<i>Juniperus virginiana</i>
Eve's Necklace	<i>Sophora affinis</i>
Farkleberry	<i>Vaccinium spp.</i>
Flameleaf Sumac	<i>Rhus lanceolata</i>
Fringe tree	<i>Chionanthus virginica</i>
Hawthorne	<i>Crataegus mollis</i>
Mexican Plum	<i>Prunus mexicana</i>
Parsley Hawthorn	<i>Crataegus marshallii</i>
Possumhaw Holly	<i>Ilex deciduas</i>
Redbud	<i>Cercis spp.</i>
Rough Leaf Dogwood	<i>Cornus drummondii</i>
Rusty Blackhaw Virburnum	<i>Viburnum rufidulum</i>
Sassafras	<i>S. albidium</i>
Smoke Tree	<i>Cotinus obovatus</i>
Sweet Bay Magnolia	<i>Magnolia virginiana</i>
Texas Buckeye	<i>Aesculus glabra</i> Texas Persimmon, <i>Disopyros texana</i>
Texas Pistachio	<i>Pistacia texana</i>
Texas Mountain Laurel	<i>Sophora secundiflora</i>
Waxmyrtle	<i>Myrica cerifera</i>
Wright Acacia	<i>Acacia wrightii</i>
Yaupon Holly	<i>Ilex vomitoria</i>



Desert Willow  
Chilopsis linearis  
Minimum spacing: 15' O.C.  
12' - 15' H / 15' - 20' W - Typ.



Mexican Plum  
Prunus mexicana  
Minimum spacing: 15' O.C.  
15' - 35' H / 10' - 20' W - Typ.



Wax Myrtle  
Myrica cerifera  
Minimum spacing: 30' O.C.  
60' - 80' H / 40' - 50' W - Typ.



Yaupon Holly  
Ilex vomitoria  
Minimum spacing: 10' O.C.  
12' - 15' H / 10' - 12' W - Typ.

## FLOODPLAIN/OPEN SPACE TREES

Common Name	Scientific Name
American Elm	<i>Ulmus americana</i>
Black Gum	<i>Nyssa sylvatica</i>
Black Walnut	<i>Juglans nigra</i>
Black Willow	<i>Salix babylonica</i>
Cedar Elm	<i>Ulmus crassifolia</i>
Pecan	<i>Carya illinoensis</i>
Persimmon	<i>Diospyros virginiana</i>
Sycamore	<i>Platanus occidentalis</i>



Boxelder  
*Acer negundo*  
Minimum spacing: 36" O.C.  
3' H&W



Bur Oak  
*Quercus macrocarpa*  
Minimum spacing: 30' O.C.  
60' - 80' H / 40' - 50' W - Typ.



Caddo Maple  
*Acer saccharum* "October  
Glory"  
Minimum spacing: 24" O.C.  
3' H&W



Cedar Elm  
*Ulmus crassifolia*  
Minimum spacing: 30' O.C.  
50' - 70' H / 40' - 60' W - Typ.



## SHRUBS FOR SCREENING

Common Name	Scientific Name
Agarita	<i>Berberis trifoliolata</i>
American Beautyberry	<i>Callicarpa americana</i>
Arkansas Yucca	<i>Yucca gloriosa or pendula</i>
Coralberry	<i>Symphoricarpos orbiculatus</i>
Dwarf Waxmyrtle	<i>Myrica pusilla</i>
Dwarf Yaupon Holly	<i>Ilex vomitoria 'nana'</i>
Evergreen Sumac	<i>Rhus virens</i>
Indian Hawthorne	<i>Raphiolepis indica 'clara' or 'snow' varieties</i>
Red Yucca	<i>Hesperaloe parviflora</i>
Roughleaf Dogwood	<i>Cornus drummondii</i>
Autumn Sage	<i>Salvia greggii</i>
Texas Sage	<i>Leucophyllum frutescens</i>
Texas Sotol	<i>Dasyliirion sp.</i>
Turk's Cap	<i>Malvaviscus arboreus</i>



Autumn Sage  
*Salvia greggii*  
 Minimum spacing: 24" O.C.  
 3' High & Wide



Dwarf Wax Myrtle  
*Myrica cerifera var. pumila*  
 Minimum spacing: 36" O.C.  
 3' - 6' High & Wide



Red Yucca  
*Hesperaloe parviflora*  
 Minimum spacing: 24" O.C.  
 3' High & Wide



Texas Sage  
*Leucophyllum frutescens*  
 Minimum spacing: 36" O.C.  
 6' High & Wide

## ORNAMENTAL GRASSES

Common Name	Scientific Name
Gulf Muhly Grass	<i>Muhlenbergia lindheimeri</i>
Little Bluestem	<i>Schizachyrium scoparium</i>
Broomsedge Bluestem	<i>Andropogon virginicus</i>
Splitbeard Bluestem	<i>Andropogon termarius</i>
Canada Wildrye	<i>Elymus canadensis</i>
Inland Sea oats	<i>Chasmanthium latifolium</i>
Mexican Feather Grass	<i>Stipa tenuissima</i>
Deer Grass	<i>Muhlenbergia rigens</i>
Silver Feather	<i>Miscanthus adagio</i>
Lindheimer Muhly	<i>Muhlenbergia lindheimeri</i>



Gulf Muhly Grass  
*Muhlenbergia capilaris*  
 Minimum spacing: 24" O.C.  
 3' High & Wide



Mexican Feather Grass  
*Stipa tenuissima*  
 Minimum spacing: 18" O.C.  
 3'-5' High & Wide



Little Bluestem  
*Schizachyrium scoparium*  
 Minimum spacing: 36" O.C.  
 3'-6' High & Wide



Lindheimer's Muhly  
*Muhlenbergia lindheimeri*  
 Minimum spacing: 36" O.C.  
 3'-5' High & Wide

## APPENDIX D - RECOMMENDED LIGHTING SPECIFICATIONS

### LUMINARIES

<b>Application:</b>	Roadway and street
<b>Model:</b>	Lumec RoadFocus LED cobra head luminaires
<b>Color:</b>	Black, bronze, gray and white
<b>Price:</b>	Variable depending on base, pole selected and spacing
<b>Features:</b>	LED Roadway lighting, saving energy, maintenance and energy costs Uniform and high performance illumination Zero uplight IP66 rated light engines Internal shielding available Includes service tag assistance throughout life of the product Seamless integration in new and existing installations Full range of precision optics and broadest range of control solutions available Accessories can be ordered separately and can be quickly installed in the field
<b>Contact:</b>	Signify North America Corporation 200 Franklin Square Drive, Somerset, NJ 08873 <a href="https://www.signify.com/en-us/brands/lumec">https://www.signify.com/en-us/brands/lumec</a> (855) 486-2216



*RFM Cobra head (medium)*



*RFS Cobra head (small)*



## LUMINARIES

<b>Application:</b>	Urban, full cutoff. Roadway, street, monuments, bridges and facades.
<b>Model:</b>	Domus LED pendant large, DMS50, Domus, Domus 55, and Domus Small
<b>Color:</b>	Multiple color and finish options available
<b>Price:</b>	Variable depending on base, pole selected and spacing
<b>Features:</b>	Multiple lumen packages Type 2, 3, 4, and 5 optics available 4000K and 3000K color temperatures available Dimming driver standard
<b>Contact:</b>	Signify North America Corporation 200 Franklin Square Drive, Somerset, NJ 08873 <a href="https://www.signify.com/en-us/brands/lumec">https://www.signify.com/en-us/brands/lumec</a> (855) 486-2216

*Domus DMS50 Pendant (large)**Domus DOS Small*

## LUMINARIES

<b>Application:</b>	Roadway, street, bridges, monuments, facades. Non cutoff.
<b>Model:</b>	Lumec's Renaissance Series, Renaissance LED RN20 / 30 large/ RNS small
<b>Color:</b>	Multiple color and finish options available
<b>Price:</b>	Variable depending on base, pole selected and spacing
<b>Features:</b>	<p>Design evokes late 19th and early 20th century styling</p> <p>Provides design flexibility with a variety of cages, crowns, and decorative deflectors</p> <p>Simple and fast maintenance</p> <p>IP66 optical system keeps optics free of contaminants</p> <p>Ensures top-level performance in harsh environmental conditions</p> <p>Multiple lumen packages</p> <p>Type 2, 3, 4, and 5 optics available</p> <p>Glass or Acrylic Globes available</p> <p>4000K and 3000K color temperatures available</p> <p>Dimming driver standard</p> <p>Multiple driver options and programmed dimming options available</p> <p>Tool free access to lamp and electrical components for ease of maintenance</p>
<b>Contact:</b>	<p>Signify North America Corporation</p> <p>200 Franklin Square Drive,</p> <p>Somerset, NJ 08873</p> <p><a href="https://www.signify.com/en-us/brands/lumec">https://www.signify.com/en-us/brands/lumec</a></p> <p>(855) 486-2216</p>



*RNS 30 (large)*



*RNS 20 (small)*



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DRAFT 08.03.2020



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## LANCASTER CITY COUNCIL

### City Council Work Session

2.

**Meeting Date:** 08/17/2020

**Policy Statement:** This request supports the City Council 2019-2020 Policy Agenda

**Goal(s):** Healthy, Safe & Engaged Community  
Sound Infrastructure  
Quality Development

**Submitted by:** Bester Munyaradzi, Senior Planner

---

### **Agenda Caption:**

Discuss and receive an update on the 2006 Master Thoroughfare Master Plan.

### **Background:**

On December 8, 2003, City Council adopted Proposed Land Use Assumptions, a Thoroughfare Impact Fee Improvement Program (TIFIP), and a Roadway Impact Fee Ordinance, which implemented the Roadway Impact Fee Program. On March 27, 2006, City Council approved an ordinance that amended the Land Use Assumptions, Thoroughfare Impact Fee Improvement Program (TIFIP), and Roadway Impact Fee Ordinance to capture additional Master Thoroughfare Plan changes. Combination of these master planning efforts enabled many efficiencies gained in terms of eliminating duplicate meetings, preparing a single report as opposed to two separate reports, and using the same set of data (land use assumptions, etc.).

A Request For Qualifications (RFQ) was issued in 2016. Three statements of qualifications were received and selected FNI to perform this work.

In October, 2017, the City Council received a presentation regarding the process to update these plans from staff and FNI.

In November, 2017 the City Council considered a resolution approving approving the terms and conditions of professional services contract with Freese and Nichols, Inc. (FNI) to provide a new master plan for water, wastewater, and roadways with updated impact fees.

In the 2018-2019 City Council Strategic Planning Session, City Council identified the objective to update the Master Thoroughfare Plan. The current Master Plan was adopted by City Council in 2006 and Industry standards suggests that Master Plans be updated at a minimum every ten years. It was prioritized that our existing plan should be updated following the 2016 Comprehensive Plan Update, to ensure alignment.

The Council will receive a presentation from Freese & Nichols Inc. on the Master Thoroughfare Plan update final draft.

### **Attachments**

Final Master Thoroughfare Plan Update Draft

---







# Thoroughfare Plan Update

City of Lancaster  
Final Report  
May 2020



# Acknowledgements

## City Council

---

Clyde C. Hairston, Mayor

Carol Strain-Burk, District 1

Marco Mejia, District 3

Racheal Hill, Mayor Pro Tem, District 5

Stanley Jaglowski, District 2

Derrick D. Robinson, Deputy Mayor Pro Tem, District 4

Nina Morris, District 6

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Lawrence Prothro

Isabel Aguilar

Angela Murphy

Temika Whitfield

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Brian Crooks, Transportation Planner

Daniel Herrig, P.E., Project Planner

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## INTRODUCTION

### Chapter 1: Introduction

The thoroughfare system forms one of the most visible and permanent elements of the community. It establishes the framework for community growth and development and forms a long-range statement of public policy for transportation. As the alignment and right-of-way (ROW) of major transportation facilities are established and adjacent property developed, it is difficult to facilitate system changes without significant financial impacts. However, by incorporating programmed land uses and densities, strategies can be developed that maximize the land use/transportation relationship thereby increasing the community's chances in achieving mobility, safety, transportation choice, and economic development.

The changing social and economic climate dictate an integrated network of transportation systems be considered to support and sustain viable long-term growth. In addition to vehicular mobility, many communities, including Lancaster, have expanded transportation planning to include a broader range of considerations for transit, bike and pedestrian initiatives. When coupled with land use considerations, viable walkable places with value capture can be achieved. The City has begun incorporating more transportation alternatives through the development of a bike and pedestrian network, trails and streetscape plans, and a more walkable and mixed-use land use policy.



The process of developing a thoroughfare plan involves balancing the existing supply of infrastructure with the projected needs of the future. These future needs help to determine how much vehicle capacity is required and what multi-modal elements should be considered such as walking, biking or riding transit.

The Thoroughfare Plan will provide individual, yet integrated, strategies for vehicular, transit, pedestrian and bicycle network development and capital projects planning that will serve as a blueprint for future investment related decisions into the transportation system. The Plan is aimed at addressing the dynamic and changing needs that have occurred in Lancaster since the last Thoroughfare Plan. These policies, in conjunction with the Thoroughfare Plan Map, will guide long-term transportation decisions.



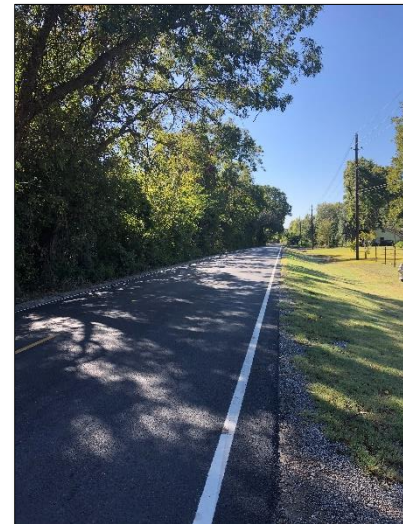
## Thoroughfare Planning 101

While there is substantial variation between thoroughfare plans, all plans share several key attributes:

- **Role as a Policy Document:** While all thoroughfare plans provide long-term solutions to shape and direct future growth, a key feature of all plans is to set policies for orderly development of the roadway network that emphasize network connections, roadway capacity, and stakeholder/public involvement. All thoroughfare plans identify the general location and type of facilities required to support growth.
- **Long-Range in Scope:** All thoroughfare plans are focused on addressing long-range transportation needs to manage forecast growth. The planning horizon for implementation is typically 20 years or more.
- **Focused on ROW Preservation:** A key component of the thoroughfare plan is to create a mechanism to preserve land for future roadways (ROW) so that an effective and efficient roadway network can be developed over time to support growth as it occurs.
- **Defined Roadway Functional Classification:** All plans include a discussion of proposed roadway functional classifications and design cross-sections for the study area. The thoroughfare plan designates roadway classifications of thoroughfares and supports the regional transportation system.
- **Thoroughfare Plan Map:** All thoroughfare plans include a map of proposed roadway recommendations, usually limited to major and minor arterials. The map identifies and integrates existing City thoroughfare plans within the study area to produce a clear and consistent vision for the development of the roadway network.
- **Living Document:** Roadway recommendations outlined in thoroughfare plans are not final. The plan itself is subject to constant revision and amendment and is typically updated every 5 to 7 years to provide considerations in accommodating the changing growth patterns of the county. As such, the thoroughfare plan acts as a “living document”.

**“A [Thoroughfare] plan is a statement of intention, not a guarantee of action.”**

Source: 2016 Montgomery County Thoroughfare Plan, HGAC.



# INTRODUCTION

## Understanding Proposed Alignments

The alignments outlined in the plan are not final and can be revised several times before a final alignment is approved, engineered, and implemented. Such revisions happen for a variety of reasons, some of which include environmental review, engineering design, compatibility with surrounding developments, future potential development, available funding, and stakeholder/public involvement.

Updates to recommended alignments identified in the plan are allowed, provided they support the long-range goals of network connectivity, safety and mobility, and additional capacity as outlined in the thoroughfare plan's map of roadway recommendations. A brief description of the core functions of proposed alignment ROW is presented in Table 1.

**Table 1: Core Functions of the ROW**

<b>Core Functions of the ROW</b>
<b>Mobility</b>
Accommodates the movement of people and good towards their destinations.
<b>Access for People</b>
Allows for people to get on or off the mobility system on-route to or from a destination. Access for people can be provided in many ways: short-term on-street parking, a bus stop, or a bike-rack.
<b>Access for Commerce</b>
Accommodates deliveries of goods and site services. Ensuring adequate access for commerce facilitates the delivery of goods and materials while aiding service provider's access in and out of buildings.
<b>Storage</b>
Provides for on-street parking for vehicles and temporary accommodation of construction activities that intrude in the ROW.
<b>Greening</b>
Enhances environmental sustainability by planting and/or installing street trees, planter boxes, and vegetated curb extensions, adding to aesthetic conditions and the environmental health of the built environment.
<b>Activation</b>
Recognizes the placemaking is an important function of the public ROW. It creates vibrant streetscapes and serves an essential placemaking function. This can include street cafes, parklets, and food trucks.

### Thoroughfare Plan Limitations

Thoroughfare plans are aimed at serving as a vision for long-term need based on forecasted growth and development. As a high-level planning document, they typically do not discuss:

- Specific projects or specific project-related issues, including final alignment, design, and construction timeframe.
- Funding commitments by local agencies to construct specific projects.
- Local traffic issues such as signage, wayfinding, and parking.
- Local roadways (with some exceptions).
- Traffic enforcement.
- Transportation and air quality.
- Traffic calming strategies.
- Traffic signalization issues.
- Specific intermodal issues.
- Managed facilities, such as High Occupancy Vehicle lanes or tolled facilities.
- Complementary transportation facilities, such as:
  - Transportation Network Companies (UBER, LYFT)
  - Travel Demand Management or Transportation System Management
  - Future Transportation Technologies
  - Automated People Movers



# INTRODUCTION

## Previous Planning Efforts

Past planning efforts in a city are essential to any thoroughfare plan. They provide a snapshot of the steps a city took to reach its current position and a guidebook of strategies that may or may not have had success in the past.

## Regional Initiatives

### *Mobility 2045 - The Metropolitan Transportation Plan for North Central Texas*

Mobility 2045 is the latest Metropolitan Transportation Plan for the Dallas - Fort Worth Metroplex and is maintained by the North Central Texas Council of Governments (NCTCOG). The primary purpose of the plan is to direct plans, policies, and programs to manage the multimodal needs of the region's growing population. The plan goals for Mobility 2045 are illustrated in Figure 1 and discussed below.

### Plan Goals

- Improve the availability of transportation options for people and goods.
- Support travel efficiency measures and system enhancements targeted at congestion reduction and management.
- Assure all communities are provided access to the regional transportation system and planning process.
- Preserve and enhance the natural environment, improve air quality, and promote active lifestyles.
- Encourage livable communities which support sustainability and economic vitality.
- Ensure adequate maintenance and enhance the safety and reliability of the existing transportation system.
- Pursue long-term sustainable revenue sources to address regional transportation system needs.
- Provide timely project planning and implementation.
- Develop cost-effective projects and programs aimed at reducing costs associated with constructing, operating, and maintaining the regional transportation system.

**Figure 1: Plan Goals**



As part of the greater Dallas/Fort Worth Metropolitan Area, Lancaster is directly impacted by issues occurring at the regional level. Mobility 2045 indicates that even with improvements to area transportation facilities, congestion is expected to significantly increase within the metropolitan area. As shown in Figure 2, the Lancaster area has light congestion in 2018, but by 2045 the area within and around the city is

forecast to experience higher levels of traffic congestion, with areas to the north experiencing severe levels of congestion. It is important that the City continue to be aware of regional initiatives aimed at improving circulation and mitigating congestion.

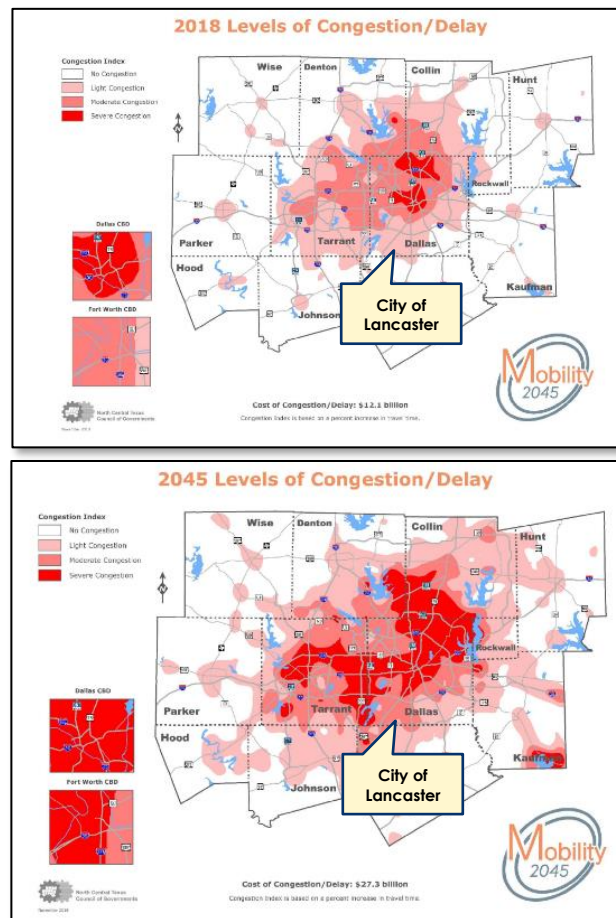
The following are regional initiatives that should be considered as future land use as transportation decisions are made for the City of Lancaster. Planned highway improvements for IH-35E and the construction of Loop 9 between IH-35E and IH-45 will enhance accessibility for residents, local businesses, and visitors to and from the City. Planned enhancements to the regional rail system and bike and pedestrian network will improve overall connectivity in Lancaster and provide viable multimodal transportation alternatives and improve mobility for all users of the Lancaster transportation network.

## NCTCOG Logistics Hub Study

Adopted in October of 2012, NCTCOG's Logistics Hub Study is shown in Figure 3. Amongst the study findings, it stated that as the Southern Dallas County area continues to grow, the most pressing issue will be increases in roadway capacity due to passenger vehicles and truck freight movement.

The document identified the major north-south arterials in Lancaster as SH 342 (Dallas Avenue), Houston School Road, and Jefferson Street. The major east-west arterials include Pleasant Run Road, Wintergreen Road, Belt Line Road, Daniieldale Road, and Bear Creek. The study gives specific recommendations for how wide

**Figure 2: Levels of Congestion and Delay**



**Figure 3: NCTCOG Logistics Hub Study**



## INTRODUCTION

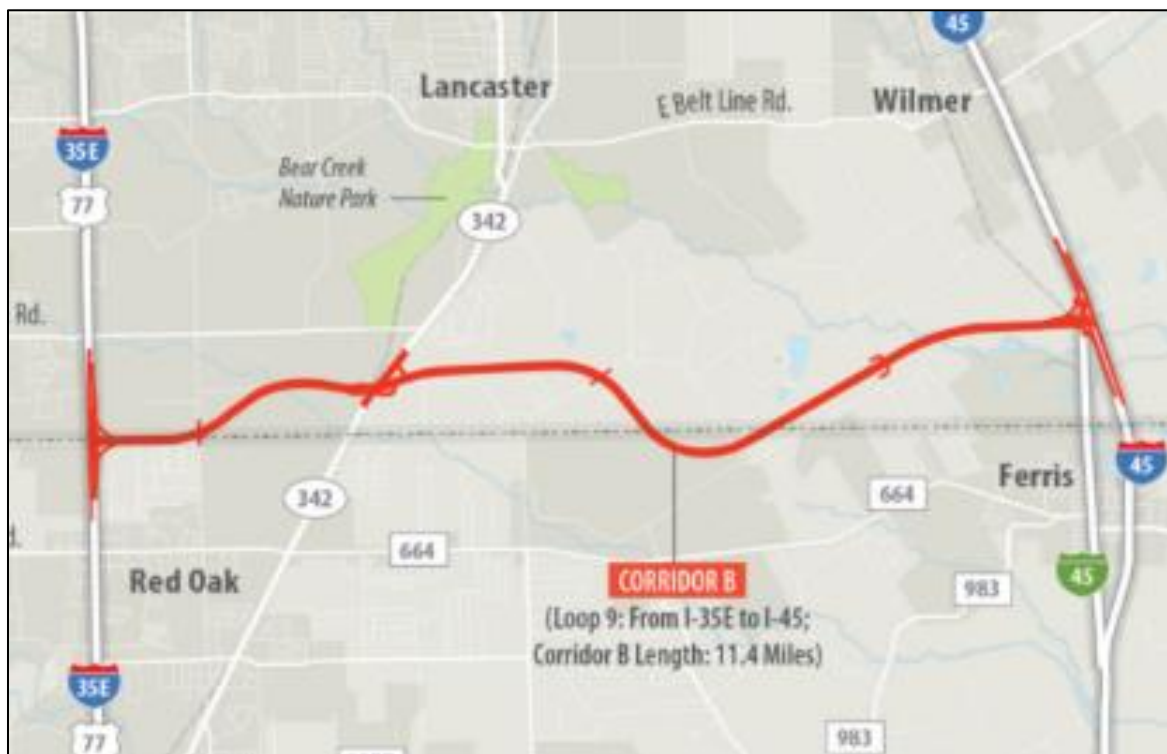
certain arterials should be that continue through Lancaster.

Improvements focused on widening of multiple east-west arterials to provide connectivity between the freight centers and IH-45. These roads included Wintergreen Road, Pleasant Run Road, and Belt Line Road, all of which are major roadways that cut through Lancaster. Additional expansions of north-south arterials such as Bonnie View Road, and Lancaster-Hutchins Road that provide connectivity to IH-20 would also be needed. A new alignment to connect the International Inland Port of Dallas (IIPOD area) to Lancaster Regional Airport and the City of Ferris would also be needed.

### Loop 9

The updated alignment of Loop 9 is identified in Lancaster's 2016 Comprehensive Plan and presented in the updated Master Thoroughfare Plan. As illustrated in Figure 4, Loop 9 would enter Lancaster's city limits on the west at the inter-section with I-35E and continue east within the city limits and extraterritorial jurisdiction (ETJ). Introduced in 1964, this loop has been revisited, studied, and realigned multiple times. The project addresses population growth in the region and provides east-west connectivity throughout communities in southern Dallas and Ellis counties. Economic development on the southern end of the city will most likely occur as a result.

**Figure 4: Proposed Loop 9 Alignment**




Source: TxDOT



## Regional Veloweb

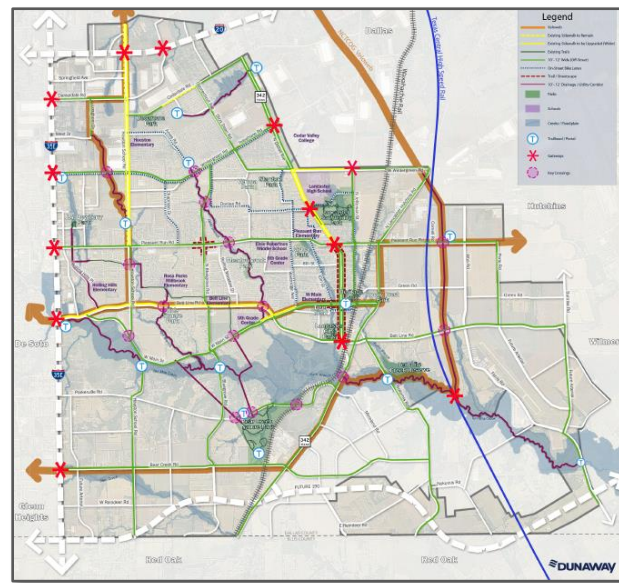
The Regional Veloweb, as defined by NCTCOG, is an 1,883-mile bike and pedestrian network spanning 10 counties and 117 cities within the Dallas-Fort Worth Metroplex. The Veloweb consists of existing and planned off-street shared use paths designed to accommodate all non-motorized modes of transportation.

Design considerations for the Regional Veloweb include the following:

- Minimum 12-foot width and grade separated crossing of roadways with significant traffic flows.
  - 16- to 24-foot sections or separated facilities for pedestrians and bicyclists in areas with high peak-volumes of users.
  - Independent corridors such as greenways or other active or abandoned ROW.
  - Continuous linear corridors that provide long-distance connections through cities and across counties.
  - Provide connections to major destinations, including transit stations, employment and education centers, and/or other major activity venues with high volumes of users.
  - Grade-separated crossings of roadways with significant traffic flows.
  - Few, if any, driveway crossings and signalized or stop sign intersections.
  - Supported by a network of local community paths, sidewalks, and on-street bikeways that provide connections to local neighborhood destinations.
  - Constructed with long-lasting impervious surfaces.
- 
- A map of the Dunaway area in North Carolina, showing a proposed greenway route. The route is highlighted in orange and red, starting from the University of North Carolina and running east towards the Durham Bulls. It crosses major roads like Highway 157 and Highway 100. The map also shows local destinations like the Durham Bulls and the University of North Carolina. The Dunaway logo is visible in the bottom right corner.

NCTCOG has identified plans to expand the Veloweb into Lancaster in its latest long-range Metropolitan Transportation Plan, Mobility 2045. Figure 5 shows the regional Veloweb plans for Lancaster as part of its 2020 Hike and Bike Trails Master Plan.

### Figure 5: Lancaster Veloweb

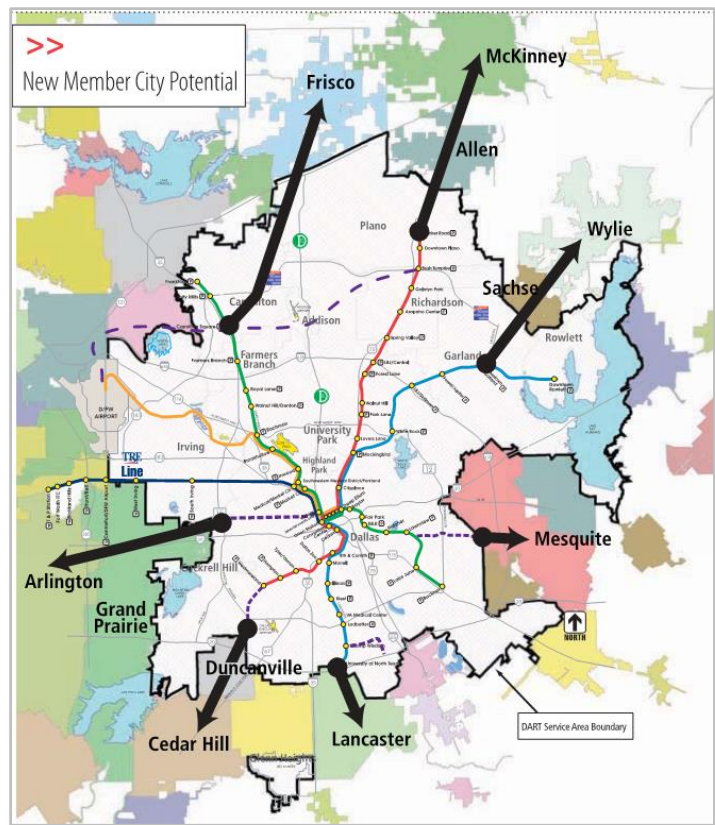


## DART 2030

The DART 2030 plan was revised in January of 2007 and focused on enhancing the existing transit system to accommodate additional services as well as expansion projects. As shown in Figure 6, several cities were identified as an expansion opportunity for DART including Lancaster which showed potential to support rail. In 2020, DART will update its Transit System Plan, which will incorporate:

- The 2019 Bus Service Plan
- Its capital expansion program to identify future expansion opportunities
- DART's Mobility as a Service strategy, which will enhance system access, mobility, and service flexibility through emerging technologies
- Opportunities for future streetcar expansion within the DART service area
- Regional opportunities beyond its current service area

**Figure 6: DART 2030 Plan – Potential New Member Cities**



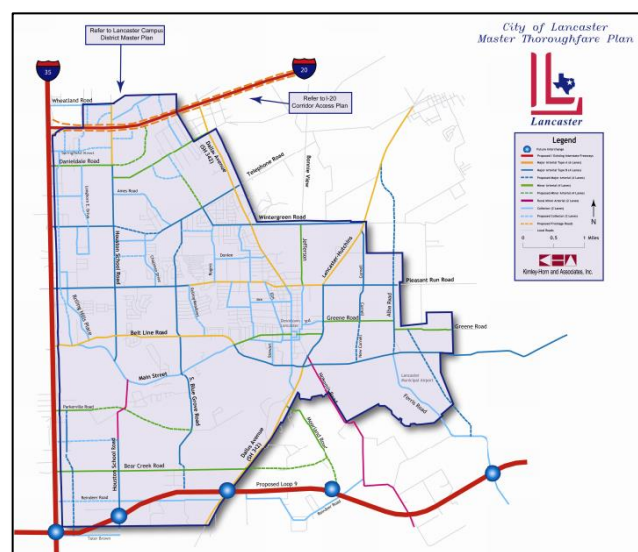
Source: DART 2030 Transit System Plan, page 45.

## City Initiatives

### Lancaster 2006 Master Thoroughfare Plan

The City of Lancaster's Master Thoroughfare Plan (MTP) was the guiding document on the location and design of major roadway facilities within Lancaster and is shown in Figure 7. Adopted in 2006, it recommended expansions of several roadways in the city. Only a handful of new alignments are planned, and they are mainly extensions of existing roadways such as Alba Road, Cornell and Wintergreen Road. Many of the planned improvements were the expansions of two-lane roads into major arterial routes through the city. These

**Figure 7: 2006 Master Thoroughfare Plan**



included east-west roads such as Belt Line Road, Pleasant Run Road and Wintergreen Road, and north-south routes such as Houston School Road, and Lancaster Hutchins.

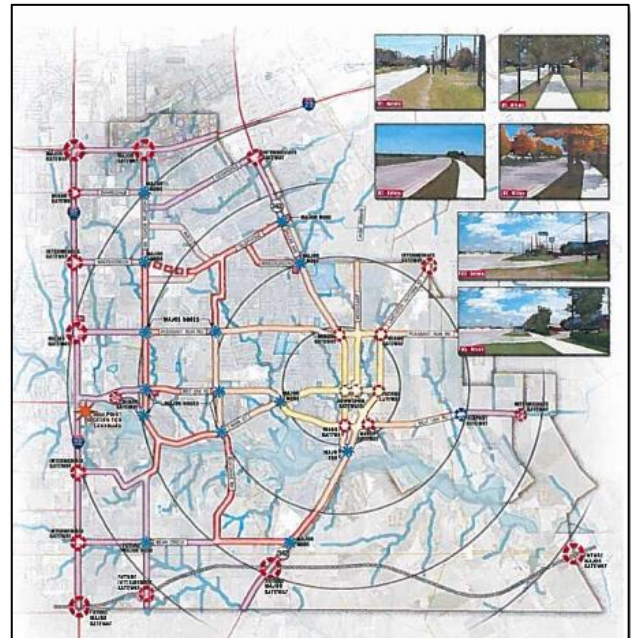
### *Lancaster 2006 Streetscape Master Plan*

Adopted in 2006, Lancaster's Streetscape Master Plan was a planning tool for developing aesthetics of future streets. The goals of the plan were to create and reinforce a unified image of Lancaster, design for vehicular and pedestrian safety, create a pedestrian friendly environment, proven wayfinding devices, and provide an overall sense of interest to the streetscape.

The intent of the document was to facilitate the creation of an attractive system of streets that would beautify the city.

The streetscape design concept recommended using a multi-ring approach with four concentric rings emanating from the city center (see Figure 8), each with their own defined character. Each ring would have their own specific set of signages, trees, colors, pavement types, and node monuments to be used. The ring approach provided a sense of reference to the City's downtown without making downtown the ultimate destination.

**Figure 8: 2006 Streetscape Master Plan**



1. Outer Ring / Gateway access - This ring provided the introduction to the city, would be highly visible, and provide wayfinding devices.
2. Middle Ring/ Intermediate - Its purpose was to define emerging neighborhoods and greenways.
3. Inner Ring/ Midtown - Its purpose was to define established neighborhoods. Signage would be for specific destination and parking information.
4. City core- downtown - Its purpose was to focus on downtown and town square and would be mostly pedestrian oriented.

The plan provided a recommended layout of thoroughfares and streets broken out into 5 types:

**A. Major Thoroughfare** (Max 120' ROW)

Three travel lanes on each side of a tree lined median with parkway, sidewalk, and then landscape setback.

**B. Major Thoroughfare** (Max 110' ROW)

Three travel lanes on each side of a tree lined median with parkway, sidewalk, and then landscape setback.



## C. Secondary Major Thoroughfare (Max 100' ROW)

Two travel lanes on each side of a tree lined median with parkway, sidewalk, and then landscape setback.

## D. Collector (Max 65' ROW)

Two travel lanes with no median, but parkways, sidewalks, and a landscape setback on each side of outer lanes.

## E. Residential (Max 50' ROW)

Two travel lanes, with parkway and sidewalks on each side of outer lanes.

The design standards would be implemented as a priority on streets and roadways that were recently widened and improved as of the CIP. These roadways would consist of Belt Line Road, Wintergreen east of Dallas Avenue and Houston School Road north of Belt Line Road.

### *Lancaster Master Thoroughfare Plan (MTP) 2015 Update*

The MTP dictates the number of lanes for a roadway facility by its thoroughfare classification system. Each classification outlines design features of the roadway. The 2015 update (see Figure 9) added Loop 9 as a proposed interstate freeway. The plan proposed to fill gaps in any major arterial that does not provide a full connection from one link to another.

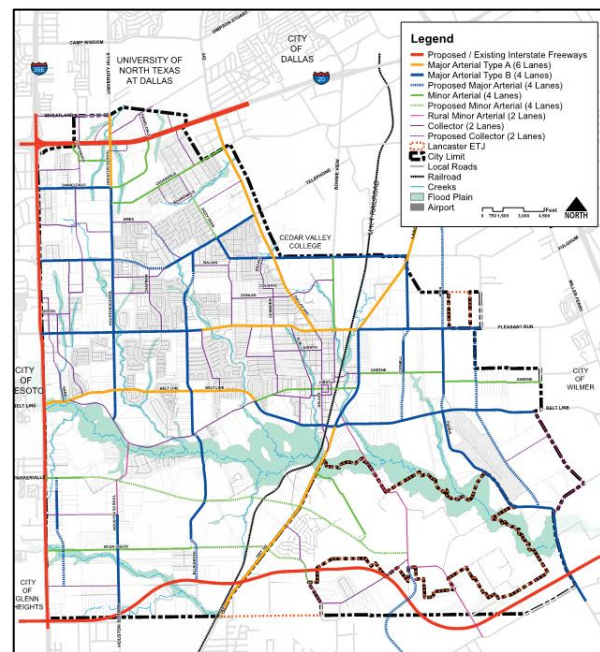
### *Lancaster 2016 Comprehensive Plan*

Adopted in 2016, the City of Lancaster's Comprehensive Plan identifies a need for a transportation system that is less focused on the automobile and more attuned to alternative modes of transportation. The plan recommends a street context framework that breaks out roadways into five different categories based on their land use:

1. Urban Commercial Streets - Wide range of uses, including live, work, shop, and play.
2. Town Center Streets – Residential and service retail.
3. Suburban Neighborhood Streets – Primarily residential.
4. Suburban Commercial Streets – Wide range of uses including live, work, shop, play, dining, and lodging.
5. Rural Neighborhood Streets – Limited range of uses including special industrial, agricultural, and single-family.

As part of the comprehensive planning process, the MTP for Lancaster was evaluated and updated. The updated plan assessed existing roadways for number of lanes,

**Figure 9: 2015 Thoroughfare Plan Update**



connectivity, and congestion. Most of the changes to the MTP included new connections between existing facilities and extensions of existing roadways.

The Plan recommended connecting east/west arterials that are not currently continuous through the city. Areas identified include Wintergreen Road, Telephone Road and Bear Creek Road. The ROW acquisitions needed for these connections are shown in the plan. Lastly, a revision of codes and ordinances would be required to reflect the five types of street contexts that were developed in the comprehensive plan to provide more uniform standards for road construction and expansion in the city.

## Current Planning Efforts

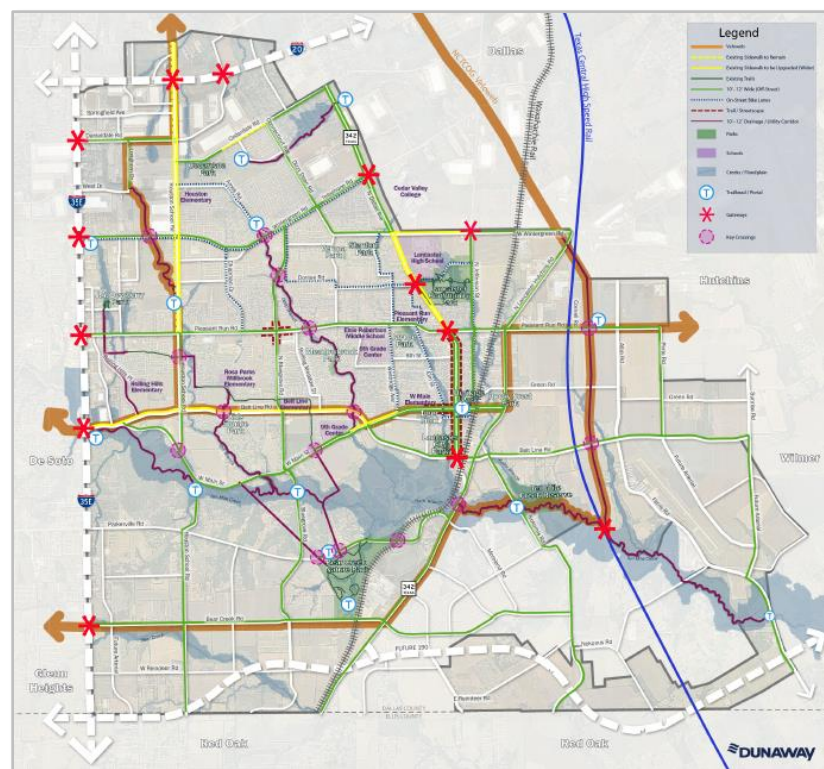
Considerations from several current planning efforts were incorporated into the thoroughfare plan update and are summarized below.

### Lancaster 2020 Hike and Bike Trails Master Plan

The City of Lancaster recently updated its Hike and Bike Trails Master Plan. The development of this master plan update was based on the 2006 Trails Master Plan Summary for planning a well-connected trail system throughout Lancaster. The plan development process included an analysis of the existing system, including identification of challenges and opportunities to expand the system, conceptual trail planning and design and community engagement, and finally development of a trail network, design standards, trail hierarchy, and the final report.

The final trail plan provides City officials and key decision-makers a guide and tools to develop and implement the proposed network of trails.

**Figure 10: 2020 Hike and Bike Trails Master Plan**



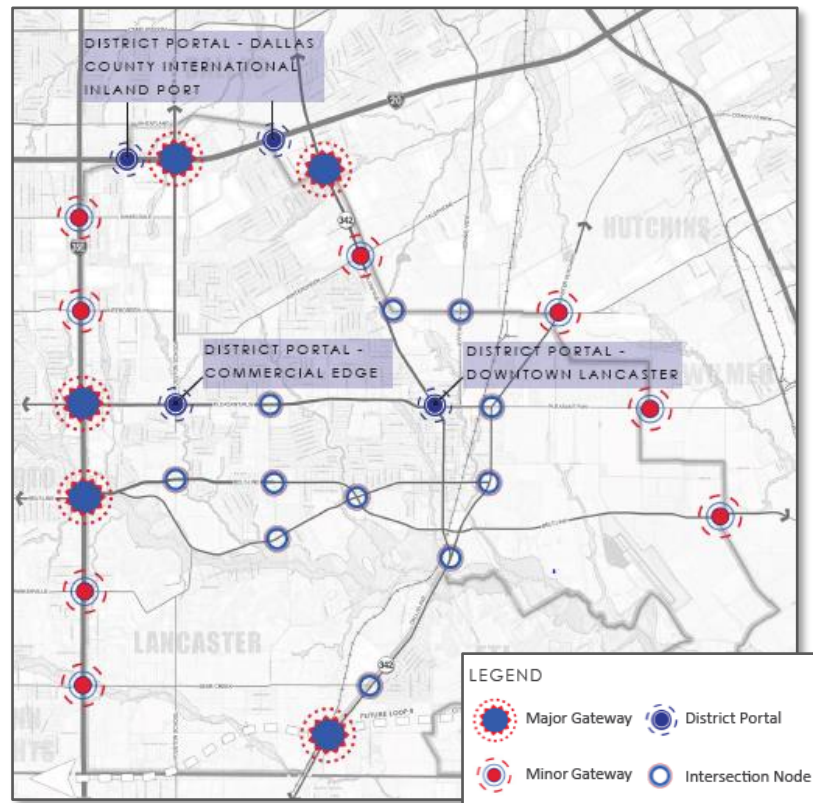
Courtesy Dunaway Associates

## INTRODUCTION

### Lancaster 2020 Streetscape Master Plan Update

The 2020 Streetscape Master Plan Update focuses on enhancing the identity and character of the community through beautification of entryways, key intersection areas, and corridors. The Streetscape Master Plan identifies classes of enhancements with specific visual qualities that address identity, context, and function. The Plan also discusses landscaping, monumentation, public art, and intersection treatments.

**Figure 11: 2020 Streetscape Master Plan - Gateways**



### Southern Dallas Regional Veloweb Alignment Study

The North Central Texas Council of Governments (NCTCOG) is leading a study to review the feasibility of bikeway segments in southern Dallas County to link the cities of Cedar Hill, DeSoto, Duncanville, and Lancaster. The study will investigate gaps between existing or planned paths and bikeways and examine key destinations along proposed routes and connections to existing transit services. The final report will discuss conceptual schematics, project phasing, environmental review, ROW requirements, and opinions on costing.



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## GOALS AND OBJECTIVES

### Chapter 2: Goals and Objectives

The transportation network forms the skeleton of the city and must serve to support the larger vision of the community. Transportation strategies were developed through input and discussion with City officials and key stakeholders. While these strategies are distinct from the general vision, they reinforce and expand upon community strengths and promote transportation as a key element of community success.

### Comprehensive Plan Vision and Principles

#### Vision Statement

A vision statement sets out the long-term aspirations or desires of the community. Lancaster's vision for the future is based upon four key points.

- It is built on our existing natural, cultural, and historic community assets.
- It creates Lancaster as a destination community.
- The community's educational excellence supports its people and businesses.
- The diverse choices in Lancaster appeal to people of all ages and businesses in a variety of industries.



#### Supporting Principles

Supporting the vision are 10 principles or policies that provide more direction on how to achieve the overall vision for the City of Lancaster.

1. Lancaster's quality of life attracts people of all ages.
2. Natural and historic assets are the foundation for distinctive neighborhoods and business areas.
3. The City's continued investments in existing neighborhoods offer desirable choices for current and future residents.
4. New residential developments expand the range of neighborhood choices, so Lancaster appeals to people throughout all stages of life.
5. Lancaster's economic base is strong because it includes businesses in diverse and growing industries.
6. The enhanced Medical District is a key reason Lancaster is the wellness center of southern Dallas County.
7. Development and investment decisions support Lancaster's fiscal sustainability over time.
8. Lancaster has great mobility choices – walking and biking routes to destination within the community, public transportation connections to the DFW region, and street networks that link Lancaster residents to jobs and Lancaster businesses to their employees and customers.

9. Lancaster residents of all ages can find the resources for success here in this community (resources for education, training, healthy living, job search, etc.).
10. The Comprehensive Plan is the foundation for unified action to implement the City's long-term vision. The City works in partnership with other agencies including the Lancaster ISD, the Chamber of Commerce, and Economic Development among others to carry out the Plan.

### Transportation Strategies

Specific guidance for transportation and related categories of land use, infrastructure, economic development, open space/recreation, community character and design, historic preservation, and public facilities build upon the vision statement and guiding principles. Defined strategies for transportation include:

- Providing a full range of mobility choices:
  - Anticipate and benefit from potential commuter rail.
  - Plan development that is "Transit-Ready" around Lancaster's desired rail stations.
  - Minimize the impacts of potential high-speed rail.
- Taking advantage of Lancaster's location within regional mobility systems (highways, public transportation, freight, air, etc.).
- Using transportation improvements to strengthen key destinations within Lancaster.

### Thoroughfare Plan Goals and Objectives

The goals and objectives are designed to relate directly to the supporting principles and strategies of the 2016 Comprehensive Plan while providing additional guidance:

#### Expand Mobility and Access

##### Objectives:

- Judiciously improve the capacity and flow of the transportation infrastructure, as appropriate.
- Continuously evaluate existing and planned roadway corridors for future transportation needs.
- Integrate trails, bike lanes, bus transit, commuter rail, roadways, and sidewalks into a more interconnected comprehensive plan.
- Explore use of new technologies to enhance transportation options.
- Develop roadway streetscape and context sensitive design policies and standards that enhance multi-modal utilization, connectivity between communities, historic preservation, economic development, and user safety.
- Maintain a functional classification and roadway design standards in the City's Thoroughfare Plan.





## GOALS AND OBJECTIVES

- Promote system connectivity to adjacent cities and the regional transportation network.

### Focus on Maintenance and Fiscal Responsibility

#### Objectives:

- Maintain and enhance the condition of the existing transportation infrastructure with special consideration for older neighborhoods and rural areas.
- Identify and investigate new pavement technologies and paving systems.
- Implement robust asset management program to ensure system condition is continuously monitored, maintenance projects prioritized, and the overall network kept in good condition.
- Leverage public and private funding sources to optimize transportation investments.
- Identify and investigate regional, state, and federal funding initiatives to support local transportation programs and projects.
- Include roadway conditions into the ranking and prioritization of roadway projects.

### Improve Economic Vitality

#### Objectives:

- Improve access to employment, commerce, education, and community resources.
- Provide for the efficient movement of goods and services.
- Give priority for freight movement in selected corridors, where appropriate.
- Strengthen the integration of transportation and land use.
- Employ roadway design principles that support community identity and wayfinding.
- Plan for Transit Oriented Development (TOD) as well as freight-oriented land use.
- Promote commuter rail initiatives to the City of Lancaster.
- Support connections and improvements to roadways adjacent to Loop 9.



### Enhance Quality of Life

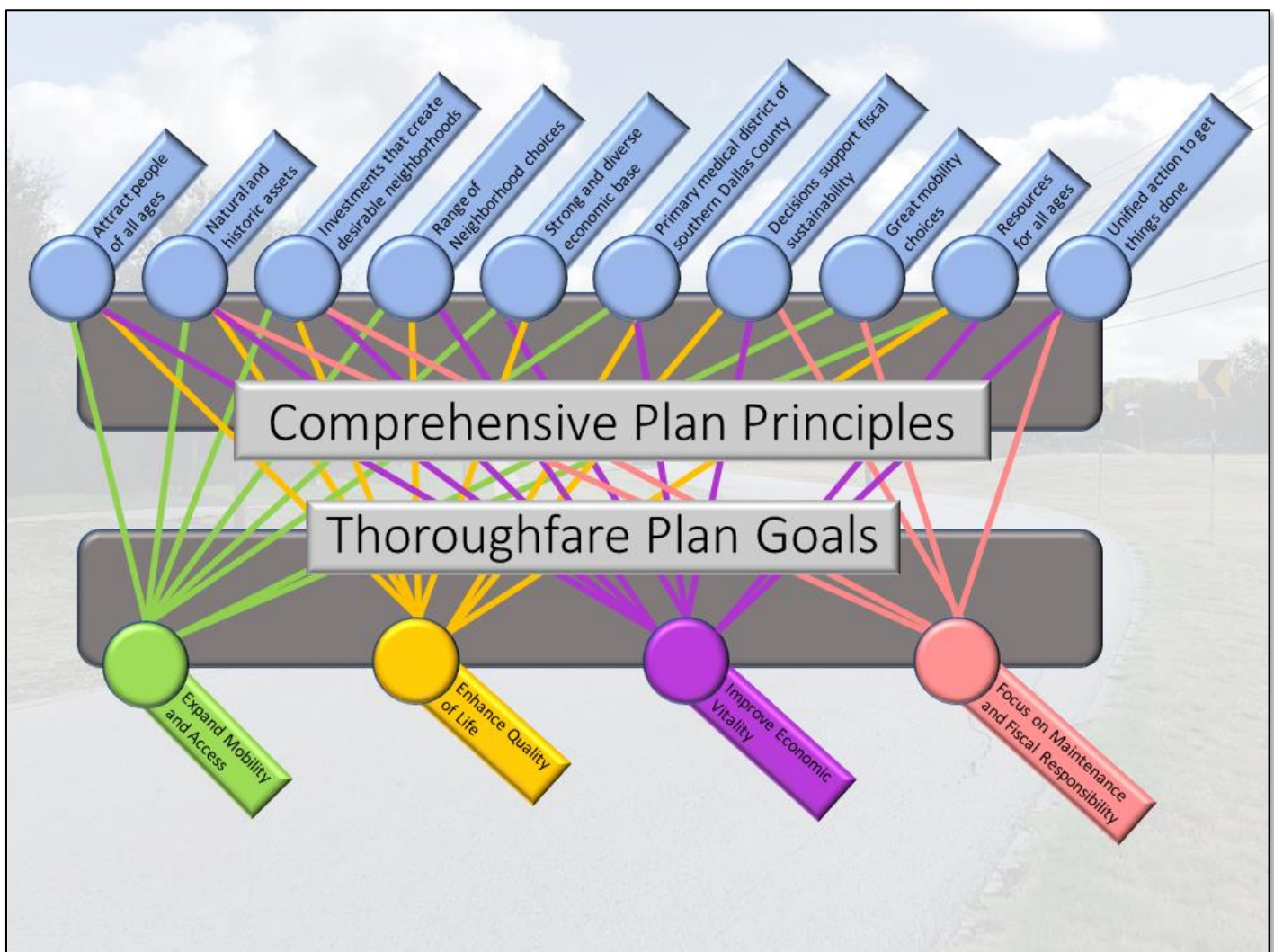
#### Objectives:

- Focus on moving people, not vehicles, safely and efficiently.
- Exceed federal, state and local air quality standards.
- Promote and incorporate active transportation activities into all events within the City.

- Embrace principles of streetscape and context sensitive roadway design where possible.
- Promote mixed-use developments at select locations to reduce auto use, improve air quality, and promote active transportation options.
- Make pedestrian and cyclist safety a priority when considering roadway rehabilitation or construction.
- Ensure safe and efficient routes to schools for pedestrians and cyclists, with preference towards elementary and middle schools.

Figure 11 illustrates the connections between the principles of the 2016 Comprehensive Plan and Thoroughfare Plan goals.

**Figure 11: Connections between Comprehensive Plan and Thoroughfare Plan**



## EXISTING CONDITIONS

### Chapter 3: Existing Conditions

The City of Lancaster has an advantage over many cities in the region and around the state because it already offers a multi-modal transportation network. The City is located just south of the DART Blue Line station at the University of North Texas at Dallas and has a developing bike and pedestrian network and excellent connections to the regional roadway network and the proposed high-speed rail station in Dallas.

The existing conditions section of a thoroughfare plan sets the foundation of the plan. It provides a baseline description of the city's transportation network as it stands today regarding capacity, functional classification, modal accommodations, and serves as a platform for recommended system adjustments.



#### Existing Transportation Framework

Lancaster contains a robust road network that provides access throughout the city and connectivity to the surrounding area. The network is generally composed of a grid network based on a functional hierarchy of streets. The purpose of the street classification system is to reduce traffic and improve connectivity to surrounding land uses.

Ease of access and efficient connectivity are important features of the overall network. Understanding the functionality and framework of facilities in Lancaster require an evaluation of different aspects of the transportation system. The purpose of evaluating existing conditions is to better define transportation needs in order to identify solutions to meet Lancaster's current and future transportation demands.

#### Existing Roadway Operations

Roadway operations describe the mechanics of a roadway network. These factors are typically gauged by examining traffic volumes, or the number of vehicles utilizing the network during a specified time interval, and level-of-service, a measure of the amount of congestion on a roadway given the number of vehicles it was designed to accommodate at a given time (capacity).





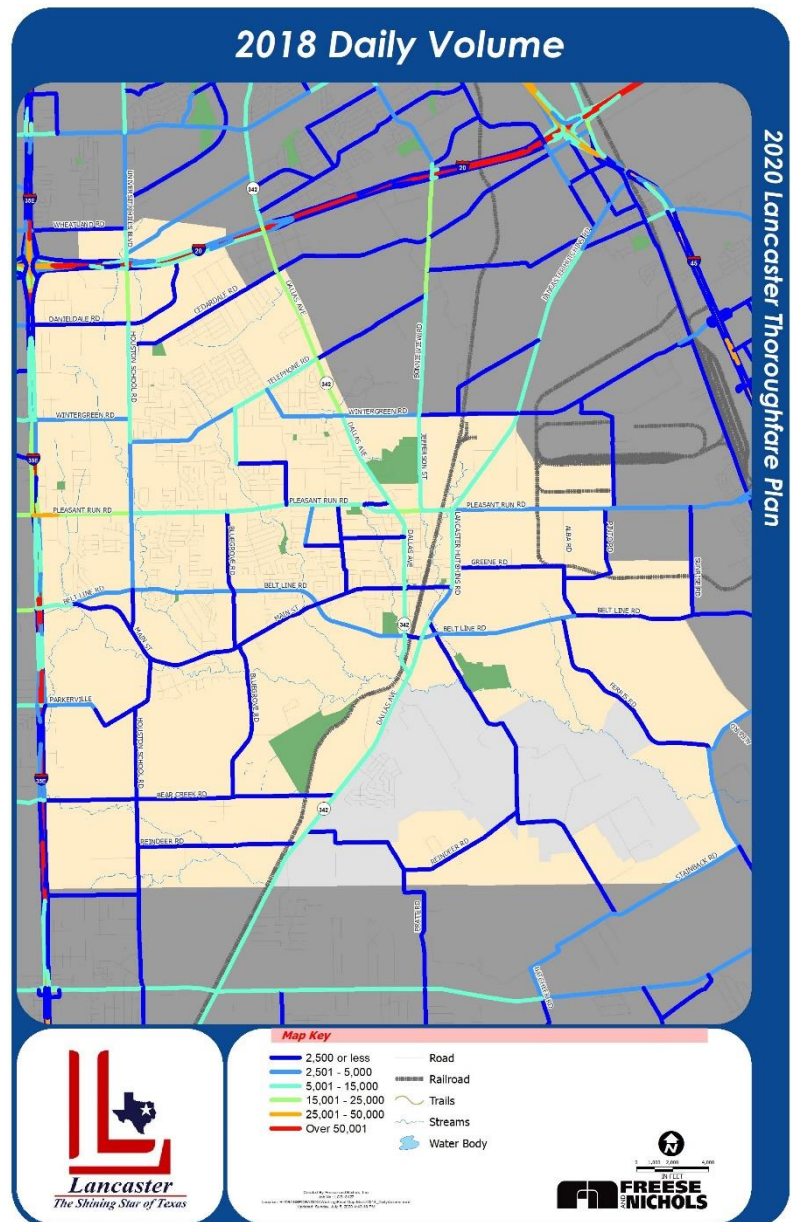
### Traffic Volumes

Understanding current traffic volumes on a road network is an important step in determining if facilities are functioning at capacity under current conditions. The Annual Average Daily Traffic (AADT) provides information on traffic history. AADT is the total volume of vehicle traffic divided by 365 days. Traffic counts can also be collected over a specific time period.

**Figure 12: 2018 Daily Volume**

#### Current Daily Traffic Volumes

The bulk of thoroughfares in Lancaster were reported to be carrying volumes of up to 2,500 vehicles per day in 2018. The range of traffic volumes in the city is as low as 4 vehicles per day and up to nearly 28,000 vehicles per day. As shown in Figure 12, Pleasant Run Road from Park Circle Drive to IH-35E has the highest AADT at just under 28,000 vehicles per day. Much of this traffic can be attributed to the roadways' proximity to a major shopping center. The next highest traffic volumes in 2017 were along Dallas Avenue from Telephone Road to Cedardale Road carrying 22,000 vehicles per day. This stretch of roadway provides access from residential communities to IH-20 and can be attributed to residents using it to commute back and forth between the Dallas-Fort Worth Metroplex. Pleasant Run Road, from Dallas Avenue to Jefferson Street, recorded a daily volume of 17,600, while Houston School Road, from Daniieldale Road to IH-20, recorded 15,500. Except for these few higher volume roadways, most roadways in Lancaster operate with daily traffic volumes under 15,000 vehicles.



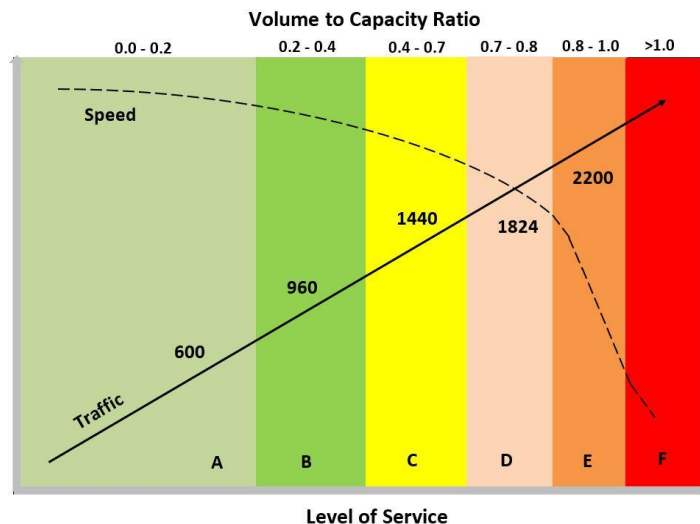
## EXISTING CONDITIONS

### Existing Network Level of Service

Level-of-Service (LOS) is a performance measure used to evaluate the function and flow of traffic through a transportation network. LOS is a measure of congestion expressed as the volume to capacity ratio of a roadway. Volumes represent an estimate of the number of vehicles on a road segment. Capacity is the maximum number of vehicles a roadway was designed to accommodate within a segment.



Traffic operational performance is based on an LOS scale from A through F, with A referring to free flow traffic conditions and F representing severely congested facilities. The closer a roadway's volumes are to equaling or exceeding their capacity, the lower the level-of-service (LOS D-F); the lower the volumes and further below the roadway's capacity, the higher the level-of-service (LOS A-C). Figure 13 illustrates the relationship between level-of-service and traffic volume, volume to capacity ratios, and speed.

**Figure 13: Volume/Capacity Ratios vs Level of Service**



Most cities design for LOS C and D operational conditions during the peak hours. Economically, LOS C or D roadways slow traffic down just enough for commuters to take notice of local businesses along a corridor; these conditions are also ideal for pedestrian activity. In some cases, mitigation of LOS may be constrained due to ROW or environmental factors. A description of operational conditions and congestion is listed in Table 2 below.

**Table 2: Level of Service and Congestion**

<p><b>LOS ABC:</b> Traffic flow in this category moves at or above the posted speed limit. Travel time in this category is not hindered as a result of congestion because traffic volumes are much less than the actual capacity.</p>	
<p><b>LOS DE:</b> This category is slightly more congested than LOS ABC; however, traffic volumes are beginning to reach their capacity of the thoroughfare. Traffic usually moves along at an efficient rate and posted speeds may not be fully reached.</p>	

**LOS F:** Congestion is apparent in this level-of-service category. Traffic flow is irregular, and speed varies. The posted speed limit is rarely, if ever, achieved in this category. In more congested corridors, traffic can be at a mere standstill with limited progression during peak hours.

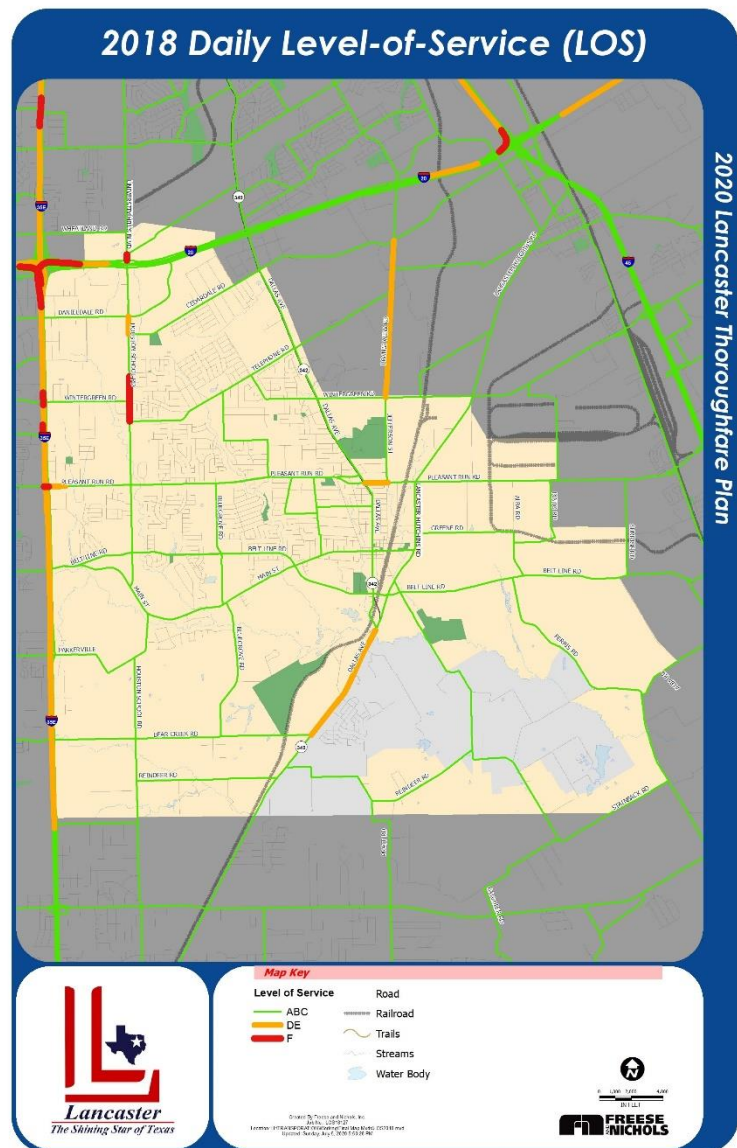


**Figure 14: 2018 Level of Service**

### 2018 Level of Service

As illustrated in Figure 14, Lancaster operates on a LOS of ABC with very few roadway segments having a rate of DE, or F. The daily LOS numbers indicated the worst projected conditions within a 24-hour period within the segment. The most congested segment is on North Houston School Road, from Wintergreen Road to approximately 600 ft north of Meadowgate Lane. This roadway is in the middle of this congested stretch of roadway and is the sole entrance/exit to a residential community of over 500 households. With five lanes and a 35-foot raise median, this unsignalized intersection has a stop sign for vehicles exiting from the community.

Traveling north on Houston School Road, the segment from Cedardale Road to Daniieldale Road operates on a level of DE. The intersections on Daniieldale Road and Cedardale Road are both large and unsignalized, and feed into major industrial business centers. At the Daniieldale Road intersection, a vehicle would have to cross over 100 feet of roadway while making a left turn. Being less than 1 mile away from IH-20, this intersection may need traffic signals to reduce congestion. Crossing IH-20 from North Houston Road on the north side is a





## EXISTING CONDITIONS

small segment that operates at an LOS of DE. Such congestion is expected as there is significant demand to access IH-20.

Another major corridor with LOS operations of DE to F is Pleasant Run Road. The overpass in between the IH-35 E frontage roads has a LOS of F which rises to a LOS of DE as it reaches Rolling Hills Place.

Besides the small segments of congestion next to areas of activity, there is a larger stretch of DE level of congestion on Pleasant Road from Dallas Avenue to Jefferson Street, and from Jefferson Street running north past the city limits. This is due to Jefferson Street being an alternative route to reach IH-20. Table 3 lists the congested roadways in Lancaster as of 2018.

**Table 3: Congested Roadways in Lancaster**

Roadway	Segment	LOS	Daily Vol	AM Vol	PM Vol
Pleasant Run Road	Southbound IH-35E frontage road to northbound IH-35E frontage road.	F	26,429	3,966	6,926
Pleasant Run Road	Northbound IH-35E frontage road to Rolling Hills Place.	D, E	28,325	4,843	7,176
Houston School Road	Wintergreen Road to Wintergreen Road.	F	9,376	1,721	2,481
Houston School Road	Wintergreen Road to 600' N of Meadowgate Lane.	F	9,690	1,787	2,559
Houston School Road	Cedardale Road to Daniieldale Road.	D, E	14,748	2,694	3,616
University Hills Drive	IH-20 westbound frontage road to Wheatland Road.	D, E	9,798	2,429	2,839
Pleasant Run Road	Dallas Avenue to Jefferson Street.	D, E	18,318	2,902	4,480
Jefferson Street	Pleasant Run Road to Wintergreen Road.	D, E	12,422	1,860	2,762

### Existing Major Traffic Generators

Major employers (greater than 150 employees) and areas of high commercial development can create an abundance of traffic and varying patterns of traffic flow. Recognizing these areas as major traffic generators can have important implications when planning future roadways. Major generators with over 200 employers include

Walmart, Lancaster Independent School District, Bass Craft, Cedar Valley College, Oak Creek Homes, and the City of Lancaster<sup>1</sup>.

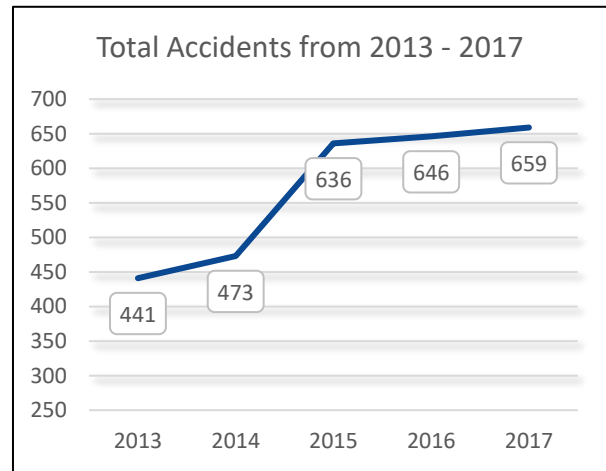
### Future Major Traffic Generators

The construction of Loop 9 in southern Dallas County is expected to create numerous significant residential and commercial developments within Lancaster. With such development, an increase in traffic is likely to occur along the City's southern periphery and will have a significant impact on the transportation network within the City.

### Crash Statistics

The annual number of vehicle crashes is important in telling whether a roadway network is safe, and where improvements can be made to improve public safety. Traffic accident data supplies critical information on the causes of congestion and whether they are the source of confusion among drivers. Through analyzing public data from the Texas Department of Transportation, corridors and locations with the highest crash rates were determined.

**Figure 15: Total Accidents (2013-2017)**



Texas Department of Transportation (TxDOT) Crash Records Information System (CRIS) reported 2,855 traffic accidents in the city of Lancaster from 2013 to 2017; 12 of these accidents resulted in fatalities. As shown in Figure 15, the crash rate rose by over 34 percent from 2014 to 2015 and then flattened out the following years with crash rates rising around 2 percent year over year. Although the number of crashes has increased slightly in recent years, the trend indicates that it is becoming normal for the roads to operate at a higher crash rate.

Specific road segments with high crash rates were identified in Table 4 and in Figure 16 on the following pages. Approximately 600 crashes were reported along the IH-35E, which makes up over 20% of total accidents within the city limits. Pleasant Run Road experienced 417 crashes, while 388 were reported on IH-20.

<sup>1</sup> Source: City of Lancaster website.

## EXISTING CONDITIONS

The one-mile roadway segment from Corporate Drive to Daniieldale Road along IH-20 has the highest number of crashes, with a high concentration occurring as IH-20 intersects North Houston School Road. The high volume of vehicles in this specific area is due to a cluster of industrial and business developments just south of the interstate. Pleasant Run Road, a major arterial that intersects through the core of the city from east to west, has the highest crash rate on its segment from IH-35E to Marsalis Road. There are more crashes than usual here because the intersection of Pleasant Run Road and IH-35E is in a major activity center and is surrounded by major retail, shopping and entertainment centers and commercial businesses.

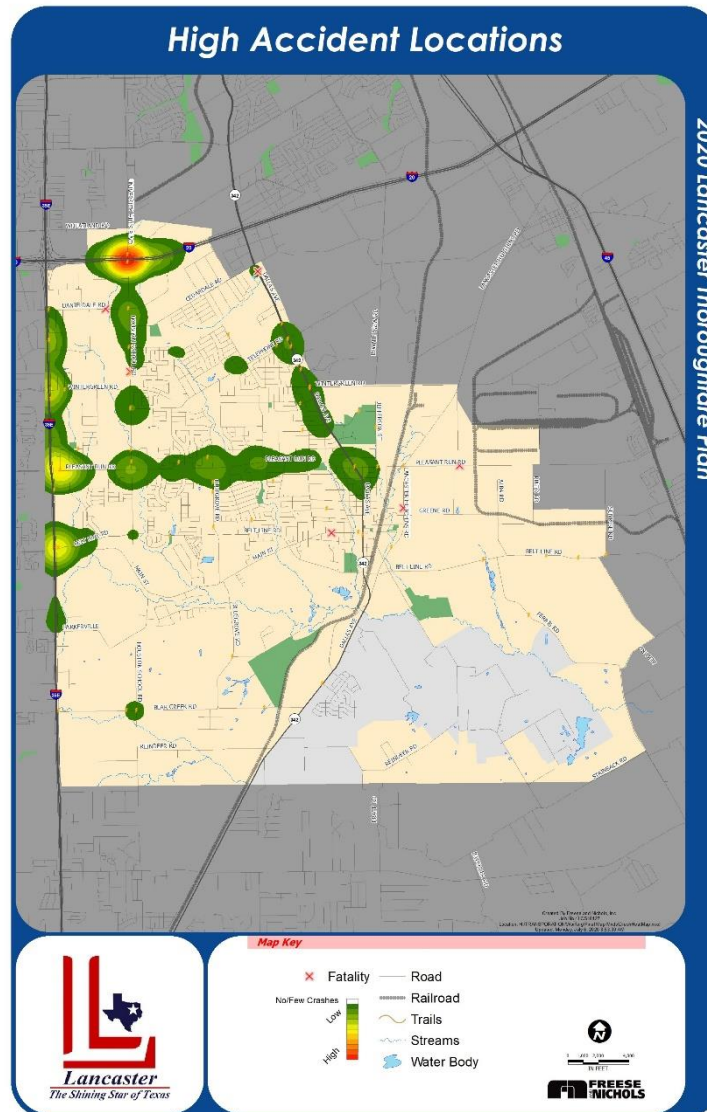
**Table 4: High Accident Locations**

High Accident Areas	Total Accidents	Crash Rate by Route Length
IH-20 from Corporate Drive to Daniieldale Road	357	63.75
West Pleasant Run Road from IH-35E to Marsalis Road	159	81.53
IH-35E from East Pleasant Run Road to Southpointe Drive	141	56.4
IH-35E from The Meadows Parkway to Wintergreen Road	130	41.93
IH-35E from West Drive to Daniieldale Road	104	41.6
Pleasant Run Road from Chapman Drive to Rolling Meadows Drive	76	27.64
Pleasant Run Road from Glendover Drive to Springcrest Circle	67	36.22
North Houston School Road between Daniieldale Road and Cedardale Road	67	60.91
West Belt Line Road from IH-35E to West Main Street	60	32.43
North Dallas Avenue from West 8 <sup>th</sup> Street to East Park Place Drive	49	23.9

Source: TxDOT CRIS 2013 - 2017



**Figure 16: High Accident Locations in Lancaster**



Of the total accidents that occurred, approximately 12% were caused by a vehicle going over 70 miles per hour. The bulk of accidents were documented at speeds of 45 – 55 miles per hour (38%), and 30 – 40 miles per hour (32%). Many of these crashes occurred in areas with wide, multilane intersections leading to a center of activity in the city.

The top contributing factors for accidents include, but are not limited to, driver inattention, failure to control speed, failure to yield on a left turn and failure to yield at a stop sign.

Of all crashes reported in this four-year period, 37 involved pedestrians. Around 65% of total accidents were non-injury-related and approximately 95% of crashes had property damages exceeding \$1,000. Between 2012 to 2015, the annual number of fatalities decreased. From 2015 to 2016, fatal crashes rose from 4 to 11.

## EXISTING CONDITIONS

### Transit Services and Connectivity

Lancaster is served by numerous transit agencies that provide service in and around the City limits. Light rail service to downtown Dallas and points beyond are provided via the DART Blue Line at the UNT Dallas Station. City residents enjoy access to STAR transit bus services within the City and DART bus services in nearby Glenn Heights.



#### Existing Rail Connectivity

The DART Blue line opened in 1996 and is one of the original light rail lines in the DFW Metroplex. In late 2016, the Blue Line expanded its service to the University of North Texas (UNT) Dallas Station, just outside Lancaster's northern city limits. The Blue Line currently runs north from the UNT Station, through downtown Dallas, then east to Rowlett. DART's 2030 System Plan shows an expansion of the Blue Line via a branch to IH-20 and the SouthPort Intermodal Terminal.

#### Existing Bus Connectivity

The City of Lancaster has several agencies that provide bus service to its residents. DART provides nearby bus service via bus route #555 with service to Cedar Valley College and has Glenn Heights Park and Ride located just west of the City near IH-35E and Bear Creek Road in Glenn Heights.

STAR Transit provides a fixed-route service within Lancaster via the Hutchins Shuttle on route #401 with service to Crescent Medical Center, Cedar Valley College, and the DART UNT Dallas Station. It also provides additional fixed route service adjacent to Lancaster along IH-35E in DeSoto on route #501.

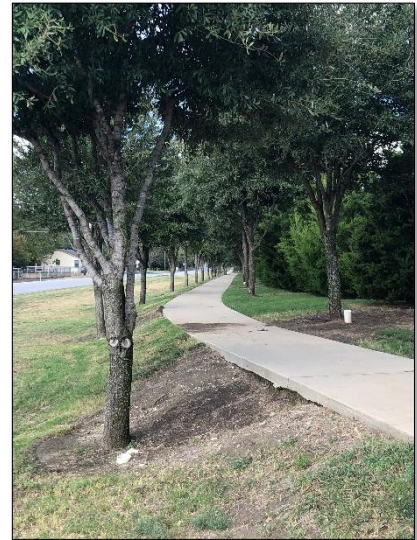


### Non-Motorized Transportation

Non-motorized transportation is one of the most essential elements of a transportation network. This is because all trips, regardless of mode, begin with the pedestrian. It is important to build a transportation network that not only accommodates but plans for pedestrian and bicycle activity. Common elements of a non-motorized network include on-street and off-street bike trails, signed bike routes, and sidewalks.

#### *Non-Motorized Transportation Elements*

- Sidewalk – A primarily pedestrian off-street facility between the curb line of the roadway and the adjacent property.
- Shared Use Path - An on or off-street facility separated by a barrier or open space that is designed to accommodate all non-motorized modes including pedestrians, bicyclists, skaters, and joggers.
- Cycle Track – On or off-street facilities, designated for bicyclists, that is separated sidewalks, motorized travel lanes, and parking lanes.
- Bike Lane – On-street facility, designated for bicyclists that is separated from the motorized travel lanes through pavement striping.
- Wide Paved Shoulders – Wide shoulders, typically along rural highways, used to accommodate bicyclists and joggers.



These elements are often bolstered by landscaping and pedestrian amenities such as benches, shade trees, pedestrian lighting, and raised cross walks.

### Existing Non-Motorized Transportation Network

Lancaster's non-motorized transportation network includes sidewalks, on and off-street trails, signed routes, and wide shoulders along certain roadways throughout the city. It accommodates several users, including pedestrians and bicyclists traveling to work and school, shopping and entertainment venues, and for general recreation.

#### *Bicycle and Pedestrian Connectivity*

Currently, the City of Lancaster has limited opportunities for bicycle and pedestrian mobility, but officials have recognized the need to develop these networks and are working diligently to improve the quantity and quality of these networks.

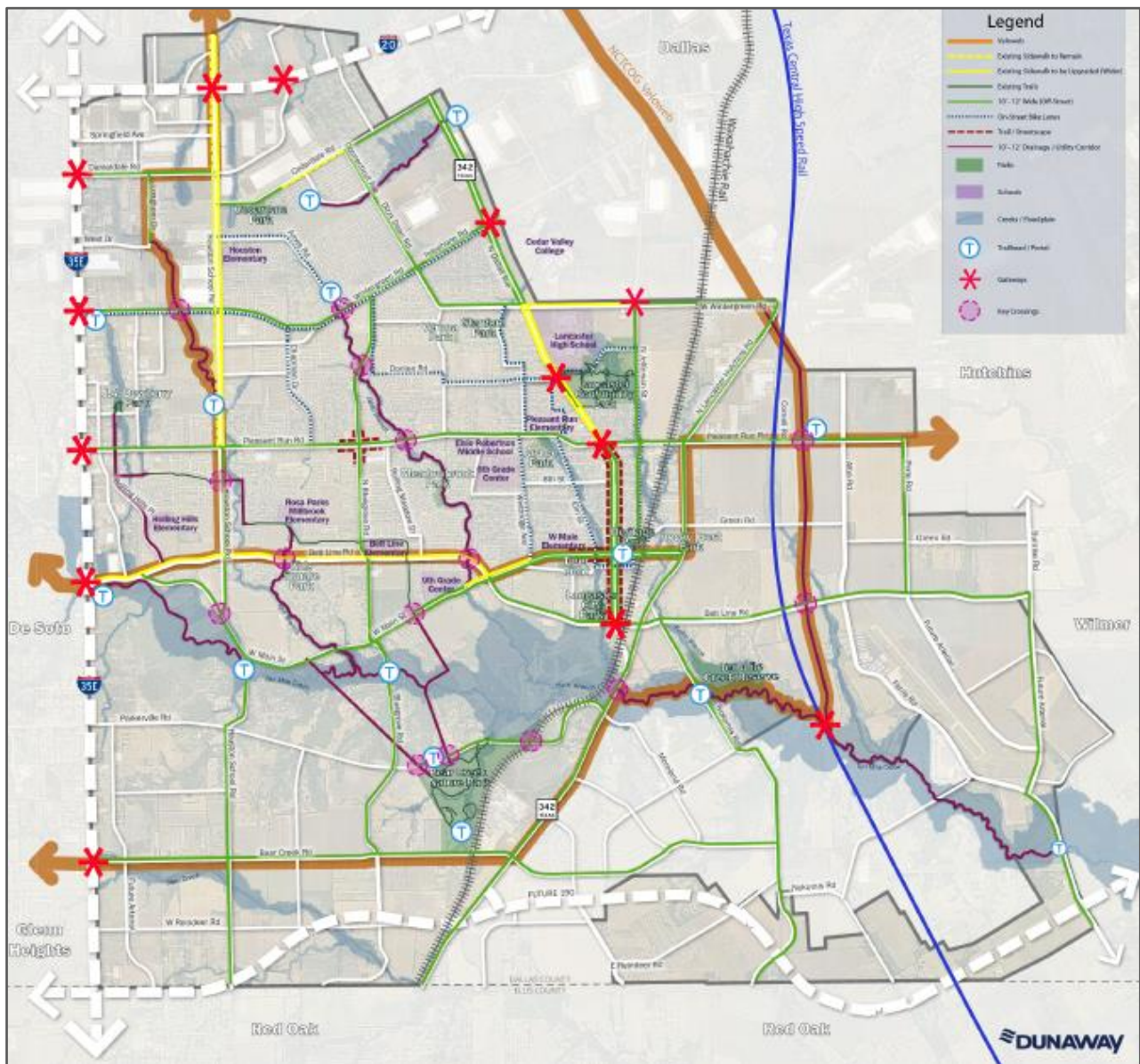
There are several bicycle and pedestrian trails within the City, mostly located along creeks and parks, such as the 10 Mile Creek Preserve, Cedardale Park, and the popular Pleasant Run Trail. Sidewalks are generally well developed within existing subdivisions, however, there is limited sidewalk network outside these areas, especially in rural areas.



## EXISTING CONDITIONS

The City of Lancaster has recently updated its Hike and Bike Trail Master Plan with the proposed network shown in Figure 17. Recommendations include trails through the downtown core and an extensive network of off-street bike lanes along major and minor arterials with on-street facilities along collectors and select minor arterials.

**Figure 17: 2020 Hike and Bike Trails Master Plan**



Courtesy of Dunaway Associates

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## MODELING AND THOROUGHFARE ANALYSIS

# Chapter 4: Modeling and Thoroughfare Analysis

## Modeling Process

The City of Lancaster's Thoroughfare Plan was developed using several mobility analysis tools, including the Dallas Fort Worth Regional Travel Model for the Extended area (DFX), maintained by the North Central Texas Council of Governments (NCTCOG). The DFX model forecasts trips in the region based on several factors, including trip purpose (work, home and shopping), trip length, and congestion. Regional trip forecasts are based on projections of future population and employment which help determine total daily trips, trip origins and trip destinations.



The data provided by the DFX model, along with expert technical judgment, was used in tandem to develop the Lancaster Thoroughfare Plan. Using a regional model in the thoroughfare planning process provides a more comprehensive analysis in anticipating future trips within and around the City of Lancaster.

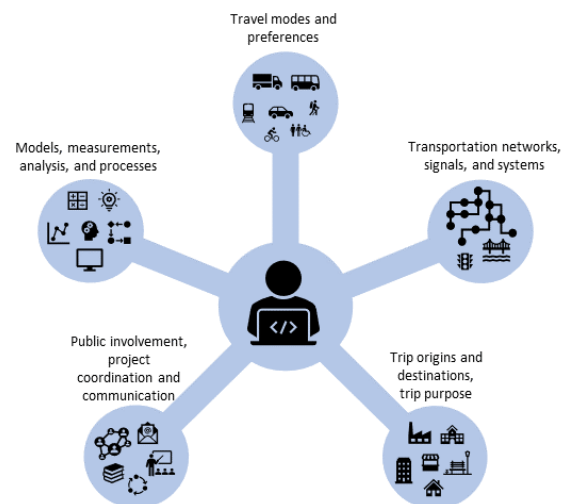
The model was used to help prioritize projects and aid in making recommendations for the future street network. General components associated with the development of travel demand models are illustrated in Figure 18.

The model-based analysis was completed using the following steps.

### Thoroughfare Analysis Modeling Methodology

- Review of Lancaster population and employment projections by Traffic Survey Zone (TSZ).
- Review of NCTCOG model network to match currently adopted Lancaster Thoroughfare Plan.
- Review of 2045 model performance outputs on Lancaster thoroughfare network.
- Adjusted proposed thoroughfare network to reflect needed capacity improvements or possible capacity reductions.

**Figure 18: Components of Travel Demand Modeling**



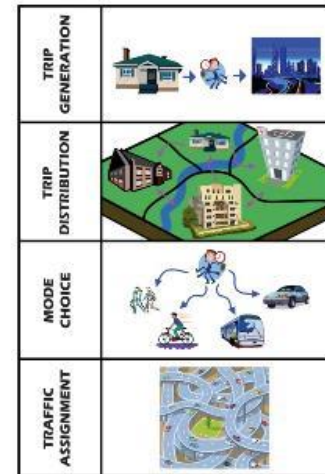


## Travel Demand Modeling Steps

Travel demand modeling is comprised of a series of mathematical models that simulate travel on the transportation system. The model divides the City of Lancaster into TSZs which have specific demographic and land use data associated with them and are used to determine trip demand and travel patterns. The modeling process encompasses the following four primary steps as illustrated in Figure 19:

- Trip Generation – the number of trips produced and attracted to a destination or TSZ based on trip purpose.
- Trip Distribution – the estimation of the number of trips between each TSZ, i.e., where the trips are going.
- Modal Split – the prediction of the number of trips made by each mode of transportation between each TSZ.
- Traffic Assignment – the amount of travel (number of trips) loaded onto the transportation network through path-building. This is used to determine network performance.

**Figure 19: Steps of Travel Demand Modeling**



The model provides the City with an accurate tool to identify system improvements to create a forecast network that will accommodate future transportation needs.

## Forecasting Growth

Two essential inputs for the travel demand model are population and employment data. This information helps determine the origin and destination of each trip. The number of trips produced by each person or job varies depending on many factors, including income level and job type.

Traffic changes between the base year and the forecast/build-out year are evaluated to determine relative change and the impact of proposed improvements. These changes serve as a guide for decision-makers to determine how to develop their roadway networks and which projects are most important for their community.



## Travel Demand Model Base Year Conditions

NCTCOG maintains an updated version of the base year demographics and transportation network for the region. This includes most of the major and minor thoroughfares in the City of Lancaster. The model's demographics undergo a comprehensive update at least once every 5 years. The 2018 demographics provided from NCTCOG were used in the analysis of the base year conditions.

## MODELING AND THOROUGHFARE ANALYSIS

### Travel Demand Model Analysis

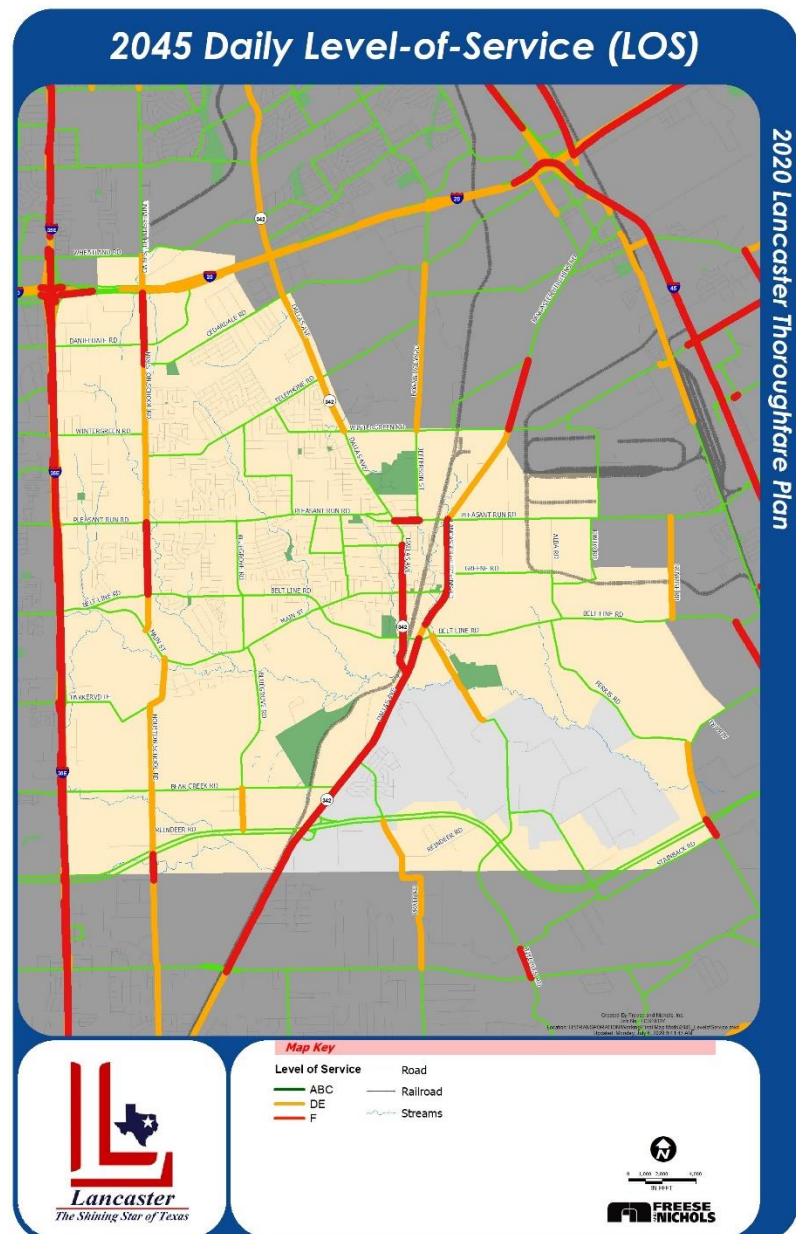
The results from the DFX help to determine the capacity and thoroughfare needs in the City of Lancaster. The goal of a thoroughfare plan is to balance the supply and demand of the roadways to ensure that resources are maximized and the system functions safely and efficiently. The purpose of the analysis was to determine where the mobility needs in the region are and to adjust roadway size and functional class based on forecast volumes, congestion and known constraints. The new thoroughfare plan network was developed through an extensive process of engagement with city staff, public participants, and other stakeholders.

The two primary indicators for evaluating future need are traffic volumes and congestion or level-of-service (LOS). Traffic volumes help to determine the appropriate sizing of a road. Congestion on the other hand compares the projected volumes to the proposed capacity of the roadway; this is known as the Volume to Capacity (V/C) Ratio. The results of the V/C Ratio are presented in an A through F grading system with a LOS A roadway representing free flow conditions and LOS F representing extremely congested conditions.

### Projected Level of Service

An evaluation of future thoroughfare conditions in Figure 20 reveals that most major north-south corridors are forecast to have high traffic volumes and be heavily congested by 2045. This is compounded by the observation that IH-35E, IH-20, and IH-45 will also be heavily congested by 2045, indicating few alternative routes for travelers.

Figure 20: 2045 Daily Level of Service



Some of these major thoroughfares that are forecast to experience poor levels-of-service are:

### **North-South Corridors:**

- North Dallas Avenue (SH 342), from IH-20 to West Telephone Road.
- SH 342, from East Beltline Road to the southern city limits.
- North Houston School Road, from IH-20 to West Wintergreen Road.

### **East-West Corridors:**

- West Pleasant Run Road, from North Jefferson Street, to SH 342.

In addition, some roadways are forecast to experience low volumes, but high level-of-service. These corridors include:

### **North-South Corridors:**

- North Houston School Road, from West Wintergreen Road to the southern city limits.
- North Lancaster Hutchins Road, from South Dallas Avenue (SH 342) to West Wintergreen Road.
- South Bluegrove Road, from Bear Creek Road to Loop 9.
- North Dallas Avenue, from 8<sup>th</sup> Street to South Lancaster Hutchins Road.

Note that while Loop 9 is not expected to be congested at this point in the future, several connecting roadways are expected to be heavily congested. These roadways include Pratt Road, Ferris Road, Bluegrove Road and Houston School Road.

It is also important to note that while the many north-south corridors through the City are forecast to become congested, only one small segment of the east-west roadway network is expected to become congested.

## Projected Thoroughfare Volumes

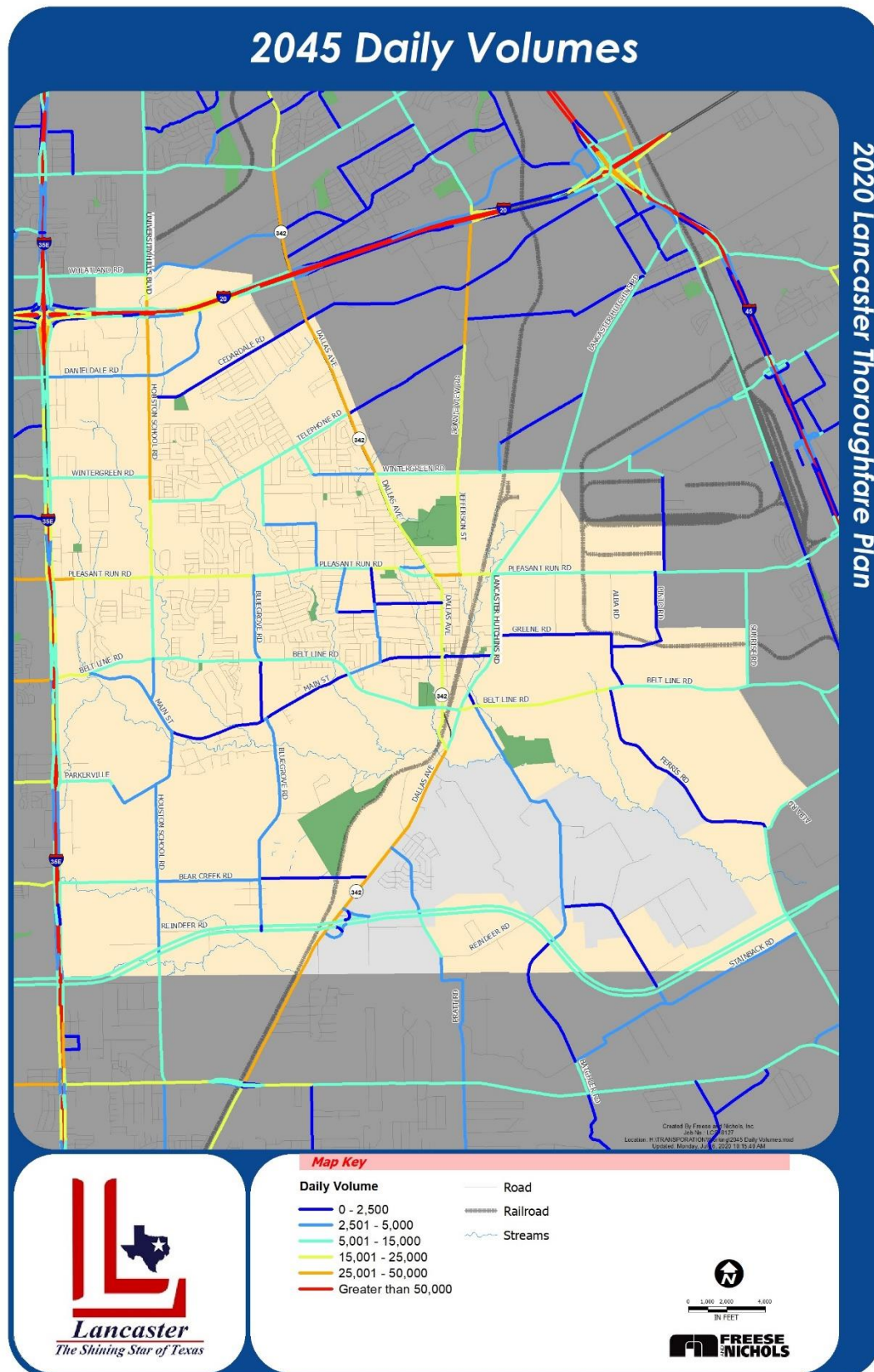
An analysis of forecast daily volumes in Figure 21 supports the LOS analysis, showing high volumes along north-south corridors, with lower forecast volumes along east-west thoroughfares. Roadways with high volumes include Houston School Road past Pleasant Run Road, Dallas Avenue/SH 342, Jefferson Street, and Lancaster Hutchins Road.

Main Street, Houston School Road and Bluegrove Road (south of Pleasant Run), Cedardale Road, Daniieldale Road and Bear Creek Road have some of the lowest volumes in Lancaster in 2045.

Note that the discrepancy of volumes and LOS between east-west and north-south corridors was the most obvious observation shown in the analysis, indicating a clear preference of travelers to use north-south over east-west corridors though the City.



Figure 21: 2045 Daily Volumes



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## THOROUGHFARE PLAN

### Chapter 5: Thoroughfare Plan

The process of developing a thoroughfare plan involves balancing the existing supply of infrastructure with the projected needs of the future. These future needs help to determine how much vehicle capacity is required and what multi-modal elements should be considered such as walking, biking, or riding transit. Included in each functional classification recommendation is the amount of required ROW that is needed as the thoroughfares are built, widened, or as development occurs. Preserving ROW is an important part of the plan for the City of Lancaster.

Lancaster's Thoroughfare Plan is built upon traditional thoroughfare planning concepts, which focus on functionality in providing mobility and accessibility for vehicular traffic, as well as accommodations for transit and non-motorized forms of transportation.

### Proposed 2020 Lancaster Thoroughfare Plan

#### Key Changes to Current Plan

Thoroughfare plan amendments recommended to help meet the land use and transportation goals had to be developed with respect to existing ROW constraints. This was accomplished by creating flexibility within the existing functional classification system and ROW requirements to meet future land use and transportation needs. To accomplish this goal, the following changes were recommended for the existing thoroughfare plan. A graphical representation of the plan amendments is shown in Figure 22 on page 39.

#### Deletions:

- West Drive and North Longhorn Drive extensions.
- West Main Street spur, from Bear Creek Nature Park west boundary to Nokomis Road.
- Extension of Cedar Valley Drive, from Dallas Avenue to Dizzy Dean Drive.
- Springfield Street and Corporate Drive extensions.
- New roadway from IH-20 frontage road to University Hill Blvd.
- East Wheatland to University Hills Blvd (built).
- New roadway from North Houston School Road to IH-20 frontage road.
- Removal/Realignment of Ferris Road connections to Sunrise Road.



#### Realignments:

- Batchler Road, from Stainback to Nokomis Road.
- Fairweather Drive from Dallas Avenue to Bear Creek Drive Extension



- Bear Creek Drive extension, from Bradberry Drive to Nokomis Road.
- East Reindeer Road, from Poe Road across Loop 9 to Bear Creek extension.

### **Rightsizing / ROW Reallocation (see page 66):**

- Dizzy Dean Drive, from West Telephone Road to Connecticut Avenue.
- Cedardale Road, from Houston School Road to Dallas Avenue.
- Main Street, from Belt Line Road to Lancaster Hutchins Road.



### **Additions:**

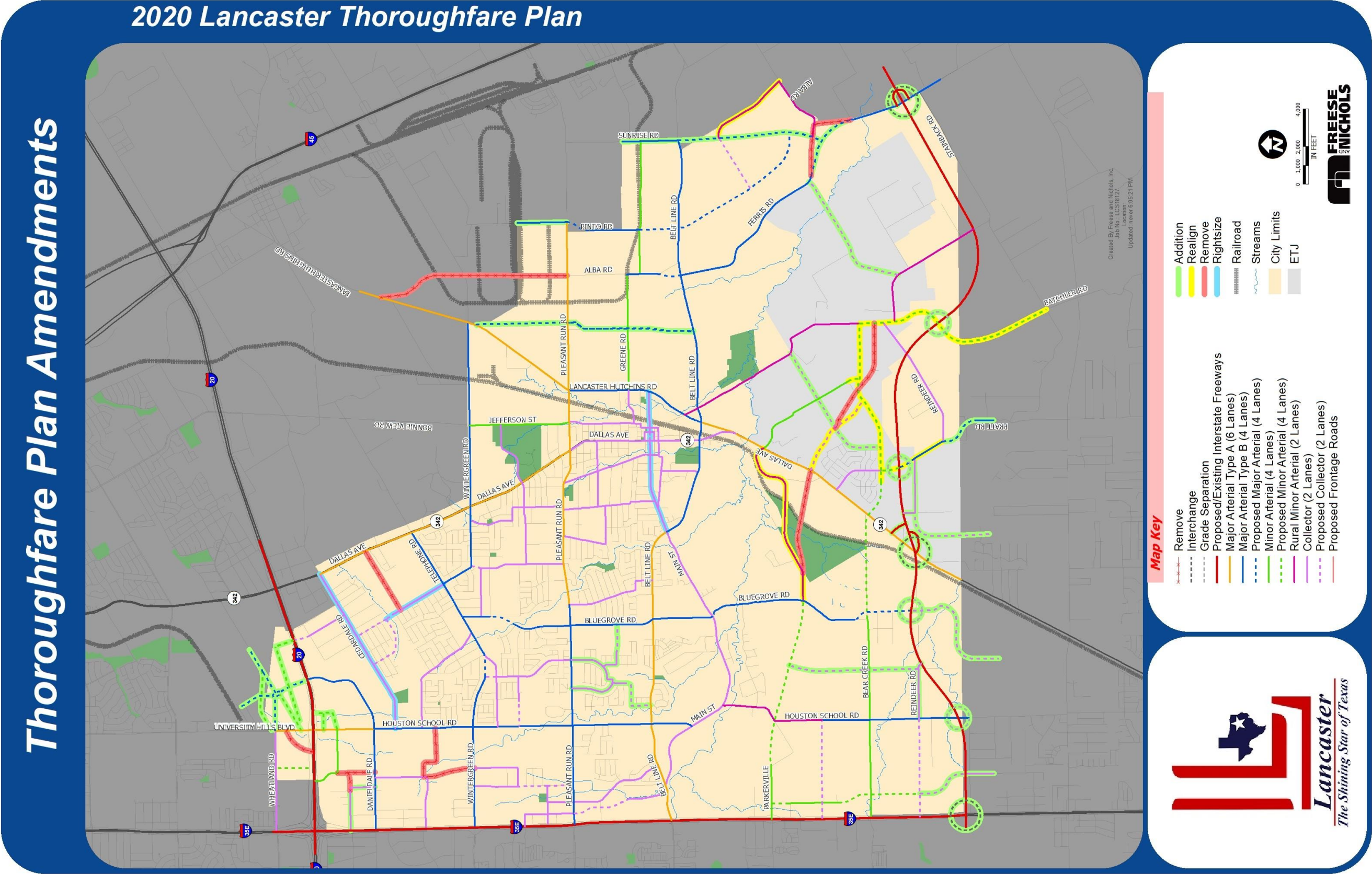
- New collector road extension of East Wheatland Road from University Hills Blvd to East Wheatland Road (west of University Hills Blvd).
- New collector road from East Wheatland Road to DART Blue Line ROW.
- New collector road from Lee Street north across Loop 9 to Meadowlark Lane.
- New collector road from Loop 9 to Parkerville Road, between Houston School Road and Bluegrove Road.
- Extension of Reindeer Road, east from Houston School Road to Loop 9.
- New collector road from Nokomis Road to Ferris Road.
- Extension of Bluegrove Road across Loop 9 south.
- Extension of East Reindeer Road south of Loop 9.
- Extension/Realignment of Pratt Road north to East Reindeer Road.
- New Collector from Bear Creek extension to Nokomis Road.
- Extension of Sunrise Road to Ferris Road.
- Extension/Realignment of Ferris Road at Sunrise Road.
- Extension of Millbrook Drive south to West Belt Line Road.
- Upgrade of Rawlins Drive and Chapman Drive to collector.
- Extension of Indian Lilac Drive to Bluegrove Road.

### **Interchanges/Grade Separations:**

- IH-35E at Loop 9.
- Houston School Road at Loop 9.
- Bluegrove Road at Loop 9.
- SH 342 (Dallas Avenue) at Loop 9.
- Bradberry Drive extension at Loop 9.
- Batchler Road at Loop 9.
- Ferris Road at Loop 9.
- Lee Street at Loop 9.



Figure 22: Thoroughfare Plan Amendments



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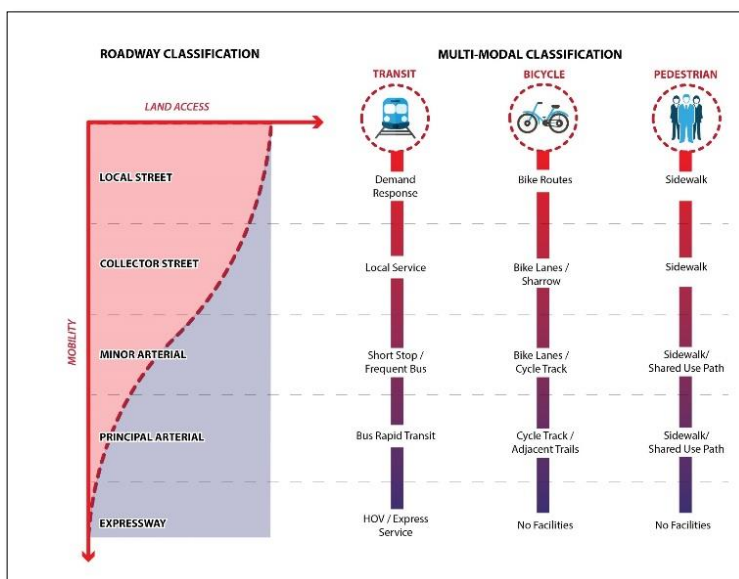
## THOROUGHFARE PLAN

### Functional Street Classification

As shown in Figure 23, the functional classification of streets is used to identify the hierarchy, function, and dimensions of a facility. Streets and highways are grouped into classes based on facility characteristics, such as geometric design, speed, and traffic capacity. The roadway functional class allows travelers ease of access to origins and destination through a combination of streets. Functional class can be updated over time if surrounding land uses change significantly. A facility will move up in hierarchy as the surrounding area becomes denser and additional cars are drawn to the area. Population and land use densification may also decrease the functional class of a roadway as the area becomes more walkable. The network in Lancaster varies in functional classes, with a mixture of freeways, major and minor arterials, rural minor arterials, collectors, and local roads.

Most large cities in Texas incorporate a traditional functional classification system to organize roadway types within their jurisdiction. This system provides key information and standards for each roadway type to assist citizens and developers in understanding the types of roadways that are planned for the region's transportation system and how those roadways may be designed.

Figure 23: Roadway Classification



The Lancaster Thoroughfare Plan consists of all the major roadways in the City of Lancaster by their assigned functional classification. This classification sets the required ROW to be acquired or preserved to accommodate future traffic demand in the region. This plan also looks at ways to incorporate multi-modal elements along identified corridors within the city. Where these elements are needed, alternative thoroughfare design elements may be implemented through retrofit or redesign as reconstruction is needed. The street types or functional classification in the City of Lancaster identifies thoroughfares as freeways and frontage roads, major and minor arterials, collectors and local roadways.

### Freeways and Frontage Roads

Freeways are also not typically designated on a thoroughfare plan. The regional, statewide and national scale of the freeways that traverse through Lancaster limit the ability for the City of Lancaster to impact the decisions made at the state and national level. However, the impact of these facilities on the mobility and needs in the City are essential to consider as thoroughfare planning processes continue.

Frontage roads are significant as they provide important access parallel to limited-access freeways and toll roads in and around the City. Access to these roads is essential for the success of businesses that front these roads.

Lancaster is currently serviced by three freeway facilities: IH-35E, IH-20, and IH-45. For Lancaster residents, these interstate facilities provide regional access to many metroplex cities. Interstate 20 provides an east-west connection in the north of the city and forms its northern border. IH-35E and IH-45 provide excellent north-south access to nearby cities as well as superior connections to major cities within Texas as well as Oklahoma. The proposed Loop 9 will provide additional east-west connectivity to the south. Note that there are no existing or planned toll facilities within or adjacent to the City of Lancaster.



### Major Arterials

Arterials focus on moving regional traffic. These types of thoroughfares typically carry the highest amounts of traffic and have the highest speeds depending on the context environment. These facilities are classified into major and minor arterials.

Major arterials are designed to allow large volumes of traffic to operate at a high level of mobility. A major arterial is designed for longer distance trips and provides access to major activity centers and adjacent cities. There should be a limited number of driveways directly accessing major arterials and should only connect to other major arterials or freeways. Typically, on-street parking should not be allowed on a major arterial.

Major arterials in the City of Lancaster are sub-classified as Type "A" or "B" facilities. These sub-classifications are based on the current and future demands and the potential development. Type "A" facilities have six (6) lanes, while Type "B" roadways have four (4) lanes.



State Highway 342 (Dallas Avenue) is an example of a Type "A" major arterial. It provides a north-south corridor through the city and serves as a link between cities in southern Dallas County and north Ellis County. This facility intersects Lancaster and runs through downtown before connecting with IH-35E and US 77 in Red Oak in Ellis County.

Bluegrove Road and Wintergreen Road are examples of Type "B" major arterials. Several major arterials have both Type "A" and "B" classifications, including Belt Line Road, Pleasant Run Road, Lancaster Hutchins Road, and Houston School Road.

# THOROUGHFARE PLAN

## Minor Arterials

Minor arterials connect traffic from collectors to primary arterials. They are designed to accommodate moderate traffic volumes at relatively low speeds, and often extend to a larger geographic area. If ROW and/or level-of-service are adequate, minor arterials may accommodate on-street parking. Parkerville Road, Cedardale Road and Greene Road are examples of minor arterials.



## Collectors

Roadways designated as collectors are designed for short trips and low speeds. They serve primarily to connect trips to higher functional class facilities and on moving traffic between neighborhoods and different areas within the City. These types of thoroughfares carry moderate volumes of traffic and have lower speeds to accommodate access to adjacent properties. The number of lanes range from two (2) to four (4) depending on the current and future demands and the potential development. Center turn lanes may be incorporated on Major Collectors, but raised medians are rarely found on these types of streets. Main Street and Reindeer Road are examples of collectors.



Sometimes collectors are broken down into major and minor collectors. Major collectors provide higher levels of mobility, handle more traffic, and have fewer driveways and intersections than minor collectors.

## Local Streets

Local streets are typically not designated on a thoroughfare plan because it is a street type that does not require ROW dedication. As new development occurs, local streets are typically built by the developer and once the development is complete, the city takes over maintenance and ownership of the ROW. Local streets are focused on providing access to homes in residential neighborhoods where speeds are less than 30 miles per hour (mph), and traffic volumes are the lowest. In most cases lane striping is not implemented, and on-street parking occurs in a variety of locations depending on the surrounding uses and building types.





## Functional Street Classification System Analysis and Recommendations

In the past, functional classification systems have been rigid and inflexible, providing little ability to incorporate alternative design options. This concept of rigidity has evolved over time as the relationship between transportation and land use has become more influential in the design and operation of our streets. Now, as development patterns are changing, roadways are accommodating multiple modes of transportation. Thoroughfare design practice has begun to involve several different design considerations such as pedestrian, bicycle and transit accommodations. This has resulted in a variation of the typical street design along certain corridors to incorporate multi-modal design implementation.



### Typical Roadway Characteristics by Functional Classification

All functional classes have general characteristics, such as spacing, capacity, speed, required ROW, and specific design criteria to delineate how each facility should be utilized. Table 5 below sets out current characteristics defined for each type of functional class of roadway.

**Table 5: Roadway Characteristics by Functional Class**

Attributes	Freeway	Major Arterial	Minor Arterial	Collector	Local
Roadway Spacing	2-10 miles	1-2 miles	0.25-1 mile	0.1-0.25 miles	200-500 feet
Facility Length	15+ miles	5-15 miles	1-5 miles	0.25-1 mile	<0.25 mile
Traffic Volume (vehicles/day)	100,000+	35,000-80,000	10,000-35,000	1,000-10,000	<1,000
ROW (feet)	300-500	100-120	70-100	60-70	50-60
Number of Lanes	Main + Frontage Roads	4 to 6	3 to 5	2 to 4	2
Median	Yes	Typical	Optional	Not Typical	No
Speed Limit (mph)	55-75	35-55	30-45	25-35	30 Max.

### Recommended Functional Classification Amendments

As mentioned previously, the thoroughfare network was amended to accommodate updated growth projections. New classifications were developed to provide

# THOROUGHFARE PLAN

consistency with existing roadway design implementation, provide options for multi-modal elements, and to provide more flexibility in developing new street sections. Recommendations address potential expansion of existing thoroughfares (5-lane major arterial) as well as providing more flexibility by redefining and expanding the sub-classes of collectors.

Table 6 contains the current and proposed functional classifications for the Lancaster Thoroughfare Plan. Descriptions and cross-sections of each classification are discussed in the following pages.

**Table 6: Comparison of City of Lancaster Thoroughfare Classifications**

Roadway Class	Lanes	Area Type	Min ROW (feet)		
			Recommended 2020 TP	2016 Comp Plan	2006 Streetscape Plan
<b>Major Arterial</b> (Type A)	6	Urban	120'	120'	110'-120'
	5 (New)	Urban	110'	-	-
<b>Major Arterial</b> (Type B)	4	Urban	100'	100'	100'-110' (6 lanes)
<b>Minor Arterial</b> (Type C)	4	Urban	100'	86'	85'-100'
	4 (New)	Rural	100'	-	110'
<b>Major Collectors</b> (Type D1)	4 (New)	Urban	80'	-	65'
	4 (New)	Rural	80'	-	110'
	3	Urban	60'	60'	-
<b>Minor Collectors</b> (Type D2)	2 (New)	Urban	60'	-	-
	2	Rural	60'	86' (Rural Minor Arterial)	-
<b>Local Roads</b> (Type E)	2	Urban	60'	60'	50'
	2	Rural	60'	60'	60'

## Recommended Thoroughfare Design Standards

Versatility is a strength in any policy document because it gives policymakers flexibility to address unforeseen issues that may arise during the implementation phase. To provide flexibility in the thoroughfare plan, new thoroughfare design standards were developed to accommodate a variety of land uses adjacent to both urban and rural ROW, including future developments associated with Loop 9.

It is recommended that the new thoroughfare design standards from the 2020 Thoroughfare Plan update be incorporated in existing subdivision regulations to ensure consistent roadway construction throughout the County.



## Recommended Thoroughfare Design Standards

There are established roadway design standards that are utilized by communities across the United States; these standards are based upon decades of research and field experience. Guidelines for these revised design standards came from a variety of sources, including:

- American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets, latest edition.
- Transportation Research Board, Highway Capacity Manual, latest edition.
- Texas Manual on Uniform Traffic Control Devices, latest edition.

Previous design standards for the City of Lancaster from the 2006 Streetscape Plan and the 2016 Comprehensive Plan were evaluated and referenced to ensure consistency of the revised design standards. Tables 7 through 9 on the following pages list these previous design standards for comparison, as well as the new recommended design standards for the 2020 Thoroughfare Plan Update.

Changes to the design standards focused on more clearly defining urban versus rural roadways. There was also an effort to provide more flexibility for major arterials in commercial areas. This was accomplished by adding in a 5-lane roadway arterial class with a continuous left turn lane to enhance access to local businesses where appropriate.



**Table 7: 2006 Streetscape Master Plan Thoroughfare Design Standards**

Roadway Class	Lanes	Area Type	Min ROW (feet)	Travel Lane Pavement (feet)	Median (feet) (Flush / Raised)	Sidewalk Buffer (feet)	Sidewalk (feet)	Parking
Major Arterial (Type A)	6	Urban	110'-120'	2 @ 33'	17'	7'-11'	5'-6'	No
Major Arterial (Type B)	6	Urban	100'-110'	2 @ 33'	14'	5'-10'	5'	No
Minor Arterial (Type C)	4	Urban	85'-100'	2 @ 22'	17'	6'-14.5'	5'-6'	No
Collectors (Type D)	4	Urban	65'	45'	-	5'	5'	No
Local Roads (Type E)	2	Urban	50'	27'	-	6.5'	5'	No
Rural Thoroughfares (Type F)	2	Rural	60'	28'-30'	-	Ditch	-	No
Rural Thoroughfares (Type F – Divided)	4	Rural	110'	2 @ 28'-30'	20'	Ditch	-	No

**Table 8: 2016 Comprehensive Plan Thoroughfare Design Standards**

Roadway Class	Lanes	Area Type	Min ROW (feet)	Travel Lane Pavement (feet)	Median (feet) (Flush / Raised)	Shoulders (feet) (Inside/Outside)	Pedestrian Realm (feet)	Parking
Major Arterial (Type A)	6	Urban	120'	2 @ 36'	17'	-	15.5'	No
Major Arterial (Type B)	4	Urban	100'	2 @ 24'	16'	-	18'	No
Minor Arterial	4	Urban	86'	2 @ 24'	17'	-	10.5'	No
Rural Minor Arterial	2	Rural	86'	24'	-	5'	26' (Drainage / Buffer)	No
Collectors	3	Urban	60'	2 @ 12'	14' CLT*	-	11'	No
Local Roads	2	Urban	60'	2 @ 18.5'	-	-	11.5'	No

\*Continuous left turn lanes.

**Table 9: Recommended 2020 Lancaster Thoroughfare Plan Design Standards**

Roadway Class	Lanes	Area Type	Min ROW (feet)	Travel Lane Pavement (feet)	Median (feet) (Flush / Raised)	Shoulders (feet) (Inside/Outside)	Sidewalk (feet)	Parking
<b>Major Arterial (Type A)</b>	6	Urban	120'	2 @ 36'	14'/18'	-	6'-8'	No
	5 (New)	Urban	110'	62'	CLT*	-	6'-8'	No
<b>Major Arterial (Type B)</b>	4	Urban	100'	2 @ 24'	14'/16'	-	6'-8'	No
<b>Minor Arterial (Type C)</b>	4	Urban	100'	2 @ 22'	14'/16'	-	5'-6'	No
	4	Rural	100'	48'	-	4-8'	Optional	No
<b>Major Collectors (Type D1)</b>	4 (New)	Urban	80'	44'	-	-	5'-6'	No
	4 (New)	Rural	80'	44'	-	4'	Optional	No
	3	Urban	60'	38'	CLT*	-	5'-6'	No
<b>Minor Collectors (Type D2)</b>	2 (New)	Urban	60'	30'	-	-	5'	Optional
	2	Rural	60'	24'	-	4'	Optional	Optional
<b>Local Roads (Type E)</b>	2	Urban	60'	28'	-	-	5'	Optional
	2	Rural	60'	28'	-	2'	Optional	Optional

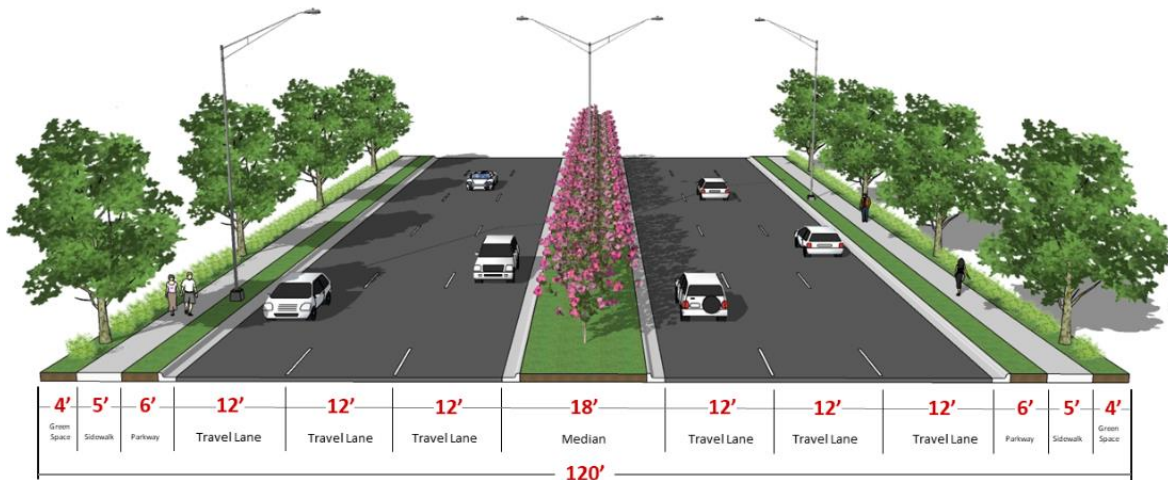
\*Continuous left turn lanes.

# THOROUGHFARE PLAN

## Design Standard Cross-Sections

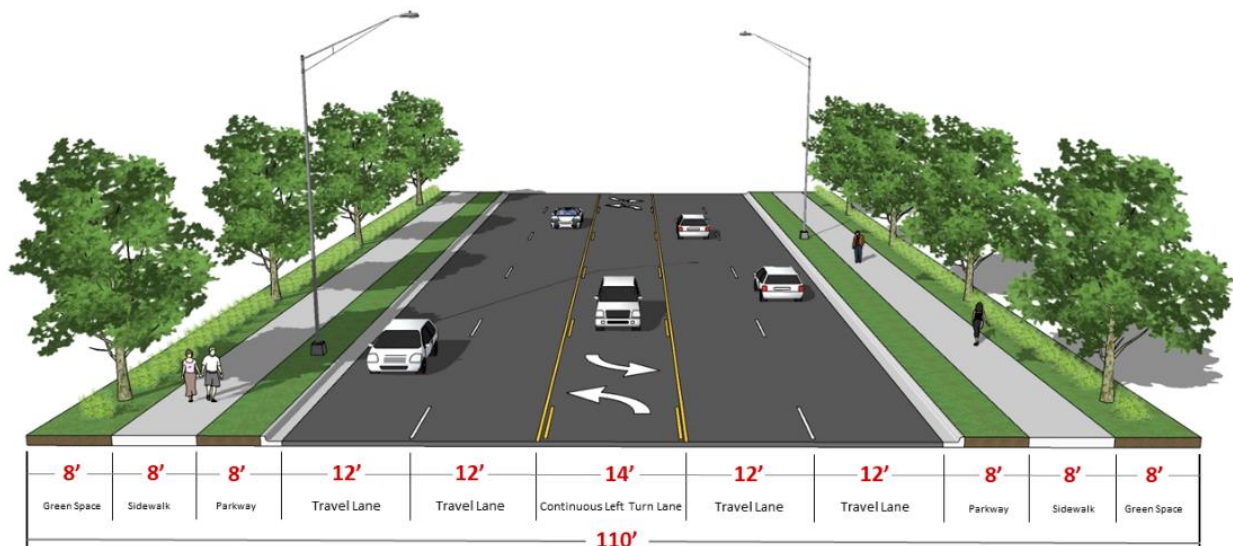
Graphics depicting recommended design cross-sections are shown below and on the following pages through Figures 24 to 35.

**Figure 24: Major 6-Lane Urban Arterial**



Major Urban Arterial (Type A) – 6 Lane, 120' ROW, 12' Lanes

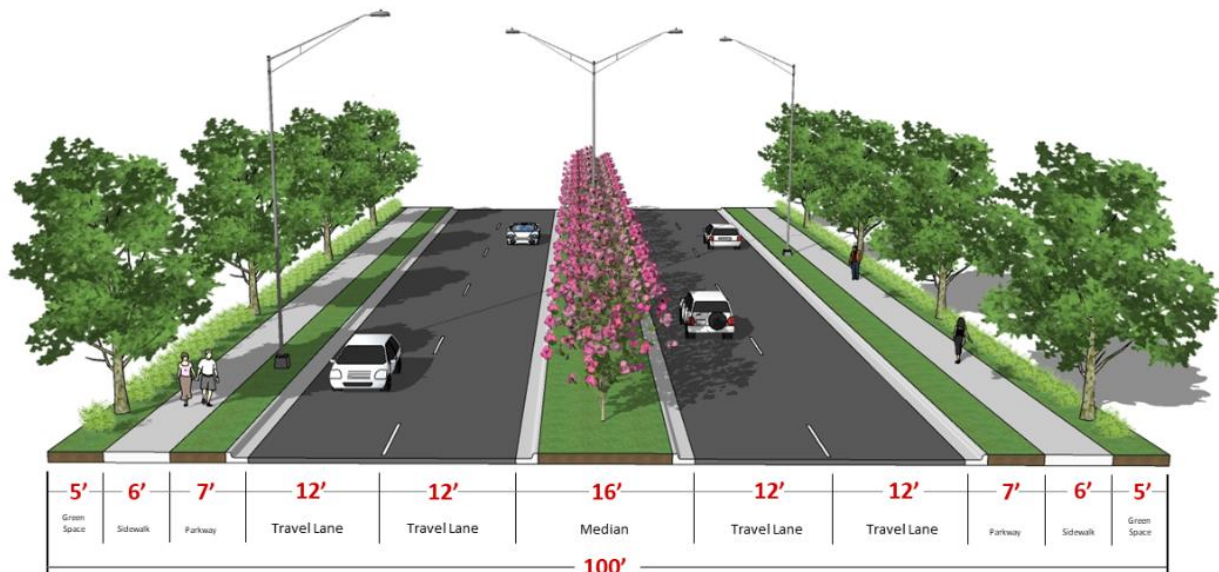
**Figure 25: Major 5-Lane Urban Arterial**



Major Urban Arterial (Type A) – 5 Lane, 110' ROW, 12' Lanes w/ CLT

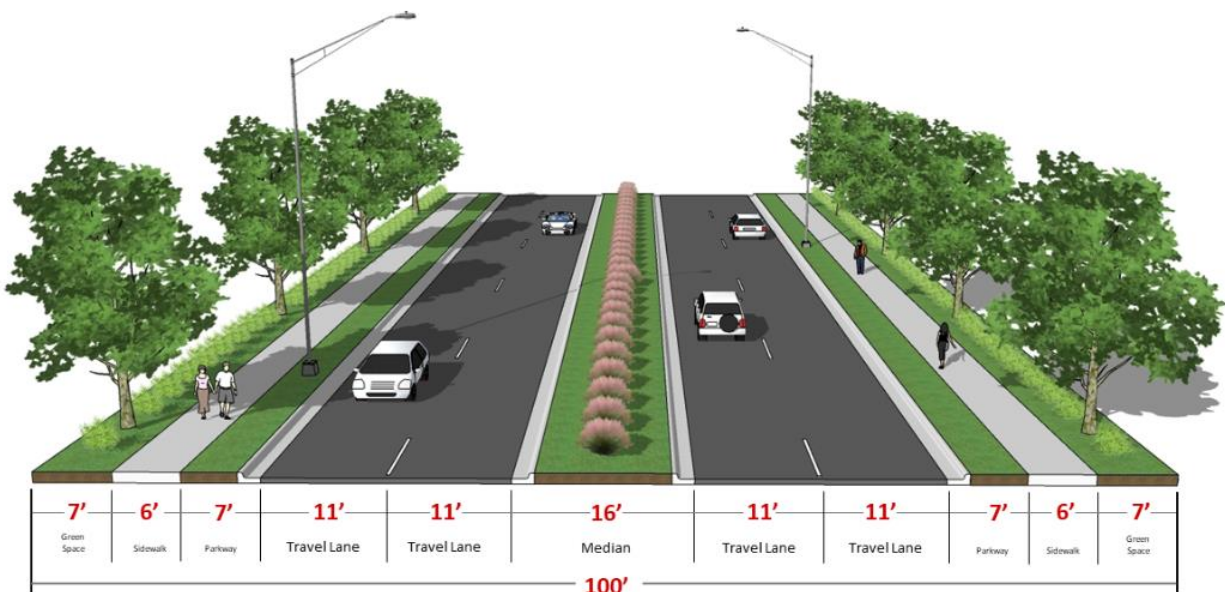


**Figure 26: Major 4-Lane Urban Arterial**



Major Urban Arterial (Type B) – 4 Lane, 100' ROW, 12' Lanes

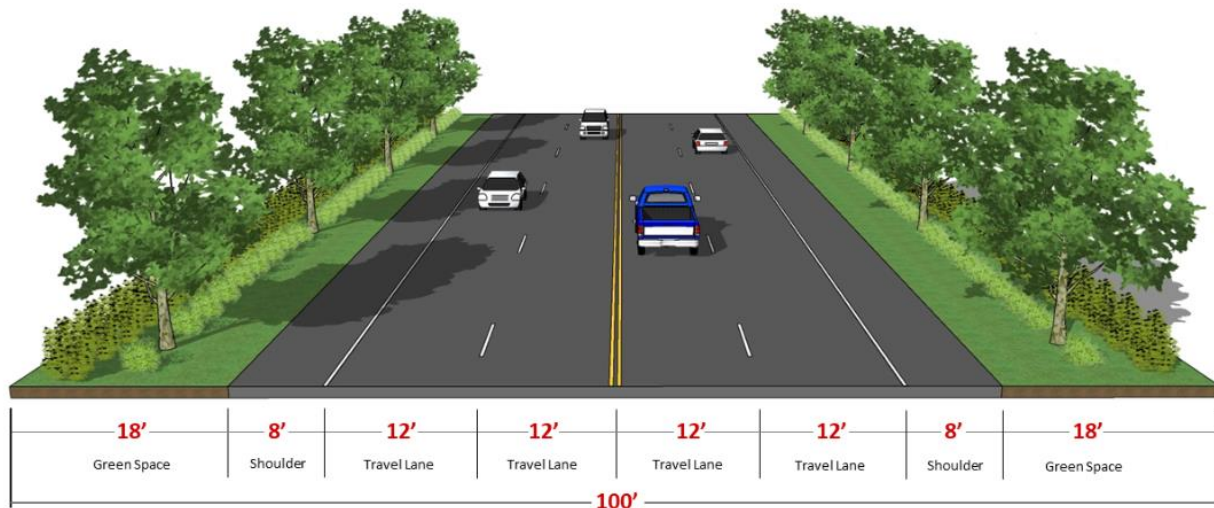
**Figure 27: Minor 4-Lane Urban Arterial**



Minor Urban Arterial (Type C) – 4 Lane, 100' ROW, 11' Lanes

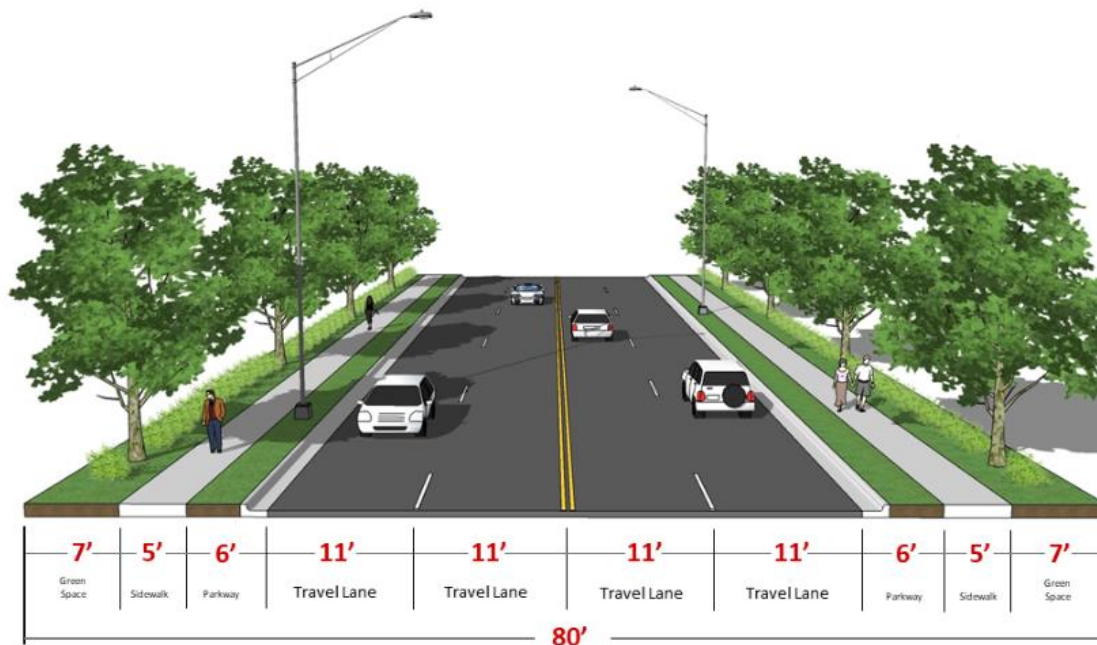
# THOROUGHFARE PLAN

Figure 28: Minor 4-Lane Rural Arterial



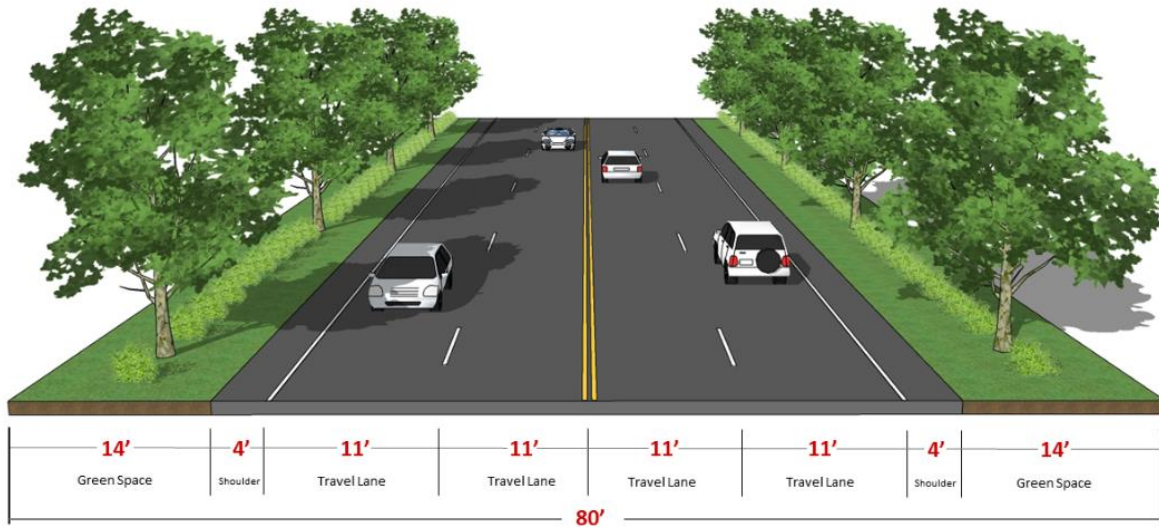
Minor Rural Arterial (Type C) – 4 Lane, 100' ROW, 12' Lanes

Figure 29: Major 4-Lane Urban Collector



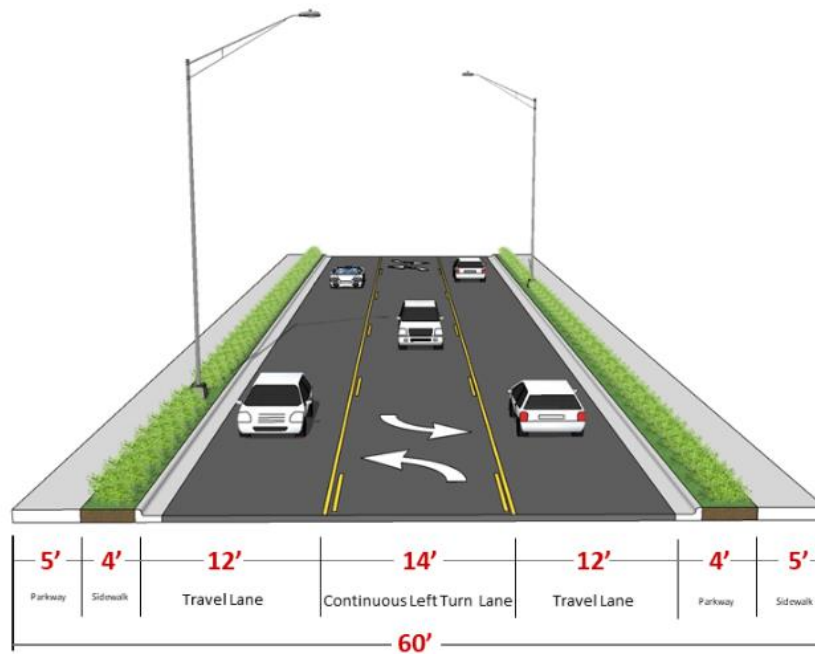
Major Urban Collector (Type D1) – 4 Lane, 80' ROW, 11' Lanes

**Figure 30: Major 4-Lane Rural Collector**



Major Rural Collector (Type D1) – 4 Lane, 80' ROW, 11' Lanes

**Figure 31: Major 3-Lane Urban Collector**



Major Urban Collector (Type D1) – 3 Lane, 60' ROW, 12' Lanes



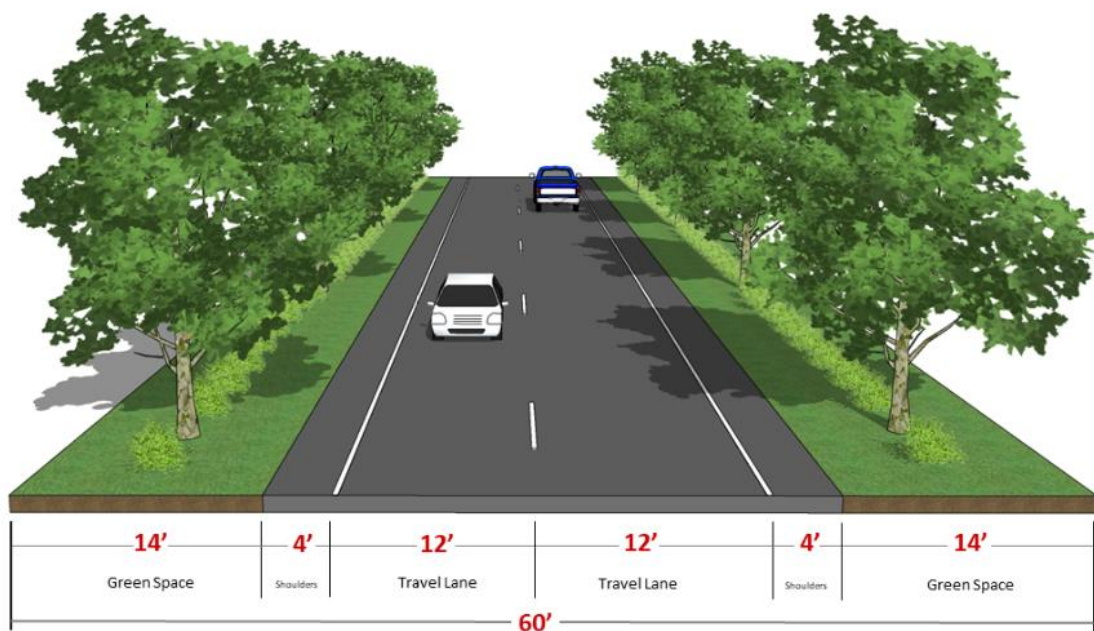
# THOROUGHFARE PLAN

Figure 32: Minor 2-Lane Urban Collector



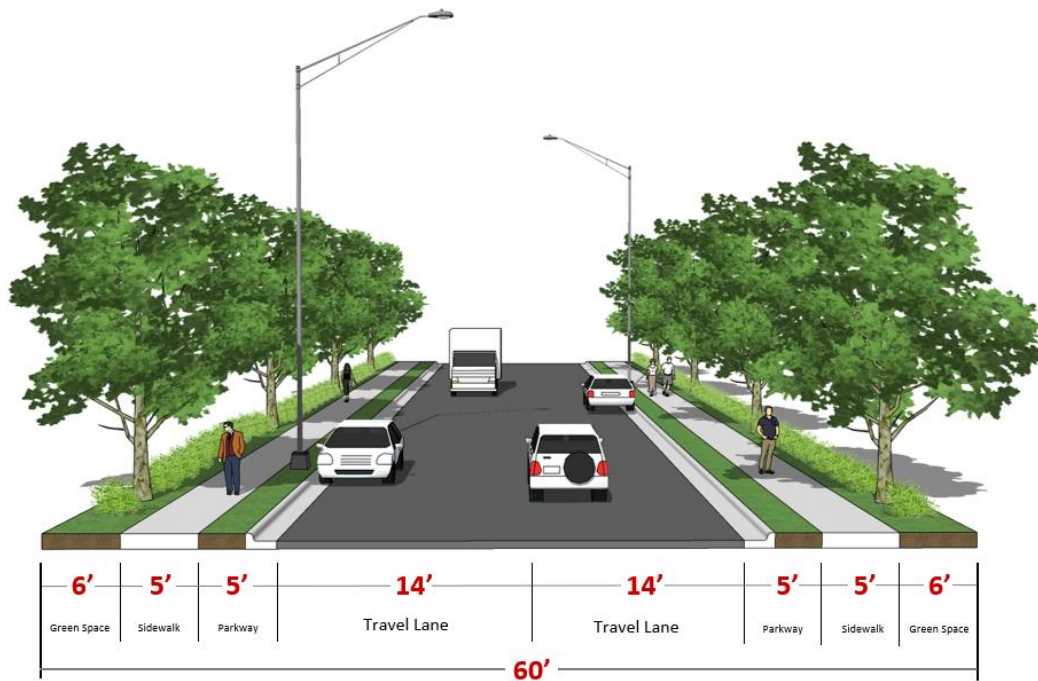
Minor Urban Collector (Type D2) – 2 Lane, 60' ROW, 15' Lanes

Figure 33: Minor 2-Lane Rural Collector



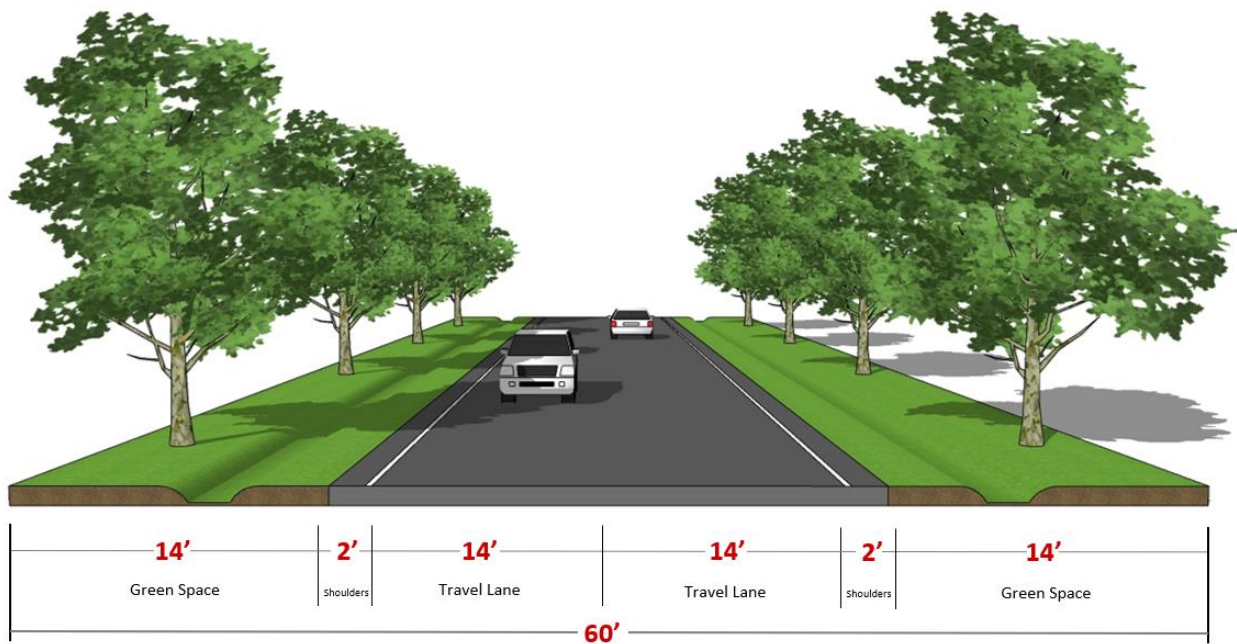
Minor Rural Collector (Type D2) – 2 Lane, 60' ROW, 12' Lanes

**Figure 34: Local Urban Roadway**



Local Urban Roadway – 2 Lane, 60' ROW, 14' Lanes

**Figure 35: Local Rural Roadway**



Local Rural Roadway – 2 Lane, 60' ROW, 14' Lanes



# THOROUGHFARE PLAN

## Transitions between Design Sections

In cases where thoroughfare corridors cross between municipal and county boundaries, it is recommended that staff from affected agencies develop a memorandum of understanding or other legally binding agreement to determine final design and/or design of transition between roadway sections.

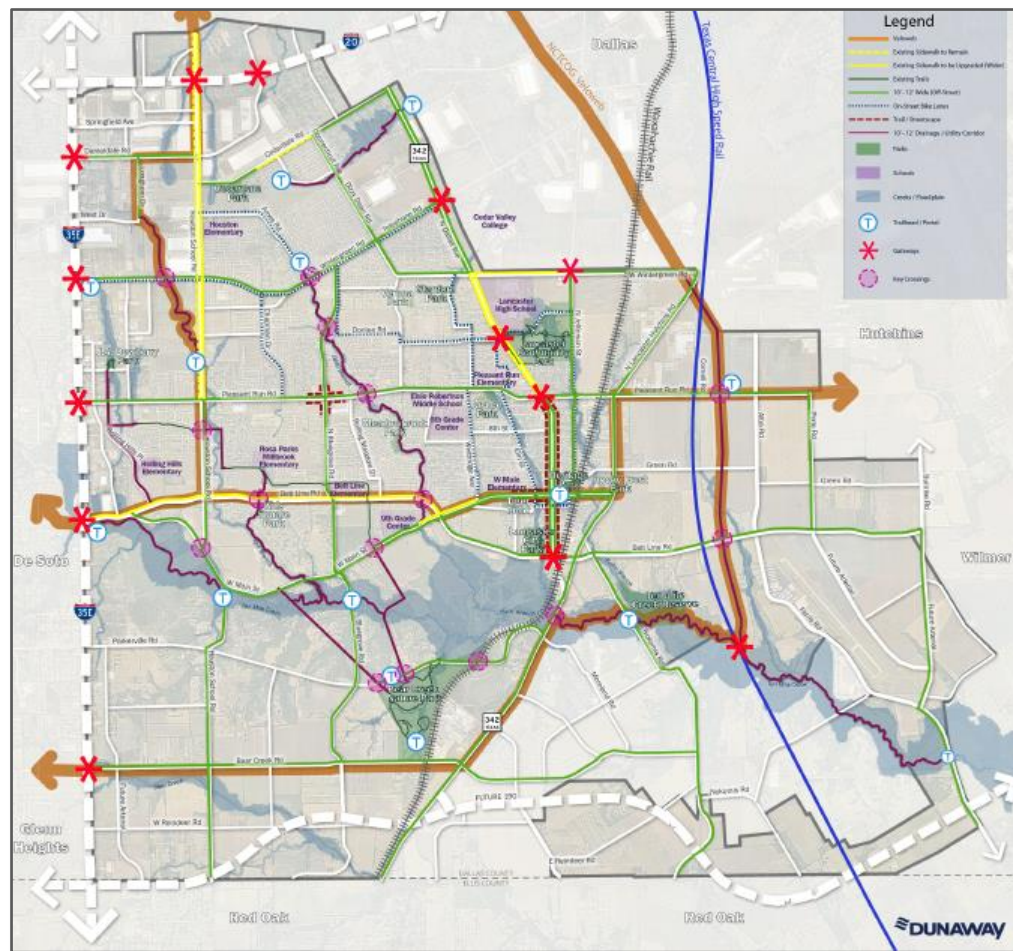
## Bike & Pedestrian Networks

The framework of the Lancaster bicycle network will be a system of routes and trails throughout the city connecting key destinations or bike access areas such as schools, parks, transit stations, major employers and activity centers.

## Bike Plan Recommendations

The City of Lancaster is currently in the process of updating its Hike and Bike Trails Master Plan. An initial review of the plan in Figure 36 reveals a well-connected network of both on and off-street bicycle and pedestrian facilities.

Figure 36: 2020 Hike and Bike Trail Master Plan



Courtesy of Dunaway Associates



It is recommended that the City incorporate the final recommendations from the Trail Master Plan, the new Streetscape Plan, and the Southern Dallas Regional Veloweb Alignment Study into the new Thoroughfare Plan once they are complete.

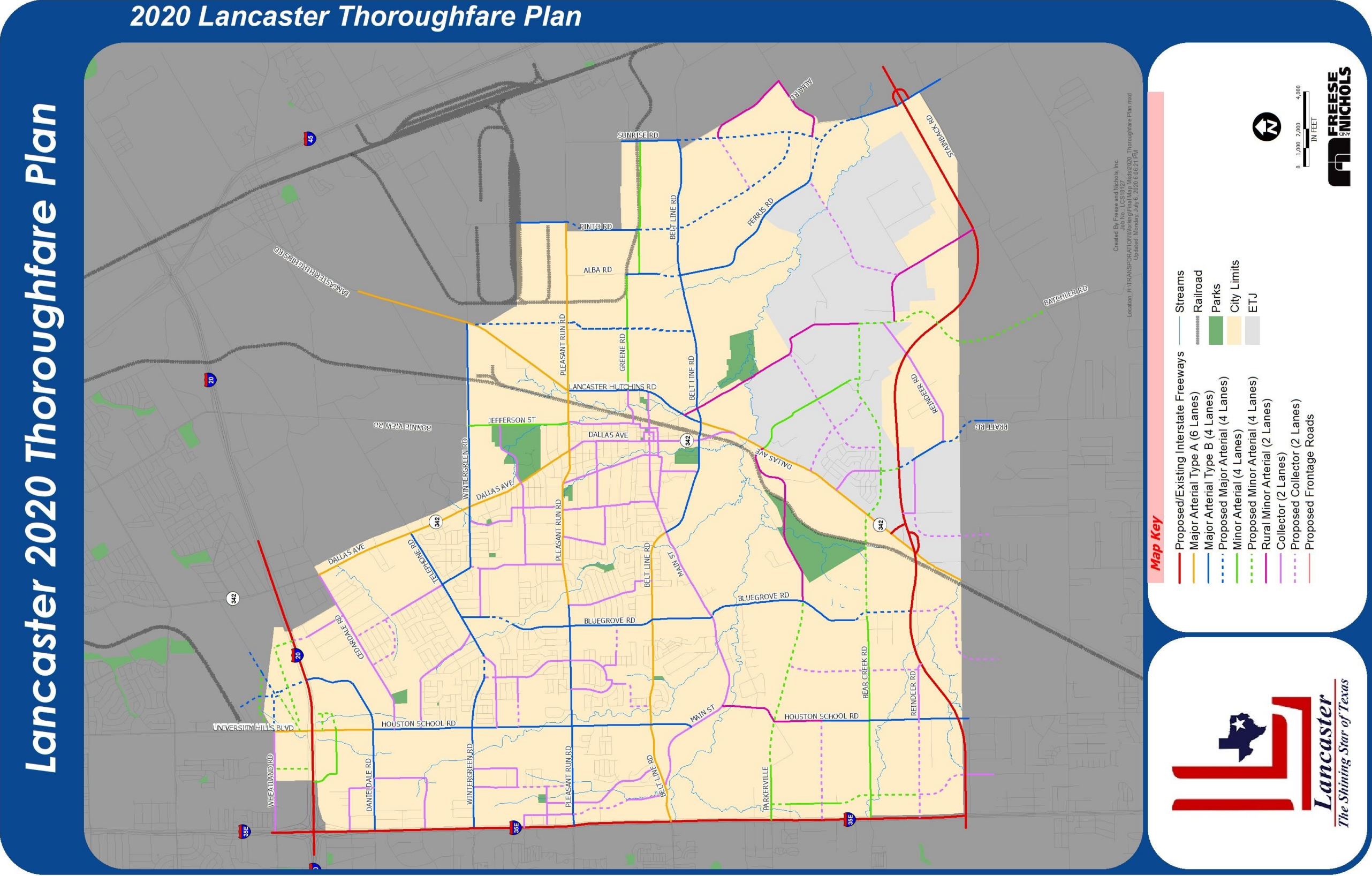
Based on our review of existing thoroughfares within the City of Lancaster, the following guidance is recommended for the expansion of bicycle and pedestrian networks in the City of Lancaster.

- Identify which groups of riders the City wishes to attract to its bike/ped network and *design a system specifically focused on their needs and concerns.*
- Focus on projects that produce early “wins” in promoting bicycling and walking. Such examples could be expanding the Pleasant Run Trail south to Bear Creek Nature Park or connecting downtown to Pleasant Run Road facilities via Main Street.
- Place on emphasis on buffered or separate ROW for cyclists over on-street facilities as they are safer than simple bike lanes. There should be focus on attracting new riders to the system, which must be balanced against satisfying the needs of existing riders.
- The City should also develop a bicycle education and activities program in parallel with development of its bicycle network and in coordination with local cycling organizations and businesses. Efforts should be made to include cycling promotions during community events and engage stakeholders in promoting active transportation. An example of such promotions could be the introduction of “Ciclovias” or Open Streets, a community event that creates car-free streets for several hours on a set day to encourage residents to bike, walk, or run through their community. Work with regional cycling groups to create special events or other initiatives that promote cycling.
- Consider “Pop-up” bike lanes as interim measures along selected streets.
- Create bike parks and other bike-centric facilities within the parks network that create a safe place for children to learn to bike and practice biking.
- Work with the Lancaster Independent School District to identify safe routes to school and develop a cycling education program within schools for children.
- Make bicycle and pedestrian networks a priority in new development areas within the City, as appropriate.
- Create a separate dedicated funding source for bicycle and pedestrian facilities within the City’s Capital Improvement Program.
- Avoid large scale implementation of bicycle and pedestrian facilities along Houston School Road, north of Wintergreen Road. This area is being developed by the City as an industrial area focused on intermodal freight and is a challenging environment for active transportation. It is recommended that future initiatives explore parallel corridors with lower truck activity.

## 2020 Thoroughfare Plan Map

The 2020 Thoroughfare Plan map is shown in Figure 37 on the following page.

Figure 37: 2020 Lancaster Thoroughfare Plan



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## CONTEXT-BASED ROADWAY DESIGN

# Chapter 6: Context-Based Roadway Design

## Context-based Approach

Recent trends in thoroughfare planning practices have provided opportunities for greater flexibility in thoroughfare design. This new trend better complements surrounding land use by creating different roadway standards based on the users of the facility and the surrounding context. The Context Sensitive Solutions (CSS) Design Manual, written by the Institute of Transportation Engineers and the Congress for the New Urbanism, provides a guide on how this emerging practice can be implemented during the thoroughfare planning process. Opportunities for multi-modal corridors that advance economic development and create a safer, more efficient transportation system, arise when the context of a roadway is considered during the planning and design process. The context sensitive approach has been adopted by the Texas Department of Transportation (TxDOT) and has already been successfully implemented in thoroughfare planning processes in other cities across the State of Texas. The updated Lancaster Thoroughfare Plan will advance the concept of flexible roadway design for multi-modal purposes by taking advantage of context sensitive design principles.

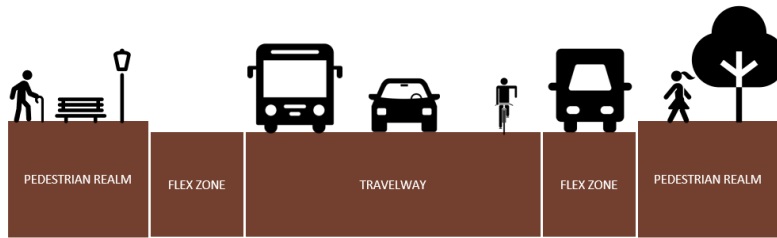
**Figure 38: Context Sensitive Urban Zones**



## Context Sensitive Design Elements

As Lancaster continues to mature as a community, essential functions within the ROW become more diverse to serve existing and emerging activities. As shown in Figure 38, context sensitive design can define networks that add activity to certain corridor areas. Since every function cannot be accommodated within the ROW, a framework for integration and prioritization of functions must be developed. A description of context sensitive street design elements is illustrated in Figure 39 on the next page.

**Figure 39: Context Sensitive Street Design Elements**



	Definition	Travelway	Flex Zone	Pedestrian Realm
Mobility	Moves people and goods	✓	✓	✓
Access for People	People arrive at their destination or transfer between different travel modes		✓	✓
Access for Commerce	Goods and services reach their customers and markets		✓	✓
Storage	Provides storage for vehicles or equipment		✓	
Greening	Enhances aesthetics and environmental health		✓	✓
Activation	Offers vibrant social spaces		✓	✓

## Travel Way

The travel way (travel lanes) includes the central portions of the roadway or thoroughfare. Typically, the travel way is from curb-to-curb when on-street parking is not available. Primarily including the travel lanes, the travel way contains the elements of the roadway that involve the movement of vehicles, transit, bicycles and truck traffic. The design of this portion of the thoroughfare includes travel lane considerations, transit accommodations, and in some cases, bicycle integration.

## Flex Zone

A transition area between the travelway and pedestrian realm, this area provides space for people and goods to transition between moving vehicles and people in the

pedestrian realm. This zone can contain multiple uses along a street including on-street parking, passenger loading, commercial deliveries, and parklets, which are street-side miniature parks that provide a space for people to sit while enjoying the activity of the street.

## Pedestrian Realm

Comprised of sub-zones, including frontage, clear walk, and buffer zones, this area lies between the property line and the flex or travelway zones. This space includes the sidewalk, planting areas, street furniture, lighting, and other pedestrian and business amenities.

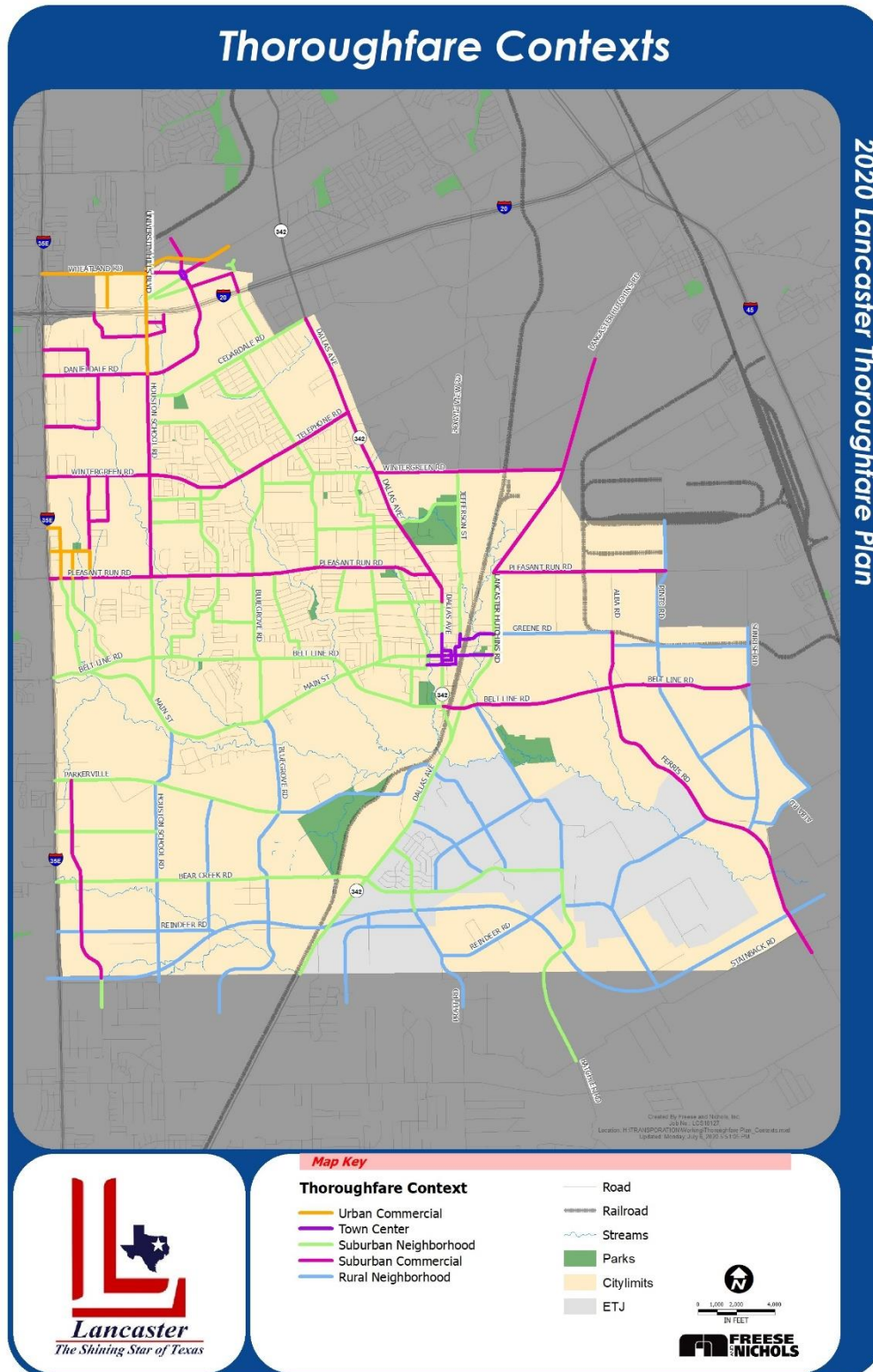
## Context Types

Along with the more flexible functional-classification design standards, the character of the area adjacent to the roadway (street context) will play an important role in the way a street looks. One type of street design will not satisfy all the different needs within Lancaster. Therefore, it is important that the standards incorporate design elements to provide flexibility for differing types of land use characteristics. As illustrated in Figure 40 on the following page, the City of Lancaster has five (5) different context types; Urban

## CONTEXT-BASED ROADWAY DESIGN

Commercial, Town Center, Suburban Neighborhood, Suburban Commercial and Rural Neighborhood.

Figure 40: Thoroughfare Contexts in Lancaster





### Urban Commercial

The urban fabric in this zone includes a diverse mix of uses with nominal building setbacks. Roadways provide for bicycle and pedestrian uses and transit service as these activities are usually present. On street parking and loading/unloaded zones for commercial vehicles are provided. Posted speeds are low and roadway design encourages interaction with surrounding land uses. Parklets and other street-side amenities are often present. Sidewalks may be wider than usual to accommodate high pedestrian activity. Roadways may be closed to traffic on occasion to support special events such as farmers markets or festivals.



### Town Center

Town Center context zones are comprised of a mix of land uses and activity centers that attract all types of people and trips on a daily basis. The mix of land uses in this context type accommodates several different travel modes such as vehicles, transit, pedestrian and bicyclists. In this context type it is sometimes difficult to differentiate between arterials and collectors because the volumes and speeds are similarly ranged. Transit service can be provided on most urban arterials and collectors; the slower speeds allow more frequent transit stops.



Bicycle users are more common in urban commercial and town center zones due to the type of development and context. Bicycle infrastructure can range from cycle tracks along corridors with additional ROW, to shared lanes where speeds are low. Pedestrian accommodation is also important in urban contexts. Higher volumes of pedestrians in urban areas usually warrant additional pedestrian accommodations such as wider sidewalks, street furniture and more intense landscaping along a corridor. On-street parking is an important consideration in urban areas because they serve businesses that front urban center streets. Different types of parking can be implemented such as parallel parking, angled parking and reverse angled parking depending on the needs of the surrounding business and available ROW.

## CONTEXT-BASED ROADWAY DESIGN

### Suburban Neighborhood

Suburban areas typically contain both suburban homes (single family, multifamily, mobile homes) and some neighborhood-scale commercial uses. Access to suburban neighborhoods from the arterial network is primarily through the collector and local network of streets. Driveway management is paramount in these areas. On-street parking is common. Speed restrictions around schools are commonplace.



Public transit routes for suburban developments are usually located on arterial streets, however school bus activity can occur on any street. Bicycle use in suburban development is primarily for leisure with a small percentage of bicycle commuters. Pedestrian use can be either for commuting (to a transit stop or school) or for leisure. Sidewalks provide pedestrian access for those that live in the surrounding neighborhoods.

### Suburban Commercial

In Lancaster, there are several industrial districts near major freeways or rail facilities. Industrial thoroughfares are designed to connect heavy vehicles to and from major highways to industrial areas. These streets are designed with wider travel lanes with larger turning radii than most typical thoroughfares. Industrial streets have limited pedestrian infrastructure but can incorporate bicycle and transit infrastructure.



Pedestrian and bicycle facilities may require buffers due to traffic speeds and volumes.

### Rural Neighborhood

Rural neighborhoods typically consist of very low-density rural residences with agricultural and occasional light industrial uses. Most buildings have substantial setbacks from the roadway. Roadways are usually widely spaced with lower posted speeds and have no on-street parking. Roadways and bridges can be narrow in places and have weight restrictions for trucks. Some local roadways or access roads may be dirt or gravel. Bicycles and pedestrians share the roadway with vehicles and there is very limited transit service, if any. Farm vehicles are often present on roadways. Equestrian travel may occasionally be present on some roadways.



## Integrating Context Sensitive Design Elements with Land Use Types

Table 10 discusses the relationship between context sensitive design and land use between the different context types for the City of Lancaster.

**Table 10: Context Sensitive Design and Land Use**

	Rural Neighborhood	Suburban Commercial	Suburban Neighborhood	Town Center/Urban Commercial
Land Use	Limited range of uses including special industrial, agricultural, and single-family  Larger rural building setbacks	Wide range of uses including live, work, shop, play, dining, and lodging  Larger suburban building setbacks	Primarily residential  Homes can frontage on low volume facilities	Wide range of uses including live, work, shop, and play  Minimal building setbacks
Travelway	Lower speeds on collector facilities  Transit service limited  Shared lanes with bicycles and vehicles	Higher speeds and volumes  Driveway management important  Raised medians desirable  Transit service available; stops spaced no closer than ¼-mile to increase efficiency  On-street bike facilities desirable; may require buffer due to traffic speeds and volumes	Low to moderate speeds and volumes  Driveway management important  Emergency vehicle accommodation  Transit service available  On-street bicycle facilities desirable	Low speeds on collector facilities  Emergency vehicle accommodation  Frequent transit service; stops spaced no greater than ½-mile  Shared lanes with bicycles and vehicles  On-street bicycle facilities desirable where ROW is available
Flex Zone	No on-street parking  Limited transit stops	No on-street parking  Limited transit stops; Stops spaced no closer than ¼-mile to increase efficiency	On-street parking common  Transit stops	On-street parking encouraged  High quality, weather protected transit stops  Freight delivery zones  Pick-up/drop-off zones  Activation spaces (food trucks, festivals)
Pedestrian Realm	Low pedestrian activity  Shared-use path desirable where ROW is available  Limited transit stops  Landscaping and trees to provide shade	Low to moderate pedestrian activity  Wider sidewalks with wide landscaping buffer  Pedestrian access to transit and adjacent land uses  Off-street trails where ROW permits  Limited transit stops; Stops spaced no closer than 1/4 – mile to increase efficiency	Low to moderate pedestrian activity  Wider sidewalks with wide landscaping buffer  Off-street trails where ROW permits  Transit stops  Landscaping and trees to provide shade  Activation spaces (parklets, outdoor dining, public art)	Moderate to high pedestrian activity  Wider sidewalks with landscaping buffer  Bicycle parking  High quality, weather protected transit stops  Pedestrian-scaled lighting and street furniture  Activation spaces (parklets, outdoor dining, public art)



## CONTEXT-BASED ROADWAY DESIGN

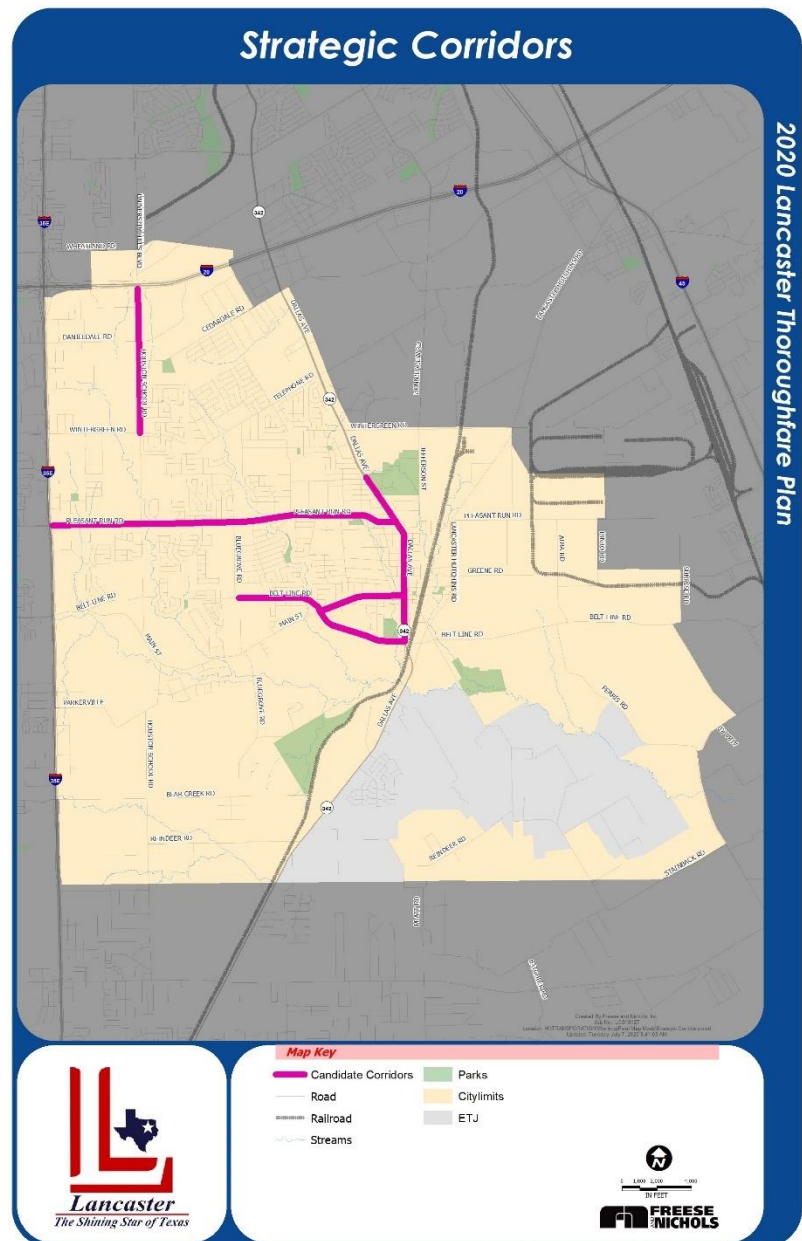
### Context Sensitive Strategic Corridors

Implementing context sensitive design and complete streets into an existing network of thoroughfares can range in difficulty. In some cases, simply adding signage and restriping the roadway may change the entire character of the corridor. In other cases, implementation may involve repaving or acquiring ROW to build the complete street. Retrofitting streets with new design elements are most effective when combined with other improvements such as utility maintenance or pavement overlay.

One of the best ways to introduce complete streets is to incorporate the design elements into the construction of an entirely new thoroughfare. The ability to do this in Lancaster is challenging as most of the urban thoroughfare network is complete.

In Lancaster, there are several key corridors with potential for context sensitive design implementation. This includes expanding upon the existing multi-modal characteristics of the corridor. For each strategic corridor, a few options are considered as potential improvements. The following corridors shown in Figure 41 were examined in specific detail. Cross sections are provided to provide a visual guide to explain the balance between the different uses of the street and illustrate how portions of ROW can be effectively dedicated for specific uses.

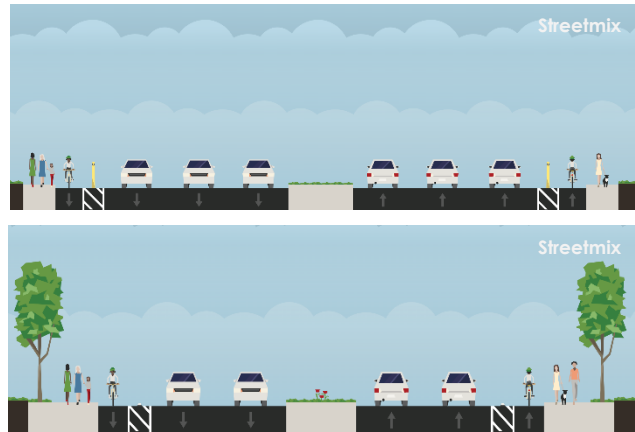
Figure 41: Strategic Corridors



## Pleasant Run Road (from IH-35E to SH 342 / Dallas Avenue)

Pleasant Run Road is an east-west major arterial that runs through the center of Lancaster and connects its downtown core to the City of DeSoto's downtown to the west and Wilmer to the east. Pleasant Run Road is a 4-lane undivided roadway from IH-35E to Dallas Avenue (SH 342). The 2018 network from the regional mobility plan (Mobility 2045) shows current traffic volumes on Pleasant Run Road ranging from 28,000 vehicles per day (vpd) near IH-35E to 10,000 vpd at Dallas Avenue. Future traffic projections show traffic increasing near IH-35E to 34,500 vpd, with 13,000 vpd at Dallas Avenue.

**Figure 42: Potential Corridor Configurations for Pleasant Run Road**



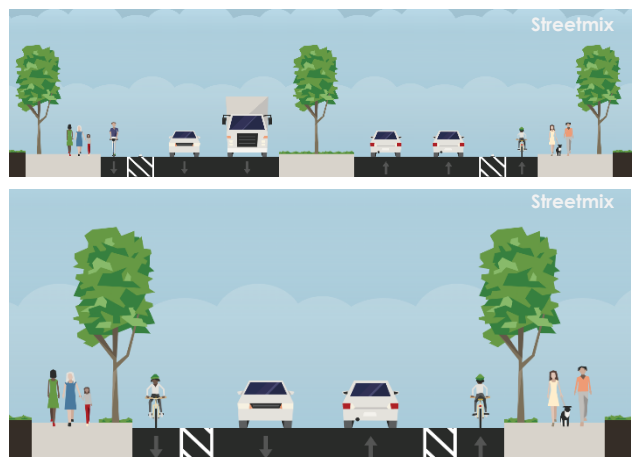
The focus of this corridor is to provide access for a range of modes connecting downtown to IH-35E. This includes transit, bicycling and walking as additional modes to be accommodated along with the automobile. The roadway corridor to the east of Dallas Avenue is expected to remain in its current configuration.

Figure 42 displays potential multi-modal improvements for Pleasant Run Road.

## SH 342 / Dallas Avenue (from Veterans Memorial Parkway to Belt Line Road)

Dallas Avenue is one of the primary north-south mobility corridors in the City. It connects to the proposed Loop 9 to the south and IH-20 to the north. The land uses along the corridor are primarily commercial, residential, and institutional. This corridor runs through downtown Lancaster to connect with Lancaster Community Park, the Public Library, Recreation Center, Lancaster High School, Tiger Stadium, and the Public Safety Building. This corridor starts as a 6-lane divided major arterial to the north and transitions to a 2-lane undivided collector as it approaches downtown.

**Figure 43: Potential Corridor Configurations for Dallas Avenue**



Modeled 2018 counts show just over 10,000 vpd at Veterans Memorial Parkway and just 6,000 vpd at Belt Line Road. The presence of the high school, recreation center, park, seniors center, and historic downtown suggest that improvements should

## CONTEXT-BASED ROADWAY DESIGN

be considered along the corridor to promote bicycle, pedestrian, and transit activity (see Figure 43). Accommodations for low speed vehicles, such as golf carts and electric scooter-type vehicles may also be considered at a future date.

Forecast 2045 volumes show consistent volumes along the corridor, with 18,800 vpd at Veterans Memorial Parkway with almost 19,000 vpd at Belt Line Road. Since there is limited ROW through downtown, accommodations for vehicle mobility pose significant challenges along this section of the corridor. One option is to expand the 4-lane section of the corridor by right-sizing the roadway from Veterans Memorial Parkway south of Oak Street and retaining the 2-lane undivided section through the historic downtown.

### Houston School Road (from IH-20 to Wintergreen)

This facility is a 4-lane divided major arterial that connects residential and major warehousing and intermodal facilities to IH-20 to the north. This corridor is expected to generate substantial truck traffic and is therefore should be designed primarily for vehicles and large trucks. Current volumes of 10,000 to 15,000 vpd are expected to increase substantially to 30,000 to 34,000 vpd. As illustrated in Figure 44, sidewalks should be designed with special care to ensure the safety of pedestrians and cyclists. Any proposed transit stops along this route should include turnouts. Due to the volume of truck traffic and the continued development of intermodal facilities along this corridor, the promotion of transit, walking and cycling along this roadway is not recommended. Alternative corridors should be explored for bicycle, pedestrian, and transit connections to the DART Blue Line and the University of North Texas Campus to the north.

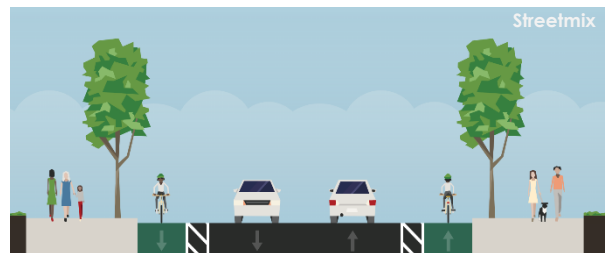
**Figure 44: Potential Roadway Configuration for Houston School Road**



### Main Street (from Belt Line Road to SH 342 / Dallas Avenue)

This 2-lane undivided collector runs from Belt Line Road to Dallas Avenue. There is ample ROW along the corridor providing flexibility in future design. This corridor runs primarily through residential neighborhoods as well as an elementary school and retail as it approaches Dallas Avenue.

**Figure 45: Potential Roadway Configuration for Main Street**



Currently this roadway only carries about 1,400 vpd, which is expected to increase to only 2,000 to 4,000 vpd by 2045. This suggests that no additional roadway capacity is required, and that excess ROW could be reallocated for bicycle and pedestrian uses as shown in Figure 45.

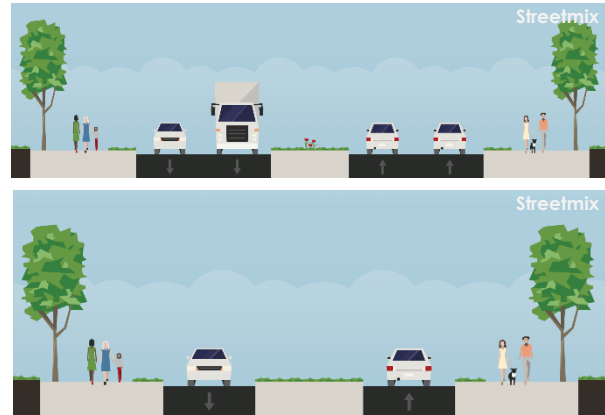


### Belt Line Road (from Bluegrove Road to SH 342 / Dallas Avenue)

This corridor is but one section of Belt Line Road, a key east-west corridor that runs through southern Lancaster, between DeSoto and Wilmer. The primary land uses along this corridor are residential, with variety of commercial, institutional, and retail uses at select locations. This 2-lane undivided roadway has a good bike and pedestrian pathway on its northern half until Main Street. This facility is expected to increase its traffic volumes from 2,500 to 3,300 vpd in 2018 to between 7,500 to 8,400 vpd in 2045.

Since this corridor provides key east-west mobility and connects several growing residential areas, it is expected to require mobility upgrades in the future. Additional bicycle and pedestrian facilities are recommended on its northern edge from Main Street to Dallas Avenue, with a new bike/ped facility running along its southern edge from Bluegrove Road to Dallas Avenue (see Figure 46).

**Figure 46: Potential Roadway Configurations for Belt Line Road**



### Roadway Rightsizing

Rightsizing is the process of reallocating pavement and ROW space to better serve the context of the roadway and the goals of the community. A road built many years ago in an undeveloped area or developing area was sized for a future condition, but now housing, shops, schools, and other destinations have matured in the community. Traffic conditions have stabilized and are more predictable and the needs of adjacent development is better known. These conditions, prevalent in some areas of Lancaster, provide the opportunity to rightsize roadways to optimize these assets for the community.

Using data from the regional travel demand model, corridors were evaluated for rightsizing under two scenario types which both reduce the ultimate number of lanes on the facility.

1. Reallocation – reducing the number of existing travel lanes.
2. Redesignation - preempting roadway widening by acknowledging new ultimate sizing.

## CONTEXT-BASED ROADWAY DESIGN

Reallocations consider ultimate vehicular demands and reallocate existing pavement and/or ROW space to other uses when excess vehicular capacity remains.

Reallocations identified with Lancaster include both straight lane reductions, and rightsizing conversions. The former is straightforward in the reallocation of space with similar intersection and driveway traffic operations and reducing existing vehicular capacity by the travel lane loss.

Redesignations reconsider future investments in expansion, but existing pavement conditions are unaffected. These are made to align traffic demands with roadway capacity supply, reducing excess infrastructure liabilities and reducing overall cost to the City. No existing capacity is lost, only potential future capacity.

### Rightsizing

*is the process of reallocating pavement and ROW to **better** serve the context of the roadway and goals of the community*

It is important to note that vehicular capacity is made up of two parts: link-level segments and intersections. While roadway rightsizing reduces link segment lane configurations, typical capacity bottlenecks are found at intersections so the reduced lane configuration between intersections does not affect true corridor capacity. Intersection treatments through dedicated turn bays, traffic control devices, and signal timing and coordination can offset reduced link-level capacities of roadway rightsizing.

By analyzing the travel demand model for anticipated demand on the network in the future, major movements could be tracked to determine vehicular capacity needs that need absorbed in the collector and arterial network.

### Rightsizing Analysis

Many corridors in Lancaster are experiencing a LOS between A and D and have low daily traffic volumes. These roadways provide excellent opportunities, where ROW is available, to provide additional infrastructure and accommodations for multi-modal elements. Recommended roadways for rightsizing include Main Street, Bluegrove Road, Cedardale Road, Bear Creek Road, and Dizzy Dean Drive. Additional analysis is recommended to determine if these and other roadways are eligible for rightsizing, but preliminary analysis suggests there may be opportunities for rightsizing on these roadways.

### Bike and Pedestrian Complete Streets Integration

Complete Streets is a transportation planning approach that aims to maximize the use of public ROW for all transportation users, regardless of age, ability, or modal choice. This method uses high-level policy direction to influence everyday decision-making processes in roadway design, rather than design prescription. Complete Streets is not about special projects, but about changing the approach to projects on all streets. It is an incremental approach aimed at long-term results. These policies utilize the entire

ROW while focusing on safety, comfort, and convenience as well as cohesiveness within the context of the community. Complete Streets make it easier to cross the street, walk to shops, and bicycle to work, which in turn makes the town a better place to live. These traits are essential to a seamless multimodal transportation network.

### *Benefits*

Complete Streets improve safety, provide modal choices, reduce costs, and lead to better health and stronger economies. By considering the many different users of the roadway, streets can be designed to accommodate everyone and improve the livability of the community.

- Improve Safety – Reduced travel speed which lowers risk to pedestrians and cyclists as well as include pedestrian infrastructure such as sidewalks, bicycle lanes, crossings, median islands, and curb extensions.
- Provide Modal Choices – By building safe, comfortable, and convenient infrastructure for other modes of transportation, residents are more willing to use them.
- Reduced Costs – Encouraging and installing provisions for non-motorized transportation – particularly within and around employment and activity centers, reduce transportation system operation and maintenance costs. It also decreases travel costs for Lancaster residents who can walk or ride a bike to work as opposed to automobiles alone. Further, by reevaluating the needs of the residents and incorporating community input at the beginning of the project, the schedule, scope, and budget can often be reduced. Narrowing the pavement area will also reduce costs.
- Better Health – Accommodating pedestrians and bicyclists in the transportation network enhances the overall health of Lancaster residents. Lancaster's aging, but active population, in addition to kids and teens who cannot drive, look for pedestrian and bicycle facilities to become more active and independent.
- Stronger Economies – Areas that provide safe and comfortable walkability have lower commercial vacancies and higher home and office space values.

### *Economic Benefit*

Complete Streets affect the local economy in various ways. By providing convenient alternatives to driving, such as transit, walking, or biking, residents and visitors save money on transportation costs which can then be used for other expenses, such as housing, restaurants, and entertainment. Congestion costs can also be reduced if residents use alternative modes.

Local businesses see the benefits in improving access to people traveling by foot or bicycle. By increasing pedestrian and bicycle activity, businesses often see increased sales. Bicycle infrastructure can often create jobs directly through increased tourism, bicycle manufacturing, sales and repair, bike tours, and other activities.



## CONTEXT-BASED ROADWAY DESIGN

Complete Streets also create a framework for economic development and spur private investment by improving the public space and making it a more pedestrian and cyclist friendly place. In a downtown area or commercial boulevard, the Complete Streets framework defragments the overall development landscape by visually reducing the space between developments and thus encouraging pedestrian movement between adjacent businesses. Revitalizing key areas throughout Lancaster with pedestrian plazas, wide sidewalks, landscaping, and traffic calming elements may entice private investors to build or redevelop more residential, retail, and office buildings. In addition to private investments, property values increase with the walkability of a neighborhood. Today's college graduates, who comprise an increasing percentage of the workforce and add to the vitality of a local economy, prefer walkable urban neighborhoods.

### Key Intersections

The ability for the roadway network to operate effectively relies on the ability of intersections to efficiently process traffic. Operational conditions typically break down when insufficient turn-lane capacity is available to remove turn movements from the traffic stream. To ensure the ability to provide channelized turn movements, such as a second left-turn or right-turn lane, an additional 22 feet should be provided at key major and minor arterial intersections. To determine the exact dimensional requirements of specific intersections, a traffic analysis should be conducted at the time of facility implementation.

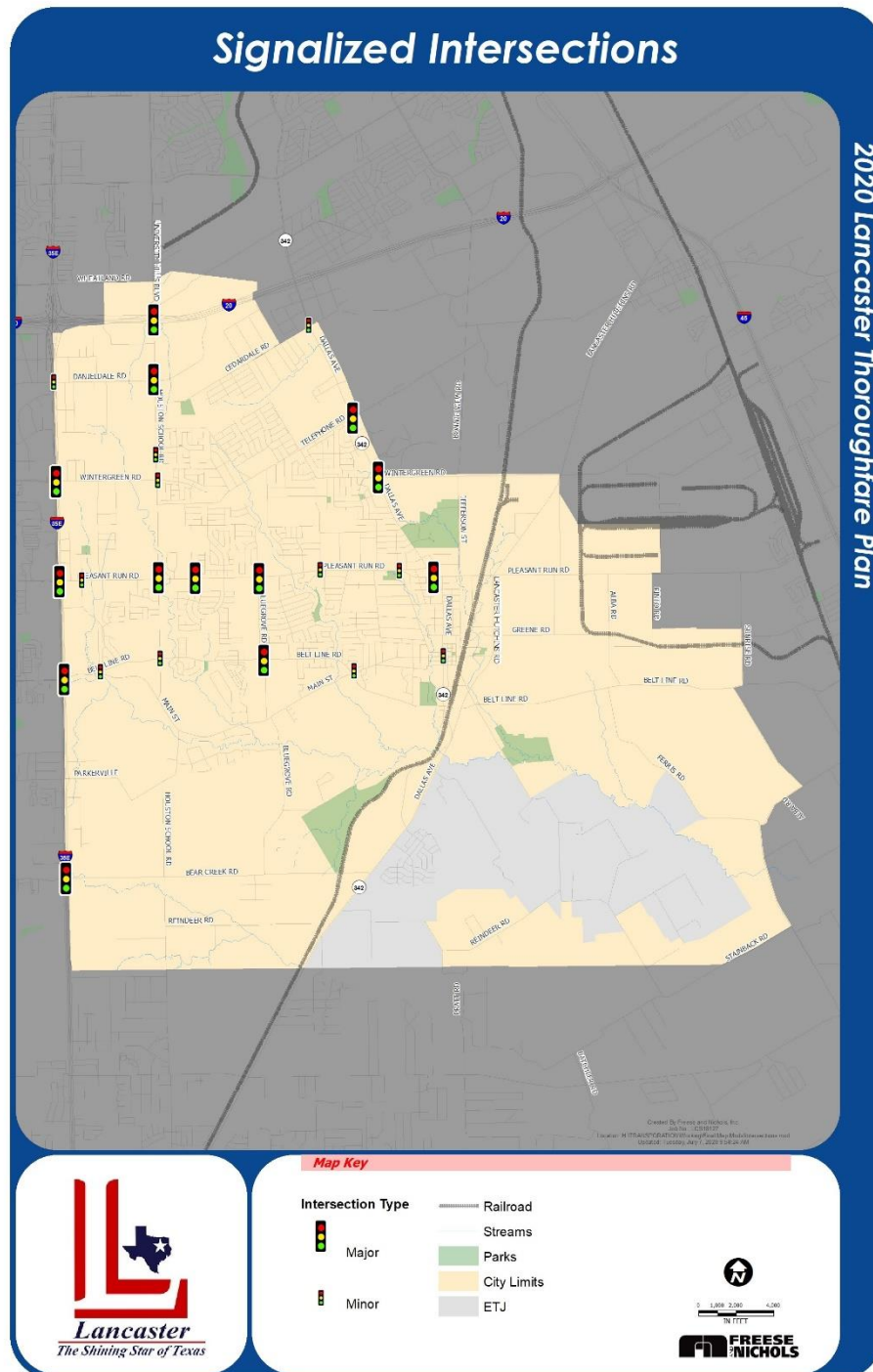
**Table 11: Critical Intersection ROW Requirements**

Critical Intersection ROW Requirements					
Roadway	Major Arterial	Minor Arterials	Major Collector	Minor Collector	Greenway Arterial
Major Arterial / Greenway Arterial	350'	350'	300'	260'	350'
Minor Arterial	300'	300'	260'	260'	300'

As currently defined, divided roadways could accommodate a separate left-turn lane. By adding 22 feet of width, a second left-turn and separate right-turn bay can be added as needed to an intersection. Travel lanes of 11 feet provide enough roadway width for turn movements. Table 11 presents the ROW requirements for critical intersections in Lancaster.

Twenty-three signalized intersections were identified in Lancaster (see Figure 47) and are located at crossings between major and minor arterials or freeway frontage roads. At these intersections, the City should require additional ROW (via the platting process if possible) to allow for additional turn lanes that may be needed in the future. Note that a review of intersections suggest that significant, widespread intersection upgrades and the expansion of the signalized intersection network are expected in the near term.

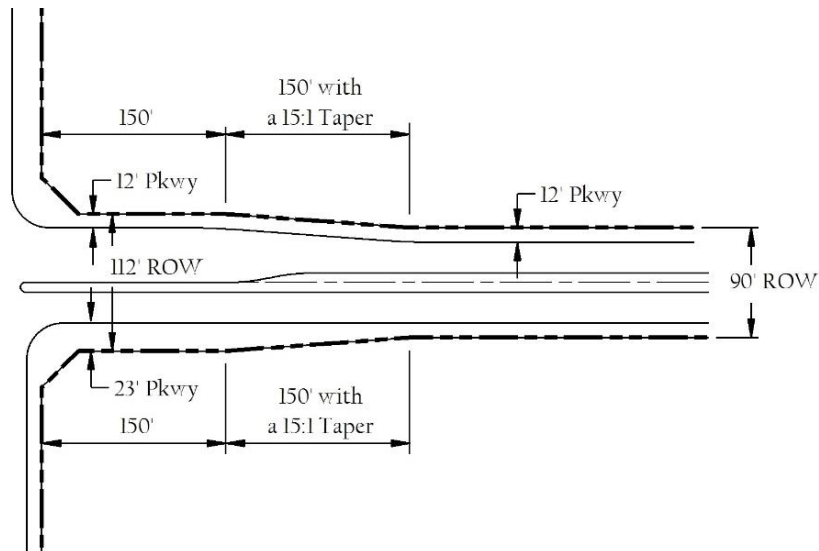
**Figure 47: Signalized Intersections in Lancaster**



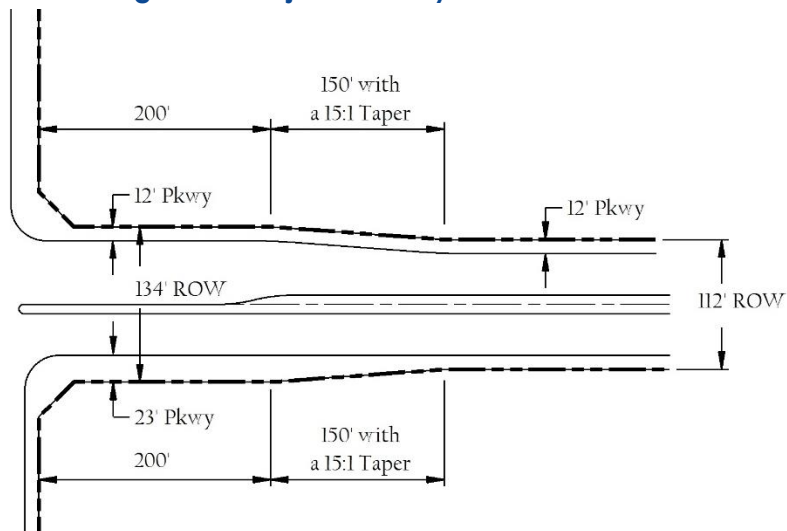
## CONTEXT-BASED ROADWAY DESIGN

Figures 48 and 49 below identify the necessary distances by roadway class for storage and transition requirements. The distances allow for minimum turn-lane storage and lane transitions. In high intensity development areas, a traffic analysis should be conducted to determine appropriate intersection requirements.

**Figure 48: Minor Roadway Intersections**



**Figure 49: Major Roadway Intersections**



### Intersection Congestion Mitigation

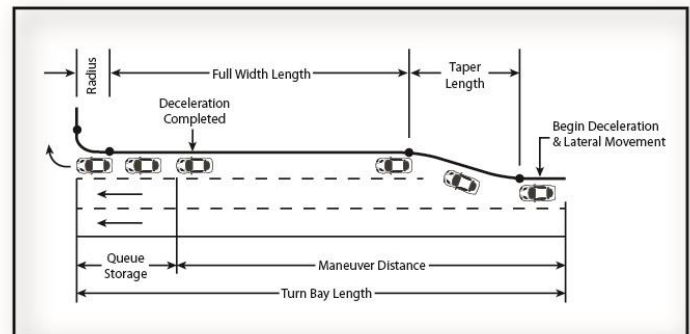
Intersection performance can be improved through several different mitigation techniques. These techniques can be applied to better handle the current traffic or the forecasted traffic. The following are some of the intersection improvements that can be implemented at critical intersections within the City of Lancaster.



**Signal Timing** – Signal timing is a critical technique that involves synchronizing the sequence and duration of each phase of a traffic signal to improve the overall traffic flow throughout the corridor. The timing of signals often involves coordinating an entire signal system or series of signals. Advanced traffic signal controllers provide the traffic engineer great flexibility in controlling the flow of traffic through an intersection. Proper signal timing along a corridor can increase the efficiency of the roadway by allowing for the maximum number of vehicles to pass in the shortest time. It also affects the air quality of the city because travel time and idling are reduced. This technique can be used to increase capacity on corridors and is a less expensive option than adding lanes.

**Right Turn Capacity Increase** – The addition of acceleration and deceleration lanes can provide operational benefits throughout a corridor and at an intersection by allowing turning vehicles to exit the roadway without affecting the through movement of traffic. As shown in Figure 50, this design allows a more efficient flow of traffic along a corridor and allows vehicles to form platoons at the signalized intersections, thereby maximizing the flow that the signal can handle.

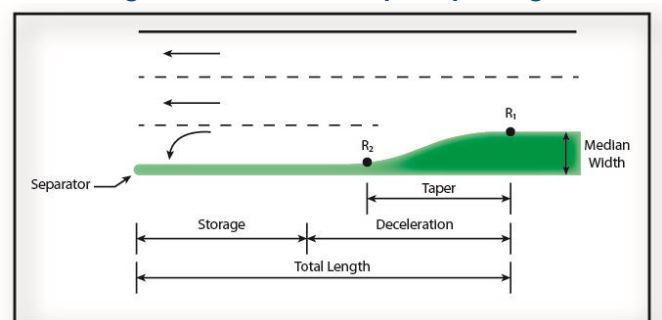
**Figure 50: Right Turn Capacity Design**



Right turn lanes consist of storage length and acceleration or deceleration length. Lengths of auxiliary lanes (acceleration or deceleration) are a function of the posted speed, but queue lengths are normally established on a case by case basis. The Highway Capacity Manual and TxDOT's Operations and Procedures Manual provide guidance on the provision of auxiliary lanes. These improvements are not one size fits all. Consideration must be given for posted speed, traffic volume, and development type.

**Left Turn Capacity Increase** – Much like right-turn lanes, left-turn lanes also allow the turning vehicles to exit the through lanes without affecting the through traffic. As illustrated in Figure 51, left-turn lanes should provide adequate queue storage for signalized and unsignalized intersections based on an operational analysis. The length of deceleration is dependent on the posted speed and the amount of speed differential acceptable for the thoroughfare.

**Figure 51: Left Turn Capacity Design**



## Chapter 7: Plan Implementation

The recommended projects include improvements to enhance connectivity within the city through several modes, including, but not limited to, roadway and intersection improvements, complete streets applications, bike and pedestrian enhancements, and transit connectivity.

### Committed and Funded Projects

Both TxDOT and the North Central Texas Council of Governments have several committed and planned projects within the City of Lancaster and the surrounding area. Figure 52 reveals the location of these projects within the City of Lancaster.

### Project Prioritization

Final prioritization of transportation improvements within the city of Lancaster will be at the discretion of the City. The recommendations shown in Figure 53 and Table 12 on the following pages are preliminary in nature and will need to be vetted by the City before the list is finalized.

Figure 52: Committed and Funded Projects

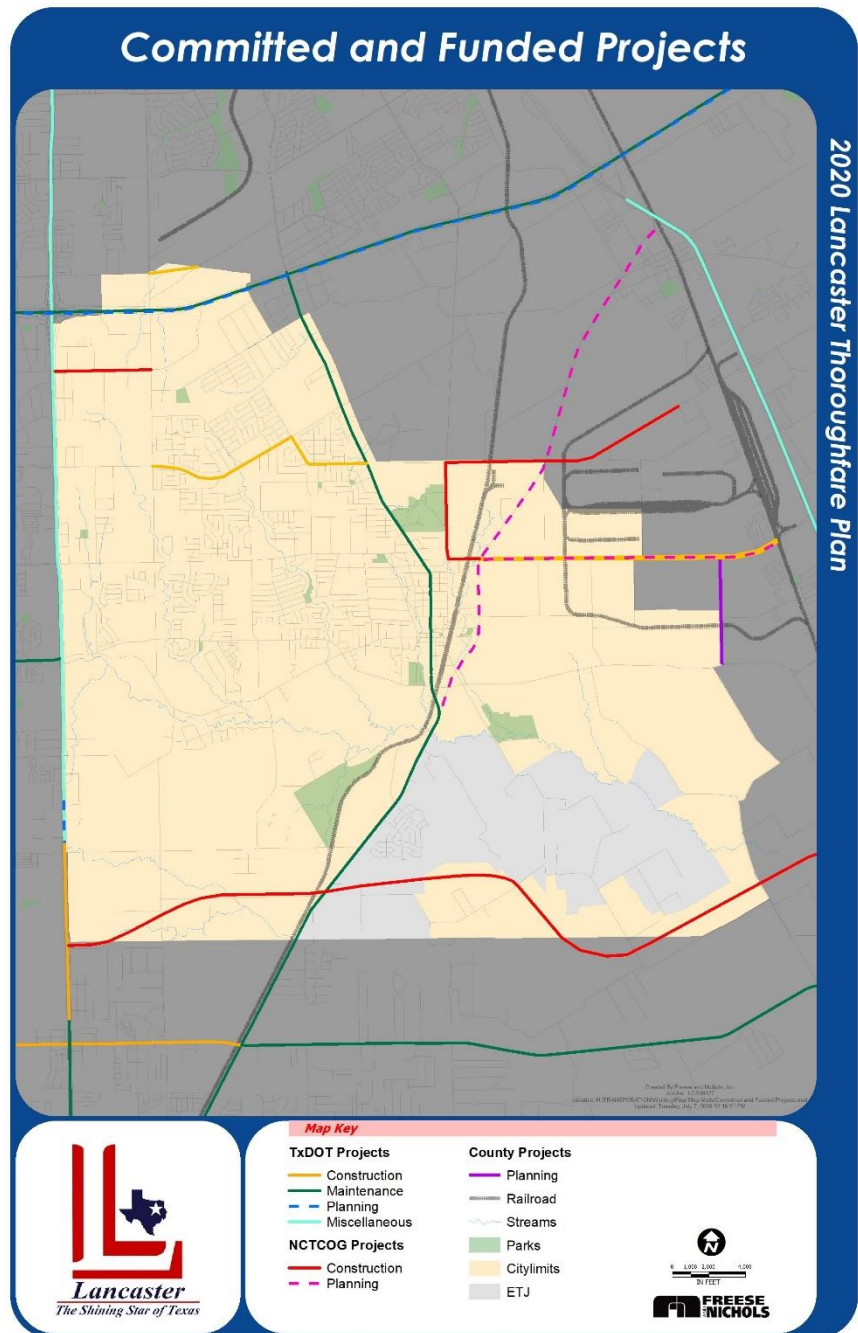
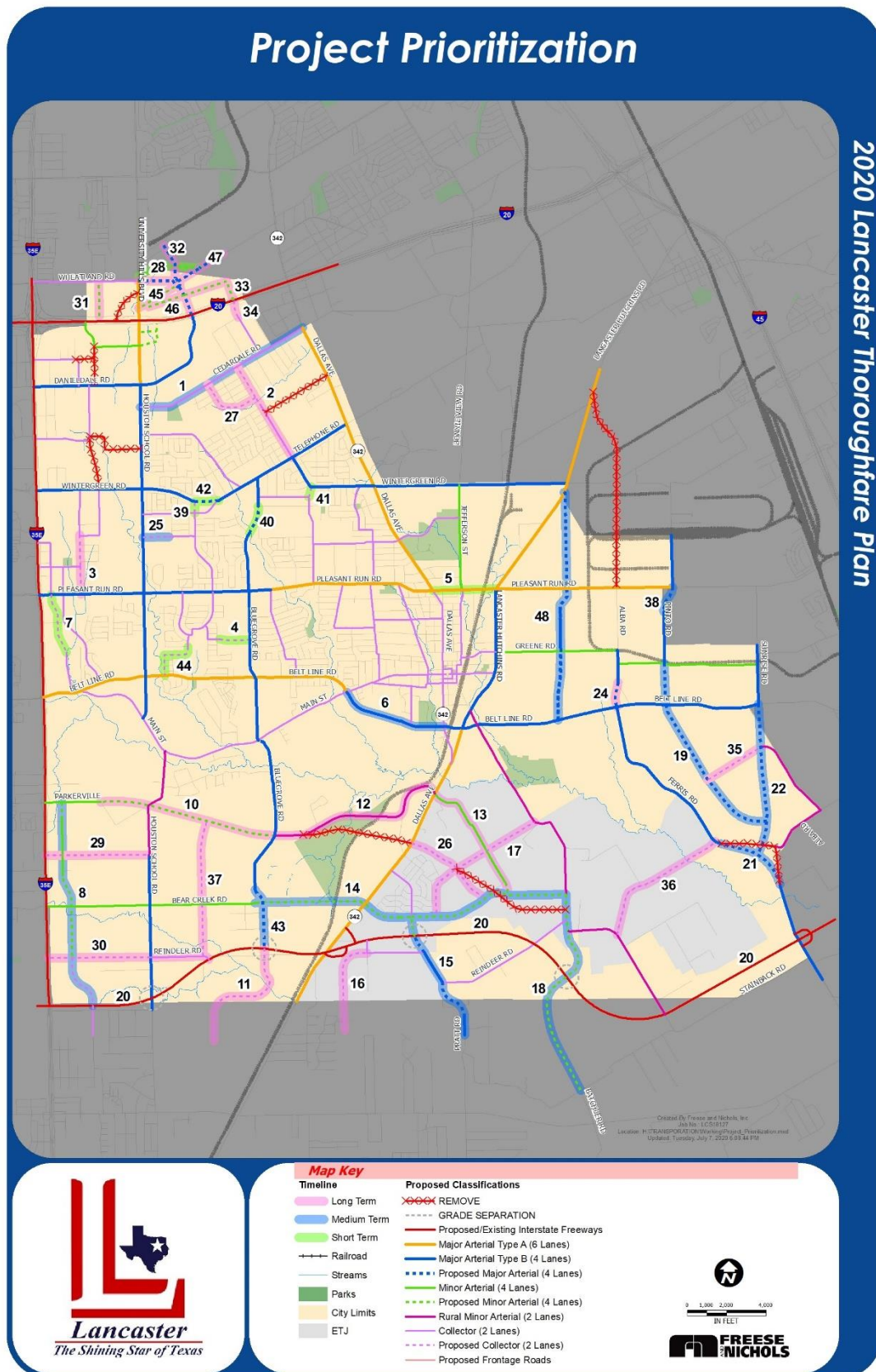


Figure 53: Project Prioritization





**Table 12: Thoroughfare Plan Project Listing**

ID	Project Description	Recommendation	Time Frame	Comment
1	Cedardale Road (Houston School Road to Dallas Avenue)	Rightsize and reconstruct to a 2-lane facility; Flare at ends	Medium Term	Residential use, industrial access on other facilities Low travel demand model volume (4,000 daily) Dallas extension east is 4-lane
2	Dizzy Dean Road (Wintergreen North of Telephone Road to Cedardale Road)	Extend and rightsize to 2-lane collector; Flare near Telephone Road	Long Term	Logistics/distribution planned for land on east side Encourage access via Telephone and Dallas instead (away from res.) Minimize bridge width
3	Marsalis Road Connector (Longhorn Drive to Pleasant Run Road)	Construct a 2-lane collector	Long Term	Connection improves north-south mobility in northern Lancaster
4	Indian Lilac Drive Extension (Millbrook Drive to Bridle Path)	Construct a 2-lane collector	Short Term	Charter school on Pleasant Run; need alternate routes for pickup/drop off Elementary school also in neighborhood Ensure future connections to Bluegrove and Belt Line
5	Pleasant Run Road (Dallas Avenue to Lancaster Hutchins)	Rightsize to 4-lane facility	Short Term	Low travel demand model volume (16,000-24,000 daily; 1,900 pk hr dir) Repurpose space for other objectives E-W through-travel shifting to Loop 9. Dallas County / TxDOT Project.
6	Belt Line Road (West Main to Dallas Avenue)	Rightsize to 4-lane facility	Medium Term	Low travel demand model volume (20,000 daily; 1,600 pk hr dir) E-W through-travel shifting to Loop 9
7	Main Street (Belt Line to Lancaster Hutchins)	Reconstruct and rightsize to a 2-lane collector	Short Term	Constrained ROW for any future widening Low travel demand model volume (2,000-4,000 daily) Maintain historic character through downtown
8	Meadowlark Lane (Reindeer Road south)	Extend backage	Medium Term	Align with major collector in Red Oak Plan Secondary Loop 9 access
9	Reindeer Road (Houston School to Loop 9)	Extend collector	Long Term	Maintain roadway ROW and access to Loop 9 Secondary Loop 9 access
10	New North-South Collector (Parkerville to Bluegrove Road)	New 2-lane collector	Long Term	Ensure ROW preserved in future for collector between Houston School and Bluegrove
11	Bluegrove Road (Loop 9 south to Red Oak)	New 2-lane collector	Long Term	Align with major collector in Red Oak Plan Need full intersection access at Loop 9 Leverage existing creek crossing
12	Parkerville Extension / Realignment (Bluegrove Road to SH 342)	Realign, downgrade to Rural Minor Arterial	Long Term	Current alignment goes through Bear Creek Nature Park Realign to follow Ten Mile Road, cut through tip of park E-W travel covered from other facilities per travel demand model
13	Moreland Extension (SH 342 to Bear Creek extension #14)	Remove and realign, downgrade to collector	Long Term	Ensure ROW preserved in future Realign to meet other objectives (see Bear Creek extension)
14	Bear Creek Road Extension (Bluegrove Road to Nokomis Road)	New 2-lane collector	Medium Term	Extend to east to support: local E-W travel (without Loop 9), access, and circulation Move tie-in point on Nokomis Road north to avoid home/pond on Moreland Road Ensure ROW preserved in future
15	Reindeer Road/Pratt Road (south of Bear Creek)	Realign, upgrade segment	Medium Term	Realign for traditional intersection at Bear Creek and Reindeer Continue Minor Arterial status to align with Red Oak Plan
16	Reindeer Road Collectors (east of Dallas Avenue)	New 2-lane collector	Long Term	Ensure ROW preserved in future Align with major collector in Red Oak Plan
17	New Collector Roadway	New 2-lane collector	Long Term	Implementation timeline dependent upon development activity

	(Nokomis Road to Bear Creek Extension #14)			
18	Nokomis Road (south of Bear Creek)	Upgrade to Minor Arterial	Medium Term	Upgrade segment from Rural Arterial to Minor Arterial to meet with Bear Creek extension Upgrade south of Nokomis Road 90 turn to align with Red Oak Plan
19	Pinto Road Connector (Greene Road to Sunrise Road Extension #22)	Construct 4-lane major arterial (type B)	Medium Term	Dependent upon Loop 9 construction and subsequent development activity
20	Loop 9	Add grade separations and planned ramping	N/A – TxDOT Project	According to Feasibility Study
21	Ferris Road Realignment (Watermill Road Extension #36 to Ferris Road)	Realign major arterial	Medium Term	Dependent upon Loop 9 construction and subsequent development activity
22	Sunrise Road (Belt Line Road to Ferris Road)	New 4-lane major arterial	Medium Term	Leverage Loop 9 interchange Straighten facility for easier N-S mobility for industrial development
23	Danieldale Road Extension (IH-20 north to Campus District Village Center)	New 4-lane major arterial	Long Term	Construction dependent upon development activity
24	Alba Road Extension (south of Greene Road to Belt Line Road)	New 4-lane major arterial	Long Term	Construction dependent upon development activity
25	Reynolds Drive Extension (Reynolds Drive to Houston School Road)	New 2-lane collector	Medium Term	Construction dependent upon development activity
26	New Collector Roadway (Lancaster Hutchins Road to Bear Creek Extension #14)	New 2-lane collector	Long Term	Construction dependent upon development activity
27	Boardwalk Avenue Extension (Boardwalk Avenue to Dizzy Dean Extension #2)	New 2-lane collector	Long Term	Construction dependent upon development activity
28	Wheatland Road Extension (from East Wheatland Road to Houston School Road)	New 2-lane collector	Short Term	City of Dallas Project. Construction phase imminent.
29	New Collector Roadway (Houston School Road to IH-35E)	New 2-lane collector	Long Term	Construction dependent upon development activity
30	Reindeer Road Connector (Houston School Road to IH-35E)	New 2-lane collector	Long Term	Construction dependent upon development activity and Loop 9 construction
31	New Collector Roadway (IH-20 north to East Wheatland Road)	New 2-lane collector	Long Term	Construction dependent upon development activity
32	Danieldale Road Extension (IH-20 north across East Wheatland Road Extension)	New 4-lane major arterial	Long Term	Construction dependent upon development activity
33	New Minor Arterial (Danieldale extension - #23 east then south to IH-20 frontage roads)	New 4-lane minor arterial	Long Term	Construction dependent upon development activity
34	Trippie Street Connector (Lyle Street north to IH-20 frontage roads)	New 2-lane collector	Long Term	Construction dependent upon development activity
35	Sunrise Road Connector (Sunrise Road to Pinto Road)	New 2-lane collector	Long Term	Construction dependent upon development activity
36	Watermill Road Extension (Wilson Road to Ferris Road)	New 2-lane collector	Long Term	Construction dependent upon development activity

## PLAN IMPLEMENTATION

37	New Collector Roadway (Parkerville extension (#10) south to Reindeer Road))	New 2-lane collector	Long Term	Construction dependent upon development activity
38	Pinto Road Realignment (Pinto Road at Pleasant Run Road)	Realign 4-lane major arterial connection	Medium Term	Dependent upon Loop 9 construction and subsequent development activity
39	Chapman Drive Extension (Wintergreen Road to Wintergreen Road)	Construct new 4-lane major arterial connection	Short Term	Creates new east-west connection and supports ongoing development in northern Lancaster
40	Bluegrove Road Connector (Kings Cross Drive to Sunny Meadow Road)	Construct new 4-lane major arterial connection	Short Term	Strengthens north-south connections and supports ongoing development in northern Lancaster
41	Rodgers Avenue Connector (Balkin Drive to Wintergreen Road)	New 2-lane collector	Short Term	Strengthens north-south connections and supports ongoing development in northern Lancaster
42	Wintergreen Connector (East of Godiva Street to Baskin Drive)	Construct new 4-lane major arterial connection	Short Term	Immediate improvement to east-west connectivity in Lancaster.
43	Bluegrove Road Extension	Construct new 4-lane major arterial connection	Medium Term	Dependent upon Loop 9 construction and subsequent development activity
44	Millbrook Drive Extension	Construct new 2-lane collector	Short Term	Enhance access to Rosa Parks-Millbrooks Elementary School Ensure future connections to Bluegrove and Belt Line
45	New Collector Roadway (Campus District Village Center to Houston School Road)	Construct new 4-lane collector	Long Term	Construction dependent upon development activity
46	New Collector Roadway (Danielsdale Road Extension to Campus District Village Center)	Construct new 4-lane collector	Long Term	Construction dependent upon development activity
47	New 4-lane Major Arterial Roadway (Wheatland Road Extension to Campus District City Center)	Construct new 4-lane major arterial	Long Term	Construction dependent upon development activity
48	Cornell Road (Lancaster-Hutchins Road to Belt Line Road)	Construct new 4 lane major arterial	Medium Term	Construction dependent upon Prime Pointe development activity

### Recommended Funding Strategies

Several potential funding sources have been identified for the implementation of recommended transportation improvements in Lancaster.

#### *Impact Fee Program*

The funding and implementation matrix were developed to identify potential funding sources for Plan recommendations. For this section of the document, the matrix was broken into four (4) categories:

- Roadway Construction
- Roadway Rehabilitation
- Intersection Improvements
- Miscellaneous



### Roadway Construction

Roadway construction funding sources, such as Category 12: Strategic Priority Funds, are geared towards new road roadway construction, roadway realignments, and interchange construction. Table 13 provides a list of funding sources that could be used to fund roadway construction. Category 12 Funds are specifically obligated to projects that promote economic development and improve interstate connectivity. Eligible projects include construction of additional lanes and new roadways, grade separations, interchanges, bottleneck removal, and safety improvements. These funding sources could be instrumental in the construction of recommended mobility projects.

**Table 13: Funding Sources for Roadway Construction**

Roadway Construction		
Recommendation	Problem Addressed	Potential Funding Source(s)
<b>Street Construction</b>	Improved Access Capacity Improvement Congestion Relief Economic Development	Category 12: Strategic Priority Funds Category 4E: Rural Mobility/Rehabilitation Category 11: Texas Mobility Fund Category 8B: Texas FM Road Expansion Proposition 7 Funds
<b>Frontage Road Construction</b>	Congestion Relief Economic Development Capacity Improvement	Category 12: Strategic Priority Funds Category 11 Proposition 7 Funds
<b>Roadway Realignment</b>	Safety Improved Traffic Flow Congestion Relief	Category 12 Category 4E Category 11 Proposition 7 Funds
<b>Interchange Construction</b>	Capacity Improvement Congestion Relief	Category 12 Category 11 Proposition 7 Funds

## PLAN IMPLEMENTATION

### Roadway Rehabilitation

Roadway rehabilitation projects include investments in transportation improvements that increase capacity, improve safety, or facilitate economic development. It includes enhancements such as grade separations, roadway resurfacing, lane additions, and ROW acquisitions. Funding options for roadway rehabilitation include, but are not limited to, Category 4F: Rehabilitation in Urban and Rural Areas, which are geared towards the rehabilitation of on-system roadways that are functionally classified higher than minor collectors. Table 14 provides a list of funding sources that could be used for roadway rehabilitation improvements.

**Table 14: Funding Sources for Roadway Rehabilitation**

Roadway Rehabilitation		
Recommendation	Problem Addressed	Potential Funding Source(s)
Grade Separation	Congestions Relief Safety	CMAQ Category 2: Metro Corridor Funds Category 11 Texas Mobility Fund
Lane Addition	Congestion Relief Improved Capacity	STP-MM Category 12: Strategic Priority Funds Category 11 Texas Mobility Fund
Roadway Widening	Congestion Relief Improved Capacity Accommodates wider vehicles	STP-MM Category 12 Category 4F Category 3C Category 11 Texas Mobility Fund
Narrower Lanes	Traffic Calming Safety	Category 11 Category 4E
ROW Acquisition	ROW for future Road Expansion	Category 2 Category 4E Proposition 7 Funds
HOV Lane	Congestion Relief Capacity Improvement	Texas Mobility Fund
Road Dieting	Traffic Calming Safety Economic Development	Category 11 Category 4E

### Intersection Improvements

Intersection improvement funds are geared towards intersection safety improvements and access management projects that improve the overall flow of traffic within a corridor. Intersection improvements include traffic signalization, intersection lighting, roundabouts, turn lanes, and intersection geometry improvements. Intersection improvement funding sources include but are not limited to Category 10A Traffic Control Devices and Category 4E: Rural Mobility/Rehabilitation. Category 10A funds can be used for the installation or rehabilitation of traffic signals and intersection lighting on on-system roadways. Category 4E funds can be used in rural unincorporated areas or cities with populations below 5,000. Eligible projects include right and left turn lanes, intersection Geometry improvements, and roundabouts. Table 15 includes a list of funding sources for intersection improvements.

**Table 15: Funding Sources for Intersection Improvements**

Potential Funding Sources for Intersection Improvements		
Recommendation	Problem Addressed	Potential Funding Source(s)
<b>Traffic Signalization</b>	Congestion Relief Safety	CMAQ Category 10A: Traffic Control Devices category 10B: Rehab of Traffic Management Systems Category 11
<b>Intersection Geometry Improvements</b>	Safety Congestions Relief Capacity Improvement Accommodates Wider Vehicles	CMAQ Category 4E Category 11
<b>Intersection Lighting</b>	Safety	Category 12 CMAQ Category 11
<b>Left and Right Turn Lanes</b>	Safety Congestions Relief Capacity Improvement	CMAQ Category 11 Category 4E
<b>Round-A-Bout</b>	Congestion Relief Capacity Improvement Safety Traffic Calming	CMAQ STEP Funds Category 11 Category 4E



## PLAN IMPLEMENTATION

### Miscellaneous Projects

Miscellaneous improvements range from bridge construction to pedestrian amenities and traffic impact assessments. Some of the eligible funding sources for these improvements include the Statewide Transportation Enhancement Program (STEP) funds. STEP funds are available for non-traditional transportation projects such as bike and pedestrian initiatives, landscaping, and special studies. Although federally funded, these funds are not restricted to on-system facilities. Table 16 provides a list of funding options available for miscellaneous projects.

**Table 16: Potential Funding Sources for Miscellaneous Projects**

Potential Funding Sources for Miscellaneous Projects		
Recommendation	Problem Addressed	Potential Funding Source(s)
<b>Bridge Construction/ Reconstruction</b>	Safety Capacity Improvement Accommodate Wider Vehicles	Category 6A: On System Bridge Program Category 6B: Off System Bridge Program Category 11
<b>Street Lighting</b>	Safety Economic Development	CMAQ STEP Funds Category 11
<b>Railroad Grade Separation Repair/ Construction</b>	Congestion Relief Safety	Category 4G: Railroad Grade Separation Category 11
<b>Pedestrian Amenities/ Landscaping</b>	Traffic Calming Safety Economic Development Beautification	CMAQ STEP Funds Green Ribbon Funds Category 11
<b>Transit Expansion</b>	Transit Needs Multimodal Connectivity	CMAQ STEP Funds Category 11
<b>Traffic Impact Assessment</b>	Congestion Relief Traffic Calming Safety Improved Access	CMAQ Regional Toll Revenue
<b>Miscellaneous</b>	Safety Congestion Relief Capacity Improvement	Category 4F: Category 4E Category 3C: NHS Rehabilitation Category 8A: Rehabilitation of FM Roads Category 11 Texas Mobility Fund

Additional funding sources for the cities located in the North Central Texas Region is available at NCTCOG's One Stop Shop for Transportation Funding:

<http://www.nctcog.org/trans/onestop/>.

## Conclusion

Successful implementation of the Lancaster Thoroughfare Plan will require the coordination between agencies and stakeholder groups to gain public acceptance and acquire funding. Two of the biggest deterrents to plans implementation are public resistance and a lack of agency coordination.

Public acceptance is essential to the implementation of a project. Many projects, though planned, designed, and funded, have fallen apart due to public disapproval. In order to avoid this, all recommendations presented in this plan need to be vetted through the public participation process prior to implementation. Each project needs to be presented and reviewed by the public to provide awareness of any negative or positive impacts of the project.

Agency coordination is also essential in the implementation of transportation projects. Because transportation is regional, different agencies and jurisdictions must communicate to ensure more seamless connectivity. One city's or county's strategy to widen a roadway in order to accommodate more traffic can create issues for an adjacent city attempting to accommodate traffic on the same facility through the implementation of complete streets and sustainable land use policies. Successful implementation of the Lancaster Thoroughfare Plan will require constant and transparent communication with Dallas, DeSoto, Hutchins, Red Oak, Wilmer in addition to Dallas County, NCTCOG, and TxDOT.

The current work in progress on roadways throughout the county would not be possible without the leadership of elected city officials advocating together for improvements to roads and other transportation infrastructure. To implement this plan, continued leadership from the City will be required.

## LANCASTER CITY COUNCIL

### City Council Work Session

3.

**Meeting Date:** 08/17/2020

**Policy Statement:** This request supports the City Council 2019-2020 Policy Agenda

**Goal(s):** Quality Development

**Submitted by:** Carey Neal, Assistant to the City Manager

---

#### **Agenda Caption:**

Discuss amending the Lancaster Development Code (LDC) to address concrete pavement for residential front yards.

#### **Background:**

As prescribed in the City Council rules and procedures as amended August 2019, Section D. City Council Agenda Process, Subsection 1.b., Councilmember Carol Strain-Burk requested that an item be included on City Council Work Session for the purpose of discussing amending the Lancaster Development Code (LDC) to address concrete pavement for residential front yards.

On June 18, 2020, staff responded to the request of Councilmember Strain-Burk reporting new construction for paved residential front yard parking. Staff researched and provided a site plan of the residence and an excerpt from the Lancaster Land Development Code (LDC) Section 14.604 Residential Parking. The LDC does not prohibit or state any limitations regarding paving the front yard of a residential property.

On June 24, 2020, staff responded to a request of Councilmember Strain-Burk inquiring if the LDC allows a residential circular driveway. Section 14.604 of the LDC, "No required off-street parking space shall be located in the required front yard in any residential or agricultural district"; however, the LDC does not prohibit residential concrete paving on front yards.

At the work session held on July 20, 2020, staff provided Council with the LDC Ordinance 2010-10-25 Section 14.604 to explore the option of amendment. Council requested additional information regarding the definition of a circular drive and the landscape that goes along with it; the definition of a setback, as well as a few examples.

Council will receive a presentation with the updated information requested and the examples.



## LANCASTER CITY COUNCIL

### City Council Work Session

4.

**Meeting Date:** 08/17/2020

**Policy Statement:** This request supports the City Council 2019-2020 Policy Agenda

**Goal(s):** Healthy, Safe & Engaged Community

**Submitted by:** Carey Neal, Assistant to the City Manager

---

### **Agenda Caption:**

Discuss the historical marker located at 220 W. Main St, Lancaster, TX 75146.

### **Background:**

As prescribed in the City Council rules and procedures as amended August 2019, Section D. City Council Agenda Process, Subsection 1.b., Mayor Clyde C. Hairston requested that an item be included on a work session agenda for the purpose of discussing the historical marker located at 220 W. Main St, Lancaster, TX 75146.

On or about July 4, 2020, Mayor Clyde C. Hairston along with Council received an email from a constituent regarding the removal of a confederate monument located within the City of Lancaster. The confederate monument was identified as the Texas historical marker located at 220 W. Main St. Lancaster, TX 75146; more commonly known as the Lancaster Municipal Court.

This marker is identified as marker number 6655 of the Texas Historical Commission, and reads "Site of Confederate Arms Factory. Established by Joseph H. Sherrard, William L. Killem, Pleasant Taylor and John M. Crockett in 1862 to manufacture pistols for the State of Texas."

The marker at the Court was placed and designated by the Texas Historical Commission as a landmark.

### **Attachments**

Attachments

---

**From:** [REDACTED]  
**Date:** July 4, 2020 at 12:10:15 PM CDT  
**To:** "Hairston, Clyde" <[chairston@lancaster-tx.com](mailto:chairston@lancaster-tx.com)>  
**Subject:** #External - Confederate Symbols in Lancaster

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Clyde,

I hope you are well. I'm writing because as Mayor of Lancaster you have the duty and power to serve the interests of the community. I'm writing to you as a regular citizen, who thinks about how policy affects our lives and how we engage with each other, not as a Republican or democrat.

The reason for my email is the Confederate Arms Factory monument.

([https://www.waymarking.com/waymarks/WMTMBZ\\_Site of Confederate Arms Factory](https://www.waymarking.com/waymarks/WMTMBZ_Site_of_Confederate_Arms_Factory)) Monuments, statues, schools, seals, and even road names celebrate people, and put them on a pedestal (sometimes literally). The Confederacy was many things, and Southern history is a proud one. But the Confederacy also fought to preserve the enslaving of Americans, and the oppression and murdering of many African-Americans. I believe these actions do not reflect the values of the community, and are deeply hurtful to decent people everywhere. It is also important to remember that many Confederate monuments and names were dedicated in the first half of the 1900s during the Lost Cause movement when the South was trying to reframe the Civil War to avoid thinking about slavery as its cause, and when minorities were trying to gain human rights. For those whose ancestors were enslaved, these are symbols of oppression.

If we want to remember this part of Southern history, we should do it in a museum, where people can learn about it while understanding the context of time. Texas, and Dallas County for that matter, should continue to be a welcoming place for businesses and all people, and I think it is of utmost importance to rename the monument. I'm not passing judgement on anyone in the community, please believe me. I also believe in the 1st amendment, and people being able to voice their opinions. This is about government-sanctioned honoring of these people. This isn't about erasing or hiding history, it's about finding the right way to remember it. If you find it in your heart, please also take the time to talk to your council members. I am also contacting them separately.

Thank you for your time.

[REDACTED]


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you are not logged in. [\[log in\]](#)

## Site of Confederate Arms Factory - Texas Historical Markers on Waymarking.com


[View waymark gallery](#)


### Site of Confederate Arms Factory

in [Texas Historical Markers](#)Posted by: [Benchmark Blasterz](#)

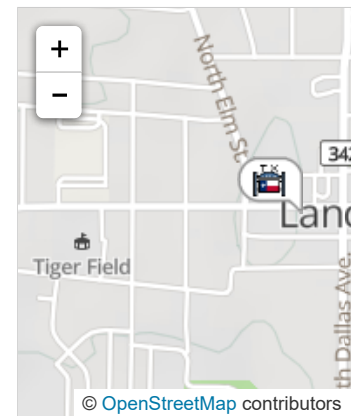
N 32° 35.524 W 096° 45.459

14S E 710452 N 3608283

**Quick Description:** A 1936 grey granite pedestal style marker at the Public Library in Lancaster TX

**Location:** Texas, United States**Date Posted:** 12/10/2016 10:35:42 AM**Waymark Code:** WMTMBZ**Published By:** [YoSam.](#)**Views:** 3

#### Map



Search from Here

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- [View Waymark](#)
- [View Gallery \(3\)](#)

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[Newest](#)  
[Requiring Review](#)

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#### Group Lists:

[Groups I Manage](#)  
[Groups I Belong To](#)  
[Newest Groups](#)  
[Recruiting Groups](#)

#### Scavenger Hunts:

[My Scavenger Hunts](#)  
[Newest Public Hunts](#)

#### Download this waymark:

- [.GPX File](#)
- [.LOC File](#)
- [.KML File \(Google Earth\)](#)

#### Long Description:

This marker is located on Main Street near downtown Lancaster.

**Marker Number:** 6655

#### Marker Text:

Established by Joseph H. Sherrard, William L. Killem, Pleasant Taylor and John M. Crockett in 1862 to manufacture pistols for the State of Texas.  
Erected by the State of Texas 1936

#### Visit Instructions:

Please include a picture in your log. You and your GPS receiver do not need to be in the picture. We encourage additional information about your visit (comments about the surrounding area, how you ended up near the marker, etc.) in the log.

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[Nearest Texas Historical Markers](#)



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Date	Logged	Log
	12/9/2016	<a href="#">Benchmark Blasterz visited it</a>
	10/13/2012	<a href="#">WalksfarTX visited it</a>



[View all visits/logs](#)

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15 Year Fixed

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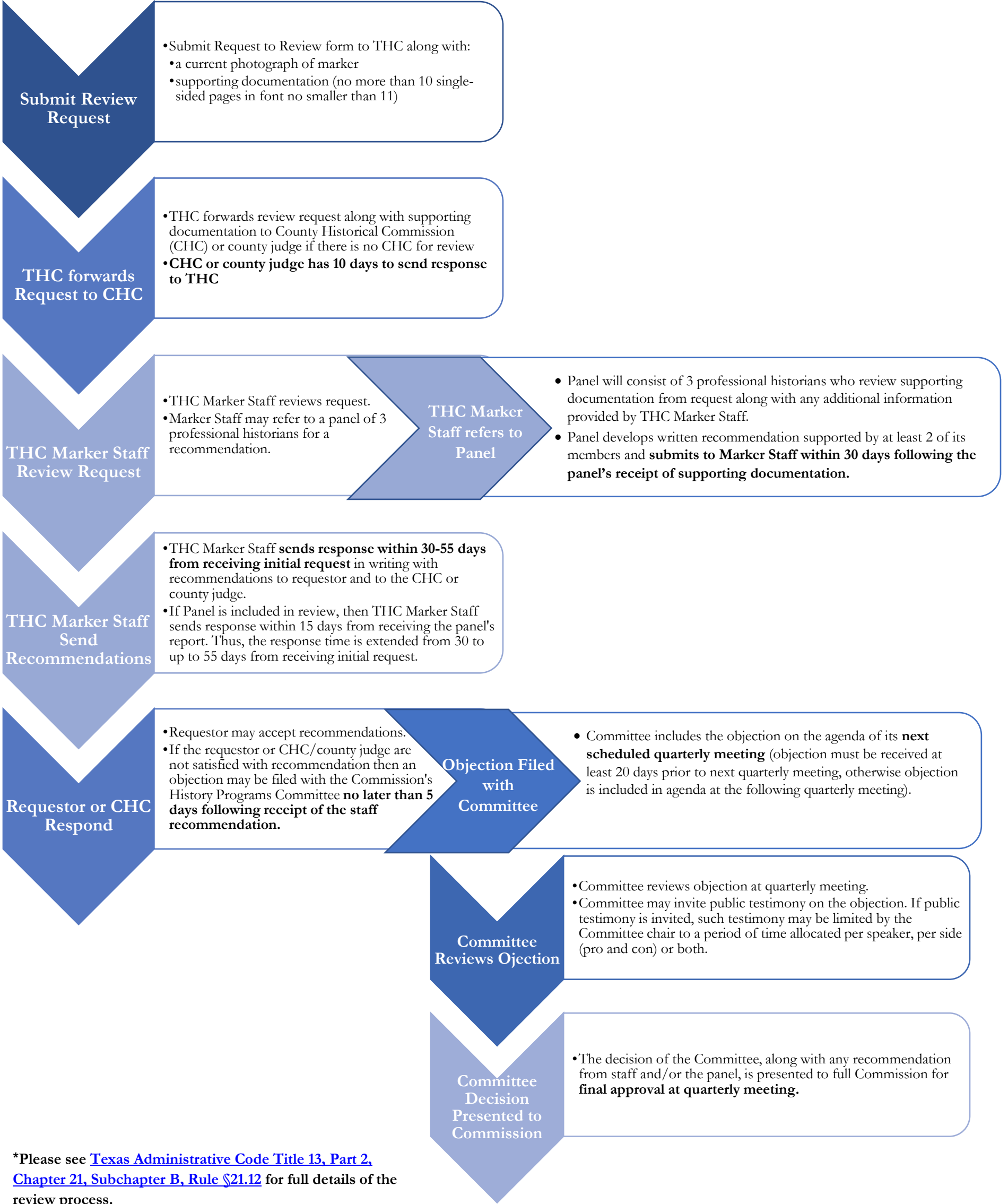
\$

\$225,000

T &Cs apply. NMLS#11136

Calcu

Marker Review Request Process



**If Request or Objection Approved**

- If a request or objection is approved by the Commission, THC Marker Staff will determine if existing marker requires replacement or if it can be corrected through the installation of a supplemental marker.
- The cost of such correction shall be paid by the Commission, subject to the availability of funds for that purpose.
- THC Marker Staff will write the replacement or supplemental text.

**If Not Approved**

- The Commission will not accept subsequent requests or objections that are substantively similar to a request or objection that has already gone through the request process.
- A request for review may only be filed against a single marker, and no individual or organization may file more than one request for review per calendar year.

Revised March 2019

TEXAS HISTORICAL COMMISSION

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REQUEST FOR A REVIEW OF MARKER TEXT

**Marker Title:**

**County:**

**Marker Number (if known):**

**Marker Year:**

**Reason for marker correction (please give brief reason for correction)**

- ☐ The name of an individual or organization is not spelled correctly:
- ☐ Text includes a date that is not historically accurate:
- ☐ Text includes a statement that is not historically accurate:
- ☐ Has been installed at the wrong location:

**Street address of marker site, if applicable:**

Otherwise, give a precise verbal description here (e.g. northwest corner of 3rd and Elm, or FM 1411, 2.6 miles east of Post Oak Creek):

**Requestor** (may be individual or organization):

**Contact person** (if applicable):

**Mailing address:**                      **City, State, Zip:**

**Phone:**                      **Email address** (required):

Requests shall be submitted to the Commission at 1511 Colorado St., Austin, TX 78701; by mail to P.O. Box 12276, Austin, TX 78711; or by email to [thc@thc.texas.gov](mailto:thc@thc.texas.gov).

Please include the following:

1. A current photograph of the marker.
2. Supporting documentation  
(no more than 10 single-sided pages printed in a font size no smaller than 11)

Please see <https://www.thc.texas.gov/marker-review> for full details of the review process.

Revised March 2019

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Texas Historical Commission  
P.O. Box 12276  
Austin, TX 78711-2276  
512.463.6100  
fax 512.475.4872  
[thc@thc.texas.gov](mailto:thc@thc.texas.gov)



**TEXAS HISTORICAL COMMISSION**  
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Home (/) | Gallery of Custom-Built Guns (/Gallery-of-Custom-Built-Guns\_c\_237.html) |  
 Tucker & Sherrard Dragoon Revolver (/Tucker-Sherrard-Dragoon-Revolver\_c\_250.html)

## TUCKER & SHERRARD DRAGOON REVOLVER

The Texas-based Tucker & Sherrard Armory has been dubbed "Texas' most highly publicized maker of Arms during the Civil War and the least effective". In 1862, the *Dallas Herald* announced the partnership of "Tucker, Sherrard, Killen and Burnie...for the purpose of manufacturing Colt's and other revolving Pistols." The news of Texas' newest arms plant was of great interest to Lieutenant Governor John M. Crockett who immediately lobbied the Military Board to offer the new firm a contract to produce pistols for the Confederacy.

After obtaining the Board's approval, Crockett approached the partners of the Lancaster County-based firm and offered them a government contract in exchange for naming him a partner; which they did and from then on John M. Crockett became the spokesperson for the firm. From there, the story becomes a little bizarre. The original order received by the plant was for 100 "old style Colt's Army Revolvers" (Dragoon-style) per month at a price of \$40 per pistol. The original delivery deadline was slated for May 1862; however by September, not a single pistol had been delivered. A string of letters written by Crockett to the state Board between May of 1862 and April of 1863 makes every excuse imaginable for the armories' delay in delivering even a single pistol. Crockett blames everything from a lack of able-bodied workmen, a lack of necessary equipment, a lack of raw materials, and a general concern that if the pistols were delayed long enough, he could ensure that they would be delivered to the Texas State Military Board instead of being "pressed into general service" by the Confederate Conscription Officers (as a proud Texan, Crockett wanted to assure the board that his pistols would be used by Texas boys only). The delay in delivery was so bad, that in one letter Crockett ran out of excuses and resorted to blaming "the prejudice against our establishment on account of the exemption of conscripts in it" with "much being said to injure [our firm]". In each letter Crockett continually reassured the Board that the first delivery of "the elusive 400 pistols" would be made soon as he claimed that "nearly all the pistols are complete". However, many scholars agree that the Tucker and Sherrard Armory began selling pistols under the table. Friedrich Victor, in an article published in *The Texas Gun Collector* wrote that Tucker & Sherrard revolvers were mostly likely sold to officers and enlisted men directly "at an excessive profit". Crockett himself, lamented the low price at which he had agreed to sell his pistols to the state when he wrote, "we are actually told here that we can have \$100 a piece for them." After advancing the Tucker & Sherrard (or Sherrard, as it was often misspelled in government documents) revolver company \$5,000 in early 1863 with an additional \$10,000 bond to follow a few months later, the Military Board had finally had enough and cancelled the contract without ever having received a single pistol. Despite the fact that Tuck & Sherrard were never able to fulfill even their first order of pistols, there are a number of documented Tucker & Sherrard pistols that saw use on Civil War Battlefields. A Tucker & Sherrard revolver that was picked off a battlefield by a soldier from the 28th Maine recently sold at auction for \$86,250.

War-time Tucker and Sherard pistols are characterized by their close resemblance to the Colt M1848 Dragoon Pistol. Their most distinguishing feature is their lack of a "loading aperture" or relief cut in the barrel frame to allow the necessary clearance for loading conical bullets. Historians are baffled as to why the company left this feature out but, it is a universal characteristic on all documented Tucker & Sherard pistols. The revolver can easily be loaded with round balls however, the shooter simply needs to "start" the ball in the out-bored chamber and rotate it under the loading lever to seat it. Tucker and Sherard Dragoons also have larger back strap screws than their Colt counterparts and the heads of these screws can be seen protruding out of their holes. Tucker loading levers are also unique in the fact that the spring loaded lever latch is the updated horizontal style found on the Colt M1851 and M1860 revolvers rather than vertical as seen on the Colt Dragoon pistol from which it was copied.

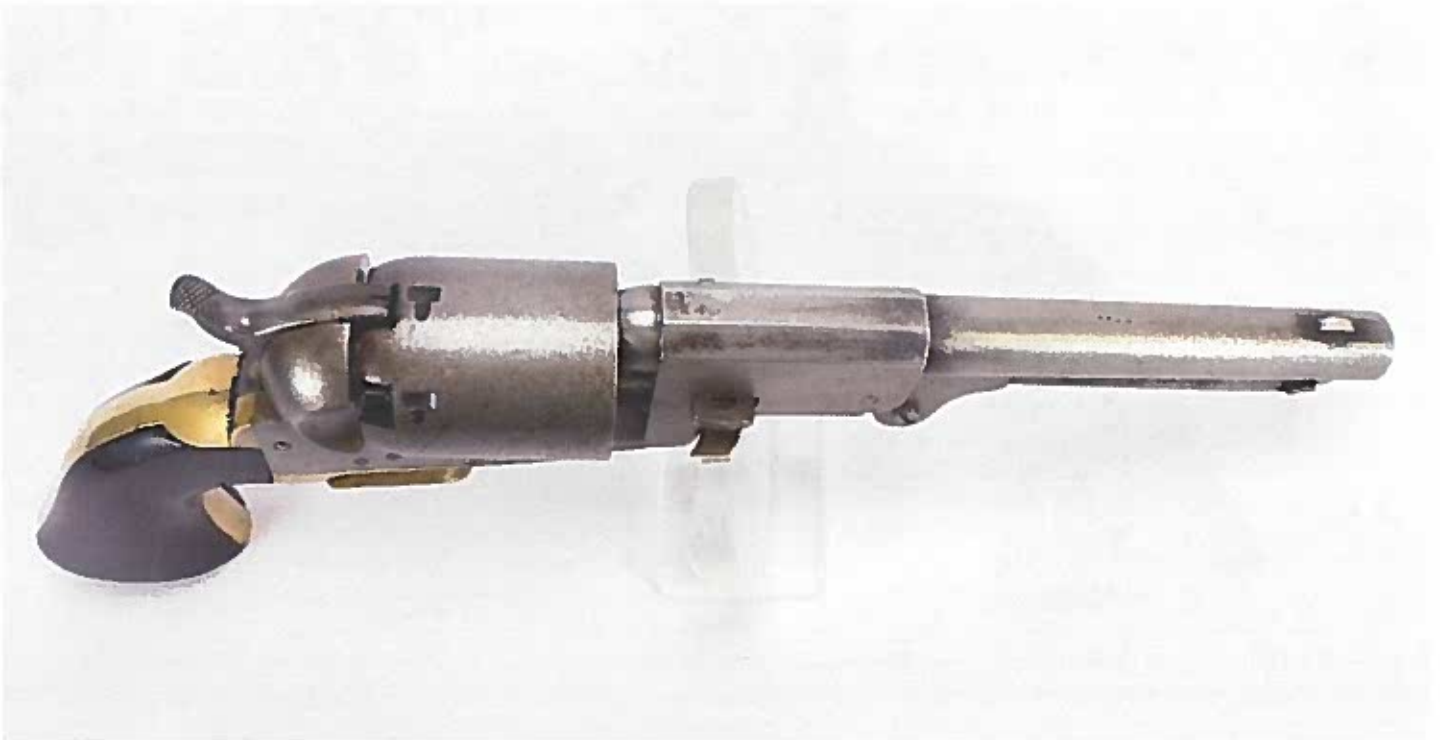
This pistol, built by Steve Krolick is a faithful copy of the infamous Tucker & Sherrard Pistol in every way shape and form. Steve built this pistol using a brand new Uberti Colt Dragoon as a base. He began by meticulously welding up the loading aperture relief cut and hand filed it to shape. The result is an absolutely perfect Tucker and Sherrard barrel that has no traces of ever having a loading cut to begin with. Steve continued by defarbing the whole pistol; removing all the Italian and Colt markings from the barrel, frame, cylinder, trigger guard and back strap. Steve also machined washers for the back strap screws to allow them to protrude just like the originals. Steve also completely re-worked the loading lever and barrel catch to be the correct "horizontal catch" rather than vertical. The grips were then thinned out and re-shaped before being refinished and antiqued. Steve marked all the major components serial numbers the appropriate size and font to original Tucker pistols. He also stamped many of the components with a small sub-inspector's "A" stamp. Finally, Steve finished the work by installing an appropriate Confederate spring-less wedge and antiqued the whole pistol to simulate the wear and patina that would have developed on the pistol from war time service.

The Tucker and Sherrard pistols are arguably the most rare and mysterious revolvers of the Civil War. Never before has a war time production Tucker pistol been produced. This would be the perfect pistol for a Texas Cavalry Reenactor, and the bizarre history surrounding it would be sure to delight many a listener around the campfire. This pistol would also be a great addition to any CS pistol enthusiasts collection. It's new barrel with crisp rifling will make it a great shooter too!

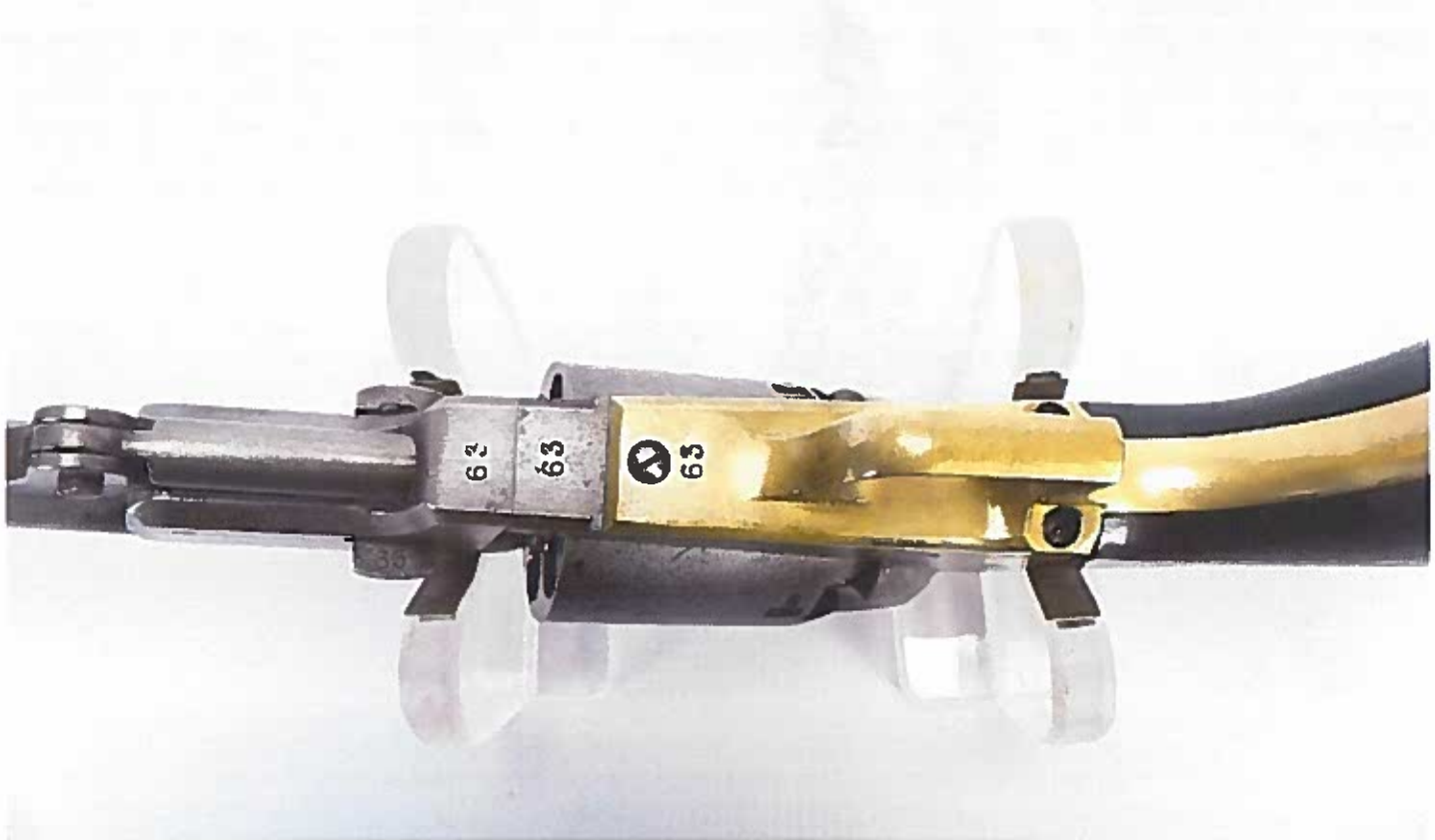














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# Texas Pistol Makers of the Confederacy

William A. Gary

All of the Confederate pistol makers of the Civil War were located either in Georgia or Texas. Much more has been known and written about the Georgia makers than about those from Texas. Also, much that has been written about the Texas makers has not been accurate. The purpose of this paper is to straighten out the inaccurate history of these "Texas pistol makers of the Confederacy."

There were two revolver makers in Texas who played a part in arming the Confederacy. They were the firms of J.H. Dance and Brothers, and the Lancaster Pistol Factory. The latter of these two companies made those revolvers known to collectors as the Tucker and Sherrard and the Clark and Sherrard.

It has always been thought that the Dance Brothers never had a contract with either the Confederate government or the Texas Military Board. It has also been thought that while the Lancaster firm had a contract with the Texas Military Board, they never completed any revolvers during the war.

I would like to explore with you what is now known and believed to be the facts about these two revolver makers.

## J.H. DANCE & BROS.

Nothing quickens the heartbeat of a Texas gun collector more than the anticipation of acquiring a Confederate Dance revolver. True, they were not really Confederate, only secondary Confederate. The Dance factory never had a contract with the Confederate government or even the Texas Military Board; however, the guns were manufactured during the Civil War, so they must have been purchased by Confederate soldiers for wartime use.

A true statement?

Not by a long shot.

Not only did the Dance factory furnish revolvers for the Confederate Army, but prior to the end of the war, the Confederate government probably acquired ownership under the Confederate Ordnance Department. We are getting ahead of the story, though. First we need to go back to the beginning and review the history of the Dance family's venture into revolver production.

The family dates back to Thomas Dance (1675-1765) of Virginia, whose grandson, Ethelred (1750-1828), served for North Carolina during the American Revolution. Family members migrated first from Virginia



to North Carolina, then to Alabama and, finally, to Texas. The four Dance brothers settled in Brazoria County, Texas, in 1853, where they became the preeminent gun makers of Texas' history and the preeminent family of gun makers for the Confederacy.

The brothers were James Henry, George Perry, David Ethelred, and Isaac Claudius Dance. A cousin, Harrison Perry Dance, also was involved in the business. The firm of J.H. Dance & Bros. was founded in the town of Columbia, Texas, which was situated on the banks of the Brazos River near Houston and Galveston. By today's terms the business would have been called a machine shop, but at that time it was known as a steam factory. When the Civil War broke out, the brothers decided they should join the war effort and so they halted other business efforts in favor of producing revolvers for the Confederacy. This must have been quite an undertaking for a group of country boys who had no experience in gun making or in the manufacture of guns.

This decision probably was made in late 1861 or early 1862. It is interesting to note that the Dance brothers never received any money from the Confederate government or the Texas Military Board for financial assistance to start production. It is also interesting to note that all four brothers entered the Confederate Army by enlisting in the 35th Texas Cavalry (Brown's Regiment).

Over the years, disagreements have surfaced as to whether the revolvers made in Columbia should be known by the name of Dance or as Dance and Parks. Jesse W., Anderson, and Samuel Park were brothers who lived in Columbia and worked at the pistol factory throughout the war.



**.44 Caliber Dance revolver from the collection of Don Bryan.**

Fuller and Steuart's *Firearms of the Confederacy* (1944) refer to the revolvers as Dance and Parks because they believed the Park brothers were partners in the firm. Carroll C. Holloway in *Texas Gun Lore* (1951) refuted this and said it was a misconception to believe that the Parks were any more than factory employees.

There are no records of a business relationship between Dance and Park in either Brazoria or Grimes county, although there are tax records before, during, and after the war in Brazoria County for both groups of men. There also are tax records for J.H. Dance & Bros. However, records from the National Archives reveal that all the correspondence refers to the firm as Dance and Park, never as J.H. Dance and Bros. This would indicate that there must have been some form of business relationship between the two groups.

Information now available on the wartime operation of the Dance Bros. pistol factory comes from the National Archives and the "Mattie and George Duff Letters and Papers" now in the Confederate Collection of the Hill County Junior College Library in Hillsboro, Texas.

Mattie Duff was a cousin of the Dances and lived in the home of James Henry Dance while her husband, George, served as Captain of Company A of the 35th Texas Cavalry. Fortunately for today's students of the Dance pistol factory, letters to her husband, in which she kept him well informed about the pistol factory, were preserved.

The Dance brothers did better than many other Confederate revolver makers in getting their factory into production. Military service records from the National

Archives indicate that on May 1, 1862, George P., David E., and Isaac Claudius Dance were detached from their unit for duty at the pistol factory in Columbia where they remained until the war ended. James Henry Dance, however, continued in the service as 1st Lieutenant in the 35th Texas Cavalry. Despite his absence from the factory, he still seems to have played some type of management role in the firm's operation.

By July 1862 the factory was close to finishing its first revolvers. Mattie wrote George on July 5, 1862, "the boys think they will soon get three or four of their pistols finished."

On February 25, 1863, she wrote "there was a benefit given in Columbia to raise money for disabled Confederate veterans. The boys gave them a very fine pistol which they sold. I took a chance on it for you but lost it. Mr. Beal Terry drew it."

All Confederate arms makers found it very difficult to locate skilled workers due to the Confederate Conscription Act, which drafted all white males ages 18 to 35 without exception. Their only recourse was to convince the army to assign smiths and mechanics to work in the factories, although few firms had much success with this approach. The Dance brothers, however, were quite successful. More than 35 soldiers were assigned to work at the factory and at least 23 of them came from the 35th Texas Cavalry (Brown's Regiment). This success was no doubt due in part to James Henry Dance, one of the unit's officers.

Another contributing factor was that most of the Texas units in the Confederate Army had trouble secur-



**.36 Caliber Dance revolver from the collection of Cliff Young.**

ing arms and Brown's Regiment was no exception. The prospect of getting more revolvers manufactured no doubt was a strong incentive for the Regiment to assign soldiers to the factory. In a letter dated August 29, 1863, by George Duff to Mattie, he states, "I have an opportunity to send a letter to you by George Westervelt who is going to Columbia today to work in the pistol factory. Jim Henry has got several more men detailed to work in the factory with the promise from Gen. Magruder that our Battalion shall have all the pistols they make till we are armed."

It has always been the belief that the Dance brothers never had a contract with the State of Texas or the Confederate government. It can now be shown that this was not the case.

In a letter from Edmund P. Turner to Dance and Park dated June 26, 1863, Turner states, "I am verbally informed by Major Maclin, Chief Ordnance Officer of this district, that the contract with Messrs. Dance and Park for the manufacture of pistols has been disapproved at Richmond." However, on November 16, 1863, the District of Texas, Confederate State Army issued Order No. 312: "A Board of Officers is hereby appointed to convene today at the office of Capt. Good, Ord. Off. E.S. Dist. to examine and report upon a lot of pistols received from Dance and Park by Capt. Good 'under contract.'"

The move of the pistol factory to Anderson, Texas, does not seem to be completely due to fear that Columbia would be shelled by Federal gun boats, as many people have speculated. Anderson was the site of a Confederate Ordnance Works and the move coincides

with the timing of the purchase of the Dance pistol factory by the Confederate government.

On November 30, 1863, Mattie wrote George Duff that "the boys think it quite possible they will quit the shop soon. George (Dance) went to Galveston last week to see if he could make a government affair of it and he thinks perhaps it will be done." On April 16, 1864, she wrote that "George (Dance) did not find out anything about what they will do about his machinery. The papers were sent back to Houston." On June 16, 1864, 1st Lieutenant J.H. Dance was given leave to go to Anderson "for the purpose of settling with Capt. Good for machinery sold the Government." The fact that the pistol factory now was part of the Confederate Ordnance Department is supported by the unit's muster rolls, which no longer identified the workers as detached to the pistol factory. Instead, they were now carried on the Post Return, Post of Anderson, Grimes County, Texas.

The move of the Dance family and the pistol factory to Anderson was completed about the first of the year in 1864. However, it took some time to get back into production. On February 7, 1864, Mattie wrote George, "they have not got quite ready for making pistols but will soon."

On June 6, 1864, Lewis J. Wilson writes in a letter to "Friend Howell" that, "We have lately got to making six shooters and have turned out 46."

The last revolvers received by the Ordnance Depot of Supplies at Houston was on April 18, 1865. Hugh T. Scott, Captain, Artillery & Acting Ordnance Officer, reports the receipt of 25 six-shooting pistols, although





**.36 Caliber Dance revolver with recoil shields.**

the box had been broken into and 5 were missing. Dance Bros. were the 4th largest producers of hand guns in the Confederacy and the only firm to produce both .44 caliber and .36 caliber revolvers. Using known serial numbers would indicate that about 350 .44 caliber revolvers were produced and perhaps 135 more .36 caliber revolvers. It is unknown if the .36 caliber serial numbers were separate or integrated with the .44 caliber numbers. However, many .36 caliber parts have been uncovered at the Anderson site, which is strong evidence that the numbers were in a separate series. Production of .44 caliber revolvers would have passed number 135 long before leaving Columbia. If the numbers were integrated, no .36 caliber revolvers would have been made after the move to Anderson.

Most of the revolvers produced at the Dance factory were delivered to Ordnance Officers in Texas for issue to Texas Cavalry units. No doubt some of the guns produced earlier were sold to various individuals. Texas units known to have received Dance revolvers were the 35th Texas Cavalry and Captain Sutton's Company, Graham Rangers.

#### **Characteristics of the Dance Revolvers**

The Dance revolvers are patterned after the Colt revolvers. The .44 caliber and .36 caliber revolvers are similar in appearance except for size. One of its most distinguishing features is the omission of recoil shields. A lot of written speculation focuses on this subject. One simple explanation is that the available metal stock was not thick enough to include the recoil shields. Since they serve no real purpose, why not eliminate them?

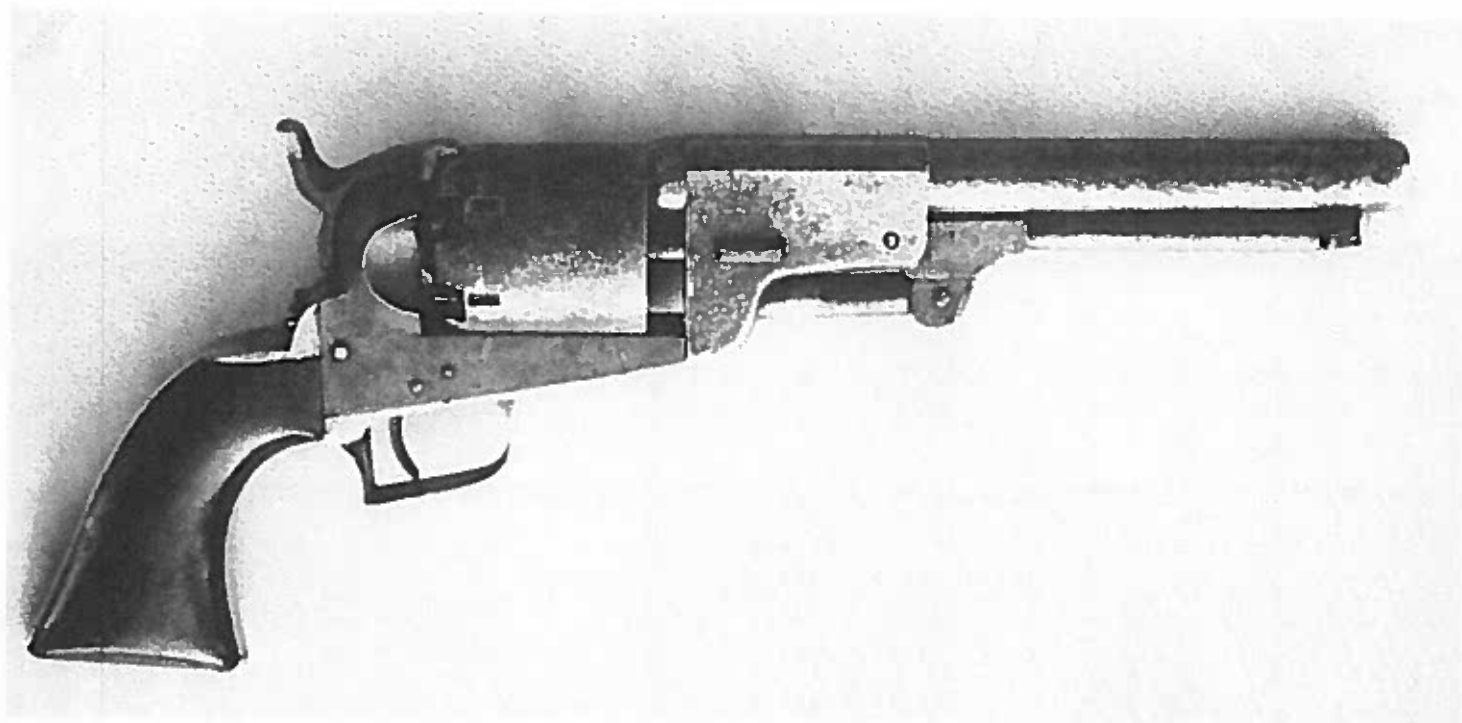
The Dance revolver was not marked with the Dance name. The serial number dies are fairly large and the serial numbers are marked on nearly all parts of the revolver. Some of the revolvers are marked with zeros, diamonds, or stars in various combinations instead of serial numbers. There are several specimens with no numbers or markings, and one with 4 dots. These oddly marked and unmarked revolvers were probably part of those sold to the civilian market.

The revolvers have a round barrel similar to the Colt Dagoon, although several specimens have a full-octagon barrel. There is a roller on the hammer of most examples and, contrary to what most authors on this subject have said, there is a cap release groove on the Dance revolver.

The .44 caliber Dance has the overall length of a Colt Dagoon, but weighs less. The length of the cylinder corresponds to a Colt 1860 Army, which makes the barrel actually longer than a Colt Dagoon. The bore has 7 lands and 7 grooves with a clockwise spin and no gain to the twist.

The trigger guard is rather square, thick, and heavy. However, low-numbered revolvers have a lighter weight trigger guard; the guard increased in thickness as production continued.

The .36 caliber revolver is much more scarce than the .44 caliber. If the serial numbers were integrated within the .44 caliber range, it would appear that not too many of the smaller calibers were made. However, if a separate range of numbers was used, at least 135 were made, since this is the highest number known. Authentic .36 caliber revolvers are extremely rare today.



Tucker & Sherrard revolver with square backed trigger guard made at Lancaster, Texas. These revolvers were most likely completed during the war and sold to individual soldiers.

The .36 caliber revolver is similar in size to the Colt 850 Navy model, although it has a round barrel. The serial number dies are the same as the .44 caliber Dance and the location of the markings are the same. The bore has 7 lands and 7 grooves, a clockwise spin and no gain to the twist. Nearly all the characteristics for the .44 caliber Dance are found on the .36 caliber.

#### Dance Revolvers with Recoil Shields

Most people have believed that the lack of a recoil shield is necessary for a revolver to have been made by the Dance brothers. It is almost certain, however, that they did manufacture a few revolvers with shields.

In the .36 caliber model, 3 revolvers with recoil shields meet every comparison test with .36 caliber Dance revolvers without the shields. Their serial numbers are 48, 50, and 51. These serial numbers are stamped with the same dies and in the same locations as the other Dance revolvers. The rifling in the bore is the same. They have the same squareness to the front of the barrel housing and barrel lug, the same thickness to the wall of the grip and the same misplaced screw.

In making the revolvers, the Confederates used a wooden jig to drill the screw holes. All .36 caliber Dances have one screw that is misplaced and these revolvers with recoil shields also have this feature.

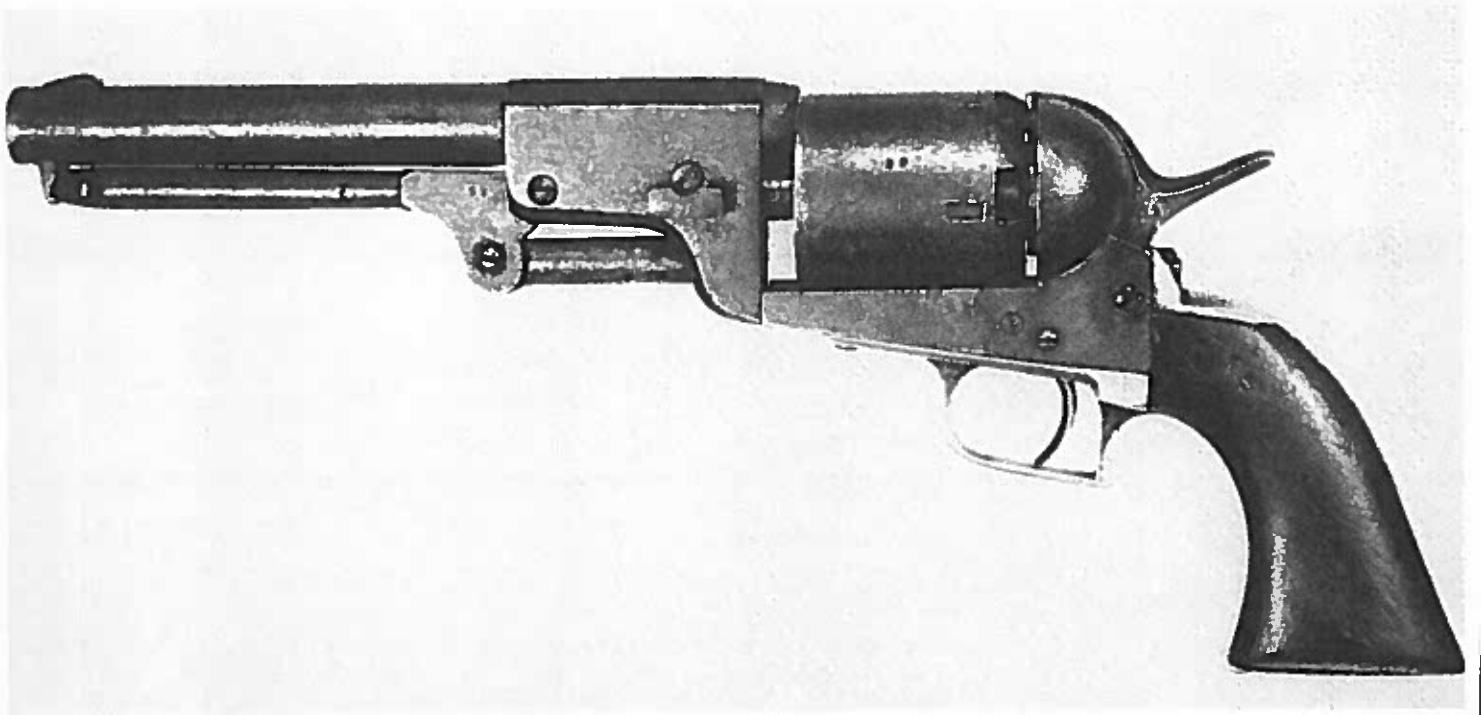
Conclusive evidence is found on revolver number 51, which is marked on the grips with the name *Charles Hill*, Co. H., *Brown's Regiment*. National Archives records indicate that Charles Hill was a member of the unit and we have already shown that Dance revolvers were issued to soldiers in Brown's Regiment.

As for the .44 caliber revolvers, there is one known specimen with recoil shields that meets all the criteria for guns made at the Dance factory. All measurements are correct and the rifling in the bore is correct. It has the squareness to the barrel housing and barrel lug and the square heavy trigger guard. It has an octagon-shaped barrel and a rear sight mounted on top of the barrel housing. There are Dance revolvers with both of these characteristics. It does not have a serial number, but is stamped *J B* where serial numbers would ordinarily be found. The top of the barrel is stamped *G. Erickson*, *Houston, Texas*. Gustav Erickson was a gun dealer in Houston during the Civil War and is known to have stamped his name on derringers and rifles. Since the Dance factory at Columbus was only 35 miles from Houston, it is probable that Erickson could have purchased this revolver from Dance and then stamped his own name on it. The Otto and Alec Erickson listed as workers assigned to the Dance factory were sons of Gustav Erickson. Two workers were assigned to the factory with the initials "J.B." They were Joseph Bray and J. Black, both members of Brown's Regiment. Either man could have stamped his initials on the revolver in place of a serial number.

All of these facts pertaining to the .36 and .44 caliber revolvers with recoil shields mentioned above and pictured in this paper leave little doubt that Dance did make a few revolvers with recoil shields.

#### THE LANCASTER DRAGOON

The Confederate pistol factory at Lancaster, Texas,



Tucker & Sherrard revolver with the experimental low hammer spur. There are three of these known, serial numbers 52, 54, and 56.

has almost passed from the realm of history into the realm of myth. Who ran it? What did it make? When did it function? Was the whole operation something we might today call a scam? Question has clouded fact from the day the owners received their first contract from the State of Texas in 1862. Some writers have called the Lancaster plant a munitions factory, which it wasn't; some have suggested other firearms besides pistols were made there, but none were, and during the brief period it was in operation (less than 2 years), suspicions were voiced that arms manufacture merely served as a front for military exemption and that equipment, labor, and metal stock were devoted to consumer goods.

The firm names are confusing. At one time or another the company was referred to as Tucker, Sherrard & Co., Tucker, Sherrod & Co., Sherrard, Taylor & Co., and Clark, Sherrard & Co. But the biggest questions is whether the wartime factory ever produced more than 2 finished revolvers.

There are pistols marked *Lancaster, Texas*, which are among the most eagerly sought pieces of American armament, but were they manufactured in Lancaster in wartime or were they assembled later from leftover parts? Facts have been hard to come by because the experts have disagreed. Referring to Sherrard, Taylor & Co., the name under which the wartime firm operated longest, Carroll C. Holloway, in *Texas Gun Lore*, says, "Texas' most publicized makers of arms during the Civil War were the least effective." At the time he wrote (1951), Holloway doubted any pistols were actually completed by the factory during the war. Satterlee and

Gluckman's *American Gun Makers* (1945) erroneously reported that "about 400" pistols were made in 1862, while Fuller and Steuart's *Firearms of the Confederacy* (1944) fails to differentiate between pistols which might have been made during the war and those made afterward. Victor Friedrichs, writing in *The Texas Gun Collector* in 1954, talks of "the highly controversial Texas Confederate Revolver generally known as the 'Tucker & Sherrod Confederate Colt,'" and says the controversy "hinges on whether or not this firm did or did not produce and manufacture a goodly number of revolvers."

Friedrichs was of the opinion that the firm finished some revolvers but sold them under the counter to private individuals "at an excessive profit" during the time the firm was under contract to deliver such revolvers to the State of Texas at a price of \$40. He adds, "There will be a storm of protests to the effect that there is no documentary evidence whatsoever to substantiate this statement."

However, there is evidence available today that will clear up much of the mystery surrounding these historic Texas revolvers.

The pistol factory story begins with a notice in the *Dallas Herald* of February 19, 1862: "Messrs. Sherrard, Killen and Brunie, of Lancaster, have formed a co-partnership for the purpose of manufacturing Colt's and other revolving pistols. They commence immediately to arrange the necessary machinery . . . and if justified by large subscriptions, will be able to manufacture this arm in any desired quantities . . . at \$40.00 each for Navy pistols and \$50.00 for the Army size. Those desiring to



Clark and Sherrard revolver from the collection of Stanley Diefenthal. This revolver was made after the war at Lancaster, Texas. Some have an etched cylinder scene and the name etched on the top flat of the barrel housing. This one, number 404, is plain, without name or cylinder scene.

add their names to the list can address either Dr. J.H. Swindell, Hon. Jeff Weatherford, or J.H. Sherrard, Esq., Lancaster, Texas."

With the Civil War moving into its second year and Southern arms in desperately short supply, this notice seems to have drawn quick response from the State Military Board, consisting of the Governor, the Comptroller, and the State Treasurer, an agency created to provide arms and ammunition for the defense of the state and to establish "a foundry for the manufacturing of ordnance." It was not part of the Confederate government and, as you will see, often found Confederate agents, whether Texans or not, to be in sharp competition for scarce materials.

On March 6, 1862, the Military Board wrote John M. Crockett of Dallas, Texas, who was Lieutenant Governor of Texas, requesting he "interview immediately with gentlemen in your County who are constructing revolving pistols, and learn . . . whether the Board can in any way aid them to increase their results, and whether they can build guns for use in the army. (We) further request that you will learn whether the company or contractor will enter into a contract with the Board to build arms for the defense of the State, and if so at what price they can make (them)."

It is difficult to determine if the board was writing in response to the *Dallas Herald* "notice or was simply making a broad inquiry. Whatever the case, Crockett's reply is a masterpiece of opportunism." I have taken all the pains that I could to ascertain the facts you desire

(and find) there is no establishment of this kind in this county, but there are about twenty gun-smiths, some of whom are first-rate. I have induced a few of the first men among the smiths to open a shop . . . they say that with the corps that they can organize and the tools and materials at hand they can make about thirty Colt Revolvers per week. The men who are undertaking are . . . in every way worthy of the confidence of Board, but they have no means, and could not have started but for my assurances."

Crockett, with the Military Board's offer in his pocket, apparently went to the Lancaster pistol people and offered them a chance at a government contract if they would make him a co-partner, which they did, and from then on Crockett was spokesman for the pistol firm in all its relations with the State. By April 11 the Military Board offered "Messrs. Tucker, Sherrod (sic) & Co." \$5,000 in advance on signing of a contract with a performance bond, the contract promising the Board would, at \$40 per weapon, "take . . . all the pistols they shall make within one year, not to exceed three thousand" with 100 pistols per month to be delivered after May, 1862. It also stipulated, "Said pistols are to be of the kind and quality of the Colt Revolver, but the exact form and style being immaterial so that said pistols are good and substantial arms of the size and after the manner of said Colt Revolver." The Lancaster men signing this contract were Laban E. Tucker, Joseph H. Sherrard, W.L. Killen, A. W. Tucker, Pleasant Taylor, and John Crockett. (The State's constant spelling error of "Sherrod" as firm name has



added historical confusion. No "Sherrod" was connected with the project.)

Laban Tucker had manufactured revolvers prior to the war, a fact most historians have overlooked. Argyle W. Tucker was his son. One account calls the elder Tucker, "near genius in both the metallurgical and mechanical principles of gunmaking." Joseph H. Sherrard was a Lancaster blacksmith, W.L. Killen was a wagon maker, while Pleasant Taylor, the capitalist of the venture, was a Lancaster merchant who had come to Texas in 1844 from Illinois as a Peters Colonist. We would today call Crockett a lobbyist, and in his position as Lieutenant Governor, might feel there was a conflict of interest dealing with the Military Board over state contracts and the like.

The pistol factory was located on West Main Street in Lancaster, the site today of the Veterans Memorial Library. For decades the lot was owned by the Rawlins family of Lancaster, which Pleasant Taylor had married into. Another confusing factor is that in 1862, the same year as the opening of the pistol factory, the Confederate Quartermaster established a wagon manufacturing plant adjacent to the pistol factory with Maxine Guillot of Dallas as superintendent. Guillot is sometimes listed as directing the pistol factory, which was never the case.

By June 30, 1862, the final deadline for delivery of the initial shipment, Crockett was forced to write the Military Board, "We are not ready to deliver 100 pistols." He spread the blame by stating that Confederate government agents were buying up every article needed by the pistol factory "at the most exorbitant prices." He feared that when pistols were made ("We have several hundred on the way") they would be "pressed" (confiscated) by Confederate officers. He also states that while one local agent "has advised us that his men will not be allowed to press our pistols," he is also aware, he says accusingly, that there is a secret proviso wherein the Military Board has consented for one Confederate officer to have them. "And he is not all," Crockett moans, "the walls — law — have broken down. We therefore think of putting none (pistols) together until *ordered* to do so." All of which adds up to a set of excuses for not delivering the contract guns.

On July 3 another Crockett letter states the factory has "several waggons on the way from San Antonio with materials which are long due" but the newly enacted (April 16, 1862) Confederate Conscription Act, which forced able bodied white men ages 18 through 35 into the army, may have stopped them. "We understand that the conscript Officers are taking the drivers & turning the trains out & we greatly fear they have done ours so. We now employ twenty-five hands & have machinery & materials to keep them going for some time. We have now

machinery for about as many more hands & will have it all running in about ten days with fifty hands."

The letter voices more expectations than concrete information, and on July 21 yet another letter defends the factory's failure "to have the first hundred pistols ready" and says Col. Burford, the Confederate agent, "has been urging us to let him have what we can complete . . . and has conceived the idea that we are refusing to finish off (the order) for fear of getting them pressed."

By August 5, still no pistols. Crockett wrote, "We are pressing on with the work and have a good many (pistols) on the way but the difficulty of getting machinery has prevented us from finishing some of them. We have expended at least half or more of our labor making tools & machinery . . ." Two weeks later Crockett reports, "We are at no child's play . . . but are traversing every portion of the Country assessable, and when we have the least hope of securing material or machinery are paying the most exorbitant prices, having to come in competition with (Confederate) Government Agents who, you well know, are not generally any ways particular about the prices they pay. We are now at work on the third hundred pistols and our expectation is to complete the four hundred (due you) during the month of September. We had to send to Boggy Depot, Choctaw Nation (now Oklahoma) for coal (and) we have paid as high as 75 cents per pound for steel and \$700 for a lathe. We have expended more than as much more money was advanced to us, and we are now out."

Crockett adds, "The effort & expenditures we are making would intimidate most men & they would most likely shrink from the engagement — indeed two of our men have already shrunk from it & gone out of the concern: the two Mr. Tuckers, the pistol makers — but they are working for us at wages. I think they became dissatisfied at our contract to make pistols for \$40 when we could sell them for \$60 to \$100." An 1886 profile of Crockett, in *Farm & Ranch* magazine, says that looking for material for the pistol factory, "He set out for Jefferson, Marshall and Shreveport, returning by Galveston, Houston and intermediate places . . . Waco, Austin, San Antonio, Brownsville and Matamoras, securing every piece of steel to be found and all suitable implements and machinery and shipping them to Lancaster."

Still no pistols. But on October 2, despite the failure of Sherrard, Taylor & Co. (the new name as of mid-August) to supply any arms, the Military Board advanced the firm another \$5,000. A \$10,000 performance bond was signed by Sherrard, Killen, Taylor, Crockett, G. W. Record and R.M. Hawpe, the latter two of Dallas. Crockett complains this time that the factory's workers are being drafted "regardless of the law exempting men from military duty who are engaged in the manufacture of



The name as it appears on the top flat of the barrel housing on those Clark & Sherrard revolvers which have a cylinder scene.

re arms, etc. They utterly refuse to let us have one nan) out of any company or regiment. Even Texas colonels have been most rigid with us. We have tried cols. Ross, Spaight and Elmore for men whom we know to be good mechanics and who wish to come to us but they refuse to yield to any request. It only takes 54 men to fill our shops . . . yet we have not been able to reach thirty yet."

On November 20, Crockett is writing the board nearly all of the pieces of the four hundred pistols are finished." Now, he notes, "We are failing to find material and are preparing to melt our own ore and do all we can to secure material by our own resources. There is ore in Denton Co." Also, "There is great prejudice against our establishment on account of the exemption of conscripts from it, and much is being said to injure it." He also pleads, "Under all the circumstances could not the Board afford to give us a little encouragement by advancing \$10 a piece on the price of our pistols and letting us have a little more money? We are actually told here that we can have \$100 a piece for them . . ." At one point in November the plant had only three hands available for work.

By the new year things hadn't changed. No pistols. On January 28, 1863, Crockett complained, "All assurances were given that artisans and mechanics would be relieved of their engagements in the army to engage in the manufacture of arms. But strange to say, we have been able to employ on an average about twelve." On top of that, New Orleans, "whence we hoped to obtain material," fell to the Federals. "For hands we have been compelled to pay \$4.00 per day and over," he says. But the elusive 400 pistols are being finished "with all possible dispatch."

In January, Crockett went to Austin, Texas, as the legislature opened its session, and took with him two completed revolvers, alleged to have been manufactured

at the Lancaster plant. He later reported the pistols were tried "by Governor Lubbock, Ed Fannin and others, in the presence of the members of the Legislature, and pronounced true and trusty." On February 28, *The Texas Almanac*, a newspaper, remarked, "We were shown the other day a beautiful specimen of a six-shooter, manufactured in Dallas (sic) by Col. Crockett, who has a large armory in successful operation. The pistol appears, in every respect, quite equal to the famous Colt's six-shooter. We learn that Col. Crockett has now 400 of these pistols on hand, which he has manufactured within the last six months, and which he has offered to the Governor at remarkably low figures — not one-third of what they could be sold at by retail."

We must hope that Crockett was misquoted by the *Texas Almanac*, because on March 14 he addresses his friend, Governor F.R. Lubbock, somewhat belligerently, reporting that Major Johns (one of the Board members) said Crockett's only alternative was to sell the pistols to individuals, and winds up by saying, "We can sell the pistols for \$100.00 each without any trouble but we shall be pleased to hear from you."

The 400 pistols belonged to the State of Texas, under terms of the contract, but it is doubtful that anywhere near that number had been finished. In fact, except for the "pilot pistols," none of the famous, or infamous, 400 were delivered to the State. Thus the months dragged on with Crockett offering the same reasons for delay: lack of materials, conscription of workers, the military going back on its word to release experienced armaments men, needing only certain unspecified parts, etc.

Finally, despite satisfaction with the sample pistol it and the Legislature had seen demonstrated, the Military board in September 1863 reported, "The Legislature . . . thought proper to relieve the parties of the contract on

their repaying the sums advanced with legal interest, and in July last the parties repaid the loan in Confederate Treasury notes with \$814.00 interest." There were complaints that the repayment was unfair because inflation caused Confederate money in 1863 to be worth only half what it had been when given to the Lancaster firm, but under terms of the contract there was no basis for adjustment.

The loss of the contract ended Sherrard, Taylor & Co., but not the activity of the factory. The Dallas and North Texas region was, at the time, a great wheat growing country that furnished the Confederate army with a vast amount of flour. But the mills and harvesting machinery were giving out, and there was no means of repairing them. Crockett, according to an 1886 *Farm & Ranch* article, "lost no time sending notice over the State that the foundry and machine shop would be at the service of the country and that all the machinery which was breaking down could be repaired. And to this shop was the army and the women and children of the State indebted for all the flour that was made in 1863 and 1864."

Several persons who would later be important in Dallas County history worked at the pistol factory during the war. Foremost was Joseph Paul Henry, a La Reunion colonist, who was a lithographer and was famed as an engraver on metal and ivory. On reaching the United States in 1855 he had worked for the famous Endicott Engraving Co. of New York for a few months before proceeding to Frenchtown, as the Reunion colony was called. Writing in Johnson and Barker's biographical set, *A History of Texas and Texans*, his son, Rene Paul Henry, said, "During the Civil War the Confederacy called his services as an engraver into use, assigning him to the Lancaster pistol manufactory. This would explain why several of the Clark & Sherrard pistols have etched cylinders and would suggest that Henry was the person responsible for the work. What is also little known about Joseph Paul Henry (who after the war became a successful banker in Lancaster) is, according to one reliable historian, that he learned pistol making in Liege, Belgium, before migrating to the United States.

John M. Oram, who had settled near Lancaster with his parents in 1857 at age 12, enlisted in the Confederate army but was transferred from active duty to the Lancaster pistol factory "because of his special skills," presumably as a watchmaker.

Elihu McDonald Tucker, a son of Laban, who had helped his father run the gun factory and powder mill in Marshall, worked in Lancaster but when drafted by the Confederate army was assigned to work in the Confederate powder mill in Marshall. And despite Crockett's assertion that the pistol factory had gotten "not one man" from the army, Thomas J. Kemble, of Co. A, 31st

Texas Cavalry (a Dallas County unit), is shown on company reports as detached to duty as a smith in the Lancaster factory.

However they got them, or whatever they got, early in 1867 Clark and Sherrard (who had served in the Confederate army after Sherrard, Taylor & Co. folded) were advertising pistols for sale in the *Dallas Herald*. In a letter to a Jefferson, Texas, merchant, Clark says "We have about 400 cal .44 old style army revolvers that we plan to finish and embellish into high class merchandise." The embellishment consisted of fancily decorated cylinders and *Clark & Sherrard, Lancaster, Texas* etched across the top of the frame.

Cartridge pistols, already making the cap and ball guns obsolete, had been introduced and used in the Civil War, and in 1873 the U.S. Army officially adopted them, so it was undoubtedly recognized that these Lancaster revolvers were more useful as souvenirs than as serious weapons. Besides, the wholesale price of \$20 gold was rather steep, since Colt revolvers of newer design were retailing for \$30 at that time.

Whatever reasons customers might have had for buying the post-war Lancaster Dragoons, not many did, if you base that conclusion on the very small number in existence today.

While most writers and students of Confederate handguns maintain that the Lancaster gun factory never completed any revolvers during the war and that all specimens known today were assembled from leftover parts after the war, a good case can be made to prove otherwise.

We first need to separate the different types of revolvers attributed to the Lancaster gun factory. The characteristics that make them alike are the dragoon size and the lack of a loading aperture on the barrel lug, while the most distinguishing difference is the square-backed trigger guard and the round trigger guard. Those revolvers with the square-backed trigger guards were the earlier models made during the war by Tucker, Sherrard & Co. After reading all the material from the Texas Archives, one would have to come to the conclusion that Colonel Crockett accepted the suggestion of Major Johns and sold the guns on the retail market at a higher price than the Texas Military Board would allow for them. Also, some of the few square-backed revolvers in existence today show considerable holster wear. If they had not been finished until after the war, it is doubtful they would have received much use at all, since they already were obsolete.

The conclusion is that these Tucker & Sherrard revolvers were completed and put into use during the war, even though they were sold on the open market to soldiers for their personal use.

The round trigger guard models were those revolvers

old after the war by Clark, Sherrard & Co. Close examination and comparison of the square-backed trigger guard models (Tucker and Sherrard) and the round trigger guard models (Clark and Sherrard) reveal conclusively that the round trigger guard models were not made from leftover parts of the square-backed models. All the parts are of different size, dimension, and configuration, with two exceptions. The barrels of the Clark and Sherrard could have been made of unfinished barrel blanks from Tucker, Sherrard and Co. and the loading levers could have been left over from the same company. Everything else, including the serial number dies, are completely different.

Much speculation has been made and numerous conclusions drawn as to why the Lancaster pistols did not have a loading aperture. Examination of the revolvers and a study of those involved in their manufacture offers some answers to this mystery.

The proper way to carry a percussion revolver in the holster was to rotate the cylinder to the point where the

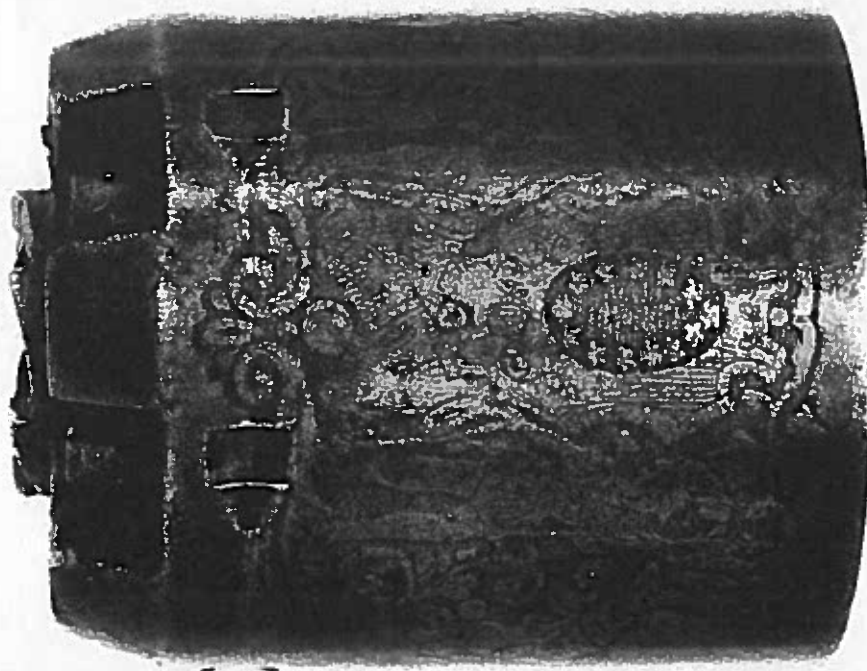
hammer, when let down, rests on the shoulder between the nipples. When this is done, one of the cylinders is straight out from the frame and can be loaded without a loading aperture.

A revolver in the Metzger collection at Texas A & M marked *L.E. Tucker & Sons*, serial number 79, does not have a loading aperture. This is one of the revolvers made by Leban E. Tucker before the war at Marshall, Texas. Perhaps Tucker felt that a loading aperture was not necessary and since he was the experienced revolver maker in the firm of Tucker, Sherrard & Co., that may be the reason this feature was left off their revolvers.

Looking at the details of the Lancaster dragoons, they, too should be divided into two main categories: the Tucker and Sherrards, with the square-backed trigger guards made by the firm of Tucker, Sherrard & Co., and the Clark and Sherrards made after the war by the firm of Clark, Sherrard & Co.

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This article is an excerpt from the forthcoming book, *Confederate Revolvers* by William A. Gary.



An etched cylinder from a Clark & Sherrard revolver.



# TUCKER-SHERRARD GUN FACTORY, Lancaster TX

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Confederate Gun Factory, Lancaster TX

During the Civil War, the Tucker-Sherrard Company of Lancaster, in Dallas County, contracted with the State of Texas to manufacture 3,000 "Texas Dragoon Revolver" copies of Colt revolvers at \$40 each. 1,500 would be .44 Army caliber Dragoon revolvers, and 1,500 would be .36 caliber Navy revolvers; all built on frames copied from Colt Dragoon revolvers. Advances totaling \$10,000 were paid to the company, but it was unable to fill the contract which was finally canceled. Reasons for failure to meet the contract were shortages of material and workers (able-bodied men were drafted into the Confederate Army), and wartime inflation.



Four hundred of the partially-completed .44 caliber revolvers were later finished and sold, and some were used in the latter phases of the war. After the war ended, the Dallas Herald advertised the guns for sale at \$20 each. Only a few surviving weapons are known to exist today. They are now described as "The Most-Wanted Confederate Firearm." They were marked with a Lone Star and "Texas Arms."

Modern copies have since been made and sold. No Navy caliber guns were made.

The little foundry and gun factory was located on West Main Street in Lancaster, and was torn down in 1906. The Veterans Memorial Library was later erected on the site. Tucker-Sherrard and Company was formed by Laban E. Tucker and his son, Argyle W. Tucker, Joseph H. Sherrard, W. L. Killen, and Pleasant Taylor of Dallas and Lancaster. The Tuckers had previously made a few guns at Marshall, Texas, before moving to Lancaster. The name Tucker-Sherrard was later changed to "Sherrard, Taylor and Company," then to "Clark, Sherrard and Company" after the Civil War.

"Colonel" John M. Crockett, Dallas Mayor in 1857 and Texas Lieutenant Governor in 1861.