





CHAPTER 4
TRANSPORTATION

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EXISTING CONDITIONS

The Lubbock Thoroughfare Plan was built on a solid foundation of a grid network with arterials spaced out every mile and collectors spaced at half mile intervals between the arterials.

The previous Thoroughfare Plan in the City of Lubbock was last updated and adopted in 2007. The 2007 update was a continuation of the original vision for transportation in the City and was predominantly focused on revising the map alignments and status of the roadway's construction. The 2018 Thoroughfare Plan is part of this Comprehensive Plan and is supplemented by the growing bike and transit networks.

THOROUGHFARE NETWORK

As Lubbock has grown, the building out of the thoroughfare network has held to the original grid network vision. Within the loop (Texas Loop 289), much of the thoroughfare network has been built out and currently provides ample capacity to serve existing demand. Growth has recently been occurring south of the loop, primarily between the loop and 146th Street. This has spurred the continuing growth of infrastructure to support demand in the south.

BICYCLE NETWORK

The Lubbock Metropolitan Planning Organization (LMPO) Comprehensive Bicycle Study was first adopted in 1995, and received updates in 2007 and most recently in 2012, being now known as the Lubbock Metropolitan Area Bike Plan. In 1998, the LMPO Comprehensive Bicycle Study was used to inform decision-making in the revision of the LMPO Thoroughfare Plan. However, a comprehensive plan linking policy for bicycle and thoroughfare planning has yet to be developed. In 2018 a Comprehensive Bicycle and Pedestrian Plan entitled Walk and Bike Lubbock is under consideration and will provide a vision and link between the Comprehensive Plan and Bike and Pedestrian Infrastructure. The vision of Walk and Bike Lubbock is to “create a unified and integrated regional bicycle and pedestrian system that connects people of all ages and abilities to desired destinations and encourages them to walk or bike for transportation or recreational purposes in a safe manner.” As part of this plan a comprehensive bicycle network will be developed that focuses on encouraging ridership through increasing safety.



As of 2018, there are a limited number of bike routes, dedicated bicycle facilities, and shared-use paths in Lubbock. Many of the existing bike facilities in Lubbock are concentrated within the loop, and most heavily concentrated in the Central Business District and around Texas Tech University (TTU) Campus. Most of the on-street bike lanes are located within these two areas, while outside of these areas the bike facilities consist primarily of bike routes using shared lanes. Due to the nature of this pattern, there is minimal connectivity that currently exists for bike trips between locations outside the loop and locations inside the loop.

PEDESTRIAN NETWORK

Currently, most of the pedestrian facilities in Lubbock exist in developed areas and neighborhoods within the loop and south of the loop. These facilities include sidewalks, mid-block crossings, pedestrian hybrid beacons, and pedestrian bridges. In general, the existing sidewalk network is discontinuous and lacking along thoroughfares. While Lubbock's pedestrian network is widespread, the quality of the network is poor, with many crumbling sidewalks, ADA compliance issues, missing curb ramps, and an insufficient number of roadway crossings for pedestrians. Thoroughfares form the backbone of the transportation network, many of which have wide seven lane configurations and large intersections. Sidewalk gaps along thoroughfares and limited opportunities to cross with a formal pedestrian crossing limit travel between neighborhoods situated within the one-mile grids.

Walk and Bike Lubbock is a comprehensive bicycle and pedestrian master plan that is under development. The vision of Walk and Bike Lubbock is to "create a unified and integrated regional bicycle and pedestrian system that connects people of all ages and abilities to desired destinations and encourages them to walk or bike for transportation or recreational purposes in a safe manner." As part of this plan a comprehensive bicycle network will be developed that focuses on encouraging ridership through increasing the safety. As part of this plan a pedestrian strategy will be developed that promotes developing facilities focused on increasing walkability and safety within priority areas of the City

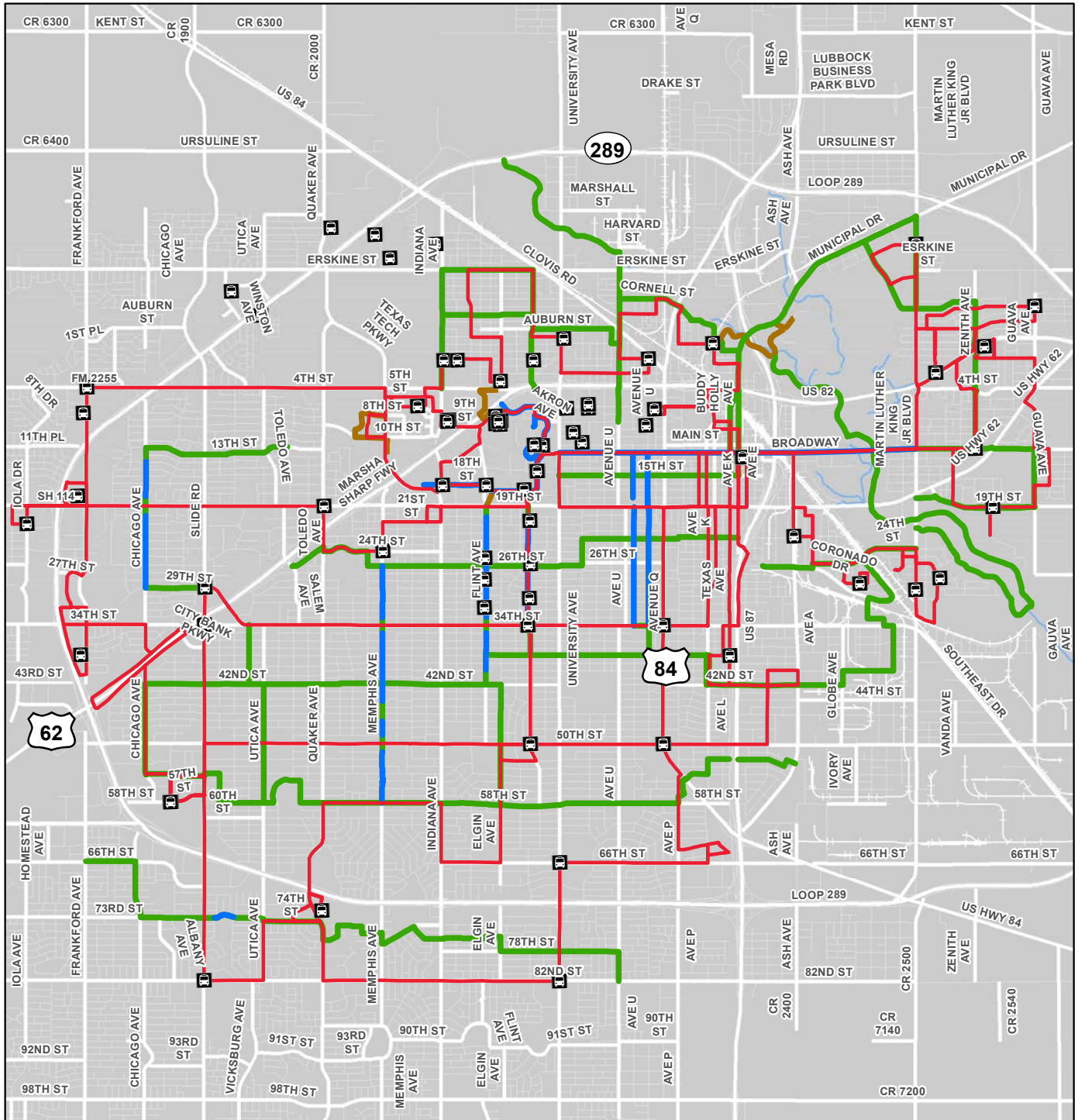
TRANSIT NETWORK

Transit service in the City of Lubbock is provided by Citibus. There are currently nine bus routes serving the City and additional shuttle routes serving TTU campus. Citibus also serves as the Greyhound bus freight and ticketing agent for intercity trips which transfer to other routes at the Downtown Transfer Plaza. In 2004, the Public Transportation Strategic Planning Task force identified loss of funding, perception of Citibus, limited access to all parts of the City, and the need for better building/facility/technology/security as weaknesses or threats to transit operation in the City of Lubbock.

WALK SCORE

According to [walkscore.com](https://www.walkscore.com), Lubbock has a walk score of 38 out of 100 (average), a transit score of 22 out of 100 (minimal), and a bike score of 43 out of 100 (average). The most walkable neighborhoods are Overton and the Maedgen Area. Lubbock is generally car-dependent and most errands require a car.





EXISTING BIKE FACILITIES AND TRANSIT ROUTES

- Transit Stops
- Existing Bike Lane
- Transit Routes
- Existing Bike Route
- Existing Bike Trail

1

Miles



LUBBOCK THOROUGHFARE PLAN UPDATE

The first goal of the Thoroughfare Plan was to update the City of Lubbock Thoroughfare Plan Map. This process consisted of updates to the functional classification, status nomenclature, cross sections, alignments and the Thoroughfare Plan Map. Each of these elements are discussed in the following sections.

FUNCTIONAL CLASSIFICATION

Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. Roadways are most commonly split into four major classification groups based on their intended purpose. These groups are freeways, arterials, collectors, and local streets.



FREWAYS

Freeways are intended to move high volumes of automobile traffic at relatively high speeds over long distances. Freeways (or highways) also have limited access to help maximize traffic flow and safety. Freeways are generally accessed via on-ramps from frontage roads or direct connectors from other high-speed facilities. The primary function of a freeway is to connect local areas to other regions, rather than serve local traffic needs. Currently, Lubbock is served by Interstate Highway 27, US Highways 62 and 82, and Texas Loop 289. All these facilities at certain places within the Lubbock Metropolitan Area can be categorized as freeways.



ARTERIALS

Arterials are continuous routes whose function is to serve high volume needs of local traffic and regional traffic. Speeds are relatively high on arterial streets, and access is controlled by planning the locations of intersecting streets, left turn lanes, and traffic signals. Arterial roads will function more efficiently when the number and location of median breaks and driveway cuts are limited. Arterial streets provide connectivity across the transportation network, so best practices are to consider all modes on these streets. Due to the high automobile speeds, protective measures should be established for cyclists and pedestrians along these routes to buffer them from vehicles. Where possible, continuous left turn lanes should be discouraged.



COLLECTORS

Collectors are designed for medium volumes of vehicles operating at lower speeds (i.e., 30 – 35 mph). Collectors provide access and movement within residential, commercial, and industrial areas. Direct access to higher intensity development, such as commercial businesses, daycares, places of worship, schools, and multi-family uses calls for lower speed limits due to an increased number of turning movements. These lower speed limits along collectors prioritize safety for all modes of travel. Direct access to single-family development is generally not encouraged, with access from local streets being preferred. Collectors connect to the citywide street network, but often do not cross the entire city.

As part of this Thoroughfare Plan update, the project team made the decision to update the functional classifications of the thoroughfares in Lubbock. The update serves to align the functional classifications in Lubbock with the functional classifications defined by the Federal Highway Administration (FHWA). The table below presents the previous classifications alongside the new classifications in the context of which functional class group each falls into.

Functional Class Group	Previous Functional Class	New Functional Class	Number of Lanes
Freeways	Freeway	Freeway	4-8
Arterials	T-2	Principal Arterial	7
	T-1	Minor Arterial	5
Collectors	C-1 Collector	Collector	2-3
	Industrial Collector		
Local Streets	Local	Local	2

STATUS NOMENCLATURE

In the previous Thoroughfare Plan, the status of each thoroughfare facility was symbolized and described using specific nomenclature in the legend to indicate which roads were existing or proposed, and which roads need to be widened. With the Thoroughfare Plan update, this nomenclature was updated to add clarity. The previous and new thoroughfare status nomenclature is presented in the table below.

Previous	New	Definition
Existing	Completed	Road is fully built to its ultimate configuration.
Existing, Open to Traffic	Partial	Road exists but is not fully built to its ultimate configuration.
Proposed	Future	Road does not yet exist.



LOCAL STREETS

Local streets typically provide access to smaller, destination-oriented areas, such as neighborhoods, subdivisions or local business districts. Pedestrian activity is expected to be higher on local streets, while traffic volumes are lower, making lower speed limits most appropriate. With the intended function of local streets being to carry traffic to and from the main transportation network, these streets are generally residential in character and shorter in length, spanning short distances rather than across districts.

CROSS-SECTIONS

In keeping with the update to the functional classifications presented in the Thoroughfare Plan, the roadway typical design cross-sections were also updated. The goal of the cross-sections update was to incorporate Complete Streets principles into the cross-sections and provide added flexibility for future roads and retrofit projects. Among the elements that remain unchanged from the existing arterial cross-sections are:

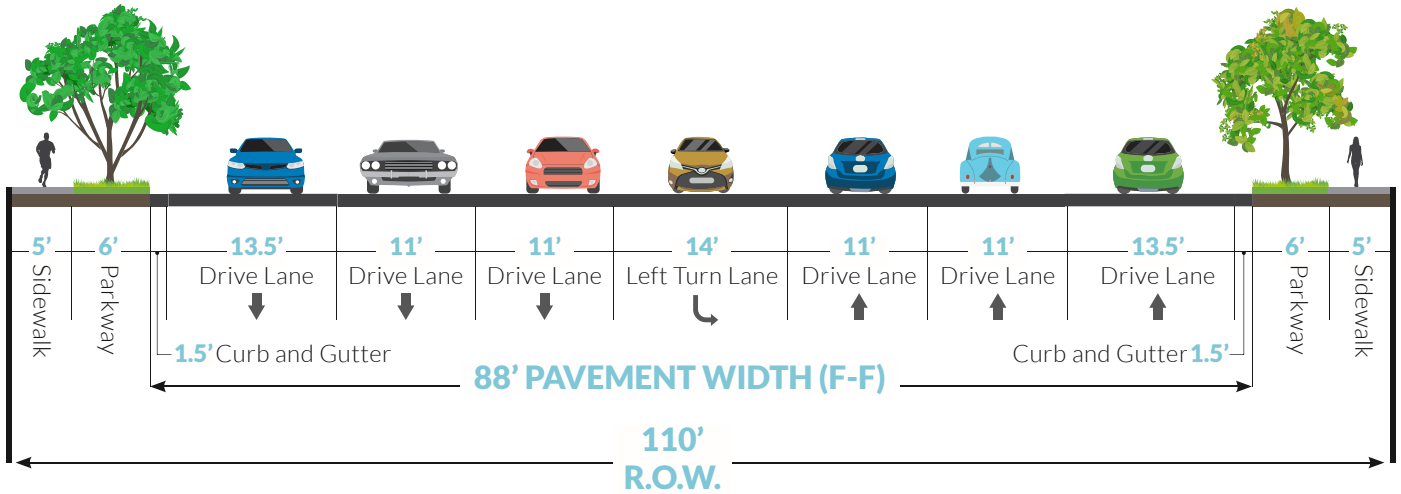
- Standard two-way left-turn lane (TWLTL)
- Wide outside lane (13.5 ft)
- Wide gutter (1.5 ft)

With the cross-section update, multiple cross-section options are provided for each functional classification. For the collectors, option A provides on-street parking and option B provides bike lanes and a TWLTL. Neither option is focused on a specific land use, providing added flexibility. For the minor arterials, option A represents a traditional vehicle-oriented travelway configuration with the addition of a wide shared-use path in the parkway for cyclists and pedestrians. Option B accommodates bikes in the travelway with a buffered bike lane. For the principal arterials, a typical seven lane configuration is provided. The modified principal arterial option represents a hybrid between principal and minor arterials, by placing a typical five-lane minor arterial cross section within the same right-of-way as the principal arterial. This configuration is intended to add flexibility within the parkway for bicycle and pedestrian facilities. The cross-sections are intended for roadways identified as partial or future roadways on the Thoroughfare Plan Map. Completed roadways would be reevaluated on a case-by-case basis. These cross-section options are presented in the Thoroughfare Plan Map. The table below provides an equivalence of the old cross-sections and the new cross-sections depicted in this chapter.

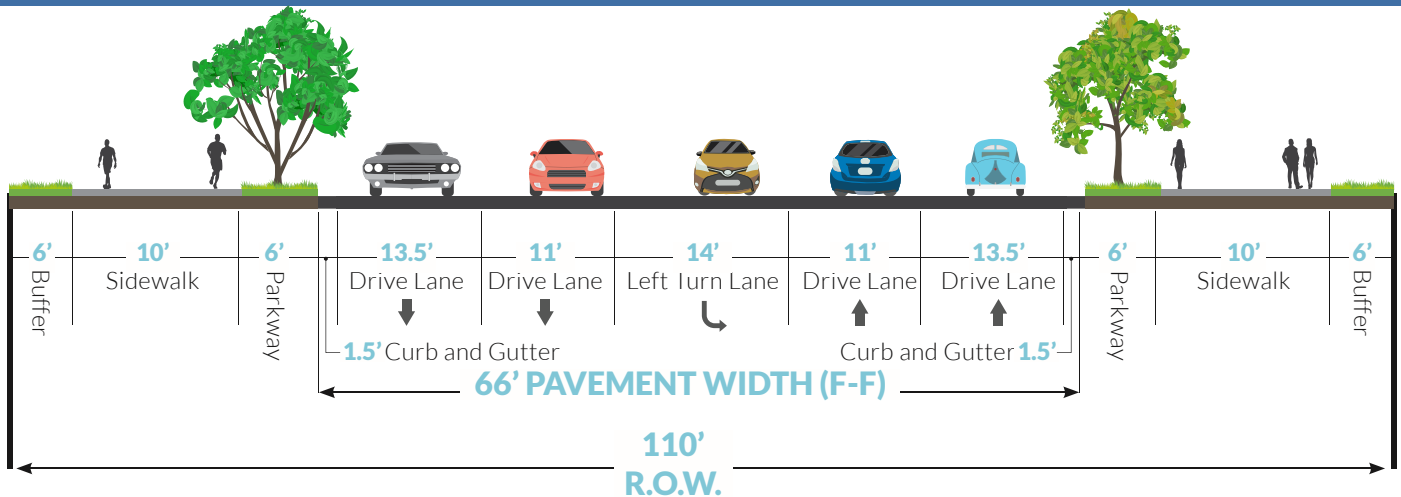
Cross-Section Equivalency

CURRENT CROSS-SECTION	UPDATED CROSS-SECTION
T-2 Thoroughfare	Principal Arterial A or Modified
T-1 Thoroughfare	Minor Arterial A or B
C-1 Collector and Industrial Collector	Collector A or B

PRINCIPAL ARTERIAL A*



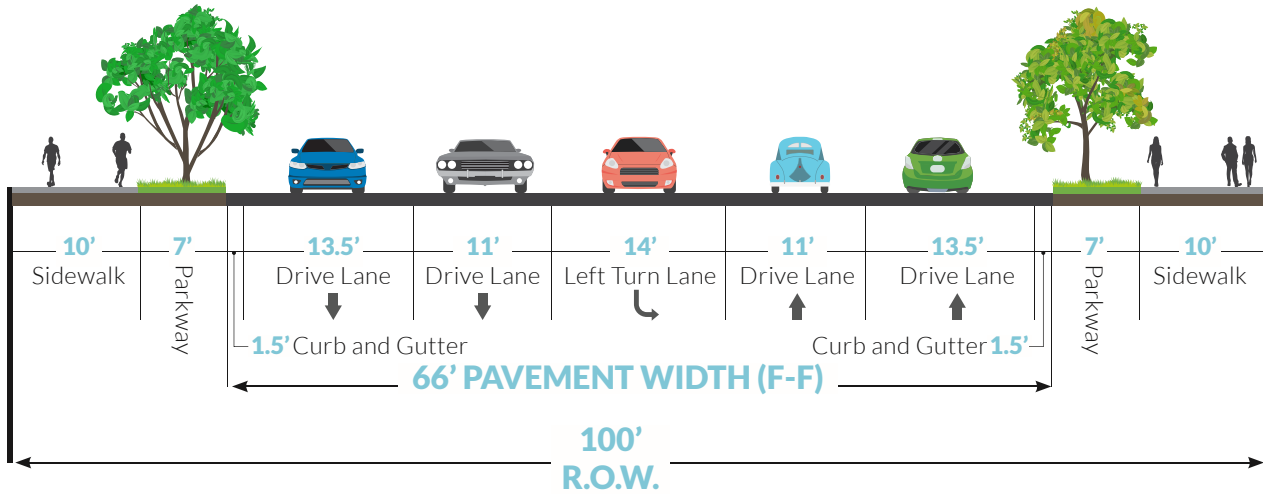
PRINCIPAL ARTERIAL (MODIFIED)*



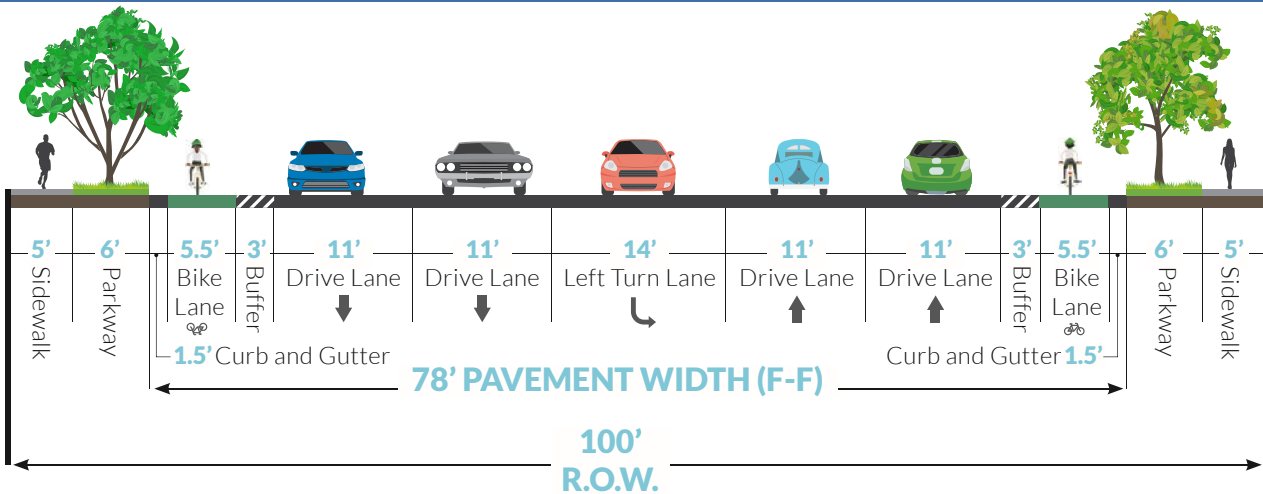
*Principal arterials can also include a raised median in place of a center turn lane.



MINOR ARTERIAL A*



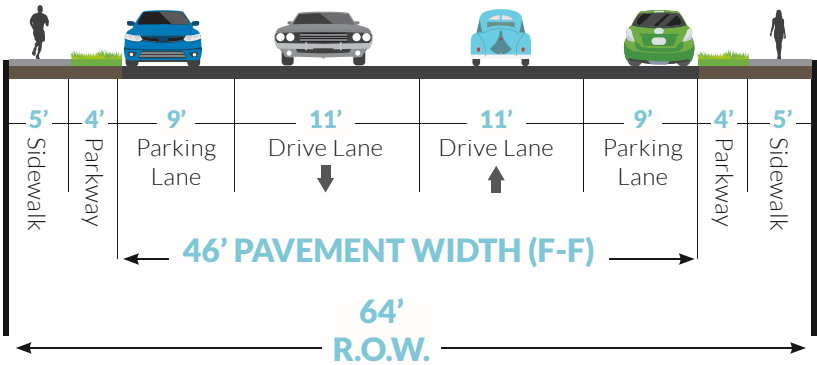
MINOR ARTERIAL B*



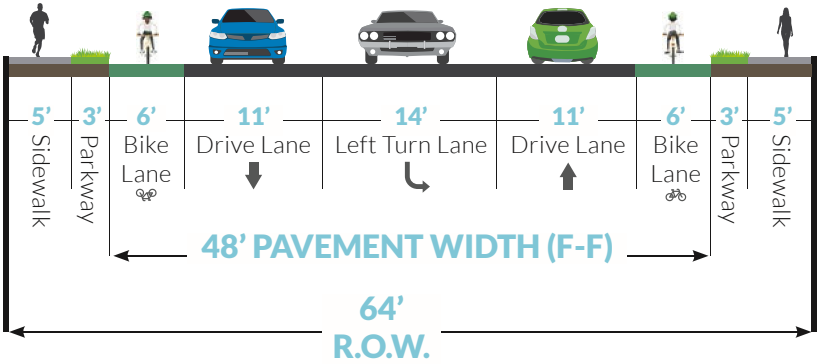
*Minor arterials can also include a raised median in place of a center turn lane.



COLLECTOR OPTION A



COLLECTOR OPTION B



THOROUGHFARE PLAN MAP UPDATES

As part of the Thoroughfare Plan update, a complete inventory of every thoroughfare on the existing Thoroughfare Plan was performed, broken up into over 3,700 individual segments. This inventory included identifying the following elements for every thoroughfare segment:

- Lane configuration (number and type of lanes, including bike lanes and shared lanes)
- Lane widths
- Status (completed, partial, or future roads)

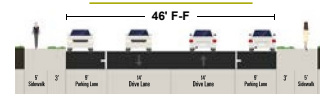
The outcome of the inventory process was a fully digitized shapefile version of the existing Thoroughfare Plan. This was not digitized previously.

In addition to the inventory of existing thoroughfares and the digitization of the map, several updates were made. These updates include:

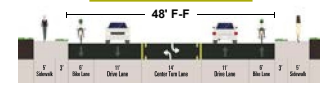
- Functional classification changes
 - Upgrades
 - Downgrades
- Status updates
 - Previously partial or planned roadways now built
- New connections and realignments
 - Reflective of recent development
 - Collectors avoid playa lakes

RIGHT-OF-WAY SECTIONS (PROPOSED ROW)

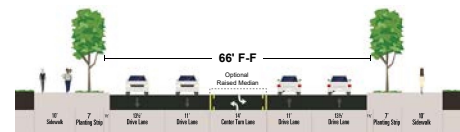
COLLECTOR A - 64'



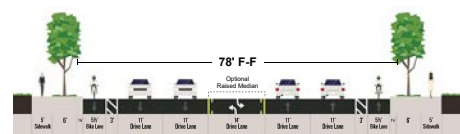
COLLECTOR B - 64'



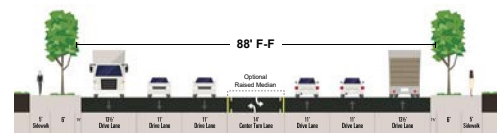
MINOR ARTERIAL A - 100'



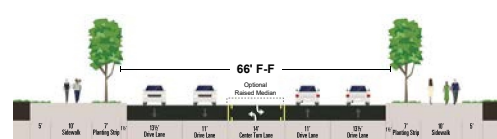
MINOR ARTERIAL B - 100'



PRINCIPAL ARTERIAL A - 110'

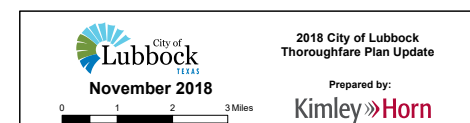


PRINCIPAL ARTERIAL (MODIFIED) - 110'



LEGEND

- | | |
|--|------------------------|
| --- Freeway, Proposed Outer Loop | ++++ Railroads |
| — Freeway, Completed | ● Playa Lake |
| - - - Freeway, Partial | ● Unclassified Wetland |
| — Principal Arterial, Completed | ⊕ City Limits |
| - - - Principal Arterial, Partial | |
| Principal Arterial, Future | |
| - - - Principal Arterial (Modified), Partial | |
| Principal Arterial (Modified), Future | |
| — Minor Arterial, Completed | |
| - - - Minor Arterial, Partial | |
| Minor Arterial, Future | |
| — Collector, Completed | |
| - - - Collector, Partial | |
| Collector, Future | |



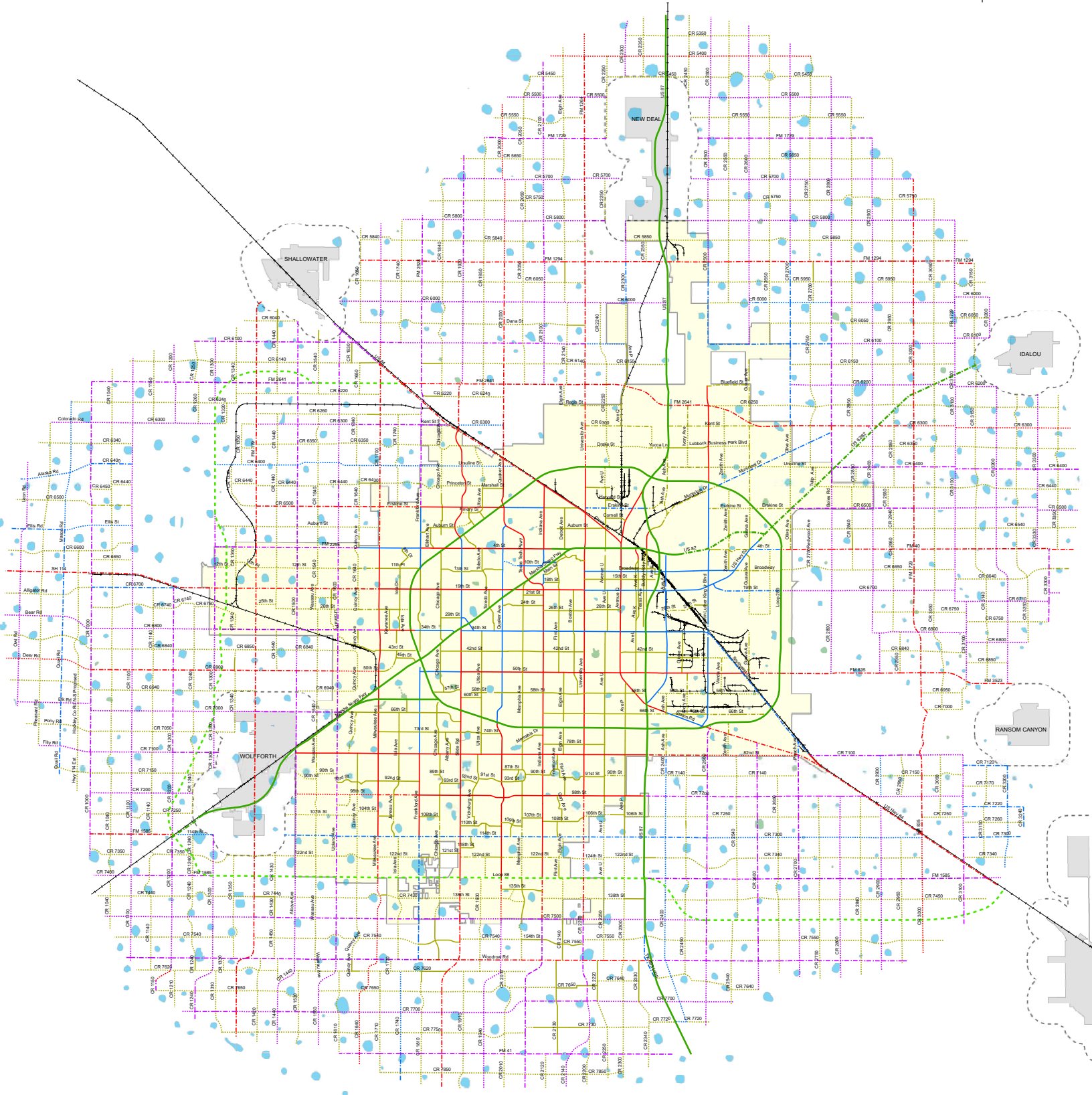
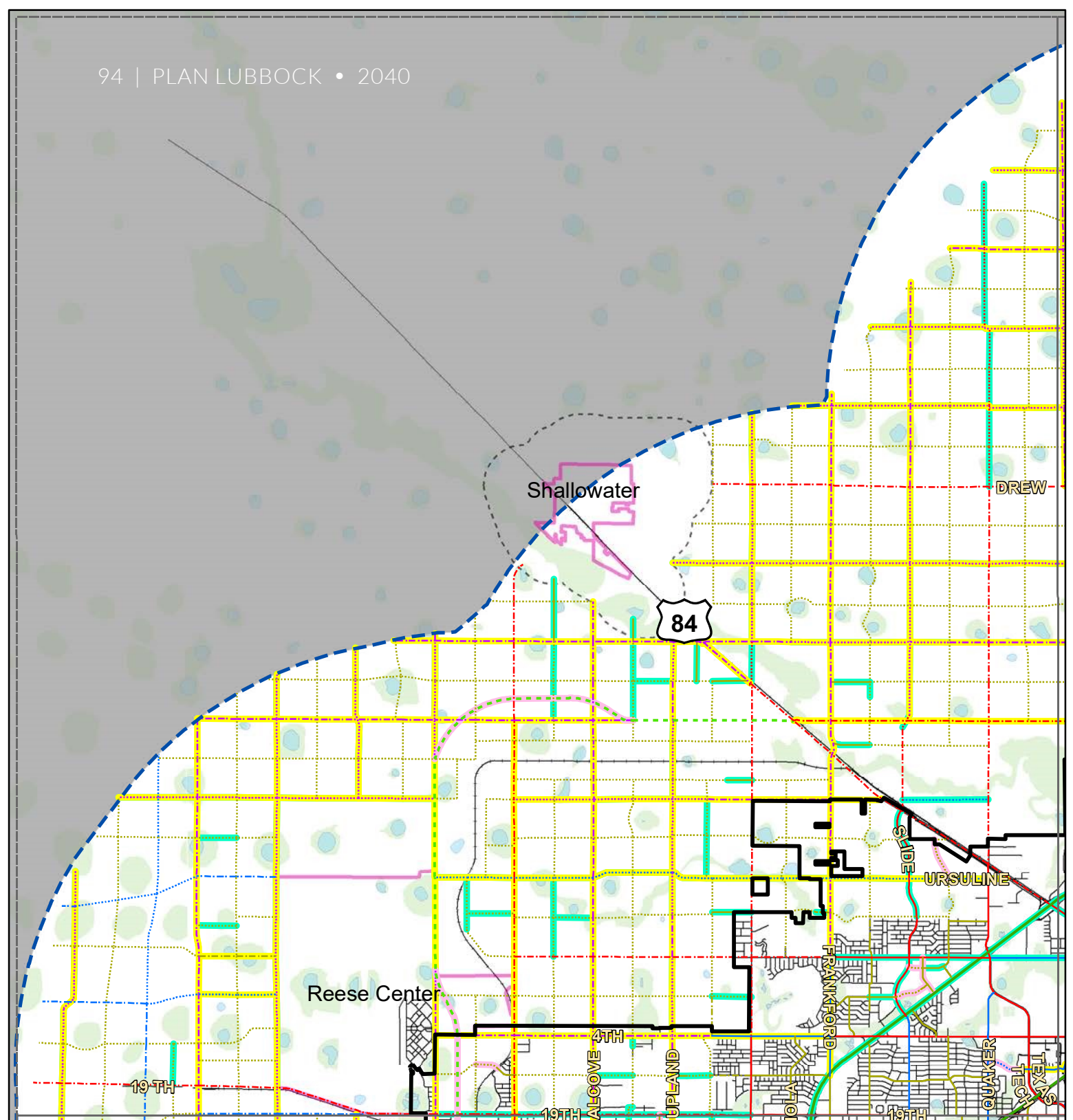
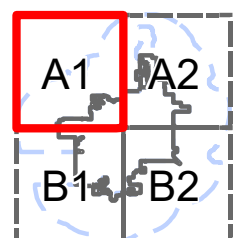


Figure 4.1: Thoroughfare Plan Map

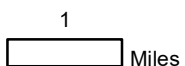


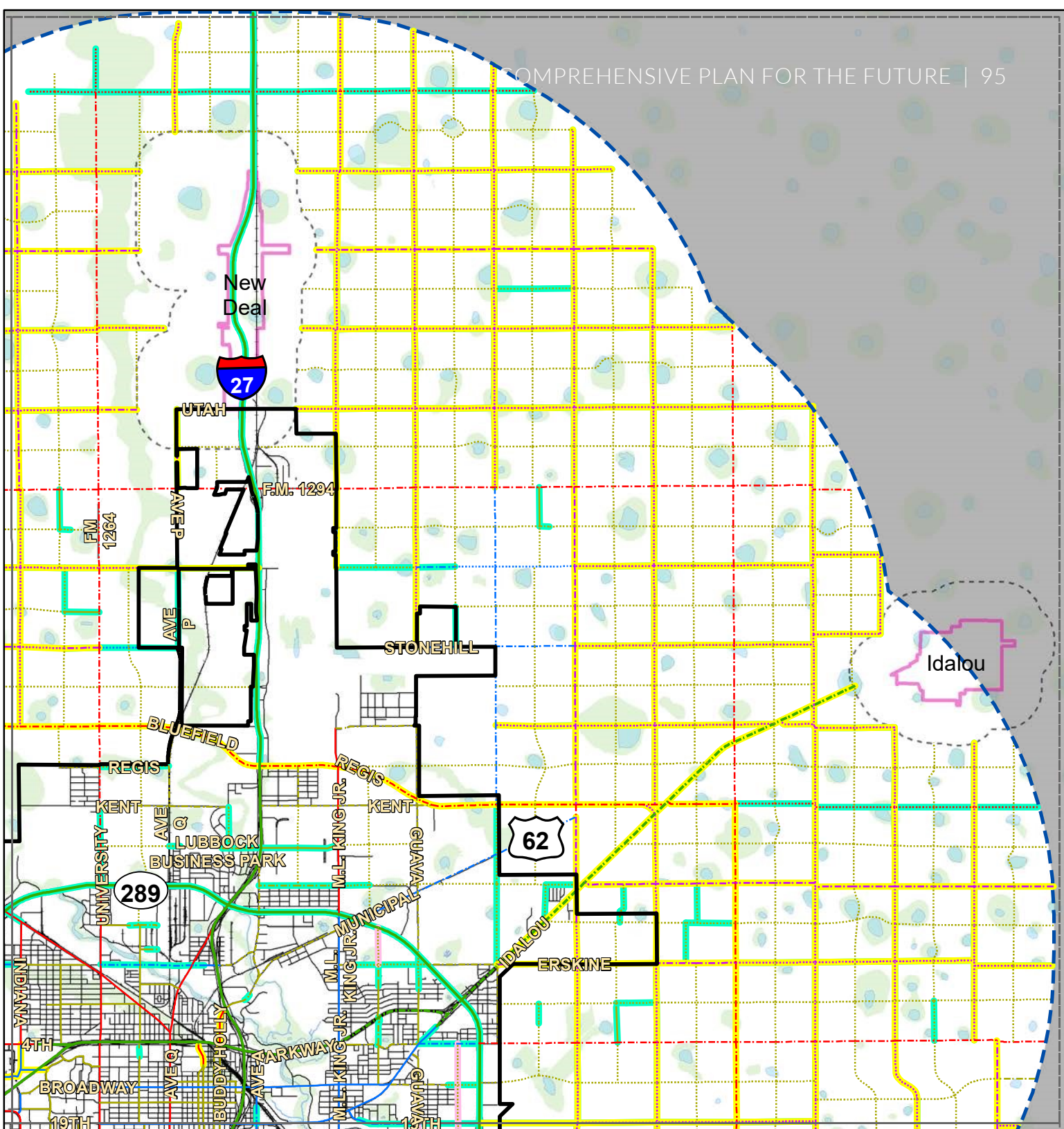
Road Classifications

- Freeway, Proposed Outer Loop
- Freeway, Completed
- Freeway, Partial
- Principal Arterial, Completed
- Principal Arterial, Partial
- ... Principal Arterial, Future
- Principal Arterial (Modified), Partial
- ... Principal Arterial (Modified), Future
- Minor Arterial, Completed
- Minor Arterial, Partial
- ... Minor Arterial, Future
- Collector, Completed
- Collector, Partial
- ... Collector, Future
- New Connections/Realignments
- Functional Class Updates
- Status Updates
- Lubbock City Limits
- Outer Cities ETJ
- Surrounding Cities Approximate
- Lubbock/Wolforth ETJ Agreement Line
- 1-Percent Flood Risk Zones (FEMA)
- Lakes
- Canyon Lake Stream
- Future Loop 88



Date: November, 2018





FUTURE THOROUGHFARE PLAN

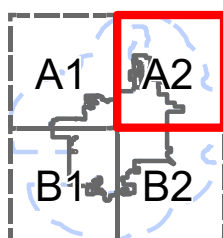
Date: November, 2018

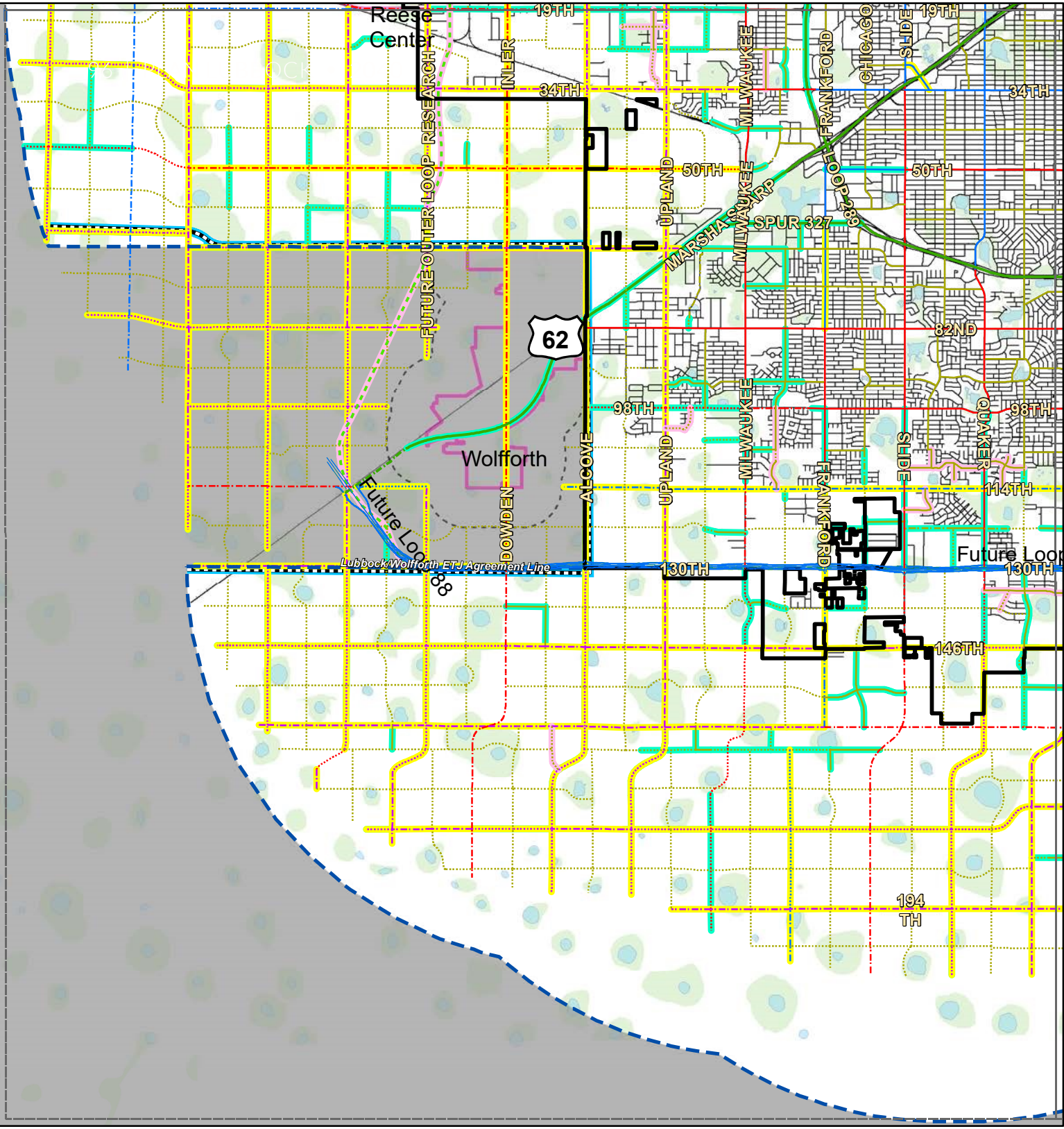
1

Miles

Road Classifications

- Freeway, Proposed Outer Loop
- Freeway, Completed
- Freeway, Partial
- Principal Arterial, Completed
- Principal Arterial, Partial
- Principal Arterial, Future
- Principal Arterial (Modified), Partial
- Principal Arterial (Modified), Future
- Minor Arterial, Completed
- Minor Arterial, Partial
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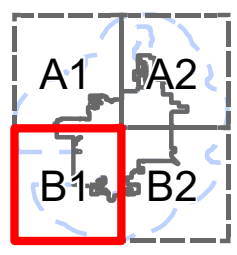
City of Lubbock TEXAS

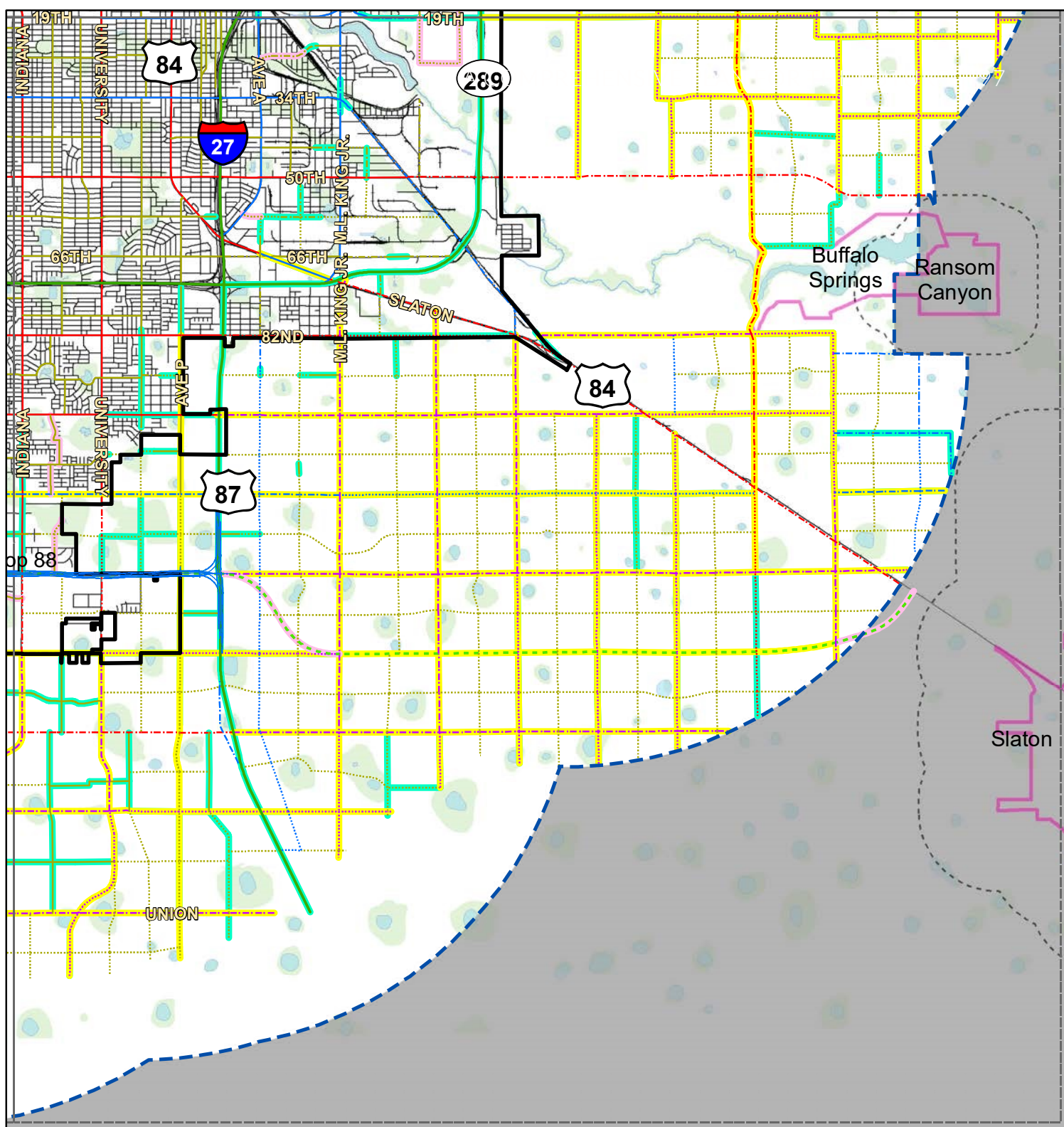
FUTURE THOROUGHFARE PLAN

Date: November, 2018

1 Miles

- ### Road Classifications
- Freeway, Proposed Outer Loop
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 - Principal Arterial, Partial
 - Principal Arterial, Future
 - Principal Arterial (Modified), Partial
 - Principal Arterial (Modified), Future
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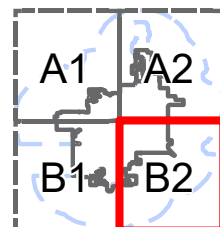
FUTURE THOROUGHFARE PLAN

Date: November, 2018

1
Miles

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- Freeway, Proposed Outer Loop
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- Principal Arterial, Partial
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- Principal Arterial (Modified), Future
- Minor Arterial, Completed
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THOROUGHFARE PLAN PRIORITIES

Lubbock's Thoroughfare Plan puts an emphasis on three categories- safety, policy, and funding- to create a transportation network. It successfully implements a right-sized thoroughfare network that safely accommodates all users and spends the City of Lubbock's funds in an optimal manner.



FUNDING

A successful thoroughfare plan is one that considers existing maintenance and capital costs, future maintenance and capital costs and impacts of growth.

RIGHT-SIZING STREETS

Lubbock's wide roadways are one of the City's greatest potential opportunities. Operationally, the collector and arterial network roadways should be examined for excess capacity. Where excess capacity exists, road right-sizing should be considered. Right-sizing streets allows the opportunity for aesthetic and connectivity enhancements, such as walking pathways, landscaping and bicycle facilities without spending additional funds for new facilities. In addition, several of the partial and new principal arterials were revised by this plan to the five lane modified principal arterial- a typical section that will allow adjacent trails within a similar right-of-way (110'). This change will build the appropriate size street that saves upfront capital costs and long-term maintenance costs.

Determining the need for alleys is also important in the development of the roadway system. If alleys are deemed necessary for a development, appropriate accessibility improvements should be required.

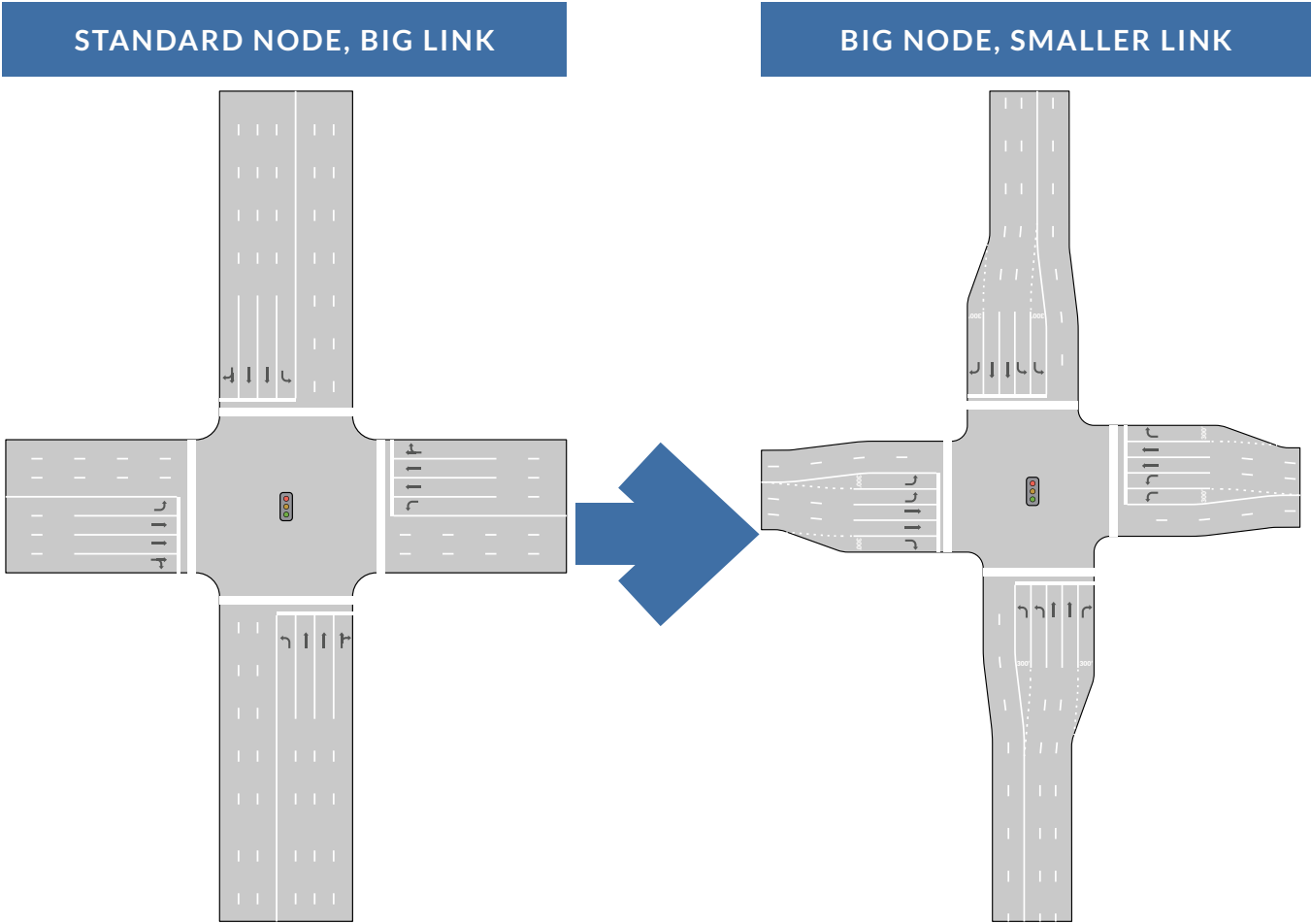


BIG NODES, SMALL LINKS

Intersections are the key to maintaining adequate traffic flow. For the right-sized arterial facilities, it is recommended to flare out the intersections to allow for dual left-turn lanes and a dedicated right-turn lane. This configuration will maintain similar capacities to a seven-lane section with a single left-turn and no right-turn lane at a much lower cost.

As part of the Thoroughfare Plan process, the entire arterial network was examined to determine which future roads

have the potential to be built with big nodes and smaller links. The result of this process was the re-classification of some principal arterials as modified principal arterials. While maintaining the same right-of-way as the principal arterial, the modified principal arterial allows for the concept of big nodes and smaller links to be implemented, which have the ability to maintain similar capacity but reduce the amount of funding needed to build the transportation network.



FUNDING - DEVELOPER CONTRIBUTION

Below is a list of tools that the City could consider to help developers assist in the mitigation of their traffic impacts.

TRAFFIC IMPACT ANALYSIS

A Traffic Impact Analysis (TIA) is a tool or process that ensures the City and land developers share a responsibility in determining reasonable solutions to identified transportation problems. A TIA examines the proposed development's effect on the existing transportation systems with supporting documentation. The TIA recommends mitigation measures to accommodate the impacts of the proposed development.

A TIA is typically required whenever additional site-generated traffic exceeds 100 peak hour trips. A TIA is also typically required with a zoning request change or a site plan. The TIA is used by City staff and the Planning & Zoning Commission to make a recommendation for approval or denial of the zoning case or site plan.

Typical mitigation measures can include:

- Widening of the adjacent thoroughfare
- Intersection improvements within study area
- Safety mitigation – sight distance and turn lanes
- Access management

IMPACT FEES

Impact fees are another tool to aid in funding new roadway infrastructure. It consists of a charge or assessment imposed by a political subdivision on new development in order to generate revenue or recoup the costs of capital improvements or facility expansions necessitated by and attributable to the new development. An impact fee study calculates the cost for growth to pay for roadway expansion within the City.

BORDER STREET POLICY

Border street policies are one tool to aid in funding roadway infrastructure where development is occurring and creating new traffic demand. This is done by requiring development to build a portion of the thoroughfare facility adjacent to the property line.

One component that could be included as part of the policy in Lubbock is to request developers to provide preliminary centerline profiles along key corridors prior to development to minimize reconstruction costs when curb and gutter is installed prior to roadway construction. The policy could also require the adjacent border street to be constructed to a three-lane section if determined proportional to the impacts of the development.



FUNDING - OTHER MECHANISMS

BONDS

The City may issue a bond as an instrument to finance public projects such as roads, schools, airports and infrastructure-related repairs. Any bonds issued should be used to fund projects consistent with the City's goals as established in this document and in other documents including the Walk and Bike Lubbock Plan and the Lubbock Thoroughfare Plan.

TAX INCREMENT FINANCING (TIF)

TIF districts assist in financing development of unimproved or blighted land by dedicating the real estate property taxes to be generated by the built project to a TIF fund for payment of the principal and interest on TIF bonds. Under a TIF, the property owner pays taxes on the full value of the property, and the taxing entities pay into the TIF fund the taxes attributed to the added value of the land due to the new development. TIF bonds may be issued for a maximum of 20 years and may be used to pay for public improvements associated with a development including but not limited to parking, infrastructure, land acquisition, and utilities.

STREET MAINTENANCE FEE

A street maintenance fee is a fee collected by a political subdivision to fund necessary transportation operations and maintenance projects that are commensurate with the impacts from existing development. The purpose is to allocate a dedicated funding source based on usage of system.

PUBLIC IMPROVEMENT DISTRICT (PID)

The formation of a PID allows the City to levy and collect special assessments on property that is within the City or within the City's Extraterritorial Jurisdiction (ETJ). A PID may be formed to perform any of the following improvements:

- Water, wastewater, health and sanitation, or drainage improvements
- Street and sidewalk improvements
- Mass transit improvements
- Parking improvements
- Library improvements
- Park, recreation, and cultural improvements
- Landscaping and other aesthetic improvements
- Art installation
- Creation of pedestrian malls
- Similar improvements
- Supplemental safety services for the improvement of the district, including public safety and security services
- Supplemental business-related services for the improvement of the district

EMPHASIS ON SAFETY

The safety of all motorists, pedestrians, and bicyclists is the top priority for transportation in the City of Lubbock. Safety is emphasized and reinforced in many existing design standards, ordinances, and policies that pertain to transportation. In order to further improve safety for those traveling in Lubbock, four specific focus areas have been identified. These areas are:

- Access management
- Speeding
- Intersections as a priority
- Non-motorized transportation

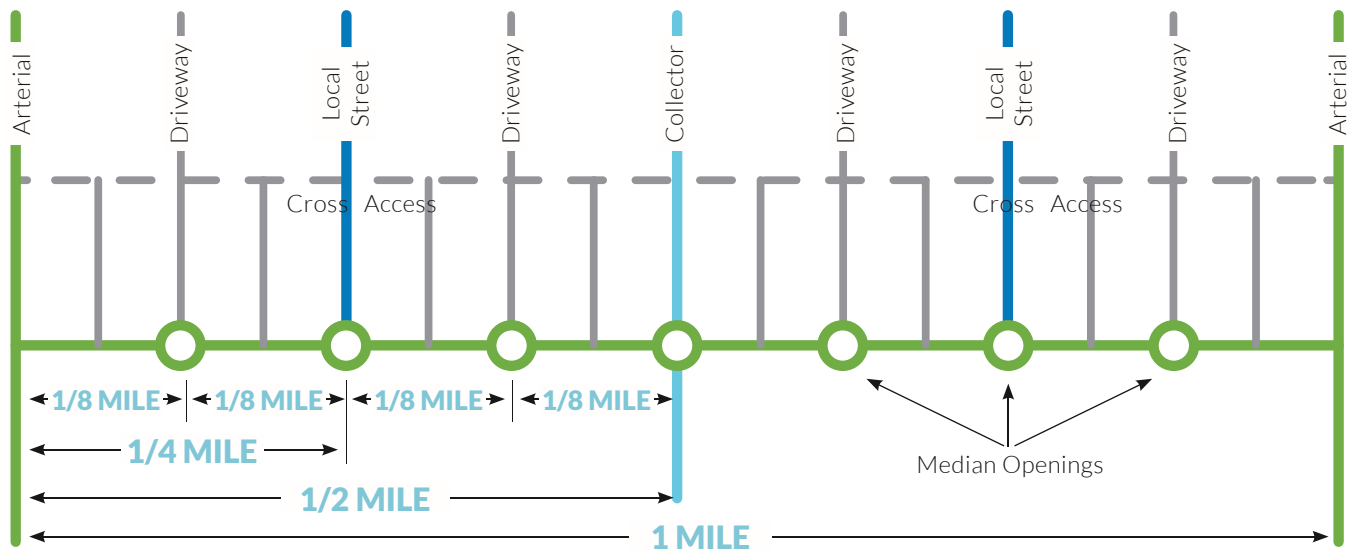


Figure 4.2: Pavement Section for Local and Collector Roads

ACCESS MANAGEMENT

Access management refers to the regulation of interchanges, intersections, driveways, and median openings to a roadway. Access management can increase safety by reducing the number of turning movement conflicts and opportunities for collisions on a roadway and by providing better protection for pedestrians. Some strategies for implementing access management in Lubbock include:

- Identification of future candidate corridors for raised median installation

- Development of revised access spacing criteria
- Right-turn lane requirements
- Emphasize providing cross access for commercial properties instead of additional driveways

For corridors where raised medians are applied, Figure 4.2 represents an access management strategy (pavement section) based on the existing arterial spacing in Lubbock.

SPEEDING

Speeding poses a threat to the safety of all modes of travel as excessive speeds can lead to loss of control and increased severity of crashes. Emphasis should be placed on neighborhood local and collector streets where young children may be playing. Speeding motorists on local streets present a significant danger. Wide streets with a lack of pedestrian amenities can encourage drivers to speed. New roadways should be designed to lower the probability of a vehicle speeding, especially in a neighborhood context. As shown in Figure 4.3, the risk of fatal injury for pedestrians has been shown to increase rapidly

as impact speed increases above 30 miles per hour. Several strategies to reduce speeding in Lubbock have been identified.

These strategies include:

- Identification of top corridors with speeding concerns
- Encouraging narrower roads throughout the system
- Smaller drive lanes, where appropriate
- Speed limit reduction
- Traffic calming, landscaping, and pedestrian features
- Increased enforcement

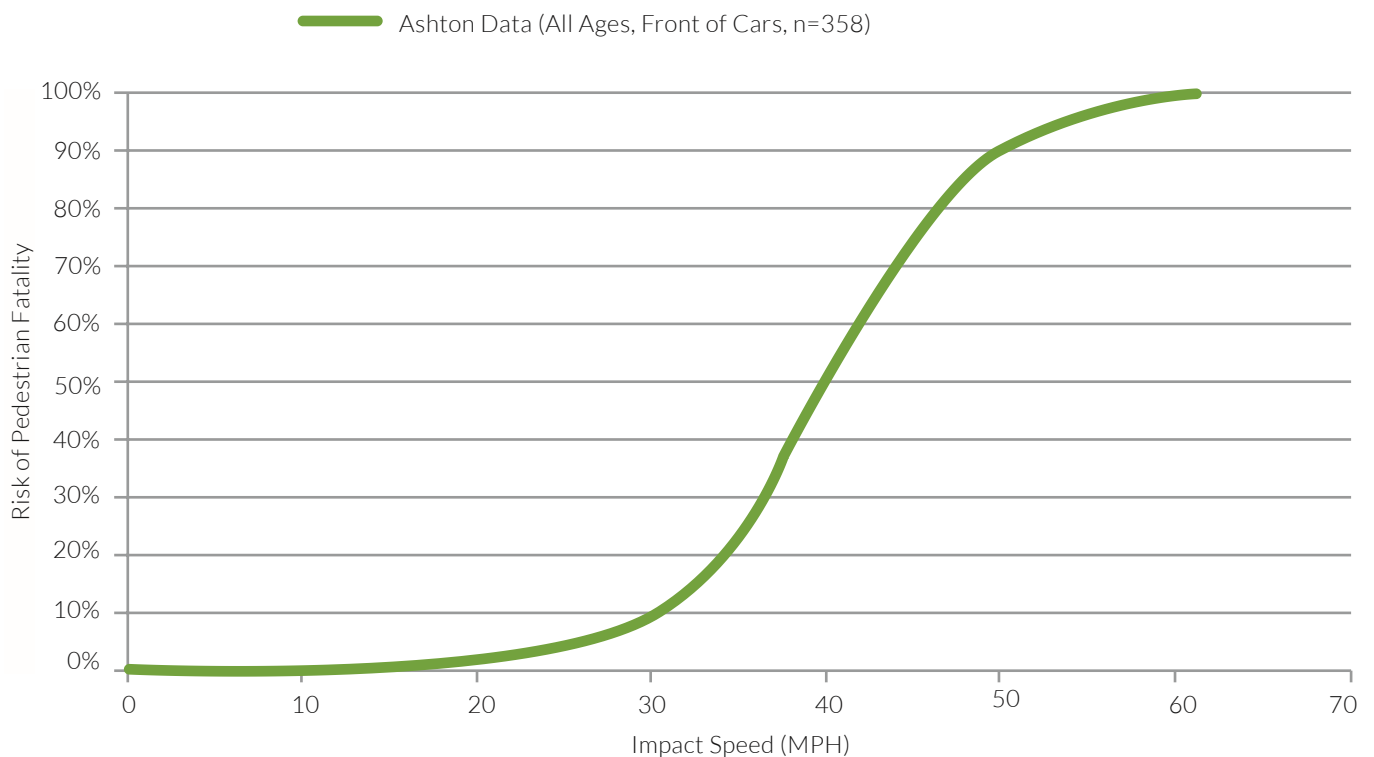


Figure 4.3: Relationship Between Speed and Risk of Pedestrian Fatality

Source: *Relationship Between Speed and Risk of Fatal Injury: Pedestrians and Car Occupants, Figure 2.1, London Department for Transport, 2010*

INTERSECTIONS

Many severe crashes occur at intersections due to increased opportunity for collisions, making intersections an important focus area for safety. The following two strategies have been identified as beneficial to improving intersection safety in the City of Lubbock:

Development of a Safety Improvement Program

The development of a Safety Improvement Program would include identifying top safety priorities and creating a specific plan to implement improvements.

Develop a List of Candidate Intersections for Safety Improvements

A list of candidate intersections for safety improvements can be identified using data such as crash rate, geometry, vehicular volumes, and pedestrian traffic.

NON-MOTORIZED TRANSPORTATION

Pedestrians and cyclists typically bear the greatest risk of severe injury or death when involved in an automobile crash. Well-designed pedestrian and bicycle networks can significantly decrease the risk of those using non-motorized forms of transportation.

For the establishment of a safe and connected pedestrian network, sidewalks should be included in all new roadway construction, large roadway rehabilitation projects, and in subdivision construction. Existing gaps within the sidewalk network should also be identified. Developments should be reviewed to ensure pedestrian connectivity is maintained. Areas around schools, parks, transit and public facilities should receive priority when targeting areas for pedestrian improvements, as these areas are typically the most likely to attract pedestrian trips.

The bicycle network should be continuous and should provide dedicated or separated facilities where possible to maximize safety and comfort for riders of all ages and abilities. On routes where dedicated or separated facilities cannot be provided, traffic calming measures, wayfinding, and clear signage should be considered to alert motorists of the presence of cyclists and to increase the comfort and safety of cyclists. Bicycle and pedestrian facilities and priorities will be emphasized in the Walk and Bike Lubbock Plan.





Online Survey Question:

What is the number one transportation issue facing Lubbock?

One respondent:

((The City is already so close to being bike-friendly, but there's a lot more that could be done. Car traffic isn't bad unless it's rush hour, so that doesn't seem like much of a problem. However, I couldn't find a good place to cross Quaker. I used the 42nd bike lane and felt like I was taking my life in my hands every time I went through. I also found that it was difficult to ride my bike under the loop. It's such a high-traffic area, and there's no shoulder, so you have to get off and walk it, and it's not great. I love what you did for Broadway. Honestly, the change made it so much easier to drive too, because of the turn lane. More like that would be great.))



POLICIES

In addition to the Thoroughfare Plan Map and cross-section design, the crafting of transportation policies can aid in providing and maintaining a well-functioning transportation system that meets the needs of its users. The following sections discuss several policies that, if implemented, are anticipated to build on and enhance the existing transportation network in Lubbock.



THE CRAFTING OF TRANSPORTATION POLICIES CAN AID IN PROVIDING AND MAINTAINING A **WELL-FUNCTIONING** TRANSPORTATION SYSTEM

CONTEXT SENSITIVE DESIGN

The principle behind context sensitive design is that roadways and other transportation facilities are built to reflect the needs of the surrounding land use. For example, roads in more rural areas are more often built with bar ditches and less often include transit facilities. Roads in urban areas may more commonly have a need for on-street parking and/or bike lanes. Many areas of Lubbock have distinct and unique characteristics. The roadways should have flexibility in design to adapt to match the areas where they are located. The land use context, adjacent neighborhoods and long-term character should all be considered during roadway design. The development of a policy by the City's Engineering and Planning staff would ensure that future roadway facilities are built to correctly suit their environment in the City of Lubbock.

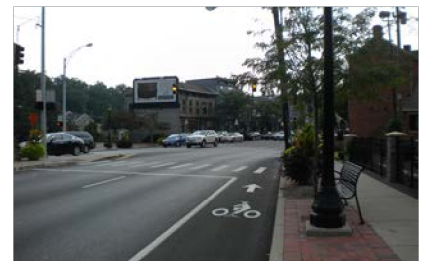


infrastructure



economic development

community livability



parks, trails & open space

implementation

COLLECTOR CONNECTIONS

The existing grid network in Lubbock allows for an efficient and highly connected means of transportation by limiting trip lengths throughout the City and providing multiple route options for roadway users. This network was designed generally with an arterial spacing of one mile, and a collector spacing of one-half mile between arterials. In addition to this, it is recommended that a policy be considered to allow no more than three street connections between arterials, and for access management standards to be strictly enforced for driveways. These policies, in conjunction with robust access management practices, have the ability to enhance mobility along arterial roadways in Lubbock.

PUBLIC TRANSIT

Public transit is a vital appendage of the transportation system, and serves a diverse demographic including students, commuters, elderly persons, and persons with disabilities. It is important to understand the existing transit demand and identify geographic and demographic areas that are currently being under-served so that new ways of expanding service can accurately be identified and acted upon. The City is in the process of evaluating the transit system with the goal of promoting equity of opportunity in the system. It is

recommended that a transit plan be developed which addresses the following four questions:

- How well is transit demand currently being met?
- What new connections and services should be provided?
- How should transit be accommodated within Complete Streets?
- What improvements to the Transit System for under-served communities and areas are needed?

WIDENING/IMPROVEMENT CRITERIA

One way to ensure that transportation projects are prioritized appropriately and funds are used where they are needed most is to develop criteria to aid in the selection process to identify candidates for roadway widening and other improvements. The result of this policy would be a live, up-to-date list of high priority projects to be completed. Selection of projects from that list would be based on the criteria, as well as public and stakeholder input. Project selection criteria may include the

following elements:

- Annual Average Daily Traffic (AADT)
- Intersection and link level of service
- Large anticipated development
- Future land use
- Network connectivity
- Roadway/pavement condition



RELATIONSHIP BETWEEN LAND USE AND TRANSPORTATION

Land use and transportation are directly related. Each type of land use generally generates a certain amount of traffic and has specific traffic patterns. The capacity of the roadways also determines if a particular land use can be developed on a corridor. It is important for the Planning and Engineering departments to work together when planning major corridors to ensure the most compatible development and traffic patterns.

FLEXIBLE PRIORITIZATION

In addition to development of widening and improvement criteria, it is important that the goals of the transportation system in Lubbock reflect the interrelationships with other systems and should be evaluated comprehensively. This means that some goals may be weighted more heavily than others, and even on a case-to-case basis. This level of flexibility allows Lubbock to customize the prioritization process based on what is most important to achieve community goals.



**Functional
Classification**



**Connection to
Amenities**



Crash Rate



Traffic Volumes



Funding



**Congestion
Reduction**



**Feasibility and
Implementation**



Multi-Modal

RECOMMENDATIONS



1. ADOPT THE UPDATED THOROUGHFARE PLAN.

The adoption of this Thoroughfare Plan replaces the 2007 Plan. This new Thoroughfare Plan should be utilized by staff to guide transportation and land use related decisions. The map should also be reviewed annually for any minor updates and at least every five years for major updates. These updates should be identified by staff and recommended to the Planning & Zoning Commission for review and recommendation to the City Council. The City Council should also continue to evaluate the overall transit system and engage in discussions with transit users.



2. UPDATE AND ALIGN THE ZONING AND SUBDIVISION REGULATIONS WITH THE RECOMMENDATIONS IN THIS THOROUGHFARE PLAN.

This Thoroughfare Plan creates a transportation vision for the City of Lubbock. The first step to implementing a plan is through the zoning and subdivision regulations. Lubbock's current regulations are outdated and do not align with many of the transportation policies in this Plan. It is recommended that the zoning and subdivision regulations be updated after the adoption of this Plan to allow for successful implementation of the policies and strategies (i.e.; functional classifications, access management, cross-sections, collector connections, etc.). The City should also consider combining the zoning and subdivision regulations into a Unified Development Code (UDC) to streamline the regulations and make them user-friendly to the public and developers. The right-of-way should also be zoned correctly so that appraisals accurately reflect an appropriate value other than a commercial land use.



*Thoroughfare
Plan*



*Revise
Zoning
Ordinance*



3. APPOINT A CAPITAL IMPROVEMENTS ADVISORY COMMITTEE.

Appoint a Capital Improvements Advisory Committee (CIAC) to assist in the development of an impact fee program for roadways as authorized per Chapter 395 of Texas Local Government Code (LGC) for the purpose of constructing key infrastructure over the next 10 years. This Committee should be separate from the Planning and Zoning Commission and is recommended to consider adoption of impact fees at 50 percent of the maximum amount allowed by law.



5. PRIORITIZE AND IMPLEMENT ROADWAY IMPROVEMENT STRATEGIES

Development of a Safety Improvement Program

The development of a Safety Improvement Program would include identifying top safety priorities and creating a specific plan to implement improvements.

Develop a list of candidate intersections for Safety Improvements by working with the MPO.

A list of candidate intersections for safety improvements can be identified using data such as crash rate, geometry, vehicular volumes, and pedestrian traffic.

Develop a new access management policy

- Identification of future candidate corridors for raised median installation
- Development of revised access spacing criteria
- Right-turn lane requirements
- Emphasize providing cross access for commercial properties instead of additional driveways
- Require alleys to be paved and limit alley intersections with major arterials

Speed Reduction Strategies

- Identification of top corridors with speeding concerns
- Evaluation of most appropriate speeding countermeasures
 - Speed limit reduction
 - Traffic calming
 - Increased enforcement



4. EVALUATE TRANSPORTATION IN NORTHERN AND EASTERN LUBBOCK.

Transportation solutions should be further evaluated in Northern and Eastern Lubbock. The focus should be the reduction of barriers to improve the pedestrian and bicyclists experience and allow good connections to a future transit system.



*Neighborhood
Planning
Program*



*Impact fees for
Infrastructure
Projects*



*Corridor
Design &
Gateways*