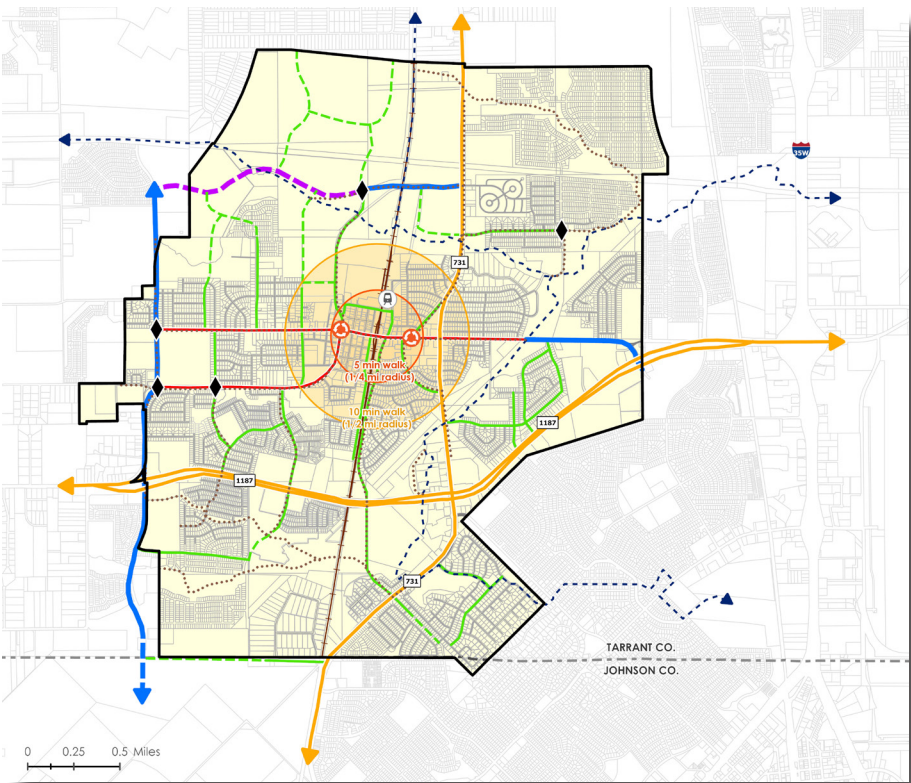


3.2 Master Thoroughfare Plan (MTP)

Because roads do not stop at the city limits, coordination with neighboring cities is important. Preparation of the updated Crowley Master Thoroughfare Plan (MTP) included analysis of the existing MTP, local and regional plans, traffic volumes, lane capacity, accident data, and proposed development. Crowley is currently an auto-centric community. However, personal and public mobility is not limited to automobiles. Crowley residents spoke out about the need and desire for sidewalks, bike lanes, transit, and trails. People want downtown Crowley to be a walkable area allowing them to walk to and around Main Street, leaving their cars in their garage. An integrated plan addressing mobility for all citizens should include pedestrian and bicycle facilities and public transportation options, such as carpools, shuttles, buses, and commuter rail. This plan is an updated and enhanced Master Thoroughfare Plan. When adopted and in combination with the new adopted Parks and Trails Master Plan, current and future Crowley residents will enjoy a lot more connectivity in their community.

This plan discusses and contextualizes Crowley mobility infrastructure in the following ways:



- ★ **Beyond the City Limits:**
Highlights importance of coordinating with overarching regional transportation agencies
- ★ **Local Links:**
Shows where Crowley roads link to Fort Worth and Burleson
- ★ **Getting Out of the Car:**
Plans for a more active community with facilities to connect to and for recreation
- ★ **The Street as a Drainage Facility:**
Intentional design of the street as part of the stormwater system
- ★ **Master Thoroughfare Plan (MTP):**
The long-range plan and typical cross-sections to guide the roads associated with development and redevelopment



Figure 3-2-1: MTP Graphic
City of Crowley 2045 Comprehensive Plan update

Beyond the City Limits

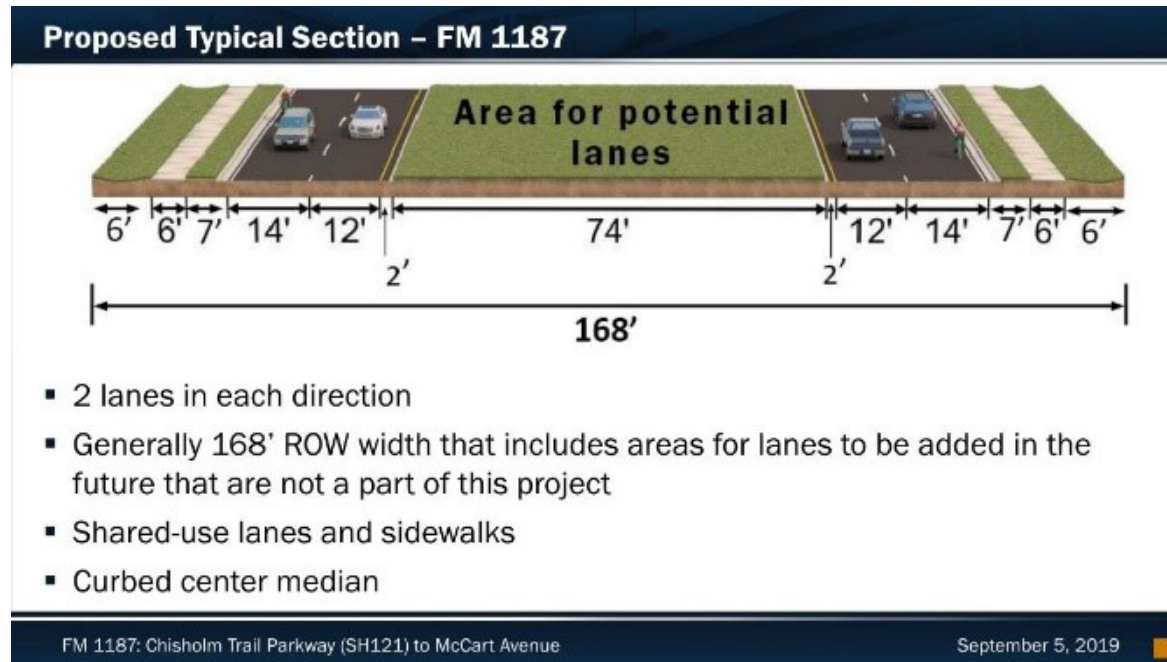
Existing Facilities and Plans

The network of roads in Crowley consists of city and state-maintained roads. Texas Department of Transportation (TXDOT) maintains SH 1187 and FM 731 (Crowley Road). Traffic safety is one of the major [goals](#)¹ of TXDOT's mission. [Maintenance](#)² includes upkeep of the roadway surface and supports the goal of optimized system performance. The [Traffic Safety division](#)³ is responsible for

pavement markings, signs, and signals. Crowley Road / Farm to Market Road 731 is the major north-south route through the city, connecting Crowley to its neighboring communities - Fort Worth and Burleson. Crowley-Plover Road/ SH 1187 is the major east-west regional connector, providing regional connection from Mansfield to Aledo.

Federal and Regional Transportation Planning

Statewide transportation planning is administered by the [Texas Transportation Commission](#)⁴ (TTC) in accordance with federal legislation administered by the [Federal Highway Administration](#)⁵ (FHWA). Currently, TXDOT is preparing its transportation plan, known as [Texas Transportation Plan 2050](#)⁶, and its [2020 Unified Transportation Plan \(UTP\)](#)⁷ was adopted in August 2019.



Regional transportation planning efforts are coordinated through the Metropolitan Planning Organization (MPO). The North Central Texas Council of Governments (NCTCOG) acts as the Dallas/Fort Worth regional MPO. This agency prepares and updates the regional transportation plan, known the [Transportation Improvement Plan](#)⁸ (TIP). With a three-year horizon, the TIP is updated annually,

and includes infrastructure improvements and funding programs for roads that Crowley residents use every day. Separate from its work as an MPO, NCTCOG also prepares its own transportation plan, known as [Mobility 2045](#)⁹. The plan is updated on a regular basis, and its primary mission is to plan the transportation network within the region holistically, including all forms of mobility from active to passive. It is important to note that SH 1187 is considered in the Mobility 2045 plan. Recently, TXDOT held a public hearing about improvements to SH 1187 from the western boundary of Crowley toward Hwy 377. It is important for Crowley residents to know that two of its major roadways are not controlled by the city government, and they therefore should remain aware of the state and regional plans.

Note: The TXDOT website has a [project tracker portal](#)¹⁰, which assists and enables citizens to track projects.

Figure 3-2-2: TXDOT: Proposed Improvements to SH 1187

! Side Bar

Recent noteworthy TXDOT and NCTCOG plans which will affect Crowley are:

1. TXDOT plans to reconstruct and widen SH 1187 from Chisholm Trail Parkway to BR 1181/McCart Boulevard. Currently, the Fort Worth TXDOT District plans to continue its design efforts, with construction estimated in 5-10 years.
2. TXDOT: The original 2004 construction documents for SH 1187 included the wide median which exists today. While this currently allows for green space and some landscaping, the original plans depict future “freeway” lanes in the median. It is imperative that city staff and residents stay aware of TXDOT plans for this roadway.
3. NCTCOG: Mobility 2045 designates both FM 731 and SH 1187 as regionally significant arterials because these roadways provide connectivity within the region. These roadways provide options to local vehicular movement which, in turn, lessen traffic volumes on I-35 W and I-20, respectively. The NCTCOG plan also acknowledges that the existing arterial network in south Tarrant County is deficient given all the recent development. Again, Crowley residents and city staff will need to routinely check for updates or new plans for SH 1187.



KEY takeaway: It is important to note that these transportation projects are in the planning stages and, with input from Crowley, may not be entirely negative. These plans highlight how important it is for Crowley to plan for its future so that it can create the community it wants and not be shaped by external dynamics.

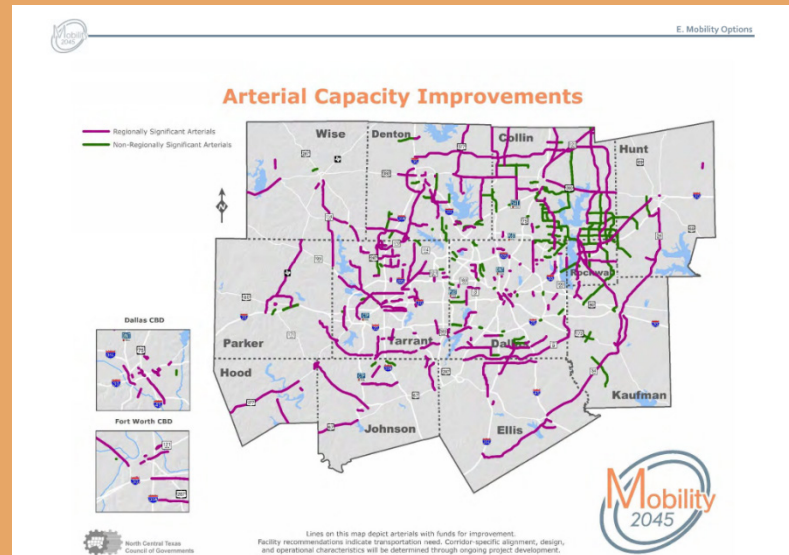


Figure 3-2-3: NCTCOG Mobility 2045: Arterial Capacity Improvements

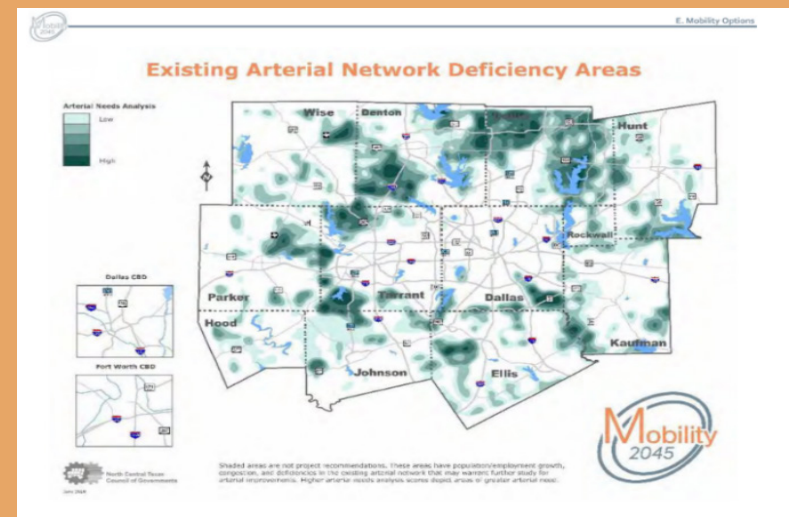


Figure 3-2-4: NCTCOG Mobility 2045: Existing Arterial Network Deficiency Areas

Local Links

The existing MTP is coordinated with Table 7 in Chapter 98 of the Crowley code of Ordinances ([Chapter 98, General Development](#)¹¹) and is used for review of proposed development plans and engineering documents. While this section of the code specifically regulates the roadways within the city limits, roads do not care about jurisdictional boundaries. Therefore, it is very important to examine how roads will connect between the cities.

Both [Burleson](#)¹² and [Fort Worth](#)¹³ have Master Thoroughfare Plans that are available to read online. Classifications of Burleson streets that connect to Crowley are outlined below. (Note that FM 731 and SH 1187 are maintained by TXDOT. This section addresses rights-of-way maintained by the local cities.)

1. Existing Burleson – Crowley connection
 - Renfro Road:
 - Existing right-of-way: 70 feet
 - Crowley: Principle Arterial (100 ft)
 - Burleson: Major Arterial (90 ft)
2. Existing Fort Worth – Crowley connection
 - McCart / Eagle Drive:
 - Existing right-of-way in Crowley: varies between 80-95 feet
 - Crowley: Principle Arterial (120 ft)
 - Fort Worth: Major Arterial (110 ft)
 - Industrial Boulevard: (100 ft)

Summary Evaluation of the internal and external local street networks and their different classifications based on function clearly reveals the need for a coordinated thoroughfare plan. As Crowley approaches build-out, potentially in the next 20 years, coupled with the forecast for significant population growth in the region, coordinated maintenance and connectivity will be paramount.

Getting Out of the Car

Citizen input highlighted the need for options of getting around the community other than in a privately-owned vehicle (POV). People want to get out of their cars for a variety of reasons – to walk for their health, to feel a connection to their community, to enjoy the natural environment, and to avoid traffic. The good news is that the Crowley street network as it exists today and as planned provides capacity for vehicles for the next 25 years. In other words, most roads in Crowley can already accommodate future volumes of traffic. The bad news is that the current street network has a couple of “choke” points that need to be addressed on the future plan.

Traffic and Congestion Analysis

Two of the three common components of traffic congestion are based on the physical construction of the roadway (number of lanes and demand, known as volume and capacity). The function of a roadway is impacted by the number of cars travelling at any given time and the number of available lanes. The third aspect has to do with the potential hazards at key intersections and access points to private property, also known as driveways. Analysis of the existing and future road network revealed that the majority of Crowley roads have both the capacity and the volume needed for estimated future demand. And, most roadways generally received a good score for Level of Service (LOS) both now and in the future. This term, LOS, is commonly used by transportation planners to study and make recommendations for the road network. Multi-Modal Level-of-Service Indicators are rating systems used to evaluate various transportation modes and impacts. Level of Service (also called Quality of Service or Service Quality) refers to the speed, convenience, comfort, and security of transportation facilities and services as experienced by users. Level-Of-Service (LOS) ratings, typically from A (best) to F (worst), are widely used to evaluate problems and potential solutions.

Level of Service (LOS)¹⁴

The following travel flow characteristics (V/C Ratio) are used to determine needs and deficiencies during the planning process:

- A** Virtually free flow; completely unimpeded:
Volume/Capacity ratio less than or equal to .60.
- B** Stable flow with slight delays; reasonably unimpeded:
Volume/capacity ratio .61 to .70.
- C** Stable flow with delays, less freedom to maneuver:
Volume/Capacity ratio .71 to .80.
- D** High Density but stable flow:
Volume/Capacity ratio .81 to .90.
- E** Operating conditions at or near capacity; unstable flow
Volume/Capacity ratio .91 to 1.00.
- F** Forced flow, breakdown conditions
Volume/Capacity ratio greater than 1.00.

Such ratings systems can be used to identify problems, evaluate potential solutions, compare locations, and track trends. Current planning tends to evaluate transportation system performance based primarily on motor vehicle traffic speed and delay (aka traffic). Note the focus on motor vehicle mobility, contributing to continued automobile dependency. This plan, however, utilizes the traditional LOS methodology for roadways in Crowley, but also considers other forms of mobility as result of community input and addressed in both this plan and the Parks and Trails Master Plan (to be adopted in 2020).

Four locations are highlighted for future improvements based on anticipated capacity and traffic volume.

- Eagle Drive / McCart Boulevard north of Main Street:**
This is a capacity issue for the rural cross-section and general roadway segment which continues north into the City of Fort Worth. There is an additional issue at the intersection at Main Street and Eagle Drive. There is a high volume of traffic using this intersection to avoid the train, get to the high school, or shop in the nearby Fort Worth stores.
- Main Street east of FM 731 to Walmart/SH 1187:**
The 2-lane bridge over Deer Creek is the limiting factor for this road segment. It is recommended that the bridge be replaced with a design that includes additional lanes as well as a shared bike lane (refer to Park and Open Space Master Plan) and sidewalks.
- Intersection of FM 731 and SH 1187:**
While the map appears to show that west bound SH 1187 is not functioning well, the real issue is the intersection of FM 731 and Renfro Road, its design, and the lack of spacing. In reality, the TXDOT plans show that the right-of-way width of SH 1187 is more than adequate to handle volume with additional lanes. An access management strategy which limits the number of driveways and promotes shared access driveways onto SH 1187 would be beneficial. Another option, which aligns with the NCTCOG 2045 Mobility plan, is the installation of a controlled access facility, such as an express lane. This option would apply to the segments of SH 1187 from Main Street (east) to Eagle Drive (west).
- FM 731 North (between Main Street and city limits):**
Existing infrastructure of this roadway is adequate to meet future demand. It is currently built as a 6-lane roadway (3 lanes in each direction) with a continuous turn lane. However, the outer lanes are currently striped, limiting use of the outer lane as a shoulder. These areas are not currently used as travel lanes, except for the turn lane onto Crescent Springs Road. The NCTCOG 2045 Mobility Plan

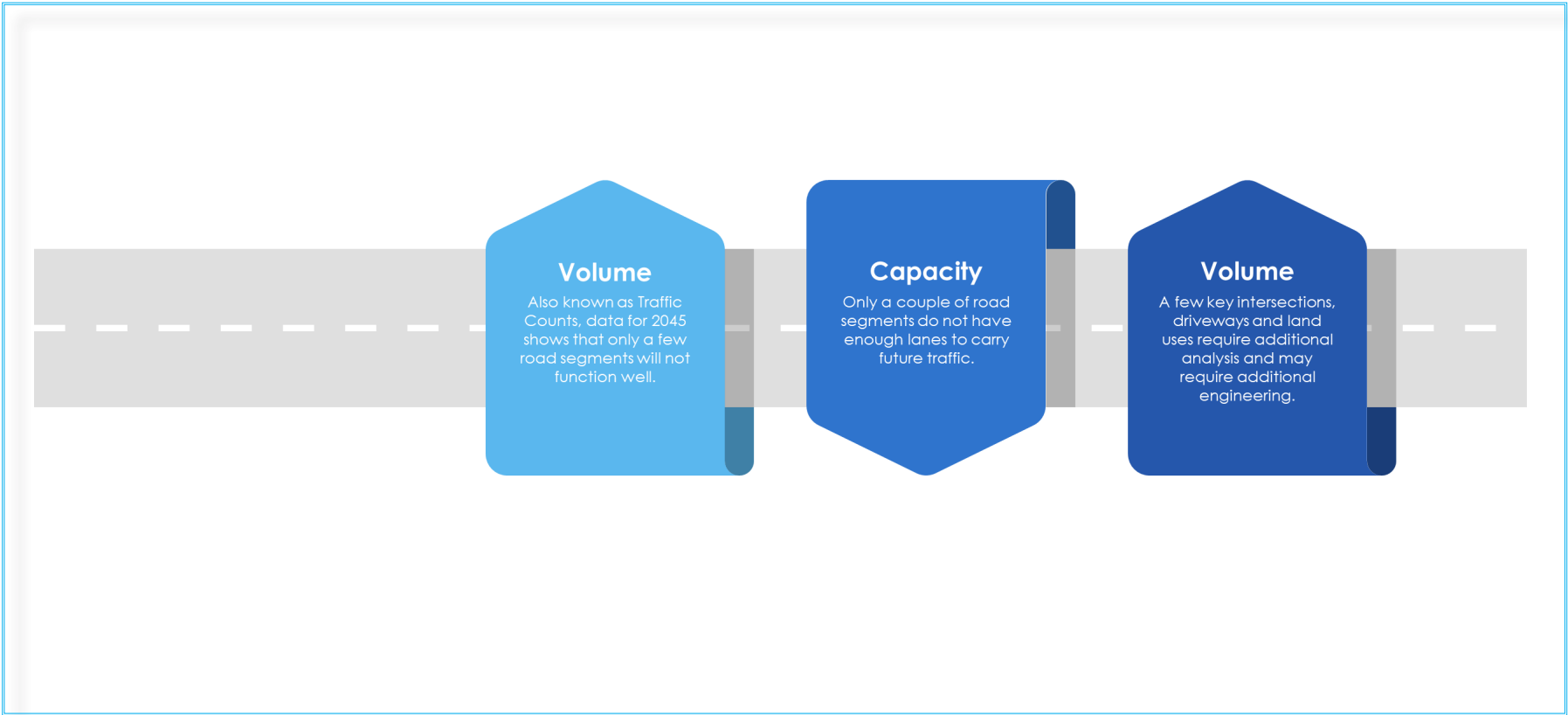
recommends that the striping be removed in 2037 to allow for full use of the facility. The year 2037 is only an estimate based on the current rate of development in the region. Therefore, this plan recommends that city monitor the two signalized intersections at Main Street and Industrial Boulevard. Extended traffic delays at these two intersections will indicate that it is time to coordinate with TXDOT to open the outer lanes to travel.

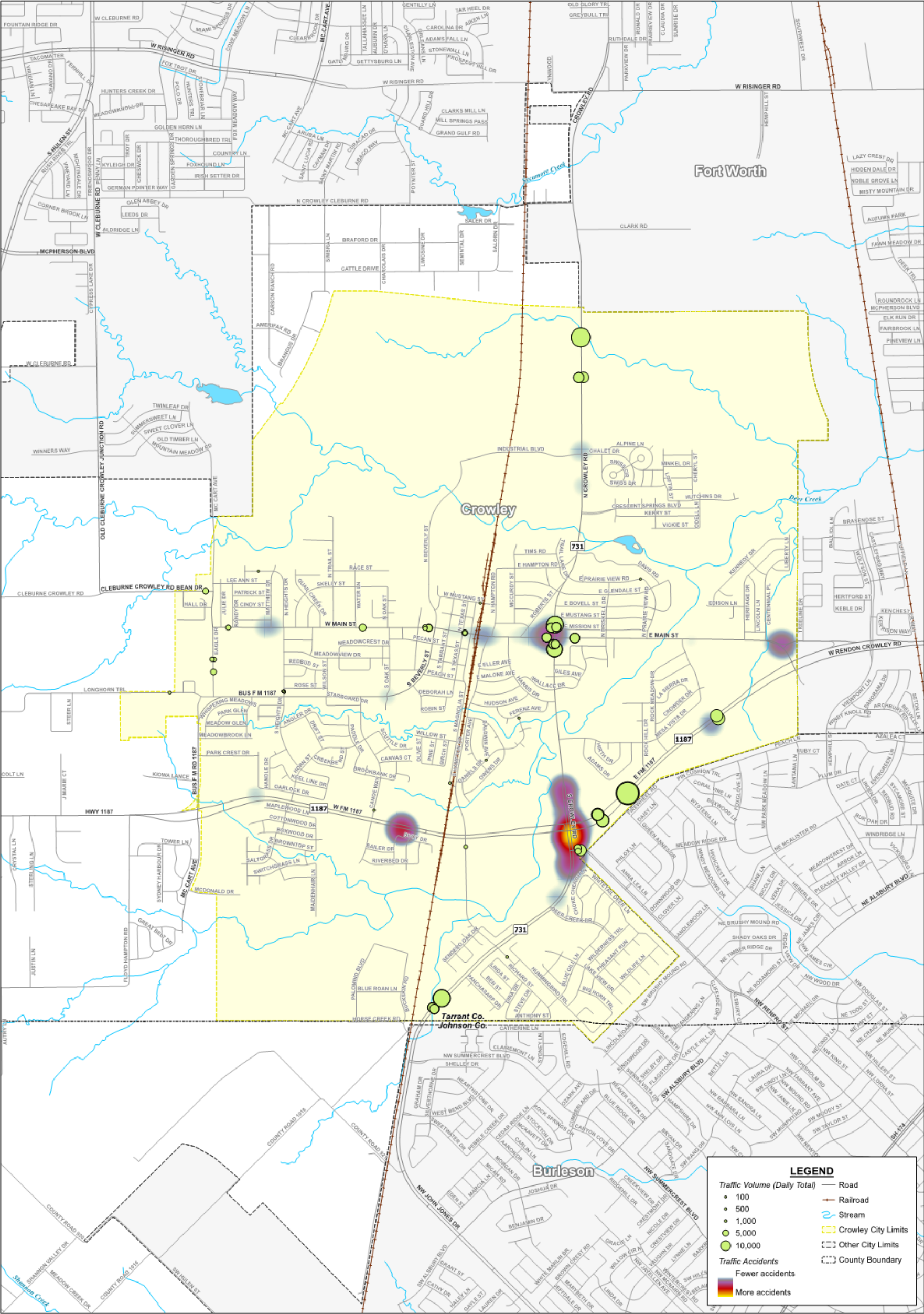
Crowley Railroad Crossings:

The at-grade railroad crossings on Main, Mustang, and Magnolia Streets are also a significant source of congestion. The train schedule is unpredictable, but frequent enough that people plan the route to their destination to avoid the railroad crossings. The train trestle over SH 1187 and the bridge over the tracks on Industrial Boulevard provide optional relief routes. The city plans to continue its efforts with NCTCOG and BNSF to improve the crossings and reduce delays.

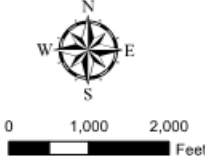
COMPONENTS OF TRAFFIC ANALYSIS

(graphic prepared by Dunaway)



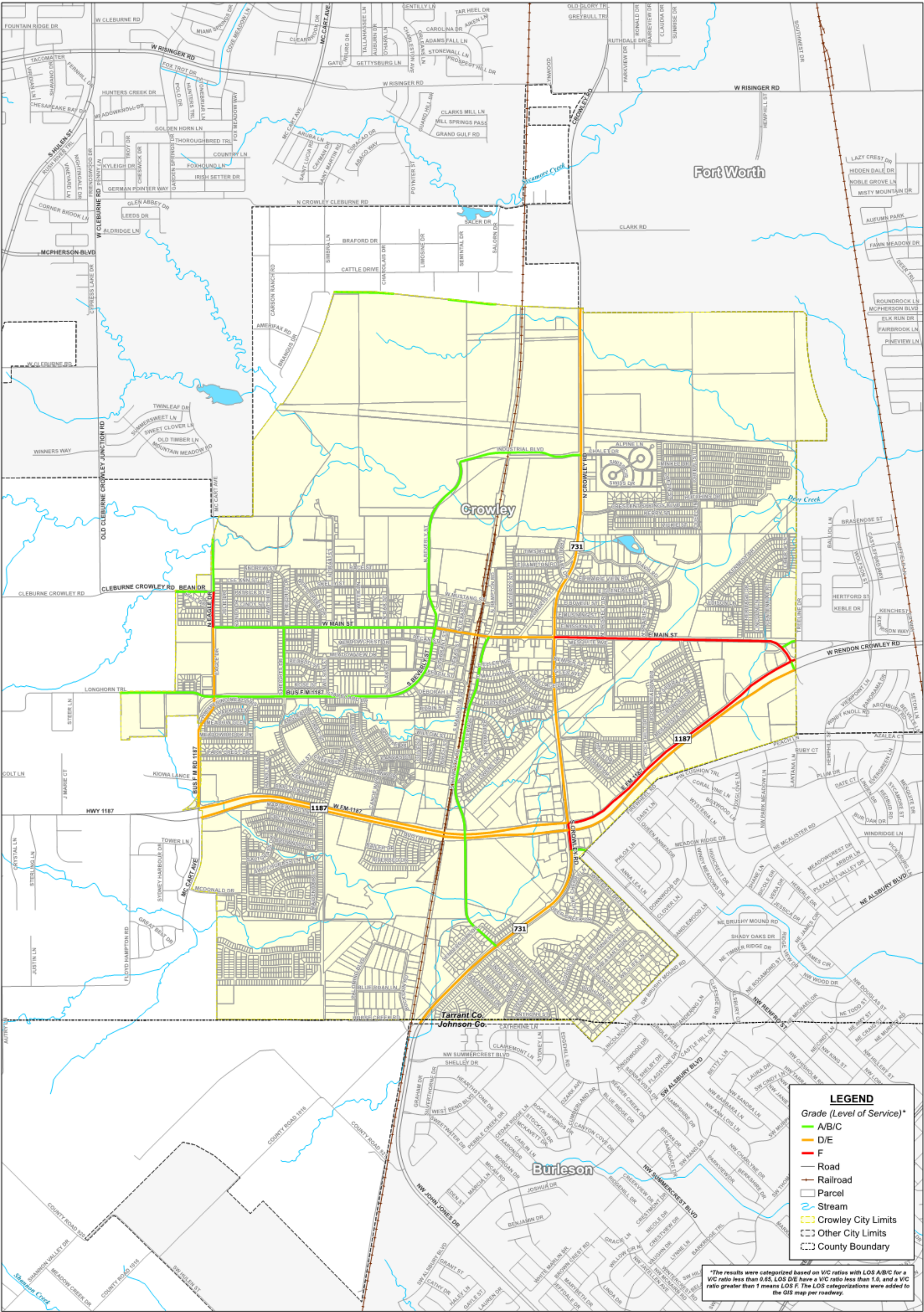


Traffic Accidents and Volume, 2014-2017

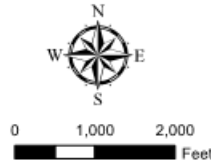


Created by
DUNAWAY
April 24, 2020

Figure 3-2-5: Heat Map of Traffic Accidents and Volume (2014-2017)



Future Road Level of Service



Created by
DUNAWAY
April 24, 2020

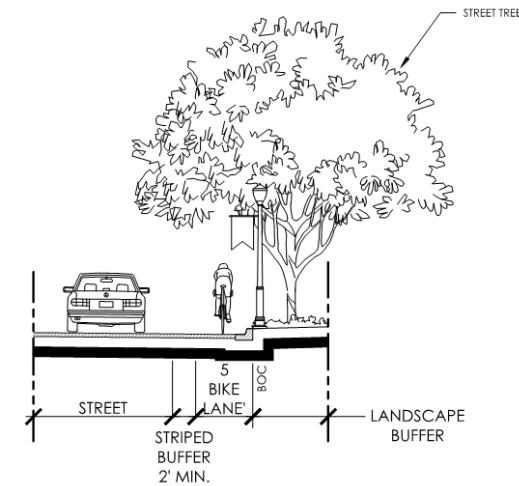
Figure 3-2-6: Future Road Level of Service (2045)
City of Crowley 2045 Comprehensive Plan

Alternative Modes of Transportation

Active transportation, unlike driving and public transit, involves getting around in ways that are human-powered—walking, bicycling, using a wheelchair, skateboarding, and so on. Traditional communities built prior to the 1970s were structured to provide alternative modes with a grid network of streets. Dependent on the location and regulatory environment, inclusion of sidewalks as an element of the mobility network has varied over time. Fluctuating gas prices, increased traffic and associated delays, environmental concerns, a more widespread focus on personal health and fitness, and the shifting lifestyle preferences of younger generations all point to a greater demand for walkable, bikeable communities. It is recommended that Crowley incorporate active transportation as a key component of its design and branding and how it markets itself to future residents and employers. Design criteria for all components of transportation facilities are typically included with the municipal standards and policies for public infrastructure. [Refer to the Parks and Trails Master Plan for further details on planned active transportation and mobility facilities.](#) Information is available in on the [City of Crowley website](#).

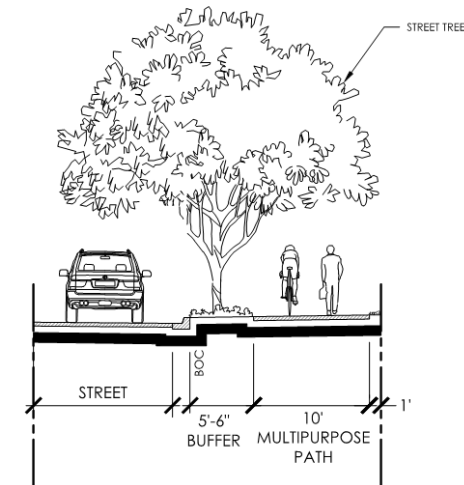
Active modes of transportation include walking and bicycling. Other options include carpooling, motorcycles, and rideshare. Public survey responses were very favorable when residents were asked if they would like to get to a local store without getting in their car. There were also a number of comments recommending that Crowley focus on recreational facilities, such as trails, to promote community health. It is recommended that the city prioritize walkable, complete neighborhoods with integrated and accessible uses in a compact form. This form of the built environment will result in fewer driving trips and less infrastructure to maintain. Crowley can become more active transportation-friendly by: committing to a more compact, multi-use pattern of development; investing in pedestrian facilities like sidewalks and multi-use paths; and designing streets as low-speed, people-first places. When walking or biking is more convenient for residents, they are far more likely to make these healthy activities a part of their daily lives.

Examples of Typical Bicycle Facilities



ON STREET SHARED BIKE LANE

NOT TO SCALE



OFF STREET 10' PEDESTRIAN BIKE WALK

NOT TO SCALE

Figure 3-2-7: Typical Bicycle Facilities

Public Transportation

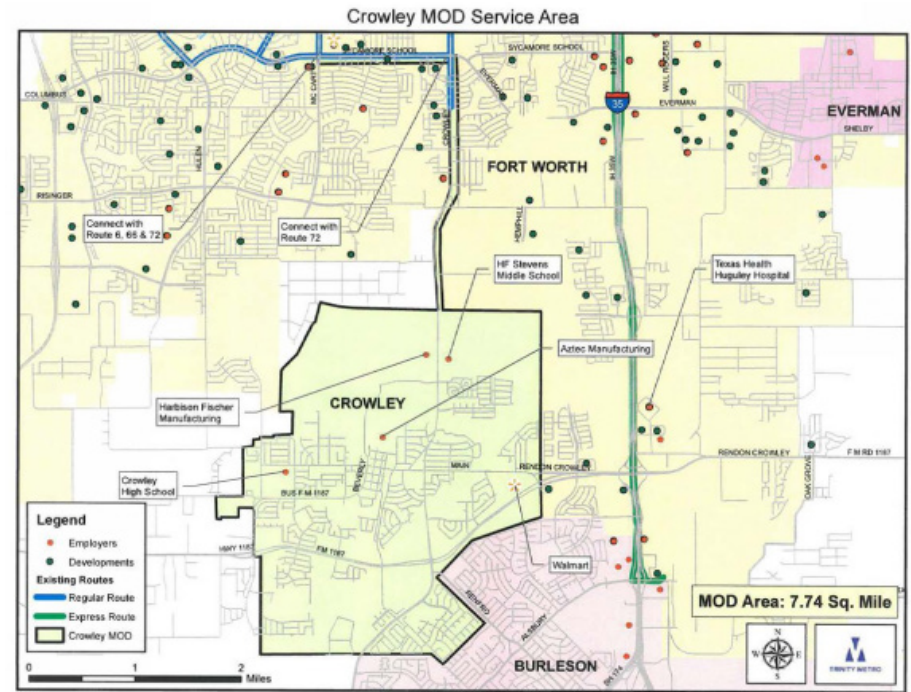
While Crowley does not have a public transit system at this time, new technology and transportation innovation can be acknowledged with city policy that will effectively adapt new transportation alternatives into its fabric over the next several years. There are several opportunities for the city to capitalize on the future of public transportation. First, the city should evaluate existing programs that are available to it now or in the near future, such as paratransit and shuttle service connection to the nearest public transit system (the Trinity Metro). In fact, recent agreements with Trinity Metro and Via will substantially improve transit options for residents. Check with City Hall for more information about these two programs. Then the city should proactively adapt the plan to include public transportation facilities, such as bus stops and ride-sharing lots. Any improvements to the major corridors – McCart Avenue, FM 731 and SH 1187 – should be programmed to include [pull-out bus stops](#)¹⁵ to get buses out of travel lanes for on-boarding and alighting and intelligent shelters which use technology to inform passengers of arrival times or delays. While past efforts for a regionally coordinated public transportation program were unsuccessful several years ago, the public is much more aware of the benefits of mass transit now. Therefore, it is recommended that the city renew its efforts, re-engage likely partners, and create a public transportation strategic plan. Adoption of the strategy enables the city to identify funding opportunities with partner agencies, such as NCTCOG, Tarrant County, and Trinity Metro.

The future commuter rail station should be a focused effort now. Again, collaboration with regional planning agencies will provide primacy to the efforts and help navigate the difficult negotiation process with the railroad. Because there is an Amtrak station in Cleburne, and Burleson is also located along the rail line, Crowley must make its intentions known in order to secure the rail stop.



Side Bar

On [November 7, 2019](#)¹⁶, City Council approved an interlocal agreements with Trinity Metro for Mobility-On-Demand Service (FWTA Interlocal Agreement No. 0782) which will substantially



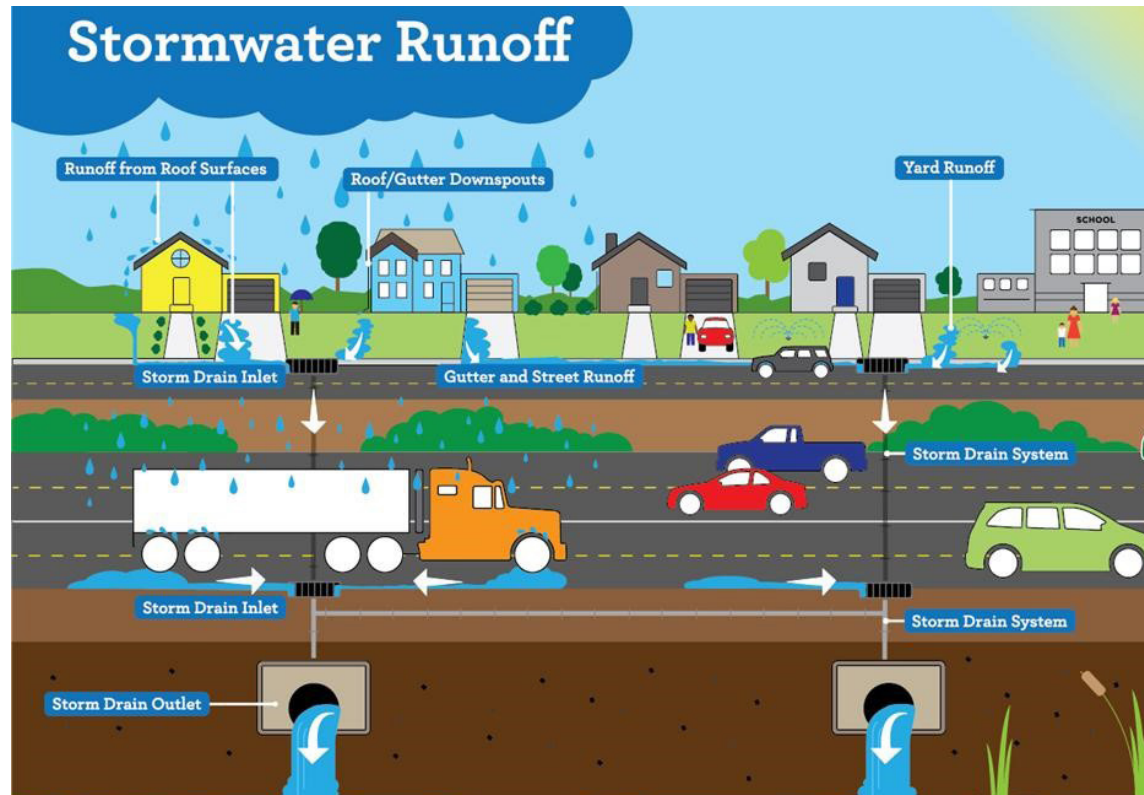
improve transit options for residents. Check with City Hall for more information about the programs.

Figure 3-2-8: Map of Trinity Metro On-Demand Ride Share Zone

[Crowley Trinity Metro Zip Zone](#)¹⁷

The Street as a Drainage Facility

Most people are aware that streets fill with water during a heavy rain, but many don't know that this is an intentional engineered design as part of the [municipal stormwater system](#)¹⁸.



Chapter 74 of the [City Code of Ordinances](#)¹⁹, in combination with Chapter 98, General Development, provide the regulations for the installation and maintenance of this important part of the municipal provision of public safety. Streets are designed to cause water to flow to inlets and capture the surface water into the underground pipes. The system is also a very important part of surface water and groundwater quality. The [NCTCOG Integrated Stormwater Management program](#)²⁰, commonly referred to by its acronym, iSWM, is a collection of regional best management practices, composed of a series of guidelines for construction site stormwater management in the North Central Texas region. The iSWM Design Manual for Construction contains a stepwise methodology for creating an effective Storm Water Pollution Prevention Plan (SWPPP) for construction sites and detailed information for the design, installation, and maintenance of best practices to reduce the release of sediment and other pollutants that result from construction activities. While Crowley is currently not an active participant in the iSWM program, the city could incorporate this regulatory program into its development regulations in the near future.

Figure 3-2-9: Stormwater Runoff

Master Thoroughfare Plan (MTP)

Often the MTP is referred to as a Mobility Plan because it acknowledges that there is more to transportation than automobiles. The plan includes all kinds of passive transportation, which is travel assisted by a vehicle, including airports, freight routes, railroad lines, buses, and ride sharing. There is also an active transportation component, which focuses on self-propelled, human-powered modes, such as walking or bicycling.

The MTP map on the following page represents the next generation transportation planning for Crowley because the community finds itself in the path of development as well as citizens' demands based on current health standards. Previous plans did not include bicycle and pedestrian facilities. However, current technological trends and lifestyle choices demand these types of amenities and facilities. Recall that a traffic engineering analysis stated that the road network for vehicles is sound "as-is" when developed as shown on the plan. However, it is recommended that the city create a "[complete streets²¹](#)" policy for both new development and redevelopment along key connecting corridors. "Complete streets" is the general term used to describe transportation infrastructure that provide safe travel for all users. How this is implemented within Crowley depends on the unique physical and environmental context. In addition, neighborhood nodes should be strategically zoned to implement complete neighborhoods, meaning residents can choose their method of transportation when they need to pick up basic goods and services because there are roads, sidewalks, and bike lanes to both regional and local commercial areas.

Note the following new facilities and roadways shown on the MTP map and identified in the Implementation Strategies:

- ★ Regional Veloweb
- ★ Proposed trails
- ★ Proposed roundabouts
- ★ Extension of S. Magnolia to align with median break on SH 1187
- ★ Extension of Race Street to connect to North Beverly
- ★ Improved railroad crossing on Mustang Drive
- ★ Commuter rail station (shown on the Future Land Use Plan)
- ★ Improved intersections across major roadways to facilitate safe pedestrian and bicycle mobility/connectivity

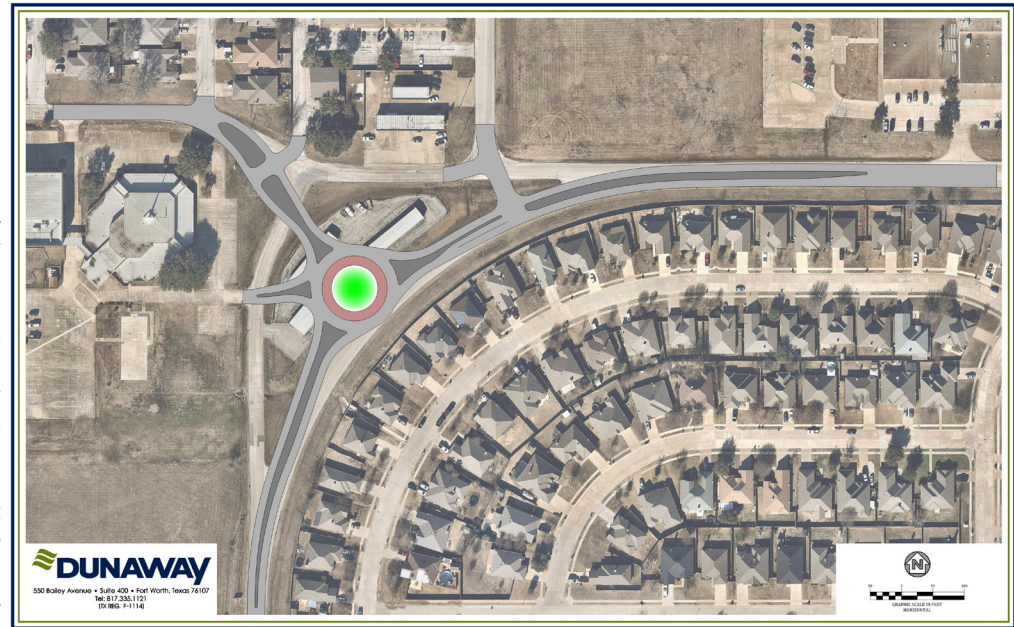


Figure 3-2-10: Conceptual Roundabout schematic

Recommendations and Coordination:

The Thoroughfare Plan is a long-range plan that identifies the location and type of roadway facilities that are needed to meet projected long-term growth within the area. The Thoroughfare Plan is not a list of construction projects but rather serves as a tool to enable the City to coordinate new development within the city as well as with the adjacent jurisdictions. As a holistic view of the transportation systems within the city, it also serves to preserve future corridors for transportation needs as development occurs.

Legal Authority

Under the provisions of [Article XI, Section 5](#)²² of the Texas Constitution and [Title 7, Chapter 212](#)²³ of the Texas Local Government Code, the City of Crowley can require that development plans and subdivision plats conform to "... the general plan of the municipality and its current and future streets ..." and "... the general plan for extension of the municipality and its roads, streets, and public highways within the municipality and its extra-territorial jurisdiction."

Requirements for right-of-way dedication and construction of street improvements apply to all subdivision of land within the jurisdictional boundaries of the city.

Plan Considerations

A Thoroughfare Plan displays the proposed general alignments for the extensions of existing collector and arterial roadways and planned new roadways. It is important to note that the actual alignments of these roadways will likely vary somewhat from this plan and will be determined through the subdivision development process and the preliminary engineering phase of design. Slight modifications to facility locations, such as a shift of an alignment several hundred feet one way or another or changes in roadway curvature are warranted and accepted as long as the intent of the Thoroughfare Plan to provide system connectivity

and appropriate types of facilities is not compromised. As development occurs alignment studies will probably be needed to determine the exact location of some roadways, keeping in mind the overall purpose and intent of the MTP and the alignments shown on it.

In addition, the MTP includes typical cross-sections which may be used to guide the design of roads proposed with new development and for roadways programmed for maintenance or repair with the Capital Improvement Plan. The cross-sections included in this plan are considered "typical," which means that facilities shown in the roadway and parkway are general. These cross-sections and improved intersections give developers and design engineers an idea of what is needed as they plan new development or redevelopment. They may also be used to guide the design criteria and construction standards when the current Subdivision regulations are updated.

The plan does not show future local streets because they function principally to provide access to private property - individual sites and parcels- so their ultimate alignments will, therefore, vary depending upon individual land development plans. Local street alignment should be determined by the city in conjunction with landowners as part of the subdivision development process. Likewise, collectors are required with new development but are not shown in all places on since their alignments will depend on the surrounding street system and the layout and density of development. They are, nevertheless, vital to an efficient and viable transportation network and must, therefore, not be overlooked during the subdivision development and review process. Collectors should be situated to connect arterial streets with other collectors and local streets.

Functional Classification

An effective transportation system is comprised of a network of roadways, each with its own designation, function and capacity within the overall system. Each street segment contributes to

the interconnectivity of the network. Therefore, for a network to operate efficiently, it is essential for there to be a complete network of roadways designed in a hierarchy from highways to arterial and collector streets, to the local street network. Each link is intended to function according to its design capacity, in effect distributing traffic from the highest functional classification – highway or expressway – to the lowest design classification. Connectivity is key to providing an efficient, safe, and convenient roadway network for vehicular traffic.

A functional roadway system facilitates a progressive transition in roadway purpose from the provision of access to the provision of movement. Freeway and arterial facilities are at one end of the spectrum, primarily providing the function of moving vehicles. Collector and local streets are at the opposite end of the spectrum, providing access to property as well as to address needs for additional modes of local transportation, such as pedestrian and bicycle modes. To enable streets and highways to accomplish their intended function, the planning and design of each facility should consider those elements that support its intended function.

Requirements and Standards

This section outlines criteria for certain characteristics of street and land development. These criteria supplement or expand upon the design standards of the Subdivision Ordinance, providing further policy support for such provisions. To facilitate administration of these policies, existing ordinances may need to be amended or updated.

- Location and alignment of arterials

The general location and alignment of thoroughfares should conform to the MTP. Subdivision plats should provide for dedication of needed rights-of-way for thoroughfares within or bordering the subdivision. Any major changes in thoroughfare alignment that are inconsistent with the plan should require the approval through a public hearing process. A major

change would include any proposal that involves the addition or deletion of established thoroughfare designations or changes in the planned general alignment as shown on the MTP.

- Location and alignment of collectors

Generally, collectors should be placed between arterial streets. Collectors must be shown on all proposed subdivisions of land. In cases where a proposed collector alignment is not shown on the MTP but is warranted due to development density and projected traffic volumes, it is also required and must be shown.

- Roadway continuity

To maximize mobility, it is essential that collector streets traverse adjacent neighborhoods to provide access and circulation not only within, but also between neighborhoods.

- Right-of-way and pavement width

The pavement and right-of-way width for thoroughfares must conform to minimum standards unless a waiver is granted using formalized criteria as adopted in the city subdivision regulations. Properties proposed for subdivision that include an existing thoroughfare with insufficient right-of-way width must be required to dedicate land to compensate for any right-of-way deficiency. When a new thoroughfare extension is proposed to connect with an existing thoroughfare that has a narrower right-of-way, a transitional area must be provided. Typically, travel lane width should be continued, and the parkway width may vary.

- Continuation and projection of streets

Existing streets in adjacent areas should be continued, and, when an adjacent area is undeveloped, the street layout must provide for the future continuation of streets into the undeveloped area. Where adjacent land is undeveloped, stub

streets must include a temporary turnaround to accommodate fire apparatus and other large vehicles.

- Location of street intersections

New intersections of subdivision streets with existing thoroughfares within or bordering the subdivision should be planned to align with existing intersections to avoid creation of offset or “jogged” intersections and to provide for continuity of existing streets, especially collector and arterial streets. Roundabouts are considered a type of controlled intersection, and many are proposed on the plan. The city should consider creating a policy which acknowledges a roundabout as a preferred or accepted form of controlled intersection, in addition to, signalized or sign controlled intersections (stop or yield signs). Refer to next page for information about the safety benefits of a roundabout. More information is available from the Institute of Transportation Engineers (ITE)²⁴.

- Angle of intersection

The angle of intersection for street intersections should be as nearly at a right angle as possible. Corner cutbacks or radii should be required at the acute corner of the right-of-way line to provide adequate sight distance at intersections.

- Offset intersections

The standard for offset or “jogged” street intersections should be 200 feet between the centerlines of the intersecting streets.

- Angle of intersection.

The angle of intersection for street intersections should be as nearly at a right angle as possible. Corner cutbacks or radii should be required at the acute corner of the right-of-way line to provide adequate sight distance at intersections.

- Offset intersections

The standard for offset or “jogged” street intersections should be 200 feet between the centerlines of the intersecting streets.

- Cul-de-sacs

Through streets and tee-intersections are preferable to cul-de-sacs, which limit through access, restrict pedestrian circulation, increase emergency response times, and confuse motorists.

- Residential lots fronting on arterials.

Subdivision layout must avoid the creation of residential lots fronting on arterials with direct driveway access to the arterial street. Lots should be accessed from local streets which are internal to the subdivision, from local streets which border the subdivision, or from an auxiliary street, such as a slip lane, designed to accommodate driveway traffic.

- Residential lots fronting on collectors

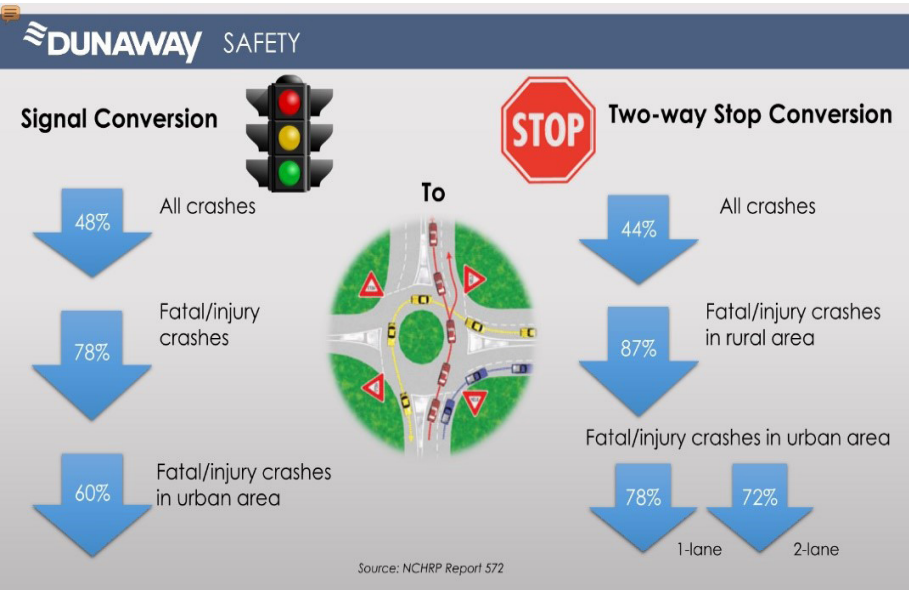
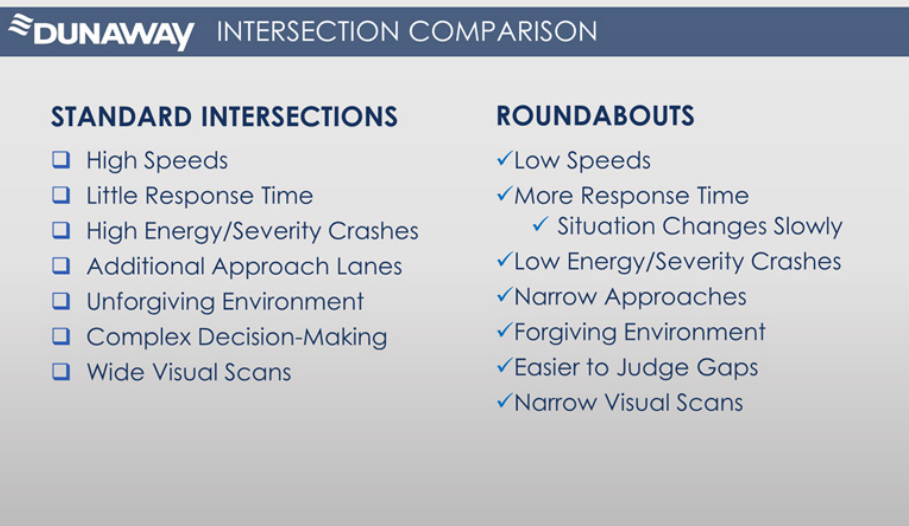
Subdivision layout must avoid the arrangement of lots to access major collector streets and, to the maximum practicable extent, minimize direct access to minor collector streets, particularly within 180 feet of an intersection.

- Non-residential lot access guidelines

Other requirements and guidelines for the number of curb cuts allowed for commercial, industrial and multi-family sites should be provided in the subdivision regulations and associated design standards/criteria. Very wide curb cuts and lay-down curbs do not adequately control access or increase traffic safety and, therefore, should not be permitted.

- Geometric design standards and guidelines

Other requirements and guidelines for the geometric design of thoroughfares and public streets should be provided in the adopted and updated subdivision regulations which include design criteria and standard construction specifications. This includes special provisions to preserve sight distances at adjacent intersections.



Additional considerations based on Community Input

Because a variety of transportation modes are wanted by the residents (survey results in Appendix), this plan should also coordinate with the new Parks and Trails Master Plan which establishes policy for implementation of facilities for active transportation, such as pedestrian (sidewalks) and bicycle facilities (trails and bike lanes). Generally, active bicycle transportation should be incorporated into the design or improvement of the following types of facilities:

- ★ Local roads:
Specified as a 50-foot wide right-of way in the subdivision regulations, neighborhood streets are typically used for both cars and bicycles.
- ★ Collectors:
Depicted in the typical cross-sections on the following pages, these roads vary between 60 – 80 feet wide, sidewalks and on-street bike lanes should be designed accordingly. For some road segments, a 10-foot wide (minimum) multi-purpose path is appropriate.
- ★ Arterials:
Depicted in the typical cross-sections on the following pages, these roads vary between 100-120 feet wide, sidewalks and off-street bike facilities are appropriate should be designed accordingly. For some road segments, a 10-foot wide (minimum) multi-purpose path is appropriate.
- ★ Improved Intersections:
To facilitate mobility and pedestrian and bicycle connectivity, improved intersections and crosswalks are needed for the safe crossing of arterials and highways within the city, such as FM 731. These improvements should be coordinated with the Parks and Trails Master Plan for continuity of mobility.

Figure 3-2-11: Safety Benefits of a Roundabout (both graphics)

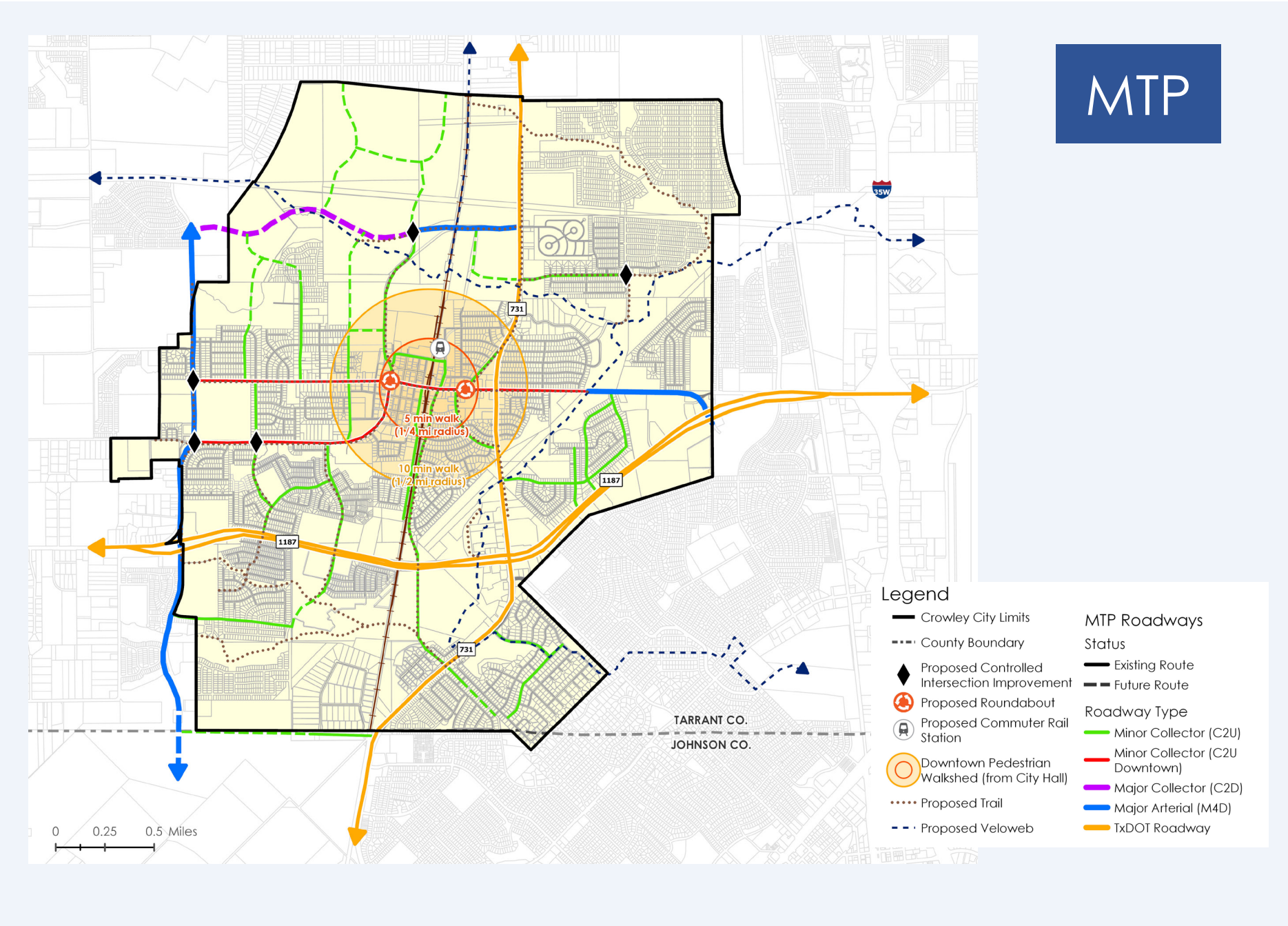


Figure 3-2-12: Master Thoroughfare Plan
City of Crowley 2045 Comprehensive Plan

Typical Cross-Sections

Major Arterial 4-lane Divided (M4D) Cross-Sections

M4D

Location:

- McCart / Eagle Blvd
- East Main Street (between bridge at Centennial Park to SH 1187)
- Industrial Blvd (between N. Beverly to FM 731)

Typical Facility Standards:

- 100-foot right-of-way
- Roadway options include:
 - 8-foot on-street parking
 - 11-foot travel lanes minimum
 - Variable width landscape median
- Parkway options include:
 - 6-foot sidewalk
 - Landscapes buffer area
 - 10-foot multi-purpose path (pedestrian and cyclist)

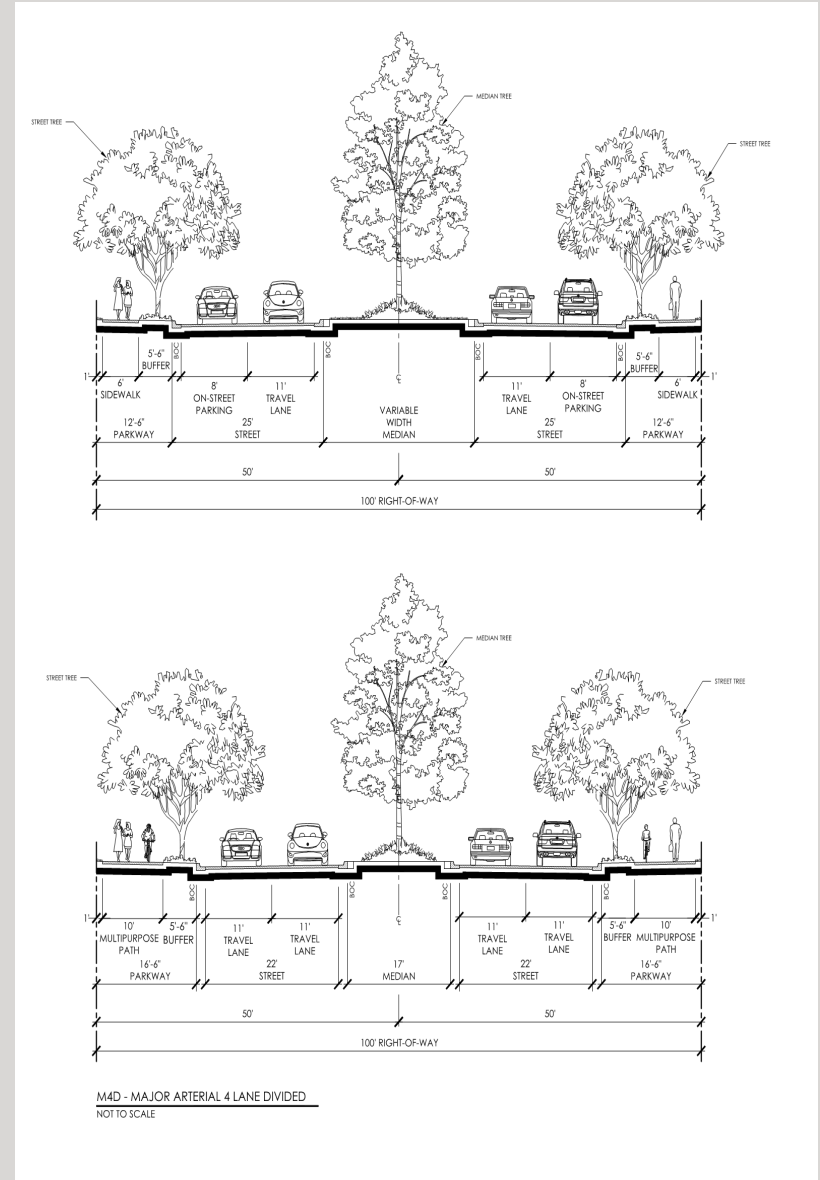


Figure 3-2-13: M4D Typical Cross-sections Major Arterial 4-lane Divided Cross-Sections

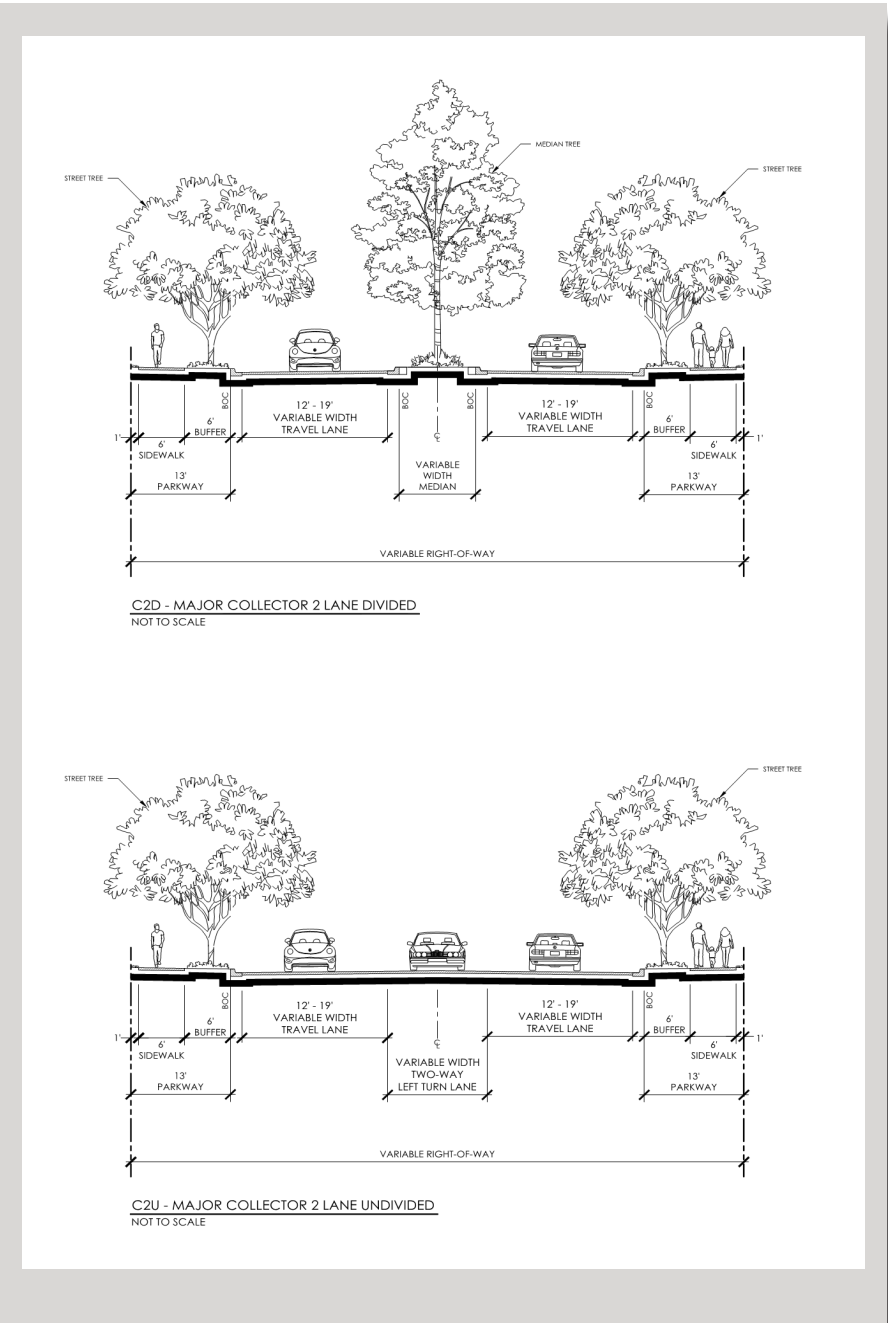
Major Collector 2-lane Divided (C2D) Cross-Section

Location:

- Future Karis Blvd

Typical Facility Standards:

- Variable width right-of-way to accommodate unique layout of Karis development
- Maximum 80-foot right-of-way
- Roadway options include:
 - 12-18-foot travel lanes minimum
 - Variable width landscape median
- Parkway options include:
 - 6-foot sidewalk
 - Landscapes buffer area
 - 10-foot multi-purpose path (pedestrian and cyclist)



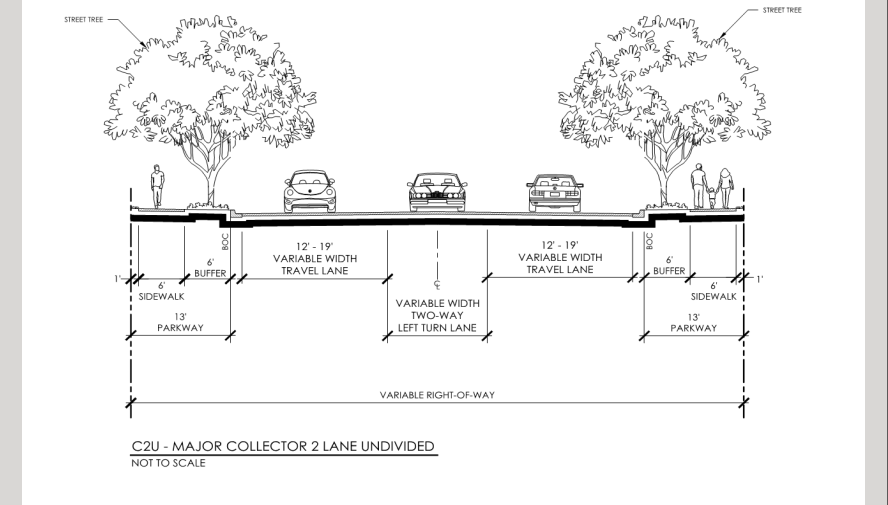
Major Collector 2-lane Undivided (C4U) Cross-Section

Location:

- Future Karis Blvd

Typical Facility Standards:

- Variable width right-of-way to accommodate unique layout of Karis development
- Maximum 80-foot right-of-way
- Roadway options include:
 - 12-18-foot travel lanes minimum
 - Variable width center travel
- Parkway options include:
 - 6-foot sidewalk
 - Landscapes buffer area
 - 10-foot multi-purpose path (pedestrian and cyclist)



Figures 3-2-14: C2D and C2U Typical Cross-sections Major Arterial 2-lane Divided Cross-Sections

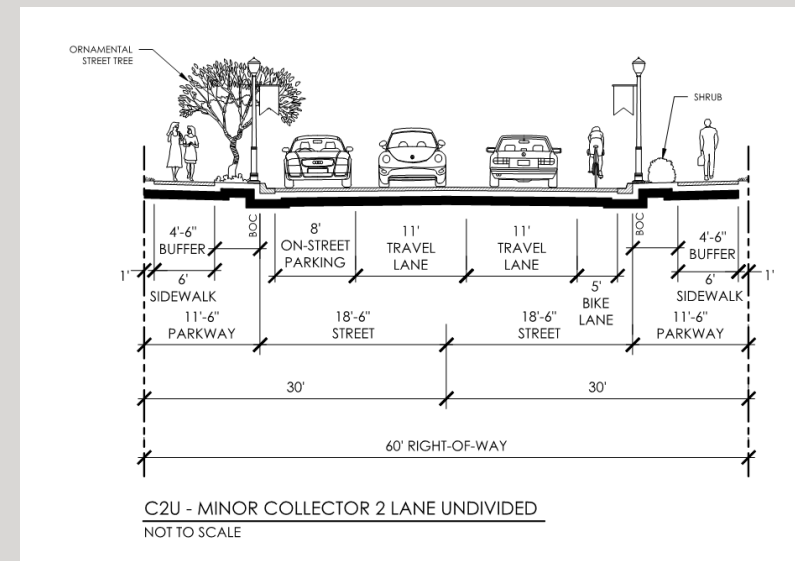
Minor Collector 2-lane Undivided: Typical C2U Cross-Section

Location:

- Throughout City (Refer to MTP)

Typical Facility Standards:

- 60-foot right-of-way
- Roadway options include:
 - 11-foot travel lanes minimum
 - Variable width landscape median
- Parkway options include:
 - 6-foot sidewalk
 - Landscapes buffer area
 - 10-foot multi-purpose path (pedestrian and cyclist)



Minor Collector 2-lane Undivided: C2U Downtown Cross-Section

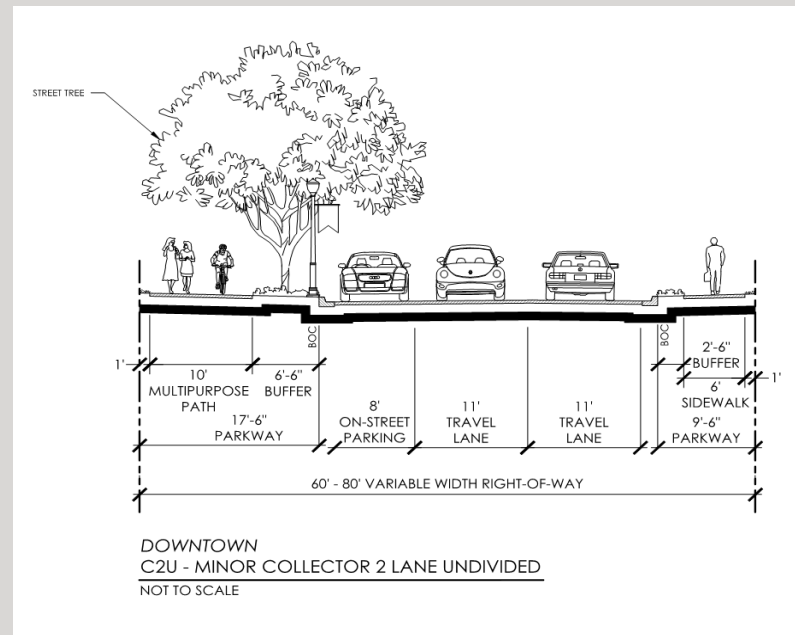
Location:

- Main Street
(west of Beverly Street)
- Main Street (east of FM 731 to bridge)
- S. Beverly
(from Main Street to Longhorn Trail)

Note: Main Street between Beverly Street and FM 731 improvements approved by City and TXDOT and under construction at adoption of this plan

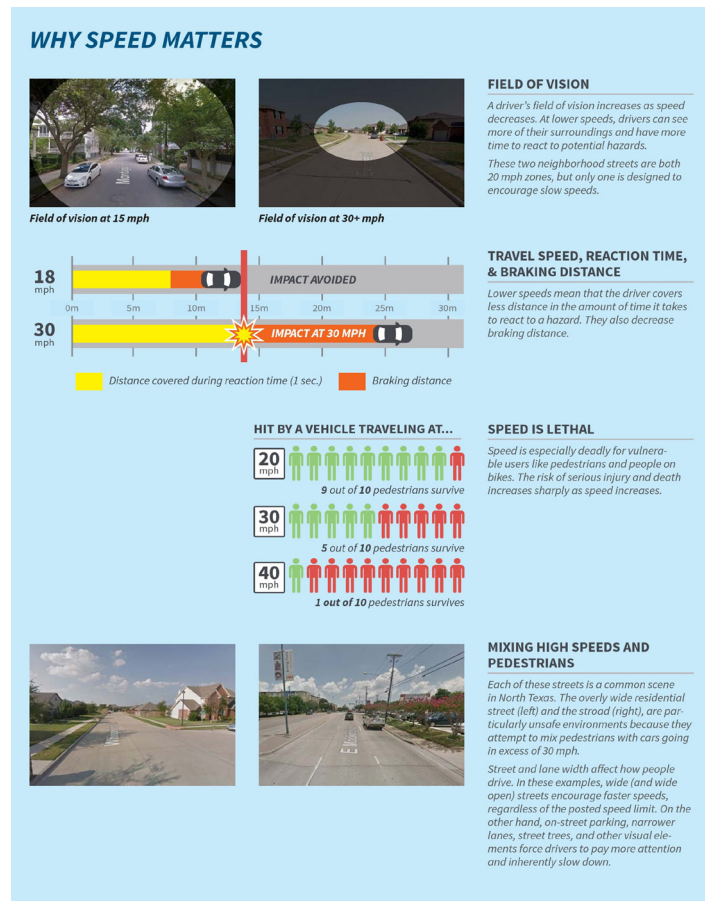
Typical Facility Standards:

- Variable width right-of-way
- Roadway consists of:
 - 11-foot travel lanes
 - On-street parking (varies by location and segment)
- Parkway options include:
 - 6-8-foot sidewalk
 - Landscaped buffer area
 - 10-foot multi-purpose path (pedestrian and cyclist)



THE STREET LAND USE NEXUS

Streets do more than provide active and passive transportation; they are also intrinsically connected to individual properties and the types of activities on those sites. Whether a property is used for a single-family residence, a commercial retail center, or a city park, roads, sidewalks, trails, and lanes provide the access. In consideration of this nexus, let's now evaluate the transportation network from a slightly different perspective. Instead of thinking about roads as a facility made of concrete, curb and gutter, lanes, and sidewalks, let's look at their function and how they connect the residents of Crowley to people and places.

STREETS, ROADS, ... AND 'STROADS'²⁵

- **Streets: economic generation, social networking, community identity** The *street* is a low-speed (under 25 mph) area that allows for a high amount of human activity. This may be the buzzing Main Street with a mix of businesses and outdoor seating, or the quiet residential street with children playing in front yards. Streets can be part of a larger place or can be destinations themselves; they're where people spend time and money and historically were used as public gathering places. They accommodate vehicle traffic—alongside foot traffic—but do not prioritize it. They're a safe place for pedestrians and drivers alike. Streets are platforms for economic growth and social interaction and are a key component of a community's brand and neighborhood character. Both the downtown corridor (Main Street) and the majority of the connectors through residential neighborhoods (i.e. Canoe Way) should be designed as streets.
- **Roads: fast and efficient connections** While streets should be designed to prioritize people, the primary function of a road is to move people and goods quickly between places. Highways and farm-to-market roads are great examples. On a road, the automobile is prioritized, and higher speeds are appropriate. In order to minimize congestion and pedestrian fatalities, sidewalks, crosswalks, driveways, and intersections should be minimized, or in some cases, eliminated altogether. The highway and the city's larger thoroughfares should be designed to prioritize the movement and safety of automobiles and those in them.
- **Stroads: a dysfunctional and dangerous hybrid** When we combine the functions of a street and a road, we end up with a hybrid that President of Strong Towns²⁵, Chuck Marohn, has termed a *stroad*. (Strong Towns is an international movement that's dedicated to making communities across the United States and Canada financially strong and

Figure 3-2-18: Why Speed Matters

resilient.) Stroads are failed attempts to get the economic productivity of a street and the efficiency of a road all in one corridor. They are designed for high volumes of cars and faster speeds (over 35 mph) but often have sidewalks next to the curb and crosswalks, which make them particularly dangerous for pedestrians and cyclists. At the same time, these corridors also have multiple signalized intersections, median cuts, and driveways to accommodate auto-oriented businesses—all of which slow cars down and increase opportunities for crashes. They are not efficient at moving cars quickly, do not safely accommodate people on foot, and cost much more to build and maintain than the revenue from adjacent development can pay for. Put simply, they are inefficient, unsafe, and expensive. Stroads are what we get when we fail to understand that streets and roads have mutually exclusive functions. The majority of the city's thoroughfares fit into this category.

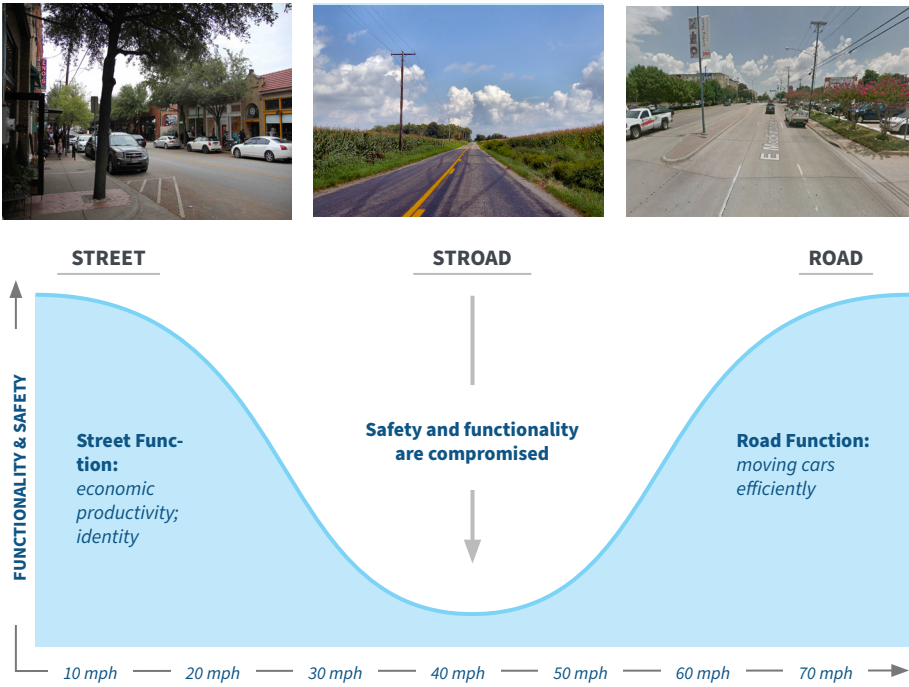


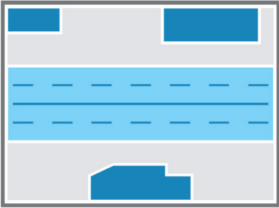
Figure 3-2-19: Speed vs Functionality and Safety

PRIORITIZING PEOPLE AND PLACE IN DOWNTOWN

Another way of understanding our transportation system is to see the built environment as split between links and places.

LINK

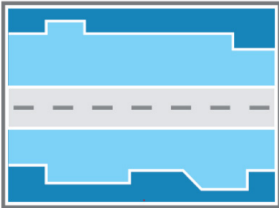
Street as a movement conduit Design objective: **Save time**



- *Links* are designed to save us time—to get us from Point A to Point B as quickly and efficiently as possible.
- FM 731 and SH 1187 are both examples of *Links*.
- Links are made up of roads that prioritize vehicle movement in the right-of-way. In either case, an explicit decision is made regarding which users to prioritize within the public right-of-way.

PLACE

Street as a destination Design objective: **Spend time**



- Main Street in Downtown Crowley is a *place*.
- A place is a destination and meant for spending time.
- Places are enabled by streets that prioritize pedestrian use within the right-of-way and treat driving as a secondary use.

Legend:
Blue box: Prioritized Users
Grey box: Secondary Users
Dark blue box: Private Development

(Adapted from Scott Doyon, Placemakers)

Figure 3-2-20: Links and Place

The graphics on the preceding page show the area within public right-of-way can be dedicated to pedestrians (streets/places), or to automobiles (links). Many of the streets in downtown include wide rights-of-way with:

- Wide pavement with wide or oversized travel lanes;
- Bar ditches;
- Underground and overhead utilities; and
- Missing or narrow sidewalks.

These components of the right-of-way make driving convenient but make people feel uncomfortable and unsafe.

In order to transform the Downtown District, the Main Street corridor, and the surrounding area into a vibrant destination where people of all ages want to spend time and to invest in (ie, a place), the city should work to transform the majority of the streets. The streets should be reconfigured or reconstructed to prioritize the movement and safety of people over cars.

Initially, this effort should focus on transforming key blocks and frontages along Main Street. Next, the work can be done on streets which connect to Main Street. Low-cost, tactical improvements, such as painted bulb-outs at intersections seen in the graphic to the right, can be deployed quickly. These types of improvements also allow the idea to be tested and, if necessary improved prior to installation of permanent infrastructure and facilities.

Over time, as interest and activities expand in the area, the city and development partners, such as local businesses or a transportation authority can work together to invest additional resources into installing permanent traffic calming measures and improvements to additional blocks and corridors, throughout the Downtown District and, ultimately, throughout the city.

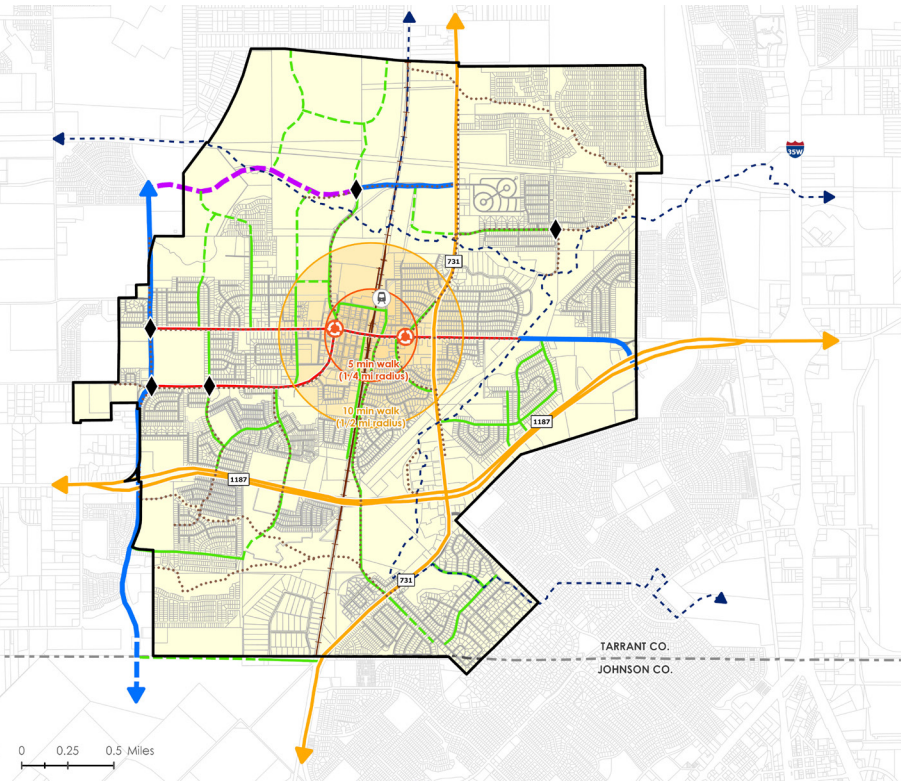


Figure 3-2-21: FHWA: Traffic Calming for Small Towns

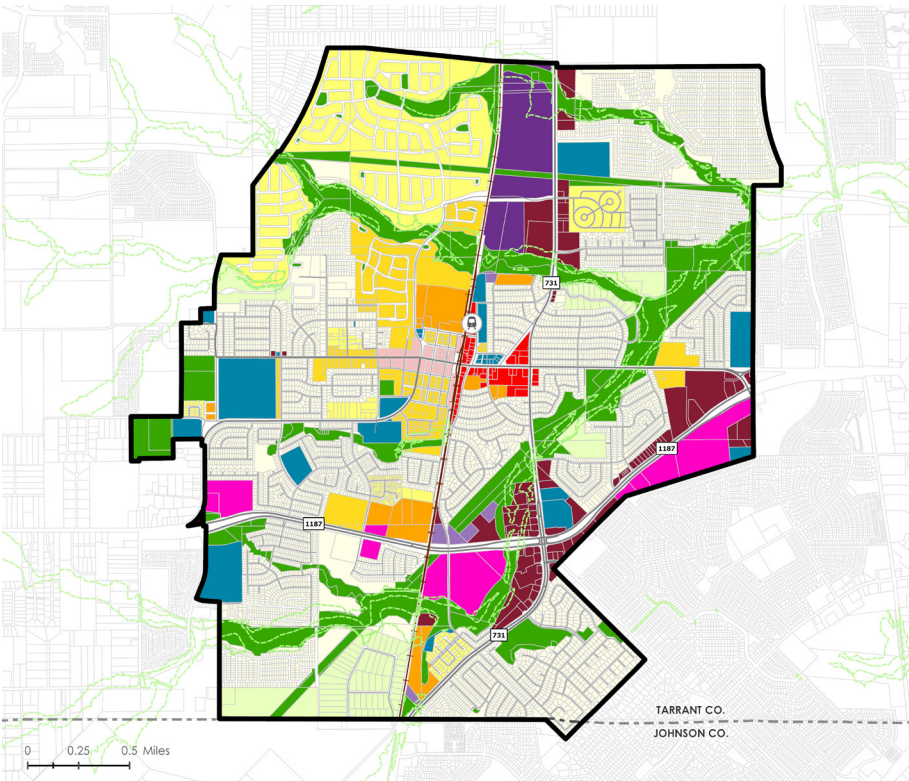
THE INTEGRATED RELATIONSHIP BETWEEN MOBILITY AND LAND USE

Transportation and land use go hand-in-hand in determining the look and feel of a community. If a city plans and builds neighborhoods around auto-oriented development, it will take on a more spread-out form with separated residential, shopping, and employment uses, which requires more infrastructure and generates more traffic. If a city prioritizes walkable, complete neighborhoods, then more uses are integrated together in a compact form, resulting in fewer driving trips and less infrastructure to maintain. Main Street presents an opportunity to provide a pedestrian-first environment where people can live, work, shop, and socialize all within a short walking distance – something that is becoming increasingly important to recruiting and retaining residents of both older and younger generations.

MASTER THOROUGHFARE PLAN



FUTURE LAND USE PLAN



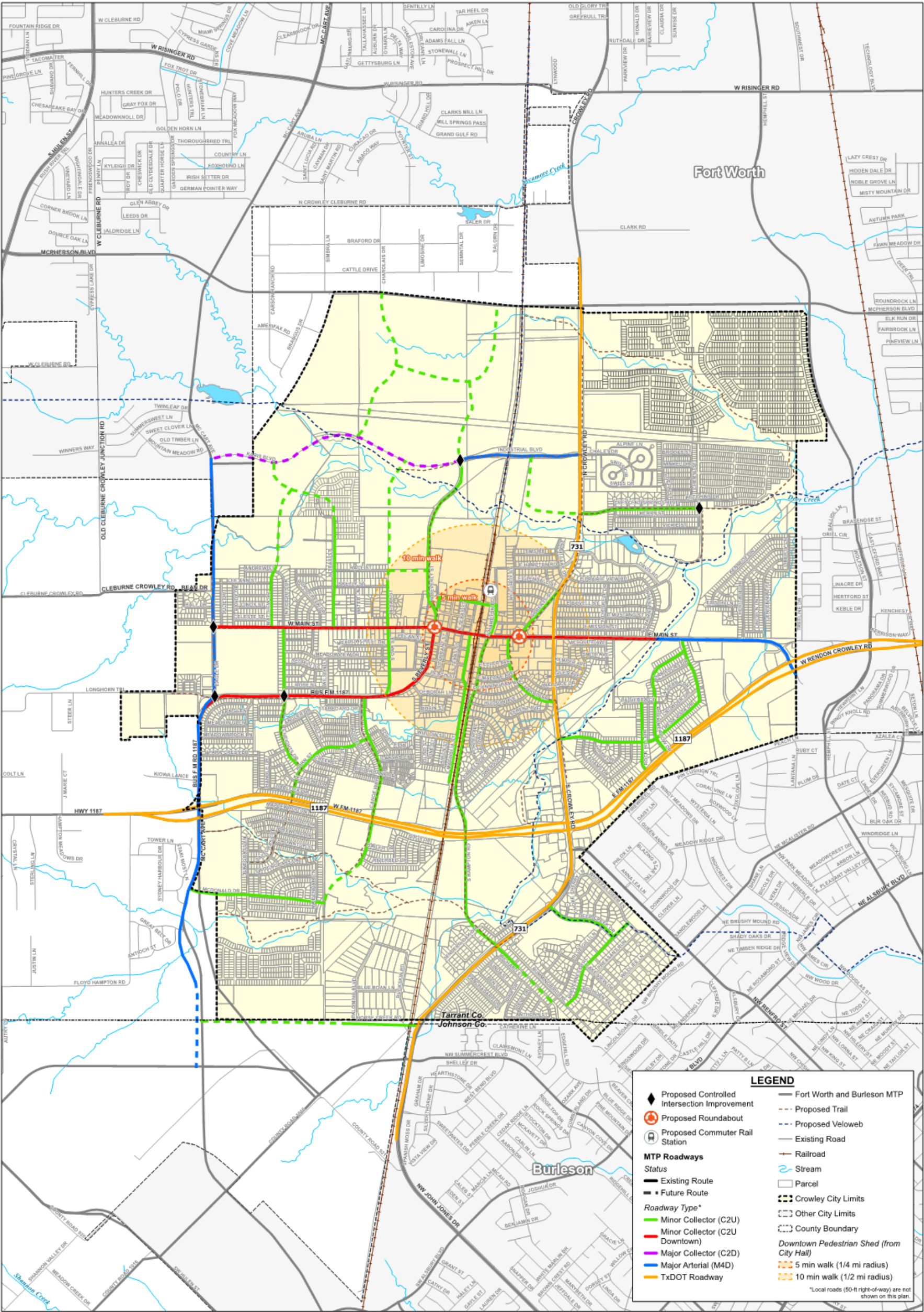
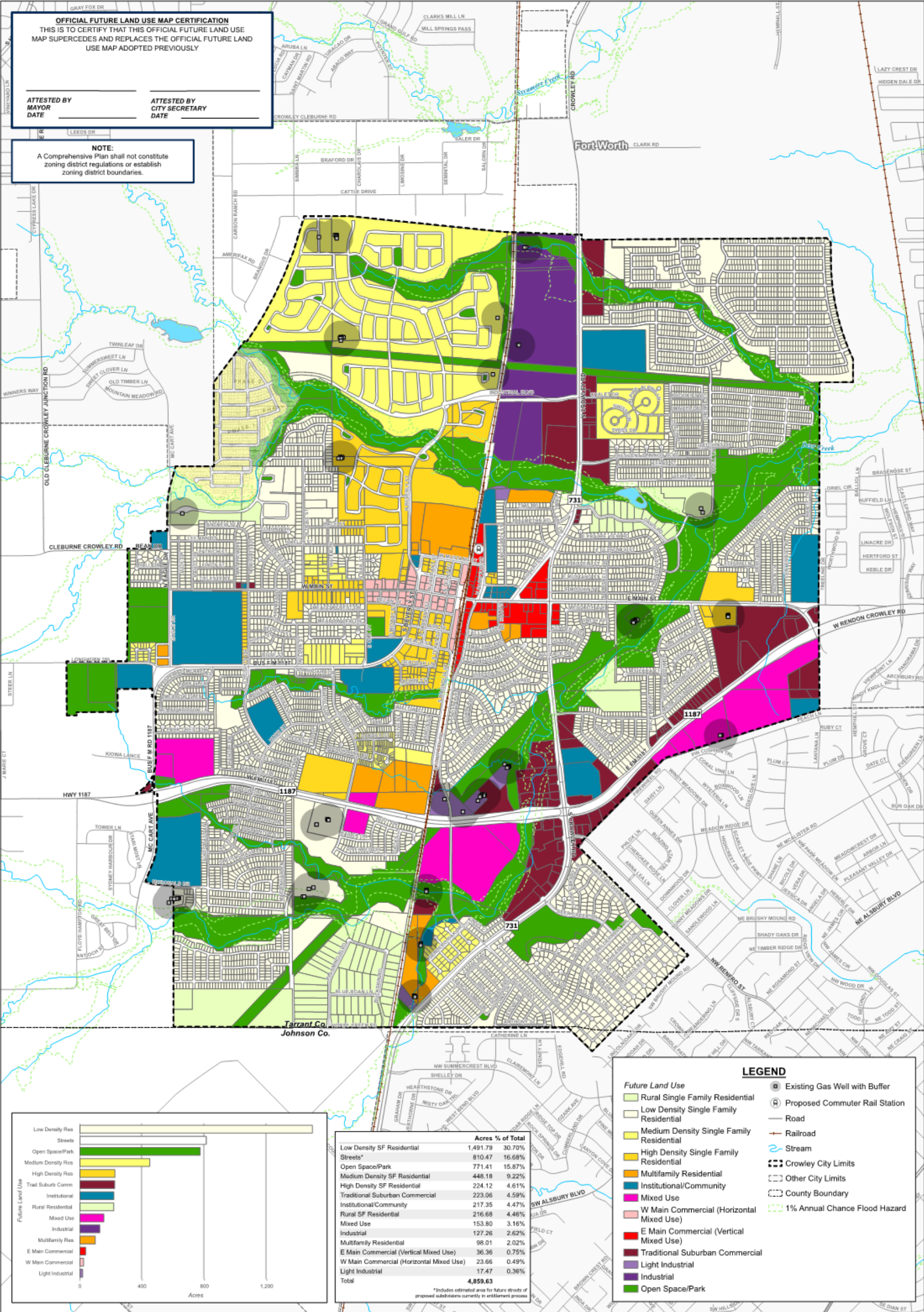
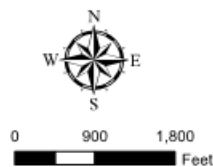


Figure 3-2-17: Master Thoroughfare Plan



Future Land Use



Created by
DUNAWAY
April 24, 2020

