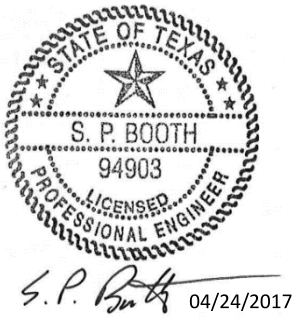
MASTER THOROUGHFARE PLAN

Master Thoroughfare Plan Update
Hickory Creek, Texas

April 2017

Prepared for

Town of Hickory Creek



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MASTER THOROUGHFARE PLAN

The Master Thoroughfare Plan (MTP) identifies both existing major roadways and streets that serve the community and provides a general location of all future major thoroughfares. The attached MTP is an update to the 2008 Master Thoroughfare Plan for the Town of Hickory Creek.

REGIONAL TRANSPORTATION SYSTEM

The major transportation facilities serving this area of Denton County are Interstate Highway 35E and FM 2181. Interstate Highway 35E (IH 35E) connects the cities of Denton, Dallas, and all areas in between. It is part of the Interstate Highway 35 corridor, which is a major national roadway extending from northern United States to the southern border at Laredo, Texas. It is a major international trade route and, as a result, has high volumes of truck traffic. FM 2181 (Teasley Drive) is a major arterial that serves communities west of IH 35E. FM 2181 feeds into the IH 35E corridor and connects to the Lake Lewisville Toll Bridge via Swisher Road, providing access for communities east of Lake Lewisville.

TRAFFIC VOLUMES

Information on both current and projected traffic volumes is useful for economic development purposes as well as for establishing a sound roadway maintenance or improvement program. Existing traffic volumes are often collected in the course of preparing traffic impact studies and some municipalities collect traffic data on major roadways on an annual basis. As part of the MTP update, 24-hour traffic volumes were collected at 14 locations throughout the Town of Hickory Creek. A list of traffic volume locations is below and are shown in Figure 1 on the following page. A copy of the 24-hour counts are located in the appendix.

1. Parkridge Drive
2. Sycamore Bend Road (south of Turbeville)
3. Harbor Lane
4. Ronald Reagan Avenue
5. Point Vista Street (east of Ronald Reagan)
6. Turbeville Road (west of Ronald Reagan)
7. Hickory Creek Boulevard
8. Ventana Road
9. Point Vista Street (north of Turbeville)
10. Turbeville Road (west of Point Vista)
11. Point Vista Street (south of Turbeville)
12. Turbeville Road (west of IH 35E)
13. Main Street
14. Sycamore Bend Road (south of Hidden Hills)

In addition to traffic volumes collected by local municipalities, the Texas Department of Transportation (TxDOT) collects Annual Average Daily Traffic (AADT) volume information for most TxDOT roadways throughout the State. Generally, these volume counts are taken near major intersections and are taken in the same location each year. This provides information for calculating historical growth rates on major corridors. The data is available on the internet at the TxDOT Statewide Planning Map located at the following URL: http://www.txdot.gov/apps/statewide_mapping/StatewidePlanningMap.html

Future traffic volume projections can be derived from the North Central Texas Council of Governments (NCTCOG) 2040 Traffic Volume Projections. However, in a review of the NCTCOG model, it was noted that the model's projected volumes on some roadways were inconsistent with actual/historic count data, particularly on roadways that do not have cross-connectivity to the south, such as Main Street and Harbor Lane. Therefore, Halff utilized a combination of data from historical counts, NCTCOG projections, current traffic counts, and projected development to estimate future daily traffic volumes on thoroughfares within Hickory Creek at build-out of development within the town.

** Trafficware Synchro 8 screenshot reprinted with permission from Microsoft Bing Maps*

Figure 1 – Traffic Volume Locations

THOROUGHFARE CLASSIFICATIONS AND STANDARDS

Utilizing the information discussed above and the projected daily traffic volumes at build-out, Halff developed the follow thoroughfare classifications and standards.

Local Streets

Local streets generally make up the majority of the streets in a community, provide access to properties, (typically residential or local destinations) and prioritize accessibility over mobility. The actual cross-section of local streets varies from community to community and is dependent upon street construction practices, adjacent land uses, parking, landscaping, and other considerations. Theses streets are not shown on the Thoroughfare Plan

Collector Streets

Collector streets (collectors) provide the transition from arterials to local streets. Collector roads typically connect residential areas, schools, and local shopping centers, and move traffic over shorter distances, balancing mobility and accessibility. As such, local land access should be more carefully regulated along a collector street. Numerous driveway cuts increase the number of potential conflict points and create safety issues, including increased congestion and number of traffic accidents. Parking on collector streets

should be discouraged and there should be limited residential access. Examples of collector streets include Main Street and Parkridge Drive.

Arterial Streets

Arterials move large volumes of traffic between major destinations. With some degree of access control they prioritize mobility over accessibility in order to provide the highest level of service at the greatest speed for the longest uninterrupted distance. Arterial streets are divided into two classes, primary arterials and minor arterials.

Primary arterial thoroughfares are multi-lane facilities and are often constructed and maintained by the Texas Department of Transportation (TxDOT). Primary arterials serve both traffic from the local municipality and through traffic from adjacent cities. There is only one primary arterial street in Hickory Creek, FM 2181, which is already built to its ultimate divided six-lane cross-section.

Minor arterial streets provide for traffic movement from neighborhoods to commercial areas and other major traffic generators (e.g., schools and municipal buildings). In many communities, minor arterials also serve as routes for through traffic from adjacent cities. However, due to the natural boundaries formed by Lake Lewisville, the minor arterial roadways in Hickory Creek do not carry significant traffic from other communities. Examples of minor arterial streets include Ronald Reagan Boulevard and Point Vista Street.

Expressways/Freeways

Expressways/freeways provide for expeditious movement of traffic between areas and across cities, with an intent of moving large volumes of traffic at relatively high speeds, with as few delays and interruptions as possible. One of the ways this occurs is through the limitation of direct access to adjacent properties. Interstate Highway 35E is the only freeway within the Town of Hickory Creek.

STREET DESIGN STANDARDS AND CROSS-SECTIONS

The Master Thoroughfare Plan (MTP) is designed to provide for the future travel needs of the community by ensuring the orderly development of the street system. It is also designed to ensure that adequate rights-of-way are preserved with general alignments and sufficient width to allow for the efficient expansion and improvement over time.

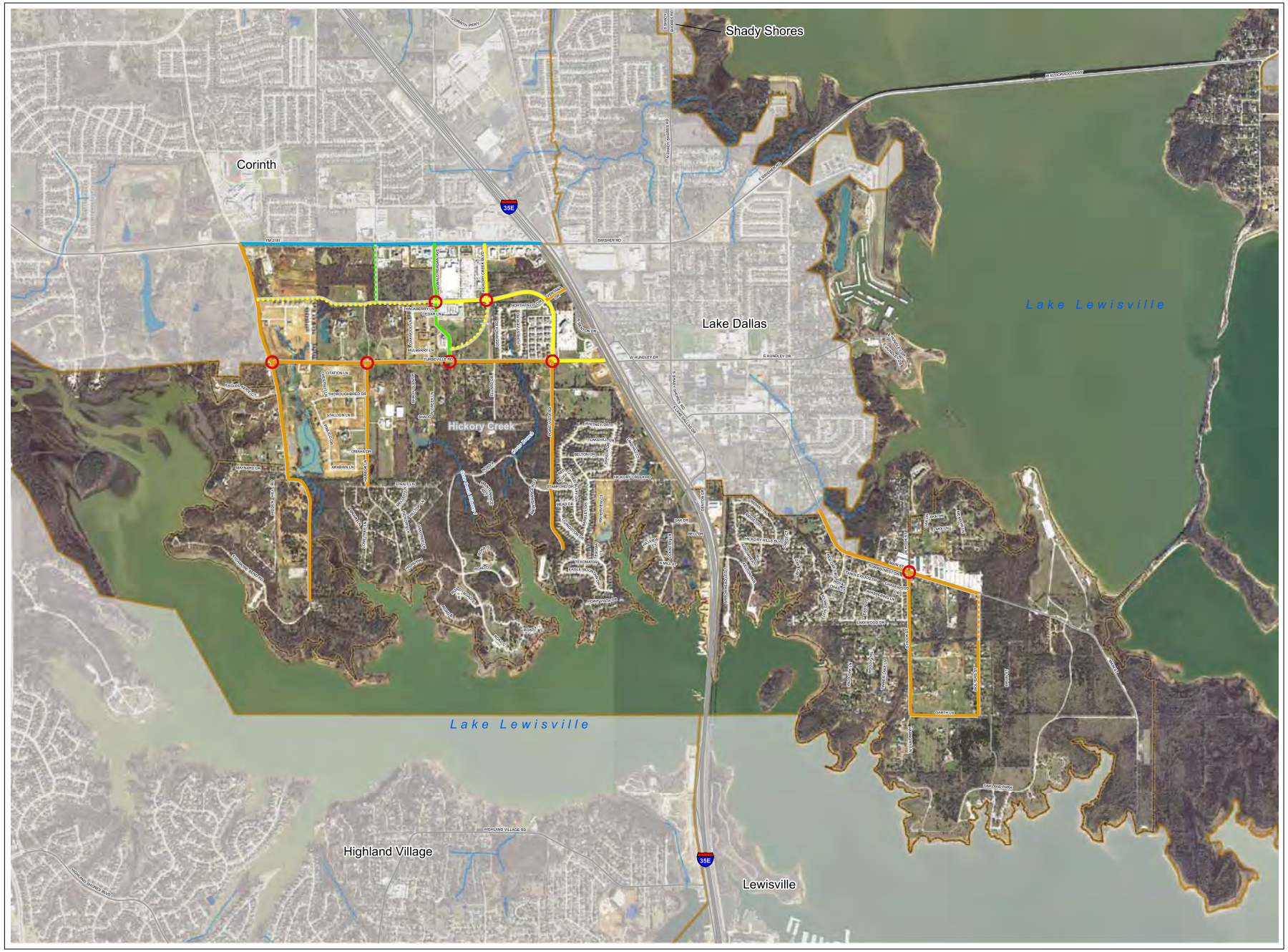
In cases where new alignments are proposed, the MTP provides guidance as to the general alignment of the proposed street. The actual alignment will be refined over time as design and engineering plans and specifications are prepared. The MTP also provides guidance as to the functional classification of streets. These functional classifications are then subject to design standards which provide specifications on right-of-way and pavement widths, traffic capacity, number of lanes (including turn lanes), and the design of sidewalks or trails. Specifics regarding the required pavement width and right-of-way for the thoroughfares can be found in the Town of Hickory Creek Engineering Design Manual.

The thoroughfare plan also depicts key intersections where future improvements necessary to upgrade intersection capacity are proposed. Improvements could include the addition of turn-lanes, installation of a roundabout, and/or installation of traffic signals. Intersections identified for possible capacity upgrades are circled.

FUTURE CONSIDERATIONS

With much of the Town of Hickory Creek being bordered by Lake Lewisville, there are some unique characteristics of the thoroughfare system. One item in particular is that many neighborhoods have a limited number of roads providing access. In some cases, there is only one roadway (such as Harbor Lane) that serves the development. Therefore it is recommended that the Town of Hickory Creek examine opportunities to create connections, even if these are limited to emergency vehicle use only.

An example of this would be a connection between Oaktree Lane and Hickory Creek Road. This connection would require coordination with Corps of Engineers, but would be an option for a second access point serving the neighborhood at the south end of Harbor Lane. Options for limiting traffic to emergency vehicles are readily available if access needs to be restricted.



2017 Master Thoroughfare Plan Update

Legend

Thoroughfare Type

Existing	New
Collector	Collector
P4U	P4U
P4D	P4D
P6D	P6D

- Intersection Capacity Upgrade
- Hickory Creek City Limits
- Surrounding City Limits
- Roads
- Railroads
- Water Bodies

Notes:
1. Solid lines indicate an existing roadway.
   Dashed lines indicate a future roadway.
2. Intersection Capacity Upgrades include traffic signals, additional turnlanes, roundabouts, etc.
   That are appropriate to move traffic more efficiently.

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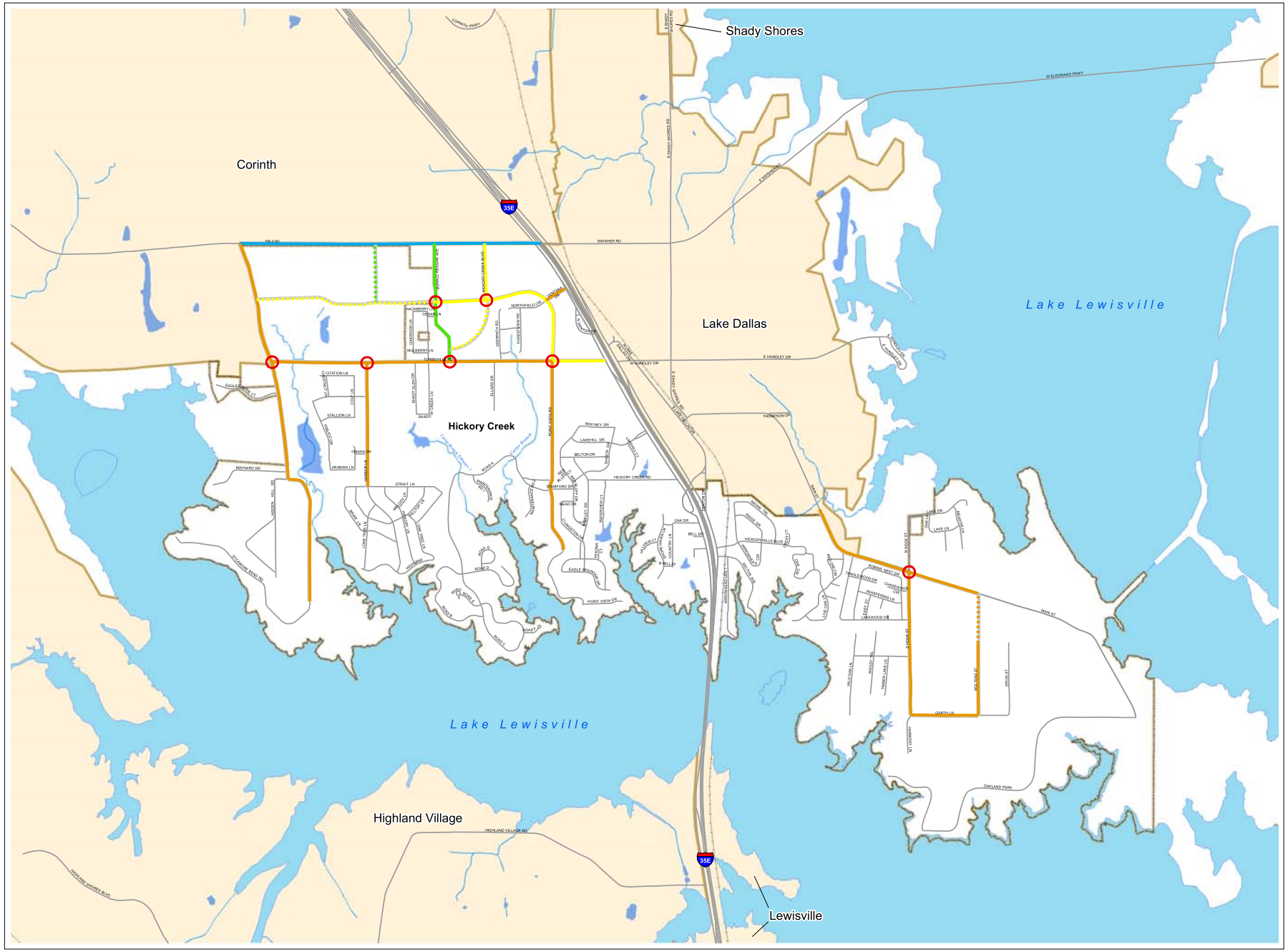
Print Date: 4/14/2017

HICKORY CREEK TX



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