

Belton Thoroughfare Plan Update

FINAL REPORT

Prepared for



City of Belton

Prepared by



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2/19/15

February 19, 2015



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INTRODUCTION

As stated in the City of Belton's Comprehensive Plan, "The Thoroughfare Plan has one of the most substantial impacts upon a City, in that basic thoroughfare design and layout are identified, providing a skeletal framework around which development may occur." The function of the Thoroughfare Plan is to ensure development of a street system to serve both the mobility and access needs of the public, as well as to provide guidance on the general alignment and right-of-way required for roadways. The Plan provides guidance on thoroughfare system improvements, including the existing and planned extension of city roadways.

As part of this study effort, the existing Thoroughfare Plan was reviewed, assessed and updated. This document identifies recommended changes to the existing Thoroughfare Plan Map, the functional classification system and the planned cross-sections for the City of Belton in order to more efficiently serve the City's transportation needs.



EXISTING ROADWAY NETWORK

Belton is located in central Bell County, southeast of Belton Lake and northeast of Stillhouse Hollow Lake. Interstate Highway 35 (IH 35) bisects the City of Belton and provides statewide access from the Mexican border at Laredo to the Oklahoma border north of Dallas-Fort Worth in Gainesville. US 190 runs through the City in an east-west direction and provides regional access to the west and east (via shared alignment with IH 35 and Loop 363 in Temple). The City is bordered on the northeast by the City of Temple with sections of unincorporated Bell County bordering the remainder of the City. The cities of Harker Heights, Killeen and Nolanville are located within 10 miles west of the City of Belton along US 190 and the Village of Salado is located within 10 miles to the south along IH 35.

The majority of the major roadways serving connectivity and mobility purposes within Belton are state maintained State Highways (SH) and Farm-to-Market (FM) Roads such as SH 317 (Main Street), Loop 121, FM 93 (2nd Avenue and 6th Avenue), FM 436, FM 439 (Lake Road), FM 1670 and FM 2271.

The existing roadway network was inventoried by City of Belton staff based on direction provided by Lee Engineering and included roadways identified in the existing Thoroughfare Plan. Data collected for each roadway included the number of lanes, pavement type, presence of a divided median or center two-way left turn lane (TWLTL) and whether sidewalks and bike lanes were present. A summary of the field data collected is provided in the Appendix. This inventory helped identify roadway segments that have been constructed and segments that have not been upgraded to thoroughfare plan standards.

24-hour traffic volumes at 50 locations on roadways on the existing Thoroughfare Plan were collected as part of this study effort in May 2013. The locations where the traffic volumes were collected are provided graphically in **Figure 1**, while **Table 1** summarizes the 24-hour traffic volume data which was collected.

As part of the traffic volume evaluation, existing daily volume-to-capacity ratios were calculated for the roadway links where traffic volumes were collected. The resulting level-of-service (LOS) information (LOS A to F) was identified and those links which currently operate at poor levels of service, LOS E (near capacity) or LOS F (over capacity), are shown in **Table 2**.



Table 1: Summary of 24-Hour Traffic Volumes

ID	ROADWAY	LOCATION	EB	WB	NB	SB	TOTAL
1-1	Sparta Rd	Between Lil Carmel Road and FM 439	2,247	2,180			4,427
1-2	Sparta Rd	Between Mystic Mountain Rd and Dunn's Canyon Rd	1,876	1,838			3,714
1-3	Sparta Rd	W of Commerce St	5,530	5,786			11,316
1-4	Sparta Rd	Between Walmart Driveway and Main St (SH 317)	6,252	5,986			12,238
3-1	Dunn's Canyon Rd	W of Lake Rd (FM 439)			1,060	1,384	2,444
3-2	Dunn's Canyon Rd	N of Sparta Rd			1,010	961	1,971
4-1	Loop 121	Between Powell Ave and Old Ave D			7,457	7,820	15,277
5-1	Lake Rd (FM 439)	Between Loop 121 and River Fair Blvd	7,135	6,979			14,114
6-1	Commerce St	Between FM 439 (Lake Rd) and Sparta Rd			842	617	1,459
6-2	Commerce St	S of Sparta Rd			1,056	1,139	2,195
7-1	Industrial Park Rd	Between Apartment Driveway and Main St (SH 317)	1,245	1,036			2,281
12b-1	Chisolm Trail Pkwy WB	Between Loving Cove and Dunn's Canyon Rd		915			1,852
12b-2	Chisolm Trail Pkwy EB	Between Loving Cove and Dunn's Canyon Rd	937				
14-1	Pearl St	Between Shine Ave and 2nd Ave (FM 93)			489	507	996
16a-1	FM 93 (Nolan Valley Rd)	W of Wheat Rd	1,342	1,174			2,516
18a-1	Wheat Rd	N of Nolan Valley Rd (FM 93)			562	587	1,149
18a-2	Wheat Rd	S of Nolan Valley Rd (FM 93)			314	481	795
18a-3	Wheat Rd	N of US 190			281	475	756
18b-1	Wheat Rd	S of Sparta Rd			497	566	1,063
21-1	George Wilson Rd	N of US 190			484	443	927
22-1	Digby Dr	Between Wheat Rd and Kirkley Blvd	131	156			287
23-1	Kirkley Blvd	N of US 190			354	108	462
24-1	Powell Ave	W of Loop 121	636	351			987
25-1	Avenue D	E of Loop 121	1,325	1,170			2,495
25-2	Avenue D	Between Pearl St and Main St (SH 317)	1,200	1,073			2,273
26-1	Main St (SH 317)	N of Griffin Dr (Between Lake Rd (FM 439) and Griffin Dr)			9,292	9,471	18,763
26-2	Main St (SH 317)	Between Montrose St and E 22nd Ave			12,394	11,295	23,689
28-1	Old Golf Course Rd	S of Ave O	300	312			612
29-1	Auction Barn Rd	Between Stillhouse Hollow Lake Rd (FM 1670) and Rocking M Ln			203	227	430
29-2	Auction Barn Rd	W of Loop 121			209	221	430
31-1	Connell St	Between US 190 and Loop 121	266	132			398
34a-1	Shanklin Rd	S of Shanklin Rd/Loop 121			221	194	415
34b-1	Shanklin Rd	W of IH 35	215	240			455
35b-1	Tahuaya Rd	W of IH 35	191	170			361
35c-1	Elmer King Rd	E of IH 35	246	226			472
35c-2	Elmer King Rd	W of Elm Grove Rd	173	176			349
35d-1	Elmer King Rd	W of Armstrong Rd	80	81			161
36b-1	Amity Rd	W of IH 35	367	357			724
36c-1	Amity Rd	E of IH 35	712	723			1,435
37-1	E 22nd Ave	Between Main St (SH 317) and East St	243	454			697
38-1	E 13th Ave	Between Main St (SH 317) and Penelope St	3,096	3,393			6,489
38-2	E 13th Ave	N of Waco Rd (FM 817)			3,792	3,293	7,085
40-1	Central Ave	E of Birdwell St	3,666	4,384			8,050
41-1	Penelope St	Between 10th Ave West and 10th Ave East (offset)			256	356	612
41-2	Penelope St	Between 4th Ave and 3rd Ave			858	643	1,501
41-3	Penelope St	S of Avenue C			239	580	819
45-1	Elm Grove Rd	S of Holland Rd (FM 436)			522	556	1,078
45-2	Elm Grove Rd	N of Elmer King Rd			82	122	204
46-1	FM 1123	W of Armstrong Rd	734	666			1,400
47b-1	Armstrong Rd	N of Summers Mill Rd			163	187	350

--- Data collected on either Wednesday, May 22, 2013 or Thursday, May 23, 2013



Table 2: Summary of Roadway Segments At or Near Capacity

Roadway Name	Current TP Designation	Travel Direction	# of Lanes	Divided/ Undivided/ TWLTL	24-Hour Traffic Volumes	Capacity (veh/day)	V/C	LOS
Sparta Rd								
Loop 121-Commerce	Major Collector	EB	1	Undivided	5,530	5,250	1.05	F
		WB	1		5,786	5,250	1.10	F
Commerce-Walmart	Major Collector	EB	1	TWLTL	5,891	5,750	1.02	F
		WB	1		5,886	5,750	1.02	F
Walmart- SH 317	Major Collector	EB	1	TWLTL	6,252	5,750	1.09	F
Loop 121								
Sparta to SH 190	Major Arterial	NB	1	Undivided	7,457	8,750	0.85	E
		SB	1		7,820	8,750	0.89	E
Main St (SH 317)								
W 14th Ave to W Ave J	Major Arterial	NB	1	TWLTL	12,394	9,250	1.34	F
		SB	1		11,295	9,250	1.22	F



ASSESSMENT OF CURRENT THOROUGHFARE PLAN

The existing Thoroughfare Plan, shown in **Figure 2**, was adopted by the Belton City Council in 2001 and updated in 2008. Our assessment of the current thoroughfare plan included an inventory of existing roadways (described in the previous section), existing City of Belton Thoroughfare Plan-related documents and an inventory of surrounding area thoroughfare plans

Inventory of City of Belton Documents

The project team obtained and reviewed City of Belton documents, including:

- Comprehensive Plan (August 2006) which includes the existing Thoroughfare Plan and the Future Land Use Plan
- City of Belton Design Standards (August 2009)
- City of Belton Design Manual and Standard Details (June 2002)
- City of Belton Parks and Recreation Strategic Master Plan (March 2010)
- City of Belton Subdivision Ordinance (May 1985)
- City of Belton Zoning Ordinance (April 2008)
- City of Belton Zoning Map (2013)
- City of Belton New Development Map (2013)

Existing Thoroughfare Plan Map

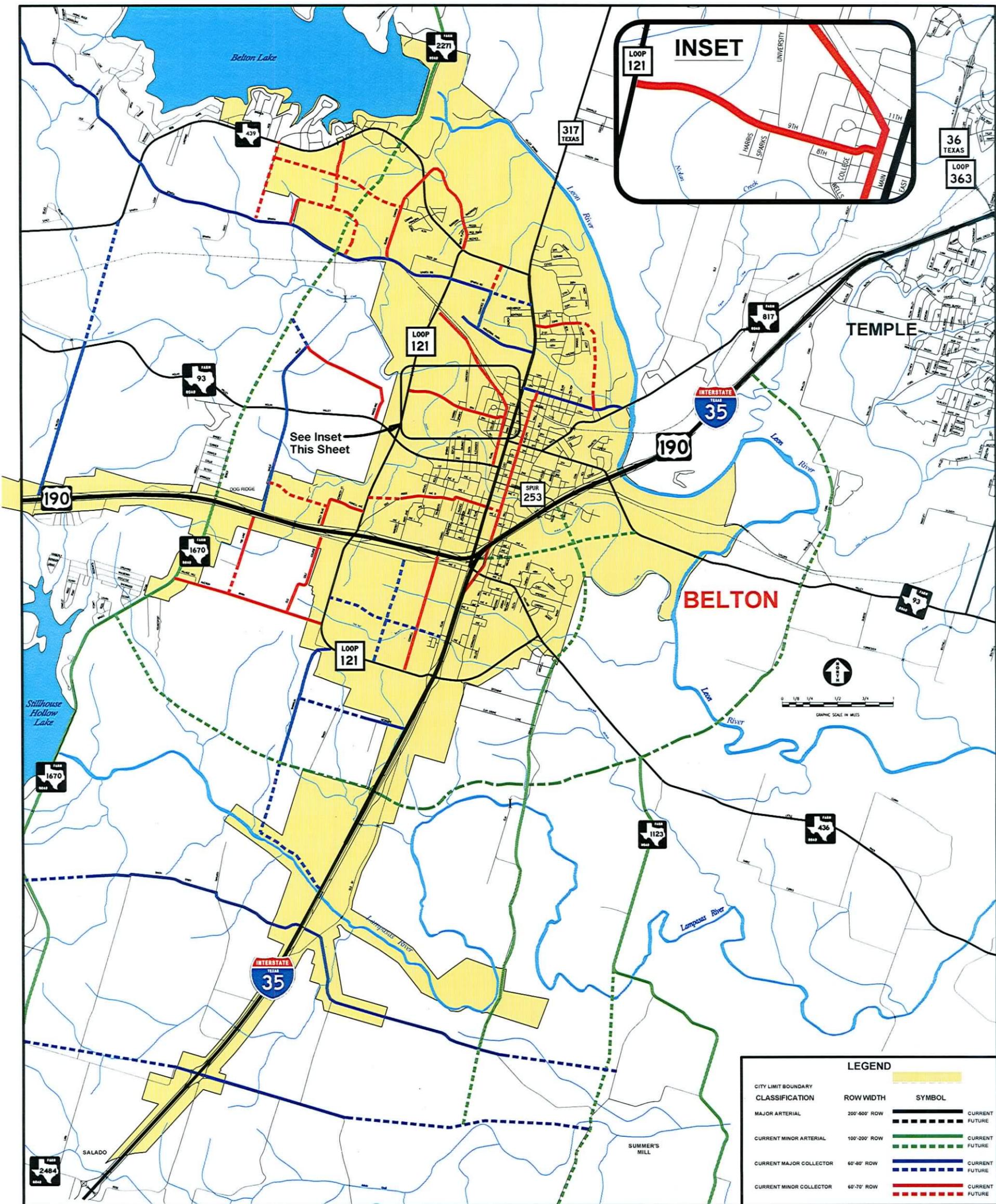
The current roadway classification system used in the existing thoroughfare plan identified the following functional classifications:

- Freeways
- Major Arterials (200 to 500 feet of ROW)
- Minor Arterials (100 to 200 feet of ROW)
- Major Collectors (60 to 80 feet of ROW)
- Minor Collectors (60 to 70 feet of ROW)

Thoroughfare Design Standards

The 2006 Comprehensive Plan provides geometric design standards that include standards for ROW width, number of traffic lanes, lane widths, and median widths, as shown in **Figure 3**. However, the thoroughfare classifications and ROW standards do not correspond with those provided in the Thoroughfare Plan. The functional classifications used in the Comprehensive Plan include:

Figure 2: Existing City of Belton Thoroughfare Plan



ADOPTED BY THE BELTON CITY COUNCIL
ON
TUESDAY, JULY 24, 2001



City of Belton, Texas

Thoroughfare Plan Map

PREPARED BY

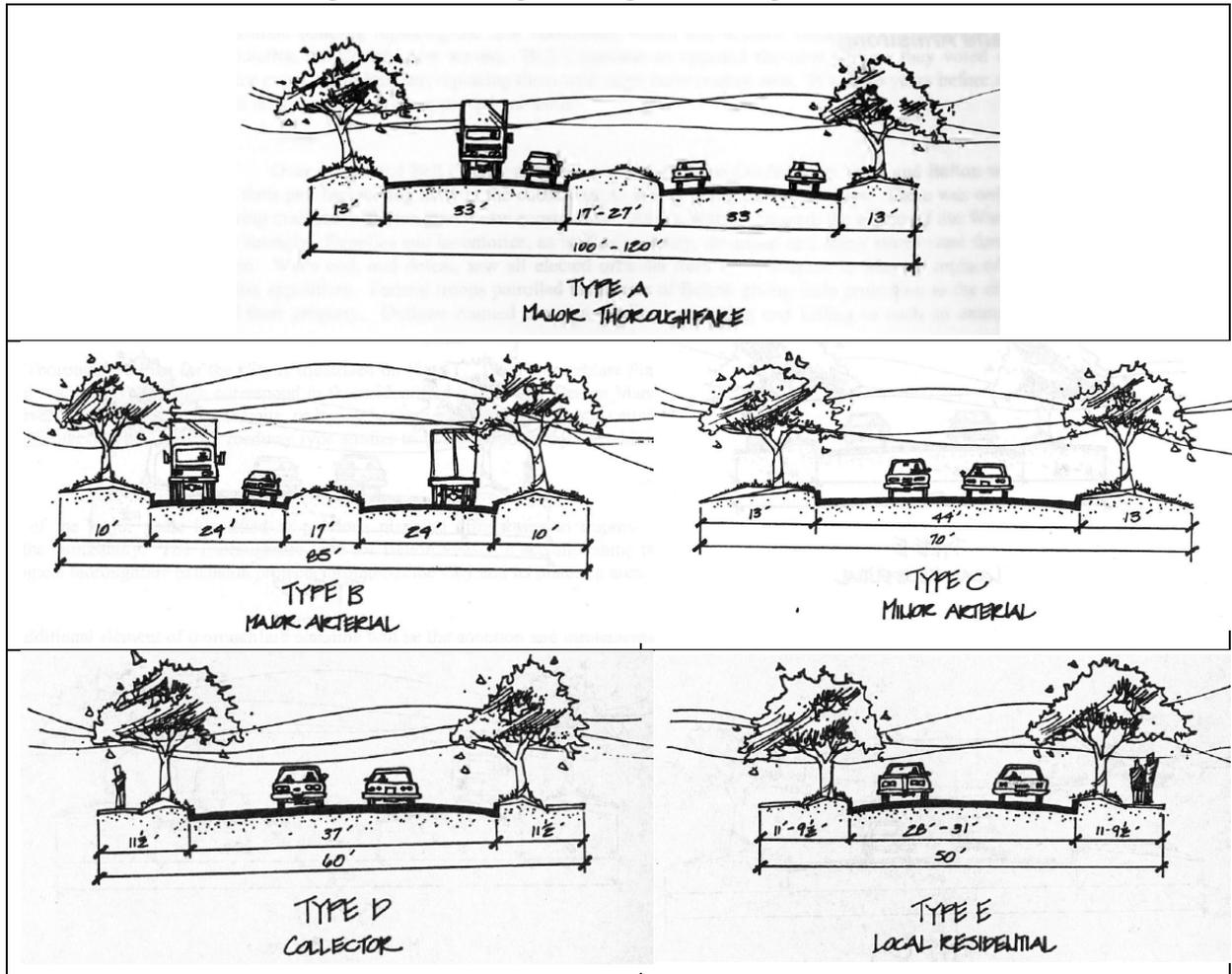


KASBERG, PATRICK & ASSOCIATES, LP
CONSULTING ENGINEERS
TEMPLE, TEXAS 76501



Alvin R. Sutton, III
11/17/08

Figure 3: Existing Thoroughfare Design Standards



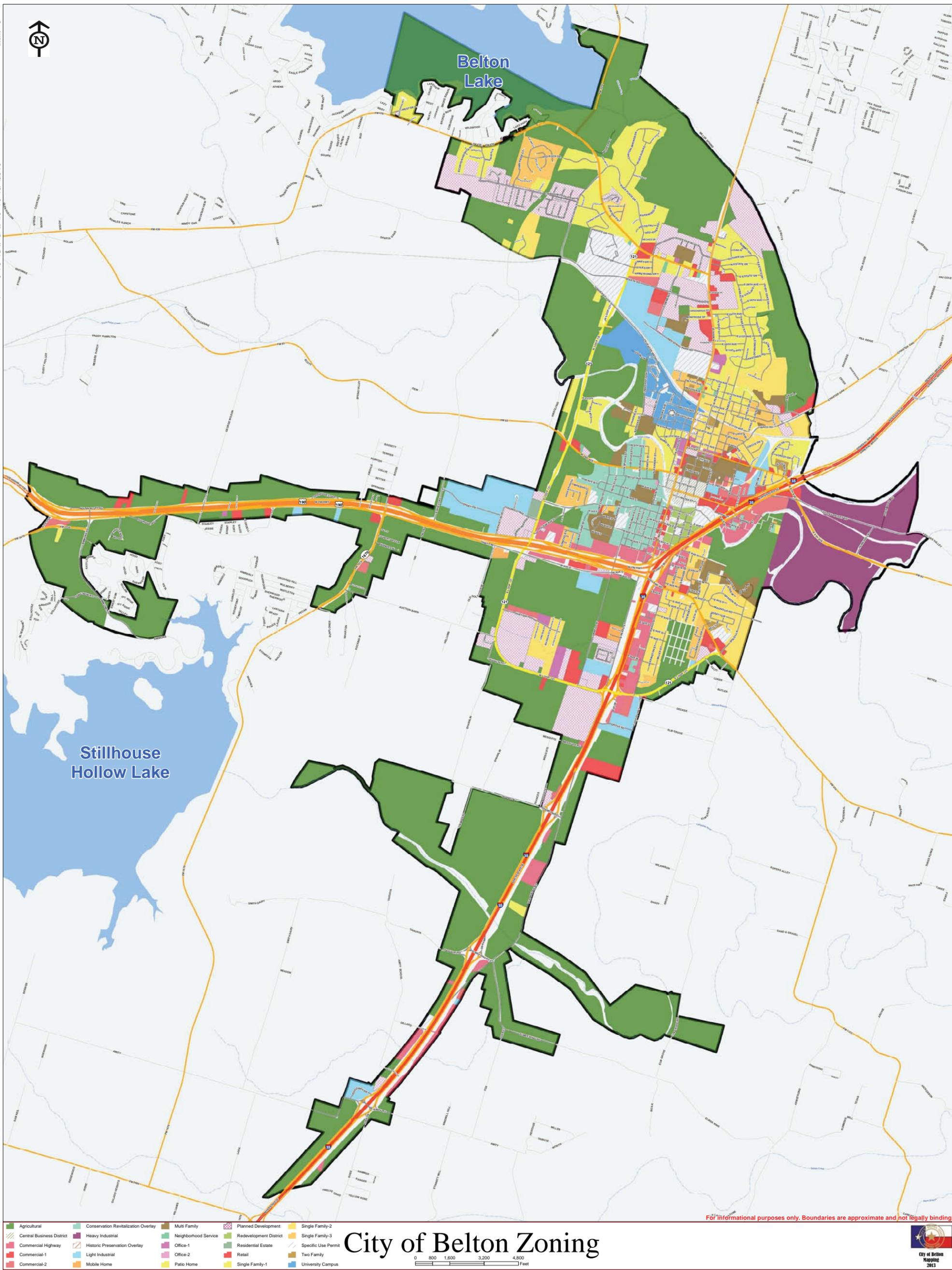
- Type A – Major Thoroughfare (100 to 120 feet of ROW)
- Type B – Major Arterial (85 feet of ROW)
- Type C – Minor Arterial (70 feet of ROW)
- Type D – Collector (60 feet of ROW)
- Type E – Local/Residential (50 feet of ROW)

These classifications, and corresponding ROW requirements, should be updated to reflect the classifications used in the Thoroughfare Plan.

Zoning / Future Land Use

Figure 4 shows the current zoning within the Belton City Limits, while Figure 5 shows the future land use plan for the City of Belton. In addition to these two documents, City staff also provided a summary of planned developments (2013) in the City of Belton (Figure 6). The current zoning, future land uses and planned developments help indicate areas where roadway facilities may be needed.

Figure 4: Current City of Belton Zoning Map

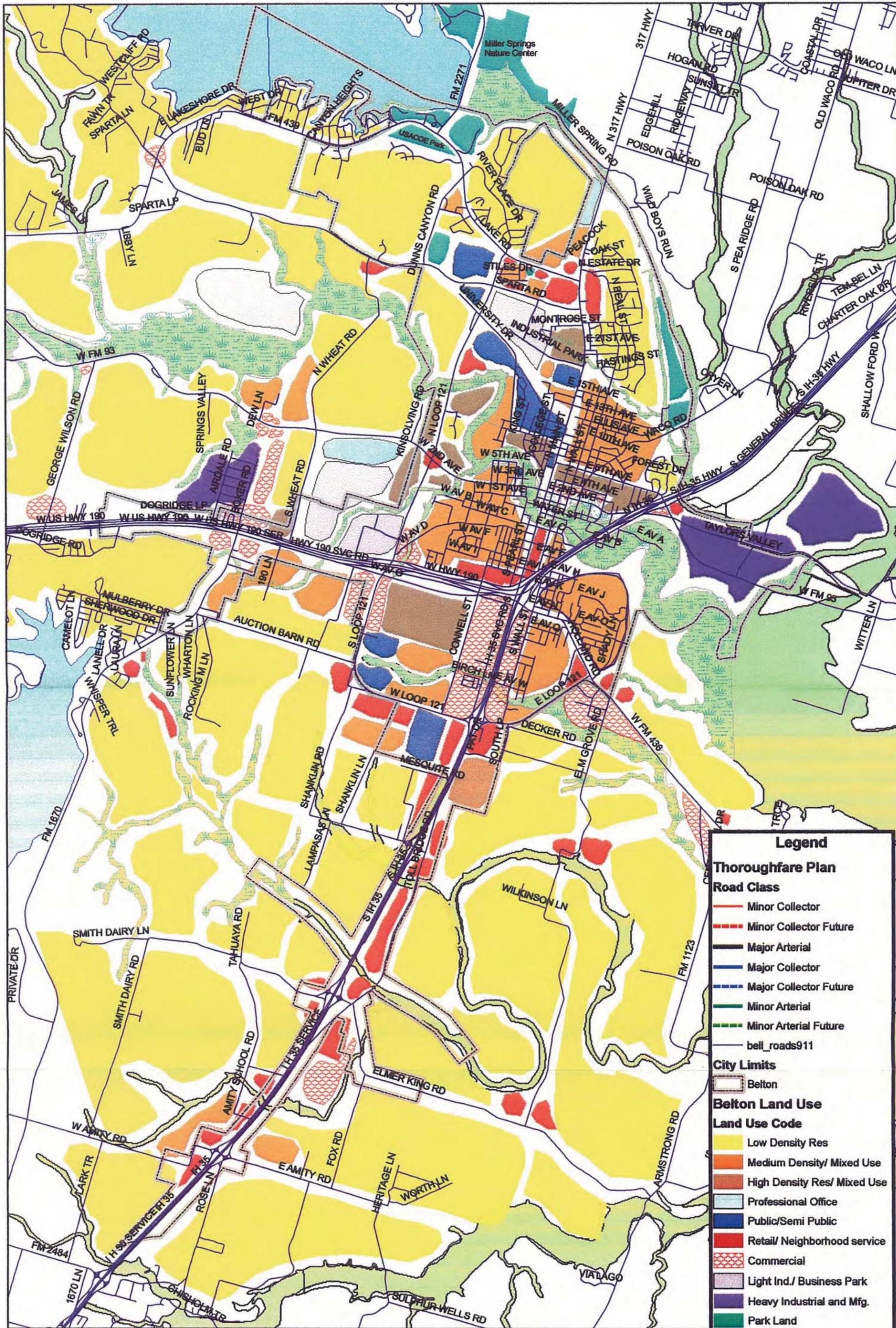


For informational purposes only. Boundaries are approximate and not legally binding.

City of Belton Zoning



Figure 5: City of Belton Future Land Use Plan



Legend

Thoroughfare Plan

Road Class

- Minor Collector
- Minor Collector Future
- Major Arterial
- Major Collector
- Major Collector Future
- Minor Arterial
- Minor Arterial Future
- bell_roads911

City Limits

- Belton

Belton Land Use

Land Use Code

- Low Density Res
- Medium Density/ Mixed Use
- High Density Res/ Mixed Use
- Professional Office
- Public/Semi Public
- Retail/ Neighborhood service
- Commercial
- Light Ind./ Business Park
- Heavy Industrial and Mfg.
- Park Land
- Flood Plain and Open Spaces
- Lake/Wetland



CITY OF BELTON
Future Land Use Plan
8-22-06

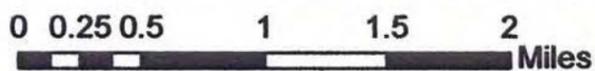
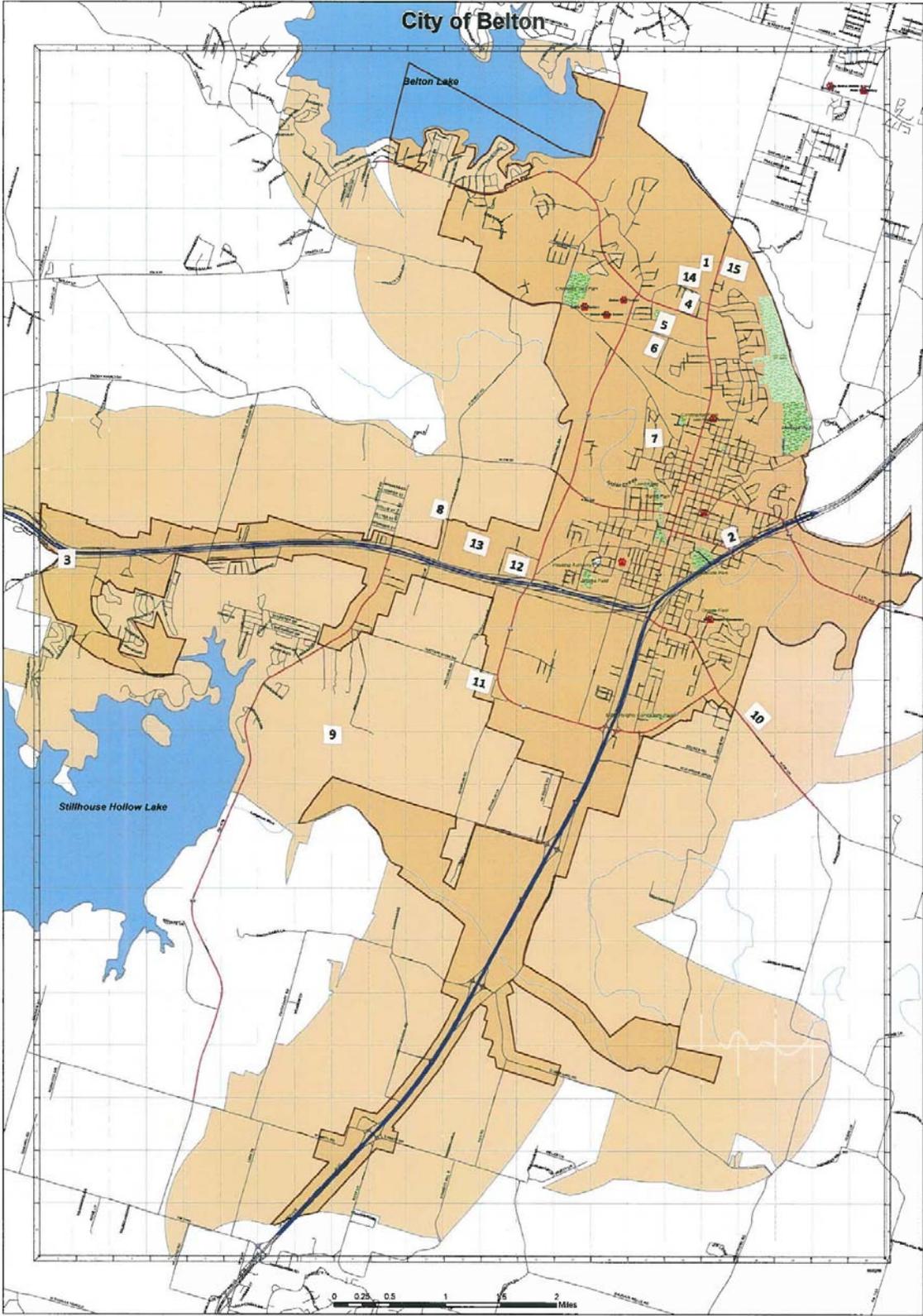




Figure 6: Proposed New Development (2013) Locations





Inventory of Surrounding Area Thoroughfare Plans

The thoroughfare plans for the surrounding municipalities of Harker Heights, Killeen, Temple and Salado, as well as the thoroughfare plans for Bell County and the Killeen-Temple Metropolitan Planning Organization (KTMPPO) were obtained and reviewed in order to gain a better understanding of the regional impacts of Belton's roadway network. Major differences between these plans and the existing City of Belton Thoroughfare Plan are identified below:

- City of Temple Thoroughfare Plan (2012)
 - The future loop connecting Shanklin Road/Witter Lane/Old Waco Road is classified as a proposed Major Arterial and follows a different alignment. This roadway is identified as a Minor Arterial in the current City of Belton Thoroughfare Plan.
 - Holland Road (FM 436) and Waco Road (FM 817) are classified as proposed Minor Arterials. Both of these roadways are classified as Major Arterials in the current City of Belton Thoroughfare Plan.
 - FM 1123 is classified as a Collector roadway. This roadway is identified as a Minor Arterial in the current City of Belton Thoroughfare Plan.
- Village of Salado Transportation Plan (2004)
 - Near the Belton/Salado ETJ border, the Salado Transportation Plan identifies north-south roads west (Lake Trail) and east (Rose Lane) of IH 35 as a Minor Collector Roadway. There is no classification of these roadways in the current City of Belton Thoroughfare Plan.
- Bell County Thoroughfare Plan (2001) – Functional Classifications
 - Loop 121 between US 190 and IH 35 is classified as a Minor Arterial, whereas the existing City of Belton Thoroughfare Plan classifies this roadway section as a Major Arterial.
 - Several FM roads (FM 93, FM 436, FM 439, FM 1123, FM 1670 and FM 2271) that are classified as Major Arterials in the current City of Belton Thoroughfare Plan are classified as Collectors.
- Killeen-Temple MPO Regional Thoroughfare and Pedestrian/Bicycle Plan (2011)
 - Holland Road (FM 436) east of IH 35 and Amity Road west of IH 35 are both identified as conceptual route alignments for future study.
 - The future loop connecting Shanklin Road/Witter Lane/Old Waco Road is classified as a proposed Major Arterial and follows a similar alignment of the City of Temple Thoroughfare Plan. This roadway is identified as a Minor Arterial in the current City of Belton Thoroughfare Plan.
 - This Plan classifies FM 1670, FM 2271, and Armstrong Road as Major Arterials, while these are classified as Minor Arterials in the current City of Belton Thoroughfare Plan.
 - Several roadways (Amity Road, Sparta Road, George Wilson Road, and Waco Road) are classified as Minor Arterials which differ from that identified in the current City of Belton Thoroughfare Plan.

These neighboring Thoroughfare Plans, which were considered in developing the proposed City of Belton Thoroughfare Plan, are provided in the Appendix.



PROPOSED ROADWAY CROSS SECTIONS

The functional classification system used in the current Thoroughfare Plan was utilized for the proposed Thoroughfare Plan, with modifications to the right-of-way for each classification, and includes:

- Major Arterial (120' ROW)
- Minor Arterial (100' ROW)
- Major Collector (80' ROW)
- Minor Collector (60' ROW)

Some of the roadway cross sections shown in the following sections provide adequate right-of-way for the development of a single left-turn lane at major intersections or traffic generators. For those cross sections where adequate right-of-way is not provided for a single left turn lane at a major traffic generator or intersection, or where dual left turn lanes or a right turn lane is needed, the roadway would need to be widened and additional right-of-way acquired to provide the additional lane(s). For each functional classification, alternative concepts are provided in order to select the most appropriate configuration as part of the development process. The alternative layouts presented under this designation include the presence of individual/shared bike lanes and a 10 foot hike and bike trail on one side. Sidewalks are shown in these typical sections for reference purposes only and are not a requirement of the Thoroughfare Plan.

Major Arterial (120' ROW)

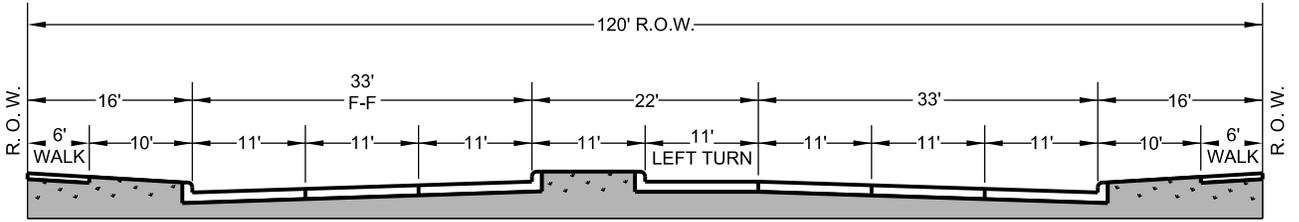
The Major Arterial designation is a six-lane divided roadway within a 120 foot wide right-of-way with geometric options shown in **Figure 7**. The primary purpose of this facility is to provide mobility for long and intermediate trip lengths and general connectivity within and to areas outside of Belton. The alternative layouts presented under this designation include the presence of individual bike lanes, shared bike lanes and a 10 foot hike and bike trail on one side. A sidewalk is shown on both sides of the roadway under all alternatives.

Minor Arterial (100' ROW)

The Minor Arterial designation is a four-lane divided roadway within a 100 foot wide right-of-way with geometric options shown in **Figure 8**. The primary purpose of this facility is to provide mobility for longer trip lengths and general connectivity to areas outside of Belton. The alternative layouts presented under this designation include the presence of individual bike lanes and a 10 foot hike and bike trail on one side. A sidewalk is shown on both sides of the roadway under all alternatives.

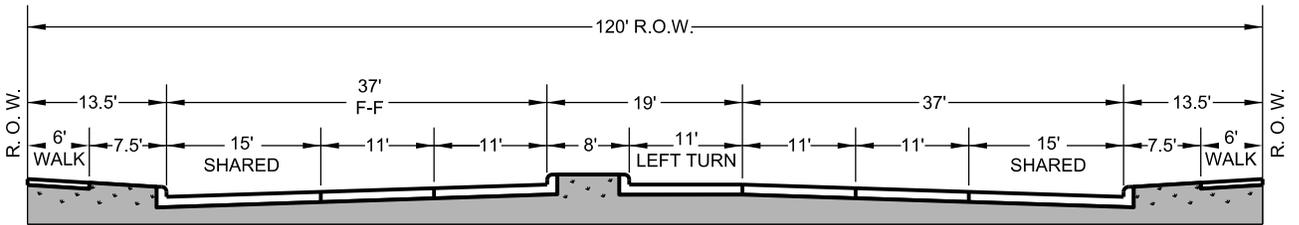
A rural Minor Arterial cross section is also a four-lane divided roadway within a 100 foot wide right-of-way with geometric options shown in **Figure 9**. This roadway cross section is intended for rural areas where open drainage channels are provided (no curb and gutters), although particular locations may require an engineered swale with underground pipes. The alternative layouts presented under this designation include the presence of individual bike lanes, shared bike lanes and a 10 foot hike and bike trail on one side. A sidewalk is shown on both sides of the roadway under all alternatives. For these rural sections, pavement can be provided in the center of the road to provide a five-lane section (left turn lane) at an intersection.

(A)



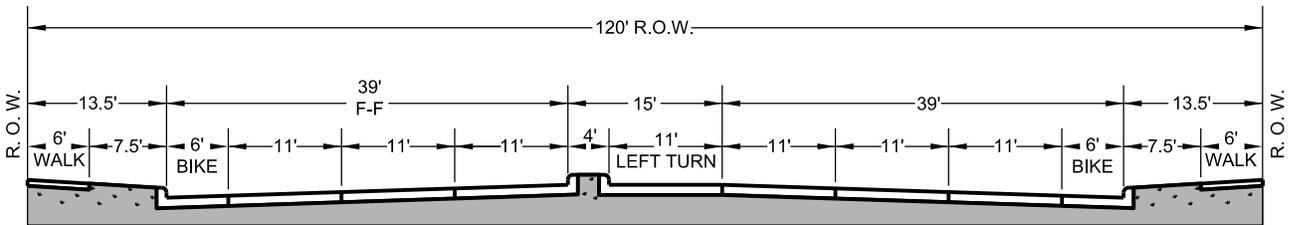
Major Arterial - 6 lane divided roadway, no bike lanes, 6' sidewalks

(B)



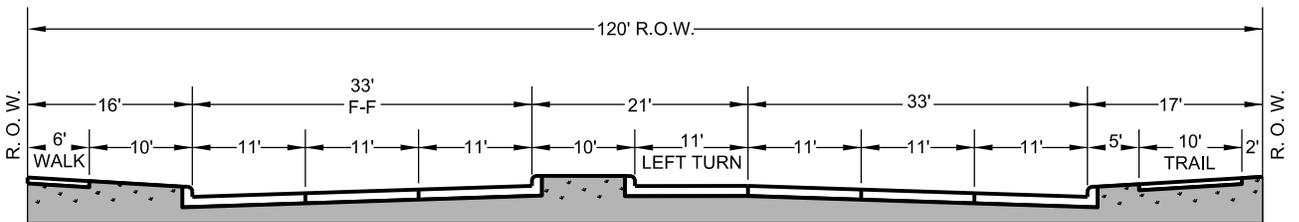
Major Arterial - 6 lane divided roadway, shared bike lanes, 6' sidewalks

(C)



Major Arterial - 6 lane divided roadway, 6' bike lanes, 6' sidewalks

(D)



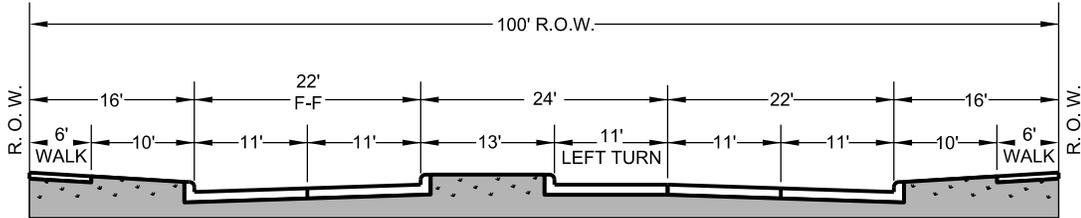
Major Arterial - 6 lane divided roadway, no bike lanes, 6' sidewalk on one side, 10' hike and bike trail on other side

Last Updated: October 9, 2014



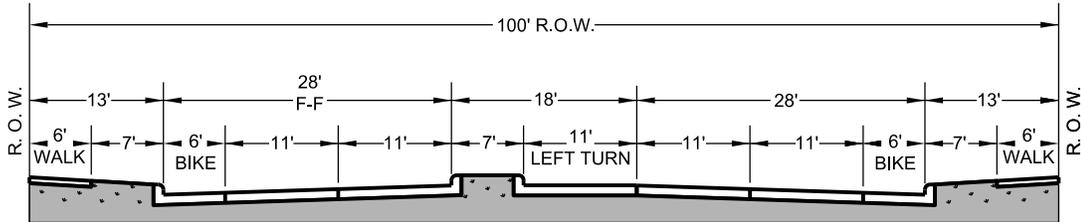
3030 LBJ FREEWAY
 SUITE 1660
 DALLAS, TEXAS 75234
 972-248-3006 FAX 972-248-3855
 TBPE FIRM F-450

(A)



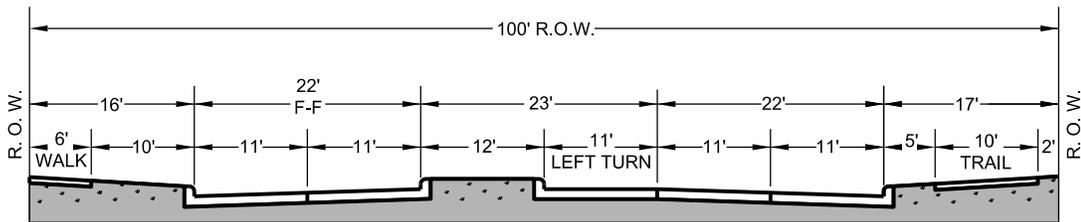
Minor Arterial - 4 lane divided roadway, no bike lanes, 6' sidewalks

(B)



Minor Arterial - 4 lane divided roadway, 6' bike lanes, 6' sidewalks

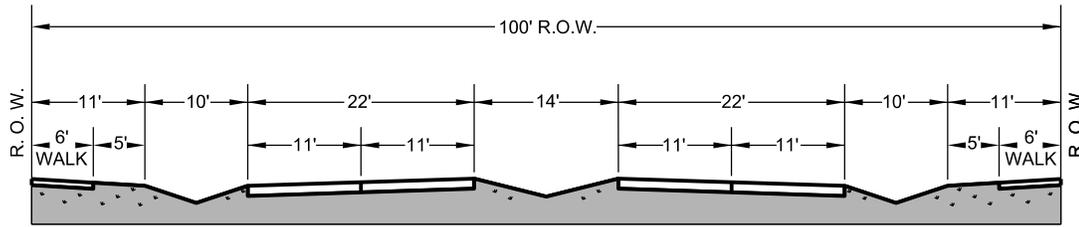
(C)



Minor Arterial - 4 lane divided roadway, no bike lanes, 6' sidewalk on one side, 10' hike and bike trail on other side

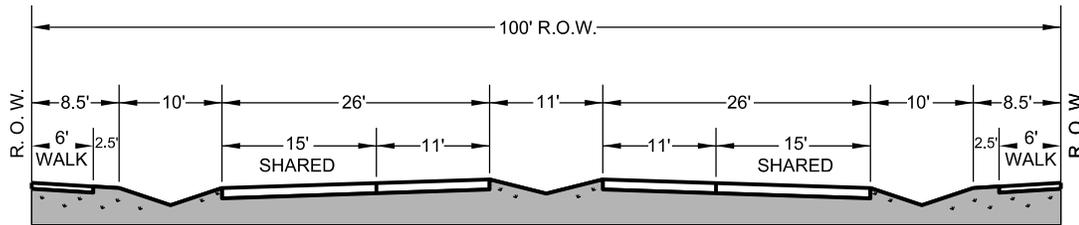
Last Updated: October 9, 2014

(A)



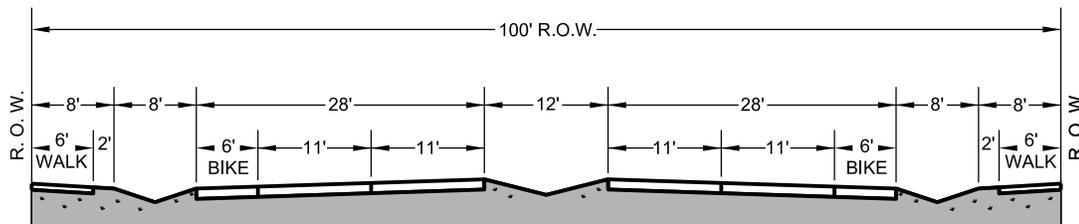
Minor Arterial (rural cross section) - 4 lane divided roadway, no bike lanes, 6' sidewalks

(B)



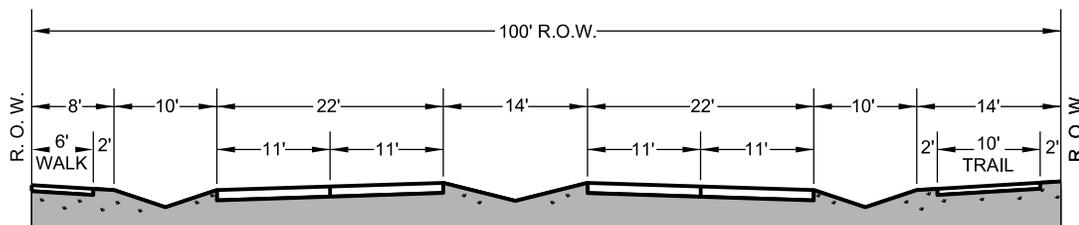
Minor Arterial (rural cross section) - 4 lane divided roadway, shared bike lanes, 6' sidewalks

(C)



Minor Arterial (rural cross section) - 4 lane divided roadway, 6' bike lanes, 6' sidewalks

(D)



Minor Arterial (rural cross section) - 4 lane divided roadway, no bike lanes, 6' sidewalk on one side, 10' hike and bike trail on other side

Last Updated: October 9, 2014



Major Collector (80' ROW)

The Major Collector designation consists of a four-lane undivided roadway with an 80 foot wide right-of-way and is shown in **Figure 10**. This facility serves the primary purpose of collecting trips within subareas of Belton and providing access to arterials or other collectors throughout the City. The alternative layouts presented under this designation include the presence of individual bike lanes, shared bike lanes and a 10 foot hike and bike trail on one side. A sidewalk is shown on both sides of the roadway under all alternatives.

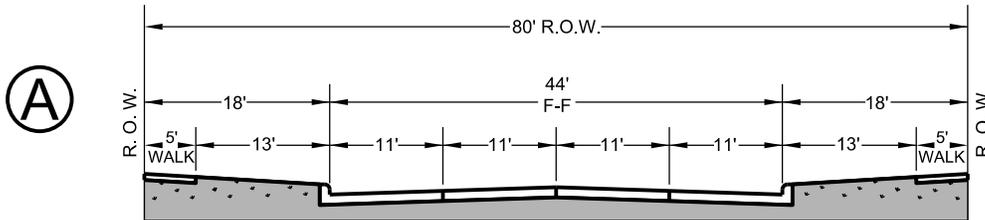
Minor Collector (60' ROW)

The Minor Collector designation consists of two separate cross sections within a 60 foot wide right-of-way and is shown in **Figure 11**. The first cross section provides a two-lane undivided roadway section while the second cross section includes a center two-way left turn lane (TWLTL) between the two through lanes. This facility serves a similar purpose as the major collector, collecting trips within subareas of Belton or within a residential subdivision and providing access to the larger network of streets throughout the City. Traffic volumes on these roadways are typically lower than Major Collectors.

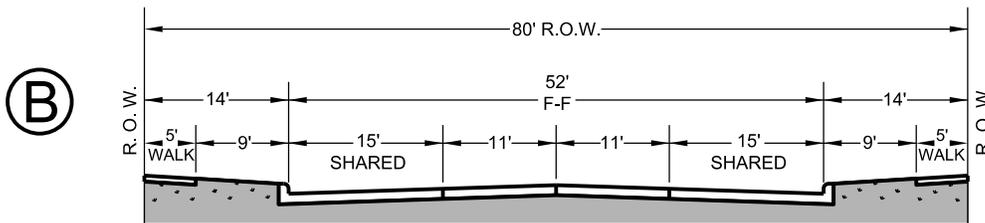
Local Roadway (50' ROW)

The Local Roadway cross section, which is not shown on the Thoroughfare Plan, lies outside the Arterial and Collector classification and primarily serves residential neighborhoods, with houses fronting these roadways and with sidewalks shown on both sides. The cross section for a Local Roadway is contained within a 50 foot wide right-of-way and is shown in **Figure 12**.

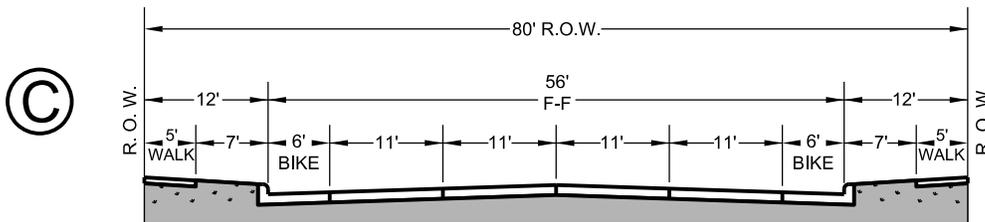
Designation of the classification (arterial, collector, or local) of new roads not shown on the current City of Belton Thoroughfare Plan shall be made by the City Engineer.



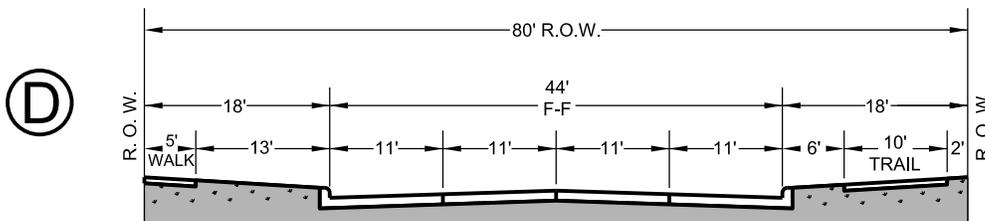
Major Collector - 4 lane undivided roadway, no bike lanes, 5' sidewalks



Major Collector - 4 lane undivided roadway, shared bike lanes, 5' sidewalks



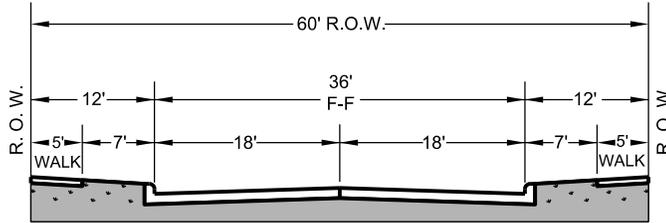
Major Collector - 4 lane undivided roadway, 6' bike lanes, 5' sidewalks



Major Collector - 4 lane undivided roadway, 5' sidewalk on one side, 10' hike and bike trail on other side

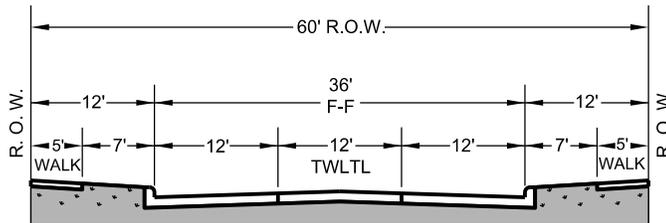
Last Updated: October 9, 2014

(A)



Minor Collector - 2 lane undivided, shared bike lane, 5' sidewalks

(B)



Minor Collector - 2 lane undivided w/ two-way left-turn lane (TWLTL),
no bike lanes, 5' sidewalks

Last Updated: October 9, 2014

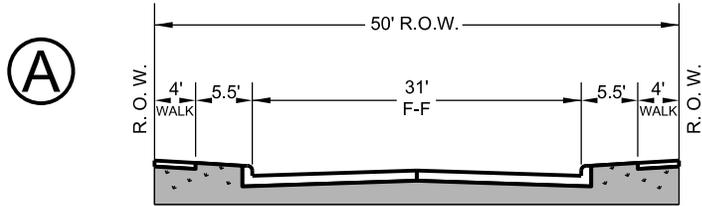


3030 LBJ FREEWAY
SUITE 1660
DALLAS, TEXAS 75234
972-248-3006 FAX 972-248-3855
TBPE FIRM F-450

LEE ENGINEERING

Minor Collector (60' ROW)

Figure 11



Local Roadway - 2 lane undivided, 4' sidewalks

Last Updated: October 10, 2014



3030 LBJ FREEWAY
 SUITE 1660
 DALLAS, TEXAS 75234
 972-248-3006 FAX 972-248-3855
 TBPE FIRM F-450

LEE ENGINEERING

Local Roadway (50' ROW)

Figure 12



PROPOSED MASTER THOROUGHFARE PLAN

The proposed thoroughfare plan for the City of Belton is shown in **Figure 13**. Proposed roadways shown in undeveloped areas are not intended to indicate precise configurations or alignments.

The Major Arterials form the primary framework of the proposed roadway system, and are intended to carry the longest trips and the highest traffic volumes. The proposed Major Arterials, as shown in Figure 13, are:

- SH 317 (Main Street)
- Loop 121
- FM 439 (Lake Road)
- FM 93 (2nd Avenue)
- FM 93 (6th Avenue)
- FM 817 (Waco Road)
- FM 436 (Holland Road)

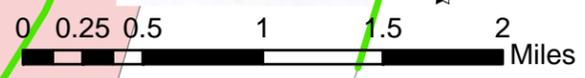
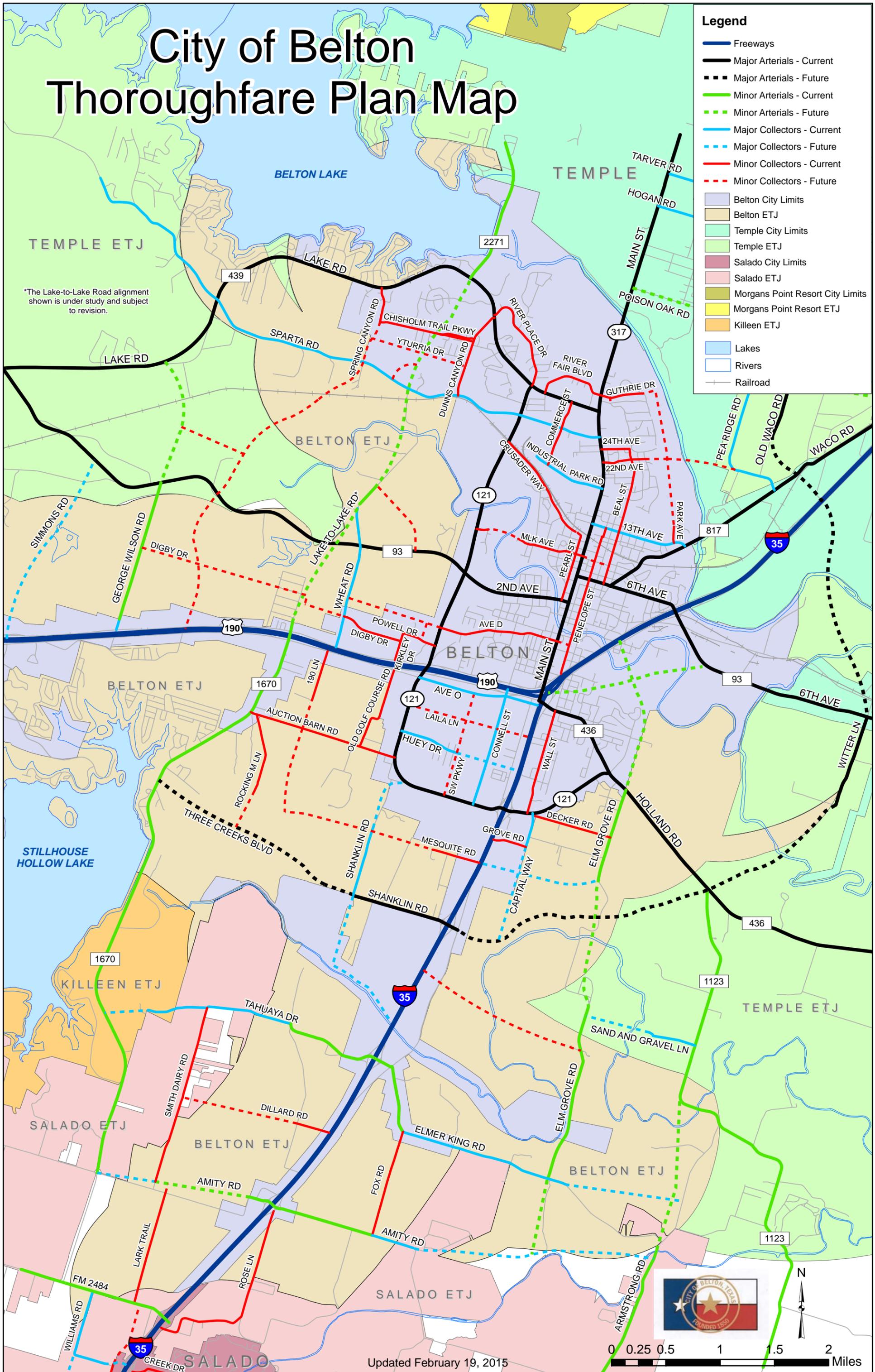
Old Waco Road, including a proposed segment connecting to Witter Lane, is also shown as a Major Arterial, based on the City of Temple Thoroughfare Plan. Old Waco Road does not fall within the City of Belton city limits or extra-territorial jurisdiction (ETJ).

City of Belton Thoroughfare Plan Map

Legend

- Freeways
- Major Arterials - Current
- Major Arterials - Future
- Minor Arterials - Current
- Minor Arterials - Future
- Major Collectors - Current
- Major Collectors - Future
- Minor Collectors - Current
- Minor Collectors - Future
- Belton City Limits
- Belton ETJ
- Temple City Limits
- Temple ETJ
- Salado City Limits
- Salado ETJ
- Morgans Point Resort City Limits
- Morgans Point Resort ETJ
- Killeen ETJ
- Lakes
- Rivers
- Railroad

*The Lake-to-Lake Road alignment shown is under study and subject to revision.



Updated February 19, 2015



THOROUGHFARE PLAN AMENDMENT PROCESS

It will be necessary to periodically consider and adopt amendments to the Thoroughfare Plan to reflect changing conditions and new needs for thoroughfare system improvements and development. A systematic procedure should be followed for making plan amendments, including a schedule for considering changes.

Typically, plan amendment requests may originate from landowners, civic groups, neighborhood associations, developers, other governmental agencies, city staff and other interested parties. Proposed revisions should be analyzed by the Planning Director, Public Works Director/City Engineer, and other City Staff, and the proposed changes and staff recommendations should then be considered by the Planning and Zoning Commission and City Council. A public hearing on proposed plan amendments, including advance notice of such hearing to obtain input to proposed amendments, is undertaken. The burden for establishing compelling reasons for and public benefit of any proposed changes should rest with the requesting parties. Decisions and determinations should represent the best interests of the public.

Subject to Planning and Zoning Commission recommendation, the revised Thoroughfare Plan, including any approved recommended plan amendments, should be submitted and considered by the City Council for adoption. The amended plan becomes effective upon adoption by the City Council.



APPENDIX

City of Belton Roadway Inventory (2013)

Count ID	Length (mile)	Roadway Name	Current TP Designation	Travel Direction	Pavement Type	# of Lanes	Divided/ Undivided/ TWLTL	Sidewalks?	Bike Lanes?	Notes
1	5.1	Sparta Rd								
1-1	1.1	Waterworks-Lake Rd	Major Collector	EB WB	O.C.S.T O.C.S.T	1 1	Undivided	No	No	2 Lanes
1-2	2.4	Lake Rd-Dunn's Canyon	Major Collector	EB WB	O.C.S.T O.C.S.T	1 1	Undivided	No	No	2 Lanes
---	0.3	Dunns Canyon-Tiger Dr	Major Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	2 Lanes/Turn Lane
---	0.7	Tiger Dr - Loop 121	Major Collector	EB WB	asphalt asphalt	1 1	TWLTL	No	No	2 Lanes/Turn Lane
1-3	0.3	Loop 121-Commerce	Major Collector	EB WB	asphalt asphalt	1 1	Undivided	Yes - north side	No	2 lane
---	0.1	Commerce-Walmart	Major Collector	EB WB	asphalt asphalt	1 1	TWLTL	Yes - north side	No	2 lanes/turn lane
1-4	0.2	Walmart- SH 317	Major Collector	EB WB	asphalt asphalt	1 2	TWLTL	Yes - north side	No	3 lanes/turn lane
2	0.9	River Place Drive								
---	0.9	From Lake Rd (FM 439) to Gate	Minor Collector	NB SB	O.C.S.T O.C.S.T	1 1	Undivided	No	No	1 Lane 1 Lane
---	0.0	From Gate to Lake Road (FM 439)	Minor Collector	EB NB	O.C.S.T O.C.S.T	2 2	Divided	No	No	1 Lane 2 lanes
3	0.8	Dunn's Canyon Rd								
3-1	0.3	Lake Rd (FM 439) to Chisolm Trail Pkwy	Minor Collector	NB/EB SB/WB	asphalt asphalt	1 1	TWLTL	No	No	2 Lanes/Turn Lane
3-2	0.5	Chisolm Trail Pkwy to Sparta Rd	Minor Collector	NB SB	asphalt asphalt	1 1	TWLTL	No	No	2 Lanes/Turn Lane
4	5.8	Loop 121								
---	0.3	Lake Rd (FM 439) to Sparta	Major Arterial	NB SB	asphalt asphalt	2 2	Undivided	No	No	All ints have LT
4-1	2.5	Sparta to SH 190	Major Arterial	NB SB	asphalt asphalt	1 1	Undivided	No	No	All ints have LT
---	0.9	SH 190 to Shanklin	Major Arterial	NB SB	asphalt asphalt	1 1	Undivided	No	No	All ints have LT
---	0.6	Shanklin to 2100 ftr east of shanklin	Major Arterial	EB WB	asphalt asphalt	1 1	Undivided	No	No	Right Turn Lane
---	0.5	2100 ft east of shanklin to IH 35	Major Arterial	EB WB	asphalt asphalt	1 1	TWLTL	No	No	Right Turn Lane
---	0.3	IH 35 to Southloop Dr	Major Arterial	EB WB	asphalt asphalt	1 1	Undivided	No	No	At Expo & TXDOT
---	0.8	Southloop Dr to Holland Rd (FM 436)	Major Arterial	EB WB	asphalt asphalt	1 1	Undivided	No	No	At Expo & TXDOT
5	6.3	Lake Rd (FM 439)								
---	1.5	Whispering Oaks Court to Sparta	Major Arterial	EB WB	asphalt asphalt	1 1	Undivided	No	No	
---	2.3	Sparta - Shady Meadow Mobile Home Park	Major Arterial	EB WB	asphalt asphalt	1 1	Undivided	No	No	
---	0.5	Shady Meadow Mobile Home Park to FM 2271	Major Arterial	EB WB	asphalt asphalt	2 2	TWLTL	Yes - north side	No	4 lane (continuous turn lane)
5-1	2.0	FM 2271 to Main St (SH 317)	Major Arterial	EB WB	asphalt asphalt	2 2	TWLTL	Yes	No	4 lane (continuous turn lane)
6	2.7	Commerce St								
6-1	0.2	Lake Road (FM 439) to Sparta	Major Collector	NB SB	asphalt asphalt	1 1	Divided	Yes	Yes	
6-2	2.5	Sparta-Industrial Park Dr	Major Collector	NB SB	asphalt asphalt	1 1	Undivided	No	No	
7	0.7	Industrial Park Dr								
7-1	0.7	SH 317-Commerce-Industrial Park /Dr	Major Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
8	1.8	FM 2271								
---	0.8	Adams (FM 2305) to Live Oak Ridge Park Dr	Minor Arterial	NB SB	asphalt asphalt	1 1	TWLTL	No	No	
---	1.0	Live Oak Rdige Park Dr to Lake Rd (FM 439)	Minor Arterial	NB SB	asphalt asphalt	1 1	Undivided	No	No	
9	0.5	Mystic Mountain Ln								
---	0.5	End Rd to Sparta Rd	Minor Collector	NB SB	asphalt asphalt	1 1	Undivided	No	No	
10	0.2	Gravel Rd (opposite Wild Wood Dr)								
---	0.2	Gravel Rd-Heart of TX at the end of Road	Minor Collector	NB SB	Gravel Gravel	1 1	Undivided	No	No	
11		Gravel Rd (2 streets E of Lake Ridge Dr)								
---		Could not locate	Minor Collector	NB SB						
12	1.0	Chisolm Trail Pkwy								
---	0.4	Spring Canyon-Breakers Cove	Minor Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	Breakers Cove has Walk Trail
---	0.3	Twin Ridge-Matadoor	Minor Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	Breakers Cove has Walk Trail
12b-1 12b-2	0.3	Matador-Dunn's Canyon	Minor Collector	EB WB	asphalt asphalt	1 1	Divided	Trail	No	
13	1.5	Crusader Way								
---	1.0	Loop 121-University	Minor Collector	EB/SB	OCST/Asp	1 1	Undivided	No	No	0.5 m OCST 0.5 masphalt
---	0.5	University to College	Minor Collector	WB/NB	asphalt asphalt	1 1	Undivided	Yes No	Yes	

City of Belton Roadway Inventory (2013)

Count ID	Length (mile)	Roadway Name	Current TP Designation	Travel Direction	Pavement Type	# of Lanes	Divided/ Undivided/ TWLTL	Sidewalks?	Bike Lanes?	Notes
14	0.6	Pearl St								
14-1	0.6	End Rd to N of 11th Ave-FM93-3,168'	Minor Collector	NB SB	asphalt asphalt	1 1	Undivided	Yes	No	
15	0.6	9th Ave / Cliff Drive								
---	0.2	End of road to University	Minor Collector	EB WB	asphalt asphalt	1 1	Undivided	Yes	No	
---	0.4	University to Main St (SH 317)	Minor Collector	EB WB	asphalt asphalt	1 1	Undivided	Yes	No	
16a	5.9	Nolan Valley / 2nd Ave (FM 93)								
	1.5	Lake Rd (FM xx) to Paddy Hamilton	Major Arterial	EB WB	asphalt asphalt	1 1	Undivided	No	No	
16a-1	1.5	Paddy Hamilton to Spring Valley -7,920'	Major Arterial	EB WB	asphalt asphalt	1 1	Undivided	No	No	
---	1.9	Spring Valley to Loop 121	Major Arterial	EB WB	asphalt asphalt	1 1	Undivided	No	No	
---	1.0	Loop 121 to SH 317	Major Arterial	EB WB	asphalt asphalt	1 1	Undivided	No	No	
16b	5.2	E 6th Ave (FM 93)								
---	0.9	Main St (SH 317) to Waco Rd	Major Arterial	EB WB	asphalt asphalt	2 2	Undivided	Yes	No	
---	0.6	Waco Rd to IH 35	Major Arterial	EB WB	asphalt asphalt	2 2	Undivided	No	No	
---	1.3	IH 35 to Leon River	Major Arterial	EB WB	asphalt asphalt	2 2	TWLTL	No	No	
---	2.4	Leon River - S 31st St - 12,672'	Major Arterial	EB WB	asphalt asphalt	2 2	TWLTL	No	No	
17	0.3	Kinsolving Rd								
---	0.3		Minor Collector	NB SB	asphalt asphalt	1 1	Undivided	No	No	
18	3.6	Wheat Rd								
18b-1	1.3	Sparta Rd to 1.3 mi S of Sparta Rd	Major Collector	NB SB	asphalt asphalt	1 1	Undivided	No	No	
18a-1	1.3	1.3 mi S of Sparta Rd to Nolan Valley Rd (FM 93)	Major Collector	NB SB	asphalt asphalt	1 1	Undivided	No	No	
18a-2	0.7	Nolan Valley Rd (FM 93) to Digby Dr	Major Collector	NB SB	asphalt asphalt	1 1	Undivided	No	No	
18a-3	0.3	Driby Dr to US 190	Major Collector	NB SB	asphalt asphalt	1 1	Undivided	No	No	
19	0.5	Boxer Rd								
---	0.5	SH 190 to Bassett Dr	Minor Arterial	NB SB	asphalt asphalt	1 1	Undivided	No	No	
20	6.5	Stillhouse Hollow Lake Rd (FM 1670)								
---	2.2	US 190 to Dam	Minor Arterial	NB SB	asphalt asphalt	1 1	Undivided	No	No	
---	3.3	Dam to Amity Rd	Minor Arterial	NB SB	asphalt asphalt	1 1	Undivided	No	No	
---	1.0	Amity Rd to FM 2484	Minor Arterial	NB SB	asphalt asphalt	1 1	Undivided	No	No	
21	1.4	George Wilson Rd								
21-1	1.4	George Wilson N of US 190 to E 2nd Ave (FM 93)	Minor Arterial	NB SB	asphalt asphalt	1 1	Undivided	No	No	
22	0.5	Digby Dr								
22-1	0.5	Wheat Rd to Kirkley Blvd	Minor Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
23	0.3	Kirkley Blvd								
23-1	0.3	200x10 Drive from US 190	Minor Collector	NB SB	asphalt asphalt	1 1	Undivided	No	No	
24	0.3	Powell Ave								
24-1	0.3	Kirkley Blvd to Loop 121	Minor Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
25	1.2	Ave D								
25-1	0.3	Loop 121 to 1,400' E of Loop 121	Minor Collector	EB WB	asphalt asphalt	2 2	Undivided	Yes Yes	no No	
	0.8	1,400' E of Loop 121 to Pearl St	Minor Collector	EB WB	asphalt asphalt	1 1	Undivided	Yes Yes	no No	
25-2	0.2	Pearl St to Main St (SH 317)	Minor Collector	EB WB	asphalt asphalt	1 1	Undivided	Yes Yes	no No	
26	5.6	Main St (SH 317)								
---	2.4	Adams to Peacock	Major Arterial	NB SB	asphalt asphalt	1 1	Undivided	No	No	
---	0.3	Peacock to Lake	Major Arterial	NB SB	asphalt asphalt	1 1	TWLTL	No	No	
26-1	0.2	Lake to Sparta	Major Arterial	NB SB	asphalt asphalt	2 2	TWLTL	some on west side	No	
26-2	0.8	Sparta Rd to W 14th Ave	Major Arterial	NB SB	asphalt asphalt	2 2	TWLTL	Yes some	No	
	1.7	W 14th Ave to W Ave J	Major Arterial	NB SB	asphalt asphalt	1 1	TWLTL	Yes	No	
	0.2	W Ave J to US 190	Major Arterial	NB SB	asphalt asphalt	2 2	Divided	Yes	No	
na	0.0	US 190 to Ave O	Major Arterial	NB SB	asphalt asphalt	0 2	One-Way	Yes	No	

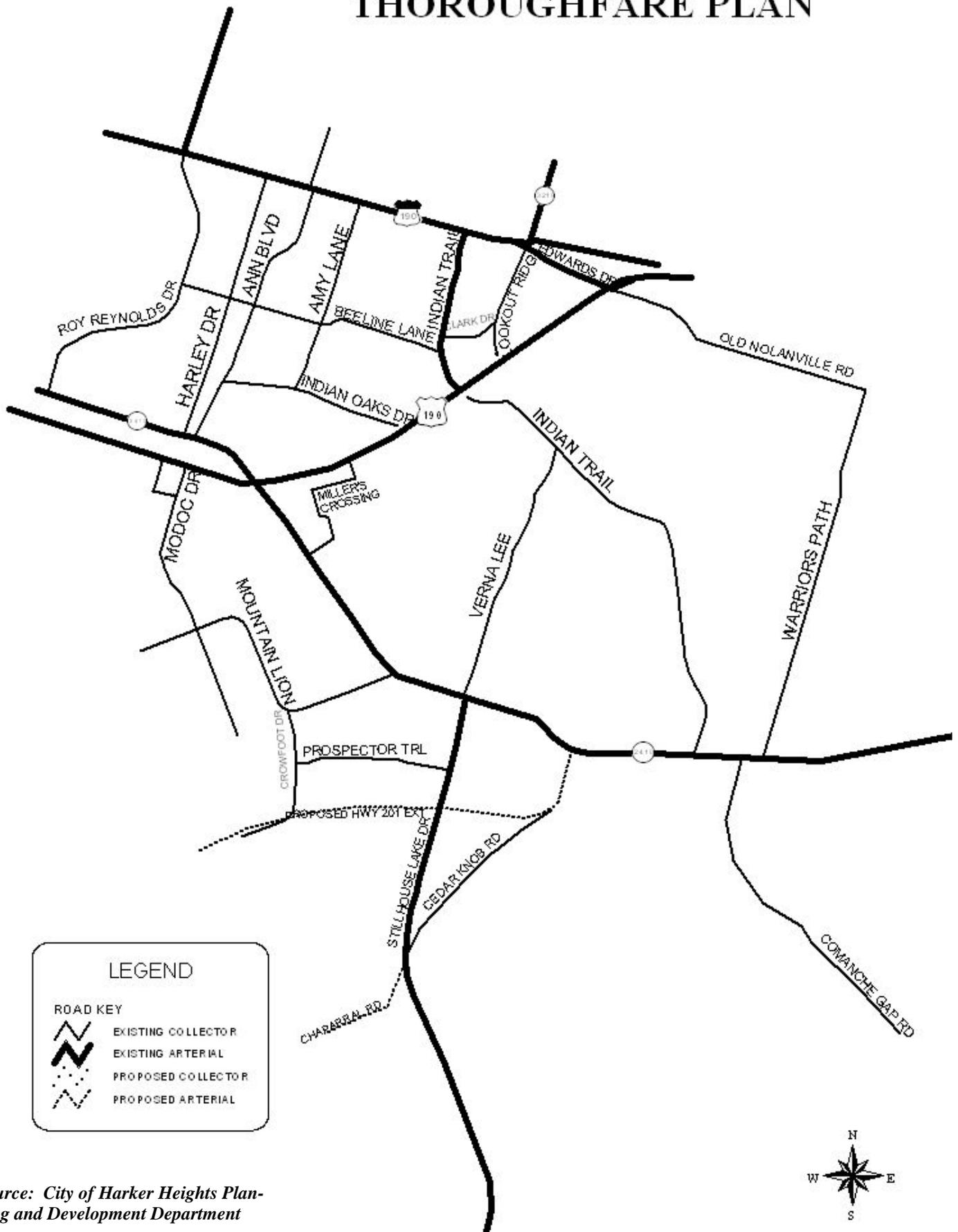
City of Belton Roadway Inventory (2013)

Count ID	Length (mile)	Roadway Name	Current TP Designation	Travel Direction	Pavement Type	# of Lanes	Divided/ Undivided/ TWLTL	Sidewalks?	Bike Lanes?	Notes
27	0.5	190 Ln								
	0.5	US 190 to End of Road	Minor Collector	NB SB	asphalt asphalt	1 1	Undivided	No	No	0.3 asphalt + 0.1 gravel
28	0.8	Old Golf Course Rd								
28-1	0.8	Ave O to Auction Barn Rd	Minor Collector	NB SB	asphalt asphalt	1 1	Undivided	No	No	
29	1.3	Auction Barn Rd								
29-1	1.0	Stillhouse Hollow Dam Rd to Old Golf Course Rd	Minor Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
29-2	0.3	Old Golf Course Rd to Loop 121	Minor Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
30	0.5	Huey Dr								
---	0.5	Loop 121 to End of Road	Major Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
31	1.0	Connell St								
31-1	1.0	US 190 to Loop 121	Minor Collector	NB SB	asphalt asphalt	1 1	Undivided	No	No	
32	0.1	Unnamed Road (2 streets S of Topaz Circle)								
---	0.1		Major Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
33	0.5	Mesquite								
---	0.5		Major Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
34	1.9	Shanklin Rd								
34a-1	1.1	Loop 121 to 90 degree turn	Major Collector	NB SB	asphalt asphalt	1 1	Undivided	No	No	
34b-1	0.8	90 degree turn to IH 35	Minor Arterial	EB WB	asphalt asphalt	1 1	Undivided	No	No	
35a	2.5	Smith Dairy Rd								
	2.5		Local Road	EB WB	asphalt asphalt	1 1	Undivided	No	No	
35b	0.8	Tahuaya Rd								
35b-1	0.8	Smith Dairy Rd to IH 35	Major Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
35c	3.4	Elmer King Rd								
35c-1	0.8	IH 35 to Fox Rd	Major Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
35c-2	1.4	Fox Rd to Elm Grove Rd	Major Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
35d-1	1.3	Elm Grove Rd to Armstrong	Major Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
36	5.3	Amity Rd								
---	1.5	Brewer Ln to FM 1670 (Stillhouse Hollow Lake Rd)	Major Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
36b-1	1.7	FM 1670 (Stillhouse Hollow Lake Rd) to IH 35	Major Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
36c-1	0.9	IH 35 to Fox Rd	Major Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
---	1.2	Fox Rd to Sulphur Wells	Major Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
37	0.4	E 22nd Ave								
37-1	0.4	SH 317 to N East St	Minor Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
38	0.9	E 13th Ave								
38-1	0.1	Main St to Penelope	Major Collector	EB WB	asphalt asphalt	1 1	Undivided	Yes	No	
38-2	0.8	Penelope to Waco Rd	Major Collector	EB WB	asphalt asphalt	1 1	Undivided	No	No	
39	2.8	Waco Dr (FM 817)								
---	0.9	E 6th Ave (FM 93) to Leon River	Major Arterial	EB/NB WB/SB	asphalt asphalt	1 1	Undivided	No	No	
---	1.9	Leon River to Parkside Dr	Major Arterial	EB/NB WB/SB	asphalt asphalt	1 1	Undivided	on bridge	No	
40	0.5	Central Ave (Spur 253)								
40-1	0.5	IH 35 to Birdwell	Minor Arterial	EB WB	asphalt asphalt	1 1	Undivided	Yes	No	
41	1.5	Penelope St								
41-1	0.5	E 13th St to E 6th Ave	Minor Collector	NB SB	asphalt asphalt	1 1	Undivided	Yes	No	
41-2	0.3	E 6th Ave to @ 2nd Ave	Minor Collector	NB SB	asphalt asphalt	1 1	Undivided	Yes	No	
41-3	0.7	Ave C to IH 35	Minor Collector	NB SB	asphalt asphalt	1 1	Undivided	Yes	No	
42	4.3	Holland Rd (FM 436)								
---	0.1	IH 35 to Wall St	Major Arterial	EB WB	asphalt asphalt	2 2	Divided	Yes	No	
---	0.9	Wall St to Matilda	Major Arterial	EB WB	asphalt asphalt	2 2	Undivided	Yes (incomplete)	No	
---	1.2	Mathilda to FM 1123	Major Arterial	EB WB	asphalt asphalt	1 1	Undivided	No	No	
---	2.1	FM 1123 to Oliver Rd/Curry Loop	Major Arterial	EB WB	asphalt asphalt	1 1	Undivided	No	No	

City of Belton Roadway Inventory (2013)

Count ID	Length (mile)	Roadway Name	Current TP Designation	Travel Direction	Pavement Type	# of Lanes	Divided/ Undivided/ TWLTL	Sidewalks?	Bike Lanes?	Notes
43		- omitted -								
44		- omitted -								
45	4.0	Elm Grove Rd								
45-1	0.1	Holland Rd (FM 436) to Luker Rd	Minor Arterial	NB SB	asphalt	1 1	Undivided	No	No	
45-2	3.9	Luker Rd to Elmer King Rd	Minor Arterial	NB SB	asphalt	1 1	Undivided	No	No	
46	3.7	FM 1123								
---	1.5	Holland Rd (FM 436) to Sand and Gravel Lane	Minor Arterial	NB SB	asphalt asphalt	1 1	Undivided	No	No	
46-1	0.9	Sand and Gravel Lane to Armstrong Rd	Minor Arterial	EB/SB WB/NB	asphalt asphalt	1 1	Undivided	No	No	
---	1.3		Minor Arterial	EB/SB WB/NB	asphalt asphalt	1 1	Undivided	No	No	
47	2.6	Armstrong Rd								
47b-1	1.2	FM 1123 to Elmer King Rd	Minor Arterial	NB SB	asphalt	1	Undivided	No	No	
---	1.4	Elmer King Rd to Sulphur Wells Rd	Minor Arterial	NB SB	asphalt	1	Undivided	No	No	

THOROUGHFARE PLAN





City of Killeen

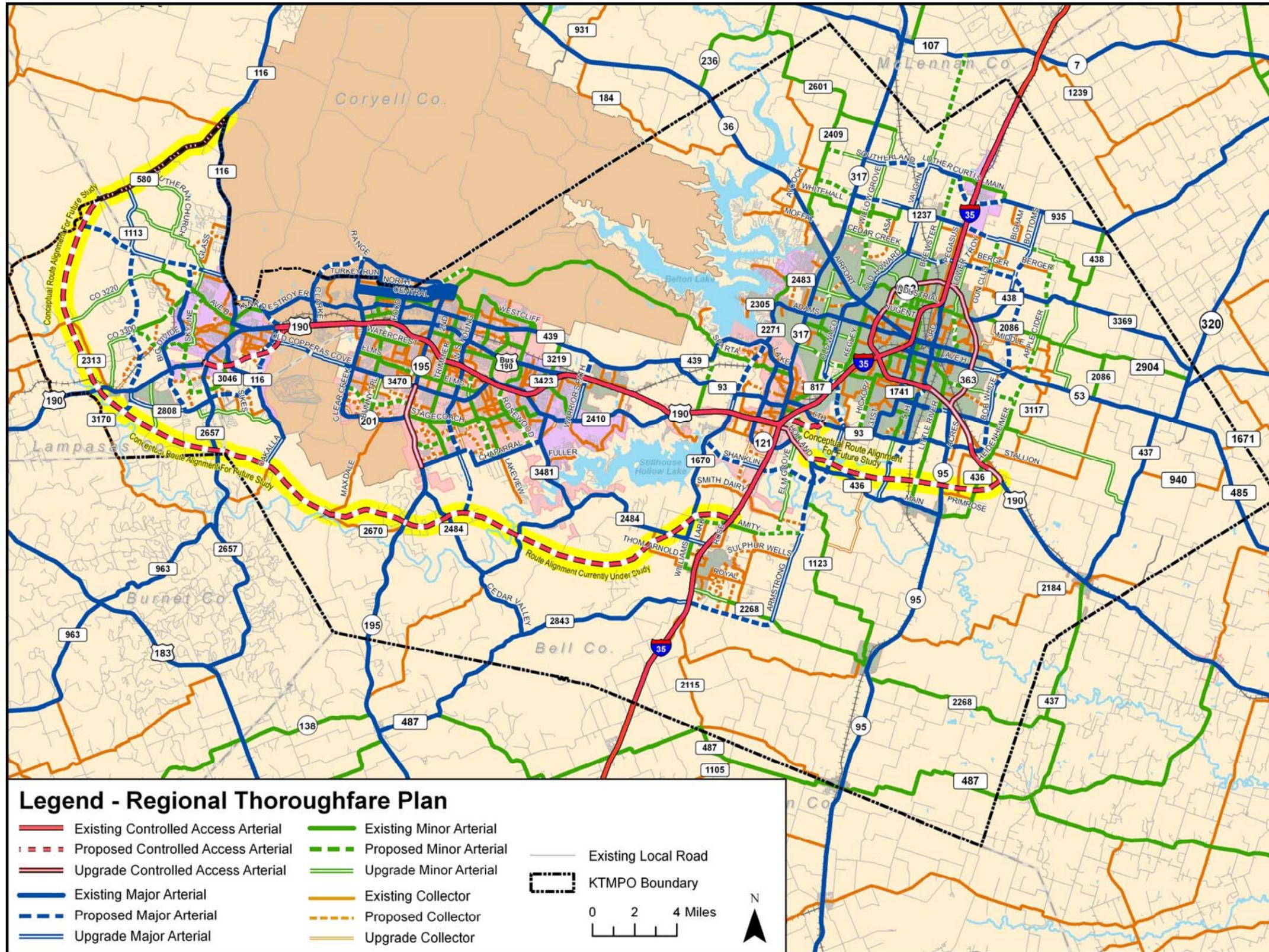
Planning & Development
Services

Thoroughfare Plan

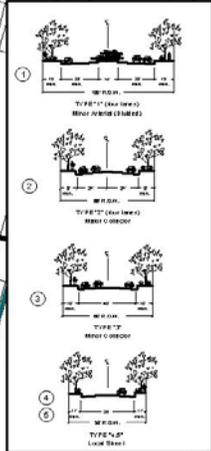
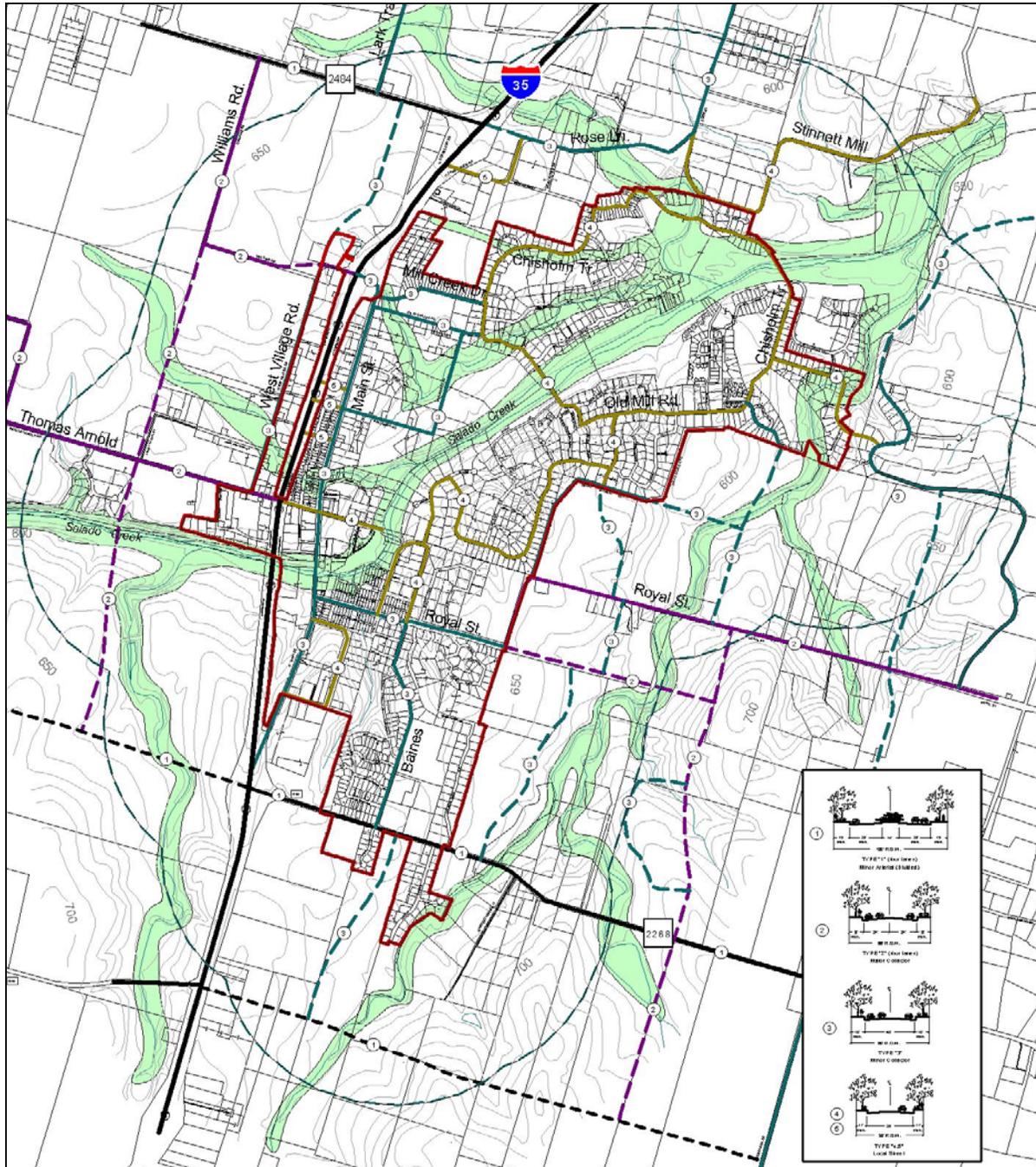
LEGEND		
PROPOSED	EXISTING	CLASSIFICATION
(110' R.O.W.)	Orange solid line	PRINCIPAL ARTERIAL
(90' R.O.W.)	Green solid line	MINOR ARTERIAL
(70' R.O.W.)	Blue solid line	COLLECTOR
(65' R.O.W.)	Magenta dashed line	MARGINAL ACCESS
(50' R.O.W.)	Black solid line	LOCAL STREET

Last Revised June 22, 2010

Exhibit 13: KTMO Future Regional Thoroughfare Plan Map



Source: Wilbur Smith Associates, 2011.



Legend

- Interstate 35
- Type 1 - Minor Arterial (divided)
- Type 1 - Proposed
- Type 2 - Major Collector (undivided)
- Type 2 - Proposed
- Type 3 - Minor Collector
- Type 3 - Proposed
- Type 4 & 5 - Local Street
- Type 4 & 5 - Proposed
- Floodplain
- Village Limits
- ETJ

Transportation Plan

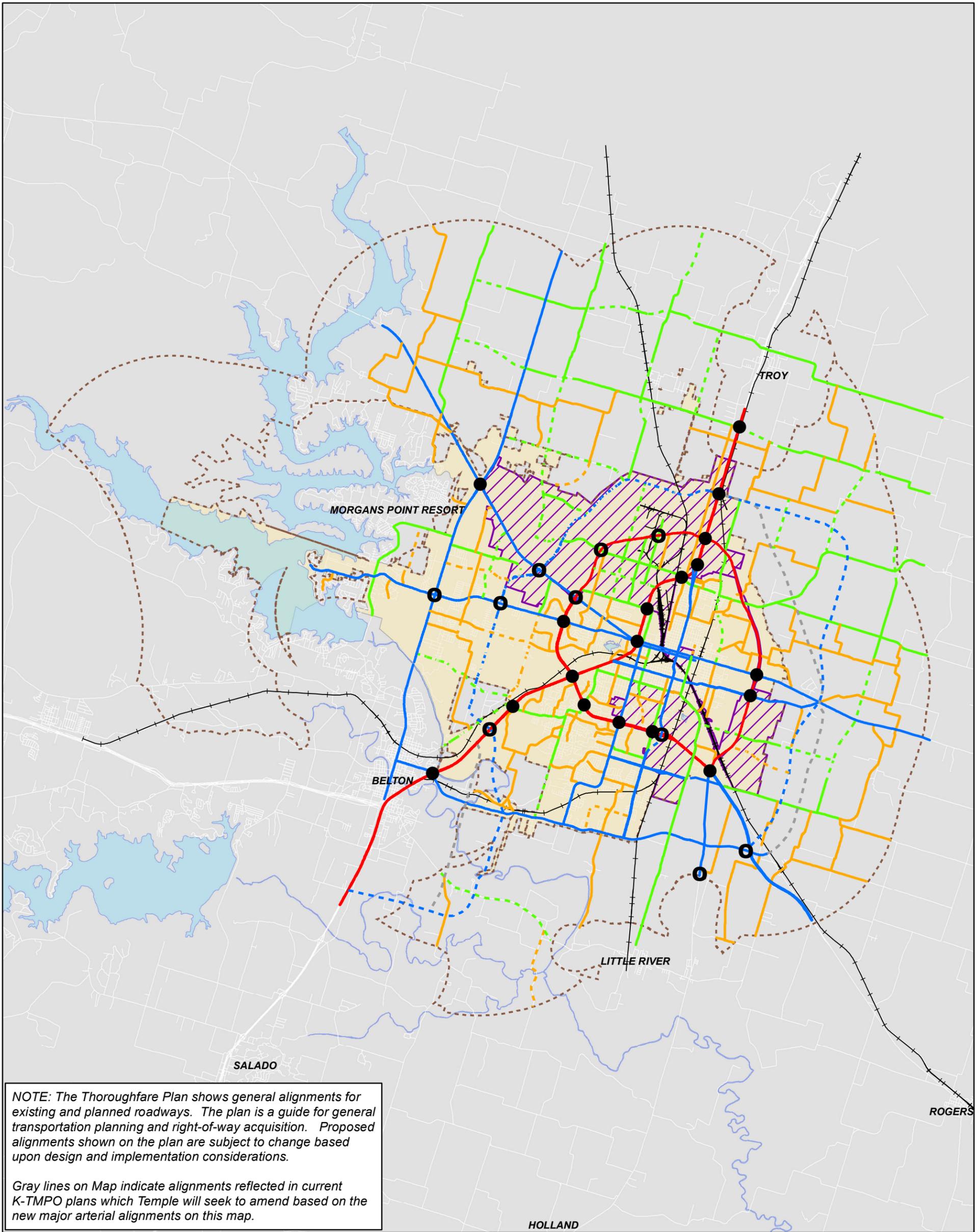
VILLAGE OF SALADO

Plate 4-1

2000 0 2000 4000 6000 Feet

Dunkin, Sefko & Associates, Inc.
February 2004





THOROUGHFARE PLAN

ADOPTED: October 18, 2012

- | | |
|-------------------------|-------------------------------------|
| Expressway | Existing Railroad |
| Major Arterial | Grade Separated Interchange |
| Proposed Major Arterial | Existing |
| Proposed K-TMPO | Future |
| Minor Arterial | Water Body |
| Proposed Minor Arterial | Extraterritorial Jurisdiction (ETJ) |
| Collector | Reinvestment Zone |
| Proposed Collector | City Limits |

5.2

FIGURE

10.25.12