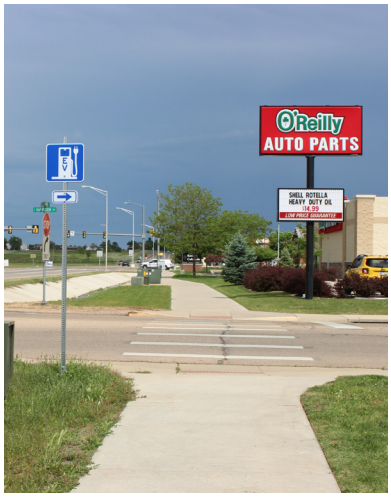

FORT LUPTON TRANSPORTATION PLAN

June 2018

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INTRODUCTION

PLAN OVERVIEW AND USE OF PLAN

The City of Fort Lupton was incorporated in 1890 and was originally established as a fur trading post. Historically, Fort Lupton has been a farming community and agriculture continues to be a basic industry of the area along with the gas and oil industries.

The City of Fort Lupton, located in southern Weld County, as shown in Figure 1, has experienced varying growth periods over the past 100 years, and is currently experiencing significant growth similar to many of the Front Range communities. In 2018 an updated Land Use Plan was completed for the City which included long-range planning goals and a long-term land use plan for the Fort Lupton Urban Growth Planning Area.

The implementation of a land use plan naturally lends itself to the development of a transportation plan. Expansion and improvement of the existing transportation system needs to be planned for and implemented in a response to the planned growth.

RELATIONSHIP TO OTHER PLANS AND STUDIES

This 2018 Fort Lupton Transportation Plan was prepared in response to the recent development of the City's *2018 Comprehensive Plan* and includes references to other plans and planning efforts. The two plans are consistent, although the Transportation Plan provides additional details specific to the transportation system.

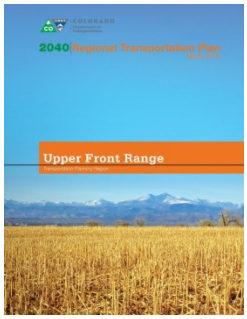
In addition to the Comprehensive Plan, there are a number of recent and/or ongoing studies that deserve mention in relation to the Transportation Plan:

- Upper Front Range TPR's 2040 Regional Transportation Plan
- US 85 Planning and Environmental Linkages (PEL) Study
- Weld County 2035 Transportation Plan

Roadways and other transportation infrastructure in and around Fort Lupton are funded, constructed, and maintained by several different transportation agencies, such as the Colorado Department of Transportation (CDOT), Upper Front Range, Weld County, and surrounding cities and towns. As such, the Fort Lupton transportation system is affected by the plans of these outside agencies, which should be monitored on a continuing basis.

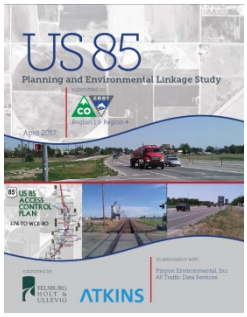
The Fort Lupton Transportation Plan identifies specific transportation infrastructure improvements through the year 2040. It is updated periodically to reflect changes to growth assumptions, plans of other agencies, and for other reasons. The Plan provides a guideline for transportation improvements within Fort Lupton as development occurs. As such, it provides valuable information to support the City's development process.

UPPER FRONT RANGE TPR'S 2040 REGIONAL TRANSPORTATION PLAN (2015)



The purpose of the Upper Front Range (UFR) Transportation Planning Region (TPR's) Regional Transportation Plan (RTP) is to provide guidance and direction for decision-making related to maintenance and improvement of the state highway system that contributes to the economic vitality and quality of life in the TPR. It allows people of the Upper Front Range to communicate their needs and desires for transportation, and in response, to understand what they can expect from CDOT for funding and completing projects. UFR projects that benefit Fort Lupton are identified later in the Project Prioritization section.

US 85 PLANNING AND ENVIRONMENTAL LINKAGES STUDY (2017)

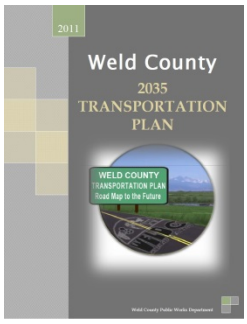


In 2017, CDOT conducted a Planning and Environmental Linkages (PEL) study for the segment of US 85 between Interstate 76 (I-76) and Weld County Road (WCR) 100. The objective of the *US 85 PEL Study* is to develop a strategic vision for the US 85 corridor that addresses safety, mobility, and access concerns. The *US 85 PEL Study* included the following goals:

- Identify the transportation needs along US 85 from I-76 to WCR 100
- Create a vision for development improvements that addresses the needs
- Determine the short-term and long-term transportation priorities for US 85
- Position the corridor for successful and streamlined implementation of improvements

Short-term and long-term improvements were identified and prioritized through a collaborative process with stakeholders and the public along the corridor. *US 85 PEL Study* projects that will benefit Fort Lupton are identified later in the Project Prioritization section. The *US 85 Access Control Plan* (ACP), dated 1999, served as the foundation for the *US 85 PEL Study*.

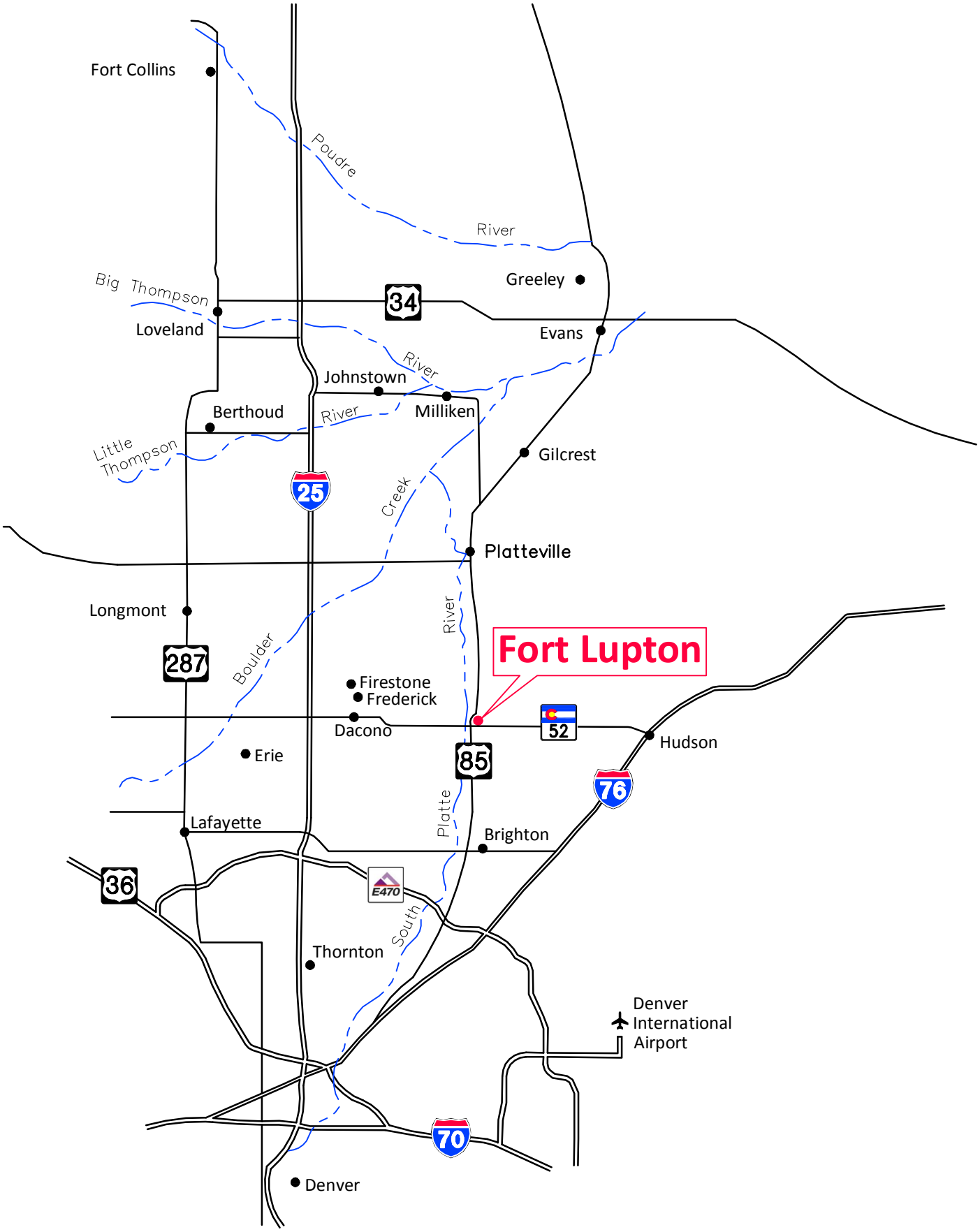
WELD COUNTY 2035 TRANSPORTATION PLAN (2011)



The Weld County Transportation Plan serves an integral part in the decision-making process for Weld County staff and elected officials. The primary purpose of this document is to provide technical information that can be used as a basis for formulating transportation related policies.

To ensure the sustainability of Weld County's quality of life, this plan considers preserving the rural character, while providing strategies that sustain urban development. With Weld County's diversity, addressing priorities, such as safety and mobility, will rely on creating a balanced, well-maintained transportation system. Weld County projects that benefit Fort Lupton are identified later in the Project Prioritization section.

Figure 1: Vicinity Map



TRANSPORTATION GOALS AND OBJECTIVES

The City is committed to implementing a comprehensive transportation system plan in conjunction with continued development and redevelopment. This requires that a series of incremental steps be taken to logically integrate all elements of a transportation system. In this context, the City of Fort Lupton recognizes the need to address all five of the following transportation system elements.

ROADWAY NETWORK ELEMENT

This element of the transportation system documents the hierarchy of roadways needed to serve vehicular travel demand forecasts expected to be generated by the land use plan within the City's *2018 Comprehensive Plan*. This transportation plan specifically addresses this element.

REGIONAL TRANSIT SERVICES

This element involves ongoing coordination with public transit providers as well as special services transit for the transportation disadvantaged. The City intends to pursue these opportunities in an ongoing basis.

PEDESTRIAN FACILITIES

This element includes providing both dedicated pedestrian facilities as well as joint use facilities such as sidewalks within street rights-of-way (ROW). The City intends to pursue the development of an integrated sidewalk and pedestrian path network as new development occurs and as a part of redevelopment projects.

BICYCLE FACILITIES

Similar to the pedestrian element, the bicycle element is intended to become an integral component of new development projects and redevelopment. Both the bicycle and pedestrian elements of the transportation system plan will have to be coordinated with the roadway element to ensure safe crossings through signing, speed control, and appropriate traffic control devices.

RECREATION TRAILS

The City also recognizes that other trail systems will develop over time including a recreational trail system involving a variety of travel modes including pedestrian, bicycle or equestrian.

EXISTING CONDITIONS

The roadway network forms the backbone of the transportation system in Fort Lupton. Roads provide automobile mobility and access to land developments throughout the City. In addition to personal motor vehicles, roadways provide multi-modal mobility for transit buses, bicycles, and pedestrians. As such, the City's roadway system must be continually maintained and improved to keep pace with development.

The identification of the roadway element of the Fort Lupton Transportation Plan started with the street network from the previous *2000 Fort Lupton Transportation Plan*, prepared by Felsburg, Holt and Ullevig. Additions and modifications were made during the development of the *2007 Comprehensive Plan* based on studies of specific future land developments and analysis of the relationship between the new land uses and the transportation system.

EXISTING ROADWAY NETWORK

The 2007 Roadway Classifications Map shows that the City of Fort Lupton has a comprehensive transportation network with good access to all parts of the community. There are also several opportunities for improved connectivity, and potential projects were identified mostly located along existing alignments between arterial and collector roads.

The City of Fort Lupton's roadway network is the primary transportation infrastructure carrying travelers to and throughout the community, and several key corridors are essential to the daily function of the City. First Street is a key east-west arterial roadway for the City and larger region. First Street is designated State Highway 52 (SH 52) and provides access to Interstate 25 and other adjacent cities such as Frederick and Dacono to the west and Hudson and Interstate 76 to the east.

US Highway 85 (US 85) is the regional north/south expressway through the region and a key in the connection and travel from Brighton and other parts of Metro Denver to the south and Platteville and Greeley to the north.

Denver Avenue is a key north-south arterial roadway and is designated US Highway 85 Business. US 85 Business is a highway route that branches from US 85 at SH 52, passes through downtown Fort Lupton, and rejoins US 85 on the north side of the City.

Other important north-south routes include Fulton Avenue, McKinley Avenue, Park Avenue, Main Street, Rollie Avenue, Lancaster Avenue, County Road (CR) 31, and CR 29. Other important east-west routes include CR 8, Kahil Street (CR 12), 4th Street, 9th Street (CR 14), 14th Street (CR 14.5), and CR 16.

The City of Fort Lupton features one diamond interchange on SH 52 at US 85, which plays a vital role to accessing the community.

The existing transportation system is shown in Figure 2. Existing traffic count data is included in **Appendix A**.

JURISDICTION

Certain roadways within Fort Lupton fall under the purview of the City, Weld County, or the Colorado Department of Transportation (CDOT), and infrastructure projects involving these roads require close coordination among agencies. The City's design and management influence on US 85, SH 52 and US 85 Bus is limited by the policies, requirements, regulations, and recommendations established by the State. The City owns and maintains all other roadways within city limits.

CONNECTIVITY

The Roadway Classifications Map from the *2007 Comprehensive Plan* shows that the City of Fort Lupton has a comprehensive transportation network with good access to all parts of the community. There are also several opportunities to improve connectivity, and potential projects are identified mostly located along existing alignments between arterial and collector roads.

US HIGHWAY 85

This CDOT facility is one of the major north-south connections in the North Front Range. US 85 is shown in Figure 3. Over the last decade, traffic along this roadway has significantly increased, and various improvements have been made. In the future, this corridor will continue to be critical to freight movement, commuting and regional transit between Greeley and Denver. This corridor also attracts trips from all areas of Fort Lupton. If not appropriately planned, most regional trips out of Fort Lupton will access the corridor at the SH 52/US 85 interchange. In an effort to control traffic growth at the SH 52/US 85 interchange, additional connections from the arterial street network to US 85 will be necessary. The connections should be consistent with *US 85 PEL Study* and the findings of the *North I-25 Environmental Impact Statement*.

1ST STREET (STATE HIGHWAY 52)

This CDOT facility provides east-west connection between Boulder and Weld County. First Street (SH 52) is shown in Figure 3. In the future, this roadway will play a vital role in accessing employment and housing. The section of SH 52 between Rollie Avenue and US 85 is a slower speed (posted 30 MPH) corridor that has limited opportunities for expansion in the future. Given the context of the land uses, it also presents an opportunity to create a unique downtown street, as identified in the *2018 Comprehensive Plan*. To realize this vision, additional east-west connections are necessary both north and south of SH 52. The connections will provide alternative east-west corridors for vehicle access to US 85, Interstate 76, and Interstate 25. The most likely corridor follows the current CR 6 or CR 8 alignment from Interstate 25 to Interstate 76. CR 8 aligns with the Interstate 25 and Erie Parkway interchange. Another likely corridor follows the current CR 14.5 alignment.

TRUCK ROUTING

Existing truck routes for the City of Fort Lupton include US 85, 1st Street, Denver Avenue, 14th Street (CR 14.5), CR 16, and CR 31. Existing truck routes are shown in Figure 4.

Coordination can take place during the development review process for new uses and on an ongoing basis with existing truck traffic generators.

EXISTING BIKE, PEDESTRIAN, AND TRANSIT NETWORK

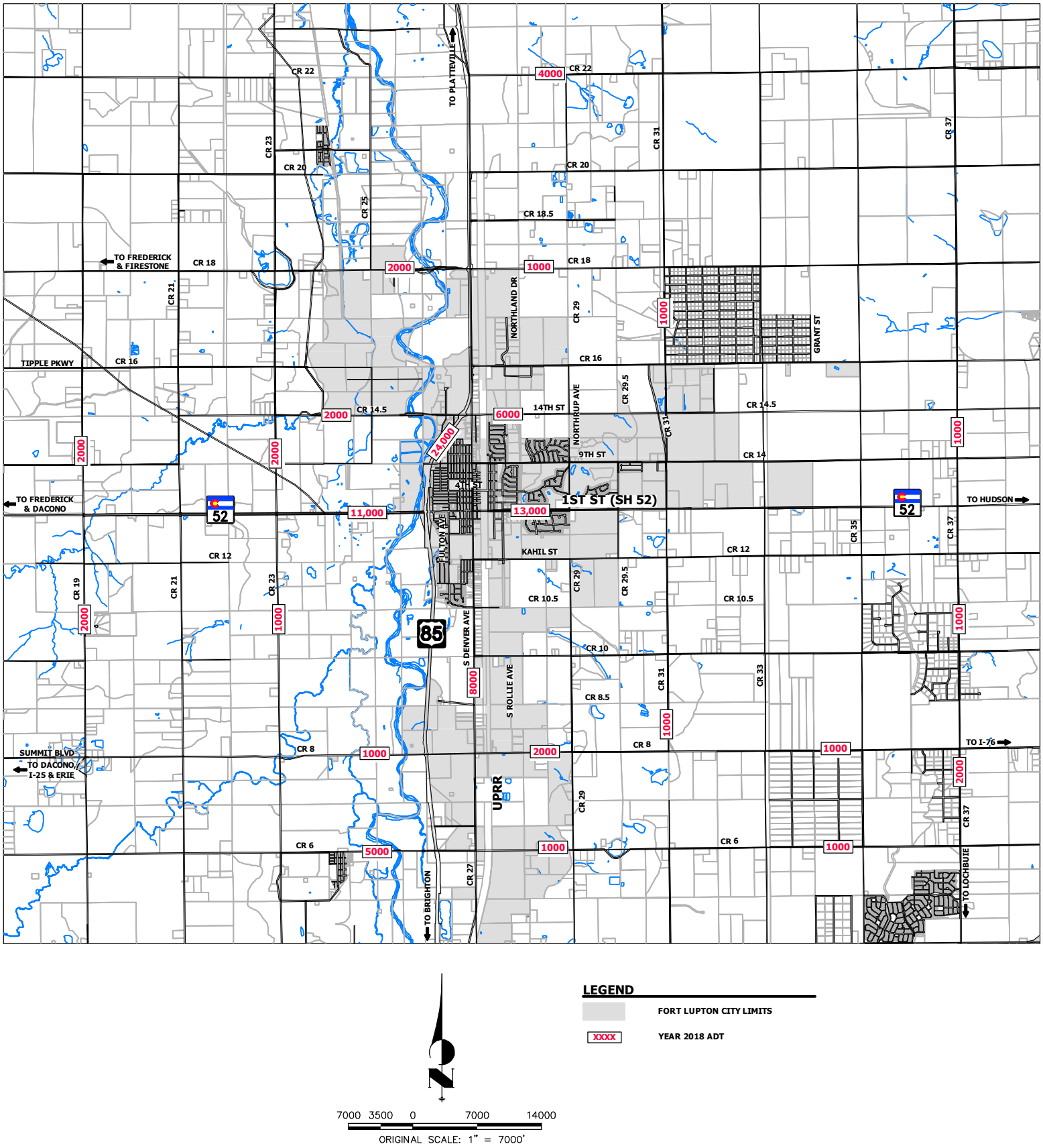
Sidewalks typically reside on public property but are the responsibility of the adjacent landowner. On some neighborhood or local levels, the sidewalk networks can be found to be complete and well connected. As with the variety in age of housing stock and sporadic development, there are portions of Fort Lupton's sidewalk network that are incomplete. Separated by spans of rural roadway sections, the City lacks continuity for a pedestrian to traverse all of its reaches.

There are portions of Fort Lupton's sidewalks that do not meet Americans with Disabilities Act (ADA) standards in terms of cross slope and longitudinal grade. An example of a steep cross slope is located at the intersection of Denver Avenue and 9th Street, which is shown in the picture below. In this example, the sidewalk cross slope is in excess of 2% at the driveway crossing.

The City encompasses many areas that are now very rural in character. Current zoning also designates large areas of very low density single family residential use. The land use goals are to preserve much of the rural character of these areas and, thus, rural street standards have been established. These rural street standards do not include sidewalks.

The City also currently lacks on-street bike lanes and transit services.

Figure 2: Existing Transportation System



LEGEND

FORT LUPTON CITY LIMITS

XXXX YEAR 2018 ADT

Figure 3: CDOT Jurisdiction

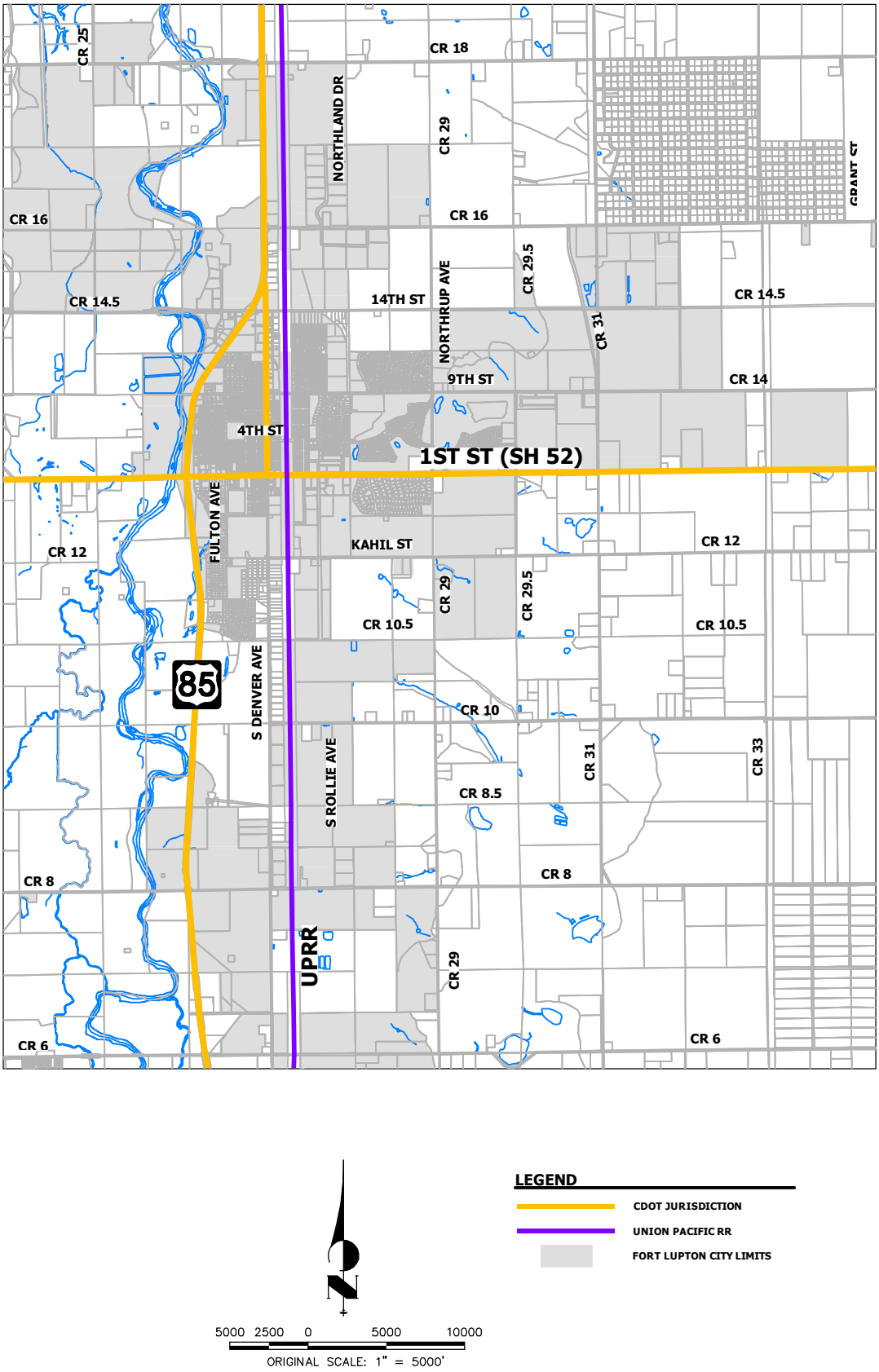
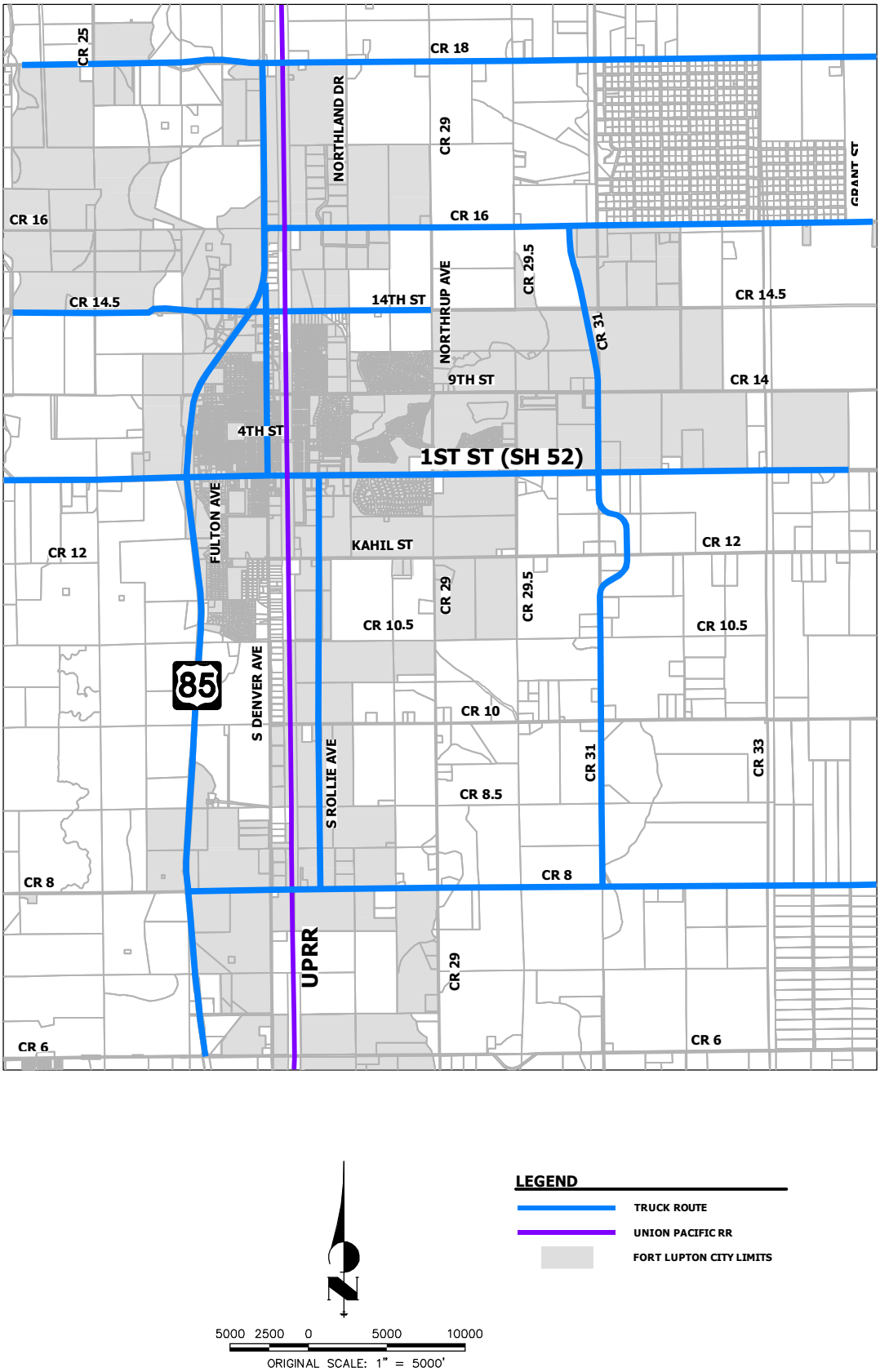


Figure 4: Truck Routing



FORECASTED GROWTH

The land use plan from the Comprehensive Plan, shown on Figure 5, is used for developing the year 2040 transportation network. The general growth boundaries were established as CR 22 to the north, CR 35 to the east, CR 6 to the south, and CR 23 to the west. There are some exceptions to these boundaries, such as existing development outside of these boundaries and some other known future development. It is expected that the population of Fort Lupton will be approximately 16,000 by the year 2040. Such growth would result in a doubling of the population over the next 20 years, an average growth rate of 3 percent per year in population.

TRIP GENERATION, DISTRIBUTION AND ASSIGNMENT

The Institute of Transportation Engineers (ITE) documents trip generation rates for a variety of land uses in their publication Trip Generation, 10th Edition, dated 2017. These documented trip rates were used to determine trip generation for the study area. The trip generation table is included in **Appendix B** for reference. By the year 2040, an estimated 105,000 trips per day are expected to be generated within Fort Lupton.

Trip distribution patterns were estimated based on existing travel patterns and existing and projected developments in and around Fort Lupton. Primary travel patterns include east-west travel through Fort Lupton to Interstate 25, south on US 85 to the Denver metropolitan area and north on US 85 to the Greeley area. The projected trips were assigned to the roadway network within the study area based on these distribution patterns.

PROJECTED TRAFFIC VOLUMES

In addition to traffic volumes expected to be generated by development in Fort Lupton, there will be vehicles that travel through the study area, but do not have an origin or destination within the study area. These traffic volumes are referred to as pass-through trips.

The existing traffic volumes, traffic volumes projected to be generated by expected development, and pass-through traffic volumes are summed to create the forecasted traffic volumes, and are shown in Figure 6. The forecasted traffic volumes are referred to as the “Year 2040 Traffic Volumes.”

Figure 5: Land Use Plan

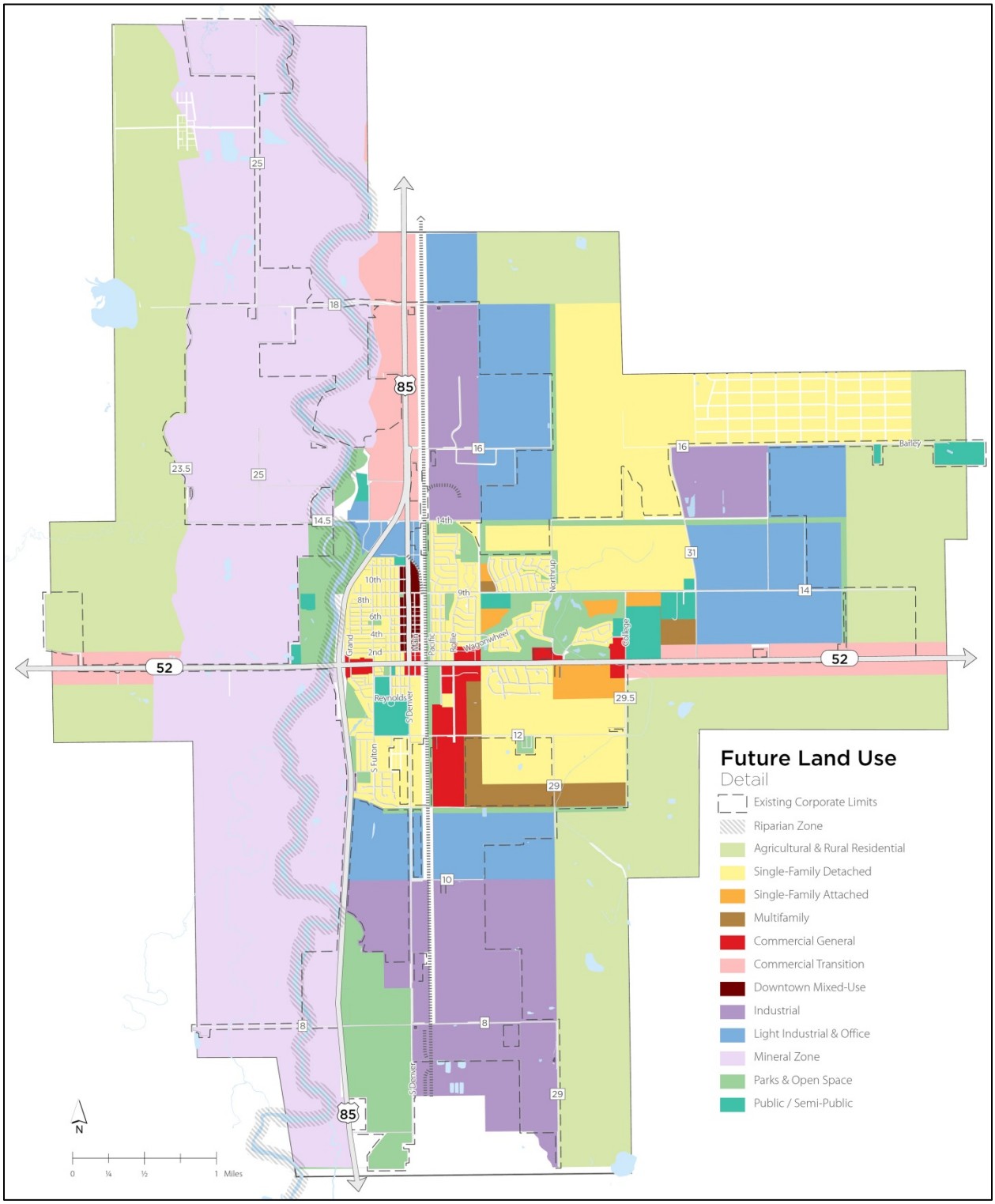
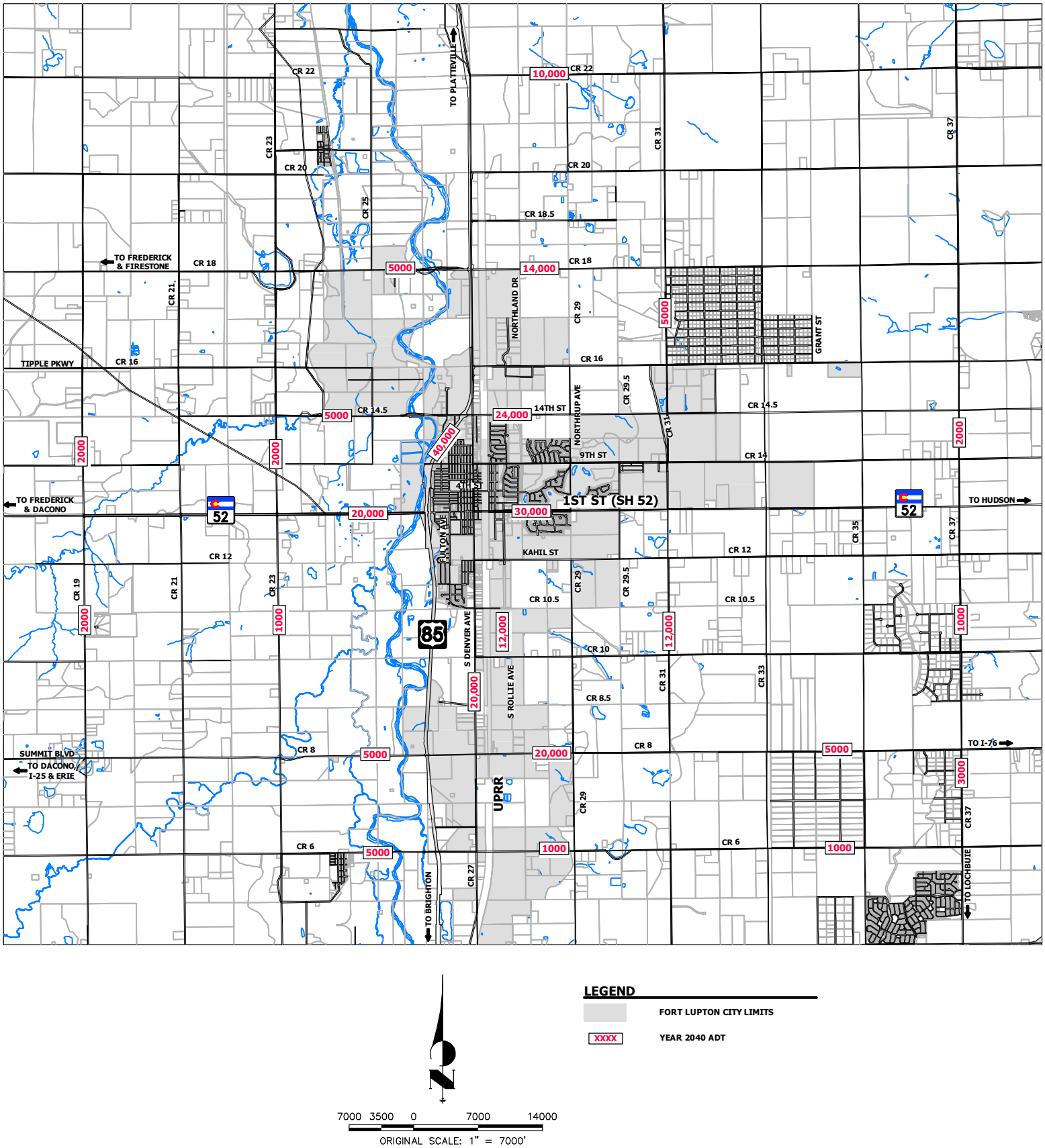


Figure 6: Year 2040 Traffic Volumes



LEGEND

FORT LUPTON CITY LIMITS

XXXX YEAR 2040 ADT

7000 3500 0 7000 14000

ORIGINAL SCALE: 1" = 7000'

OPERATIONAL ANALYSES

ROADWAY LEVEL OF SERVICE

Level of Service (LOS) is a measure of congestion delay. It can be thought of as a grading scale, where LOS A is excellent and implies high levels of mobility and ease of maneuverability. LOS F represents failure and indicates that the road is experiencing heavy traffic volumes, significant congestion, and stop-and-go conditions throughout many times of the day. LOS A through LOS D are considered acceptable. LOS is commonly measured for the following types of transportation facilities:

- Roadway segments between intersections
- Signalized intersections
- Stop-controlled intersections
- Roundabouts

LOS for signalized intersections is a common method used to measure the performance of the intersection. The LOS is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometry, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle, typically for a 15-minute analysis period. Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the green ratio, and the volume to capacity (v/c) ratio for the lane group.

Level of service standards are not a guarantee of actual system performance at all locations at all times. They assist in identifying appropriate roadway improvement needs but must be balanced with other considerations such as funding availability, environmental issues, and other constraints. As congestion reaches high levels in a specific corridor or at intersection locations, the LOS standards can be relaxed. Some common performance measures and operating characteristics related to level of service are shown in Table 1 on the next page.

Lane warrants and roadway functional classifications for the ultimate roadway network plan are determined based on traffic volume forecasts and level-of-service capacity thresholds. The Year 2018 LOS (existing conditions) is shown in Figure 7. As shown in Figure 7, US 85, Denver Avenue and 1st Street are generally operating at LOS A to C (uncongested) in the existing conditions; except for 1st Street (between US 85 and Denver), which is operating at LOS D (congesting).

The Year 2040 LOS is shown in Figure 8. As shown in Figure 8, sections of US 85, Denver Avenue and 1st Street are expected to degrade to LOS E or F (congested).

Table 1: Level of Service Characteristics

	Level of Service					
	A	**B**	**C**	**D**	**E**	**F**
Driver Comfort	High	High	Some Tension	Growing Tension	Uncomfortable	Distressed
Average Travel Speed	Speed Limit	Close to Speed Limit	Close to Speed Limit	Some Slowing	Significantly Slower than Speed Limit	Significantly Slower than Speed Limit
Maneuverability	Almost Completely Unimpeded	Only Slightly Restricted	Somewhat Restricted	Noticeably Limited	Extremely Unstable	Almost None
Intersection Delay (Control Delay per Vehicle, sec)	<10	>10 and <20	>20 and <35	>35 and <55	>55 and <80	>80
Arterial Volume/ Capacity Ratio	<0.6	0.6-0.7	0.7-0.8	0.8-0.9	0.9-1.0	>1.0

Figure 7: Year 2018 Roadway Level of Service

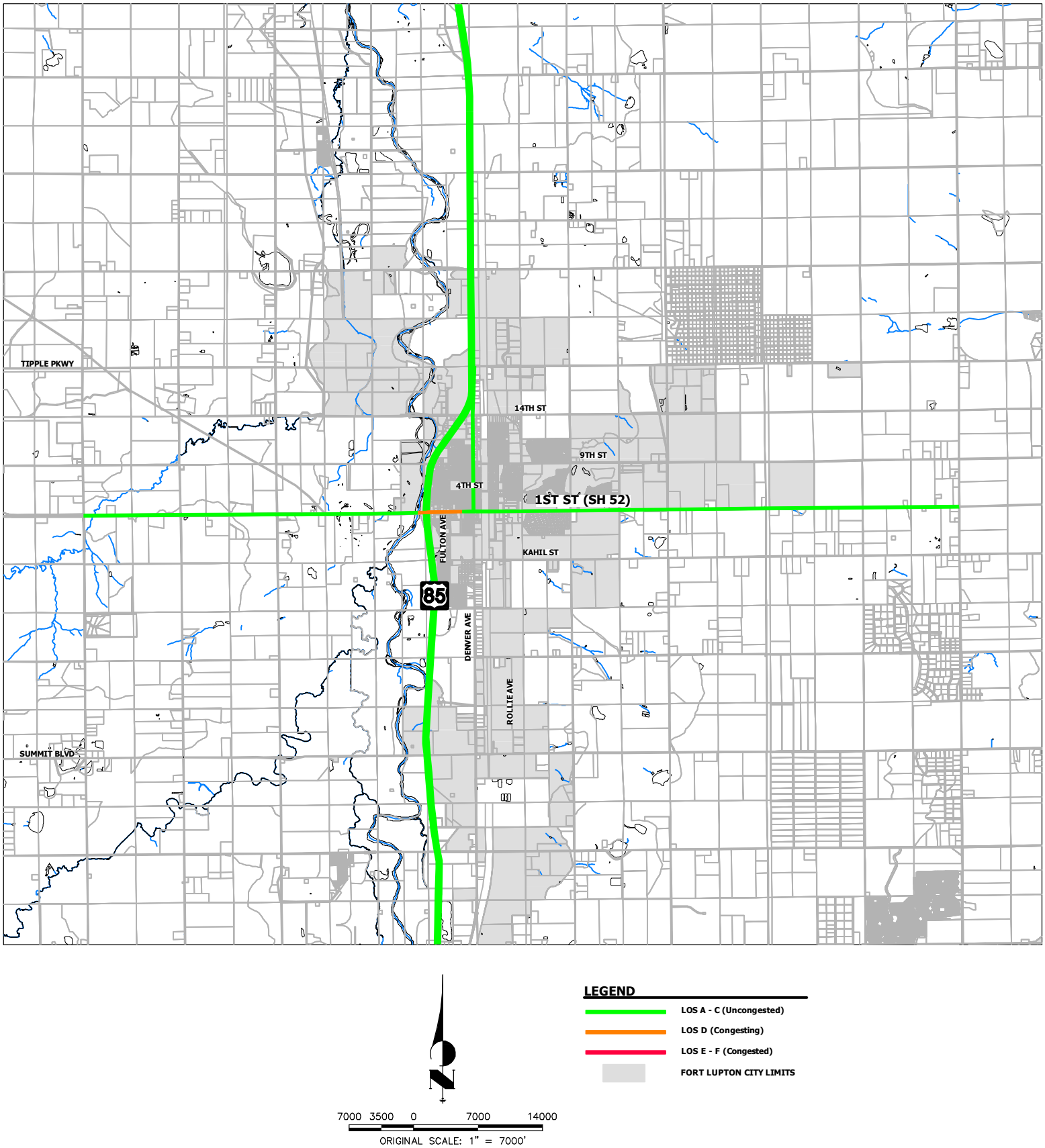
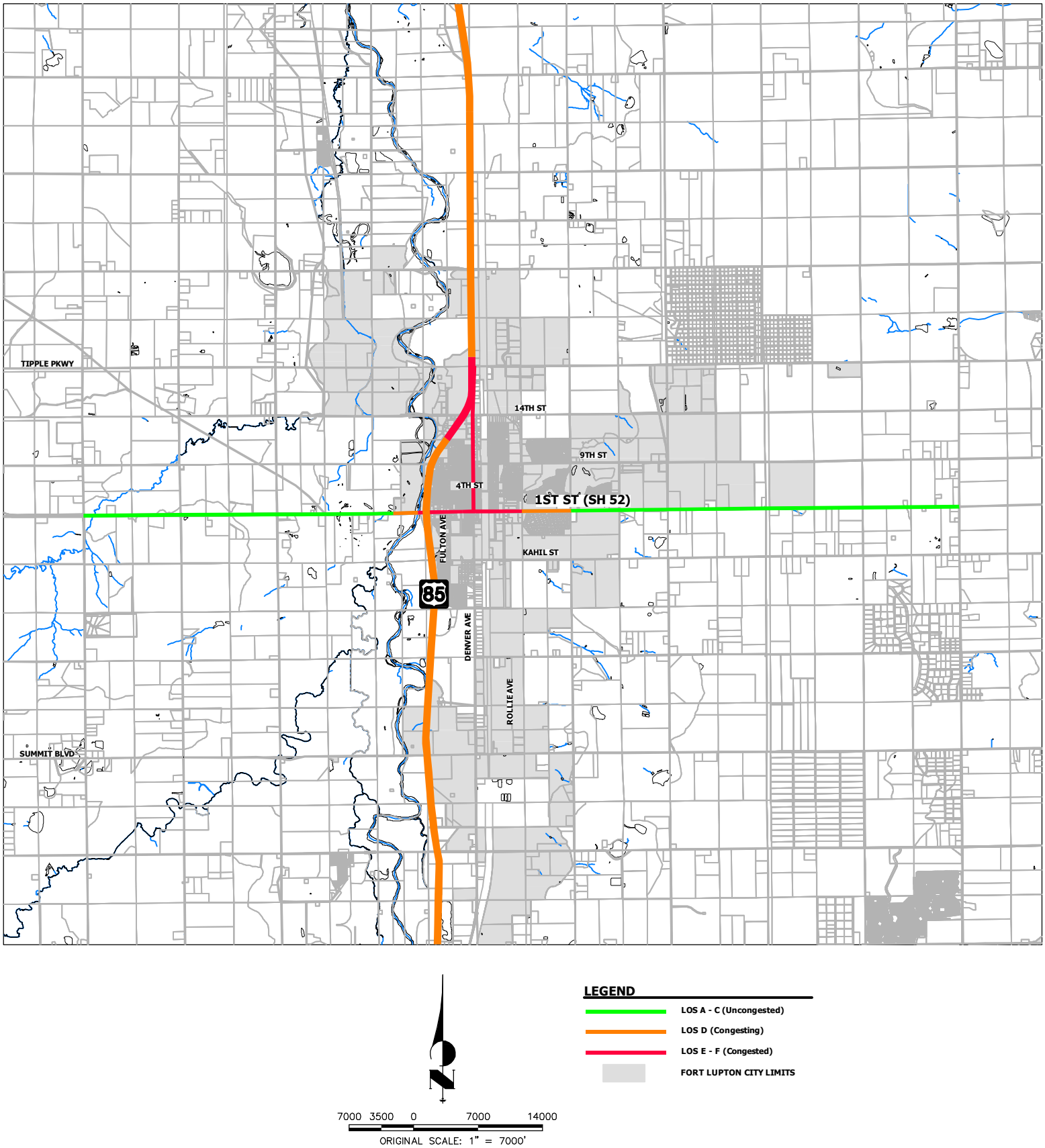


Figure 8: Year 2040 Roadway Level of Service (No Action)



ULTIMATE ROADWAY NETWORK

The ultimate roadway network analysis for the 2018 Transportation Plan started with the roadway network that resulted from the development of the *2000 Transportation Plan*. Based on the previous work of the *2007 Comprehensive Plan* and the needs assessment for the 2018 land use plan, an ultimate roadway system plan is developed for the Fort Lupton planning area as shown in Figure 9. This network represents the system of streets and highways anticipated to be in place at full build-out and are consistent with established land uses and growth expectations. The network also represents the ultimate cross-section and functional classification for right-of-way dedication and acquisition activities.

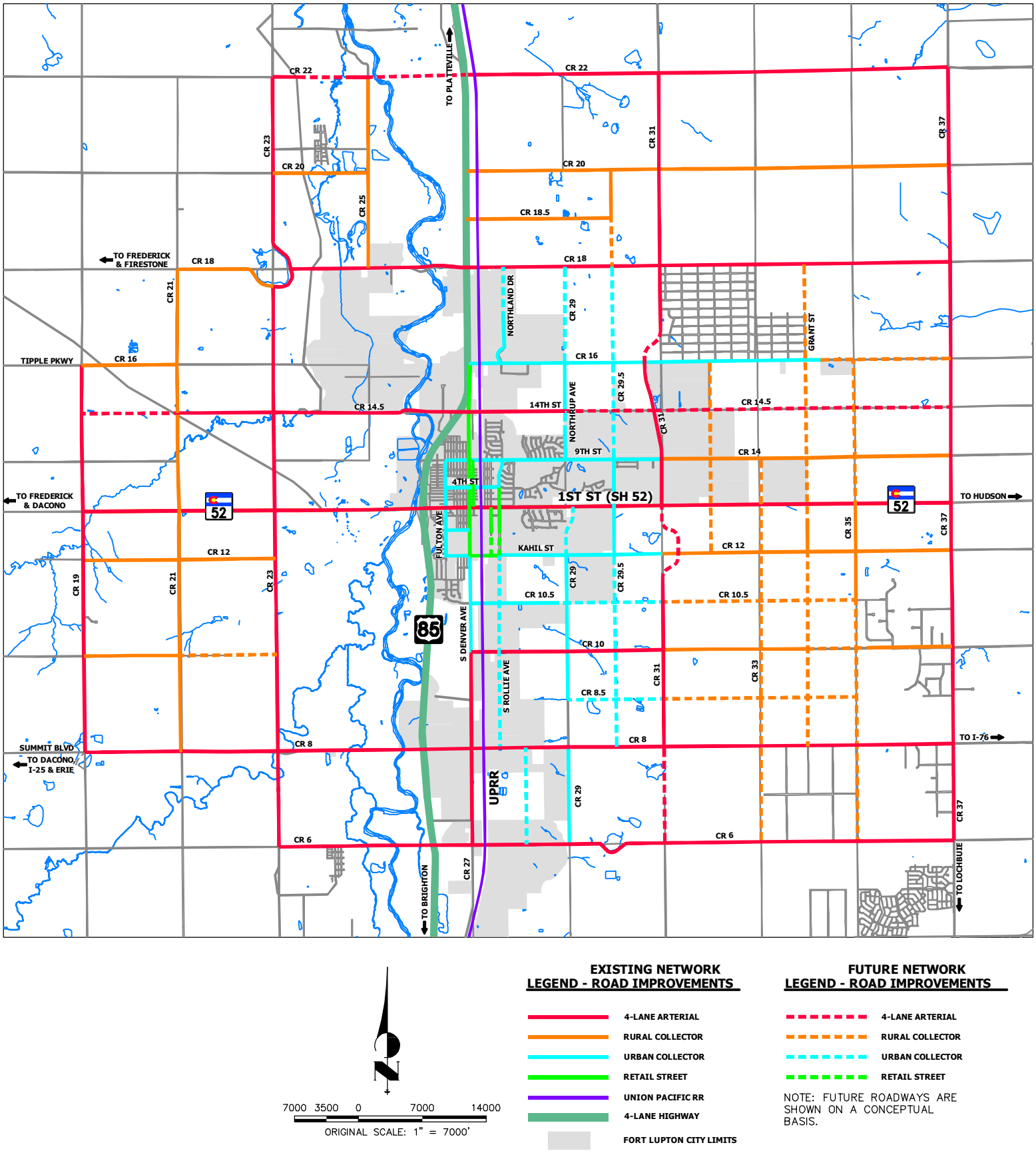
All streets within the City of Fort Lupton are classified according to a hierarchical system that is based on elements such as the number of travel lanes, traffic volumes, level of access, and mobility. Per the *2007 Comprehensive Plan*, the City has roadways separated into the following functional classifications: Local Street, Retail Street, Minor Collector, Major Collector, and Arterial. These classifications relate to the function of these streets. Lower order streets function primarily as access to individual lots, and higher order streets function primarily for the purpose of mobility (expeditious movement of people and goods). The City of Fort Lupton includes both urban and rural areas and, thus, minimum street standards are defined that are appropriate for each area type.

The primary function of a roadway is to provide either a high level of mobility (where higher speeds occur and direct land access is restricted) or to provide a high level of accessibility (where speeds are lower and direct land access is emphasized). In addition, there are intermediate roadway facilities whose function is to provide a transition between mobility and accessibility.

It should be noted that the primary determinants of functional classification are length of trip, average travel speed, frequency of access points, and continuity. Traffic volumes while often higher on mobility facilities, do not, by themselves, determine roadway function. It is possible, and frequently the case, that accessibility roadways carry relatively high traffic volumes (e.g. access to major office parks, regional shopping centers, etc.) and require multiple traffic lanes to accommodate the travel demand. As well, a mobility facility serving relatively long trips at higher speeds between low density land uses, may require only two traffic lanes to accommodate the demand.

Figure 9 identifies the proposed functional classification for the roadways within Fort Lupton. Figure 13 to Figure 18, later in this plan, identify the ultimate mid-block cross-sections and number of travel lanes for each roadway functional classification. However, there are three issue areas where the ideal roadway width would be difficult to attain because of existing development.

Figure 9: Ultimate Roadway Network



7000 3500 0 7000 14000

ORIGINAL SCALE: 1" = 7000'

EXISTING NETWORK LEGEND - ROAD IMPROVEMENTS

- 4-LANE ARTERIAL
- RURAL COLLECTOR
- URBAN COLLECTOR
- RETAIL STREET
- UNION PACIFIC RR
- 4-LANE HIGHWAY
- FORT LUPTON CITY LIMITS

FUTURE NETWORK LEGEND - ROAD IMPROVEMENTS

- 4-LANE ARTERIAL
- RURAL COLLECTOR
- URBAN COLLECTOR
- RETAIL STREET

NOTE: FUTURE ROADWAYS ARE SHOWN ON A CONCEPTUAL BASIS.

It is recommended that primary development access be provided onto collector roadways, not arterials whenever possible. Access to arterials should be primarily from collectors, to restrict excessive accessibility while enhancing the mobility function on these roadway types.

As previously discussed, Figure 9 illustrates potential roadway cross-sections for the recommended roadways shown on the plan. Some of the roadways may not need to be built to the ultimate cross-section until further development of Fort Lupton occurs. Additionally, the recommended right-of-way (ROW) may be more than is necessary even by the year 2040. However, it is essential to establish, and preserve, the ultimate ROW at the onset of development, to ensure that buildings are not built within the ultimate cross-section envelope.

As development plans are submitted to the City, this transportation plan should be referenced to determine how the development plans fit the long-range goals of the City improvements to be required as a part of the development should be identified.

Ultimate road network exhibits, sized 36" x 48", are included in **Appendix E**.

ISSUE AREAS

There are three roadway segments in Fort Lupton where expanded roadway cross-sections are needed to serve the travel demand forecasts, but existing physical and social constraints prohibit such expansion. These three segments are:

- SH 52 from US 85 to the UPRR tracks
- Denver Avenue from Kahil Street south toward CR 10
- Denver Avenue through downtown from south of SH 52 to 9th Street

1ST STREET (SH 52)

First Street (SH 52), from US 85 to the UPRR tracks, is the heart of Fort Lupton. Currently, the roadway is a two-lane arterial roadway with a striped median through the corridor and left-turn lanes at the intersections. The intersections at the US 85 ramps, McKinley Avenue and Denver Avenue are signalized. Based on the nature and volume of trips expected on this roadway, a four-lane roadway with center median/turn lanes would be required. However, this could not be achieved without significantly impacting the adjacent land uses throughout the corridor, as shown on Figure 10 on the next page.

Recommendations for the corridor include the following:

- Pursue the preparation and implementation of an access control plan on SH 52 as proposed in the Upper Front Range 2040 Regional Transportation Plan.
- Over the long-range future, as properties along SH 52 are sold or abandoned, the City should preserve the ROW necessary to provide 110 feet of roadway ROW as a long-range goal. If and when appropriate, the City may choose to become involved in specific land acquisition activities in conjunction with CDOT. During the short-range (5 year) interim, the City should seek alternative solutions to improve traffic conditions.

Figure 10: 1st Street Issue Area

Specific arterial road widening and extension projects are anticipated to relieve traffic volumes along 1st Street (SH 52). East/west bypasses to 1st Street (SH 52) would include the following projects:

- Widening and paving CR 8 from CR 19 to CR 37
- Extending, widening and paving 14th Street (CR 14.5) from CR 19 to CR 37
- Widening and paving CR 18 from CR 23 to CR 37

The CR 8 alignment is recommended because it ultimately aligns with the existing interchange at I-25 and Erie Parkway. The *US 85 PEL Study* recommended interchanges at US 85 and CR 8 as well as US 85 and CR 6. The bypasses are shown in Figure 11.

The 14th Street (CR 14.5) alignment has significant gaps that would need to be extended from CR 19 to CR 21 and from CR 29 to CR 37. The *US 85 PEL Study* also recommended an interchange on 14th Street (CR 14.5) at US 85. Preservation of 14th Street as an arterial and provision of this interchange will provide relief to SH 52 for those drivers desiring to access US 85 who may live north of SH 52 and/or whose trips are oriented to/from the north of Fort Lupton.

It should be noted that the CR 14.5 alignment runs parallel to the Tipple Parkway alignment in the Town of Frederick, but CR 14.5 is offset by 0.5 miles to the south. The Tipple Parkway/CR 14.5 arterial could be made more continuous by providing a crossover along the CR 19 alignment, and T-intersections with right-turn acceleration lanes could be provided at the Tipple/CR 19 and CR 14.5/CR 19 intersections.

DENVER AVENUE

Denver Avenue, through downtown Fort Lupton, is currently a two-lane roadway with on-street parking and northbound and southbound left-turn lanes provided at both 1st Street and 9th Street. Projected traffic volumes indicate that a four-lane cross-section with a center median would enhance both mobility and accessibility. However, similar to 1st Street, construction of such a roadway would

significantly impact existing developments. Therefore, since Denver Avenue currently has a roadway cross-section of approximately 51 feet (curb face to curb face), it is recommended to conduct a complete street or "road diet" project as noted in the *2018 Comprehensive Plan*.

A roadway diet along Denver Avenue would better allocate the wide public ROW to support all users within the Downtown. This reconfiguration was based on existing conditions, adjacent uses, connectivity within the subarea, and mobility across Fort Lupton. The proposed reconfiguration would include:

- Two 11' travel lanes
- Two 4' bike lanes
- 8' parallel parking on both sides

Given the importance of Denver Avenue as a primary roadway in the Downtown subarea, as well as the extreme width of the public right-of- way, the City should prioritize Denver Avenue for a complete street project.

In addition, following completion of such a project, the City should explore opportunities to conduct additional streetscaping and reconfiguration projects within the Downtown, particularly for other primary and secondary roadways.

South Denver Avenue, from SH 52 to Kahil Street, is recommended to provide a transition between the recommended roadway cross-sections to the north and south of this section. A "Retail Street" cross section could be constructed, which consists of one travel lane in each direction separated by a raised or striped median. The retail street section would include on-street parking on both sides.

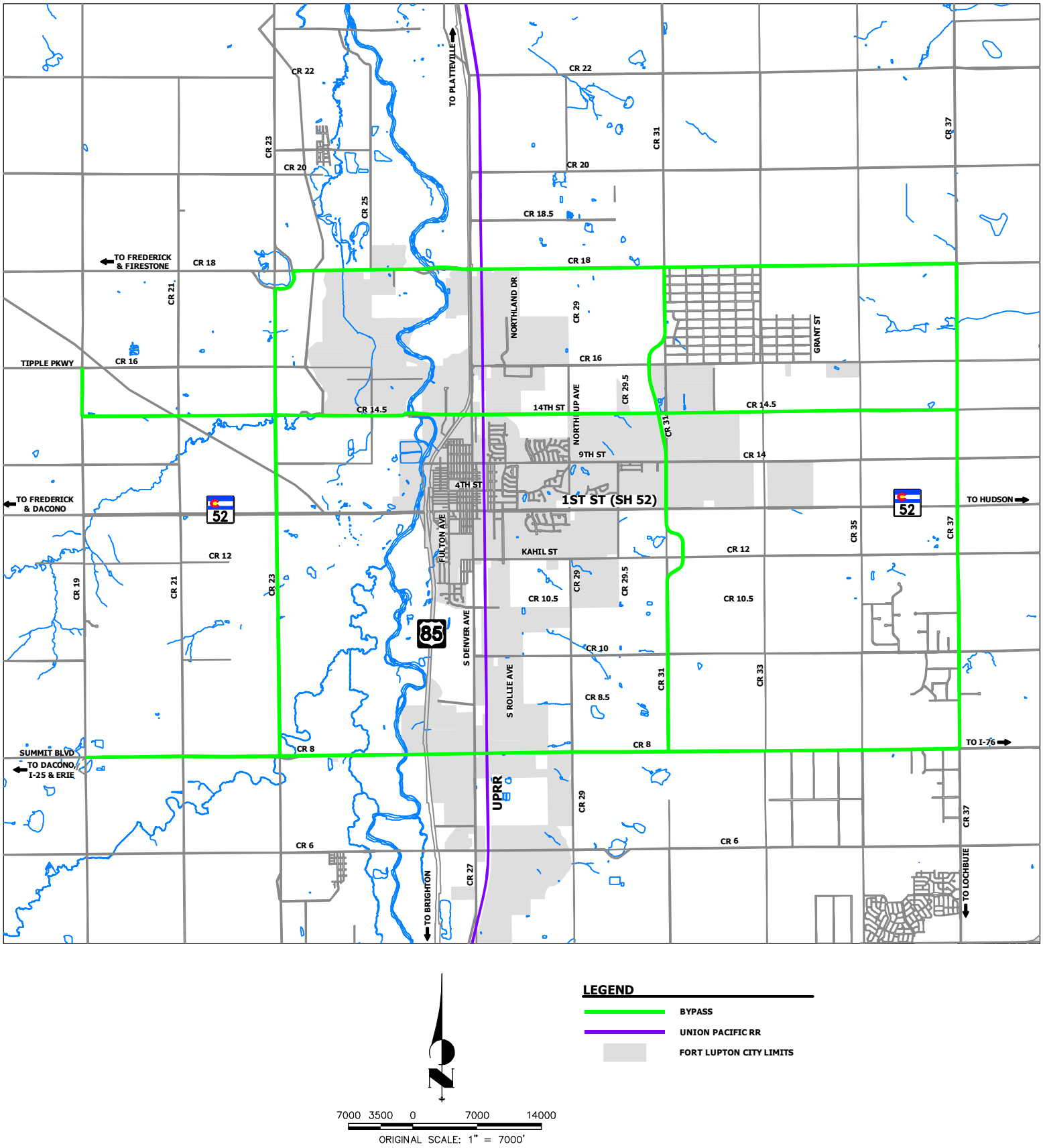
South Denver Avenue to the south of Kahil Street (CR 12) provides uncontrolled residential access. South Denver Avenue is the southern door to Fort Lupton, providing connection to US 85 via CR 8 or CR 6 approximately 2 miles south of the City. A four-lane roadway with median would provide the needed capacity to serve the arterial function and allow refuge for access to/from the residential properties. Similar to SH 52, as the properties through this corridor are sold, the City has the opportunity to obtain additional ROW to achieve a 110 foot cross-section to be available in the long-term future.

Meanwhile, it is recommended that the City pursue alternate north/south roadways that could provide congestion relief to Denver Avenue. Preservation of adequate ROW for these roadways is strongly encouraged. North/south arterial bypasses to Denver Avenue would include the following projects:

- Widening CR 23 from CR 6 to CR 18
- Extending, widening and paving CR 31 from CR 6 to CR 18
- Widening CR 37 from CR 6 to CR 18

The bypasses are shown in Figure 11.

Figure 11: Bypass Map



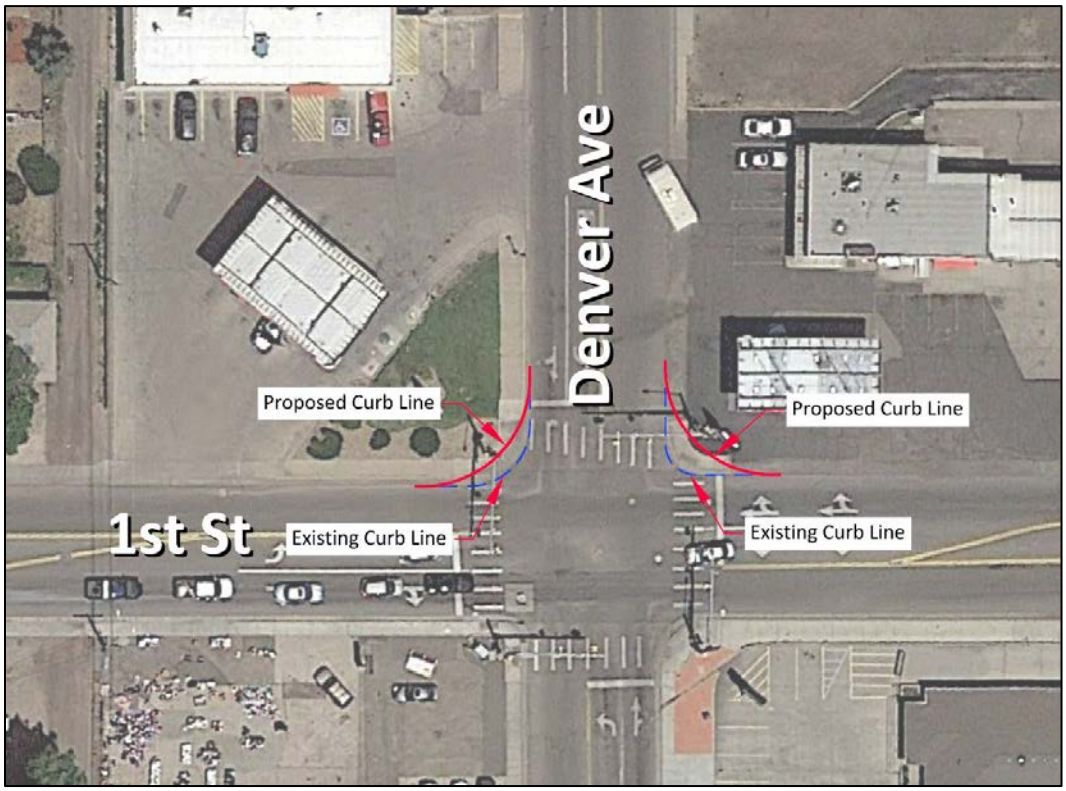
INTERSECTION IMPROVEMENTS

JR Engineering assisted with the analysis of two intersection projects, which were detailed in the *2018 Comprehensive Plan*. The two projects included the 1st Street and Denver Avenue intersection and the US 85 and 14th Street intersection. The two intersection projects are discussed below, although the Comprehensive Plan provides additional details and graphics.

1ST STREET AND DENVER AVENUE INTERSECTION

The intersection of 1st Street and Denver Avenue is identified as an issue for truck traffic. The existing lane configuration and curb alignment result in a narrow turn radius which is difficult for trucks, and can result in safety hazards and traffic delays.

The City should explore curb realignment for the northeast and northwest corners of the intersection to provide improved turn radii for trucks, as shown in the figure below. This will likely require a more thorough engineering study to establish detailed specifications. It is important to note that Denver Avenue south of this intersection is not a designated truck route. As such, curb realignments are not recommended for the southeast or southwest corners. Refer to the *2018 Comprehensive Plan* Subarea Plan Sections for additional details.



US HIGHWAY 85 AND 14TH STREET INTERSECTION

The intersection of US 85 and 14th Street is the center of the Northern Industrial Subarea, supporting a high frequency of traffic and acting as a gateway to Fort Lupton from the north. However, the intersection is highly skewed (by approximately 30 degrees), resulting in sight distance and increased blind spots.

The recent *US 85 PEL Study* by CDOT has determined that Highway 85 is classified as a "freeway" which generally requires all intersections to be grade separated. The PEL study proposed a junior interchange at this location, though the time-frame for that project is unknown. In reviewing the proposed junior interchange, the following concerns were noted:

- Southbound on/off movements at jug handle of US 85 may be risky due to decelerating and accelerating.
- The jug handle creates a gap in potential development.
- Small westbound right turning radius at CR 16 may be risky for accelerating.
- Business accesses are significantly impacted, including possible major ROW implications.
- Freeway access to and from Road Side Park is not addressed.

In order to account for these issues, an alternative interchange concept was developed. Refer to the *2018 Comprehensive Plan* Subarea Plan Sections for additional details and graphics.

In addition to the larger reconfiguration projects, the following minor recommendations should be implemented in the short-term:

- Safety improvements include changing the permissive left turn movements to protected only, adding reflective backplates to the traffic signal heads, extending the northeast mast arm for northbound traffic and reset the heads over each lane, and add "lane ends" signage for the northbound and southbound acceleration lanes at 14th Street.
- Operational, safety, and access improvements should be made with minor pavement widening along US 85 in the acceleration and deceleration lanes to increase storage lengths and extending the auxiliary lanes.
- Add better signage/striping (more visible), rumble strips and enhanced ADA crossings.
- Add "dilemma zone" detection with advanced loop detectors on US 85.

INTERSECTION CONTROL

CDOT currently owns and maintains the existing traffic signals along US 85, 1st Street and Denver Avenue through Fort Lupton. The City has one signalized intersection that it maintains, and the City's intersections are predominately stop-controlled. The City conducts traffic counts and warrant analyses as necessary to determine if traffic signals or all-way stop signs should be installed at intersections within their jurisdiction that meet warrants. Table 2 summarizes the existing and proposed intersection control throughout the City.

The *Manual on Uniform Traffic Control Devices* (MUTCD, 2009 Edition) identifies nine warrants criteria for the installation of traffic control signals. The MUTCD specifies consistent standards for traffic signals and other traffic control devices and is used by traffic engineers almost universally throughout the country. At least one of the MUTCD signal warrants must be met to justify a signal. For purposes of evaluating the need for future traffic signals, Warrant 3 – Peak Hour, was applied. This warrant looks at the peak hour traffic volumes on the major roadway and the higher volume on the minor roadway to establish signal need. The daily forecasted traffic volumes from the 2018 and 2040 model runs were converted to peak hour using a 10% peak hour factor and a 50/50 peak directional split.

Table 2 also shows the intersections in which a traffic signal could be warranted by the year 2040. These potential signal warrants are noted as "planned" in Table 2 and are only for planning purposes and do not represent a guarantee of signalization at any specific time if at all. There are several other signal warrants that should be reviewed with observed data instead of the forecasted data applied for this analysis. Warrants may change based on development trends, roadway improvements, and other factors. Existing and planned signalized intersections are shown in Figure 12.

Table 2: Intersection Control

Major Street	Intersecting Minor Street	Intersection Control	Jurisdiction	Status
1st Street (SH 52)	NB and SB US 85 Ramps	Traffic Signal	CDOT	Existing
1st Street (SH 52)	McKinley Avenue	Traffic Signal	CDOT	Existing
1st Street (SH 52)	Denver Avenue (US 85 Business)	Traffic Signal	CDOT	Existing
1st Street (SH 52)	Rollie Avenue	Traffic Signal	CDOT	Existing
US 85	14th Street (CR 14.5)	Traffic Signal	CDOT	Existing
US 85	CR 18	Traffic Signal	CDOT	Planned
Denver Avenue (US 85 Business)	9th Street (CR 14)	Traffic Signal	CDOT	Existing
CR 8	CR 27	Traffic Signal	City	Existing
US 85	CR 6	Traffic Signal	CDOT	Existing
SH 52	CR 19	Traffic Signal	CDOT	Planned
SH 52	CR 23	Traffic Signal	CDOT	Planned

Due to ever-changing traffic patterns in the area, signal timing optimization should be performed on an annual basis to ensure efficient traffic flow and use of the existing facilities.

RAILROAD CROSSINGS

There is one railroad corridor within the City of Fort Lupton; the Union Pacific Railroad (UPRR). The UPRR runs north-south through the community. The UPRR corridor consists of 15 highway-rail grade crossings from CR 6 to CR 22. A quiet zone along the corridor is not present. A rail spur line also deviates from the UPRR mainline and heads into an industrial area on the northwest side of the City. Table 3 and Table 4 summarize the existing crossing conditions for the main and spur lines, respectively.

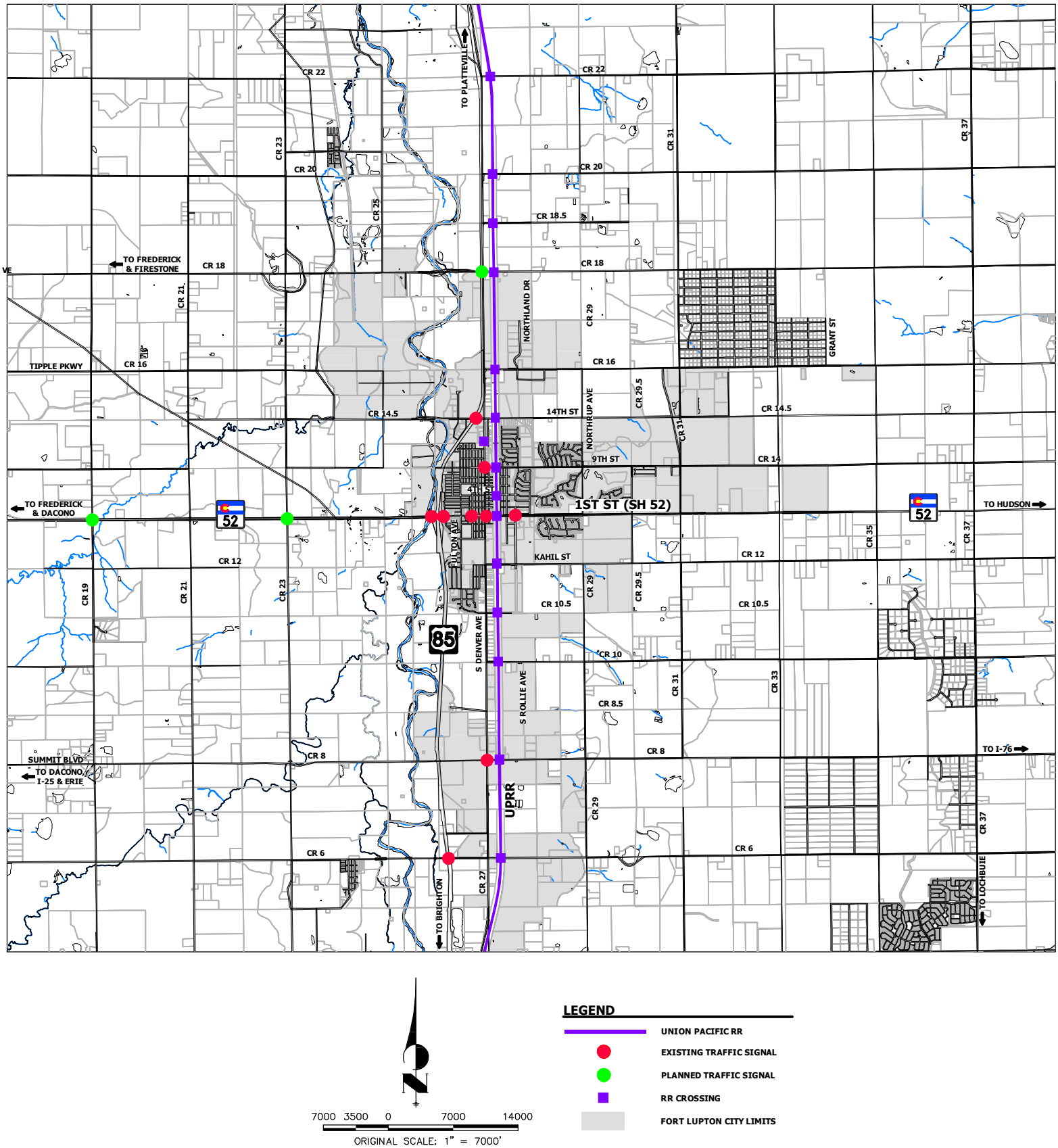
Table 3: Existing UPRR Mainline Crossings

Street Crossing	DOT #	Trains Per Day (Year 2016)	Existing Device
County Road 6	804475P	10	Sign
County Road 8	804472U	10	Lights & Gates
County Road 10	804488R	10	Sign
County Road 10.5	804460A	10	Sign
Kahil St (County Road 12)	804461G	10	Sign
1st Street (SH 52)	804463V	10	Lights & Gates
4th Street	804464C	10	Lights & Gates
9th Street	804465C	10	Lights & Gates
County Road 14.5	804374D	10	Lights & Gates
County Road 16	804375K	10	Lights & Gates
County Road 16.5	804376S	10	Sign
County Road 18	804377Y	10	Sign
County Road 18.5	804378F	10	Sign
County Road 20	804379M	10	Sign
County Road 22	804329J	10	Lights & Gates

Table 4: Existing Railroad Spur Line Crossings

Street Crossing	DOT #	Trains Per Week (Year 2016)	Existing Device
9th Street	906066F	1	Sign
Denver Avenue	804282R	1	Sign

Figure 12: Intersection Control Map



LEGEND

- UNION PACIFIC RR
- EXISTING TRAFFIC SIGNAL
- PLANNED TRAFFIC SIGNAL
- RR CROSSING
- FORT LUPTON CITY LIMITS

ROADWAY FUNCTIONAL CLASSIFICATION AND DESIGN STANDARDS

Roads generally provide two important functions: mobility and land access. These functions conflict with each other in that the more land access (e.g., driveway openings) provided, mobility (e.g., vehicle carrying capacity) generally decreases and vice versa. Each road improvement is specifically designed to operate with certain characteristics based on the adjoining land uses, proximity to other facilities, and other factors. A road's functional classification describes these characteristics, and the street design standard identifies specific design parameters, ROW needs, and other measures.

FUNCTIONAL CLASSIFICATION

The functional classification of a roadway reflects its role in the street and highway system and forms the basis for access management, corridor preservation, and street design guidelines and standards. Roadway function tends to vary by facility depending on the amount of urbanization and access management in a particular corridor. Existing roadways may not meet all of the desired characteristics described by their defined functions but can be upgraded to do so when improvements to the roadway are made. Functional classifications are summarized as follows.

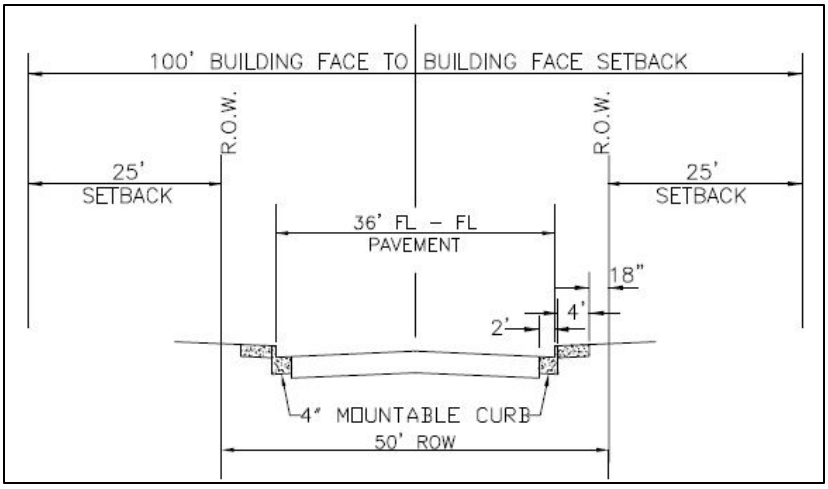
All streets within the City of Fort Lupton are classified according to a hierarchical system that is based on elements such as the number of travel lanes, traffic volumes, level of access, and mobility. Based on the previous transportation planning efforts, the City has roadways separated into the following functional classifications: Local Street, Retail Street, Minor Collector, Major Collector, and Arterial. These classifications relate to the function of the streets. Lower order streets function primarily as access to individual lots, and higher order streets function primarily for the purpose of mobility (expeditious movement of people and goods). The City of Fort Lupton includes both urban and rural areas and, thus, minimum street standards are defined that are appropriate for each area type.

STREET DESIGN STANDARDS

Each roadway type, or functional classification, is further described by the cross-sections of the City's *Standards and Specifications for the Design and Construction of Public Improvements*. The City reviews and updates the standards on a periodic basis. Those shown in the figures on the following pages are the current standards in place at the time of print, but some additional recommendations have been provided for this transportation plan. Street design standards are primarily intended for new roads. To the extent possible, they should be applied to widened or reconstructed roads in the built environment as improvements occur. Existing roads may not meet current design standards depending on when the road was constructed and what standards were in place at the time.

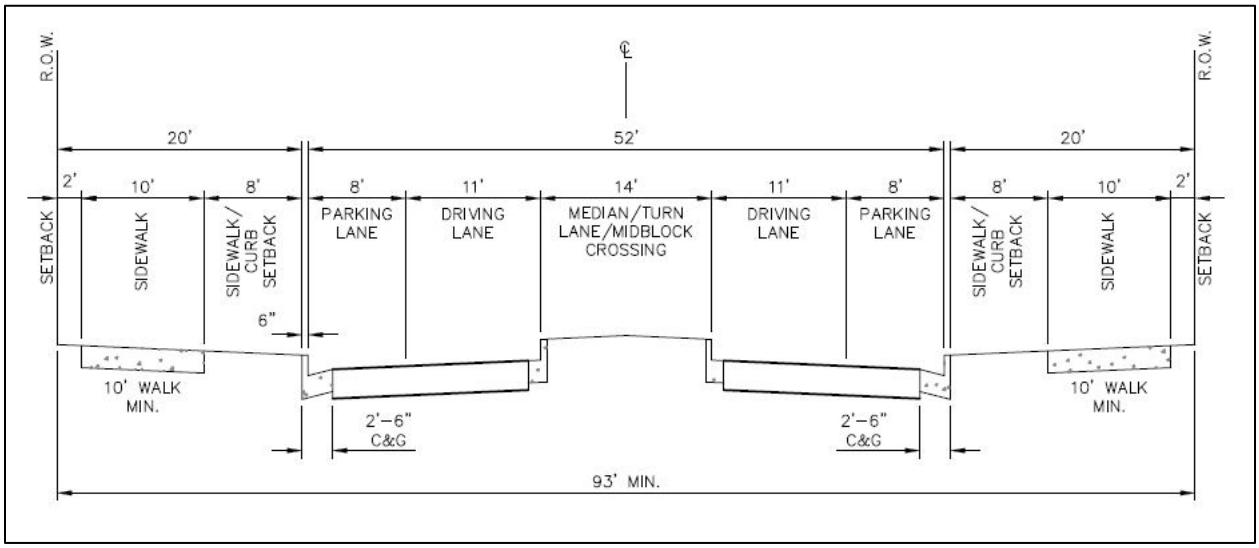
Figure 13 to Figure 18 identify the ultimate mid-block cross-sections for each roadway functional classification, although scaled back designs are allowed for interim phases of arterial roads.

Figure 13: Local Road



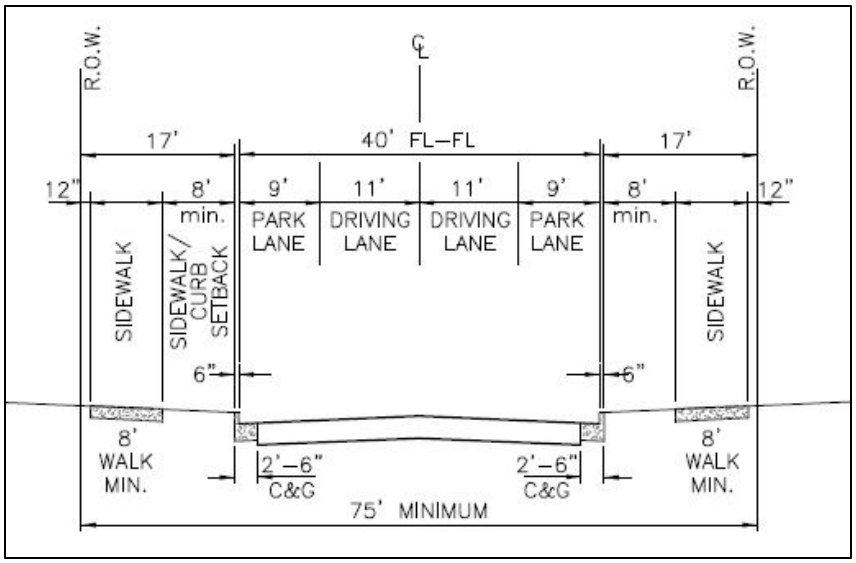
- Parking allowed on both sides of street
- Single family residential areas

Figure 14: Retail Street



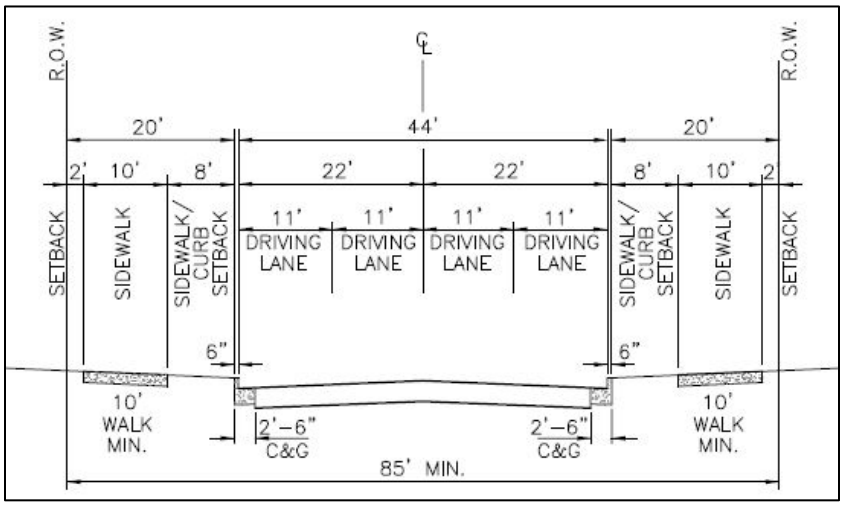
- Parking optional

Figure 15: Minor Collector



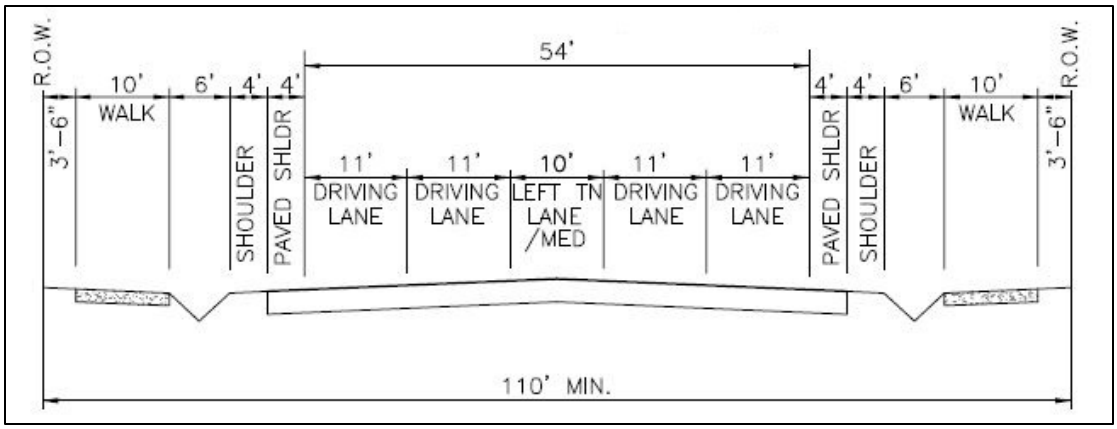
- Parking allowed. Utilized in industrial, commercial, multi-family, and single family residential areas where on-street parking is required.
- No parking allowed on rural collectors and provide 4' paved shoulder and roadside ditch in lieu of parking lane.
- If left turn lane is required, no parking provided on either side drive lanes move to outside of pavement with turn lane in middle.

Figure 16: Major Collector



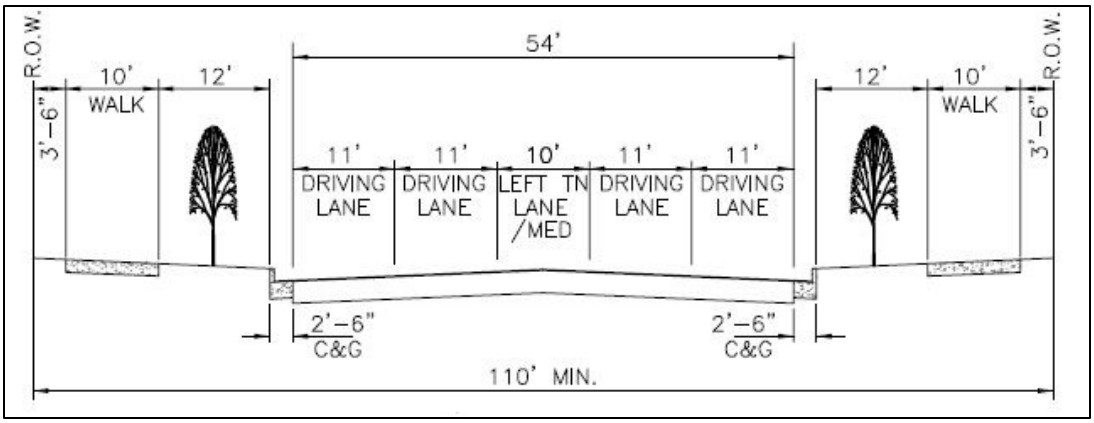
- Provide widening at intersections for left turn lanes and accel/decel lanes. Right-of-way width to be increased to 105' in these areas.
- No parking allowed
- Used in areas where there is limited access and projected traffic volumes are greater than 10,000 vehicles per day.

Figure 17: Rural Arterial



- No parking allowed
- Provide accel/decel lanes at intersections
- Provide accel/decel lanes and double left turn lanes at major intersections as necessary

Figure 18: Urban Arterial



- No parking allowed
- Median may be painted or curbed

MULTI-MODAL PLAN

PEDESTRIAN AND BIKE NETWORK

As the street design standards presented in the previous chapter demonstrate, the City of Fort Lupton is committed to a roadway system that includes accommodations for pedestrian and bicycle facilities for new and improved roadways. Fort Lupton's *2018 Recreational Trails Plan* identifies off-street trails that further enhance the opportunities for non-motorized transportation in and around the City.

The most significant pedestrian gap is the 400-foot stretch on 4th Street between Main Street and Pacific Avenue. Pedestrian infrastructure, in the form of a sidewalk, on this stretch of roadway would connect downtown and the residential areas to the east. The sidewalk connection would cross the Union Pacific Railroad (UPRR), and coordination, permitting, and approvals would be needed through both UPRR and the Public Utilities Commission (PUC) of Colorado.

Many pedestrian gaps exist around Fort Lupton's urban core. The City should conduct a more detailed study to determine sidewalk infill project locations and prioritize the projects. On-street bike lanes can be added to existing streets with complete street projects. Complete street projects can be added to streets around the urban core including Denver Avenue, Fulton Avenue, McKinley Avenue, 4th Street, and 9th Street. Sidewalk infill and curb ramps upgrades can also be added in conjunction with the complete street projects.

The sidewalk improvement locations are shown in Figure 19.

As improvements are made along roadway corridors, the City should construct sidewalks and/or trails. Adjacent development should participate in this process by providing the necessary ROW and improvements along their property.

IMPROVING PEDESTRIAN MOBILITY ON 1ST STREET

JR Engineering assisted with the analysis of improving pedestrian mobility on 1st Street, which was detailed in the *2018 Comprehensive Plan*. The improvements are discussed below, although the Comprehensive Plan provides additional details and graphics. This analysis focused on ensuring pedestrians have adequate infrastructure to move safely and efficiently along and across the corridor. Based upon the analysis, the following potential improvements should be considered:

- Pearson Park to east side of US 85 ramps: Upgrade curb ramps and widen/infill sidewalk
- East side of US 85 to McKinley Avenue: Upgrade curb ramps, widen sidewalk and improve crosswalk safety
- McKinley Avenue to Denver Avenue: Upgrade curb ramps and improve crosswalk safety
- Denver Avenue to Rollie Avenue: Upgrade curb ramps, infill missing sidewalk and install overhead signage
- 1st Street crossing at UPRR: Extend railroad crossing arms, add separate pedestrian gates and consider additional warning systems that alert those with visual or hearing impairments

Refer to the *2018 Comprehensive Plan* Subarea Plan Sections for additional details.

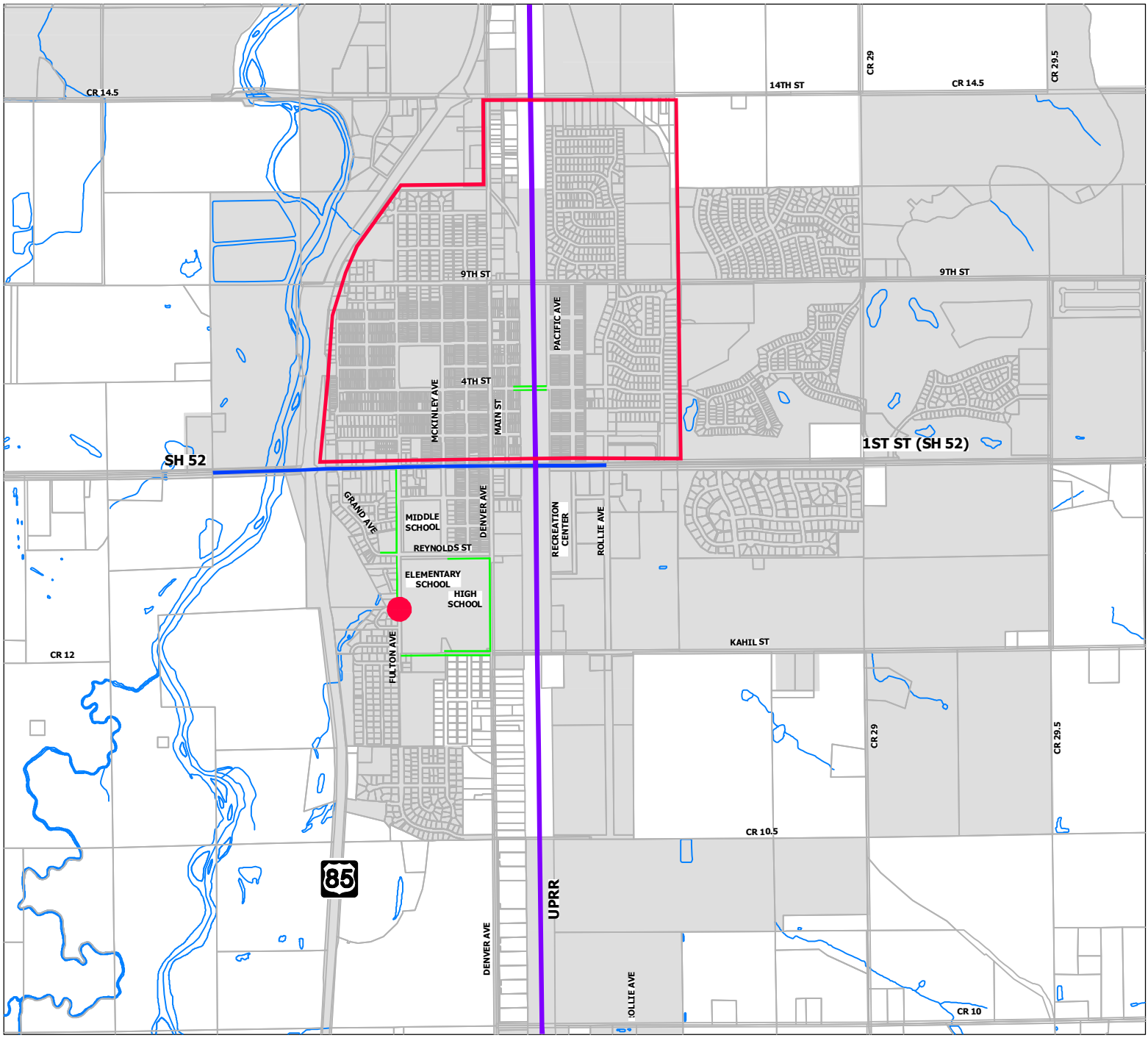
Analysis of the existing conditions at 1st Street and the UPRR crossing determined that the intersection does not require a grade separated crossing to support pedestrian mobility. However, through public outreach, residents demonstrated an interest in a pedestrian bridge or other grade separated railroad crossing, particularly one that would support access to the Fort Lupton Recreation Center. As such, the City should explore the potential of constructing a grade separated pedestrian bridge in the future, considering resident interest, cost, and feasibility of construction.

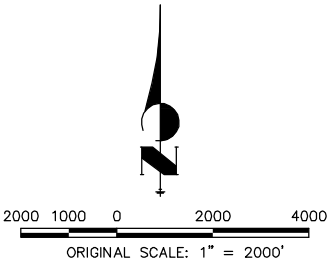
IMPROVING PEDESTRIAN MOBILITY AROUND SCHOOLS

Other pedestrian gaps exist adjacent and within proximity to Fort Lupton Middle School and High School. More specifically, the City should prioritize sidewalk infill projects along Fulton Avenue, Grand Avenue, Reynolds Street, Kahil Street, and Denver Avenue, which would provide safer routes to school.

A midblock pedestrian traffic signal and raised crosswalk (shown to the right) is located on Fulton Avenue approximately 200 feet south of Monte Vista Court. The City should consider upgrading the traffic control devices at the crossing. Potential minor improvements should include changing the pedestrian signal heads to the modern countdown style, adding stop bars and upgrading the roadside signage.

Figure 19: Sidewalk Projects





LEGEND

- SIDEWALK IMPROVEMENTS
- SIDEWALK IMPROVEMENTS PER 2018 COMPREHENSIVE PLAN
- SIDEWALK IMPROVEMENTS URBAN CORE STUDY AREA
- UNION PACIFIC RR
- MIDBLOCK PEDESTRIAN SIGNAL
- FORT LUPTON CITY LIMITS

PARK-AND-RIDE FACILITIES

A park-and-ride lot is located to the northwest of the US 85 and SH 52 intersection (shown on Figure 20 to the right), just west of Pearson Park in Fort Lupton. The lot has capacity for 70 vehicles and 3 parking spaces for accessible parking. The lot is located within CDOT ROW.

Figure 20: Existing Park-and-Ride

TAXI AND AIRPORT SHUTTLE SERVICES

Currently the Super Shuttle service provides routes from Fort Lupton to Denver International Airport (DIA). Eagle Limousine operates out of Fort Lupton and provides routes to Metro Denver, DIA and ski resorts. Uber and Lyft taxi services also serve Fort Lupton.

TRANSIT OPPORTUNITIES

Fort Lupton should continue to participate in regional transit planning efforts along with other municipal, county, and regional jurisdictions. As roadways are improved, the designs should incorporate elements which would support transit services along the roadways.

The City lacks a senior-ride transportation program. Usually this program is designed to provide transportation assistance to senior citizens (age 55 and older) who are unable to drive themselves or do not have alternate transportation. Rides are primarily provided to and from physician, eye doctor, and dental appointments. It is recommended that the City explore a senior-ride transportation program.

PLAN IMPLEMENTATION

The implementation of the planned roadway improvements in the City will be conducted and funded by the State/CDOT, City, Weld County, surrounding cities, developers and other sources. Infrastructure cost estimates were not completed for this plan.

PROJECT PRIORITIZATION

The recommendations of this roadway element of the transportation plan have been divided into three categories of short-term needs (1 to 5 years), intermediate-term needs (5 to 10 years) and long-term needs (10 to 20 years). The categories and recommendations are meant to serve as a guideline. The improvements should be pursued in an order that relates to development and growth within and around Fort Lupton.

Table 5: Interchange Projects

No	Street/Location	Improvement	Timeframe (Years)		
			1 to 5	5 to 10	10 to 20
1	14th Street (CR 14.5) and US 85 Interchange	Pursue identification and funding through regional planning efforts			X
		Construct interchange per US 85 PEL Study and Comprehensive Plan			
2	CR 22 and US 85 Interchange	Pursue identification and funding through regional planning efforts			X
		Construct interchange per US 85 PEL Study			
3	CR 18 and US 85 Interchange	Pursue identification and funding through regional planning efforts			X
		Construct interchange per US 85 PEL Study			
4	CR 8 and US 85 Interchange	Pursue identification and funding through regional planning efforts			X
		Construct interchange per US 85 PEL Study			
5	CR 6 and US 85 Interchange	Pursue identification and funding through regional planning efforts			X
		Construct interchange per US 85 PEL Study and Weld County Transportation Plan			

Table 6: Roadway Projects

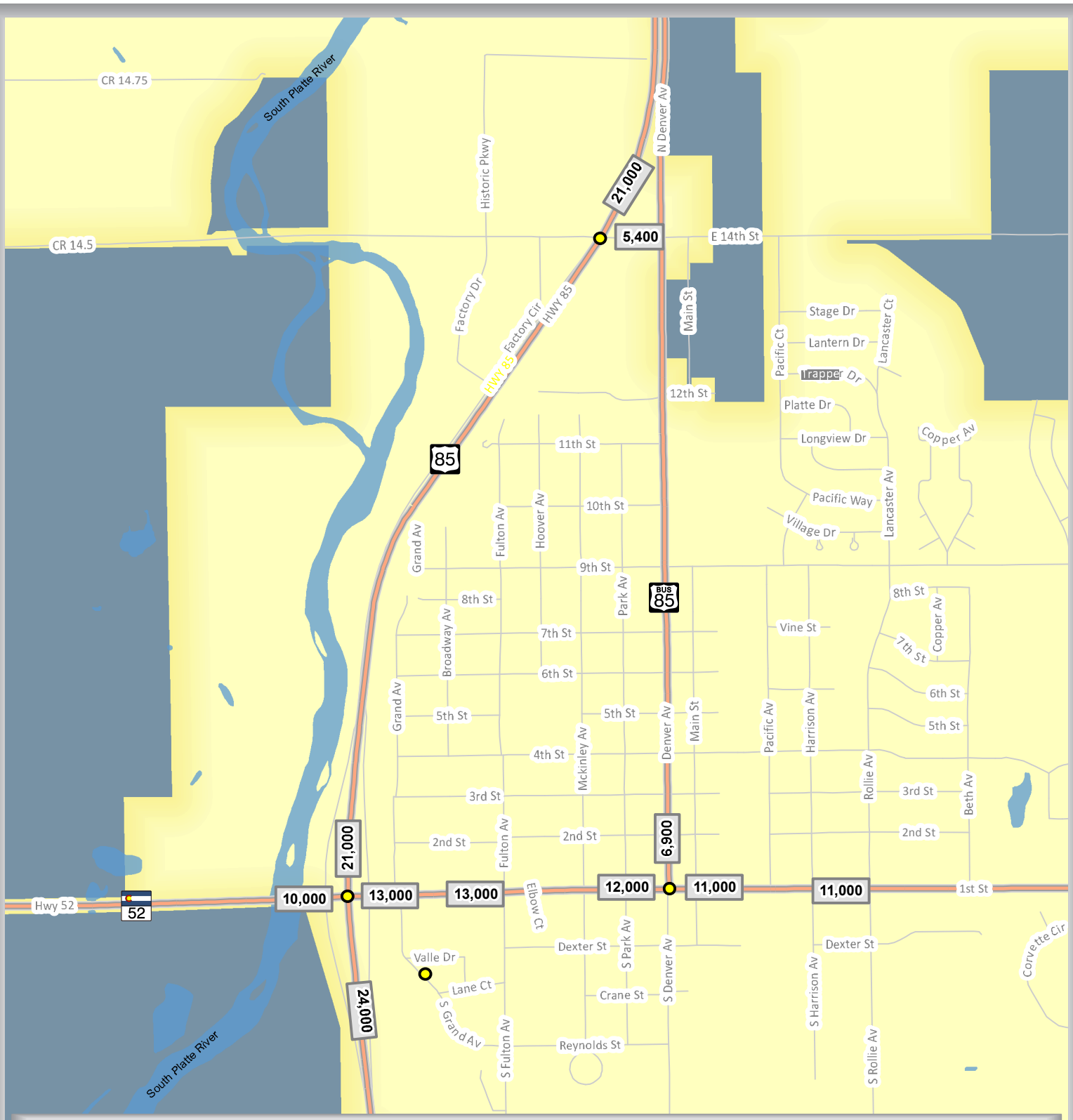
No	Street/Location	Improvement	Timeframe (Years)		
			1 to 5	5 to 10	10 to 20
1	SH 52 (US 85 to UPRR)	Pursue access control plan in conjunction with regional partners	X		
		Pursue acquisition of 110-foot ROW to provide an arterial			
2	SH 52 (UPRR to CR 31.5)	Pursue access control plan in conjunction with regional partners		X	
		Pursue acquisition of 110-foot ROW to preserve an arterial			
		Construct 4-lane arterial			
3	SH 52 (west of US 85)	Pursue access control plan in conjunction with regional partners		X	
		Pursue acquisition of 110-foot ROW to preserve an arterial			
		Construct 4-lane arterial			
4	1st Street and Denver Avenue Intersection	Construct intersection improvements per Comprehensive Plan	X		
5	US 85 and 14th Street Intersection	Construct intersection improvements per Comprehensive Plan	X		
6	Denver Avenue (CR 6 to CR 8)	Pursue acquisition of 110-foot ROW to preserve an arterial			X
		Construct 4-lane arterial			
7	Denver Avenue (CR 8 to 2nd Street)	Conduct complete street project		X	
8	Denver Avenue (2nd Street to 9th Street)	Conduct complete street project	X		
9	Denver Avenue (9th Street to 14th Street)	Conduct complete street project		X	
10	Bypasses to 1st Street (SH 52)	Pursue acquisition of 110-foot ROW to preserve an arterial on CR 18, CR 14.5 and CR 8			X
		Construct 2-lane arterial			
11	Bypasses to Denver Avenue	Pursue acquisition of 110-foot ROW to preserve an arterial on CR 23, CR 31 and CR 37			X
		Construct 2-lane arterial			
12	CR 22 (US 85 to CR 49)	Widen to 3-lane collector per Weld County Transportation Plan		X	
13	US 85 and CR 16	Construct intersection improvements per Weld County Transportation Plan		X	
14	US 85 and CR 18	Construct intersection improvements per Weld County Transportation Plan		X	
15	CR 31 (CR 12 to SH 52)	Construct 2-lane arterial per Weld County Transportation Plan			X

Table 7: Multi-Modal Projects

No	Street/Location	Improvement	Timeframe (Years)		
			1 to 5	5 to 10	10 to 20
1	1st Street (SH 52) and US 85 Interchange	Construct pedestrian improvements per Comprehensive Plan	X		
2	Sidewalk on 1st Street (from US 85 to Rollie)	Construct pedestrian improvements per Comprehensive Plan	X		
3	Sidewalk on 4th Street (from Main to Pacific)	Construct sidewalk across UPRR	X		
4	Sidewalks around Middle School and High School	Construct sidewalks on Fulton Avenue, Grand Avenue, Reynolds Street, Kahil Street, and Denver Avenue	X		

APPENDIX A

TRAFFIC COUNTS

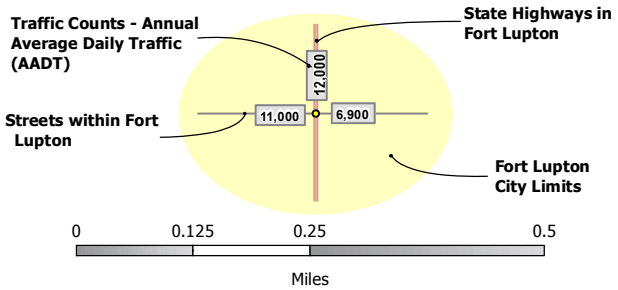


City of Fort Lupton Traffic Counts

Notes

- All traffic count studies were made by the Colorado Department of Transportation (CDOT) in 2014.
- This map was created by the City of Fort Lupton GIS and is for general reference only.

November 10, 2015



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APPENDIX B

TRIP GENERATION CALCULATIONS

TAZ	Land Use	Area (ac)	% Undeveloped	Undeveloped Area (ac)	Adjusted Area (ROW Removed) (ac)†	Gross Floor Area (1000 ft^2)	Land Use Code	Trip Generation Rate	Generated Weekday Traffic
1	Multifamily	26	100%	26	**17**	**N/A**	270	46.78	815
2	Public*	61	50%	30	**20**	**266**	534	11.59	3,085
3	Public*	24	33%	8	**5**	**69**	730	1.21	84
4	Single Family Attached	15	100%	15	**10**	**N/A**	270	46.78	479
5	General Commercial**	10	100%	10	**7**	**75**	820	37.75	2,823
6	Single Family Attached	14	100%	14	**9**	**N/A**	270	46.78	438
7	General Commercial**	10	100%	10	**7**	**74**	820	37.75	2,796
8	Single Family Attached	71	80%	57	**38**	**N/A**	270	46.78	1,782
9	General Commercial**	11	60%	6	**4**	**46**	820	37.75	1,755
10	Single Family Detached	370	95%	352	**236**	**N/A**	210	26.04	6,133
11	Single Family Detached	461	75%	346	**232**	**N/A**	210	26.04	6,035
12	Multifamily	165	100%	165	**110**	**N/A**	270	46.78	5,163
13	General Commercial**	131	80%	105	**70**	**765**	820	37.75	28,866
14	Single Family Attached	13	100%	13	**9**	**N/A**	270	46.78	418
15	Multifamily	5	50%	2	**2**	**N/A**	270	46.78	71
16	Light Industrial/Office	450	95%	428	**286**	**936**	110	4.96	4,641
17	Industrial***	1212	75%	909	**609**	**1990**	130	3.37	6,705
18	Industrial***	195	90%	176	**118**	**384**	130	3.37	1,295
19	Light Industrial/Office	720	90%	648	**434**	**1418**	110	4.96	7,035
20	Single Family Detached	900	100%	900	**603**	**N/A**	210	26.04	15,702
21	Light Industrial/Office	485	90%	436	**292**	**955**	110	4.96	4,736
22	Industrial***	335	90%	302	**202**	**661**	130	3.37	2,227
23	Light Industrial/Office	224	90%	202	**135**	**441**	110	4.96	2,188
								Total Weekday Generated Traffic	**105,271**

†Assumed adjustment	67%
*Assumed Floor Area Ratio	30%
**Assumed Floor Area Ratio	25%
***Assumed Floor Area Ratio	7.5%

APPENDIX C

LEVEL OF SERVICE DESIGN CRITERIA

Roadway Level of Service Thresholds by Functional Classification

	Level of Service				
	A	**B**	**C**	**D**	**E**
	Arterial				
4 Lanes with Median	20,400	26,800	31,600	36,000	40,000
	Collector				
2 Lanes	6,100	8,000	9,500	10,800	12,000
2 Lanes with Center Turn Lane or Median	9,200	12,100	14,200	16,200	18,000
	Rural Arterial/Collector				
2 Lanes	8,200	10,700	12,600	14,400	16,000
4 Lanes	16,300	21,400	25,300	28,800	32,000

APPENDIX D

REFERENCES

Standards and Specifications for the Design and Construction of Public Improvements, City of Fort Lupton, 2014

2018 Fort Lupton Comprehensive Plan: Picture Fort Lupton, Houseal Lavigne and Associates, 2018

2007 Fort Lupton Comprehensive Plan, Civil Resources, LLC, 2007

Fort Lupton Transportation Plan, Felsburg, Holt and Ullevig, 2000

Upper Front Range TPR, 2040 Regional Transportation Plan, Colorado Department of Transportation, 2015

US 85 Planning and Environmental Linkages Study, Felsburg, Holt and Ullevig; Atkins, 2017

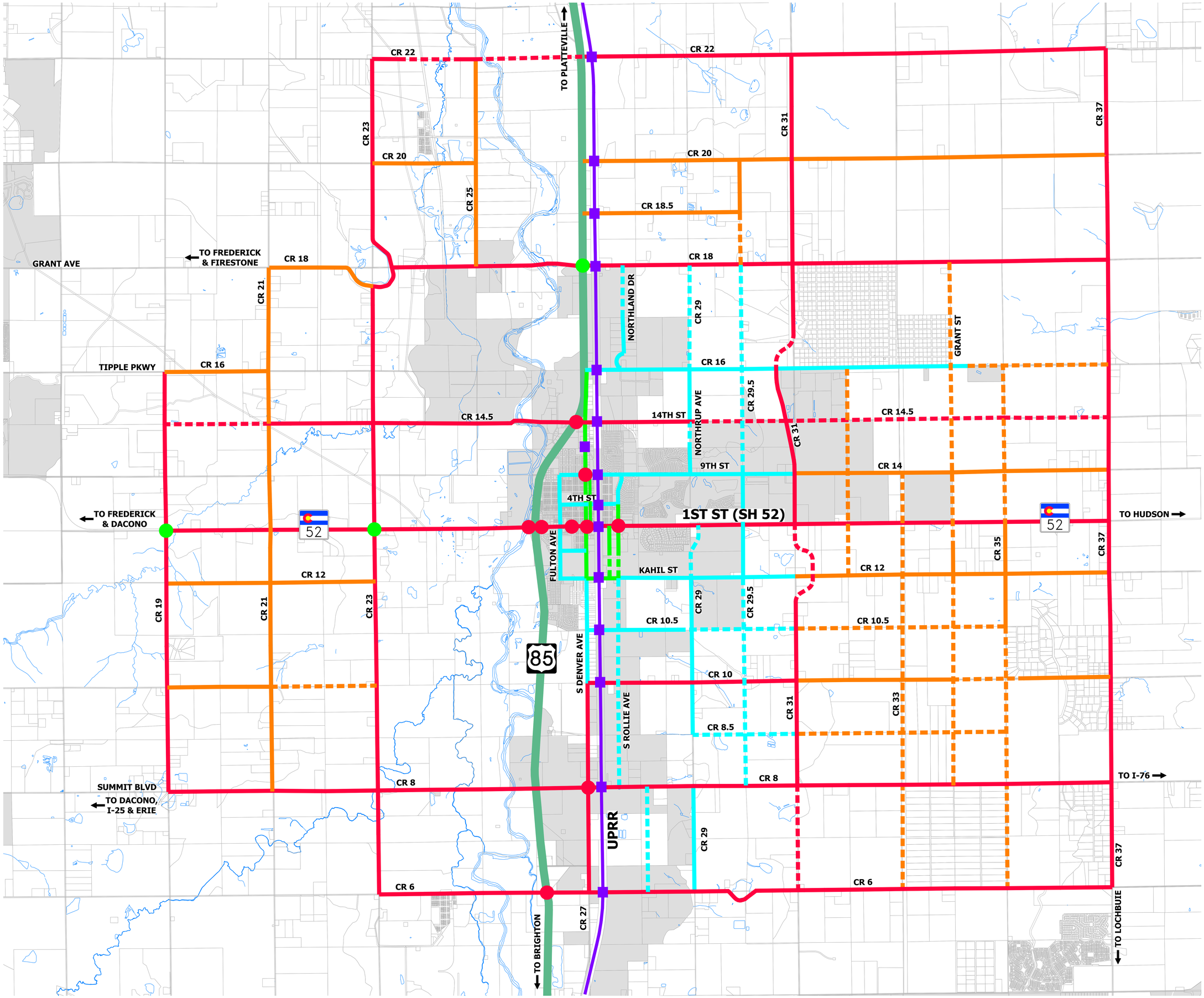
Weld County 2035 Transportation Plan, Weld County Public Works Department, 2011

Manual on Uniform Traffic Control Devices, US Department of Transportation – Federal Highway Administration, 2009

APPENDIX E

ULTIMATE ROAD NETWORK EXHIBITS

FORT LUPTON - ULTIMATE ROADWAY NETWORK



EXISTING NETWORK LEGEND - ROAD IMPROVEMENTS

- 4-LANE ARTERIAL
- RURAL COLLECTOR
- URBAN COLLECTOR
- RETAIL STREET
- UNION PACIFIC RR
- 4-LANE HIGHWAY
- TRAFFIC SIGNAL
- RR CROSSING

FUTURE NETWORK LEGEND - ROAD IMPROVEMENTS

- 4-LANE ARTERIAL
- RURAL COLLECTOR
- URBAN COLLECTOR
- RETAIL STREET
- TRAFFIC SIGNAL

NOTE: FUTURE ROADWAYS ARE SHOWN ON A CONCEPTUAL BASIS.

1500 750 0 1500 3000

ORIGINAL SCALE: 1" = 1500'

ULTIMATE ROADWAY NETWORK
FT. LUPTON TRANSPORTATION PLAN
JOB NO. 15915.00
MAY 2018
SHEET 1 OF 2

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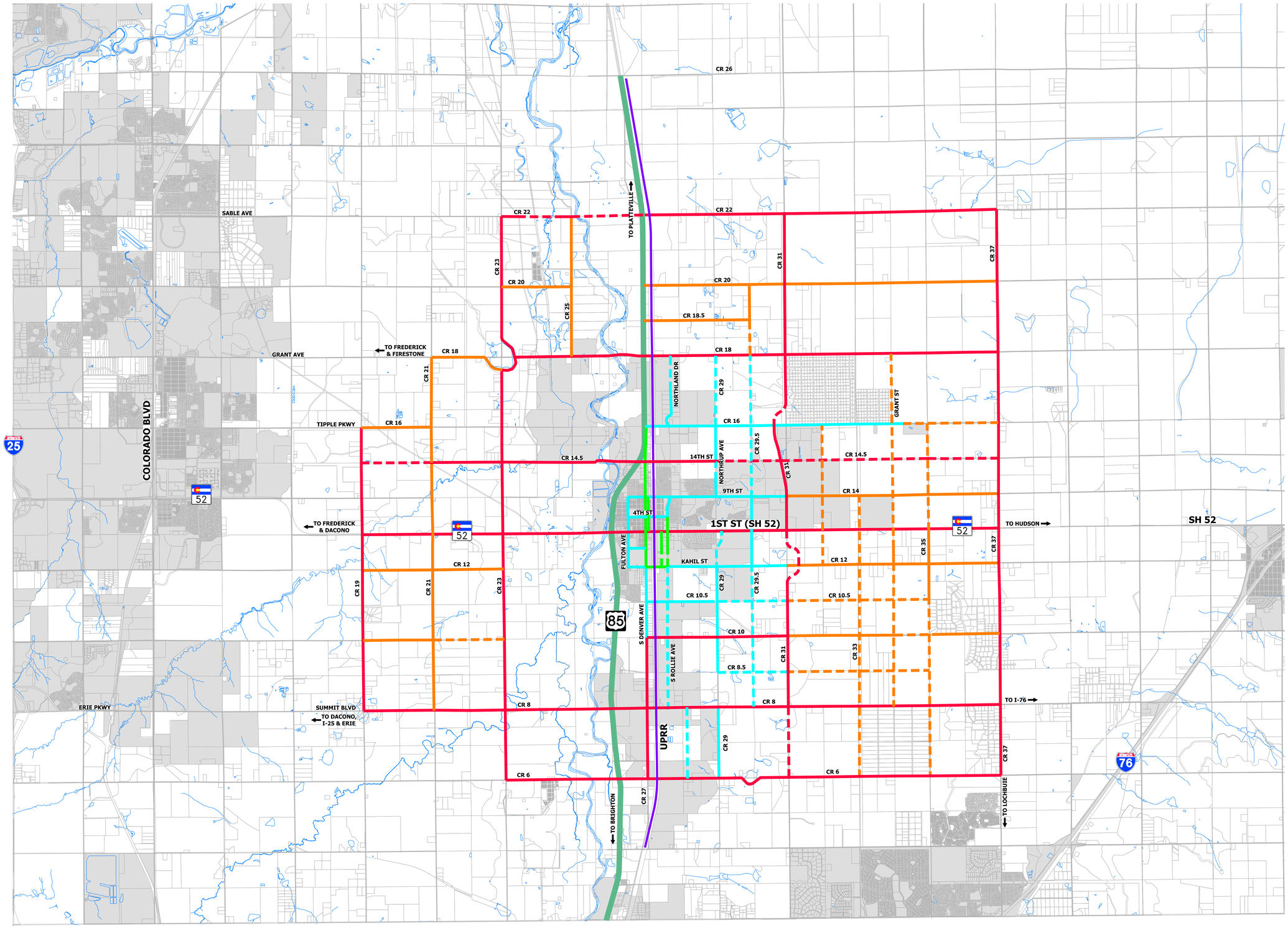
FORT LUPTON - ULTIMATE ROADWAY NETWORK



EXISTING NETWORK LEGEND - ROAD IMPROVEMENTS

- 4-LANE ARTERIAL
- RURAL COLLECTOR
- URBAN COLLECTOR
- RETAIL STREET
- UNION PACIFIC RR
- 4-LANE HIGHWAY

FUTURE NETWORK LEGEND - ROAD IMPROVEMENTS

- 4-LANE ARTERIAL
- RURAL COLLECTOR
- URBAN COLLECTOR
- RETAIL STREET

NOTE: FUTURE ROADWAYS ARE SHOWN ON A CONCEPTUAL BASIS.

2500 1250 0 2500 5000

ORIGINAL SCALE: 1" = 2500'

ULTIMATE ROADWAY NETWORK
FT. LUPTON TRANSPORTATION PLAN
JOB NO. 15915.00
MAY 2018
SHEET 2 OF 2

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