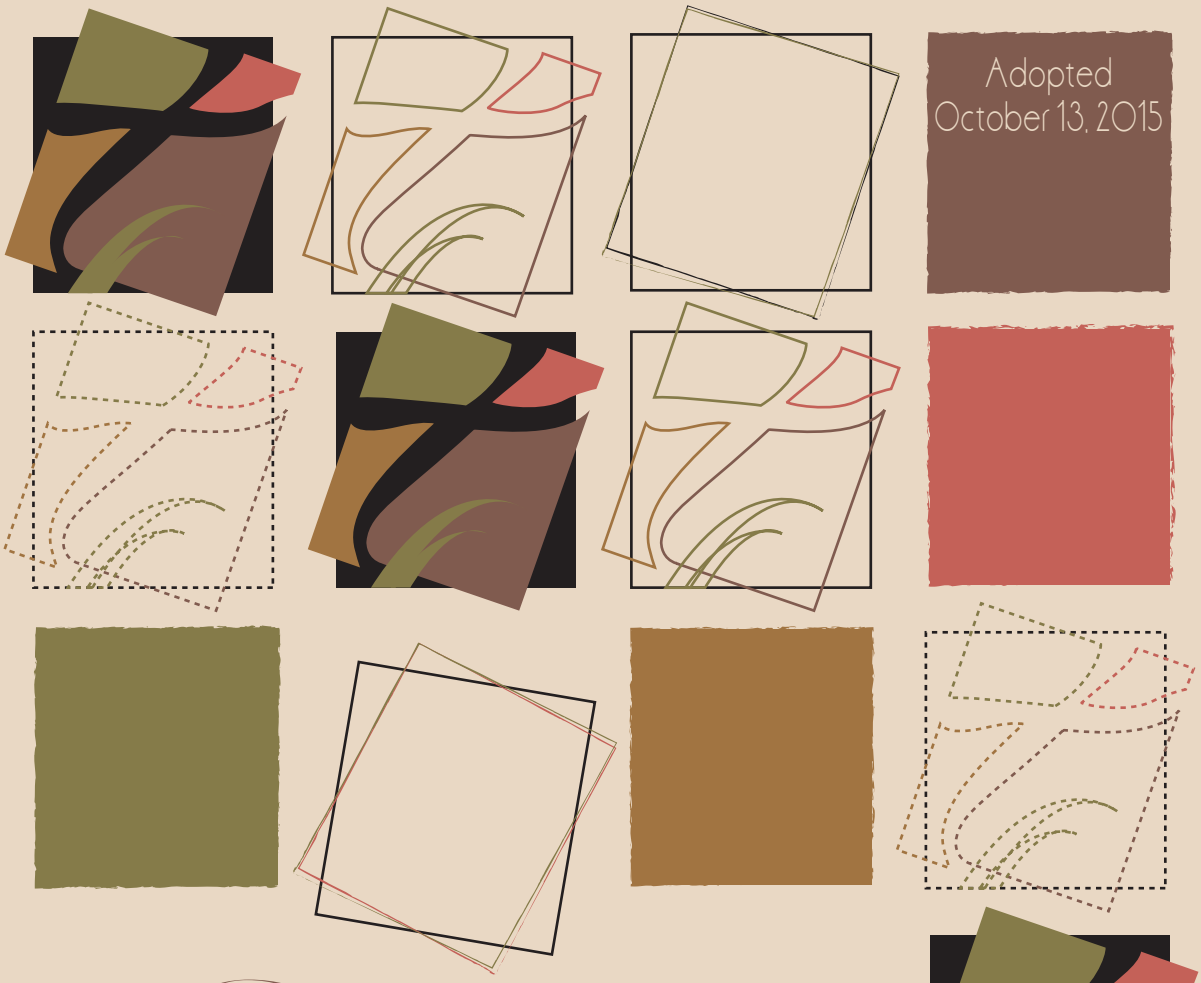


town of

# TIMNATH

ESTABLISHED 1882

# Transportation Plan

FELSBURG HOLT & ULLEVIG

# TIMNATH TRANSPORTATION PLAN

***Prepared for:***

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Timnath, Colorado 80547

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FHU Reference No. 114312-01

October 13, 2015

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## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| AASHTO | American Association of State Highway Transportation Officials |
| ADA | Americans with Disabilities Act |
| BRT | Bus Rapid Transit |
| CIP | Capital Improvement Plan |
| CDOT | Colorado Department of Transportation |
| CR | County Road |
| EIS | Environmental Impact Statement |
| FHWA | Federal Highway Administration |
| FRA | Federal Railroad Administration |
| GMA | Growth Management Area |
| GWR | Great Western Railway of Colorado |
| I-25 | Interstate 25 |
| IX | Interregional Express |
| LCR | Larimer County Road |
| LCUASS | Larimer County Urban Area Street Standards |
| LOS | level of service |
| mph | miles per hour |
| NFRMPO | North Front Range Metropolitan Planning Organization |
| PROST | Parks, Recreation, Open Space and Trails Plan |
| RIRO | right-in/right-out |
| RRFB | Rectangular Rapid Flashing Beacon |
| RTA | Regional Transportation Authority |
| RTD | Regional Transportation District |
| SAINT | Senior Alternatives in Transportation |
| SH | State Highway |
| STC | South Transit Center |
| TAZ | Traffic Analysis Zone |
| V/C | volume to capacity |
| vpd | vehicles per day |
| WCR | Weld County Road |

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# 1. Introduction

The Town of Timnath is a community of approximately 3,000 residents. The Town, founded in 1882, has remained an agriculture and farming community for decades. Since 2008, many communities in northern Colorado have been experiencing rapid growth, and Timnath is no exception. Timnath has experienced significant population growth in recent years and was the fastest growing community in Colorado in 2013.

Timnath is proximate to Fort Collins, on the east side of I-25. In 2004, the size of the Town increased considerably with the annexation of more than 2,000 acres of land. These annexations extended the Town boundaries eastward to the Larimer-Weld county line and south past Larimer County Road (LCR) 36. Later annexations extended the Town boundaries northward toward State Highway (SH) 14. Transportation will largely influence the way in which Timnath will continue to grow and develop.

## Purpose

Transportation is a critical component of community planning, and Timnath recognizes the need to be proactive about transportation as the pace of growth and development increases. This Transportation Plan, therefore, will provide guidance on how to strategically plan and accommodate this expected growth. This plan updates the Town's previous Transportation Plan, which was adopted in 2005.

The plan addresses all modes of transportation and is intended to accommodate projected growth through 2040. This plan contains guidance to assist staff and policy makers in reviewing development proposals and implementing transportation improvements. The plan includes a list of projects that would be necessary to realize Timnath's transportation goals. It is intended that this plan be flexible enough to accommodate future revisions and adjustments as development conditions dictate.

## Study Area

The Timnath Comprehensive Plan (2013) identifies the Town limits, as well as a Growth Management Area (GMA). The GMA represents those areas beyond the Town limits that can reasonably be expected to annex into the Town as growth continues. The study area for this Plan, therefore, is the GMA limits, including the expanded GMA area to the north.

## Approach

The development of this Transportation Plan involved a number of specific tasks, coordination, and public involvement. The transportation goals, objectives, and action steps established in Timnath's Comprehensive Plan (2013) were used as a starting point to develop the policy framework. New or modified goals were created and upon adoption of this Plan, they will supersede the Comprehensive Plan's transportation goals and objectives. An inventory of the existing transportation system and areas of deficiencies were then documented so that immediate needs could be identified. Current and projected socioeconomic data were obtained and used to confirm the assumptions used in the travel demand model. The travel demand model was then used to project future traffic and identify future needs. A list of short-term, mid-term, and long-term needs was developed that will serve as the basis for the Town's Capital Improvement Plan (CIP), and street standards were established. **Figure 1** shows the sequence of the major work items included in the transportation planning process.

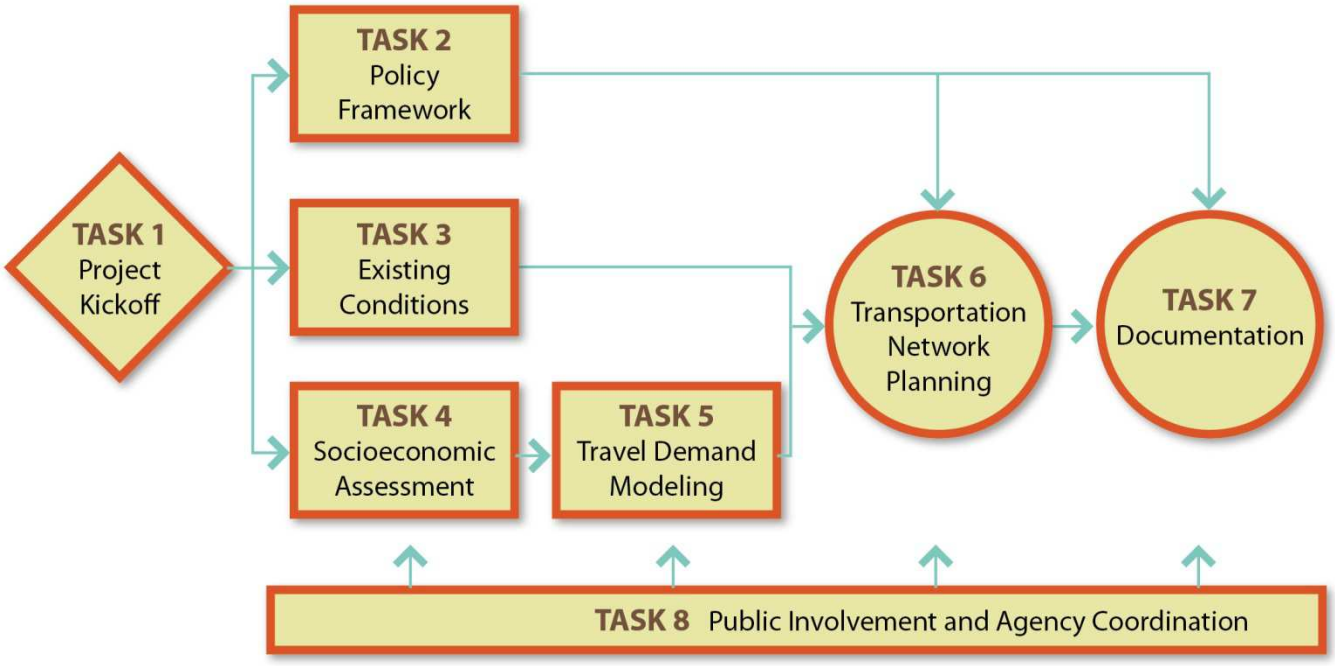


**Figure 1. Transportation Planning Approach**

## Public Involvement

An essential part of the transportation planning process is public participation. The project team solicited input from the community throughout the life of the project and at two key milestones. An open house was held at the Town Hall on March 26, 2015, where citizens were given an opportunity to review existing conditions and provide their input on transportation needs and concerns. Approximately 20 citizens attended the open house event.

A second open house was held at the Town Hall on July 20, 2015. This open house focused on the implementation strategy and action plan. The intent of this open house was to gain input from the community about the way in which projects have been prioritized. Approximately 10 citizens were in attendance.

The public could also provide their thoughts by filling out the project survey, either at a public meeting or online. The survey received over 60 responses at the public meeting and online. The results from three key questions included in the questionnaire are provided below. **Appendix A** includes a summary of the comments received.

### *On a scale of 1 to 5, with 1 being best, how would you rate the ease of traveling in and around Timnath?*

Opinions on the ease of travel by bike in Timnath are primarily negative, with about 54 percent of respondents rating the ease of travel as low or very low, while about 19 percent responded positively. Travel by foot fared slightly better, with 46 percent responding negatively and 26 percent responding positively. Only 23 percent felt travel by car was not easy to do, while over 75 percent of respondents rated the ease positively or neutral.

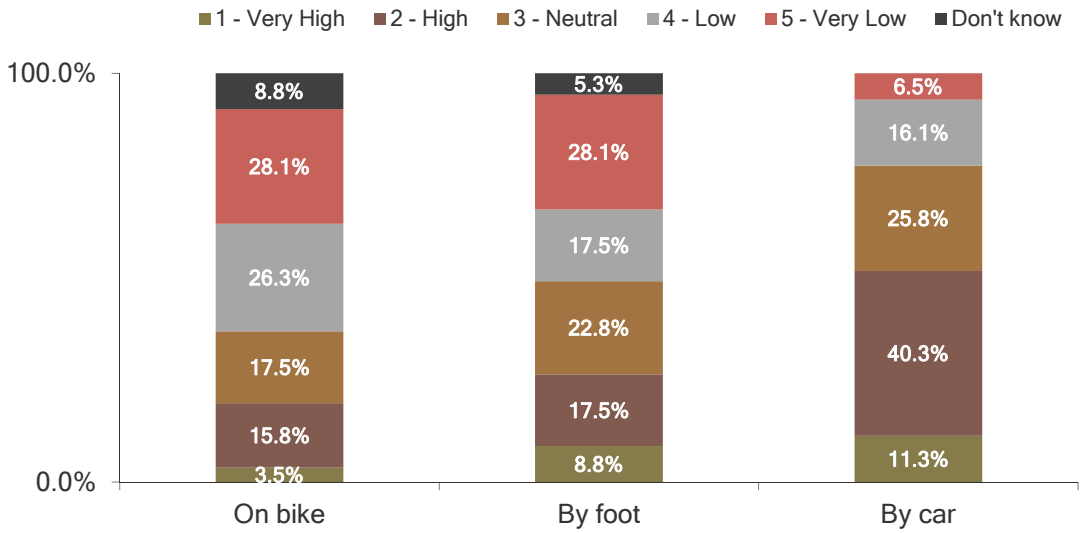


**Figure 2. Ease of Travel by Mode**

### *On a scale of 1 to 5, with 1 being the highest priority, how would you prioritize transportation improvements needed in Timnath?*

When prioritizing transportation improvements, a large majority of respondents gave a higher priority to new or improved sidewalks/trails, new or improved biking facilities, and road widening–each with over 75 percent of respondents giving a 1 or a 2 rating. Most respondents approved of constructing the new parkway (65 percent higher priority vs. only 13 percent as a lower priority), while improving safety and railroad crossings also received support as a higher priority. Few felt it was important to improve vanpool service or add bus service, though nearly 25 percent of respondents rated such improvements with medium prioritization. Desire for additional traffic signals was mixed, though a majority placed a lower priority on this improvement.

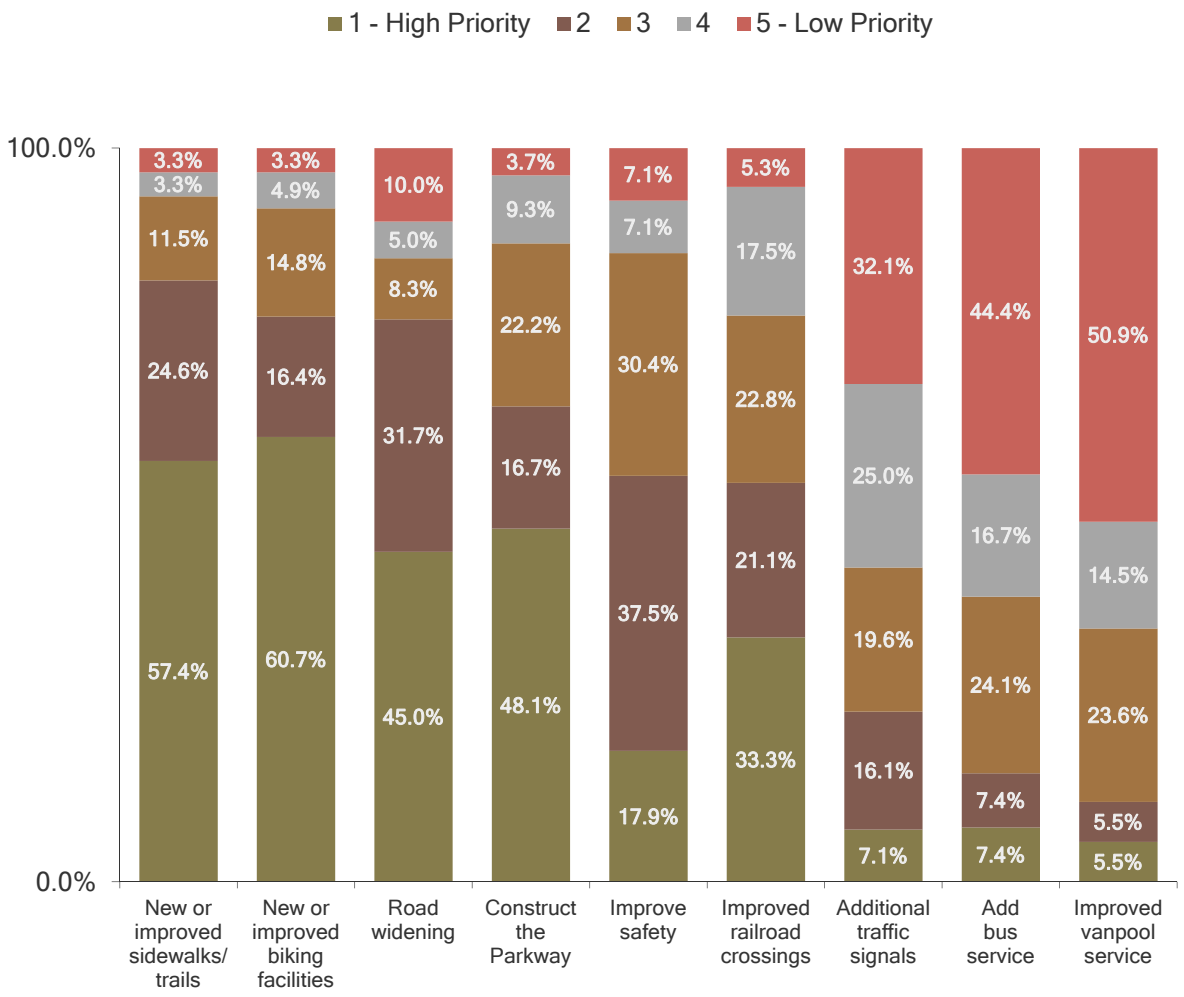


**Figure 3. Traffic Improvements**

### *Overall, how satisfied are you with Timnath's existing transportation network?*

Opinions were generally evenly split between satisfied, neutral, and somewhat unsatisfied (26 percent, 26 percent, and 27 percent, respectively). Nearly 17 percent were very unsatisfied, while only 4 percent of respondents were very satisfied.

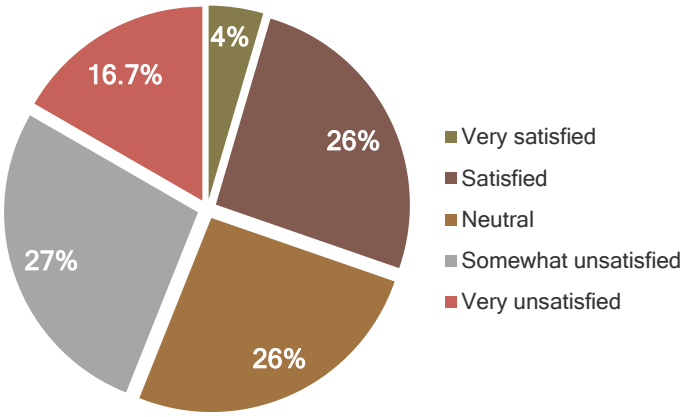


**Figure 4. Satisfaction with Transportation Network**

## Relevant Plans

Local and regional agencies have completed several planning plans and studies in the Timnath area in recent years. Each plan, as listed below, has been used to varying degrees in the development of the Transportation Plan.

### *Timnath Comprehensive Plan*

Timnath's Comprehensive Plan was completed in 2013. The Comprehensive Plan is a representation of what stakeholders envision their Town to look like in the near-term and long-term future. The Plan is used to guide decision-making by the Town's Planning Commission and Town Council. The Plan provides goals, objectives, and action items that will guide the development of Timnath over the next 10 to 20 years. The Plan's transportation goals, objectives, and action items are integrated into this Plan; however, the transportation goals and objectives included in this Transportation Plan supersede those in the Comprehensive Plan upon adoption of this Plan.

### *Parks, Recreation, Open Space and Trails Plan*

Timnath's Parks, Recreation, Open Space, and Trails (PROST) Plan was completed in 2011. The role of the PROST Master Plan is to provide guidance and direction for the acquisition, development, funding, maintenance, and operation of current and future parks, open space, recreation and trail facilities within the Town of Timnath. The Plan's existing and future regional, community, and roadside trails are incorporated into this Transportation Plan.

### *North Front Range Metropolitan Planning Organization 2040 Regional Transportation Plan*

The North Front Range Metropolitan Planning Organization (NFRMPO) recently updated the Regional Transportation Plan. The 2040 Regional Transportation Plan Update was adopted in September 2015. The Plan focuses on the long-term

transportation vision of the North Front Range region. The Plan considers the existing transportation system—the roads, transit, bicycle and pedestrian infrastructure, and the environment and provides a fiscally constrained plan for the future.

### *NFRMPO Regional Bicycle Plan*

In 2013, the NFRMPO developed a regional bicycle plan for inclusion in the 2040 Regional Transportation Plan. This plan evaluates existing infrastructure and future improvement to the regional bicycle network. The plan explores bicycle performance monitoring, infrastructure expansion, design standards, and future connections among the member agencies, trail systems, employment centers, and recreation opportunities.

### *North I-25 Environmental Impact Statement*

In 2011, the Federal Highway Administration (FHWA), in cooperation with the Colorado Department of Transportation (CDOT), prepared a Final Environmental Impact Statement (EIS). The EIS identifies and evaluates multimodal transportation improvements along the I-25 transportation corridor extending from the Fort Collins/Wellington area to Denver. The EIS addresses regional and inter-regional movement of people, goods, and services along I-25.

Other relevant transportation plans for adjacent communities and counties include:

- Larimer County Transportation Plan (September 2006, update in progress)
- Weld County 2035 Transportation Plan (May 2011)
- Fort Collins Transportation Master Plan (February 2011)
- Severance Transportation Plan (April 2015)
- Windsor Transportation Plan (Comprehensive Plan update in progress).

# 2. Goals, Objectives & Actions

The goals listed below were formulated to represent the community's vision and the desired state for the region's transportation system. These eight goals are the foundation for the supporting objectives and actions recommended to realize the stated goals. The goals, objectives and actions included herein supersede the transportation goals, objectives and actions of the Comprehensive Plan upon adoption of this Plan. The updated goals should be incorporated into the next update of the Comprehensive Plan.

| Goal | Objectives | Actions |
|---|---|---|
| **Connectivity**<br>An accessible, connected, and integrated street network that provides efficient route choices for all travel modes. | Ensure all new streets and sidewalks, particularly in and around the Old Town Core and existing residential areas, are designed and installed to connect with existing streets and sidewalks. | Amend the Land Use Code to require connectivity between new streets and existing streets. |
| | | Identify spacing requirements between connecting streets. |
| | | Where cul-de-sacs are proposed, require a sidewalk connection to existing sidewalks. |
| | Increase connectivity of modal and intermodal transportation networks. | Identify and prioritize missing connections for each mode of transportation especially where there are gaps in connecting neighborhoods. |
| | | Evaluate opportunities for development of intermodal facilities to enhance transfers between modes. |
| | Manage automobile congestion. | Ensure coordination of the Town's signal system and work with CDOT in the coordination of their signals. |
| | | Integrate Intelligent Transportation System (ITS) infrastructure such as fiber optics into roadway design where beneficial (e.g., Harmony Road). |
| | | Preserve the integrity of mobility corridors through implementation of access spacing standards and design. |
| **Safety**<br>A safe transportation system for motorized and non-motorized users. | Reduce crash rates for vehicles, bicyclists, and pedestrians. | Regularly identify high crash locations in the Town planning area and identify improvements to mitigate significant crash patterns. |
| | | Consider roundabouts as a way to reduce crash severity. |
| | | Encourage public education and awareness of safety and sharing the road with others. |

| Goal | Objectives | Actions |
|---|---|---|
| **Alternative Transportation**<br>A well-balanced transportation system that also supports pedestrian, bicycle, and transit movement. | Provide on-street bicycle lanes and sidewalks along urban streets throughout the community. | Require sidewalks on all streets in development approvals. Include sidewalks in all street reconstruction, where feasible. |
| | | Consider alternative transportation projects when prioritizing future parks, open space, and trails for the PROST Plan. |
| | | Ensure all new sidewalks and sidewalk crossings comply with the standards of the Americans with Disabilities Act (ADA). |
| | Develop a safe and efficient active transportation system using complete street concepts where feasible. | Design streets to include easily identifiable spaces for all users: drivers, pedestrians, and bicyclists. |
| | | Provide frequent street crossings in developed areas with easily accessible pedestrian crossings at major signalized intersections. |
| | | Design pedestrian and bicycle street crossings to be well-marked and visible to motorists and to enhance the character of the area. |
| | Develop a continuous system of bicycle lanes and trails that connect with Old Town Core, New Town Center, activity centers, and developing neighborhoods. | Incorporate bicycle lanes and trails as recommended in the PROST Plan into the development review process and require trails to be constructed or the right-of-way provided as new developments are approved. |
| | | Include bicycle lanes in the design of new or improved (as possible) streets to complement the trail system and provide bicycle accommodations for different types of bicyclists. |
| | Develop an off-road pedestrian and bicycle trail system that connects open spaces and recreation areas in and around Timnath as adopted in the Parks Recreation and Open Space and Trails (PROST) Plan. | Refer to the trails adopted in the PROST Plan during development review and require new trails to be constructed or the right-of-way for new trails to be provided as new developments are approved. |
| | Incorporate bicycle facility design into new development and street construction projects. | Require amenities, including bicycle parking areas and bicycle racks, in the development review process. |
| | | Implement way-finding and streetscape design that encourages biking and walking. |
| | | Adopt a complete streets policy. |
| | Provide Timnath residents with public transit options. | Optimize and prioritize connections to the Harmony Transportation Transfer Center to improve access to Bustang or other service. |
| | | Coordinate with the NFRMPO and CDOT on future regional transit service and potential Regional Transportation Authority (RTA). |

| Goal | Objectives | Actions |
|---|---|---|
| | | Discuss with Transfort the potential for expanding service into Timnath. |
| | | Work with human service transportation providers in the area to consider service area expansions into Timnath. |
| **Parkway**<br>A parkway that deviates from the CR 5 alignment, protects the Old Town character, provides access to new development, and serves and diverts regional travel from Old Town. | Determine the exact location of the parkway using detailed design studies building on the right-of-way identified in the Timnath Landings Annexation Agreement. | Consider the conditions of approval for projects that might infringe on the proposed Parkway alignment. |
| | | Use the design study and right-of-way identified in the Timnath Farm North Annexation Agreement to identify additional right-of-way that may fall within new developments and require right-of-way dedication as part of project approvals. |
| | | As necessary, revisit past approvals to negotiate needed right-of-way acquisition for the parkway. |
| | Actively involve the public in the design of the new parkway. | Hold public meetings with all key stakeholders to obtain input into the parkway design. |
| | Ensure that the parkway design provides safe, convenient street connections. | Identify streets to connect with Old Town to the west and east, ensuring that intersections onto the parkway are designed as aligned, full movement intersections. |
| | Account for the future parkway in long-range traffic impact studies. | Identify an area of influence within which any proposed development or redevelopment will consider the parkway in their traffic impact studies. |
| | | Until the parkway is completed, traffic impact studies prepared for development proposals will consider traffic impacts both before and after construction of the parkway. |
| | Emphasize Main Street gateway connections and ensure that they project a positive, inviting community image. | Identify the north and south terminus points for the parkway as gateways into Old Town. |
| | | Develop special identification features to identify these points as the beginning of the Old Town area. |
| | | Create a logo and signage specific to Old Town Timnath within any established Town guidelines. |

| Goal | Objectives | Actions |
|---|---|---|
| **Public Facilities**<br>Provision of an adequate level of public facilities, infrastructure and services for Timnath residents. | Plan the locations of new public facilities to meet the needs of existing and future growth. | Refer to the Future Land Use Map to anticipate the location and levels of future development and plan the extension of public facilities accordingly. |
| | | As the Town identifies preferred development areas, plan for the installation of infrastructure and the siting of public facilities to encourage growth in these areas. |
| | Require adequate infrastructure concurrent with development. | Establish level of service (LOS) standards for all infrastructure. |
| | | Require all new development to maintain adopted LOS. |
| | | Adopt an Adequate Public Facilities ordinance. |
| **Environmental Stewardship**<br>A transportation network that restores and maintains the quality of the environment in the Town of Timnath. | Minimize the transportation system's impact on the natural environment. | Support development that is adequately connected to the transportation system. |
| | | Encourage more sustainable modes of travel (bicycling, walking, or transit). |
| | | Support mixed use development and population and employment density that support alternative modes of transportation. |
| | | Implement commuter Transportation Demand Management strategies in coordination with the NFRMPO. |
| | Consider sustainable construction practices for transportation projects. | Support projects that use recycled or reusable materials, reduce the amount of construction waste, and increase the use of renewable energy. |
| **Economic Vitality**<br>A transportation system that supports economic and community vitality. | Increase coordination of land use and transportation planning. | Support appropriate location of new development that is adequately connected to the transportation system. |
| | | Support mixed use development and population and employment density that support alternative modes of transportation. |
| | Integrate infrastructure in a manner that supports economic development. | Improve and/or expand transportation facilities to support access to jobs. |
| | | Consider the transportation system in economic development planning. |
| | | Design transportation corridors that are attractive and enhance the travel experience and quality of life. |

| Goal | Objectives | Actions |
|---|---|---|
| **Partnerships and Funding**<br>Regional collaboration and efficiency in transportation planning, funding, and implementation. | Maintain a short-term and long-range CIP for improvements to and scheduled replacements of the Town's infrastructure that is coordinated with the Comprehensive Plan and Transportation Plan. | Consider implementation of a transportation impact fee and a street maintenance fee. |
| | | Continue the development of a five-year CIP based on projected revenues. |
| | | Continue the development of maintenance and expansion plans for capital facilities based on the anticipated growth patterns in the Comprehensive Plan. |
| | | Prioritize projects based on maintenance needs, anticipated growth, mobility, safety and multimodal needs, and projected cost. |
| | Increase regional coordination in developing a multimodal transportation system. | Keep the Town's appointment to the NFRMPO current and attend all regularly scheduled Technical Advisory Committee and Planning Council meetings. |
| | Improve the coordination and funding of transportation projects. | Work with Larimer County, the NFRMPO, and CDOT to seek additional funding sources to assist with design and construction of the parkway and other regional projects. |
| | | Continue to coordinate with Larimer County, the NFRMPO, and surrounding communities to apply for grants to fund the regional trail system. |
| | | Research and consider creative alternative funding sources, such as public private partnerships. |

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# 3. Current Conditions

To understand how transportation is provided to Timnath residents, an inventory of the existing transportation system within the GMA was conducted. The inventory is an important part of the planning process because it helps identify areas that need improvement.

The roadway inventory includes collecting data associated with the existing street system (such as number of lanes, paving, traffic control devices, posted speed limits, etc.) and compiling traffic counts. The inventory focused on streets with a functional classification of Major Collector and higher; local streets were not included in the inventory. The multimodal inventory includes bicycle and pedestrian facilities, nearby transit service, and railroad information.

## Street Network and Traffic

### Roadway Conditions

The principal component of Timnath's transportation system is the roadway network, with major streets primarily located along mile-spaced section lines. **Figure 5** illustrates surface types (paved versus gravel), number of lanes, and lane/shoulder widths for roadway segments within and surrounding the Timnath GMA. Harmony Road from I-25 to the Great Western Railway of Colorado (GWR) railroad tracks is the only roadway with four through lanes in the GMA. Some roadway segments, such as Three Bell Parkway and River Pass Road along the Timnath Ranch development, have a three-lane cross-section with two through lanes and a center turn lane. Otherwise, roads within the GMA consist of two through lanes, one in each direction. **Figure 5** also notes shoulder widths.

### Regionally Significant Corridors

The NFRMPO has identified Regionally Significant Corridors, which serve as regional connections between North Front Range communities. The Timnath GMA has five identified corridors: SH 14, Harmony Road, Prospect Road, Larimer County Road (LCR) 1/Weld County Road (WCR) 13, and LCR 5.

The Colorado Department of Transportation (CDOT) owns and maintains **SH 14,** a two-lane east-west state highway that is a part of the National Highway System. SH 14 bisects the GMA, running just north of the existing Town limits. To the west, it provides access to Fort Collins, I-25, and US 287. To the east, it provides access to Severance, Ault, US 85, and further east to Sterling and I-76.

**Harmony Road** is a major east-west roadway that provides the primary access to Timnath. To the west, it provides access to southern Fort Collins, I-25, and US 287. To the east, it provides access to Windsor, Severance, Eaton, and US 85. It has four lanes between I-25 to the GWR tracks, while it has two lanes further east and six lanes further west.

**Prospect Road** is a two-lane east-west road one mile south of SH 14. To the west, it provides access to Fort Collins, I-25, and US 287. To the east, it provides access to SH 257, where it terminates. Prospect Road's designation as a Regionally Significant Corridor is from Main Street to the west.

**LCR 1/WCR 13,** a two-lane north-south roadway, runs along or near the eastern boundary of the GMA. It provides access to rural areas to the north, although it is only considered a Regionally Significant Corridor up to SH 14. To the south, it parallels I-25 as Colorado Boulevard to the Denver metropolitan area, providing access to Windsor, SH 392, and US 34 along the way.

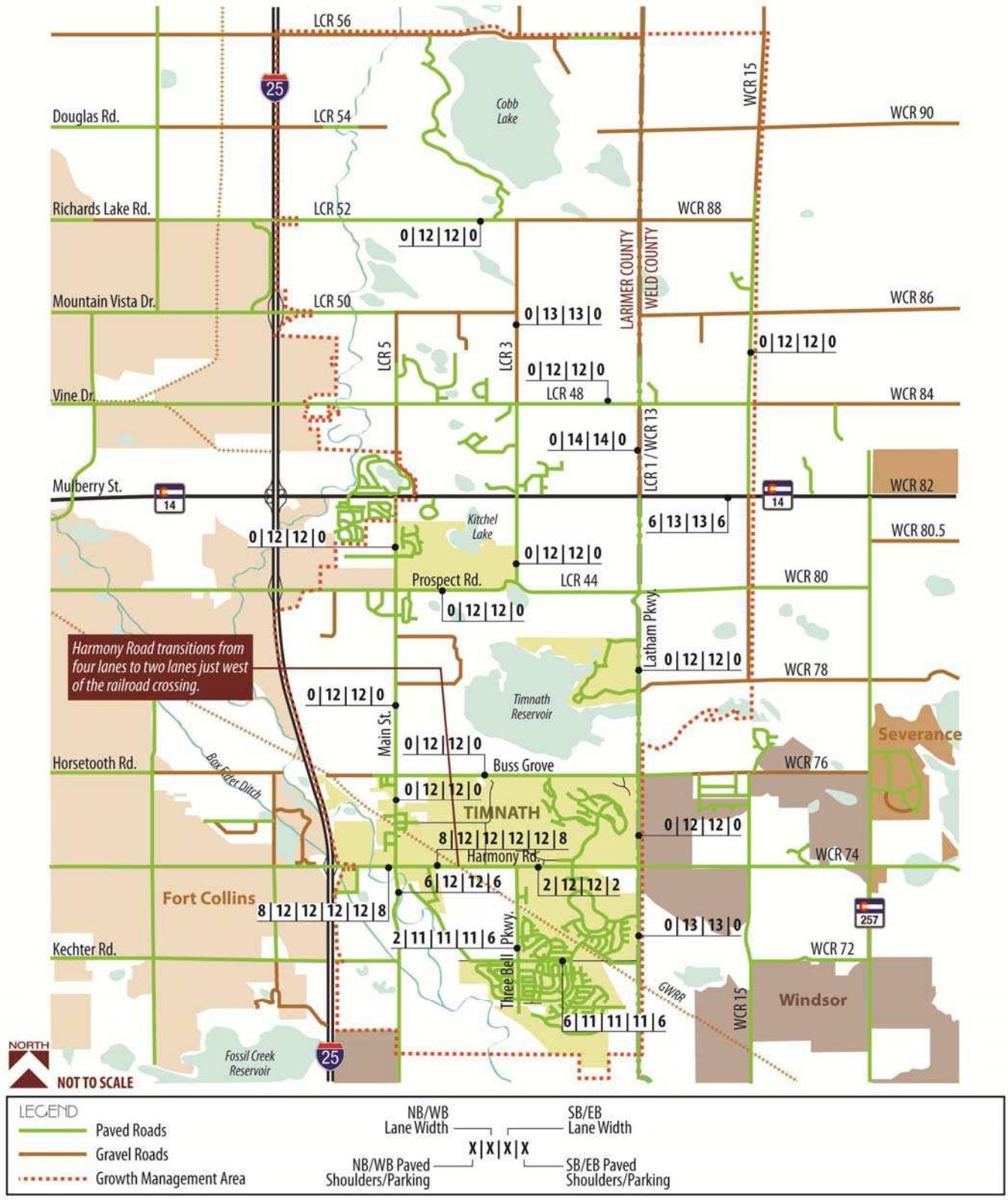



**Figure 5. Existing Roadway Characteristics**

**Main Street (LCR 5),** a two-lane north-south street, runs through Old Town, parallel to I-25. The roadway does not provide regional connectivity north of SH 14, where it ceases to be classified as a Regionally Significant Corridor. To the south, it provides access to the western edge of Windsor, eastern edge of Loveland, SH 392, and US 34.

Additionally, three other nearby state facilities are Regionally Significant Corridors: I-25 running along the western Town and GMA boundary, SH 257 just east of the GMA, and SH 392 just south of the GMA.

## Traffic Control Devices

**Figure 6** illustrates the existing traffic control devices in the Timnath GMA, with most rural intersections and important intersections within Timnath documented. Intersection traffic control ensures safe and efficient traffic operation by assigning right-of-way between conflicting traffic streams. This assignment of right-of-way provides uniform and predictable movements of vehicles, bicyclists, and pedestrians. Typical intersection traffic control may consist of a traffic signal or a STOP sign on the minor street approaches. All five traffic signals in the Timnath GMA are along Harmony Road (at the I-25 ramps, Weitzel Street, LCR 5, Three Bell Parkway, and Club Drive). Nearly all four-way intersections of section-line roads have stop sign control on at least the minor street approach, and several "T" intersections have no control. A few intersections within Town limits, including the Prospect Road/Main Street and Buss Grove/LCR 1 intersections, have all-way stop sign control.

**Figure 7** shows the posted speed limits. Like most of northern Colorado, most unpaved roads in the Timnath GMA have no posted speed limit. For paved roads within the Town limits, posted speed limits generally range from 25 to 45 miles per hour (mph) depending on the adjacent land uses and roadway facility type. Outside the Town limits, speed limits range from 40 to 75 mph.

## Traffic Volumes

CDOT, Larimer County, Timnath, Fort Collins, and Weld County provided existing daily traffic volumes on roadways within and around the Timnath GMA. These counts were recorded between 2011 and 2014 as part of regular count programs or were obtained from recent transportation studies. Ten additional counts were conducted in March 2015 as part of this planning effort to fill in gaps along important roadway segments or to refresh outdated count data. Two of these counts, north of Buss Grove along LCR 1 and LCR 5, included vehicle classification counts. **Figure 8** shows each of these counts and the year they were recorded.

Harmony Road near I-25 has the highest volumes in the GMA with 32,000 vehicles per day (vpd) just east of I-25. Daily traffic volumes along Harmony Road decrease further east toward LCR 1. The next highest volumes in the GMA are along SH 14 with 9,400 vpd just east of Main Street. Main Street south of Kechter Road, with 7,400 vpd, is the only other roadway in the GMA with over 5,000 vpd.

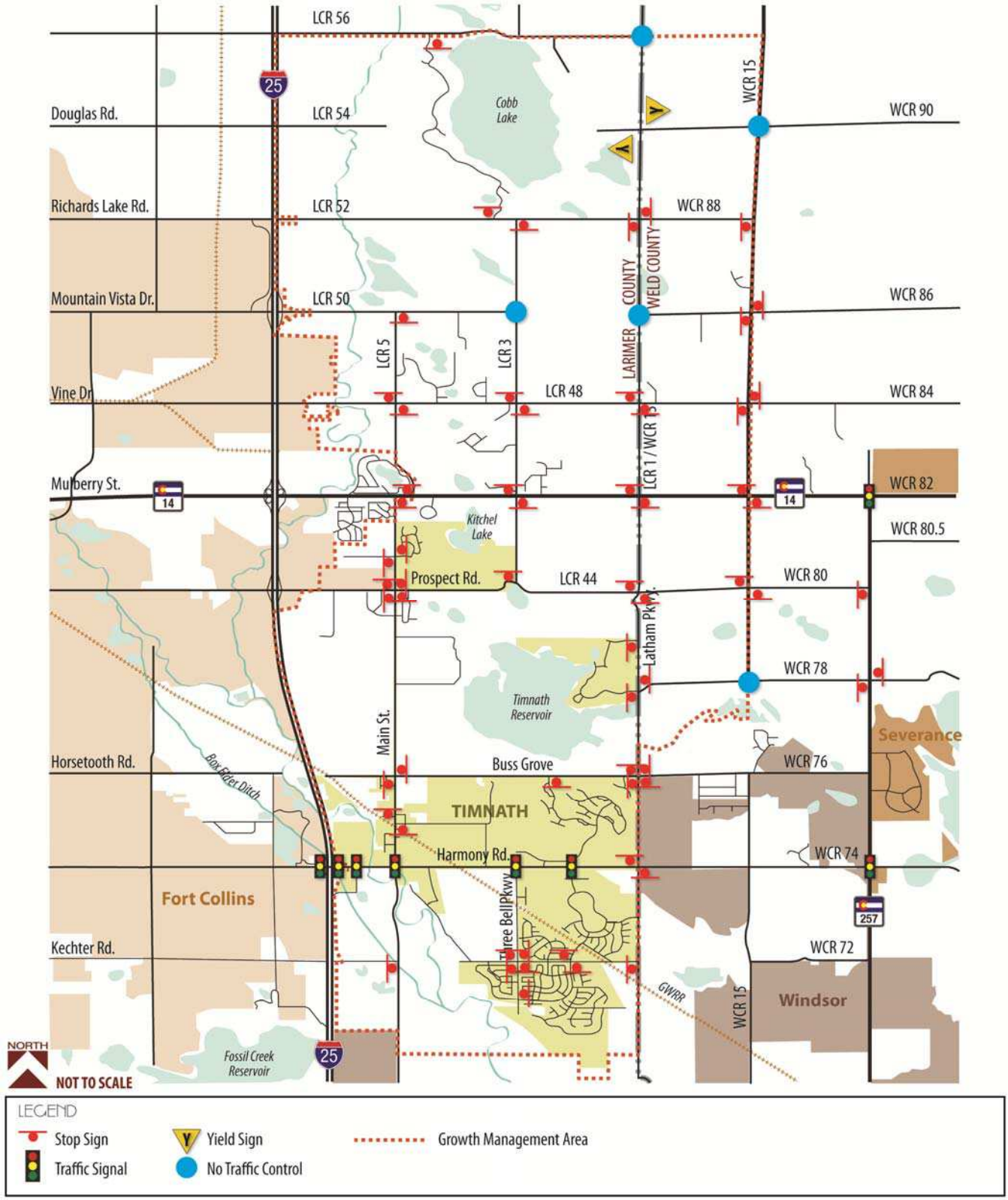



**Figure 6. Existing Traffic Control Devices**

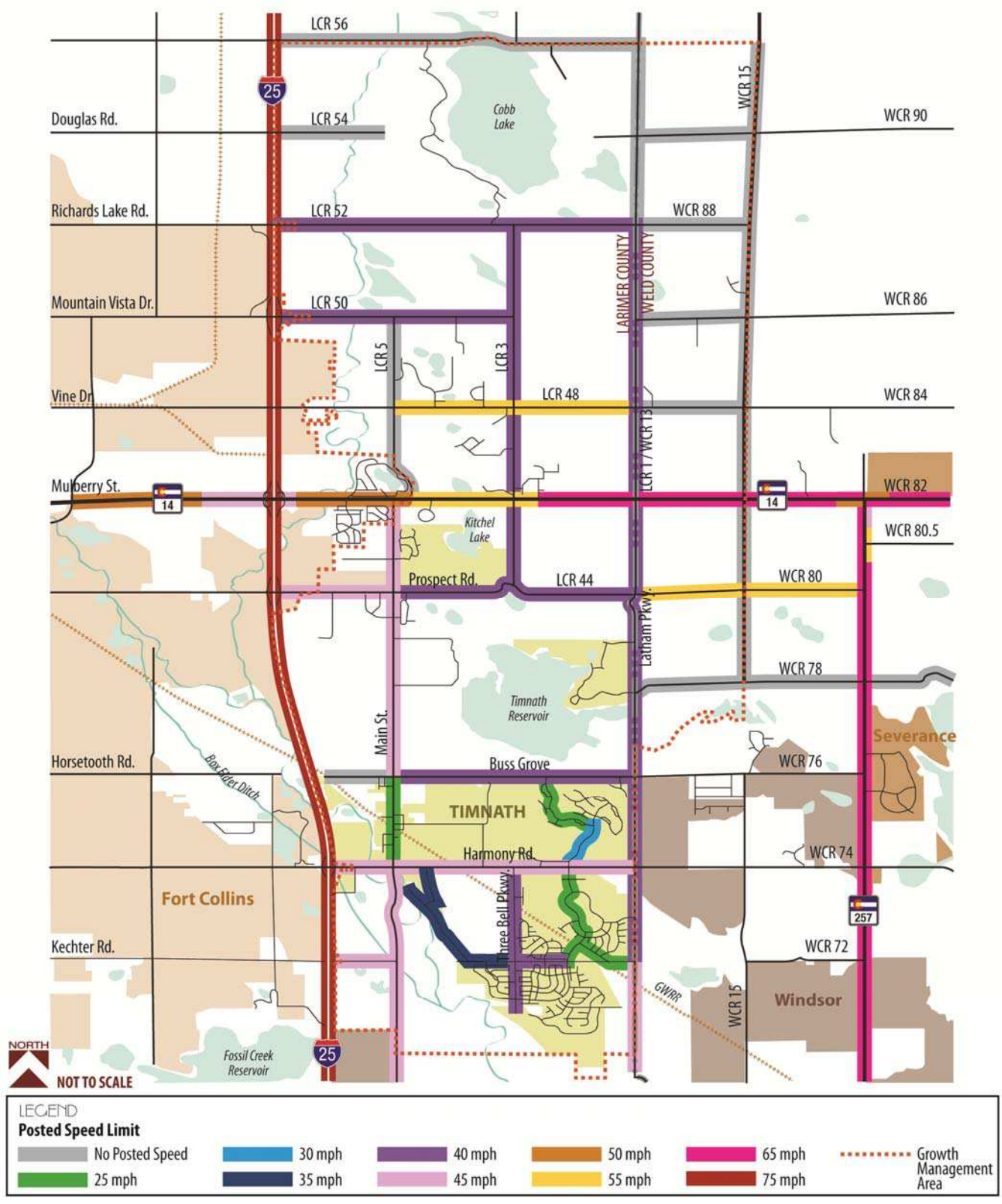



**Figure 7. Posted Speed Limits**

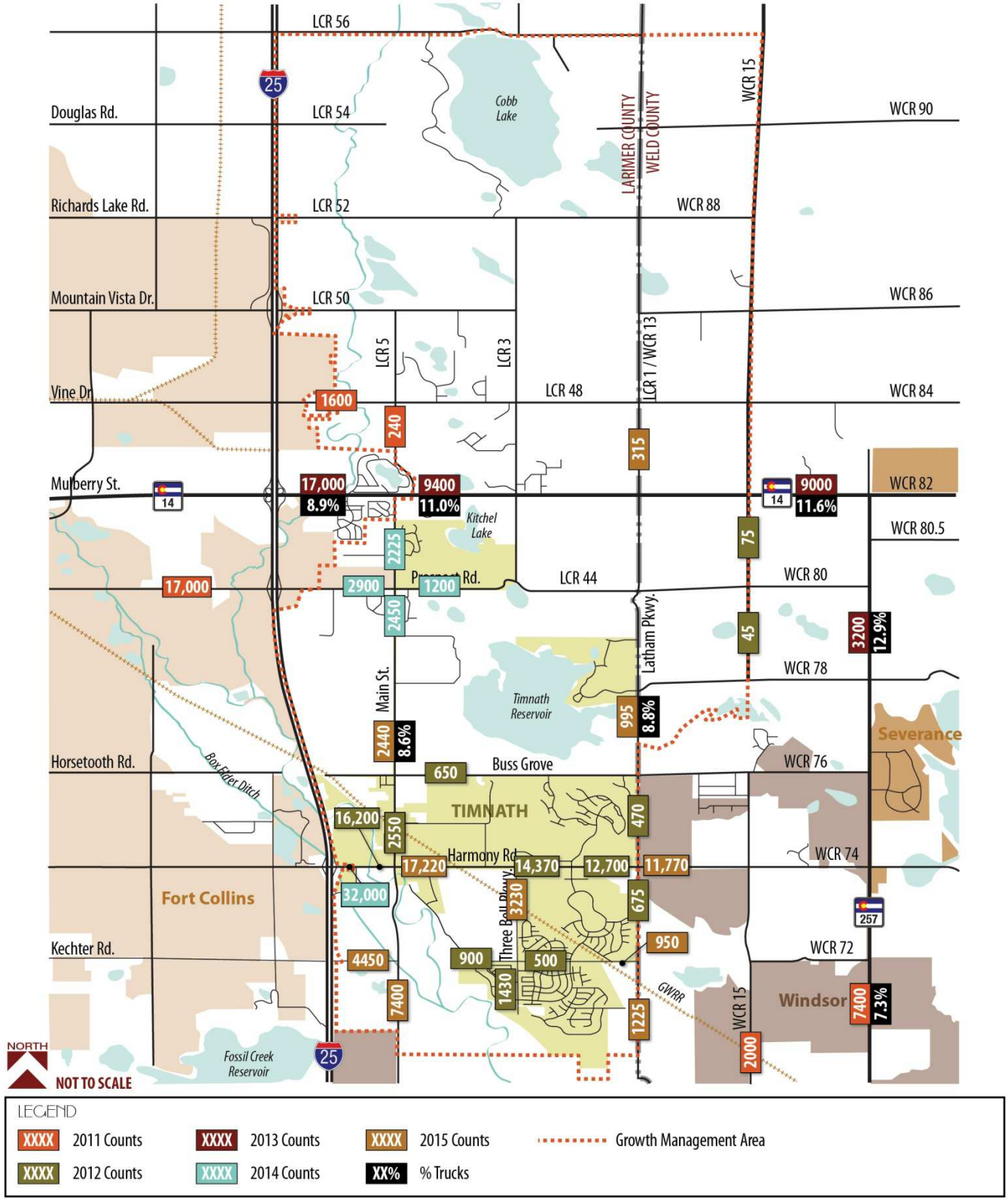



**Figure 8. Existing Daily Traffic Volumes**

## Bicycle and Pedestrian Facilities

Timnath has an expanding network of bicycle and pedestrian facilities, as shown on **Figure 9**. This network continues to grow in conjunction with new development.

### Bicycle Facilities

Bikeways primarily serve two purposes: as a means of transportation (often for commuting) and for recreation. The design of bicycle facilities differs for each of these purposes. Commuting bicyclists often want to ride the most direct route from their origin to their destination, even along streets with higher traffic volumes. Recreational cyclists, on the other hand, prefer to ride on either detached shared use trails or streets with low traffic volumes.

Timnath currently several on-street bicycle lanes/wide shoulders. One facility is along Harmony Road between the GWR crossing and I-25. This facility is on both sides of the roadway and continues into Fort Collins. Main Street has bike lanes between Harmony Road and the south GMA, and Three Bell Parkway has a northbound bike lane on the east side of the street (the southbound bike lane will be added when the land west of the street is developed). Some major collectors within neighborhoods also have striped bike lanes including Club Drive, Grand Tree Boulevard and Folsom Parkway.

### Trails

Timnath is fortunate to be located at the crossroads of major planned regional trail systems. Colorado State Parks is working to create a continuous multi-use trail extending along the Front Range from New Mexico to Wyoming. A Front Range Trail Corridor Plan has been completed and proposes a route of approximately 725 miles. A key element of this trail is a connection from Greeley to the foothills west of Fort Collins along the Cache la Poudre River, through Timnath. Timnath recently completed a section of the Poudre River Trail, which is located north and east of Wal-Mart. Connecting the Poudre River Trail across I-25 is a regional desire, and CDOT is pursing funding options to expedite the bridge replacements, which would facilitate this critical trail connection.

### Pedestrian Facilities

Sidewalks and shared use paths generally serve the purpose of providing pedestrian access between neighborhoods to commercial areas and to community resources such as parks, libraries, community gardens, and schools. Sidewalks and shared use paths can also be used for recreational purposes. Timnath has a growing network of sidewalks, primarily on local and collector roads. **Figure 9** depicts sidewalks on roads with a functional classification of only Major Collector and higher; therefore, existing sidewalks on local streets and within neighborhoods are not shown.

Streets in Old Town did not initially include sidewalks. However, sidewalks were built on both sides of Main Street from the GWR crossing north to Timnath Elementary School when Main Street was reconstructed. Sidewalks were also added to 4$^{th}$ Avenue and 3$^{rd}$ Avenue from Main Street east to the alley. Other streets in Old Town currently do not have any pedestrian facilities.

Detached sidewalks are prevalent within the newer, residential neighborhoods, such as Timnath Farms and Timnath Ranch. These newer developments have detached sidewalks on the local and collector streets. As development continues in Timnath, pedestrian connectivity will increase.

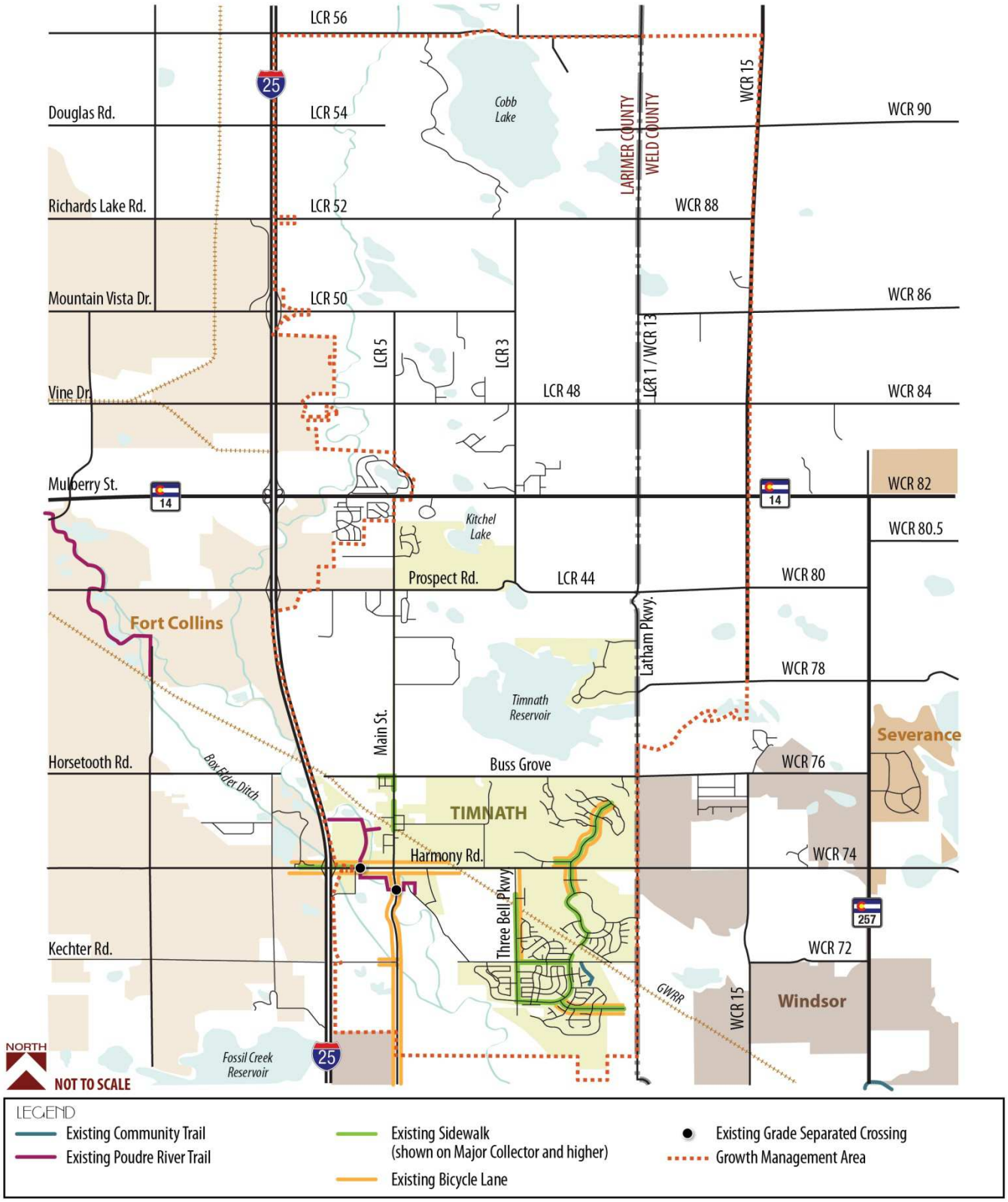



**Figure 9. Existing Bicycle and Pedestrian Facilities**

## Transit in the Region

Timnath currently has no transit service; however, many services exist in the immediate vicinity. The following subsections summarize existing public transit and human services transportation options surrounding Timnath.

### Transfort

Transfort is the primary transit service provider for the city of Fort Collins. Transfort does not currently serve Timnath; however, Route 16 runs along Harmony Road, with a stop at the Harmony Transfer Center, as shown on **Figure 10**. Route 16 operates on 30-minute headways and connects to the South Transit Center (STC) and Fossil Ridge High School using Harmony Road.

At the STC, riders can transfer to the following routes: 6, 12, 19, FLEX and MAX bus rapid transit (BRT). MAX BRT operates on 10-minute headways during peak hours and connects the major activity and employment centers throughout Fort Collins, including Colorado State University and Old Town. The FLEX serves stops between Fort Collins, Loveland, Berthoud, and Longmont. Transfers to Denver and Boulder through the Regional Transportation District (RTD) bus system are available in Longmont.

### CDOT Bustang

CDOT successfully launched an Interregional Express (IX) bus service to connect commuters along the I-25 Front Range (and I-70 Mountain Corridor) in July 2015. Bustang's focus is longer-distance commuters and was initiated to help alleviate congestion and offer more travel choices on the State's major corridors. The North route serves northern Colorado with a stop at I-25 and Harmony Road, as shown in **Figure 10**. The North route includes five roundtrips every weekday connecting travelers to Denver. A trip from Fort Collins to Denver Union Station costs $10/trip.

### NFRMPO SmartTrips Program

The NFRMPO's SmartTrips program assists travelers in northern Colorado to travel as often as possible by means other than driving alone in a car. The program provides resources, information, and incentives to help encourage the use of alternative modes of transportation. Information and resources are available for biking, walking, carpooling, vanpooling, transit, and teleworking.

SmartTrips offers assistance with finding fellow carpoolers and vanpoolers through the CarGo and VanGo services. CarGo helps match commuters with similar commute profiles to share their ride. The program uses an online database to match commuters and to help participants track carpool plans. VanGo organizes vanpools for commuters that have similar schedules and origins and destinations. VanGo vanpools have a minimum of six people and travel a one-way distance of 20 to 80 miles. Vanpool members pay a monthly fee for the vehicle, fuel, maintenance, and insurance.

### Senior Alternatives in Transportation (SAINT)

SAINT is a human services transportation provider that operates within the city limits of Fort Collins and Loveland. SAINT serves people 60 years and older and people with disabilities that prevent them from driving. SAINT provides transportation to any destination within the service areas for any purpose. SAINT operates from 8:15 AM to 4:00 PM Monday through Friday. SAINT is a pre-scheduled service. Riders must call to make reservations at least three business days in advance of the requested date. There is no charge for SAINT's services.

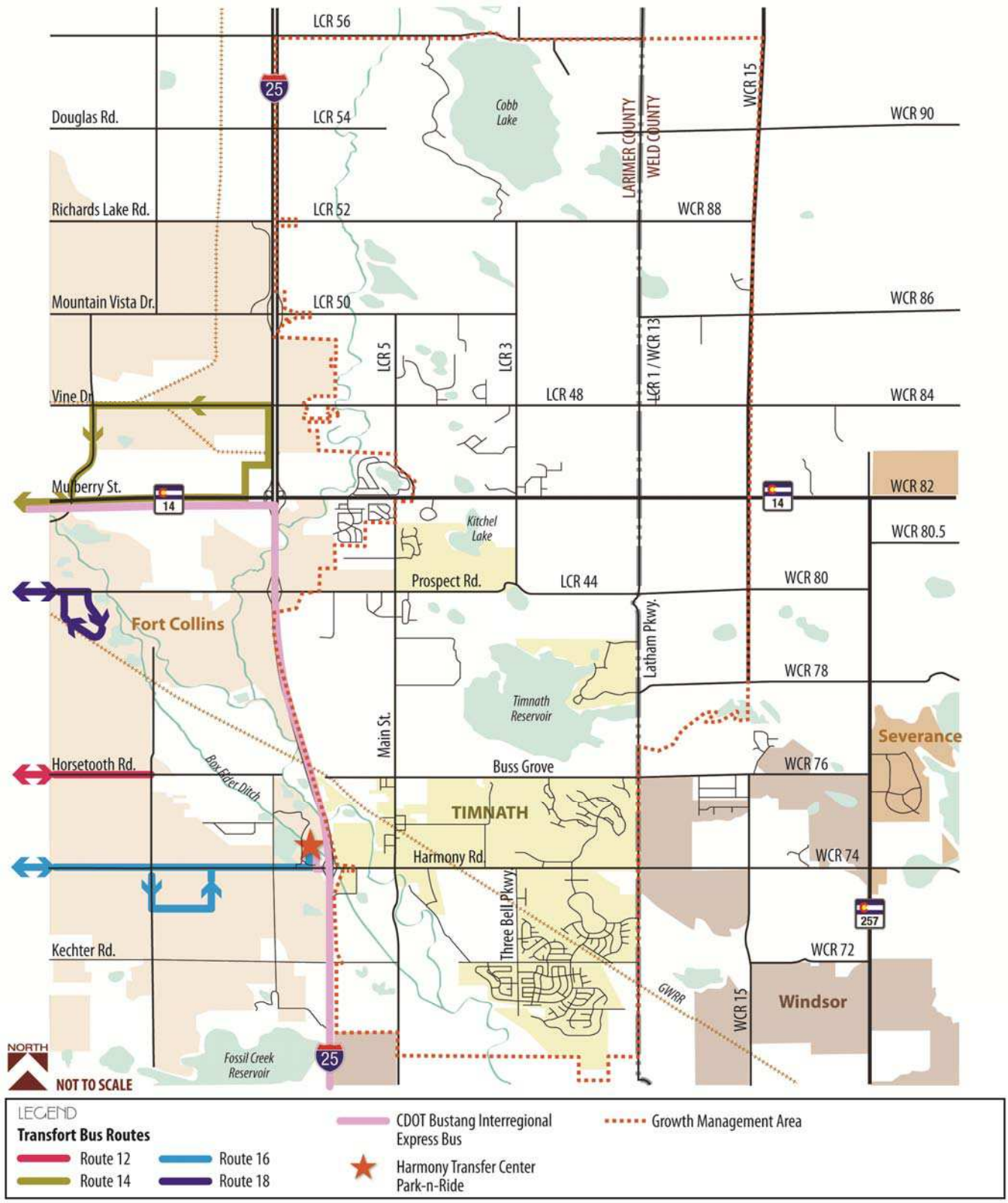



**Figure 10. Existing Transit in the Region**

## Railroad

The Greeley Line of the GWR serves the Timnath area. The Greeley Line is a single track that bisects the Town of Timnath from northwest to southeast, as shown in **Figure 11**. According to the Great Western Railway, an average of four trains per day passes through the Town of Timnath, traveling 1 to 20 mph. However, Town staff has indicated that the number of trains per day is considerable higher at times. The maximum time table speed is 20 mph, and the train movements are indicated to occur during the day (rather than at night).[1]

There are five railroad crossings within the study area. All crossings are at-grade crossings with varying crossing controls. **Figure 11** shows each crossing location with its respective control type. Both gates and signs control Crossing B, which crosses Harmony Road. Crossing A, located in Old Town on LCR 5/Main Street, and Crossing C, located along Three Bell Parkway, are both stop sign controlled. Crossing D, which crosses Twin Pass Road, and Crossing E, which crosses Latham Parkway (LCR 1, WCR 13), have crossing signs, but no stop signs or gates.

## Barriers to Transportation

Barriers to transportation prevent connectivity and access, and force travelers to go out of their way to make a connection. Although these barriers can be assets to one particular mode or for recreation, they can lead to unsafe travel or discourage the use of modes such as walking and biking. These barriers can exist in many forms, both natural and man-made. Many common forms of barriers to transportation include limited-access highways, interchanges, railroads, bodies of water, difficult terrain, and large land uses.

Although not directly within the Timnath GMA, I-25 is perhaps the largest barrier to local trips by car, bike, or foot. Although the interstate is one of the greatest transportation assets for regional and interstate connectivity to the area, its limited access nature makes local connections between Timnath and communities such as Loveland and Fort Collins more difficult. A total of seven crossings of I-25 are near the Timnath GMA, with four having an interchange with I-25 and only one providing multimodal facilities (Harmony Road). Most of these crossings are in the northern half of the GMA, while most of Timnath's existing population is positioned in the southern portion. This relationship can lead to increased congestion along crossings that are major roadways, such as Harmony Road.

The GWR and area bodies of water present similar connectivity and access challenges as a freeway like I-25 because these barriers also need crossings to allow movement across them. At-grade railroad crossings can present safety challenges to all modes, and trains can block key access points for neighborhoods such as Timnath Ranch, while grade-separated crossings are expensive. Similarly, crossings of moving water can be expensive and must account for flood-related concerns, while large lakes such as the Timnath Reservoir create an obstacle for the county roadway section line grid system, forcing traffic to travel out of direction.

[1] U. S. DOT Crossing Inventory for crossing 244878F, http://safetydata.fra.dot.gov/officeofsafety/publicsite/crossing/crossing.aspx

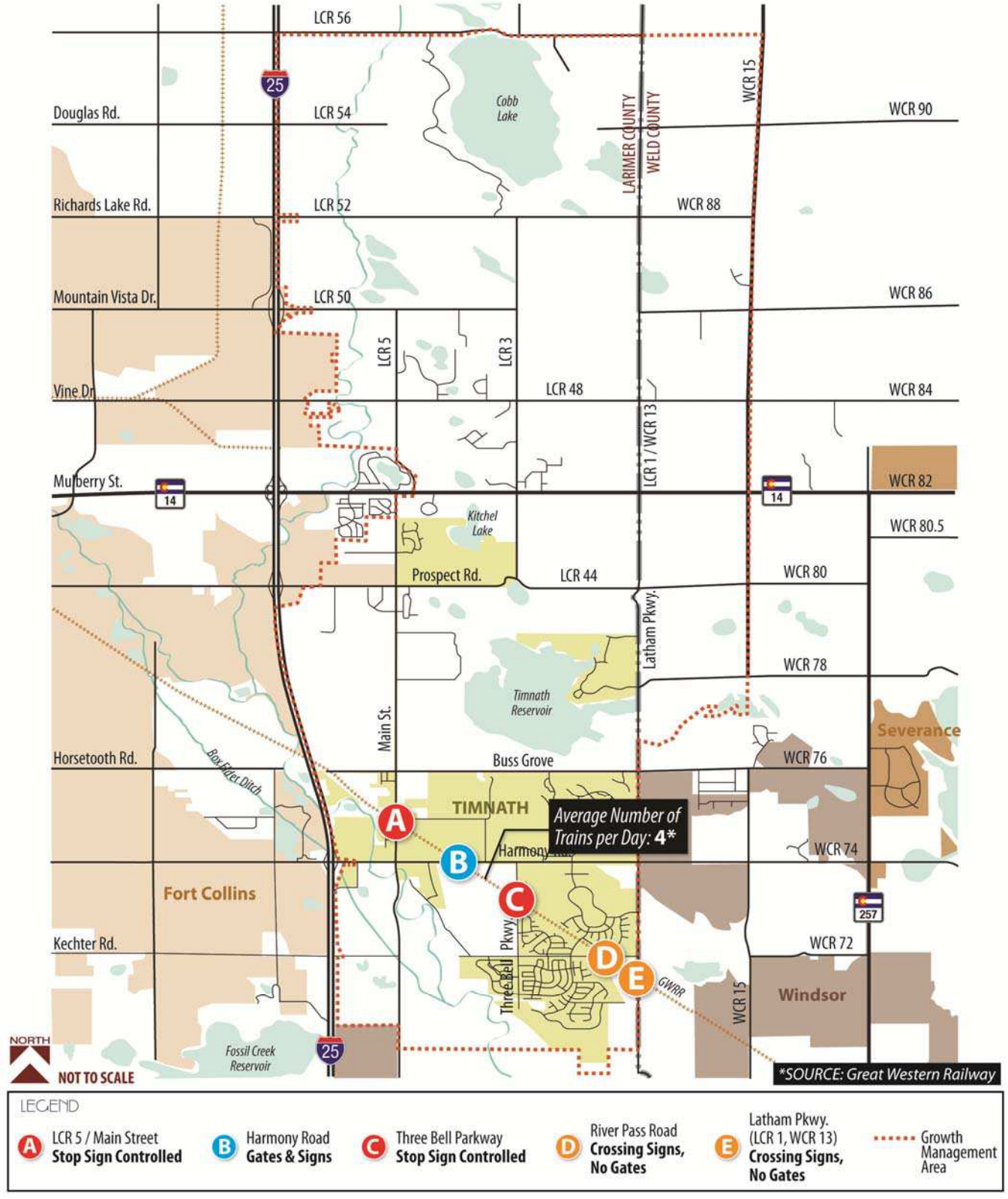



**Figure 11. Railroad Inventory**

# 4. Future Conditions

To properly identify potential improvement projects for Timnath's transportation system, it is important to first understand the nature and volume of future traffic in the GMA. It is also useful to understand existing traffic flow patterns, as presented in the **Chapter 3**. To help facilitate these analyses, the NFRMPO's Fiscally Constrained transportation model was used. The model not only gives the ability to analyze the GMA, but also provides a regional context of traffic flows.

Land use estimates and the transportation network are two basic inputs to the NFR model. The amount of traffic that different types of land uses (residential, retail, office, industrial, etc.) generate has been measured for the North Front Range and around the country. The amount of development (number of households or jobs) can then be used to determine the volume of traffic that will be generated from any specified area. To develop these specific allocations of residential and commercial development throughout the region, the NFRMPO has subdivided its planning area into traffic analysis zones (TAZs). The NFRMPO recently updated the existing and future land use forecasts within these TAZs with input from the local agencies, including Timnath. **Figure 12** shows the 40 TAZs within the Timnath GMA.

## Land Use Forecasts

The NFR base year model includes estimates of the number of households and employees for the year 2012, which were derived with input from Town staff. Future land uses within the GMA were derived from land use types and boundaries set forth by the Timnath Comprehensive Plan. Town staff provided the NFRMPO with estimates as to how much of this land use should be incorporated into the NFR 2040 modeling horizon. The remaining land use was reserved as the "buildout" scenario, which has no associated date but assumes the complete development of the GMA according to land use designations and allowable densities defined within Timnath's Comprehensive Plan. Household and employment numbers provided by the NFRMPO for 2040 and the buildout horizon were used unchanged. **Table 1** summarizes the total estimated number of households and employment for the 40 TAZs within the Timnath GMA, in 2012, 2040 and at buildout of the community.

**Table 1. Land Use Growth Summary**

| Time Period | Households | Employment |
|---|---|---|
| 2012 | 1,574 | 1,801 |
| 2040<br>*(% Annual Growth)* | 11,418<br>*(7.3%)* | 9,328<br>*(6.0%)* |
| Buildout | 21,125 | 22,288 |

*NOTE: Some TAZs extend beyond the Timnath GMA boundaries.*

**Table 2** provides the 2040 land use estimates used for the 40 TAZs within the Timnath GMA, while **Table 3** provides the estimated land use for the buildout scenario – both of which were unchanged from the land use received from the NFRMPO. **Figure 13** through **Figure 18** map households and employment in 2012, 2040, and the buildout scenario to illustrate where growth is expected to occur during the planning horizons.

## Travel Demand Modeling

To develop traffic forecasts, two versions of the NFRMPO model must be used to determine the amount of growth in traffic volumes expected on the area's roadways. The base 2012 model represents existing roadway network characteristics (roadway alignments, number of lanes, and classifications) and land use conditions (households, employment, and area types). Existing locally-significant roadways were added to the model to assist in analysis for this plan.

The future conditions model takes the base 2012 model and applies the new NFR 2040 Fiscally Constrained transportation network, along with the added locally-significant roadways. This network includes those improvement projects committed over the next six years plus the projects included in the Fiscally Constrained list of the NFRMPO 2040 Regional Transportation Plan. Two improvement projects included in the Fiscally Constrained Plan are within the Timnath GMA: (1) widening Harmony Road to four lanes from the GWR to LCR 1, and (2) the construction of the parkway around the east side of Old Town.

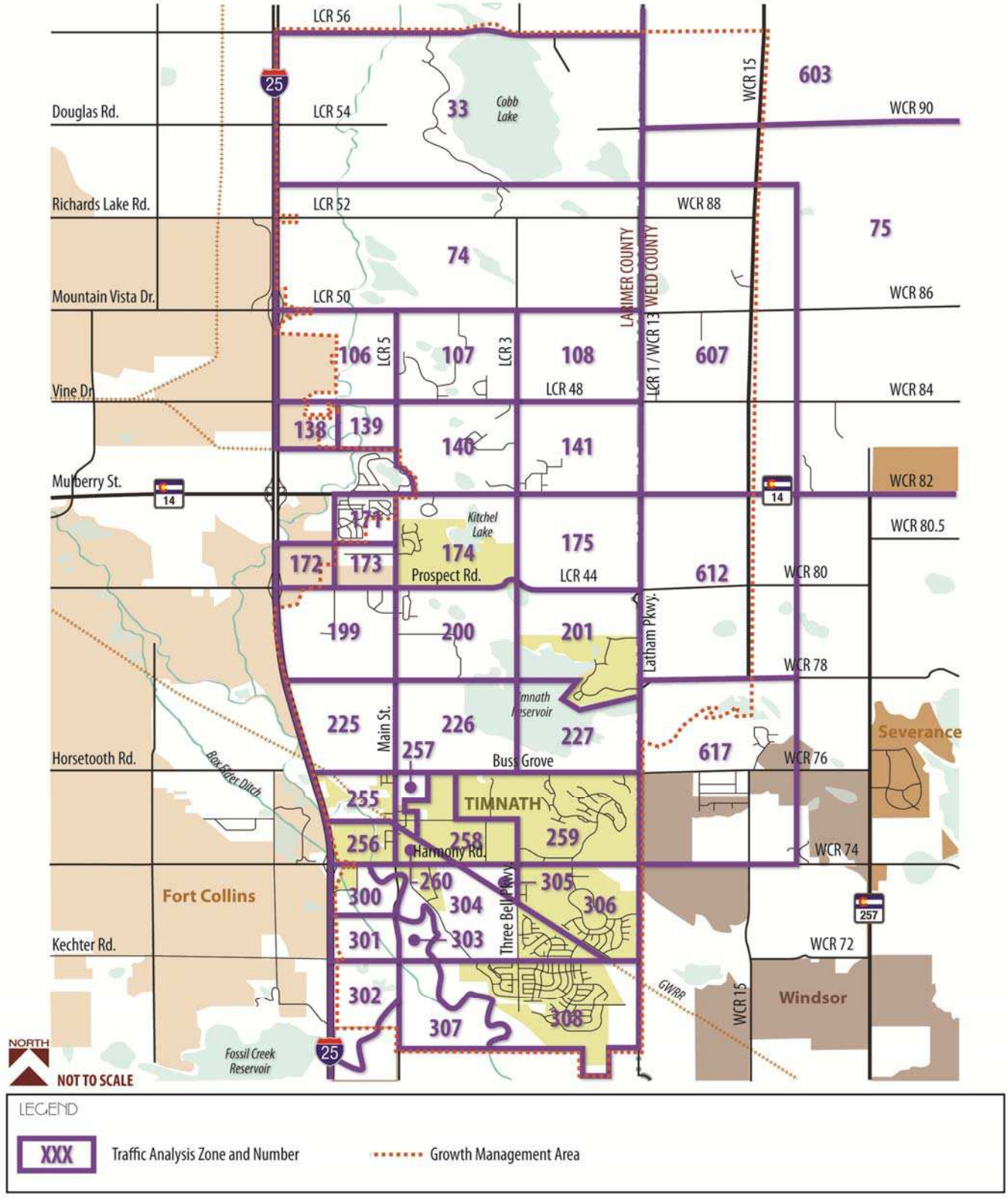



**Figure 12. NFRMPO Traffic Analysis Zones (TAZs)**

## Table 2. 2040 Land Use Forecasts by TAZ

| TAZ | Households | Retail Employment | Service Employment | Base Employment | Medical Employment | Total Employment |
|---|---|---|---|---|---|---|
| 33 | 183 | 1 | 123 | 9 | 0 | 133 |
| 74 | 455 | 11 | 83 | 98 | 2 | 194 |
| 75* | 513 | 29 | 214 | 267 | 2 | 512 |
| 106* | 140 | 17 | 96 | 177 | 2 | 292 |
| 107 | 81 | 0 | 9 | 3 | 0 | 12 |
| 108 | 65 | 0 | 25 | 41 | 0 | 66 |
| 138* | 130 | 5 | 271 | 30 | 91 | 397 |
| 139 | 34 | 0 | 0 | 0 | 0 | 0 |
| 140 | 173 | 1 | 5 | 0 | 0 | 6 |
| 141 | 207 | 4 | 19 | 0 | 0 | 23 |
| 171* | 278 | 0 | 3 | 2 | 0 | 5 |
| 172* | 300 | 67 | 293 | 0 | 0 | 360 |
| 173 | 17 | 0 | 0 | 0 | 0 | 0 |
| 174 | 400 | 49 | 327 | 7 | 0 | 383 |
| 175 | 50 | 3 | 365 | 290 | 42 | 700 |
| 199 | 500 | 93 | 481 | 32 | 0 | 606 |
| 200 | 28 | 0 | 3 | 5 | 0 | 8 |
| 201 | 142 | 0 | 0 | 5 | 0 | 5 |
| 225 | 250 | 28 | 164 | 8 | 0 | 200 |
| 226 | 250 | 0 | 26 | 21 | 3 | 50 |
| 227 | 100 | 0 | 26 | 21 | 3 | 50 |
| 255 | 96 | 24 | 291 | 43 | 0 | 358 |
| 256 | 63 | 280 | 31 | 44 | 0 | 355 |
| 257 | 33 | 9 | 24 | 3 | 0 | 36 |
| 258 | 506 | 65 | 389 | 0 | 0 | 454 |
| 259 | 712 | 0 | 38 | 3 | 0 | 41 |
| 260 | 45 | 43 | 258 | 0 | 0 | 301 |
| 300 | 8 | 280 | 905 | 0 | 0 | 1,185 |
| 301 | 0 | 41 | 103 | 81 | 12 | 237 |
| 302* | 200 | 72 | 428 | 0 | 0 | 500 |
| 303 | 150 | 0 | 44 | 0 | 0 | 44 |
| 304 | 1,500 | 73 | 439 | 0 | 0 | 512 |
| 305 | 4 | 0 | 0 | 166 | 0 | 166 |
| 306 | 1,000 | 42 | 558 | 0 | 0 | 600 |
| 307 | 150 | 0 | 0 | 32 | 0 | 32 |
| 308 | 600 | 7 | 49 | 4 | 0 | 60 |
| 603* | 293 | 19 | 141 | 161 | 0 | 321 |
| 607* | 579 | 7 | 57 | 39 | 1 | 104 |
| 612* | 64 | 0 | 0 | 0 | 0 | 0 |
| 617* | 1,119 | 0 | 6 | 8 | 6 | 20 |

** TAZ extends beyond the Timnath GMA boundaries*

## Table 3. Buildout Land Use Forecasts by TAZ

| TAZ | Households | Retail Employment | Service Employment | Base Employment | Medical Employment | Total Employment |
|---|---|---|---|---|---|---|
| 33 | 183 | 1 | 123 | 9 | 0 | 133 |
| 74 | 567 | 111 | 840 | 992 | 20 | 1,963 |
| 75* | 513 | 29 | 214 | 267 | 2 | 512 |
| 106* | 140 | 112 | 633 | 1,166 | 13 | 1,924 |
| 107 | 81 | 0 | 13 | 5 | 0 | 18 |
| 108 | 65 | 0 | 25 | 41 | 0 | 66 |
| 138* | 130 | 5 | 283 | 31 | 95 | 414 |
| 139 | 72 | 0 | 0 | 0 | 0 | 0 |
| 140 | 193 | 50 | 251 | 0 | 0 | 301 |
| 141 | 1,030 | 217 | 1,028 | 0 | 0 | 1,245 |
| 171* | 278 | 0 | 8 | 5 | 0 | 13 |
| 172* | 300 | 323 | 1,414 | 0 | 0 | 1,737 |
| 173 | 17 | 0 | 0 | 0 | 0 | 0 |
| 174 | 561 | 81 | 540 | 12 | 0 | 633 |
| 175 | 1,024 | 4 | 417 | 331 | 48 | 800 |
| 199 | 802 | 131 | 676 | 45 | 0 | 852 |
| 200 | 709 | 0 | 19 | 31 | 0 | 50 |
| 201 | 313 | 0 | 0 | 25 | 0 | 25 |
| 225 | 474 | 47 | 273 | 13 | 0 | 333 |
| 226 | 331 | 0 | 27 | 22 | 3 | 52 |
| 227 | 273 | 0 | 30 | 24 | 3 | 57 |
| 255 | 147 | 30 | 367 | 54 | 0 | 451 |
| 256 | 73 | 285 | 32 | 45 | 0 | 362 |
| 257 | 33 | 11 | 28 | 3 | 0 | 42 |
| 258 | 1,121 | 65 | 389 | 0 | 0 | 454 |
| 259 | 918 | 0 | 251 | 20 | 0 | 271 |
| 260 | 45 | 52 | 312 | 0 | 0 | 364 |
| 300 | 100 | 280 | 905 | 0 | 0 | 1,185 |
| 301 | 100 | 41 | 103 | 81 | 12 | 237 |
| 302* | 200 | 230 | 1,367 | 0 | 0 | 1,597 |
| 303 | 150 | 0 | 44 | 0 | 0 | 44 |
| 304 | 1,500 | 98 | 587 | 0 | 0 | 685 |
| 305 | 4 | 0 | 0 | 166 | 0 | 166 |
| 306 | 1,000 | 52 | 684 | 0 | 0 | 736 |
| 307 | 150 | 0 | 0 | 77 | 0 | 77 |
| 308 | 997 | 15 | 104 | 8 | 0 | 127 |
| 603* | 457 | 19 | 143 | 164 | 0 | 326 |
| 607* | 1,039 | 112 | 914 | 625 | 16 | 1,667 |
| 612* | 2,430 | 91 | 578 | 260 | 20 | 949 |
| 617* | 2,605 | 0 | 426 | 568 | 426 | 1,420 |

** TAZ extends beyond the Timnath GMA boundaries*

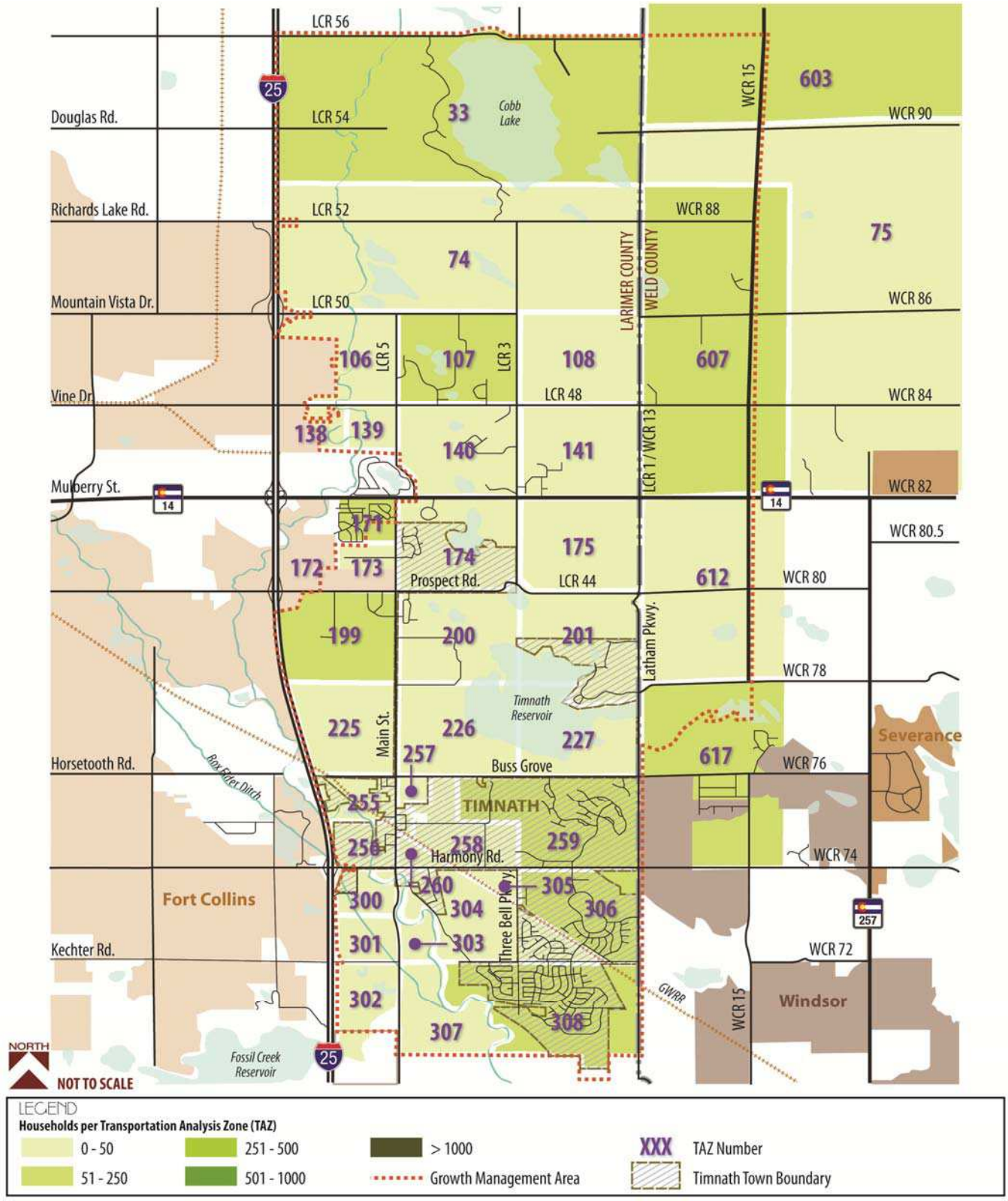



**Figure 13. 2012 Households by TAZ**

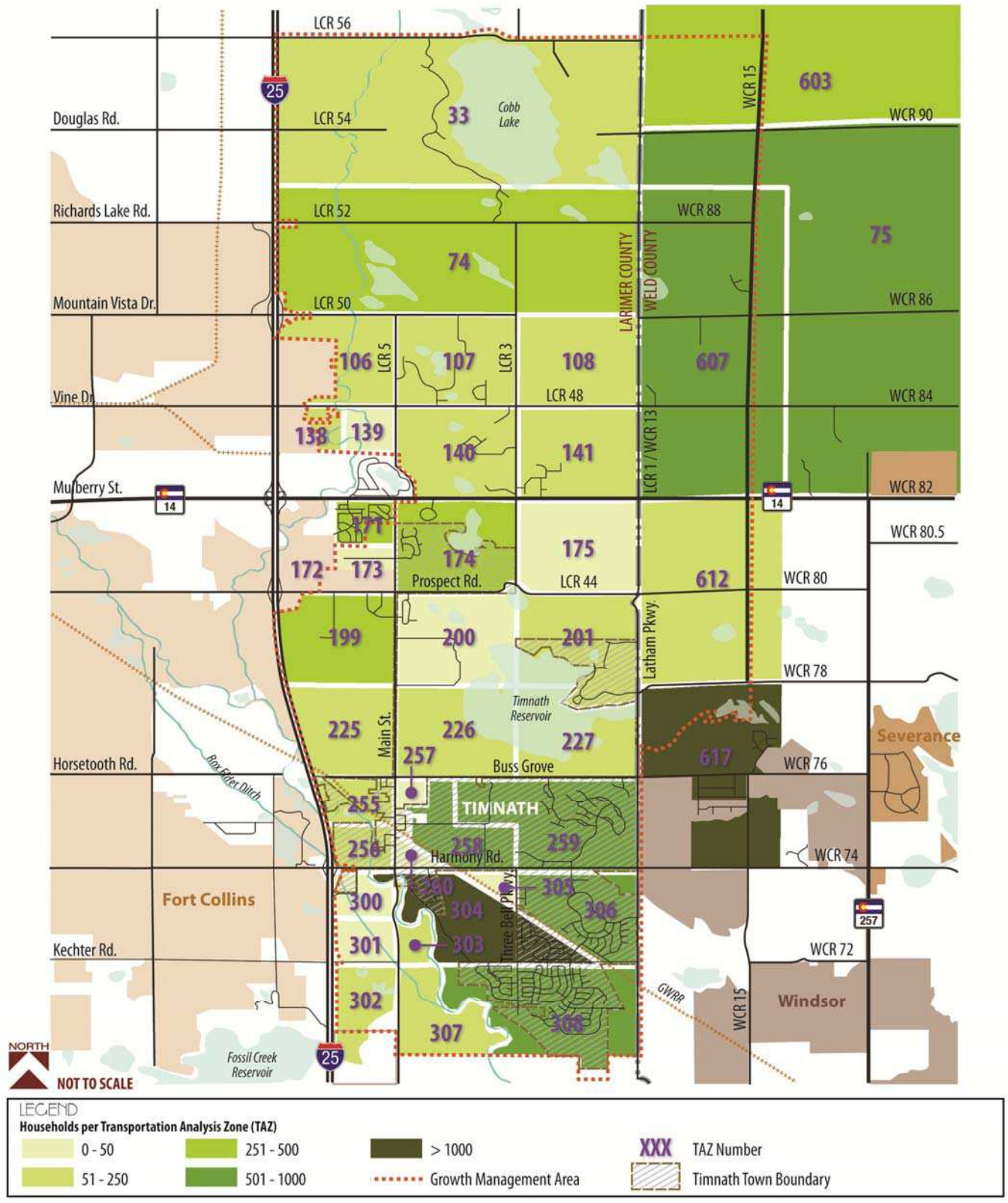



**Figure 14. 2040 Households Forecasts by TAZ**

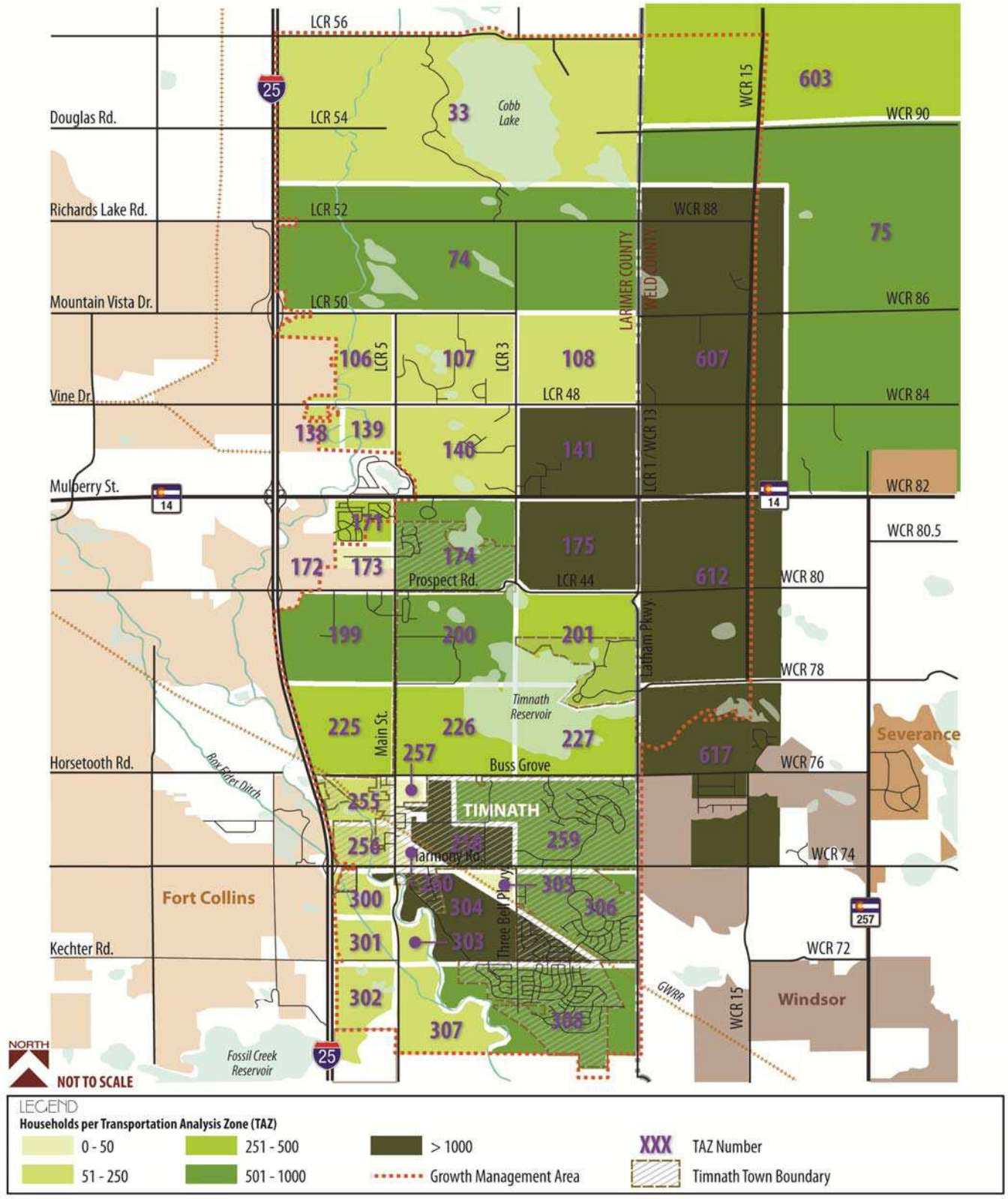



**Figure 15. Buildout Households Forecasts by TAZ**

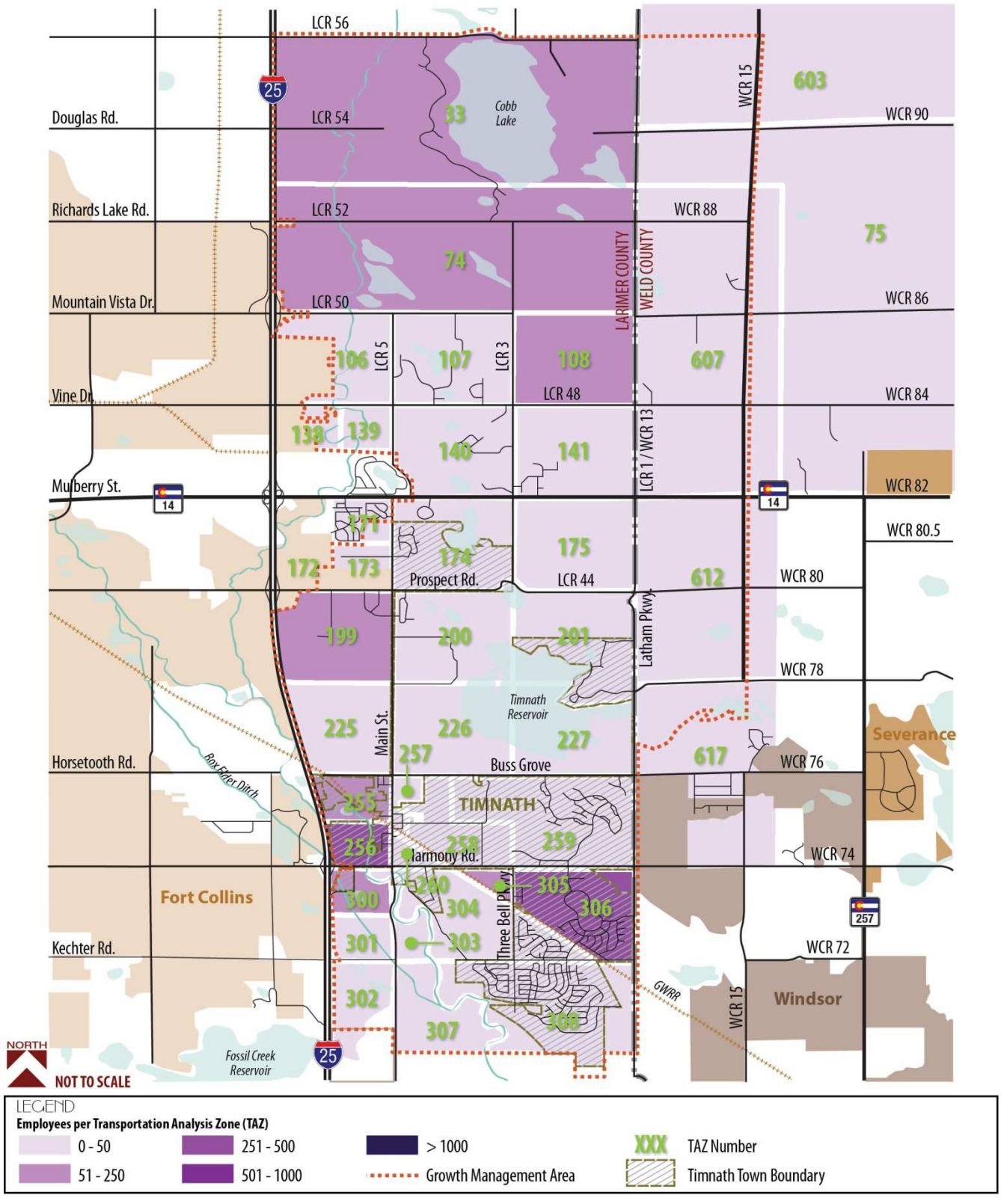



**Figure 16. 2012 Employment by TAZ**

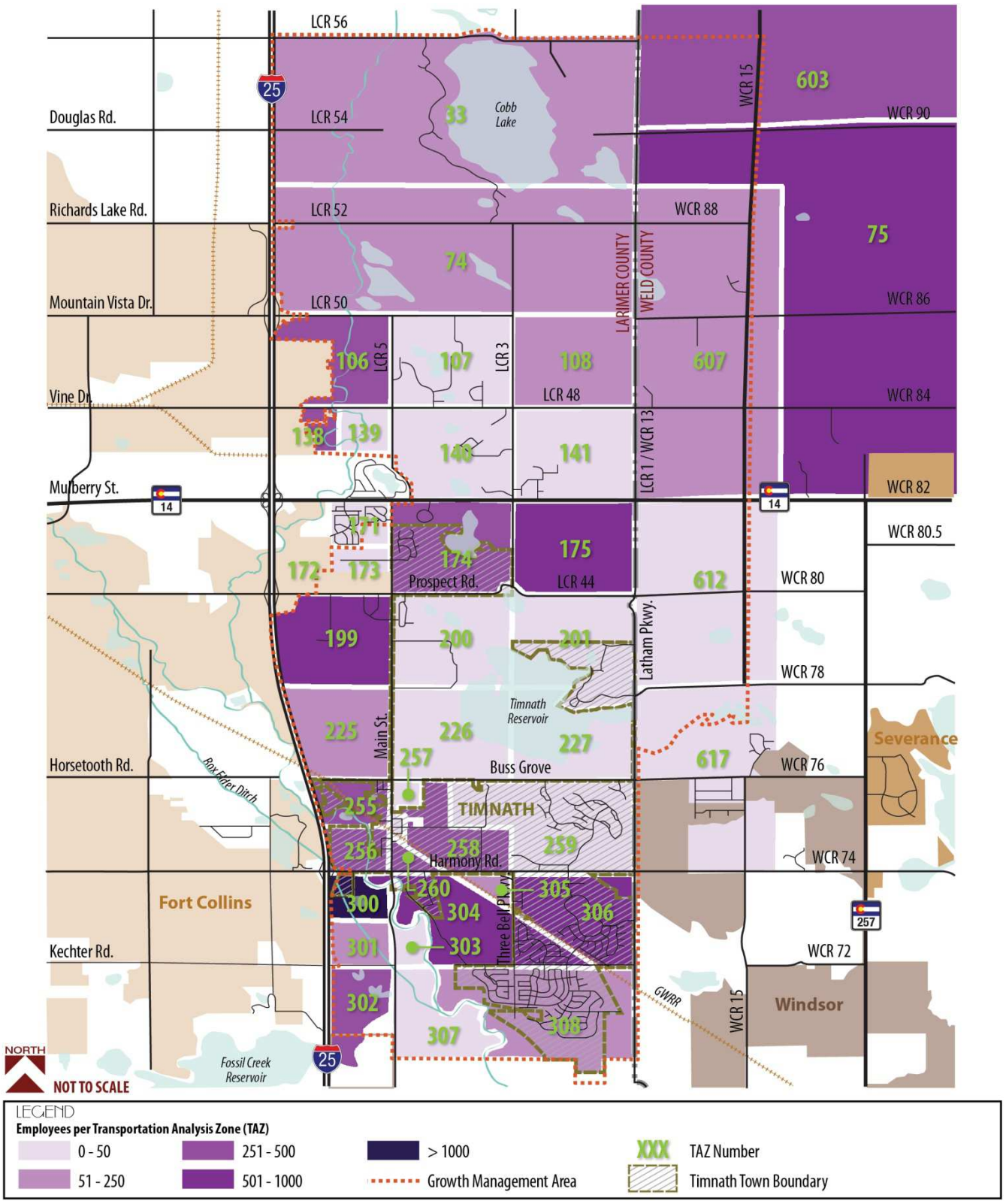



**Figure 17. 2040 Employment Forecasts by TAZ**

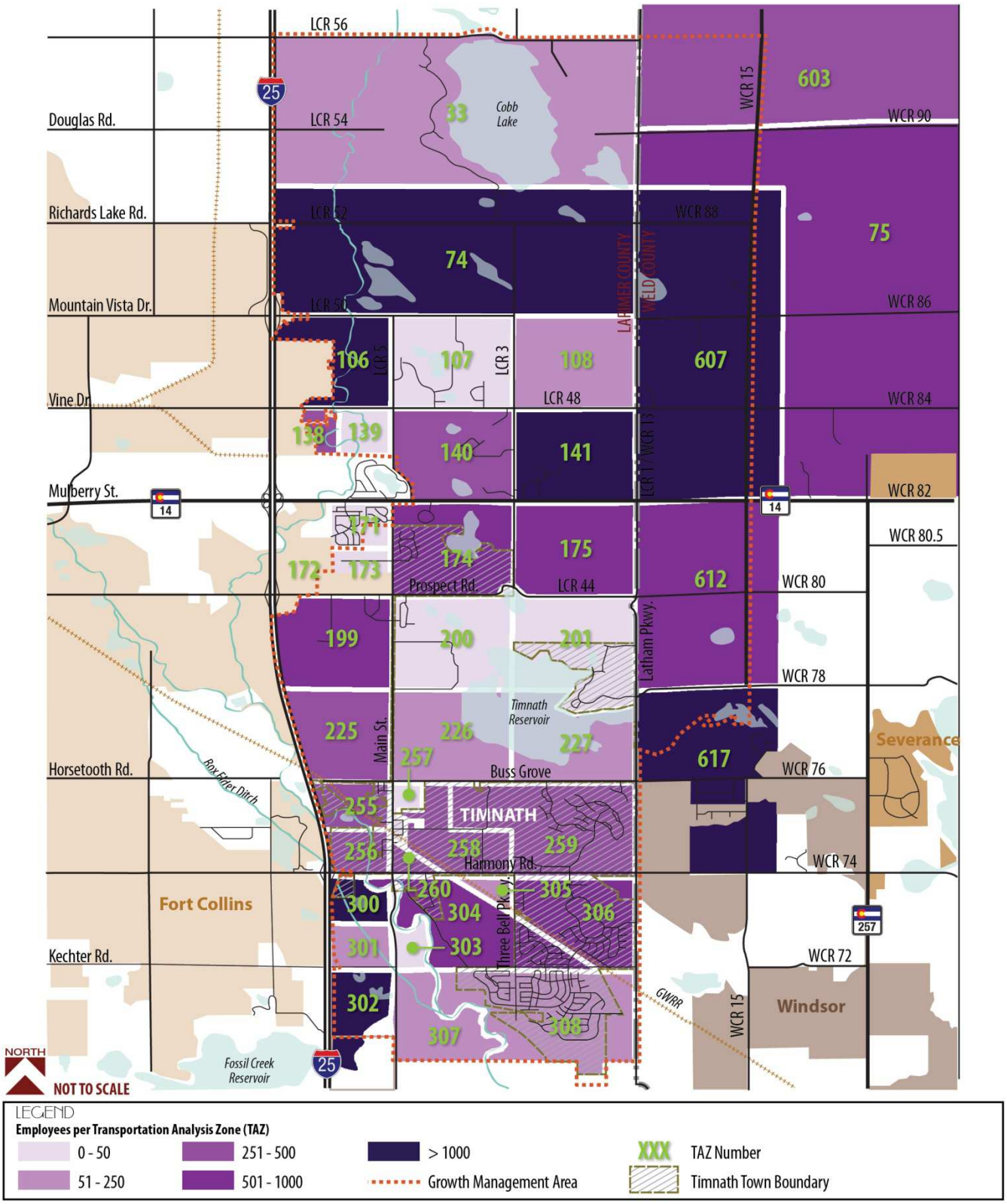



**Figure 18. Buildout Employment Forecasts by TAZ**

## Traffic Forecasts

The future travel demand patterns in the Timnath GMA and the North Front Range region are primarily a function of the population and employment opportunities in the area. The household and employment data outlined in the previous sections were used as input to the NFR travel demand model. The model provided traffic forecasts on the various street networks that were used to assess improvement needs. These forecasted volumes were used to identify capacity deficiencies in the roadway network and to evaluate the effectiveness of alternatives. The forecasted 2040 traffic volumes on Timnath's NFR 2040 Fiscally Constrained road network are displayed on **Figure 19**, while forecasted buildout traffic volumes on this network are shown on **Figure 20**.

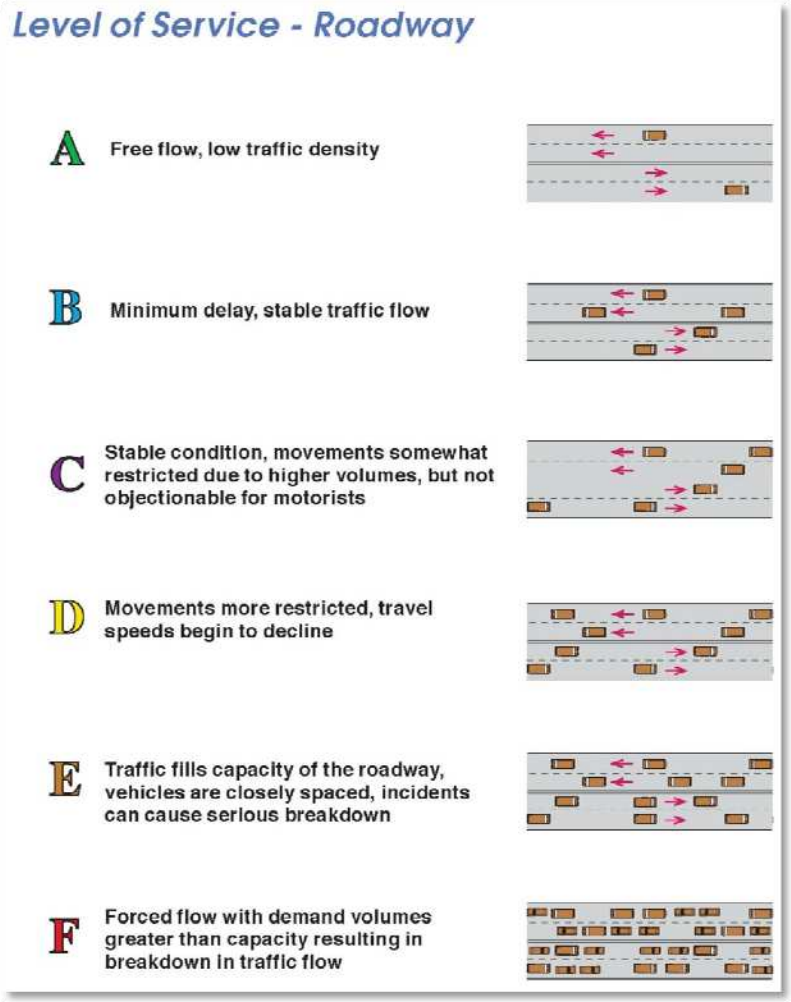
## Volume to Capacity Analysis

A comparison of traffic volumes versus planning level capacities was conducted to assess roadway capacity needs for the 2040 and buildout planning horizons. This analysis helps determine where critical widening projects are needed, while drawing attention to potential trouble areas to prioritize where right-of-way preservation should occur for widening projects beyond 2040. To perform this analysis, a volume to capacity (V/C) ratio was calculated using daily traffic volumes and planning level capacities assumed for each roadway classification. **Table 4** lists the planning level capacities.

**Table 4. Planning Level Capacities**

| Classification | Capacity per Lane (vpd) |
|---|---|
| Major Arterial | 8,000 |
| Minor Arterial | 6,000 |
| Major Collector | 5,000 |

A lower V/C ratio means the better the flow of traffic along that segment of road. A V/C of 1.0 or greater is considered to be congested (Level of Service F), while a V/C of 0.9 to 1.0 is considered to be approaching a congested state (Level of Service E). **Figure 21** through **Figure 23** illustrate the V/C for each roadway within the Timnath GMA with a roadway classification of Major Collector or higher for the existing, 2040, and buildout time periods. The red segments represent roadways that carry traffic volumes in excess of the planning level roadway capacity (V/C ≥ 1.0). The orange and yellow segments represent roadways that are operating at or near capacity conditions (V/C between 0.80 and 1.0).



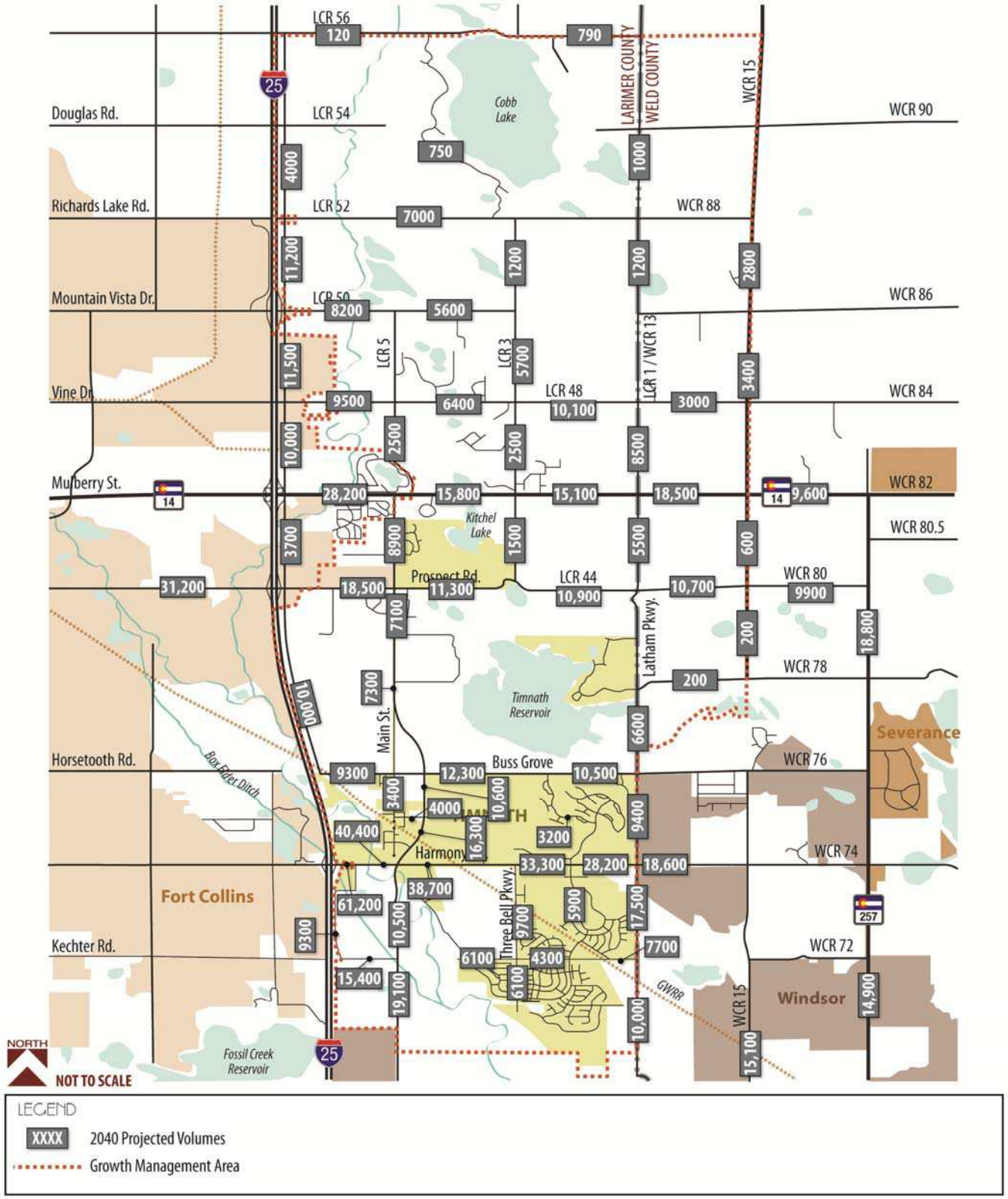



**Figure 19. 2040 Daily Traffic Projections (Existing + Committed Network)**

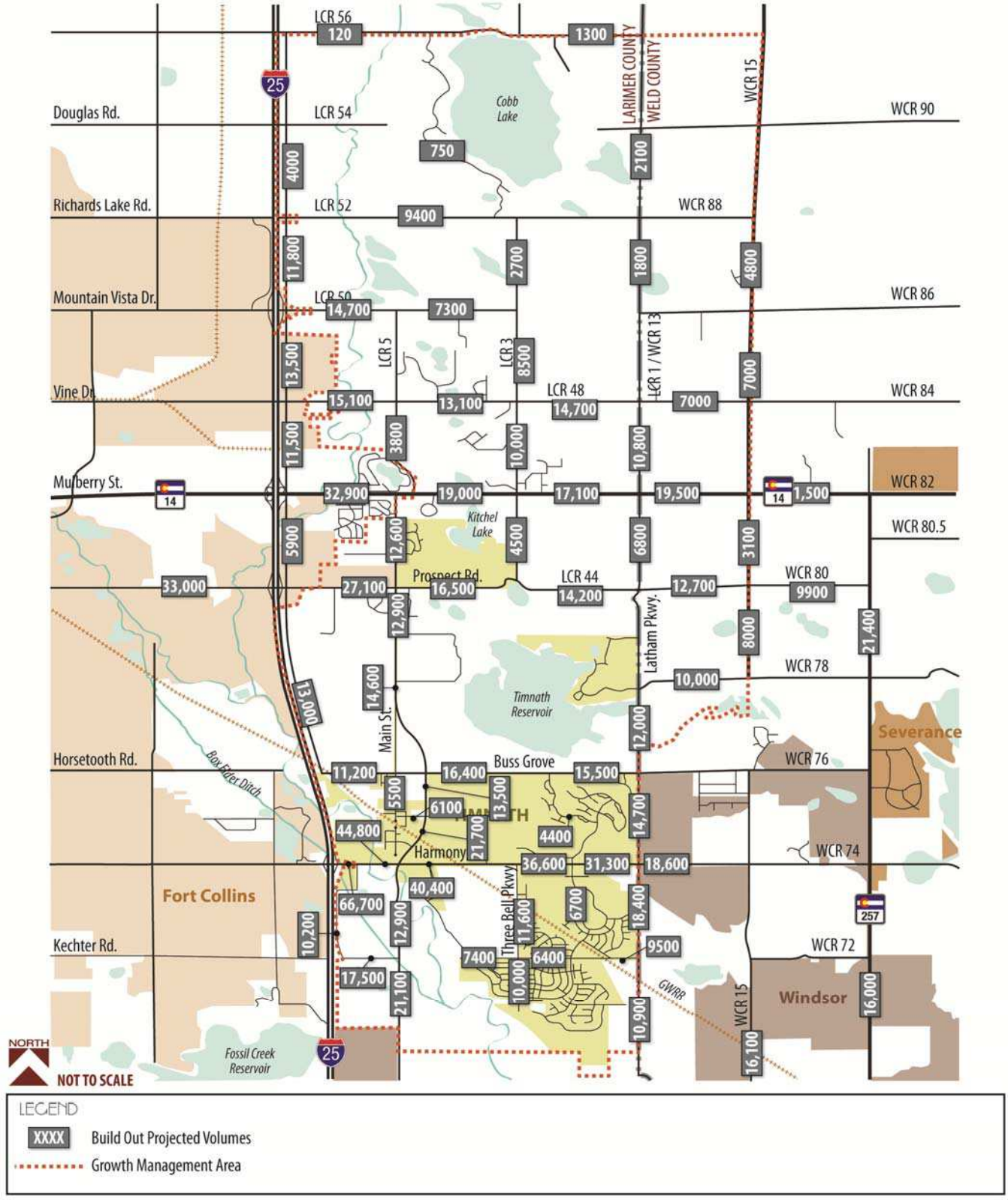



**Figure 20. Buildout Daily Traffic Projections (Existing + Committed Network)**

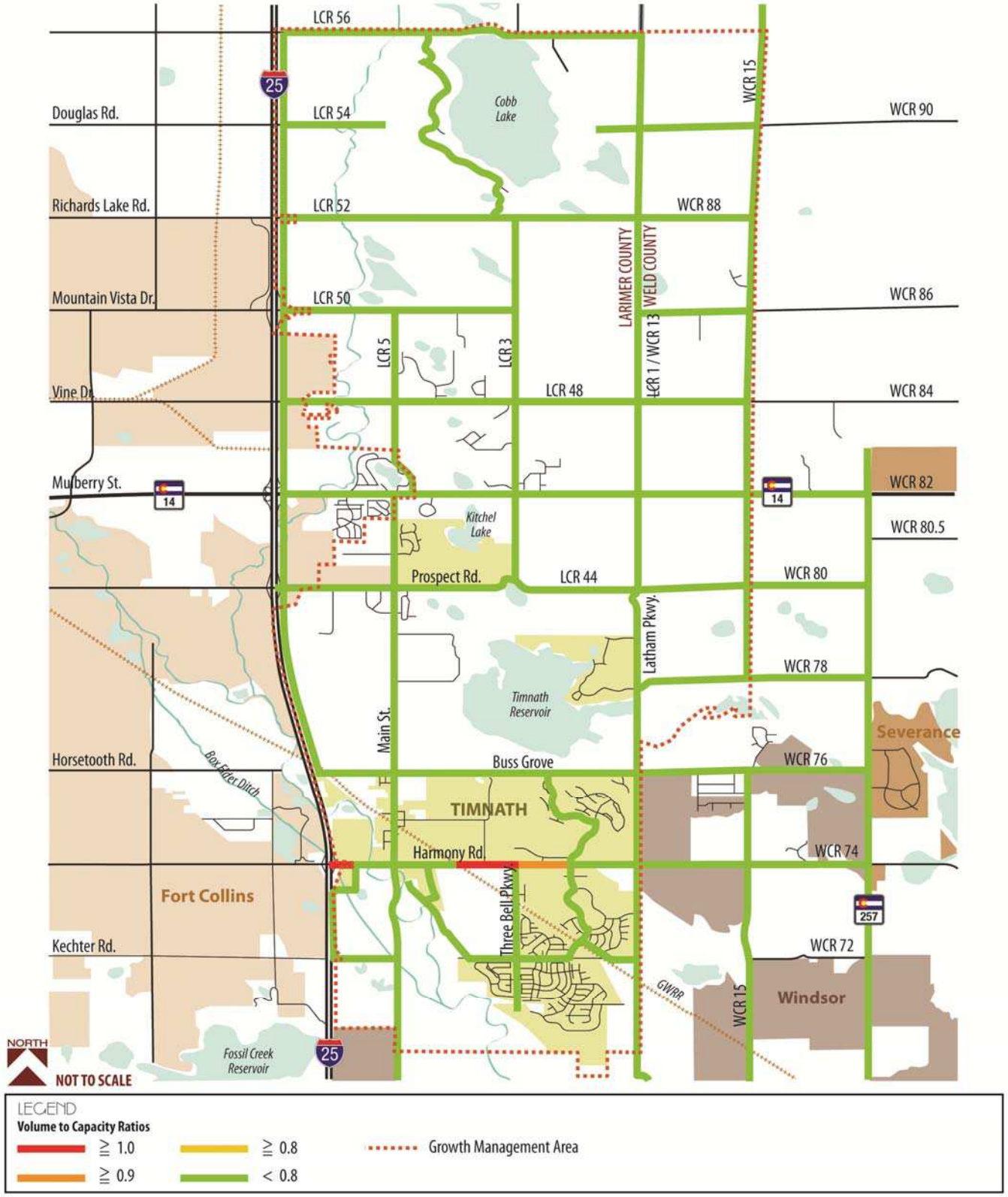



**Figure 21. Existing Volume/Capacity Ratios**

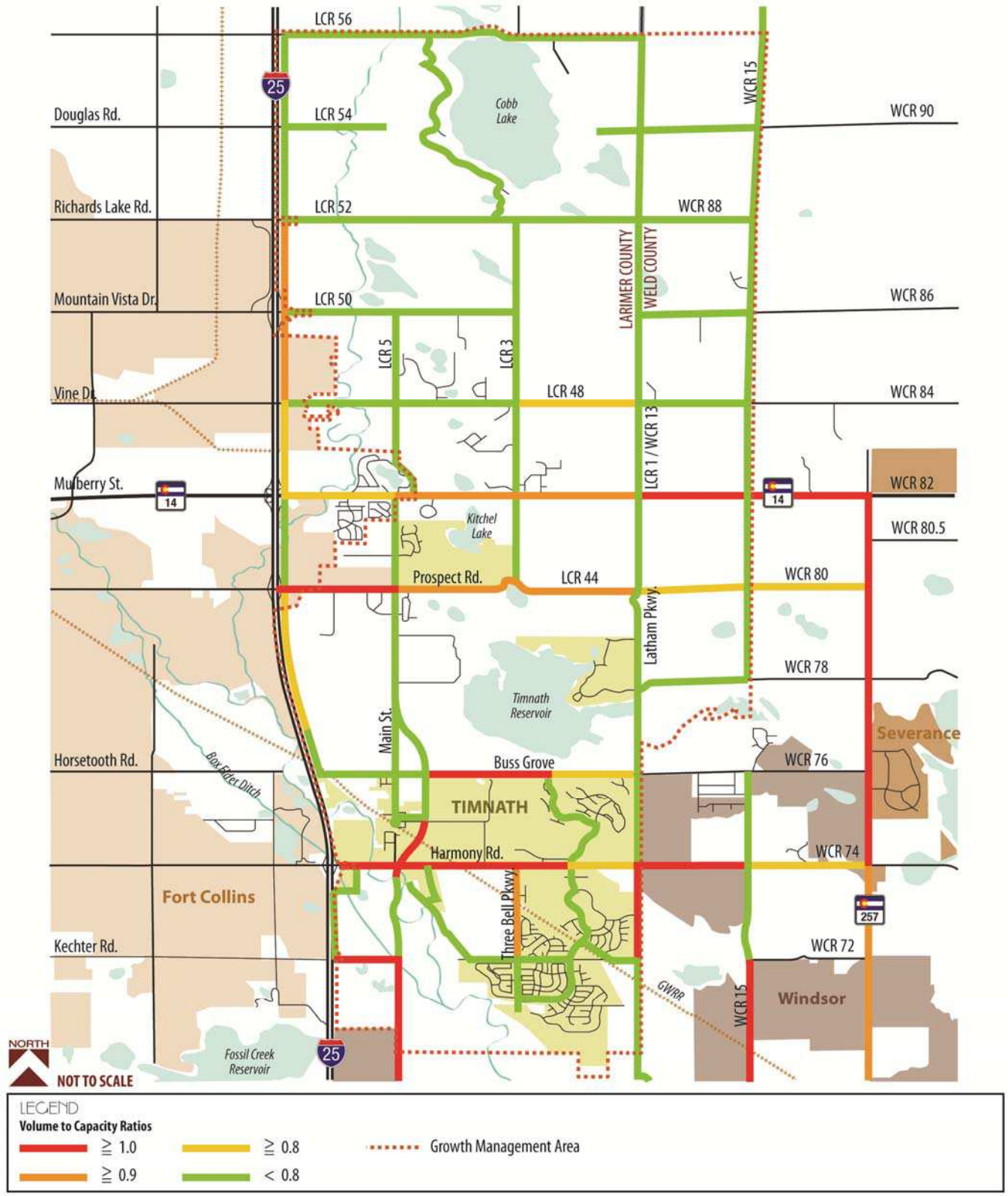



**Figure 22. 2040 Volume/Capacity Ratios (Existing + Committed Network)**

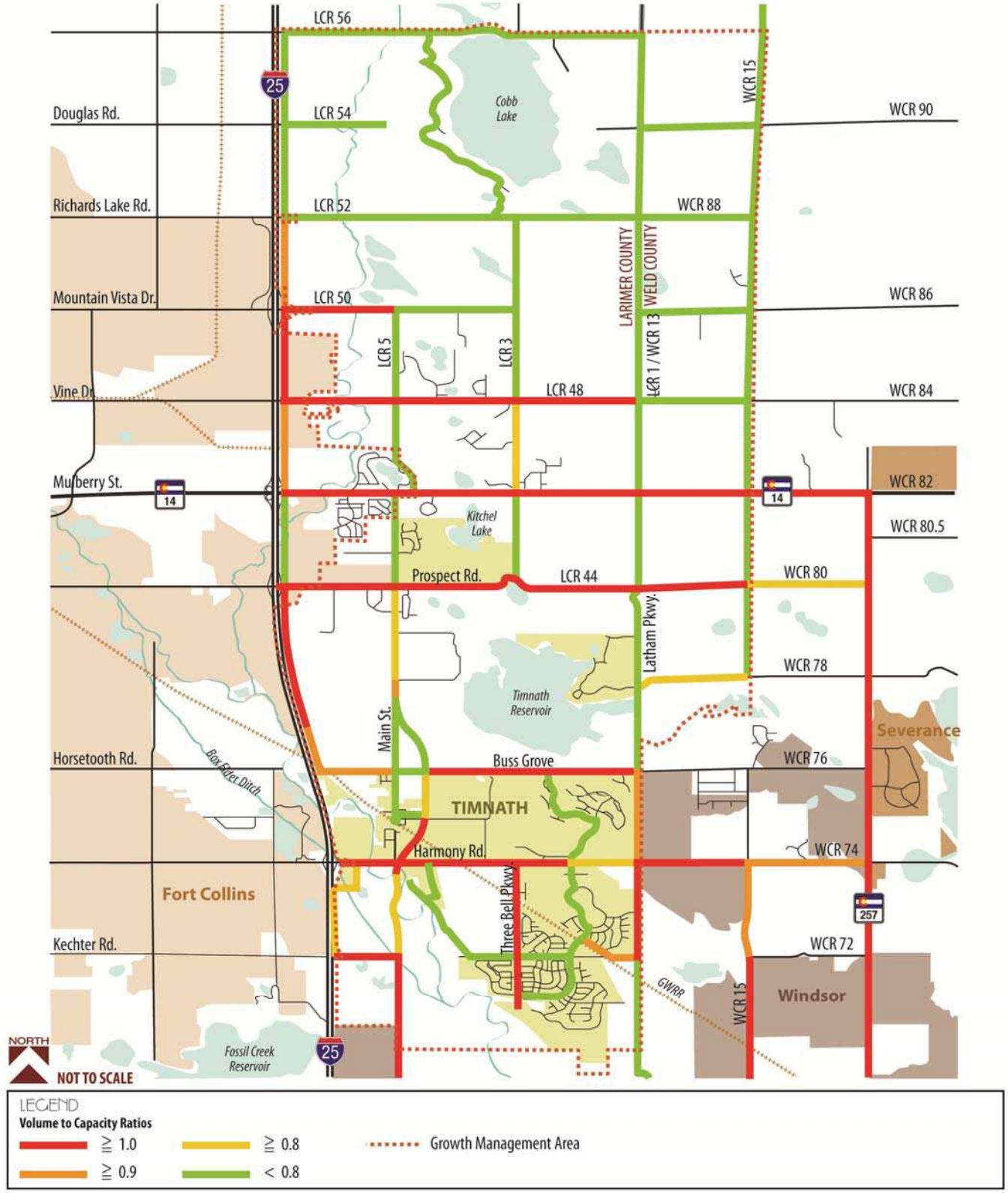



**Figure 23. Buildout Volume/Capacity Ratios (Existing + Committed Network)**

The existing V/C is calculated based on the existing road network configuration, while the 2040 and buildout V/C analyses include committed roadway widening projects, such as expanding Harmony Road to four lanes from the GWR to LCR 1 and construction of the Parkway.

The V/C analysis shows that the current traffic volumes are within the carrying capacity of most roads within the Timnath GMA. However, if no improvements are made to the network, most road segments will be approaching, or experiencing, congestion in the 2040 and buildout time periods.

## Alternatives Analysis

The travel demand model was used to test the effectiveness of several roadway improvements to address the existing and future congestion on Timnath's street network. The following major roadway improvement alternatives were identified through a combination of technical analysis (using the 2040 and buildout V/C ratios), discussion with the Town Council and Planning Commission, and input from the community.

A. Construct the Timnath Parkway
B. Widen Kechter Road to 4 lanes (including the bridge over I-25)
C. Widen Harmony Road to 6 lanes
D. Widen Prospect Road to 4 lanes
E. Widen SH 14 to 4 lanes
F. Widen Vine Drive to 4 lanes
G. Widen Main Street to 4 lanes (including the Parkway)
H. Widen LCR 1 to 4 lanes
I. Widen SH 257 to 4 lanes
J. Extend Kechter Road from Main Street to River Pass Road
K. New interchange at I-25 and Kechter Road
L. South "beltway" connecting Main Street and LCR 1 near the south GMA boundary

The travel demand model results indicate that the vast majority of the current and future congestion in Timnath could be mitigated by building roadway improvement alternatives A – I, which are included in the Master Streets Plan (Chapter 5) and should be phased over time to accommodate increasing travel demands. While some of these projects will be needed by 2040, others will not be needed until after 2040. **Chapters 5 and 6** address the timing and specific road segments in more detail.

Congestion is expected on Harmony Road between I-25 and Three Bell Parkway in the future, even when it is widened to six lanes. Many of the trips using Harmony Road have either an origin or a destination along the corridor; resulting in a strong draw to using Harmony. Similarly, many of the trips using Harmony Road have either an origin or destination east of Timnath, and Harmony Road provides east-west continuity all the way to US 85.

The remaining three major roadway alternatives (J, K, and L) would be considerably more difficult to implement. Specifically, an interchange at I-25 and Kechter Road is not included in the North I-25 EIS and would, therefore, require a reevaluation of the EIS and support from the Federal Highway Administration (FHWA), CDOT and the City of Fort Collins. A new east-west connection (either J or L) would require a new crossing of the Poudre River, which would involve environmental clearances and considerable costs, and could result in undesirable impacts to current residents. The addition of roadway alternatives J, K, or L is not expected to relieve future congestion on Harmony Road enough to justify the associated costs and impacts. Because of the significant effort, costs, and impacts associated with these three alternatives, and the ability of projects A – I to address the vast majority of current and future congestion, projects J, K, and L are not recommended. A more detailed summary of the alternatives analysis is included in **Appendix B**.

# 5. Long Range Plan

**Chapter 5** portrays Timnath's vision for the future multimodal transportation system. A well-planned street network will provide automobile, bicycle, and walk connectivity within the Town and between Timnath and neighboring communities and will position the Town for future transit service.

## Master Streets Plan

Timnath's roadway plan focuses on providing a well-planned system of streets to serve the Town's current and future multimodal travel needs. The Master Streets Plan shown on **Figure 24** was developed to accommodate future travel demands and illustrates the functional classification and future lane requirements for each street.

### Roadway Classifications

Streets generally provide two important functions: mobility and land access. These functions conflict with each other—more land access generally leads to reduced traffic carrying capacity and mobility, and vice versa. Each roadway type is specifically designed to operate with certain characteristics based on the adjoining land uses, level of continuity, and proximity and connections to other facilities.

A street's functional classification describes these characteristics, and the street design standards identify specific design parameters, right-of-way needs, and other measures for each classification. Timnath's Master Streets Plan includes the functional classifications described below.

**Freeways** have the highest level of mobility, providing unimpeded, high-speed regional and interstate connections. Freeways are limited access, divided highways that link major urban areas. I-25 is the only freeway in the Timnath area, serving north-south interstate travel through Colorado's Front Range. I-25 is under the jurisdiction of FHWA and CDOT.

**State Highways** can range in functional classification from Major Collectors to Principal Arterials, but commonly provide for longer distance travel between communities. For the purpose of Timnath's Transportation Plan, the State Highways in the area (SH 14 and SH 257) are categorized separately because they are under the jurisdiction of CDOT; Timnath's design and access standards do not apply to these facilities.

**Principal Arterials** provide a high degree of mobility and serve corridor movements with longer trip lengths. While adjoining land uses can be served directly, access is limited to emphasize mobility. The NFRMPO identifies Timnath's four Principal Arterials (Harmony Road, Latham Parkway, CR 5, and a short segment of Prospect Road) as regionally significant corridors.

**Minor Arterials** provide for trips of moderate length and offer connectivity to streets of higher functional classification. Minor arterials provide intra-community continuity and a higher degree of land access than Principal Arterials without penetrating neighborhoods. Timnath's Minor Arterials are generally spaced one mile apart on the section line roads.

**Collectors** serve to gather traffic from local streets and funnel them to the arterial network. Collectors provide a balance between access and mobility and retain continuity through neighborhoods. Travel speeds are moderate, and travel distances are short to medium. Collectors can be sub-stratified into *major* and *minor* categories with Major Collectors having lower connecting driveway density, longer lengths, and higher speeds.

The Town should work with developers to identify future collector street alignments and to encourage

a system of collectors that enhance the grid network, minimizing discontinuous, curvilinear alignments. Collectors should be located opposite each other at arterial intersections to avoid offset T-intersections along arterial corridors.

**Local Streets** serve the highest level of access, providing direct driveway access to adjacent properties and carrying traffic to the collectors. Local streets can be of limited continuity and may be designed to discourage through traffic. Local streets are typically identified through development plans.

The functional classification of a street reflects its role in the road network and forms the basis for access management, corridor preservation, and street design guidelines and standards. Existing streets may not meet all of the desired characteristics described by their defined functional classification but can be upgraded as improvements to the street are made. The functional classification should be viewed as the desired condition and should not change over time. While the level of traffic is typically highest on higher level functional classifications like freeways and principal arterials, traffic volumes are a result of the street's function rather than a delineator between functional classifications.

## Roadway Cross-Sections

The Town of Timnath has adopted the Loveland standards in the *Larimer County Urban Area Street Standards* (LCUASS). The Town's typical street cross sections are intended to provide safe, attractive, and comfortable access and travel for all modes within the public right of way. The Town's cross sections shown on **Figure 25 through Figure 30** match the Loveland cross-sections in LCUASS. A series of rural cross sections with drainage ditches instead of curb and gutter are presented in **Figure 31** through **Figure 33**. The rural cross sections may be considered in certain areas of Timnath either as an interim condition or as a context sensitive long-range option that may be more fitting to the rural setting in some areas of the GMA. Use of the rural cross section requires approval from the Town of Timnath.

In addition to defining functional classification, the Master Streets Plan (**Figure 24**) identifies the through lane requirements to meet the 2040 travel demands. It also indicates the long-range through lane requirement to accommodate the travel demands at buildout of the community, beyond 2040.

**Table 5** is a lookup table that translates the functional classification, 2040 lane requirement, and long-range lane requirement (from **Figure 24**) to the cross-section options and right of way width that should be preserved. The cross-section options are based on the 2040 lane requirements, and the minimum right of way preservation is based on the long-range lane requirement. The rural cross sections require an additional 20 feet of right of way to accommodate the roadside ditch. Streets in Timnath should be designed in accordance with the parameters noted in Table 7-2 of LCUASS.

## Access Spacing Standards

To preserve the functional integrity, safety, and mobility of Timnath's street network, the Town has adopted the access control standards documented in LCUASS, with one exception as described in this section. The access standards encourage, to the extent possible, the provision of direct access to the streets with lower functional classifications.

The State Highway Access Code governs access onto the state highway system. Any access onto the state highways in the vicinity of Timnath (SH 14 and SH 257) requires an access permit from CDOT, and the access design must comply with the Access Code. FHWA and CDOT govern I-25, and modifications to access onto I-25 require extensive

study, including a System Level Feasibility Study, an Interstate Access Request, and applicable environmental clearance.

Unlike LCUASS, Timnath's Master Streets Plan differentiates between Principal and Minor Arterials. The primary reason for this distinction is to allow different access spacing standards. The Principal Arterials are considered regional mobility corridors, and access is more restrictive. While the Minor Arterials serve an important mobility function in the community, the access standards are slightly less restrictive than LCUASS to encourage a gridded street network that provides convenient access into and between neighborhoods by car, by foot, and by bike. Access onto any of Timnath's arterial streets (Principal or Minor) requires the Town's approval through the development review process.

Principal Arterials within Timnath's GMA (regardless of lane requirements) shall comply with the technical design criteria, access spacing distances, and intersection control as presented in Table 7-4 and Chapter 9 of LCUASS for 4- or 6-Lane Arterials. These standards allow for 0.5 mile spacing of full-movement signalized intersections; all other accesses will be limited to right-in/right-out (RIRO) movements to protect the mobility function of the Principal Arterials.

The access spacing standards for Minor Arterials within Timnath's GMA deviate slightly from LCUASS standards. Full-movement intersections shall be allowed on Minor Arterial streets (regardless of lane requirements) at 0.25-mile spacing. The full-movement intersections at 0.25-mile spacing shall be signalized only if a traffic engineering study documents the following conditions:

- Left turns from or onto the Minor Arterial would incur long delays (LOS F) during a peak period if unsignalized based on current traffic levels and/or 2040 traffic forecasts;
- A Manual of Traffic Control Devices signal warrant is expected to be met;
- A corridor signal progression efficiency of 30 percent can be maintained based on current traffic levels and 2040 traffic forecasts with the addition of the signal; and
- Geometric design criteria as presented in Table 7-4 of LCUASS (for 2-Lane Arterials) can be met.

Major Collectors, Minor Collectors, and Local Streets within Timnath's GMA shall comply with the criteria and access spacing distances as presented in Table 7-4 and Chapter 9 of LCUASS.

## Geometric Design Standards

Timnath streets shall comply with the geometric design standards documented in Chapters 7, 8, and 9 of LCUASS (notably, Table 7-4). Regardless of the number of current or future lanes, Timnath's Principal Arterials shall comply with the 4- or 6-Lane Arterial geometric standards in LCUASS, and Timnath's Minor Arterials shall comply with the 2-Lane Arterial geometric standards in LCUASS.

Although the Parkway (from Harmony Road to the tie-in at Main Street north of Buss Grove) is designated as a Principal Arterial, the Town's desire is to create a livable street that welcomes pedestrian and biking activity along and across the street through the Town core. To achieve this intent, the Parkway shall be designed to LCUASS 2-Lane Arterial geometric standards, which will result in slower travel speeds compatible with high levels of pedestrian and bicycle activity.

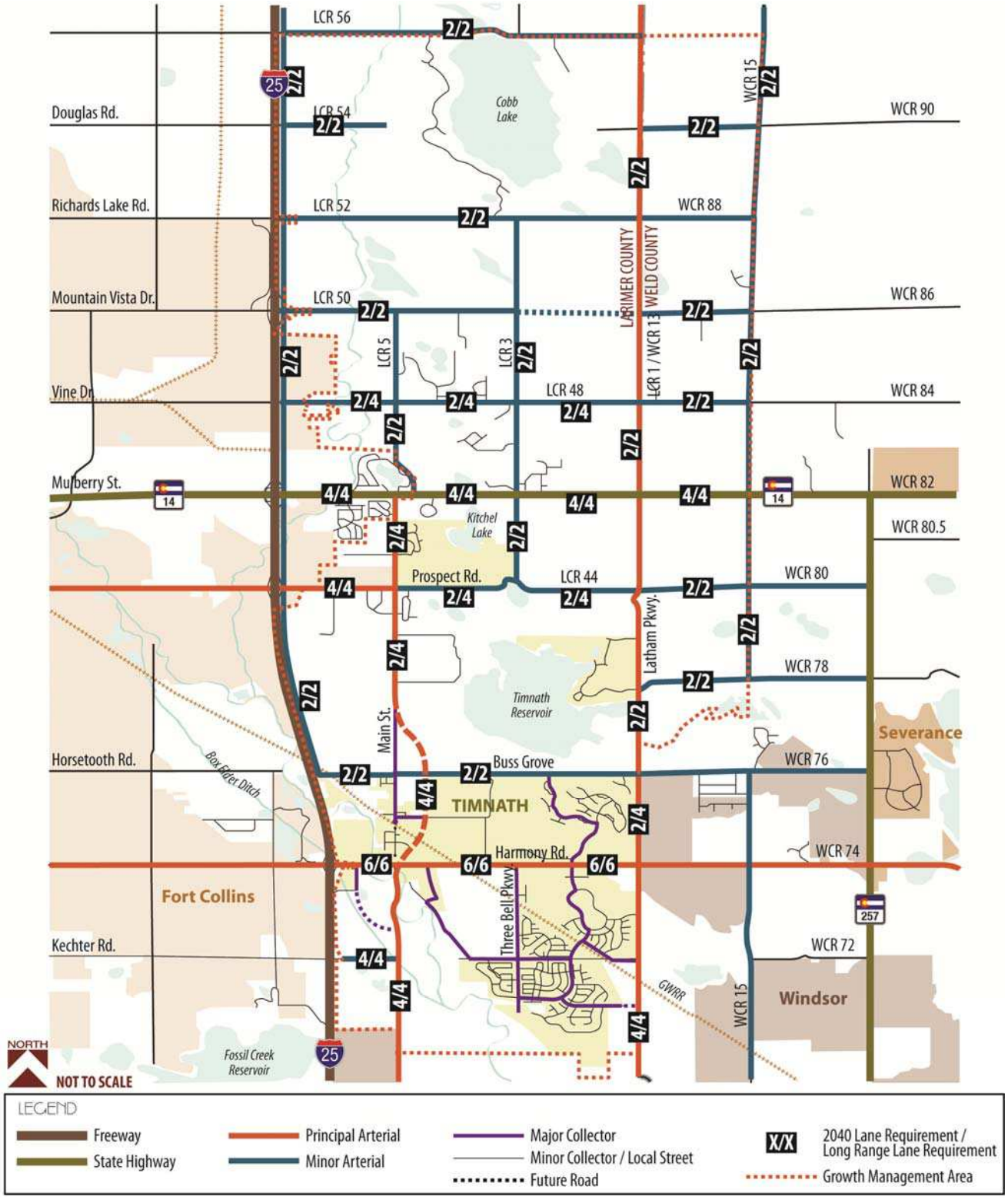
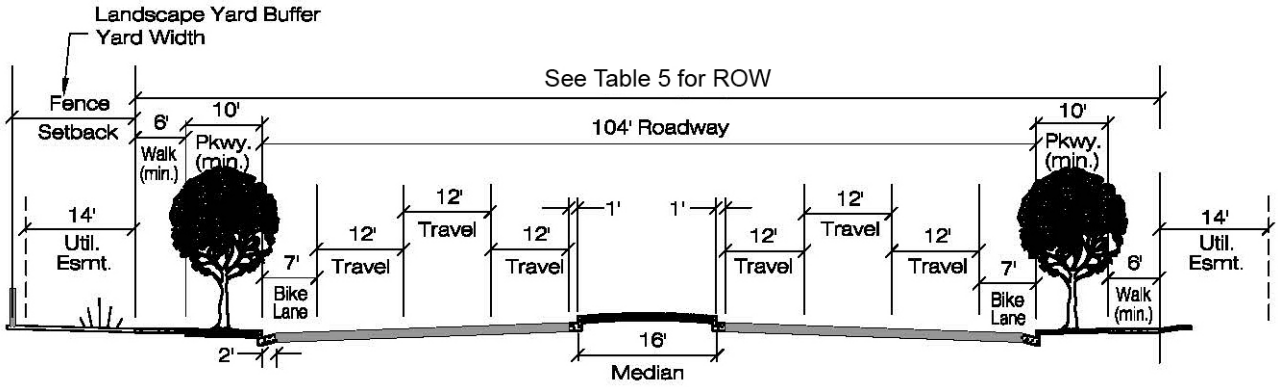



**Figure 24. Master Streets Plan**

## Table 5. Functional Classification, Cross-Sections and ROW Preservation

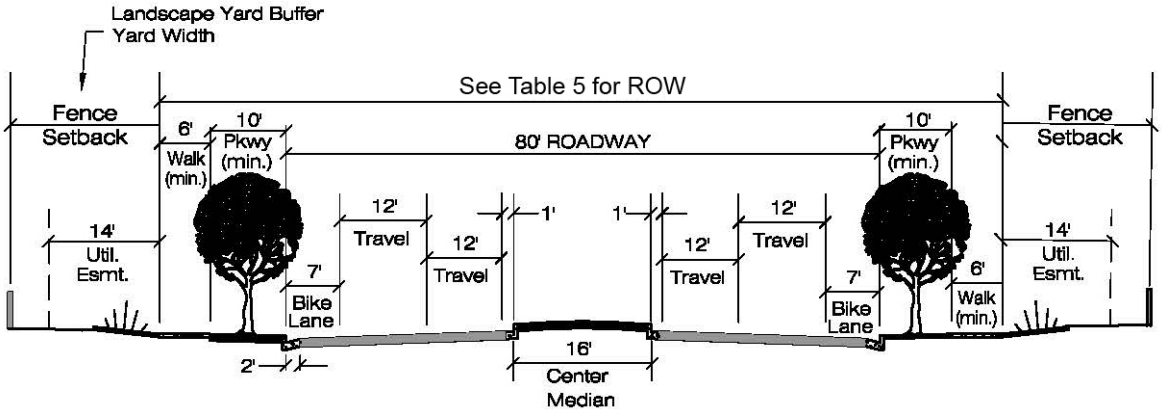
| Master Street Plan Configuration (refer to Figure 24) | | | 2040 Cross-Section Options | Minimum Right of Way |
|---|---|---|---|---|
| Functional Classification | 2040 Lane Requirement | Long Range Lane Requirement | | |
| Principal Arterial | 2 | 2 | 2-Lane Arterial (**Figure 27**) | 100’ |
| | | | Rural 2-Lane Arterial (**Figure 32**)[1] | 120’ |
| Principal Arterial | 2 | 4 | 2-Lane Arterial (**Figure 27**) | 120’ |
| | | | Rural 2-Lane Arterial (**Figure 32**)[1] | 140’ |
| Principal Arterial | 4 | 4 | 4-Lane Arterial (**Figure 26**) | 120’ |
| | | | Rural 4-Lane Arterial (**Figure 31**)[1] | 140’ |
| Principal Arterial | 4 | 6 | 4-Lane Arterial (**Figure 26**) | 140’ |
| | | | Rural 4-Lane Arterial (**Figure 31**)[1] | 140’ |
| Principal Arterial | 6 | 6 | 6-Lane Arterial (**Figure 25**) | 140’ |
| Minor Arterial | 2 | 2 | 2-Lane Arterial (**Figure 27**) | 100’ |
| | | | Rural 2-Lane Arterial (**Figure 32**)[1] | 120’ |
| Minor Arterial | 2 | 4 | 2-Lane Arterial (**Figure 27**) | 120’ |
| | | | Rural 2-Lane Arterial (**Figure 32**)[1] | 140’ |
| Minor Arterial | 4 | 4 | 4-Lane Arterial (**Figure 26**) | 120’ |
| | | | 4-Lane Rural Arterial (**Figure 31**)[1] | 140’ |
| Major Collector | 2 | 2 | Major Collector (**Figure 28**) | 80’ |
| | | | Rural Collector/Local (**Figure 33**)[1] | 100’ |
| Minor Collector | 2 | 2 | Minor Collector (**Figure 29**) | 67’ |
| | | | Rural Collector/Local (**Figure 33**)[1] | 87’ |
| Local Street | 2 | 2 | Local Street (**Figure 30**) | 50’ |
| | | | Rural Collector/Local (**Figure 33**)[1] | 70’ |

[1] *The rural cross sections may be considered in certain areas of Timnath either as an interim condition or as a context sensitive long-range option that may be more fitting to the rural setting in some areas of the GMA; use of the rural cross section requires approval from the Town of Timnath.*



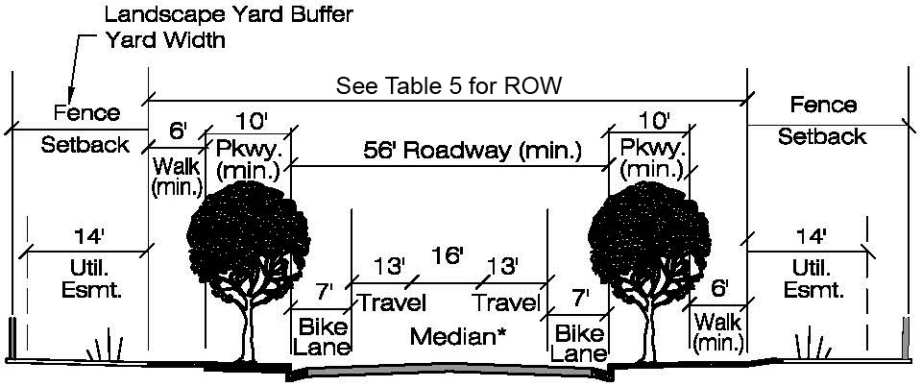

*Source: Larimer County Urban Area Street Standards 6-Lane Arterial (LCUASS Figure 7-1L)*

**Figure 25. 6-Lane Arterial Cross Section**




*Source: Larimer County Urban Area Street Standards 4-Lane Arterial (LCUASS Figure 7-2L)*

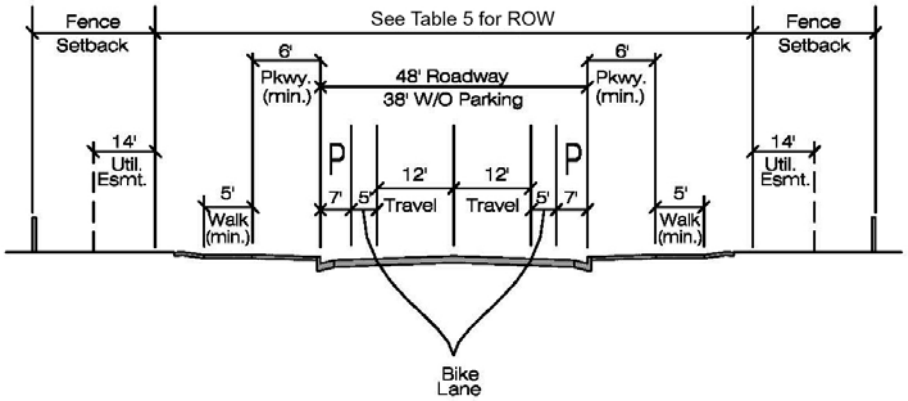
**Figure 26. 4-Lane Arterial Cross Section**




*Source: Larimer County Urban Area Street Standards 2-Lane Arterial (LCUASS Figure 7-3L)*

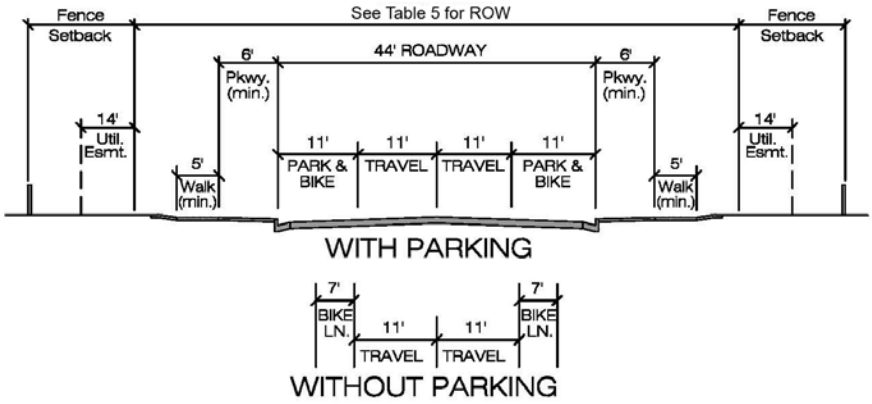
**Figure 27. 2-Lane Arterial Cross Section**

NOTE: Wider roadside trails may be required per the PROST Plan



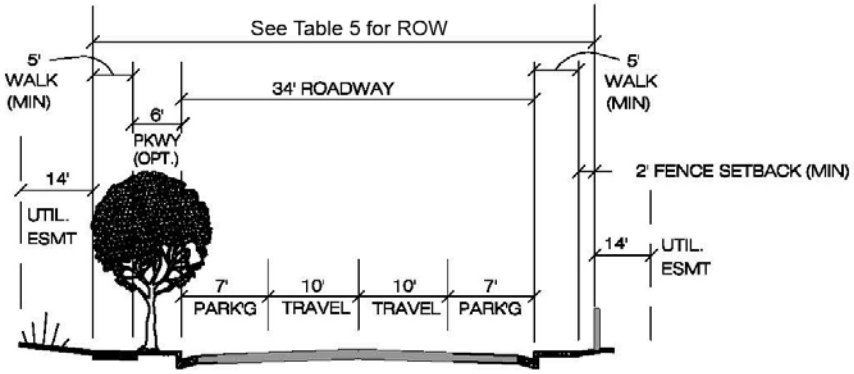

*Source: Larimer County Urban Area Street Standards Major Collector/Commercial Collector (LCUASS Figure 7-4L)*

**Figure 28. Major Collector Cross Section**




*Source: Larimer County Urban Area Street Standards Minor Collector Street (LCUASS Figure 7-5L)*

**Figure 29. Minor Collector Cross Section**




*Source: Larimer County Urban Area Street Standards Residential Local Street (LCUASS Figure 7-7L)*

**Figure 30. Local Street Cross Section**

NOTE: Wider roadside trails may be required per the PROST Plan

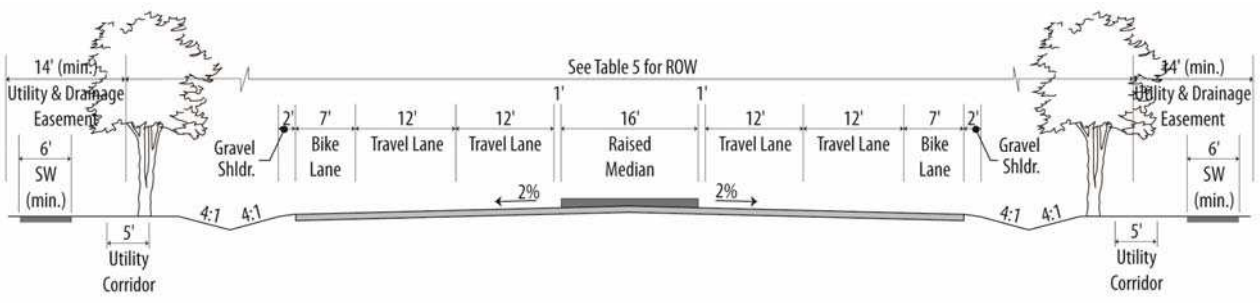



**Figure 31. Rural 4-Lane Arterial Cross Section**

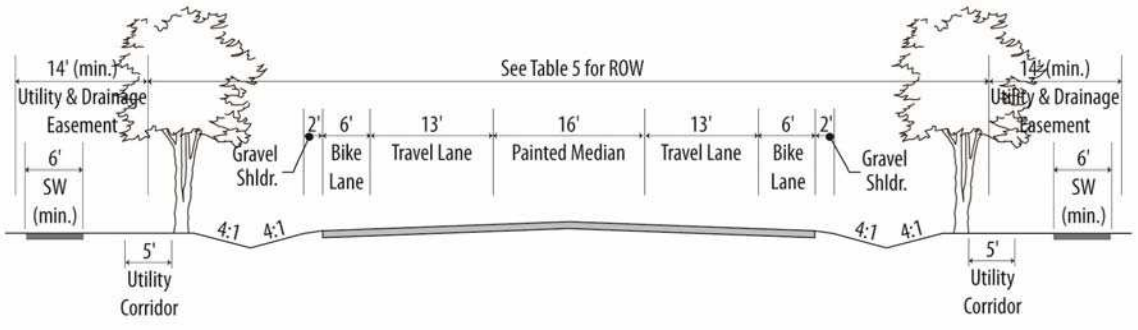



**Figure 32. Rural 2-Lane Arterial Cross Section**

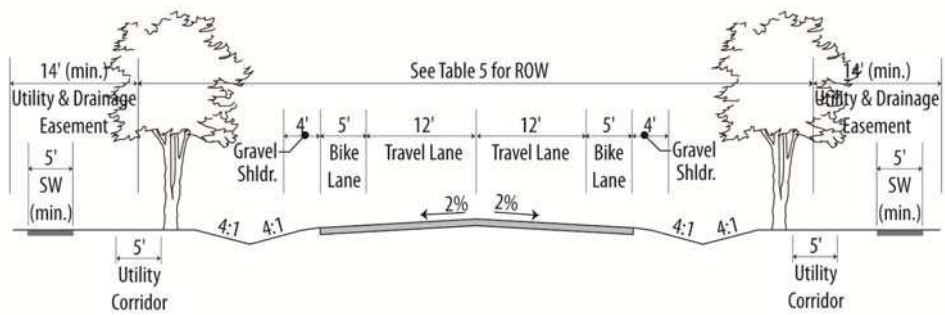



**Figure 33. Rural Collector/Local Cross Section**

NOTE: Wider roadside trails may be required per the PROST Plan

## 2040 Travel Forecasts with Master Streets Plan

The 2040 daily traffic forecasts on the 2040 Master Streets Plan are shown on **Figure 34**. These forecasts represent the expected travel demand on Timnath's streets with the Master Streets Plan 2040 roadway network. The forecasted 2040 traffic volumes were compared to planning level capacities. The resulting volume to capacity (V/C) ratios are shown on **Figure 35**. There are only a few roadway segments that are expected to have traffic volumes exceeding the roadway capacity based on the 2040 Master Streets Plan:

- SH 14 between I-25 and CR 5
- Harmony Road between I-25 and Three Bell Parkway

Congestion is expected on Harmony Road between I-25 and Three Bell Parkway in the future, even when it is widened to six lanes. The 2040 forecasts on Harmony Road are in the range of 48,000 vpd, which is approximately the current volume on Harmony Road between Timberline Road and Lemay Street in Fort Collins (which is six lanes). Congestion levels on Harmony Road through Timnath are forecasted to be similar in 2040 to the current congestion levels on this section of Harmony Road in Fort Collins.

The I-25/Harmony Road interchange area is expected to incur high volumes of traffic in the future; the signal operations of the ramp terminal intersections and the Harmony Road & Weitzel Street intersection will be critical to minimizing delay through the area.

## Preferred Future Commercial Truck Routes

Although commercial truck restrictions are primarily administered at the county level, the Town recognizes that it receives a significant amount of regional commercial truck traffic passing through the Town. **Figure 36** documents the Town's preferred truck routes as a resource for commercial trucks to use to travel through the GMA. These routes are compatible with the recommendations of the NFRMPO Sub Regional Study (April 2010). As the Town grows, these facilities will remain as appropriate routes for commercial trucks when considering design and speed limits, while other streets will be programmed to better accommodate local travel and alternative modes, potentially making them less attractive for commercial truck use.

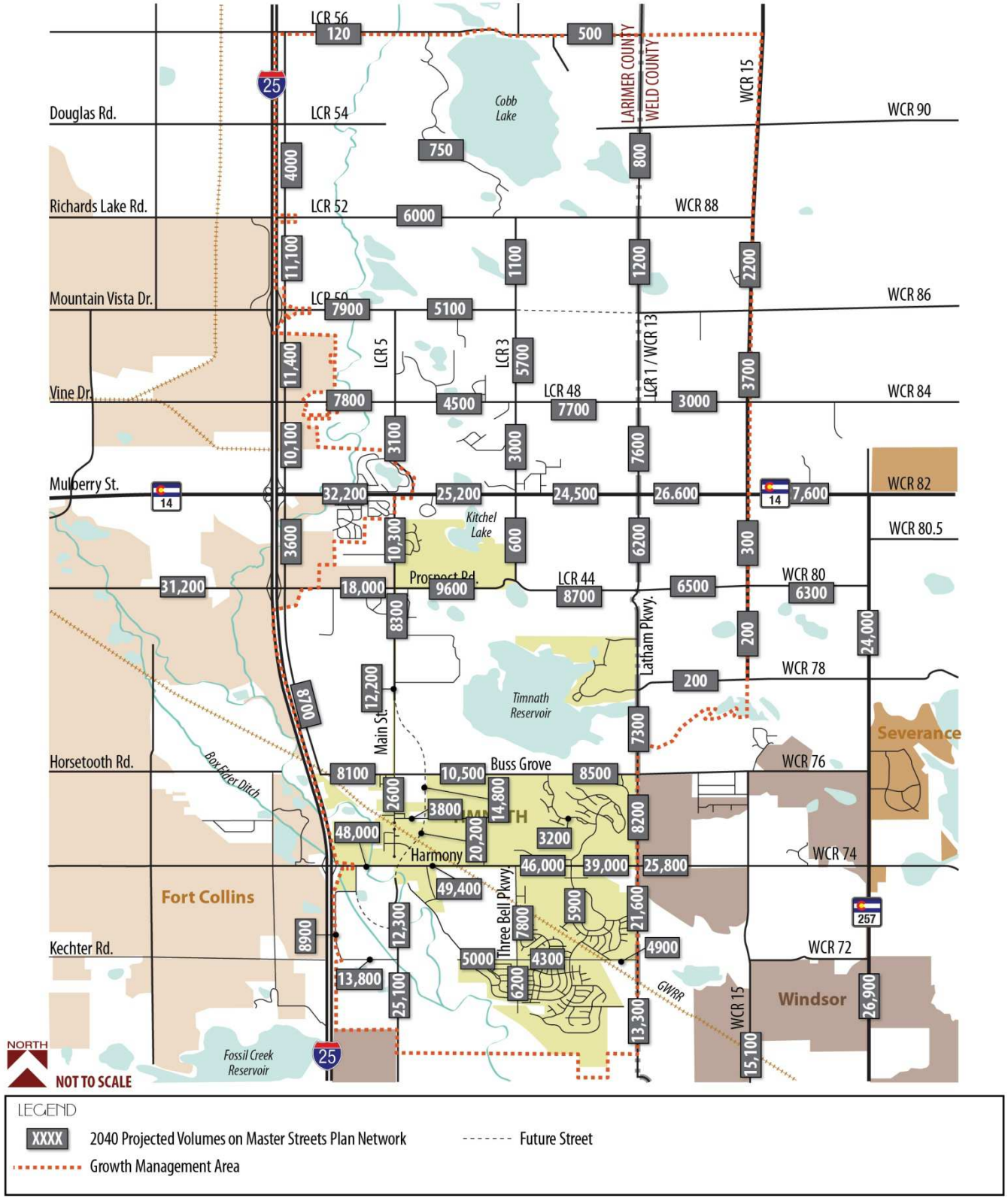



**Figure 34. 2040 Daily Traffic Forecasts on 2040 Master Streets Plan**

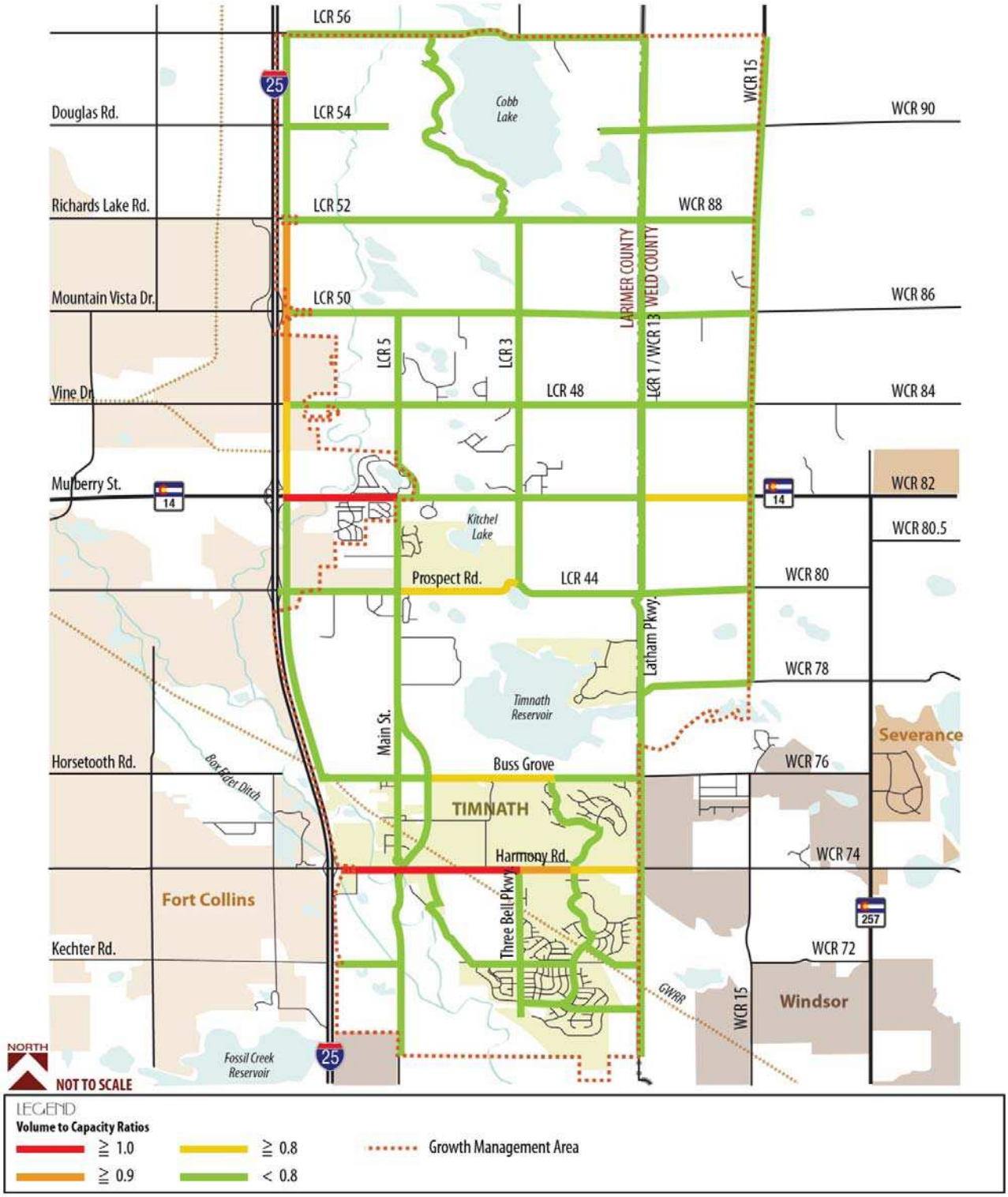



**Figure 35. 2040 Volume/Capacity Ratios (2040 Master Streets Plan)**

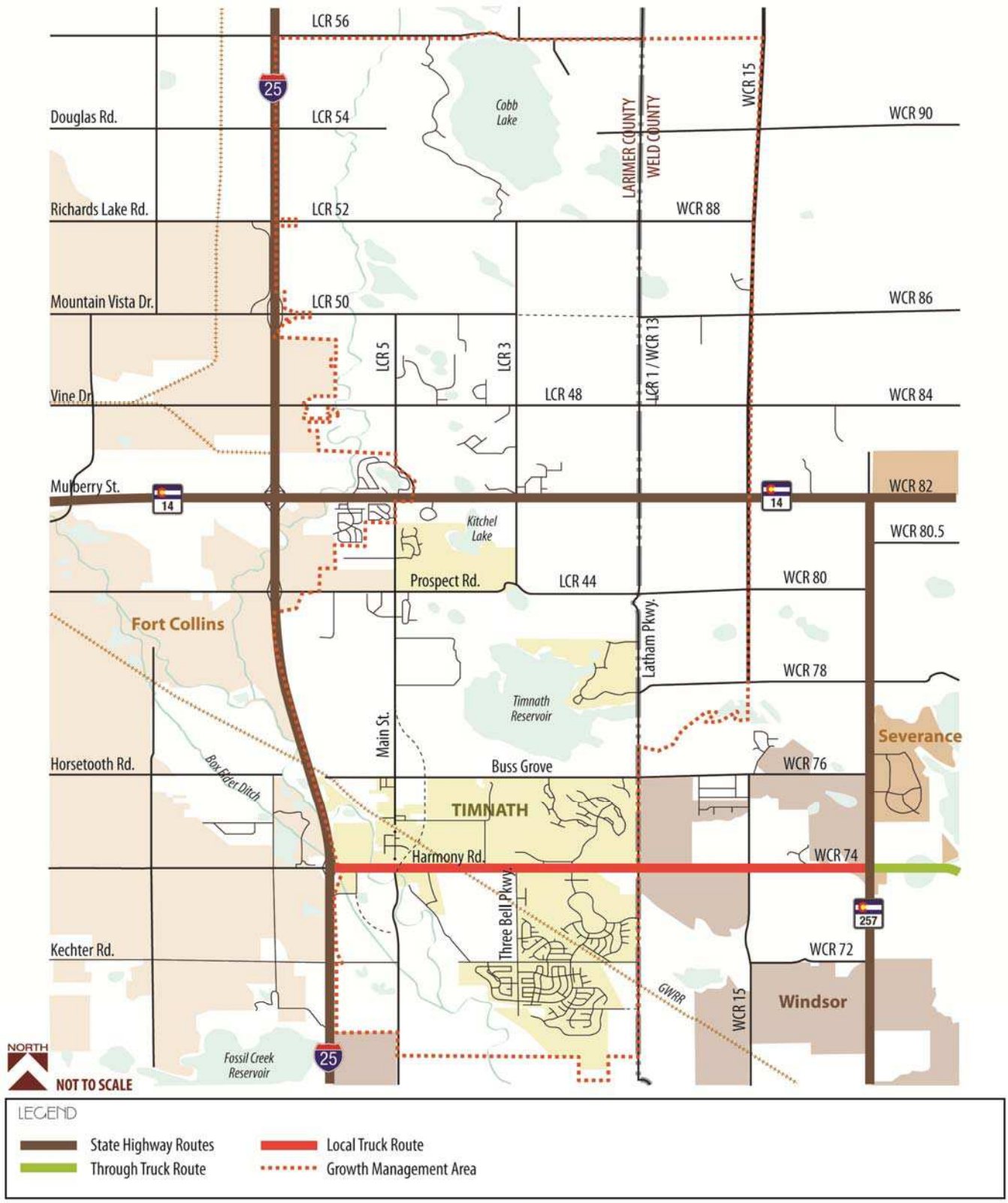



**Figure 36. Preferred Commercial Truck Routes**

## Bikeway and Pedestrian System

The accommodation of bicycle and pedestrian travel is essential for Timnath's quality of life. Timnath has an opportunity to expand the network of bicycle and pedestrian facilities, connect to community activity centers, and increase the overall regional network available in northern Colorado.

Bicyclists and pedestrian can vary greatly in their abilities and their level of comfort in using various types of facilities. Ideally, the transportation system should accommodate all types of bicyclists and pedestrians.

***"Strong & Fearless" Bicyclists*** are bicycle enthusiasts who will ride their bicycle for any trip type, with bicycling being their primary mode for commuting. Bicycling is part of their identity, and they will ride on nearly any roadway in any conditions.

***"Enthused & Confident" Bicyclists*** are encouraged to bicycle by the availability of bicycle facilities. They will occasionally ride in traffic when bicycle facilities are not present but prefer to ride within their own facility. These riders may not always choose to bicycle but are comfortable doing so in many cases. Investment in additional bicycling infrastructure to improve safety and connectivity will lead to these riders making more bike trips.

***"Interested but Concerned" Bicyclists*** are typically the largest group of a population. They are interested in biking but are concerned about their safety. They do not like using routes without bicycle facilities, as they are nervous about mixing with motorized vehicles. They primarily ride their bicycle for short trips and for recreational reasons. The addition of bicycle facilities that remove them from interacting with motorized vehicles would increase their likelihood of riding.

***"No Way, No How"*** are people who have no interest in bicycling due to immense safety concerns, weather, topography, and/or a simple lack of interest.

***Pedestrians*** can range in a multitude of characteristics including age (children, adults, and the elderly), speed, ability (ambulatory or visual impairments), and purpose (recreational walking, running, commuting). These characteristics often dictate the type of facility a pedestrian is comfortable using. Wider, detached sidewalks generally serve the greatest number of pedestrians by providing a buffer between the pedestrian and vehicular traffic and adequate space to accommodate passing and wheelchair use. Shared-use trails primarily serve recreational pedestrians.

Timnath's Bicycle and Pedestrian Plan is intended to provide a comprehensive, well-connected system of bicycle and pedestrian facilities that accommodate all abilities. The Town's Bicycle and Pedestrian Plan is compatible with the NFRMPO's Regional Bike Plan, which identifies three regional bicycle corridors in the Timnath area:

- Poudre River Trail
- Front Range Trail (West) – east of I-25 from approximately Prospect Road to the north
- Johnstown/Timnath Corridor – along the LCR 1 alignment

### Pedestrian and Trails Plan

Timnath's PROST Plan serves as a primary trails planning document by identifying existing and future regional, community, and roadside trails. This system of trails will be built over time and as development continues to occur. At full buildout, Timnath will have a well-connected system of trails that serves all types of non-motorized travel. This trail network will provide local access to neighborhoods and community resources such as

schools and parks, as well as regional access to adjacent communities such as Windsor, Severance, and Fort Collins. **Figure 37** shows Timnath's Pedestrian and Trails Plan. Depicted are future grade-separated crossings that will eliminate vehicle-bike and vehicle-pedestrian conflicts and allow uninterrupted bicycle and pedestrian movements across major roadway facilities like I-25 and Harmony Road. Any future trail crossings of SH 14 will also likely require grade separation.

The expansion of the sidewalk network will happen over time as development occurs. Sidewalks on the Major Collector and higher streets are shown, but all streets in Timnath shall include sidewalks. Timnath's typical cross sections, **Figure 25** through **Figure 33**, include a minimum 5 foot detached sidewalk along local and collector streets, and a minimum 6-foot detached sidewalk along arterial streets. Pedestrian walkways connecting residential developments to the arterial and collector street system should be provided to ensure that pedestrians have quick and direct access between neighborhoods and to commercial areas. The pedestrian plan includes particular focus on improved sidewalk connections in the Old Town area and to improve walking access to Timnath Elementary School.

## On-Street Bike Plan

Timnath's typical cross-sections, **Figure 25** through **Figure 33**, include on-street bike lanes for all arterial and collector streets. Arterial streets require a minimum 7-foot bike lane, and collector streets require a minimum 5-foot bike lane. **Figure 38** shows the arterial street bike lanes. When fully built, the arterial street bike lanes will form a connected network of on-street bike facilities at approximately 1-mile spacing. Consideration should be given to enhanced bike lanes on higher volume streets (like Harmony Road, Main Street, and LCR 1) such as buffered bike lanes or protected bike lanes.


*Buffered Bike Lane; Source: NACTO Urban Bikeway Design Guide*


*Protected Bike Lane; Source: NACTO Urban Bikeway Design Guide*

While the arterial street bike lanes will provide direction connections in and around the community, they will predominately serve the "strong & fearless" and enthused & confident" bicyclists; the "interested but concerned" population (which typically accounts for upwards of 60 percent of any population) may not be comfortable riding alongside the higher traffic volumes and higher speeds associated with the arterial street network. To better serve the "interested but concerned" population—and to better accommodate bicyclists of all abilities throughout Timnath—the On-Street Bike Plan includes a low stress bike network to complement the arterial street bike lanes. A low stress bike facility is one on which a bicyclist shares the street with low-volume, low-speed automobile

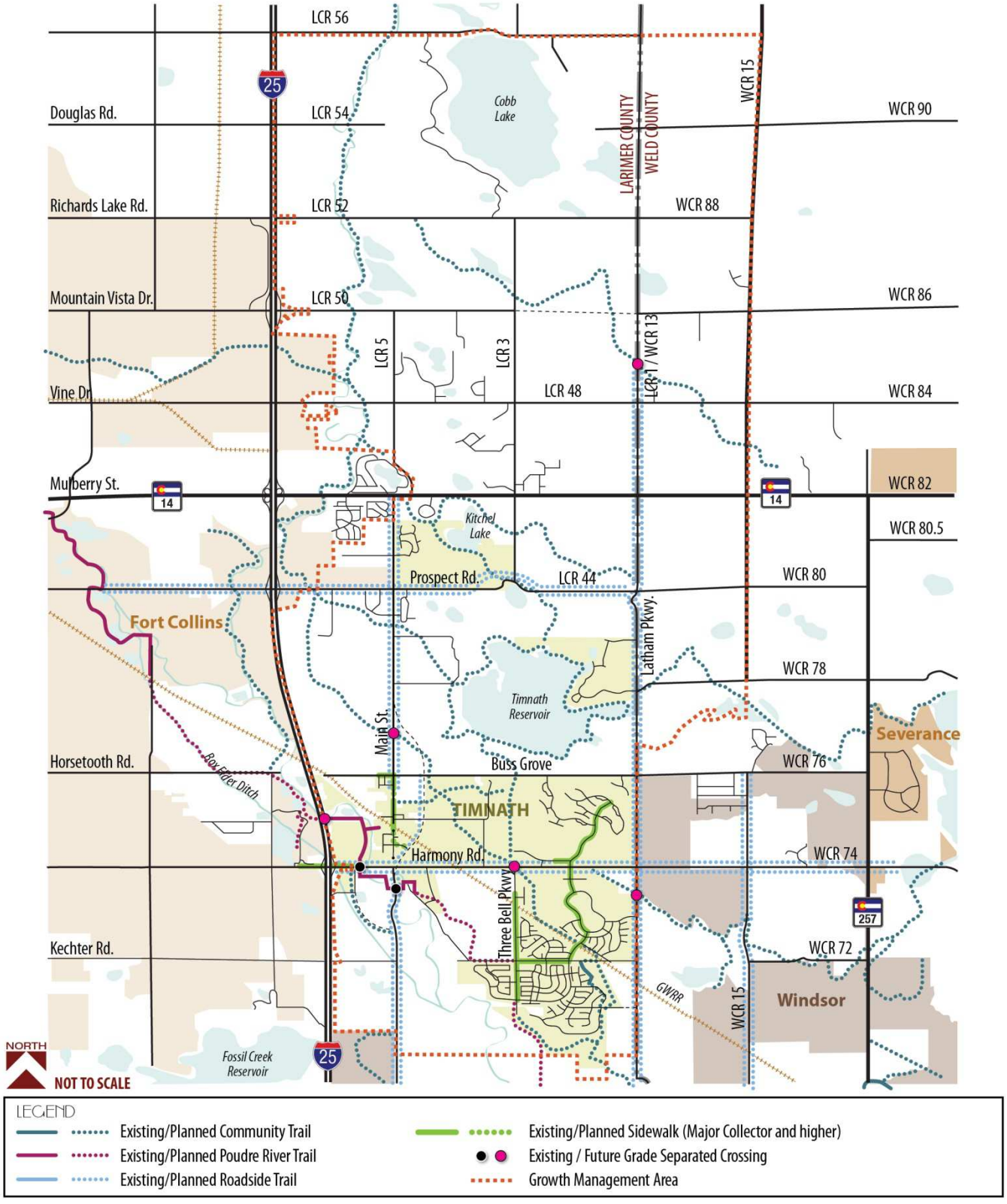



**Figure 37. Pedestrian and Trails Plan**

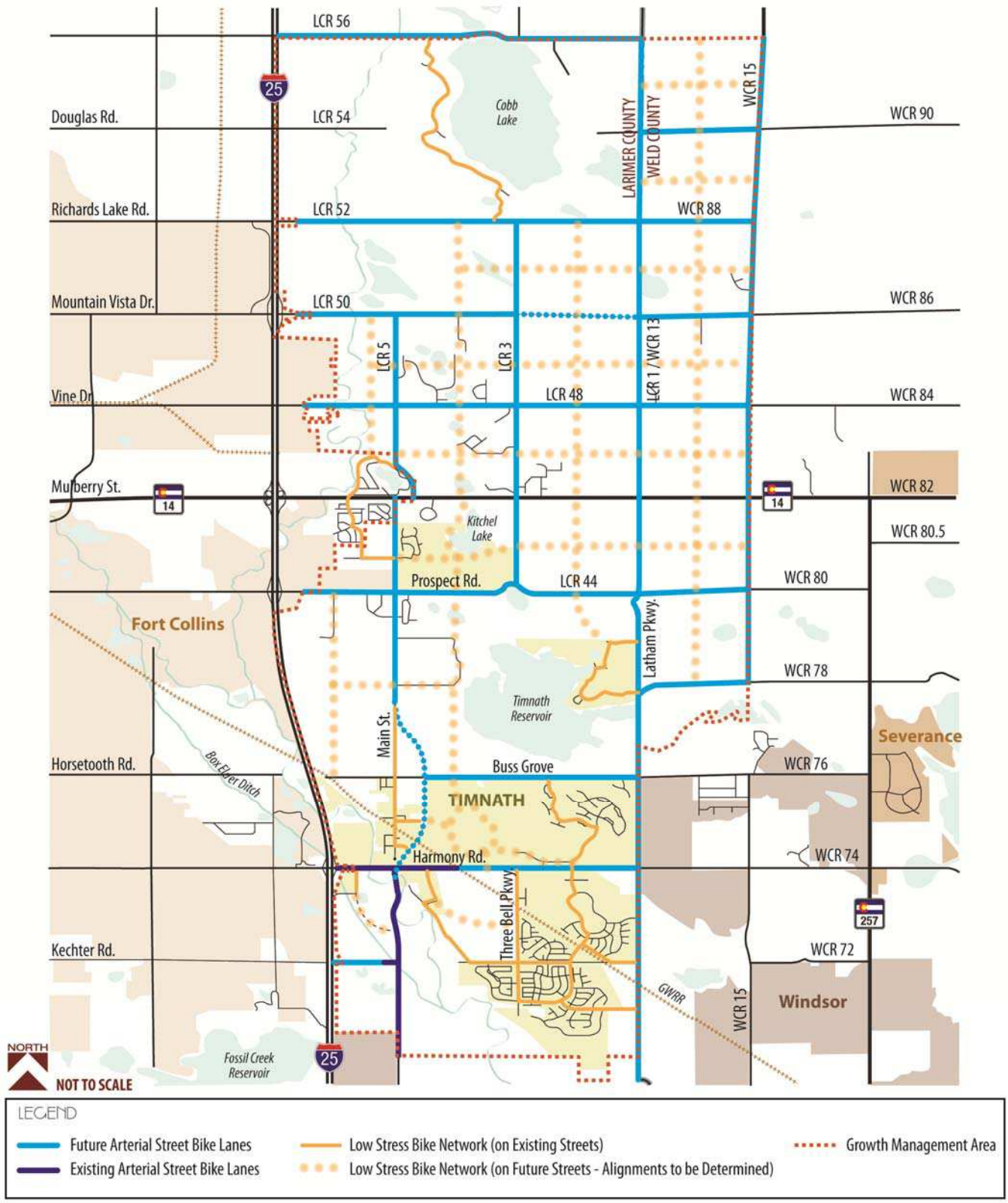



**Figure 38. On-Street Bike Plan**

traffic, is adjacent to such traffic in a bike lane, or is completely separated from traffic in a protected bike lane or on a paved trail.

Several of the existing collector streets through residential areas have been identified on **Figure 38** as part of the low-stress bike network. The Town should work to sign these streets as designated bike routes and possibly stripe designated bike lanes where adequate width is provided.

Timnath is fortunate to be in a position to plan ahead for the provision of a well-connected network of low stress bike facilities. While the exact alignment of the low stress bike network on collector streets will be determined through the development and development review process, **Figure 38** depicts the general concept of providing low stress bike routes at approximately ½ mile spacing between the arterial streets. The low stress bike facilities should be designed and built with the following guidance:

- Collector streets on the low stress network should provide a relatively direct route for north-south and east-west travel through each 1-mile section of land.
- Collector streets in adjacent neighborhoods/developments should align, providing a connected network for all modes, particularly for bicycle travel on the low stress network.
- Where the collector streets on the low stress network intersect arterial streets, the intersection should be signalized (if warranted) or provide enhanced bicycle and pedestrian crossing treatments such as rectangular rapid flashing beacons (RRFB), pedestrian hybrid signals (HAWKs), and pedestrian crosswalks and/or cross-bike markings. In some cases, a grade-separated crossing may be required for safety.

Bicycle facilities in Timnath shall be designed to comply with the AASHTO Bicycle Guide standards.[2]

## Transit System

Timnath residents have expressed interest in adding public transit options. There are several options for the Town to pursue to incorporate transit services into the community by either coordinating with existing providers, developing the Town's own system, or a combination.

Timnath should coordinate with SAINT, an existing human services transportation provider based out of Fort Collins, to see whether expanding their service area to include Timnath would be a possibility. Because many residents travel to and from Fort Collins for medical appointments, shopping, etc., this could be a valuable service to the residents of Timnath.

Timnath could also explore with Transfort the possibility of extending Transfort service into Timnath. Route 16 was recently extended service to the east, with a stop at the Harmony Transfer Center just west of I-25 on the north side of Harmony. Route 16 connects to the South Transit Center, a major transfer center for the Transfort system, including connections to MAX.

A future option would be to develop a Timnath circulator bus/shuttle. The circulator could connect major locations such as neighborhoods, schools, Old Town, shopping along I-25, and the Harmony Park-n-Ride. With connections to the Harmony Park-n-Ride, users would then be able to access CDOT's Bustang service. More analysis is needed to determine whether this is a feasible option for Timnath.

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[2] American Association of State Highway Transportation Officials (AASHTO) Guide to the Development of Bicycle Facilities, 4th Edition, 2012.

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# 6. Implementation Strategy

The infrastructure and transit service recommendations described in **Chapter 5** provide strategies that will move Timnath toward reaching the transportation goals as stated in **Chapter 2**. While improving travel by bike, by foot, by car, and by transit are clear community priorities, implementation of these recommendations will necessarily occur over time commensurate with available resources. This chapter provides guidance in the phasing and funding strategies for the Town to implement the transportation plan recommendations.

## Identification of Projects

### Regional Projects

Several transportation improvement projects have been identified either through this Transportation Planning effort or through previous regional planning efforts that will require considerable regional coordination. The projects listed in **Table 6** are regional projects with scopes and costs well beyond the means of the Town of Timnath. All of these projects are important to Timnath's transportation system (as well as to the region as a whole), but implementation of these projects will not be the primary responsibility of the Town. Rather, the Town will partner with the appropriate agencies to support implementation of these important regional projects.

**Table 6. Regional Projects**

| Location | Description | Primary Responsibility |
|---|---|---|
| I-25 (SH 66 to SH 14) | Widen to 6 Lanes + Express Lanes (North I-25 EIS) | CDOT |
| I-25 (SH 14 to SH 1) | Reconstruction (North I-25 EIS) | CDOT |
| I-25/Harmony Rd | Reconstructed Diamond Interchange (North I-25 EIS) | CDOT |
| I-25/Prospect Rd | Reconstructed Diamond Interchange (North I-25 EIS) | CDOT |
| I-25/SH 14 | Reconstructed Diamond Interchange (North I-25 EIS) | CDOT |
| I-25/Mountain Vista | Reconstructed Diamond Interchange (North I-25 EIS) | CDOT |
| Kechter Rd at I-25 | Reconstruct Bridge to 4 Lanes (Widening of I-25 will require bridge reconstruction) | CDOT/Timnath/Fort Collins |
| SH 14 (I-25 to SH 257) | Widen to 4 Lanes | CDOT/NFRMPO |
| SH 257 (SH 14 to SH 392) | Widen to 4 Lanes | CDOT/NFRMPO |
| Poudre River Trail at I-25 | Underpass or Overpass | Fort Collins/Timnath/ Larimer County |
| Harmony Rd (LCR 1 to SH 257) | Widen to 4 Lanes | Windsor/Weld County |
| LCR 1 (South GMA to SH 392) | Widen to 4 Lanes and Realign North of LCR 32e | Windsor/Weld County |
| LCR 5 (South GMA to SH 392) | Widen to 4 Lanes | Windsor/Weld County |

## Roadway Projects

The roadway improvement projects needed to realize the 2040 Master Streets Plan fall in five general categories:

- Paving of currently gravel streets
- Reconstruction to bring an existing road to the standard cross section
- Road widening to handle increasing traffic and to bring the road to the standard cross section
- New road connections
- Intersection control (signalization or roundabout)

Timnath's typical cross sections (**Chapter 5**) are multimodal and include the provision of bike lanes and sidewalks on all streets. Therefore, the roadway improvement projects described herein include the design and construction of the associated bicycle and pedestrian facilities.

The roadway projects have been divided into four time periods based on input from the public, Town staff and Council members, anticipated development patterns, and on projected travel demand:

- Short term (2015 – 2020)
- Mid term (2020 – 2030)
- Long term (2030 – 2040)
- Beyond 2040

**Table 7** lists the projects in terms of general time frames but does not prioritize within each time frame. Where two or more projects may be related (and could be constructed as a package), the appropriate Project ID #s are cross-referenced in the table.

Although funding sources for these projects will vary, **Table 7** also presents planning-level cost estimates for each project. Contributions to these projects may come from the Town, developers, adjacent jurisdictions, state or federal funding, or other funding sources. Much of the needed right-of-way will be obtained from adjacent future development. Funding from "Timnath" may be from the Town's general fund and/or the Timnath Development Authority revenue.

The need for certain projects, such as the paving of county roads, will probably be created by specific developments, and these developers should be held responsible for funding such projects through transportation impact fees or exactions. It should be noted that the cost estimates for all collector and arterial streets are based on the urban cross sections, which include curb and gutter. **Appendix B** includes quantities and calculations used to develop the per-mile cost opinions. Cost estimates presented in this plan are high-level planning estimates and exclude the costs of right-of-way acquisitions. All costs are in 2015 dollars and exclude the costs of right of way acquisition.

Ten intersections have been identified as likely candidates for signalization in the future. The Town should monitor traffic volumes to determine if/when the intersection warrants signalization. When intersection control improvements are needed at these and other locations in Timnath, the Town should evaluate whether a roundabout might be a preferable intersection treatment rather than a signal. The costs shown in **Table 7** are for signalization ($250,000); the design and construction of a roundabout can cost $1 million to $1.5 million, depending on the size and design parameters.

**Table 7. Roadway Projects**

| Project ID # | Location | Description | Project Cross-Reference | Length (mi) | Per-mile Cost | Cost Estimate (2015$) | Primary Responsibility |
|---|---|---|---|---|---|---|---|
| **Short Term (2015 – 2020)** | | | | | | | |
| 1 | Summerfield Pkwy (River Pass Rd to Twin Bridges Dr) | Extension of Major Collector | 46 | 0.2 | - | $0.65 M | Timnath |
| 2 | Old Town | Pave Old Town Streets | 50 | - | - | - | Timnath |
| 3 | Parkway (Harmony Rd to Buss Grove) | New 2-Lane Arterial | 44 | 1.1 | $4.9 M | $5.4 M | Developer |
| 4 | Parkway & 4th Avenue | Roundabout | - | - | - | $0.5 M – $1.0 M[3] | Timnath |
| 5 | Harmony Rd & Signal Tree Dr | Signalize Intersection | - | - | - | $0.25 M | Timnath/ Developer |
| 6 | Harmony Rd & Timnath Landing Blvd | Signalize Intersection | - | - | - | $0.25 M | Developer |
| 7 | Harmony Road (GWR to LCR 1) | Widen to Rural 4-Lane Arterial Cross-Section including railroad crossing improvements | 52 | 1.5 | - | $12 M | Timnath/ Developer |
| 8 | LCR 1 (Harmony Rd to Buss Grove) | Widen to Rural 2-Lane Arterial Cross Section | - | 1 | $4.9 M | $4.9 M | Developer |
| 9 | LCR 1 (Buss Grove to Wild Wing) | Pave 2 lanes | - | 0.8 | - | - | Developer |
| 10 | LCR 1 (Wild Wing frontage) | Pave and widen to Rural 2-Lane Arterial Cross-Section | - | 0.7 | - | - | Developer |

[3] The cost for the Parkway and 4th Avenue roundabout represents an approximate cost to upgrade the intersection to a roundabout compared to a traditional signalized intersection.

| Project ID # | Location | Description | Project Cross-Reference | Length (mi) | Per-mile Cost | Cost Estimate (2015$) | Primary Responsibility |
|---|---|---|---|---|---|---|---|
| 11 | Prospect Rd (Main St to Three Bell Pkwy) | Widen to 2-Lane Arterial Cross-Section with realignment around Deadman Lake | - | 1.0 | - | - | Developer |
| **Mid Term (2020 – 2030)** | | | | | | | |
| 12 | Kechter Rd (I-25 to Main St) | Widen to 4-Lane Arterial Cross Section | - | 0.5 | $5.7 M | $2.5 M | Timnath/ Developer |
| 13 | Main Street (Harmony Rd to South GMA) | Widen to 4-Lane Arterial Cross Section | - | 2 | $5.7 M | $9.8 M | Timnath/ Developer |
| 14 | Folsom Pkwy (Yellowtail St to LCR 1) | Extension of Major Collector | - | 0.3 | $4.1 M | $1.2 M | Developer |
| 15 | LCR 1 (Harmony Rd to South GMA) | Widen to 4-Lane Arterial Cross Section | 48/58 | 2 | $5.7 M | $9.8 M | Timnath/ Developer |
| 16 | Harmony Rd (I-25 to LCR 1) | Widen to 6-Lane Arterial Cross Section | - | 2.5 | - | $5.6 M[4] | Timnath |
| 17 | Harmony Rd & LCR 1 | Signalize Intersection | - | - | - | $0.25 M | Timnath/ Developer |
| 18 | Parkway (Buss Grove north to Main St) | New 2-Lane Arterial | - | 0.5 | $4.9 M | $2.5 M | Developer |
| 19 | Parkway (Harmony to Main St) | Widen to 4-Lane Arterial Cross Section | - | 1.6 | $5.7 M | $9.1 M | Timnath |
| 20 | Buss Grove (I-25 Frontage Road to LCR 1) | Reconstruct to 2-Lane Arterial Cross Section | - | 2.5 | $4.9 M | $12.3 M | Timnath/ Developer |
| 21 | Prospect Rd (West GMA to Main St) | Widen to 4-Lane Arterial Cross Section | - | 0.8 | $5.7 M | $4.6 M | Timnath/ Developer |

[4] The cost for Harmony Road widening assumes restriping only from I-25 to approximately the GWR.

| Project ID # | Location | Description | Project Cross-Reference | Length (mi) | Per-mile Cost | Cost Estimate (2015$) | Primary Responsibility |
|---|---|---|---|---|---|---|---|
| **Long Term (2030 – 2040)** | | | | | | | |
| 22 | Kechter Rd & Main St | Signalize Intersection | - | - | - | $0.25 M | - |
| 23 | Twin Bridge Dr & LCR 1 | Signalize Intersection | - | - | - | $0.25 M | - |
| 24 | Buss Grove & LCR 1 | Signalize Intersection | - | - | - | $0.25 M | - |
| 25 | WCR 78 (LCR 1 to WCR 15) | Reconstruct to 2-Lane Arterial Cross Section | - | 1 | $4.9 M | $4.9 M | - |
| 26 | Main Street/LCR 5 (Parkway to LCR 50) | Reconstruct to 2-Lane Arterial Cross Section | - | 4.5 | $4.9 M | $22.1 M | - |
| 27 | Prospect Rd & Main St | Signalize Intersection | - | - | - | $0.25 M | - |
| 28 | Prospect Rd (Three Bell Pkwy to WCR 15) | Reconstruct to 2-Lane Arterial Cross-Section | - | 2 | $4.9 M | $9.8 M | - |
| 29 | Prospect Rd & LCR 1 | Signalize Intersection | - | - | - | $0.25 M | - |
| 30 | LCR 3 (Prospect Rd to LCR 52) | Reconstruct to 2-Lane Arterial Cross Section | - | 4 | $4.9 M | $19.6 M | - |
| 31 | LCR 1 (Wild Wing to LCR 56) | Reconstruct to 2-Lane Arterial Cross Section | 59 | 6.5 | $4.9 M | $31.9 M | - |
| 32 | SH 14 & LCR 1 | Signalize Intersection | - | - | - | $0.25 M | - |
| 33 | Vine Drive (West GMA to WCR 15) | Reconstruct to 2-Lane Arterial Cross Section | - | 3.7 | $4.9 M | $18.1 M | - |
| 34 | Vine Dr & LCR 1 | Signalize Intersection | - | - | - | $0.25 M | - |

| Project ID # | Location | Description | Project Cross-Reference | Length (mi) | Per-mile Cost | Cost Estimate (2015$) | Primary Responsibility |
|---|---|---|---|---|---|---|---|
| **Beyond 2040** | | | | | | | |
| 35 | WCR 15 (WCR 78 to WCR 92) | Reconstruct to 2-Lane Arterial Cross Section | - | 7 | $4.9 M | $34.3 M | - |
| 36 | LCR 50 (I-25 to LCR 3) | Reconstruct to 2-Lane Arterial Cross Section | - | 2 | $4.9 M | $9.8 M | - |
| 37 | LCR 50 (LCR 3 to LCR 1) | New 2-Lane Arterial | - | 1 | $4.9 M | $4.9 M | - |
| 38 | WCR 86 (LCR 1 to WCR 15) | Reconstruct to 2-Lane Arterial Cross Section | - | 1 | $4.9 M | $4.9 M | - |
| 39 | LCR 52/WCR 88 (I-25 to WCR 15) | Reconstruct to 2-Lane Arterial Cross Section | - | 4 | $4.9 M | $19.6 M | - |
| 40 | LCR 54 (I-25 to LCR 5 Alignment) | Reconstruct to 2-Lane Arterial Cross Section | - | 1 | $4.9 M | $4.9 M | - |
| 41 | WCR 90 (LCR 1 to WCR 15) | Reconstruct to 2-Lane Arterial Cross Section | - | 1 | $4.9 M | $4.9 M | - |
| 42 | LCR 56 (I-25 to LCR 1) | Reconstruct to 2-Lane Arterial Cross Section | - | 3 | $4.9 M | $14.7 M | - |

## Railroad Crossings Projects

There are currently five at-grade railroad crossings within the Timnath GMA. The GWR crosses Main Street, Harmony Road, Three Bell Parkway, River Pass Road, and LCR 1. When the Parkway is constructed between Harmony Road and Buss Grove, a new at-grade railroad crossing will be included. The Town will concurrently close the Main Street at-grade crossing. However, the Town has initiated discussions with the GWR regarding options to retain pedestrian and/or emergency access at the Main Street crossing. Similarly, the River Pass Road crossing will be closed, and a new at-grade crossing is planned at Summerfield Parkway.

**Table 8** summarizes the recommended railroad crossing improvements, all of which are considered short-term projects (2015–2020). In addition to the railroad crossing closures and new railroad crossings, **Table 8** includes installation of quiet crossing infrastructure including gates and signs at the at-grade crossings to formalize a quiet zone through Timnath. The costs shown in **Table 8** are for the crossing upgrades (gates, signs, etc.); the construction cost for the new crossings themselves are included in the cross-reference roadway projects.

**Table 8. Railroad Crossing Projects**

| Project ID # | Location | Description | Project Cross-Reference | Cost Estimate (2015$) | Primary Responsibility |
|---|---|---|---|---|---|
| **Short Term (2015 – 2020)** | | | | | |
| 43 | Main St Railroad Crossing | Close railroad crossing; coordinate with GWR on retaining pedestrian and/or emergency access | 44 | $50,000 | Timnath/Developer |
| 44 | Parkway Railroad Crossing | New railroad crossing; Install quiet crossing infrastructure; gates and signs | 3/43 | $300,000 – $500,000 | Developer |
| 45 | Three Bell Pkwy Railroad Crossing | Install quiet crossing infrastructure; gates and signs | - | $300,000 – $500,000 | Timnath/Developer |
| 46 | Summerfield Pkwy Railroad Crossing | New railroad crossing; Install quiet crossing infrastructure; gates and signs | 1/47 | $300,000 – $500,000 | Timnath |
| 47 | River Pass Rd Railroad Crossing | Close railroad crossing | 46 | $50,000 | Timnath |
| 48 | LCR 1 Railroad Crossing | Install quiet crossing infrastructure; gates and signs | 15 | $300,000 – $500,000 | Timnath/Developer |

## Bicycle and Pedestrian Projects

Most of the community trails, sidewalks, and low stress bike network identified in **Chapter 5** will be built when the adjacent land is developed. Likewise the sidewalks, roadside trails, and arterial street bike lanes will be constructed as a part of roadway

improvement projects included in **Table 7**. However, some specific bicycle and pedestrian projects are unique and will require special attention from the Town to be constructed; these projects are listed in **Table 9**. The Poudre River Trail crossing of I-25 is a high priority for the Town of Timnath; this project is included with the Regional Projects in **Table 6**. Three potential grade-separated pedestrian crossings are identified for the Long Term or Beyond 2040. These locations should be considered for at-grade crossing treatments such as rapid rectangular flashing beacons (RRFB) as an interim improvement.

**Table 9. Bicycle and Pedestrian Projects**

| Project ID # | Location | Description | Project Cross-Reference | Cost Estimate (2015$) | Primary Responsibility |
|---|---|---|---|---|---|
| **Short Term (2015 – 2020)** | | | | | |
| 49 | Main Street (Timnath Elementary School to Outlook Avenue) | Connect sidewalk on west side | - | $60,000 | Timnath |
| 50 | Old Town | Add sidewalks on all Old Town Streets | 2 | - | Timnath |
| 51 | Harmony Road (Main Street to LCR 1) | Add sidewalks on both sides | - | $1,600,000 | Developer |
| 52 | Harmony Road near Three Bell Parkway | Connections to Grade Separated Pedestrian Crossing | 7 | $325,000 | Timnath |
| ly53 | Town-wide | Identify Safe Routes to Schools | - | - | School District/ Timnath |
| **Mid-Term (2020 – 2030)** | | | | | |
| 54 | Poudre River Trail to Old Town | Pedestrian bridge and trail connection | - | $650,000 – $900,000 | Timnath |
| 55 | Poudre River Trail (Stone Fly Dr to River Pass and Summerfield Pkwy to South GMA) | Construct this segment of Poudre River Trail | - | $1,000,000 | Developer |
| 56 | LCR 1 (Harmony Rd to Buss Grove) | Roadside trail on the west side | - | $400,000 | Timnath |
| **Long Term (2030 – 2040)** | | | | | |
| 57 | Main Street north of Buss Grove | Grade Separated Pedestrian Crossing | - | $1 M – 3 M | Timnath |
| 58 | LCR 1 south of Harmony Road | Grade Separated Pedestrian Crossing | 15 | $1 M – 3 M | Timnath |
| **Beyond 2040** | | | | | |
| 59 | LCR 1 north of Vine Drive | Grade Separated Pedestrian Crossing | 31 | $1 M – 3 M | Timnath |

## Funding

Like most other municipalities along Colorado's Front Range, Timnath faces a challenge of how to fund transportation improvements. Not only are future needs significant in monetary terms, but the Town must consider resident concerns that new development pay for the transportation infrastructure demands it imposes on the community. New development in the Town will generate new vehicle trips and associated new demands on the Town's road system. The impacts of different developments vary from a small number of trips for a single new home to a large number of trips for a major residential subdivision or commercial development. Major developments should submit a traffic impact study, estimating the number of trips expected to be generated, the expected distribution of those trips onto the surrounding road network, and identifying major road improvements needed to accommodate the traffic.

The following summarize financing options that the Town of Timnath can considered, individually or in combination, to fund these improvements to the major road system to address existing deficiencies or needs created by new development.

***Timnath Capital Improvement Program*** – Much of the funding for improvements to existing roads is currently funded using general Town funds through a CIP. These funds are limited by the size of the anticipated Town revenues through the annual budgeting process.

***Street Impact Fees*** – Impact fees are development exactions, which many local governments use as common devices to impose charges on new development to generate revenues for funding off-site road expansion necessitated by new development. These fees allow developer contributions to be pooled so that road improvements can be implemented on a community-wide basis. These fees cannot legally be applied to existing deficiencies or to improvements that would result from traffic passing through Timnath. It is important to regularly update impact fees to keep pace with rising construction costs.

***Street Maintenance Fees*** – A street maintenance fee is a way of recouping a portion of ongoing street maintenance costs by way of a fee paid through residents' utility bills.

***Federal/State Funding*** – State highways are the primary responsibility of CDOT, in coordination with the NFRMPO. The decision to improve these facilities will be based on state and regional funding considerations. Timnath should monitor this process closely and may need to be prepared to provide local matching funds to leverage money on regionally significant corridors. It should be noted that the availability of federal and state funding for transportation projects in the NFRMPO is currently very limited. Partnerships between communities and CDOT can be an effective way of pooling resources to implement regionally important projects. Funding sources that might be applicable to some of Timnath's projects include Transportation Alternatives Program, Safe Routes to School, Congestion Mitigation and Air Quality Improvement Program, and Surface Transportation Program.

***Regional Transportation Authority*** – The Town may join with neighboring communities to develop a transportation funding and implementation district, similar to the Pikes Peak RTA in the Colorado Springs area.

***Bond Programs/Borrowing*** – Timnath can use long-term financing programs to allow capital improvements to proceed sooner than would be possible with a "pay-as-you-go" approach. This approach is most common for capital improvements

in entities with an expanding tax base. Again, voter approval would be required.

***Special Service Districts*** – Special districts are another option to link specific transportation improvements to funding generated from the development associated with the demand for, or benefitting from, the improvements. The Timnath Development Authority is an example of an urban renewal district. Under Colorado law, there are several forms of special service districts. One form, a tax increment district, can be applicable for a commercial development. The incremental tax revenues generated by the development are dedicated to either fund public costs to serve the area or to rebate developer-incurred costs expended on public improvements for the project.

***Energy and Mineral Impact Assistance Fund*** – The Colorado Department of Local Affairs Energy and Mineral Impact Assistance Fund provides funds generated from the state's severance tax to assist local governments that are socially and/or economically impacted by the development, processing, or energy conversion of minerals and mineral fuels. The grant can fund a variety of projects, including road improvements, construction/improvements to recreation centers, and local government planning.

***Great Outdoors Colorado (GOCO)*** – This state funding program uses a portion of lottery proceeds for projects that protect and enhance Colorado's trails and open space.

## Action Plan

The intent of this Transportation Plan is to ensure that the Town of Timnath has a plan in place to effectively upgrade the transportation system. The Transportation Plan includes roadway and intersection improvements projects, railroad crossing improvements, shared use trails, sidewalk improvements, and on-street bike facilities.

The transportation improvement projects are divided into four time periods based on input from the public, Town staff and Council members, anticipated development patterns, and on projected travel demand:

- Short term (2015 – 2020)
- Mid term (2020 – 2030)
- Long term (2030 – 2040)
- Beyond 2040

The projects associated with each time horizon are depicted on **Figure 39 through Figure 42**. The Project ID #s correspond to **Table 7 through Table 9**. These projects are primarily the responsibility of the Town, often in conjunction with private development. The Town of Timnath also supports the regional transportation improvements listed in **Table 6**. The regional projects will require coordination with CDOT, the NFRMPO and/or surrounding jurisdictions. The following list provides a summary of actions the Town of Timnath should consider taking to ensure that the needed local and regional transportation improvements are funded:

- Begin to plan and budget for completion of the improvements that have been identified for the short term (**Figure 39**).
- Coordinate with SAINT (an existing human services transportation provider) to explore the possibility of expanding their service area to include Timnath.
- Explore with Transfort ways to connect the community to the existing Transfort bus system, including the possibility of extending a Transfort route into Timnath.

- Conduct a feasibility study for a Timnath circulator bus/shuttle that could connect major locations such as neighborhoods, schools, Old Town, and shopping along I-25 with the Harmony Park-n-Ride (for access to Bustang and Transfort's bus system).
- Continue to require transportation impact studies from all proposed developments so that the requirements for internal streets and impacts to the surrounding street network can be evaluated. Transportation impacts studies should address traffic, bicycle, and pedestrian operations. If a proposed development will impact a state highway, require a referral to CDOT for development review.
- Continue to participate in the NFRMPO regional transportation planning process and other regional planning initiatives to ensure the consideration of Timnath's vision for regional roads.
- Incorporate an adequate public facilities ordinance into the Town's land use code to formalize the requirement of adequate infrastructure concurrent with development.
- Adopt a complete streets policy to formalize the expectation that streets in Timnath accommodate pedestrians, bicyclists, motorists and transit riders of all ages and abilities.
- Consider adoption of a street impact fee program to allow developer contributions for major road improvements to be pooled and implemented on a community-wide basis.
- Consider adoption of a street maintenance fee program to offset ongoing street maintenance costs.
- Periodically monitor traffic volumes, safety concerns, and land use development to assess speed limits and conditions for recommended traffic signals.

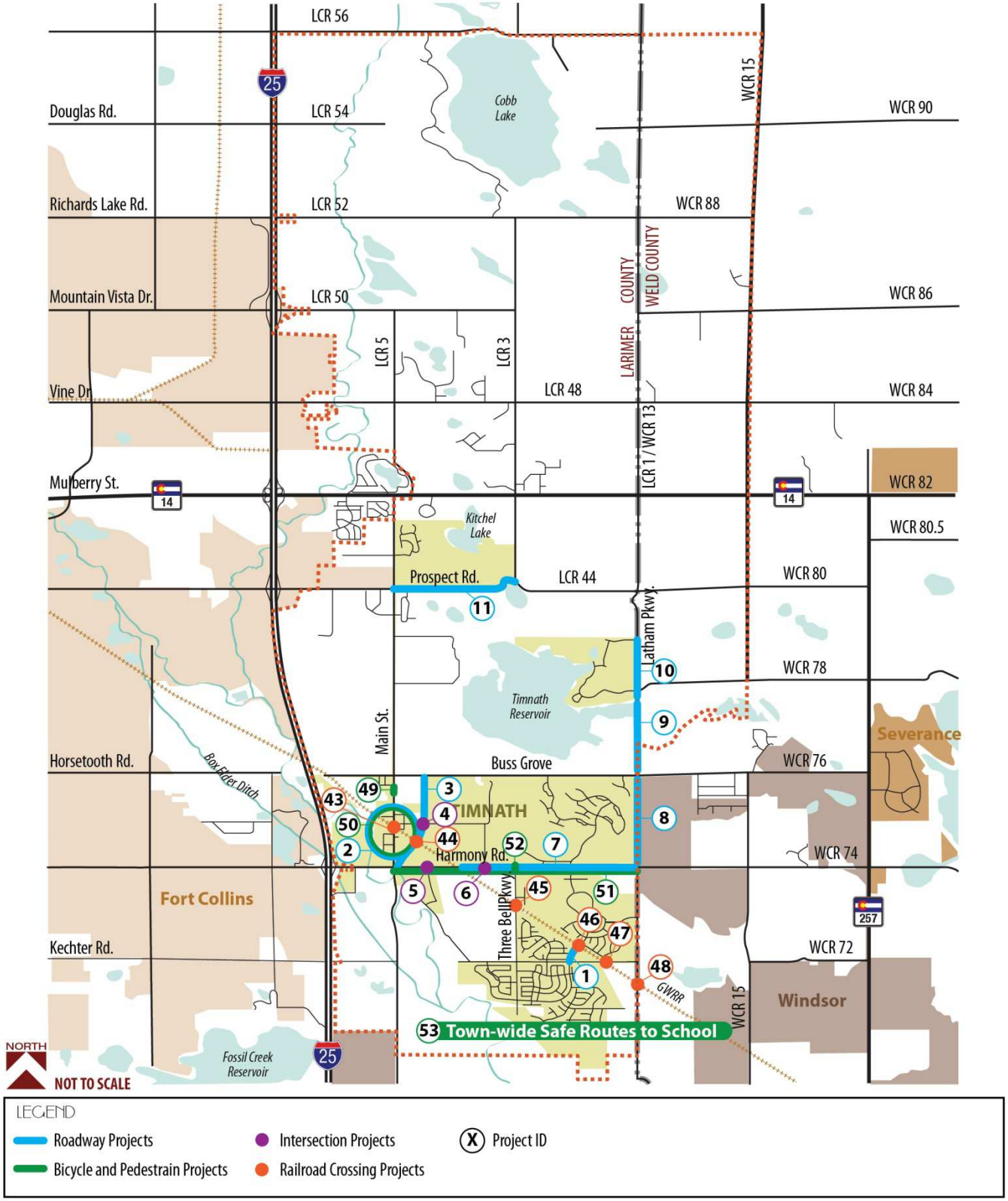


**Figure 39. Short Term (2015 – 2020) Projects**

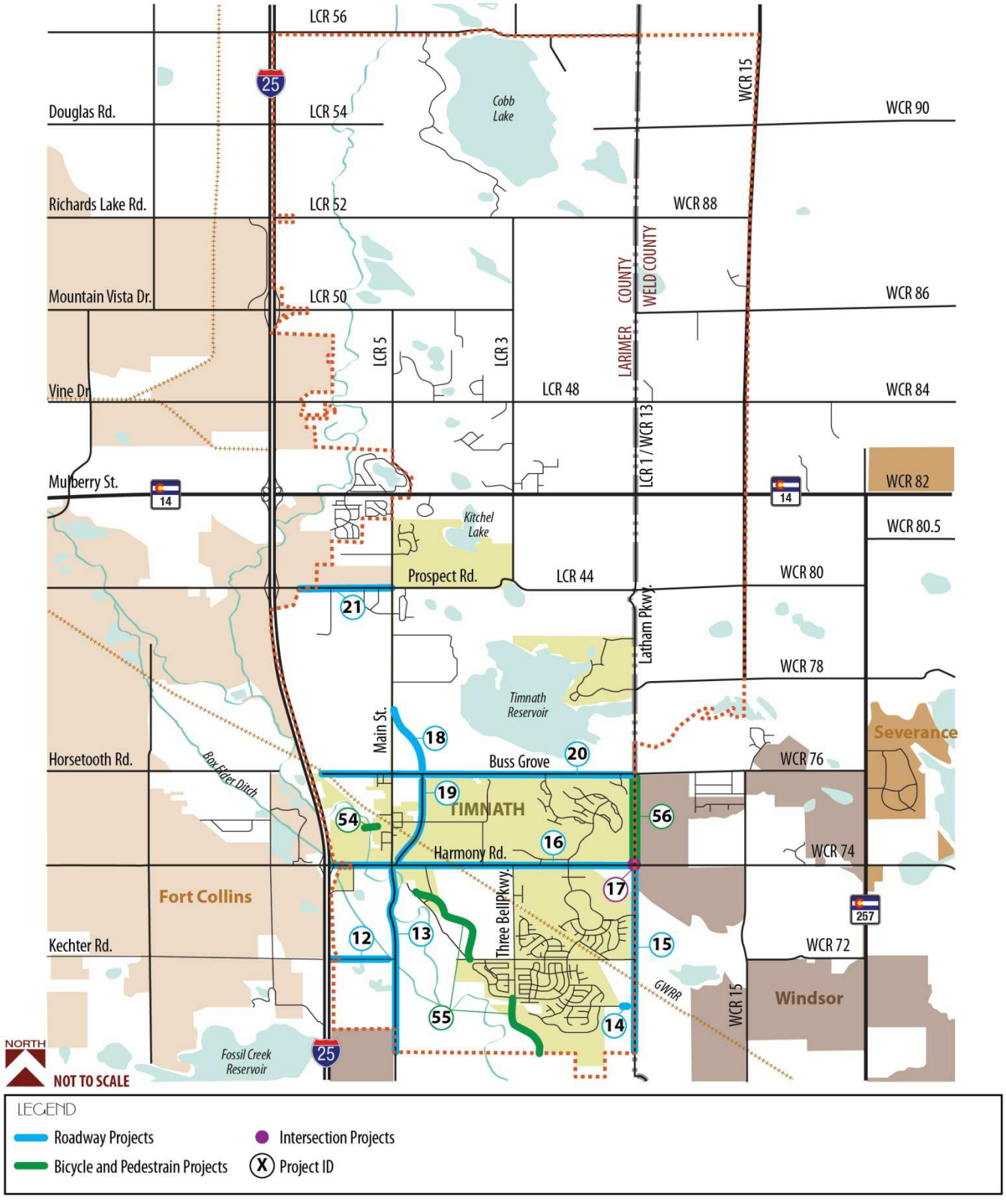


**Figure 40. Mid-Term (2020 – 2030) Projects**

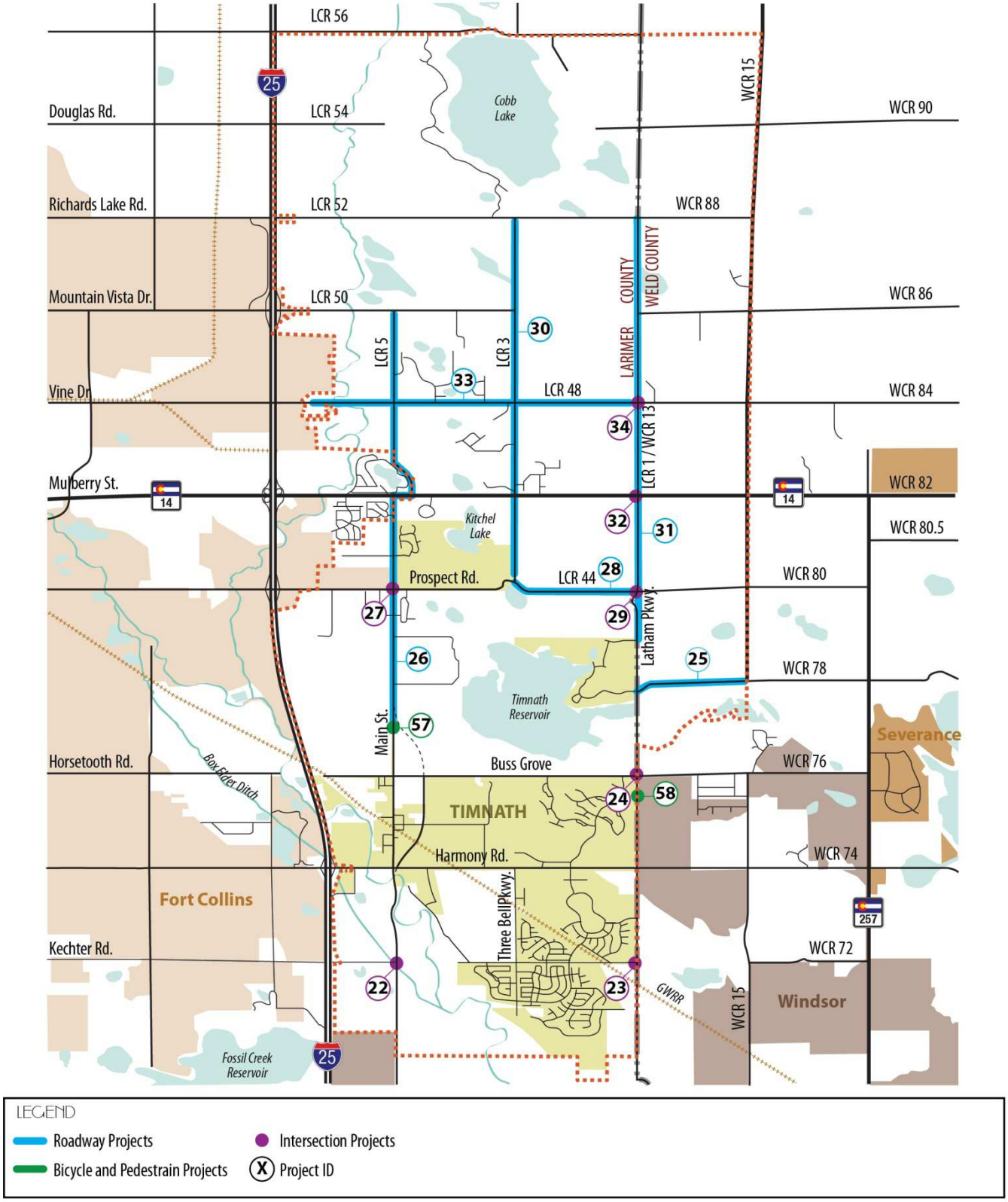


**Figure 41. Long Term (2030 – 2040) Projects**

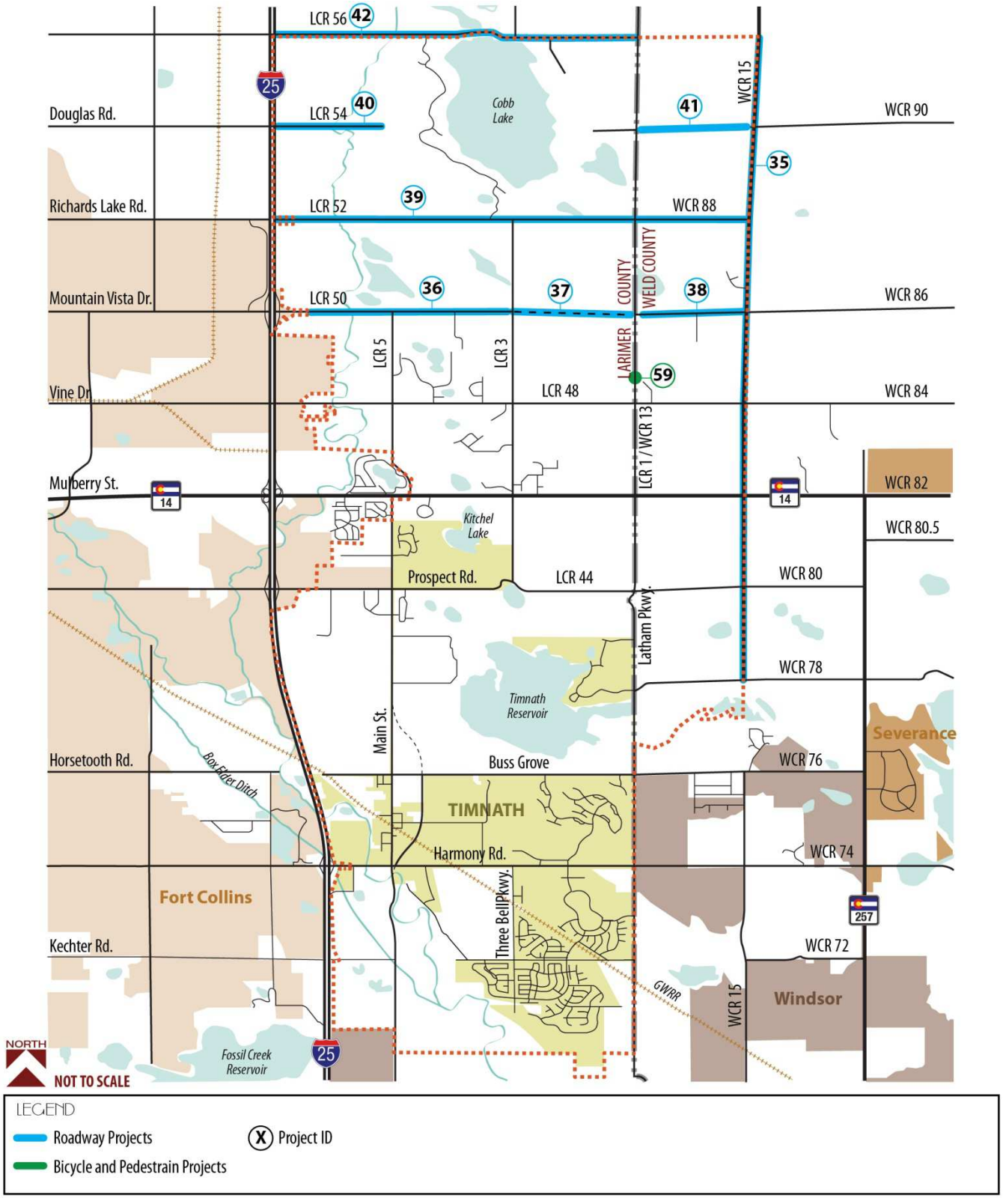


**Figure 42. Beyond 2040 Projects**

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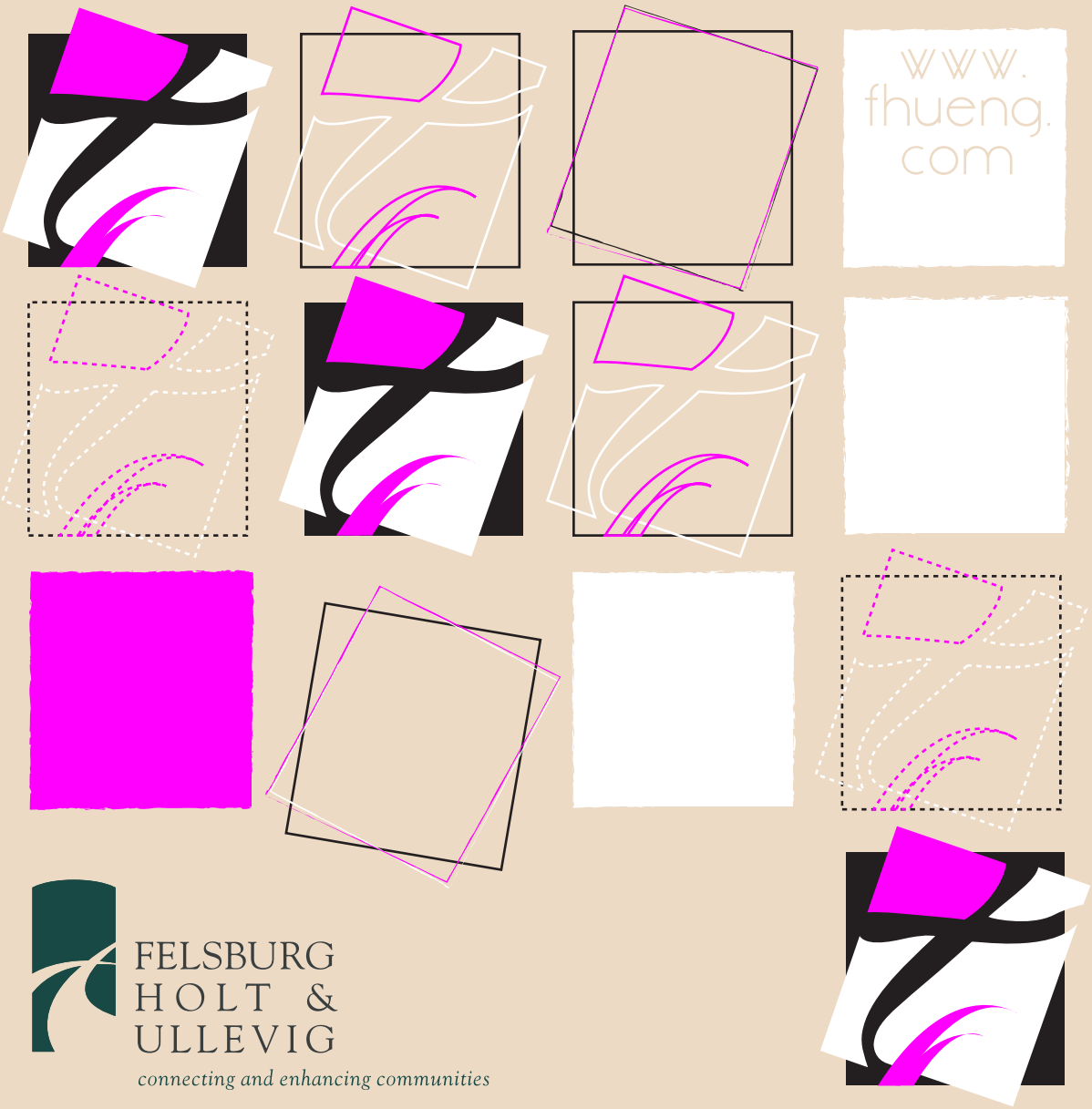


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# Appendix A. Summary of Public Comments

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# Public Meeting Notes & Survey Results

Timnath Transportation Plan
Public Open House – March 26, 2015 – 5:30pm to 7:00pm MST
FHU Project No. 14-312-01

**Meeting & Survey Overview:**
An open house public meeting was held on March 26th, 2015 from 5:30-7pm at the Timnath Town Hall to introduce the Timnath Transportation Plan project to the community and solicit responses and concerns about transportation in and around the Town of Timnath. A total of nineteen attendees signed in at the front table.

The meeting was advertised through a mailing to all Timnath residents, and on the Town's website. A copy of the mailing is attached to the end of this document.

Information presented at the meeting included:

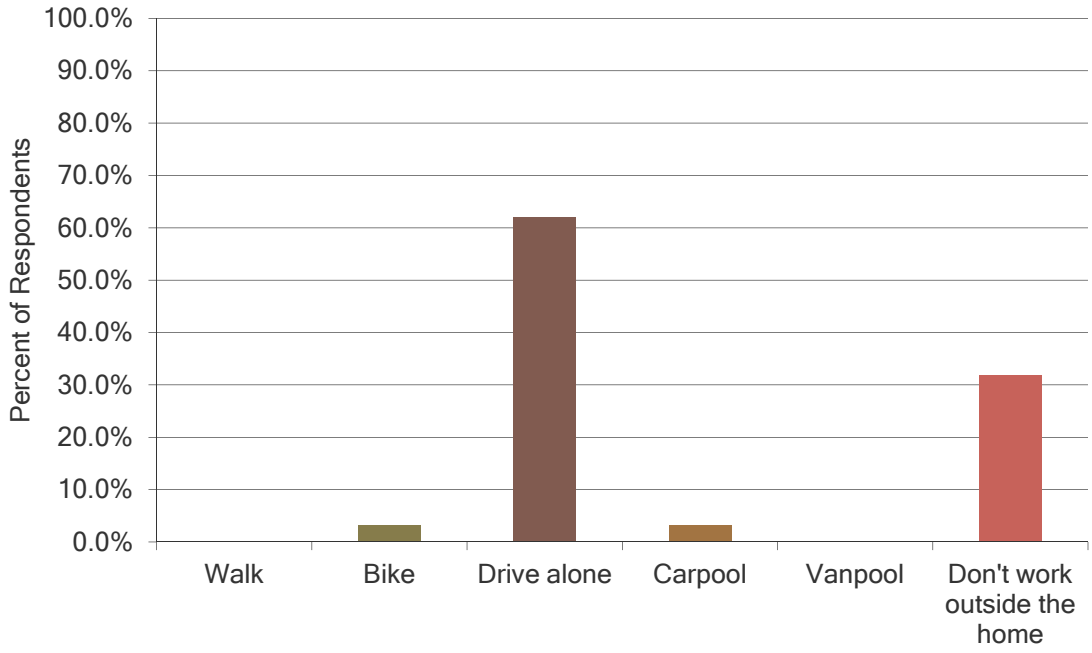
- The transportation planning process and project schedule
- Existing roadway characteristics
- Existing posted speed limits
- Existing traffic control devices
- Existing daily traffic volumes
- Available crash history (from 2014, near Harmony Road and I-25)
- Railroad crossing inventory
- Existing and planned alternative modes (sidewalks, bike lanes, trails, and nearby transit)

Attendees were provided two ways to provide feedback and concerns. The first was a survey to acquire general opinions on transportation in Timnath. This survey was also conducted online to obtain information from people who could not attend the open house. A copy of the survey is attached to the end of this document. A total of 66 survey responses were received: 62 from the online survey and 4 from the open house. Attendees were also provided the opportunity to place comments on a large map of the Timnath planning area in order to give feedback in a geographical manner.

**Survey Results:**
The following is a summary of the survey conducted online and at the open house. A total of 66 survey responses were received: 62 from the online survey and 4 from the open house.

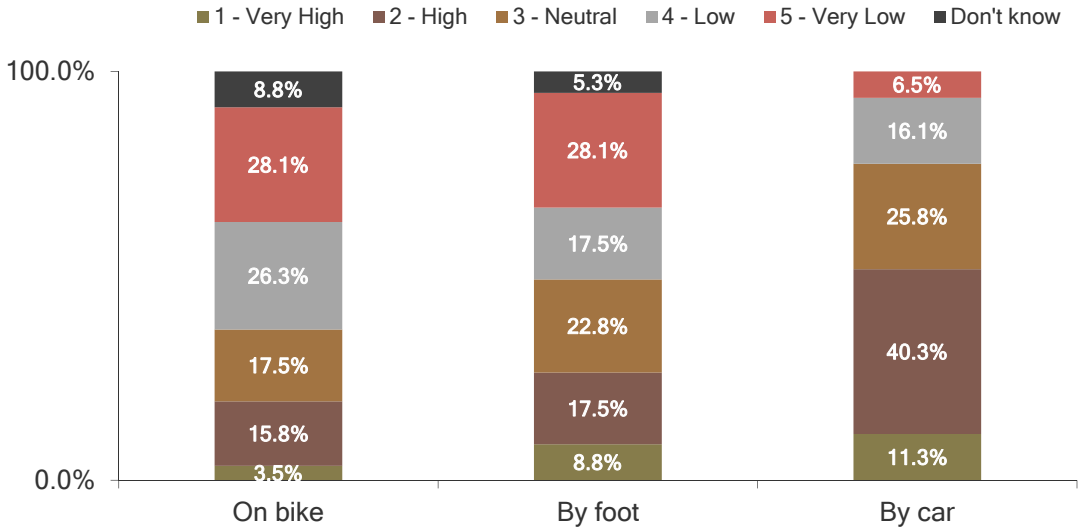
1. *On a typical day, how do you travel to work (or school)?*

The majority of respondents stated that they commute by driving alone, but 32% noted that they do not work outside of the home. Two respondents stated they bike, and another two stated they carpool.



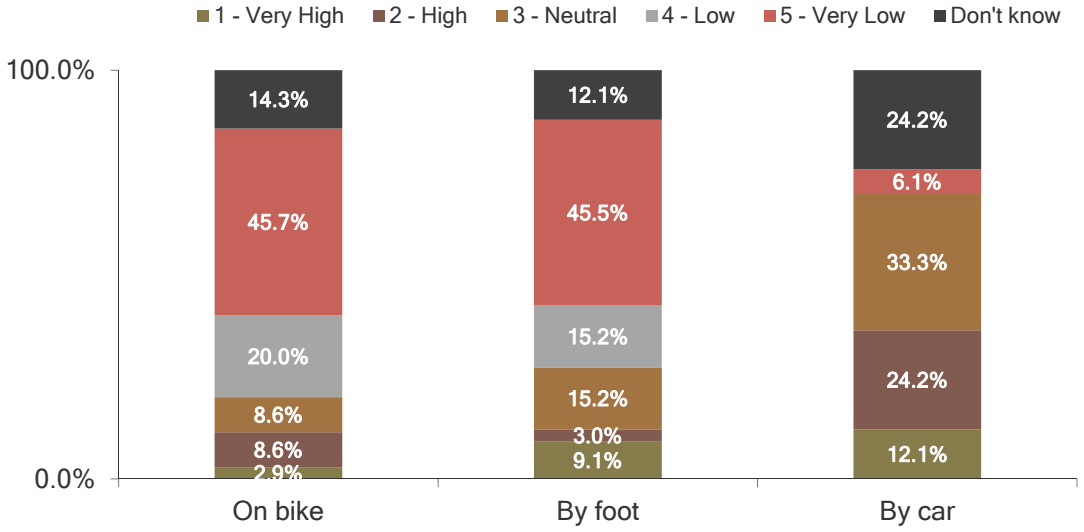
2. *On a scale of 1 to 5 with 1 being best, how would you rate the ease of traveling in and around Timnath?*

Opinions on the ease of travel by bike in Timnath are primarily negative, with about 54% of respondents rating the ease of travel as low or very low, while about 19% responded positively. Travel by foot fared slightly better, with 46% responding negatively and 26% responding positively. Only 23% felt travel by car was not easy to do, while over ¾ of respondents rated the ease positively or neutral.



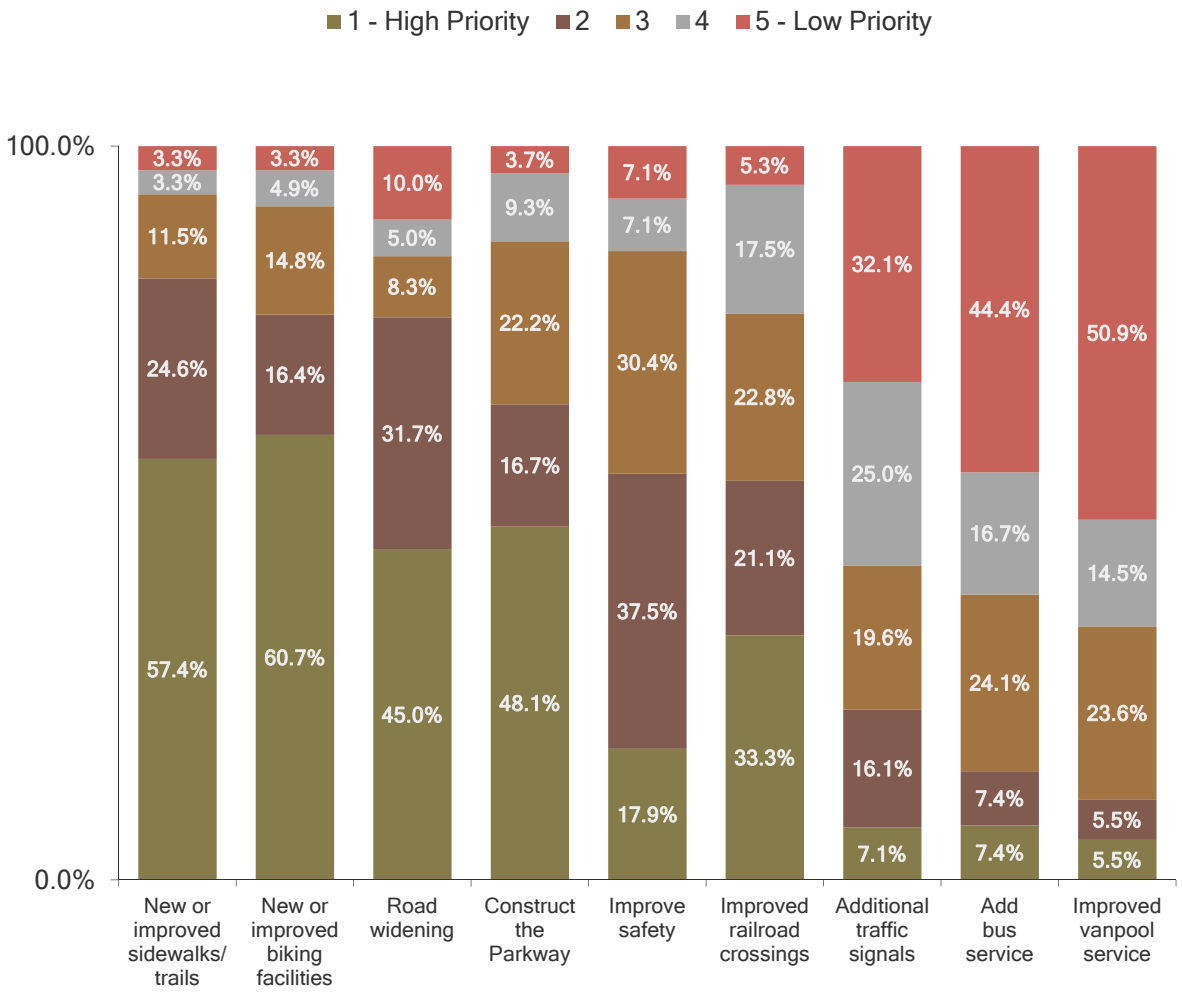

3. *If you have children, how would you rate the ease of traveling in and around Timnath for your children?*

Respondents with children felt more negative about the ease of their children traveling around Timnath on a bicycle (11% positive, 66% negative) and on foot (12% positive, 61% negative), which becomes even more pronounced with the removal of those who responded "Don't know". Most people with children of driving age felt it was easy or neutral for their children to get around Timnath in a vehicle.



4. *On a scale of 1 to 5 with 1 being the highest priority, how would you prioritize transportation improvements needed in Timnath?*

When prioritizing transportation improvements, a large majority of respondents gave a higher priority to new or improved sidewalks/trails, new or improved biking facilities, and road widening – each with over ¾ of respondents giving a 1 or 2 rating. Most respondents approved of constructing the new parkway (65% higher priority vs. only 13% as a lower priority), while improving safety and railroad crossings also received support as a higher priority. Few felt it was important to improve vanpool service or add bus service, though nearly a quarter of respondents rated such improvements with medium prioritization. Desire for additional traffic signals was mixed, though a majority placed a lower priority on this improvement.



5. *What specific transportation improvements would you like to see in Timnath?*

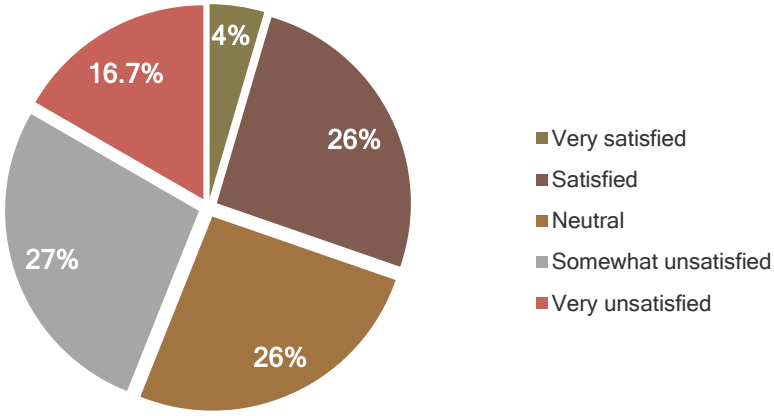
There were numerous respondents who indicated that they would like to see more bike paths and sidewalks, and/or improvements to increase bike safety. A number of respondents specifically identified the desire for a bicycle facility along Harmony Road, east of the railroad tracks, as well as connections to the Poudre River Trail. Other improvements that received multiple mentions included improving bus service, creating train quiet zones, and the recommendation of a roundabout at River Pass Road and Three Bell Parkway. A full list of responses is below.

- Adding railroad crossing arms
- Bus service, including Park-n-ride in Timnath or better connection with the Harmony Transportation Center, and connections to Transfort's MAX
- Widen Main Street
- Add sidewalks on Main Street south of the railroad
- Bike facility on or along Harmony Road east of the railroad
- More bike paths, sidewalks, and hiking trails in general
- Improve bike safety/crossings, particularly crossing I-25
- More curb and gutter
- More traffic signals on Harmony Road, including at LCR 1
- Connections to the Poudre River Trail
- Improve road maintenance
- Left-turn lane on westbound Harmony Road at Three Bell Parkway
- Another connection out of Timnath Ranch, such as with Folsom Parkway to LCR 1
- Roundabout at River Pass Road and Three Bell Parkway
- Install gates and signs at the railroad crossing of Three Bell Parkway
- Create train quiet zones
- Extend River Pass Road west to connect with LCR 5 and Kechter Road
- Reduce speeding
- Add emergency exit routes out of town

Numerous respondents also made comments related to projects currently in progress or are planned to occur in the near future. These include a desire to widen Harmony Road to four lanes, improved signal timing on Harmony Road, building the Parkway, and completing/improving the connection from Timnath Ranch to Bethke Elementary School and LCR 1 across the railroad tracks.

6. *Overall, how satisfied are you with Timnath's existing transportation network?*

Opinions were generally evenly split between satisfied, neutral, and somewhat unsatisfied (26%, 26%, and 27% respectively). Nearly 17% were very unsatisfied, while only 5% were very satisfied.




A comment box was provided for this question. Comments received include:

- Conditions of streets, including the gravel portion of River Pass Road east of Timnath Ranch
- Traffic volumes in residential areas
- Dissatisfaction with traffic signal operations along Harmony Road from I-25 to Main Street
- Vehicles speeding and running red lights on Harmony Road
- Request for turn lanes at the intersection of Harmony Road and LCR 1 to improve safety
- Need for bus service to connect Timnath to the Harmony Transportation Center

7. *Please tell us your most important transportation system concern.*

Multiple comments were received regarding the desire for more bike paths, sidewalks, and trails. Other concerns receiving multiple mentions were related to general traffic congestions, development growth in the area, maintenance of gravel roads, and problems with potholes. A full list of responses is below.

- General traffic congestion and growth
- Railroad crossing arms
- More bike paths, sidewalks, and trails in general
- Truck traffic, including along LCR 40
- Speeding
- Potholes
- Concern that LCR 5 will be closed
- Lack of turn lanes at intersection of Harmony Road and LCR 1
- Maintenance of gravel roads
- At-grade crossing of the railroad tracks east of Timnath Ranch

Numerous comments were related to projects currently in progress or are planned to occur in the near future. These include a desire to widen Harmony Road to four lanes, improved signal timing on Harmony Road, building the Parkway, and completing/improving the connection from Timnath Ranch to Bethke Elementary School and LCR 1 across the railroad tracks.

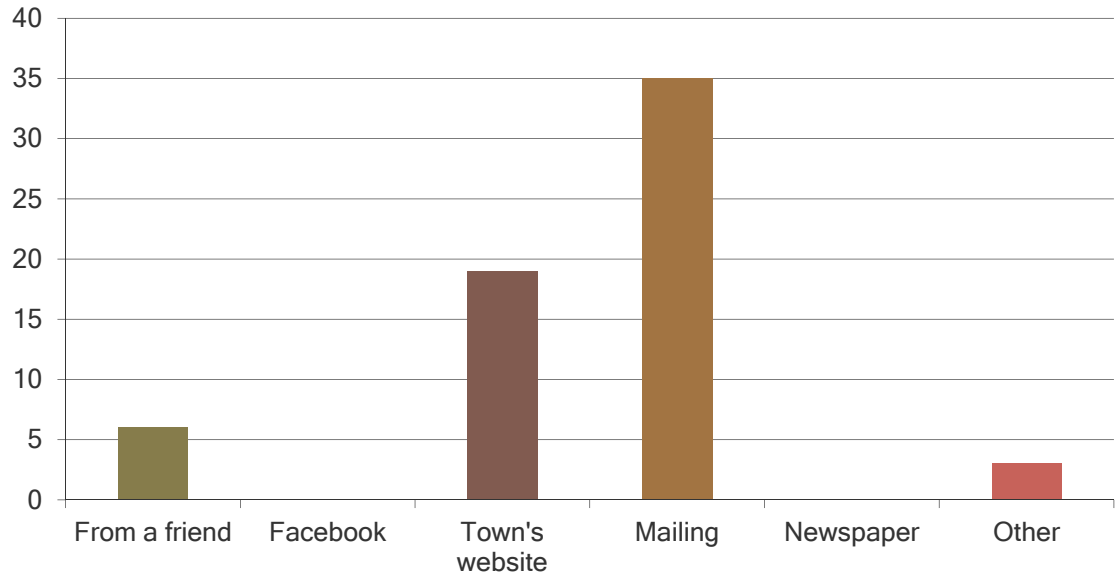
8. *Do you have any other comments or suggestions for consideration in the Timnath Transportation Plan?*

Multiple respondents indicated a desire to improve the existing transportation system before continuing to add or approve new housing and development in the area. Other popular comments include the desire to expand the bicycle trail connections in Timnath, provide bus service, and reduce speeding. A full list of responses is below.

- More bike trails and sidewalks
- Improve transportation system in place before continuing to approve development
- Monitor potholes
- Bus service from Timnath to Fort Collins (possibly with Transfort) – could be a single route along Harmony Road
- Reduce speeding; possibly hire more police for traffic/speed patrolling
- Keep LCR 3F open for use
- Plow roads
- Add red light cameras
- Improve/add exits from the Timnath Ranch area – currently Three Bell Parkway is the main option
- Improve signal timing

9. *How did you hear about this transportation planning process?*

The majority of respondents heard about the meeting and process through the mailing, while many others found out through the Town's website. A few respondents found out via the Town's Facebook page as well.



**Summary of the Open House Comment Map and Other Comments Received:**
Many of the attendees of the open house placed comments via sticky notes on a large aerial map of the Timnath planning area, and/or provided comments to staff while at the meeting. Many comments were similar to those received in the surveys, such as improvements on Harmony Road, support for the Parkway, and providing bus service. Other comments included:

- Concern about losing access during construction when the Parkway is constructed
- Need second street connection to the Parkway – would like a signal, stop sign, or roundabout as it will be difficult to get onto the Parkway
- Concern over traffic from new school northwest of Prospect Road and LCR 5
- New road across railroad tracks east of Timnath Ranch
- Improve Latham Parkway
- Extend Three Bell Parkway south to SH 392
- Concern regarding traffic diverting to LCR 5 during an incident on I-25
- A new elementary school will be across from current school, old school would be dedicated to the town
- 4th Street is a pinch point – would 5th Street be a better connection to Parkway?
- Circulator bus through Timnath, connecting to Transfort, is a good idea
- Park-n-ride east on Harmony – work with Windsor?
- Harmony Transportation Center parking is full
- Expand Transfort to serve out to at least LCR 5
- Need Larimer County's handicap transit service expanded to Timnath, especially since it is a county-funded service
- Traffic from I-25 hops through ditch onto the frontage road south of Harmony Road during congestion on I-25
- Improve the intersection at Harmony Road and LCR 1, such as turn lanes and/or a traffic signal
- Make sure that the 2nd Street access to the Parkway has a traffic signal
- Concern over exiting the Timnath Ranch area when a train blocks the crossings from LCR 1 to Harmony Road

# Public Open House Summary

**Timnath Transportation Plan**
**July 20, 2015 from 5:30pm to 7:00pm**

An open house public meeting was held on July 20, 2015, from 5:30pm to 7pm at the Timnath Town Hall to present the draft Transportation Plan. The meeting focused on the implementation strategy and action plan. The intent of the meeting was to gain input and responses from the community about the way in which projects have been prioritized.

The meeting was advertised through a postcard mailing to all Timnath residents, and on the Town's website. A copy of the mailing is attached.

Information presented at the meeting included:

- The transportation planning process and project schedule
- Overview of the public survey results
- 2040 Master Streets Plan
- Pedestrian and Trails Plan
- On-Street Bicycle Plan
- Transit Plan
- Implementation Strategy: Short-Term (2015 to 2020)
- Implementation Strategy: Mid-Term (2020 to 2030)
- Implementation Strategy: Long-Term (2030 to 2040)
- Implementation Strategy: Beyond 2040
- Action Plan
- The draft transportation plan document

A total of ten attendees signed in at the front table. The sign in sheet from the meeting is attached. Attendees could either speak to a project team representative or fill out a comment card as ways to provide feedback.

# Appendix B. Roadway Alternatives Analysis

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FELSBURG HOLT & ULLEVIG

*connecting and enhancing communities*

July 16, 2015

**MEMORANDUM**

To: Town of Timnath

From: Jenny Young, PE, AICP

Re: Roadway Alternatives Comparison
Timnath Transportation Plan
FHU Reference No. 114-312

The purpose of this memorandum is to document the evaluation of various roadway alternatives considered as part of the Timnath Transportation Plan.

## ALTERNATIVES CONSIDERED

The NFRMPO regional travel demand model was used to test the effectiveness of several roadway improvements to address the existing and future congestion on Timnath's street network. The following major roadway improvement alternatives were identified through a combination of technical analysis, discussion with the Town Council and Planning Commission, and input from the community:

A. Construct the Parkway
B. Widen Kechter Road to 4 lanes (including the bridge over I-25)
C. Widen Harmony Road to 6 lanes
D. Widen Prospect Road to 4 lanes
E. Widen SH 14 to 4 lanes
F. Widen Vine Drive to 4 lanes
G. Widen Main Street to 4 lanes (including the Parkway)
H. Widen LCR 1 to 4 lanes
I. Widen SH 257 to 4 lanes
J. Extend Kechter Road from Main Street to River Pass Road
K. New interchange at I-25 and Kechter Road
L. South "beltway" connecting Main Street and LCR 1 near the south GMA boundary

6300 South Syracuse Way, Suite 600 Centennial, CO 80111 tel 303.721.1440 fax 303.721.0832
www.fhueng.com info@fhueng.com

The travel demand model results indicate that the vast majority of the current and future congestion in Timnath could be mitigated by building roadway improvement alternatives A – I. These improvements are included in the draft Master Streets Plan (shown on page 3 of this memo).

The remaining three major roadway improvement alternatives (J, K, and L) would be considerably more difficult to implement than the preceding list of roadway projects. Specifically, an interchange at I-25 and Kechter Road is not included in the North I-25 EIS and would, therefore, require a reevaluation of the EIS and support from the Federal Highway Administration (FHWA), CDOT and the City of Fort Collins. A new east-west connection (either J or L) would require a new crossing of the Poudre River, which would necessitate environmental clearances and considerable costs, and could result in undesirable impacts to current residents.

Because of the significant effort, costs, and impacts associated with these three alternatives, and the ability of projects A – I to address the vast majority of current and future congestion, projects J, K, and L were not recommended in the June 2015 draft Timnath Transportation Plan, which was presented to and discussed with the Town Council and Planning Commission during a work session on June 30, 2015. At the work session, the Town Council and Planning Commission requested more information and analysis related to the expected level of congestion in 2040 and the potential for roadway improvement alternatives J, K, and/or L to relieve that congestion.

## RESULTS OF ADDITIONAL ANALYSIS

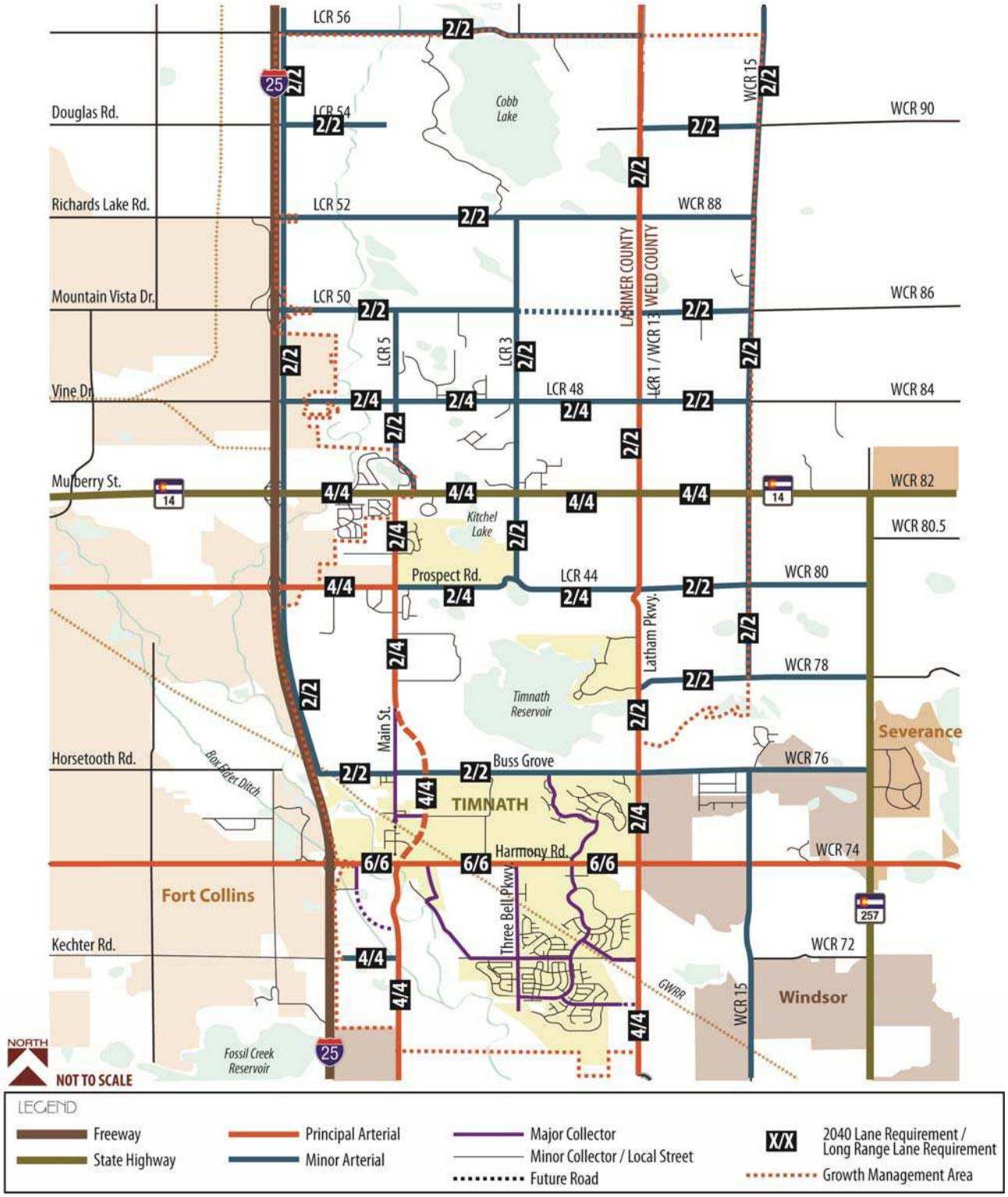
The 2040 daily traffic forecasts on the draft 2040 Master Streets Plan are shown on page 4 of this memo. These forecasts represent the expected travel demand on Timnath's streets with roadway alternatives A-I in place. The forecasted 2040 traffic volumes were compared to planning level capacities (shown in the table below). The resulting volume to capacity (V/C) ratios are shown on page 5 of this memo.

### Planning Level Capacities

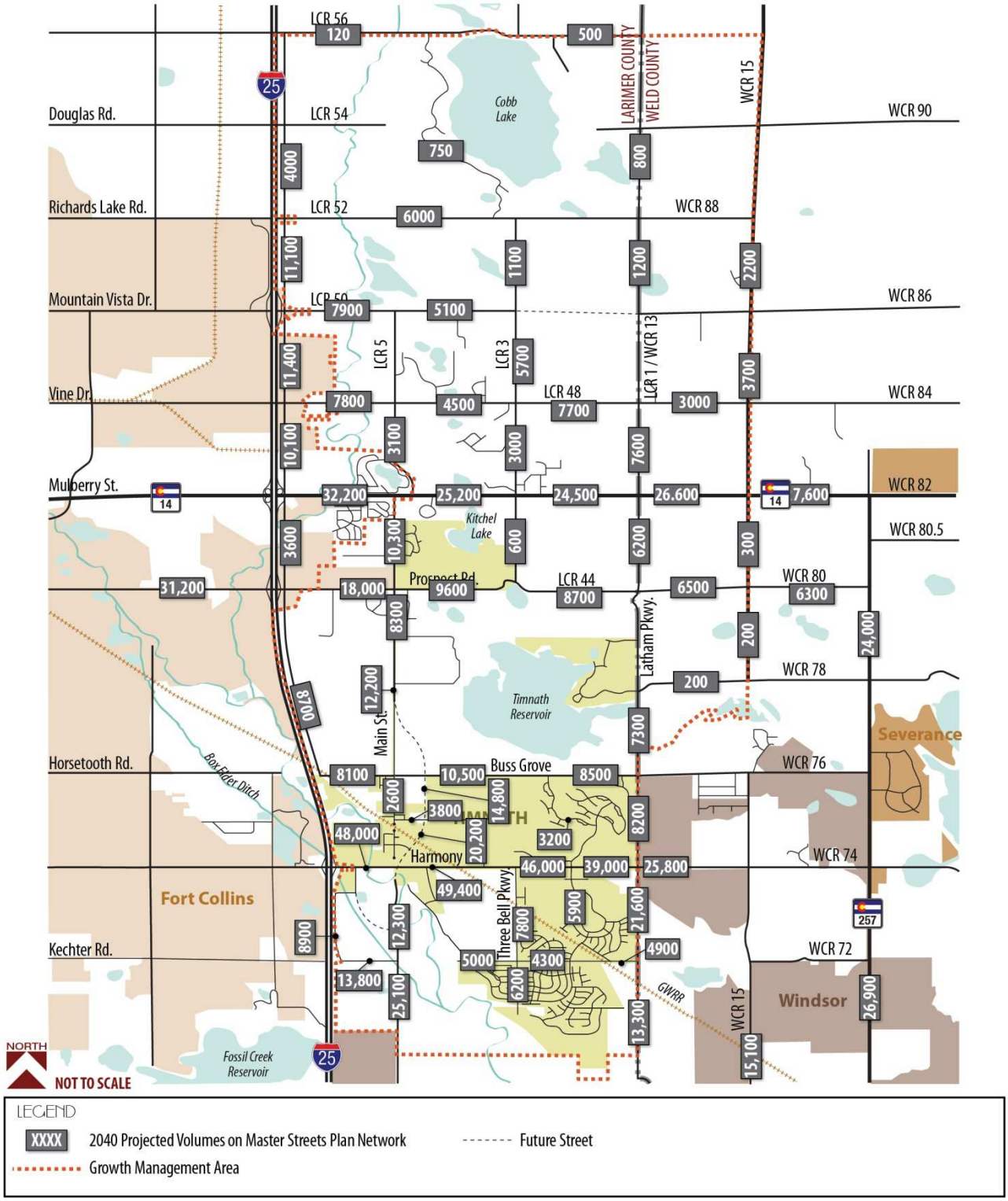
| Classification | Capacity per Lane (vpd) |
|---|---|
| Major Arterial | 8,000 |
| Minor Arterial | 6,000 |
| Major Collector | 5,000 |

A lower V/C ratio means the better the flow of traffic along that segment of road. A V/C of 1.0 or greater is considered to be congested, while a V/C of 0.9 to 1.0 is considered to be approaching a congested state. The red segments represent roadways that carry traffic volumes in excess of the planning level roadway capacity (V/C ≥ 1.0). The orange and yellow segments represent roadways that are expected to operate at or near capacity conditions (V/C between 0.80 and 1.0). As shown on page 5, there are only a few roadway segments that are expected to have traffic volumes exceeding the roadway capacity based on the 2040 Master Streets Plan:

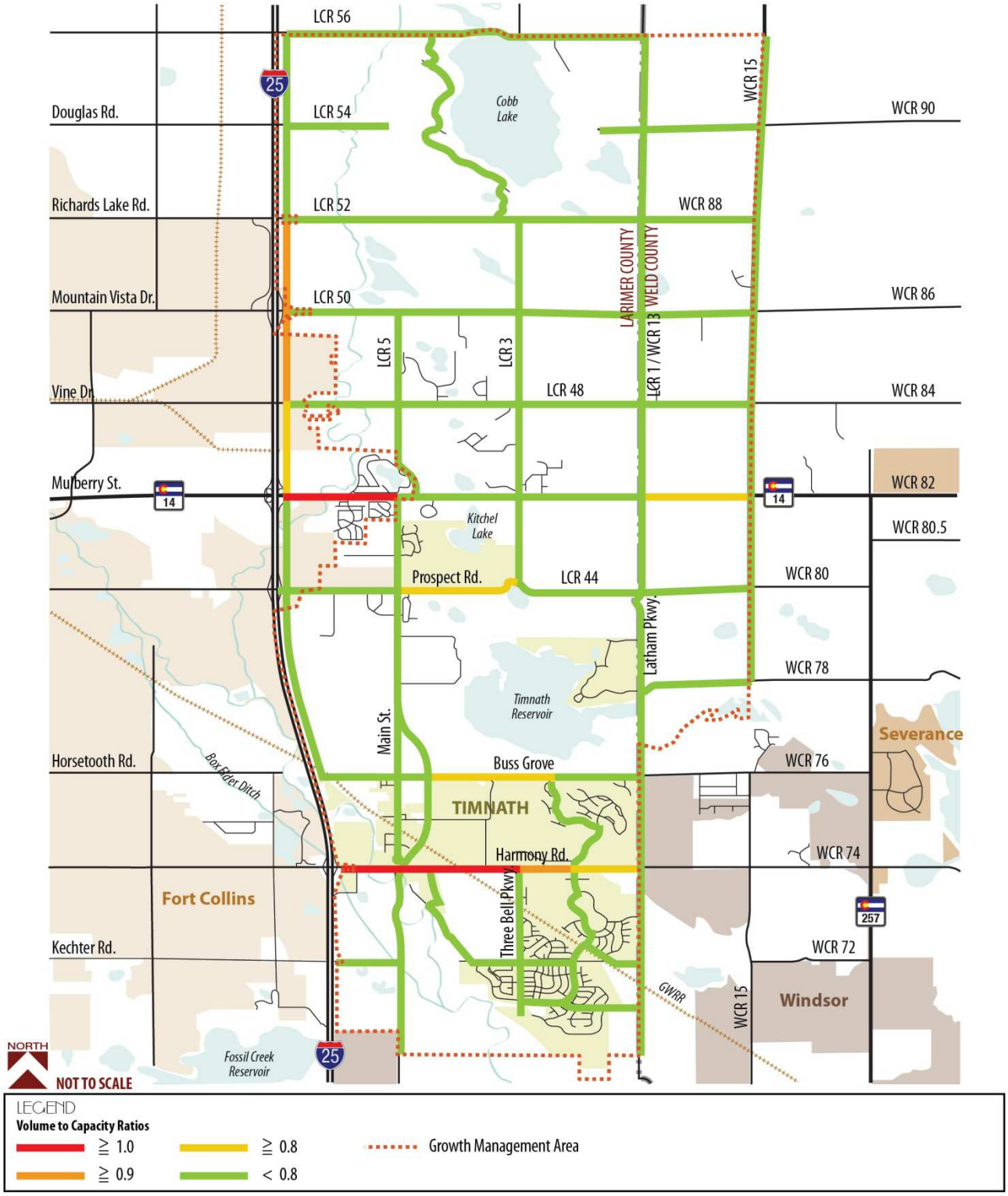
- SH 14 between I-25 and CR 5
- Harmony Road between I-25 and Three Bell Parkway




**Master Streets Plan**




**2040 Daily Traffic Forecasts on 2040 Master Streets Plan**




**2040 Volume/Capacity Ratios (2040 Master Streets Plan)**

The NFRMPO regional travel demand model was used to test the potential for roadway alternatives J, K, and/or L to relieve Harmony Road. Three model runs were completed, all using 2040 land use forecasts:

1. 2040 Master Streets Plan + extension of Kechter Rd from Main Street to River Pass Road (Alt J)
2. 2040 Master Streets Plan + I-25/Kechter Rd interchange (Alt K)
3. 2040 Master Streets Plan + extension of Kecther Rd (Alt J) + I-25/Kechter Road interchange (Alt K)

Compared to the forecasts shown on page 4, the travel model results show:

- Extending Kechter Rd from Main Street to River Pass Road (Alt J) would attract an additional 10,000 – 15, 000 vehicles per day (vpd) onto Kechter Rd, but would only reduce traffic volumes on Harmony Road by 3,000 to 4,000 vpd, which is less than 10 percent reduction.
- A new interchange at I-25/Kechter Rd would attract an additional 5,000 vpd onto Kechter Rd (just east of I-25), but would reduce traffic volumes on Harmony Road by less than one percent.
- The two alternatives in combination (the Ketcher Rd interchange and extension) would reduce traffic volumes on Harmony Road by less than 10 percent.
- A south beltway (Alt L) was not tested in the model, but is expected to be less effective than the direct connection of Kechter Rd to River Pass Road at relieving Harmony Road congestion because it would result in out of direction travel.

## SUMMARY OF FINDINGS

Congestion is expected on Harmony Road between I-25 and Three Bell Parkway in the future, even when it is widened to six lanes. The 2040 forecasts on Harmony Road are in the range of 48,000 vpd, which is approximately the current volume on Harmony Road between Timberline Road and Lemay Street in Fort Collins (which is six lanes). Congestion levels on Harmony Road through Timnath are forecasted to be similar in 2040 to the current congestion levels on this section of Harmony Road in Fort Collins.

Many of the trips using Harmony Road have either an origin or a destination along the corridor; resulting in a strong draw to using Harmony. Similarly, many of the trips using Harmony Road have either an origin or destination east of Timnath, and Harmony Road provides east-west continuity all the way to US 85 (in Eaton). The addition of roadway alternatives J, K, or L is not expected to relieve the congestion on Harmony Road enough to justify the associated costs and impacts. Therefore, these alternatives are not recommended for inclusion in Timnath's Transportation Plan.

# Appendix C. Cost Estimates

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# Timnath Transportation Plan

## Estimate of Conceptual Costs

### 2 Lane Arterial
### (1.00 Mile)

| Date Prepared: | May 1, 2015 |
|---|---|

| | Item | | Unit Cost | Quantity | Extended Cost | *Notes* | |
|---|---|---|---|---|---|---|---|
| 1 | Earthwork | CY | $12.50 | 23,467 | $293,333 | | |
| 2 | Aggregate Base Course (Class 6) | TON | $20.00 | 18,258 | $365,165 | 12-inch depth | |
| 3 | Hot Mix Asphalt (Grade S)(100)(PG 64-22) | TON | $81.00 | 13,423 | $1,087,258 | 8-inch depth | |
| 4 | Curb and Gutter | LF | $21.00 | 10,560 | $221,760 | C&G on both sides | |
| 5 | Concrete Sidewalk | SY | $46.00 | 7,040 | $323,840 | 6 foot (min) walk on each side | |
| 6 | Landscaping | SF | $2.00 | 105,600 | $211,200 | 10' zone btwn bike lane and walk | |
| | | | | **Total Major Items** | **$2,503,000** | | |

| | % of Major Item Cost | | |
|---|---|---|---|
| **Total Major Items** | | **$2,503,000** | **A** |
| Drainage / Utilities | % of A | $201,000 | **B-1** |
| Environmental | % of A | $126,000 | **B-2** |
| Miscellaneous | % of A | $38,000 | **B-3** |
| Mobilization | % of A | $233,000 | **B-4** |
| Removals / Resets | % of A | $93,000 | **B-5** |
| Roadway | % of A | $11,000 | **B-6** |
| Signing and Striping | % of A | $53,000 | **B-7** |
| Traffic / Lighting / ITS | % of A | $76,000 | **B-8** |
| Traffic Control / Detour | % of A | $241,000 | **B-9** |
| Structural - Minor Structures / Walls | % of A | $26,000 | **B-10** |
| Bid Force Accounts | % of A | $36,000 | **B-11** |
| **Total of Bid Construction Items** | | **$3,637,000** | **B** |
| Force Account - Misc. | % of B | $95,000 | **C-1** |
| Minor Contract Revisions | % of B | $146,000 | **C-2** |
| **Total of Bid Construction Items & Force Account Items** | | **$3,878,000** | **C** |
| Design Engineering | % of C | $311,000 | **D-1** |
| Construction Engineering | % of C | $660,000 | **D-2** |
| **Total Design & Construction Cost** | | **$4,849,000** | **D** |
| Utilities | % of D | $49,000 | **E-1** |
| **Total Project, Design & Construction Cost** | | **$4,898,000** | **E** |
| **Contingency (Engineering & Utilities Only)** | % of D1, D2, E1 | **$21,000** | **F** |
| **Total Project Cost Estimate** | | **$4,919,000** | **G** |

# Timnath Transportation Plan

## Estimate of Conceptual Costs

### 4 Lane Arterial
### (1.00 Mile)

| Date Prepared: | May 1, 2015 |
|---|---|

| | Item | | Unit Cost | Quantity | Extended Cost | *Notes* | |
|---|---|---|---|---|---|---|---|
| 1 | Earthwork | CY | $12.50 | 25,813 | $322,667 | | |
| 2 | Aggregate Base Course (Class 6) | TON | $20.00 | 20,365 | $407,299 | 12-inch depth | |
| 3 | Hot Mix Asphalt (Grade S)(100)(PG 64-22) | TON | $81.00 | 14,972 | $1,212,710 | 8-inch depth | |
| 4 | Curb and Gutter | LF | $21.00 | 21,120 | $443,520 | C&G on both sides, plus median | |
| 5 | Concrete Sidewalk | SY | $46.00 | 7,040 | $323,840 | 6 foot (min) walk on each side | |
| 6 | Landscaping | SF | $2.00 | 105,600 | $211,200 | 10' zone btwn bike lane and walk | |
| | | | | **Total Major Items** | **$2,922,000** | | |

| | % of Major Item Cost | | |
|---|---|---|---|
| **Total Major Items** | | **$2,922,000** | **A** |
| Drainage / Utilities | % of A | $234,000 | **B-1** |
| Environmental | % of A | $147,000 | **B-2** |
| Miscellaneous | % of A | $44,000 | **B-3** |
| Mobilization | % of A | $272,000 | **B-4** |
| Removals / Resets | % of A | $109,000 | **B-5** |
| Roadway | % of A | $12,000 | **B-6** |
| Signing and Striping | % of A | $62,000 | **B-7** |
| Traffic / Lighting / ITS | % of A | $88,000 | **B-8** |
| Traffic Control / Detour | % of A | $281,000 | **B-9** |
| Structural - Minor Structures / Walls | % of A | $30,000 | **B-10** |
| Bid Force Accounts | % of A | $41,000 | **B-11** |
| **Total of Bid Construction Items** | | **$4,242,000** | **B** |
| Force Account - Misc. | % of B | $111,000 | **C-1** |
| Minor Contract Revisions | % of B | $170,000 | **C-2** |
| **Total of Bid Construction Items & Force Account Items** | | **$4,523,000** | **C** |
| Design Engineering | % of C | $362,000 | **D-1** |
| Construction Engineering | % of C | $769,000 | **D-2** |
| **Total Design & Construction Cost** | | **$5,654,000** | **D** |
| Utilities | % of D | $57,000 | **E-1** |
| **Total Project, Design & Construction Cost** | | **$5,711,000** | **E** |
| **Contingency (Engineering & Utilities Only)** | % of D1, D2, E1 | **$24,000** | **F** |
| **Total Project Cost Estimate** | | **$5,735,000** | **G** |

# Timnath Transportation Plan

## Estimate of Conceptual Costs

### 6 Lane Arterial from I-25 to County Line Road
### (1.53 Miles of Improvements)

**(Applies to Harmony Road from I-25 to LCR1. Improvements from I-25 to Great Western Railroad include only restriping.)**

**Date Prepared:** June 9, 2015

| | Item | | Unit Cost | Quantity | Extended Cost | *Notes* |
|---|---|---|---|---|---|---|
| 1 | Earthwork | CY | $12.50 | 19,200 | $240,000 | |
| 2 | Removal of Curb and Gutter | LF | $6.00 | 26,600 | $159,600 | C&G on outsides for entire length |
| 3 | Removal of Pavement Marking | SF | $0.80 | 10,000 | $8,000 | Restriping from I-25 to RR |
| 4 | Aggregate Base Course (Class 6) | TON | $20.00 | 12,928 | $258,552 | 12-inch depth |
| 5 | Hot Mix Asphalt (Grade S)(100)(PG 64-22) | TON | $81.00 | 9,504 | $769,824 | 8-inch depth |
| 6 | Curb and Gutter | LF | $21.00 | 26,600 | $558,600 | C&G on outsides for entire length |
| 7 | Concrete Sidewalk | SY | $46.00 | 10,800 | $496,800 | 6 foot (min) walk on each side |
| 8 | Pavement Marking Paint | GAL | $35.00 | 1,500 | $52,500 | Restriping from I-25 to RR |
| 9 | Landscaping | SF | $2.00 | 162,000 | $324,000 | 10' parkway (min) of each side |
| | | | | **Total Major Items** | **$2,868,000** | |

| | | % of Major Item Cost | | |
|---|---|---|---|---|
| **Total Major Items** | | | **$2,868,000** | **A** |
| Drainage / Utilities | % of A | 8.0% | $230,000 | **B-1** |
| Environmental | % of A | 5.0% | $144,000 | **B-2** |
| Miscellaneous | % of A | 1.5% | $44,000 | **B-3** |
| Mobilization | % of A | 9.3% | $267,000 | **B-4** |
| Removals / Resets | % of A | 3.7% | $107,000 | **B-5** |
| Roadway | % of A | 0.4% | $12,000 | **B-6** |
| Signing and Striping | % of A | 2.1% | $61,000 | **B-7** |
| Traffic / Lighting / ITS | % of A | 3.0% | $87,000 | **B-8** |
| Traffic Control / Detour | % of A | 9.6% | $276,000 | **B-9** |
| Structural - Minor Structures / Walls | % of A | 1.0% | $29,000 | **B-10** |
| Bid Force Accounts | % of A | 1.4% | $41,000 | **B-11** |
| **Total of Bid Construction Items** | | | **$4,166,000** | **B** |
| Force Account - Misc. | % of B | 2.6% | $109,000 | **C-1** |
| Minor Contract Revisions | % of B | 4.0% | $167,000 | **C-2** |
| **Total of Bid Construction Items & Force Account Items** | | | **$4,442,000** | **C** |
| Design Engineering | % of C | 8.0% | $356,000 | **D-1** |
| Construction Engineering | % of C | 17.0% | $756,000 | **D-2** |
| **Total Design & Construction Cost** | | | **$5,554,000** | **D** |
| Utilities | % of D | 1.0% | $56,000 | **E-1** |
| **Total Project, Design & Construction Cost** | | | **$5,610,000** | **E** |
| **Contingency (Engineering & Utilities Only)** | % of D1, D2, E1 | 2.0% | **$24,000** | **F** |
| **Total Project Cost Estimate** | | | **$5,634,000** | **G** |

# Timnath Transportation Plan

## Estimate of Conceptual Costs

### Major Collector
### (1.00 Mile)

| Date Prepared: | May 1, 2015 |
|---|---|

| | Item | | Unit Cost | Quantity | Extended Cost | *Notes* | |
|---|---|---|---|---|---|---|---|
| 1 | Earthwork | CY | $12.50 | 20,338 | $254,222 | | |
| 2 | Aggregate Base Course (Class 6) | TON | $20.00 | 15,449 | $308,986 | 12-inch depth | |
| 3 | Hot Mix Asphalt (Grade S)(100)(PG 64-22) | TON | $81.00 | 11,358 | $919,987 | 8-inch depth | |
| 4 | Curb and Gutter | LF | $21.00 | 10,560 | $221,760 | C&G on both sides | |
| 5 | Concrete Sidewalk | SY | $46.00 | 5,867 | $269,867 | 5 foot (min) walk on each side | |
| 6 | Landscaping | SF | $2.00 | 63,360 | $126,720 | 6' zone btwn bike lane and walk | |
| | | | | **Total Major Items** | **$2,102,000** | | |

| | % of Major Item Cost | | |
|---|---|---|---|
| **Total Major Items** | | **$2,102,000** | **A** |
| Drainage / Utilities | % of A | $169,000 | **B-1** |
| Environmental | % of A | $106,000 | **B-2** |
| Miscellaneous | % of A | $32,000 | **B-3** |
| Mobilization | % of A | $196,000 | **B-4** |
| Removals / Resets | % of A | $78,000 | **B-5** |
| Roadway | % of A | $9,000 | **B-6** |
| Signing and Striping | % of A | $45,000 | **B-7** |
| Traffic / Lighting / ITS | % of A | $64,000 | **B-8** |
| Traffic Control / Detour | % of A | $202,000 | **B-9** |
| Structural - Minor Structures / Walls | % of A | $22,000 | **B-10** |
| Bid Force Accounts | % of A | $30,000 | **B-11** |
| **Total of Bid Construction Items** | | **$3,055,000** | **B** |
| Force Account - Misc. | % of B | $80,000 | **C-1** |
| Minor Contract Revisions | % of B | $123,000 | **C-2** |
| **Total of Bid Construction Items & Force Account Items** | | **$3,258,000** | **C** |
| Design Engineering | % of C | $261,000 | **D-1** |
| Construction Engineering | % of C | $554,000 | **D-2** |
| **Total Design & Construction Cost** | | **$4,073,000** | **D** |
| Utilities | % of D | $41,000 | **E-1** |
| **Total Project, Design & Construction Cost** | | **$4,114,000** | **E** |
| **Contingency (Engineering & Utilities Only)** | % of D1, D2, E1 | **$18,000** | **F** |
| **Total Project Cost Estimate** | | **$4,132,000** | **G** |