

## 2040 LANCASTER COUNTY FUTURE LAND USE PLAN

- Agricultural
- Residential - Urban Density
- Residential - Low Density
- Potential Large Employer Opportunity Areas
- Commercial
- Industrial
- Public & Semi-Public
- Agricultural Stream Corridor
- Green Space
- Environmental Resources
- Lakes & Streams
- Future Service Limit

The location of each land use designation is generalized. The appropriateness of a particular zoning district for a particular piece of property will depend on a review of all of the elements of the Comprehensive Plan. Please consult other sources for exact locations of environmental resources such as wetlands, native prairie and floodplain. Not all of these resources are displayed on this figure.

The incorporated town plans are displayed on this figure. In many circumstances the land use categories in the town plans were different from the categories used in the Lincoln/Lancaster County Plan, so some adjustments were made for the purposes of this display. These communities and their specific adopted plans should be consulted as the source for decisions within



Map 1.1: Lancaster County Future Land Use Plan





- So that they enhance entryways or public way corridors, when developing adjacent to these corridors.
- In a manner that supports the creation and maintenance of green space as indicated in the environmental resources section of this Plan.
- Encourage public-private partnerships, strategic alliances, and collaborative efforts as a means to accomplish future economic objectives.
- Explore additional opportunities for streamlining the permitting process.

## COMMERCIAL CENTERS

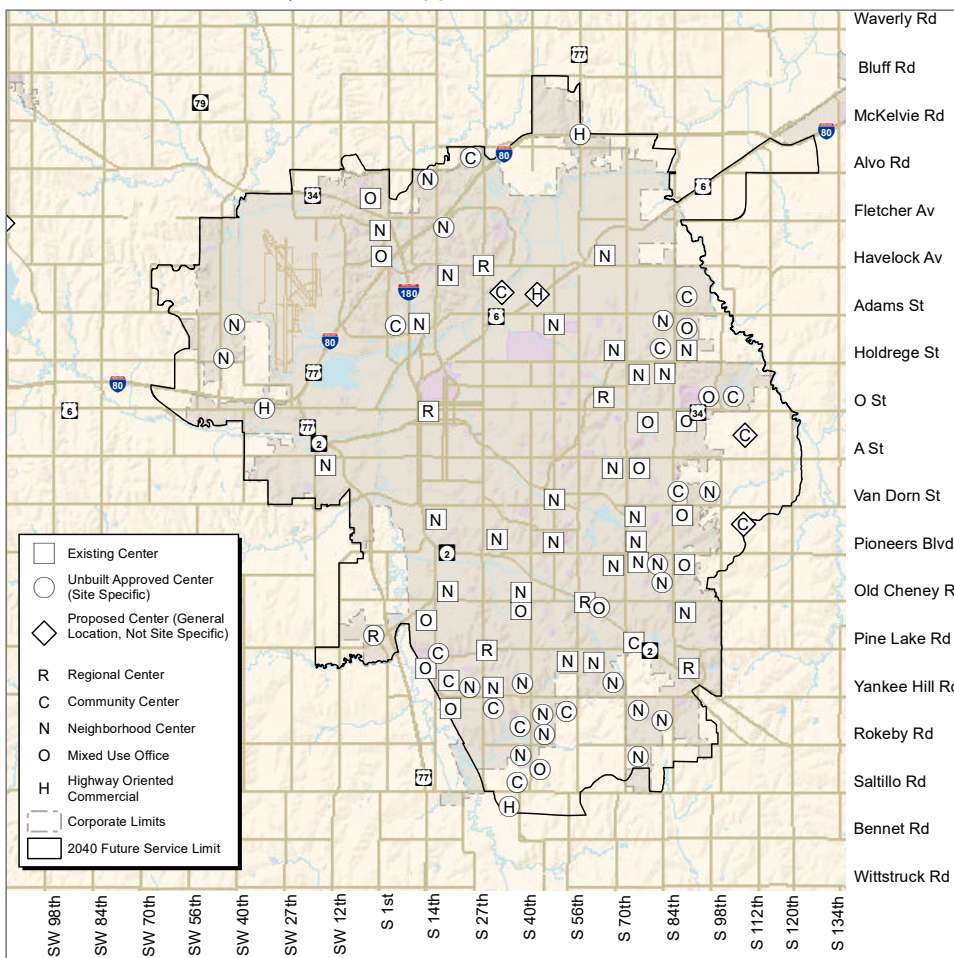
Based on the projected population growth rates, the Plan identifies the potential for 58.6 million square feet of occupied retail, office, and service uses by 2040. A substantial portion of this future commercial capacity will be accommodated on sites already zoned or approved for commercial

development or that have been identified in the Plan for future commercial land use.

“Commercial Centers” are defined as areas containing a mix of retail, office, service, and residential uses, with some light manufacturing and warehousing in selected circumstances. Other land uses such as child care centers, assisted living facilities, and recreational facilities should be integrated within the development. They can include shopping centers or districts (such as neighborhood centers, large scale retail malls, strip centers, and traditional store-front retail settings), residential mixed use centers, office parks, business parks, stand-alone corporate office campuses, research and technology parks, and Downtown Lincoln. Commercial Centers are distinguished from Industrial Centers by their dominance of commercial uses over industrial uses, and in the types of industrial uses located in them — that is, the uses are less intrusive in terms of lighting, noise, odors, truck and vehicular traffic, and

pollutants. Where properly sited, light manufacturing uses may be a part of larger Commercial Centers, except for Neighborhood Centers.

The Commercial Centers concept gives recognition to the evolving role of commercial and industrial uses in the life of cities. Commercial Centers encompass a broad range of land uses and are intended to encourage the mixing and integration of compatible land use types. Residential mixed use is encouraged in some commercial areas; especially for Regional, Community, Neighborhood, and Mixed Use Office Centers. Transitional uses (such as offices or commercial uses) should develop between Moderate to Heavy Industrial Centers and residential uses. In redeveloping areas, smaller setbacks between commercial and residential may

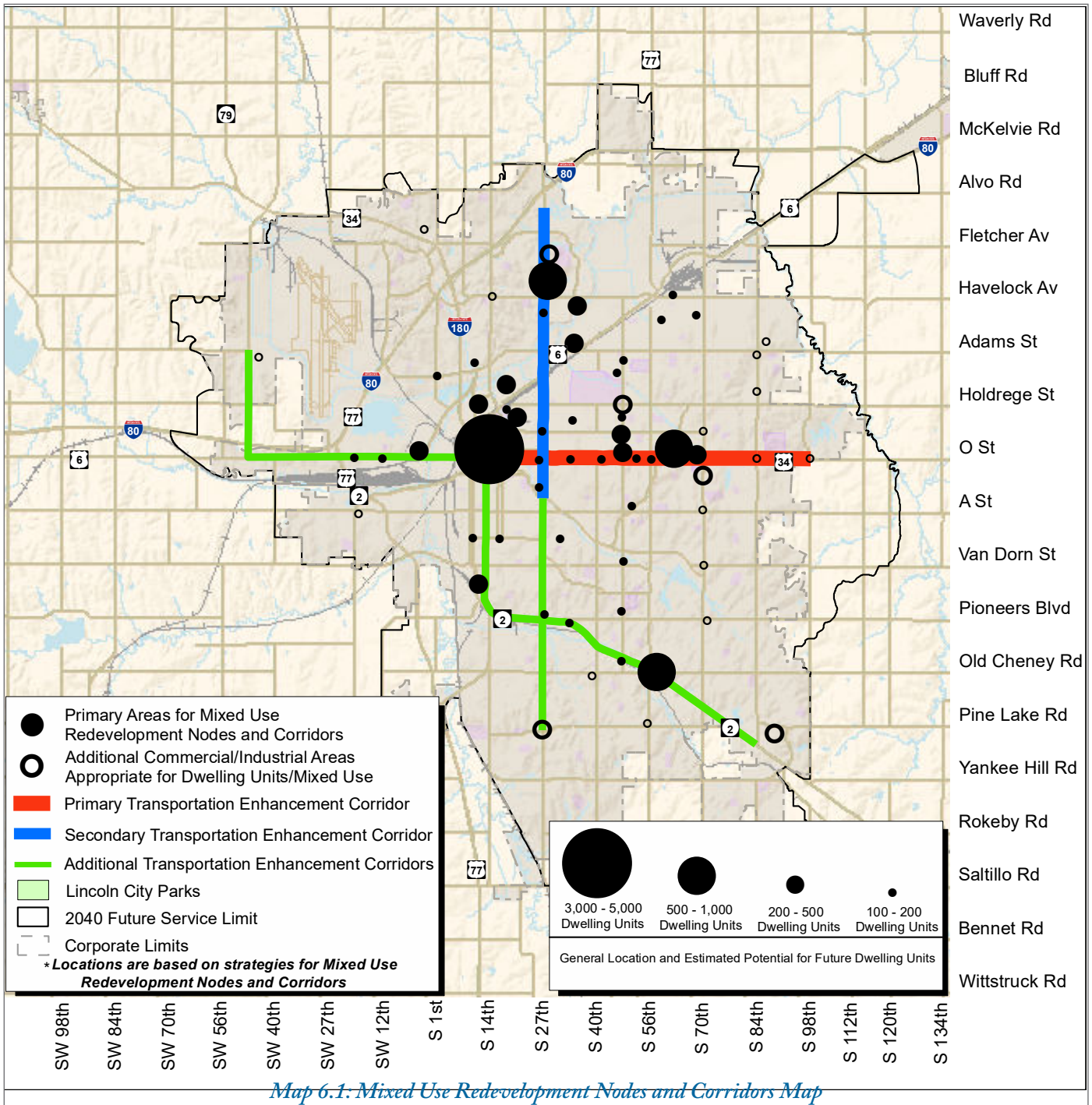


Map 5.1: Existing and Proposed Commercial Centers

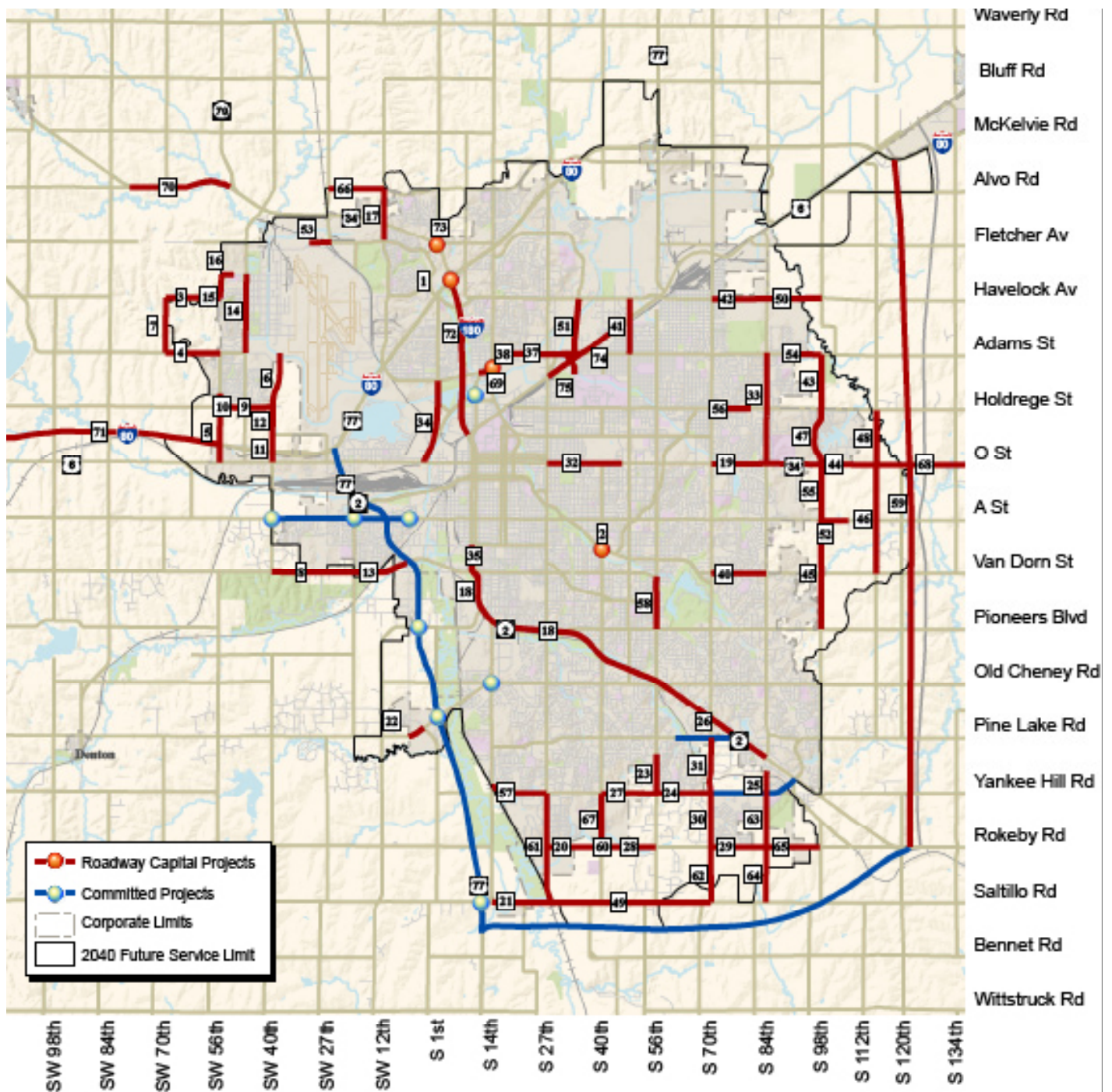
spacing of a node will depend on the Commercial Center designation. Nodes should be located on arterials and should have access to public transit. They should provide adequate facilities for multi-modal transportation including a complete sidewalk network, transit stops, automobile parking and circulation, and storage of bicycles. This concept is designed and intended to be mutually beneficial for existing adjacent neighborhoods and

the new mixed use neighborhood created by the redeveloped center. Newer commercial centers that are not yet fully developed are encouraged to utilize this concept as a guide for amending their approved plans to develop as mixed use centers.

Corridors represent priorities for future public transportation enhancements (such as increases in level of service), areas to encourage mixed







Map 10.8: Candidate Roadway Capital Projects



*Table 10.1: Candidate Roadway Capital Projects*

Project ID	Street Name	Limits	Description	Lead Agency	Project Cost (2016 \$)
1	I-80	I-80 and I-180	Major interchange work	State	\$41,000,000
2	S. 40th St	Normal Blvd and South St	Major intersection area work	Local	\$8,600,000
3	W. SUPERIOR St	NW 70th Street to NW 56th Street	2 lanes + intersection improvements	Local	\$7,400,000
4	W. ADAMS St	NW 70th Street to NW 56th Street	2 lanes + intersection improvements	Local	\$7,000,000
5	NW 56TH St	W. Partridge Lane to W. "O" Street	2 lanes + intersection improvements	Local	\$6,600,000
6	NW 38TH St	W. Adams Street to W. Holdrege Street	2 lanes + intersection improvements	Local	\$6,000,000
7	NW 70TH St	W. Superior Street to W. Adams Street	2 lanes + intersection improvements	Local	\$7,000,000
8	W. VAN DORN St	SW 40th Street to Coddington Avenue	2 lanes + intersection improvements	Local	\$10,500,000
9	W. HOLDREGE St	NW 48th Street to NW 40th Street	2 lanes + intersection improvements	Local	\$3,900,000
10	W. HOLDREGE St	NW 56th Street to NW 48th Street	2 lanes + intersection improvements	Local	\$3,100,000
11	NW 40TH St	W. Vine Street to US-6, including I-80 Overpass	Overpass	Local	\$11,500,000
12	NW 40TH St	W. Holdrege Street to W. Vine Street	2 lanes + intersection improvements	Local	\$3,500,000
13	W. VAN DORN St	Coddington Avenue to US-77	2 lanes + intersection improvements	Local	\$6,000,000
14	NW 48TH St	Adams Street to Cuming Street	2 lanes + intersection improvements	Local	\$10,300,000
15	NW 56TH St	W. Cuming Street to W. Superior Street	2 lanes + intersection improvements	Local	\$3,200,000
16	W. CUMING St	NW 56th Street to NW 52nd Street	2 lanes + intersection improvements	Local	\$1,800,000
17	NW 12TH St	W. Alvo Road to Fletcher Avenue, US 34 Overpass	2 lanes + int. impr. + overpass	Local	\$11,500,000
18	NEBRASKA HWY 2	Van Dorn Street to Old Cheney Road	6 lanes + intersection improvements	Local	\$15,900,000
19	O St (US-34)	Wedgewood Drive to 98th Street	6 lanes + intersection improvements	Local	\$28,000,000
20	ROKEBY Rd	S. 27th Street to S. 40th Street	2 lanes + intersection improvements	Local	\$7,000,000
21	SALTILLO Rd	S. 14th St to S. 27th St	2 lanes + intersection improvements	Local	\$8,200,000
22	DENTON Rd	Amaranth Ln to S. Folsom St	2 additional lanes	Local	\$4,000,000
23	S. 56TH St	Thompson Creek Boulevard to Yankee Hill Road	4 lanes + intersection improvements	Local	\$7,400,000
24	YANKEE HILL Rd	S. 56th Street to S. 70th Street	2 lanes + intersection improvements	Local	\$7,000,000
25	S. 84TH St	Amber Hill Road to Yankee Hill Road	4 lanes + intersection improvements	Local	\$4,300,000
26	NEBRASKA HWY 2	Old Cheney Road to S. 84th Street	6 lanes + intersection improvements	Local	\$30,100,000
27	YANKEE HILL Rd	S. 40th Street to S. 56th Street	2/4 lanes + intersection improvements	Local	\$10,200,000
28	ROKEBY Rd	S. 48th Street to S. 56th Street	2 lanes + intersection improvements	Local	\$7,000,000
29	ROKEBY Rd	S. 70th Street to S. 84th Street	2 lanes + intersection improvements	Local	\$7,400,000
30	S. 70TH St	Yankee Hill Rd to Rokeyby Rd	2 lanes + intersection improvements	Local	\$4,800,000
31	S. 70TH St	Pine Lake Road to Yankee Hill Road	4 lanes + intersection improvements	Local	\$10,500,000
32	O St (US-34)	Antelope Valley N/S Rdwy. (19th St.) to 46th Street	6 lanes + intersection improvements	Local	\$27,300,000

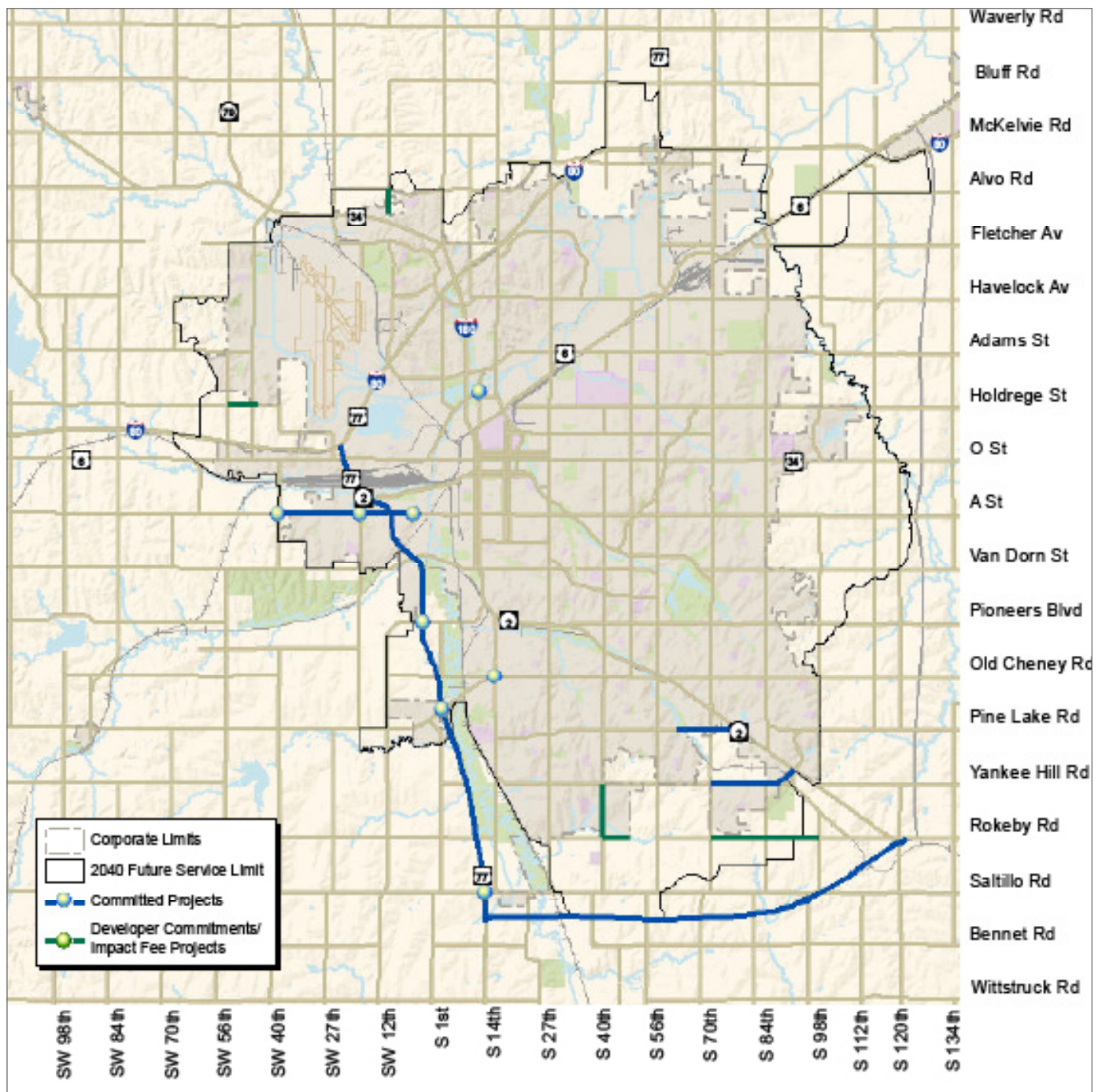
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*Table 10.1: Candidate Roadway Capital Projects (cont'd)*

Project ID	Street Name	Limits	Description	Lead Agency	Project Cost (2016 \$)
33	N. 84TH St	O Street to Adams Street	6 lanes + intersection improvements	Local	\$28,500,000
34	US-6 (SUN VALLEY)	Corn. Hwy (US-6) to W. O St.(US-6)	4 lanes + turn lanes	State	\$16,000,000
35	S. 9TH St	Van Dorn St to South St	3 lanes + intersection improvements	Local	\$3,500,000
37	CORNHUSKER (US-6)	N. 20th Street to N. 33rd Street	6 lanes + intersection improvements	Local	\$16,800,000
38	CORNHUSKER (US-6)	N. 11th St to N. 20th St	6 lanes + intersection improvements	Local	\$18,200,000
40	VAN DORN St	S. 70th Street to S. 84th Street	4 lanes + intersection improvements	Local	\$10,200,000
41	N. 48TH St	Adams St to Superior St	4 lanes + intersection improvements	Local	\$12,400,000
42	HAVELOCK Ave	N. 70th Street to N. 84th Street	2 lanes + intersection improvements	Local	\$6,300,000
43	N. 98TH St	Adams Street to Holdrege Street	2 lanes + intersection improvements	Local	\$8,000,000
44	O St (US-34)	84th Street to 120th Street	4 lanes + intersection improvements	State	\$14,000,000
45	S. 98TH St	A Street to Pioneers Boulevard	4 lanes + intersection improvements	Local	\$21,000,000
46	S. 112TH St	US-34 to Van Dorn Street	2 lanes + intersection improvements	Local	\$14,000,000
47	N. 98TH St	Holdrege St to O St	Additional 2 lanes	Local	\$5,400,000
48	N. 112TH St	Holdrege Street to US-34	2 lanes + intersection improvements	Local	\$9,100,000
49	SALTILLO Rd	27th Street to 70th Street	2 lanes + intersection improvements	Local	\$21,000,000
50	HAVELOCK Ave	N. 84th St to N. 98th St	2 lanes + intersection improvements	Local	\$7,000,000
51	N. 33RD St	Cornhusker Hwy to Superior St	4 lanes + int. impr. & bridge	Local	\$15,000,000
52	A STREET	S. 98th St to 105th St	2 lanes + intersection improvements	Local	\$3,500,000
53	W. FLETCHER Ave	NW 31st St to NW 27th St	2 lanes + intersection improvements	Local	\$3,200,000
54	ADAMS St	N. 90th St to N. 98th St	2 lanes + intersection improvements	Local	\$4,200,000
55	S. 98TH St	US 34 (O St) to A St	4 lanes + intersection improvements	Local	\$10,500,000
56	HOLDREGE St	N. 70th St to N. 80th St	4 lanes + intersection improvements	Local	\$7,900,000
57	YANKEE HILL Rd	S. 14th St to S. 27th St	Additional 2 lanes	Local	\$4,000,000
58	S. 56TH St	Van Dorn St to Pioneers Blvd	4 lanes + intersection improvements	Local	\$10,500,000
59	EAST BELTWAY	Nebraska Hwy 2 to I-80	New 4 lane divided highway	Local	\$247,000,000
60	ROKEBY Rd	S. 40th St to S. 48th St	2 lanes + intersection improvements	Local	\$3,500,000
61	S. 27TH St	Yankee Hill Rd to Saltillo Rd	2 lane realignment + int. impr.	Local	\$14,000,000
62	S. 70TH St	Rokeby Rd to Saltillo Rd	4 lanes + intersection improvements	Local	\$10,500,000
63	S. 84TH St	Yankee Hill Rd to Rokeby Rd	4 lanes + intersection improvements	Local	\$10,500,000
64	S. 84TH St	Rokeby Rd to Saltillo Rd	4 lanes + intersection improvements	Local	\$10,500,000
65	ROKEBY Rd	84th St to 98th St	2 lanes + intersection improvements	Local	\$5,000,000
66	W. ALVO Rd	NW 27th Street to Tallgrass	2 lanes + intersection improvements	Local	\$8,400,000
67	S. 40th St	Yankee Hill Rd to Rokeby Rd	2/4 lanes + intersection improvements	Local	\$8,800,000
68	O St (US-34)	120th Street to east county line	4 lanes + intersection improvements	State	\$29,000,000
69	N. 14TH St	US-6 Cornhusker Highway	Interchange	Local	\$15,300,000
70	US 34	N79 to Malcolm Spur	4 lanes + intersection improvements	State	\$12,000,000
71	I-80	Pleasant Dale to NW 56th Street	6 lanes + bridges	State	\$76,000,000
72	I-180	I-80 to US-6	Reconstruction + bridges	State	\$40,100,000
73	US 34	US 34 and Fletcher Ave	New interchange	State	\$25,000,000
74	N. 33rd St	N. 33rd/Cornhusker/Adams/Fremont	Grade Separated RR Crossings	Local RTSD	\$80,000,000
75	Salt Creek Rdwy	State Fair Park Dr to Cornhusker Hwy	6 lanes + intersection improvements	Local (City)	\$26,000,000





*Map 10.9: Committed Roadway Projects*

requests for repaying developers. Other future developer agreements may impact the timing and priority of roadway capital projects. Additional growth related improvements that are not covered yet will be a challenge to meet the needs for the transportation network.

### Committed Roadway Projects

Committed roadway projects as shown on Map 10.9: Committed Roadway Projects include the road segments that are part of the Developer Commitment projects that have not yet been constructed, urban area rural paving projects that have been coordinated with the County Engineer's



Office, and funded urban and State projects that are scheduled to be constructed or are underway.

## Controlling Roadway Costs

In developing the remaining future roadway system, consideration of the limits of the capital budget and the needs of the future population were considered. A valuable tool in the development of the system was the work of the Mayor's Road Design Task Force. This 14 member committee appointed by the Mayor of Lincoln was charged with developing a strategy for addressing the near term roadway funding challenges of the time. Among other findings, the Task Force recommended the City consider extended life for rural paved roadways, simplified road designs, and building roads initially to meet the demand of the immediate future, rather than traffic volumes that may not exist for decades. An updated look at this strategy would be useful to ensure the current development needs are being addressed with cost factors constrained.

In addition to the Highway 2 corridor, several roadway corridors were originally contemplated as six-lane (or four-lane) major widening projects. However, an alternative approach to major widening is recommended for these corridors. This approach would focus on traffic signal coordination and intersection improvements. By applying this alternative approach to these corridors, the limited funding available for roadway capital projects can be stretched to address the congestion needs on more corridors.

The Needs Based Plan reflects this philosophy by including roadway designs that are scaled back, compared to the 2030 LRTP, to the projected traffic demands of year 2040. In some cases this means that existing pavement, such as the asphalt paving on Saltillo Road in southwest Lincoln, would remain (and be maintained) to serve the future population through 2040 along with safety improvements. However, acquisition of right-of-way should still occur with development to plan for the full build-out of the roadway beyond 2040.

The result of this approach in planning for future roads is a system that attempts to provide paved roadways to all areas of the future service limit and minimizes the level of congestion in the road system while keeping costs as low as possible.

## South and East Beltways

The South and East Beltways have long been projects included in the Lincoln and Lancaster County Comprehensive Plan. Together with the West Bypass/US Highway 77 and Interstate 80, they would form a beltway loop around the City of Lincoln. These roadways provide alternative routes for traffic traveling around the City of Lincoln, particularly interstate truck traffic. The safety benefits of removing this type of traffic from 84th

Street, NE Highway 2, and 148th Street, which also serve as major intercity traffic routes, are very important. Protecting the beltway corridors, acquiring the right-of-way, and obtaining funding

has begun for these routes. The South Beltway is a \$200 million State project that is in the State's programmed budget. The State has completed preliminary engineering and done some level of work with landowners within the planned corridor. With the passage of the Build Nebraska Act (LB 84) during the 2011 State legislative session, road funding for the State's expressway system became available beginning in 2013.

The East Beltway remains a local project at this time with no state or federal funding available to assist. The price tag for construction of this project does not justify this being solely a local project. At this time, the City and County should continue to fund a program for protecting the corridor where the future East Beltway is planned. However, no funding is shown at this time for construction of this project. Continued evaluation of this corridor is important in order to identify any change in its priority.



## Nebraska Highway 2

One of the largest roadway projects in the capital road program is the Highway 2 corridor project. A Planning and Environmental Linkages (PEL) study from Van Dorn Street to Old Cheney Road is expected to be undertaken within the first five years of the plan to determine how best to improve this important facility. A study should be completed within five years of the adoption of this plan to determine the utility of implementing technological advancements concentrating improvements at the major intersections along Highway 2 (14th Street, 27th Street, 40th Street, 48th Street, 56th Street/Old Cheney Road), or to construct the full widening to 6 lanes along the entire length of the corridor. Included in this study should be consideration of impacts to and conflicts with the rail line that runs along the south side of Highway 2. Also needed is a phasing plan based on the recommended improvements.

### Intersection Capacity and Safety Projects

The roadway capital project list focuses on larger projects. Intersections are where much of current and future congestion and most vehicular crashes



occur. The City of Lincoln Public Works and Utilities Department regularly works to identify intersection improvements to address high-priority congestion and safety needs. An intersection improvement project could include additional right or left turn lanes, intersection

geometric modifications, and signal modifications or roundabout construction. Intersection capacity and safety improvements are an integral part of the region's ongoing Congestion Management Process.

## Two Plus Center Turn Lane Projects

The Two Plus Center Turn Lane Program, or "2 + 1" program, has been a very successful strategy by increasing the capacity of a two-lane roadway by approximately 50 percent and minimizing traffic congestion while improving safety and preserving the character and viability of the established neighborhoods and other components of the built environment. The City of Lincoln has been adding a center left turn lane as part of programmed street rehabilitation along two-lane minor arterials and some collectors.

Table 10.8 in Section 6 lists the remaining 14 miles of two plus center turn lane projects estimated to cost approximately \$45 million in 2016 dollars.

### Intelligent Transportation Systems and Technology

A goal of the Lincoln MPO is to advance the development and application of Intelligent Transportation System (ITS) technologies across the region, which will increase highway safety, mobility, security, economic health and community development, while preserving the environment.

ITS technologies are cost effective and relatively quick to deploy. Solutions like synchronized or adaptive traffic signals, vehicle to infrastructure technologies, and vehicle to vehicle technologies are intended to avoid motor vehicle crashes and enable a wide range of other safety, mobility, and environmental benefits. The application of connected vehicles addressed the unique needs and properties of all vehicles, operations, institutions, and travelers.

Federal Regulations require local communities consider and include ITS applications in their transportation planning process. This mandate has been carried forward by the Lincoln MPO in the Long Range Transportation Plan, and continues to implement the Southeast Nebraska Regional ITS Architecture (2005). This is also a guide for ITS planning in the deployment new technologies in the Green Light Lincoln Program.



The new system operations technologies being implemented in the Green Light Lincoln Program is expected to result in significant improvements to the overall traffic signal system and several projects with high benefit/cost ratios. Benefits of this initiative is expected to result in reduced travel times, delays, and stops, lower levels of vehicle emissions, reduced fuel consumption, fewer crashes and improved traffic flow. Additional cost savings are in reduced driver frustration and fewer major street widening projects.

Green Light Lincoln will require many upgrades to, or complete replacement of, the existing traffic signal system and equipment. Key components include:

- New signal system management software and hardware
- New intersection detection systems
- New signal displays and signal phasing alternatives
- ITS deployment
- Corridor signal optimization (re-timing) program
- Traffic monitoring and incident management capability improvements

To accomplish this, ITS technology can be used to assist in delivering and disseminating real time data on the conditions of traffic flow that can then be shared and used by motorists and the proper authorities to effectively address changing conditions on the streets. One of the greatest benefits is the safe, secure and continuous movement of people and goods during emergencies that depends upon well-coordinated system operations. Applicable ITS technologies is expected to be of enormous benefit, particularly when they are integrated with the information and communication systems of our public safety agencies.

## Railroad Crossing Improvements

The City and County are served by both freight and passenger rail service. While the railroad lines through Lincoln and Lancaster County are critically important to the local economy, many of the railroad crossings with the street network are at-grade resulting in safety problems and travel delays. Continuous study and analysis of potential projects that will reduce rail/vehicular/pedestrian conflicts at street crossings should continue. The availability of Railroad Transportation Safety District (RTSD) and State Train Mile Tax revenue should allow for appropriate railroad related projects to be funded throughout the 2040 planning period. The needs based plan for railroad crossings analyzed the addition of crossing gates and flashers at at-grade railroad crossings, railroad crossing surface upgrades, pedestrian and bicycle crossings, as well as grade separations as listed on page 50 of the [Technical Report](#).

The [Lincoln/Lancaster County Railroad Transportation Safety District \(RTSD\)](#) identifies railroad crossings in need of work, prioritizes projects, and conducts studies to plan future work. Currently, there are 12 at-grade crossings THAT qualify for construction of grade separated crossings, listed in Table 10.2.

*Table 10.2: At-Grade Railroad Crossings*

Street Crossing	BNSF Subdivision	Daily Exposure (Vehicles x Trains)
Adams Street	Creston	708,500
N. 33rd Street	Creston	604,500
Old Cheney Rd.	St. Joseph	558,140
N. 70th Street	Creston	385,450
Saltillo Road	St. Joseph	341,291
South Street	St. Joseph	215,000
Pioneers Blvd.	St. Joseph	136,310
S. 14th Street	St. Joseph	102,942
N. 44th Street	Creston	97,500
Hickman Rd.	St. Joseph	91,805
W. A Street	Hastings	91,000
N. 148th Street	Creston	87,750



## N. 33rd & Cornhusker Subarea and Corridor Enhancement Plans

In 2017, following completion of the Planning and Environmental Linkages Study, the Lincoln/Lancaster County Railroad Transportation Safety District and City of Lincoln decided that prior to any major transportation investments, the subarea around N. 33<sup>rd</sup> Street and Cornhusker Highway should be analyzed more comprehensively so that any transportation changes would align with the future vision of the subarea. To determine this vision, a community-consensus built subarea planning process was undertaken. The subarea planning process analyzed the following:

- land uses;
- zoning;
- utilities and infrastructure;
- transportation routes (transit, rail, bicycles, pedestrians, and automobiles);
- market-supported economic development opportunities;
- parks and open space enhancement opportunities; and,
- aesthetic, urban design, market, and environmental conditions

The Subarea Plan addresses the opportunities, constraints, and issues discovered through analysis of existing conditions and incorporates the visions, goals, and guiding principles as determined during the extensive online and in-person public engagement process. The plan sets forth land use and zoning, development and redevelopment, transportation, aesthetics and urban design, and sustainability recommendations for the subarea within Northeast Lincoln.

The Subarea Plan was created in conjunction with a Corridor Enhancement Plan to ensure Cornhusker Highway is both functional and aesthetically pleasing. The Corridor Enhancement Plan illustrates and describes Cornhusker Highway's

preferred streetscape, touching on items such as site furnishings, landscaping, public art, lighting, and building setbacks. The Subarea Plan and the Corridor Enhancement Plan are considered part of this Long Range Transportation Plan.

### Right-of-Way Considerations

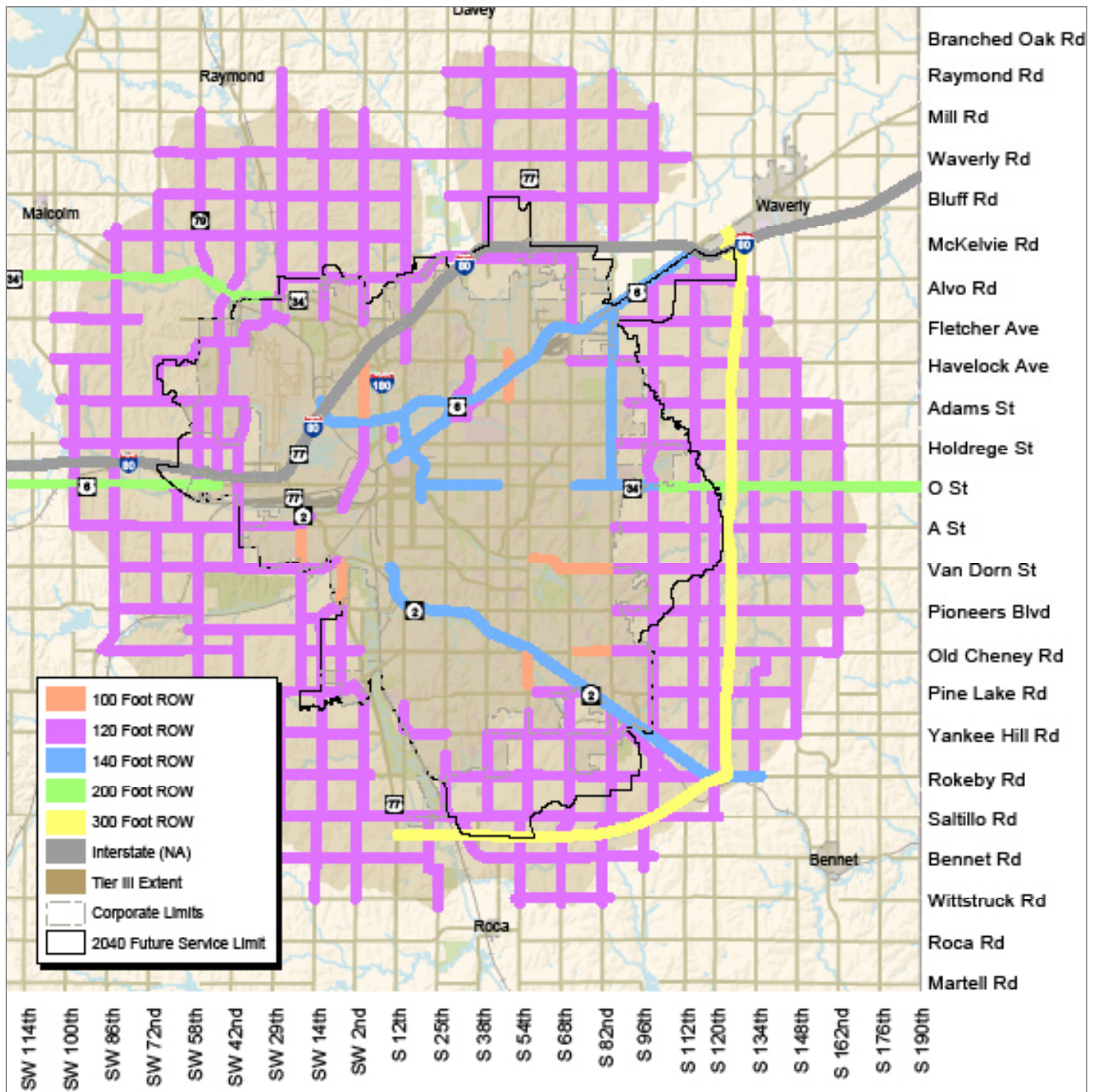
Right-of-Way (ROW) widths for projects on the Year 2040 Street and Highway Improvements Plan are displayed on Map 10.10: Right-of-Way Standards.

Projects occurring at the intersection of two arterial streets or at locations where right turn lanes are required will warrant the further dedication or acquisition of public right-of-way up to 130 feet in width for the "2+1 at 120 feet of ROW" and "4+1 at 120 feet of ROW" projects, and 150 feet in width for the "6+1 at 140 feet of ROW" projects, for a distance extending two blocks from the centerline (approximately 700 feet) of the intersection. The length of the intersection improvement should consider the existing and proposed land uses in the general area, traffic studies, and other pertinent information. Signalized intersections occurring along an arterial but not crossing another arterial may also fall under these ROW standards. The standard applies when land uses or other factors demonstrate the need for a wider ROW at that location.

Within Lincoln's future Growth Tiers I, II and III, a public ROW width of 120 feet for any potential future arterial street is considered the standard for this Plan. This may include, but is not necessarily limited to, the existing section and half-section line roads in these future Growth Tiers. Any ROW obtained to extend or otherwise complete the section line road system in the future growth area should also be done at this standard.

There are instances — mostly but not always in newer areas — where trails are to be placed along an arterial street. This may occur in order to provide trail connections and to allow safe trail crossings at arterial streets. When a future trail or bike lane is designated along an arterial roadway, the corridor





Map 10.10: Right-of-Way Standards



should be expanded by six (6) additional feet on the side where the trail will be located. This additional ROW should be obtained in advance of development.

Modifications to existing or proposed right-of-way are typically noted with the implementation of roundabout intersections. In most cases, ROW needed for exclusive right-turn lanes at intersections can now be lessened on the approaches due to the less intrusive footprint of roundabout intersection approaches. Additional considerations are needed at some intersection roundabout corners however due to the circular intersection characteristics which can identify more ROW needs due to the offset nature of approaches to calm traffic speeds.

### **Congestion Management Process**

The Congestion Management Process and mitigation efforts should remain flexible and ongoing. A regular process is in place to identify and respond to traffic congestion challenges. Many management and operational actions will be undertaken at the departmental level to provide the quickest possible resolution, while more serious issues may require a formal study process. Congestion management data is a primary source of information that shapes the decision making process for the Long Range Plan. Levels of delay, or congestion, were identified using the MPO traffic model to determine which roadway projects are most needed by the year 2040. Also, incident management is one of the major challenges of congestion management in Lincoln where much traffic congestion can be tied to crashes, incidents, and construction.

Additional studies may be desirable to identify specific congestion mitigation strategies that appear most reasonable for the particular location. Where deficiencies are identified, the MPO Technical Committee will suggest specific strategies for congestion mitigation. More general strategies include:

- Alternative transportation modes and Complete Streets policy development
- Continued monitoring and planning
- Intelligent Transportation System (ITS) improvements
- Transportation Demand Management (TDM) techniques
- Two Plus Center Turn Lane Program
- Intersection capacity improvements
- Road improvements

### **Alternative Transportation Modes and Complete Streets**

Increased trips using alternative transportation modes, such as bicycles and transit, may theoretically reduce the number of single occupant vehicles on the road, and so might therefore reduce congestion.

The streets of our City and County are important parts of the livability of our community. It makes sense in select areas of the City to develop roadways that can serve all users, not just vehicular traffic. Complete Streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities should be able to safely move along and across a Complete Street. However, Complete Streets do not make sense in all cases. The City should selectively develop Complete Streets only in those areas where such development is both cost effective and likely to provide direct benefit to users who frequent the area where the Complete Street will be built.

The Executive Order 086476/Administrative Regulation 35 established a Complete Streets Committee to discuss how to implement Complete Streets within the community. The committee is an interdepartmental group composed of representatives from Planning, Public Works and Utilities, StarTran, Urban Development, Building and Safety, Parks and Recreation, Lincoln Police



Department, and the Health Department. Complete Streets Committee members identify projects within their departments to be reviewed by the Complete Streets Committee and the committee focuses on projects that have a regional significance. Project plans are typically sent out to departments for review, and several Complete Streets Committee members review Public Works and Utilities projects for Complete Streets elements outside the regular meetings.

### Travel Demand Management (TDM) Techniques

Travel Demand Management (TDM) is a strategy to reduce demand for single occupancy vehicle use on the transportation network. TDM can reduce congestion and traveler delay, improve air quality, and improve access to jobs, schools and other opportunities. Travel Demand Management Strategies can include the following:

- Flexible Work Schedules
- Traveler information
- Employer and Campus TDM
- Auxiliary Transit Service
- Market and Financial Incentives
- Parking Management
- Transit Use
- Walking and Cycling
- Teleworking or Telecommuting
- Car Share
- Van Pooling

- Bike Share
- Partnerships with Transportation Network Companies (TNC)

By comparison to road widening and other capital projects, TDM programs are very inexpensive and can be effective in decreasing demand on roadways, especially during peak travel times of the day.

The Lincoln MPO should continue to pursue a travel demand management program that is coordinated between various departments and identifies and works with large employers including the State of Nebraska, University of Nebraska-Lincoln, and various private businesses.

### RURAL ROADS

Improvements to the rural road system will occur throughout the County. The amount of new pavement installed will depend upon the growth in traffic and population, and the fiscal resources available in the future to make the improvements.

The future County Paved Road Network is subject to more impacts in areas closest to the City when compared to areas experiencing slower growth outside the urbanizing areas of Lincoln. These impacts and the resulting improvements vary from simply grading and graveling a road to a two-lane paved facility. (Map 10.11: Rural Road Project Needs)

Road improvement decisions in the County are triggered by daily traffic volumes with the amount of traffic dictating the type and degree of improvement necessary. When a road experiences traffic levels of 300 trips per day or more, a minimum of 100 feet of ROW may be acquired by the County and grading and drainage improvements may be made in anticipation of future improvement needs. At 400 trips per day, a roadway qualifies for paving, which should remain as an effective facility, with proper maintenance, until a level of 6,000 trips per day is reached. At that point a four-lane divided facility may be needed. The Future County Road Improvements Plan





shows County roads which are likely candidates for two-lane paving in the future.

Often these traffic level increases are experienced as urban development approaches the roadway. It may be possible that as this happens the roadway will move from a County road to a City street as land is annexed into Lincoln or other surrounding towns. In order to make the best use of existing facilities, these rural roads may continue to be used until the demand reaches a level where an urban design is needed.

The County Road Plan indicates some road widenings for those existing two lane paved roads that are no longer adequate for current traffic volumes. These widening projects consist of increasing the lane width and the addition of paved shoulders, not the construction of additional lanes. New roadways are included in this Plan to provide for continuity in the road system and better serve the adjacent areas. These segments include:

- 98th Street, A Street to "O" Street
- 98th Street, Adams Street to Fremont Street
- Alvo Road, NW 27th Street to NW 12th Street



This approach to County road improvements does, however, become threatened when acreage development is not

focused on already paved roads and the needs exceed limited fiscal resources available for road improvements. New development should locate along those facilities that have already received improvements capable of supporting such development.

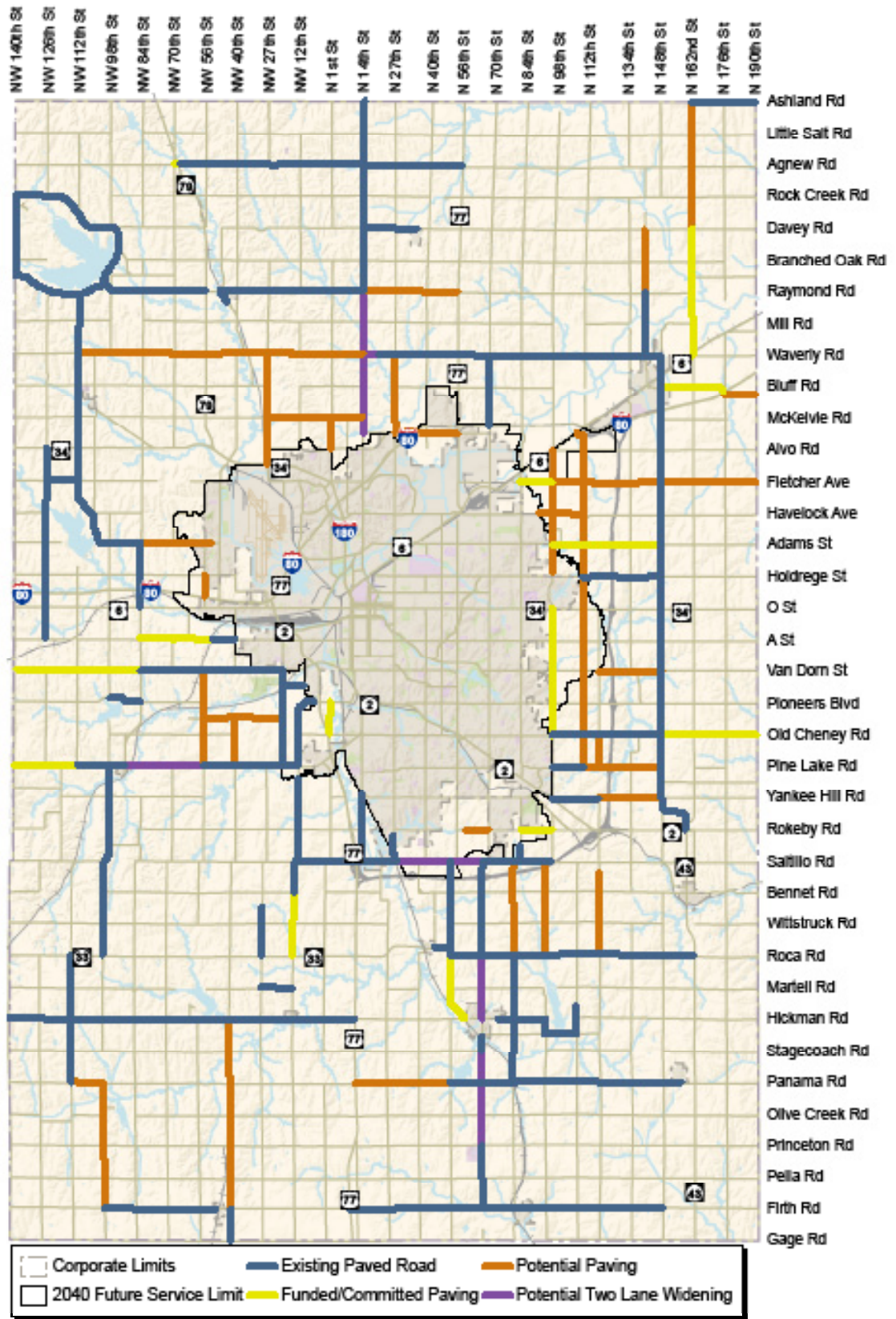
Close coordination between the Lancaster County Engineer's Office and MPO staff occurred during the development of the LRTP update to identify a needs based rural roads program. The rural roads program includes two basic project types:

1. Rehabilitation and two lane widening projects.
2. Paving gravel roads.

Rehabilitation and two-lane widening projects involve repairing or rebuilding currently paved roadways and, in some cases, widening these roads to include wider lanes and paved shoulders. Map 10.11 shows the rural road project needs.

In March 2006, the City of Lincoln and Lancaster County entered into an Interlocal Agreement to establish public street ROW and construction standards to be applied to the repair, maintenance, and construction of streets located within the 3-mile zoning jurisdiction of the City. The purpose of the agreement was to provide mutually beneficial guidelines for a more useful life of the public investments in the county roads while accommodating future growth with rural to urban transition street (RUTS) standards. The design and construction standards generally specify that rural principal arterial, rural minor arterial, rural major collector, and rural minor collector in the Lincoln-Lancaster County Comprehensive Plan be graded to future ultimate width, paved with an alignment shifted to one side of the centerline to accommodate two lanes of rural paving with urban culverts. This was to allow the addition of two urban lanes in the future without the need to close the roadway and detour traffic.

Ideas on the best method for making the transition from rural to urban sections continue to evolve as traffic needs and intersection design (roundabouts) change. The City of Lincoln Public Works and Utilities Department and Lancaster County Engineer's Office are currently reviewing the RUTS standards to evaluate whether there are adjustments that should be made to transition from rural to urban more efficiently.



Map 10.11: Rural Road Project Needs



## GOODS AND FREIGHT MOVEMENT — 2040 NEEDS

Air, rail and trucking are essential components in the local economy and play a key role in the Lincoln Metropolitan Area and Lancaster County transportation system. Efforts should be made to continue coordination with the freight community that will further integrate freight interests into the transportation planning process. Specific activities that are beneficial to the freight industry include ongoing information dissemination and dialogue through the MPO's Freight Carriers Working Group, enhanced efforts to inform the freight industry of upcoming projects and related impacts on detours and routing, and moving forward with projects like intersection improvements and improvements along major freight routes like Highway 2. The focus of discussion on freight bottlenecks with the freight community during the development of the 2040 Plan was on needed improvements to Highway 2 and the anticipated construction of the South Beltway as a major benefit to freight operations in the region. Freight considerations, including the locations of identified truck routes in the region, were part of the project selection process for the 2040 Needs assessment.

## AIRPORTS AND AIRFIELDS — 2040 NEEDS

The Lincoln Airport will continue to be the principal airport facility serving the Lincoln Metropolitan Area, Lancaster County, and a significant portion of the region in the southeast area of the State. As a member of the Lincoln MPO Technical Committee, the Lincoln Airport Authority will continue to be part of the metropolitan area transportation planning process. Specific strategies include:

- Ensure that future developments are aware of their proximity to the airport and noise issues are appropriately addressed through the Airport Environs Noise District ordinance and the recommendations of the Airport Noise Compatibility Study.

- The Airport West Subarea Plan was approved in 2005 and was amended into the Comprehensive Plan. Elements of the Plan should be pursued for implementation over time.
- Other future considerations include redevelopment of Lincoln Airpark West for a variety of uses including the development of sites for rail-accessible warehousing and seeking opportunities for air-rail-truck freight operations. While these potential developments can make the airport into an intermodal transportation hub, attention will need to be focused on mitigating conflicts between the different freight operations.

## PEDESTRIAN AND BICYCLE FACILITIES — 2040 NEEDS

Bicycle and pedestrian facilities are very highly valued by the citizens of Lancaster County. According to federal requirements these facilities should be considered in all transportation projects. In order for these facilities to be properly planned and for a full network to be integrated into the existing transportation network, active planning and coordination of projects should be a priority.

During the planning, engineering, maintenance, and rehabilitation of all streets and roads, bicyclists should be considered “design users,” with most streets being considered a “bicycle facility.” Education and enforcement of the rules of the road are keys to encourage bicycling as viable



transportation and creating an environment that is safe and convenient for cyclists and motorists. The bicycle and pedestrian program should include



education and promotional activities to encourage full and safe use of these facilities.

During the development of the LRTP, the community expressed a desire to continue expanding the network of on-street bike facilities to complement the trail system. Further study of the complete on-street bike network in Lincoln was assessed during the development of the Lincoln Bike Plan and includes various facility types, depending on street context, such as cycle tracks, road diets, striped bike lanes, and signed bike routes as seen in Map 10.12: Bicycle and Pedestrian Capital Plan. The Bicycle and Pedestrian Capital Plan should be updated and advanced in the near future and should include consideration of how bicycle improvements can be cost-effectively incorporated at the time of routine street maintenance.

A major element of the overall bicycle plan is the provision for adequate bicycle facilities as part of the existing urban area. For example, while parking for cars is routinely planned for, rarely is there a place where bicyclists can lock or store their bicycle. These facilities can be public facilities or part of private development. In addition to basic bicycle locking and storage facilities, many communities and larger mixed-use centers provide basic shower facilities for commuter bicyclists. The bicycle and pedestrian program should include subdivision and building codes that plan for the inclusion of appropriate bicycle facilities.

Lincoln currently has a well-developed sidewalk system, and the requirement of sidewalks on both sides of all streets should continue. However, this system is in need of rehabilitation in many areas. The sidewalk rehabilitation program should be funded at a level to replace a minimum of three (3) miles of sidewalk, or one percent of the sidewalk system annually. Pedestrian crossing signals should be updated and installed when warranted at appropriate sites along with other visual cues to alert drivers to pedestrian crossing points and to increase the safety and security of pedestrians. Some policies that should remain in place to

support pedestrian facilities include the policy stating sidewalks should not be placed adjacent to the curb but separated by a landscaped parkway consistent with the City's Design Standards for street trees, parking screening, and landscaping. This policy, in conjunction with others, will benefit the pedestrian environment.

Other pedestrian improvements should be made, such as completing missing gaps, increasing amenities at and around transit stops, and other projects like mid-block crossing improvements, pedestrian countdown signal heads, and a wayfinding system.

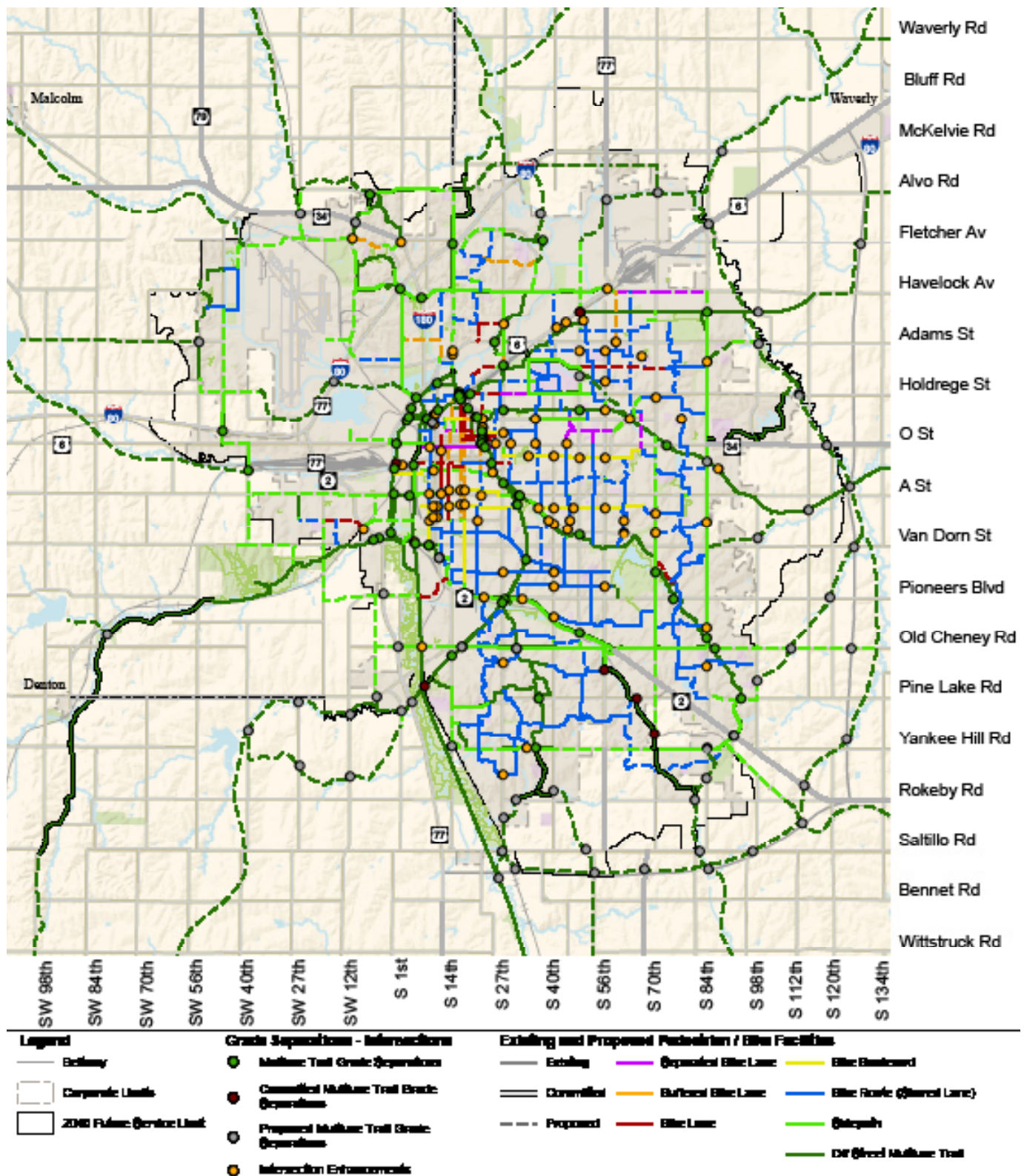
## MULTI-USE TRAILS — 2040 NEEDS

The grid pattern of roadways and the use of the Rails-to-Trails program have provided a strong foundation for a quality trail system. This system should be completed and new growth areas should be connected to it as they develop. Opportunities to develop trails (See Map 10.13: Countywide Trails Plan) in the County should be identified as they are presented and efforts to complete these projects should be made as funding opportunities allow.

As the trail system begins to age, rehabilitation of trails will become a larger issue. A rehabilitation program should be developed and funded adequately in order to complete projects as they are needed. Additionally, some trail segments have already begun to see more use than was originally anticipated. New trails should be built to a ten foot width and in some areas existing trails should be widened to 10 or 12 feet as they are rehabilitated.

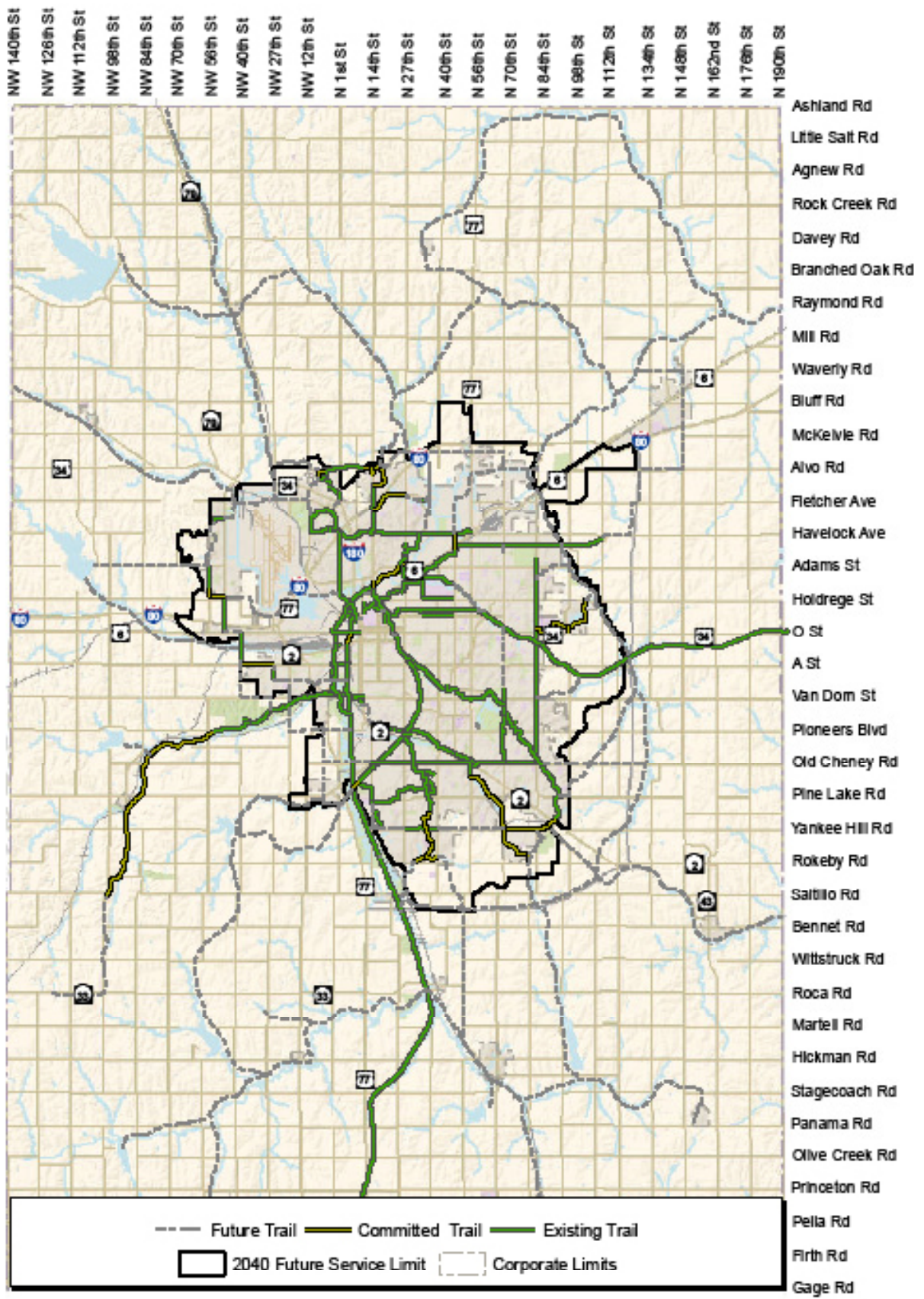
Rails-to-Trails has been a popular method for expanding the trails system as rail corridors have been abandoned and are no longer operational. Two currently active rail corridors within the City are identified as potential future trail expansion opportunities if the rail lines are ever abandoned. These rail lines can be seen in Map 10.5. A listing of Trail projects can be found in Table 10.3 and are shown on Map 10.14: Candidate Trail Projects





Map 10.12: Bicycle and Pedestrian Capital Plan

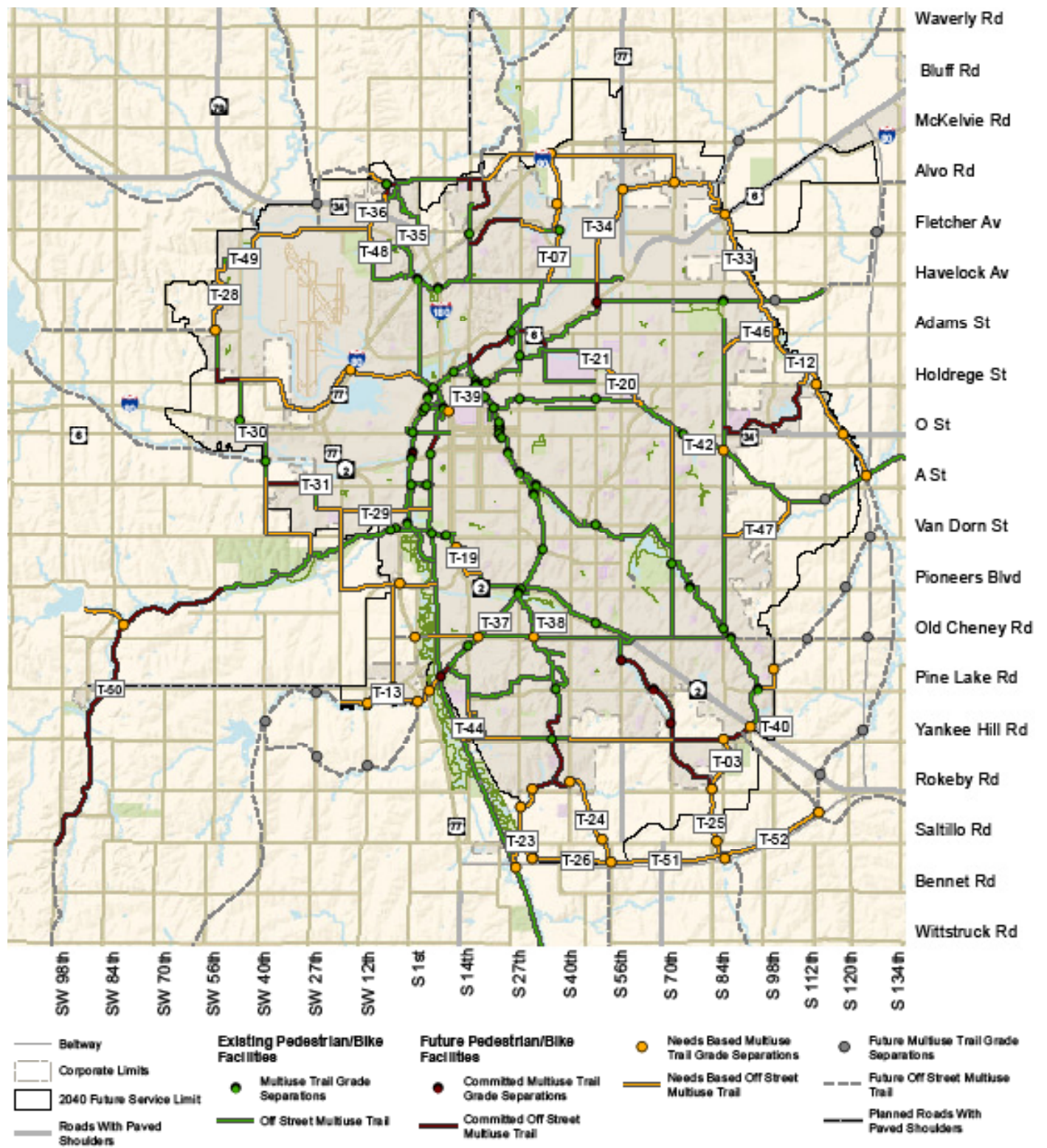




Map 10.13: Countywide Trails Plan







Map 10.14: Candidate Trail Projects

Table 10.3: Candidate Trail Projects

Project ID	Trail Name	Limits	Project Cost (2016 \$)
T-03	Woodlands	Jensen Park to Rokeby Rd	\$470,000
T-04	Woodlands	Rokeby Rd to 70th St to Yankee Hill Rd	\$900,000
T-07	Landmark Fletcher	33rd St & Superior St to 27th St	\$600,000
T-08	Rock Island Connection	Viaduct over BNSF to Jamaica	\$900,000
T-09	Wilderness Hills	Yankee Hill Rd to Rokeby Rd	\$1,150,000
T-11	Waterford	84th to Stevens Creek	\$850,000
T-12	Stevens Creek	Murdock Trail to Mo Pac Trail	\$2,300,000
T-13	Cardwell Branch Trail	Hwy 77 to Prairie Creek	\$700,000
T-14	Air Park Connector - Fletcher Ave	NW 27th St to NW 31st St	\$90,000
T-15	W. Holdrege Street Trail	NW 48th St to NW 56th St	\$140,000
T-16	N. 48th St Trail	Murdock Trail to Superior St	\$170,000
T-18	N. 33rd St and Adams Trails	Murdock Trail to Cornhusker Hwy	\$200,000
T-19	10th Street Trail	Van Dorn St to 17th St/Burnam St	\$300,000
T-20	Deadmans Run Trail	48th St to Mo Pac Trail	\$410,000
T-21	East Campus Trail	Leighton St to Holdrege St	\$150,000
T-23	27th St Connector	Rokeby Rd to South Beltway	\$460,000
T-24	56th Connector	Rokeby Rd to South Beltway	\$1,200,000
T-25	84th Connector	Rokeby Rd to South Beltway	\$450,000
T-26	South Beltway Trail - Phase I	27th St to 56th St	\$1,500,000
T-27	Greenway Corridor Trail/Haines Branch - Phase I	SW 56th St to Saltillo Rd	\$3,000,000
T-28	NW 56th	W. Adams to NW 56th to W. Superior	\$550,000
T-29	South Street	SW 27th to Jamaica	\$730,000
T-30	O Street	SW 40th St to SW 48th St	\$240,000
T-31	A Street Connectors	SW 40th - A Street to F St & SW 27th - Shane Dr to A St	\$90,000
T-33	Stevens Creek	Murdock Trail to Hwy 6	\$610,000
T-34	N. 48th St/Bike Park Trail	Superior St to N. 56th St	\$680,000
T-35	N. 1st St	N. 1st St crossing of Hwy 34	\$400,000
T-36	NW 12th St	NW 10th St to crossing of Hwy 34 to Aster	\$850,000
T-37	Rock Island	Grade separated crossing of Old Cheney	\$1,200,000
T-38	Tierra Williamsburg	Grade separated crossing of Old Cheney	\$1,200,000
T-39	10th Street	Grade separated crossing	\$2,000,000
T-40	Hwy 2 & Yankee Hill Rd	Grade separated crossing	\$2,000,000
T-41	Mo Pac Trail	Grade separated crossing of 112th	\$1,100,000
T-42	Mo Pac Trail	Grade separated crossing of 84th	\$1,500,000
T-43	Yankee Hill Rd	S. 56th St to S. 70th St	\$310,000
T-44	14th & Yankee Hill Connector (w/RTSD proj)	S. 14th St - South LPS Property Line to Yankee Hill Rd	\$320,000
T-45	Landmark Fletcher	Fletcher Ave from N. 27th St to N. 14th St	\$950,000
T-46	Prairie Village Trail	84th St. to Stevens Creek, South of Adams	\$450,000
T-47	Van Dorn Trail	84th and Van Dorn to 106th and MoPac Trail	\$725,000
T-48	Air Park Connector - Phase I	NW 12th to Fletcher to NW 27th	\$530,000
T-49	Air Park Connector - Phase II	NW 48th to NW 31st	\$550,000
T-50	Greenway Corridor Trail/Haines Branch - Phase II	SW 56th to Saltillo Rd	\$1,000,000
T-51	South Beltway Trail - Phase II	56th to 84th	\$2,500,000
T-52	South Beltway Trail - Phase III	84th Street to Hwy 2	\$3,500,000
T-53	NW 56th Street Trail	W. Holdrege to W Partridge	\$80,000
T-54	Jamaica North - Arena Trail	J Street to N Street	\$150,000
T-55	Yankee Hill Road	S. 40th Street to S. 56th Street	\$310,000



## TRANSIT SYSTEM — 2040 NEEDS

Providing transit services throughout the City requires careful consideration of the number of routes, the frequency of service, and the hours of service. The [Transit Development Plan](#) (TDP) adopted in 2016 provides a framework for monitoring and modifying transit services in response to changes in development patterns and user needs, and is based on adopted service standards and policies. The TDP is developed by Public Works and Utilities – StarTran under the guidance of the StarTran Advisory Board and the public. The TDP is the main planning document for transit services in Lincoln and was last updated in 2016.

The current transit pattern in Lincoln attempts to provide some level of service as many households as possible while consolidating or eliminating services in unproductive areas. However, in the future, consideration of a change to the pattern of transit delivery needs to be made in order to maximize the productivity of the system. With the update of the TDP and implementation of the new transit routes, corridors with higher ridership have been enhanced with shorter wait times and longer service hours. Service to major employment centers have been and should continue to be considered for enhancement as well as areas of current and future anticipated density. The Mixed Use Redevelopment Nodes and Corridors discussed in the [Mixed Use Redevelopment](#) chapter provide an opportunity to direct redevelopment and transit services in a coordinated fashion.

To be comparable to other cities of Lincoln's projected 2040 size, funding for transit should be increased to provide similar levels of service. Future phases identified in the 2016 TDP should receive the necessary funding for implementation. Areas of the City that are not along the transit corridors above can be served to a more modest level. Neighborhood feeder routes that direct transit riders to the major corridors could be provided with smaller, more fuel efficient, and automated vehicles.

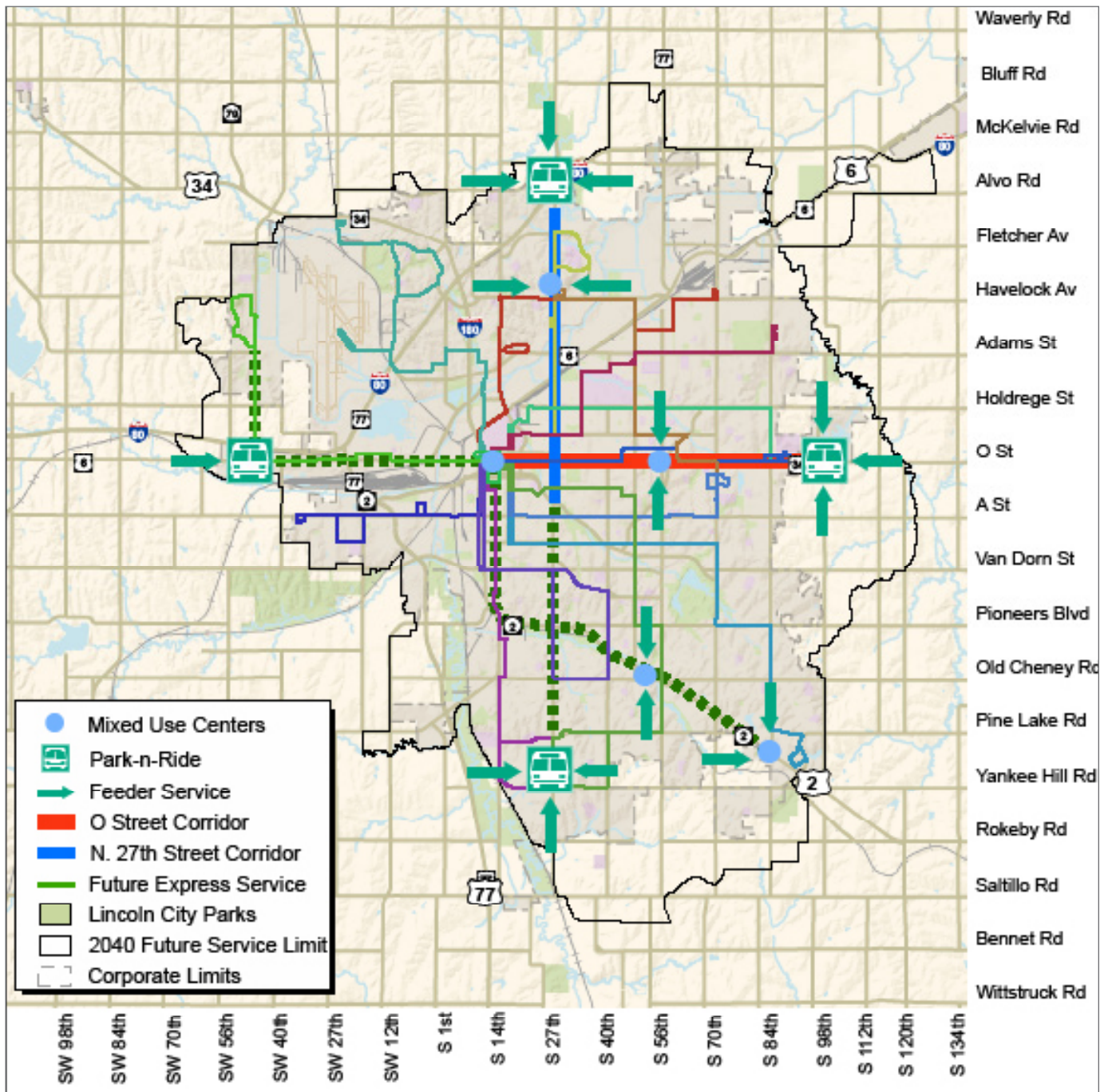
Continued enhancement of the bike-and-bus feature would also allow those in areas with lower service to access and use transit. Establishing park-and-ride locations along outlying areas of the community could support transit connections to the Downtown and other mixed use centers. The use of Intelligent Transportation System (ITS) and other emerging technologies to provide route information, fare payment systems, travel data, real-time bus location information and potentially driverless vehicle service will allow those who ride by choice to participate at a higher level and riders of necessity to plan their routes and be better served.

Effective public transportation service requires good pedestrian connections to and from transit stops, density of activities, and development designs supportive of transit riders. Pedestrian connections to transit must be direct and the sidewalk system must have continuity. Street crossings to transit stops must be safe. Productive transit service requires higher-density land development patterns that link residential areas and employment, retail, and service centers. Development design needs to be transit-friendly, providing convenient access to transit services.

Although Lincoln may not reach the density and demand needed to justify a bus rapid transit (BRT) system within the planning period, efforts should be made to identify potential routes and to concentrate efforts to increase density along those routes. Careful design and right of way preservation along these routes may also allow a conversion to street car or light rail in the distant future. The "O" Street and N. 27th Street corridors are likely candidates for planning and identification as long term BRT routes.

The projected increase in the 65 and over population creates challenges in service provision. This population increase will create a greater usage of demand-responsive public transportation. Based on current funding levels, such increase in usage could create funding challenges. While all





Map 10.15: 2040 Transit System Concept Map



fixed-route services are, and will continue to be, accessible, the need for increased complementary paratransit services (HandiVan/Brokerage) will continue. Such services are very expensive, due to vehicle load constraints and operating policies and therefore, innovative variations of such services will be essential.

Expanded transit service within the rural areas of the County or between Lincoln and other larger cities is not currently practical; however, data should continue to be collected and analyzed to monitor travel patterns in the hopes of identifying opportunities for regional transit. The Nebraska Innovation Zone Commission and several other interest groups have advocated regional planning for just such an opportunity. The Lincoln MPO should continue to be involved in these conversations.

## FISCALLY CONSTRAINED TRANSPORTATION PLAN

### REVENUE SUMMARY

The previous sections and policy direction presented the 2040 transportation needs for the Lincoln MPO including roadway operations, maintenance and capital, pedestrian and bicycle, trails and transit. Section 6 describes in detail the Fiscally Constrained Transportation Plan including the revenue sources, anticipated revenues, and potential additional revenues to maintain, operate, and expand the transportation system in the City of Lincoln and Lancaster County from 2016 until 2040.

The financial analysis presented in this section meets the requirements stated in federal transportation regulations. This detailed information should be referenced to guide project implementation for all modes of travel. The project costs and potential funding are estimates and will be revisited several times before the years they represent come to pass. The intent of the Fiscally Constrained Transportation Plan is to prepare an approximate, but realistic, estimate of both the total

funds available and total program cost by year of expenditure.

Satisfying the Lincoln MPO region's transportation financial needs during the next 24 years is a major undertaking. The infrastructure demands associated with building and maintaining the roadway, non-motorized, and public transportation systems will be challenged by the region's projected population growth and by the aging of the existing infrastructure already in use. The limited availability of federal, state, and local moneys will also have a significant impact on the ability to fund proposed projects. Demands on the transportation system have grown significantly in the past and the increase in costs of this demand is expected to accelerate faster than the growth in funding.

Federal rules require that LRTPs be fiscally constrained. That is, planned expenditures shall not exceed the revenue estimates to support the operations, maintenance, and new construction during the 24 years covered by the Long Range Transportation Plan.

The Lincoln MPO region, like the rest of the United States, has and will continue to have additional transportation needs beyond

those improvements listed within the fiscally constrained portion of the plan. Therefore, the Lincoln MPO LRTP is a Fiscally Constrained Plan as it only includes a portion of the region's Needs Based Plan identified in the preceding section, constrained to the projected funding available. Projects that are in the Needs Based Plan but not in the Fiscally Constrained Plan are illustrative and could be constructed if a new source of funding were to become available or if priorities change.

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**Code of Federal Regulations:**  
“... the financial plan shall contain system-level estimates of costs and revenue sources that are reasonably expected to be available to adequately operate and maintain Federal-aid highways and public transportation.”

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This plan acknowledges that projected funding levels are not sufficient to adequately maintain forecast needs or serve projected increases from regional population and employment growth. Meeting the region's full transportation needs identified in the preceding section will require new revenues from as yet unidentified revenue sources. Without additional revenues, regional accessibility and mobility will be impacted, which will constrain the movement of goods and people throughout the region. The gap between needs and resources is not new, and simply reallocating resources will not resolve the funding limitation.

## REQUIREMENTS FOR A FINANCIAL PLAN

The Code of Federal Regulations describes the elements of a Transportation Financial Plan. The requirements of [SAFETEA-LU](#) and [Fixing America's Surface Transportation \(FAST\) Act](#) (2015) are that the plan must include the revenues and costs to operate and maintain the roads and associated systems (signals, signage, snow removal, etc.) to allow MPOs to estimate future transportation conditions and promote good stewardship of available funds by using existing infrastructure to the fullest. However, the Fiscally Constrained Transportation Plan provided in this section does serve the MPO Planning Area as best as possible over the next 24 years and is based on the prioritization process of the LRTP planning effort.

Another requirement of federal transportation



regulations is to use “year of expenditure” dollars for planning purposes. This requirement accents the reduction in the buying power of the transportation

revenues that had not been previously accounted for during the preparation of long range transportation plans.

While the Lincoln MPO plans and develops programs for the all of Lancaster County, separate and defined funding sources are used to fund the respective urban and rural transportation programs. Urban sources of funding are generally planned to be used within the “Urban Area Boundary” as shown on the Existing Functional Classification map. Rural sources of funding are generally planned to be used outside of this identified boundary. This Fiscally Constrained Transportation Plan provides detailed funding and programmatic information for the Urban Area programs and related projects. Also provided is a fiscally constrained plan for the rural road network. There are projects included in this Plan where rural projects are planned inside the Urban Area Boundary.

## OVERVIEW OF FUNDING SOURCES

In general, there are three major funding categories for transportation in the Lincoln MPO Long Range Transportation Plan. The first is for roadway improvements which includes 1) roadway operations, maintenance, and rehabilitation projects and 2) roadway capital projects. This category would also include pedestrian and bicycle improvements within the street right-of-way. The second funding category is for alternative travel modes which includes pedestrian, biking and trails projects, which includes the construction of new trails, the maintenance of existing trails and the development of on-street bike facilities. The third funding category would be for transit. This includes operations, maintenance and capital. In general, revenue assumptions were established through coordination with the City of Lincoln Public Works & Utilities Department, the Lincoln Parks & Recreation Department, and StarTran to identify all current and expected revenue sources, and to establish a trend in those funding amounts. The details for the LRTP funding projections and analysis is located in the [LRTP Technical Report](#)-Chapter





6. The general finding is that the transportation revenues expected over the 24-year time horizon of the LRTP will not be enough to cover the cost of the transportation needs in Lincoln and Lancaster County. Compounding the funding shortfall is the increasing cost to construct transportation projects; costs have inflated by approximately 5 percent per year in recent years and revenues are projected to increase by approximately 2.5 percent per year. Careful consideration of investment strategies is needed, along with an understanding of the associated tradeoffs.

## ROADWAY TRANSPORTATION FUNDING

In general, there are two major funding sources available to the Lincoln MPO for roadway operations, maintenance and capital improvements: State and Federal funds and local City and County funds. The following section presents the funding sources and reasonable forecast revenues. It should be noted this funding revenue would also include pedestrian and bicycle improvements within the street right-of-way. These funds are presented in the [LRTP Technical Report](#), Chapter 6 - Funding Outlook by source and year of expenditure. Combined they comprise the total amount of funding that is available for the urban roadway program and include local, state, and federal sources. The use of the federal funding source of funds will be for the purpose of funding projects related to the arterial street network and facilities of regional significance. A 20% local funding match is assumed for those projects using federal funds, and the federal process will be followed for all regionally significant projects. The appropriate use of local, state, and federal funding will be determined on a project by project basis.

### City Wheel Tax

The City Wheel Tax is a revenue source that is generated by a City tax on all vehicles registered within the corporate limits. This revenue helps fund four street related programs:

**Snow Removal:** This portion of the City Wheel Tax is specifically dedicated to only fund the removal of snow and ice from streets and roads within the City limits.

**Residual Fund:** This portion of the City Wheel Tax is specifically dedicated to be used generally for street improvements in the City of Lincoln.

**Residential Rehabilitation Fund:** This portion of the City Wheel Tax is specifically dedicated to be used only for the purpose of rehabilitating existing residential streets.

**New Construction:** This portion of the City Wheel Tax is dedicated to fund the construction, design, and right-of-way acquisition of streets, roads, alleys, public ways, or parts thereof, or for the amortization of bonded indebtedness when created for such purposes.

### General Fund Revenue

The City of Lincoln's general fund provides resources from sources such as property tax and sales tax for general operating functions of City departments, including transportation.

### Impact Fees

This [local funding source](#) is levied against new development to generate revenue to support specific public projects for arterial streets. The fees can generally be used on public projects within the district that it is collected.

### Railroad



### Transportation Safety District

The Railroad Transportation Safety District is a local funding source generated by a countywide property tax. These funds are specifically designated for projects throughout the City and County to

reduce or eliminate automobile/pedestrian and railroad conflicts.

### State Train Mile Tax

The State Train Mile Tax is a state tax on rail traffic passing through the City and used specifically for constructing, rehabilitating, and relocating or modifying railroad grade separation facilities.

### Highway Allocation Funds (State Fuel Tax)

State fuel tax collections are allocated to the City via a State funding formula. These funds are designated for projects throughout the City to rehabilitate, construct and improve streets, intersections/interchanges, sidewalks, bikeways and trails, safety projects, intelligent transportation infrastructure, and landscaping in connection with street improvement projects. A portion of this revenue amounting to approximately \$5 million annually is used to pay off City of Lincoln road improvement bonds that will be paid off in 2024 and 2027 respectively.

### Build Nebraska Act State Revenue (LB 84)

This state revenue commits 0.25 cents of the state's existing 5.5-cent sales tax to high priority highway projects. A minimum amount of this funding annually will be required to go toward construction of the State's expressway system. The revenue will be split between the state (83%) and cities and counties (17%). Local governments will be required to use their allotment of the revenue for road and street purposes. This allocation of revenue to Lincoln has been incorporated into the revenue assumptions for the 2040 Plan.

### Federal Aid Surface Transportation Program (STP)

This federal funding source is designated by formula for urbanized areas with over 200,000 populations and provides resources for a variety of eligible transportation projects. A total STP funding amount

of \$5.3 million in 2017 is assumed for the Fiscally Constrained Plan. A minimum of 20% non-Federal match is required (80% Federal funding).

### Federal Safety/Bridge

**STPP Hazard Elimination:** This federal funding source provides resources for safety improvements on any public road for activities including railroad crossings, public transportation facilities and public pedestrian and bicycle pathways, and trails. A total STPP Hazard Elimination funding amount of \$0.5 million in 2017 is assumed for the Fiscally Constrained Plan.

**Bridge Replacement:** This federal funding source provides resources to assist the City to replace or rehabilitate deficient highway bridges. A total Bridge Replacement funding amount of \$1.5 million in 2017 is assumed for the Fiscally Constrained Plan.

### TRAILS FUNDING

Funding for trails has historically been provided through Federal Transportation Enhancements, Federal Recreational Trails, the Lower Platte Natural Resources District (NRD), and local sources. Each of the federal sources of revenue requires a 20% match that has been provided through a number of sources including private contributions, Trail Impact Fees and the City's General Fund.

### TRANSIT FUNDING

StarTran transit funding includes a combination of transit funding through the Federal Transit Administration, state revenue/aid, the City's General Fund and transit revenues. These funds are presented in [L RTP Technical Report](#), Chapter 6 by source and year of expenditure.

## FISCALLY CONSTRAINED TRANSPORTATION PLAN

The funding outlook analysis in the [L RTP Technical Report](#)-Chapter 6 presents an overview of the revenue forecasts, describes the resource allocation process, and establishes a strategy to maintain



the transportation system and to make the system function as efficiently as possible, given transportation funding limitations. The Fiscally Constrained Transportation Plan presents a strategy based on the revenue forecasts and resource allocation process to maintain the transportation system and goal of making the system function as efficiently as possible, given transportation funding limitations.

Transportation needs and opportunities in Lincoln and Lancaster County are great. Chapter 5 of the [LRTP Technical Report](#) presented a compilation of current and future needs to improve the region's transportation system. Current funding realities indicate that not all desired projects will be built within this plan's 24-year time horizon. In

*Table 10.4: Total Revenue Forecasts*

Program	Revenue Forecasts (2017 - 2040)
Urban Roads Program	\$1,9484,650,000
Transit Program	\$452,820,000
Trails Program	\$36,350,000
<b>TOTAL</b>	<b>\$2,437,820,000</b>

total, an estimated \$2.4 billion in transportation revenues can reasonably be expected for the urban area roadway, transit, and trails programs, as summarized in Table 10.4.

The total estimated revenues for the Lincoln MPO Long Range Transportation Plan by category and year of expenditure are presented in Table 10.5, LRTP Resource Allocation. This table includes various Federal, State and City funding programs. There are numerous additional federal programs, such as Interstate Maintenance that might be available and used by the Nebraska Department of Roads or the Transportation Alternative Program

(TAP) may provide additional funding but were not included.

This LRTP builds from the funding plan established in the [Technical Report](#), Chapter 6 - Funding Outlook and forms the basis for decisions about how best to prioritize and phase transportation improvement projects and programs. The resource allocation detailed in Table 10.5, LRTP Resource Allocation was used to develop the Fiscally Constrained Plan as shown on Figure 10.2, LRTP Resources Allocation.

While the Lincoln MPO plans and develops programs for all of Lancaster County, separate and defined funding sources are used to fund the respective urban and rural transportation programs. Urban sources of funding are generally planned to be used within the Urban Area Boundary. Rural sources of funding are generally planned to be used outside this identified boundary. The Fiscally Constrained Plan provides detailed funding and programmatic information for the Urban Area programs and related projects.

Expectations contained within the [LRTP Technical Report](#) do not in any way compel members of future City government to raise revenues to meet said expectations.

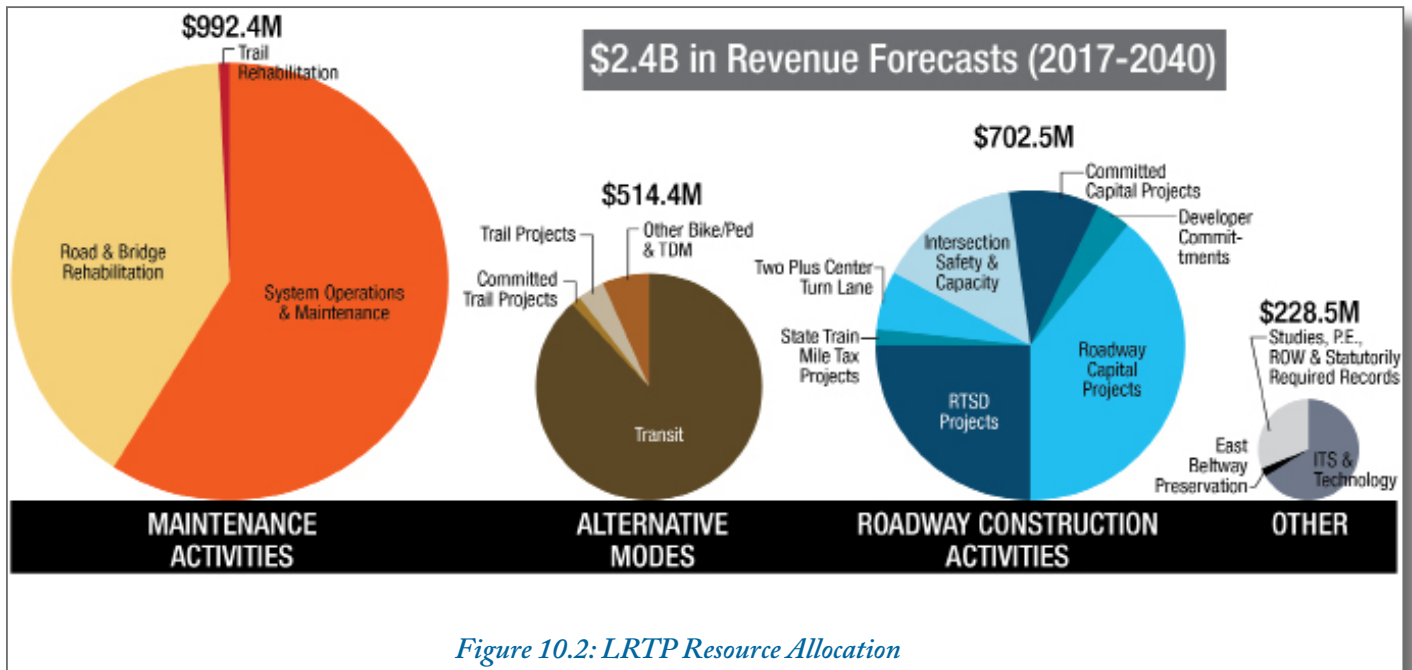
## PROJECT PRIORITIZATION PROCESS

Although the LRTP addresses funding for various project types, only Roadway Capital Projects and Trail Projects are prioritized within the LRTP. All other project categories, including Transit, RTSD, System Operations and Maintenance, Rehabilitation, etc., are provided a fiscally constrained funding allotment and are prioritized outside the LRTP. These other programs are funded through a "pool" of funding as established in the Resource Allocation step ([LRTP Technical Report](#) -Chapter 6). The Fiscally Constrained Plan includes



Table 10.5: L RTP Resource Allocation

Program	Resource Allocation in Millions (2017 - 2040)
System Operations & Maintenance	\$586.00
Road & Bridge Rehabilitation	\$398.13
Trail Rehabilitation	\$8.29
Transit	\$452.82
Committed Trail Projects	\$7.75
Trail Projects	\$20.31
Other Bike/Ped and TDM	\$33.51
RTSD Projects	\$177.06
State Train Mile Tax Projects	\$11.05
Two Plus Center Turn Lane	\$43.29
Intersection Safety and Capacity	\$104.68
Committed Capital Projects	\$66.82
Developer Commitments	\$25.55
Roadway Capital Projects	\$274.01
ITS and Technology	\$151.85
East Beltway Preservation	\$6.00
Studies, P.E., ROW & Statutorily Required Records	\$70.70
<b>TOTAL</b>	<b>\$2,437.82</b>



the top ranked Roadway Capital Projects and Trail Projects, and a pool of funding for the various other transportation programs and project categories.

With limited funding available, the process of prioritizing projects must be comprehensive and strive to identify those projects that will most effectively move the region's transportation system toward fulfilling the vision and achieving the transportation goals. In compliance with federal requirements for performance-based planning, the project prioritization process is structured to identify those projects that will provide the greatest contributions toward meeting the seven transportation goals and associated performance targets. The evaluation criteria used to compare projects are directly related to the goals.

## Maintenance Activities

### System Operations & Maintenance

This category includes ongoing maintenance requirements (e.g., snow removal, street sweeping, stormwater management, and pothole repair) to keep the transportation system functional. The \$586 million allocation to this category will provide continuation of the current operations and maintenance activities. The City of Lincoln has pursued innovation and the use of technology advances to make efficient use of available resources.

### Road and Bridge Rehabilitation

The Rehabilitation program includes the repair of arterial and residential streets and bridges. A pavement condition rating system is used to help determine which road surfaces are in most need of repair. It is important to note that money invested today in the ongoing maintenance and repair of the street system saves a significant amount of money in the future by avoiding the expanded costs associated with full reconstruction of roadways.

Routine and preventative maintenance activities will be performed, such as localized repairs, crack and joint sealing, and various surface treatments (slurries, sealing, and micro-surfacing). As pavement

ages, thin to thick overlays, panel replacements, base stabilization, and repairs will be used in an effort to avoid more costly reconstruction if possible.

Currently, the Rehabilitation program is funded at increased levels—a 58 percent increase since 2010—resulting in 72.2 miles of arterials and 487 blocks of residential street improvements. These targeted investments in the rehabilitation program over the past six years have resulted in measurable improvements in the condition of our streets.

Community members identified maintaining the existing transportation infrastructure as the top priority; the LRTP resource allocation increases funding for Road and Bridge Rehabilitation compared to the 2011 LRTP. However, the \$398 million allocation to the Road and Bridge Rehabilitation Program is not adequate to meet the future demands of the program – rehabilitation needs continue to outpace investment as the current system ages and expands with City growth, and as construction costs increase.

The Public Works and Utilities Department is committed to using the available rehabilitation funds efficiently by using data from the pavement management system to identify the most effective maintenance treatments. Several additional strategies are recommended to help offset the shortfall in funding for the rehabilitation program:

- Continue experimentation and innovation to maximize return from available resources.
- Encourage the use of alternative travel modes (biking, walking, and transit) to lessen the demand on the streets.
- Implement the Green Light Lincoln program to maximize the operational efficiency of the existing system, thereby reducing the pace of lane-miles being added to the street network.
- Streets that are neglected over time require costlier reconstruction. Continue to advance preventative maintenance strategies (e.g., pothole repairs and crack sealing) to extend

the life of Lincoln's streets and minimize the life-cycle costs.

- Investigate opportunities for increased rehabilitation funding.

### Trail Rehabilitation

The \$8.29 million allocated to trail rehabilitation is composed of Keno funds, Park and Recreation Repair and Replacement funds, and other trail-specific funding sources. This allocation will allow the continuation of the current trail rehabilitation program.

## Alternative Modes

### Transit

The allocation to Transit will allow StarTran to operate the Transit Development Plan (TDP) Preferred Alternative Phase I routes and services and to maintain the fleet of 67 fixed-route buses and 13 paratransit vehicles. Table 10.6 identifies the funded and priority transit projects. These projects are expected to be funded within the Fiscally Constrained 2040 Plan. Additional transit enhancements (such as next bus information and transit signal priority) will be addressed in the ITS and Technology Program.

### Committed Trail Projects

The 2016–2022 CIP includes six Trail Projects that are assumed to be fully funded and completed within the first six years of the plan. These committed Trail Projects total \$7.75 million and include the Rock Island Connection, the Waterford Trail, the Fletcher Landmark Trail, the Wilderness Hills Trail, the Woodland Trail, and the Salt Creek Greenway Corridor Trails. There are several additional Trail Projects with committed funding (outside the LRTP future funding revenues) that will be constructed in the near future. These projects are listed on Map 10.16.

### Trail Projects

The Trails Scoring Committee evaluated more than 40 Trail Projects using evaluation criteria that

*Table 10.6: Priority Transit Projects*

Project Description	Project Cost (2016 \$)
<b>Funded/Committed Transit Projects</b>	
Purchase Replacement Buses	\$1,983,200
Purchase Replacement Handivans	\$0
Transit Enhancements	
(bus shelters, passenger stops)	\$40,000
Security Enhancements	
(upgrade buildings/shelters)	\$40,000
Purchase Replacement Supervisor Vehicles	\$0
Computer Replacements and Upgrades	\$320,000
Shop Equipment Replacements and Upgrades	\$15,000
Purchase Replacement Service Vehicles	\$20,000
Building Renovations and Improvements	\$200,000
<b>Priority Transit Projects</b>	
Purchase Replacement Buses	\$52,596,200
Purchase Replacement Handivans	\$5,250,000
Transit Enhancements	
(bus shelters, passenger stops)	\$1,035,000
Security Enhancements	
(upgrade buildings/shelters)	\$1,035,000
Purchase Replacement Supervisor Vehicles	\$305,000
Computer Replacements and Upgrades	\$3,600,000
Shop Equipment Replacements and Upgrades	\$1,165,000
Purchase Replacement Service Vehicles	\$290,000
Building Renovations and Improvements	\$2,400,000

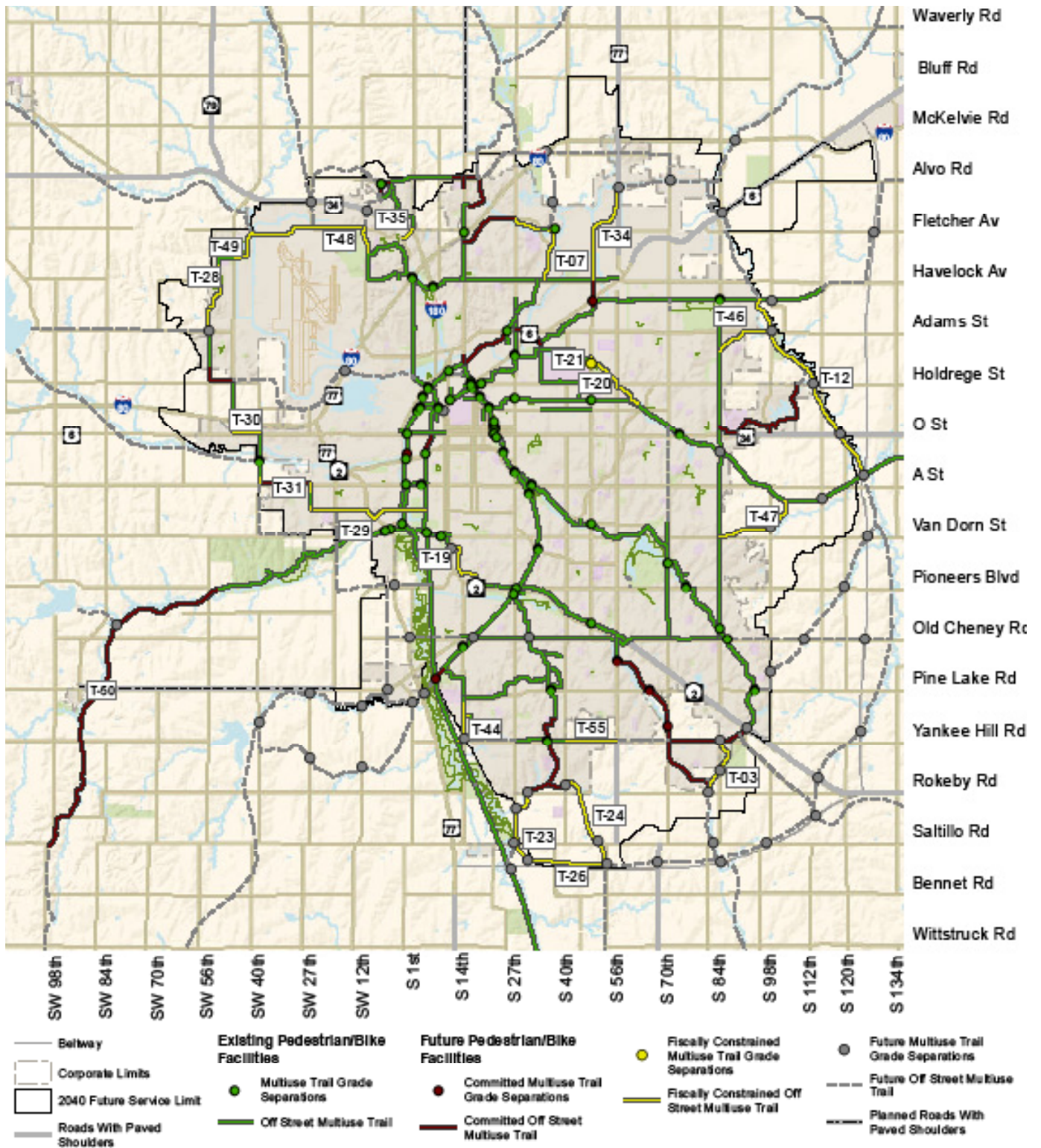
align with the seven goals, as described previously. Based on annual revenues and year of expenditure project costs (assuming a 3 percent annual inflation rate, which is consistent with recent trends in trail construction cost inflation), approximately 21 new Trail Projects (36 miles of trail) could be added by 2040 using the \$20.31 million allocation. In addition, five of the Trail Projects are part of street projects in





Table 10.7: Priority Trail Projects

Project ID	Trail Name	Limits	Project Cost (2016 \$)
<b>Funded/Committed Trail Projects</b>			
T-54	Jamaica North – Arena Connector Trail	J Street to N Street	Funded
T-57	Stonebridge Trail	N 14th and Humphrey to N 11th and Alvo Rd.	Funded
T-58	Salt Creek Levee Trail	14th and Salt Creek to 27th and Salt Creek	Funded
T-59	A Street Trail	SW 40th to SW 27th	Funded
T-60	Salt Creek Levee Trail Underpass	RR Underpass at J Street	Funded
T-61	Beal Slough Trail	S 56th and London Rd to S 70th and Yankee Hill	Funded
T-62	Yankee Hill Rd Trail	S 70th to Highway 2	
T-08	Rock Island Connection	Viaduct over BNSF to Jamaica	\$900,000
T-27	Greenway Corridor Trail/Haines Branch - Phase I	SW 56th St to Saltillo Rd	\$3,000,000
T-04	Woodlands	Rokeby Rd to 70th St to Yankee Hill Rd	\$900,000
T-11	Waterford	84th to Stevens Creek	\$850,000
T-09	Wilderness Hills	Yankee Hill Rd to Rokeby Rd	\$1,150,000
T-45	Landmark Fletcher	Fletcher Ave from N. 27th St to N. 14th St	\$950,000
<b>Trail Projects Within Fiscally Constrained Roadway Capital Projects</b>			
T-16	N. 48th St Trail	Murdock Trail to Superior St	\$170,000
T-18	N. 33rd St and Adams Trails	Murdock Trail to Cornhusker Hwy	\$200,000
T-15	W. Holdrege Street Trail	NW 48th St to NW 56th St	\$140,000
T-53	NW 56th Street Trail	W Holdrege to W Partridge	\$80,000
T-55	Yankee Hill Road	S. 40th St to S. 56th St	\$310,000
<b>Priority Trail Projects</b>			
T-19	10th Street Trail	Van Dorn St to 17th St/Burnam St	\$300,000
T-35	N. 1st St	N. 1st St crossing of Hwy 34	\$400,000
T-21	East Campus Trail	Leighton St to Holdrege St	\$150,000
T-31	A Street Connectors	SW 40th: A St to F St, SW 27th: Shane Dr to A St	\$90,000
T-07	Landmark Fletcher	33rd St & Superior St to 27th St	\$600,000
T-29	South Street	SW 27th to Jamaica	\$730,000
T-30	O Street	SW 40th St to SW 48th St	\$240,000
T-20	Deadmans Run Trail	48th St to Mo Pac Trail	\$410,000
T-46	Prairie Village Trail	84th St. to Stevens Creek, South of Adams	\$450,000
T-47	Van Dorn Trail	84th and Van Dorn to 106th and MoPac Trail	\$725,000
T-50	Greenway Corridor Trail/Haines Branch – Phase II	SW 56th to Saltillo Rd	\$1,000,000
T-44	14th & Yankee Hill Connector (w/RTSD project)	South LPS Property Line to Yankee Hill	\$320,000
T-23	27th St Connector	Rokeby Rd to South Beltway	\$460,000
T-24	56th Connector	Rokeby Rd to South Beltway	\$1,200,000
T-26	South Beltway Trail - Phase I	27th St to 56th St	\$1,500,000
T-28	NW 56th	W. Adams to NW 56th to W. Superior	\$550,000
T-03	Woodlands	Jensen Park to Rokeby Rd	\$470,000
T-34	N. 48th St/Bike Park Trail	Superior St to N. 56th St	\$680,000
T-48	Air Park Connector - Phase I	NW 12th to Fletcher to NW 27th	\$530,000
T-49	Air Park Connector - Phase II	NW 48th to NW 31st	\$550,000
T-12	Stevens Creek	Murdock Trail to MoPac Trail	\$2,300,000



Map 10.16: Priority Trail Projects



the Fiscally Constrained Plan. A total of 55 miles of new trails (including the Committed Trail projects) are expected to be constructed by 2040. Table 10.7 lists the Priority Trail Projects that are expected to be funded within the time horizon of the LRTP. The order of projects may change depending on opportunities for funding.

Trail Projects that improve trail crossings of a railroad may be funded with RTSD funds, as described in the RTSD Projects section of this chapter.

Appendix G of the [Technical Report](#) includes the Trails Project scoring results.

### **Other Bike/Ped and Travel Demand Management (TDM)**

This program includes sidewalk repairs, ADA compliant ramps, restriping and road diets to improve safety and to add bike lanes, and the travel options program. The allocation of \$33.51 million would cover roughly 3 miles of sidewalk repairs per year.

#### **On-Street Bike Facilities**

The public comments received through the LRTP have included much praise for the N Street Cycle Track. During the development of the LRTP, the community expressed a desire to continue expanding the network of on-street bike facilities to complement the trail system. Further study of the complete on-street bike network in Lincoln was assessed during the development of the Lincoln Bike Plan and includes various facility types, depending on street context, such as cycle tracks, striped bike lanes, and signed bike routes (shared lanes). The Bikeshare program will further increase the demand for on-street facilities in the core area of Lincoln.

The future on-street bike facilities identified in the [LRTP Technical Report](#), Chapter 4 (Figure 29), are assumed to be funded, to the extent possible, through the existing street improvement programs.

Further study of these on-street facilities was conducted during the development of the Lincoln Bike Plan and includes consideration of how they can be cost-effectively incorporated at the time of routine street maintenance.

With the success of the N Street Cycle Track, the City of Lincoln is considering a future north-south separated bike lane on 13th Street as bicycle demand increases and funding is available in the downtown area. Further study will be required to assess the feasibility of a separated bike lane along 13th Street or another north/south Downtown street. Private funding and/or grants should be pursued to help fund bike projects such as this.

Where traffic volumes allow, the City of Lincoln has considered painted bike lanes as part of the Complete Streets initiative. In some cases, four-lane roadways may be considered for “road diets,” in which they would be converted to two through lanes, a center left turn lane and bike lanes. Example streets where this type of treatment has been implemented include:

- S. 13th Street from K Street to South Street
- Vine Street from 16th Street to Antelope Valley Road and to the east
- 16th Street from P Street to Vine Street through the UNL Campus

This type of treatment could be done very cost-effectively, particularly if it is paired with a planned street overlay or rehabilitation projects.

While the allocation to this program is not sufficient to fund major on-street bike facilities such as a cycle track, funds for these types of projects could be pursued through Tax Increment Financing (TIF) with commercial redevelopment in the downtown area (similar to funding for the N Street Cycle Track).

With the South Beltway funded and planned for construction in the near future, it is important to plan for bicycle connectivity across the Beltway.



Bicycle connectivity will be accommodated through the Highway 77 and Highway 2 system interchanges. The City of Lincoln and NDOR are coordinating to identify opportunities to accommodate planned trails in south Lincoln.

### Travel Demand Management (TDM) Program

The TDM portion of this program may include partnerships with employers to support biking, walking, and transit commuting; flexible work hours; and remote work options. The program could also consider partnerships with Transportation Network Companies (TNC) such as Uber or Lyft, as well as car share and bike share options, to support shared mobility options in Lincoln.

## Roadway Construction Activities

### RTSD and State Train Mile Tax Projects

The \$188.11 million allocated to RTSD and State Train Mile Tax Projects is directly from the two highly restrictive funding sources. This amount is estimated to cover major railroad grade separation projects at 33rd and Adams and the South Beltway, along with railroad crossing gates and flashers at

two crossings per year, and six railroad crossing surface upgrades per year.

Trail projects that improve trail crossings of a railroad may be constructed as a part of larger RTSD Projects or constructed as stand-alone projects with RTSD funds. Examples of such trail projects include the 33rd and Cornhusker project, the Rock Island Trail bridge in Densmore Park, and a South 14th and Yankee Hill Road trail crossing.

### Two Plus Center Turn Lane Projects

The City of Lincoln has been adding a center left turn lane as part of programmed street rehabilitation along two lane minor arterials and some collectors for many years. This program has successfully increased the capacity and safety of a two-lane roadway and minimized traffic congestion, while preserving the character and viability of the established neighborhoods and other components of the built environment.

Approximately 14 miles of Two Plus Center Turn Lane (2+1) projects remain in Lincoln. The allocation of \$43.29 million will allow construction of

*Table 10.8: Two Plus Center Turn Lane Projects*

Street Name	Limits	Length (miles)	Project Cost (2016 \$)
S. 40th Street	Pioneers Boulevard to Gertie Avenue	0.40	\$1,400,000
Adams Street	39th Street to 46th Street	0.50	\$1,750,000
Havelock Avenue	60th Street to 63rd Street	0.25	\$50,000
A Street	6th Street to 17th Street	0.85	\$2,975,000
A Street	17th Street to 27th Street	0.75	\$1,500,000
A Street	40th Street to 48th Street	0.44	\$1,540,000
Van Dorn Street	11th Street to 27th Street	1.25	\$2,500,000
Cotner Boulevard	48th Street to South Street	0.46	\$1,610,000
S. 40th Street	L Street to C Street	0.50	\$1,750,000
Fremont Street	48th Street to 70th Street	1.50	\$5,400,000
S. 33rd Street	South Street to High Street	0.72	\$1,440,000
Military Road	10th Street to 14th Street	0.16	\$1,120,000
S. Folsom Street	A Street to South Street	0.50	\$1,000,000
Leighton Avenue	48th Street to 70th Street	1.50	\$5,400,000
Y Street	17th Street to 27th Street	0.66	\$1,320,000
W. Adams Street	1st Street to 14th Street	0.90	\$1,800,000
W. South Street	Coddington Avenue to Park Boulevard	1.55	\$10,850,000
Calvert Street	48th Street to 56th Street	0.50	\$1,000,000
N. 40th Street	Cornhusker Highway to Superior Street	0.58	\$1,160,000



approximately 7.5 miles of 2+1 projects. This estimate accounts for the increasing cost of construction projects using a 5 percent annual inflation rate. The candidate list of projects are identified in Table 10.8.

### **Intersection Safety and Capacity**

Much of the current and future congestion on the street network occurs at existing intersections. The LRTP resource allocation includes an increased allocation to this program over historic funding levels, totaling \$104.68 million, which would allow construction of one intersection project per year in addition to critical safety improvements. This increased emphasis on intersection improvements aligns with the alternative approach to transportation corridor investments described in the [LRTP Technical Report](#), Chapter 6, and would allow expanded geographic coverage of this approach by addressing critical bottlenecks in the system through intersection improvements.

### **Committed Capital Projects**

Eight Roadway Capital Projects included in the 2016–2022 CIP and/or current Transportation Improvement Program (TIP) are assumed to be fully funded and are most likely to be completed within the first six years of the plan. These committed capital projects include:

- West Beltway (US-77) interchanges from I-80 to Saltillo Road (NDOR project)
- N. 10th Street and Military Bridge over Salt Creek
- Rokeby Road from 84th Street to 98th Street
- Yankee Hill Road from 70th Street to Hwy 2
- West “A” Street from SW 40th to Folsom
- South Beltway (NDOR Project)
- 14th/Warlick/Old Cheney
- Pine Lake Road from 61st to Hwy 2

## **Developer Commitments**

The City has made commitments to developers to contribute a portion of the construction cost for some roadway projects. The timing of these projects is uncertain and depends on when the associated development occurs. For the purpose of the LRTP, the City’s contributions to these projects are treated similar to the Committed Capital Projects; that is, they are assumed to be complete before funding is allocated to any new Roadway Capital Projects. The plan includes a total of \$25.55 million in developer commitments. Projects with current commitments are listed in Table 10.9. Funding for some of these projects will come from Impact Fees, while funding for others may come from various local funding sources. Other future developer agreements may impact the timing and priority of roadway capital projects.

### **Roadway Capital Projects**

The Roadway Scoring Committee evaluated more than 70 Roadway Capital Projects based on evaluation criteria that align with the seven goals of the Plan. The resulting ranked projects were compared with the available funding for Roadway Capital Projects. The Fiscally Constrained Plan must consider the year of expenditure (YOE) cost of projects—a 5 percent annual inflation has been applied to the 2016 project costs. This inflation rate is consistent with construction cost increases over the past five years. Table 10.9 lists the ranked projects that can be funded within the Fiscally Constrained Plan, including the committed projects and developer commitments. Map 10.17 shows the fiscally constrained roadway projects.

In total, the funding allocation for Roadway Capital Projects is \$366.38 million, including \$66.82 million for Committed Projects, \$25.55 million for Developer Commitments, and \$274.01 million for other Roadway Capital Projects. As shown in Table 10.9, this would allow construction of 27 high priority Roadway Capital Projects.

### **Highway 2 Projects**



As described in Chapter 6 of the [Technical Report](#), Highway 2 was used as a case study to better understand the benefits of six-lane widening compared to a considerably less expensive approach of improving traffic signal coordination and key intersections to eliminate bottlenecks. The LRTP includes a Highway 2 Corridor Study, which could be a Planning and Environmental Linkages (PEL) study, to evaluate alternative improvements for the corridor. This Corridor Study (Project “A”) is listed as the top priority and is scheduled for 2019. A \$20 million placeholder for construction of priority improvements is included as a high priority (Project “B”); the specific improvements will be identified through the Corridor Study.

### Alternative Approach Corridors

In addition to the Highway 2 corridor, several roadway corridors were originally contemplated as six-lane (or four-lane) major widening projects. However, an alternative approach to major widening is recommended for these corridors. This approach would focus on traffic signal coordination and intersection improvements along with significant technology improvements to increase the efficiency of traffic flow along these corridors. This alternative approach is recommended for five corridors within the Fiscally Constrained Plan:

- N. 84th Street between O Street and Adams Street
- O Street between Antelope Valley and 46th Street
- O Street between Wedgewood Drive and 98th Street

- Cornhusker Hwy between N. 20th Street and N. 33rd Street
- Van Dorn Street between S. 70th Street and S. 84th Street

By applying this alternative approach to these corridors, the limited funding available for Roadway Capital Projects can be stretched to address the congestion needs on more corridors. The LRTP Oversight Committee identified intersections that could benefit from capacity improvements along each of these corridors and developed planning level cost estimates accordingly. Costs are shown in Table 10.9.

## Other Programs

### Intelligent Transportation System (ITS) and Technology

The Green Light Lincoln initiative uses smart technologies to improve traffic flow and reduce travel times. By using the next generation of traffic management systems, Lincoln travelers can expect less time waiting at red lights, fewer vehicle emissions, and a reduction in crashes. By maximizing the existing capacity of the City’s streets through signal timing improvements, the need for major capacity expansions could be postponed or eliminated. The LRTP resource allocation includes a total of \$151.85 million in funding for this program, which would allow full implementation of the City’s Traffic Management Plan and Green Light Lincoln initiative. Travel delay reductions in the range of 20 percent may be expected with full implementation of Green Light Lincoln.



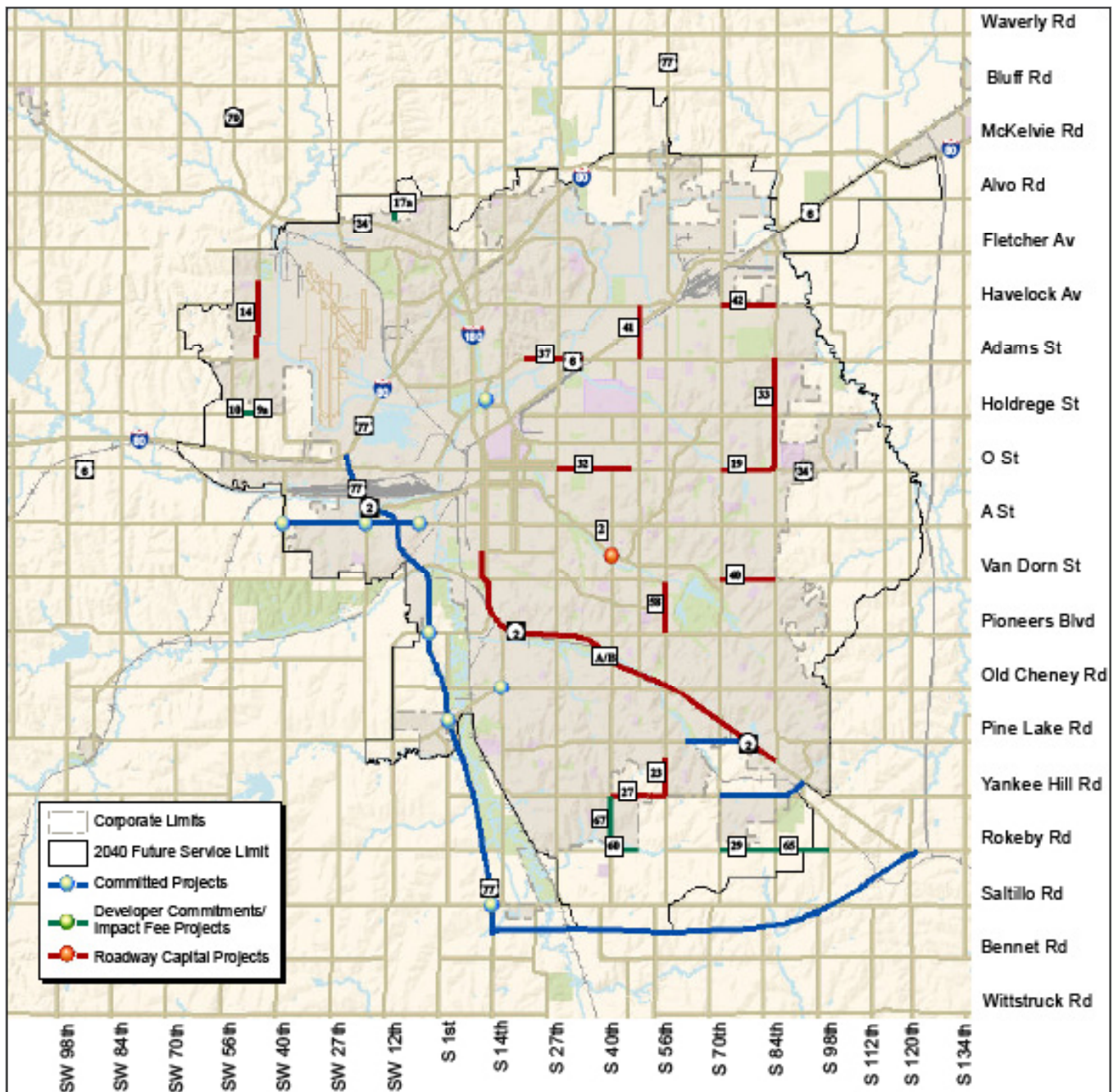


**Table 10.9: Fiscally Constrained Roadway Capital Projects**

RANK	Project ID	Street Name	Limits	Description	Lead Agency	Project Cost (2016 \$)	Local Portion (2016 \$)	Year of Expenditure (YOE)			Refer to Notes Below Table
								YOE	YOE Project Cost	Cumulative Cost (YOE)	
Committed		West Beltway (US 77)	I-80 to Saltillo Rd	Freeway with new interchanges	State	\$15,700,000					1
Committed		N. 10th Street	N. 10th St and Military Bridge over Salt Creek	Bridge replacement	Local	\$3,500,000					1
Committed		Yankee Hill Road	70th Street to Hwy 2	2 lanes + roundabouts	Local	\$14,790,000	\$9,980,000				1
Committed		West A Street	SW 40th to Folsom	2 lanes + intersection improvements	Local	\$16,980,000	\$16,980,000				1
Committed		South Beltway	US 77 to Hwy 2	4 lane freeway	State	\$200,000,000	\$15,400,000				1, 6
Committed		14th / Warlick	14th/Warlick/Old Cheney	Intersection improvements and grade separation	Local	\$24,930,000	\$15,020,000				1
Committed		Pine Lake Road	61st St to Hwy 2	4 lanes + turn lanes	Local	\$10,850,000	\$9,450,000				1
Impact Fee/LES	65	Rokeby Road	84th St to 98th St	2 lanes + intersection improvements	Local	\$5,000,000	\$1,500,000	2017	\$1,575,000	\$1,575,000	2, 5
Impact Fee	29	Rokeby Road	S. 70th Street to S. 84th Street	2 lanes + intersection improvements	Local	\$7,400,000	\$7,400,000	2018	\$8,158,500	\$9,733,500	2
Impact Fee	A	Nebraska Hwy 2	84th Street to South Street	Corridor Study	Local	\$1,500,000	\$1,500,000	2019	\$1,736,438	\$11,469,938	3
Impact Fee	60	Rokeby Road	S. 40th St to S. 48th St	2 lanes + intersection improvements	Local	\$3,500,000	\$3,500,000	2023	\$4,924,851	\$16,394,789	2
Impact Fee	9a	W. Holdrege Street	NW 48th St to Chitwood (east ¼ mile)	2 lanes + intersection improvements	Local	\$925,000	\$925,000	2023	\$1,301,568	\$17,696,357	2
Developer Commitment	67	S. 40th Street	Yankee Hill Rd to Rokeby Rd	2/4 lanes + intersection improvements	Local	\$8,800,000	\$8,800,000	2024	\$13,001,608	\$30,697,965	2
Developer Commitment	17a	NW. 12th Street	W. Alvo Road to Aster	2 lanes + turn lanes	Local	\$2,800,000	\$2,800,000	2024	\$4,136,875	\$34,834,840	2
Developer Commitment	10	W. Holdrege Street	NW 56th Street to NW 48th Street	2 lanes + intersection improvements	Local	\$3,100,000	\$3,100,000	2025	\$4,809,117	\$39,643,957	2
1	41	N. 48th Street	Adams St to Superior St	4 lanes + intersection improvements	Local	\$12,400,000	\$12,400,000	2026	\$20,198,293	\$59,842,251	
	B	Nebraska Hwy 2	84th Street to South Street	Priority improvements (TBD by Corridor Study)	Local	\$20,000,000	\$20,000,000	2028	\$35,917,127	\$95,759,377	3
3	2	S. 40th Street	Normal Blvd and South St	Major intersection area work	Local	\$8,600,000	\$8,600,000	2029	\$16,216,583	\$111,975,960	
4	27	Yankee Hill Road	S. 40th Street to S. 56th Street	2/4 lanes + intersection improvements	Local	\$10,200,000	\$10,200,000	2030	\$20,195,302	\$132,171,262	
6	58	S. 56th Street	Van Dorn St to Pioneer's Blvd	4 lanes + intersection improvements	Local	\$10,500,000	\$10,500,000	2032	\$22,920,183	\$155,091,445	
7	33	N. 84th Street	O Street to Adams Street	Intersection improvements	Local	\$4,125,000	\$4,125,000	2032	\$9,004,358	\$164,095,803	4
8	32	O Street (US-34)	Antelope Valley N/S Rdwy (19th St) to 46th St	Intersection improvements	Local	\$14,000,000	\$14,000,000	2034	\$33,692,669	\$197,788,472	4
11	19	O Street (US-34)	Wedgewood Drive to 98th Street	Intersection Improvements	Local	\$4,100,000	\$4,100,000	2035	\$10,360,496	\$208,148,968	4
12	37	Cornhusker (US-6)	N. 20th Street to N. 33rd Street	Intersection Improvements	Local	\$4,500,000	\$4,500,000	2036	\$11,939,840	\$220,088,808	4
13	14	NW. 48th Street	Adams Street to Cuming Street	2 lanes + intersection improvements	Local	\$10,300,000	\$10,300,000	2037	\$28,695,415	\$248,784,223	
14	40	Van Dorn Street	S. 70th Street to S. 84th Street	Intersection improvements	Local	\$2,900,000	\$2,900,000	2038	\$8,483,256	\$257,267,479	4
16	42	Havelock Avenue	N. 70th Street to N. 84th Street	2 lanes + intersection improvements	Local	\$6,300,000	\$6,300,000	2039	\$19,350,600	\$276,618,078	
17	23	S. 56th Street	Thompson Creek Blvd to Yankee Hill Rd	4 lanes + intersection improvements	Local	\$7,400,000	\$7,400,000	2040	\$23,865,740	\$300,483,818	

1. Committed projects are included in the 2016-2022 CIP and/or the current TIP and are assumed to be fully funded and constructed prior to allocation of resources to other Roadway Capital Projects.
2. The timing of the Impact Fee/Developer Commitment projects depends on development; for the purpose of the LRTP, they are assumed to be complete prior to allocation of resources to other Roadway Capital Projects.
3. Rather than assuming the widening of Hwy 2 to six lanes, a Corridor Study is recommended to evaluate alternative improvements for the corridor. A \$20 M placeholder for construction of priority improvements is included as a high priority; the specific improvements will be identified in the Corridor Study.
4. These corridor projects include the alternative approach to six-lane widening (or four-lane widening in the case of Van Dorn) – traffic signal coordination and key intersection improvements to address bottlenecks.
5. The Rokeby Road project (84th St to 98th St) is being partially funded by Lincoln Electric System (LES) (\$3.5 M) and partially by directed impact fees (\$1.5M).
6. The \$15.4 M local portion for the South Beltway project is the Wheel Tax funding only.





Map 10.17: Fiscally Constrained Roadway Plan



Technology could also help to improve transit service through applications such as transit signal priority treatments and next bus rider information. As transportation technologies advance, it will be important to stay abreast of how connected vehicles and driverless cars change the travel needs in Lincoln.

### **East Beltway Preservation**

The allocation of \$250,000 per year (\$6 million over the 24-year time horizon) should be used to preserve approximately 170 acres of land along the East Beltway corridor, which is approximately 20 percent of the total land needed for the future corridor. The East Beltway was identified as the highest priority Roadway Capital Project by the public; proceeding with full corridor preservation and construction of a project this size depends on additional funding from the State and/or Federal government.

### **Studies, PE, ROW, & Statutorily Required Records**

This program category covers pre-project level engineering studies, responses to non-project-specific public inquiries, engineering standards and guidelines, staff coordination with private sector growth proposals, and legal requirements for record keeping. The \$70.7 million allocation will allow continuation of these essential staff functions.

### **County Projects**

The LRTP Project Team has coordinated closely with the Lancaster County Engineer's Office throughout the development of the LRTP Update. The County's Rural Roads Program identifies priority paving projects that are most likely to receive funding for paving improvement during the 2040 planning period. The order and priority of the paving projects may vary as traffic conditions warrant. Funding for the Rural Roads Program is separate from the MPO funding described in the preceding sections. Most of the budget for the rural roadway network is

devoted to maintenance of the network including grading, spreading gravel, snow removal and bridge and ROW maintenance. About \$1 million per year is devoted to the programmed paving projects. Map 10.18 shows the rural roads projects, which are also listed in Table 10.10. Some of the County projects shown on Map 10.18 are located within Lincoln's 2040 Future Service Limit. The City and County will closely coordinate these projects to determine appropriate phased rural to urban roadway cross sections and drainage improvements at the time of construction. The objectives in phasing construction of the first two lanes of paving on these segments are to maximize pavement life, minimize pavement reconstruction, and reduce traffic disruption when traffic volumes warrant additional lanes. The pace of adjacent land development, rate of traffic growth, the need for sidewalk and trails, together with funding availability, will determine the initial and ultimate design.

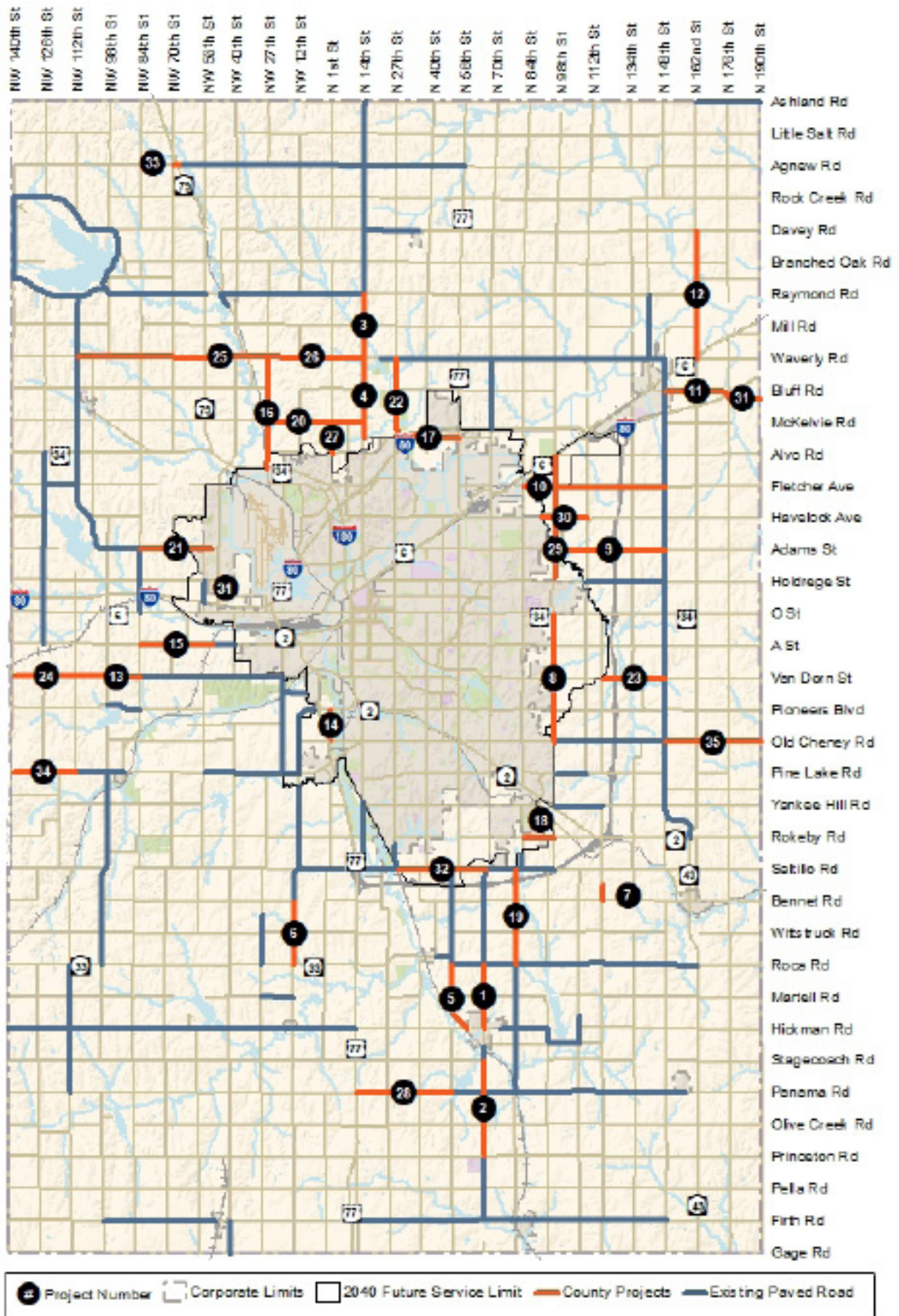
Ideas on the best method for making the transition from rural to urban sections continue to evolve as traffic needs and intersection design (roundabouts) change. The City of Lincoln Public Works and Utilities Department and Lancaster County Engineer's Office are currently reviewing the rural to urban transition street (RUTS) standards to evaluate whether adjustments should be made to transition from rural to urban more efficiently.

## **ILLUSTRATIVE PLAN**

### **ROADWAYS**

All remaining Roadway Capital Projects (including an additional 52 lower ranked projects that are not included in the Fiscally Constrained Plan) are included as Illustrative (unfunded) projects in the LRTP. These projects are depicted on Figure 40 and detailed in Table 27 of the [Technical Report](#). Other projects may consider additional 2 plus center turn lane facilities, increased rehabilitation efforts, and on-street bike facilities.





Map 10.18: Rural Roads Projects



Table 10.10: Rural Roads Projects

Priority	Project ID	Street	Location	Length (Miles)	Project Type
2016	11	Bluff Road	Waverly City Limits to I-80	2.10	County Project
2016	18	Rokeyby Road	S. 84th Street to 98th St	1.00	County Project
2016	33	W. Agnew Road	Hwy. 79 west 0.2 miles	0.20	County Project
2016	34	W. Denton Rd.	SW 112th St. to SW 140th St.	2.00	County Project
2016	35	Old Cheney Rd.	148th St. to 190th St.	3.00	County Project
1	9	Adams Street	Steven's Creek to N. 148th St	3.50	County Project
2	5	S. 54th Street	Hickman Rd to Roca Rd	2.00	County Project
3	1	S. 68th Street	Hickman to Roca Rd	1.30	Federal-Aid County Project
4	32	Saltillo Road	S. 27th St to S. 68th St	3.00	County Project
5	15	W. A Street	SW 84th St to SW 52nd St	2.20	County Project
6	30	Havelock Avenue	Stevens Creek to N. 112th St	1.40	County Project
7	16	NW 27th St	Hwy 34 to W. Waverly Rd	3.50	County Project
8	2	S. 68th Street	Princeton Rd to Stagecoach Rd	3.00	Federal-Aid County Project
9	3	N. 14th Street	Waverly Rd to Raymond Rd	2.00	Federal-Aid County Project
10	8	S. 98th Street	Old Cheney Rd to Hwy 34	4.00	County Project
11	4	N. 14th Street	Arbor Rd to Waverly Rd	2.50	Federal-Aid County Project
12	6	SW 14th Street	Highway N-33 to W. Bennet Rd	2.00	County Project
13	10	Fletcher Avenue	N. 84th St to N. 148th St	4.42	County Project
14	29	N. 98th Street	Holdrege St to Highway US-6	4.30	County Project
15	13	W. Van Dorn Street	SW 112th St to SW 84th St	2.00	County Project
16	7	S. 120th Street	Bennet Rd North 0.5 Miles	0.50	County Project
17	17	Arbor Road	N. 27th St to Highway US-77	2.00	County Project
18	12	N. 162nd Street	Highway US-6 to Davey Rd	3.80	County Project
19	24	W. Van Dorn Street	SW 140th St to SW 112th St	2.00	County Project
20	14	S. 1st Street	Old Cheney Rd to Pioneers Blvd	1.00	County Project
21	25	W. Waverly Road	NW 112th St to Highway N-79	4.00	County Project
22	26	W. Waverly Road	Highway N-79 to N. 14th St	5.00	County Project
23	27	N. 1st Street	Alvo Rd to McKelvie Rd	1.00	County Project
24	22	N. 27th Street	Arbor Rd to Waverly Rd	2.50	County Project
25	19	S. 82nd Street	Roca Rd to Saltillo Rd	3.00	County Project
26	21	W. Adams Street	NW 84th St to NW 56th St	2.00	County Project
27	23	Van Dorn Street	S. 120th St to S. 148th St	2.00	County Project
28	28	Panama Road	Highway US-77 to S. 54th St	3.00	County Project
29	20	McKelvie Road	NW 27th St to N. 14th St	3.00	County Project
30	31	Bluff Road	I-80 to N. 190th St	1.10	County Project
	36	NW. 56th Street	I-80 to W. Holdrege Street	0.70	County Project

### State Projects

Several State projects are included in the candidate Roadway Capital Projects list and were ranked by the Scoring Committee. The rankings of these projects reflect where they fall within the Lincoln MPO's priorities. However, it is recognized that the timing of these projects will depend on the

statewide priorities and funding availability.

Therefore, all State projects, other than the West and South Beltway projects, are shown in the Illustrative Plan.

### TRAILS

The remaining trail projects that are not expected to be funded within the 2040 Fiscally Constrained



Plan are included as Illustrative projects in the LRTP, as depicted on Figure 41 in the [Technical Report](#). The timing and priority of these projects may change depending on opportunities for funding.

## TRANSIT

The Illustrative Plan includes full implementation of the future phases of improvements identified in the 2016 TDP. The following transit projects and services are included as Illustrative (unfunded) projects.

### Multi-Modal Transportation Center

A Multi-Modal Transportation Center will provide a high level amenity for StarTran bus riders, bicyclists who desire to use transit when they travel, pedestrians as an information center and travel hub, and other transportation providers. A Multi-Modal Transportation Center (MMTC) would also provide a strong and permanent statement of intent on the part of Lincoln to become a multi-modal friendly community.

The MMTC would function as a bus transfer center, StarTran administrative office, bicycle storage facility, bike share facility, and likely offer space for supportive retail, taxi stands, and downtown parking, benefitting all of the City of Lincoln. The proposed location for a Multi-Modal Transportation Center would be in downtown Lincoln in order to improve connections between people and centers of employment, education, and services. Such a center would allow for convenient, safe and easy bus passenger transfers. Having a transfer facility would also reduce the criminal activity at the bus stop by making the area more transparent and the presence of continued administrative staff in the area.

### Maintenance Facility and Bio-Gas Fueling Station

StarTran will be in need of a new Bus Maintenance and Storage Facility. The current bus maintenance and a significant portion of the bus storage facility is well beyond its reasonable building life. The facility was built in the 1930s. Additionally, the facility is

located within the South Haymarket Neighborhood Plan, approved by the City Council, December 2015, redeveloping the area into a mixed residential/commercial district. The facility will need to relocate to allow for redevelopment in the future.

StarTran has applied for \$16,294,395 under the Federal Transit Administration's Grants for Buses and Bus Facilities Program to fund design and construction of a new bus maintenance and storage facility to be located on Theresa Street, adjacent to the Lincoln Wastewater System sewage treatment plant to help facilitate the proposed Renewable Natural Gas (RNG) project that will be located there. The RNG project employs an innovative methane gas recovery conversion to vehicle fuel process, utilizing methane from the sewage treatment plant. The plan is to locate the RNG fueling station adjacent to the StarTran bus maintenance and storage facility, allowing buses to be fueled on site.

### Implement TDP Expansion Plan

The approved 2016 Transit Development Plan included an expansion plan for increasing service on key routes and adding vehicles. Below is the expansion plan from the TDP.

#### Bus Rapid Transit

Consider BRT in high use corridors such as "O" Street and 27th street.

#### Technology Improvements

Enhance customer knowledge and trip planning with passenger information systems.

Consider private transportation options such as UBER or Lyft to enhance customer travel. Such applications could be used to transport customers at the end of the bus line to their final destination.

#### Alternative Fueled Vehicles

Consider different fuel types and propulsion systems such as Electric buses as a means of reducing green house gas emissions and lowering fuel costs.





### **Explore use of Rail Corridors for passenger use**

Study the potential of using existing rail corridors such as Highway 2 and Cornhusker Highway for light rail.

### **Consideration of inter-city transportation between Lincoln and Omaha**

**Consideration of technology applications outlined in the City of Lincoln’s Smart City Challenge application.**

## **IMPLEMENTATION**

The Lincoln MPO is committed to moving forward with the implementation of this plan’s goals and in helping to implement the programs and high priority projects identified in the plan. The Implementation Plan provides a series of strategies that will guide the MPO’s implementation of the Long Range Transportation Plan over the next five years.

Land use and transportation are interdependent in that one relies on and is influenced by the other. LPlan 2040 envisions a City and County that provides an ample supply of land for future edge growth, but is also more compact with a wider range of housing options, which will support and require a wider range of transportation options. The impacts of the new land use plan will need to be closely watched to gauge and best plan for impacts on the transportation system.

It should also be noted that by federal regulation the Long Range Transportation Plan is to be updated every five years. This is considered a more substantial review of the plan than the periodic review process or a standalone amendment process. During these five-year updates the assumptions and identified needs and priorities of the transportation plan will be reexamined to best reflect any changes that occurred since the previous five-year update.

The vision for transportation in Lincoln and Lancaster County is a safe, efficient and sustainable transportation system that enhances the quality of life, livability and economic vitality of the community. The following guiding principles should be applied to the major modes of transportation in order to implement this vision.

## **GUIDING PRINCIPLES**

### **LAND USE**

- Promote consistency between land use and transportation plans to enhance mobility and accessibility.
- Reduce the demand for single occupant vehicle (SOV) travel through coordinated land use and transportation decisions.
- Support mixed use development.
- Support affordable housing and higher densities.
- Encourage higher density infill development to reduce demand for travel.

### **ALTERNATIVE FUELS**

- Encourage the provision of electric charging stations.
- Convert City and County fleet to alternatively fueled vehicles.

### **ENVIRONMENTAL CONSIDERATIONS**

- Incorporate sustainable design elements into transportation projects by using low-impact development (LID) techniques to reduce runoff, alternative street designs, and permeable pavement.
- Minimize impacts of transportation projects on the natural environment.
- Reduce the impacts of transportation projects on neighborhoods and cultural and historic resources.

## FUNDING

- Continue discussions with the community about how more of the transportation needs can be met.
- Maximize the cost effectiveness of transportation investments.
- Continue to work with NDOR to pursue funding options for construction of the East Beltway.
- Continue funding the Railroad Transportation Safety District (RTSD).
- Consider creative alternative funding sources, such as public-private partnerships.
- Consider indexing the Wheel Tax.
- Improve communication to the public about the need for increased transportation funding.

## PEDESTRIAN AND BICYCLE FACILITIES

Dedicated funding for an ongoing pedestrian and bicycle capital program is identified as a priority in the 2040 Long Range Transportation Plan. Ongoing study of the system should identify projects that are most needed, including but not limited to assessment of the existing bike route system, signing the bike route system, the development of bike parking standards, locations of potential on-street bike facilities, wayfinding and signage needs, pedestrian crossing locations, pedestrian and bike amenities needs, identification of needed local and state law adjustments, and education and promotional strategies.

## STRATEGIES

- Identify possible amendments to state law that protect the status of bicyclists as equal users of transportation facilities.
- Consider the establishment of a bicycle licensing fee, the proceeds of which would be dedicated to bicycle improvements and programs.
- Projects should be coordinated through a continuing program of data collection,

interagency cooperation and public input and participation.

- Develop and implement a coordinated system of well-connected pedestrian and bicycle facilities that serve both new and older neighborhoods and provide access to activity centers such as schools, parks, employment areas and shopping.
- Consider on-street bicycle facilities that are designed to meet the capacity and the opportunity of new and retrofitted roadways. These facilities may vary from bike routes with signage to dedicated on-street bicycle lanes to protected bicycle lanes.
- Develop a program of standards and incentives to include bicycle amenities in employment, commercial, educational and office centers such as lockers, showers, and bicycle parking.
- Develop design standards for a variety of on and off street bicycle facilities that may be appropriate for roadways of different traffic levels.
- Implement the Lincoln Bike Plan improvements as funding is available.
- Include bicycle and pedestrian amenities as part of all City and County facilities to serve as a model for private investment.
- Cooperate with public and private organizations to develop and deliver educational programs for pedestrians, bicyclists and motorists on the rules, regulations, and benefits of alternative transportation.
- Continue to examine funding options that more closely match the identified needs in the sidewalk rehabilitation program.
- Rehabilitate one percent of sidewalks annually.



- Implement Complete Streets projects and expand the on-street bike network for community purposes.
- Add bike lanes in conjunction with street rehabilitation “road-diet” projects.
- Implement and fully support the bike share program.
- Consider installation of protected bikeways to provide a physical separation between bicyclists and motorists.
- Make adequate maintenance of bicycle and pedestrian facilities a priority.
- Add bicycle parking where appropriate.
- Elevate the status of pedestrians and bicyclists in the community to be an integral part of the transportation network in Lincoln.
- A dedicated funding source for pedestrian and bicycle projects and programs should be established.



## MULTI-USE TRAILS

Lincoln’s multi-use trail system should continue to be a priority for the community. A well connected multi-use trail

system provides recreational and health benefits, acts as an alternative transportation network, and promotes economic development in the community. Plans for this system in the Fiscally Constrained Transportation Plan identify prioritized trail segments for construction within the 24-year planning period as well as connections to be made after 2040, or as funding is available. A countywide trail system is also planned and should be considered in future development.

## STRATEGIES

- Continue the development of the multi-use trail network according to the priorities as shown on the Fiscally Constrained Transportation Plan trails map. Maintain existing route maps for all trails, lanes, and routes.
- Implement a useful and visually pleasing wayfinding signage program along the trail system.
- Increase trail safety for all users.
- Consider the location and alignment of multi-use trails and bike lanes in reviewing development applications; request that the platform for trails be graded in conjunction with the associated development.
- Consider grade separated crossings in conjunction with all new construction and reconstruction of transportation projects.
- In rural areas of the County, identify potential bicycle corridors that serve existing and planned activity centers and link to existing and planned City bicycle facilities.
- Continue to expand the trail counting system for data tracking and development.
- Expand and enhance public information and education programs.
- Continue the practice of widening and paving the shoulders of County roads. This should occur when reconstruction or resurfacing of the road is planned, with safety of users as a primary consideration.
- Increase direct access to the trail system from adjacent neighborhoods.
- Take advantage of abandoned railroad corridors and drainage ways, when possible, to expand the multi-use trail system.
- Adequately maintain existing and proposed trails.
- Develop a methodology to monitor trail conditions.



## TRANSIT

To achieve viable long range transit service for the City of Lincoln and Lancaster County in the year 2040, a number of broad policies and actions are needed to guide successful implementation and expansion of public transit. These policies and action items are to be guided by the results of the updated Transit Development Plan (TDP). The TDP is the guide for near and mid-term transit planning for the 2040 Long Range Transportation Plan. Included in a Transit Development Plan is a comprehensive operations analysis, near and long term transit service alternatives, updated service standards and policies, and management and funding options.

### STRATEGIES

- Implement the recommendations in the Transit Development Plan (TDP). Extend evening service hours per the recommendations in the TDP.
- Examine alternatives to change from a coverage based transit system to a productivity based transit system.
- Consider Mixed Use Redevelopment Nodes and Corridors in developing transit corridors.
- Pursue funding for construction of a downtown Multimodal Transportation Center.
- Continue to have discussions regarding technology advances and how they can be implemented for enhanced transit.
- Evaluate opportunities for public/private relationships for funding transit services.
- Provide amenities at transit stops that encourage multi-modal use.
- Work with the Public Works and Utilities Department on implementing a new Biogas Facility and update bus fleet to utilize this system.

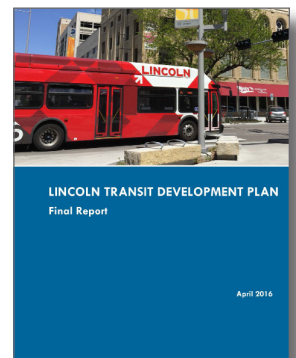
- Identify opportunities to improve the connectivity between travel modes such as pedestrian access and bike parking at bus stops.
- Develop a well-functioning transit system that provides options to both riders by choice and those who ride out of necessity.

## STREETS AND ROADS

Although investment in other modes of transportation may decrease reliance on the automobile, streets and highways will continue to form the backbone of the entire region's transportation system. The streets and roads programs are integral to a well-functioning system and are responsible for meeting the day to day demands of the system, providing routine maintenance of the roadways, utilizing technology to improve efficiencies in the system and supporting alternative modes of transportation.

### STRATEGIES: GENERAL

- Implement the recommendations of the Mayor's Road Design Task Force to maximize cost-effectiveness in roadways, build roads to serve the traffic projected in the near term, and ensure all roadways within the future service limit are served by an appropriately paved surface. Consider updating these recommendations to best reflect current needs and conditions.
- Collaborate to refine the Rural to Urban Transition for Streets (RUTS) program standards to identify efficient transitions from rural to urban conditions.
- Encourage the use of alternative travel modes (biking, walking and transit) to lessen the demand on the streets.
- Continue advancing preventative maintenance strategies (i.e. pothole repairs and crack sealing) to extend the life of Lincoln's streets and minimize the life-cycle costs.



- Implement the funding program and construct the committed and priority Roadway Capital Projects per the Fiscally Constrained Plan.
- Rehabilitate 5% of major streets and 3% of residential streets each year.
- Continue to discuss strategies to more fully fund the roadway rehabilitation program to more closely match identified needs.
- Implement an alternative approach to major widening projects through technology and intersection improvements.
- Continue to analyze railroad crossings and recommend grade separations when warranted.
- Continue to develop crash data focusing on identifying significant crash patterns and implement countermeasures.
- Continue to fund the sidewalk repair program.
- Consider the travel needs of the aging population.
- Improve the efficiency, performance and connectivity of a balanced transportation system.
- Promote consistency between land use and transportation plans to enhance mobility and accessibility.
- Provide a safe and secure transportation system.
- Support economic vitality of the community.
- Protect and enhance environmental sustainability, provide opportunities for active lifestyles, and conserve natural and cultural resources.
- Maximize the cost effectiveness of transportation.
- Design arterial streets in developing areas to meet the foreseeable demand instead of designing and constructing them for full future capacity.

- Review and evaluate all Streets and Roads projects for conformance with Complete Streets elements.

## STRATEGIES: ROADWAY STUDIES

Alternative approach corridor studies focus on the use of technology, such as traffic signal coordination, and strategic intersection improvements versus major widening projects. By applying this alternative approach to these corridors, the limited funding available for Roadway Capital Projects can be stretched to address the congestion needs on more corridors. Alternative corridor studies are recommended for the following corridors:

- Highway 2 from South Street to S. 84th Street
- N. 84th St between O St and Adams St
- O St between Antelope Valley and 46th St
- O St between Wedgewood Drive and 98th St
- Cornhusker Hwy between N. 20th St and N. 33rd St
- Van Dorn St between S. 70th St and S. 84th St

Additional roadway corridor and intersection projects should be evaluated for their impacts on surrounding properties as well as to the transportation system overall. Roadway corridor studies are recommended for the following projects:

- 33rd and Cornhusker – Complete the Planning and Environmental Linkages (PEL) Study to identify and evaluate potential railroad grade separated structures in the vicinity of N. 33rd and Cornhusker Highway. This project should aim to eliminate train conflicts with vehicles, bicyclists and pedestrians.
- Continue RTSD at-grade crossing studies to reduce or eliminate automobile/pedestrian and railroad conflicts.
- As part of the US-77/West Beltway freeway project, study a potential overpass at US-77 and



Old Cheney Road and Rokeby Road. The study is to be a joint State/County/City feasibility study, including a traffic analysis, a citizen participation element, an appropriate environmental review, and will be started no later than one year prior to the contract letting of the West Bypass freeway upgrade. The study will comply with FHWA procedures for Federal Aid projects and will attempt to maintain an Old Cheney connection to 1st Street. (Study for a potential overpass at Rokeby Road has been approved by the County Board only.)

## STRATEGIES: CONGESTION MANAGEMENT PROCESS

One area of ongoing emphasis is the Congestion Management Process. Congestion mitigation efforts should continue and remain flexible. There should be a regular process in place to identify and respond to traffic congestion challenges. Many management and operational actions will be undertaken at the departmental level to provide the quickest possible resolution, while more serious issues may require a formal study process. Additional studies may be desirable to identify specific congestion mitigation strategies that appear most reasonable for a particular location. Where deficiencies are identified, the MPO Technical Committee may suggest strategies for congestion mitigation. Studies or recommendations for congestion mitigation should address as a minimum the impacts on the following:

- Projects should be evaluated against the recommendations and guiding principles of the Alternative Transportation Modes, Complete Streets Committee, Travel Demand Management Techniques, Two-Plus Center Turn Lane Program, Intersection Capacity Improvements as well as the Congestion Management Process adopted in 2009. Specific projects to address congestion management include but are not limited to implementation of the Green Light Lincoln initiative and strategic intersection improvements and signal coordination.

- Implement the Green Light Lincoln program.
- Improve intersection operations and coordinate signal timing.
- Replace 15 signals each year (3 percent).
- Implement intelligent transportation systems (ITS).
- Consider the impacts that emerging technologies in transportation (e.g., autonomous cars and online goods delivery) may have on travel behaviors and the future capacity needs of the system.
- Implement transportation demand management (TDM) tools such as van-sharing.
- Help the transportation system recover swiftly from incidents.

## AIRPORTS AND AIRFIELDS

Lincoln Municipal Airport is governed by the Lincoln Airport Authority (LAA). The LAA is part of the MPO and participates in its activities; however, planning for airport facilities is done in a separate process. Private airports and airfields must abide by the rules of the Nebraska Department of Aeronautics as well as County and City zoning code.

### STRATEGIES

- Maintain compatible land uses and zoning within the 60 DNL and 75 DNL noise contour lines.
- Continue to enforce zoning restrictions for building and structure height in the approach and turning zones.

## FREIGHT

A network of railroad tracks and the highway system in Lincoln and Lancaster County play an important role in freight movement. Land with highway and/or rail accessibility may be desirable

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**Congestion Management Process: Congestion mitigation efforts should continue and remain flexible and ongoing. There should be a regular process in place to identify and respond to traffic congestion challenges.**

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for employment center development and should be sited according to Lincoln/Lancaster County Future Land Use Plan.

## STRATEGIES

- Continue coordinated efforts with representatives from all appropriate modes to ensure that projects proposed by the private sector are incorporated into the planning and programming process. The focus of discussion on freight bottlenecks with the freight community during the development of the 2040 Plan was on needed improvements to Highway 2 and the anticipated construction of the South Beltway as a major benefit to freight operations in the region.
- Coordinate with the State's efforts to develop a state-wide freight plan.
- Review existing policies concerning separation between conflicting land uses and continue the assessment of risk concerning hazardous materials and impact on nearby land uses.
- Enhance access to external transportation connectors (e.g., Interstate system) in order to minimize impact on existing land uses.
- Enhance the internal transportation routes (e.g. State highways and City arterials) in order minimize impact on existing land uses.
- Encourage and support the development of individual inter-modal projects by private industry. Opportunities for expanding the intermodal facility should be encouraged in the Lincoln Airport and Airpark areas where rail access exists.
- To the extent possible, eliminate conflicts between highway traffic and railroads in Lincoln and Lancaster County.
- Expand the use of technology to improve the efficiency of freight trucking routes.

- Implement adaptive signal control with emphasis on major truck routes.

## PERFORMANCE MEASURES

Under MAP-21 and FAST Act, performance-based planning was established. Therefore, this Long Range Transportation Plan incorporates performance measures (detailed in Section 4, Goals) that relate to local and national goals. Performance-based planning affords a structure for this LRTP to ensure that scarce resources are used effectively and equitably. The community values of transportation are woven into the goals, objectives, performance measures, and ultimately, evaluation criteria, used to identify high-priority transportation projects. The LRTP is based on a set of goals intended to implement the vision and support the transportation needs and community values, while aligning with national goals and federal planning factors. Individual performance measures have been identified and included in the Implementation Section found in the strategies of each applicable mode of transportation

## PERFORMANCE TRACKING STRATEGIES

- Develop a methodology for and begin tracking those performance measures (in Section 4) that are not currently being tracked
- Track the progress in each performance measure annually and provide an annual performance report
- Update the City's Asset Management Plan to include improved tracking and reporting

