



Final Report

City of Lincoln 2012

Bicycle Transportation Plan Update



August 2012

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I. INTRODUCTION

The purpose of the City of Lincoln 2012 Bikeway Transportation Plan (BTP) is to update the 2005 Lincoln Bikeway Transportation Plan to reflect the current street system, bike paths, lanes and routes, and recent land use development within the City of Lincoln. This update is required to meet the requirements of California Streets and Highways Code Section 891.2 (the Bicycle Transportation Act or BTA). Updates are required every 5-years and must be found in conformance with the Placer County Transportation Planning Agency's (PCTPA) Regional Transportation Plan, and Bikeway Plan. BTA grant applications for the next round of project solicitation are restricted to projects identified in this plan. The recommended projects to be considered for BTA grant funding are listed in Appendix F by type of facility (Class I Path, Class 2 Bike Lane, Class 2/NEV Lane (Separated), and Class 2/NEV Lane (Shared)). Upon adoption of the 2012 BTP by the Lincoln City Council and receipt of approvals from PCTPA (consistency finding), a copy of the certified Council Resolution and the PCTPA approval letter will be filed at the Bicycle Facilities Unit at Caltrans Headquarters. A copy of the PCTPA approval letter is included in Appendix A.

The focus of the 2012 Bikeway Master Plan update is on the existing City limits, Village 1 and Village 7 (these villages have bikeway facilities defined in approved or draft specific plans). As additional specific plans are developed for each of the other Villages and Special Use Districts in the City's General Plan, the proposed bikeway facilities will be added to the Bikeway Transportation Plan at that time. The Bikeway Transportation Plan provides a blueprint for developing a bikeway system that includes both on-street and off-street facilities as well as support facilities and programs for the City and its surrounding sphere of influence.

The 2012 BTP conforms to the requirements of California Streets and Highways Code Section 891.2. Table 1 shows the BTP elements that are being updated from the 2005 plan to conform to the latest BTA requirements.

TABLE 1 CALIFORNIA STREETS AND HIGHWAYS CODE SECTION 891.2 REQUIRED ELEMENTS	
Required Bikeway Master Plan Element	Complies with BTA
A. Estimated number of existing and future bicycle commuters	P25
B. Map and description of land use and development patterns	P11, App
C. Map and description of existing and proposed bikeways	P28, Fig 4
D. Description of bicycle parking facilities ¹	P18
E. Map of transit routes and multi-modal connections	P17, App C-E
F. Description of facilities for changing and storing clothes and equipment ¹	p18, 31
G. Description of bicycle safety and education programs	P13,19,21,32
H. Description of citizen and community participation	P7
I. Description of consistency with transportation, air quality, and energy conservation plan	P2,7,12,14
J. Cost summary of proposed bicycle projects for Class I, II and III priorities	P41, App F
K. Description of past expenditures and future financial needs for bicycle facilities	P15, P39
Notes:	
1. In the past, Caltrans has allowed jurisdictions to discuss items D and F without the added burden of inventorying and mapping each location. For the purposes of the 2012 BTP update, item D and F are discussed, but not mapped.	
Source: Fehr & Peers, 2012.	

The BTP update was prepared by Fehr & Peers under contract to the City of Lincoln, Department of Public Services.

This plan presents existing and past information about bike planning in the City of Lincoln as well as new information developed solely for this update. The report contains information on bikeway design, goals and policies that guided the planning and development effort, a system map of existing and proposed bikeways, implementation priorities, and cost estimates for completing the system. The plan incorporates new elements of the Caltrans Highway Design Manual and the California Manual on Uniform Traffic Control Devices, 2012 Edition. Bicycle and NEV access, modal integration, routing and safety are key provisions of the update. In addition, the BTP shows consistency with the Placer County Regional Bikeway Plan and the Placer County Regional Transportation Plan. As mentioned above, the consistency finding by the PCTPA is included in Appendix A.

STUDY AREA

The City of Lincoln is located on the eastern edge of the Sacramento Valley floor at the base of the Sierra Nevada foothills. It is located on State Route 65 and State Route 193 approximately 25 miles northeast of Sacramento and 10 miles north of Roseville. The City consists of approximately 19 square miles. The study area for the City of Lincoln Bikeway Master Plan includes the city limits, plus the land outside of the City known as their "sphere of influence." The study area is shown in Figure 1 and is generally described

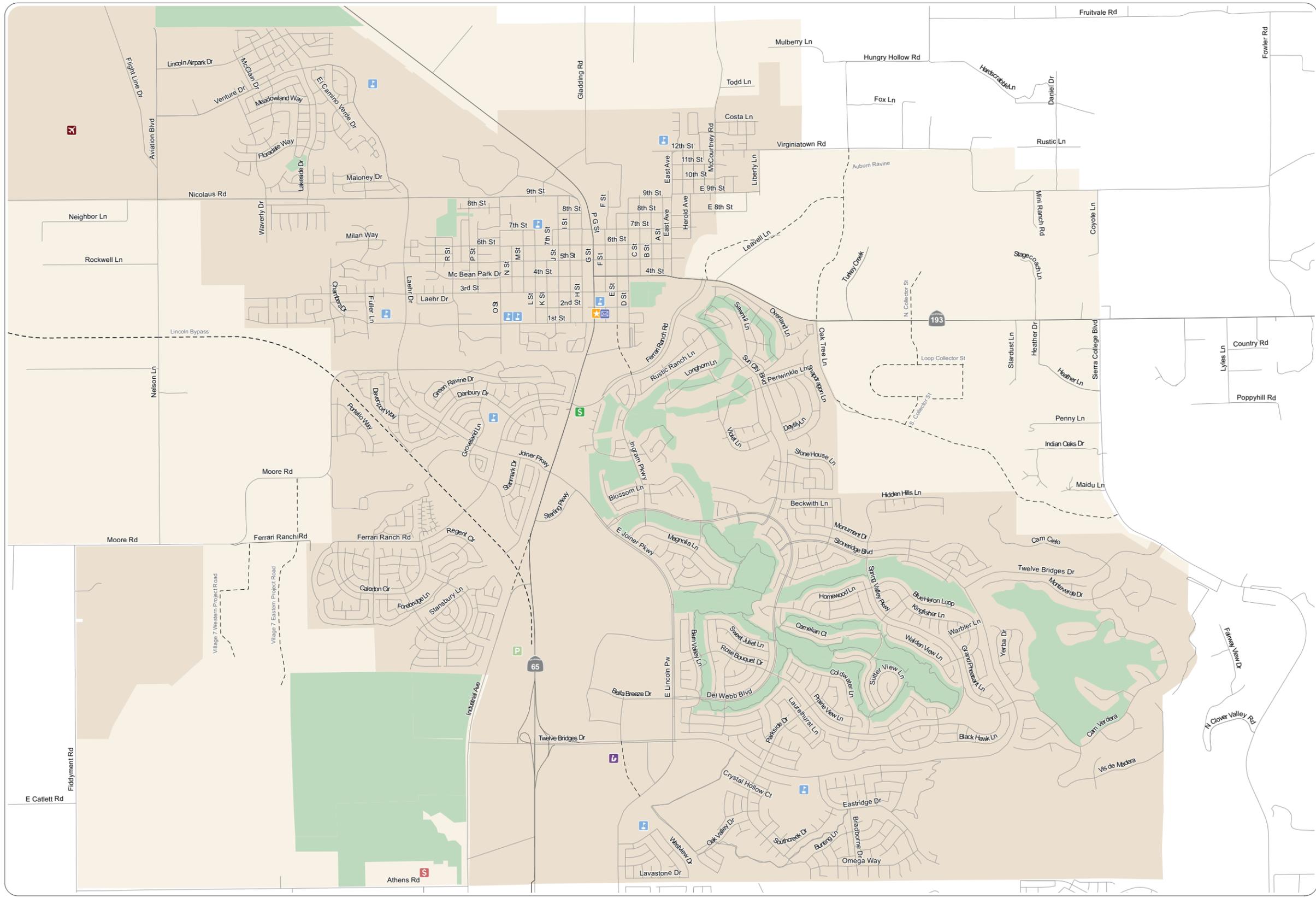
as being bordered by Athens Road on the south, Sierra College on the east, Fiddyment Road and Airport Road on the west, and Virginia Town Road/SR65/West Wise Road on the north.

PLANNING AND DESIGN STANDARDS

Bikeway planning and design in California rely on the guidelines and design standards established by the California Department of Transportation (Caltrans) as documented in Chapter 1000: Bikeway Planning and Design contained in the Highway Design Manual, 6th Edition (California Department of Transportation, 2006) and the California Manual on Uniform Traffic Control Devices, 2012 Edition.

These documents identify specific design standards for various conditions and the relationship of bikeways to roadways. The Caltrans standards provide for three distinct types of bikeway facilities as described below and shown in Figure 2A, 2B and 2C.

- Class I Bike Path (2A) - Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with cross-flow minimized. Caltrans standards call for Class I bikeways to have a minimum of 8 feet of pavement (10 feet preferred) with 2 foot graded shoulders on either side. These bikeways must also be at least 5 feet from the edge of a paved roadway.
- Class II Bike Lane (2B) – Provides a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted. Caltrans' standards require a six inch striped lane with a 4-5 foot paved shoulder for one-way bike travel on a street or highway.
- Class III Bike Route (2C) - Provides for shared use with pedestrian and/ or motor vehicle traffic within the same right-of-way and is designated with signs only indicating "Bike Route." Class III bike routes are appropriate where restricted right-of-way would make a Class II facility infeasible. Note: An example is Nicolaus Road where adequate right-of-way may not be available to accommodate striped lanes according to recommended widths in all areas.



LEGEND

- School
- Library Public Library
- Park-n-Ride
- Thunder Valley
- Downtown Core
- Lincoln Air Center
- Lincoln Hills Town Center
- Post Office
- Planned Roads
- Lincoln City Limits
- Lincoln Sphere of Influence
- Regional Parks Open Space

Not to Scale

Figure 2A – Class I Bike Path

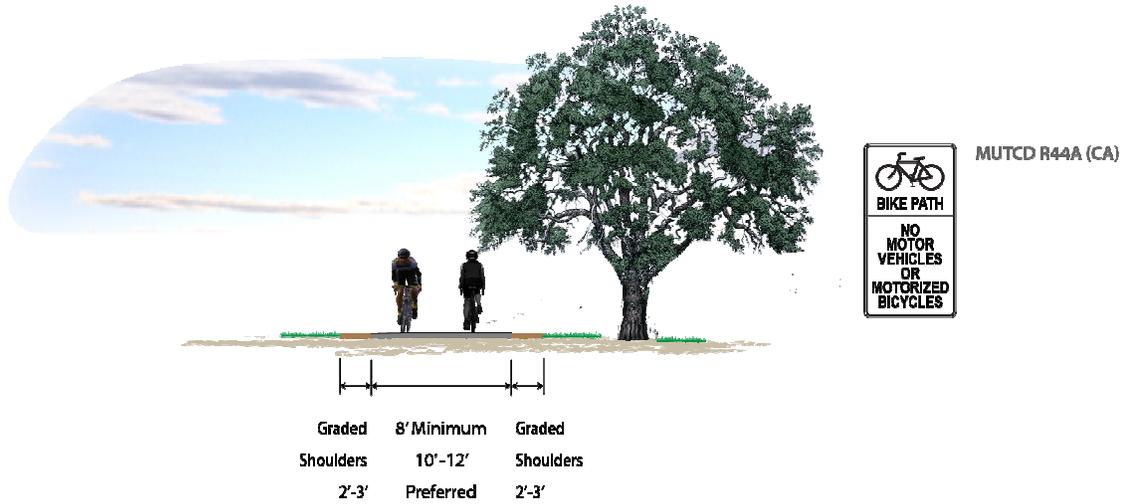


Figure 2B – Class II Bike Lane

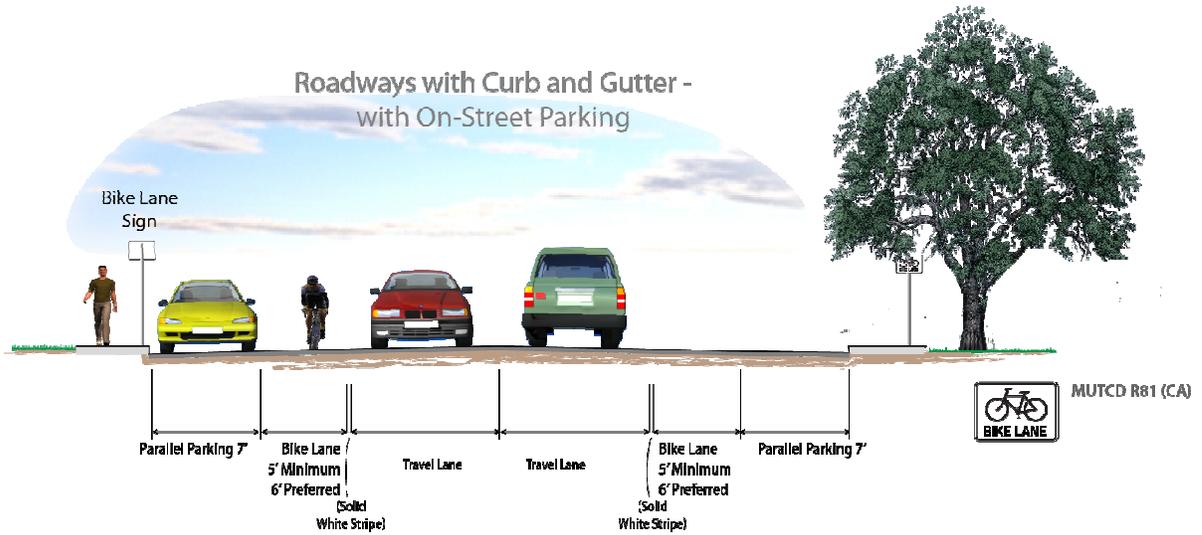
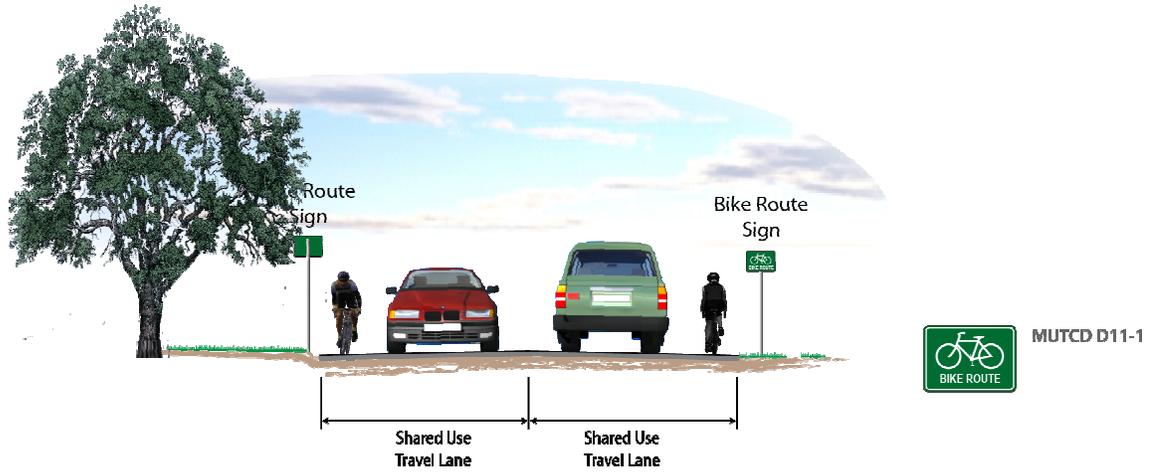


Figure 2C – Class III Bike Route



CONSISTENCY WITH OTHER PLANS

Preparation of this plan update included a review of the following plans:

- 2005 City of Lincoln Bikeway Master Plan
- Sacramento County Bicycle Master Plan (April 2011)
- SACOG Metropolitan Transportation Plan for 2035 (2008)
- City of Lincoln General Plan (2008)
- Placer County Bikeway Master Plan (2002)
- Revised Twelve Bridges Specific Plan (1997)
- Twelve Bridges Golf Cart Circulation Plan (2004)
- The City of Lincoln Neighborhood Electric Vehicle (NEV) Transportation Plan (2006)
- Lincoln Crossing Specific Plan (2001)
- Village 7 Specific Plan (2009)
- General Development Plan and Golf Cart Transportation Plan for Del Webb – Lincoln Hills (1998)
- Gladding Parkway EIR (2007)

Goals and policies and proposed bikeway facilities from these documents were reviewed for relevance and incorporation into this document. Relevant goals and policies from select plans above and the City's General Plan are included in Appendix B.

COMMUNITY PARTICIPATION

Community participation was an important component of this plan for the purpose of obtaining input on existing bicycling facilities, potential roadways for improvement to accommodate bicycles, and the type of support facilities or programs needed to improve bicycling within the City of Lincoln. The development of the plan was based on an advocacy planning approach between City staff, interested organizations, and citizens. The essence of this approach includes the following:

- A thorough review of existing plans and studies to determine what exists today.
- Direct input from the City staff about what development is planned for the future and what will be needed to accommodate that growth.
- A public presentation and workshop to incorporate citizen and community input.
- A refinement process that takes into account the following bikeway planning criteria
 - *Safety* – The system should provide the highest level of safety feasible.
 - *Coverage* – The system should provide balanced access from the City's activity centers for commuting and recreation purposes.
 - *Connectivity* – The system should provide bikeway connections to major activity centers, multi-modal transfer locations, regional connections, and should integrate with golf cart and NEV facilities as appropriate.

- *Use* – the proposed system should reflect use levels that are commensurate with the intended level of investment.
- *Standards* – The system should reflect the appropriate Class of bikeway facility consistent with Caltrans' design standards.

COMMUNITY OPEN HOUSE

An open house for the 2012 Bicycle Transportation Plan update was held on Wednesday, May 23, 2012. The open house was attended by two citizen representatives, City of Lincoln staff from Public Services and Community Development, and the Consultant. The purpose of the open house was to review the existing and planned bicycle facilities in the City of Lincoln that will be the core of the 2012 BTP update. The consultant provided large D size plots as well as 11 x 17 maps of the existing and proposed system. The following comments/ recommendations were recorded for consideration and possible incorporation into the Draft Bicycle System Map.

1. Make the new bypass larger and more pronounced (completed).
2. Include the open space corridor found on previous versions of the bicycle system map (park layer added).
3. Include a proposed Class 2 (from 4th St to school) on the east side of East Street (added).
4. The white strip near Industrial Ave is within city boundaries (added).
5. Move the airport symbol west to coincide with the airport location (moved).
6. Show the Twelve Bridges Library (included).
7. Show a proposed Park & Ride facility adjacent to SR 65 and Twelve Bridges Drive (added).
8. Sorrento Parkway and its proposed Class II bike lanes are not on the map (added).
9. Show the Class I facilities south of Twelve Bridges that have been recently completed (included).

Other Notes and Comments:

1. The Lincoln Hills cycling club requested to be kept informed of the planning process. A joint venture with the club is possible to install "bike boxes" if the need and location is approved by the City (bike boxes to be reviewed by the City).
2. The cost difference between loop detectors in the pavement and camera detectors should be explored as means to facilitate bicycle crossings of major roads and intersections (discussion of cost differences to be included in plan).

ORGANIZATION OF THE PLAN

The remainder of this document includes the following sections:

- Section II - Bikeway Goals and Policies;
- Section III - Existing Conditions;
- Section IV - Analysis of Demand;
- Section V - Proposed System;

- Section VI - Cost and Funding Analysis; and
- Section VII - Implementation.

The information presented for each of these sections is the result of the data collection efforts of City of Lincoln staff and the consultant. The overall planning effort to update the 2005 BTP began with a review of the existing bikeway goals, objectives and policies for continued relevance in the 2012 update. Where feasible, NEV and golf cart travel was integrated into the goal and policy language to be consistent with the City of Lincoln Golf Cart Transportation Plan and the City of Lincoln Neighborhood Electric Vehicle Plan.

II. GOALS, OBJECTIVES AND POLICIES

The inclusion of goals, objectives, and policies for this plan are intended to provide specific direction on the necessary actions involved in planning, designing, funding, and constructing bikeway facilities in the City of Lincoln. The following information relies on an understanding of the relationship between the proposed bikeway system, key issues facing implementation of specific routes, and the requirements of local, state, and federal funding programs. The goals and policies are organized by topic areas that relate to specific implementation issues. The topic areas include:

- Overall System;
- Land Development;
- Commuting;
- Safety Education;
- Environmental Considerations; and
- Funding.

The purpose of organizing this section by topic area is to provide City staff, decision makers, and citizens with clear and concise policy direction and guidance on how to implement the bikeway facilities proposed in this plan. Each topic area addressed below includes an overall goal, measurable objective, and policies with specific action statements related to the development of specific facilities or programs within the City of Lincoln.

OVERALL SYSTEM

The following goal and policy statements express the philosophy behind this plan and the proposed system of bikeways. The statements stem from the City's desire to provide residents and visitors with a connected bikeway/path system that can accommodate both commute and recreational trips throughout the City.

Goal 1: **Provide a well-connected bikeway system within the City of Lincoln to improve the quality of life for all residents and visitors.**

Objective: Construct priority bikeways identified in the proposed system map and provide for the maintenance of both existing and new facilities.

Policies

- 1.1 Prepare and maintain a Bikeway Master Plan that identifies existing and future needs, and provides specific recommendations for facilities and programs including adequate provisions for bicycle and pedestrian use, golf carts, and neighborhood electric vehicles (NEVs) to, within, and from the City of Lincoln.

- 1.2 Require all bikeways to conform to design standards contained in the latest version of the Highway Design Manual, Chapter 1000: Bikeway Planning and Design, Caltrans, unless otherwise established by the City.
- 1.3 Consider a proposed route's importance in providing access and connectivity to adjacent bikeway facilities and destinations when recommending bike routes for implementation.
- 1.4 Coordinate with Placer County, City of Rocklin, and City of Roseville regarding the implementation of the proposed system of bikeways.
- 1.5 Provide bicycle connections that allow for regional bike travel to and from the City of Lincoln.
- 1.6 Integrate bicycle planning with other community planning, including land use and transportation planning.
- 1.7 Ensure proposed Class II bike lanes are consistent with the City of Lincoln NEV Transportation Plan.
- 1.8 As funding allows, implement the proposed bikeway system in this Bikeway Master Plan in a cost effective manner.

LAND DEVELOPMENT

As shown in the population and employment growth expectations, the City of Lincoln has significant planned development over the next 20 years. Proposed development projects should adhere to the policy statements below regarding access, mobility, and support facilities for bicyclists and pedestrians.

Goal 2: **Include bikeway facilities in all appropriate development projects to facilitate on-site circulation for bicycle and pedestrian travel, on-site bicycle parking, and connections to the proposed system of golf cart and NEV facilities.**

Objective: Maximize the number of daily trips made by bicycling to and from new development projects within the City of Lincoln.

Policies

- 2.1 Require new development projects to reserve the right-of-way for multi-use trails shown in the proposed system of bikeways.
- 2.2 Meet the requirements of the Americans with Disabilities Act when constructing facilities contained in the proposed system, where applicable.

- 2.3 Provide pedestrian/bicycle crossings at appropriate intervals along new roadways that will adequately serve new large-scale commercial office, industrial development, and residential development.
- 2.4 Provide one mile of pedestrian/bicycle trails per 2,500 population (Amended Public Facilities Element 2008).
- 2.5 Adhere to specific policies contained within adopted plans and specific plans relating to the design, implementation, and function of bikeways and pedestrian facilities within the City of Lincoln.
- 2.6 Encourage new commercial development to provide bicycle and pedestrian access to surrounding residential areas.
- 2.7 Encourage new commercial development to place required bike racks near entrances for employees and customers.

COMMUTING

Commuters that bicycle to the City can represent a larger percentage of total commute trips if a comprehensive network of interconnected bikeway facilities is developed. This plan proposes to implement such a system as defined by the following goal and policy statements.

Goal 3: Increase bicycle trips to work to reduce vehicle congestion, improve air quality, conserve energy use, and improve individual physical fitness.

Objective: Develop a system of bikeways that provides direct routes between residential areas and to major employment centers.

Policies

- 3.1 Provide connections to the proposed system from all existing and future transit facilities and transfer points.
- 3.2 Encourage employers to install and/or maintain support facilities such as bicycle racks, personal lockers, and showers at appropriate locations to promote bicycle use.
- 3.3 Employers should encourage employees to consider bicycling as an alternative mode for commuting to and from employment centers.
- 3.4 Employers should be actively involved in implementing Ordinance No. 604B relating to the City's Ridesharing Program. The provisions of Ordinance 604B provide for the following:

- Identifies a “Major project controller” as an employer or common work location with 100 or more employees working at a single site for at least 20 hours per week.
- Identifies a “Transportation Control Measure (TCM) Coordinators” as an individual assigned by the Placer County Transportation Commission to assist member jurisdictions in complying with the provisions of trip reduction ordinances.
- Requires an annual commute survey as part of the annual reporting requirement on ridesharing.
- Identifies a “new project” as a project which would allow a use or number of uses that, individually or collectively, would employ 100 or more employees at one common work location.

Identifies a “project expansion” as an existing project which would allow a use or uses that, individually or collectively, after expansion, may both (1) generate employment for 100 or more employees and (2) increase the total number of employees at the common work location by twenty percent or more from the applicant’s base-line employment.

- States that assistance in transportation plan preparation will be provided by the City through the TCM Coordinator who will be provided to the City by the Placer County Transportation Commission.
- Identifies that the Rideshare Coordinator will be responsible for conducting an annual commute survey as part of the employer’s annual reporting requirements.

SAFETY EDUCATION

Safety education is an important aspect of increasing bicycle use. If bicyclists or potential bicyclists perceive that the bikeway system is unsafe, they will be discouraged from using it. Therefore, the following goal and policy statements are intended to improve the user’s knowledge of how to use the bikeway system safely.

Goal 4: **Educate all residents of the City of Lincoln about how to use bikeway and trail facilities safely.**

Objective: Improve bicycle safety in the City of Lincoln by providing a system of connected routes that minimize conflicts with autos, golf carts, NEVs and pedestrians.

Policies

- 4.1 Play an active role in educating residents about bicycle and pedestrian safety in conjunction with public and private schools and civic organizations.
- 4.2 Use available collision data to monitor bicycle collision locations and target education programs and/or improvements in those locations.

ENVIRONMENTAL CONSIDERATIONS

Bikeway facilities are generally considered to benefit the environment because their use reduces demand for motorized travel, helps to reduce the “carbon footprint” for travel within the City, and promotes beneficial life style changes. Nevertheless, the construction of specific facilities may adversely affect the physical environment. The following goal and policy statements have been developed to avoid and minimize potential impacts to the environment.

Goal 5: Avoid adverse environmental impacts associated with the implementation of the proposed system.

Objective: Mitigate potentially significant impacts to a level of less than significant.

Policies

- 5.1 Conduct site-specific environmental review consistent with the California Environmental Quality Act for individual bicycle projects as they advance to the implementation stage of development.
- 5.2 Solicit and consider community input in the design and location of bikeway facilities that connect to neighborhoods.
- 5.3 Consider the effect on other transportation facilities such as travel lane widths, turn lanes, on-street parking, and on-site circulation when planning and designing on-street bikeways.

FUNDING

To obtain the funding required to implement the proposed system, the City of Lincoln must take advantage of funding sources at the state and federal level. It will also require a commitment of local funding.

Goal 6: Acquire sufficient funding to construct the proposed system within the next 20 years.

Objective: Maximize the amount of local, state, and federal funding sources for bikeway facilities that can be used by the City of Lincoln for the implementation of the proposed system.

Policies

- 6.1 Periodically update current information regarding regional, state, and federal funding programs for bikeway facilities along with specific funding requirements and deadlines.
- 6.2 Where feasible, consider joint grant applications with other agencies, such as the City of Roseville, City of Rocklin and/or Placer County, for state and federal funds.

III. EXISTING CONDITIONS

This summary of existing conditions describes the current status of bikeway facilities and programs in the City of Lincoln based on the 2005 BTP, in-person meetings with City staff, and the Public workshop and open house held May 23, 2012. The information focuses on recent additions to existing bikeways, multi-modal connections, and bikeway support facilities and programs. The location of existing bikeways and major attractors within the City are included on Figure 4. These facilities represent the most recent improvements that have been completed since the 2001 and 2005 BTPs.

There are currently no existing signed Class III Bike routes within the City, outside of Sun City-Lincoln Hills. However, the City of Lincoln Golf Cart Plan and the NEV Transportation Plan indicate residential streets with speed limits of 25 miles per hour or less that are intended for shared use between vehicles, bicycles, golf carts and NEVs.

PAST EXPENDITURES ON BICYCLE FACILITIES

In past years, dedicated funds for bikeway facilities have been very limited. The City did receive CMAQ funds in 2001 to use toward the construction of a Class I bike path from Lakeside Drive to Joiner Parkway along Nicolaus Road. The proposed project consisted of approximately 3,200 feet of Class I bike path within a 21-foot easement on the north side of Nicolaus Road. The project was completed in 2002. Additional projects are described below:

The following Class I Bike paths have been completed since 2001.

- Adjacent to Nicolaus Road from lakeside to Joiner Parkway (\$200,000)
- Moore Road from Joiner Parkway to the west side of the future passive park site (\$500,000)
- Class I on East Avenue between 12th and 9th (\$268,750)
- Class I along Auburn Ravine Creek between SR 65 and SR 193 (\$468,000)
- East Avenue 9th to 12th (\$185,000)
- Approximately 2.5 miles in Twelve Bridges south of Twelve Bridges Drive (\$1.5 million)

The following Class II Bicycle lanes have been completed since 2005:

- Lincoln Air Center along Aviation Blvd, Lakeside Drive and Venture Drive.(\$308,000)
- Extensions to existing Class II lanes on Highway 65, Joiner Parkway, East Lincoln Parkway, and Ferrari Ranch Road (\$240,000)
- Twelve Bridges area on Twelve Bridges Drive, Eastridge Drive and Fieldstone Drive (\$120,000)
- Sun City area on Sun City Boulevard, Colonade Drive, Stoneridge Boulevard, Bella Breeze Drive, and Galewind Drive (\$60,000)
- Third Street from joiner Parkway to D Street (\$3,600)

REGIONAL AND MULTIMODAL CONNECTIONS

To encourage bicycle use, a bikeway plan should contain connections to other communities outside of the City of Lincoln, and it should connect with other forms of travel such as walking and public transit at transfer locations. The extent of existing regional and multi-modal connections is discussed below.

REGIONAL CONNECTIONS

The City of Lincoln is bordered by unincorporated Placer County. The City of Roseville and the City of Rocklin are located to the south with primary access from Highway 65 and Industrial Boulevard. The Town of Loomis and the City of Auburn are located short distances east of Lincoln with primary access from Highway 193. Designated bikeways providing regional connections to surrounding communities do not currently exist. New proposed connections that have potential as regional connections include Industrial Boulevard, Nicolaus Road, and SR 193. These connections are discussed in Chapter 5: Proposed System.

The Town of Loomis recently completed its 2010 Bicycle and Trails Master Plan. Except for sidewalks located in the downtown area of Loomis, a trail system within the Town does not currently exist. There are also no sidewalks that connect to adjacent jurisdictions including Rocklin, Penryn, and unincorporated Placer County. The Town of Loomis currently has no Class I bike paths, 6.5 miles of Class II bike lanes, and no designated Class III routes. The Town of Loomis, through its Bicycle Transportation and Trails Plan, is committed to creating a more bicycle-friendly community with connections to adjacent jurisdiction.

The 2008 City of Roseville Bicycle Master Plan provides for bicycle connections to Sierra College Boulevard with connections to Twelve Bridges Drive and ultimately SR 193.

MULTI-MODAL CONNECTIONS

Multi-modal connections in the City of Lincoln and South Placer County are especially important due to Lincoln's distance from other communities and barriers for continuous bicycle travel such as the lack of existing continuous bikeway facilities and sidewalks. A transit center currently exists at Third and F Streets serviced by Lincoln Transit and Placer County Transit. The various transit services that serve South Placer County are described below. Maps of the various service areas and key transfer points are provided in Appendix C.

Lincoln Transit

Lincoln Transit currently operates two fixed routes known as the downtown Circulator and Lincoln Loop. Both routes operate on one hour headways (at each stop, buses arrive every hour). Each bus is equipped with two bike racks.

The Downtown Circulator operates in Historic Downtown Lincoln and along Highway 65 with stops near City Hall (6th Street), downtown retail centers, Safeway Center, Twelve Bridges Library, Twelve Bridges Medical

Center, and Kaiser Permanente. The service begins each morning at the Lincoln Transfer Point at Third and F Streets. The Circulator connects daily with the Lincoln Loop and the Placer County Transit's Lincoln/Rocklin/Sierra College route.

The Lincoln Loop operates throughout the city with stops at several schools, parks, community centers, and major activity centers. The route begins daily at the southwest corner of Venture and Lakeside Drives. It continues to the Lincoln Transfer Point at third and F Streets and then to destinations throughout the city.

Lincoln Transit Dial-A-Ride (DAR) is a complimentary curb-to-curb Para-transit service for the general public. DAR operates in the city limits of Lincoln on a reservation basis.

A map of the Lincoln Loop and Downtown Circulator with schedules is included in Appendix D

Placer County Transit (PCT)

Transit riders in Placer County can make a connection to Lincoln's Historic Downtown and points in between at the Twelve Bridges Transfer Point via the Lincoln Transit Downtown Circulator. Transfers are free.

The Taylor Road Shuttle operated by PCT does stop at the Penryn Park and Ride near King Road and the Loomis Park and Ride located at I-80 and Horseshoe Bar Road. Additional information is located at www.placer.ca.gov/transit.

Route maps of PCT's Auburn to Light Rail Route and the Taylor Road Shuttle are included in Appendix E.

Park and Ride Lots

Other potential multi-modal transfer points typically include Park and Ride lots. The City of Lincoln does not have any official park and ride lots. Non-designated park and ride activity occurs at D and Second Streets and McBean Park but the extent of this activity is unknown. A future Park and Ride facility is proposed near Highway 65 and Twelve Bridges Drive (see Figure 1).

Roseville Transit

Roseville Transit offers local fixed-route service throughout Roseville but does not currently serve the City of Lincoln. Riders can transfer to PCT at Thunder Valley to reach destinations within the City of Lincoln. Additional information is located at www.roseville.ca.us/transit.

Health Express

For citizens who cannot reach their non-emergency medical appointments by public transit, Health Express provides door-to-door service Monday through Friday in Auburn, Colfax, Lincoln, Rocklin, and Roseville. Service from Placer County to Sacramento is provided one day per week. More information is provided at www.seniorsfirst.org.

SUPPORT FACILITIES

Bikeway support facilities include physical infrastructure designed to accommodate or promote the use of bicycles. Examples include bicycle racks, bicycle lockers, restrooms, and shower facilities. A windshield survey of major shopping centers, schools, parks, and employment centers found bike racks located at most major commercial centers in the City. The Lincoln Transit District provides a rack that holds two bikes on the front of all buses. The City of Lincoln provides bike parking at City Hall, 600 sixth Street. In addition, all recent shopping centers have bike racks as a condition of their approval. Several newer projects in the downtown core have street tree grates with tree guards that qualify as informal bike racks for bicyclists. Support facilities are important because potential riders can be discouraged from riding if they think that their bicycle may be stolen, vandalized or if sufficient facilities are not provided to make bicycling convenient, particularly for commute purposes.

In many cities and counties, the installation of secure bicycle parking is required as part of local transportation system management plans or the zoning code. For example, Yuba City, CA requires the provision of bicycle racks as part of their zoning code while similar requirements apply in the City of Roseville as part of their transportation systems management program. The City of Lincoln, as part of their rideshare program, requires that bicycle parking facilities be made available at the request of any tenant or employee participating in the program whose primary mode of commuting is by bicycle. Parking facilities are not currently required as part of the City of Lincoln zoning code.

BICYCLE SAFETY

Bicycle safety was evaluated as part of the BTP development process. In particular, existing available bicycle collision data was reviewed to identify accident locations within the city limits.

COLLISION DATA

Collision data was provided by the California Highway Patrol Statewide Integrated Traffic Records System (SWITRS) Statistics and applied to Figure 3. This data represents all bicycle and pedestrian related accidents occurring in the City of Lincoln between January 2006 and December 2010. Table 2 summarizes the collision data by year, severity, and primary collision factor (PCF).

During the five year period, 21 bicycle collisions and 19 pedestrian collisions were recorded. All but four of the bike collisions resulted in injuries. There was one bike fatality recorded at Joiner Parkway and Stanmark Drive.

Pedestrian injuries totaled 18. The primary collision factors involved right-of-way, turning, wrong side of road, traffic lights and stop signs, and unsafe speed. The majority of bicycle collisions occurred in the downtown core. The one fatality occurred on Joiner Parkway west of Highway 65 at Stanmark Drive.

TABLE 2 5-YEAR COLLISION SUMMARY FOR BICYCLES AND PEDESTRIANS CITY OF LINCOLN (2006 – 2010)						
	2006	2007	2008	2009	2010	5-Year Total
<i>Collision Type</i>						
Total Collisions (Bike)	4	6	4	4	3	21
Total Collisions (Pedestrian)	8	5	1	0	5	19
Fatal Collisions (Bike)	0	1	0	0	0	1
Injuries (Bike)	3	5	4	2	3	17
Injuries (Pedestrian)	8	5	1	0	4	18
Property Damage Only (PDO)	1	0	0	2	1	4
<i>Vehicle Code Violation (Bike)</i>						
Right-of-Way						4
Unsafe Turn						4
Wrong Side of Road						4
Traffic Control Device Violation						3
Unsafe Speed						6
Source: California Highway Patrol SWITRS (2010)						

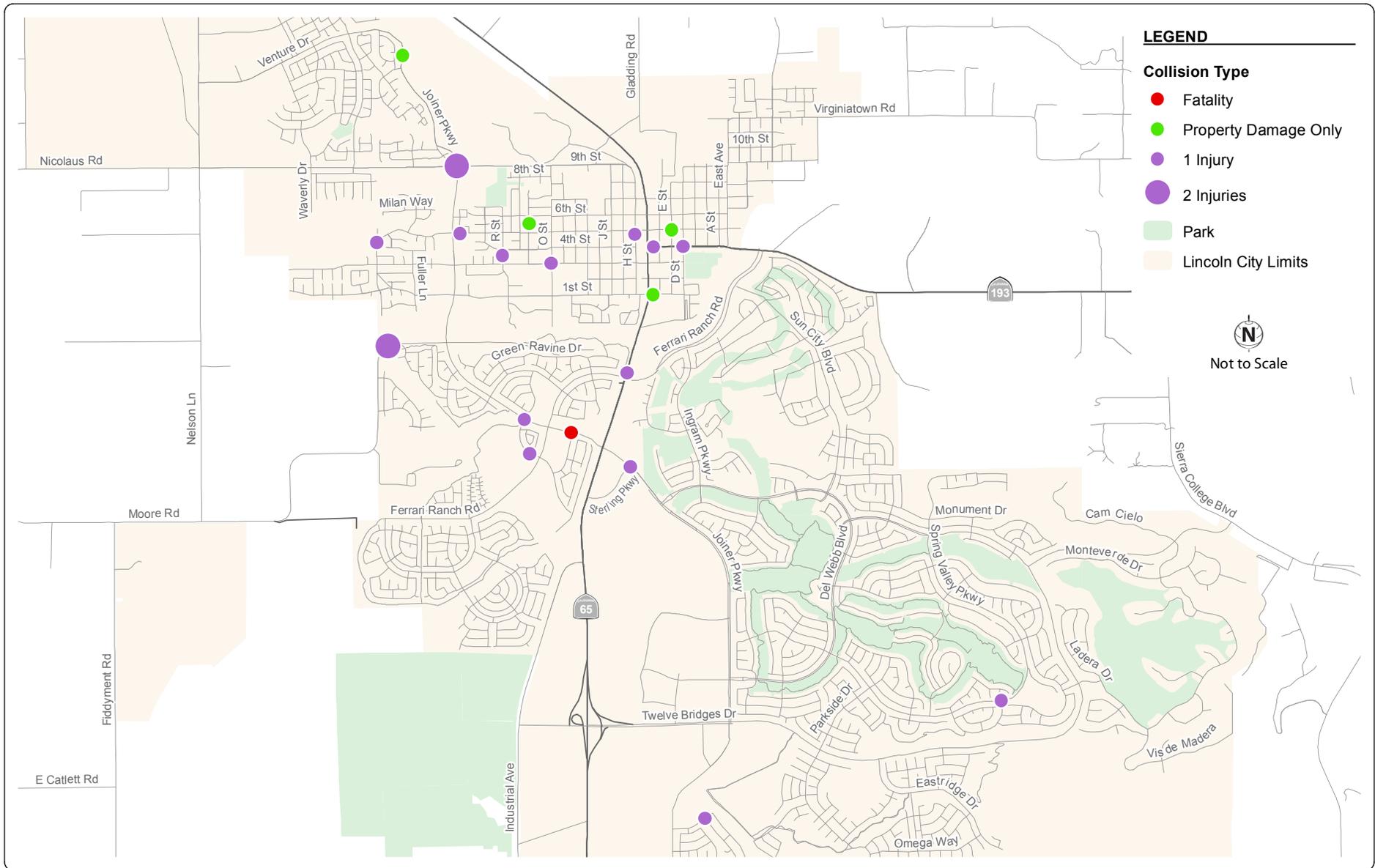


Table 3 was prepared to compare the rate of bicycle fatality and injury rates in the City of Lincoln with other locations in Placer County. The table shows a calculated incidence rate based on number of bicycle riders killed or injured per 1,000 persons as recorded in SWITRS in 2009. This is the latest year with data for each of the cities. This information is only intended for comparison purposes and does not contain sufficient data to demonstrate any statistical relationships.

TABLE 3 BICYCLE FATALITIES/INJURIES PER 1,000 PERSONS PLACER COUNTY CITIES				
City	Population	Bicycle Fatalities	Bicycle Injuries	Incidence Per 1,000 Persons
City of Lincoln	42,800	0	2	0.4
Auburn	13,330	0	1	0.8
Colfax	1,960	0	0	0
Loomis	6,430	0	1	0.2
Rocklin	56,974	0	10	0.2
Roseville	118,788	1	31	0.3
<i>Unincorporated</i>	<i>108,128</i>	<i>0</i>	<i>33</i>	<i>0.3</i>
Source: California Highway Patrol SWITRS data 2009.				

Table 3 indicates that the calculated bicycle incident rate (fatalities plus injuries) for the City of Lincoln for 2009 was slightly higher compared to other Placer County locations except for Auburn which was twice as high. As a growing but older community without a complete bikeway system, bicyclists in Lincoln are forced to mix with other traffic increasing the chance for conflict. As the bicycle system develops, conflicts between modes will lessen. It should be noted that because this information reflects reported collisions only, it does not include unreported collisions and under-counted non-automobile-related incidents. For example, bicycle-bicycle or bicycle-pedestrian collisions tend to be less severe and consequently under-reported. Studies have shown that these types of incidents occur frequently.

SAFETY PROGRAMS

A summary of current safety programs along with specific contacts is included in Table 4.

TABLE 4 BICYCLE SAFETY EDUCATION PROGRAM SUMMARY		
Agency	Contact Person	Safety Program
City of Lincoln Police Department	Lt. Paul Shelgren, Acting Chief	<ul style="list-style-type: none"> • Annual Bicycle Rodeo • Helmet Enforcement Program • Helmet Distribution Program • Bicycle Safety Programs at First Street Elementary and Creekside Oaks Elementary
UC Davis Trauma Center Outreach Program	Christy Adams 916-734-9794	<ul style="list-style-type: none"> • Helmet Safety
Source: Fehr & Peers 2012		

Each program is described below:

- Bicycle Rodeos - are designed to teach the rules of the road and safe riding practices to school age bicyclists.
- Bicycle Helmet Enforcement Program - is conducted by the Lincoln Police Department and focuses on issuing warnings to students who do not ride with a bicycle safety helmet. A warning card that includes discounts for purchasing bicycle helmets is given to violators.
- Bicycle Helmet Distribution Program - Approximately 250 helmets are given away annually to local students.
- Bicycle Safety_Instruction - Lincoln Police Department conducts bicycle safety instruction at local elementary schools at the beginning of the school year.
- Helmet Safety Program – Sponsored by UC Davis Trauma Center Outreach Program., this program provides instruction on helmet safety.

BICYCLE DETECTION

Bicycle detection at signalized intersections can provide a substantial safety improvement for bicyclists and motorists. Detection for vehicles and bicycles is usually provided via metal-detecting “loop detectors” that trigger a green light when they sense a change in their magnetic field because of metal nearby. Bicycle push buttons, where the bicyclists can push the button without leaving the bicycle lane, can be used to supplement loop detectors. The typical cost for loop detectors at four legs of the intersection is approximately \$10,000.

Recent information indicates that not all traffic signal detector loops are equally capable of detecting bicycles. "Re-Evaluating Traffic Signal Detector Loops" (Alan Watchel) concludes that Type D detectors are most effective for detecting bicycles. These detectors are very sensitive in their center so bicyclists can be detected while positioned in the middle of the detection zone. If not done already, the City should consider updating its design standards to designate the Type D detector as the default detector of choice for limit line locations.

Another form of detection is video and radar detection for the entire intersection. These systems are more costly (approximately \$20,000) but have shown to be successful if cost is not a critical factor.

The California MUTCD, 2012 Edition requires that bicycle and motorcycle detection be provided on all new and modified approaches to actuated traffic signals. This requirement results from the passage of Assembly Bill 1581 (CVC 21450.5). The MUTCD requires that bicycle detection be included at all new traffic signals and when retrofitting existing limit line detectors; MUTCD guidance suggests upgrading the whole intersection if retrofitting more than 50% of limit line detectors. There are also minimum green time requirements to accommodate bicyclists. Section 4D.105 (CA) of the California MUTCD, 2012 Edition includes the complete standards, support, options, and guidance.

IV. ANALYSIS OF DEMAND

The objective of analyzing bicycle travel demand is to identify existing bicycle ridership levels and travel patterns, along with projected future use and possible methods for stimulating additional ridership. This section provides information about City of Lincoln projections for population and employment and their influence on bicycle travel demand.

EXISTING MAJOR ACTIVITY CENTERS

One purpose of a BTP is to provide facilities that connect residential areas to employment, commercial, educational, and recreational centers. These facilities support bicycle travel demand for both commuter and recreational trip purposes. Major activity centers in the City of Lincoln include regional commercial areas such as Sterling Pointe Shopping Center, Lincoln Hills Town Center, Safeway Shopping Center, Lincoln Crossing, Joiner Parkway Corridor, and the downtown core. In addition, employment centers, schools, parks, the Thunder Valley Casino and Lincoln Air Center serve as potential destinations for bicyclists. Major activity center locations are identified in Figure 1.

POPULATION AND EMPLOYMENT TRENDS

The following discussion contains estimates of existing and forecasts of future, population and employment levels to determine trends and how they affect demand for bikeway facilities.

EXISTING POPULATION

In January 2011, the City of Lincoln had an estimated total population of 43,144 persons. This number rose 1.0% to 43,572 by January 2012. Table 5 shows a comparison of population estimates for the City of Lincoln and several surrounding cities between 2011 and 2012.

TABLE 5 PLACER COUNTY POPULATION ESTIMATES			
Jurisdiction	January 2011	January 2012	% Change
City of Lincoln	43,144	43,572	1.0
Auburn	13,378	13,468	0.7
Colfax	1,966	1,977	0.6
Loomis	6,460	6,500	0.6
Roseville	120,307	122,060	1.5
Rocklin	57,767	58,295	0.9
Balance of County	108,441	109,456	0.9

Source: California Department of Finance Report E-1 2010.

EXISTING EMPLOYMENT

According to the California Employment Development Department (EDD), Labor Market Information Division, the City of Lincoln had a labor force of 7,700 persons and employment of 6,400 in May 2012. A total of 1,400 were unemployed resulting in an unemployment rate of 17.5 percent. The relative high unemployment rate is contrasted with Loomis Town (5.8%), Auburn (7.9%), Rocklin (7.0%) and Roseville (9.9%).

BICYCLE RIDERSHIP LEVELS

Bicycle ridership levels are not easily measured or projected for an entire City without extensive data collection efforts. Existing and available data for the City of Lincoln includes the 2000 Census and the 2010 Census data on mode split, and census data on the number of occupied housing units.

Bicycle ridership varies widely among different jurisdictions. For jurisdictions with similar populations, land use density, and bicycle system quality, bicycled mode split typically varies from one to three percent. The City of Lincoln General Plan provides for increased land use densities in many areas and villages that will contribute the attractiveness of non-auto modes of travel such as bicycling. The transition to a more dense land use pattern could increase the City’s bike mode split from 0.6 percent to between one and three percent.

EXISTING RIDERSHIP LEVELS

A common term used in describing demand for bicycle facilities is “mode split.” Mode split describes the percentage of people selecting a certain means of transportation within a jurisdiction. Mode split is often used in evaluating commuter alternatives such as bicycling, where the objective is to increase the “split” or percentage of people selecting an alternative means of transportation. From the 2010 Census Journey to

Work survey, mode split information is available for home-to-work trips for the City of Lincoln, City of Roseville, and City of Rocklin. This information is presented in Table 6.

TABLE 6			
MODE SPLIT (%) FOR JOURNEY TO WORK			
Mode	City of Lincoln	City of Rocklin	City of Roseville
Drove Alone	76.9%	80.4%	79.7%
Carpool	10.0%	8.2%	10.1%
Transit	0.7%	0.9%	1.3%
Bike	0.6%	0.5%	0.4%
Walk	2.8%	1.4%	0.9%
Other	9.0%	8.6%	7.6%

Source: 2010 Census

As shown in Table 6, less than one percent of home-to-work trips for all three cities are made by bicycle. This is not surprising given the ease of traveling by car in these cities, the lack of comfortable bikeway facilities for amateur bicyclists, and the limited public transportation. Additionally, home-to-work trips are typically some of the most difficult to complete using a bicycle. Other trip types, such as shopping trips or trips to school, may be easier to complete by bicycle. Nevertheless, given the low mileage of existing bikeways and the lack of connectivity between existing routes in Lincoln, residents may be discouraged from riding due to perceptions of safety or the lack of a complete bikeway system with connections to their desired destination.

Based on current population numbers, number of daily home-based work trips (approximately 6,000) , and the 2010 Census mode split for bicyclists, it is estimated that approximately 30 to 36 persons currently use bicycles for work related trips on a daily basis. This includes teachers traveling to school by bike but not students.

FUTURE POPULATION AND EMPLOYMENT

According to the Placer County Transportation Planning Agency (PCTPA) development assumptions for their Traffic Impact Fee program, total population for the City of Lincoln is projected to reach approximately 59,000 in the year 2020. This represents a four-fold increase in 20 years. The current City of Lincoln General Plan (2008) estimated residential population growth to reach about 29,000 in 2010. The DOF estimate in 2010 was approximately 43,000 persons, a significant increase over previous planning assumption. The current 2012 population for Lincoln is 43,572. The General plan estimates approximately 54,000 persons with development on all lands (buildout) in 2020. Using this projection, population growth in the City will continue to be significant. An increased residential population will require additional parks and recreational facilities and in turn, a well-connected bikeway system to increase non-auto access and mobility, while reducing the environmental impact of transportation. The City is planning for this growth through the 2012 BTP, Golf Cart Transportation Plan, and Neighborhood Electric Vehicle Plan.

Based on employment projections by SACOG, employment in the City of Lincoln is projected to increase from 4,250 in 2000 to approximately 10,900 in 2020. This represents approximately a 59 percent increase. The

current EDD employment estimate (May 2012) of 6,400 workers is on track to be consistent with the SACOG number. Continuation of the City's rideshare program with employers could result in additional workers choosing to use bicycles to access their place of employment.

In the case employment center zoning expansions occur within the Twelve Bridges area, the associated impacts could positively impact bicycle travel and mode share and should be incorporated into future updates of the BTP.

FUTURE BICYCLE RIDERSHIP

The future development planned for the City of Lincoln will result in increases in daily and peak-hour traffic. Future bicycle ridership levels will depend on a number of factors such as population and employment trends as discussed above, the availability and quality of bikeway facilities, traffic volumes and the location, density, and type of future land development. New developments such as Village 1, Village 7, Fosket Ranch and Lincoln Crossing provide opportunity for increased bicycle access and use as facilities are implemented. Even with only modest population and employment growth, and assuming the mode split of 0.6 percent for bicycles does not change significantly, bicycle trips for work and recreation in the City of Lincoln will increase.

According to *The National Bicycling and Walking Study: Transportation Choices for a Changing America*, a much larger increase, upwards of two percent of all daily trips, could occur if a balanced, well-connected system of bikeways are implemented (Federal Highway Administration, 1994). The proposed system of bikeways for the City of Lincoln, as described in the following section, helps to achieve a balanced and well-connected system and therefore will contribute to a higher share of bicycle trips. The system as proposed provides a destination based network of connected bikeways that improve mobility and access for residents and visitors to major attractions and activity centers within the City. The benefits will be reduced congestion and improved air quality for the City and surrounding area.

Considering the range of bicycle mode split (1 percent to 3 percent) for jurisdictions with similar populations and land uses, and forecast population numbers (54,000 by 2020), bicycle ridership would continue to increase through General Plan build out (2020). Assuming that the number of occupied housing units is consistent with future population growth, the City of Lincoln can anticipate approximately 7,400 daily home-based work trips at General Plan build-out. Applying the estimated future mode split of 1 to 3 percent for bicycle trips, the range of potential bicycle commuters is estimated at between 74 and 220 trips per day.

V. PROPOSED SYSTEM

This section describes the proposed system of bikeways developed for the City of Lincoln for this plan.

PROPOSED SYSTEM OF BIKEWAYS

The existing and proposed bikeway system for the 2012 BTP is shown in Figure 4. It includes a total of 119 miles of bicycle, NEV and golf cart facilities. The entire system is comprised of approximately 51 miles of existing bikeways, and an additional 68 miles of proposed facilities. Table 7 shows the proposed distance (miles and kilometers) for each bikeway classification. The system connects residential areas with major activity centers in the City of Lincoln and it provides some regional connections to communities east and south of the city. Each route is classified according to Caltrans' standards presented earlier in Figure 1 and the City of Lincoln Neighborhood Electric Vehicle Plan.

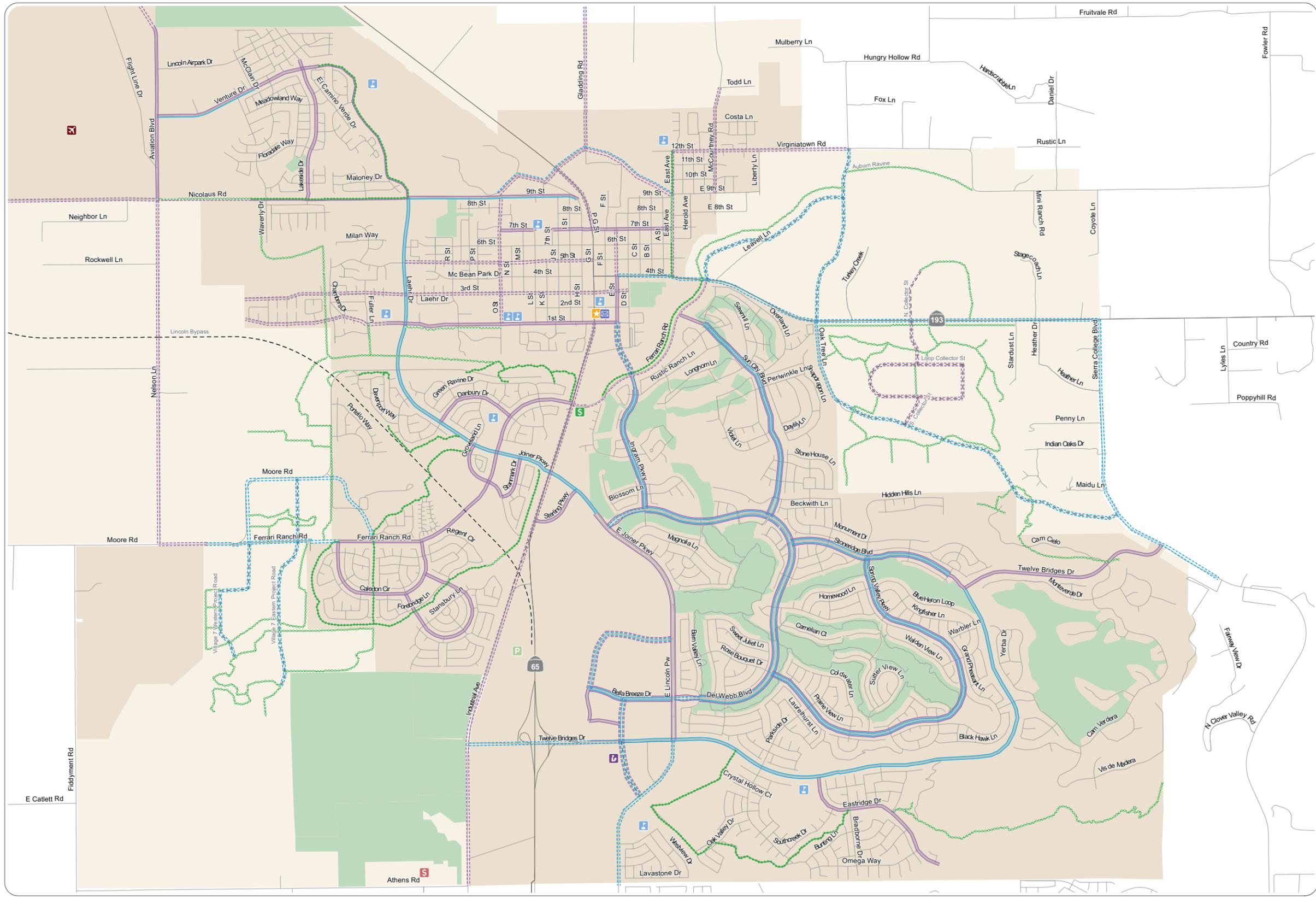
Of particular note are the additional Class 2/NEV shared routes in the new system. NEVs and bikes share these facilities in a 7-8 foot right-of-way.

TABLE 7 EXISTING AND PROPOSED SYSTEM OF BIKEWAYS					
Summary of Existing System of Bikeways					
Existing System	Class I	Class 2	Class 2/NEV (Sparated)	Class 2/NEV (Shared)	Total
Miles	11.05	21.78	10.91	7.46	51.20
Kilometers	17.68	34.85	17.46	11.94	81.92
Summary of Proposed System of Bikeways					
Proposed System	Class I	Class 2	Class 2/NEV (Sparated)	Class 2/NEV (Shared)	Total
Miles	24.45	24.61	1.65	16.98	67.69
Kilometers	39.12	39.38	2.64	27.17	108.30
Source: Fehr & Peers 2012					

PROPOSED SYSTEM DEVELOPMENT

The proposed system of bikeways was developed through an Advocacy Planning process between the City of Lincoln, interested agencies, bicycle support groups and members of the community. The advocacy planning process entails the following steps:

- A thorough review of existing plans and studies to determine and map what exists today;



LEGEND

- School
- Library Public Library
- Park-n-Ride
- Thunder Valley
- Downtown Core
- Lincoln Air Center
- Lincoln Hills Town Center
- Post Office
- Planned Roads
- Bicycle Facilities**
- Dirt Path
- Class 1 Path
- Class 2 Lane
- Class 2 / Golf Cart Lane (Shared)
- Class 2 / Golf Cart Lane (Separated)
- Future Bike Facilities**
- Class 1 Path
- Class 2 Lane
- Class 2 / Golf Cart Lane (Shared)
- Lincoln City Limits
- Lincoln Sphere of Influence
- Regional Parks Open Space



Note: Golf carts are allowed only in the Del Webb development.

- Direct input from City staff about what routes and facilities are needed in the future based on projected land use changes and growth;
- A public presentation and workshop to incorporate public input; and
- A refinement process that considers bikeway planning criteria.

The following bikeway planning criteria were considered in refining the proposed system.

- Use - Bikeways contained in the proposed system should reflect use levels that are commensurate with the level of investment required for construction and maintenance.
- Coverage - The system should provide balanced access from locations outside and within the City for both commuting and recreation routes.
- Safety - The system should provide the highest level of safety possible for bicyclists and pedestrians while minimizing major safety concerns such as narrow roadways, bicycle/pedestrian conflicts, and auto/bike conflicts.
- Connectivity - The system should provide bikeway/pedestrian connections to major activity centers, multi-modal transfer locations, and to routes that provide access to regional connections (i.e., SR 65 and SR 193). Activity centers in the City include residential areas, regional parks, shopping centers, employment centers, government centers, transit centers, and other recreational opportunities.
- Projects of Regional Significance – Projects that cross jurisdictional boundaries are potentially regionally significant bike facilities. This is important because a recurring theme throughout the planning process was a desire for bicyclists to access bikeways and use them for long, uninterrupted rides.
- On-Street Bikeways - Class II bike lanes should be provided as the preferred on-street bikeway facility. Class III bike routes should be used when Class II bike lanes are not feasible due to existing physical or environmental constraints. As with bike lanes, the designation of bike routes should indicate to bicyclists that there are particular advantages to using these routes as compared with alternative routes. This means that responsible agencies have taken actions to assure that these routes are suitable as shared routes and will be maintained in a manner consistent with the needs of bicyclists.
- Off-Street Bikeways - Where feasible, Class I bike paths on grade separated rights-of-way should be implemented. These bikeways provide a higher degree of safety and recreational benefit than bikeways located on streets. They can also become linear parks, adding to the range of amenities for local communities. In many areas of the City, the cost of constructing off-street bikeways may be competitive with that for on-street facilities due to the physical characteristics of the existing roadway system and the cost to widen roads.

The proposed system map was presented to the general public at a public workshop on May 23, 2012 at the City of Lincoln City Hall. Based on comments received through this review process, the proposed system map was refined according to the bikeway planning criteria above.

REGIONAL CONNECTIONS

In the development of the proposed bikeway routes, an effort was made to assess the potential connectivity of City of Lincoln bikeways with existing or planned bikeways on streets surrounding the City and/or within the City's sphere of influence. The City of Lincoln General Plan Circulation Diagram (Appendix I) was used as a reference in development of the system. Based on discussion with the PCTPA and public workshop participants, the following regional connections are proposed:

- Class II bike lanes are proposed to continue on SR 193 east of the City limits;
- Class II bike lanes are proposed for Sierra College Blvd. South of SR 193;
- Class II bike lanes are proposed for Industrial Avenue south of the City limits; and
- Class II bike lanes are proposed for East Lincoln Parkway south of the City limits.

For the 2012 update, additional bike facilities are proposed north and west of the City limits on Wise Road, Airport Road, Nicolaus Road, Gladding Parkway.

MULTI-MODAL CONNECTIONS

As discussed previously, the proposed bikeway system includes routes that overlap with and provide access to existing City of Lincoln transit routes and stations. To facilitate use of these routes by bicyclists, all transit buses and major transit stations and transfer points should be equipped with bike racks.

SUPPORT FACILITIES AND PROGRAMS

Support facilities and education programs are an important part of the proposed bikeway system. Existing bicycle facilities are limited in the City of Lincoln based on available data collected during the study and discussion with City staff and bike riders. The following information provides recommendations on improving the availability of support facilities.

BICYCLE SHOWER, PARKING, AND LOCKER FACILITIES

Support facilities such as bicycle parking, shower and locker facilities can encourage bicycling by reducing the threat of theft and making riding more convenient. Properly designed bike racks should be considered near major bicycle destinations in the City and work locations. For the most part, these facilities should be required

for new developments that are likely to experience a demand for bicycle parking such as parking areas, commercial centers and recreational facilities, and employment centers. Existing activity centers should be encouraged to add bicycle parking facilities where feasible. The type of parking facility (bike rack or bicycle locker) should be selected based on:

- Anticipated duration of use (short-term bike racks vs. long-term bike lockers)
- Cost
- Ease of use
- Ability to prevent theft

Access to shower and locker facilities may help encourage people to commute by bicycle, particularly in the summer months. Many jobs require employees to wear specific uniforms or formal attire such as suits and ties. By having shower and locker facilities, employees have the option to shower and dress at work. This is an important consideration for bicycle commuters since they cannot control their travel environment and are much more dependent on support facilities located at the workplace.

The following action is recommended for increasing the number of locations with bicycle parking, shower, and locker facilities:

- Develop an ordinance that requires bicycle parking at new developments, including commercial centers, recreational facilities, and employment centers;
- Encourage the installation shower and locker facilities where appropriate such as the planned employment center east of Aviation Blvd.;
- Actively pursue state and federal funding to install bicycle parking, shower, and locker facilities at existing activity and employment centers; and
- Comply with the multimodal requirements of the Lincoln ridesharing program as established in Chapter 18.45 of the City's Municipal Code as it pertains to bicycle parking and support facilities. Information on the ridesharing program requirements are discussed under the Goals and Policy section.

CROSSING PROTECTION

Crossing protection for bicyclists and pedestrians is an important consideration. The improvements list below should be targeted for major intersections on the proposed bikeway system, and at locations where students cross a busy street to gain access to campus classrooms and facilities.

- Use signing, striping, flashing beacons, raised crossing bumps, pedestrian actuated signals, and other appropriate devices at street crossings with high levels of pedestrian and bicycle demand when warranted by engineering standards.

- Install bicycle detection at signalized intersections along the bikeway system as intersections are upgraded. Detectors should be located within the striped bike lane either along the curb or between the right-turn lane and through lane.

VI. COST AND FUNDING ANALYSIS

Implementation of the proposed system will require funding from local, state, and federal sources and coordination with other agencies. To facilitate funding efforts, this section presents conceptual construction cost estimates for the recommended proposed system along with a brief description of past expenditures for bikeway and pedestrian facilities.

COST ESTIMATES

Table 8 contains a unit cost summary for constructing the proposed bikeway facilities in Figure 4 in the City of Lincoln. These cost estimates are based on costs experienced in various other California communities and previous bikeway planning projects in Lincoln, Roseville, Fresno, Clovis, and Mariposa. However, these cost estimates should be used only to develop generalized construction cost estimates and project prioritization. More detailed estimates can be developed after preliminary engineering.

TABLE 8 GENERALIZED UNIT COST ESTIMATES FOR BIKEWAY CONSTRUCTION	
Facility Type	Estimated Cost Per Mile
Class III Bike Route <ul style="list-style-type: none"> • signing only • signing plus minor road improvement • signing plus major roadway improvement 	\$340 - \$1,000 \$37,000 \$370,000 – \$1,550,000
Class II Bike Lane ¹ <ul style="list-style-type: none"> • signing and striping only • signing and striping plus minor roadway improvement • signing and striping plus moderate roadway improvement • signing and striping plus major roadway improvement 	\$4,900 – 8,800 \$41,000 \$210,000 \$740,000 – \$3,100,000
Class I Bike Path <ul style="list-style-type: none"> • construct asphalt path on graded right of way with drainage and new sub-base • unpaved bike trail 	\$800,000 – 1,500,000 \$120,000
Notes: ¹ Minor, moderate, and major designations correspond to the designations used to classify roadways in the existing facilities inventory.	

A summary of total system costs by facility type is presented in Table 9. Conceptual construction cost estimates for individual route segments are provided in Appendix F.

Table 9	
Conceptual Construction Cost Summary	
Bikeway Classification	Range of Cost between Low and High
Class I Bike Path	\$19,496,000 – \$36,671,000
Class II Bike Lane	\$427,855 – \$5,168,000
Class II /NEV (Separated)	\$346,000 – 823,000
Class II/NEV (Shared)	\$3,566,000 - \$8,490,000
Total	\$23,836,000 - \$51,153,000

Table 9 shows the total estimated cost for constructing the proposed system of approximately \$23.8 million and \$51.1 million depending on whether the segment requires a low construction cost or a higher construction cost. Many funding opportunities exist at the federal, state, and local levels for constructing bikeway facilities. A general description of these sources is provided below. More detailed funding information can be reviewed in the *Guide to Bicycle Program Funding in California*, Planning and Conservation League, April 1995.

GRADE CROSSING CONSTRAINTS

The proposed system may have locations that entail special grade crossing considerations to avoid conflicts. These locations may occur where major roads intersect with Class I or Class II facilities, Class I paths intersect with Class II facilities, or streams and/or creeks are present. Examples include the Class I bike path interface with Joiner Parkway north of Moore Road, State Highway 65 north of Ferrari Ranch Road, and State Highway 193 east of East Avenue. All three locations will require special design considerations for crossing the ravine.

Appendix G provides various prototype crossing designs including advantages, disadvantages and estimated construction costs. Prototype “A” shows an at-grade design involving only one major roadway approach. This type of interface can be constructed for less than \$100,000. At the other end of the spectrum is a fully grade separated bridge crossing that provides for continuous off-street bikeway facilities with no vehicular conflict. This type of crossing is typically greater than \$500,000. Because the proposed crossings in the City of Lincoln involve either a State Highway or major arterial, the cost to construct grade separated crossings range from \$800,000 to approximately \$2,000,000 per location.

POTENTIAL FUNDING SOURCES

In some cases, portions of the proposed system will be completed as part of future development and road widening and construction projects within the City of Lincoln. For other portions of the system, there are a variety of potential funding sources that can be used for bicycle projects, programs and plans from all levels of government. This section covers federal, state, regional and local sources of funding, as well as some nontraditional funding sources that may be used for bicycle projects.

FEDERAL FUNDING SOURCES

The primary federal source of surface transportation funding, including bicycle and pedestrian facilities, is the Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users. This Federal bill was established by Congress in 1991 with the Intermodal Surface Transportation Efficiency Act, and renewed in 1998 and extended in 2003 through the Transportation Equity Act for the 21st Century and the Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2003. Also known as the Federal Transportation Bill, it was passed in 2005 and authorizes federal surface transportation programs for the five-year period.

In late September 2009, as the 2005 federal transportation bill (SAFETEA-LU) was set to expire, a debate emerged in Congress regarding the length of time to extend the current bill while new policy is created. Rather than a simple reauthorization of existing policy, a new bill is being crafted with new policies and funding formulas, in recognition of the urgency of national needs – obesity prevention, escalating fuel prices, the need for energy independence from Middle East oil, and perhaps most important, the battle against global climate change. In December 2009 Congress voted to extend the current bill until September 2010.

Federal funding is administered through the state (Caltrans and the State Resources Agency) and regional planning agencies. Most, but not all, of these funding programs are oriented toward transportation versus recreation, with an emphasis on reducing auto trips and providing inter-modal connections. Many Federal programs require a local match of between 10-20%. Federal funding is intended for capital improvements and safety and education programs and projects must relate to the surface transportation system.

Federal Lands Highway Funds

Federal Lands Highway Funds may be used to build bicycle and pedestrian facilities in conjunction with roads and parkways at the discretion of the department charged with administration of the funds. The projects must be transportation-related and tied to a plan adopted by the State and Metropolitan Planning Organization. Federal Lands Highway Funds may be used for planning and construction and is managed by the United States Department of Transportation.

Transportation, Community and System Preservation Program

The Transportation, Community and System Preservation Program provides federal funding for transit oriented development, traffic calming and other projects that improve the efficiency of the transportation system, reduce the impact on the environment, and provide efficient access to jobs, services and trade centers. The program is intended to provide communities with the resources to explore the integration of their transportation system with community preservation and environmental activities. The Program funds, which are administered through the Federal Highway Administration (FHA) require a 20% match, and can be applied to planning, design and construction.

Land and Water Conservation Fund

The Land and Water Conservation Fund is a federally funded program that provides grants for planning and acquiring outdoor recreation areas and facilities. The Fund is administered by the National Parks Service and the California Department of Parks and Recreation and has been reauthorized until 2015. Cities, counties and districts authorized to acquire, develop, operate and maintain park and recreation facilities are eligible to apply. The application deadline is in May, and applicants must fund the entire project, and will be reimbursed for 50% of costs. Property acquired or developed under the program must be retained in perpetuity for public recreational use.

Congestion Mitigation and Air Quality Improvement Program (CMAQ)

CMAQ Funds are directed to transportation projects and programs which contribute to the attainment or maintenance of National Ambient Air Quality Standards in non-attainment or air quality maintenance areas for ozone, carbon monoxide, or particulate matter under provisions in the Federal Clean Air Act. Eligible projects include bicycle facilities.

Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program is managed locally by Caltrans. For a project to be eligible for HSIP funds, the project must be on any public road, publicly owned bicycle path, pedestrian pathway, or trail. Projects must identify a specific safety problem that can be corrected or be improved significantly.

Regional Surface Transportation Program (RSTP)

Regional Surface Transportation Program (RSTP) funding is distributed based on population, among the urbanized and non-urbanized areas of the State through Metropolitan Planning Organizations (MPOs) such as SACOG and Regional Transportation Planning Agencies. Bicycle facilities are eligible for funding through the federally administered program.

Federal Safe Routes to School (SRTS)

Eligible projects fall under the category of infrastructure (capital improvements), or non-infrastructure (education, encouragement, enforcement). Infrastructure projects must be located within a two mile radius of a grade school or middle school. Local Caltrans representatives serve as the administrative authority on SRTS projects.

Transportation Enhancements (TE)

Federal Transportation Enhancement funds are to be used for transportation related capital improvement projects that enhance quality-of-life in or around transportation facilities. Facilities that qualify for TE funds include bicycle safety, education and facility projects. Transportation Enhancements projects are managed locally by Caltrans.

STATEWIDE FUNDING SOURCES

The State of California uses both federal sources and its own budget resources to fund bicycle projects and programs throughout the State.

Bicycle Transportation Account (BTA)

The Bicycle Transportation Account (BTA) is an annual program providing state funds for city and county projects that improve safety and convenience for bicycle commuters. In accordance with the Streets and highways Code (SHC) Section 890-894.2 – California Bicycle Transportation Act, projects must be designed and developed to achieve the functional commuting needs and physical safety of all bicyclists. Local agencies establish eligibility for projects by preparing and adopting a Bicycle Transportation Plan (BTP) that complies with SHC Section 891.2 – 11 required elements (see Table 1). Funds are available for both planning and construction. Bicycle Transportation Account funding is administered by Caltrans. Caltrans anticipates approximately \$7.2 million annually for eligible projects. The maximum amount available to any applicant through the Bicycle Transportation Account is no more than 25 percent of the total amount transferred to the BTA in a single fiscal year. Cities and counties are eligible to apply. All projects must be designed to the standards outlined in Chapter 1000 of the Highway Design Manual. The “call for projects” normally occurs between December and March of each year.

Community Based Transportation Planning Grant Program

This fund, administered by Caltrans, provides funding for projects that exemplify livable community concepts including bicycle improvement projects. Eligible applicants include local governments, Metropolitan Planning Organizations and regional transportation planning agencies. A 20% local match is required and projects must demonstrate a transportation component or objective. There is \$3 million available annually statewide. The application deadline is normally in October.

State Safe Routes to School (SR2S)

To be eligible for SR2S funds, the project must be located on any state highway or on any local road. Projects must correct an identified safety hazard or problem on a route that students use for trips to and from school. Up to 10 percent of the project’s cost can fund a non-infrastructure component that supports the infrastructure project. Only cities and counties are eligible to compete for funds.

State Transportation Improvement Program (STIP)

All STIP projects must be capital projects (including project development costs) needed to improve transportation. Eligible projects include bicycle facility improvements and improved access to transit and are administered by Caltrans.

Transportation Development Act

Transportation Development Act Article 3 funds are state block grants awarded monthly to local jurisdictions for transit, bicycle and pedestrian projects in California by Caltrans. Funds for pedestrian projects originate from the Local Transportation Fund, which is derived from a ¼ cent of the general state sales tax. Local

Transportation Funds are returned to each county based on sales tax revenues. Article 3 of the Transportation Development Act sets aside 2% of the Local Transportation Funds for bicycle and pedestrian projects. Eligible pedestrian and bicycle projects include: construction and engineering for capital projects; maintenance of bikeways; bicycle safety education programs (up to 5% of funds); and development of comprehensive bicycle or pedestrian facilities plans. A city or county may use these funds to update their bicycle and pedestrian plan not more than once every five years. These funds may be used to meet local match requirements for federal funding sources. Application deadlines vary within individual county transportation agencies.

LOCAL AND REGIONAL FUNDING SOURCES

Developer Impact Fees

Traffic Impact Fees placed on new development typically cover the ultimate build-out of roadways associated with project improvements. The fees are reviewed and updated by the City every few years to reflect current economic conditions and costs to improve.

NON-TRADITIONAL FUNDING SOURCES

Community Development Block Grants

The Community Development Block Grant program provides money for streetscape revitalization, which may be largely comprised of pedestrian improvements such as sidewalks and safe crossing infrastructure. Federal Community Development Block Grant grantees may "use [these] funds for activities that include (but are not limited to):

- acquiring real property
- reconstructing or rehabilitating housing and other property
- building public facilities and improvements, such as streets, sidewalks, community and senior citizen centers
- recreational facilities, paying for planning and administrative expenses, such as costs related to developing a consolidated plan and managing Community Development Block Grant funds
- provide public services for youths, seniors, or the disabled
- initiatives such as "neighborhood watch programs"

COST AND FUNDING SUMMARY

Future expenditures for bikeway facilities are difficult to predict due to the ever changing fiscal climate and the number of variables involved in securing funding. It is instructive to consider the total annual amount required to implement the proposed system over a 20-year time frame. Dividing the low-range cost of \$23,800,000 equally over 20 years equates to about \$1,191,000 per year in 2012 dollars. This amount increases to approximately \$2,600,000 per year using the high-range cost numbers. If the cost of crossings is included, the total cost increases commensurate. The following actions are recommended to complete the proposed system.

- Prepare joint applications wherever possible, with other local and regional agencies for competitive funding programs at the state and federal levels
- Actively pursue funding from the Bicycle Transportation Act (BTA), Congestion, Mitigation, Air Quality (CMAQ), and the Safe Routes to Schools (SR2S) Programs to complete priority portions of the proposed system. These grant sources require eligible projects to be included in the BTA.
- Use existing funding sources as matching funds for state and federal funding
- Include proposed bikeways wherever possible as part of roadway projects involving widening overlays, new roads, or other improvements.

VII. IMPLEMENTATION

This section addresses the construction phasing issues related to implementation of the proposed system. It includes guidelines for establishing priorities for implementing specific routes and also provides typical design standards for each bikeway classification.

BIKEWAY SYSTEM PHASING

The specific implementation of any given route or facility, with all other things considered equal, should be based on the following criteria:

- Where an opportunity, such as a road widening or re-paving, makes implementation favorable.
- Where new roadways are constructed as part of the general plan development process.
- To complete improvements contained in adopted plans that add to circulation efficiency, completeness and safety (e.g., downtown core).
- Where an eminent loss of an opportunity, such as the sale of a railroad right-of-way, makes implementation necessary.
- Where resolution of a major obstacle, such as railroad levees, creeks, or embankments makes implementation necessary.
- Where the segment is not disconnected or otherwise poorly accessible from the rest of the system.

In many situations, the most needed bikeway improvement may not be implemented first. In these cases, external factors such as new construction create opportunities to provide new bikeway facilities without consideration for need. Therefore, the proposed system does not include a ranking of specific routes, but does include the following list of high priority routes.

PRIORITY ROUTES

Priority routes were selected based on expected use, type of route, connectivity, potential improvements to connectivity and safety, and funding potential. The following projects currently have the highest priority for implementation (no priority order).

- Ferrari Ranch Road Bike Lanes. The Class II bike lanes on Ferrari Ranch Road between 4th Street and SR 65 will provide a much needed connection from the east side of the City to Highway 65. The connection will enhance bicycle travel by residents of Sun City – Lincoln Hills and provide bicycle access to the Safeway Shopping Center. (\$165,000)



- 12th Street/Virginia Town Road Bike Lanes. Class II bike lanes are recommended for 12th Street and Virginia Town Road. This project entails mostly restriping. (\$12,000)



- O Street Bike Lanes. Class II bike lanes on O Street from 1st Street to Nicolaus Road. These lanes will enhance bicycle travel in the downtown core by completing an existing gap in the bicycle system. (estimated construction cost \$15,000)



- 3rd Street Bike Lanes and Bike Signal Detectors at 3rd Street and G Street. Class II bike lanes on 3rd from the east terminus to the west terminus will complete an existing gap. The signal detectors will be installed at the intersection of 3rd Street and G Street to assist bicyclists with crossing both facilities. (estimated construction cost \$63,000)



- Moor Gap Bikeway Completion. Complete the Moor Gap bikeway under Highway 65 as proposed in the City's Safe Routes to School application. Moore Road was closed at this location due to the realignment of SR 65. The route to school is presently along a circuitous route along roads without sidewalks, and collector streets with average daily traffic exceeding 10,000 vehicles. (estimated construction cost \$85,000).



A more detailed description of the Moore Road project is shown in Appendix H.

APPENDIX A
Consistency Finding

RESOLUTION NO. 2012- 145

A RESOLUTION OF THE CITY COUNCIL APPROVING THE SECOND AMENDMENT
TO THE CITY OF LINCOLN BIKEWAY MASTER PLAN

WHEREAS, the City Council approved the City of Lincoln Bikeway Master Plan on October 9, 2001 by Resolution Number 2001-156; and

WHEREAS, the City Council approved the first amendment to the City of Lincoln Bikeway Master Plan on November 8, 2005 by Resolution Number 2005-245; and

WHEREAS, there is a need to amend the Bikeway Master Plan every 5 years to qualify for Bicycle Transportation Account grant funds in accordance with California Streets and Highways Code Section 891.2, also known as the Bicycle Transportation Act; and

WHEREAS, to be consistent with the Bicycle Transportation Account, this amended City of Lincoln Bikeway Master Plan should be titled the Bicycle Transportation Plan; and

WHEREAS, this action is an activity that establishes a plan for minor alteration of existing public facilities and minor alteration of land for the creation of bike lanes and will not have a significant impact on the environment in accordance with the California Environmental Quality Act (CEQA) Section 15301 (Class 1), 15304 (Class 4) and 15061 (b) (3).

NOW THEREFORE BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LINCOLN AS FOLLOWS:

1. This action is Categorically Exempt from CEQA.
2. The Second Amendment to the City of Lincoln Bikeway Master Plan, now referred to as the City of Lincoln Bicycle Transportation Plan set forth as Exhibit B and attached hereto, is hereby approved.

PASSED AND ADOPTED this 28th day of August 2012.

AYES: COUNCILMEMBERS: Cosgrove, Nader, Joiner, Hydrick, Short

NOES: COUNCIL MEMBERS: None

ABSENT: COUNCILMEMBERS: None



Spencer Short, Mayor

ATTEST:



Patricia Avila, City Clerk

I hereby certify that this is
a true and correct copy of
Res. 2012-145 adopted by the
Lincoln City Council on Aug. 28, 2012
Dia Jij, Deputy

City Clerk



PLACER COUNTY
TRANSPORTATION
PLANNING AGENCY

RECEIVED
APR 14 2004

BY:

KATHY SANDS
City of Auburn
SHERRIE BLACKMUN
City of Colfax
TOM COSGROVE
City of Lincoln
MIGUEL UCovich
Town of Loomis
KATHY LUND
City of Rocklin
GINA GARBOLINO
City of Roseville
HARRIET WHITE
TLD GAINES
Placer County
ROGER IMSDAHL
Citizen Representative
CELIA McADAM
Executive Director

April 9, 2004

Assemblyman Tim Leslie
California State Capitol
Room 4164
Sacramento, CA 95814

Subject: AB2353 Neighborhood Electric Vehicle (NEV) Legislation

Dear Assemblyman Leslie,

This letter is to express the support of the Placer County Transportation Planning Agency for AB2353 which will allow expanded use of NEVs through a NEV Transportation Plan. The passage of AB2353 will provide for local control to accommodate the growth of NEV use.

It is our understanding that expanding NEV travel will accomplish the following:

- Improve Air Quality by replacing many automobile trips with electric vehicle trips
- Improve the local economy by encouraging local shopping
- Provide independence for some of those unable to drive automobiles
- Provide a clean independent transportation method using extremely low cost vehicles that will help low income families

If you have any questions, please contact me at 530 823-4030.

Sincerely,

Celia McAdam, AICP
Executive Director

Copy: Steve Ainsworth, MHM Engineers & Surveyors
735 Sunrise Avenue, Suite 220
Roseville, CA 95661

APPENDIX B

Summary of Relevant Goals and Policies from Other Planning Documents

APPENDIX B

Policies and Standards in Relevant Planning Documents

The following section provides paraphrased excerpts of policy and design documents from various plans and studies pertinent to the City of Lincoln. The purpose of presenting this information is to provide a synopsis of the existing and/or proposed policies and standards that will relate to the City of Lincoln Bikeway Master Plan. Policies and standards relating specifically to implementation and design of the proposed bikeway system are described in the Goals and Policy section of the 2012 BMP.

Placer County Transportation Regional Bikeway Plan, September 2002

Regional Goal: To promote safe, convenient, and enjoyable cycling by establishing a comprehensive system of regional bikeways that links the communities of Placer County.

OBJECTIVES AND POLICIES:

Goal 1: Create a safe and efficient network of bikeways that enhances bicycle use as a viable alternative mode of transportation for commuter and recreational use and for the avid cyclists as well as the "weekend" rider.

Policy: Implement the bikeway network by working closely with Placer County jurisdictions, Caltrans, and bicycle advisory committees.

Policy: Encourage businesses, schools, and public agencies to incorporate adequate bicycle storage in their facilities.

Goal 2: Encourage agencies responsible for public street, road, and highway improvements to consider the needs of cyclists when designing new or reconstructing existing facilities.

Policy: Work with the County, cities, and school districts to incorporate state-of-the-art bicycle design guidelines into their overall policies for facilities and roadway and interchange design.

Goal 3: Coordinate with Placer County departments, cities, Caltrans, and other government entities to create continuity and consistency with existing and planned bikeway systems.

Policy: Develop a prioritized list of bikeway projects for implementation on a countywide basis.

Goal 4: Provide for bikeways that connect to work, school, shopping, transit transfer points, and recreational areas.

Policy: Implement directional signage along bikeways to indicate connections to key destinations.

Goal 5: Create a bikeway system that takes advantage of the scenic qualities in Placer County for both resident and visitor to enjoy.

Policy: Encourage Placer County jurisdictions to work with developers and bicycle groups to dedicate easements for bikeways.

6: Assist transit operators with funding and installing bicycle racks on buses.

Policy: Encourage all transit operators to include bicycle racks in specifications for new vehicles, and encourage operators without bicycle racks on existing buses to apply for funds to add them.

Goal 7: Integrate bicycle planning with other community planning, including land use and transportation planning.

Policy: Encourage all Placer County jurisdictions, including Municipal Advisory Committees, to include bikeways in their planning efforts.

Goal 8: Provide for an ongoing bikeway planning ingress and egress.

Policy: Obtain regular progress reports from jurisdictions and update the prioritized project list accordingly.

Goal 9: Maintain bikeways and related facilities in a condition favorable to safe and efficient use by cyclists.

Policy: Develop an ongoing funding source for maintenance of bikeways.

Goal 10: Promote safe conditions for cyclists through signage, traffic controls, engineering, education, and law enforcement efforts.

Policy: Explore safety signage on shared roadways, and support safety education programs for bicyclists.

Policy: Support bicycle safety education for bicyclists and motorists.

Policy: Encourage law enforcement agencies to develop uniform enforcement policies.

Goal 11: Work toward increasing the number of trips by bicycle by promoting awareness and use of the bikeway system through employers and through distribution of a map of all bicycle facilities.

Policy: Prepare regular updates of the bicycle map, and work with local bicycle groups and employers to achieve wide distribution to everyone including low-income and minority communities.

Goal 12: Pursue funding for timely implementation of the bicycle master plan.

Policy: Encourage jurisdictions to apply for funding including: Safe Routes to Schools, Congestion Mitigation and Air Quality, Transportation Development Act, Office of Traffic and Safety, State Bicycle Transportation Account.

City of Lincoln Amended Public Facilities Element, March 2008

The following goals and policies relate to Transportation System Management and Parks, Open Spaces and Recreational Facilities within the Public Facilities element.

Goal 7: To provide and maintain park facilities that provides recreational opportunities for all residents

Policy 7.4 Maintenance – The City shall support the continued maintenance and improvement of existing recreational facilities.

Policy 7.6 Dedication of Parkland – The City will continue to collect park dedication fees, require the dedication of parkland, or a combination of both as a condition of development approval for the provision of new parks, or the rehabilitation of existing parks and recreational facilities in order to meet the City's parkland standards.

Policy 7.8 Adopted Park Standards – The amount and location of any future parkland to be developed within the City will be determined by adopted park standards and location guidelines.

- One mile of pedestrian/bicycle trails per 2,500 population.

Village 7 Specific Plan Project – June 2009

Village 7's mobility elements address more than roadways. It focuses on creating a comprehensive and multi-modal transportation system that offers multiple choices with pedestrian ways, bikeways, roadways, and NEV routes. The approach is to create "complete streets" that include facilities and designs for all users to help reduce air pollution and greenhouse gas emissions (GHG). The design elements relative to bikes include:

- Improving street connectivity in and between neighborhoods.
- Creating a balanced mobility system that accommodates all forms of mobility for walking, cycling, transit, and driving.
- Creating streets that relate functionally to their corresponding land use.
- Supporting the use of NEVs
- Providing continuous pedestrian and bicycling facilities that are safe to use and accessible throughout Village 7, which allow for travel free of major impediments or obstacles.
- Incorporating measures into street design that minimizes storm water run-off.

City of Lincoln – Short Range Transit Plan – April 2009

Goal II: Fulfill mobility needs of the elderly, disabled, and other transportation-disadvantaged individuals.

- Objective – Link residential areas with employment and activity centers.
- Objective – Ensure the service meets the needs of the ride-dependent population

City of Lincoln General Plan, March 2008

The General Plan provides for the following policies under Section 5. Transportation and Circulation:

Goal T-1: To coordinate long-term regional planning decisions with California Department of Transportation (Caltrans) and the Placer County Transportation Planning Agency (PCTPA).

Policy T-1.1 Circulation Diagram – The City shall utilize and maintain a Circulation Diagram to designate the classification for all major roadways, designate significant transit facilities, and designate bicycle facilities.

Policy T-1.2 Coordination – Coordinate with Caltrans in developing transportation policies pertaining to SR 65 and SR 193.

Policy T-1.3 Coordination– Coordinate with SACOG in developing transportation policies pertaining to SR 65 and SR 193.

Policy T-1.4 Coordination - Coordinate with Placer County in developing City transportation policies that reflect PCTPA's transportation policies.

Goal T-2: Continue to ensure provision and maintenance of a safe and efficient system of streets to meet demands of existing and planned development.

Policy T-2.2 New Development – The City shall ensure that streets and highways will be available to serve new development by requiring detailed traffic studies and necessary improvements as a part of all major development proposals.

Policy T-2.3 Level of Service – Strive to maintain a LOS C at all signalized intersections in the City during the p.m. peak hours. Exceptions to this standard may be considered for intersections where the city determines that the required road improvements are not acceptable (i.e., due to factors such as the cost of improvements exceeding benefits achieved, results are contrary to achieving a pedestrian design, or other factors) or that based upon overriding considerations regarding project benefits, an alternative LOS may be accepted. For purposes of this policy, City intersections along McBean Park Drive between East Avenue and G Street, and G Street between First Street and Seventh Street, are excluded from the LOC C standard, and will operate at a lower LOS.

Policy T-2.7 Above-Grade Crossings – The City shall ensure that traffic mitigation fees are sufficient to provide for the construction of new grade-separated crossings. The City shall support the construction of additional above grade crossings of the Union Pacific Railroad tracks and Highway 65 in order to enhance city-wide circulation. Potential crossings may include a connection of Nicolaus Road and Gladding, and a crossing of Wise Road.

Policy T-2.9 SR 65 Bypass – The City shall support construction of the SR 65 Bypass with interchanges provided at Ferrari Ranch Road, the realigned Nelson Lane, Nicolaus Road and Wise

Road. The City will continue to place a very high priority on the construction of the Highway 65 Bypass and to aggressively pursue its funding and construction with Caltrans, SACOG, Placer County Transportation and Planning Agency, and appropriate Federal and private resources.

Policy T-2.17 Conflicting Traffic Movements – The City shall require that existing and future arterial improvements are designed to minimize conflicting traffic movements such as turning, curb parking, and frequent stops.

Policy T-2.20 Coordinate with Neighboring Jurisdiction – The City will coordinate with neighboring jurisdictions to determine if acceptable and compatible LOS, consistent with the circulation elements and LOS set forth in the affected jurisdiction’s general plan, on the roadways that extend into other jurisdictions can be achieved.

Policy T-4.7 Electric Golf Carts – Through the use of golf Transportation Plans, the City shall support the use of electric golf carts within the City, and providing the necessary infrastructure to support them, when feasible.

Policy T-4.8 Neighborhood Electric Vehicles – Through the implementation of the Neighborhood Electric Vehicle Plan, the City shall support the use of NEVs and similar vehicles by providing where possible for street classifications that provide for their use and ensure connectivity throughout the City.

Goal T-5: To provide an interconnected system of bikeways that would provide users with direct linkages at a city and regional level.

Policy T-5.1 Develop Bike Lanes – The City shall require bike lanes in the design and construction of major new street and highway improvements, and to establish bike lanes on those city streets wide enough to accommodate bicycles safely.

Policy T-5.2 Promote Regional Bikeway – The City shall promote and support the development of local and regional bikeway links as established in the City Bikeways Master Plan and the County Bikeway Master Plan.

Policy T-5.3 Promote Bicycle Safety – The City shall improve bicycle safety by developing routes that will minimize conflicts with vehicles and pedestrians.

Policy T-5.4 Bicycle and Pedestrian Crossings – The City shall provide pedestrian/bicycle crossings at appropriate intervals along new roadways that will adequately serve new large-scale commercial office, industrial development, and residential development as well as parks and schools.

Policy T-5.5 Traffic Control Devices for Bicyclists – The City shall provide traffic signal phasing that is adequate for bicycle turning and straight-through movements.

Policy T-5.6 Trails and Pathways to Retail and Employment Centers – The City shall promote pedestrian convenience and safety through development conditions requiring sidewalks, walking paths, or hiking trails that connect residential areas with commercial, shopping, and employment centers. Where feasible, trails will be looped and interconnected.

Policy T-5.7 Trails and Pathways along Creeks and Wetland Areas – The City shall encourage the development of trails and pathway along the edges of creeks and wetland areas. Where feasible, trails will be looped and interconnected.

Policy T-5.8 Pedestrian Access – The City shall encourage specific plans and development plans to include design of pedestrian access that enables residents to walk from their homes to places of work, recreation and shopping.

Policy T-5.9 Review Site Plans for Pedestrian Accessibility – The City shall review site plans to determine if residential, commercial and office land uses are designed for pedestrian access. Future developments shall contain an internal system of trails that link schools, shopping centers, and other public facilities with residences in order to provide pedestrians with sufficient internal access.

Final Lincoln Crossing Specific Plan – April 1992

Section 3.2.2 General commercial and Business/Professional Policies

Policy 5 – Pedestrian and bicycle access to commercial areas shall be facilitated by the creation of sidewalks, pedestrian/bicycle paths and bicycle parking facilities.

Section 3.2.3 Circulation Policies

Policy 5 – All streetscape on public and private streets, including sidewalks, pedestrian paths, bicycle lanes and landscaping, shall be designed and constructed in accordance with the Circulation Element of this Plan and the Design Guidelines which accompany this plan.

Policy 11 – Pedestrian and bicycle paths shall be located adjacent to arterial and collector street rights-of-way and in Nature Preserve Areas. Public access rights shall be guaranteed in all instances.

Section 3.2.6 Public Facilities and Services Policy

Policy 4 – Pedestrian and bicycle paths shall be provided to link schools and parks with adjoining residential villages.

Policy 7 – Pedestrian and bicycle paths and sidewalks shall be provided to all public schools.

Design Guidelines for the Three D Property, September 1995

The following general guidelines outline the typical elements to be followed in development of Streetscape Designs.

Section 3.2 Primary Residential Streets – Primary residential streets provide a transition roadway between minor residential surface streets and local collector streets such as Moore Road. They occupy a 50-foot wide right-of-way and provide a 12-foot wide travel lane, 6-foot parking/bicycle

lane, 3 foot rolled curb and gutter and 4-foot sidewalk on each side of the street. A twelve and one half foot wide easement for public utilities and maintenance extends from the back of sidewalks onto each lot.

Notice of Preparation and Initial Study for Foskett Ranch, December 1999

The following objective guides development of the proposed project.

Objective 7 – Make walking and bicycle opportunities appealing alternative to driving, thereby reducing automobile trips and their impacts.

General Development Plan and Zoning Regulation for the Sterling Pointe Specific Plan, June 1999

The specific plan provides mandatory design elements that must be embodied in all projects proposed within the Sterling Pointe Plan area.

Pedestrian Areas – Bicycling shall be encouraged through the provision of bicycle parking areas near building entrances. Bicycle parking facilities shall be secure and fully integrated into the overall site and architectural design.

Draft Initial Study and Notice of Intent to Adopt a Mitigated Negative Declaration for the Nicolaus Road Bicycle Path, July 2000

Project Objective – The Nicolaus Road Bicycle Path is a planned improvement in the City of Lincoln General Plan and Public Facilities Element (PFE). The City intends to incrementally develop bicycle facilities within the existing city area as part of individual projects. Nicolaus Road was envisioned to include a Class III bicycle route from downtown Lincoln to Joiner Parkway and a Class I bicycle path from Joiner Parkway west. The proposed project is part of a safe and convenient bicycle system within the City of Lincoln that provides a direct link between the residential and commercial areas west of Lakeside Drive to the Lincoln downtown area. As a Class I Bicycle path, the project would provide a separated facility that would increase safety for pedestrians and bicyclists along Nicolaus Road.

Town of Loomis, Bicycle Transportation Plan - 2010

The goals, policies and implementation measures in intended to provide the Town with specific direction for improving the bicycle facilities within Loomis. Goals and policies with application to the City of Lincoln are highlighted below.

Goal 1: Achieve a balanced transportation system that is consistent with the Town of Loomis General Plan Circulation Element and provides residents with a variety of transportation choices, including automobile, transit, bicycle, and pedestrian options.

Goal 2: Establish a safe, comfortable, convenient and highly-connected bikeway system that meets the transportation and recreation needs of avid, regular, youth and beginning bike

riders, while balancing the needs of other transportation types including automobiles, train, transit and pedestrians.

Policy 1 – Provide a range of bikeway types, including bike lanes on arterial streets, bike lanes on some collector streets, bike routes on selected low volume/low speed streets and off-street bike paths.

Policy 2 – the bikeway system should provide convenient and comfortable connections between residential areas, schools, parks, public transit stops, shopping centers, employment centers and other uses.

Policy 3 – The Town should cooperatively pursue connections to neighboring jurisdictions to ensure regional bicycle accessibility.

Policy 4 – Promote land use development that enhances connectivity for transportation and recreation use, and lessen the distance of bicycle and pedestrian travel between uses.

Policy 5 – Class I Off-Street bike paths are preferred when they result in bikeway continuity, safe and preferably separated crossings of major roads, and minimal traffic cross-flow.

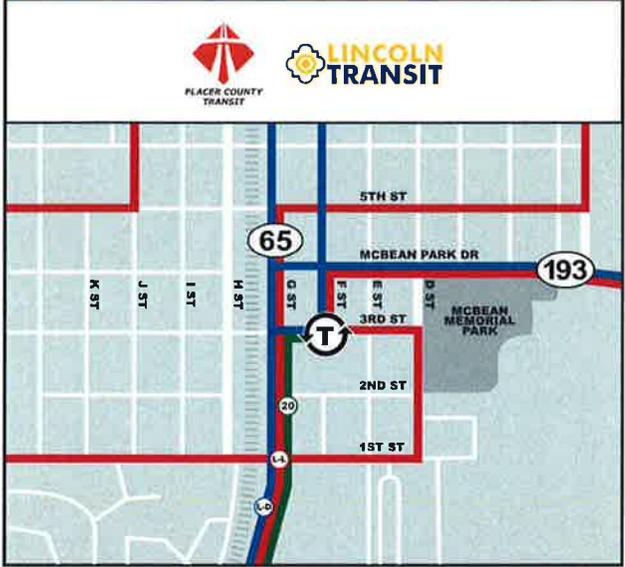
Policy 13 – Provide bicycle signal detectors per local and state law (AB 1581) at all new or significantly modified signalized intersections with bike lanes and, if feasible, retrofit existing traffic signals so that bike detections is provided.

Policy 14 – Reprogram signal timing at intersections that do not allow sufficient time for cyclists to clear the intersection.

APPENDIX C

Maps of Transit Service Areas and Transfer Points for South Placer County

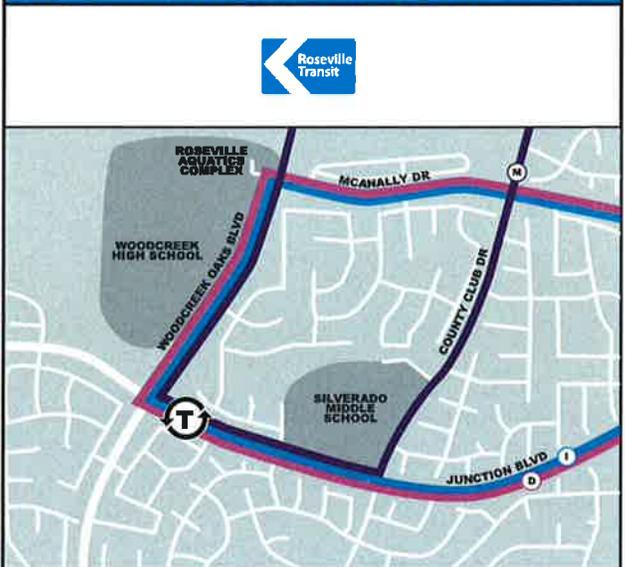
A 3RD / F ST TRANSFER POINT



B TWELVE BRIDGES TRANSFER POINT



C JUNCTION TRANSFER POINT



D WATT AVE / I-80 TRANSFER POINT



E LOUIS / ORLANDO TRANSFER POINT



- PLACER COUNTY TRANSIT**
- Auburn to Light Rail 10
 - Lincoln / Sierra College 20
 - Highway 49 30
 - Alta / Colfax 40
 - Taylor Road Shuttle 50

- AUBURN TRANSIT**
- Auburn A AA
 - Auburn B AB

- ROSEVILLE TRANSIT**
- Route A
 - Route B
 - Route C
 - Route D
 - Route G
 - Route I
 - Route L
 - Route M
 - Route R
 - Route S

- LINCOLN TRANSIT**
- Downtown Circulator L
 - Lincoln Loop LL



F CIVIC CENTER TRANSFER POINT



G SIERRA GARDENS TRANSFER POINT



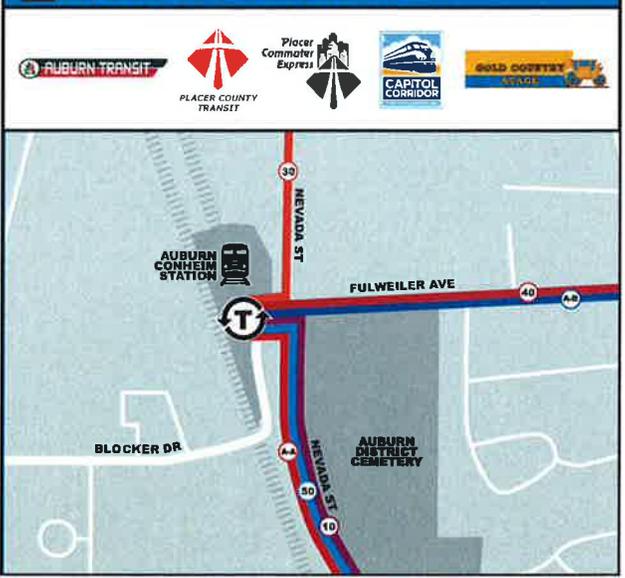
H GALLERIA TRANSFER POINT



I SIERRA COLLEGE TRANSFER POINT



J AUBURN TRANSFER POINT



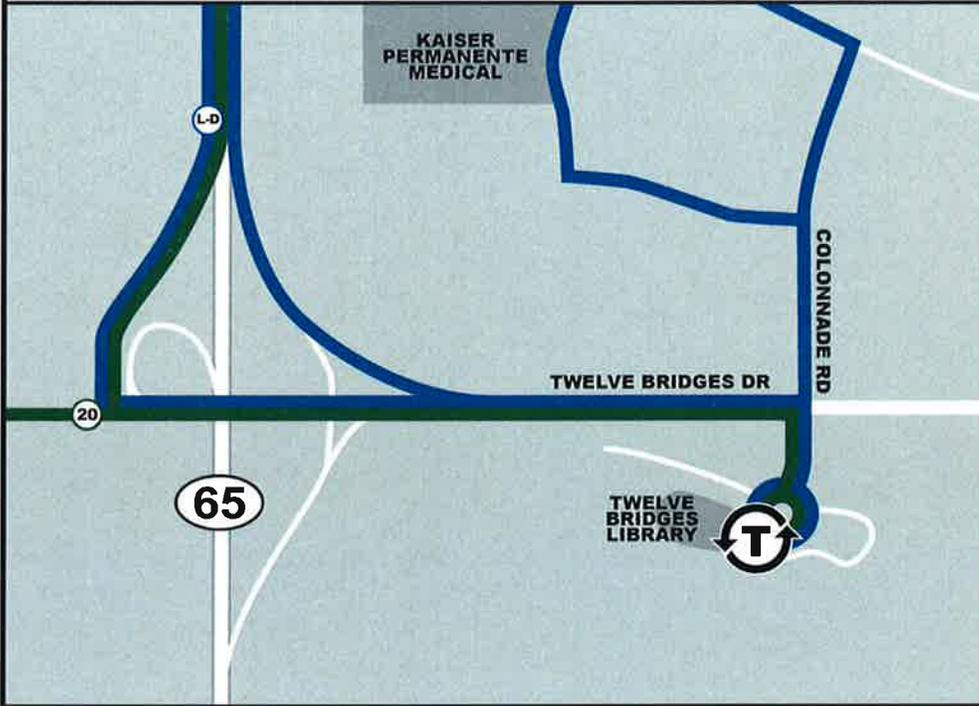
- PLACER COUNTY TRANSIT**
- Auburn to Light Rail (10)
 - Lincoln / Sierra College (20)
 - Highway 49 (30)
 - Alta / Golfax (40)
 - Taylor Road Shuttle (50)

- AUBURN TRANSIT**
- Auburn A (AA)
 - Auburn B (AB)
- LINCOLN TRANSIT**
- Downtown Circulator (LD)
 - Lincoln Loop (LC)

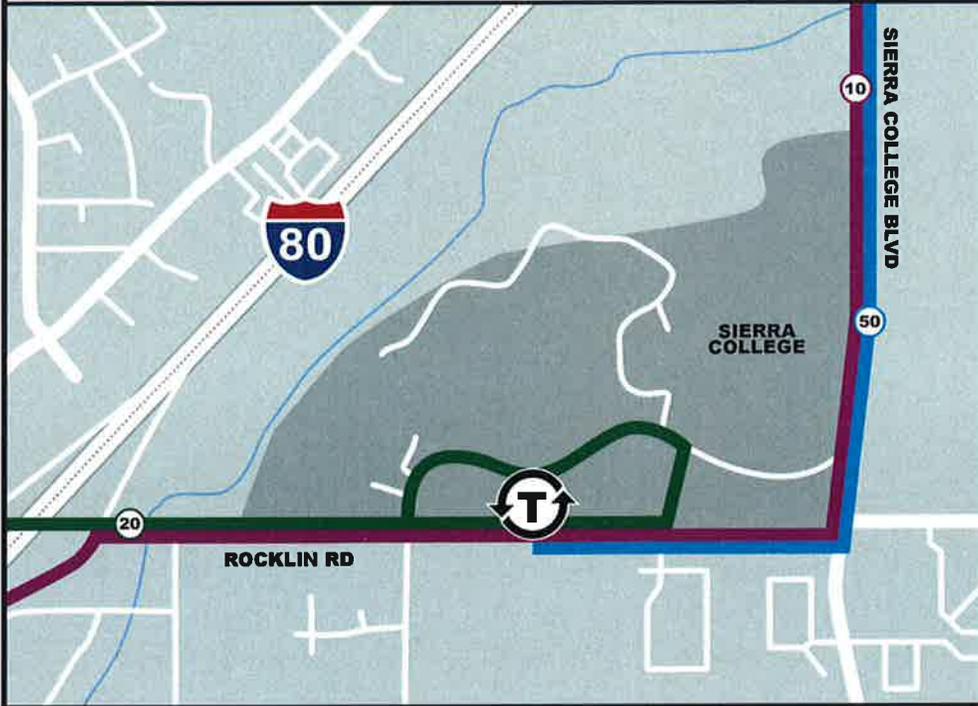
- ROSEVILLE TRANSIT**
- Route A (A)
 - Route B (B)
 - Route C (C)
 - Route D (D)
 - Route G (G)
 - Route I (I)
 - Route L (L)
 - Route M (M)
 - Route R (R)
 - Route S (S)



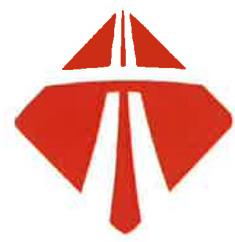
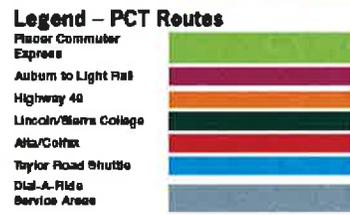
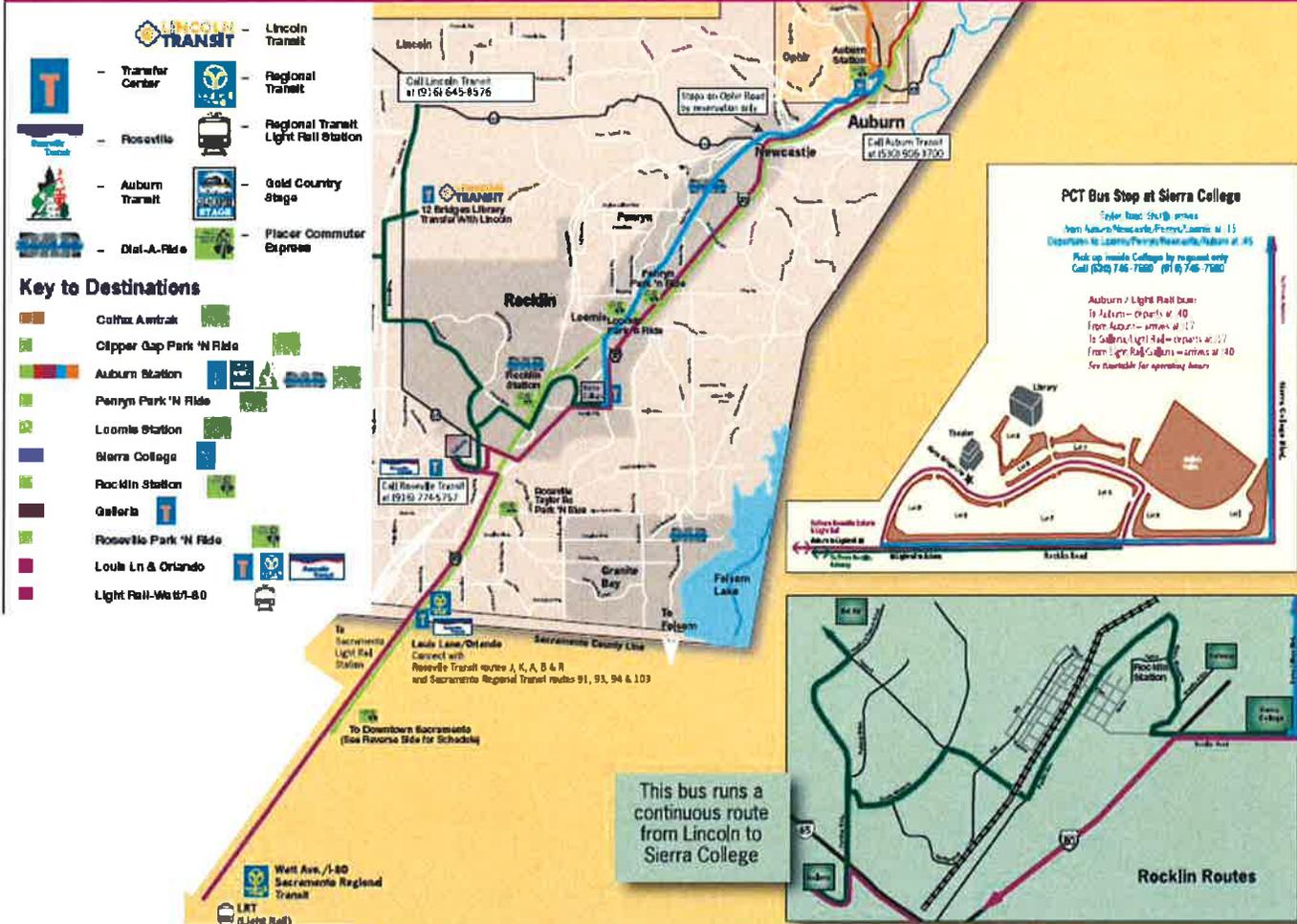
B TWELVE BRIDGES TRANSFER POINT



I SIERRA COLLEGE TRANSFER POINT



Auburn to Light Rail Route



PLACER COUNTY TRANSIT
 "We're going your way!"
 (530) 885-BUSS, (916) 784-6177
 Email: pct@placer.ca.gov

Taylor Road Shuttle



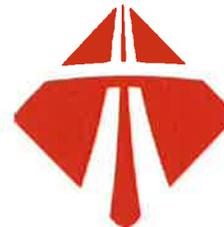
	Lincoln Transit
	Transfer Center
	Regional Transit
	Roseville
	Auburn Transit
	Dial-A-Ride
	Regional Transit Light Rail Station
	Gold Country Stage
	Placer Commuter Express

Key to Destinations

	Cofax Amtrak
	Clipper Gap Park 'N Ride
	Auburn Station
	Peeryn Park 'N Ride
	Loomis Station
	Sierra College
	Rocklin Station
	Gellers
	Roseville Park 'N Ride
	Louis Ln & Orlando
	Light Rail-We 17-80

Legend - PCT Routes

	Placer Commuter Express
	Auburn to Light Rail
	Highway 40
	Lincoln/Sierra College
	Alta/Cofax
	Taylor Road Shuttle
	Dial-A-Ride Service Areas



PLACER COUNTY TRANSIT
"We're going your way!"
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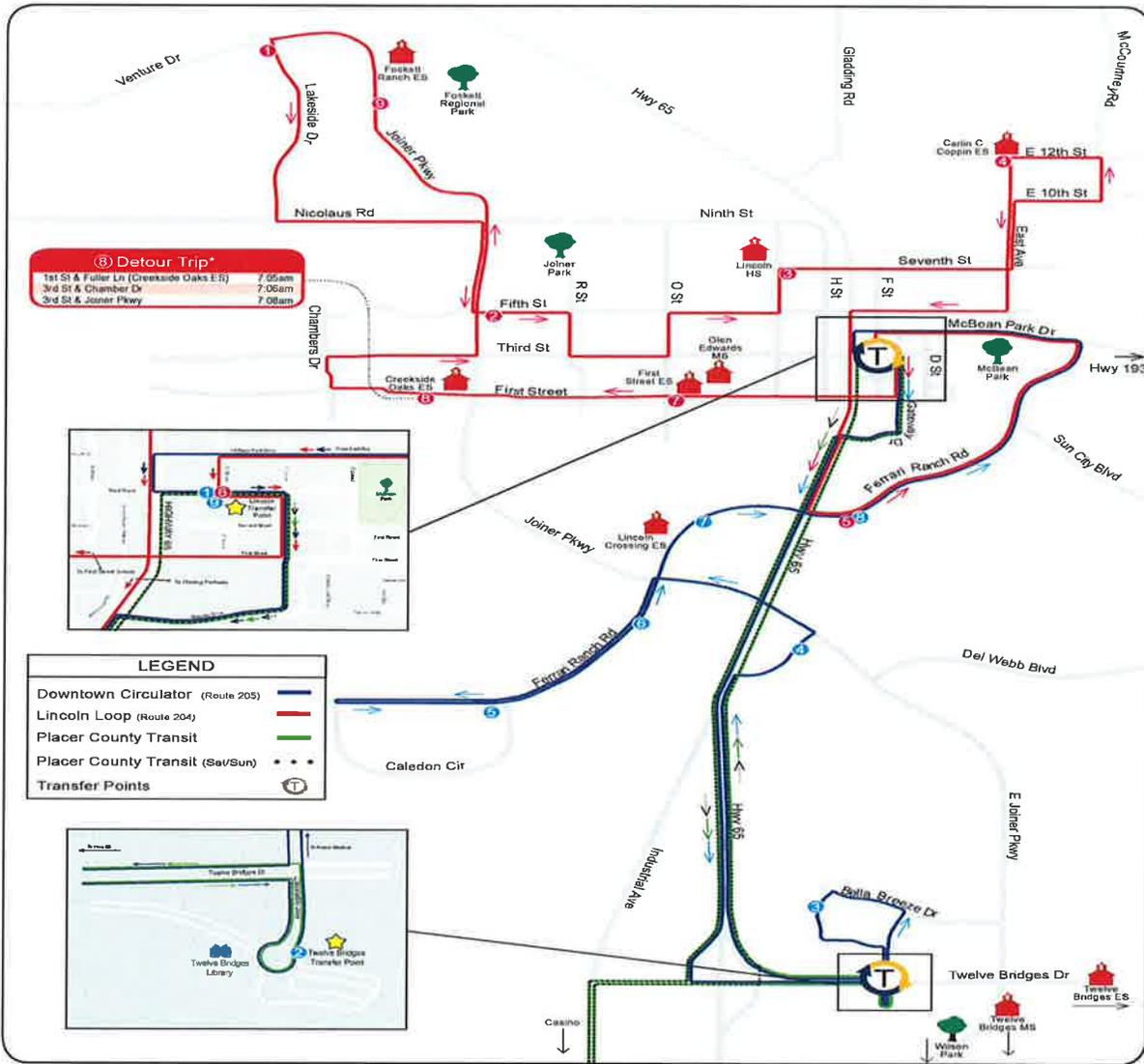
APPENDIX D

Map of Lincoln Loop and Downtown Circulator

DOWNTOWN CIRCULATOR (ROUTE 205)

①	②	③	④	⑤	⑥	⑦	⑧	⑨	
3rd St & F St (Depart)	Twelve Bridges Library (Transfer Point) (Arrive)	Kaiser Medical / Wilson Park* (Depart)	Sterling Parkway	Ferrari Ranch & Caledon Circle (East)	Lincoln Marketplace	Ferrari Ranch & Kensington Lane	Safeway Shopping	3rd & F Sts (Arrive)	
6:35 AM	6:55 AM	7:00 AM	---	7:07 AM	7:14 AM	7:17 AM	7:18 AM	---	7:25 AM
7:35 AM	7:55 AM	8:00 AM	---	8:07 AM	8:14 AM	8:17 AM	8:18 AM	8:20 AM	8:25 AM
8:35 AM	8:55 AM	9:00 AM	---	9:07 AM	9:14 AM	9:17 AM	9:18 AM	9:20 AM	9:25 AM
9:35 AM	9:55 AM	10:00 AM	---	10:07 AM	10:14 AM	10:17 AM	10:18 AM	10:20 AM	10:25 AM
10:35 AM	10:55 AM	11:00 AM	---	11:07 AM	11:14 AM	11:17 AM	11:18 AM	11:20 AM	11:25 AM
11:35 AM	11:55 AM	12:00 PM	---	12:07 PM	12:14 PM	12:17 PM	12:18 PM	12:20 PM	12:25 PM
12:35 PM	12:55 PM	1:00 PM	---	1:07 PM	1:14 PM	1:17 PM	1:18 PM	1:20 PM	1:25 PM
1:35 PM	1:55 PM	2:00 PM	---	2:07 PM	2:14 PM	2:17 PM	2:18 PM	2:20 PM	2:25 PM
2:35 PM	2:55 PM	3:00 PM	---	3:07 PM	3:15 PM	3:17 PM	3:20 PM	3:20 PM	3:25 PM
3:35 PM	3:55 PM	4:00 PM	---	4:07 PM	4:14 PM	4:17 PM	4:18 PM	4:20 PM	4:25 PM
4:35 PM	4:55 PM	5:00 PM	---	5:07 PM	5:14 PM	5:17 PM	5:18 PM	5:20 PM	5:25 PM

*Due to low ridership at Kaiser Medical / Wilson Park stops, service to these stops must be requested by notifying the driver at loading or call Lincoln Transit for pickup.



LINCOLN LOOP (ROUTE 204)

①	②	③	④	⑤	⑥	⑦	⑧	⑨	
Venture Dr & Lakeside Dr	Joiner Pkwy & 5th St	7th St & J St (Lincoln HS)	12th St & East Ave (Coppin ES)*	Ferrari Ranch Rd & Hwy 65 (Safeway)*	3rd St & F St (Transfer Point) (Arrive)	1st St & O St (Depart)	1st St & Fuller Ln (First Street ES)	Joiner Pkwy & Fiskell Regional Park (Creekside ES)	
7:00 AM	7:11 AM	7:16 AM	7:22 AM	---	7:25 AM	7:35 AM	7:38 AM	7:05 AM	7:53 AM
8:00 AM	8:04 AM	8:10 AM	8:16 AM	---	8:25 AM	8:35 AM	8:38 AM	8:45 AM	8:55 AM
9:00 AM	9:04 AM	9:10 AM	9:16 AM	---	9:25 AM	9:35 AM	9:38 AM	9:45 AM	9:55 AM
10:00 AM	10:04 AM	10:10 AM	10:16 AM	---	10:25 AM	10:35 AM	10:38 AM	10:45 AM	10:55 AM
11:00 AM	11:04 AM	11:10 AM	11:16 AM	---	11:25 AM	11:35 AM	11:38 AM	11:45 AM	11:55 AM
12:00 PM	12:04 PM	12:10 PM	12:16 PM	---	12:25 PM	12:35 PM	12:38 PM	12:45 PM	12:55 PM
1:00 PM	1:04 PM	1:10 PM	1:16 PM*	---	1:25 PM	1:35 PM	1:38 PM	1:45 PM	1:55 PM
2:00 PM	2:04 PM	2:10 PM	2:16 PM*	---	2:25 PM	2:35 PM	2:38 PM	2:45 PM	2:55 PM
3:00 PM	3:04 PM	3:10 PM	3:16 PM	---	3:25 PM	3:35 PM	3:38 PM	3:45 PM	3:55 PM
4:00 PM	4:04 PM	4:10 PM	4:16 PM	---	4:25 PM	4:35 PM	4:38 PM	4:45 PM	4:55 PM
5:00 PM	---	---	---	---	---	5:25 PM	5:32 PM	5:35 PM	5:40 PM

*Service to the 12th Street stop for the 1:40pm and 2:40pm pickups or Safeway Center stop must be requested by notifying the driver at loading or call Lincoln Transit.

APPENDIX E

Tour de Lincoln MAP & Information

Tour de Lincoln

Lincoln's Annual Recreational Bike Ride

The Tour de Lincoln is a benefit bike ride for the Lincoln Volunteer Center. The Tour offers a wonderful Spring day of riding the scenic back roads of Lincoln and South Placer County. Entrants pay a fee to enter the ride, and can pick from four different routes; The Pleasure Cruise (10 miles), The Rolling Hills (20 miles), The Country Climb (40 miles) and the Metric Century (63 miles). All rides start and finish in McBean Park in Lincoln.

The Pleasure Cruise rolls out of McBean Park and passes through the cottonwood trees that line the banks of the Auburn Ravine. The course consists almost completely of Class 2 bike lanes, and rolls along a section of the beautiful Lincoln Hills Golf Course. It's a great family ride.

The Rolling Hills consists of mild terrain and is a shorter version, with less vertical gain, than the Country Climb, includes beautiful scenery, and a rest stop midway through the route.

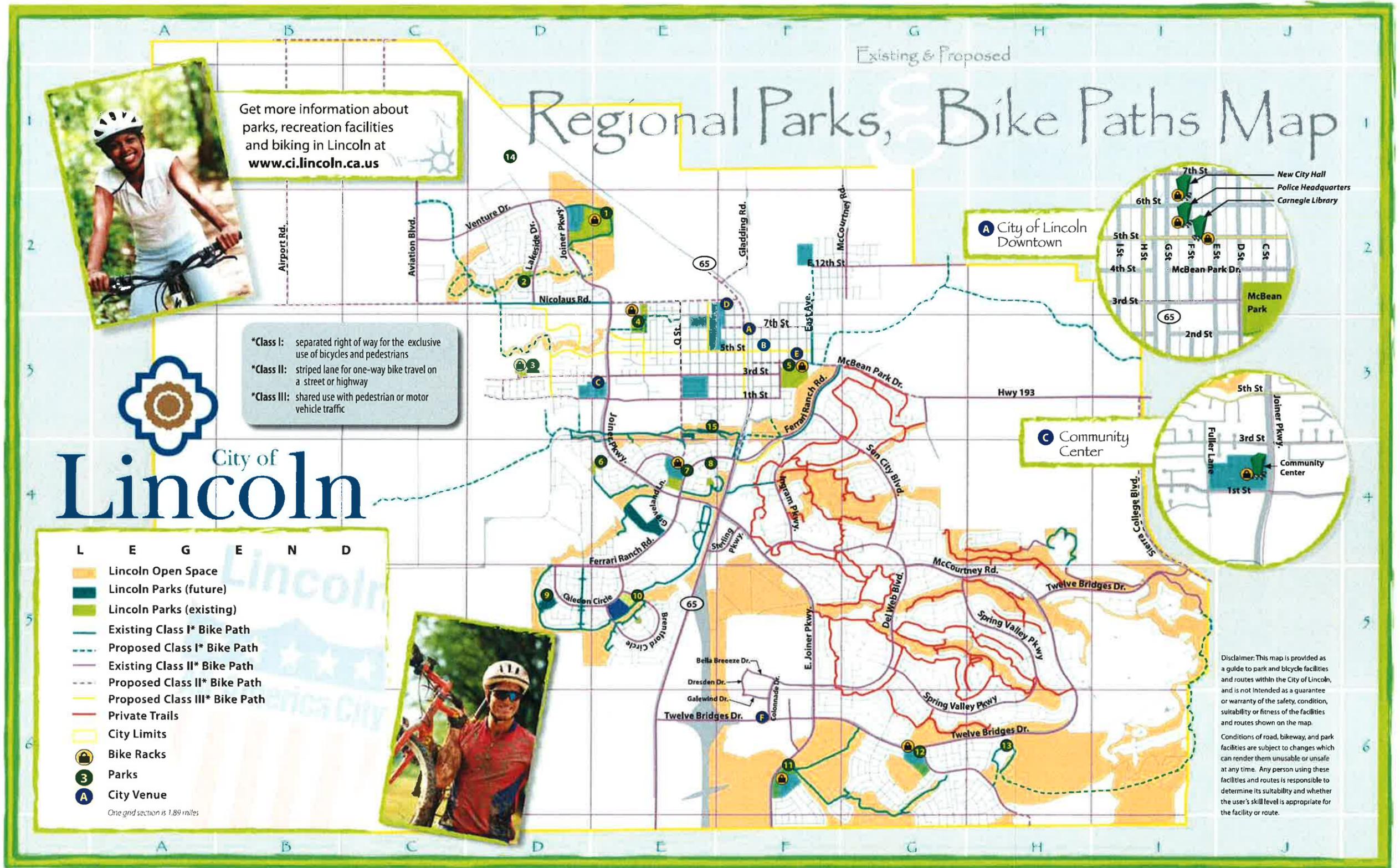
The Country Climb is a picturesque ride winding through the rolling hills and countryside between Lincoln and Auburn. This route has beautiful valley views, challenging climbs (over 1400' of vertical gain), and passes by several horse ranches. The Metric Century route is more of the same beautiful countryside, longer distance, with nearly 3500' of vertical gain.

Well stocked rest stops and sag support are located on all routes. Helmets are mandatory for all cyclists.

Riders check-in between 7 a.m. and 8 a.m. for the Country Climb and Metric Century, and 8 a.m. to 10 a.m. for the Pleasure Cruise and Rolling Hills. After check-in, riders may leave on their own after 8 a.m.

A post-ride barbecue lunch is served from 11 a.m. to 2 p.m.

Be sure to join us each May for a fun-filled day for the whole family! For more information on the Tour de Lincoln or the work of the Lincoln Volunteer Center, go to www.lincolnvolunteer.com, or phone 916-645-6254.



Places & Spaces To Get Fit In Lincoln....

Map Key	Grid Location	Location	Address								
A	F3	New City Hall	600 Sixth Street								
B	F3	Carnegie Library	590 Fifth Street								
C	E3	Community Center	2010 First Street	R		X		F			
D	F3	Lincoln High School	790 J Street						X		
E	F3	McBean Pool	61 McBean Park Drive								
F	F6	Twelve Bridges Library	485 Twelve Bridges Drive								
14	D1	Brown Park	1899 McClain Drive	B	X			X			
13	H6	Coyote Pond Park	2543 Old Kenmare Road	X	X						
1	E2	Foskett Regional Park	1911 Finney Way		X	X	R				
4	E3	Joiner Park	1701 Nicolaus Road	B	X	X	R				
6	E4	Machado Park	646 Downing Circle	X	X		X				
2	D2	Markham Park	1175 Toyon Circle	B	X	X					
5	F3	McBean Park	65 McBean Park Drive	B/R	X	X	R	F		X	X
10	E5	Pete Demas Park	1164 Stansbury Circle	B			X				
7	E4	Pete Singer Park	371 Danby Drive	X	X	X	X				
3	D3	Scheiber Park	2472 Third Street	X	X		X				
8	E4	Sheffield Park	681 Sheffield Lane	X	X		X				
12	G6	Twelve Bridges Park	2550 Eastridge Drive	X	X	X	R				
11	F6	Wilson Park	2325 E. Lincoln Parkway	X	X	X	R				
15	E3	Auburn Ravine Dog Park	1300 Green Ravine Drive								

Scheduled to open Spring 2009

Picnic Area

Playground

Restroom

Multi-use Grass Field

Basketball

Tennis

Horseshoe Pits

Skate Park

REGISTRATION SITE
 R= RESERVABLE
 B= BBQ
 F= FULL COURT

Do Not Pass on the Right

Motorists may not see a cyclist passing on the right and turn into your path.

Ride Predictably in a Straight Line

Ride to the right of faster traffic in a straight line more than a car door's width away from parked cars.

Avoid the Door Zone

When cars are parked on the road, ride outside the door zone about five feet away.

Turning at Intersections

The general rule is to use the right-most lane serving your destination.

Right Turns

Use right-turn-only lane when provided, or stay to the right side of the straight line.

Straight Through

Use the right-most through lane. Don't go straight in a lane marked "right turn only."

Left Turns

Don't turn left from the right side of the street. There are two ways to make a left turn: **(1) Like a motorist:** Signal, move into the left lane, and turn left; **(2) Like a pedestrian:** Dismount and walk your bike across an intersection.

Triggering Traffic Signals

Traffic signals are triggered by passing over "loop" detections in the auto lane and in some bike lanes. If positioned properly, bicycles usually trigger signals. Some loop detectors have a bike symbol that indicates the optimal position for your bike. Otherwise, position your bike directly over the filled-in cuts, if visible. When loops are not visible or the signal is not triggered, cross the intersection as a pedestrian.



One of the beautiful views from annual Tour de Lincoln bike ride

Bike Commuting

Bicycle commuting is an effective and inexpensive way to get to work. Even if you are only riding a couple days a week, it is a great way to exercise, save money on gas and vehicle maintenance, reduce air pollution and emissions, lower your stress level, and have fun.

Bike Commute Buddies

If you've thought about bicycling to work, but are not sure how to get started, talk to someone who's experienced. That's the idea behind the Sacramento Region 511 Bike. Buddy match. Use the experience gained by others to find the best route. Visit www.sacregion511.org/bicycling, or call 511 for more information.

Bike Racks

If you are biking around Lincoln, bike racks can be found at 640 Fifth Street, the Carnegie Library, 600 Sixth Street in downtown Lincoln and at the Twelve Bridges Library located at 485 Twelve Bridges Drive and at most commercial centers.

Bike & Bus

All Lincoln Transit buses have bike racks that are convenient and easy to use. Combined with transit, cycling can be a part of a commute over a longer distance. Find more information about Lincoln Transit online at www.cl.lincoln.ca.us, or call 916-434-2429.

Foskett Regional Park

Lincoln's 42-acre regional park is located off of Joiner Parkway in the northwest area of Lincoln, north of Nicolaus Road on Finney Way. The park features a four diamond lighted softball complex, a four field lighted soccer complex, concessions, a pedestrian and bike path and children's play equipment in three locations.

The regional park hosts a variety of tournaments, ranging from national tournaments to local recreation leagues. When the park is completely built out, it will also feature an aquatic center. For more information on the Foskett Regional Park or other City parks, contact the City's Recreation Department at 916-645-5298.

Bike Helmets

Wearing a helmet is not only smart – it's required by law if you are under age 18. Parents, set an example for your children by wearing a helmet.

Rules of the Road

Obey All Traffic Laws!

Signs & Signals

At stop signs or red lights, you are required to come to a complete stop. Proceed only when safe to do so and at signals on the green light.

Watch Your Speed

Observe posted speed limits. Never ride faster than is safe under existing conditions.

Respect Pedestrians' Rights

Pedestrians in crosswalks and on sidewalks have the right of way. Be especially aware of pedestrians with disabilities.

Scan the Road Behind You

Learn to look back over your shoulder without swerving left. Glancing also signals to drivers that you may change direction.

Watch for Cars Pulling Out

Make eye contact with drivers, proceed cautiously and assume they don't see you.

Bike Hand Signals

Use Hand Signals

Hand signals tell everyone what you intend to do. Signal as a matter of law, courtesy, and self-protection.

Left Turn Hand Signal

Left hand and arm extended horizontally to the left side of the bicycle.

Right Turn Hand Signal

Left hand and arm extended upward at the elbow to the left side of the bicycle, or right hand and arm extended horizontally to the right side of the bicycle.

Stop Hand Signal

Left hand and arm extended downward to the left side of the bicycle.

Lane Positioning

Ride to the Right

A general rule of traffic is that slower vehicles should stay to the right.

Important Contact Information

Emergency 911
 Non-Emergency/Police 916-645-4040
 To Report a Fire 916-645-4040
 Street Sweeping 916-434-2450
 Traffic Signal Operation 916-434-2450
 Report a Problem in a Park 916-434-2450
 Reserve a Park 916-645-5298
 Bikeway Information 916-645-5298

APPENDIX F

Summary of Proposed Bikeway System Costs

FUTURE BIKEWAY SYSTEM FOR 2012 CITY OF LINCOLN BICYCLE TRANSPORTATION PLAN

(Candidate Projects for Grant Funding Through The Bicycle Transportation Account)

Classification	Segment Name	From	To	Alignment	Distance (Feet)	Distance (Miles)	Distance (Kilometers)	Cost Per Mile (Low) ¹	Cost Per Mile (High) ¹
Class I Path	Nicolaus Rd	Aviation Blvd	Waverly Dr	Left	2,909.42	0.55	0.88	\$440,821	\$826,539
Class I Path	Moore Rd Gap Closure	Under SR 65			968.44	0.18	0.27	\$85,000	\$275,125
Class I Path	Sewer Access Easement (1st Street)	Joiner Pkwy	N. O Street		6,133.01	1.16	1.86	\$929,244	\$1,742,332
Class I Path	Village 19 Trail 2	Village 19 Trail 1	Twelve Bridges Dr		6,789.45	1.29	2.06	\$1,028,705	\$1,928,822
Class I Path	Village 19 Trail 1	All Links			883.28	0.17	0.27	\$133,830	\$250,931
Class I Path	Total Village 1 Path	All Links			44,276.07	8.39	13.42	6,708,494.96	12,578,428.04
Class I Path	Total Village 7 Path	All Links			40,765.27	7.72	12.35	6,176,556.36	11,581,043.17
Class I Path	Twelve Bridges Trail	Eastridge Drive	End		761.27	0.14	0.23	\$115,344	\$216,270
Class I Path	Twelve Bridges Trail	Eastridge Drive	End		10,311.99	1.95	3.12	\$1,562,423	\$2,929,544
Class I Path	East Ave	6th St	9th St		1,445.73	0.27	0.44	\$219,050	\$410,719
Class I Path	New Class I Connector	Nicolaus Rd	Existing Class I Path		12,213.39	2.31	3.70	\$1,850,514	\$3,469,714
Class I Path	Fuller Lane Path	Fuller Ln	New Class I Connector		966.85	0.18	0.29	\$146,493	\$274,674
Class I Path	Class I Connector	Existing Class I	Existing Class I		658.72	0.12	0.20	\$99,805	\$187,135
Total Class I Paths					129,082.89	24.45	39.09	19,496,280.52	36,671,275.98
Class 2 Bike Lanes	N Collector St	SR 193	end	Right	1,549.04	0.29	0.47	\$21,145	\$61,609
Class 2 Bike Lanes	Ferrari Ranch Road	SR 65	4th St.	Right and Left	6,133.01	1.16	1.86	\$1,944	\$243,927
Class 2 Bike Lanes	12th Street/Virginia Town Rd	Entire length		Restripe	5,431.90	1.03	1.65	\$4,189	\$216,041
Class 2 Bike Lanes	O St Bike Lanes	1st St	Nicolaus Rd	Right and Left	3,826.36	0.72	1.16	\$15,000	\$152,185
Class 2 Bike Lanes	3rd St Bike Lanes	East terminus	West terminus	Righ and Left	11,850.68	2.24	3.59	\$63,000	\$471,334
Class 2 Bike Lanes	Nicolaus Rd	Aviation Blvd	Waverly Dr	Right	2,909.42	0.55	0.88	\$1,944	\$115,716
Class 2 Bike Lanes	East Ave	12th St	4th St	Right	3,840.13	0.73	1.16	\$4,189	\$152,733
Class 2 Bike Lanes	N. Collector St	SR 193	Loop Collector St	Right and Left	1,404.64	0.27	0.43	\$703	\$55,866
Class 2 Bike Lanes	Loop Collector St	All Links		Right and Left	7,381.28	1.40	2.24	\$721	\$293,574
Class 2 Bike Lanes	S. Collector St	Loop Collector St	Oak Tree Ln	Right and Left	1,014.24	0.19	0.31	\$2,657	\$40,339
Class 2 Bike Lanes	Aviation Blvd	Existing Lanes	End	Right and Left	968.10	0.18	0.29	\$1,269	\$38,504
Class 2 Bike Lanes	Nicolaus Rd	City Limits	Aviation Blvd	Right and Left	4,622.64	0.88	1.40	\$17,187	\$183,855
Class 2 Bike Lanes	Gladding Rd	9th St	New Connector	Right and Left	3,316.04	0.63	1.00	\$2,410	\$131,888
Class 2 Bike Lanes	Gladding Rd	City Limits	New Connector	Right and Left	1,144.88	0.22	0.35	\$20,356	\$45,535
Class 2 Bike Lanes	O St	9th St	1st St	Right and Left	3,826.36	0.72	1.16	\$1,611	\$152,185
Class 2 Bike Lanes	8th St	O St	E St	Right and Left	2,916.96	0.55	0.88	\$1,098	\$116,016
Class 2 Bike Lanes	8th St	Joiner Pkwy	O St	Right and Left	2,951.54	0.56	0.89	\$215,138	\$117,391
Class 2 Bike Lanes	3rd St	City Limits	D St	Right and Left	11,850.68	2.24	3.59	\$2,582	\$471,334
Class 2 Bike Lanes	1st St	City Limits	Existing Class II Lanes	Right and Left	4,402.06	0.83	1.33	\$4,849	\$175,082
Class 2 Bike Lanes	E St	7th St	4th St	Right and Left	1,447.99	0.27	0.44	\$6,400	\$57,590
Class 2 Bike Lanes	Industrial Blvd	1st St	Athens Rd	Right and Left	17,896.23	3.39	5.42	\$2,341	\$711,782
Class 2 Bike Lanes	Virginiatown Rd	East Ave	Hungry Hollow Rd	Right and Left	5,431.90	1.03	1.65	\$12,302	\$216,042
Class 2 Bike Lanes	G St	Gladding Rd	7th St	Right and Left	2,229.69	0.42	0.68	\$1,690	\$88,681
Class 2 Bike Lanes	McCourtney Rd	Todd Ln	9th St	Right and Left	3,284.30	0.62	1.00	\$1,613	\$130,626
Class 2 Bike Lanes	Nelson Ln	Moore Rd	Nicolaus Rd	Right and Left	10,588.52	2.01	3.21	\$7,704	\$421,134
Class 2 Bike Lanes	Gladding Rd	City Limits	North	Right and Left	3,234.89	0.61	0.98	\$5,527	\$128,660
Class 2 Bike Lanes	Moore Rd	Nelson Ln	Ferrari Ranch Rd	Right and Left	1,468.71	0.28	0.45	\$1,908	\$58,414
Class 2 Bike Lanes	New Connector	Gladding Rd	East Ave	Right and Left	3,021.37	0.57	0.92	\$6,377	\$120,168
Total Class 2 Bike Lanes					129,943.56	24.61	39.38	\$427,855	\$5,168,210
Class 2 / NEV Lane (Separated)	Colonnade Drive Extension	Twelve Bridges Dr	E Lincoln Pkwy	Right and Left	1,827.56	0.35	0.55	\$72,687	\$173,065
Class 2 / NEV Lane (Separated)	E St/Ingram Connector	1st St	Ferrari Ranch Rd	Right and Left	1,703.39	0.32	0.52	\$67,748	\$161,306
Class 2 / NEV Lane (Separated)	Colonnade Dr	Bella Breze Dr	Lincoln Pkwy	Right and Left	1,314.75	0.25	0.40	\$52,291	\$124,502
Class 2 / NEV Lane (Separated)	Dresden Dr	Bella Breeze Dr	Lincoln Pkwy	Right and Left	3,845.49	0.73	1.17	\$152,946	\$364,156
Total Class 2 / NEV Lane (Separated)					8,691.18	1.65	2.63	\$345,672	\$823,029
Class 2 / NEV Lane (Shared)	Gladding Rd	9th St	New Connector	Right	3,398.12	0.64	1.03	\$135,153	\$321,792
Class 2 / NEV Lane (Shared)	New Connector	Gladding Rd	East Ave	Right	3,101.43	0.59	0.94	\$123,352	\$293,696
Class 2 / NEV Lane (Shared)	Oak Tree Lane	Village 1 Plan Bounda	Sierra College Blvd	Right and Left	9,885.08	1.87	3.00	\$393,157	\$936,087
Class 2 / NEV Lane (Shared)	Oak Tree Lane	SR 193	Village 1 Plan Boundary	Right and Left	2,565.53	0.49	0.78	\$102,038	\$242,948
Class 2 / NEV Lane (Shared)	SR 193	Oak Tree Ln	Stardust Ln	Right and Left	8,735.89	1.65	2.65	\$347,450	\$827,262
Class 2 / NEV Lane (Shared)	Oak Tree Lane Extension	Virginiatown Rd	SR 193	Right and Left	5,584.29	1.06	1.69	\$222,102	\$528,815
Class 2 / NEV Lane (Shared)	Leaveli Ln	SR193	Oak Tree Lane Extension	Right and Left	5,475.31	1.04	1.66	\$217,768	\$518,495
Class 2 / NEV Lane (Shared)	SR 193	Ferrari Ranch Rd	Oak Tree Ln	Right and Left	3,640.62	0.69	1.10	\$144,797	\$344,756
Class 2 / NEV Lane (Shared)	Ferrari Ranch Road	Caledon Cir	West edge of Village 7	Right and Left	4,145.38	0.79	1.26	\$164,873	\$392,555
Class 2 / NEV Lane (Shared)	Moore Road	Ferrarie Ranch Road	East edge of Village 7	Right and Left	4,538.72	0.86	1.38	\$180,517	\$429,803
Class 2 / NEV Lane (Shared)	Moore Road	Ferrari Ranch Road	South neighborhood in Villa	Right and Left	4,509.70	0.85	1.37	\$179,363	\$427,055
Class 2 / NEV Lane (Shared)	Village 7 Eastern Project Road	Ferrari Ranch Road	South neighborhood in Villa	Right and Left	4,678.22	0.89	1.42	\$186,066	\$443,013
Class 2 / NEV Lane (Shared)	Village 7 Eastern Project Road	Moore Road	Ferrari Ranch Road	Right and Left	1,929.91	0.37	0.58	\$76,758	\$182,756
Class 2 / NEV Lane (Shared)	Twelve Bridges Dr	Industrial Ave	Colonnade Dr	Right and Left	4,734.33	0.90	1.43	\$188,297	\$448,326
Class 2 / NEV Lane (Shared)	E Lincoln Pkwy	Twelve Bridges Dr	City Limits	Right and Left	5,111.85	0.97	1.55	\$203,312	\$484,076
Class 2 / NEV Lane (Shared)	Del Webb Blvd	E Lincoln Pw	Gatehouse Ln	Right and Left	798.40	0.15	0.24	\$31,755	\$75,606
Class 2 / NEV Lane (Shared)	Del Webb Blvd	E Lincoln Pkwy	Ingram Pkwy	Right and Left	1,272.72	0.24	0.39	\$50,620	\$120,523
Class 2 / NEV Lane (Shared)	Sierra College Blvd	SR 193	City Limits	Right and Left	9,817.81	1.86	2.98	\$390,481	\$929,716
Class 2 / NEV Lane (Shared)	Ingram Pkwy	Ferrari Ranch Rd	Existing Bike Facilities	Right and Left	417.31	0.08	0.13	\$16,598	\$39,518
Class 2 / NEV Lane (Shared)	4th St	E St	Ferrari Ranch Rd	Right and Left	2,836.54	0.54	0.86	\$112,817	\$268,612
Class 2 / NEV Lane (Shared)	New Roadway	Moore Rd	Ferrari Ranch Rd	Right and Left	2,482.02	0.47	0.75	\$98,717	\$235,040
Total Class 2 / NEV (Shared)					89,659.18	16.98	27.17	\$3,565,990	\$8,490,452
Total Proposed System Cost								\$23,835,798	\$51,152,967

Cost per mile¹ estimates are based on recent grant awards to communities in the U.S. and work completed by Fehr&Peers. The low-end cost usually apply where little grading or demolition is necessary. The high-end cost typically involves road or shoulder widening, right-of-way, and/or utility repositioning

Summary of Existing System of Bikeways

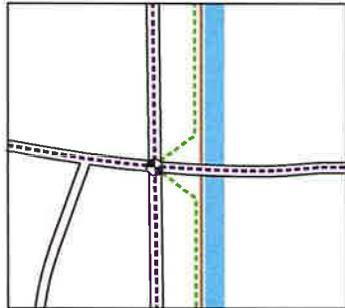
Existing System	Class I	Class 2	Class 2/NEV (Sparted)	Class 2/NEV (Shared)	Total
Feet	58,353.71	115,004.37	57,612.08	39,396.65	270,366.81
Miles	11.05	21.78	10.91	7.46	51.20
Kilometers	17.68	34.85	17.46	11.94	81.92

Summary of Proposed System of Bikeways

Proposed System	Class I	Class 2	Class 2/NEV (Sparted)	Class 2/NEV (Shared)	Total
Feet	129,082.89	129,943.56	8,691.20	89,659.20	357,376.85
Miles	24.45	24.61	1.65	16.98	67.69
Kilometers	39.12	39.38	2.64	27.17	108.30

APPENDIX G

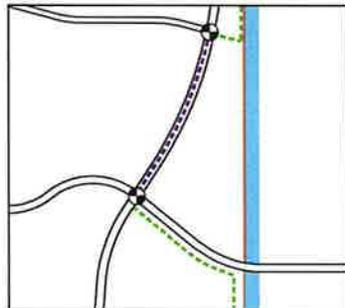
Prototype Crossing Designs and Costs



PROTOTYPE "A"

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> - Bikeway Crossing Location is Easy to Identify - Low Cost - Only Requires Crossing One Major Roadway Approach 	<ul style="list-style-type: none"> - Increases Delay for Vehicles at Intersection - Discontinuous Off-Street Bikeway Facility - Increases Conflicts between Vehicles, Pedestrians, and Bicycles

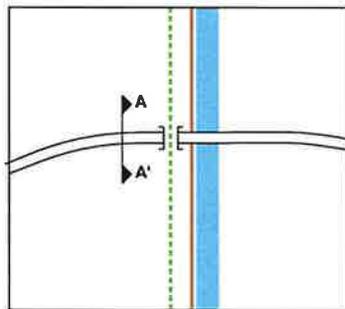
Construction Cost = <\$100,000/Location



PROTOTYPE "B"

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> - Low to Moderate Cost 	<ul style="list-style-type: none"> - Increases Delay for Vehicles at Intersection - Discontinuous Off-Street Bikeway Facility - Increases Conflicts between Vehicles, Pedestrians, and Bicycles - May Discourage Less Experienced Bicyclists - Requires Multiple Roadway Crossings - Bikeway Crossing Locations are More Difficult to Identify

Construction Cost = <\$250,000/Location



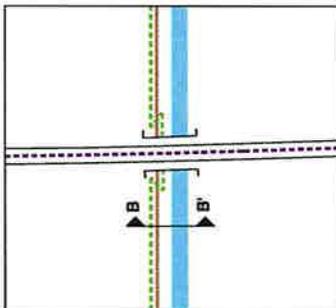
PROTOTYPE "C"

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> - Continuous Off-Street Bikeway Facility - No Conflicts with Vehicles - No Impact to Intersection Operations - May Encourage Use by Less Experienced Bicyclists 	<ul style="list-style-type: none"> - Moderate to High Cost - Bridge May Not Be Consistent with Aesthetic Standards of Community

Construction Cost = >\$500,000/Location



Cross Section A-A'



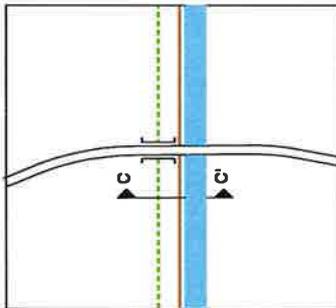
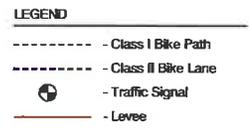
PROTOTYPE "D"

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> - Continuous Off-Street Bikeway Facility - No Conflicts with Vehicles - No Impact to Intersection Operations 	<ul style="list-style-type: none"> - Moderate to High Construction and Maintenance Cost - Difficult to Construct in Areas with High Groundwater Table - Potential Safety Concerns Given Limited Visibility of Crossing - May Discourage Some Less Experienced Bicyclists - May Experience Flooding, Which Would Limit Use

Construction Cost = >\$500,000/Location



Cross Section B-B'



PROTOTYPE "E"

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> - Continuous Off-Street Bikeway Facility - No Conflicts with Vehicles - No Impact to Intersection Operations 	<ul style="list-style-type: none"> - High Cost - Difficult to Construct in Areas with High Groundwater Table - Potential Safety Concerns Given Limited Visibility of Crossing - May Discourage Some Less Experienced Bicyclists

Construction Cost = >\$500,000/Location



Cross Section C-C'

APPENDIX H

Priority Project Descriptions



SEGMENT	CLASS	LENGTH (km)	ESTIMATED COST	DESCRIPTION
1	I	.27 (km)	\$85,000	Proposed multi-use pathway connection to correct neighborhood isolation caused by Lincoln Bypass construction. Approximately 900 feet long and 10 feet wide. The project is subject to Caltrans approvals and maintenance agreements.

NOTES:

(1) The City of Lincoln makes no claims as to the safety of any of the facilities shown in this map. The purpose of this map is to identify potential bikeway facilities for funding and implementation. For more information please contact the City of Lincoln at (916) 434-2470.

(2) The final designation of bikeways on this map may change when detailed technical analysis is developed for the individual projects as they advance to implementation.

LEGEND

--- Class I Bicycle Path (Proposed)



Not to Scale

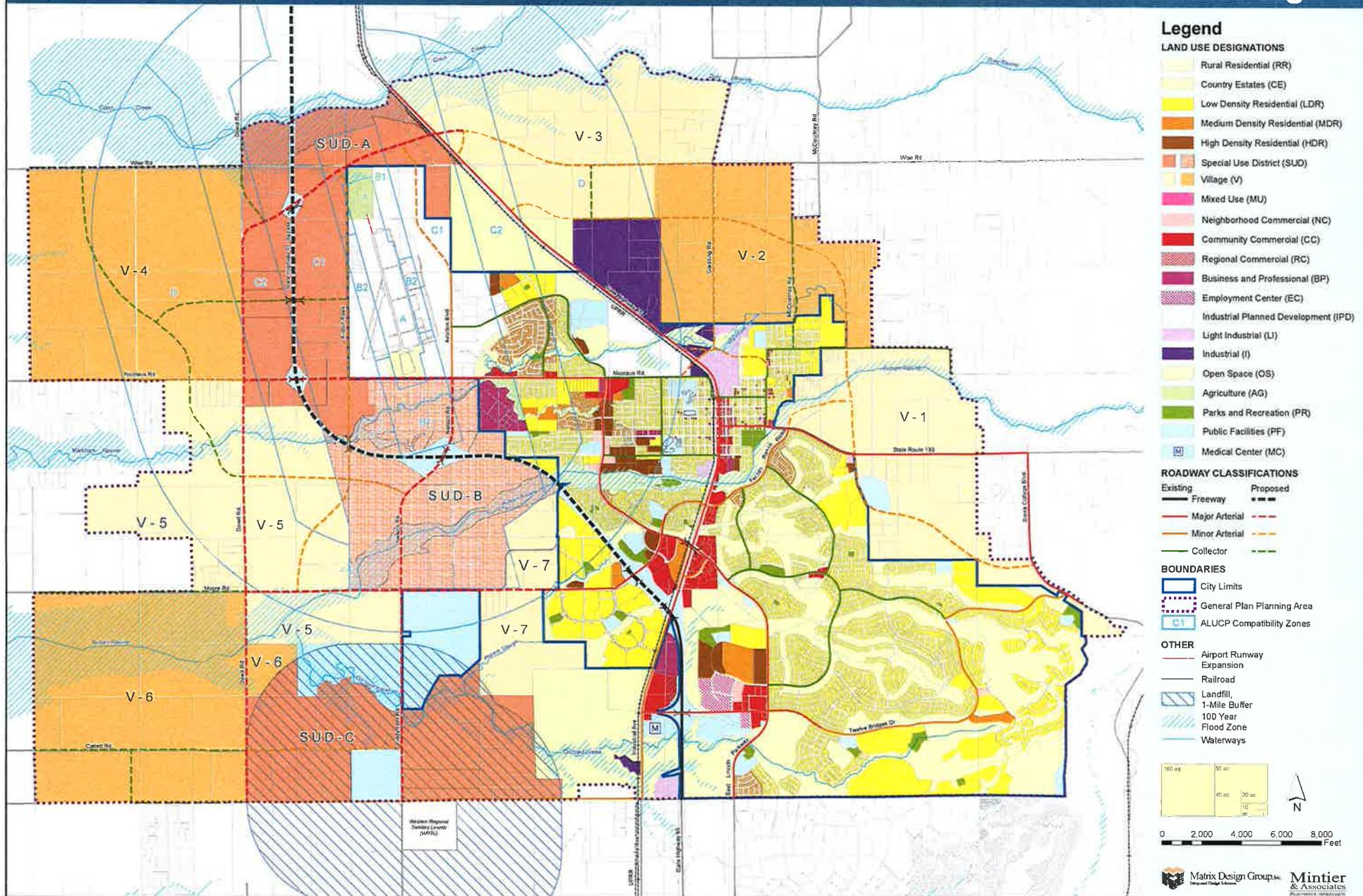


APPENDIX I

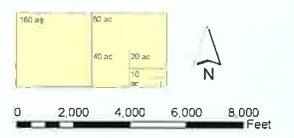
General Plan Land Use and Circulation Diagram



Land Use and Circulation Diagram



- ### Legend
- LAND USE DESIGNATIONS**
- Rural Residential (RR)
 - Country Estates (CE)
 - Low Density Residential (LDR)
 - Medium Density Residential (MDR)
 - High Density Residential (HDR)
 - Special Use District (SUD)
 - Village (V)
 - Mixed Use (MU)
 - Neighborhood Commercial (NC)
 - Community Commercial (CC)
 - Regional Commercial (RC)
 - Business and Professional (BP)
 - Employment Center (EC)
 - Industrial Planned Development (IPD)
 - Light Industrial (LI)
 - Industrial (I)
 - Open Space (OS)
 - Agriculture (AG)
 - Parks and Recreation (PR)
 - Public Facilities (PF)
 - Medical Center (MC)
- ROADWAY CLASSIFICATIONS**
- | | |
|---|--|
| Existing | Proposed |
| Freeway | Freeway |
| Major Arterial | Major Arterial |
| Minor Arterial | Minor Arterial |
| Collector | Collector |
- BOUNDARIES**
- City Limits
 - General Plan Planning Area
 - ALUCP Compatibility Zones
- OTHER**
- Airport Runway Expansion
 - Railroad
 - Landfill, 1-Mile Buffer
 - 100 Year Flood Zone
 - Waterways



APPENDIX J

Low Speed Vehicle (LSV) Fact Sheet

Low Speed Vehicles (LSV)

The following information provides operational and safety requirements for the use of Low Speed Vehicles (LSV) (and "speed modified golf carts) on public streets.

- Definition: Section 385.5 of the California Vehicle Code (CVC) defines a Low Speed Vehicle (LSV) as a "motor vehicle, other than a motor truck, with 4 wheels on the ground that is capable of a minimum speed of 20 miles per hour and a maximum speed of 25 miles per hour on a paved level surface and that has an unladen weight of 3,000 pounds or less. *Note: Because only electric powered LSVs are sold in California, all LSVs in California are also referred to as "Neighborhood Electric Vehicles*
- CVC Section 2160 (a) : LSVs cannot be operated on any roadway with a speed limit in excess of 35 miles per hour.
- CVC Section 2160 (l): LSVs may cross a roadway with a speed limit in excess of 35 miles per hour if the crossing begins and ends on a roadway with a speed limit of 35 miles per hour or less and occurs at an intersection of approximately 90 degrees.
- CVC Section 21260 (b)(2): LSVs can only cross a state highway with the approval of the agency having primary traffic enforcement responsibilities.
- CVC Section 21266 (b): Local law enforcement or the CHP may prohibit the operation of LSVs on any roadway under its jurisdiction in the interest of public safety. Signs must be erected giving notice that LSVs are prohibited.
- Safety Equipment for LSVs" LSVs must meet federal safety standards as outline in the Code of Federal Regulations, Chapter 49, Section 571.500 (attached for review).
- Drivers of LSVs must hold a valid California Drivers License
- LSVs must be registered and licensed with DMV
- Assembly Bill No. 2353 was enacted in September 2004 to allow specified cities to develop "Neighborhood Electric Vehicle Plans" so that the NEVs could operate on public streets with speed limits greater than 35 miles per hour. Only two cities are currently named in AB 2353, the City of Lincoln and the City of Rocklin. NEVs (or LSVs) operated on streets with speed limits greater than 35 mph must be operated in their own striped lane separate from general traffic.
- Cities that are interested in developing NEV plans allowing NEVs to operate on streets with greater than 35 miles per hour limits, must have legislative approval. Otherwise, no plan or approval is necessary.
- CVC Section 21115 (b): This section defines a LSV as a golf cart for specific operations associated with golf cart communities. LSVs can travel on golf courses but must restrict their speed to 15 miles per hour or less. LSVs come equipped with a duel switch for golf course (turf) operations.