

1. Emphasize the preservation and efficiency of the existing transportation system.

As the transportation system ages, increased funding is required for maintenance. There is often competition between funding for new projects and funding for the maintenance and operation of the existing system. Reductions in maintenance funding today can often lead to higher needs in the future. Constructing new roads increases future maintenance costs as the new facilities age.

- a. Maintain and repair existing roads, sidewalks and bike paths/trails on a regular schedule, as well as in response to unforeseen need.

This objective states the need for a schedule of maintenance projects while still remaining flexible enough to address unforeseen needs that may arise.

- b. Maximize the efficiency of the existing roadways through improved signal timing and removal of bottlenecks.

Often projects that increase the efficiency of the existing system do not have a high cost. Examples include the flaring of intersections to reduce bottlenecks or the use of Intelligent Transportation Systems to improve the flow of traffic.

- c. Increase access to all modes by establishing, replacing or retrofitting transportation facilities in existing neighborhoods, commercial, industrial areas, and county roads to allow for a wide range of transportation options.

This objective recognizes that in older parts of town, thought may not have been given to the provision of travel choices at the time of construction. In order to increase the efficiency of the overall system, these travel choices should be considered in any retrofit project or for construction as a separate project.

Evaluation Criteria:

Low: The project does not provide for maintenance of the existing system nor does it improve efficiency of the existing system by increasing access or improving traffic flow.

Medium: The project proposes some maintenance and access improvements to the existing system as part of a larger project, such as a street widening or intersection improvements.

High: The projects primary purpose is the maintenance or rehabilitation of an existing facility.

2. Improve the efficiency, performance and connectivity of a balanced transportation system.

Efficiency, performance and connectivity of the transportation system imply multiple benefits to all users. An efficient system allows people to move from place to place in as direct a route as possible, allowing them to reduce the amount of time spent in travel and the distance that must be traveled. Connectivity allows people to make route decisions based on current traffic conditions, road access, or desired stopping points. A transportation system that performs well allows users to choose multiple transportation modes and to move through those modes in an efficient and safe manner.

a. Optimize the efficiency of transportation facilities, across and between modes, through improved signal timing, road design, mitigation of congested locations, integration of multiple modes, and other methods.

People can move through the transportation system, using multiple modes (even within a single trip, if desired) and encounter as few obstacles as possible along the way.

b. Minimize increases in travel times by methods such as providing direct routes between destinations, use of intelligent transportation systems and transportation demand management tools, and providing information to the public to allow them to make informed transportation decisions.

The time spent in travel is reduced by reducing the congestion in the system by monitoring that system, adjusting signal timing appropriately, and informing users when delays might recommend an alternate route.

c. Promote Complete Streets concepts so that streets are planned, designed and operated to maximize safe access for all users including pedestrians, bicyclists, motorists and transit riders of all ages and abilities.

Complete streets include safe, comfortable, and attractive alternatives to single passenger vehicles. An increase in use of non-motorized transportation or transit reduces the number of single passenger vehicles on the road.

#### Evaluation Criteria:

Low: The project does not provide operational improvements or decreased travel times, nor provide increased accessibility to transit, bicycle and pedestrian facilities.

Medium: The project provides moderate operational improvements which will result in decreased travel times, and/or provide increased accessibility to transit, bicycle and pedestrian facilities.

High: The project provides significant operational improvements which will result in reduced travel times, and/or provide major improvements in accessibility to transit, bicycle and pedestrian facilities.

### 3. Promote consistency between land use and transportation plans

A major component of offering travel choices is how they fit into the context of the existing or proposed land use. The public and LPAC have shown support for increases to infill development and density on the fringe. There has also been much discussion of the changes that will occur with the aging of the Baby Boomer generation and the entry of their Generation Y children into adulthood. In both of these cases, the need for alternatives to traditional single occupancy vehicle transportation

a. Develop a balanced transportation system that meets the mobility needs of a changing community and supports Lincoln and Lancaster County's land use projections and plan

The assurance that all people have access to services necessary for a good quality of life can only be accomplished if the needs of the users themselves are taken into account. As a large portion of the population begins to age, and a

new generation that may have a stronger desire for a more urban lifestyle comes into adulthood, land use patterns, and so the transportation facilities that serve them, must change in response. Transportation facilities should include multiple modes of travel to increase accessibility to all.

b. Provide travel choices including transit, bike trails/paths, and sidewalks by expanding facilities and services and by encouraging compact, walkable land use patterns and project designs

Compact, walkable land use patterns are those which have activities of daily living (shopping, entertainment, work, recreation, etc...) within a reasonable distance from housing. This allows for more non-motorized vehicle trips. Compact development (or redevelopment) may also provide for increased transit ridership.

c. Enhance access to freight, rail and airport facilities while minimizing the impacts on surrounding land uses.

Industrial and commercial land uses often require heavy transportation for delivery and shipping of freight. The routes taken by these heavy transports should be accessible and appropriately sized, while also being adequately screened from less intense uses, and ensuring the safety of other modes of travel from vehicles that are not as quick to respond in emergency situations.

#### Evaluation Criteria:

Low: Project does not incorporate all modes of transportation, support compact, walkable communities, or increase access for freight, rail or airport facilities.

Medium: Project supports compact, walkable communities, incorporates alternative modes of transportation, or improves access for freight, rail or airport facilities.

High: Project is fully integrated with compact, walkable development and improves access for all modes including non-motorized, and freight, rail and airport facilities as appropriate.

#### 4. Increase safety and security of transportation system

a. Promote improvements which reduce crashes and improve safety of all transportation modes.

A major goal of transportation planners and engineers is insuring the safety of travelers. Visibility, access control, and separation of incompatible modes, either through buffers or grade separations, are some of the methods that can be employed to decrease conflicts and increase comfort. Security devices at key facilities, such as bus stops and trail head facilities, increase the safety and security of users. Educational programs that help travelers understand the particular safety concerns associated with various modes can help all users travel with increased confidence and security.

b. Facilitate the rapid movement of first responders and support incident management during times of emergency.

The ability of emergency responders and managers to reach incidents in a timely manner can make a difference of life or death in emergency situations. Access to technology that helps identify and clear safe and rapid routes to incident sites is vital. The ability to ensure alternative routes in times of weather emergencies, crashes, and other emergency incidents helps to secure the continued access of responders and regular users.

#### Evaluation Criteria:

Low: Project does not mitigate known safety and security problems or increase the response time or capacity of emergency vehicles.

Medium: Project addresses areas with high incidents of crashes and provides some increased safety for non-vehicle modes, or improvements in emergency vehicle response time.

High: Project directly addresses areas with high incidents of crashes, separates incompatible transportation modes, decreases emergency vehicle response time, or increases safety and security through facility improvements or educational programs.

#### 5. Support economic vitality of the community

Economic vitality is a SAFETEA-LU planning factor that is very complex and hard to describe. Economic vitality requires that many characteristics beyond transportation facilities be present, including a low cost of doing business, availability and access to technology, an educated and skilled workforce, choice of housing types, high quality schools, reduced municipal and state debt, and other less tangible qualities. A good transportation system which includes transit, vehicle, freight, air, non-motorized and rail modes all integrated with land use can help contribute to these factors.

##### a. Support new and existing commercial and industrial development by ensuring access by multiple transportation modes.

While it is important that freight haulers have access to commercial and industrial facilities as discussed above, it is equally important that the customers and employees of these facilities have safe and adequate access as well. Transportation facilities should include multiple modes to allow access by all users, as well as being appropriately sized to allow access by each mode without sacrificing the safety of another.

##### b. Provide attractive and convenient transportation facilities that attract and retain businesses, young professionals, families and older adults.

Transportation amenities are one piece of an overall amenity package that makes a city more desirable. People often make decisions of where to live based on the particular amenities available. Businesses also make decisions based on these amenities because they understand their value in attracting and retaining a particular employee or customer population. Public transportation systems, trails and trail facilities, air service, and low traffic congestion conditions are all transportation attractors.

##### c. Facilitate the movement of goods and freight to commercial and industrial centers.

The ease with which industrial and commercial facilities can receive goods and ship products is important to their economic viability. Transportation facilities that allow direct, convenient access to these centers can decrease the conflicts with other traffic and increase the efficiency of the shipping process.

#### Evaluation Criteria:

Low: The project does not provide for alternative transportation choices, increased access by freight operators or provide amenities that are attractive to prospective residents or businesses.

Medium: The project provides for alternative transportation choices, increases access by freight and/or provides some attractive amenities.

High: The project integrates multiple modes of transportation, increases access by freight operators and/or provides for attractive amenities.

## 6. Protect and enhance public health, environmental sustainability, and conservation of natural and cultural resources.

This goal is one that should be part of many different planning elements. The SAFETEA-LU Planning Factors and the proposed Transportation Bill both stress the need for transportation planning to take these factors more seriously into account than they have before. The LRTP process requires a review of environmental, cultural and social effects of transportation plans.

### a. Reduce fossil fuel consumption by minimizing travel time and providing access to alternative modes and fuels.

Fossil fuels are limited in supply and their burning has many effects on the environment including increased green house gases, particulate matter, and effects on global warming. A large proportion of the US fossil fuels supply is obtained from countries with which the US has some degree of security concern. Additionally, fossil fuels are predicted to be in very limited supply and their cost will continue to increase over time.

### b. Minimize air pollution by reducing trip length and congestion.

Air quality is very important for public health, environmental sustainability and a good quality of life. The US Environmental Protection Agency, which has been working to develop new, and much lower, thresholds for attainment of Clean Air Act goals. Depending on these thresholds, Lincoln could be in a position where it could be found in a state of "non-attainment" with any increases to current air pollution levels. This status would require corrective actions which could be very costly to the City and County.

### c. Minimize vehicle miles traveled and promote a more active lifestyle by promoting livable communities with a variety of transportation choices.

Public Health is an increasingly important topic in transportation planning, and planning in general. The availability of non-motorized options for transportation can have a great effect upon public health by increasing time spent walking and biking. Shorter trips can be accomplished by creating more mixed use, compact neighborhoods, or increasing the integration of residential land uses into existing commercial areas through redevelopment.

### d. Minimize impacts to natural environment by taking opportunities to couple transportation projects with protection and enhancement of environmental resources.

Transportation projects in new areas often cross water ways, disturb land, and cut through tree masses. It is important to, wherever possible, avoid these resources, or mitigate their disturbance. Non-motorized transportation facilities in particular can take advantage of the benefits of locating in harmony with these natural amenities. Establishing environmentally sensitive landscaping during transportation projects can create aesthetic benefits without major maintenance requirements.

e. Reduce impacts on neighborhoods' cultural and historic resources through evaluation of assets and involvement of neighbors in the planning process, particularly in areas where a larger proportion of the population belongs to traditionally under-represented groups.

In the past, many transportation projects displaced citizens, destroyed valuable cultural resources, and displaced or divided neighborhoods. Often these injustices were unfairly borne by those who were traditionally under-represented in government. Transportation planning has since evolved a very strong link to environmental justice which is both desirable and required. It is vitally important that the needs of neighborhoods, particularly those with larger under-represented populations, be involved in transportation planning decisions and that these decisions take into account, and work to protect, those resources important to neighborhoods.

#### Evaluation Criteria:

**Low:** Project promotes suburban style expansion with increased vehicle miles traveled and would result in major impacts to natural and/or cultural resources.

**Medium:** Project does not promote suburban style expansion and does provide some benefits for alternative modes of transportation as well as addressing impacts to natural and/or cultural resources.

**High:** Project supports compact development, provides for reduction in vehicle miles traveled, and offers new opportunities for alternative modes of transportation as well as promoting the protection of natural and/or cultural resources.

### 7. Minimize the cost of transportation

Transportation costs can be viewed on an individual, organizational, or municipal scale. Costs can also be viewed as the cost of building structures, powering vehicles, or the time spent in travel. Transportation facilities that expand the travel options available, reduce the time spent traveling, reduce the fuel consumed in travel, and make best use of public funding in their construction and maintenance are most desirable.

a. Plan for a transportation system that is affordable, sustainable, and makes the best use of public financial resources.

Public funding, both locally and nationally, for transportation facilities is extremely tight. Public and private groups have expressed the desire to see funds spent in the most efficient way possible. Projects with high capital construction costs decrease remaining funding for other projects. Conversely, low cost improvements leave available funds for other improvements.

b. Reduce travel costs by taking opportunities to include all modes of transportation in new and retrofitted projects and reducing travel times and distances for activities of daily living.

"Travel costs" refers to the cost of traveling, not the cost of the facility itself. If trips are shorter, vehicles travel a shorter distance and consume less fuel. If trips can be accomplished with non-motorized modes, the cost is much lower. If transit can be conveniently used for trips, this also can reduce the cost.

c. Construct projects that have a capital cost that produces a corresponding benefit to travelers.

Projects cannot be compared strictly on the basis of costs. A large project will have a high cost; however, that project may have a profound positive effect on the overall transportation system. Both costs and benefits must be evaluated when prioritizing projects.

Evaluation Criteria:

Low: The cost of this project, as compared to the benefits of reduction in travel time and increased access to alternative modes, is high.

Medium: The cost of this project, as compared to the benefits of reduction in travel time and increased access to alternative modes, is moderate.

High: The cost of this project, as compared to the benefits of reduction in travel time and increased access to alternative modes, is low.

Work in Progress