

CHAPTER 5 TRANSPORTATION

Vision Statement: Address future transportation needs while considering land use, economics, aesthetics and increasing community connectivity for vehicles, pedestrians and cyclists.

Overview

This chapter is supplemental to the Transportation Plan and the Homer Non-Motorized Transportation and Trail Plan. This chapter augments these other documents and includes content not covered by these plans.

Transportation in Homer is an integral issue that is important to the future of the community. A small, low-density community typically has few serious transportation problems. Homer, however, is evolving from a small town at the end of the road to a larger, more socially and economically diverse community. Summer visitation compounds traffic problems along certain routes. Without attention to and consideration of transportation in conjunction with land use, economic development, and aesthetics, problems related to circulation, parking, congestion, and bicycle and pedestrian safety will grow.



Transportation is also a key component in Homer's infrastructure, supporting businesses and economic activities. The 1989 Comprehensive Plan noted that "Homer is a point where people and goods often change transportation modes to arrive at the final destination." Homer is a hub for land, sea, and air transportation. Maintaining and enhancing Homer's role as this transportation hub will support future community economic and population growth.

Summary of Goals

A number of goals were identified during the preparation of the Homer Transportation Plan.¹ These goals were used as the basis for the following comprehensive plan transportation goals and objectives.

GOAL 1: The street system should be configured to include arterial, collector, and local streets. Through-street connections should be encouraged, while maintaining the integrity of existing neighborhoods.

GOAL 2: The transportation system, including streets, trails, docks and airports, should support future community economic and population growth.

¹ The 2001 Homer Area Transportation Plan prepared by Mike Taurianinen, P.E. Consulting Engineers, Inc. et al. adopted in 2005.

GOAL 3: Homer’s transportation system and services should be developed in a manner that supports community land use, design, environmental and social goals.

GOAL 4: The trail and sidewalk network should provide an alternative to driving, provide enhanced recreational opportunities, and create auto-free connectivity throughout the community.

Context: Transportation in Homer

Homer grew and developed in the years following World War II. Similar to many other communities that came of age in the post-war period, Homer reflects the use of the automobile to provide local transportation. Much of Homer’s early commercial development spread along Pioneer Avenue, East End Road, and Main Street. Homes and businesses are relatively spread out, with room provided for parking along the side or in front of most buildings. While this pattern makes it easy to get around Homer by car, it creates challenges for those who would like to have a more compact, walkable community.

Community concern, as evidenced by committee and public participation in the meetings held for the Comprehensive Plan, has focused appropriately on how the community is to evolve and what it will be like to live in Homer in the future. The role of transportation is to support the development of the kind of community that residents desire. Homer residents have consistently spoken in favor of a community that has a more compact, walkable center with attractive streets that support pedestrians, bicycles as well as cars. These objectives can be achieved, but not without a conscious and consistent effort to use road and property development standards that support community goals.

Awareness of the key role of transportation in community development has lead to a significant amount of local transportation planning in Homer over the past few years. Relevant work includes the following plans:

- The Homer Intersections Planning Study, October 2005
- Homer Non-Motorized Transportation and Trail Plan, June 2004
- The Homer Area Transportation Plan – 2001, updated and adopted 2004
- Homer Master Roads and Streets Plan, July 1985

Goals and Objectives for Transportation

GOAL 1: The street system should be configured to include arterial, collector, and local streets. Through street connections should be encouraged, while considering the impact on the integrity of existing neighborhoods.

Objective A: Ensure that collector-level streets are planned, designed, and constructed in addition to arterials and local streets.

The primary job of arterial streets is to move traffic from one place to another, rather than to provide access to adjoining property.

Collector streets move traffic from one neighborhood to another, from local streets to arterials, or from one neighborhood to other areas of the community. Predominant travel distances are shorter than on arterial routes and consequently, more moderate speeds are typical. Collectors may provide access to adjacent properties but mobility is typically a more important function.



Figure 8: Collector streets and local streets being constructed at the same time.

Local streets and roads are built as part of residential development. Their primary purpose is to provide access to adjacent land. Local streets provide the lowest level of traffic mobility and serve relatively short distances. They provide access from individual residences to the community street network by connecting to collector-level roads. Through-traffic movement is discouraged.

Arterials are the generally the responsibility of the State. Collectors are typically constructed, owned and maintained by the local government. Local streets are usually built as property is developed, then transferred to local government ownership. Because Alaska communities have been slow to adopt road powers and actively contribute to the development of their street systems, the importance of collector street development has often come too late to inexpensively locate and construct these streets. Homer adopted the 1986 Master Roads and Streets Plan to address the development of Homer's road network.

Identifying future collector street locations is important for a number of reasons. Early location of collector and arterial roads reduces the chance that too much traffic will use residential streets. If subdivisions are developed with minimal land-use controls, what could be called "creeping collectors" may result. For example, an early subdivision is located close to the main road. The streets built for the subdivision are all local streets with driveways opening directly onto the streets, appropriate for serving a single subdivision. Later, a second subdivision is built behind the first. The streets built for the second subdivision are connected to the first subdivision's streets. As houses are built in the second subdivision, traffic slowly increases on the first subdivision's streets, and in particular on the streets providing the most direct link to the main road. If the process is allowed to continue with no thought to the location and construction of collector streets, congestion, the fair distribution of road maintenance costs, safety and other issues arise. It is also much more expensive to establish collector-level streets in a developed area with higher land costs and limited location choices.

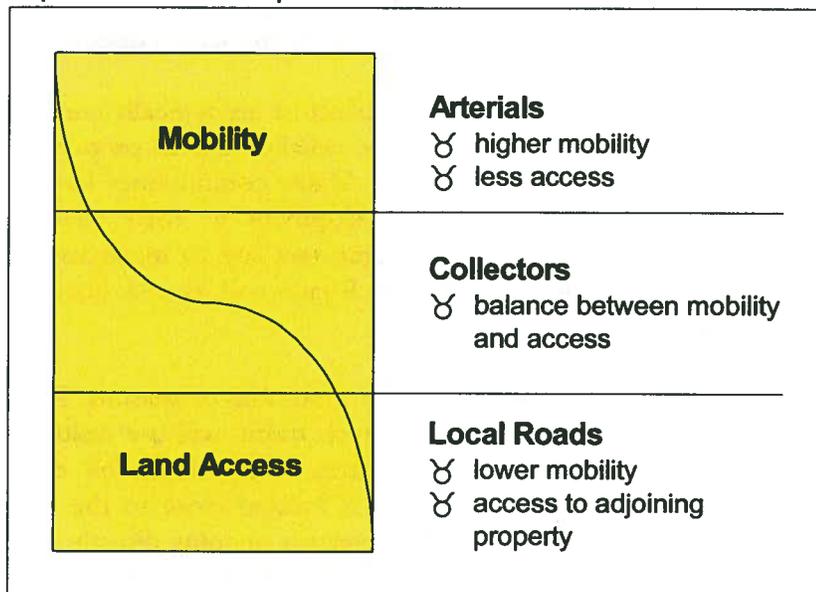
- Early location of collector and arterial roads minimizes the cost of right-of-way. Establishing future collector routes to serve rural development would allow Homer to plan for, reserve, and over time acquire the right-of-way for the street, so that by the time it is needed, it can be designed and built cost-effectively. It is appropriate for the developers of larger subdivisions to build portions of collectors that border and serve the subdivision.
- Early road location minimizes hard feelings. Without locating and designating future collector roads, subdivisions are built and lots occupied before residents know where future main roads will be located. It is far preferable for those who buy land in a development to know, for example, that the western boundary of the development will, at some time in the future, have a collector route built along it, rather than for the property buyers to expect (unrealistically) that the natural area “behind the house” will stay the way it is indefinitely.

Homer has had some success in building collector routes and critical connections through the local improvement district (LID) process in which residents of an area come together and cost share with the City for necessary improvements. This is one way the City can work with residents to improve Homer’s road system.

Implementation Strategies

1. Update the 1986 Master Roads and Streets Plan.
2. Update the 2005 Transportation Plan as needed.

Figure 9: The Mobility-Land Access Relationship



Source: Safety Effectiveness of Highway Design Features, Vol. 1 FHWA, 1992

Objective B: Roadway development in Homer should focus on establishing key street connections.

The Homer Intersections Planning Study and other plans have noted that there are a very limited number of streets and roads that provide connectivity from one part of Homer to another. For

example, Homer only has two routes for getting up the hill: East Hill Road and West Hill Road. Existing roadways and intersections are generally functioning acceptably, but several are expected to be at capacity by 2020. Adding road connections will help avoid the need for additional lanes on existing streets. The Intersections Planning Study and the Town Center Plan have recommended a group of new roadway connections and roadway improvements. These improvements are listed below: *See Figure 10.*

Implementation Strategies

- Construct connections between West Hill Road and Fairview Avenue,
- Extend of Hazel Street from Poopdeck to Main Street as part of the town center improvement; then from Main Street to connect with Pioneer Avenue at Bartlett Street.
- Add street connections developed as part of the town center connecting the extended Hazel Street to Pioneer Avenue.
- Extend Lake Street from Pioneer Avenue to South Slope Street with a connection to Heath Street.
- Extend Grubstake to Waddell Way.
- Improve Heath Street and Pioneer Avenue Intersection.

These street connections should be reviewed, approved and added to the City's capital projects priority list. This process can take the form of an "official streets and highways plan" or simply an approved map in a transportation or comprehensive plan. This provides planning and public works departments the ability to more effectively deal with development to ensure needed road and trail connections.

Figure 10: Street and Intersection Improvements



GOAL 2: The transportation system, including streets, trails, docks, and airport, should support future community economic and population growth.

Objective A: Work in concert with the State of Alaska, the Kenai Peninsula Borough, and private landowners to appropriately develop the Homer street system as the community grows.

Implementation Strategies

1. Continue to ensure that adequate streets are built by private and public sponsors to keep pace with and to support community development.
2. Consider roadway connectivity development that “minimizes impacts to residential areas and parks.”² Street connections that comprise the initial priority group are discussed under Goal 3. *See Objective B on page 5-11.*
3. Pursue designation of the entirety of the Sterling Highway as a National Scenic Byway. Designation of the highway as a Scenic Byway would contribute to tourism-based economic development strategies by granting national promotion of the highway, as well as providing increased leverage for funding road improvements.

Objective B: Homer’s street system should operate at acceptable levels of service, delay, and congestion.

Similar to the residents of many small communities, Homer drivers typically experience good levels of service on the community road system. The primary exceptions to this are on Pioneer Avenue and the Sterling Highway. Both can be very busy, with slow average speeds and steady traffic that makes executing left turns onto these roads difficult.

Since it is unlikely that the community will want to expand either the Sterling Highway or Pioneer Avenue to four lanes, serving the growing community adequately will require the simultaneous development considerations.

Implementation Strategies

1. Develop a more complete street network including collector connections, rather than two main roads with local streets that feed them, will support community growth without the need for wide, high-volume arterials.
2. Develop pedestrian/bicycle friendly street networks (as revenues allow). In a small community, it is reasonable to expect substantial non-motorized travel if the trails and sidewalks are in place to support walkers and bikers.

² *The 2001 Homer Area Transportation Plan* Prepared By Mike Taurianinen, P.E. Consulting Engineers, Inc. et al. Pg. 1-21. Adopted in 2005.

3. Support the establishment of a community transit service. Recently, smaller Alaskan communities have been able to develop transit service by combining public transit with private-nonprofit client service. Homer should consider summer service to help visitors choose to complete their trips without having to use a car. *See further discussion of transit in Homer continued in Goal 3 Objectives C and D.*

Objective C: Establish a corridor preservation program.

It is important that Homer ensure that its prospective street system includes collector connections as well as main routes and residential streets. Without the designation of general route locations it will be expensive-to-impossible to build the streets after an area is developed.

A corridor preservation program should identify the location of future roads, so that when a collector-level road is needed to connect subdivisions with highways or other arterials, the right-of-way is in hand or readily available. Without such a program, the cost of acquiring right-of-way can be high for not only the City, but also for the residents whose homes and businesses must be relocated or impinged upon. Locating future collectors and establishing a corridor preservation program should be an important objective of the City's transportation program. It is important to ensure that the corridor management program has a solid foundation in the Homer Comprehensive Plan. The Homer Transportation Plan designated road connections that will be needed as parcels of private property develop. The City will have to take a number of steps in the near future to identify and preserve corridors for these connections, shown below (following the discussion of Goal 3, Objective B). These steps include:

Implementation Strategies

1. Create a variety of options, such as:
 - a. fee simple purchase of land for right-of-way
 - b. require building setbacks from road rights-of-way
 - c. obtain voluntary dedications or donations of right-of-way on a case-by-case basis during the land development process
 - d. other available tools include securing options to purchase, making interim use agreements, land banking, purchase of access rights and density credits
2. Identify existing roadway easements.
3. Finalize future corridor needs as identified in the Homer Transportation Plan.
4. Field verify recommended corridors to make sure the routes are constructible at a reasonable cost.
5. Select alternative alignments in cases in where recommended or existing (section line) rights-of-way are not feasible.
6. Although not important (or possible, in most cases) to have a precise alignment identified before the road is designed, the designated corridors should indicate corridor needs and identify that the road location will be determined by specific engineering design studies.
7. Working with the Borough and State, reserve as much land in the corridors as possible. Consider the following measures as a basket of tools to be developed and in some cases codified as City Ordinances:

- a. Require subdivision developers to contribute funds toward upgrades on roads that will be more heavily used as a result of their subdivisions.
- b. Deny requests for waivers by subdivision developers who prefer not to improve roads to City or Borough standards.
- c. Utilize criteria for right-of-way exactions and a process for determining the amount of right-of-way dedication that is roughly proportionate to the impact of the proposed development.
- d. Provide a reduction or reprieve from property taxes on property subject to corridor preservation restrictions; e.g., by removing property from the tax roll, reducing the tax rate for preserved land, or providing a tax credit.
- e. Offer an option for clustering developments by reducing setbacks or other site design requirements to avoid encroachment into the right-of-way.
- f. Utilize procedures for intergovernmental coordination between the City, the Borough and Alaska DOT&PF.

Objective D: Work in concert with the State of Alaska to maintain and improve the Homer airport.

The Homer Airport is owned and operated by the State Department of Transportation, but the City of Homer owns and operates the terminal building. The facility provides a 6,700-foot long by 150-foot wide asphalt runway and a 3,000 by 600-foot seaplane “runway” and base at nearby Beluga Lake. The airport is equipped with IFR (instrument flight) capability. The city is served by several scheduled and chartered aircraft services.

The Homer Airport Master Plan provides long-range goals for airport improvements. Current priorities include constructing parallel taxiways and expanding the south apron, replacing the rescue and firefighting building, constructing a chemical storage building, and procuring a de-icing truck.

It is in the interest of the City of Homer to support a well maintained and improved airport facility. The airport and related support facilities amount to a vital economic engine that contributes to the local economy. Development decisions near the airport should take into account the externalities that exist with current and future operations.

Implementation Strategies

1. Consider issues such as noise impacts and safety hazards in the permitting of new housing and development near the airport.
2. During the zoning map amendment process discussed in the Land Use Section, consider the relationship of the airport and surrounding development. Evaluate and amend the map accordingly.
3. The City of Homer will participate in planning activities and comment on plans involving the maintenance and improvement of the airport.

GOAL 3: Homer’s transportation system and services should be developed in a manner that supports community land use, design, environmental and social goals.

Homer has expressed a consistency of opinion as to how the city should grow and the “look and feel” that residents want for the community. Key desires are for a more focused and walkable town center, a more walkable and bike-able community, and the development of an attractive community that mirrors the natural beauty of Homer’s setting. The community roadway system will be an important component of Homer’s development and will have a substantial impact on whether the community’s goals will be realized.

Objective A: Develop bicycle and pedestrian-friendly standard street designs and cross-sections.

The development of a comprehensive sidewalk and trail system will require the appropriate facilities be included with the construction of each new street. Important elements include standard designs for sidewalks and trails, street side planting and paving requirements, and the inclusion of traffic calming elements in residential streets.



The Homer Non-Motorized Transportation and Trail Plan (2004) provides sample street cross-section designs with locations for both pedestrian and bicycle facilities. These or similar cross-sections should be adopted as standards for a specific area that focuses on the community core. A second set of cross-sections should be developed for more outlying areas. The primary differences between the two would include the presence of curb and gutter and facilities on both sides of the street in the community core, with facilities on one side of the street and no curb and gutter in the outlying areas. A key element of the maintenance of roadside trails in Alaska pertains to how snow is handled. Sidewalks next to the street only work if snow is plowed to the center of the street. For outlying areas with a trail along the side of the road, a key design element is sufficient trail setback to allow plowing and stockpiling of snow between the road surface and the trail.

Landscaping improves the attractiveness of the streetscape, making both motorized and non-motorized travel more pleasant. Plantings can be combined with specialty sidewalk or street pavements to highlight crosswalks, bulb-outs and other features. Alaska designs also need to incorporate temporary snow storage and snow removal.

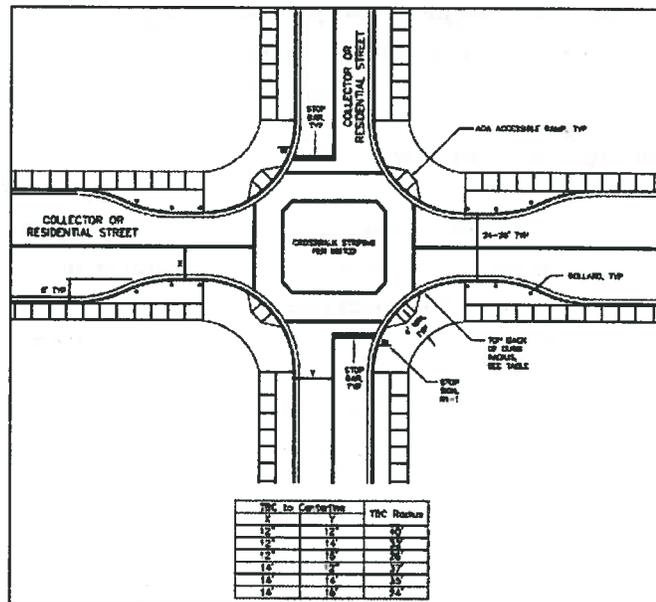


Figure 11: Neckdown or bulb-out (Municipality of Anchorage Traffic Calming Protocol Manual)

Traffic calming has been successfully used on residential streets to reduce the speed of traffic while not limiting auto access. A feature often used in town centers is the sidewalk bulb-out or neckdown at intersections. Bulb-outs have the combined benefits of slowing traffic somewhat and shortening the distance pedestrians must cover to cross the street. They also provide additional sidewalk space for trees or other plantings.

Implementation Strategies

1. Include sidewalks and trails as appropriate in the construction of new streets.
2. Create standards for traffic calming, streetscape design, and landscaping.
3. Adopt cross-sections for bike and pedestrian facilities in the downtown core.
4. Consider snow removal and maintenance concerns in design standards.

Objective B: Develop a holistic approach to parking development and management.

A number of studies have suggested that the central part of Homer needs improved parking. Because existing parcels in Homer's Central Business District contain insufficient land to accommodate business expansion and the parking spaces required for expansion, businesses have begun to consider moving to outer areas where land is more plentiful. This suggests that more innovative approaches to establishing and managing parking requirements are also needed. Parking improvement strategies should include:

Implementation Strategies

1. Construct strategically located public parking lots to serve both local residents and out-of-town visitors.
2. Consider the alteration of current parking requirements to allow businesses to contribute to the cost of public parking lots in lieu of meeting parking requirements onsite.
3. Encourage on-street parking and adding on-street parking to streets in the central area of the community.
4. Improve pedestrian circulation so that it is safe and attractive to park once and walk between uses, and to walk into the commercial district from surrounding neighborhoods.
5. Consider alteration of parking requirements or allowing creative ways to meet parking requirements (such as shared parking). Businesses with peak demand at different times of day can share a given number of parking spaces.
6. Provide parking options for visitors and people who might park in the town center area and take a shuttle to the Spit.
7. Consider providing easy-to-find parking lots for RV's at the periphery of, but within walking distance of town center.

Objective C: Support community transit service to enhance mobility, support compact development, and help achieve social goals.

There are two aspects of transit in Homer that are worthy of consideration and development: service for community residents who, due to disabilities or other reasons, are not able to provide their own transportation; and service for visitors to enhance the connection between central Homer and the

Spit. Similar operations in other Alaskan communities use a combination of vehicles owned by the private-nonprofit agencies and the transit system. On the Kenai Peninsula, CARTS, or Central Area Rural Transit System Inc, provides a ride sharing service, providing transportation for a fee to people with reduced mobility or special needs. The advantages of this type of transit organization are that the vehicles can, as a group, be more efficiently utilized and more productive operations result from combining user groups. Operating costs are low, and these systems have typically been established as demand-responsive small bus or van service rather than the fixed-route bus systems typically found in larger communities.

In 2008, the City of Homer adopted a resolution in support of the Homer Area Coordinated Transportation Plan developed by the Homer Coordinated Transportation Task Force.



Figure 12: CARTS First Wheelchair Passenger

Implementation Strategies

1. Continue to support the Task Force and implementation of the Plan.
2. Investigate a shuttle bus traveling from the Spit and providing a loop around downtown Homer.

Objective D: Consider the local, regional, and global environmental impacts of transportation development in Homer.

The U.S. Department of Energy's 2005 Annual Energy Outlook found that the transportation sector accounted for the largest share of all U.S. carbon dioxide emissions in 2002 (32 percent).³ Demand for car travel can be decreased in several ways. Compact communities with a mix of land uses and a highly connected street network are associated with fewer vehicle miles and trips, more walking and biking, and thus have lower per capita levels of emissions.

Implementation Strategies

1. Provide a variety of transit options, such as the community shuttle service described in Objective C above.
2. Invest in more fuel-efficient forms of transportation such as pedestrian and bicycle alternatives and land use patterns that support those options.

³ "The Urban Form and Climate Change Gamble," *Planning- The Magazine of the American Planning Association*, August/September 2007.

GOAL 4: The trail and sidewalk network should provide an alternative to driving, provide enhanced recreational opportunities, and create auto-free connectivity throughout the community.

Objective A: Implement greater sidewalk and trail connectivity.

In 2004, Homer completed the Homer Non-Motorized Transportation and Trail Plan. The plan provides a comprehensive examination of walkability and bike-ability in Homer and suggests a number of improvements to make Homer more walkable and bike friendly. In order for the recommendations of the Non-Motorized Plan to be implemented, it is critical that the specific actions included in the Plan be implemented. As both tourism and the size of the community grow, the traffic loads on Homer's streets will increase. The Non-motorized Plan indicates that as Homer has grown, residents have felt less safe and comfortable walking and biking in Homer. A combination of increasing traffic on the through-routes, limited sidewalks, and unconnected, low-traffic-volume streets leave pedestrians with a limited number of comfortable routes to use.

Implementation Strategies

1. Implement the Non-Motorized Transportation and Trail Plan. Pages 15-19, 26-31 and 33-36 list specific improvements.
2. Amend the "Site Design" section of the 1987 Design Criteria Manual for Streets and Drainage to include a requirement for sidewalks on both sides of collector and arterial streets within the Central Business District.

Objective B: The transportation system should develop in a manner that includes provisions for the elderly and citizens with disabilities and provides safe walking routes for children.

In general, all of the pedestrian improvements noted in recent plans and included in this plan will benefit children, the elderly and citizens with disabilities. Without linked sidewalks, trails, crosswalks, and pedestrian ways, it is often difficult for seniors to navigate on foot and often impossible for those with disabilities requiring a wheel chair. Again, the Homer Non-Motorized Transportation and Trail Plan recommends, in addition to the improvements noted in the section above, specific improvements for special user groups.

With the baby boomer generation reaching their 60s and with Homer a desirable location for retirement living, consideration of the transportation needs of the elderly will be an issue of increasing importance for Homer.

Implementation Strategies

Specific transportation considerations and improvements should include:

1. Encourage seniors and citizens with disabilities to become involved in community planning projects.
2. Work with parents and school groups to create safe walking routes to schools and after school locations frequented by Homer's school aged children.
3. Ensure that meeting notices are routinely sent to senior centers, assisted living facilities, and local senior and disabled citizen's organizations.

4. Construct the sidewalk, trail and street crossing improvements listed under Objective A, above.
5. Develop non-motorized transportation routes in accordance with the Americans with Disabilities Act.
6. Amend the Site Design and Connections sections of the 1987 Design Criteria Manual for Streets and Drainage to ensure compliance with the site accessibility requirements set forth in the Americans with Disabilities Act.

Transportation Implementation Table

Project	Timeframe			Primary Responsibility
	Near Term	Mid Term	Longer Term	
Develop Community Transit Service.		x		City
Establish Road Corridor Preservation Program.	x			City
Adopt appropriate ordinances to implement the corridor preservation program. (e.g., road standards, cost sharing mechanisms).		x		City
Update the 1986 Master Streets and Roads Plan and the 2005 Transportation Plan.		x		City
<i>Proposed Roadways</i>				
▪ West Hill Road and Fairview Avenue connection.	x			City
▪ Extend roads into the town center area from four directions as called for in the Town Center Plan.		x		City
▪ Extend Lake Street from Pioneer Avenue to South Slope St. with a connection to Heath Street.		x		City
▪ Extend Grubstake to Waddell Way.		x		City
<i>Parking</i>				
▪ Construct strategically located parking lots near downtown.		x		City, businesses
▪ Develop new parking standards for CBD to support higher density, more walkable commercial areas.	x			City
▪ Improve/increase on-street parking		x		City
▪ Allow for shared parking and in lieu fees for downtown businesses.		x		City
<i>Trails/Non-motorized Transportation</i>				
▪ Develop bike/pedestrian friendly roadway design standards.	x			City
▪ Implement the recommendations of the Non-Motorized Transportation Plan – particularly developing trail standards and a policy for trail easements.	x			City
▪ Build the recommended trail connections in the Non-Motorized Transportation Plan.	x	x	x	City, nonprofits