

# **City of Willamina Transportation System Plan**

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*The contents of this document do not necessarily reflect views or policies of the State of Oregon.*

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- Access management
- Public transportation
- Bicycle and pedestrian
- Air, rail, water, and pipeline
- Finance
- Public comment and involvement
- Development code revisions
- Capital improvements

The following is a brief description of the elements:

### **Inventory of Existing Transportation Facilities**

This element identifies and inventories existing roadways (arterials, collectors and significant local streets), pedestrian and bicycle ways. It included observations of location, jurisdiction, length, surface type, and general condition.

### **Goals and Policies**

Existing goals and policies were reviewed, coordinated with state, regional and county plans, and updated.

### **Streets**

The street element identifies the existing network of arterials, collectors and local streets, and provides a conceptual framework for future street development and system improvements.

### **Access Management**

Standards of access management, driveway spacing, and intersection spacing are recommended.

### **Public Transportation**

The existing YAMCO transit system serves the elderly and handicapped, as well as the general public.

### **Bicycle and Pedestrian**

It is recommended that all arterials and collectors have sidewalks on each side of street. Two additional multi-use paths are recommended. The bicycle plan includes provisions that encourage bikeways on all collector and arterial streets.

### **Air, Rail, Water, and Pipeline**

It is recommended that every effort be made to maintain and promote the city's existing rail, water, and pipeline service. Although no air service is provided in the city, it is available in nearby cities.

### **Finance Plan**

This plan provides the city with financial options for funding various improvements and roadways.

### **Development Code Revisions**

Existing development code ordinances were reviewed, coordinated with state and regional plans, and updated.

### **Capital Improvements**

Provides rough cost estimates for various street improvements and recommendations.

the foundation for the Nation to compete in the global economy and will move people and goods in an energy efficient matter.” In addition to numerous other provisions of the ISTEA legislation is the requirement that states use a statewide planning process to develop plans and programs.

Adoption of the TPR provided Oregon with a head start in complying with new federal requirements, an effort it soon followed with the adoption of the Oregon Transportation Plan (OTP) on September 15, 1992. The OTP defines a statewide transportation policy and a comprehensive, long-range plan for a multimodal transportation system which encourages economic efficiency, orderly economic development, safety, and environmental quality.

## Planning Process

The planning process for the development of the TSP consisted of completing numerous technical analyses combined with input and review by the city’s Transportation Advisory Committee (TAC) and the public. Key elements of the process included the following:

- Review of existing plans, policies, and standards.
- Inventory of existing transportation system.
- Determination of transportation needs.
- Development and evaluation of transportation system alternatives.
- Development and implementation of a TSP.

The Transportation Advisory Committee consisted of citizen representatives from the planning commission and city council, as well as state and county staff. TAC meetings

were generally held bi-monthly throughout the planning process to provide review and guidelines to staff and to make decisions regarding the plan. Community meetings were held at the beginning of the process to gain public input on issues and problems to be addressed, and for the review and comments upon the completion of the draft transportation master plan. The results of the first community meeting formed the basis for the identification of transportation issues and concerns with regards to traffic movement.

## Review Existing Plans, Policies, and Standards

The TSP is based upon the city’s existing comprehensive plan prepared in 1987. Although the existing plan contains a transportation element that is somewhat consistent with Statewide Planning Goal 12, this revision is necessary to update the plan and bring it into conformance with new county, state, and federal transportation planning standards.

In addition to a thorough review of the comprehensive plan, existing city ordinances and public works standards were studied to gain a clearer understanding of how future development is likely to occur. Based on the review, ordinance amendments were recommended that provide for better integration of transportation and land use issues, and to bring the city into closer compliance with state and federal requirements.

Further, this study entailed a review of the regional, state, and relevant plans shown in **Appendix B**.

The PDIA used a 30-year population growth average to estimate the city's future population. Assuming Willamina can continue to capture 2.4 percent of the county's population growth, Willamina is projected to grow from a 1990 population of 1,775 to 2,101 by 2016. This is an increase of 326 residents. Also assuming Willamina's 1990 average household average remains relatively constant, the study estimates the need for additional 134 dwelling units.

It should be noted that this study's population and housing estimates have several limitations. First, this study cannot account for market factors, such as the supply and demand for housing. Also, these estimates cannot predict possible land use actions, particularly annexations, that increase not only the amount of acreage within in the urban area, but also the urban population. Despite these limitations, these forecasts do provide a general estimate of future urban population and housing needs based on historical growth trends and offer a more conservative estimate of future residential buildout. Also, employment figures are likely to remain the same.

This method resulted in an approximate 600 ADT increase of the high count on Main Street and was the method used to forecast future needs.

Although this plan uses the PDIA to determine transportation needs, other methods were also studied and considered. The other methods included:

- Historic trends
- Population projections

## Historic Trends

Historic trends determined transportation need by averaging historical traffic counts over the past 20 years at designated mile posts and by projecting their increases 20 years into the future.

Due to the limitations of historical trends, this study was not used to determine the city's transportation needs. Detailed analysis of this method is indicated in **Appendix F**.

## Other Population Projections

Other population projections were considered in determining the City's transportation needs. The following population projections were considered initially in the study:

- The adopted 1995 population projection, and
- The maximum buildout scenario proposed by the Regional Problem Solving study.

The first of these resulted in approximately a 2000 ADT increase on Main Street's high count point, while the second resulted in an increase of nearly 15,000 ADT. However, due to the fluctuations in past populations, these population projections were not used to predict or determine the city's transportation needs because of their biases toward higher growth rates.

Detailed analysis of these population projections are in also in **Appendix F**.

Level of service (LOS) calculations were completed for "B" and "D" Streets' intersections with Main Street as representative of the functioning of all intersections on Main Street.



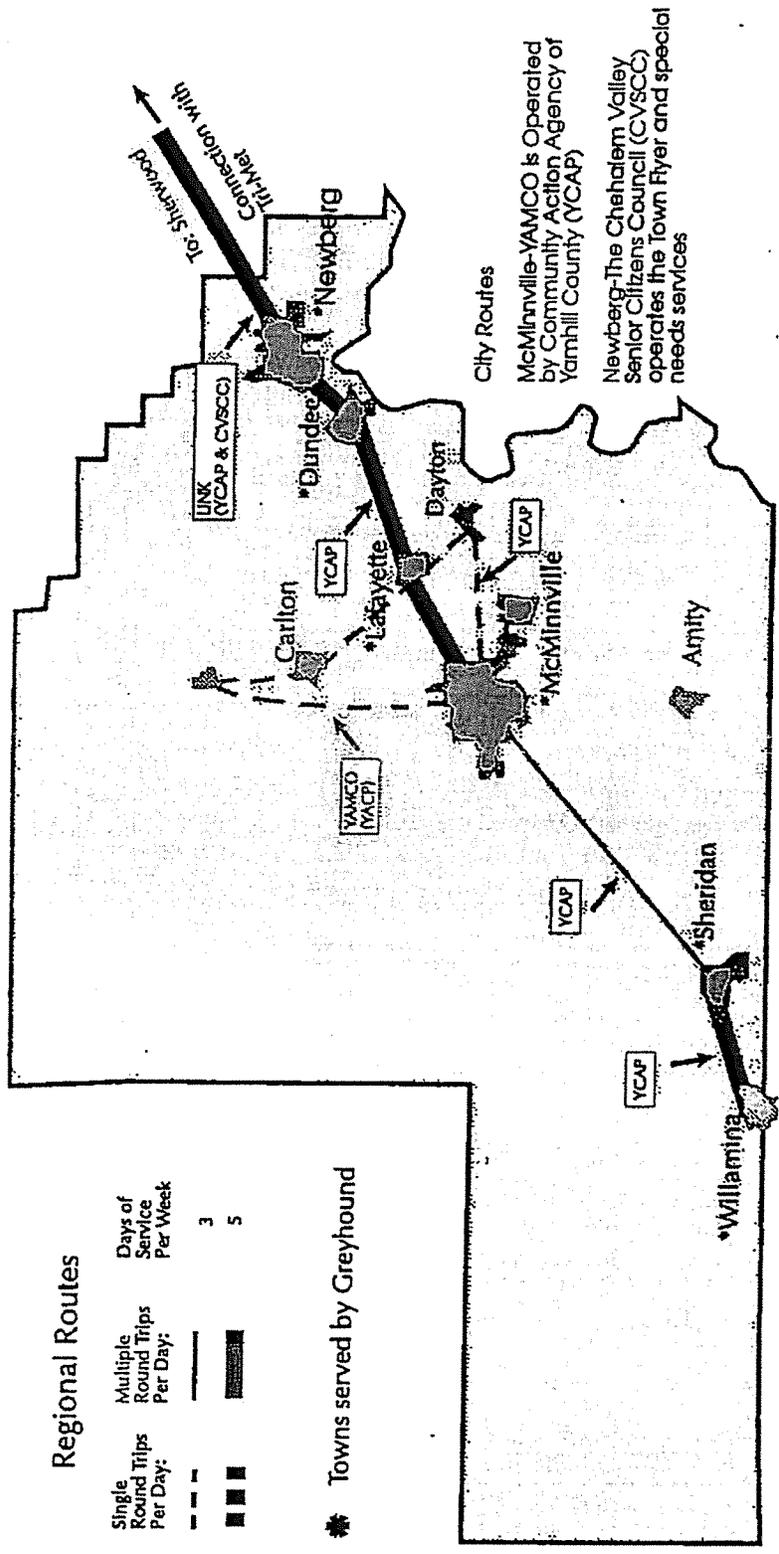
Table 3

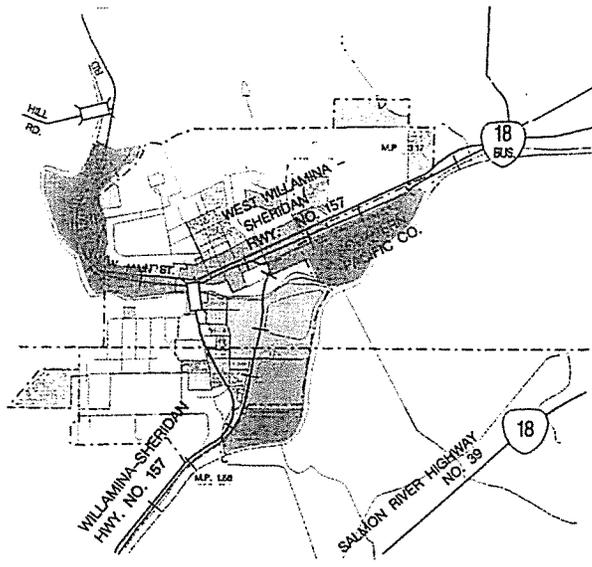
Inventory Existing Streets  
 Willamina: Arterial, Collector and Local Street Inventory

Street Name	Section	Length	County Jurisdiction	Pavement Width	Surface	Road Condition	# of Lanes	Road Condition											
								L1	RL	LL	RL								
<b>Arterials</b>																			
E. Main Street (Business 18)	Mile Post 3.17 to Interchange	3869	Yamhill Co.	45	Asphalt	Good	2	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	
W. Main Street	Interchange to Willamina Creek Rd.	950	Yamhill Co.	40	Asphalt	Good	2	N	Y	N	N	N	N	N	N	N	N	N	
S. Main Street (Business 18)	Interchange to Hill Drive	3870	Polk Co.	45	Asphalt	Good	2	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	
<b>Collectors</b>																			
<b>Oak Hills Drive</b>																			
"B" Street	End Oak Hills Dr. to E. Main Street	2112	Yamhill Co.	45	Asphalt	Good	2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
"C" Street	4th Street to E. Main Street	982	Yamhill Co.	40	Asphalt	Good	2	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	
"D" Street	4th Street to E. Main Street	762	Yamhill Co.	40	Asphalt	Good	2	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	
"E" Street	4th Street to E. Main Street	178/583	Yamhill Co.	40	Asphalt	Poor	2	N	Y	N	N	N	N	N	N	N	N	N	
Second Street	5th Street to E. Main Street	1564	Yamhill Co.	38	Asphalt	Good	2	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	
Third Street	"B" Street to "D" Street	590	Yamhill Co.	20	Rock	Poor	2	N	N	N	N	N	N	N	N	N	N	N	
Fourth Street	Churchman Street to Oak Hill Dr.	1584	Yamhill Co.	30	Asphalt	Poor	2	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	N	N	
Willamina Drive	Churchman Street to "D" Street	1065	Yamhill Co.	25	Oil	Good	2	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	N	N	
Churchman Street	5th Street to "B" Street	2640	Yamhill Co.	25	Asphalt	Good	2	N	N	N	N	N	N	N	N	N	N	N	
Lamson Avenue	5th Street to Willamina Drive	1730	Yamhill Co.	25	Oil	Poor	2	N	N	N	N	N	N	N	N	N	N	N	
Lamson Street	Ash Street to S. Main Street	1620	Yamhill Co.	22	Oil	Poor	2	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	N	N	
Washington Street	S. Main Street to Washington Street	516	Yamhill Co.	37.5	Oil	Good	2	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	
Barber Avenue	Lamson Street to Washington Street	1592	Yamhill / Polk Co.	42	Asphalt	Good	2	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	N	N	
Pioneer Avenue	Ash Street to Washington Street	2824	Yamhill / Polk Co.	28	Asp/Rock	Good	2	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	N	N	
Hill Drive	End of Pioneer Ave. to Cherry Street	1765	Polk Co.	25	Oil	Poor	2	N	N	N	N	N	N	N	N	N	N	N	
	End of Hill Street to S. Main Street	2650	Polk Co.	25	Oil	Poor	2	N	N	N	N	N	N	N	N	N	N	N	
<b>Significant Local Streets:</b>																			
Yamhill Street	C Street to "E" Street	670	Yamhill Co.	20	Oil/Rock	Poor	2	N	N	N	N	N	N	N	N	N	N	N	
Baker Street	S. Main Street to Washington Street	463	Yamhill Co.	37.5	Asphalt	Good	2	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	
Polk Street	S. Main Street to Washington Street	465	Polk Co.	20	Oil	Poor	2	N	N	N	N	N	N	N	N	N	N	N	
Adams Street	S. Main Street to Washington Street	365	Polk Co.	30	Asphalt	Good	2	N	N	N	N	N	N	N	N	N	N	N	
Ivy Street	Willow Lane to Lincoln Street	618	Polk Co.	22	Oil/Rock	Poor	2	N	N	N	N	N	N	N	N	N	N	N	
Ash Street	Lamson Avenue to Barber Avenue	792	Polk Co.	20	Rock	Poor	2	N	N	N	N	N	N	N	N	N	N	N	
Fit Street	Lamson Avenue to Pioneer Avenue	1135	Yamhill / Polk Co.	25	Oil	Poor	2	N	N	N	N	N	N	N	N	N	N	N	
Walnut Street	Lamson Avenue to Barber Avenue	792	Yamhill / Polk Co.	20	Oil	Poor	2	N	N	N	N	N	N	N	N	N	N	N	
Oak Street	Lamson Avenue to Pioneer Avenue	1135	Yamhill / Polk Co.	25	Oil	Poor	2	N	N	N	N	N	N	N	N	N	N	N	
Spruce Street	Lamson Avenue to Barber Avenue	792	Yamhill / Polk Co.	20	Oil	Poor	2	N	N	N	N	N	N	N	N	N	N	N	
Maple Street	Lamson Avenue to Barber Avenue	792	Yamhill Co.	30	Asphalt	Good	2	N	Y/N	N	N	N	N	N	N	N	N	N	

Figure 2

# Existing Transit Service Routes





Highway 18 Business

# WILLAMINA COMPREHENSIVE PLAN DESIGNATION

### URBAN ZONING KEY

- |                                   |                                 |                                   |                       |
|-----------------------------------|---------------------------------|-----------------------------------|-----------------------|
| Low Density Residential (R1)      | Residential/Commercial (RC)(C1) | Public Assembly/Institution (PAI) | City Limits           |
| Moderate Density Residential (R2) | General Commercial (C3)         | Public Use                        | Roads                 |
| Medium Density Residential (R3)   | General Industrial (I3)         | Open Space (A4)                   | Urban Growth Boundary |

*02/11*

Figure 3

4. The City shall promote and encourage usage of alternate modes, including public transportation, bicycle, and pedestrian systems.
5. All transportation planning and improvements shall be coordinated with county, regional, and state transportation plans.

### **Automobile Policies**

1. Hazardous and inferior road sections and intersections that are not in accordance with recommended standards shall be identified and recommendations shall be made for improvement through a systematic capital improvement program.
2. Prior to paving (concrete, asphalt, concrete, or rock and oil) and City road, it will have drainage, and a subbase and base rock course which meets Public Works Standards.
3. The roadways shown in the TSP's conceptual street plan will only be required as areas are developed or redeveloped. The City has no desire to condemn land, remove homes or build a roadway solely to meet the proposed roadway placement, however, the City does have a desire to plan for good future streets systems to meet growing needs.
4. Automobile routes between residential areas and major activity centers shall be examined and recommendations shall be made for improvements.
5. The City shall discourage direct access from adjacent properties onto arterial highways whenever alternative access can be made available. To accomplish this,

the City shall plan for a local street network and alleys as they develop.

6. The city will notify county and ODOT of all proposals requiring access to a state highway, and any land use change or development within 500 feet of a state highway. Additionally, the County and/or ODOT will be notified of any major development or land use change, regardless of distance, whenever such change can reasonably be expected to generate significant traffic.
7. Level of Service B is the minimum desired level on all City arterials and collectors.
8. The city will work cooperatively with Polk and Yamhill counties to accomplish an expeditious way of transferring road jurisdiction from the county to the city in conjunction with annexation, and in accordance with ORS 373.270. The following caveats apply:
  - a) The developers of the property proposed for annexation will meet city road standards, including the necessary improvements for upgrading the frontage road to city standards
  - b) Roads will be upgraded at the time of annexation, or the developer will obtain a signed agreement with the city for upgrade at the time of development.

### **Bicycle and Pedestrian Policies**

1. The city shall work in conjunction with ODOT and Polk and Yamhill counties to



way for streets and related facility improvements in appropriate locations.

The street system improvements planned for the Willamina area include improvements to the existing street network as well as future streets. These improvements are listed and defined below.

## **System Improvements**

NOTE: Installation of left turn pockets is likely to require removal of sections of on-street parking, as required by ODOT's engineering standards.

### **Intersection at Oaken Hills Drive and E. Main Street**

The intersection at Oaken Hills and East Main Street is a heavily used intersection which services the existing elementary school and various local residences. With the addition of new development along Oaken Hills Drive and a new high school, traffic will likely increase. To offset this increase, the city should work with ODOT to develop a left-turn pocket at this intersection. A left-turn pocket at this intersection would improve mobility and safety during peak travel periods by allowing traffic to proceed north without having the build up of congestion created by a vehicle turning left onto Oaken Hill Drive. It would also make left-turn movements easier and less hectic for the driver. This improvement would likely require the city to work with ODOT in obtaining additional right-of-way to accommodate the left-turn pocket. Estimated cost: \$10,000.

### **Intersection at "C" Street and East Main Street (Business 18)**

The intersection at "C" Street and East Main Street is also heavily congested. It services the existing commercial district, city hall, and local residences. With any future expansion of the northern part of the city, traffic will likely increase at this intersection. To accommodate for this additional traffic the city should consider developing a left-turn pocket lane as proposed above.

A left-turn pocket at this intersection would improve mobility and safety during peak travel periods along East Main Street. This improvement would require the city to remove on-street parking along a portion of Main Street. The removal of existing parking may make accessibility to some local businesses more difficult. Estimated cost: \$10,000.

### **"B" Street/East Main Street (Business 18)**

The intersection at "B" Street and East Main Street is also congested and services the existing commercial district and local residences. With any future expansion of the northern part of the city, traffic will also likely increase at this intersection. To accommodate for additional traffic, the city should consider developing a similar left-turn pocket lane as proposed above.

The left-turn pocket would improve mobility and safety during peak travel periods along East Main Street. This improvement would require removal of a portion of on-street parking. Estimated cost: \$10,000.

A more in-depth analysis should be conducted to determine whether or not either alternative is feasible both politically or economically.

### **Barber Avenue/South Main Street (Business 18)**

The intersection at Barber Avenue and South Main Street services surrounding residents as well as post office users and employees. Pedestrian safety at this particular intersection is a problem because the curb and gutter at this intersection make it difficult for physically challenged citizens to cross and access the other side of South Main Street. In addition to these standards, crosswalks are not properly striped.

Recurbing, guttering, and striping this intersection would improve existing conditions. These improvements would promote more user-friendly activities such as biking and walking. The costs of these improvements would be approximately \$7,000 dollars.

The city has also discussed installation of a left-turn pocket on Barber Avenue. It is anticipated this work will require some intersection radii reconstruction and attention will have to be paid to the curvature of the highway.

### **Ivy Street/South Main Street (Business 18)**

The intersection at Ivy and South Main Street currently services local residences of Ivy Street and Willow Lane. Visibility and access issues are significant problems at this intersection. Visibility is limited by the existing foliage and topography around the

intersection. Access problems are directly related to lack of visibility.

Visibility and access might be improved by ensuring property owners are aggressively trimming back and removing foliage around the intersection or by purchasing a traffic mirror (which would be attached to an existing power line). The approximate cost of the traffic mirror would be \$1,500 dollars. Implementation of one or both of these suggestions would help improve visibility and traffic movements at this intersection.

## **Future Streets**

While exact alignments will require detailed project-level planning, this TSP identifies the general future alignments and connections necessary to provide a safe, convenient, and economical transportation system with adequate access to all planned land uses.

The street network plan provides a complete and continuous network to ensure satisfactory traffic movement within the city, as well as access to and from the surrounding area.

While the street network plan identifies certain future streets of particular importance (primarily collectors) for traffic circulation, most local streets will be built as development occurs. It is important that the city require local streets to connect with existing and planned streets wherever possible. Some residential areas within Willamina have only one primary access point, which places them at risk in the event of a major emergency (i.e., Hill Drive).

Multiple access points, achieved through a well connected street network, are important to ensure that emergency services are not cut off and that local access is not eliminated or

- East-west extension from north-south (Barber Extension) to Cherry Street

## Alternative II

Recommends that the city should not build an east-west collector. This alternative would allow the city to “max-out” its current transportation system in the northern section of the city without having to budget or fund the East-West Collector improvement. However, the consequences of this would likely result in the city’s present road system in the north becoming over-utilized and unsafe for bicycle and pedestrian activity. The southern section of the alternative is the same as Alternative I.

## No Action

The “No Build” scenario recommends that the city do nothing to improve its existing street system. This action would allow the present situation to remain the same, and possibly worsen, which might result in more dangerous areas for commuters, pedestrians, and bicycle users. Therefore, this method was examined but not considered in actual determination of the city’s transportation needs.

## Functional Classification

Streets serve a variety of needs ranging from transportation through an area to direct access. To serve this wide range of uses effectively, streets should be designed to serve a primary function within a hierarchical network.

As defined by the Federal Highway Administration (FHA), functional classification is “. . . the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide.” The street network plan is based on the methodology developed by FHA.

This method of functional classification, which attempts to achieve a balance between the competing demands for mobility and access, has been tailored to suit the needs of the Willamina urban area.

Due to its size, Willamina only requires three functional classifications to describe its existing and proposed network of streets. The following three functional classifications effectively differentiate the range of streets needed to satisfy local and regional needs.

**Arterial.** A street of considerable continuity which is used primarily for through traffic and interconnection between major areas of the city. An arterial is intended to provide for the majority of regional travel passing through an area as well as the majority of local trips entering and leaving the urban area. It should also provide continuity for all rural arterials which intercept the UGB and should include connections to all rural collectors. Arterials generally emphasize mobility over land access. Access to arterials should be managed to protect the mobility function of the street as much as possible

**Collector.** A street supplementary to the arterial street system, used partly by through traffic and partly for access to abutting

properties. A collector provides more emphasis on land access than an arterial serving the traffic circulation needs of surrounding residential areas. Collectors penetrate into all areas of the city, gathering traffic, and channeling it to arterials and rural collectors.

**Local.** A street intended primarily for access to abutting properties, but protected from “through” traffic. Minor streets entail all those not otherwise defined as arterials or collectors. While connectivity is encouraged for all streets, through traffic movement is not the intended purpose of a minor street.

The classifications presented in this plan are consistent with those proposed by Polk and Yamhill counties and are in compliance with the Yamhill County TSP. The classifications presented above are consistent with those proposed in the 1987 Comprehensive Plan with the following exceptions to existing streets (see **Figure 5**):

- Oaken Hills (collector: not platted on last comprehensive plan)
- Willamina Drive intersection with “B” Street (local street to collector status)
- Lamson Street (local street to collector status)
- Pioneer Avenue to James Street (local street to collector status)
- Hill Drive (future development will upgrade to collector status)

## Street Design

Consistent with the identification of streets by functional classification is the need to develop street standards that differentiate between the three classes in terms of street dimensions and amenities. Street standards are a set of guidelines which insure that safety, level of service, and aesthetic quality are met. In addition, standards provide for ease of administration when new roadways are planned and constructed.

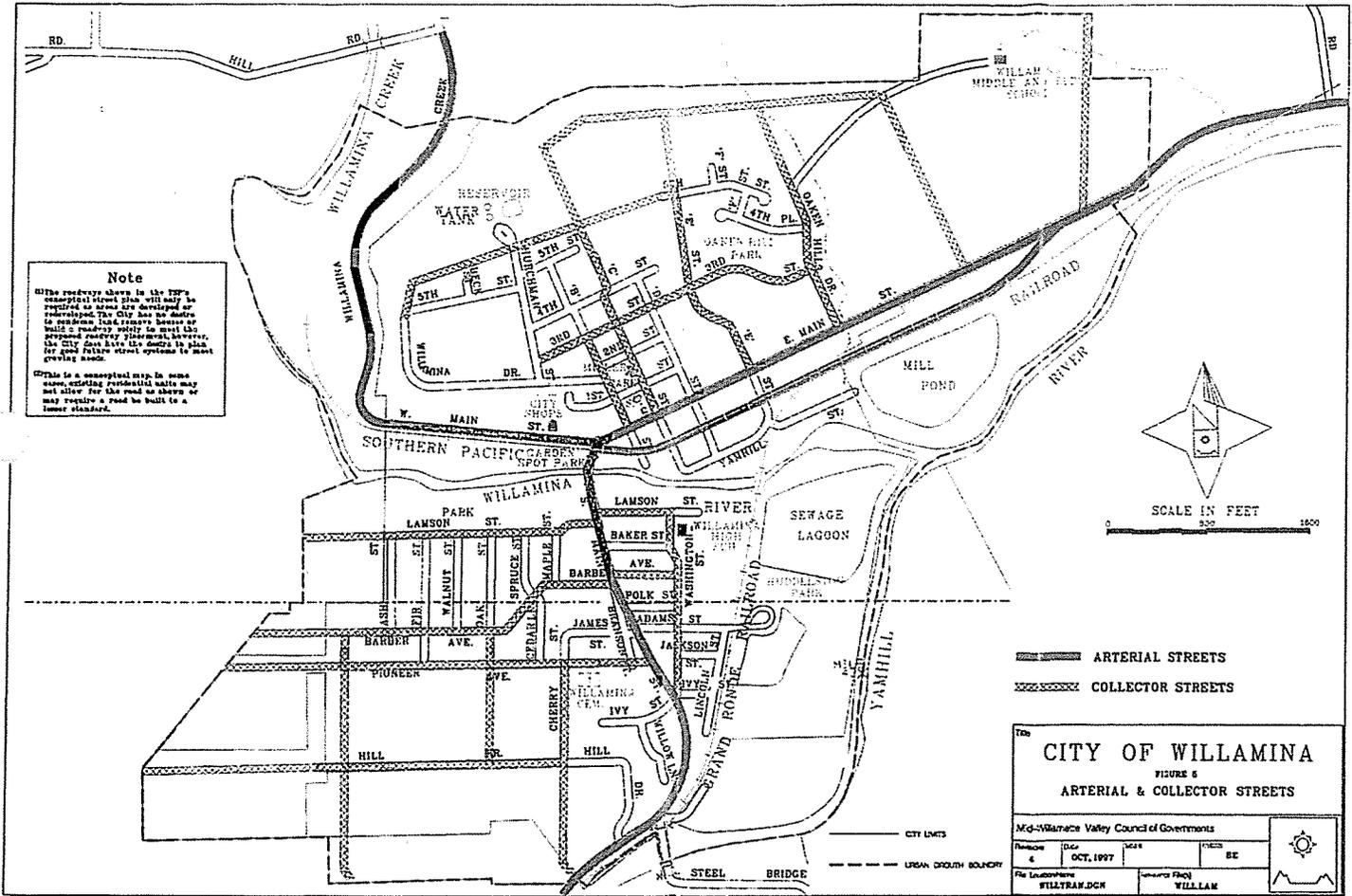
The street design standards proposed in this plan were developed through the consideration of a wide range of design alternatives from street widths to curb versus property-line sidewalks. The development used policies and publications shown in **Appendix B**.

The following street design standards are contained and adopted through the city’s development code and are reported here for the ease of use. They will help the city to achieve compatibility and consistency in the development of the street network. Although it is important to have recognized street design standards, major street projects often need to be evaluated on an individual basis. Strict adherence to these standards may not be practical in all situations, considering existing development or other social, economic, and environmental constraints. Furthermore, there are other considerations that need to be evaluated when designing specific streets, including distance between intersections, access points, and adjacent land uses.

**Note**

1. The roadways shown in the ITP's conceptual street plan will only be required as shown if developed or redeveloped. The City has no desire to maintain. The roadway shown as held in roadway solely to meet the approved roadway standards. However, the City does have the desire to plan for good future street systems to meet growing needs.

2. This is a conceptual map. In some cases, existing residential units may not allow for the road as shown or may require a road to be built to a lower standard.



————— ARTERIAL STREETS  
 - - - - - COLLECTOR STREETS

**CITY OF WILLAMINA**  
 FIGURE 5  
 ARTERIAL & COLLECTOR STREETS

City Limits  
 Urban Growth Boundary

Mid-Willamette Valley Council of Governments  
 Revision: 4 Date: OCT, 1997 Scale: 1"=1000' Project: BC  
 File Location: WILLTRAM.DGN (User: F10) Location: WILLAM

control over land adjacent to the highway, and thus has significant influence over access demands. Because of these overlapping jurisdictions, all development proposals that impact the roadway should be submitted for ODOT review. Additionally, any new access to Main St. (Business 18) will require a permit from ODOT. The city, in cooperation with ODOT, can achieve the following objectives through a coordinated approach to access management:

- Maintain an acceptable level of service (good mobility).
- Minimize capital costs.
- Improve safety by minimizing potential conflict points.
- Improve bicycle/pedestrian mobility.

Guidelines for access management are defined in the street design standards. The city achieves access management objectives through application of its updated development code.

The following are examples of access management techniques that can be used to accomplish the above objective.

- Common driveways (sharing access with adjacent properties).
- Providing access to collector and local streets.
- Encourage connections between adjacent properties.
- Construct local service roads.
- Offset opposing driveways.
- Provide adequate distance between existing and future access points.

The city should remain flexible and open to future development proposals on Main Street, considering creative access solutions but still maintaining a firm commitment to negotiating agreements that uphold the

objectives of safety and circulation. The city is in the process of adopting standards in its development code that will provide the authority to manage access. These standards, in association with state and county requirements, will assist the city to maintain a high level of service on its arterial and collector streets.

NOTE: Access requirements onto Main Street only apply to newly created lots. Lots which previously had accesses will not be required to surrender those accesses. (Grandfather Clause)



## Background

According to the existing comprehensive plan's transportation element, the city has recognized the use of bicycles for more than simply recreational purposes. In recent years, it has become clear that bicycling and walking provide a reasonable means of transportation for many local trips such as trips to school, various student activities and practices, visits to friends or relatives, work, errands and recreation.

The city's comprehensive plan also acknowledges the importance of developing alternative modes of transportation. By developing a more pedestrian-friendly environment, the city will enhance its livability and the city's surrounding beauty. **Figure 6**, indicates where conceptual bikeways are to be located.

Bikeway is a generic term used to describe preferred bike routings which meet certain standards. There are several types of bikeways. These are: bike lanes, shared roadway, (shared) shoulder bikeway, and multi-use paths. The definitions of these are contained in Appendix A.

## Network Plan

In association with the realization that bicycling and walking have more than recreational value, is the recognition that the best way to accommodate these modes of travel is on the existing road network. The regularly traveled roadway provides the best opportunity for an effective network of walkways and bikeways because it is already in place and it already connects the various activity centers within the urban area. In addition, streets are very public, highly

visible places where individuals feel safer for both themselves and their children.

The primary goal of this network plan is to identify a network of bikeways and walkways that offer safe and convenient access to all areas of the city.

The bikeways in this plan are, for the most part, "shared roadways," roadways where bicyclists and motor vehicles share a travel lane. Examples of shared roads are Willamina Avenue and Washington Street. This type of facility is appropriate in Willamina due to its small size and moderate traffic volumes. Other routes, such as Oaken Hills, are identified as "shoulder bikeways," where bicyclists normally travel on the shoulder of the roadway, which should be wide enough to comfortably and safely accommodate bicycle use.

For the most part, existing street conditions are acceptable for bicycle and pedestrian travel with one notable exception, Main Street. Main Street's present condition is unacceptable for bicycle use since it heavily used and is too narrow to accommodate both bicycles and on-street parking. There are four alternatives which the city could pursue or consider to make this area more bicycle- and pedestrian-friendly.

### Alternative I: No Action

This alternative recommends that the city do nothing to improve the present situation on Main Street. This "no action" alternative would allow the present situation to remain the same and possibly worsen, which would result in a more dangerous area for pedestrians and bicyclists. This alternative action would fail to meet the pedestrian and bicycle objectives of the TPR and the Oregon Pedestrian and Bicycle Plan.

considered at the time of development review to insure consistency with the TSP at the project level.

Good street design is a proven method of encouraging greater bicycle and pedestrian use of the right-of-way. It should be noted that the city will endeavor and strive, as funds become available, shall improve existing sidewalks and other pedestrian ways.

Education is another important means of encouraging bicycling and walking and of informing citizens of important safety issues. The city should encourage the development of educational programs for all ages that promote bicycle riding skills, encourage observance of traffic laws, and increase awareness of bicyclist and pedestrian rights.

The city considers the widening and paving of Business 18's shoulders from Willamina to Sheridan a project of significant importance. This route is used regularly by recreational bicyclists, and current conditions present a danger to users.

# Air, Rail, Water, and Pipeline

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## Requirements

### OAR 660-12-020 Elements of Transportation Systems Plans

(2) (e) An air, rail, water and pipeline transportation plan which identifies where public use airports, mainline and branchline railroads and railroad facilities, port facilities, and major regional pipelines and terminals are located or planned within the planning area. For airports, the planning area shall include all areas within airport imaginary surfaces and other areas covered by state and federal regulations.

## Air

There are no air facilities located within the city's urban growth boundary. All regional and commercial air service is provided by the Portland International Airport and charters from McNary Field in Salem and the McMinnville airport.

## Rail

The existing rail line in the city is primarily used for freight shipment. The Willamette Valley Railroad line runs parallel to the South Yamhill River through the southeastern portion of the city. A spur line runs to the west, terminating at the mill. Due to rail line deficiencies, only minimal use is made of rail. The tracks are generally bordered by the major industrial operations in

the town and serve as a major transportation source for those operations. No plans for expansion of the existing rail line is proposed; however funding has been made available to upgrade the lines, and work is in the progress at points outside of Willamina.

The rail lines are being upgraded to a level likely to reach Class 2, one step above the lowest classification. Safe speeds of approximately 20 mph will then be possible. This work will allow long term continued use of rail for shipping wood and agricultural products, with connections to other modes of transportation. Without the upgrade, the rail line will deteriorate to an unusable level.

## Water

There are no significant water transportation routes that exist within, adjacent to, or near the city's Urban Growth Boundary.

## Pipelines

Current pipeline transportation in and throughout the city includes transmission lines for electricity, cable television, telephone service, water and sewer. A 1997 grant was received to upgrade the existing water lines. The Willamina Transportation System Plan encourages continued use of these pipelines to move goods throughout the city.

# Finance Plan

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This portion of the TSP describes methods available for funding proposed projects. Some of the projects will require funding from more than one jurisdiction, even when only one jurisdiction has responsibility for and authority over the improvement being made. This situation results from a concept that cities and/or counties who wish a project to be constructed by the state can enhance the probability of the work being done if they contribute to project financing. Also, there is a concept that those who generate the need for improvements should either pay or share in the costs. Consequently, developers are also expected to share the expenses of new construction, either through right-of-way dedication or roadway construction, or both. It is to the city's advantage to participate in funding projects which directly or indirectly benefit the city residents. This portion of the plan will address these possibilities.

## Systems Development Charges (SDCs)

ORS 223.297 requires local governments who impose SDC's to:

- Complete a plan that lists the capital improvements that can be funded by SDC fees and the estimated cost and timing of each improvement. This plan meets that requirement.
- Limit the expenditure of SDC fees/charges to those capital improvement that are required to increase capacity because of uses generated by current or projected developments.
- Place the SDC's collected in a separate account and provide an annual accounting of revenues received and projects that were funded.
- Use a resolution or ordinance to establish the methodology for calculating the charge and make it available for public inspection.
- Willamina's SDC was enacted on October 27, 1994, and restricts funds collected to use on a limited number of designated streets. The city will reexamine the SDC and determine if it requires modification to incorporate some or all of the improvements shown in this document. To date, approximately \$8,200 has been collected. Collection is close to \$4,000 plus per year. Although development growth will increase total collections, the City should also reexamine the SDC rate to insure it is proper and adequate to support the increased demands on the local street system.

funding projects. However, the state has begun to enhance its funding by requiring contributions from local jurisdictions or cost sharing when developments have significant traffic impacts. The latter method was used for improvements on U.S. Highway 101 near Lincoln City and for Highway 18 near Valley Junction. These cost sharing techniques may become more prevalent if federal funds decrease in the future.

The federal funds presently available under the Intermodal Surface Transportation Efficiency Act (ISTEA) 1991 will terminate in 1997 and a new funding bill (NEXTEA) will need to be authorized. It remains to be seen whether a new bill will be more or less flexible, or whether funds more or less funds are available. ISTEA is more flexible for the state than the previous program since more authority was delegated. The perceived nationwide success of this approach will help determine if restrictions are loosened further or tightened. Overall funding levels and the portion available to various state programs are influenced by many factors. While none may presently speculate, the uncertainty will be resolved by the time projects in this plan are constructed.

Many of these uncertainties also prevail at the state level. Historically, increases in state and gas taxes generally do not provide more than a catch-up for inflationary pressures on the cost of construction or to provide a means to correct deferred maintenance. In general, it is expected the state will continue its course of requiring some contributions or cost sharing before significant work such as interchanges or bridges are constructed.

# Appendix A: Definitions and Acronyms

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**Access Management:** Measures regulating access to streets, roads, and highways from public streets or roads and private driveways. Measures may include but are not limited to restrictions on the siting of interchanges, restrictions on the type and amount of access to roadways, and the use of physical controls, such as signals and channelization including raised medians to reduce impacts of approach road traffic on the main facility. (Ref. OAR 660-12-005)

**Arterial Street:** A street that is the primary route for traffic within and through the community.

**Average Daily Traffic (ADT):** The annual average two-way daily traffic volume. It represents the total traffic for the year, divided by 365.

**Bike Lane:** A portion of a roadway which has been designated by striping and pavement marking for the preferential or exclusive use of bicyclists.

**Bikeway:** A bikeway is created when a road has the appropriate design treatment for bicyclists, based on motor vehicle traffic volumes and speeds: shared roadway, shoulder bikeway, Bike lane, or bicycle boulevard. Another type of facility is separated from the roadway: multi-use path.

**Collector:** A street that allows traffic within an area or neighborhood to connect to the arterial system.

**Corridor Plan:** A long-range plan for managing and improving transportation facilities and serves to meet needs for moving people and goods.

**Demand Management:** Actions which are designed to change travel behavior in order to improve performance of transportation facilities and to reduce need for additional road capacity. Methods may include but are not limited to the use of alternative modes, ridesharing and vanpool programs, and trip reduction ordinances. (Ref. OAR 660-12-005)

**Divided Highway:** A two-way highway on which traffic traveling in opposite directions is physically separated by a median.

**Elderly:** People 60 years of age and over.

**Frontage Road (Local Service Road):** A local street or road located parallel to an arterial highway for service to abutting properties for the purpose of controlling access to the arterial highway.

**Interchange:** A facility that separates intersecting roadways and provides directional ramps for access movements between the roadways. The structure and the ramps are considered part of the interchange.

**ISTEA:** The federally enacted Intermodal Surface Transportation Efficiency Act of 1991 which provided authorizations for highway, highway safety, and mass transportation for the following six years.

**Transportation Disadvantaged:** A term used to denote individuals without the ability or capability to use personal conveyances to travel. For example, these individuals may be the working poor, students, or physically or mentally challenged.

**UGB:** Urban Growth Boundary. A line drawn around a geographic area which separates urban use lands from resource, or rural, use land.

**Urban:** Any territory within an incorporated area or with frontage on a highway which is at least 50% built-up with structures devoted to business, industry, or residences for a distance of a quarter mile or more.

**Urbanizing:** Areas within an urban growth boundary that are undeveloped.

# Appendix B: Document Listing

	<u>Publication Date</u>
<b>State of Oregon</b>	
1991 Oregon Highway Plan	June 1991
Oregon Administrative Rules, Chapter 660, Division 12	December 1995
Oregon Transportation Plan	September 1992
State Agency Coordination Program	December 1990
2001 Statewide Transportation Improvement Program (STIP)	Draft January 1997
Traffic Volume Tables	1975, 1980, 1985, 1990, 1995, 1992, 1993, 1994, 1995
Directory of Public Transportation Services	January 1996
Transportation System Planning Guidelines	August 1995
Oregon Public Transportation Plan	Draft November 1996
Willamette Valley Transportation Strategy- Phase I report:	May 1995
Highway Compatibility Guidelines	June 1987
Aerial Photographs	October 1995
Oregon Inter-city Passenger Times-tables	Fall, 1996
Interim Corridor Strategy, "Portland to Lincoln City March 1997 Corridor"	ODOT, CH2M Hill, Jeanne Lawson, Assoc.
ODOT Potential Development Impact Analysis (PDIA)	1994

Yamhill Community Action Program Bus Schedules (YAMCO & LINK)	YCAP	1994
Work Program, Willamina Transportation System Plan		May 1996
ODOT Potential Development Analysis		1994
Portland State Population Projections		1995

## **Appendix C: Meeting Minutes and Open House Summaries**

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Willamina Transportation Advisory Committee

August 28, 1996

October 16, 1996

January 22, 1997

April 30, 1997

Public Open House

April 23, 1997

(Copies available upon request.)

## **Appendix D: Development Code Revisions**

Available upon request.

# Appendix E: Capital Improvements

## ROAD IMPROVEMENT COSTS:

Location	Improvement Type	Estimated Cost	Estimated Completion Date
Intersection at Oaken Hills & East Main Street	Left turn pocket	\$10,000	2015
Intersection at "C" Street & East Main Street	Left turn pocket	\$10,000	2013
Intersection at "B" Street & East Main Street	Left turn pocket	\$10,000	2010
Main Street Island: Alternative I	Reconfiguration of intersection	*Further Study	study - 2000
Main Street Island Alternative II	Reconfiguration of intersection	*Further Study	study - 2000
Intersection at Barber Avenue & South Main Street	Curb and Gutter & Re-striping Intersection	\$7,000	2001
Intersection at Barber Avenue & East Main Street	Left-turn pocket	\$10,000	2001
Intersection at Ivy Street & South Main Street	Traffic Mirror	\$1,500	1999

\* Further study needs to be done to determine the feasibility of each alternative

## CONSTRUCTION COSTS : New Roads

Road	Road Distance	Estimated Cost	Estimated Completion Date
East-West Collector between East Main Street and Highland Loop	4,350'	\$1,023,000	Development dependent
Oaken Hills Extension to East-West Collector	510'	\$ 122,000	Development dependent
"F" Street Extension to East-West Collector	570'	\$136,000	Development dependent
Extend Fourth Street to Willamina Drive	600'	\$143,000	Development dependent
North-South Extension between Willamina Drive, Beck Street, and East-West Collector	420'	\$100,000	Development dependent
East-West Connection from Oaken	1,980'	\$466,000	Development dependent

## **Appendix F: Travel Forecasts**

Available upon request.

# Appendix G: TPR Checklist

*TPR Requirements	TPR Compliance	Completed
<b>Public and Interagency Involvement:</b>		
Establish advisory committees	Technical Advisory Committee (TAC) established: Representatives from State, County and Planning Commission regularly participated in work sessions.	Completed
Develop informational material, schedule meetings and hearings, and coordinate plan with other agencies	Six TAC meetings and two public open houses meetings were held. Minutes and other records are contained in Appendix C.	Completed
<b>Review Existing Plans, Policies and Standards</b>		
Review and evaluate existing comprehensive land use and transportation plans.	Data was gathered and reviewed. A bibliography is contained in Appendix B	Completed
Review regional and state plans, significant transportation studies, and capital improvement programs.	See Bibliography in Appendix B. Specifically the Oregon Transportation Plan and ODOT's Interim Strategies for Highway's 18 were reviewed. Close contact was maintained with studies in progress such as Regional Problem Solving and Polk County TSP.	Completed
Analyze existing land uses and population.	Comprehensive Plan and Zoning designations were studied. Indication of this is found in Figure 3 in the TSP. Population figures can be found on page 13 of the inventory section.	Completed
Review existing ordinances and zoning, subdivision, and engineering standards	Ordinances were reviewed and changes were made (See Appendix D). Emphasis was placed upon the development of pedestrian and bicycle amenities.	Completed
<b>Inventory and Assess Existing Transportation Systems:</b>		
Street system	The TSP contains a comprehensive road inventory, for arterials, collectors and significant local streets. The inventory includes: location, length, county jurisdiction, pavement width, surface, condition and number of lanes. The inventory is illustrated in Table 1. Also, ADT and Accidents data was compiled along designated mile posts along Main Street (Business 18) see Figure 1.	Completed
Bicycle system	An inventory of the width, type, location, and condition of bikeways is included in the transportation plan.	Completed
Pedestrian system	A inventory of sidewalk location and type were conducted. The general assessment can be found in Table 1. A more in-depth inventory of existing sidewalks shall be conducted during the next update of the TSP.	Completed
Public transportation service	Transit service exists only on the Yamhill County side of the city. Willamina's service area is illustrated in Figure 2 of the document	Completed

*TPR Requirements	TPR Compliance	Completed
<b>Produce Transportation System Plans:</b>		
Develop and evaluate alternatives (build/no-build and TSM)	The "no" build and build scenarios were thoroughly examined in the following sections of TSP: <ul style="list-style-type: none"> <li>• System improvements</li> <li>• Street Plan</li> <li>• Bicycle Plan</li> </ul>	Completed
Street Plan ( Includes functional classification, street design standards, access management, truck route	Specific street system recommendations and related goals, policies, implementation measures, and development standards are outlined in the street plan of the TSP.	Completed
Public Transportation	The city shall work in conjunction with Polk and Yamhill County officials to promote and encourage the future development and operation of an inter-county public transit system. This section shall be evaluated more thoroughly during the next update of the plan.	Completed
Bicycle / Pedestrian System	The Bicycle and Pedestrian Systems were combined into one section.  <u>Bicycle:</u> Shared roadways and shoulder bikeway facilities are identified as components of the city's street system plan. Specific goals, policies, and implementation measures related to bicycle are outlined on page(s) 16-17 and 34-37. The city's updated development code requires 5 foot bikeways for both arterial and collector streets.  <u>Pedestrian:</u> Sidewalks are identified as components of the city's street system plan. Specific goals, policies and implementation measures related to bicycle are outlined on page(s) 16-17 and 34-37. The city's updated development code requires 6 foot sidewalks on arterials and 5 foot sidewalks on collector and local streets.	Completed
Airport element	Future plan updates can address airport planning if existing air service in Sheridan is expanded.	Completed
Freight and rail elements	Although the city is serviced by only freight line, future transportation plan updates can address freight and rail issues as demand and service changes warrant.	Completed
Water transportation element	No water bodies capable of providing any form of water transportation service exists within the city's planning area.	Completed
Pipeline element	Future plan updates can address pipeline transportation issues as changes warrant	Completed
<b>Implementation</b>		
Plan Review and Coordination		
Adoption		
Ordinances		