Council Meeting Date: July 6, 2010 **Agenda Item: 5(b)**

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Continued Discussion of the Transportation Master Plan: Sidewalk Maintenance & Design Issues; Bicycle Policies
DEPARTMENT:	Public Works
PRESENTED BY:	Mark Relph, Public Works Director Kirk McKinley, Transportation Services Manager Alicia McIntire, Senior Transportation Planner

PROBLEM/ISSUE STATEMENT:

The purpose of this staff report is to continue the discussion of policy issues associated with sidewalk maintenance and design as well as bicycle transportation begun at the June 14 council meeting. At this meeting, Council discussed items A-D in the sidewalk design policy section of Attachment B. One item remains (Item E) to discuss in this section before moving into the maintenance and repair and bicycle policies. Attachment B begins with the remaining undiscussed sidewalk design policy issue – sidewalks on both sides of the street. The outcome of this discussion will provide direction to staff for the Transportation Master Plan update.

Staff has two additional discussion topics scheduled with Council before a draft TMP is assembled and presented in early 2011: Concurrency and Funding and street cross sections.

BACKGROUND

Attachment A provides a summary of the purpose and scope of the Transportation Master Plan (TMP) and includes policies for which Council will be asked to address over the next few months as the City updates the TMP. The main topics of the TMP to be addressed are:

- Bicycle and pedestrian transportation
- Transit
- Stormwater management
- Traffic modeling, capacity and operations
- Neighborhood traffic action plans
- Funding
- Regional integration
- Maintenance

ISSUES

In March, staff presented Council with a status report regarding the City's Transportation Master Plan update. At that meeting, staff explained we would be returning to Council for a series of policy discussions that would guide development of the Transportation Master Plan update. The first discussion was on June 14 and the topic was sidewalk maintenance and design as well as bicycle transportation. This is a continuation of that discussion.

The community has identified sidewalks as a high priority through neighborhood meetings, letters and surveys. Many of the sidewalks on arterials in the City were constructed prior to incorporation as part of a bond measure in the 1960s known as "Forward Thrust." These sidewalks are narrower than the City's current standard, as are the landscaping strips between the sidewalk and travel lane (if present). Due to their age and in some cases, the trees planted next to them, many of these sidewalks are beginning to deteriorate. The trees have grown and matured and their roots are buckling and damaging the sidewalks and in some instances the actual vehicle lanes.

In addition to construction, all capital facilities in the City require maintenance and repair. Sidewalks must be kept safe and clear at all times to ensure users can travel on them. Ice and snow, as well as vegetation, can cause hazardous conditions for pedestrians. While it may be desirable, it is not possible for the City to perform all needed maintenance to our sidewalks. The City's existing code requires adjacent property owners to keep sidewalks free of "hazards" such as ice, snow and vegetation overgrowth.

The City currently has an extremely limited budget for construction of sidewalks and very little sidewalk work is planned in the next few years other than Aurora. As part of the Transportation Master Plan update, the City will be identifying sidewalk design standards for arterials and local streets throughout Shoreline. Location and materials will be a part of these standards.

Like sidewalks, bicycle transportation is important to the community. Bicycle facilities are limited in the City and are present on the following streets:

- Fremont Avenue N between N 190th Street and N 195th Street (southbound only)
- N/NE 155th Street between Midvale Avenue N and 5th Avenue NE
- N 185th Street between Midvale Avenue N and 1st Avenue NE
- 15th Avenue NE between NE 150th Street and NE 175th Street
- N 200th Street between Ashworth Avenue N and Meridian Avenue N, as part of the Interurban Trail
- Meridian Avenue N between N 200th Street and N 205th Street.

Completion of the Interurban Trail improved options for bicycle travel in Shoreline, however, east-west bicycle travel is still difficult. The existing Transportation Master Plan identifies very little in the form of bicycle facilities and does not include a complete bicycle system plan that connects riders to the places where they want to ride.

Attachment B outlines the remaining specific issues staff would like to discuss with Council regarding nonmotorized transportation, including:

- Public and private maintenance responsibilities
- Sidewalk repair
- Bicycle facilities.

Each issue includes two alternatives, with a pros/cons discussion. In all cases, staff is recommending the first alternative.

The recommendations included in the Transportation Master Plan will eventually result in amendments to City programs, policies or codes, such as the development code or engineering development guide.

RECOMMENDATION

There is no recommendation at this time. This report is for discussion purposes only.

Approved By: City Manager City Attorney ____

ATTACHMENTS

Attachment A: Purpose, scope and the Inputs and Outcomes of the TMP
Attachment B: Sidewalk maintenance and design issues, Bicycle policy discussion topics

ATTACHMENT A
TRANSPORTATION MASTER PLAN UPDATE

General Purpose and Scope of the TMP

The Transportation Master Plan (TMP) contains policies and projects that support the future land uses in the City's Comprehensive Plan. These policies affect choices for travel modes, such as car, bus, bicycle and on foot. By knowing how Shoreline will grow in the future, the City can plan for how the transportation system will need to change to accommodate that growth. The projects listed in the TMP help ensure that adequate transportation facilities are in place to support growth, which is known as concurrency.

The current TMP includes an inventory of the existing transportation systems and traffic forecasts for the year 2022. The updated plan will use revised growth targets to plan through 2030.

The TMP addresses several interrelated topics. They include:

- Bicycle and pedestrian transportation – Walking and bicycle travel are important elements of the City's transportation network. Residents who are unable to drive or choose to travel without a car need to have safe, well-maintained facilities that connect them from their homes to destinations.
- Transit – Like walking and bicycling, transit provides another alternative to travel by car. Transit must be frequent, affordable, accessible and travel to desired destinations in order for it to be a successful and appealing form of transportation. Shoreline has a high demand for commuter transit service, as well as all-day transit service. As light rail service begins in Shoreline in the next ten years, transit service throughout the City will change as some buses are directed to feed the light rail stations. The City's bicycle and pedestrian network must be highly integrated with the transit routes serving the City.
- Stormwater management – Streets and sidewalks create large areas of impervious surfaces and the associated stormwater runoff must be collected and treated appropriately. Shoreline has a large conventional stormwater system that collects and treats runoff from the entire City, including private property and streets. This system is predominantly located underneath the street network. As new technologies emerge and stormwater management regulations change, the City's right-of-way can be used in different ways to treat stormwater.
- Traffic modeling, capacity and operations – The City and the surrounding area are projected to grow and major changes to the region's traffic network are planned, such as tolling of state highways and expansion of light rail. As a result of these changes, traffic within and through Shoreline will change. Some areas of the City are likely to experience increased traffic congestion and delays. By utilizing traffic modeling software, the City can anticipate where these problems are likely to occur and plan for solutions to correct them.

- Neighborhood traffic action plans – Over the past few years, the City has been working with residents to identify traffic concerns and develop recommended solutions for each of Shoreline's neighborhoods. The recommendations are used to guide short and long term improvements in the neighborhood.
- Funding – The City has many transportation improvement needs and funding all of these needs is a significant challenge. Resources are limited and the City must prioritize projects. The City has been successful in receiving grants for many of our large capital projects, such as Aurora and the Interurban Trail, and will continue to pursue grant funding in the future. Other funding options to construct transportation improvements are also available, although currently not employed by the City.
- Regional integration – Transportation in Shoreline is heavily influenced by surrounding jurisdictions and transit providers. I-5 and three state highways, as well as regional arterials, are within Shoreline, resulting in significant pass through traffic. The City's transit service is provided by outside agencies that also serve many other jurisdictions. These factors, as well as our location adjacent to the county line, emphasize the need for us to coordinate regionally as we plan transportation improvements and participate in regional transportation decisions.
- Maintenance – All transportation facilities require maintenance. Age, degree of use, original construction methods and materials all contribute to the maintenance needs of a given facility. Due to combinations of all of these factors, Shoreline has various maintenance needs throughout the City. Newly constructed projects will also have long-term maintenance needs as well.

The relationship between these topics and how they affect the City's transportation system will result in plans, policies and procedures within the TMP. The TMP, in turn, will influence, guide and support the development of other City documents. The TMP will address prioritization, funding, maintenance and stormwater management for recommended projects and programs.

One of the significant transportation planning tools that will result from the TMP will be a Master Street Plan. The Master Street Plan will be a long range plan that identifies the cross-section and right-of-way needs for all of the City's arterials. By using the results of the traffic model, staff will know where improvements are needed to accommodate future traffic growth. Additionally, each arterial will be examined by staff to determine what other future improvements may be desired, such as sidewalks, bicycle facilities, landscaping or stormwater treatment. Through these processes, the City will identify the specific cross-section for each arterial, or in some cases, section of an arterial. The Master Street Plan will be used as a guide as the City plans for future right-of-way improvements. Additionally, by knowing the right-of-way needs for a given roadway, the City can ensure that the appropriate improvements are installed in the correct location when required for private developers. For non-arterial streets, the City will develop a menu of cross-sections that can be utilized when designing these streets.

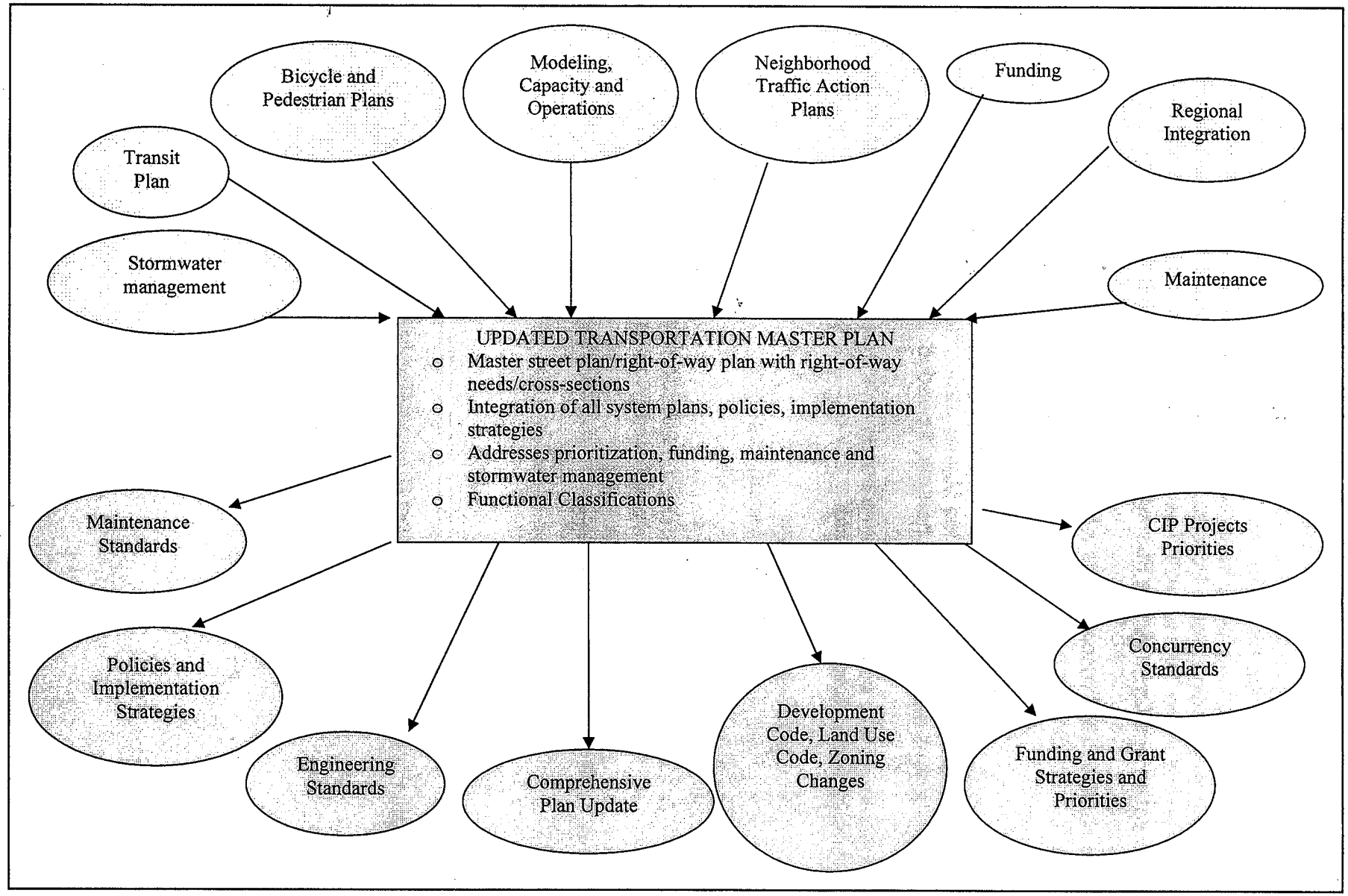
The updated TMP seeks to be a document that is highly integrated with other City system plans, long range plans and implementation strategies. The TMP will work in coordination with the City's Comprehensive Plan and the region's long range growth strategy by identifying future transportation needs based upon planned growth in the City and surrounding areas. Policies outlined in the adopted Sustainability Strategy will be reflected in the TMP as well. The City's Stormwater Master Plan and Parks, Recreation and Open Space Plan will be used to develop the TMP.

The existing TMP recommends a functional classification for all of the streets in the City. This recommendation was adopted with the Comprehensive Plan. Streets in the City are classified as Principal Arterials, Minor Arterials, Collector Arterials, Neighborhood Collectors or Local Streets. Each classification serves a different function, with differing traffic speeds, volumes, lanes, transit service, bicycle facilities and walkways. During the TMP update and creation of the Master Street Plan, staff will evaluate the existing classifications and recommend changes, if needed.

Examples of City policies, plans and documents that will be influenced by the Transportation Master Plan include:

- Maintenance standards;
- Policies and implementation strategies;
- Engineering standards;
- Comprehensive plan;
- Development code, land use code, zoning changes;
- Funding and grant strategies and priorities;
- Concurrency standards; and
- CIP projects and priorities.

The Inputs and Outcomes of the TMP



ATTACHMENT B

Sidewalk Maintenance and Design Policies

A. Sidewalks on both sides of the street

Discussion: Sidewalks are generally located on both sides of a street throughout the City. Exceptions exist where sidewalks were constructed in conjunction with private development, where the property owner was only required to construct frontage improvements in front of a single or a few parcels, on one side of the street only. Also, some of the City's priority sidewalks were constructed on one side of the street.

Should sidewalks be constructed on both sides of a street?

Alternative 1: Streets should have sidewalks on both sides, unless there is a wider trail/walkway system that accomplishes the goal of pedestrian movement and safety with traffic calming, such as green streets or cul-de-sacs.

Pros:

- *Sidewalks on both sides of the street encourage pedestrian activity.*
- *Design flexibility allows the City to construct sidewalks that take into consideration topography, sensitive areas and neighborhood character.*
- *Project costs will be reduced if sidewalks are only required on one side of a street.*

Cons:

- *There may be perceptions of inequity, as streets seem to be treated differently*

Alternative 2: Require sidewalks on both sides of the street for all projects.

Pros:

- *All streets would be treated the same – there would be no question of equity regarding which streets receive sidewalks on one side only.*

Cons:

- *Project costs will increase, as additional design, labor, right-of-way acquisition and materials are required for construction.*
- *There may be significant physical obstructions to constructing sidewalks on both sides, further increasing project costs.*
- *On-street parking may need to be removed to accommodate sidewalks; impervious surfaces are increased.*
- *It will take longer to construct sidewalks in more areas of the City, as funding for sidewalks is very limited.*

Recommendation: Alternative 1

The City is interested in facilitating walking throughout the City and sidewalks can do that. When possible, sidewalks should be constructed on both sides of a street. However, there will be circumstances where it will be expensive and/or impact sensitive areas if sidewalks are constructed on both sides of a street. Other options to encourage pedestrian activity are also

available, such as traffic calming, which may lessen the need for sidewalks. Having flexibility in design standards allows the City to design streets that fit neighborhoods and the pedestrian demand.

Maintenance and Repair

A. Sidewalk repair

Discussion: Many of the streets in the City have amenity zones that are very narrow. The trees planted in these amenity zones are mature, with large root systems that are causing damage to the sidewalks. Repair of these sidewalks is needed to ensure safe, accessible passage for pedestrians. As sidewalk damage continues to occur, either by tree roots or other causes, repair work will be necessary.

There are legal limitations for which the City can assign the costs of sidewalk repair to the adjacent property owner. In general terms, the City can assign the cost if certain conditions are met, but it cannot do so if the damage caused by a City action. For example, if the sidewalk damage is caused by the City planting street trees, then the City would be liable and responsible for the repair, not the adjacent property owner.

Who should be responsible for sidewalk repair?

Alternative 1: The City should continue to perform all sidewalk repairs. The City will need to continue to budget annually for tree removal and sidewalk repair.

Pros:

- *The City can ensure repairs are performed correctly, using proper materials and design standards.*

Cons:

- *City must incur all of the costs for sidewalk repair.*

Alternative 2: Property owners are required to perform sidewalk repairs adjacent to their property.

Pros:

- *City costs for sidewalk repair would be reduced.*

Cons:

- *Residents may not be willing to incur the costs associated with sidewalk repair.*
- *The repair work may not be performed in accordance with City standards, requiring additional work by the property owner or code enforcement action if the property owner is unwilling to redo the work.*
- *Requires the City to establish inspection, notification and enforcement programs that are costly and controversial.*
- *Provisions for low income and elderly residents would also need to be established.*
- *Costs for sidewalk repair caused by City action (e.g. tree roots lifting concrete sidewalk panels) cannot be passed onto an adjacent property owner.*

Recommendation: Alternative 1

The City should continue to perform all sidewalk repair. This will ensure that repair work is performed in accordance with our standards and no additional programs need to be established to implement this requirement. The City can prioritize repair work needs and assess if other actions, such as tree removal, is needed to prevent future damage (See Issue B below).

B. **Street tree removal**

Discussion: Mature trees with large root systems are damaging many of the sidewalks and roadways in the City. In some cases, the trees were planted in amenity zones that were too narrow to allow for healthy growth, causing the roots to spread under the sidewalk and roadway. Tree species that are not good for street applications due to their shallow root systems have also been planted. Technology or mechanisms that protect street infrastructure from tree root damage was not utilized for many, if any, of the sidewalk installation in the City where damage is occurring.

Should the City establish a program for removal of street trees?

Alternative 1: Street trees should be removed when they are causing damage to the roadway and/or sidewalk and there is no mechanism available to prevent damage. Street trees that are hazardous as a result of disease, death or damage will be removed in order to protect public safety.

Pros:

- *City costs can be reduced, as it is expensive to repair sidewalks that are continuously damaged by tree roots and it is less costly to remove a tree.*
- *Problems resulting from tree roots can be resolved through tree removal and trees appropriate for street treatment can be planted.*
- *Many trees planted in inadequate width become stressed resulting in shorter life spans. Timely removal and replacement manages the tree resource more appropriately.*

Cons:

- *Tree canopy from large trees will be lost in the short run until the replacement trees mature.*

Alternative 2: Retain street trees regardless of damage being caused and repair sidewalks as needed.

Pros:

- *Large, mature trees and street tree canopy will be retained.*

Cons:

- *Tree roots will continue to damage the street and sidewalks, causing on-going City costs for repair and potential mobility or safety impacts.*
- *Liability to the City would increase do to potential safety of tripping hazards.*
- *Minimum requirements for width and grade as required by the American with Disabilities Act (ADA) may not be met adding to the City's liability.*

Recommendation: Alternative 1

Street trees are a valuable asset to the community but, they need to be managed. When an individual tree is causing continuous damage, resulting in high repair costs for the City, and there is no mechanism available to prevent future damage, removal needs to be an option for the City. Street tree removal should be timed to ensure too many trees along a street are not removed all at once. The City should replant in the area of removed trees either in the amenity zone, if appropriate, or work with property owners to plant behind the sidewalk (see Issue C below).

C. **Sidewalk and amenity zone location**

Discussion: The amenity zone for most sidewalks in the City is located between the sidewalk and the travel lanes. In some cases, it may be appropriate to have an amenity zone or landscaping area behind the sidewalk, rather than in front, to address root damage from trees. Also, sidewalks may be redesigned around large trees in an effort to preserve them.

Should the City adopt flexible design standards for amenity zone and sidewalk location?

Alternative 1: The City's design standards for sidewalk and amenity zone location should be flexible to allow amenity zones behind sidewalks and sidewalks to be designed to retain trees. This would be an option for design when the amenity zone cannot be located between the travel lanes and sidewalk for reasons such as drainage or topography.

Pros:

- *Street design is flexible and can be tailored to meet additional City objectives, such as enhancing neighborhood character or preserving trees.*

Cons:

- *Right-of-way costs may be increased if residents are not willing to grant rights to the City for construction of sidewalks or amenity zones on their property.*
- *Streets will not have a uniform appearance throughout the City.*

Alternative 2: Always require the amenity zone between the travel lane and sidewalk. Construct all sidewalks within the right-of-way.

Pros:

- *Streets will have a uniform appearance throughout the City.*
- *Pedestrian comfort is enhanced by the presence of a separation between the sidewalk and the travel lane.*
- *Residents may not be willing to grant the rights needed to construct sidewalks on their property/outside of the right-of-way.*

Cons:

- *Trees may need to be removed in order to accommodate design standards with no flexibility.*
- *Street design cannot be as flexible.*
- *Potential conflict with Recommendation A regarding design standards.*

Recommendation: Alternative 1

The City should adopt flexible design standards for amenity zone and sidewalk location. As with other design standards that are flexible, other City goals can be accomplished, such as preservation of tree canopy or enhancing neighborhood character. At times, this may require obtaining rights from adjacent property owners to construct improvements on their property.

D. **Vegetation maintenance**

Discussion: The City's municipal code requires property owners to maintain the sidewalk adjacent to their property. This includes keeping it free of vegetation intrusion, ice and snow. The City does not actively enforce this requirement and most property owners are probably unaware of their responsibility. Vegetation can be present in the right-of-way in amenity zones, behind the sidewalk or adjacent to asphalt where no sidewalk is present.

The City performs slope and drainage ditch mowing twice a year in order to protect line of sight for drivers, maintain stormwater facilities and minimize fire hazards. These areas are often difficult to access due to topography or location and it is not feasible for adjacent property owners to maintain them. The City is responsible for vegetation removal in the right-of-way during emergencies in order to remove hazards and protect public safety.

Who should be responsible for vegetation maintenance in the right-of-way and for keeping sidewalks free of hazards?

Alternative 1: Vegetation maintenance in the right-of-way and sidewalk repair responsibilities should be as follows:

	Vegetation maintenance* in ROW	**Sidewalk clear and clean**	**Trees (in ROW)**
Major Arterials, Minor Arterials and Collectors	City	Property owner	City
Local Streets	Property owner	Property owner	City

*Does not include trees or slope and ditch mowing.

Pros:

- *City costs for maintenance are reduced.*
- *The City retains control of tree care and removal.*

Cons:

- *Property owners are not always aware of their responsibility for vegetation maintenance and to keep the sidewalk clean and clear.*
- *Property owners may not be willing to uphold their responsibility for vegetation maintenance or hazard removal.*
- *The City must maintain education and enforcement programs to ensure property owners comply with regulations.*

Alternative 2: The City assumes all responsibility for vegetation in the right-of-way.

Pros:

- *The City would be able to ensure all sidewalks are unobstructed and hazard free.*

Cons:

- *City costs would be greatly increased, as current staffing is not adequate to complete all of this work.*
- *The City would have a difficult time responding during emergency events, such as snow or wind storms.*

Recommendation: Alternative 1

The responsibilities for maintenance of vegetation in the right-of-way should be borne by both the City and residents. The City needs to provide information/guidelines to property owners that explain their requirements for maintaining landscaping in the ROW and keeping the sidewalk clear/clean. Enforcement is needed to ensure sidewalks are kept clear of intruding vegetation and is currently provided by the City's Customer Response Team.

Bicycle Policies

A. Integration of bicycle facilities into the City's transportation system

Discussion: – Like sidewalks, bicycle transportation is a high priority in the community. The City has very few bicycle facilities – the Interurban Trail and bicycle lanes on a few streets, totaling less than 10 miles total. As the City moves towards achieving its goals of sustainability, the expansion of the City's bicycle system will be an important factor. Safe bicycle facilities for all riders, which connect to neighborhoods, destinations and neighboring jurisdictions, are needed to make bicycling an appealing transportation option for residents. The existing cross-section of many of the City's streets is limited and as a result, on-street parking may need to be eliminated to accommodate bicycle lanes.

How should the City integrate bicycle facilities into the transportation system?

Alternative 1: Bicycle facilities should be identified as part of the Master Street Plan, including location and type (lanes, sharrows, signage). Short term improvements should be installed as soon as possible (1-3 years) in locations where permanent, capital improvements are not planned for several years. Adopt a Complete Streets ordinance to ensure bicycle facilities are included in major roadway construction projects.

Pros:

- *The City can plan for an extensive bicycle network, incorporating bicycle facilities into the Capital Improvement Program and major projects.*
- *A significant network can be installed in the near term, including temporary and permanent improvements.*
- *A Complete Streets ordinance would allow the City to include bicycle facilities in conjunction with major roadway projects, even if the street is not identified for bicycle facilities on the bicycle system plan.*

Cons:

- *Project costs will increase in varying degrees if bicycle facilities are included on every street.*
- *Other capital projects may be delayed if funding is used to accommodate bicycle projects.*
- *On-street parking may need to be eliminated to accommodate bicycle lanes.*

Alternative 2: Construct or install facilities only those routes shown on the bicycle master plan.

Pros:

- *Large, individual capital project costs are reduced, as bicycle facilities will not be included in larger projects.*
- *Because only a limited number of projects will be constructed, overall City costs will be reduced.*

Cons:

- *Opportunities to install as many bicycle facilities as possible may be lost. Combining projects can be less costly than multiple projects and needed right-of-way may not be obtained for future projects.*
- *A limited number of bicycle facilities will be installed throughout the City.*

Recommendation: Alternative 1

The Master Street Plan should include bicycle facilities as part of the planned street cross-sections. The City can use the bicycle system plan adopted with the Transportation Master Plan to prioritize bicycle investments, including short and long term improvements. Short term improvements may include signage or roadway markings. Long term improvements, such as intersection improvements, can be installed as stand alone capital projects or in conjunction with other capital projects. As bicycle travel increases and permanent bicycle facilities are installed in the City, the bicycle facilities map can be updated to reflect new areas for bicycle improvements. By adopting a Complete Streets program, the City can provide for bicycle facilities in conjunction with major roadway reconstruction, even if facilities are not shown on the bicycle system map. The planned street cross-sections will be brought back to Council for a discussion at a future TMP update study session.