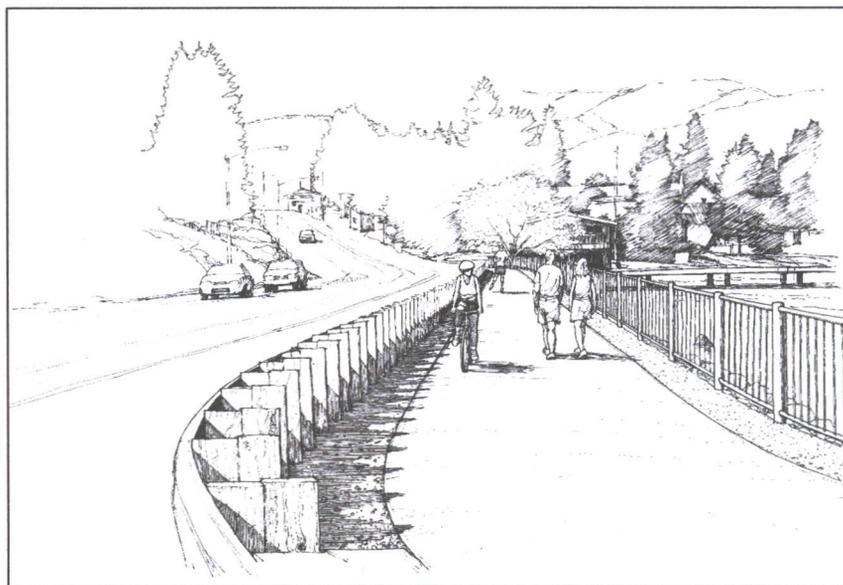


LAKESIDE TRAIL

Feasibility Study

*An investigation of a proposed bicycle & pedestrian trail between
Don Morse Park & Lakeside Park*

Chelan, WA



prepared for the
City of Chelan

funded by the
North Central Regional Transportation Planning Organization

prepared by
Silverline Projects, Inc.
1250 N Wenatchee Ave #H-222
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Adopted: November 12th, 2002

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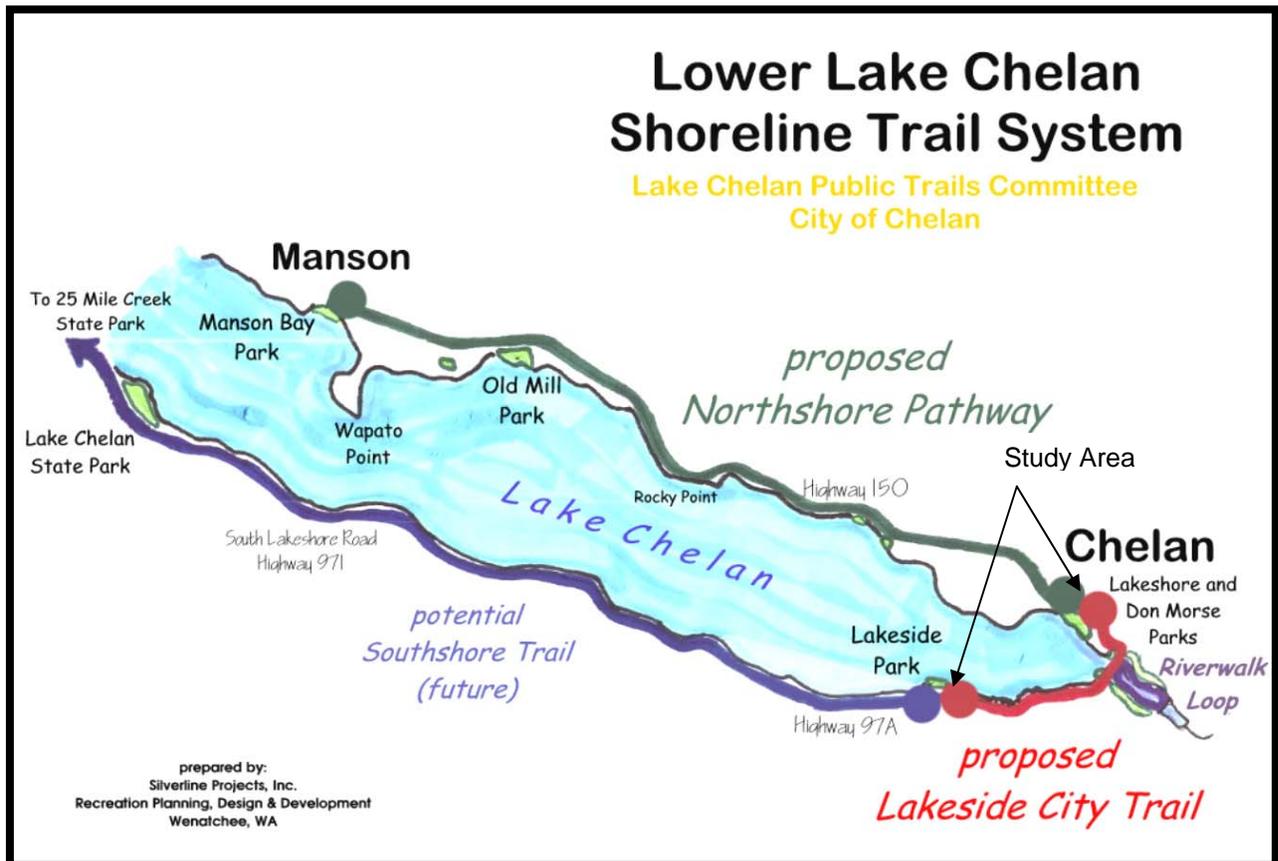
SECTION 1: SUMMARY

◆ INTRODUCTION

The purpose of this study is to aid the City of Chelan in determining how a bicycle & pedestrian trail might be routed between Don Morse Memorial Park & Lakeside Park, and what major factors are likely to have a bearing on the project. With this information, the City of Chelan and the community will be afforded the opportunity to make an informed decision regarding the pursuit or abandonment of the Lakeside Trail project.

◆ PROJECT VICINITY MAP

The Lakeside Trail is a proposed trail between Chelan's Don Morse Memorial Park & Lakeside Park. At approximately 2.25 miles in length, it would be part of the Lower Lake Chelan Shoreline Trail System, a long-range plan for trails in the Lake Chelan area.



◆ **STUDY DOCUMENT ELEMENTS**

The Lakeside Trail Feasibility Study is comprised of the following elements.

SECTION 1: OVERVIEW

The overview includes an introduction, project vicinity map, description of study document elements, sponsors, synopsis, and conclusions.

SECTION 2: BACKGROUND & PLANNING INFORMATION

This section includes background and planning information related to policy, permits, partners, costs, implementation, and operations.

SECTION 3: DESIGN GUIDELINES

This section describes the project in concept and includes a summary of design standards which would apply to the Lakeside Trail. It also includes diagrams demonstrating a variety of design concepts which may be applicable to the Lakeside Trail.

SECTION 4: CORRIDOR ANALYSIS

This section includes overview information about the study corridor as well as a segment by segment analysis of the sub areas. The segment analysis includes descriptions and photos of the study corridor areas, identification of notable attributes, and comments pertaining to implementation of the trail project.

SECTION 5: CORRIDOR STUDY MAP

The Corridor Study Map shows project-related property boundaries, right of way, intersecting roads and driveways, special features, and general details about the study corridor including the location of the proposed Lakeside Trail.

SECTION 6: OWNERSHIP, IMPACTS, & BENEFITS

This section describes property ownership and anticipated impacts and benefits associated with the Lakeside Trail project.

APPENDIX: The appendix includes a listing of references and resources used in the compilation of this study, as well as the personnel and agencies consulted.

◆ SOURCE OF BASE MAPPING INFORMATION

The properties and base mapping information obtained for use in this study were provided by the City of Chelan. This study does not include project-specific land survey, engineering, or title reports. These items would be completed in the project design phase if, and when, implementation of the Lakeside Trail project is pursued.

◆ SPONSORS & PARTICIPANTS

This study was commissioned by the City of Chelan with funding provided by the North Central Regional Transportation Organization (RTPO). The Lakeside Trail Feasibility Study was conducted and prepared by Silverline Projects, Inc.; Wenatchee, WA.

◆ SYNOPSIS

The proposed Lakeside Trail would be a multi-use paved trail providing a new opportunity for safe non-motorized travel and recreational activities around lower Lake Chelan. Bicycle & pedestrian improvements within a publicly owned transportation corridor are supported by Washington State Law and Department of Transportation policy. The proposed trail project also matches the Chelan Valley area community goals for the provision of safe bicycle & pedestrian facilities in conjunction with the existing road system and increased recreational access to the Lake Chelan shoreline.

Based on the preliminary investigation of the Lakeside Trail study corridor, it appears that constructing a multi-use paved trail within public lands between Don Morse Park and Lakeside Park is possible. However, there must be a change in the existing transportation system which recognizes that the automobile is not the only consideration. Some of the roads must be restructured in order to allow for improvement of bicycle and pedestrian mobility.

Other major factors which must be addressed include relocating utility poles, coordinating the trail route with future plans for the Old Bridge, and better defining vehicle access points to some of the adjacent businesses.

The expected high volumes of use and the close proximity of the trail to the roadways calls special attention to the need to create a trail corridor with high visibility and adequate protective measures to ensure safe flows for bicyclists, pedestrians, and motorists.

The preliminary estimated cost to design & construct the Lakeside Trail is \$750,000 to \$1,000,000. Permit constraints, public and agency input, survey and engineering findings, design features, and funding availability will have predominant influence over the actual cost, final design, and subsequent feasibility of the project.

◆ CONCLUSIONS & RECOMMENDATIONS

The proposed Lakeside Trail project would greatly improve bicycle, pedestrian, and recreational opportunities in the Chelan urban area. The trail would also provide additional public access to areas of the Lake Chelan shoreline. Many businesses along the route would benefit from an increased customer base, as well as improved public access.

Development of the trail, or alternative bicycle and pedestrian improvements, is warranted by the high volumes of people using the study corridor. Such improvements could substantially upgrade the efficiency and safety of the existing transportation system. The preferred improvement would be a two-directional, multi-use trail located on the water-ward side of the study corridor roads. Due to the anticipated volumes of mixed use on the trail, bike lanes are recommended on the adjacent roads in conjunction with the trail project in order to serve cyclists wishing to travel at above leisure speeds.

An alternative to the trail would be the provision of continuous sidewalks and bike lanes throughout the study corridor. This would supply an improvement, but would not create the recreational opportunities and overall appeal that a trail would. The provision of bike lanes and sidewalks may also require the same types of construction costs and traffic reconfigurations that the proposed trail facility would involve.

There is no conclusive evidence which would preclude development of the proposed Lakeside Trail. Securing adequate funding for the desired improvements is probably the key factor. If the City of Chelan, or another agency or organization, decides to proceed with the trail project, a public involvement program and conceptual design should be developed next. Sharing project information and obtaining input from the affected agencies, property owners, businesses, and the general public is essential. Development of a conceptual design can be an effective tool to convey initial trail alignment and features and would aid in procurement of funding. If the project is to move forward beyond the conceptual stage, it will be necessary to conduct survey and engineering so that detailed answers associated with the physical constraints of the project may be developed. This will enable a more accurate assessment of projected costs, benefits, and impacts.

The primary issues which must be addressed through design and engineering of the trail involve the safety and function of the road corridor, reconfiguration of some traffic lanes, and crossing over the Chelan River. Cooperation from the affected agencies, landowners, and other interested parties will be essential to the successful implementation of safe and effective bicycle and pedestrian improvements.

It may take several years to secure the necessary funding and support for construction of the desired improvements. However, measures can and should be taken immediately to improve existing conditions for bicycles and pedestrians within the study corridor. The City, the Washington State Department of Transportation, adjacent landowners, and the Chelan County PUD should review and/or establish development & operations policies which would be conducive to future implementation of the proposed trail.

SECTION 2: OVERVIEW

◆ OVERVIEW OF THE STUDY AREA

The general area initially investigated was approximately 3 miles long and over 1/2 mile wide. It encompassed the area from Lakeshore RV to Lakeside Park and included both motor vehicle bridges over the Chelan River. Within this area, topography, roads, right of ways, land parcels, parks, resorts, bicycle/pedestrian activity, and water bodies were investigated. After review of these characteristics, a primary Study Corridor was identified and investigated in greater detail.

◆ OVERVIEW OF THE STUDY CORRIDOR

The primary Study Corridor is centered upon the Highway 150/Pine Street, Columbia Street, and Woodin Avenue/SR97A right of way and adjacent parcels, parks, and roads. The Study Corridor begins at Don Morse Park in Chelan and extends south to Columbia Street, west on Woodin Ave, over the Chelan River via the Old Bridge, and out to Lakeside. The study corridor is 2.25 miles in length.



The study corridor presently incurs high volumes of disorderly pedestrian and bicycle traffic

The entire corridor is located in close proximity to Lake Chelan and there are frequent views of the lake as well as opportunities to link the trail with lake access points and waterfront parks. At one point the corridor crosses the head of the Chelan River. The trail corridor also includes connection points with the regional transit system, the uplake passenger ferry, and local floatplane travel.



The Lakeside Trail Study Corridor is situated at the lower end of Lake Chelan, amid waterfront parks, resorts, and the City of Chelan

The corridor lies within a predominantly urban setting. There are several intersecting streets and driveways. Much of the corridor is bordered by adjacent businesses and homes, and the corridor itself is largely developed with existing streets, curbs, sidewalks, and utilities. Parts of the study corridor are often quite congested as high volumes of bicycle, pedestrian, and motor vehicle traffic attempt to move about, especially during the summer tourist season. Adequate provisions for bicyclists and pedestrians are severely lacking in some areas.

The route passes through parks, commercial areas, tourist facilities, and an industrial area.

Overview of the Study Corridor, continued

The entire study corridor is located within Chelan City Limits. Roughly ½ mile of the 2.25 mile corridor is comprised of City Streets. The other 2 miles involves highways operated by the Washington State Department of Transportation (WSDOT). WSDOT is responsible for the “curb to curb” area of highways, or the edge of pavement to edge of pavement areas where no curbs are present, within the City Limits. The City of Chelan is responsible for the other public roadways within the study corridor, as well as the portions of WSDOT right of way beyond the curbs.

The posted speed limit of the streets within the study corridor ranges from 20 mph to 30 mph. The estimated grade of the related roadways does not exceed 3%. Average daily traffic counts fall in the 5,000 to 10,000 range on the portions of Highway 150 and 97A within the study corridor. Peak flows are during summer weekends and holidays.

Highways 150 and 97A within the study corridor are not limited access facilities, which means access connections and crossings are allowed. Streets, driveways and other private connections to the state highways are classified under the Managed Access Program. The highways in this area fall into access Class 5, which essentially allows for frequent access points to accommodate short trips and intra community travel. Access needs are generally higher than the need for through traffic mobility in Class 5 areas.

The study corridor includes a crossing over the Chelan River in the vicinity of the Old Bridge

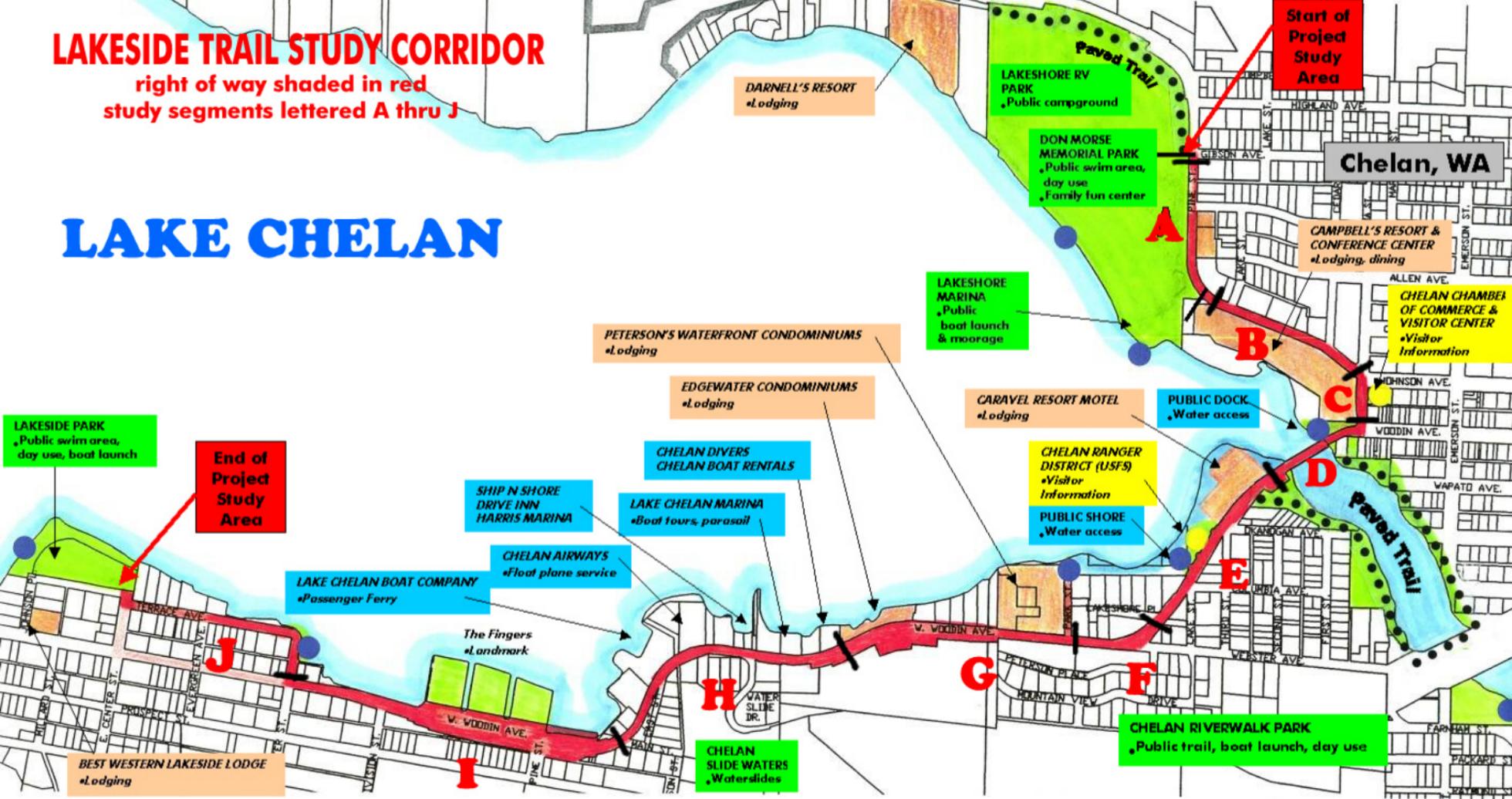


SECTION 3: STUDY CORRIDOR MAP

LAKESIDE TRAIL STUDY CORRIDOR

right of way shaded in red
study segments lettered A thru J

LAKE CHELAN



SECTION 4: CORRIDOR ANALYSIS

◆ SEGMENT ANALYSIS SUMMARY

The study corridor has been broken down into 10 individual study segments. Complete descriptions of each segment may be found in the following pages. Segment break lines and locations are indicated on the Study Corridor & Segment Map in Section 5. The segment analysis begins with Segment A at the intersection of Gibson Avenue and Highway 150 in Chelan. The analysis concludes at Lakeside Park. The study corridor was divided according to site characteristics, so the length of each segment varies from one to the next.

The segment analysis includes inventory information, characteristics, and discussion of design issues associated with each segment. Example diagrams accompany some of the discussion. This segment-by-segment analysis provides for a basic understanding of the primary opportunities and constraints associated with the proposed trail corridor. Should the trail project move forward beyond the feasibility stage, actual survey, engineering & design will be necessary to fully assess the logistics of the project prior to construction.

LIST OF SEGMENTS:

SEGMENT A: 948' (8% of project length)	HWY 150 - DON MORSE & LAKESHORE MARINA PARKS (Gibson Avenue to Lakeview Drive Inn)
SEGMENT B: 1090' (9.2 % of project length)	HWY 150 - LAKEVIEW DRIVE INN TO COLUMBIA ST.
SEGMENT C: 310' (2.6% of project length)	COLUMBIA STREET (Hwy 150 to Woodin Ave)
SEGMENT D: 681' (5.7% of project length)	WOODIN AVE - OLD BRIDGE AREA (Woodin Avenue Bridge & Approaches)
SEGMENT E: 1145' (9.7% of project length)	WOODIN AVENUE (From Caravel Motel to Lakeshore Place)
SEGMENT F: 610' (5.1% of project length)	SR 97A/WOODIN AVENUE JUNCTION (Lakeshore Place to Park Street)
SEGMENT G: 1552' (13.1% of project length)	SR 97A/W. WOODIN AVE (Park St. to Chelan Divers)
SEGMENT H: 1769' (15% of project length)	SR 97A/W. WOODIN AVE (Chelan Divers to Main Street)
SEGMENT I: 2260' (19% of project length)	SR97A/W. WOODIN AVENUE (Main Street to Water Street)
SEGMENT J: 1500' (12.6% of project length)	WATER STREET, TERRACE AVENUE, & E. CENTER ST. (SR97A to Lakeside Park)

COMBINED TOTAL ESTIMATED LENGTH OF ALL SEGMENTS = 11,865' (2.25 miles)

SEGMENT A: DON MORSE & LAKESHORE MARINA PARKS

(Gibson Avenue to Lakeview Drive Inn)

LENGTH OF SEGMENT: 948' (8% of project length)

WIDTH OF ROAD RIGHT OF WAY: 60'

WIDTH OF BUILT ROADWAY & IMPROVEMENTS: 65'

Motor Vehicle Travel Lanes:	4 @ 13' each =	52'
Shoulder:	2 @ 1' each =	2'
Sidewalks:	1 @ 6' each =	6' (west side of street)
	1 @ 5' each =	5' (east side of street)
	Total Width of Improvements:	65'

WIDTH OF UNIMPROVED ROAD RIGHT OF WAY: 0'

SPEED LIMIT: 25 MPH

DESCRIPTION OF BUILT ROADWAY & RELATED IMPROVEMENTS:

The road consists of two north bound and two south bound motor vehicle travel lanes. The shoulders (shy distance between fog line and curb) are approximately 1' each. There are no bike lane areas. Raised concrete sidewalks, with curb & gutter construction, are in place on each side of the street. The concrete sidewalks appear to be fairly old and are deteriorating. The highway was recently repaved.



The Lakeside trail would be best located on City Park property, parallel to Highway 150. in Seament A.



There is a tremendous need for improved bicycle facilities within this area of the study

CORRIDOR CHARACTERISTICS:

The terrain is generally flat and the road is predominantly straight until it begins to bend to the left just before it reaches the Lakeview Drive Inn. The corridor is heavily used by pedestrians and bicyclists, especially during the summer tourist season. This area can become quite congested with motor vehicle traffic as well.

*Segment A, continued***DESCRIPTION OF ADJACENT PROPERTY:**

Private property abuts the walkway on the east side of the street. Private residences, motels, a bowling alley, pizza parlor, grocery store and other businesses are located on the east side of the street. The land on the west side of the street is City property and includes Don Morse Memorial Park, Lakeshore Marina, and the Lakeview Drive Inn. The City Park property is landscaped with lawn and trees. The parks include a campground, swim beach, playgrounds, picnic areas, basketball courts, public restrooms, vending machines, boat launch, marina, go karts, bumper boats, and mini golf.

UTILITIES: The utilities are underground in this area. Sewer & water mains are located under the roadway. There is a fire hydrant and several grade level utility vault boxes in the park lawn area adjacent to the sidewalk. Streetlights illuminate much of the segment.

BUS STOPS: There are no bus stops in this area.

INTERSECTIONS: (from North to South)

- Lakeshore RV Park (west side)/Gibson Avenue (east side)
- Don Morse Park Entrance (west side)/Nixon Ave (east side)
- Lakeshore Marina Entrance (west side)
- Lakeview Drive Inn (west side)

NOTABLE ATTRIBUTES:

•**Waterfront Parks & Attractions:** Don Morse Memorial Park, Lakeshore RV Park, Lakeshore Marina, Bumper Boats, Go Karts, and the Putting Course attract many seasonal visitors. The swim area at Don Morse Park is the largest swim area on Lake Chelan.

•**Lakeview Drive Inn:** Fast food restaurant operated by private owners on land leased from City. This has been a very popular establishment and a well known congregating area for many years. The Drive Inn property includes an outdoor picnic area with mature shade trees and views of Lake Chelan.

•**Commercial District:** Two motels, a pizza parlor, bowling alley, and grocery store are located across the street from the parks.

•**Population Center:** This segment is located within the northern edge of the Chelan urban area.



Many visitors of the waterfront parks arrive by foot or bicycle.

Segment A, continued

●**Sidewalks & Crosswalks:** There are sidewalks on both sides of the street, except for at the Lakeview Drive Inn. There is a pedestrian crossing over Highway 150 at Gibson Avenue and another one at Nixon Avenue.

●**Potential Future Trail Connection:** This segment would connect to the proposed Northshore Pathway via an existing trail at Lakeshore RV Park. Also, spur trails from the campground and swim beach should be developed to provide convenient access and flows between the proposed Lakeside Trail and the popular waterfront park facilities.

●**Speed Limit:** The speed limit is posted at 25 MPH.

●**Overall Traffic Patterns:** Slow moving traffic on this section of highway is conducive to incorporation of bicycle and pedestrian improvements within the transportation system. The present lack of bicycle lanes on the street tends to force most cyclists onto the sidewalks. However, motor vehicle traffic often becomes quite congested during peak flows due to the number of vehicles attempting left turns into the parks and the lack of turn lanes. Heavy bicycle and pedestrian use often adds to the congestion.

●**Design Issues:** The trail could be located separately from the road in Segment A, via available land within the adjacent city parks. However, the trail corridor should be located near the road in order to provide improved capacity and orderly flows for cyclists, pedestrians, and other trail related activities. There is room to slightly meander the trail through the grassy strip adjacent to the walkway. The trail would then be buffered from the highway with ample spacing and nice green space.

The trail is expected to receive high volumes of use and would not safely accommodate the needs of cyclists wishing to travel at above leisure speeds. The provision of bike lanes on Highway 150 is strongly recommended to accommodate faster moving bicyclists. However, the trail could effectively replace the sidewalk on the west side of the highway. High visibility crossings and additional safety measures will be needed to prevent conflicts with motor vehicles at the intersecting park and drive inn entrances. An additional designated crossing of Highway 150 appears necessary in the vicinity of the grocery store and bumper boats. However, WSDOT may not approve a crossing in this location due to visibility issues associated with the curving road. Unwanted highway crossings could be discouraged through installation of a fence or railing between the trail and the highway, essentially guiding people to crossings which correlate with selected breaks in the rail. The provision of bike lanes on the highway could not be accomplished within the existing right of way unless traffic lanes reduced to minimum widths or reconfigured. A suggested reconfiguration diagram is shown on the next page.



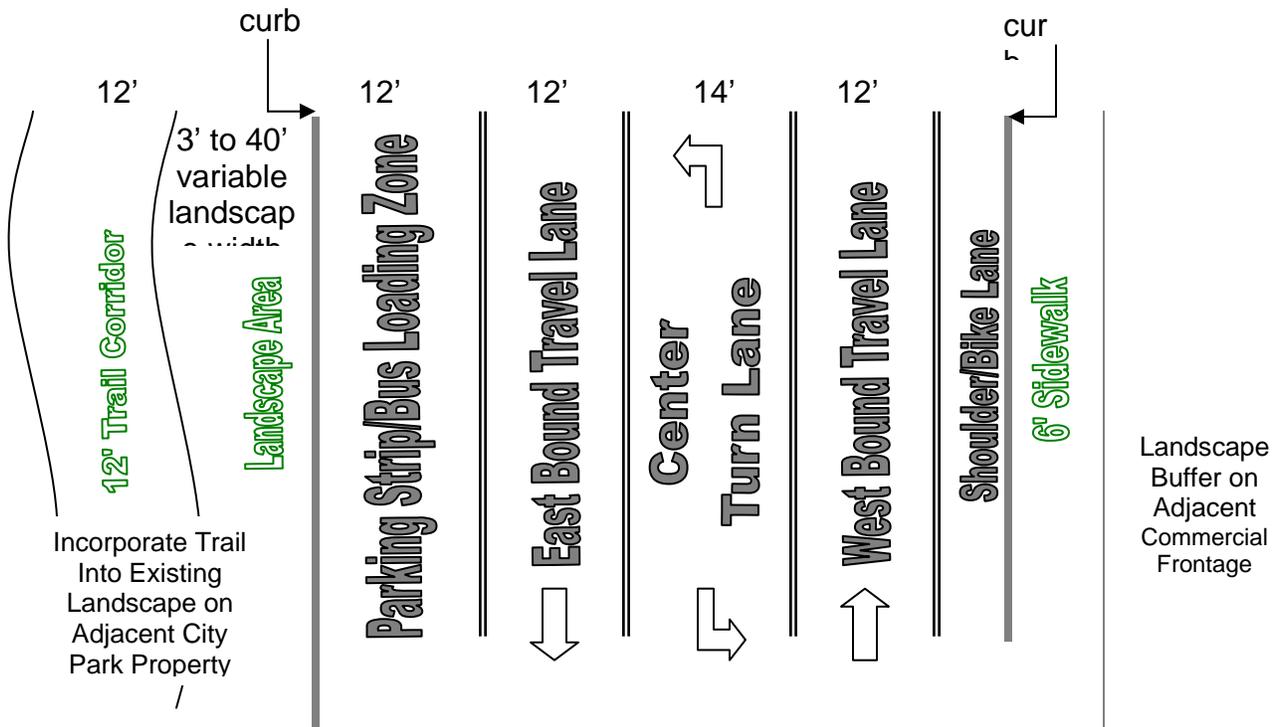
Numerous mid block pedestrian crossings occur in this area, many outside of designated crosswalk

SEGMENT A: HWY 150 FROM MP 7.58 to 7.75 (Gibson Ave to Lakeview Drive Inn)

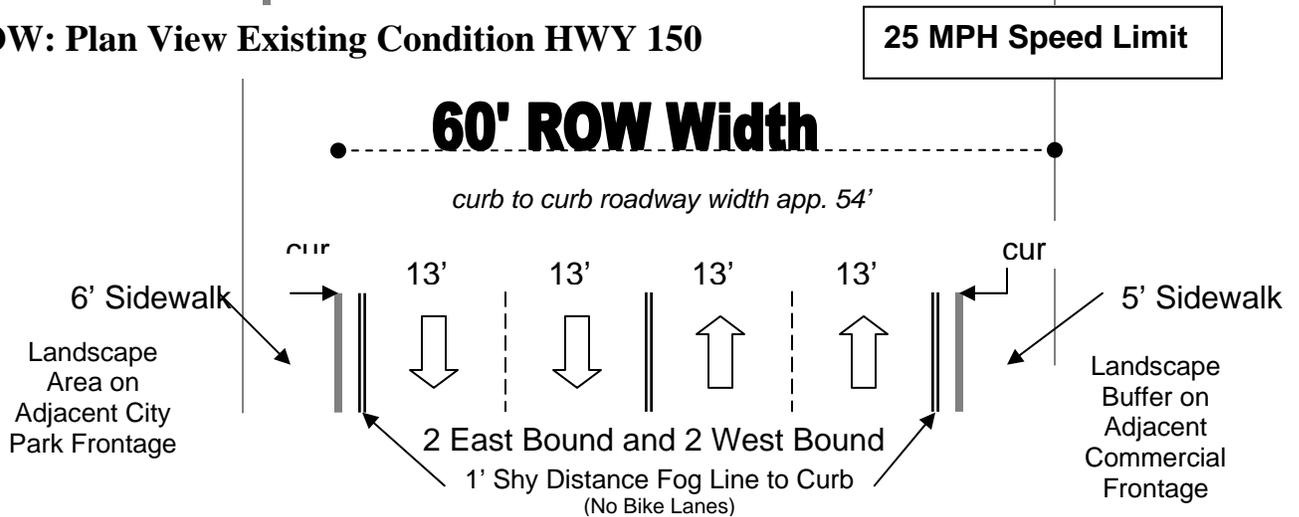
Description of Suggested Intermodal Improvements

- Add on-street parking strip & bus loading zone on west side of Hwy 150 near Don Morse Park & Lakeshore Marina
- Modify traffic lane configuration: reduce from 4 travel lanes (2 East Bound & 2 West Bound) to 3 lanes (1 East Bound, 1 West Bound, 1 Center Turn Lane) and 1 parking strip
- Increase shy distance from fog line to curb on East side of Hwy
- Trail to be developed on City Park property, separated from HWY 150 by landscape strip
- Trail adjacent to HWY 150 at intersections; High visibility markings/warnings at intersection crossings
- Expected Results:
 - Improved efficiency of HWY 150 traffic flows via dedicated center turn lane
 - Increase in multi-modal capacity & safety in area of high pedestrian concentration
 - Addition of public parking & bus stop capacity in area of high parking & transit demand

TOP: Plan View Suggested Intermodal Improvements



BELOW: Plan View Existing Condition HWY 150



SEGMENT B: LAKEVIEW DRIVE INN TO COLUMBIA ST.

LENGTH OF SEGMENT: 1090' (9% of project length)

WIDTH OF ROAD RIGHT OF WAY: 60'

WIDTH OF BUILT ROADWAY & IMPROVEMENTS: 65'

Motor Vehicle Travel Lanes:	4 @ 13' each =	52'
Shoulder:	2 @ 1'6" each=	3'
Sidewalks:	2 @ 5' each=	10'
Total Width of Improvements:		65'

WIDTH OF UNIMPROVED ROAD RIGHT OF WAY: 0'

SPEED LIMIT: 25 MPH

DESCRIPTION OF BUILT ROADWAY & RELATED IMPROVEMENTS:

The road consists of two north bound and two south bound motor vehicle travel lanes. The shoulders (shy distance between fog line and curb) are approximately 18" each. There are no bike lane areas. Raised concrete sidewalks, with curb & gutter construction, are present on the east side of the street. However, the walkway on the west side of the street is in very poor condition. Sign posts, utility poles, and disruptions in the concrete surface contribute to an unsightly and unfriendly pedestrian environment. The lack of wheelchair ramp at the corner of Columbia and Highway 150, along with obstructions in the walkway and poor surfacing also make this area non handicap accessible and non compliant with ADA laws. The highway was recently repaved.



Concessions in traffic lane configurations must be made to accommodate bicycle and pedestrian improvements through



CORRIDOR CHARACTERISTICS:

The terrain is generally flat and the road is predominantly straight until it begins to bend to the left just before it reaches the Lakeview Drive Inn. The corridor is heavily used by pedestrians and bicyclists, especially during the summer tourist season. .

Segment B hosts the worst pedestrian and bicycle conditions in the study



*Segment B, continued***DESCRIPTION OF ADJACENT PROPERTY:**

Private property abuts the walkway on both sides of the street. Campbell's Resort and Convention Center is located on the west side of the street, and a bakery, variety store, strip mall, and grocery store are located to the east.

UTILITIES: Overhead power lines, streetlights, and 6 supporting utility poles are located within the walkway corridor. The useable sidewalk width is reduced to as little as 34" where poles are present.

BUS STOPS: There are no bus stops in this area.

INTERSECTIONS: (from North to South)

- Campbell's Back Entrance (west side)
Lake St. (east side)
- Campbell's Back Entrance (west side)
Cedar St. (east side)
- Columbia Street
- Johnson Ave (east terminus)

NOTABLE ATTRIBUTES:

•**Campbell's Resort & Conference Center:** This segment of the study corridor passes by the backside of the most prominent tourist accommodation facility in Chelan. This historic 8 acre waterfront facility includes a café, pub, restaurant, conference center, 170 guest rooms, boat moorage, and a sandy beach on Lake Chelan.

•**Commercial District:** A grocery store, bakery, variety store, and strip mall are located on the east side of the street. The downtown core is located near the east end of the segment.

•**Lake Chelan Chamber of Commerce & Visitor Center:** This staffed facility has public restrooms and parking, a pedestrian plaza, and information about the area and attractions.



The Lake Chelan Chamber of Commerce and Visitor Center offers information about the area and attractions. Public restrooms,



The presence of utility poles and other obstructions, combined with a lack of bike lanes and wheelchair ramps, contribute to extremely poor conditions for pedestrians and

•**Population Center:** This segment is located near the core of the Chelan urban area.

•**Sidewalks & Crosswalks:** The sidewalk on the east side of the street is in good condition. The sidewalk corridor on the west side of the street is in very poor condition. There are pedestrian crossings on all four sides of the intersection of Highway 150 and Columbia Street. The crossing at the northwest corner does not include a wheelchair ramp.

Segment B, continued

•**Speed Limit:** The speed limit is posted at 25 MPH.

•**Overall Traffic Patterns:** Slow moving traffic on this section of highway is conducive to incorporation of bicycle and pedestrian improvements within the transportation system. The present lack of bicycle lanes on the street tends to force most cyclists onto the sidewalks. Motor vehicle traffic often becomes quite congested during peak flows due to the 4-way stop at Columbia Street and the lack of left turn lanes. Heavy pedestrian use often adds to the congestion.

•**Design Issues:** The trail would have to be incorporated into the existing Highway 150 roadway area in this segment. This could only be accomplished through a reduction in motor vehicle lane widths, or reconfiguration to reduce the total number of lanes. Reduction in lane widths would only accommodate a sub standard width trail corridor, and would leave no room for bike lanes on the road. Reconfiguration of travel lanes from four lanes to three would allow for one north bound travel lane, one south bound travel lane, a center turn lane, bike lanes on both sides of the street, a sidewalk on the east side of the street (existing), and a multi-use trail corridor on the west side of the street (in lieu of sidewalk).



This gentleman explained in detail the perils of bicycling on the streets of Chelan. Like many, his bicycle is his only mode of

The trail is expected to receive high volumes of use and would not be compatible with use by cyclists wishing to travel at above leisure speeds. The provision of bike lanes on Highway 150 is strongly recommended to accommodate faster moving bicyclists. However, the trail could effectively replace the sidewalk on the west side of the highway. High visibility crossings and additional safety measures will be needed to prevent conflicts with motor vehicles at the intersecting entrances to Campbell's. The trail would be immediately adjacent to the bike lane and could be separated by a curb, fence or rail. Unwanted highway crossings could be discouraged through strategic placement of such a fence or railing.

The provision of a standard width trail corridor and added bike lanes on the highway could not be accomplished within the existing right of way unless traffic lanes are reconfigured. Transportation engineering would be necessary to address redesign at intersection of Highway 150 & Columbia Street to coordinate with Johnson Avenue flows.

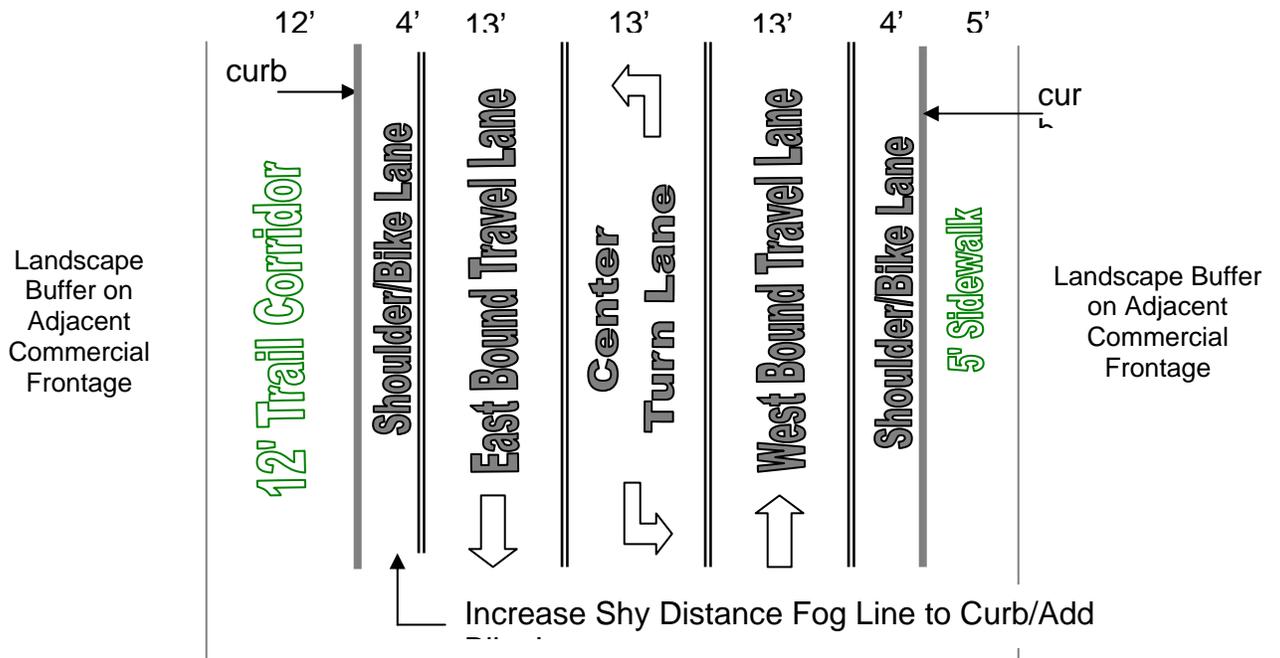
A suggested reconfiguration diagram for Segment B is shown on the next page.

SEGMENT B: HWY 150 FROM MP 7.75 to 7.97 (Lakeview Drive Inn to Columbia St)

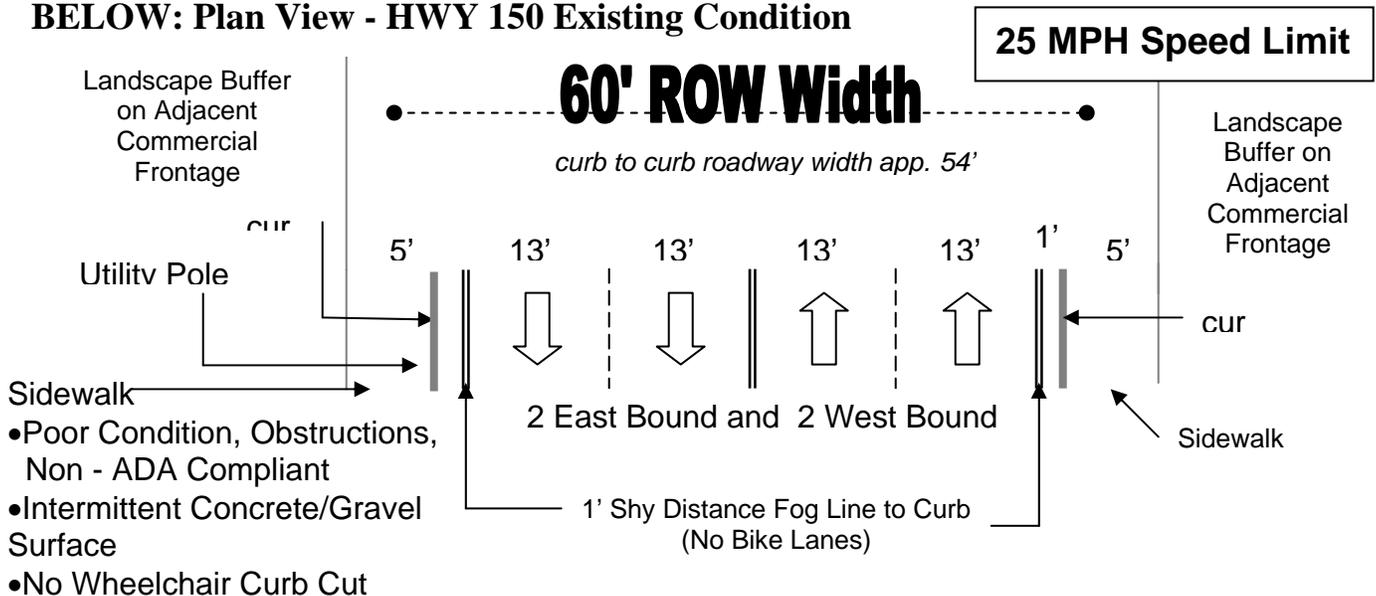
Description of Preferred Alternative

- Modify traffic lane configuration: reduce from 4 travel lanes (2 East Bound & 2 West Bound) to 3 lanes (1 East Bound, 1 West Bound, 1 Center Turn Lane)
- Underground or relocate overhead utilities & poles
- Add grade level, paved bicycle/pedestrian trail on West side of HWY 150, separated by curb, fence, or rail
- Expected Results:
 - Improved efficiency of HWY 150 traffic flows via dedicated center turn lane
 - Increase in multi-modal capacity & safety in area of high pedestrian concentration
 - Addition of ADA compliant pedestrian facility on West side of HWY 150
 - Increased shy distance (fog line to curb), added bike lane/snow storage capacity both sides of road
 - Improved aesthetics, access, & safety due to relocation or under grounding of overhead power lines

TOP: Plan View Suggested Intermodal Improvements



BELOW: Plan View - HWY 150 Existing Condition



SEGMENT C: COLUMBIA STREET

LENGTH OF SEGMENT: 310' (2.6% of project length)

WIDTH OF ROAD RIGHT OF WAY:

(Note: road and right of way tapers)

North section: 80'

South Section: 62'

WIDTH OF BUILT ROADWAY & IMPROVEMENTS:

North section: 79'

Motor Vehicle Travel Lanes:	4 @ 14' each =	56'
Parking Strip:	1 @ 13' each=	13'
Sidewalks:	2 @ 5' each=	10'
Total Width of Improvements:		79'

WIDTH OF BUILT ROADWAY & IMPROVEMENTS:

South section: 62'

Motor Vehicle Travel Lanes:	4 @ 12' each =	48'
Sidewalks:	1 @ 6' each=	6' (west side)
	1 @ 8' each=	8' (east side)
Total Width of Improvements:		62'

WIDTH OF UNIMPROVED ROAD RIGHT OF WAY:

0'

SPEED LIMIT: 25 MPH

DESCRIPTION OF BUILT ROADWAY & RELATED IMPROVEMENTS:

This is a city owned and operated street consisting of two north bound and two south bound motor vehicle travel lanes. The right of way is 80' wide on the north end but tapers down to about 62' on the south end. The north end includes a small parking strip with 4 spaces. The Parking strip and vehicle lanes are quite wide. There is no shoulder, fog line, or bike lanes. Raised concrete sidewalks, with curb & gutter construction, are present on both sides of the street.

CORRIDOR CHARACTERISTICS:

The terrain slopes slightly downward from north to south. The traffic lanes are straight, but the west walkway jogs inward in keeping with the tapered right of way parameters. The segment receives high volumes of pedestrian use, especially during the summer tourist season. This area can become quite congested with motor vehicle traffic as well.



Concessions in traffic lane configuration must be made to accommodate bicycle and pedestrian improvements throughout



Segment C is 80' wide on the north end, and tapers down to 62' on the south end

Segment C, continued

DESCRIPTION OF ADJACENT PROPERTY:

Campbell’s Resort and Convention Center is located on the west side of the street. A gas station and the Chamber of Commerce & Visitor Center, including a pedestrian plaza and street trees, are located to the east.

UTILITIES: Most utilities are underground. A fire hydrant and large junction box are located adjacent to the sidewalk within the northwest section of the segment. Two overhead streetlights are present, one on each side of the street.

BUS STOPS: There are no bus stops in this area.

INTERSECTIONS: (from North to South)

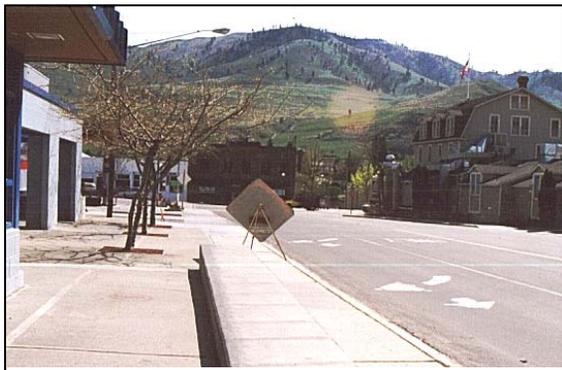
- Campbell’s Delivery/Service Entrance (west side)
- Alley between Chamber & Texaco (east side)
- Texaco entrance (east side)
- “T” intersection with Woodin Avenue (Columbia terminus)

NOTABLE ATTRIBUTES:

•**Campbell’s Resort & Conference Center:** This segment of the study corridor passes by the east side of the popular restaurant and resort. Delivery trucks back-in across the sidewalk to make deliveries to the kitchen area.



Segment C receives high volumes of pedestrian use, especially during the summer tourist season.



The Lake Chelan Chamber of Commerce includes a pedestrian plaza area with street trees lining a portion of Columbia Street.

•**Lake Chelan Chamber of Commerce & Visitor Center:** This staffed facility has public restrooms and parking, a pedestrian plaza, and information about the area and attractions.

•**Commercial District:** This segment lies along the western edge of Chelan’s downtown shopping district.

•**Population Center:** This segment is located within the core of the Chelan urban area.

•**Sidewalks & Crosswalks:** Sidewalk widths vary from 5’ to 8’ feet on the east side of the street, and from 5’ to 6’ on the west side. The east walkway and the southern portion of the west walkway include newer concrete and some decorative accents. The walkway on the west side of the street contains both permanent and intermittent obstructions, and has little or no clear area between the walkway and adjacent structures, including: a fire hydrant, signposts, protruding

Segment C, continued

rockery, regular delivery truck access/parking, and the Campbell House building. There are pedestrian crossings located at each end of the Columbia Street segment. The crossing in the northwest corner of the segment does not include a wheelchair ramp.

●**Speed Limit:** The speed limit is not posted. Traffic tends to move slower than 25mph.

●**Overall Traffic Patterns:** Slow moving traffic on this section is conducive to incorporation of bicycle and pedestrian improvements within the transportation system. Most cyclists will ride on the street in this segment, although many do use the sidewalk. Motor vehicle traffic often becomes quite congested during peak flows due to the required stops and frequent pedestrian crossings at each end of Columbia Street.

●**Design Issues:** The trail would have to be incorporated into the existing city right of way in this segment. This could only be accomplished through a reduction in motor vehicle lane widths, or reconfiguration to reduce the total number of lanes. Reduction in lane widths would only allow for a fairly narrow trail corridor to be squeezed into the right of way, and would leave no room for bike lanes on the road. Reconfiguration of travel lanes from four lanes to three would allow for one north bound travel lane, one south bound travel lane, a center turn lane, bike lanes on both sides of the street, a sidewalk on the east side of the street (existing), a multi-use trail corridor in lieu of a sidewalk on the west side of the street, parking strip (existing), and additional landscape beautification improvements.

The trail is expected to receive high volumes of use and would not be compatible with use by cyclists wishing to travel at above leisure speeds. Due to slow traffic speeds, the provision of bike lanes on Columbia Street is not necessary. However, bike lanes are recommended to establish and indicate an appropriate route for faster moving bicyclists.

Clearly marked trail stops are necessary at the intersections of Columbia and Highway 150, and at Columbia and Woodin Avenue. The stops must be included to prevent blind corner conflicts. The downward slope of the trail as it approaches and corners onto Woodin Avenue must be taken into account as well. The stop areas could be encompassed by “Slow Zones” which may include advance warning signs, special pavement markings or contrasting surfacing, or placement of bollards or bike gates to slow cyclists and other wheeled travelers.

The trail would need to provide for access by delivery trucks which back in to Campbell’s. Where the trail would be immediately adjacent to the bike lane or roadway, a curb, fence, rail, or proper pavement marking should delineate the routes.

The provision of a trail corridor and added bike lanes on Columbia Street could not be accomplished within the existing right of way unless traffic lanes are reconfigured. A conceptual diagram of how a trail could be routed around the Campbell’s Resort area is shown on the next page.

SEGMENT D: OLD BRIDGE AREA (Woodin Avenue Bridge & Approaches)

LENGTH OF SEGMENT: 681' (5.7% of project length)

WIDTH OF ROAD RIGHT OF WAY: 1) **East Approach: 47' to 80' wide/173' length**
 (Note: right of way width varies) 2) **Bridge ROW: 60' wide/456' in length**
 3) **West Approach: 112' wide/52' in length**

1) WIDTH OF BUILT ROADWAY & IMPROVEMENTS: **East Approach: 47' to 80'**

Motor Vehicle Travel Lanes:	2 @ 16' each =	32'
Left Turn Lane	1 @ 16' each	16' (east bound)
Parking Strip:	1 @ 12' each	12'
Sidewalks:	2 @ 10' each=	<u>20'</u>
Total Width of Improvements:		80'

WIDTH OF UNIMPROVED ROAD RIGHT OF WAY: **0'**

2) WIDTH OF BUILT ROADWAY & IMPROVEMENTS: **Bridge: 31'**

Motor Vehicle Travel Lanes:	2 @ 10' each =	20'
Sidewalks:	2 @ 4' each=	8'
Concrete Railings:	2 @ 1'6" each=	<u>3'</u>
Total Width of Improvements:		31'

WIDTH OF UNIMPROVED ROAD RIGHT OF WAY: **29'**

3) WIDTH OF BUILT ROADWAY & IMPROVEMENTS: **West Approach: 112'**

Motor Vehicle Travel Lanes:	2 @ 12' each =	24'
Sidewalks:	2 @ 4' each=	<u>8'</u>
Total Width of Improvements:		32'

WIDTH OF UNIMPROVED ROAD RIGHT OF WAY: **80' (abutment fill slope)**

SPEED LIMIT: 20 MPH

DESCRIPTION OF BUILT ROADWAY & RELATED IMPROVEMENTS:

This is a city owned and operated portion of Woodin Avenue. There is a west bound lane, east bound lane, and a left turn lane allowing traffic to turn onto Columbia Street near the east end of the segment. The right of way width varies from 47' to 112'. The east end includes a small parking strip with 2 spaces on the south side of the street.



The Old Bridge receives extremely high volumes of bicycle, pedestrian, and motorist

Segment D, continued

The vehicle lanes are quite wide and undefined in the east approach area. The Old Bridge is a Chelan landmark and, unfortunately, has become a notorious bottleneck. The travel lanes on the bridge structure are very narrow at 10' each, and the raised sidewalks are deteriorating and narrow at slightly less than 4' each. The lanes widen to 12' in the west approach area. There is no shoulder, fog line, or bike lanes. Raised concrete sidewalks, with curb & gutter construction, are present in both approaches to the bridge. The bridge is cambered to a crest in the center. Both approaches gain elevation as they reach the abutments.

CORRIDOR CHARACTERISTICS:

This is a unique and beautiful area as the study corridor crosses the Chelan River at the lower end of Lake Chelan. This area experiences the highest volumes of bicycle and pedestrian traffic within the study corridor. This segment becomes regularly congested and involves frequent bike/ped/motorist conflicts during the tourist season. The bridge provides a link in the transportation system and also serves as a default connection in the Riverwalk Park loop trail.

DESCRIPTION OF ADJACENT PROPERTY:

Campbell's Resort and Convention Center is located north of the east approach. A public dock and small lake access area was developed by Chelan County PUD north of the east abutment. The Campbell's Resort "Mattson Building" is located south of the east abutment. Other downtown merchants and restaurants are also located to the south of the east approach. The Chelan River is located on both sides of the bridge. Chelan Riverwalk Park is located on the south side of the west approach, and the Caravel Resort is located on the north.

UTILITIES: Utilities are underground or under the bridge. Decorative street lamps line both sides of the bridge, and some are also present in the east approach streetscape area.



The east approach to the Old Bridge includes wide, undefined traffic lanes and beautiful streetscape



The Old Bridge is a popular location for bicycles, pedestrians, fishermen, and people just chatting or taking in



This crosswalk at the east end of the bridge is the only pedestrian crossing within Segment D. The Historic Campbell House is in the

Segment D, continued

BUS STOPS: There are no bus stops in this area.

INTERSECTIONS: (from East to West)

- Riverwalk Park Access Alley (south side)
- Campbell's Main Entrance (north side)
- Riverwalk Park Public Dock & Lake Access (north side)

NOTABLE ATTRIBUTES:

•**Campbell's Resort & Conference Center:** This segment of the study corridor passes by the front of the popular restaurant and resort.

•**Commercial District:** This segment lies along the western edge of Chelan's downtown shopping district.

•**Population Center:** This segment is located within the core of the Chelan urban area.

•**Riverwalk Park:** Riverwalk Park includes a multi-use trail, boat launch, public restrooms, parking, picnic areas, benches, and a covered picnic shelter. It is the most popular location in the community for trail related recreation activities. Riverwalk Park presently has three connections to Segment D. They are: the Riverwalk Park Alley Access & Pedestrian Plaza located on the south side of the eastern approach; The Riverwalk Park Public Lake Access and Dock located north of the east abutment, and the Riverwalk Park Trail which connects to Woodin Avenue in the west bridge approach area. The popularity of the Riverwalk Park trail has increased bicycle and pedestrian traffic on the old bridge. A trail route over the Chelan River on the south side of the Old Bridge was included in the design plans for the park facility and may still be required under Chelan County PUD's Exhibit R Recreation Plan.



The popular Riverwalk Park and trail connects to Segment D near the west approach to the Old Bridge

•**Potential Trail Linkages:** In addition to the existing Riverwalk Park linkages listed above, this segment has the potential to include a spur trail crossing under the east end of the bridge. The trail could go past the waterfront side of Campbell's Mattson Building to provide a direct link to the Riverwalk Park Trail. The Campbell's have indicated support for this project, although engineering work is necessary to determine the logistics of building a trail below the bridge.

•**Historic Bridge:** The concrete bridge was built in the 1920's and reflects the decorative craftsmanship of the times. The bridge will qualify for placement on the National Historic

Segment D, continued

Register in a few years. However, the structure does not meet public transportation safety and design standards. The City has listed bridge widening and renovation on the local road improvement plan. Widening and reconstruction would not be permitted once the bridge is placed on the historic register. Another option under consideration is to limit traffic to one way. This option would allow preservation of the bridge architecture and also provide space for a dedicated bicycle & pedestrian multi-use trail corridor.

●**Shoreline Access & Views:** The bridge offers a pleasant over-water experience, and provides open views of Lake Chelan to the north and the Chelan River to the south. There are several large mature trees located near the bridge approaches. The trees and the water provide an aesthetic and natural break in the urban environment.

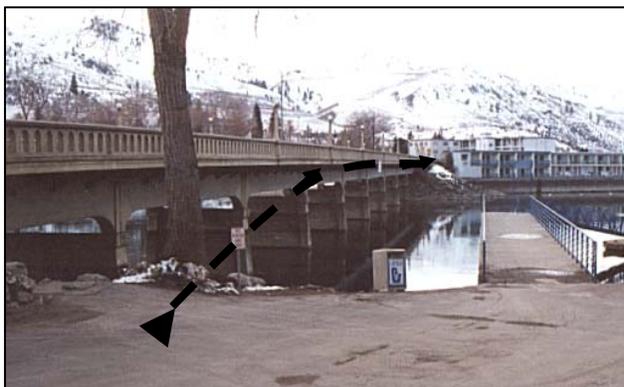
●**Sidewalks & Crosswalks:** Sidewalks on the bridge and within the west approach are 4’ wide. The sidewalks in the east approach area are 10’ wide and include decorative accents as part of the downtown streetscape project. There is only one crosswalk within this segment. It is located on the east end of the bridge.

●**Speed Limit:** The speed limit is 20mph.

●**Overall Traffic Patterns:** Many cyclists ride on the narrow bridge sidewalks, even though it is posted “no bicycles on sidewalks”. Motor vehicle traffic often becomes quite congested during peak flows due to the pedestrian crossings at the east end of the bridge and the backed up left turn traffic trying to access Columbia Street.



Pedestrian friendly improvements and an alley way lead to Riverwalk Park in



If a trail structure is located along the north side of the bridge, it could take off from the public lake access area near Campbell’s Resort. Another option is to limit traffic on the bridge to one way only and include the trail

●**Design Issues:** This is one of the more challenging areas of the study corridor. Presently, there are two distinct options for the trail route. The more cost effective option would be to reduce traffic on this section of Woodin Avenue to one-way only and place the trail on the existing bridge deck. The other option is to attach a trail structure to the outside of the bridge or construct an independent structure. Obviously this would require substantial construction, design, and permitting work. Since the bridge is substandard for two-way traffic, inclusion of the trail along with a one-way lane might work very well.

Segment D, continued

Within the east approach area, the trail could be placed adjacent to the existing sidewalk in front of the Campbell House. It would cross Campbell’s main entrance and the adjacent public lake access entrance (pictured left). This area would require extensive controls to slow trail users down and provide safe crossings through motor vehicle access areas. The restriction or prohibition of motor vehicles in the public lake access area may be warranted.

“Slow Zones” may be indicated with warning signs, pavement markings and/or contrasting surfacing, and placement of bollards or bike gates to slow cyclists, and other wheeled travelers, down. Traffic lane delineation, reconfiguration, and calming devices are suggested in the east approach area. See the conceptual diagram on page 25.

The west approach area right of way is quite wide at 112’, but much of this is shoreline fill slope, and the actual land surface is much narrower. Fitting a trail corridor into the west approach area could require extensive construction measures and would probably impact a railing and landscaped area near the Caravel Resort Motel.



If a trail were developed along the north side of the bridge, it would displace the railing and landscape shown in the lower left of the above



Engineering investigation would be necessary to determine if a spur trail could be routed under the Old Bridge

The trail is expected to receive high volumes of use and would not be fully compatible with cyclists wishing to travel at above leisure speeds. This entire segment should be a designated “Slow Zone”. Alternate routes and signing should be provided to direct faster moving bicyclists to other options.

The provision of a trail corridor and other transportation improvements within this segment are likely to require extensive design, public involvement, and construction measures. There is a strong possibility for controversy over preservation of the bridge, reconstruction of the bridge, reduction to one-way traffic on the bridge, and the aesthetic impact of a separate trail structure.

The trail project should be coordinated with the Streetscape, Park, or bridge architectural



Convenient linkages with Riverwalk Park are desirable to provide better access to this beautiful and popular facility.

styles.

SEGMENT E: WOODIN AVENUE (From Caravel Motel to Lakeshore Place)

LENGTH OF SEGMENT: 1145' (9.6% of project length)

WIDTH OF ROAD RIGHT OF WAY:

Variable 63' to 84'

(Note: right of way width varies)

WIDTH OF TYPICAL BUILT ROADWAY & IMPROVEMENTS: (USFS area)

Motor Vehicle Travel Lanes:	2 @ avg. 13' each =	26' to 32'
Parking Strips:	1 or 2 variable =	8' to 17'
Sidewalks:	1 or 2 variable =	4' to 10'6"
Total Width of Improvements:		38' to 59'6"

WIDTH OF UNIMPROVED ROAD RIGHT OF WAY:

11'6" to 46' (cut slope)

SPEED LIMIT: 20 MPH

DESCRIPTION OF BUILT ROADWAY & RELATED IMPROVEMENTS:

This is a city owned and operated portion of Woodin Avenue. There is a west bound and an east bound lane. An old rock retaining wall embanks the hillside on the south side of the road in the mid section of the segment. A concrete retaining wall and railing separates the road from the lower elevation parking area of the Caravel Motel. Intermittent parking strips are located along sections of both sides of the road. There is a walkway along the north side of the road throughout the segment. There is a short section of walkway on the south side of the road near each end of the segment. The south walkway within the west end of the segment is barely visible, as it has been overcome with debris and growth. The north walkway varies in width from 4' to 6'6". The shoulders are only 1' wide in places.



Road widening would be necessary to accommodate a trail corridor in this area. The right of

CORRIDOR CHARACTERISTICS:

Traffic moves slow through this area as the posted speed limit is 20mph. This used to be the main highway route into Chelan, and although the highway has since been rerouted, many still use this as the primary access between SR97A and town. The Chelan Ranger Station and the adjacent public lake access area attract many visitors to this segment of the study corridor. The Ranger Station includes a public restroom, landscaping and a large lawn area often used for sunning and picnicking. There is little continuity in the shoulders and walkways.



The walkway in front of the Chelan Ranger Station jogs around landscaped areas. Some people take the direct route, choosing to

Segment E, continued

DESCRIPTION OF ADJACENT PROPERTY:

The Caravel Resort Motel, Chelan Ranger District, a public lake access area, and two private residences adjoin the north side of the segment. Several private residences are also located along the south side of the road, although they are situated on the above hillside. Several mature trees are present, and thick landscape screening and chain link fence provide a buffer between the north residences and the study corridor.

UTILITIES: There are three power poles located on the south side of the road. Streetlights and decorative lights illuminate much of the segment.

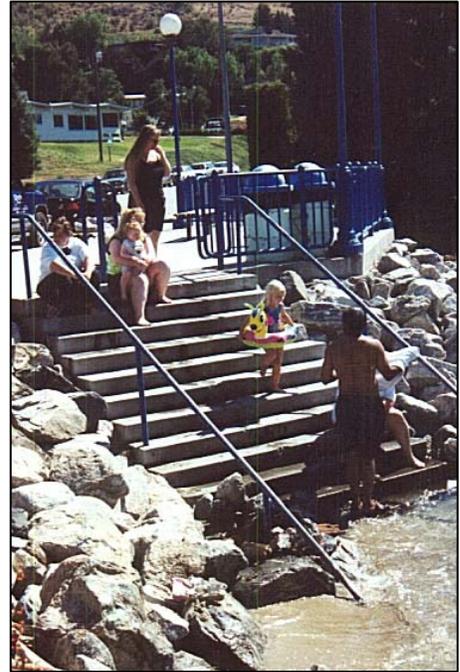
BUS STOPS: There are no bus stops in this area.

INTERSECTIONS: (from East to West)

- Caravel Resort Motel Entrances (2 - north side)
- Third Street (south side)
- Chelan Ranger District Parking Entrance (north side)
Authorized Vehicles Only
- Lake Street (south side)
- Lakeshore Drive (north side)

NOTABLE ATTRIBUTES:

- Caravel Resort Motel:** This segment of the study corridor passes by the large, waterfront motel complex.
- Residential Neighborhoods:** Several residential properties are located near the study corridor. However, there is only one residential property with a driveway which would intersect with the trail corridor.
- Chelan Ranger District:** The Chelan Ranger District provides visitor information pertaining to Lake Chelan and several USFS parks, trails, roads, and public lands. The Ranger District office includes pleasant landscaping and a large lawn area which is often used by the public for sunning and picnicking. A public outhouse is also located here.
- Kingman Viewpoint Property:** A proposed viewpoint/park area is located near the study corridor, just up Third Street. This undeveloped City owned property offers spectacular views of Lake Chelan from an elevated vantage point. However, the location atop a fairly steep incline presents access and design issues associated with achieving safe grades for bicyclists and other wheeled, non motor users.



The Lakeside Trail would provide improved bicycle, pedestrian, and recreational access to this popular swim area already in place along

Segment E, continued

●**Shoreline Access & Views:** Direct water access and viewing is available at a public lake access point near the mid section of the segment. This popular swim area and canoe/kayak launch is located immediately adjacent to the proposed trail corridor. This small site includes concrete steps into the water, a landing/viewpoint area, trash receptacles, and decorative lighting. It is located on city owned right of way and was developed by Chelan County PUD as part of the Riverwalk Park project. Sporadic lake views are available from other various places within the segment.

●**Sidewalks & Crosswalks:** A continuous sidewalk is present along the north side of the road. It may be possible to keep some the walkway in service by placing the trail adjacent to it.

●**Speed Limit:** The slow speed limit of 20mph adds to the “friendliness” of this area for bicyclists and pedestrians.

●**Overall Traffic Patterns:** Slow moving traffic on this section is conducive to incorporation of bicycle and pedestrian improvements within the transportation system. Many cyclists ride on the street as the pace of traffic and width of lanes often create suitable conditions for shared use. However, this segment does receive high volumes of motorist traffic which can become quite intimidating for cyclists. A sign of nearby SR 97A indicates this as the route to the City Center.

●**Design Issues:** There are two distinct options for this area. As with the Woodin Avenue Bridge section, there is the possibility of reducing traffic in part or all of this section one-way only. This would allow for the most cost effective placement of the trail onto the existing roadway. Another option is to widen the roadway. This would require substantial construction measures to address slope retention, primarily on the south side of the road. Displacement or removal of parking is also a possibility in achieving space for a trail corridor through this segment. The narrowest portion of Segment E (west end pictured below) is 63’ wide. This area presently includes development approximately 54’ wide. Adding a trail to the two-way traffic pattern would require additional build-out of the right of way or displacement of a parking strip.

If the road remains open to two-way travel, the area in the vicinity of the Caravel Motel would require the most significant construction measures. The old rock retaining wall and slope across the street from the Caravel would need to be reconstructed to accommodate a wider transportation corridor. The right of way in this area is quite wide and the trail, upgrading of Woodin Avenue, and necessary slope embankment should be able to occur within the right of way. Some large trees would likely be impacted.



Inclusion of a trail in this area would require displacement of parking on one side of the road or additional build-out of the City

SEGMENT F: SR 97A/WOODIN AVENUE JUNCTION

(Lakeshore Place to Park Street)

LENGTH OF SEGMENT: 610' (5.1% of project length)

WIDTH OF ROAD RIGHT OF WAY: Merging right of ways, variable 60' to 103'+
(Note: right of way width varies)

SPEED LIMIT: 20 MPH ON WOODIN; 30 MPH on SR 97A

DESCRIPTION OF BUILT ROADWAY & RELATED IMPROVEMENTS:

This is where the city owned portion of Woodin Avenue intersects with State Route 97A. The state highway is called “West Woodin Avenue” to the west of this junction, and “Webster Avenue” to the east of the junction. The Highway includes a west bound and east bound lane, as well as a left turn lane for east bound traffic who wish to turn left onto Woodin Avenue. The shoulders of the highway are 4' wide (fog line to curb) and include an unmaintained (accumulations of loose sand and gravel) walkway area behind the curb. The shoulders on SR 97A provide bike lane capacity which meets minimum AASHTO design criteria.



The proposed Lakeside Trail could readily follow this pleasant walkway corridor

CORRIDOR CHARACTERISTICS:

The primary area of focus for trail development potential is pictured above. This “pedestrian friendly” area includes a 6' wide concrete walkway, two benches, a few shade trees, and a large irrigated lawn area. Although very appealing, this area is presently largely underutilized, probably due to the lack of development in this vicinity, as well as lack of linkages to similar, pedestrian friendly connections.

DESCRIPTION OF ADJACENT PROPERTY:

The Christian Science Building is immediately adjacent to this site. There are three private residences along the proposed trail corridor just west of the highway junction. Undeveloped property across the highway is presently for sale and may be developed in the future.

UTILITIES: Power poles are located on the south side of the highway. An overhead streetlight illuminates the intersection.

BUS STOPS: There are no bus stops in this area. There are two LINK bus stops to the east on Webster Avenue, approximately 1200' away, near Chelan High School. There are also two bus stops to the west, in front of Peterson's Resort on SR 97A, approximately 260' from Park Street.

*Segment F, continued***INTERSECTIONS:** (from East to West)

- The proposed trail corridor does not cross any intersections in this area, but it is located near of a primary junction involving SR 97A, Woodin Avenue, and Webster Avenue.

NOTABLE ATTRIBUTES:

- Landscape:** This segment has already been developed for pedestrian use and includes landscaping, irrigation, benches and walkways. Incorporating a trail into the existing pedestrian area would be relatively simple. The existing setting is very pleasant, but there is tremendous potential to further beautify this area.

- Bike Lanes:** SR 97A includes shoulders wide enough to meet minimum bike lane standards (4'), providing an alternate route for faster moving cyclists.

- Design Issues:** A trail corridor could be incorporated into the landscaped pedestrian area quite easily. Implementation would likely entail replacement of the walkway with the desired trail surface, and associated landscape repairs in the adjacent turf and irrigation system. Extending the trail corridor through Segment F and west bound onto SR 97A would entail a bit of a tight squeeze under present conditions. There is only about 8' of distance between the edge of pavement and adjacent private property in the area depicted by the arrow in the photo at right. More space for the trail corridor is recommended to maintain a consistent 12' width. There does not appear to be much room for reduction of highway lane widths or shoulders. The best option to provide more room for the trail may be through acquisition of an easement on the southern border of the neighboring two or three property owners. Depending on verification through land survey, the easement may need to be a minimum of 4' wide by up to 244' in length. A land swap with the east property owner may be possible, as the city appears to own right of way (Lakeshore Place) on the north side of this parcel.



Segment F is located at the junction of SR 97A & Woodin Avenue.



Acquisition of a small strip of private land may be the best way to widen the proposed trail corridor through the area between Park

SEGMENT G: SR 97A (Park St. to Chelan Divers)

LENGTH OF SEGMENT: 1552' (13% of project length)

WIDTH OF ROAD RIGHT OF WAY: Variable 60' to 180'

WIDTH OF BUILT ROADWAY & IMPROVEMENTS: Variable 42' to 47'

Motor Vehicle Travel Lanes:	2 @ 13' each =	26'
Shoulder:	2 @ 8'+ each=	16'
Sidewalks:	1 @ 5' each=	<u>0' to 5'</u> (525' @ Edgewater)
Total Width of Improvements:		42' to 47'

WIDTH OF NON HIGHWAY RIGHT OF WAY: Average of 18'

Note: 180' wide area is comprised of steep rock slope (south side of highway)

SPEED LIMIT: 30 MPH

DESCRIPTION OF BUILT ROADWAY & RELATED IMPROVEMENTS:

The road consists of one east bound and one west bound travel lane. The shoulders are a typically about 8' wide, varying up to 13' in places. The north shoulder is only 4' wide for a short distance just west of Park Street. There is a new, 5' wide sidewalk in front of the Edgewater Condominiums. The highway and shoulders fill up approximately 42' of the 60' wide right of way in front of Peterson's Waterfront Resort Condominiums. Although the right of way is 180' wide at the widest point, only about 70' of width is flat and useable. A steep rock face along the south side of the segment comprises the remainder of the widest highway property.



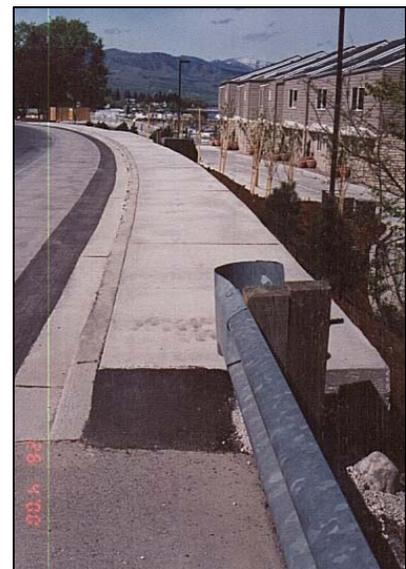
The landscaping in front of Peterson's Resort would provide a nice border for the proposed

CORRIDOR CHARACTERISTICS:

The roadbed is generally flat and the road is predominantly straight until it begins a gentle sweeping curve to the left in the vicinity of the Edgewater Condos. Some bicycle and pedestrian use occurs within this area, although not as much as previous segments. Traffic usually flows fairly well through this section of highway as there are no stops and few turn offs. The

This new sidewalk in front of the Edgewater Condominiums would probably have to be replaced or modified to accommodate the trail.

However, the revisions would improve handiness



*Segment G, continued***DESCRIPTION OF ADJACENT PROPERTY:**

Two condominium complexes and 6 residences are located along the north side of the segment. The condos include the Peterson's Waterfront Resort Condominiums, shown at right, and the newly developed Edgewater Condominiums. The residential properties are at a lower elevation than the road. The terrain is sloped downward from the highway to these parcels. The property to the south of the segment is in two parcels. It is presently undeveloped land, much of it too steep for building. The south shoulder is often utilized for parking.

UTILITIES: A power line runs parallel to the highway, near the southern edge of the right of way. The utility poles are located 24' or more from the south curb. Three utility poles are located in the trees along the north side of the road and could be impacted by trail development.

BUS STOPS: There is one LINK transit stop on each side of the highway in front of Peterson's Resort.

INTERSECTIONS: (from East to West)

- Park Street (north side)
- Petersons Resort Entry (north side)
- 3 Residential Access Drives serving 5 homes (north side)
- Edgewater Condominium Entry (north side)

NOTABLE ATTRIBUTES:

•**Waterfront Condominiums/Resorts:** Peterson's Waterfront Resort Condominiums is a large recreational facility which includes boat moorage, a swimming pool, volleyball courts, tennis courts, basketball, and a playground. The property offers nightly rates for accommodating tourists. The Edgewater Condominiums are a new facility also offering boat moorage.



The proposed Lakeside Trail would provide a much improved bicycle and pedestrian linkage to several properties, including Peterson's Resort, pictured above.



The trail corridor within Segment G is likely to displace some trees and utility poles on the north side of the road near five residential parcels



The end of Park Street is a city owned right of way that may be developed into a small public

Segment G, continued

●**Park Street Lake Access:** Park Street is one of the city owned street ends being considered for development as an improved public lake access site. The shoreline is roughly 340' away from the proposed trail corridor and may be accessed via a short jaunt down Park Street.

●**Overall Traffic Patterns:** Traffic tends to move through fairly constantly at the speed limit of 30mph. There are relatively few vehicles leaving or entering the highway in Segment G.

●**Design Issues:** The portion of Segment G in front of Peterson's Resort includes a flat partially grassed area about 16' wide between the north edge of pavement and a low shrub hedge on Peterson's property. Approximately half of this strip appears to be located within the state right of way, and the other half on Peterson's property. The terrain and space is good for trail construction. The Peterson's ownership should be asked if they would be interested in allowing the trail to be located partially on their property to provide increased distance between the highway and the trail route. This could greatly increase the appeal of the proposed trail, as well as improve the appearance of Peterson's highway frontage property boundary.



The end of Park Street is a little known public lake access area. It is shown here at low water

The sloping terrain in the vicinity of the five residential parcels, and the sidewalk segments near the Edgewater Condominiums, will require added design and construction measures. The slope of the residential properties, as well as the trees and utility poles will have to be addressed in order to provide the necessary space and clearances for the trail. The new sidewalk and short segment of guardrail near the Edgewater may have to be removed or modified. However, these recently constructed items represent very poor pedestrian design and present a significant accessibility barrier. See photo on page 36.

Presently, the edge of the sidewalk is 8' from the north fog line. The sidewalk is 5' wide. This provides a total of 13' between the north edge of the walkway and the fog line. The highway shoulder must be at least 4' wide. This leaves a maximum width of 9' for the trail corridor. The recommended width of the trail corridor is 12'. An additional 3' of width is needed. There appears to be ample room to gain 3' or more by shifting the highway alignment south. This would slightly straighten the highway route, and may limit the parking of boats and vehicles along the south side of the highway in this area.

This trail is expected to receive moderate to high volumes of use. It is advisable to ensure the availability of bike lanes on the highway in addition to trail development. This will provide a route for cyclists wishing to travel at faster speeds while the trail is in use by others. Bike lanes also provide snow storage areas in winter.

SEGMENT H: SR 97A (Chelan Divers to Main Street)

LENGTH OF SEGMENT: 1769' (15% of project length)

WIDTH OF ROAD RIGHT OF WAY: Variable 60' to 110'

WIDTH OF BUILT ROADWAY & IMPROVEMENTS: Variable 42' to 55'

Motor Vehicle Travel Lanes:	2 @ 13' each =	26'
Center Turn Lane:	0-1 @ 13' each =	0' to 13'
Shoulder:	1 @ 2'-8' =	2' to 8'
	1 @ 8' each =	<u>8'</u>
	Total Width of Improvements:	42' to 55'

WIDTH OF NON HIGHWAY RIGHT OF WAY: Variable 11' to 18'+

SPEED LIMIT: 30 MPH

DESCRIPTION OF BUILT ROADWAY & RELATED IMPROVEMENTS:

The road includes an east bound lane, west bound lane, and center turn lane. The shoulders are typically about 8' wide, but the south shoulder is only 2' wide near Waterslide Drive. The east and west ends of the segment do not include a center turn lane. The road and shoulders in these areas comprises 42' of the right of way. A center turn lane is present through most of the segment. The right of way seems to be wider (68' to 70') where the center turn lane is present.



Segment H passes through the waterfront industrial part of Chelan. The area is somewhat unsightly as it is dominated by asphalt, industrial buildings, parked cars.

CORRIDOR CHARACTERISTICS:

The roadbed is generally flat and the road bends right and then left. There are several businesses and parking areas adjacent to the right of way. The businesses are mostly industrial in nature. The access points to the adjacent properties are largely undefined. There is little or no landscaping along the right of way. This is the main route in and out of Chelan. It is a very unsightly area, dominated by asphalt, industrial buildings, parked cars, and power lines.

DESCRIPTION OF ADJACENT PROPERTY:

With the exception of a few homes, waterfront industrial businesses occupy the adjacent properties. Tourists frequent the Lake Chelan Boat Company, Chelan Airways, Harris Marina, Parasail and Boat Rentals, Ship N Shore Drive-Inn, and gas station.

Segment H, continued

UTILITIES: Overhead lines and utility poles are located on both sides of the highway. As many as seven power poles are located within the path of the proposed trail corridor.

BUS STOPS: There is a LINK transit stop on the north side of the highway near Chelan Airways, and one on the south side of the highway near East Street.

INTERSECTIONS: (from East to West)

- Waterslide Drive (south side)
- East Street (south side)
- Main Street (south side)
- Miscellaneous: There are several undefined or exceptionally wide accesses to adjacent business and homes.

NOTABLE ATTRIBUTES:

•Passenger Air & Water Transport Services:

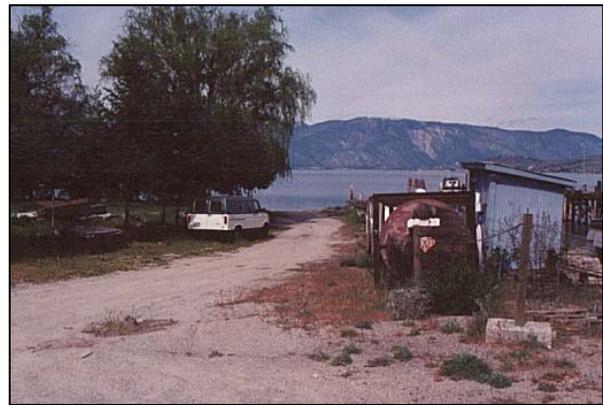
The Lakeside Trail would provide a key intermodal connection to local air and water transport services. Bicycle & pedestrian improvements would allow many people make air, land, and water linkages without use of an automobile.

•Chelan Slide Waters: The popular water park is located about 600' from the proposed trail route. Access is up Slide Water Drive.

•Overall Traffic Patterns: Traffic tends to move through fairly constantly at the speed limit of 30mph. The center turn lane accommodates traffic entering and leaving the road. There always seems to be a lot of cars parked haphazardly in the open areas of adjacent businesses, yards, and right of ways. Improved bicycle and pedestrian facilities could increase the customer base and reduce the demand for parking at many of the businesses in this area.



The industrial area is cluttered with unattractive features, such as these dumpsters located next to the Lady of the



This site is thought to be a city owned right of way that could be developed into a small waterfront



Lack of designated entry drives to adjacent properties would expose the trail route to lengthy areas of somewhat random motor vehicle crossings.

Segment H, continued

●**Water Access/Waterfront Reclamation Sites:** There are several potential locations to develop public water access sites, pedestrian pockets, or viewpoints. A host of old city street right of ways overlap much of the waterfront land and docks in this area. Some properties and docks of the old industrial waterfront appear to be abandoned. Whether in public or private ownership, there is tremendous potential to launch restoration efforts to improve the safety, function, and appearance of this waterfront area.



Public/private reclamation efforts could potentially transform sites like this abandoned pier into a pedestrian boardwalk, viewpoint, or

●**Design Issues:** The frequency of motor vehicle crossing locations is a concern. The wide open entry drive areas serving some of the adjacent properties would make it difficult to provide predictable motor vehicle crossing areas on the trail corridor. It would be beneficial to the trail project, and general traffic safety, to develop designated motor vehicle access points that reflect Washington State Department of Transportation managed access standards. The access drives could be separated by curbs or landscape strips which would define the separation of the road and adjacent parcels. Present access patterns are not conducive to providing the curbs, dividers, or landscape strips that are desirable to separate the trail from the roadway. Under present conditions, the trail corridor could only be designated by pavement markings.

Seven utility poles are located along the north side of the highway, roughly 15' from the fog line, within the proposed path of the trail. These poles will probably need to be relocated.

An unfenced petroleum distribution station is located immediately adjacent to the highway. Understanding the function of this facility and investigating ways to alleviate potential public safety issues will be a design issue requiring careful consideration.

This trail is expected to receive moderate volumes of use. It is advisable to ensure the availability of bike lanes on the highway in addition to trail development.



This industrial petroleum distribution facility is located very close to the proposed trail corridor. The function and public safety aspects associated

SEGMENT I: SR 97A (Main Street to Water Street)

LENGTH OF SEGMENT: 2260' (19% of project length)

WIDTH OF ROAD RIGHT OF WAY: Variable 60' to 193'

WIDTH OF BUILT ROADWAY & IMPROVEMENTS: 42'

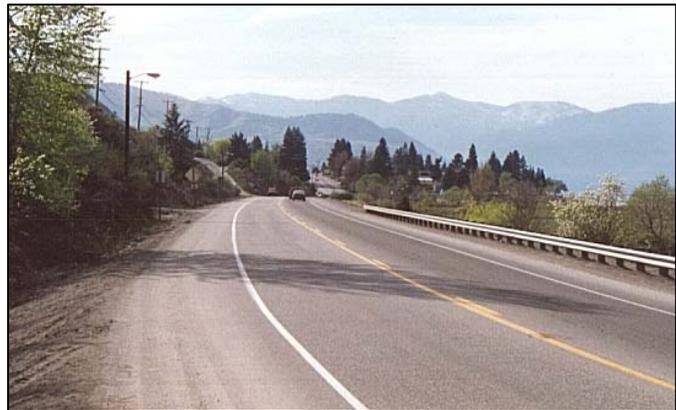
Motor Vehicle Travel Lanes:	2 @ 13' each =	26'
Shoulder:	2 @ 8' =	<u>16'</u>
Total Width of Improvements:		42'

WIDTH OF NON HIGHWAY RIGHT OF WAY: Variable 18' to 151'

SPEED LIMIT: 35 MPH

DESCRIPTION OF BUILT ROADWAY & RELATED IMPROVEMENTS:

The road includes an east bound and west bound lane. The shoulders are typically about 8' wide, but are a bit narrower in places. The road and shoulders in these areas comprises about 42' of the right of way. The highway includes two sections of guardrail in the areas where the road is adjacent to the lake.



Segment "I" includes the westernmost stretch of highway within the study corridor. It is one of the more peaceful areas along

CORRIDOR CHARACTERISTICS:

The roadbed rises, falls, and curves gently. The effect provides a more aesthetic, meandering path. The highway corridor and surrounding area is moderately vegetated with trees and shrubs. The right of way is quite wide throughout most of the segment. It tapers down to 60' in front of the two residences in the western end. Much of the right of way is shoreline property. There are very nice scenic views which include Lake Chelan and the Chelan Mountains.

DESCRIPTION OF ADJACENT PROPERTY:

The land adjacent to the right of way is mostly undeveloped. There are five homes which border the south side of the right of way within the west end of the study segment. There are two homes bordering the north side in the same vicinity. The remainder of the right of way is bordered by Lake Chelan and the Goodfellow Fingers to the north, and several undeveloped hillside lots to the south. The hillside lots are separated from the highway right of way by their own road easement. A large portion of the Goodfellow Fingers is within the right of way.

Segment I, continued

UTILITIES: Overhead lines and utility poles are located on the south side of the highway.

BUS STOPS: There is one LINK transit stop within the segment. It is on the south side of the highway near the intersection with Water Street.

INTERSECTIONS: (from East to West)

- Pine Street (south side)
- Division Street (south side)
- Water Street
- Miscellaneous: There are two connecting docks on the north side of the highway, near the west end of the guardrail.

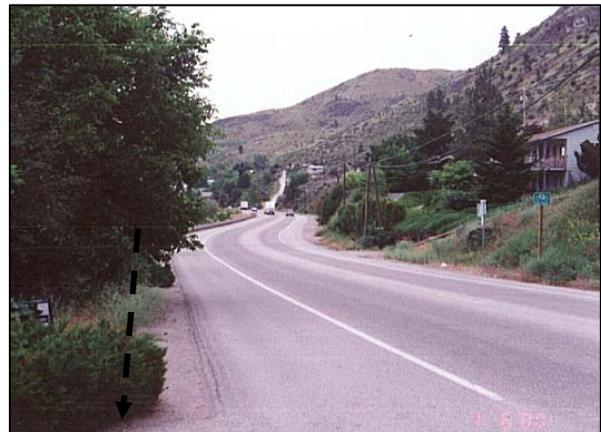
NOTABLE ATTRIBUTES:

•**Goodfellow Fingers:** The fate of this once controversial property has not yet been determined. The land was created by non-permitted excavation and filling in to the lake. A development moratorium is expected to expire soon. This shoreline property has become a landmark. It is three “fingers” of flat, wide land with narrow waterways between. A 100’ wide strip of the fingers is within the SR 97A right of way, providing opportunity to route the trail quite a way from the highway in his area.

•**Overall Traffic Patterns:** There are few turn-offs and no adjacent businesses, so through traffic moves well. The Lakeside area of the highway has been identified as a high accident location. The accident locations are concentrated to the west of the study segment at the intersections and adjacent commercial access points.

•**WSDOT Planned Improvements:** The Washington State Department of Transportation is planning to make improvements to the highway from the west end of the guardrail to East Center Street. A two-way center turn lane, lights, and improved intersection corners are being planned. WSDOT has been asked by the City to ensure that the improvements leave enough space for the trail corridor along the north side of the highway between the end of the guardrail and Water Street, pictured at right.

•**Design Issues:** In addition to the issues that have been discussed in the previous bullets, the primary design issue associated with this segment will be the need for shoreline embankment work behind the west guardrail.



Space for a trail corridor will be established in conjunction with WSDOT’s plans to improve visibility at the intersection of SR97A and

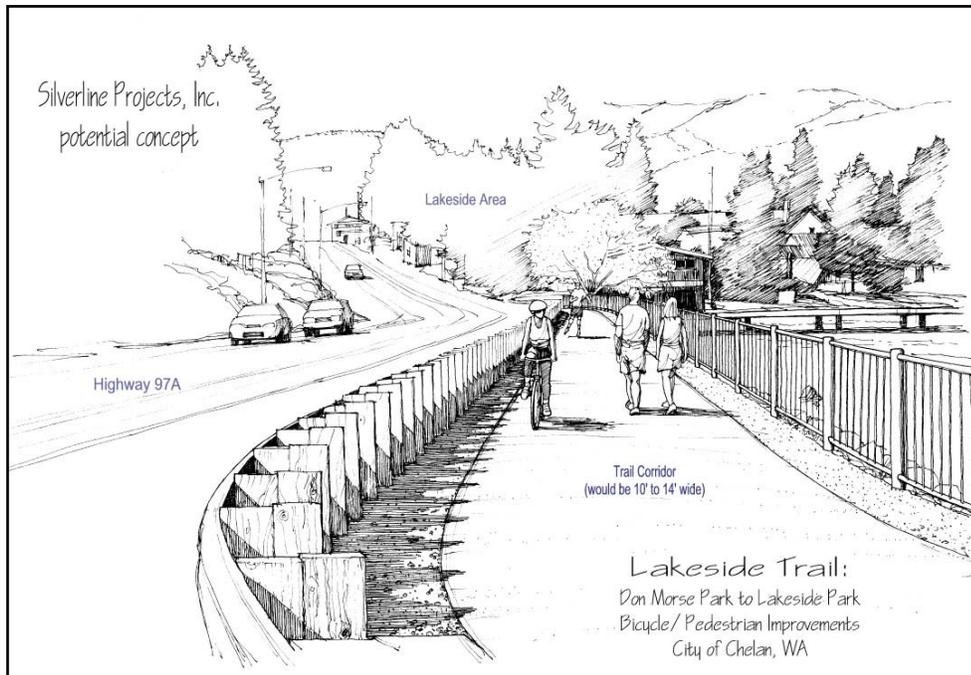
Segment I, continued

●Existing Walkway Area Behind Guardrail: A paved walking path was placed behind the guardrail some time ago. The pavement is not visible as a layer of sand & debris covers it. The path is narrow and deteriorating, but it does provide a viable walkway corridor within the proposed trail route. This corridor would need to be slightly expanded to upgrade it to the desired trail width. Pedestrians use both the highway shoulder and the unmaintained footpath.

The pedestrian conditions in Segment I, pictured at right, could be transformed into a beautiful shoreline trail, attached



EXISTING CONDITION



PROJECT VISION

SEGMENT J: Water Street, Terrace Ave, & E. Center St (SR97A to Lakeside Park)

LENGTH OF SEGMENT: 1500' (12.6% of project length)

WIDTH OF ROAD RIGHT OF WAY:

Water St 70'
Terrace Ave 60'
East Center St. 80'

WIDTH OF BUILT ROADWAY & IMPROVEMENTS: 22'

Paved Two Way Road (no striping): 1 @ 22' each = 22'
Total Width of Improvements: 22'

WIDTH OF NON HIGHWAY RIGHT OF WAY:

Variable 38' to 58'

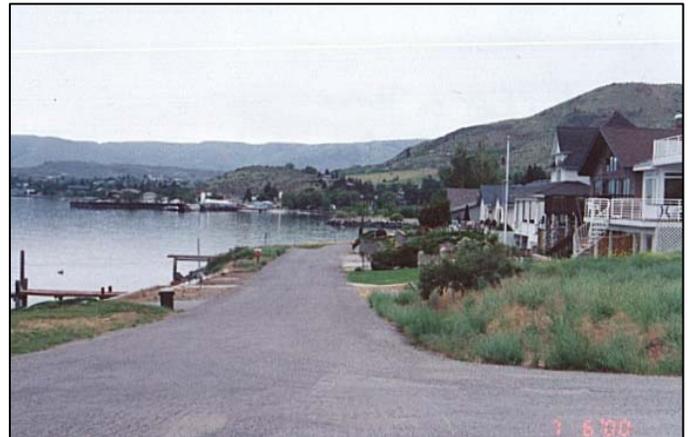
SPEED LIMIT: Not Posted

DESCRIPTION OF BUILT ROADWAY & RELATED IMPROVEMENTS:

This segment includes portions of three city streets. Water Street and Terrace Avenue are narrow, somewhat rural, roads. East Center Street has been recently paved and widened. About 500' of the study segment is adjacent to Lake Chelan.

CORRIDOR CHARACTERISTICS:

The road is narrow and the pavement surface is old. Water Street makes a 90 degree bend and changes into Terrace Avenue. The shoreline setting includes a nice sandy beach area which is not developed, but is available for limited public access. The area is characterized by waterfront residential development.



Segment J includes portions of three city streets. Although only paved to a width of 22', the right of way ranges in width from 38' to 58'. Here on Terrace Avenue the

DESCRIPTION OF ADJACENT PROPERTY: There is one home to the east and three homes to the west of Water Street. The home to the east is for sale. One corner of this house is located 5' from the Water Street right of way. The home across the street, on the west side of Water Street appears to be built partially within the right of way. Both of these homes are located near the intersection of Water Street and SR 97A. There are twelve homes on the north side of Terrace Avenue. Six of these are separated from the Lake by only the road. There are three private docks connected to the south side of Terrace Avenue. There are also six waterfront homes located on the north side of Terrace Avenue. The portion of East Center Street included in Segment J is the far north end of the street, where it meets Lakeside Park. The street fronting Lakeside Park is one-way east bound only.

Segment J, continued

UTILITIES: There are two utility poles located adjacent to the east side of the Water Street pavement. There are 3 poles on the north side of Terrace Avenue, two at the base of Evergreen Street, and one at the intersection of Terrace & East Center Street.

BUS STOPS: There are no LINK bus stops in this segment.

INTERSECTIONS: (South to North, then East to West)

- Alley (west side of Water Street)
- Evergreen Avenue (south side of Terrace Avenue)
- Miscellaneous: There is one dock connected to the east side of Water Street and three connected to the north side of Terrace Avenue.

NOTABLE ATTRIBUTES:

•**Waterfront Access & Views:** Much of the segment is in immediate proximity to Lake Chelan. The right of way is adjacent to the shoreline in the east half of the segment, allowing opportunity for public access and views of Lake Chelan.

•**Vacated Right of Way:** Part of Water Street and Terrace Avenue were vacated to the Electric Company in the 1920's. The city has since reiterated a claim to maintain control of public ownership and access rights in the vacated areas. There may be ownership discrepancies associated with these areas.

•**Residential Neighborhood:** This segment travels through a quiet residential area. Property owners should be involved in the early planning stages to determine their level of support for the project.

•**Lakeside Park:** The trail would terminate and transition into Lakeside Park. The park includes public restrooms, parking, picnicking, swim area, and seasonal boat launch.

•**Lakeside Community:** This was once an independent town that is now part of the City of Chelan. The area is more like a separate village, located west of town. The Lakeside area includes several residential neighborhoods, commercial services (restaurant, gas station, convenience store), a nice new hotel, and other smaller lodging units.

•**Overall Traffic Patterns:** There are few turn-offs and no adjacent businesses, so through traffic moves well. The Lakeside area of the highway has been identified as a high accident location. The accident locations are concentrated to the west of the study segment at the intersections and adjacent commercial access points.

Segment J, continued

●**Design Issues:** The residential property owners should be consulted regarding their support or concerns for a trail through this area. Issues associated with vacated street right of ways also need to be resolved in order to clarify ownership and development rights.

Construction of a trail could require road widening, shoreline embankment or a boardwalk structure, or reduction of motorized traffic to one-way only.

The intersections of SR97A and Water Street, Water Street and Terrace Avenue, and Terrace Avenue and East Center Street could present design challenges in addressing sharp corners and limited sight distances. Acquisition of the home for sale at the northeast corner of Water Street and SR97A could alleviate cornering difficulties at that intersection. Controlled stops at the corner are another option. Site distances are fairly good at the bend from Water Street to Terrace Avenue.

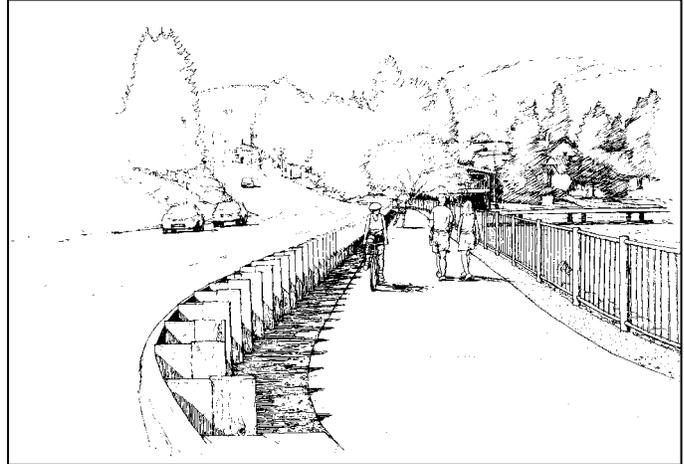
Incorporation of the trail into the one-way east bound motor lane and entry into Lakeside Park will require special attention for safe and orderly integration.

SECTION 5: DESIGN GUIDELINES

◆ DESCRIPTION OF THE PROPOSED TRAIL

The Lakeside Trail project would provide a safe, accessible bicycle and pedestrian trail, 2.25 miles in length between Chelan and Manson. The paved multi-use trail is proposed to be located within the Washington State Department of Transportation and City owned right of ways and public park lands.

Much of the trail will be situated in close or immediate proximity to Lake Chelan and the commercial area of the City of Chelan. It will link communities, neighborhoods, parks, resorts, and various commercial and recreational areas along the way. With adequate levels of support, the trail could include a variety of amenities such as landscape beautification, drinking fountains, parking strips, viewpoints, fishing platforms, and improved public access to the lake. See discussion regarding amenities below.



The project would begin at the intersection of Gibson Avenue and Highway 150, where it would connect to the existing city trail at Lakeshore RV Park. The end of the project would terminate at Lakeside Park. The route through the Lakeside area may involve integrating the trail into the existing bike lane and sidewalk system, although the preference is to route the trail all the way to Lakeside Park without disruption.

The trail would be located parallel to Highway 150 from Gibson Avenue to Columbia Street on the west, or lake side, of the road. It would then route south down the west edge of Columbia Street, wrapping around the Campbell House on Woodin Avenue and west over the Chelan River either on or adjacent to the north side of the Old Bridge. The trail would continue west on Woodin Avenue to West Woodin Avenue/Highway 97A, through the waterfront industrial area, and out to Water Street in Lakeside. At Water Street the trail could terminate and integrate with the existing bike lane/sidewalk system. Or the trail could be routed North on Water Street to Terrace Avenue, then west on Terrace Avenue to East Center Street and the final destination of Lakeside Park.

The trail will be designed in compliance with federal, state, and local standards. It will be separated from the motor vehicle travel-way by either a curb, divider, landscape buffer, or high visibility pavement markings, depending on the site specific situation. The trail project must include safe crossings at roads and driveways, and will incorporate access to bus stops, parks, neighborhoods, connecting streets, and commercial areas.

◆ AMENITIES & FEATURES

Depending on the level of support, the Lakeside Trail could include a variety of features and amenities, such as: Drinking fountains, rest areas, bus stops, parking strips, landscaping, interpretive signs, boardwalks, scenic viewpoints, fishing platforms, and other lake access features. Amenities are an important part of making trails user friendly, and strategic design and placement must be carefully considered.

The actual features of the trail system will be determined through the design and public involvement processes, and the implementation of amenities will be driven by availability of funds. Even if it is not possible to include all the desired amenities at the outset, it is important to plan for them so they may be added in the future. Due to the nature and scope of amenities, many can be funded through sponsorship and added after trail construction.

The location of amenities, viewpoints, and water access should be carefully reviewed in the design process. Grouping amenities together in clusters is preferable to stringing them along. Clustering minimizes construction and maintenance costs, makes the amenities more visible from a distance, saves space along the trail edge, and minimizes visual disturbances in the trail corridor. Amenities must be located effectively to adequately serve trail users and also minimize disturbances to neighboring properties.

Basic Amenities: Basic trail amenities such as periodic trash receptacles, benches, and drinking fountains should be made available at least every mile or so. In areas of high use, some amenities may appear more frequently. Bus stops are already located along the proposed trail route, and some include trash receptacles and benches. Jointly improved bus stops could double as trail rest stations.

Restrooms & Trailheads: Public parking, restrooms, telephones, picnic areas, and water access are available at Don Morse Park in Chelan, the Lake Chelan Chamber of Commerce, Riverwalk Park, and Lakeside Park. On-street parking is available in some places along the route although additional parking is desirable. Traffic reconfiguration may allow for additional on-street parking in some areas.

Features, Water Access, and Linkages: Bridges are always a draw for people to stop and look over the side or take in the view. The crossing over the Chelan River is expected to be one of the primary features on the trail. The Old Bridge, with its narrow sidewalks and travel lanes, is already a popular place for fishing, viewing, and chatting. The trail must take into account the anticipated popularity of this location and include wide, pull-out areas to prevent congestion.

The Lakeside Trail will also link with five major waterfront parks, including Lakeshore RV Park, Don Morse Memorial Park, Lakeshore Marina, Chelan Riverwalk Park, and Lakeside Park. These parks include boat launching, moorage, go karts, bumper boats, camping, picnicking, swimming, and trails. Additionally, the Lakeside Trail will provide improved bicycle and pedestrian access to the Chelan downtown shopping district, the visitor center, local hotels,

Amenities & Features, continued

motels, and restaurants, the Chelan Slidewaters, watercraft and moped rentals, and several other tourist attractions and waterfront facilities.

Other key features on the system include existing lake access points. There are two developed lake access points in addition to the parks -- a dock near the Campbell House and a swim area/canoe launch near the Chelan Ranger District. Three new lake access points are under study by the City and may offer short spur trails from the Lakeside Trail to proposed waterfront "micro parks" at Park Street, near the Lake Chelan Boat Company, and on Water Street.

The Lakeside Trail would also connect with regional transit, and local passenger ferry and floatplane services. The trail project could include wayside viewpoints and docks where boaters could stop and enjoy the trail vista points and other amenities. Connection with the passenger ferry landing and the addition of canoe/kayak friendly access would integrate the Lakeside Trail with the proposed water-trails of lower Lake Chelan.

There are several locations where public road right of ways intersect the proposed trail route and extend to the lake. These sites are identified on the corridor site plan as "Undeveloped Public Lake Access" because public right of way connects to the lake. However, careful consideration must be given in regards to attempting to develop these sites for improved public access because some are located down narrow corridors which would be difficult to patrol, and some are likely to impose on the privacy of neighboring residents. These sites should only be proposed as public access sites if design and management measures can be developed which assure appropriate use and protection of adjacent private property.

◆ EXPECTED USE

The proposed Lakeside Trail is approximately 2.25 miles in length. It is intended to be a two directional trail serving non-motorized transportation and recreational purposes. Because of its proximity to Lake Chelan, the trail is also expected to receive use from people simply wishing to enjoy the waterfront setting and lake scenery available at certain points along the route. The length and design of the proposed trail will be suitable to bicyclists, pedestrians, wheelchairs, and other recreational uses such as in line skating. Wide areas for viewing, fishing, and water access would be popular destinations for many people. The trail facility would be appropriate for all age and ability levels. All or most of the trail project will be accessible to the disabled.

According to a 1990 statewide recreational user survey, 76% of all Washington State households walk or hike for recreation. The breakdown of use within this group follows:

75% walk along neighborhood streets or roads	50% bicycle on roads
55% walk in neighborhood parks	46% day hike on trails

Walking and bicycling were ranked as the top two recreational growth activities in the 1995 Statewide Comprehensive Outdoor Recreation Plan (SCORP). Paved multi use trails with water oriented settings are now the most highly sought form of public recreation in the state.

A 1995 survey conducted of Lake Chelan area residents showed the following participation levels in various trail-related activities:

- 87% of adults & 77% of students walk for exercise, recreation, transportation
- 72% of students & 57% of adults bicycle for exercise, recreation, transportation
- 71% of students & 34% of adults jog for exercise, recreation, transportation
- 61% of adults & 59% of students hike for exercise, recreation, transportation
- 57% of students & 11% of adults rollerblade for recreation, exercise, transportation
- 15% of students skate board for recreation, transportation, exercise

Riverwalk Park was identified as the most frequently used facility visited for the above activities by students and adults.

The popularity of the Lakeside Trail is expected to be exceptional. In addition to use by the general population of the Chelan area, numerous adjacent residents and business patrons will utilize the trail for recreation and transportation purposes. A large percentage of trail trips are expected to originate from area parks and lodging facilities. The average daily use of the Lakeside Trail is expected to be moderate to heavy during the fair-weather seasons from spring through fall. Weekend use is expected to be heavy. Use is expected to be lighter during winter months.

◆ TRIPS

Estimated trip times do not include stopping times. Stopping time will vary depending on the frequency of required traffic control stops and the number of desired, and/or availability of, rest stops or featured destination points.

Walkers: The average speed of walkers ranges from 1mph to 3mph. At the mean rate it would take an hour and fifteen minutes to walk from one end of the Lakeside Trail to the other, and roughly two and a half hours to make an uninterrupted round trip. A fitness walker averaging 3mph would take about 50 minutes to walk one way, and about an hour and forty minutes to make a round trip.

Those walking for transportation purposes are likely to utilize segments of the trail to visit predetermined destinations, such as a store, bus stop, restaurant, park, or the passenger ferry. Those walking for fitness or recreation are most apt to make a round trip. Many recreational/fitness walkers will use the trail in combination with the existing trail in Riverwalk Park.

Joggers: The average speed of joggers ranges from 3mph to 7mph. At these rates it would take a jogger approximately 21 to 50 minutes to travel the distance, one way, between Lakeside and Don Morse Parks. An uninterrupted round trip would require anywhere from 42 to 100 minutes.

Bicyclists: Leisure bicyclists travel at an average of 7mph. The average cyclist travels at 12 to 15mph. The leisure rider will be capable of completing the 2.25 mile ride in about 21 minutes, or 42 minutes for the round trip. Most cyclists will be capable of completing the trip in less time, although the trail will not serve as a high speed route for cyclists due to the anticipated volumes of use and the “slow zones” which will be mandatory in certain portions of the corridor. Average paced cyclists could make the round trip in about 25 minutes during low traffic periods, but all cyclists will have to slow down in areas of high pedestrian traffic and the sharp corner at the intersection of Woodin Avenue and Columbia Street.

Competitive cyclists travel 20 to 30mph. Competitive cycling is not generally compatible with multi-use trails. These riders tend to ride on the road system. Shoulder space and bike lanes for faster moving cyclists should be made available in conjunction with trail implementation.

◆ CLASSIFICATION OF BICYCLE FACILITIES

As classified by the Washington State Department of Transportation

The Washington State Department of Transportation (WSDOT) has developed a Design Manual which includes guidelines for the development of facilities for non motorized travel (Section 1020, *Design Manual*). Design standards for bicycle facilities are similar to that of low speed roadways. The state recognizes that “properly designed facilities can accommodate bicyclists of all levels of skill, whereas an improperly designed facility will frequently be avoided by bicyclists.” *Design Manual* 1020.03 (1). The following classifications and general parameters are outlined in the Design Manual:

● **SHARED ROAD** (Class 4 Bikeway): The road is not designated with signs or pavement markings for bicyclists, but is accessible to them.

● **BIKE ROUTE** (Class 3 Bikeway): A Bike Route is a highway that is designated with signs as a bicycle route and is shared with other transportation modes.

● **BIKE LANES** (Class 2 Bikeway): An official Bike Lane is a portion of the highway which is designated by signs and/or pavement markings for preferential bicycle use. Bike lanes are required to be a minimum of 4’ wide. When they are adjacent to fixed objects (such as parked cars) they are required to be 5’ wide to allow for the opening of car doors. **Bike lane improvements on the roads are recommended in conjunction with the Lakeside Trail.**

● **BIKE PATH** (Class 1 Bikeway): A separate trail for the specific use of non-motorized transportation. Bike paths with two-way travel must be clearly separated from the road, either visually or physically. **This is the type of facility proposed for the Lakeside Trail.**

◆ PEDESTRIAN FACILITIES

As classified by the Washington State Department of Transportation

Highway 150 and 97A within the study corridor are classified as “No Access Control” highways. In reference to pedestrian facilities in conjunction with “No Access Control” highways the Design Manual states the following:

No Access Control. Sidewalks can be provided along both sides of urban area highways that are used for pedestrian access to schools, parks, shopping areas, commercial areas, and transit stops. In urban residential areas, a sidewalk is to be provided on at least one side of the highway. The sidewalk(s) is located close to the right of way line.

In rural areas, sidewalks would be needed only at points of community development such as schools, business, industrial plants, and transit stops. The cost of sidewalks are justified by a study of the local conditions. Walking trails may be used to connect some of these areas.

Crossings are permitted on uncontrolled access highways at intersections and where significant foot traffic is generated. In business districts, marked crosswalks are normally provided at intersections and, although not recommended, may be provided mid-block where pedestrian traffic volumes require. In residential and rural areas, marked crosswalks are normally unnecessary. In the vicinity of schools, convalescent centers, local parks, or community centers, marked crosswalks may be justified through a study of local conditions.

Sidewalk Design: Sidewalks are parallel and adjacent to a highway and follow the same alignment. The minimum width of sidewalks is 4’ when separated from the traveled way by a planting strip a minimum of 3’ in width. When a sidewalk is separated from a highway by a curb only, the minimum sidewalk width is 6’. Additional sidewalk design criteria is described in the Design Manual Section 1020.

◆ PROJECT SPECIFIC DESIGN GUIDELINES

The Lakeside Trail is proposed to be a paved, multi-use trail, located within public right of ways. This type of trail would be classified as a *Class 1 Bikeway* by the Washington State Department of Transportation and would be subject to established WSDOT design standards. Refer to WSDOT Design Manual Section 1020 for complete guidelines for non-motorized transportation facilities. If the Design Manual does not address every aspect of project design, unique situations may be resolved on a case by case basis using other appropriate design methods. The following is a summary of applicable requirements and recommendations for the Lakeside Trail.

Location: Bikeways should be located where use can be maximized. Along highways with high traffic volumes, the bikeway should be separated from the highway if there is adequate width.

Access: Trail facilities should provide direct routes between destination points and should be convenient to use. They should include frequent and convenient access points and should be readily accessible to emergency and service vehicles.

Separation from Highway: A two-directional bike path along a highway with posted speeds greater than 35mph should be located at least 5' from the edge of the roadway. Wider separations are desirable. If the trail is located less than 5' from the edge of a highway with posted speeds over 35mph, an approved physical divider must be used. In areas where the posted speeds are 35mph or less, which is the case of the Lakeside Trail, separation is still recommended to confirm to both the cyclist and the motorist that the trail functions as an independent route for bicycles. There are no minimum distance or divider requirements, but according to the Bicycle Program Coordinator for WSDOT, the trail should be clearly separated from the road by a curb, divider, or high visibility markings. Conflicts at intersections and driveways are a major concern on pathways adjacent to roadways.

Recommended treatments for delineation or separation of multi-use pathways include: Colored paving, signing; textured paving or paving patterns; slip resistant pavement markings; i.e. symbols or words; striping, especially in areas of limited site distance or curves; or a combination of these. Education programs to help trail users and motorists understand what the markings mean is also recommended.

An 8" wide white line should be used on the trail edge to separate it from immediately adjacent paved areas used by motor vehicles, i.e. roads or parking strips.

Trail Width: The minimum allowable width of two-direction bike paths is 8' travel surface with 2' graded or clear areas (shoulders) adjacent to each side -- a total of 12'. Where heavy bicycle volumes or significant pedestrian traffic is expected, the paved width should be at least 10'. The recommended width of the Lakeside Trail is 10' to 12'. If the paved width exceeds the minimum, the shoulder width may be reduced accordingly. A 10' trail would be required to have only 1' shoulders on each side – still a total of 12'.

Project Specific Design Guidelines, continued

Clearance to Obstructions: The minimum horizontal clearance to an obstruction is 2'. If this minimum can not be achieved, signs and pavement markings should warn cyclists of the condition. Vertical clearance must be a minimum of 8' with 10' preferred.

Embankments: If the trail is located atop an embankment of 10' high or more, a 3' wide graded area (shoulder) shall be provided adjacent to the pavement. Barriers may also be necessary depending on the elevation difference between the trail surface and adjacent terrain.

Minimum Width of Trail Structures: The clear width on trail bridge structures between railings must not be less than 10' for two-way bikeways. Wider clearances or waysides are desirable, especially since people are often inclined to stop on trail bridges to enjoy the view.

Dividers: If the trail is located less than 5' from the fog line of a highway with posted speeds above 35 mph, a physical divider must be used to prevent cyclists from encroaching onto the highway. The divider may consist of a concrete barrier Type 4, chain link fence, hedge, or railing. It must be at least 42" in height to prevent cyclists from toppling over. In areas where the posted speeds are 35mph or less, which is the case of the Lakeside Trail, dividers are not required. However, clear separation between the trail and the highway is recommended through use of approved dividers, curbs, or high visibility treatments. Barriers are also necessary on structural sections of a trail such as bridges or embankments. Vertical concrete surfaces should be smooth to avoid snagging or abrasive injuries when contact is made. Fences and railings should include smooth rub rails at handlebar height unless adequate clear space is present between the trail and the divider.

Surface: Dense graded asphalt concrete surfaces are best for multiple use trails and preferable to open-graded or seal coated surfaces. The surface should be smooth and the pavement edge uniform. Asphalt Concrete Pavement (ACP) a minimum of 2" in depth is the norm. Non slip, hard surfaces such as properly finished concrete, pavers, crushed stone, and wood decking are considered accessible to wheelchairs and may be considered in special situations. However, except for concrete, these surfaces are not conducive to convenient wheeled travel.

Grades: The maximum grade rate recommended by the WSDOT Design Manual for bicyclists is 5%. Steeper grades up to 10% can be tolerated for short segments up to about 500'. Where steeper grades are necessary, the trail width should be increased by up to 3' for greater maneuverability. National Accessibility standards for wheelchair users also lists the maximum grade at 5% for Level 4 (easiest) accessibility. Level 3 (moderate access) grades may be up to 8.33% for a distance of up to 200'.

Design Speeds: A separated bike path in open country with level or undulating terrain should be designed to a minimum design speed of 20mph. A bike path with downgrades steeper than 4% and longer than 500' should be designed to a minimum design speed of 30mph.

Project Specific Design Guidelines, continued

Drainage: A 2% cross slope is recommended for proper drainage and is the maximum allowable for wheelchair accessibility. Sloping in one direction is the preferred practice. Generally drainage from the path is adequately dissipated over the shoulder, but a drainage ditch may be required to intercept hillside drainage before it reaches the path if a trail is constructed on a hillside. Proper drainage of the trail surface and sub base is essential to the longevity of the trail project.

Guardrails: Where bicyclists use facilities located behind guardrail, the protruding bolts on the guardrail should be cut off.

Barrier Posts (bollards): Bollards may be installed at entrances to bike paths to prevent motor vehicles from entering. They must be at least 30" in height and are normally used only when operational problems demand it. Barrier posts should be located 5' apart and should be well marked and visible to bicyclists. The posts should be removable to permit access by service and emergency vehicles. They should be located at least 10' from the intersection if possible.

Signs: The U.S. Department of Transportation's Federal Highway Administration has outlined size, shape, and color criteria for signs on transportation projects, including trails (refer to MUTCD - Manual of Uniform Traffic Control Devices). Regulatory and warning signs may be necessary in places to instruct trail users to stop, yield, slow, or use caution. Warning or regulatory signs should not be grouped closely together as this diminishes their effectiveness. They should be placed at least 75' apart to allow users time to read and react to the messages. Informational signs may also be included in a trail corridor to provide users with information, geographic orientation, or interpretive messages. Information signs should be clustered in key locations where there is ample room for trail users to stop and get off the trail to read them. Regulatory & warning signs should be placed 2' from the edge of trail pavement and should be raised 4' to 5' off the ground. Informational signs should be placed at least 4' from the edge of the trail.

Pavement Markings: Pavement markings should be used sparingly as they can become slippery and they require annual maintenance. They should be used in conjunction with signs where it is necessary to attract additional attention to problem areas and at intersections. A 4" wide, yellow center line stripe is beneficial to separate opposing directions of travel where there is heavy use, on curves with restricted site distance, and where the path is unlighted and nighttime use is expected. An 8" wide white line should be used on the trail edge to separate it from immediately adjacent paved areas used by motor vehicles, i.e. roads or parking strips. Intersections should be consistently unmarked or marked. If marked, standard pavement markings for trail crossings and advance warning of intersections should be clearly communicated. Changes in trail surfacing can also be used to warn trail users of intersections, but speed bumps should never be used on trails. (refer to MUTCD - Manual of Uniform Traffic Control Devices)

Project Specific Design Guidelines, continued

Intersection Crossings: Conflicts at intersections and driveways are a major concern on pathways adjacent to roadways. Road and driveway crossings must be addressed during the design and engineering phase on a site-specific basis to determine the best way to safely interface the trail with each particular intersection. Transportation engineering must determine right of way, as well as the type of traffic control to be used. For most trail users, frequent stops greatly interfere with a trail's effectiveness. In some situations, right of way is determined by gauging traffic volumes. Whichever of the crossing routes receives the most use also receives the right of way. In light traffic situations, yielding may be preferable to stopping.

During the spring, summer, and fall, the Lakeside Trail is expected to have higher daily traffic volumes than any one motor vehicle crossing point. This may not hold true in winter months. Typically, motorists would be required to stop at trail crossings. If the motorist cannot be expected to stop, trail traffic would be required to stop.

Crossings should be at least as wide as the trail approaches and should be oriented perpendicular to vehicular crossing routes if possible. Site distance to intersections must be maintained and adequate signs and markings should be in place for trail users and motor vehicles. In light traffic situations, the most common trail crossings are identified by advance warning signs and crosswalk pavement markings. High traffic crossings often include a traffic signal that can be activated by trail users. WSDOT's present warrant for installing a pedestrian crossing signal calls for 90 ped xings per hour for 4 hours, or 190 ped xings in one hour on an average day.

At grade trail crossings should be located as close as possible to intersections, in the same place a crosswalk would be placed. This allows for a stop bar to be placed behind the crosswalk preventing cars from blocking the trail while they wait to proceed. If it is not reasonable to locate the trail crossing at an intersection, the trail should cross at a location completely independent of the intersection.

Highway Crossings: Crossing the trail over the highway is not desirable. If necessary to cross the highway, a grade crossing should be considered only in conjunction with a controlled intersection. Mid-block pedestrian crossings are not recommended, but can be provided where pedestrian traffic volumes warrant. Signalization may be necessary in this case. Another option, although generally very expensive and often cost prohibitive, is to consider a grade separated crossing such as an overpass or tunnel.

Termination Points: Trail termination points should connect to other trails or suitable destination points. When bicycle paths terminate at existing roads, it is important to integrate the path into the existing road system. Appropriate signing should warn and direct bicyclists and motorists at transition areas.

◆ SELECTING THE LOCATION OF THE TRAIL

Generally, bicyclists and walkers wish to travel the same routes as motorists. A trail that is direct, continuous, and conveniently located will provide the greatest public benefit. Situating a trail in an aesthetically pleasing setting will widen the range of public use and benefit. A suburban multi use trail, such as the proposed Lakeside Trail, will be used for both transportation and recreation purposes. The selected corridor is proposed where use will be maximized due to location and appeal.

The directness, convenience, and aesthetic appeal of a trail will contribute greatly to its use and popularity. Shoreline trails are among the most popular in the state. Lake Chelan is a natural attraction, and it is to be expected that trail users would prefer to have the trail located near the lake. Due to the extent of privately held property and existing developments on the shore of Lake Chelan, there is not a viable trail corridor immediately adjacent to the water for the entire distance between Don Morse Park and Lakeside Park. However, the road system is in close proximity, and occasional immediate contact, with Lake Chelan. It is the primary traffic host between the trail termination points, and this corridor is presently used by bicyclists and pedestrians. The proposed Lakeside Trail corridor provides the most direct and readily accessible route between Don Morse Park and Lakeside Park for motorists and non-motorists alike.

The preferred trail corridor meets all of the primary criteria for trail location and it is already a publicly owned, established transportation corridor. Alternate routes were investigated, but the only practical alternative to the selected trail corridor would be the establishment of continuous sidewalks and bike lanes in lieu of a trail. Site-specific alignment would be based on the opportunities and constraints determined through survey, engineering, budget, and public involvement.

Through earlier public involvement processes associated with the Lake Chelan Valley Public Trails Comprehensive Plan, the public has expressed a strong desire to locate trails along the lake side of the roads and highways. Whenever possible, it is best to locate a trail where it is evident that people most want to be. Street crossings will need to be included for desired linkages to properties on the other side of the road.

At approximately 2.25 miles, people may easily use the trail to travel the entire distance from Don Morse Park to Lakeside Park, or vice versa. However, a large number of nearby residents, visitors, employees, and business patrons will use the trail to travel shorter distances between smaller destination points, or “sub areas”. Some people will use the corridor to travel from one neighborhood to another, or to a selected destination, such as a shop, restaurant, park, or bus stop. The trail and access points should be located for the convenient flow of both the long distance and short distance travelers.

◆ ALTERNATE ROUTES

The general area between Don Morse Park and Lakeside Park is under private property ownership except for public roads, utility easements, the lake, the parks and bits of land owned by public agencies. The majority of lakefront properties are developed for residential, commercial, industrial, and private recreational use. Many shoreline property lines extend well below the present Lake Chelan reservoir boundary. The extent of private shoreline ownership and development patterns, along with the overlapping reservoir boundary, precludes the feasibility of attempting to develop the trail entirely on the Lake Chelan shoreline.

All public right of ways in the vicinity of the study area were investigated for potential alternate routes. Other road routes between Don Morse and Lakeside Park were investigated, but they would not provide for the direct access nor serve the populated hub that the preferred Lakeside Trail corridor would.

Deviations from the road right of ways: There are a few key places with excellent potential to separate the trail from the roadways. The most obvious are the areas within Don Morse Park, Lakeshore Marina, the Old Bridge, and the Fingers. A possible route through Campbell's Resort was also investigated, but discussions with the property owner indicated that they, understandably, would not support a trail through the narrow, and often crowded, private waterfront section of their resort. However, Campbell's did indicate support of a route along the Highway 150, Columbia Street, and Woodin Avenue borders of their property and indicated an interest in cooperating with the City to accommodate the improved bicycle and pedestrian facilities through this area.

Bike Lanes & Sidewalks: The primary alternative to development of a trail within the study corridor is development of contiguous sidewalks and bike lanes. These types of facilities are the standard method for addressing bicycle and pedestrian mobility within most urban transportation systems. However, these facilities primarily serve the utilitarian needs of pedestrians and cyclists and will not adequately meet the recreational travel demands of the Chelan area.

To incorporate bike lanes and sidewalks where there are present deficiencies would also entail traffic reconfigurations and construction costs similar to the proposed trail. However, the provision of bike lanes on the roads adjacent to the trail corridor is strongly recommended to accommodate faster moving cyclists.

◆ SUPPLEMENTAL LINKAGES

Riverwalk Park: An interesting option for a supplemental trail linkage involves a connection to Riverwalk Park via a route past Campbell's Mattson Building. This linkage could potentially run under the east end of the Old Bridge, connecting the Lakeside Trail directly to the Riverwalk Park Trail. This would provide improved access to the popular Riverwalk Park. It would effectively integrate the Lakeside Trail with the Riverwalk Trail, and also provide the Riverwalk Trail with the final link necessary to form a very desirable loop trail. The Campbell's have indicated support for this trail linkage, which would be located partly on their property.

Supplemental Linkages, continued

Street End Micro Parks: The City of Chelan owns several undeveloped or partially developed right of ways, or street ends, which extend to the Lake Chelan waterfront. Three of these lake access points are under study by the City and may offer short spur trails from the Lakeside Trail to proposed waterfront “micro parks”. The sites are located at Park Street, adjacent to the Lake Chelan Boat Company, and on Water Street. These sites would have to be designed on a site specific basis and would include only those features appropriate to the particular site. Features may include some or all of the following: picnicking, swimming, viewpoints, docks, drinking fountains, litter receptacles, interpretive signs, benches or landscaping.

Kingman Viewpoint: This City owned property, located on Third Street just above the Chelan Ranger District, has been identified by the community as a site for a future viewpoint or small park. The elevated vantage point offers spectacular views of Lake Chelan. However, bicycle and pedestrian access would be via a very steep grade on third street. A multi-use spur trail is not recommended here due to steep grades. Alternate access with lesser grade difficulties could be achieved from Webster Avenue. Separate pedestrian access may be possible with development of a long, steep stairwell directly from Woodin Avenue.

◆ STAGED DEVELOPMENT

Ideally, the Lakeside Trail would be implemented as one continuous piece, providing a safe, convenient, and aesthetically pleasing trail connection around lower Lake Chelan. However, depending on funding, logistics, and the level of public/private support, the Lakeside Trail may have to be implemented in stages.

Portions of the study corridor appear to be capable of accommodating trail development with relative straightforwardness. However, some sections will definitely require above average planning, partnerships, and public support. Staged development, or phasing may be necessary. Stages would be determined during the design process, based on project-specific opportunities and constraints.

A staged trail project may consist of building the entire trail in a scaled-down fashion, i.e. a “bare bones” project, with the planned intent to make upgrades as possible. Another method of staging may involve the implementation of trail sections that serve as stand alone facilities until they are linked to other trails or walkways. Regardless of staging, the entire trail facility should be planned uniformly with provision for all the desired design details.

If it is not possible to construct the trail in certain areas at the onset, the provision of bicycle and pedestrian improvements within other areas of the corridor should not be altogether disregarded. Short trail sections can improve the transportation and recreation capacity of the corridor within a specific area. And often times when sections are completed and placed into public use, pressure and support build for creating additional links.

SECTION 4: TYPICAL DESIGN CONCEPTS

◆ EXPLANATION OF DESIGN CONCEPTS & CROSS SECTION DIAGRAMS

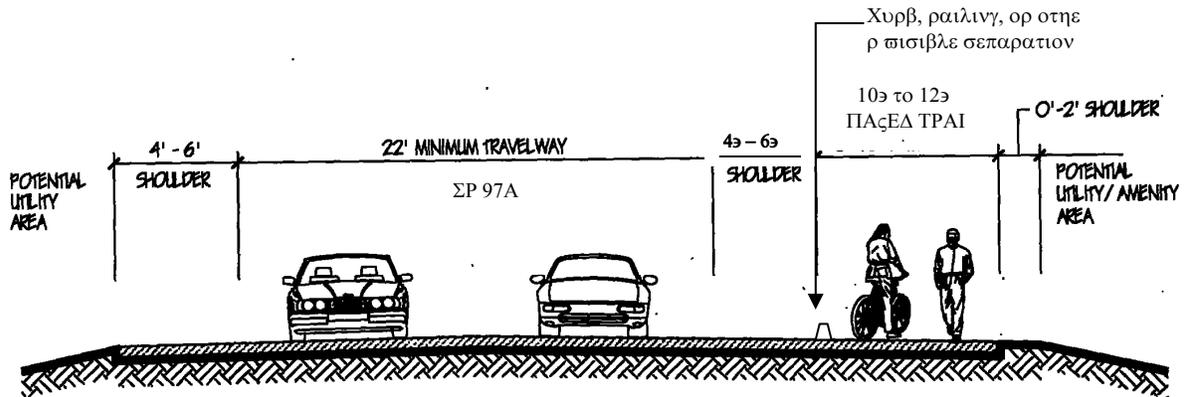
The following typical cross sections present conceptual designs demonstrating different scenarios of how a trail may be incorporated into the study corridor. These drawings represent design applications that may be used to address various areas of the project. These typical cross sections are examples only, and do not fully convey every possible design solution. The cross section analysis describes the minimum widths allowable and the minimum widths recommended. However, greater widths may be considered as site conditions and projected volumes of use warrant. Actual, site-specific design solutions would be determined through the design process, and would incorporate land survey, engineering, and public involvement information.

Discussions and quantitative summaries pertaining to trail and road widths, and related applications accompany the typical cross sections. The design concepts include analysis of adding the trail to the existing road without realignment, and also the possibilities associated with roadway realignment to achieve minimum widths

The width of the built highway, shoulders, and right of way varies. The following cross sections and related descriptions are based on the principal width of Highway 97A, which is 35' (6' paved shoulders on each side and a 23' wide roadway accommodating two travel lanes). There are exceptions to this norm, including additional lanes for turning and passing. Detailed descriptions of existing and varying roadway conditions can be found in the Corridor Analysis & Study Corridor Site Plan sections of this study.

The key numbers in the following pages are the "+" numbers associated with "Net Gain". This refers to the width of space needed in addition to the existing, typical 35' wide paved surface of Highway 150. The net gain figure refers to the needs of the trail corridor (surface and related barriers) only. It does not include additional space for embankment or other trail related construction measures that may be necessary in some areas.

TYPE 1 DESIGN CONCEPT (HIGHWAY SPEEDS OF 35 MPH OR LESS)



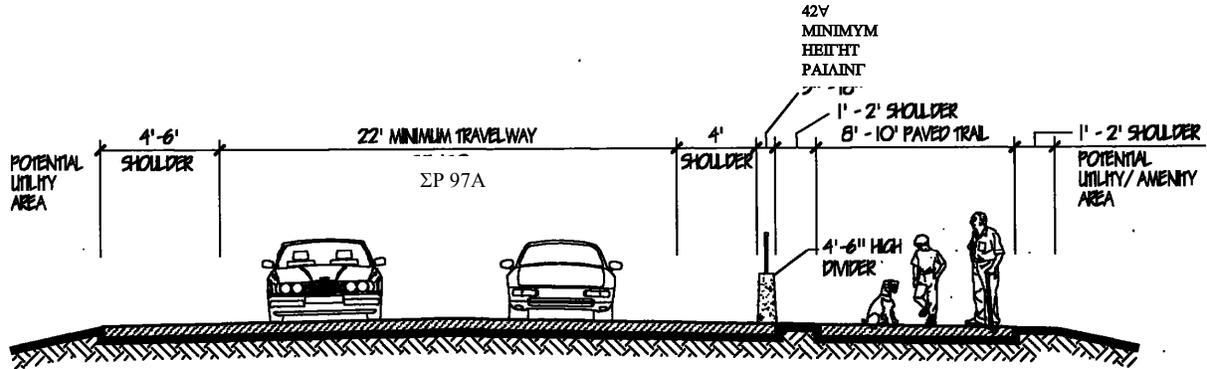
CROSS SECTION VIEW

A minimum roadway shoulder space of 4' should be maintained if possible to allow for bike lanes, snow storage, and desired clear area for motorists. Although 5' of distance between the edge of a highway and a trail is recommended, the distance may be less where posted speeds are 35mph or less. Some kind of prominent visual separation between the trail and the roadway is encouraged to confirm to both the cyclist and the motorist that the trail functions as an independent route for non-motorists. The trail should be clearly separated from the road by a curb, railing, divider, or high visibility markings.

Recommended treatments for delineation or separation of multi-use pathways include: Colored paving, signing; textured paving or paving patterns; slip resistant pavement markings; i.e. symbols or words; striping, especially in areas of limited site distance or curves; or a combination of these. Education programs to help trail users and motorists understand what the markings mean is also recommended.

An 8" wide white line should be used on the trail edge to separate it from immediately adjacent paved areas used by motor vehicles, i.e. roads or parking strips.

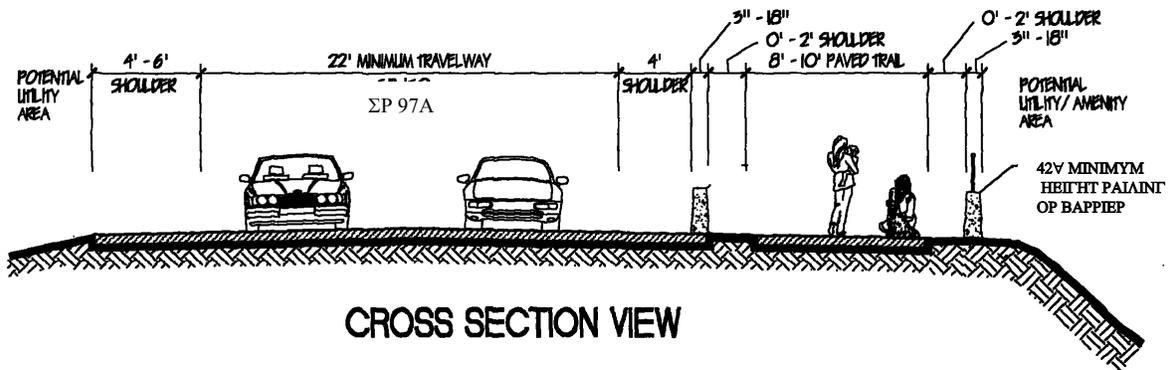
TYPE 2 DESIGN CONCEPT (PHYSICAL DIVIDER)



CROSS SECTION VIEW

If the edge of trail is located less than 5' from the roadway, a physical divider is required on highways with posted speeds above 35mph. Although the highways within the Lakeside Trail study corridor are posted at 35mph or less, this treatment may be utilized in some areas for added safety.

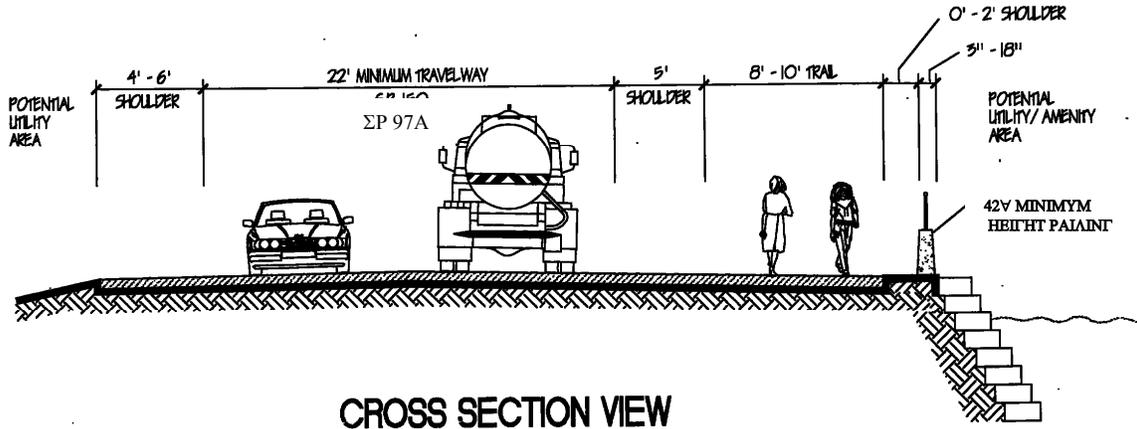
TYPE 3 DESIGN CONCEPT (PROTECTIVE BARRIERS ON BOTH SIDES OF TRAIL)



This design concept may be applicable where there is concern for physical separation of trail and highway, and where the non-highway edge of the trail is near a steep slope, drop-off, or the trail is bridged over land or water. It may also be applicable to extremely narrow corridor areas where there is limited space between the highway and adjacent constraints such as nearby private property.

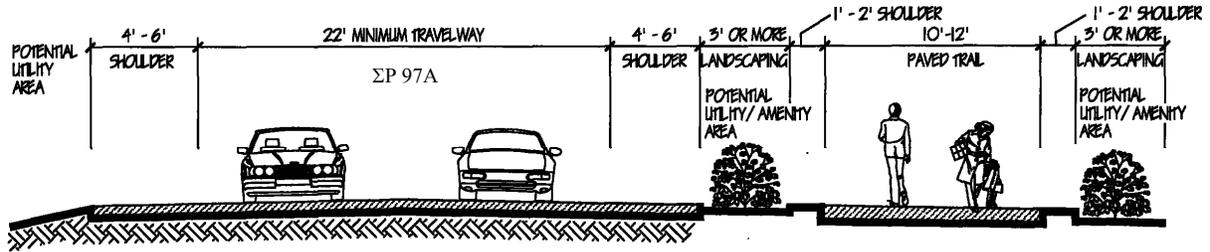
NOTES: This design concept requires less space than any other typical trail section due to the 10' minimum clearance required between trail barriers. Adequate breaks in the barriers would be necessary to allow access to the trail from adjacent properties, at driveways, and intersection crossings.

TYPE 4 DESIGN CONCEPT (PROTECTIVE BARRIER ON LAKE SIDE OF TRAIL)



The protective barrier must be at least 42" in height. Approved barriers include concrete, chain link fencing, or railings. This design concept may be applicable where the non-highway edge of the trail is near a steep slope, drop-off, atop an embankment, or immediately adjacent to the lake.

TYPE 5 DESIGN CONCEPT (LANDSCAPING & AMENITIES)



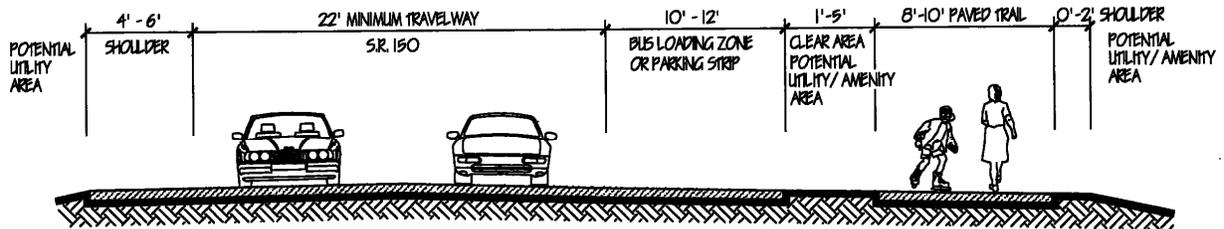
CROSS SECTION VIEW

Where adequate space is available, landscape strips and/or trail amenities may be included. The location of amenities will be determined through the site-specific design process, and should take into account maintenance and snow plowing concerns.

RECOMMENDED MINIMUM WIDTH: A trail corridor of 20' would accommodate a 12' trail, with 4' landscape/amenity strips on each side.

NOTE: A 3' wide shoulder (compacted gravel or earth for jogging lane) and a 12' paved surface are optimal for high volume, multi use trails.

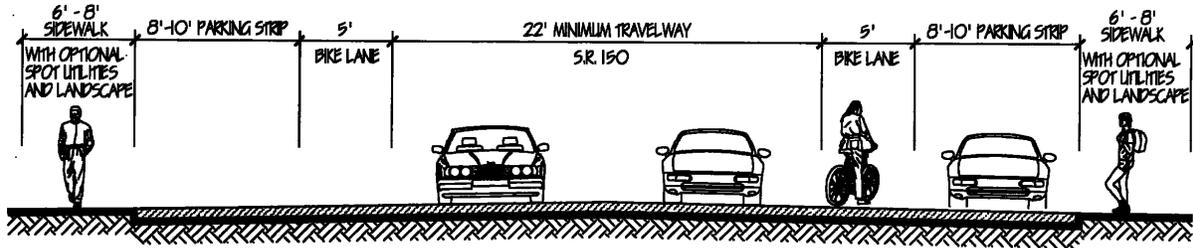
TYPE 6 DESIGN CONCEPT (PARKING STRIP OR BUS LOADING ZONE)



CROSS SECTION VIEW

Where adequate space is available, improved parking strips and/or bus loading zones may be included. The location of parking and bus stop improvements will be determined through site-specific design and public involvement processes.

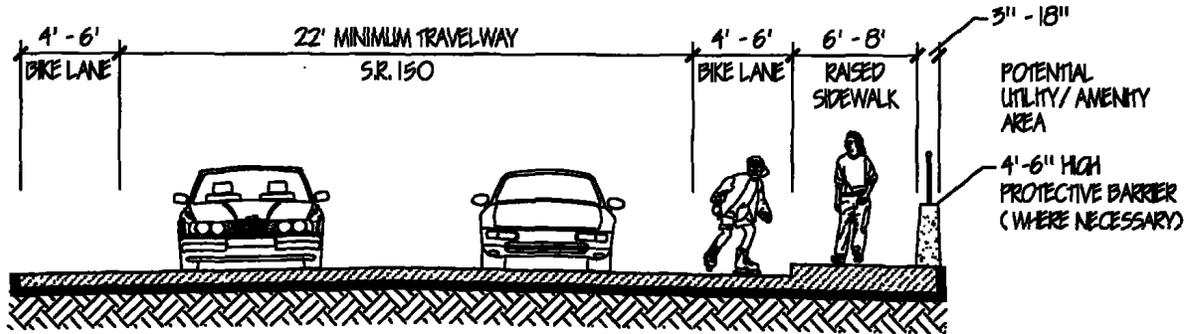
TYPE 7 DESIGN CONCEPT
(SPECIAL AREA: BIKE LANES, SIDEWALKS, AND PARKING STRIPS)



CROSS SECTION VIEW

Sidewalks and bike lanes may be included within the road system to accommodate pedestrian and bicycle travel in lieu of trails.

TYPE 8: DESIGN CONCEPT (TRAIL ALTERNATIVE: BIKE LANES AND SIDEWALKS)



CROSS SECTION VIEW

Bike lanes and sidewalks may be included within the road system to accommodate pedestrian and bicycle travel in lieu of trails. This design concept provides an alternative for providing improved bicycle and pedestrian facilities between Don Morse Park and Lakeside Park. However, this concept is oriented toward non-motorized transportation and would not appeal to as wide a variety of the public as a trail would.

NOTE: It is generally not advisable to transition back and forth from a trail facility on one side of the road to a system of bike lanes and sidewalks on each side of the road. Continuity in the type of bicycle and pedestrian facility will minimize uncontrolled road crossings.

SECTION 7: CONSTRUCTION & MAINTENANCE COSTS

◆ PROJECTED TRAIL COSTS

The cost of the overall Lakeside Trail project cannot be determined until the project is engineered and designed so that all elements can be accurately assessed. However, every project must begin with at least a ballpark figure. Generally speaking, paved multi-use trails range from \$200,000 to \$300,000 per mile to design & construct, in 1999 dollars, under conducive site conditions in Washington State. For a 2.25 mile trail project, this translates to an estimated \$450,000 to \$675,000 for a relatively standard trail.

Due to its location in a built environment and proximity to roads, highways, and Lake Chelan, the Lakeside Trail will require many construction measures beyond “standard” trail construction. Necessary extraordinary measures are likely to include: demolition of curb and sidewalk, reconfiguration of travel lanes, inclusion of curb, dividers, railings, or high visibility pavement surfacing, several driveway and intersection crossings, slow zones, shoreline embankment, landscaping, relocation of utility poles or under grounding of power, and a structural section to cross the Chelan River. Other trail amenities to be determined may include drinking fountains, benches, viewpoints, lights, bus stops, etc. The Lakeside Trail project area is in the immediate vicinity of state highways and local roads and will require carefully coordinated traffic control and construction scheduling. The project corridor is also extremely narrow in places, making construction maneuvering more difficult and time consuming.

However, potentially favorable cost factors may exist in some portions of the study corridor. Much of what will be the trail bed is already fairly level and clear of obstructions, thereby minimizing excavation costs. It is also possible that the bridge section of the trail might be accomplished in conjunction with the City’s planned bridge renovation project, in which case the trail cost would be effectively shared with the bridge cost.

If the trail will include construction of an independent structure across the Chelan River, the estimated cost in 1999 dollars ranges from \$500 to \$1000 per lineal foot for a 12’ wide structure, including design and permitting. At approximately 500 feet, a 12’ wide trail structure could cost \$250,000 to \$500,000.

Based on figures obtained from a local paving contractor, the 1999 prevailing wage for installation of 4” top course and 2” pavement in the Chelan area was \$1.50 per square foot. Placing a 2.25 mile trail, 12’ wide onto an existing “trail bed” would cost about \$213, 840 plus tax in 1999 dollars. This figure does not include excavation and preparation of the sub grade, or “trail bed”, or removal of existing sidewalks, curbs, utilities, etc.

Based on the above factors, the preliminary estimate for design and construction of the Lakeside Trail is expected to fall between \$750,000 to \$1,000,000. The least the project could cost is probably \$600,000. The maximum estimated cost is \$1,250,000. These figures are based on 1999 currency values and prices. Survey, engineering, design, permitting, and construction management (included in the above estimates) can be expected to account for about 20% of the project cost. These figures may vary greatly depending on the complexity and timing of the planning process, final trail design, and the desired overall quality and appearance of the facility.

◆ FACILITY MAINTENANCE & MANAGEMENT

A lead agency or organization, or a combination thereof will need to be responsible for maintenance and management of the trail. The Washington State Department of Transportation Design Manual states: “Bikeway surfaces should be maintained in good condition, generally free of potholes, corrugations, gravel, broken glass, and other debris.” A list of routine and major maintenance activities should be developed, prioritized, scheduled, and assigned. Those activities which are critical to the safe operation of the trail should not be compromised. Other priorities may include protection of the trail neighbors, environment, or infrastructure. The priorities may vary according to the involvement and expectations of the community and resources available to the lead agency. Regular, routine maintenance on an annual basis ensures trail safety, reduces potential legal liability, and prolongs the life of the trail. Well maintained facilities tend to incur far less vandalism, litter, and undesirable activities than facilities which are allowed to become “run down”. Locating the trail in plain view and avoiding “hidden pockets” also contributes greatly to the prevention of undesirable activity.

The design of the trail should carefully consider the amount of funding which will be available for maintenance. Extensive landscaping, interpretive signs, restrooms, and lighting are wonderful amenities which add to the trail experience and appearance, but they obviously necessitate a higher degree of upkeep than a trail without these features. The following maintenance & operations activities may apply to the Lakeside Trail. Some items listed may not apply, depending on the features which actually become incorporated into the trail project:

- Sweeping
- Snow & ice removal
- Litter control
- Weed control
- Law enforcement
- Repaint pavement markings
- Remove graffiti
- Replace or repair missing or damaged signs
- Patch holes, fill cracks, and feather edges
- Maintain emergency telephones
- Maintain furniture and other amenities
- Trim trees, shrubs, and grasses to maintain site distances & eliminate fire hazards
- Clean, repair, and winterize drinking fountains
- Maintain landscaping
- Clean and replace lights
- Drainage control, culvert and catch basin clean outs
- Monitor, adjust, repair, and winterize irrigation system
- Inspect structures and surfacing for deterioration or damage, replace as needed
- Improve or upgrade facility as needed

◆ MAINTENANCE BUDGET

In addition to the expense of building the trail, the expense of maintaining the trail must also be considered. Generally, the maintenance of a paved trail is one of the lowest cost-to-benefit ratio items in public recreation. Even so, while grants and fund raising are widely available for trail construction, maintenance dollars are historically more difficult to come by. The single most important factor in keeping maintenance costs down is to properly design and construct a quality facility from the beginning. By dedicating the time and expense in the design & construction phases, significant maintenance and management problems can be prevented in the future.

The Lakeside Trail is proposed to be located within the Washington State Department of Transportation and City right of ways. Design, maintenance, and regulations associated with the trail should provide continuity regardless of the jurisdiction in which it lies. Inter-agency coordination will need to take place in order to identify and address the issues and procedural methods of all involved agencies.

Once a project specific maintenance list and schedule is developed and the responsible parties are identified, a maintenance budget can be developed. Currently, maintenance of similar trails costs \$5,000 to \$6,000 per mile annually. This includes litter control, sweeping, trimming, and minor patching. On a 2.25 mile trail, this equates to \$11,250 to \$13,500 annually.

Capital improvements such as pavement overlays or replacement of asphalt may be necessary every 7 to 15 years. In 1999, an 1 ½" ACP overlay would cost about \$30,000 per mile for a 10' wide trail in the Chelan area. At 2.25 miles this would figure to cost about \$67,500. Removal and replacement of asphalt costs about twice as much as an overlay. Again, the expense and essential frequency of maintenance will vary depending on the original quality, materials, and additional features of the project.

A joint use maintenance agreement between multiple agencies and/or organizations can significantly aid in reducing the monetary burden on any one party. Often times the road department already owns snow removal, sweeping, and marking equipment which can be readily put to work on the trail. Parks departments usually have trained personnel who can handle daily operations items such as landscape & irrigation maintenance, litter control, and minor repairs. Volunteers can aid with various items too.

For the Lakeside Trail, potential maintenance partners include the City of Chelan, Chelan County, Washington State Department of Transportation, Chelan County P.U.D., and the Lake Chelan Recreation Association. Local businesses, individuals, and other organizations may provide financial support for the upkeep of the trail also.

SECTION 8: PROJECTED IMPACTS & BENEFITS

◆ PROPERTY OWNERS

City & State Highway Right of Way: The Lakeside Trail is proposed to be located within the city and state right of ways between Don Morse Park and Lakeside Park. The primary property owners are the City of Chelan and the Washington State Department of Transportation. Receiving City and Department of Transportation's approval and support for the implementation of this project is critical.

Adjacent Property: There are approximately 40 property parcels adjacent to the trail corridor side of the right of way, and approximately 66 parcels adjacent to the non-trail side. A substantial amount of the trail-side properties are in public ownership, i.e. the City Parks and Lake Chelan. The majority of the other parcels are commercial properties which would benefit from the customer base and promotional attractiveness the trail would provide. A small proportion of the properties adjacent to the study corridor are residential homes. Only part of one property, a truck lane at a petroleum distribution station, may not be fully compatible with the proposed trail project. Further investigation of this property and exploration of related solutions to ensure compatibility would be needed during the trail design phase. Encouraging active public involvement from all adjacent landowners and other interested parties during the planning and design stage is recommended to ensure the needs and concerns of adjacent property owners are understood and addressed. Although the trail project is proposed to be located within public right of way, there are two locations where minor additional land or easement space would be desirable. Discussions with the owner(s) of these three or four parcels should be initiated early in the project planning stage.

In general, well planned trails have proven to be welcomed and valuable amenities to most neighbors. A vast majority of landowners adjacent to trails use them frequently, and recreational trails are commonly used as a selling point for real estate marketing. Studies have shown that in many cases, property values increase with the presence of trails. Many of the adjacent homeowners who would be concerned about privacy have already taken steps to isolate their property from the busy transportation corridor.

Planning & design techniques can and should be incorporated to ensure the trail will be embraced as a pleasantry to its neighbors. Having so many close neighbors presents two distinctive matters. First, adjacent land owners will have specific needs and expectations associated with the interface of the trail and their private property. Some people may want extra measures to ensure privacy and security, while others may want the trail to provide open access or to blend with their landscape setting. The second issue relates to the benefit the neighbors will provide to the trail. While having neighbors will inherently result in a lengthy list of needs and concerns, it will also greatly contribute to the safety and security of the trail facility. The trail will be in plain site of several homes, parks, and businesses. It will also be in view of the passing motorists on the roads. The high visibility of the project will lend quite well to the proper conduct of trail users and the prevention of undesirable activity.

◆ GOOD NEIGHBOR POLICIES

A public involvement process should be conducted to provide each neighbor the opportunity to express his or her needs and desires pertaining to the trail project. Some of the key considerations which should be incorporated into the Lakeside Trail for the protection and benefit of adjacent land owners and residents include:

- Design the trail to discourage unwanted diversions off of the trail. Provide adequate amenities including: rest stations, view points, lake access, emergency phones, parking areas, and rest rooms.

- Design the trail to include landscape buffers or other screening for adjacent residents who wish to maintain privacy. If necessary, fencing can be placed between the trail and adjacent private property also.

- Design the trail to include identifiable access to nearby commercial enterprises, neighborhoods, parks, resorts, etc. Provide access to the trail for nearby residents.

- Design the trail to accommodate placement of residential mailboxes, private signs, bus stops, and trash bins (for weekly pick up service) in a convenient location.

- Design the trail to include safe and visible driveway crossings.

- Manage the trail in a manner which ensures the proper use of the facility. This includes proper security measures, litter control, and upkeep of signs, rest stations, and trail surfacing.

- Establish and maintain open communication with trail neighbors throughout the planning, design, and management of the trail facility. Recognize the value of their position to serve as “eyes and ears” for the trail management agency.

◆ IMPACT ON ROADS AND RIGHT OF WAY

Use of Right of Way: The trail will make use of a portion of the right of way. The alignment of the trail must be designed in consistency with the City's and WSDOT's long-range plans for the corridor, so as to complement future development.

Crossings & Traffic Control: Regulatory & advisory signs, pavement markings, and crossing devices would have to be added to comply with Uniform Traffic Control standards. Existing bicycle and pedestrian signs may have to be relocated in conjunction with final trail alignment and crossing areas.

Lighting: Much of the proposed trail corridor is already illuminated by streetlamps. Future trail and/or highway lighting improvements should be coordinated. Relocation of some existing light poles may be necessary.

Signs: Relocation of several signposts is imminent.

Roadway Revisions: There are areas within the study corridor where traffic reconfigurations will be necessary to allow for the trail project. Shoulder and lane widths may be reduced or expanded, depending on the location and final design. The most significant change to the road system is necessary on Highway 150 in the vicinity between the Lakeview Drive Inn and Columbia Street (Segment B). The four lane road would need to be reconfigured to three lanes. This would trigger the need to adjust connecting sections of the road system to achieve proper alignments. Another significant road revision could be the conversion of a section of Woodin Avenue to one-way traffic flows in Segments D and E. Although this is not the only option, it would be the most cost effective option for routing a trail over the Chelan River and on up to SR97A. Other effects to the road system may include a reduction in shoulder width on SR97A.

Construction Traffic Control: Construction of the trail would require temporary traffic control measures, including possible lane closures.

Safety Improvements, Congestion Reduction, & Emergency Access: Separating motorized and non-motorized uses, and providing designated travel ways for each will create predictability and reduce conflicts in the transportation corridor. The provision of designated parking strips, bus loading areas, bike/ped corridors and associated dividers would improve the safety for all uses within the corridor. The trail could be built to accommodate access for emergency vehicles. Shoulder and lane widths could be improved as a result of the trail project on Highway 150, in Segments A & B.

◆ IMPACTS ON ADJACENT LANDS

Driveway Crossings: If constructed, the Lakeside Trail would intersect with several driveways, and a few docks. Each crossing would need to be reviewed and designed on a case by case basis to provide for the most safe and effective crossing possible. Maintaining proper site distance for both the motorist and the trail users is critical. The crossing will include proper warning and control signs or pavement markings. Right of way must be established. Typically, motorists would be required to stop or yield at trail crossings. If the motorist can not be expected to stop, trail traffic would be required to stop or yield. Access points to many businesses in the Industrial Waterfront area (Segment H) should be better defined to improve safety.

Residential & Commercial Service Items: In addition to driveway crossings, consideration needs to be given to allowing placement of ancillary features such as residential or business name & address signs, mailboxes, and bin space for roadside trash collection. Also, some properties presently rely on the road shoulders for deliveries or overflow parking. The need and location of ancillary features should be thoroughly assessed and incorporated into the design of the trail project during the engineering phase.

Interface and Landscape: The landscape of the trail corridor would be matched with existing grades in most locations. On steeper sloped areas, embankment will be necessary. Retaining walls, grade contouring, terracing, and/or landscape plantings may be used to create the proper elevation controls. There is the possibility of including extensive landscaping into the trail corridor to blend with or screen neighboring properties, or to add to the attractiveness of the route.

Construction Activities: Construction of the trail will create temporary conditions which will not go unnoticed by neighboring residents. Heavy machinery will grade the trail route and install the surfacing. In some locations structural work will be necessary. Traffic control measures may include temporary travel lane and driveway closures. The General Contactor will be required to obtain and adhere to the regulations of a locally controlled Construction Permit.

Maintenance & Operation Activities: Regular maintenance and operation activities may include litter control, weed control, sweeping, and snow removal. Occasional repairs and upgrades, including asphalt overlays every 7 to 15 years, will be necessary to maintain the integrity of the trail.

◆ IMPACT ON UTILITIES

Below Grade: The proposed trail corridor contains a number of utilities. Domestic water, sewer, irrigation, fiber optics, power, storm water drains, and phone lines are located below grade to varying degrees in varying locations throughout the right of way. Trail construction is not expected to impact any below grade utilities, except for matching grade level access covers with appropriate construction grades and possibly tying into utilities for service, i.e. drinking fountain, irrigation, electrical service, and storm drainage.

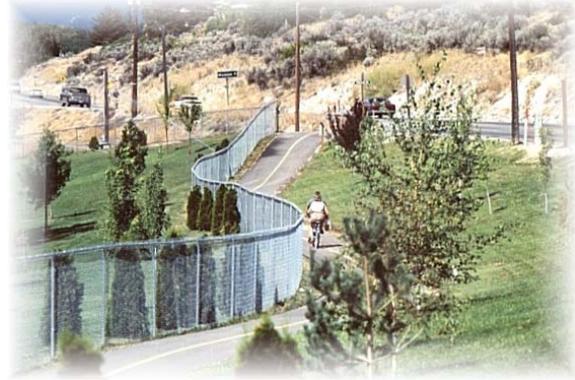
Above Grade: Above grade utilities include power poles and transmission lines, telephone poles and lines, fire hydrants, cable television lines, junction boxes, and buried utility markers. Many of the utility features located within the proposed trail corridor will need to be relocated or undergrounded. There are four power poles in Segment B which are in direct and unavoidable conflict with the trail route. Power will probably have to be moved to the other side of the highway or buried underground in Segment B. There seems to be widespread support for undergrounding the power service in this area. Up to 15 power, phone, anchor, or light poles may need to be relocated in Segments G, H, & J.

Moving power poles up to 50' fore and aft in line with the existing system is not as difficult as moving a pole on a tangent from the line. Often, moving one pole out of line requires moving other poles and securing them with guy wires as well. The typical span length between poles is 275' to 300'. The span is shorter in curves. A straight line of poles does not usually require the use of guy poles. There is a 2 degree angle tolerance at any given pole in the line. A 10' easement is usually obtained around each pole, allowing 5' of space for access on each side of the running line. The expense of relocating utility poles can cost roughly \$2,000 to \$3,000 each.

◆ BENEFITS OF TRAILS

“Don’t underestimate the value of this strip of pavement”

Meeting Public Recreation Needs: Multi-Use Trails in shoreline settings are the most sought after form of public recreation in Washington State. They are popular with all ages and abilities and provide relatively safe and inexpensive recreational opportunities to the public. Public trails top the state public recreation priority list.



Trails are a proven community enhancement feature.

Sending us down the right trail

On days like these, all the overused adjectives come to mind — words like “visionary” and “far-sighted.” Then there are well-worn phrases like, “courage to make his dream a reality.”

Cliches perhaps, but they apply to Gordon Congdon. It was Congdon who was on hand Tuesday as the Douglas County Commissioners at last awarded a bid for construction of the Eastside Columbia River Trail. It is the culmination of a 4½-year effort by the Complete the Loop Coalition and its most outspoken advocates, particularly Congdon and attorney Robert Parlette.

“I couldn’t have been happier,” said Congdon. “This is the nicest thing that could happen to me at this time of my life.”

Work on the trail will begin within a month. When it is complete, probably in October, East Wenatchee and Wenatchee will be connected by an 11-mile riverfront loop trail, widely regarded as the finest in the state.

Don’t underestimate the value of this strip of pavement. The loop will be a centerpiece, a link between east and west. Projects like this provide more than just a place to take a walk. It will reinforce our sense of community. It will continue to remind us that our town is good, and the work we undertake to improve it is worthwhile. In the decades to come, thousands of people will stroll or pedal or skate down the trail and be grateful they have chosen this spot on the earth to live and work.

And if nothing else, the trail will be a

“The Loop will be a centerpiece... Projects like this provide more than just a place to walk. It will reinforce our sense of community.” Tracy Warner, “The Wenatchee World”, on Wenatchee’s Loop Trail.

Meeting Transportation Needs: Trails in urban and suburban areas are strongly supported by Washington State Transportation Policy as they provide alternative modes of safe personal mobility and help relieve pressure on motorized travel ways. They also help reduce air pollution. The proposed Lakeside Trail has been submitted for inclusion on the Statewide Non-Motorized Transportation Plan.

Meeting the Goals of the State Shoreline Management Act: Trails are considered to be one of the low impact recreational developments compatible with shoreline areas. They provide desired public access to Washington shorelines, while dispersing use. The State Shoreline Management Act supports public shoreline trails.

Meeting the Goals of Local Plans: The proposed Lakeside Trail would achieve economic development, transportation, recreation, and beautification goals set forth through several local plans, including: Lake Chelan Chamber of Commerce; Lake Chelan Basin Comprehensive Plan; City of Chelan Visioning Report; Chelan Parks Comprehensive Plan; and the Lake Chelan Recreation Association Product Development List. The Trail System has been endorsed by Chelan County, City of Chelan, Chamber of Commerce, U.S. Forest Service, Port of Chelan County, Quest for Economic Development, Manson Parks, and numerous local organizations.

Benefits of Trails, continued

Diversified Recreation Opportunities: The Lakeside Trail would provide new recreation opportunities allowing people of all ages, abilities, and activity levels to experience the beauty and enjoyment of the City and the Lake Chelan Shoreline from a variety of vantage points along the proposed 2.25 mile route.

Economic Development: Trails have been a leading factor in community economic development across the nation. In addition to the obvious tourism factor, white-collar industries and families place a higher priority on relocating to communities with a strong network of parks and trails. And retail businesses located near trails receive significant increases in foot traffic, which is far better for business than drive-by traffic. Trails tend to be good for property values too. Real estate advertisements commonly list proximity to a trail as a key selling point.



All ages and abilities enjoy trail related activities, but safe, accessible trail linkages in Chelan are needed.

Businesses follow trails

Like many of the other 26 employees at Oneonta Trading Corp. in Wenatchee, Skip Johnson usually forgoes lunch. Instead of chomping down on a ham sandwich, he changes his clothes and heads out to the riverfront trail at Walla Walla Point Park.

Sometimes at noon, Johnson jogs the trail along the Columbia River. Other times, he roller skis or bikes. When he's looking for a little less exercise, he simply walks the trail.

Johnson and his fellow employees are luckier than most. The Oneonta office is next to the park. There's access for employees through a gate.

A member of the Complete the Loop Coalition that's raising money for a trail on the East Wenatchee side of the river, Johnson says he's amazed at how fast the community has taken to the new parks and trail. A peek out his office window reveals people using the trail daily. Johnson says he's thankful his office is so close to the greenway.

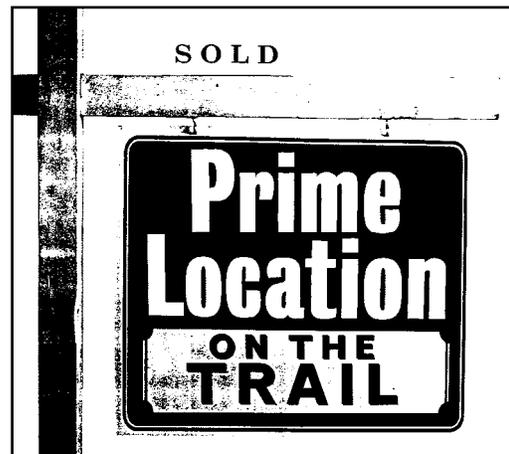
Others probably wish they could say the same. There's reason for that.

During the past 10 years, the words "park," "trail" and "greenway" have crept into the American vernacular like never before. Some attribute the change to President Reagan's Commission on Americans Outdoors, which recommended in 1987 a system of recreational corridors be created around the country. Others say it's just a case of changing values.

One thing is certain. The move has spread like wildfire across the country. An estimated 500 greenway projects currently are under way in the United States, according to National Geographic magazine.

My Turn

by Stephen Maher
World Business Writer



Business recruitment efforts, real estate values, and local retail sales have prospered from trail projects throughout the nation.

1992

6 BUSINESS/MARKETS

Bike sales click into high gear

By STEPHEN MAHER
World business writer

WENATCHEE — Bicycles remain hot in the Wenatchee area. Several dealers report bike sales have been running at a pace as good or better than a year ago when sales doubled at some locations. As was the case a year ago, mountain bikes are the top seller.

Sales have been so good at Asplund's Outdoor Recreational Sports that the 8,000-square-foot business is expanding by 4,000 square feet so it can have room for more bikes and in-line skates as well as a new bike repair shop.

The store sold only 10 bikes in 1990. That number increased to 125 in 1991 and to 400 in 1992. Owner Bill Asplund said sales this year are doing better than a year ago but not double.

Asplund said he leases the building from Earl Coule, who will be building the addition. The space occupied by bikes now will be taken over by cross-country skis once the work is done.

"Bicycles have been good to us," Asplund said. "Sales have been very, very good in our business. We feel we're going to expand without touting on Park Place with seven hotels and not be able to pay the rent."

"We've needed the space," he said. "We've outgrown the store."

At T.K. Specialty Sports, formerly Japrow ski and cycle, owner Tony McCart said he's noticed a slight slowdown in the sale of beginner bikes but brisk sales in more advanced — and more expensive — mountain bikes have made their mark in

for it. McCart said bike sales have been fueled by a "mass boom across the United States as well as the growth of Wenatchee as a recreational playground."

"The riverfront park trails have done wonders for the town," he exclaims. "And the vast amount of accessible land in the Wenatchee area has helped the mountain bikers."

Asplund agrees. He also believes completion of a shoreline trail on the East Wenatchee side of the Columbia River in the next year or two will create more of a demand.

"I think if the Lakeside trail is going to be a benefit for our community, and I think it'll be a benefit for our business, too," he said. "People are concerned about their health and want to exercise."

McCart said his business is

eventual slowdown in bike sales due to saturation. But he noted that mountain bike sales have remained strong in other parts of the country for six years. In Wenatchee, sales have been strong for only about three years.

Even when bike sales slow down, however, service (tune-ups and repairs) and the sale of accessories and parts likely will pick up, he said.

"Once you get into a \$600 bike, it's going to last you a long time," McCart added.

Asplund said new or planned commercial developments in the area — including the Knart shopping center in Olds Station and a mystery development near Maiken Lane — also played a role in his store's expansion.

"I like competition," he said. "It makes me work harder."

Benefits of Trails, continued

Beautification: Trails are often incorporated into natural or enhanced landscape settings, greatly contributing to beautification of the area or community in which they pass.

Shoreline Aesthetics: Trails incorporated into undeveloped areas can provide an incredible “facelift” to the setting. Improved shoreline aesthetics will continue to contribute to quality of life and social appeal of the Lake Chelan area.

Year Round Benefit: Trails provide year round recreation opportunities and remain very popular throughout the spring and fall “shoulder seasons”. They can also be enjoyed in the wintertime to some degree. The daily recreation opportunity associated with trails extends from early in the morning into the night. Unlike water sports, trails are enjoyable throughout a variety of weather conditions.



Trails with landscaping, viewpoints and other amenities can greatly enhance the aesthetics of the surrounding area.



A separated trail would upgrade the transportation system, improve public safety and reduce conflicts among motorists, bicyclists, and pedestrians.

Improved Public Safety: Providing trails and formalizing roadside water access facilities in the Chelan area could greatly increase the safety and orderly use of the road system for motorists and non-motorists alike. Bicyclists, pedestrians and those seeking roadside water access will have designated areas for their activities. The predictability and safety of non-motorized activities will increase, while conflicts and distractions to the motorist will be decreased.



Transportation Upgrades: The shoreline trail system will upgrade and improve the safety and efficiency of the local transportation corridor by providing non-motorized transportation opportunities in a safe and orderly fashion. Allowing people to get around the urban and suburban areas without reliance on the motor vehicle aids in the reduction of congestion, pollution, and parking demands.

Benefits of Trails, continued

Meeting Public Need: The Public Trails Survey conducted by the Lake Chelan Recreation Association in 1995 indicated that 87% of adults and 77% of students in the Chelan Valley participate in walking for exercise, recreation, or transportation. 72% of the students and 58% of the adults said they bicycle on paved surfaces. 71% of the students and 34% of the adults said they jog, and 61% of adults and 59% of students said they hike. 57% of students and 11% of adults said they rollerblade. The most frequently used facility for these types of activities was Riverwalk Park.



The Lakeside Trail Study Corridor is a popular area for cyclists, pedestrians, and other related trail activities.



Surveys of Lakeshore RV Park revealed that over half the campers bring their bikes when they visit Chelan.

The public demand and proposed location for trails is documented in the 1995 Lake Chelan Valley Comprehensive Trails Plan, the result of a community wide effort involving hundreds of citizens and 27 agencies and organizations. There is a proven need and significant deficiency in the availability of public shoreline access and trails in the lower Lake Chelan area.

Shoreline Access: Scenery, Viewpoints, Fishing Access, Drinking Fountains, Interpretive Signs, Boardwalks, and possibly even docks and swim areas, are all potential features of the trail system. It will provide safe, appropriate recreational access to a

new expanse of the urban shoreline. The trail system will provide improved access to the lake front parks, and may include new access to the lake via spur connections on existing undeveloped public right of ways.

Extension of Existing Park System: Trails will become an extension of the existing park system, interconnecting the community with the parks. The expanded park system will serve a greater area and provide more recreational opportunities to park visitors and the community as a whole.

The trail would provide additional viewpoints and shoreline access to Lake Chelan, while linking existing



Benefits of Trails, continued

Serve the Populated Downlake Area: The majority of the residents and visitors to the Lake Chelan area are active in the downlake area. The public trails would be readily available to all visitors and residents.

Relieve Overcrowding of Existing Parks: Shoreline trails will provide opportunities for dispersed recreational use along the shoreline and throughout the lower Lake Chelan area, thus aiding in the relief of concentrated use at existing and often overcrowded parks. Providing other recreation opportunities may also substantially relieve boating congestion on the lake.

Year Round Use and Independence from Lake Levels: Shoreline trails provide a form of recreation which is available year round. The tourism season would be extended with the availability of recreational trails.



The trail would provide a recreational outlet for the overcrowded shoreline parks, reduce parking demands, and may aid in the reduction of boating

Reduction of Parking Problems: Providing a safe, convenient, and appealing trail corridor will reduce many people's dependence on motorized travel. The Lakeside Trail may include designated parking strips where possible.

Potential Partnership to Reclaim and Improve Waterfront Areas: Trail planning and development could be the catalyst of expanded beautification, reclamation, and transformation of Chelan into a pedestrian friendly community.



Joint public/private waterfront reclamation efforts could improve the appearance, function, and value of the

Effective Use of Funds and Partnerships: Trails are among the best cost-to-benefit ratio public recreation facilities that can be built. They are also one of the least expensive types of public recreation facilities to maintain. Public support and interagency cooperation for these types of projects is tremendous. There are many potential partners to aid in accomplishing the proposed trails and tremendous potential for spreading the cost and benefits associated with the project.

Lake Chelan Hydroelectric Project Relicensing Objectives: Public access and recreation facilities, including part of the Lakeside Trail, are a requirement of Chelan County PUD's hydroelectric project licenses. The potential to partner with other interests in accomplishing the Lakeside Trail may allow the PUD to achieve relicensing goals at a substantial savings.

**SECTION 9:
BACKGROUND & PLANNING
INFORMATION**

◆ PROJECT IMPLEMENTATION SEQUENCE

Implementation of the Lakeside Trail project will require a sequence of extensive planning activities. Under favorable conditions it could take 2 years to receive the necessary approvals and funding, prepare a final design, and enter into a construction award agreement. Construction could probably be completed within 6 months of the award.

The following steps will be essential to the preparation and implementation of the project:

- Organizing Lead Participants:** Key participants, roles, and time lines should be outlined. A lead agency, organization, consultant, or combination thereof, should be designated to oversee the areas of public involvement, planning & design, construction, and maintenance.
- Budget:** A projected budget and prospective funding sources should be outlined. The estimated cost will have to be adjusted as the project scope and design becomes more detailed.
- Public Involvement:** A public involvement program should be activated and support from public agencies and private property owners sought. Develop and conduct property owner and agency consultations, conveying a complete project overview to each affected party. Solicit comments, questions, and approvals from the public & private sectors.
- Funding:** If the public and agency response is favorable, create a strategy and commence fund raising. Address design, construction, maintenance, and administration costs in the budget.
- Survey, Engineering, & Design:** Determine site-specific alignment of trail and related improvements. Identify and resolve known impacts of proposed project, integrate with other uses.
- Properties:** Secure or acquire necessary easements, permits, and approvals to construct trail.
- Permits:** Secure necessary approvals and development permits.
- Construction:** Upon obtaining permits and funding, a construction agreement can be awarded. Logistics, staging, and operations will be managed in accordance with a construction permit.
- Management:** The trail manager will oversee maintenance and operations of the trail facility. The managing body should be involved in facility design and construction inspections.
- Security and Enforcement:** The appropriate law enforcement agencies should be determined and key personnel consulted during project planning. The trail management agency and the law enforcement agencies should communicate about the appropriate use of the facility and procedures for handling any undesirable activity associated with the project.

◆ PROJECT HISTORY & PAST SUPPORT

The concept of valley wide non-motorized trail system was outlined in the 1995 Lake Chelan Valley Public Trails Comprehensive Plan. The result of an extraordinary public/private effort over a three year period (1992-95), twenty-seven public agencies, local organizations, and businesses actively participated in the development of the Lake Chelan Valley Comprehensive Trails Plan. The Trails Plan was endorsed and/or funded by: Quest for Economic Development, Chelan County Board of Commissioners, United States Forest Service, City of Chelan, and the Port of Chelan County. The Chelan County Public Utility District provided technical support for the Comprehensive Trails Plan and assisted with public surveys.

Numerous residents participated in the Comprehensive Trail Planning workshops and surveys. Survey results heavily favored improvement of bicycle & pedestrian opportunities associated with the existing road system. Safety, scenery, and access to Lake Chelan were rated as the top priorities for any future trail projects. Local plans emphasized the provision of improved bicycle & pedestrian transportation facilities that would allow for the effective mobility of motorized and non-motorized travelers with minimal conflict.

In late 1999, the City of Chelan received a non-motorized transportation planning grant to conduct a feasibility study to determine whether or not the Lakeside Trail project is feasible. Silverline Projects, Inc. was contracted by the City to conduct the feasibility study to determine the location and logistics involved in developing a multi-use trail between Don Morse Park and Lakeside Park.

◆ POTENTIAL SUPPORT & PARTNERSHIPS

Support for public multi-use trails is generally very good as these types of projects continue to be the most highly sought form of public recreation in the state. Urban and suburban trails which are located near natural bodies of water are the most popular. Examples include the Apple Capital Recreation Loop Trail located along the Columbia River in Wenatchee, the Yakima Greenway, the Burke-Gilman Trail in Seattle, and the Centennial Trail in the Spokane-Couer 'd Alene area. These trails have become the jewels of their communities, creating outstanding opportunities for tourism, economic development, multi-modal transportation, resource conservation, family recreation, and overall community delight.

The City of Chelan initiated the feasibility study phase of this project. Funding for the study was provided by a Transportation Enhancement grant through the North Central Regional Transportation Planning Organization (RTPO).

Upon completion of the study, the City of Chelan should begin a public involvement process to exchange information about the project with the affected individuals and agencies, as well as the general public. The primary and adjacent landowners should be consulted early and often. Issues, concerns, solutions, and planning decisions should be discussed and documented. Prior to moving forward into engineering & design, appropriate letters of support should be obtained from the primary agencies involved.

Support & Partnerships, continued

The degree of support from other agencies, individuals, organizations, and the communities served can make a tremendous difference in the successful implementation of any trail project. Partnerships and community support allow for a diverse pool of resources to work together for the good of a common goal. The overall quality of the end product is a direct result of the level of public support and partnerships.

The agencies and organizations whose authorization and support should be sought include:

●**Washington State Department of Transportation:** As a property owner and state authority on transportation, WSDOT is the key agency that must approve of the proposed Lakeside Trail. WSDOT must grant permission to construct a trail within the state owned right of way. In addition, WSDOT sets the primary design standards applicable to constructing a trail adjacent to a state highway. This agency also provides and administers state transportation funding awards which may fund much of the trail project.

WSDOT has extensive data and technical resources associated with the highway right of ways, and it is within agency policy to provide bicycle and pedestrian improvements within state transportation corridors. WSDOT may provide technical assistance in project administration, funding awards, survey, engineering, permits, and maintenance.

●**The Chelan County P.U.D.:** Under the PUD's Federal License for the Lake Chelan Hydroelectric Project, a trail crossing the Chelan River at the Old Bridge was planned, and subsequently required, as part of the Riverwalk Park system (Exhibit R – Recreation Plan, Dec 1976, Volume 2 of 3, p 20, & fig. 8). The trail crossing over the Chelan River was intended to link both sides of the Riverwalk Park trail. The connection across the Chelan River was never built, although it's construction, or an amendment to the license that altered the site plan, is clearly required by the Federal Energy Regulatory Commission's operating license issued to Chelan County PUD on May 12, 1981. Since no amendment was filed, it appears that this section of trail over the Chelan River is still required.

The current project license expires March 31, 2004. Chelan County PUD is presently engaged in the process of relicensing the Lake Chelan Hydroelectric Project. The new license must address recreation, socioeconomics, aesthetics, erosion control, water quality, fish & wildlife, and cultural resources. In the PUD's recreation and Socioeconomic Studies, public trails in urban areas, and that provide access to the lake, were identified as one of the greatest needs.

Supporting documentation associated with the new license application, and requirements under the current license, indicate that development and maintenance of at least part of the Lakeside Trail could fall into the PUD's responsibility. The City of Chelan and the Lake Chelan Public Trails Association are presently involved in the PUD relicensing process and have raised this issue with PUD representatives.

Support & Partnerships, continued

The P.U.D. owns and operates public park facilities along the proposed Lakeside Trail corridor. The trail would essentially become an extension of the park system as it would provide a connection between parks, and provide a new recreational opportunity as well. If linked to the trail, these parks could serve as trailheads, rest areas, or destination points for trail users. The parks offer important trail related amenities including restrooms, drinking fountains, telephones, trash receptacles, picnic tables, and rest areas.

In some places the Lake Chelan Hydro Electric Project boundary overlaps or directly interfaces with the proposed trail corridor. Part of the trail may have to be constructed within the Lake Chelan Hydro Electric Project boundary. A P.U.D. Occupation & Use permit would be required for these portions of the trail.

The PUD also owns an overhead electrical transmission system which will require modifications, i.e. relocation or under grounding, to accommodate parts of the Lakeside Trail project. Coordinating the trail project with the facilities, operations, and licensing of the Chelan County P.U.D. is a fundamental part of trail implementation.

•**Chelan County:** Although the Lakeside Trail would be located within the incorporated area of Chelan, a trail of this nature will be of county-wide significance. The trail would provide a central link in the much greater Lower Lake Chelan Shoreline Trail System, which is planned to extend through the unincorporated areas of Chelan County on the Northshore and the Southshore of Lake Chelan.

Chelan County has provided planning funds and technical assistance for the Northshore Pathway Feasibility Study and the Lake Chelan Public Trails Comprehensive Plan. Inclusion of the Lakeside Trail in the county comprehensive plan and designation as a high priority trail project is essential to receiving grant funding and support from other agencies. Coordination with the County should be implemented to aid in the smooth transition as the trails cross jurisdictional boundaries. Also, inter-local agreements pertaining to design, development, operations, and/or law enforcement could benefit the involved agencies.

•**City of Chelan:** The Lakeside Trail lies within the Chelan City limits and the City is the most likely candidate to serve as the Lead Agency on the Lakeside Trail project. As the Lead Agency, the City would be responsible for project administration, public involvement, funding procurement, planning & design, construction, maintenance, and enforcement. The Lead Agency would also enlist the support from other agencies, organizations, and the public. The City could opt to handle all or part of these tasks in-house, but would probably need to contract some of the more specialized work out to other professionals. Without initiative on the part of the City, the Lakeside Trail project is not likely to transpire.

Support & Partnerships, continued

●**LINK:** As a provider of public transportation, LINK operates several bus stops within the study corridor. Bus stops and waiting areas should be integrated into trail design. Joint planning and/or funding of transit related trail facilities may include benches, shelters, trash receptacles, landscaping, drinking fountains, informational signs, and parking areas.

●**Neighboring Property & Business Owners:** The neighboring property & business owners should be consulted to determine their level of support for the project and allow project managers to obtain input regarding the implementation, design, and management of the trail facility. Support from and coordination with neighboring properties and businesses will be instrumental in helping the trail to fit well with its surroundings.

●**Native American Tribes:** The Colville Confederated Tribes wish to offer consultation regarding any proposed trail development in the vicinity of Lake Chelan. The Lake Chelan vicinity is known to have potentially culturally sensitive areas associated with the original territories of aboriginal bands in this area. The Colville Confederated Tribes may offer valuable assistance and support, and may even choose to become a supporting partner if involved early in the planning process.

●**Chelan County Port District:** RCW Title 53 allowed establishment port districts for the purposes of acquisition, construction, maintenance, operation, development and regulation of harbor improvements, rail or motor vehicle transfer and terminal facilities, water transfer and terminal facilities, air transfer and terminal facilities, or any combination of such transfer and terminal facilities and other commercial transportation, transfer, handling, storage and terminal facilities and industrial improvements. Title 53 also authorizes port districts to engage in economic development programs as well as giving ports the authority to expend moneys and promote resources and facilities to attract visitors and encourage tourist expansion. The Lakeside Trail is a qualifying project for economic development and tourism, as well as a land-based transportation improvement with assured connections to regional transit, local air, and passenger ferry water transport.

●**The Lake Chelan Public Trails Association:** The Lake Chelan Public Trails Association has already offered informal support for the Lakeside Trail project. They should be asked to review and comment on the Lakeside Trail Feasibility Study, and encouraged to update the local trails comprehensive plan to include the current concept of the Lakeside Trail. A letter of endorsement from the Trails Association should be sought, and assistance with appropriate aspects of project implementation (i.e. fund raising, public involvement, etc.) should be considered.

●**Other Local Organizations:** Organizations from throughout the area should be informed of the potential Lakeside Trail and encouraged to comment on and/or endorse and support the project. The involvement of service clubs, user groups, business leaders, merchant and lodging groups, community organizations, and others can greatly aid in the successful implementation and operations of a community trail. This will be especially important since traffic reconfiguration will be necessary in some areas to accommodate the trail.

◆ WASHINGTON STATE LAW

RCW 67.32.030 established the Washington State Recreation Trails System Act in 1970. It reads, in part:

“In order to provide for the ever increasing outdoor recreation needs of and expanding resident and tourist population and to promote public access to, travel within, and the enjoyment and appreciation of outdoor areas of Washington, it is declared to be in the public interest to plan a system of trails throughout the state to enable and encourage the public to engage in outdoor recreation activities.”

Chapter 47.30 of the Revised Code of Washington (RCW) sets forth state law pertaining to paths and trails. Section 47.30.020 allows for joint use of public transportation rights of way for paths and trails. It states:

“Facilities for pedestrians, equestrians, or bicyclists shall be incorporated into the design of highways and freeways along corridors where such facilities do not exist upon a finding that such facilities would be of joint use and conform to the comprehensive plans of public agencies for the development of such facilities, will not duplicate existing or proposed routes, and that safety to both motorists and to pedestrians, equestrians, and bicyclists would be enhanced by the segregation of traffic.

“In the planning and design of all highways, every effort shall be made consistent with safety to promote joint usage of rights of way for trails and paths in accordance with the comprehensive plans of public agencies.”

Section 47.30.030 allows for expenditure of public funds on paths and trails. It reads:

“Where an existing highway severs, or where the right of way of an existing highway accommodates a trail for pedestrians, equestrians, or bicyclists or where the separation of motor vehicle traffic from pedestrians, equestrians, or bicyclists will materially increase the motor vehicle safety, the provision of facilities for pedestrians, equestrians, or bicyclists which are part of a comprehensive trail plan adopted by a federal, state, or local governmental authority having jurisdiction over the trail is hereby authorized.

“The department of transportation or the county or city having jurisdiction over the highway, road, street, or facility is further authorized to expend reasonable amounts out of the funds made available to them, according to the provisions of RCW 46.86.100, as necessary for the planning, accommodation, establishment, and maintenance of such facilities.”

◆ TRANSPORTATION POLICY

The 1995 Transportation Policy Plan for Washington State promotes the achievement of a balanced multimodal transportation system. The policy on rights of way preservation suggests that use of right of ways should be maximized for safe, multiple uses.

The policy plan states, “the mission of Washington’s transportation system is to provide safe, efficient, dependable and environmentally responsive transportation facilities and services to:

- Promote a positive quality of life for Washington Citizens
- Enhance the economic vitality of all areas of the state
- Protect the natural environment and improve the built environment

The Washington State Department of Transportation’s Statewide Multimodal Transportation Plan identifies walking and bicycling as integral parts of the transportation system. The Washington State Transportation Commission has adopted policies regarding pedestrian and bicycle activity. In 1991 the Bicycle Policy identified the state’s existing roadway system as the basic network for bicycle travel. In 1993, the Pedestrian Policy set forth the goal to, “Encourage access to and the safe use of the transportation system by bicyclists and pedestrians.”

The Bicycle Service Objectives are:

- Improve bicycle safety
- Increase the use of bicycling for transportation purposes, principally utilitarian and commuting trips and connections to intermodal facilities

The Pedestrian Service Objectives are:

- Improve pedestrian safety
- Increase the use of walking as a transportation mode, principally utilitarian and commuting trips and connections to intermodal facilities

The state’s primary service objective regarding bicycling and walking is to improve bicycle & pedestrian safety. The Washington State Department of Transportation (WSDOT) Design Manual recognizes that many rural highways are used by bicyclists for intercity and recreational travel, and emphasizes bikeway planning to provide safe and efficient facilities. The Manual also indicates that most highways can be upgraded to accommodate shared use by bicyclists and motorists. Where transportation right of ways are wide enough, separated trails have been very successful in accomplishing safe, convenient bicycle & pedestrian mobility.

◆ WSDOT ADVISEMENT

This study was initiated by the City of Chelan in following suit with the advisement of the local office of the Washington State Department of Transportation that the Lake Chelan Public Trails Association conduct a feasibility study pertaining to the Northshore Pathway.

The Northshore Pathway Feasibility Study and the Lakeside Trail Feasibility Study were funded through a study grant provided by the North Central Regional Transportation Planning Organization, a committee presently staffed by the Washington State Department of Transportation.

In 1995, the Lake Chelan Public Trails Comprehensive Plan identified the highways within the Lakeside Trail study corridor as areas in need of bicycle & pedestrian improvements. Local WSDOT staff were consulted during the Feasibility Study process, and provided information pertaining to right of way, safety, utilities, access, construction projects, funding, and maintenance. The local office of the Department of Transportation and the City of Chelan will be the primary reviewing authorities of this document.

A complete listing of WSDOT personnel and other agencies and individuals consulted during the feasibility study process is attached in Appendix B.

◆ LEGISLATIVE COMPLIANCE & PERMITS

Public trail projects must comply with local, state, and federal laws. The trail project must be designed in compliance with known regulations in order to obtain required approvals. Although necessary details will not be known until the trail project is designed, it appears that the Lakeside Trail could be fashioned to meet with all required approvals. There are presently no endangered species in Lake Chelan, and no known environmentally sensitive areas within the proposed trail corridor. However, the reintroduction of Bull Trout (presently listed as a federally protected Endangered Species) may be instituted by fish & wildlife agencies in the future. This would bring about stricter development regulations and could preclude portions of trail development.

Most permit applications require detailed drawings and they expire two years after the issue date. Therefore permit applications should not be submitted until the project design is thought to be complete. Subsequently, the permit and approval process may require revisions to the design. Working through the permit process for a project such as the Lakeside Trail may easily take a year or more. A Washington Joint Aquatic Resource Permits Application (JARPA) may be used to apply for permits noted with “(JARPA)” below.

Legislative Compliance & Permits, continued

Under current regulations, the construction of the Lakeside Trail will be subject to the following authorities:

●**The Washington State Department of Transportation (WSDOT):** A WSDOT Right of Way Permit must be obtained for any work performed within a state owned transportation right of way. WSDOT will require facility design in accordance with WSDOT design standards.

●**Chelan County Public Utility District (P.U.D.):** The Chelan County P.U.D. operates the Lake Chelan Hydroelectric Project with a boundary extending to the 1100' elevation level. There are areas within the WSDOT Hwy 97A Right of Way where there is overlap with the P.U.D. project boundary, and it is likely that the trail project would be constructed within this overlap. If any portion of the Lakeside Trail will be located water-ward of the 1100' elevation line, the P.U.D. must seek approval from the Federal Energy Regulatory Commission (FERC) for Project Use & Occupancy Approval. If other permits and approvals are received and it appears the project is eminent, FERC generally approves the project also.

●**Washington State Department of Natural Resources (DNR):** The Department of Natural Resources' Aquatic Lands jurisdiction on Lake Chelan includes the 1079' elevation level and below. It is unlikely that work for trail construction would occur within DNR jurisdiction. However, DNR Aquatic Resources Use Authorization would be required if trail work will occur at or below the 1079' elevation. (JARPA)

●**Americans with Disabilities Act (ADA):** This legislation requires new public facilities to comply with minimum accessibility standards for the disabled. The trail width, surface, grades, and amenities should be designed and constructed to allow for accessibility where possible without causing undue hardship to the project. Parts of the trail will be required to be barrier free, but the ADA law does not require the entire trail to be barrier free. Generally, ADA design standards are encompassed within the WSDOT Design standards for trails. Therefore it should not be difficult to meet ADA compliance.

●**SEPA/NEPA:** The State Environmental Policy Act (SEPA) requires the environmental consequences of a proposed action to be disclosed to the public and government agencies before action is taken. The National Environmental Policy Act (NEPA) will apply if any federal funding is utilized for the project, even if the funds are administered through a state agency. NEPA also requires the environmental consequences of a proposed action to be disclosed to the public and government agencies before action is taken. Separate forms must be completed, and different questions are asked, but the SEPA and NEPA processes are quite similar.

*Legislative Compliance & Permits, continued***SEPA/NEPA may result in one of three possible outcomes:**

1) Categorically Exempt: A project classified as “categorically exempt” does not have to produce further environmental documentation. In Washington State, bicycle facilities are categorically exempt from NEPA, unless they are constructed over water or located on land classified as environmentally sensitive. To receive this status, a form for the qualifying project must be completed and submitted to the local agency responsible for EPA compliance (City of Chelan). When completed, the construction plans for the Lakeside Trail will reveal whether or not the trail will be located over water or in sensitive areas. Presently, it appears that two sections of the trail may be constructed over water (Old Bridge vicinity/Chelan River crossing and just east of Water Street near Lakeside), but there are no known environmentally sensitive areas within the project area.

2) Environmental Checklist: If a project is not deemed categorically exempt, an environmental checklist must be prepared. This standard form requires a description of construction and/or project related impacts. The form is then submitted to the City of Chelan and a threshold determination is made declaring the project impacts to be either significant or non significant.

3) Determination of Significance or Non Significance: If the project is likely to have no adverse environmental impacts a determination of non significance (DNS) will be issued. The DNS will then be filed with the Washington State Department of Ecology. If the project is likely to have adverse environmental impacts it will be deemed significant and either an environmental assessment or an environmental impact statement will be required.

•Local Agencies - City of Chelan & Chelan County: If any part of the project is located within 200’ of the ordinary high water mark of Lake Chelan, a Shoreline Substantial Development Permit (under the Shoreline Management Act) must be obtained from the local government jurisdiction. In the case of the Lakeside Trail it is expected that part of the trail will be located within 200’ of the lake in the incorporated area of Chelan, therefore requiring a substantial development permit from the City of Chelan. Similarly, a Critical Areas Permit (under the Growth Management Act) will be required from the City also. (JARPA)

•Washington State Department of Fish & Wildlife: An Hydraulic Permit Approval (HPA) must be obtained if the project will use, divert, obstruct, or change the natural flow or bed of the lake. It is very likely that development of the Lakeside Trail will involve construction of an elevated deck above the water in the vicinity of the Old Bridge over the Chelan River. The area just east of Water Street near Lakeside may require shoreline embankment to provide a bed for the trail. It is probable that an HPA will be required. (JARPA)

Legislative Compliance & Permits, continued

●**Army Corps of Engineers:** A Section 10 Permit is required of any project affecting navigable waterways, including floats, piers, docks, dredging, piles, buoys, overhead power lines, etc.). A Section 404 Permit is required if the project includes discharge or excavation of dredged or fill material waterward of the ordinary high water mark. (JARPA)

●**Department of Ecology:** When a federal approval such as a Corps of Engineers permit is required, a Section 401 Water Quality Certification from the Department of Ecology is also required. An application need not be sent in to the Department of Ecology, as the Corps will notify them (JARPA). If more than 5 acres of soil will be moved, a Stormwater Construction Permit must also be obtained by applying directly to the State Department of Ecology.

●**United States Coast Guard:** A Section 9 Permit from the Coast Guard is required for construction of bridges over navigable waterways. This permit will be required to cross the Chelan River.

◆ PROSPECTIVE FUNDING SOURCES

The functions and benefits of trails are far reaching. As such, they often involve a multitude of partners and funding sources. A comprehensive fund raising program will consider all of the possible sources of project funding and assistance—public and private. Goals can be set within each source category, and a funding strategy can then be developed and implemented.

State & Federal Highway Funds: The Transportation Equity Act of 1998 (TEA-21) provides for the continuation and expansion of the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA). This legislation provides several funding mechanisms for transportation enhancements such as bicycle & pedestrian facilities. This funding is made available through Federal Aid Highway Funds and is administered by the Washington State Department of Transportation. Up to 87% of the total project cost may be funded through TEA 21 grants. The last cycle of TEA-21 funding will occur in 2000. Replacement legislation is expected to renew the intermodal funding source. Additional funding may be available through the State Transportation Improvement Board (TIB).

Inter Agency Committee For Outdoor Recreation: This state agency administers state and federal grant monies for outdoor recreation projects, including trails, water access, and shoreline recreation projects. Competitive grant cycles are conducted annually for parks and trails. Some grants are funded through federal monies provided through the National Park Service's Land & Water Conservation Fund (LWCF). State funds are made available through the Washington Wildlife & Recreation Program (WWRP). Through LWCF and/or WWRP, awards of up to \$300,000 are available for design & construction of parks, but trails and water access projects do not have a maximum request limit. A minimum match of 50% (non IAC funds) is required for all projects.

Prospective Funding Sources, continued

Department Of Natural Resources: The Aquatic Lands Enhancement Account (ALEA) provides funding for shoreline access projects, including trails, through a biannual competitive grant program. Funds for this program come from state revenues acquired through tideland leases and the sale of aquatic resource harvest rights. Grant awards up to \$300,000 are available. A 50% match is required. The DNR also administers Urban Forestry Grants which provide funds for tree planting projects in urban areas.

Motor Vehicle Fund: By Washington State law (RCW 47.30 “Trails & Paths”), local agencies must allocate and expend a minimum of one half of one percent of funds received from gas tax on paths and trails. This funding is administered by Chelan County. The same law requires the Washington State Department of Transportation to expend three tenths of one percent of the state motor vehicle fund on paths and trails. Up to \$150,000 from Initiative 215 Boating Funds (boating gas tax) may be awarded for marine related projects such as water trail connections. Boating grants require a 50% match.

Department of Ecology: Grants are available through the Coastal Zone Management Account for shoreline acquisition and/or public access. A 50% match is required. The Centennial Clean Water Program provides grants and loans to projects that will enhance water quality. Up to 70% of the project planning, design, and construction costs may be funded.

Public Transit: Bus stops are present throughout the trail project area and should be incorporated into trail design. Joint trail/bus planning and development may permit certain aspects of the project to qualify for funding through public transit funding mechanisms. Examples include design and construction of rest stations with benches, shelters, and trash receptacles. Crosswalks, drinking fountains, parking, informational signs, and landscaping may also be possible at bus stops through joint trail and transit efforts.

Local Agencies: A variety of other funding sources may be available for this project through the participation of local agencies. The Lakeside Trail could qualify for funding through parks & recreation, transportation, tourism, growth management impact fees, or economic development resources. Examples include: Property Transfer Excise Tax; General Fund; Capital Improvement Fund; Special Levy; General Obligation Bonds; Revenue Bonds; Councilmanic Bonds; Utility Tax; and the Stadium Fund (hotel/motel tax). Possible local agency participation may include: Chelan County, City of Chelan, Chelan County Port District, Chelan County Public Utility District, LINK, the Manson Parks District, and others.

Private Funding: Private funding for trail projects may come from private contributions, community fund raising programs, user groups, civic organizations, and philanthropic foundations. The local Chamber of Commerce, hospitality providers, and retailers may also aid in the development of a trail facility. Tourism, recreation, and economic development organizations often provide funding assistance for trails.

Matching Funds: State, Federal, and many private grants typically require a percentage of local matching funds to aid in funding of the overall project.

APPENDIX

APPENDIX A

References And Resource Materials

Lake Chelan Valley Public Trails Comprehensive Plan, 1995.

Washington State Department of Transportation *Design Manual*, 1995.

Revised Code of Washington, 1992.

Washington State Trails Plan Technical Assistance Manual; *Resources for Local Trail Managers*, 1992.

Guide for the Development of Bicycle Facilities; American Association of State Highway and Transportation Officials, 1991.

Lower Lake Chelan Basin *Comprehensive Plan*; Chelan County, 1990

Trails for the 21st Century; Rails to Trails Conservancy, 1993.

Site Work & Landscape Cost Data, R.S. Means, 1999.

Washington Joint Aquatic Resource Permits Application (JARPA), 1996.

Design Guide for Accessible Outdoor Recreation, USDS, USDA, 1992.

Statewide Comprehensive Outdoor Recreation Plan, Interagency Committee for Outdoor Recreation, 1995.

Statewide Multimodal Transportation Plan, Washington State Department of Transportation, 1994.

Transportation Policy Plan for Washington State, Washington State Transportation Commission and the Washington State Department of Transportation, 1995.

Don Hopey; "Prime Location on the Trail", *Rails to Trails*, 1999.

Pedestrian Facilities Guidebook, Washington State Department of Transportation, Puget Sound Regional Council, Association of Washington Cities, County Road Administration Board, 1997.

Mapping & Properties Information:

City of Chelan, Autocad Files, 2000.

Washington State Department of Transportation, 1999-2000.

APPENDIX B**Agencies & Personnel consulted during the Feasibility Study process:**

Mike Dornfeld, State Wide Bicycle Program Coordinator
Washington State Department of Transportation

Julie Matlick, Statewide Pedestrian Program Coordinator
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Dave Bierschbach, Transportation Planning Engineer
Washington State Department of Transportation

Stan Delzer, Trans Aid Engineer
Washington State Department of Transportation

Jennene Ring, Regional Traffic Engineer
Washington State Department of Transportation

Fred Suter, Transportation Planner
Washington State Department of Transportation

Matt Wisen, Transportation Planner - Statewide Bicycle Advisory Committee
Washington State Department of Transportation

Terry Berends, Construction Project Engineer
Washington State Department of Transportation

Ted Hill, Real Estate Services Manager
Washington State Department of Transportation

Dan Sarles, Assistant Regional Administrator for Development
Washington State Department of Transportation

Frank Sblendorio, Assistant Utilities Engineer
Washington State Department of Transportation

Dwayne Standerford, Maintenance Superintendent
Washington State Department of Transportation

Bob Stowe, Maintenance Supervisor
Washington State Department of Transportation

Jolen Gosselin, Transportation Planner
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*APPENDIX B, continued**Agencies & Personnel consulted during the Feasibility Study process*

Jim Ramella, Transmission Lines Engineer - Lake Chelan Area
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Jim Huffman, Environmental Coordinator
Chelan County P.U.D.

Rob Salter, Director of Lands & Facilities
Chelan County P.U.D.

Jim Pope, Recreation Administrator
Chelan County P.U.D.

Greg Jones, Parks Recreation Coordinator
Chelan County P.U.D.

Michelle Smith, Relicensing Specialist
Chelan County P.U.D.

Gregg Carrington, Relicensing Coordinator
Chelan County P.U.D.

Dennis Osborn, Community Development Director
City of Chelan,

City Council
City of Chelan

Dwayne VanEtts, Interim Public Works Director
City of Chelan

Greg Moser, Parks Director
City of Chelan

Park Board
City of Chelan

Art Campbell Jr., Owner
Campbell's Resort and Conference Center

John Walcker, Owner
Caravel Resort Motel

*APPENDIX B, continued**Agencies & Personnel consulted during the Feasibility Study process*

Barbara Ritchie, Permit Coordinator
Washington State Department of Ecology

Mike Kaputa, Chelan County Shorelines Planner
Chelan County

Main Office, Chelan County Public Works
Chelan County

Dave Griffiths, Chelan County Treasurer
Chelan County

Arnie Marchand, Planner
Colville Confederated Tribes

Mary Beth Clark, Economic Planner
Colville Confederated Tribes

Bruce Phillips, Planner 1
LINK

Max Blankenship, Transportation Engineer
City of Chelan

Steve Lyles, Transportation Engineer
City of Chelan

David Sypher, City Administrator
City of Chelan

Richard Uhlhorn, Board Member
Lake Chelan Public Trails Association