

Washington's Complete Streets & Main Street Highways Program

Case Studies & Practice Resource

WA-RD 780.1

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WSDOT Research Report

Research Report
Research Project GCB 1037

WA-RD 780.1
WASHINGTON'S COMPLETE STREETS AND MAIN STREET HIGHWAYS PROGRAM:
CASE STUDIES AND PRACTICE RESOURCE

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Summary

Complete Streets is a national movement that promotes accessibility for all users. Typical Complete Streets components accommodate pedestrians, bicycles, transit users, personal vehicle and freight trucks. A growing number of communities in Washington State and nationwide have existing Complete Streets policies or ordinances. Washington State passed a Complete Streets Bill (HB 1071) that went into effect July 2011, creating a program that would provide grants to communities that met appropriate criteria.

Washington State is initiating a Grant Program that would provide a funding source for Complete Streets and Main Street Highways projects. There are 500 miles of Main Streets in Washington State that are also State Highways. Complete Streets and Main Street Highways treatments must be context-specific based on size, location, and community needs. The Complete Streets and Main Street Highways conversation is a continuum, encompassing a range of project size, scope, and systems.



WASHINGTON STATE

Complete Streets



Let's Complete Washington's Streets!

WASHINGTON ADOPTS A COMPLETE STREET BILL

Washington State has recently passed a Complete Streets grant program. It would provide funding and resources to cities and towns that pass a Complete Streets ordinance according to its criteria.

The Complete Streets Grant Program, as part of WSDOT's Highways and Local Programs Division, encourages local governments to adopt arterial retrofit street ordinances based on safe access for all users: pedestrians, bicyclists, motorists, public transportation users, and truck drivers.

WHAT MAKES A STREET "COMPLETE?"

Towns and cities across the nation are beginning to enact Complete Streets policies, which require planners and engineers to "routinely design and operate the entire right of way to enable safe access for all users, regardless of age, ability, or mode of transportation."

Complete Streets policies can be enacted in both rural and urban areas, and in towns and cities of any size. Rural areas have more traffic collisions involving motor vehicles, while urban areas see more pedestrian and bicyclist traffic collisions. The solutions can be simple: where a bike/transit lane might be added in a larger city, a rural road might simply need sidewalks and a wider shoulder for safe walking.

Washington's Complete Streets Bill (HB 1071):

"Urban main streets should be designed to provide safe access to all users, including bicyclists, pedestrians, motorists, and public transportation users.

It is the intent of the legislature to encourage street designs that safely meet the needs of all users and also protect and preserve a community's environment and character."



Complete Streets in Washington State

SEATTLE

In April of 2007 the City of Seattle passed a city ordinance (122386) that developed guidelines for implementing Complete Street treatments to new road projects.

“Seattle’s Complete Streets guiding principle is to design, operate and maintain Seattle’s streets to promote safe and convenient access and travel for all users pedestrians, bicyclists, transit riders, and people of all abilities, as well as freight and motor vehicle drivers.

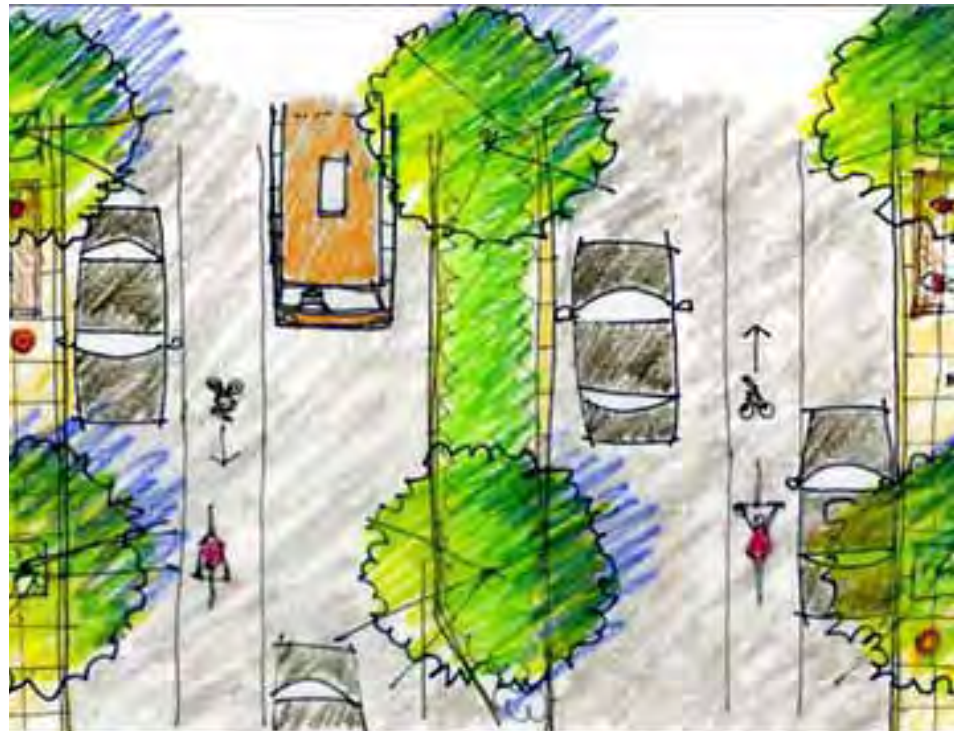
The Seattle Department of Transportation (SDOT) will implement Complete Streets policy by designing, operating and maintaining the transportation network to improve travel conditions for bicyclists, pedestrians, transit and freight in a manner consistent with, and supportive of, the surrounding community.”



TACOMA

On November 17, 2009 the City Council adopted Resolution Number 37916. The city’s Complete Streets guidelines were recognized by the National Complete Street Coalition as a “Top Policy” in 2010.

“A Resolution relating to the City’s street design; endorsing the creation and ongoing development of Tacoma’s Complete Streets Design Guidelines; and directing the City Manager to implement the Mixed-use Centers Complete Streets Design Guidelines and the Residential Complete Streets Design Guidelines.”



Complete Streets in Washington State

ISSAQUAH

The City of Issaquah adopted a Complete Streets policy in November of 2007. The policy, in addition to an existing streets improvement program, works to retrofit existing facilities, increasing accesibility to more users.

"We have created a living inventory of areas we would like to see improved within the City. We have broken them down into 5 categories: signal improvements, sidewalk installation and replacement, crosswalk installation and modification, bike lane installation and modification, and street light installation."



SEDRO-WOOLLEY

Sedro-Woolley, a rural town of 10,000 people, has made a commitment to increase accessibility for all users in future design with their ordinance No. 1676-10.

"City Council created a new section in its municipal code in June 2010 stating that bicycle and pedestrian ways shall be included in transportation projects and noting that such accommodations were not required where there was no identified need or where their cost would be excessively disproportionate. Sedro-Woolley's city engineers are currently retrofitting the Fruitdal/McGarigle arterial road, adding school zone crosswalks, pavement markings, and ADA ramps."



Communities with a Complete Streets policy:

- Airway Heights
- Issaquah
- Kirkland
- Redmond
- Renton
- Seattle
- Sedro-Woolley
- University Place
- Tacoma
- Edmonds
- Everett
- Spokane



COMPLETE STREETS COMPONENTS

Pedestrians



What makes a walkable community?

There are several benefits of a walkable community. Increased accessibility to local businesses leads to economic growth and a reanimated streetscape. The street becomes not only a vehicular route through town, but serves as the pedestrian gateway to the community, activating one of the busiest spaces of the town.

About 15% of our population has impairments which reduce and limit their mobility. Another 20% face temporary mobility impairments (injury, stroller, etc).

-“Transition Planning”, WSDOT

A WALKABLE STREET MIGHT HAVE:

REDUCED SPEED LIMITS

Reducing motor vehicle speeds to 30 mph or below can significantly reduce pedestrian and bicycle fatal and serious injury collision. Speed humps, changes in road surface, and signage can reinforce the speed limit.

ACCESSIBILITY

Pedestrian walkways need to be accessible to users of all ages and abilities. Ramps, incline, and curb height must not exclude users with wheelchairs, strollers, luggage, or other mobility impairments.

PEDESTRIAN VISIBILITY

Good visibility is vital to keeping pedestrians safe, especially at crosswalks and intersections. The “daylighting” concept removes visual obstacles from a corner or intersection. Removing even one curb-parked car can significantly improve visibility.

MEDIANS

Medians between opposing lanes of traffic can serve as refuge for pedestrians crossing the road. Medians might reduce the time required to cross the street. They have also been shown to reduce auto collisions.

BULB-OUTS

Bulb-outs widen the sidewalk at an intersection, shortening the crosswalk length and creating a safe refuge for pedestrians on both sides. Bulb-outs also slow traffic and help define and separate parking, bicycle and transit lanes.

MORE TIME TO CROSS

Elderly and the mobility impaired pedestrians require more time to cross a street. The crossing time allowed should ensure that the street can be safely crossed.

WALKWAY MARKINGS

Pedestrian walkways should be clearly marked for passing vehicles. Signs, lights, barriers, and surface changes increase the visibility of a pedestrian walkway. Signs also remind pedestrians to be safe and aware when crossing the street.

BUFFER SPACES

Buffers create barriers between pedestrians and traffic. Buffers can be as simple as relocating parking areas so as to divide the walkway from the road.

Buffers can also be opportunities to incorporate pedestrian-related amenities. These spaces can be opportunities for landscaping, bicycle parking or bike lanes, street-side parking, and benches.



COMPLETE STREETS COMPONENTS

Bicycles



Do bicyclists feel safe?

Bicyclists ride for several reasons. Cyclists can commute solely on their bicycle or combine a bike route with a bus trip. Bicycles are used for errands, personal visits, transporting children to school, exercise and recreation.

If bicycle facilities were located close to destinations like shops, schools, parks, the bicycling network will be more appealing and successful. There are valuable economic, social, and health benefits to a bikable community.

Wrong-way riding and riding on the sidewalk are two of the main contributors to car and bike collisions.

-League of American Bicyclists

WAYS TO ACCOMMODATE BICYCLE TRAVEL:

ACCESSIBILITY

Bicycling is often combined with walking or public transit use. Bike facilities like lockers and bicycle racks should be in close proximity to walkways, transit stops, and business entrances. Then the bicycle system would be accessible to a variety of users.

GIVE BICYCLES SPACE

Bicycle lanes provide a safe space for bicycles on the road, reducing the risk of car - bicycle collisions. Bicycle travel lanes can be wide curb lanes, bicycle lanes or separate bicycle paths. Bicycle lanes can be tinted green or buffered with striping or barriers to increase visibility and improve safety.

COMMUNICATION

Vehicular and bicycle paths need to be clearly marked to each other. Posted signs and roadway pavement markings are useful to drivers and bicyclists. They denote space, indicate where bicyclists can safely ride, and bring awareness.

BICYCLIST FACILITIES

Well-positioned bicycle facilities encourage biking and enable better accessibility. They can also generate income for the city and help streetside shops and businesses. Publicly accessible bicycle programs, like the "R-Bike" program in Roslyn, WA, encourage the community's bicycle use and build support for the existing bicycle system.

STAY OFF THE SIDEWALK

It is more dangerous for bicycles to ride on the sidewalk than on the road. According to the League of American Bicyclists, wrong-way riding and riding on the sidewalk are two of the main contributors to car and bicycle collisions. Designating road space for bicycles not only creates a safe route for bicyclists, but it also keeps bicycles off the sidewalk.

Communicating pertinent bicycle information is also important. Bicycle routes must be easy to navigate, well-marked, and clearly distinguished from pedestrian routes. Maps and posted information can inform bicyclists of existing policies and systems.



COMPLETE STREETS COMPONENTS

Transit



How accessible is public transit?

A street designed thoughtfully for all users enables a reliable, efficient public transit system as an alternative mode of transportation. In addition to reducing traffic crashes and pollution emissions, public transit increases physical activity, improves mental health, and increases accessibility to medical care and healthy food. By designing with all users in mind, the public transit system would contribute to increased mobility, connectivity and safety along these roads.

Nearly 1/3 of transit users meet the Surgeon General's recommendations for minimum daily exercise through their daily travels.

-Complete Streets Coalition

HOW CAN WE ENCOURAGE TRANSIT USE?

ACCESSIBILITY

Transit should be accessible to users of all modes of transportation, and should accommodate all ages and mobility levels. An accessible transit system can also encourage bicycling and walking.

WAITING AREAS

Waiting areas at transit stops should be universally accessible. They should provide buffer space (between 5-10 feet) from traffic. In areas with heavy transit use, bus stops should be sheltered to protect users from environmental hazards, and they should provide seating and transit information.

Transit stops should also be safe, pleasant and attractive. They should be well-lit so users feel safe during their wait. Video surveillance adds an extra level of security and assurance. Transit stops are also opportunities for planting and streetscaping.

PLACEMENT

Transit stop locations are based on traffic levels, parking, safety, and convenience, and typically located near intersections. They should be clearly visible without blocking a driver's line-of-sight.

PEDESTRIAN ACCESS

To keep pedestrians safe while using the transit system, transit stops should lie directly adjacent to pedestrian walkways. A sheltered bus stop should be located in a safe place and be convenient for users, without blocking the sidewalk or the road.

BICYCLE ACCESS

To encourage bicycle commuting, the transit stop should be equipped with bicycle facilities like storage racks and lockers. There should be ample space for bicyclists to transition.

CAR ACCESS

Park & Rides connect car drivers to the transit system. A Park & Ride offers a convenient carpool, reduces fuel usage, and provides temporary car storage.

HOV LANES

High-Occupancy Vehicle (HOV) Lanes provide transit vehicles with an advantageous separated lane. This lane provides additional safety to transit vehicles. It may also be used as a combined bicycle - transit lane .

PULL-OUTS

Transit pull-outs in high-volume traffic areas help to minimize the effects on traffic at transit stops. Pull-outs also protect loading and unloading passengers. Islands can be used on multi-lane roadways.



COMPLETE STREETS COMPONENTS

Cars



How can we increase safety and improve efficiency?

Typical roadways are often designed primarily for cars. The Complete Streets concept aims to integrate all modes of transportation. While personal vehicles are an important factor in road design, roads must provide safety for users of all modes and abilities. A comprehensive design strategy can also alleviate traffic and vehicle safety concerns. Drivers must be made aware of the other modes of transportation with which they share the road. As the dominant transportation system, personal vehicles can pose serious dangers to pedestrians, bicyclists, and transit users.

Over half of the daily trips made are under 3 miles. 87% of those trips take place in personal vehicles.

These trips could be replaced by alternate transportation.

--National Household Travel Survey

ADDRESSING CAR-RELATED NEEDS:

REDUCED SPEED

Reasonable speed limits are vital to the safety of a roadway. Eighty-three percent of pedestrians hit by a vehicle traveling at forty miles per hour will not survive; the percentage improves significantly when the speed limit is reduced to even thirty-five miles per hour.

A reduced speed limit can lead to economic benefit for the community. Local businesses might attract more customers and property can increase in value when the speed limit is reduced.

COMMUNICATION

An essential part of road safety is clear signage. Drivers must be made aware of nearby pedestrians, bicycles, transit, other vehicles, and any surrounding obstacles with appropriate signage and markings.

PARKING AREAS

Parking, while important for business and accessibility, can be rearranged to keep passengers safe while loading and unloading. Parking areas may be buffer spaces between different modes of transportation. A well-designed parking area can ease traffic flow and improve visibility at intersections.

NOISE BARRIERS

Automotive traffic can create noise in the surrounding community. Reduced speed significantly reduces traffic noise. In addition, a streetscape may provide noise barriers, like plantings or walls, to reduce the noise pollution levels in the community.

“ROAD DIET”

The “Road Diet” program helps over-sized roads minimize lanes and width to maximize efficiency. Somewhat counter-intuitively, a “Road Diet” conversion makes a road more efficient, able to carry a greater volume of vehicles and safer for bicycles, pedestrians, and transit users.

This conversion often involves narrowing or removing lanes of travel, which increases awareness of speed and surroundings. Two-way left-turn lanes, or medians with turning pockets, reduce left-turn collisions and assist in maintaining traffic flow. Often, the space redeemed by such a conversion can accommodate a bicycle lane, a transit lane, and wider sidewalks.



COMPLETE STREETS COMPONENTS

Semi-Trailers



How can freight traffic be more efficient?

Washington State's abundant natural resources and thriving economy require efficient oversized vehicle and semi-truck accessibility. Logging trucks, agricultural equipment, horse trailers, and cargo beds are common across the state. Maintaining truck routes in all contexts is important.

The requirements for trucks are similar to that of personal vehicles, but more extreme. Trucks need more space, more allowances, and more noise control.

Truck implements are similar to that of personal vehicles, but more extreme. They should be case-specific to the type of freight common to the community.

SPECIAL CONSIDERATIONS FOR TRUCKS:

REGIONALLY SPECIFIC

Methods to maximize freight route efficiency must be informed by the community. Some communities might frequently see logging trucks, while others have agricultural vehicles. All methods implemented should be case-specific, addressing the situation most relevant to that community.

REDUCED SPEED

Speed is especially important on main arterials and state routes. The speed limit of a state route highway is usually reduced when passing through an urban area. Reducing speed through towns improves safety and reduces truck noise.

REROUTING TRUCKS

Trucks may be given an alternate route through a community. This solution may be difficult to implement, but rerouting trucks in a community might make local businesses, public spaces, and the streetscape more appealing to visitors and members of the community. In Grandview, WA, for example, the alternative freight route is an efficient system of service alleys. This keeps trucks off of the pedestrian-oriented areas and maximizes delivery efficiency.

TRUCK CURFEWS

Limiting freight traffic at certain times of the day in specific areas can reduce noise and congestion associated with trucks on busy urban arterials.

NOISE BARRIERS

Truck traffic can create unwanted noise in the community. While some truck noise is due to engines and brakes, the dominant source of noise is tire-pavement noise. The most effective way to reduce truck noise is to employ a noise-minimizing pavement or surface. These solutions may be costly, so noise barriers such as vegetation or better building insulation can alleviate some of the noise along the streetscape. Barriers also create opportunities for other Complete Streets concepts, like bicycle or pedestrians facilities or environmental stewardship practices.



COMPLETE STREETS

Goals & Benefits



What would we gain?



ECONOMIC VITALITY

Complete Streets have the potential to economically activate a community. Increasing accessibility, improving safety, incorporating sustainable practices, and improving the aesthetic appeal of a town can draw visitors, promote business growth, and add value to a community's character and identity.



ACCESS AND MOBILITY

Complete Streets increase access to local shops and business, supporting alternative transportation. Complete Streets activate the street, providing safe areas for visitors and residents at all levels of mobility to experience and interact with the community.



ENVIRONMENTAL STEWARDSHIP

Complete Streets provide opportunities to demonstrate an awareness of environmental stewardship. A well-designed Complete Street incorporates sustainable solutions in comprehensive design strategies.



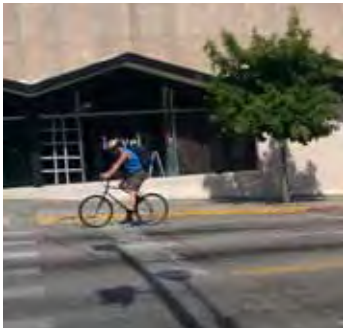
HEALTH AND SAFETY

Complete Streets improve conditions for biking and walking, enabling a safe, healthy, and active lifestyle. Making the road accessible to pedestrians, bikers, and transit riders, Complete Streets encourage and enable alternative modes of transportation and activate the community.



WASHINGTON STATE

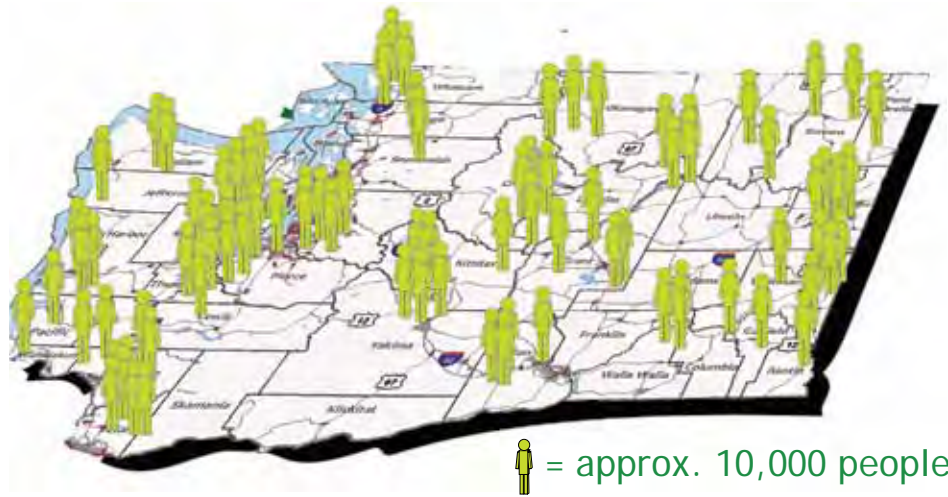
Main Street Highways



When is a Highway Also a Main Street?

500 MILES OF COMMUNITY

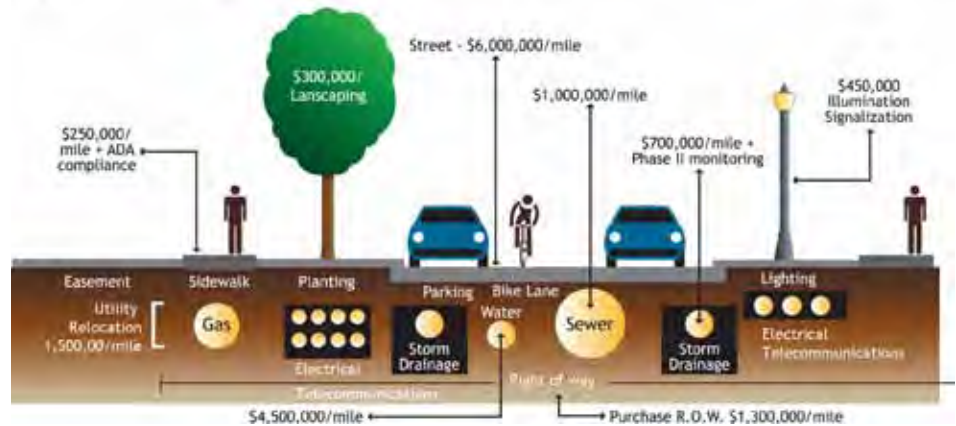
In over 180 communities of all sizes throughout Washington, a state route intersects the center of town as its Main Street. This can present challenges to a communities' infrastructure, economic vitality, health and safety.



Over 3.2 million residents, about half of Washington's population, have Main Street Highways running through their city limits.

There are 500 miles of state highway in Washington that also act as a community's main street

TYPICAL COST OF A COMPLETE STREET (PER MILE)



A typical Complete Street costs \$15.7 million per mile. There are about 6400 people per mile living in a Main Street Highway community. The cost of implementing Complete Streets improvements would be \$2453.13 per resident.

Washington State Department of Transportation (WSDOT) Main Street Highways Program looks at ways in which visioning and planning, based on the Complete Streets concept, can increase safety and accessibility. Projects achieved within the Complete Streets scope enable Main Street Highways communities to maintain historical and community identity, encourage economic growth and environmental stewardship, and ensure infrastructure accessibility for all users of all ages, all abilities, and all modes of transportation.

Grandview



Downtown "ALIVE!"

The Setting



Vicinity map with surface street parking and lots.

Background

Grandview is a town of 9100 located in south central Washington State, at the heart of the Yakima Valley. One of the key arterials through the downtown core, Wine Country Road, was once a state highway.



Community involvement in meetings.



Source: www.grandview.wa.us

The Vision

In 2006, the city of Grandview created an action plan to reinvigorate the downtown core. By 2008, they had received \$3.8 million in funding from at least ten different sources. Construction began in March of 2010 and was completed in October of 2010. The community worked with city officials to overhaul a six-block area of downtown Grandview. The plan, "Downtown Alive!", created a streetscape that is welcoming, comfortable, and safer to use as a place for people to explore and interact. A redesigned road system maximizes efficiency and improves access for all users.

Since the project's completion, existing businesses have experienced growth, and seven new businesses have been established.

Grandview was awarded the People's Choice Award for Best Community Impact from the Infrastructure Assistance Coordinating Council.

The "Alive! Downtown" Project was also awarded the "Director's Award" by WSDOT and the Federal Highway Administration.

MAIN STREET COMPONENTS



/ Downtown Streets
 / Pedestrian Pathway
 - - - Truck Routes

GOALS & BENEFITS

“Alive! Downtown has revitalized businesses. It has re-instilled pride in both downtown and the community as a whole.”

-Cus Arteaga
City Administrator



PEDESTRIANS

Street furniture, trees, and landscaping elements were installed along widened sidewalks, enabling increased pedestrian activity. A pocket park was added next to the Veteran of Foreign Wars building, and a large mural of historic Grandview reinforces local character.

Pedestrian walkways are marked with textured paving. Bold stripes and bulb-outs make crosswalks safely visible.



CARS

The city cataloged available surface parking in the downtown core and found that one curb of angled parking could be converted to parallel parking, with a net loss of fifteen spots. This allowed for wider sidewalks, and those fifteen spots were replaced by downtown customer parking, previously pay parking.

Streets widths were narrowed from 36 feet to 24 feet, which has shown to auto collisions.



SEMI - TRAILERS

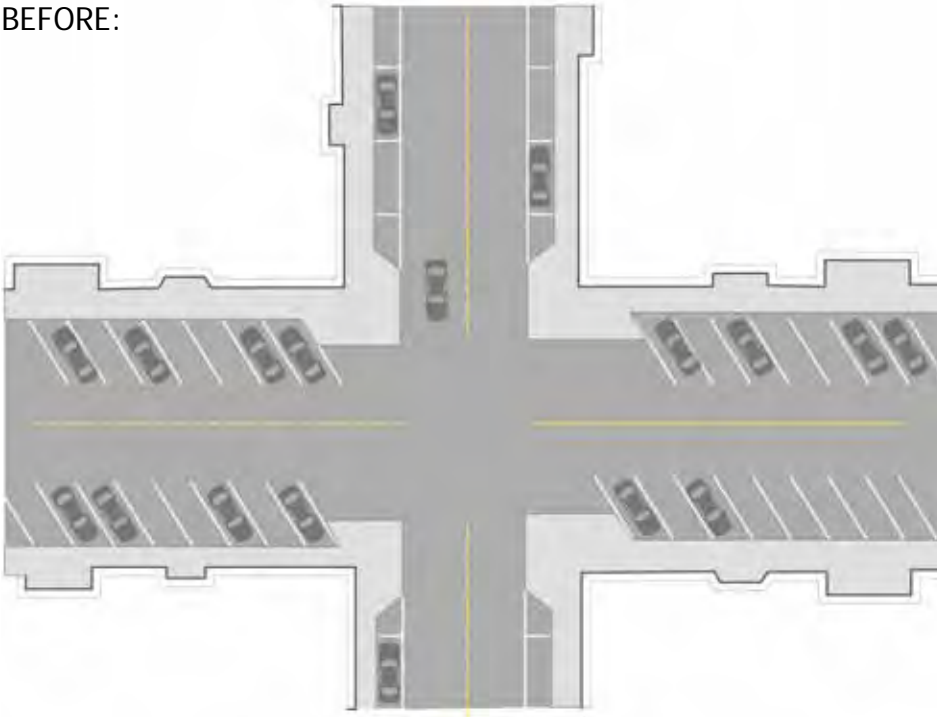
Previously, businesses in the downtown core received truck deliveries on the Main Street. The community wanted to reduce truck congestion from the downtown area while still accommodating deliveries.

The new plan reroutes trucks through the core by way of alleyways. Signs clearly mark the new routes and restricted areas.

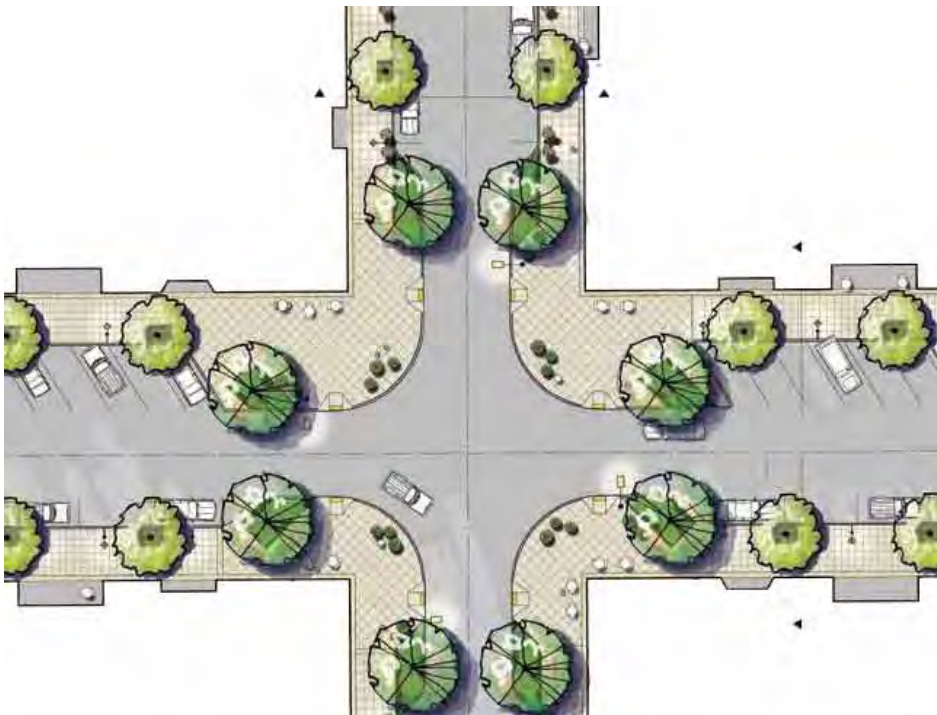
DOWNTOWN CORE

DIVISION & 2ND STREET

BEFORE:



AFTER:




Grandview worked with Hough Beck & Baird Landscape Architecture to develop a schematic concept for Division and West 2nd Street that could be applied over the entire six-block area.


Streetscape treatments include flower pots, textured paving, street trees and shrubs.


WEST 2ND STREET


Before & After

BEFORE

 Narrow sidewalks
Old, worn crosswalks
Minimal streetscaping

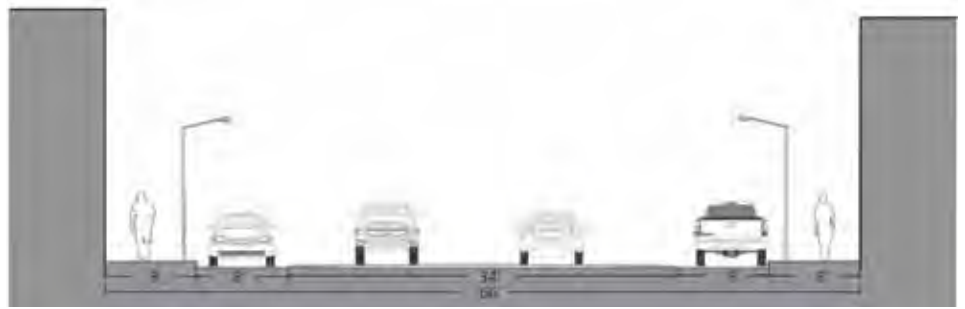
 Lack of bicycle routes

 Wide streets
Surplus of parking


 Truck traffic congests
downtown streets


“Our downtown
core was dying.”


-Brad Smith,
Grandview Chamber of Commerce





AFTER

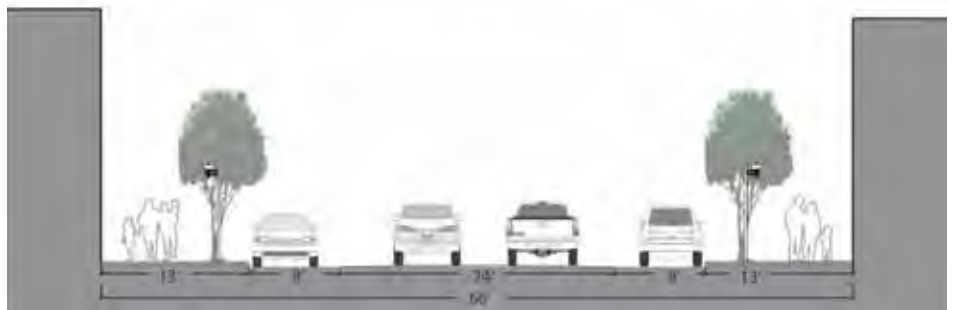
 Bulb-outs
Wider sidewalks
Clearly marked crosswalks

 Connects to 16-mile bike
route to neighboring town
Sunnyside

 Parking rearranged to be
more efficient. “Road diet”
improves safety

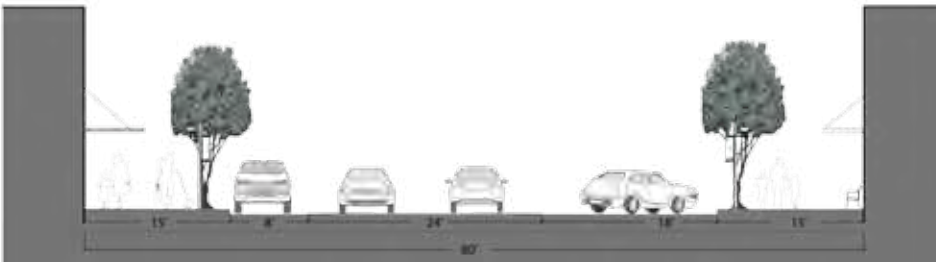
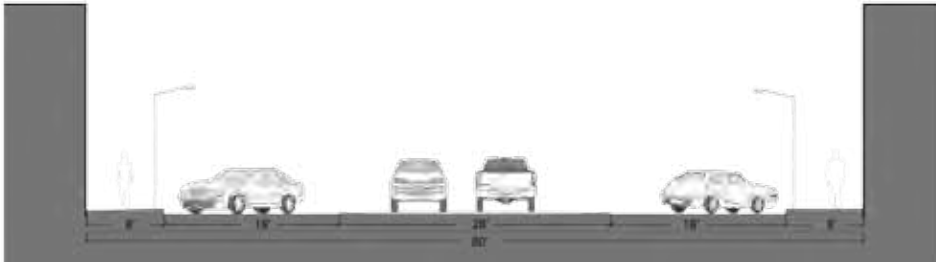
 Trucks are re-directed in the
downtown core

 Businesses in
Grandview have
experienced growth
and development.



DIVISION STREET

Before & After



GRANDVIEW'S KEYS TO SUCCESS

Work and communicate with existing businesses to ensure economic security during construction.

Keep the community up to date and involved for full support throughout the project.

Combine complete street projects with existing renovation needs and code requirements.

Extend revitalization out of downtown: inspire other businesses, promote town activities and events, and connect to and promote existing town features.

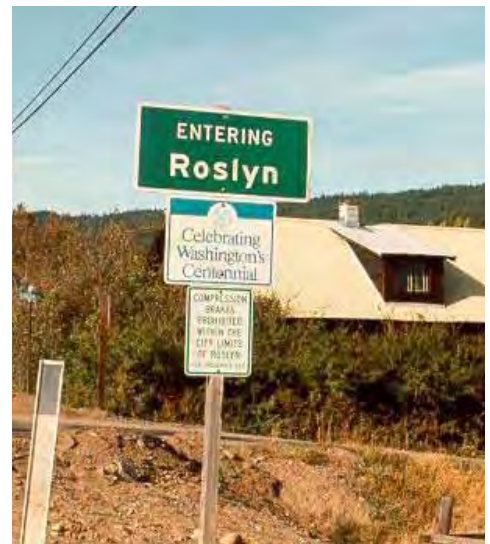
Don't stop here. Grandview is continuing its downtown revitalization efforts with a community wide project called EDGE: Enhancing Development of Grandview's Economy.

--Brad Smith, Grandview Chamber of Commerce.



WASHINGTON STATE CASE STUDIES

Roslyn



A ten mile rural collector for local and recreational use.



BACKGROUND

- Population of 893 (2010) in a total area of 4.9 sq mi.
- Average daily traffic of up to 7400 cars at downtown core
- Known for its outdoor recreation, coal mining history, and for hosting the TV program "Northern Exposure."
- Recent addition of 500+ single family homes in Suncadia, a resort community south of Roslyn

State Route 903 connects the towns of Cle Elum, Roslyn, Ronald, and the recreational area of Lake Cle Elum. Accessed from I-90 via SR 970, the two lane undivided highway serves as the main arterial, 1st Street, through Roslyn. The surrounding areas are zoned as Residential Low Density, Commercial Central, and Public. The Storefront Studio, through the University of Washington, has studied in Roslyn for the past three years, developing design proposals engage the community interaction and stimulate new thought.

Left: UW Faculty Jim Nicholls speaks with local news crew.



LOCAL "COMPLETE STREETS" ACHIEVEMENTS

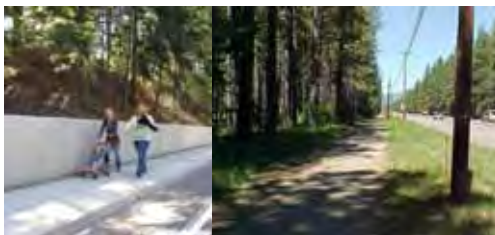
DOWNTOWN CLE ELUM

Sidewalk curbs have been extended to form bulb-outs, a traffic calming feature that shortens crossing distance for pedestrians, allows better visibility past cars parked in the shoulder, and increases motorists' awareness of the crosswalk.



SAFE ROUTES TO SCHOOL

New sidewalks have been added along SR 903 north of the schools (*left*). South of the school, towards downtown, "Progress Path" lines SR 903, separated from the highway by a grassy bank (*right*). The Cle Elum students enjoy a direct, safe route to walk or bike to school.



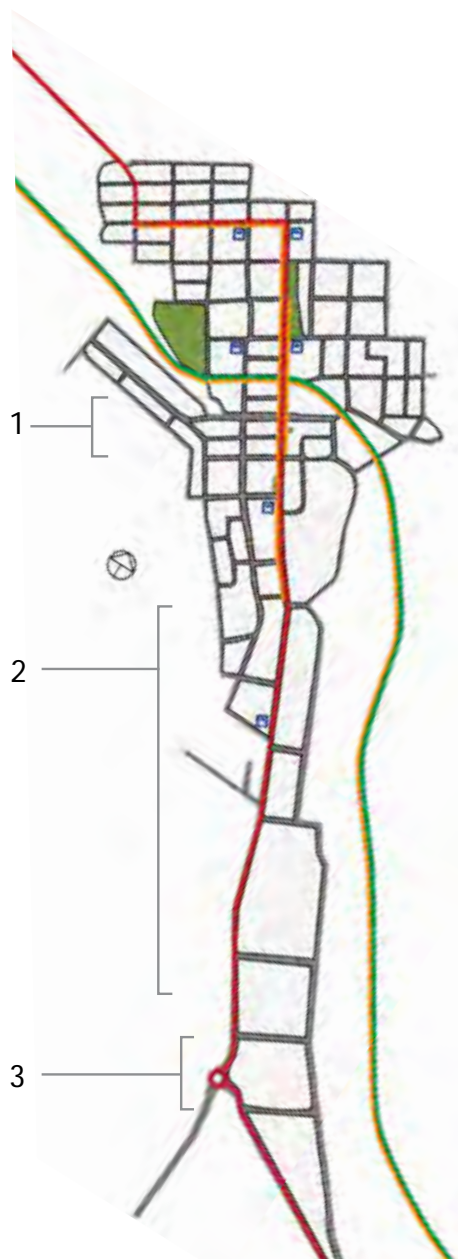
SUNCADIA ROUNDABOUT

A housing development about 1 mile south of Roslyn, has a similarly sized roundabout on Bullfrog Road. Its' signage and landscaping can be examples for potential treatment of the SR 903/Bullfrog roundabout to Roslyn.



MAIN STREET COMPONENTS

In 2004, WSDOT developed a 20 Year Route Improvement Plan for SR 903. The following information includes both existing conditions and recommended improvement goals from the plan.



PEDESTRIANS

SR 903 has five blocks with sidewalk on both sides and four marked crosswalks in downtown Roslyn. As it moves south, the poorly maintained sidewalks are limited to one side, and disappear near the town limit.

BICYCLES

Bicycling is a popular recreational activity in Roslyn during the summer months, but there are no designated bike lanes along SR 903. Bicyclists must ride along the shoulder, which ranges from 0-16 ft., or on the sidewalk. Cars park along the shoulders, which can obstruct cyclists' path.

SEMI-TRAILERS

Between 4.7 million and 7.0 million tons of freight is transported annually through Roslyn. Major commodities transported include timber, livestock, and grain products.

CARS

The majority of accidents in the Roslyn area are rear-end or driveway collisions caused by motorists entering or exiting the freeway.

Proposed solutions include left turn channelization, a continuous two-way left turn lane, and a consistent, reduced speed limit

TRANSIT

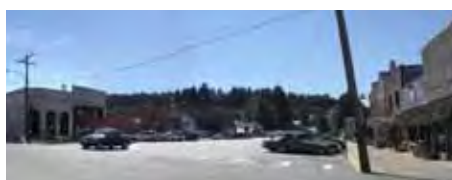
There is no public transit system other than a paratransit service for Medicaid patients. A Park and Ride facility and carpool system, has been suggested by WSDOT. A well-used school bus system services the outer reaches of the area, including Roslyn, Cle Elum, Ronald, and Liberty.

GOALS

- Improve crosswalks / sidewalks
- Add designated bicycle routes
- Create Park and Ride facility
- Adjust shoulder use / size
- Add traffic calming measures
- Safe routes to school
- Enhance local character

KEY ISSUES

1 DOWNTOWN CORE



2 SHOULDER/SIDEWALK



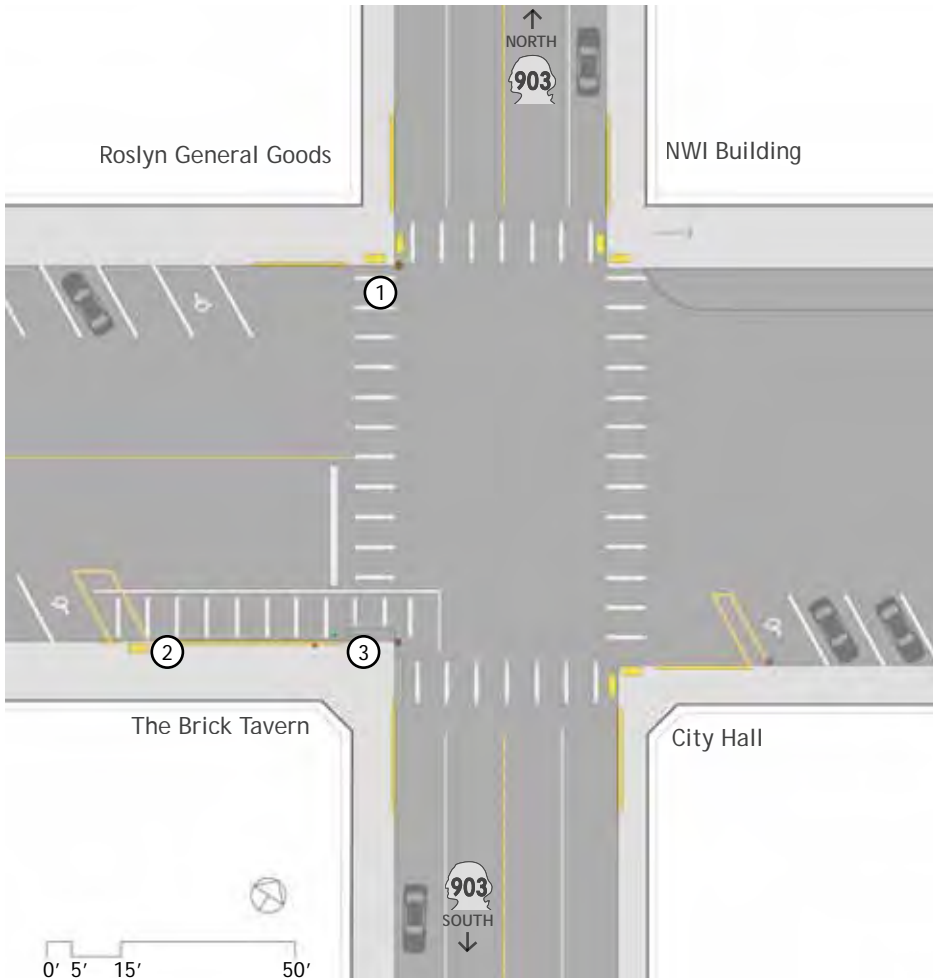
3 BULLFROG ROUNDABOUT



1 DOWNTOWN CORE

EXISTING CONDITIONS

The main commercial intersection in Roslyn is Pennsylvania and SR 903. This is the only location with 4-way crosswalks and designated angle parking along the side of the road.



POINTS OF INTEREST

CROSSWALKS

The painted crosswalks are fading due to extreme winter weather(1). A marked path lines the north side of the sidewalk along the Brick, creating an accessible route to a curb cut farther west (2) .

SIDEWALK ACCESS

The curbs at the SW corner are unusually high, accessible by a set of stairs on each side (3). The other corners have accessible curb cuts in all directions.

TOWN CHARACTER

Roslyn maintains the main street of its original coal mining days, and its building character is reminiscent of the past. Aging structures and facades require upkeep to revitalize the economy.

Looking South down SR 903

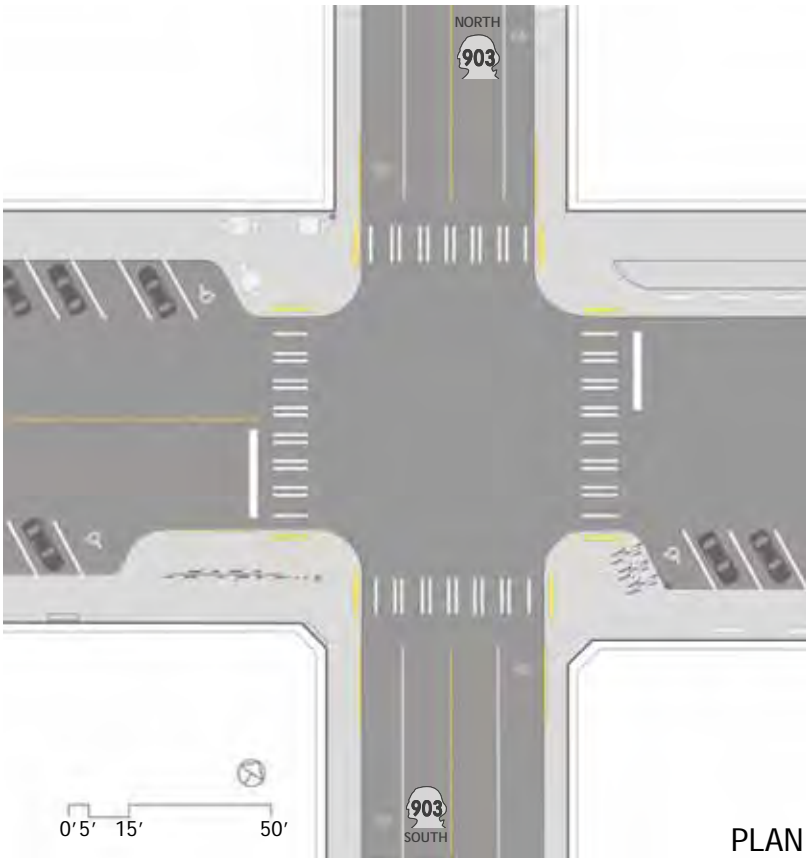







View from SW



DOWNTOWN CORE

Proposal A : 2-Way Bulb-outs



-  Bulb-outs and painted crosswalk maintenance.
-  Additional signage and traffic calming measures.
-  Bikes share shoulder in downtown core. Parking racks on corners.
-  SR 903 is kept open for trucks and snowplows.
-  Mural and facade renovations stimulate economic vitality.



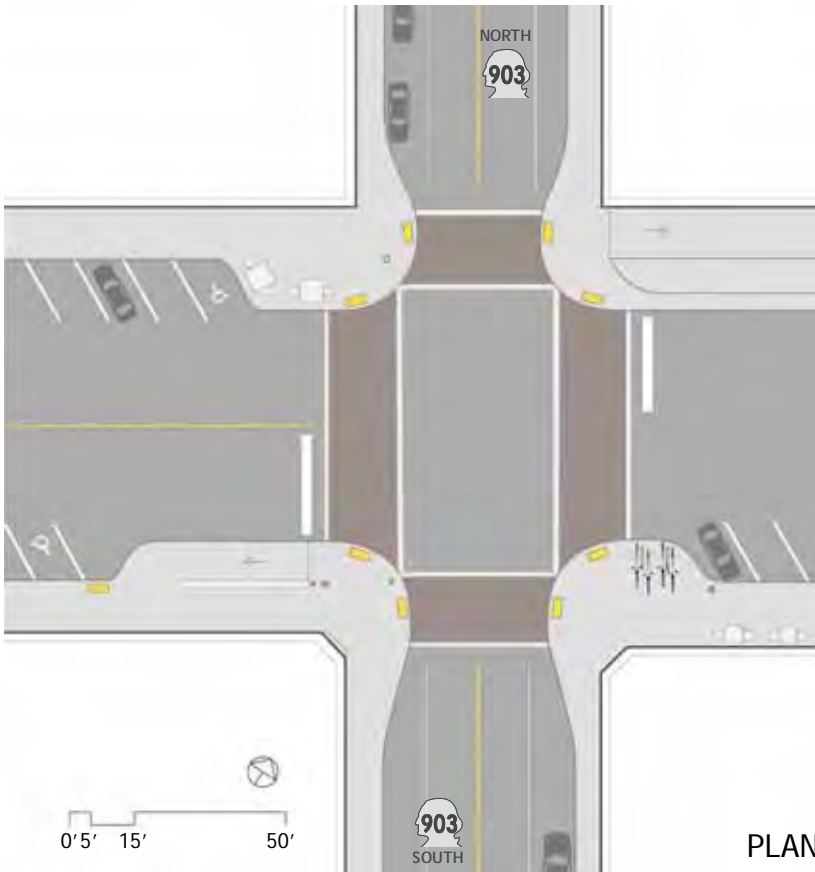
Before







After

DOWNTOWN CORE

Proposal B: 4-Way Bulb-outs



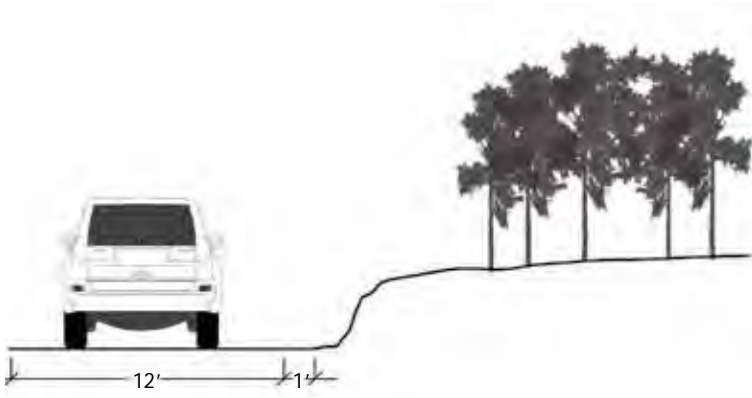
PLAN

-  Cafe seating, displays, and lighting draw people downtown.
-  Rumble pavement and signage calms traffic. Shoulders are reserved for parallel parking.
-  "Sharrows," shared car and bike lanes, connect to local trails.
-  Safety and community features make downtown a comfortable and appealing place to be.



2 SHOULDER/SIDEWALK

Existing Conditions

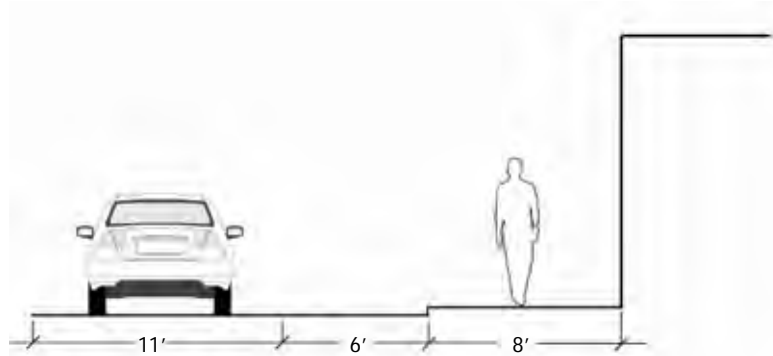


NORTH OF ROSLYN

Toward Ronald and Lake Cle Elum, the shoulder becomes as narrow as one foot wide. This is especially dangerous when the road bends around corners. North of Ronald, the state route ends and becomes Salmon Le Sac Road, where the shoulders widen to four feet.

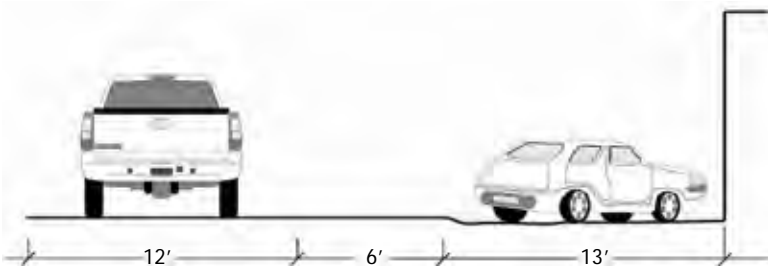
ROSLYN'S MAIN STREET

The shoulder of SR 903 is wide, completely paved, and adjacent to a sidewalk in downtown Roslyn. On the north and south edges of downtown, the shoulder remains wide, but is poorly maintained as it moves toward the sidewalk.



SOUTH OF ROSLYN

There are no sidewalks south of 1st Street. The shoulder merges into gravel parking areas for local restaurants and narrows out after the passing the roundabout and turning into Bullfrog Road.



North



Main



South



SHOULDER/SIDEWALK

Proposal: Widen Shoulder & Add Sidewalk

Current shoulder widths vary from 0-16 feet wide along the length of the Highway. According to the proposed SR 903 Development Plan, *all shoulders in unincorporated Roslyn should be widened to a minimum of 6 feet.*



New sidewalk with curb



Widened shoulders keep cars on the road



Shoulders can be used by cyclists



Better conditions outside of Roslyn make popular outdoor recreation more accessible



Before



After

EXISTING PEDESTRIAN DANGERS

Walking along a 1' wide shoulder.



Poorly maintained sidewalk.



No crosswalk.

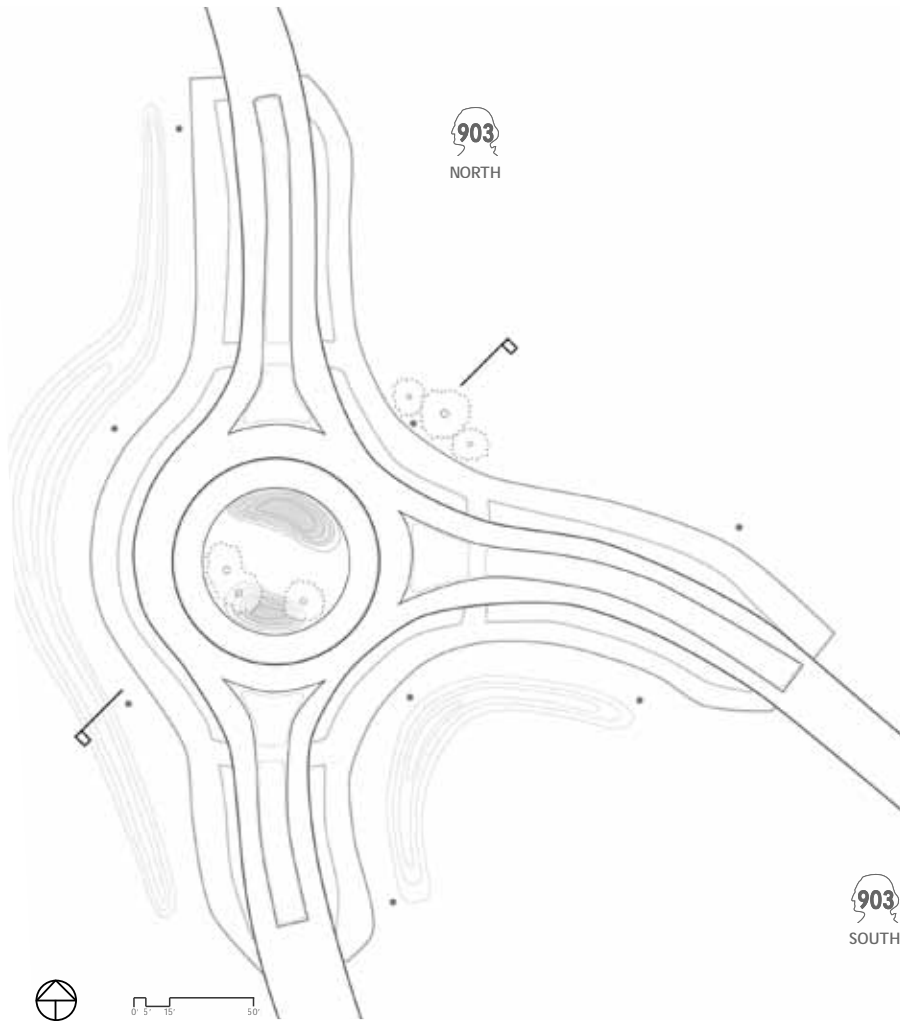


3 BULLFROG ROUNDABOUT

Existing Conditions



Section



Plan



The "Bullfrog" roundabout has a 14' truck apron and paved islands that guide the approach from each road. Bridging the islands are three marked crosswalks. Sidewalks are flanked by dirt shoulders, a barrier between motorists and pedestrians.
(left: aerial view)

BULLFROG ROUNDABOUT

Proposal : Plan/Diagrams



Section



Plan

WSDOT requires a berm to block headlights and limited pedestrian access to the center of the circle.

The area is locally sponsored by the Wildflowers Club. In 2012, they plan to treat the center of the roundabout with drought tolerant plants.

This proposal extends two existing berms along the outer edge of the roundabout, blocking headlights and maximizing drought tolerant, native planting space. North & South SR 903 connect with a path that bypasses the northeast corner of the roundabout. This improves safety between Cle Elum and Roslyn by minimizing pedestrian circulation in high traffic corners. Additional crosswalk and signage calm traffic.




Block Headlights





Showcase Landscape


BULLFROG ROUNDABOUT


Proposal: Crossing Signage and Safety

 Flashing signs allow accessible crossing.

 Town signage and maintained crosswalks are easier to see.

 Cyclists are most safe riding with traffic.

 Truck apron protects roundabout.

 Native landscaping beautifies and creates a gateway.



GOALS & BENEFITS

Flashing warnings & well marked crosswalks alert drivers to the crossing and improve accessibility for a pedestrians of all ages and abilities.

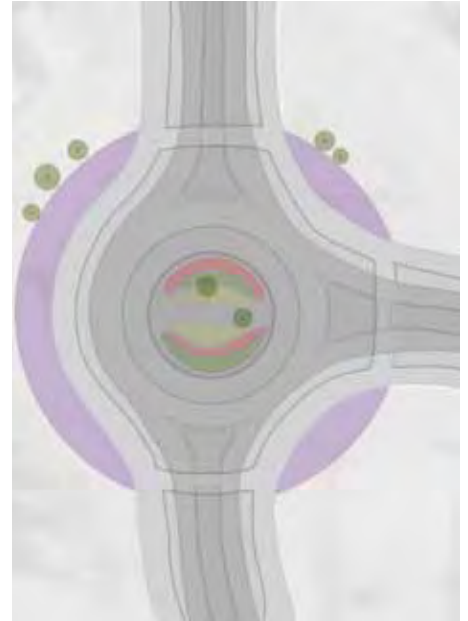
BULLFROG ROUNDABOUT

Design Elements: Landscape

“XERISCAPE”

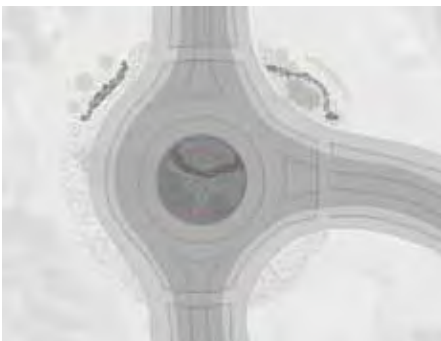
Due to an extreme climate, Kittitas County experiences restricted water usage during the summer months. Even with abundant water, the roundabout itself has little access to irrigation. “Xeriscaping” is a type of planting that minimizes water use by determining which types of native, drought tolerant flowers and shrubs would flourish in different areas of the site.

- Wildflower/Perennial
- Full Sun Perennial
- Shade Tolerant Shrubs
- Shade/Moisture Tolerant



DRY CREEK BED

Cutting through the berms, the dry creek bed collects storm water and directs it through drainage pipes below ground to the empty, grassy space on the other side of the highway. This design extends the creek bed under SR 903, following the path of water both visually and physically from center to the edges. The end is marked by large rocks, which could also be etched as town signs.





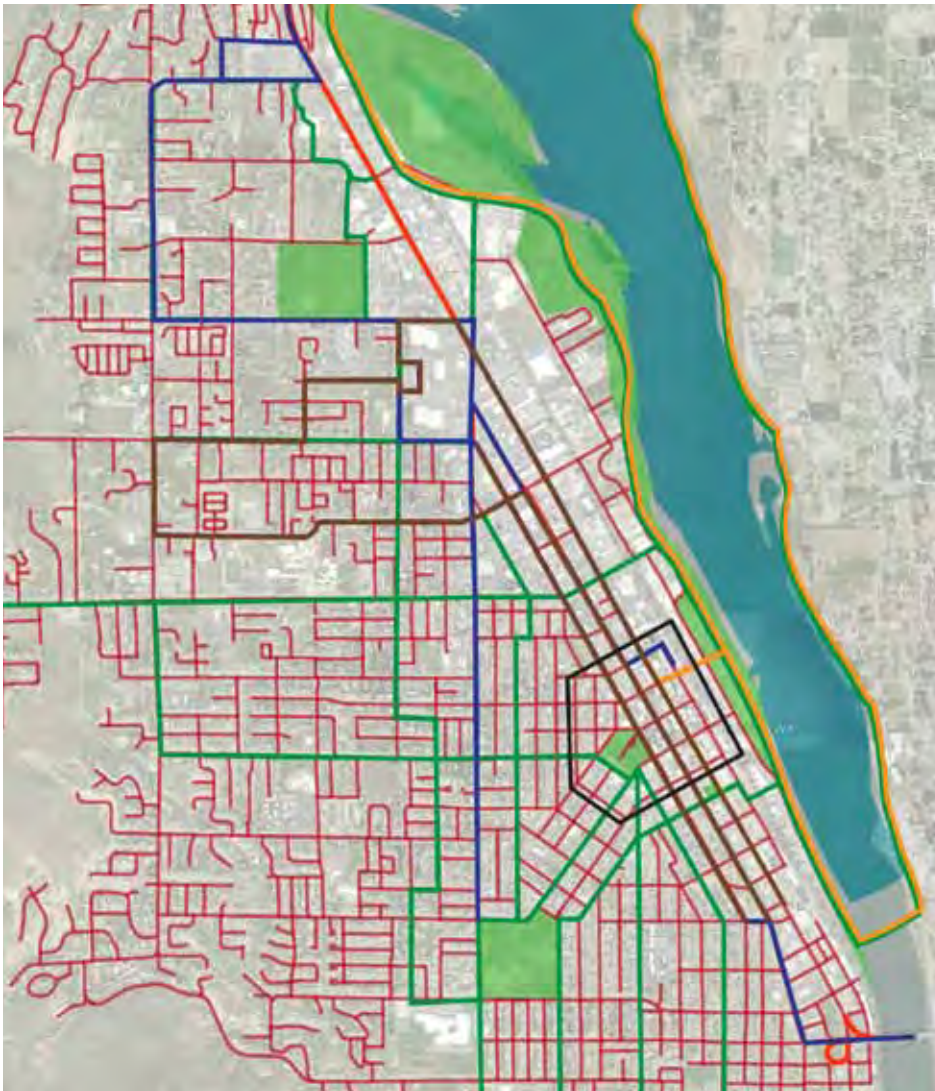
WASHINGTON STATE CASE STUDY

Wenatchee

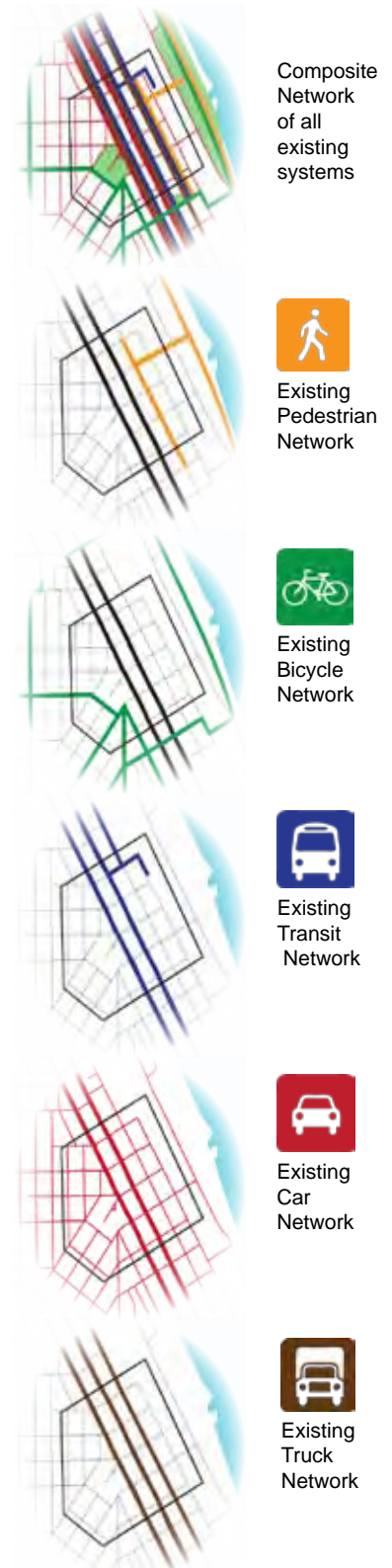


The Apple Capital of the World

Wenatchee, located along the Columbia River in the center of Washington State, is the self-declared “Apple Capital of the World”. It is also the home of the locally-dubbed “Couplet” of State Route 285. Through Wenatchee proper, SR-285 splits into Mission Street (north-bound SR-285) and Chelan Avenue (south-bound SR-285). Each is a three-lane, one-way road which runs parallel to the main downtown strip, Wenatchee Avenue. This busy highway affects the whole community of Wenatchee, particularly in the Downtown Core.



Wenatchee’s Downtown Core has a complex network of existing transportation systems. Breaking this network into pieces shows how each system interacts with the Core, and helps us see opportunities for increased accessibility and safety in the Downtown Core.



THREE “MAIN STREETS”

Wenatchee has three “Main Streets” that run in the north-south direction: Chelan Street (SR-285 South), Mission Street (SR-285 North), and Wenatchee Avenue. All north-south traffic passes through Wenatchee on one of these arterials. East-west connectors link these three main arterials to the residential zones to the west, the central Downtown Core, and the waterfront to the east.

The concept in this analysis is to treat SR-285 as the safe and efficient route through town, while Wenatchee Avenue aims to capitalize the pedestrian experience in the downtown core.



The “Three Main Streets” of Downtown Wenatchee and their east-west connectors.

- The “Couplet” - the safe, fast and efficient route through downtown.
- The “Main Street”, Wenatchee Avenue, focused on the pedestrian experience.
- East-West connectors between residential zones, commercial zones, and the waterfront.



1 CHELAN STREET
(SR-285 South-bound)

The furthest west of the three streets, Chelan Street marks the boundary between the residential zones to the west and the commercial zone to the east. If Chelan Street were more accessible to pedestrians, bicycles, and transit users, those in the west residential zones might be drawn into the Downtown core, encouraging business growth and healthy walking in the community.



2 MISSION STREET
(SR-285 North-bound)

Mission Street features many of the public functions of Wenatchee: City Hall, the Fire Department, the Post Office, and other public facilities are located along Mission Street. This could serve as a catalyst to implement complete street improvements along Mission Street, making these public services more accessible to the community.



3 WENATCHEE AVENUE

Wenatchee’s historical “Main Street”, Wenatchee Avenue was partially revitalized by the 1989 Local Improvement District (LID) overlay. The LID improved pedestrian facilities, vehicle accommodations, and landscaping along a four-block stretch. Concepts from the LID could extend to the rest of Wenatchee Avenue, stimulating economic growth and unifying the downtown core.

RECLAIMING PARKING AREAS



A map highlighting all available surface parking in Wenatchee's downtown core.



The site of "Park(ing) Day", before and after installation. 2009. Provided by Patrick Walker.

PARKING LOTS

An inventory of available curb and surface parking indicates a parking surplus in downtown Wenatchee. These parking areas, particularly the pay lots, are largely unused. This surplus could be a valuable asset in developing the streetscape's livability, walkability, and economic viability.

Instead of discouraging local business, readjusting parking would actually help activate the streetscape, stimulating economic growth and increased public activity to the area.

ON-STREET PARKING

Both directions of the Couplet have parallel on-street parking flanking east and west curbs. This space could be used for transit and bicycle lanes.

Current angle parking might be converted to back-in angle parking. This would help keep unloading passengers out of the flow of traffic. Back-in angle parking would help visibility between vehicles and bicycles, enabling future bicycle lanes to operate safely.

PARK(ING) DAY

The elements of pedestrian bulb-outs, crosswalks, and parking can create void spaces along the curb. These spaces are additional opportunities to include more Complete Street elements, further revitalizing the streetscape.

Wenatchee participated in the 2009 National Park(ing) Day, an event where empty parking voids are transformed into small temporary parks. The site in front of Caffè Mela was transformed into a small park, with benches, potted plants. In the same way, the surplus of parking lots in downtown Wenatchee could be reclaimed to enhance the streetscape.

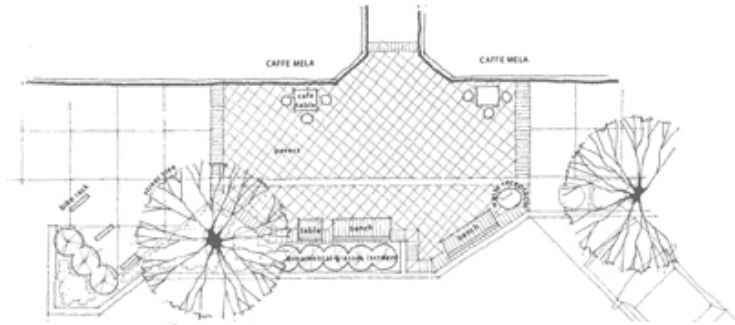
PREVIOUS STUDIES & COMMUNITY PARTICIPATION

EXTENDING BUSINESS

Working with the downtown business community, Project Groundwork has worked to extend streetside businesses on Wenatchee Avenue into the sidewalk. Mid-block bulb-outs would improve crosswalk safety and assist with traffic flow. Increased use of the sidewalk space for dining and public events would activate the streetscape and encourage business growth. Local restaurants and establishments have already begun extending business into the sidewalk, and both report an increase in business and productivity.



STUDY: MIDBLOCK NEAR LEMOLO



STUDY: MIDBLOCK NEAR CAFFE MELA



RECLAIMING PARKING

The City of Wenatchee, with the help of Makers Architecture and Urban Design, has examined the surplus of parking available in the Wenatchee Downtown Core. The Central Business District Subarea Plan proposes mixed-use development in the under-used parking lot on Mission St & Palouse St, defining downtown core into historic and entertainment zones, and bringing Wenatchee's character and economic development to the streetscape.



THREE “MAIN STREETS” - WENATCHEE AVENUE

The Local Improvement District (LID) on Wenatchee Ave between First Street and Yakima Street
BEFORE LID:



Wenatchee Avenue before the LID, 1989. Courtesy of Wenatchee City Hall.

AFTER LID:



Wenatchee Avenue immediately after the LID overlay, 1989. Courtesy of Wenatchee City Hall.



Wenatchee Avenue today, after the LID overlay.



Wenatchee Avenue won the Great American Main Street Award in 2003, showing the LID’s success.



Achievements:



Bulb-outs increase pedestrian visibility, and minimize crossing distance. Wider sidewalks allow for increased activity along the street. Crosswalks and signage are clearly marked.



Bulb-outs assist with traffic flow; Crosswalks and signage are clearly marked; Angle parking provides street parking without risking passenger safety at the curb.



The LID encourages walking downtown, makes the Downtown Core accessible to a wider range of mobility, adds vegetation and greenery to the streetscape, and has resulted in marked economic improvement

Opportunities:



Historically inspired “trolley” bus is loud: Soon Wenatchee will implement a quieter, environmentally friendly electric trolley



Signage prohibits bicycles from sidewalks, but there are few provisions for bicycles on the road. Angle parking presents a hazard to bicyclists on the road.



Wenatchee Avenue is currently the primary freight route, creating noise and congestion. Trucks should be encouraged to utilize SR-285 as the primary route through town.

IMPROVING ACCESSIBILITY ON THE COUplet

EXISTING:

The SR-285 “Couplet” currently has three lanes of traffic, flanked by continuous parallel parking strips on both curbs. Bicycles are discouraged from using the sidewalk, but have no designated space on the road. Good sidewalks accommodate pedestrian travel, but could be expanded to incorporate more pedestrian facilities and provide businesses with the opportunity to extend into the streetscape.



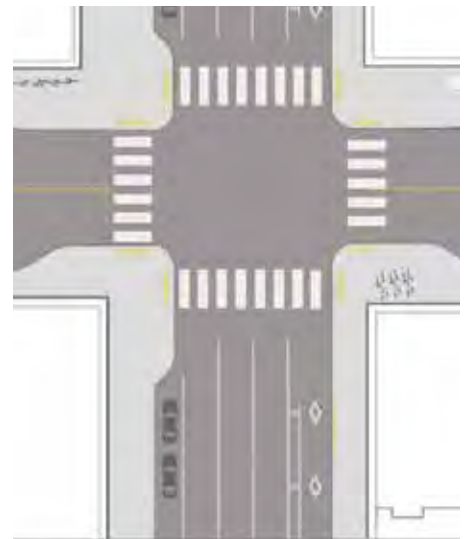
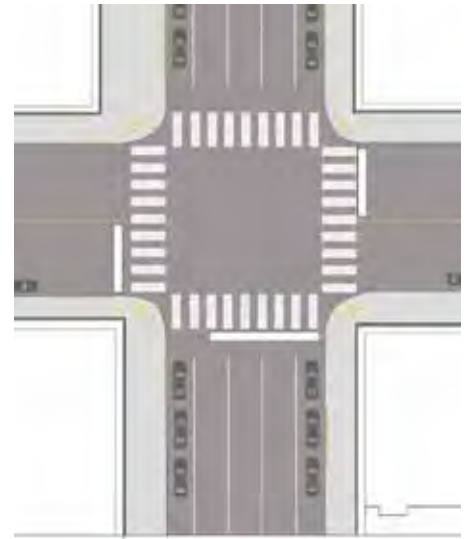
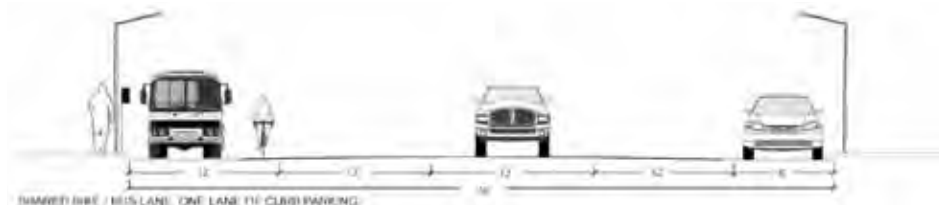
Option A: BICYCLE AND TRANSIT LANES:

One option to provide safer bicycle and transit use is to remove one side of parallel curb parking, and use the space to create separate transit and bicycle lanes. Providing a transit lane would reduce transit’s impact on traffic flow at each stop. A bicycle lane would lie between the transit and traffic lanes, keeping bicycles out of transit loading and unloading areas.



Option B: SHARED BICYCLE - TRANSIT LANE:

The transit and bicycle lanes may also be combined. A shared transit - bicycle lane gives bicycles a designated space and allows transit to pull over without impacting traffic flow while using less road space. With this solution, clear signage is imperative to prevent transit / bicycle collisions.



THREE “MAIN STREETS” - CHELAN STREET

This view of the intersection of Chelan and Yakima shows how transit and bicycle lanes might look along the SR-285 Couplet.

EXISTING LOT:



SITE WITH MAIN STREET HIGHWAY COMPONENTS:



An appealing and accessible public space along Chelan, a key arterial to downtown, encourages walking and cycling, provides pause along the sidewalk, and stimulates economic growth along the streetscape.



Bulb-outs increase pedestrian visibility and minimize crossing distance. Public space creates a place of pause for passing pedestrians.



Bicycle lane and turn box designate space for bicycles on the road. Bicycle storage racks make bicycling on Chelan more appealing.



Transit HOV lane allows busses to separate from traffic when loading and unloading.



Bulb-outs assist with traffic flow. Parking is readjusted to allow for HOV lane and mixed-use development.



Efficient speed and reduced obstacles encourage freight to use SR-285 as preferred route over than Wenatchee Avenue.

THREE "MAIN STREETS" - MISSION STREET

A large under-used parking lot is converted into a mixed-use development, with a parking structure at the alley, new businesses and public spaces at the street level, and residential above.

EXISTING LOT:



SITE WITH MAIN STREET HIGHWAYS COMPONENTS:



A surplus parking lot is reclaimed for mixed-use development, stimulating economic streetside growth. Business extends into the sidewalk.

Parking is now in the garage beneath the building.



Wider sidewalks allow for increased business activity along the street. Bulb-outs increase pedestrian visibility and minimize crossing distance.



Shared transit - bicycle lane encourages alternative transportation and provides a safe place for bicycles on the road.



Shared transit - bicycle lane allows busses to separate from traffic flow when loading and unloading.



Parking is readjusted, and moved to a structure underneath the building, to allow for new development and the shared transit - bicycle lane.



Efficient speed and reduced obstacles encourage freight to use SR-285 as preferred route over Wenatchee Avenue.

THREE "MAIN STREETS" - MISSION STREET

Another under-utilized parking lot on Mission Street is reclaimed for a mixed-use development with commercial and residential space.

EXISTING LOT:



WITH MAIN STREET HIGHWAYS COMPONENTS:



Reclaiming one side of curb parking for bike and transit lanes increases accessibility for alternative modes of transportation. New mixed-use building activates the street physically, economically, and aesthetically.



Bulb-outs increase pedestrian visibility and minimize crossing distance. Wider sidewalks allow for increased activity along the street.



Separate bicycle lane designates space for bicycles on the road. Facilities like off-street bicycle parking and storage make bicycling easier.



Transit HOV lane allows buses to separate from traffic flow when loading and unloading



Bulb-outs assist with traffic flow. Parking is readjusted to allow for bicycle and transit lanes.



Efficient speed and reduced obstacles encourage freight to use SR-285 as preferred route rather than Wenatchee avenue.



COMPLETE STREETS & MAIN STREET HIGHWAYS

Grant Program



How attainable are the means?

The purpose of this program is to encourage street designs that safely meet the needs of all users, including bicyclists, pedestrians, motorists, and public transportation users while protecting and preserving community environment and character. Recognizing that improvements to these city streets and Main Street Highways are critical to community development in cities and towns across the state, this program provides funding for transportation improvements that support infill and redevelopment, intensify land uses, and connect housing and employment in order to improve the health and safety of Washington residents.

SIZE

Cost might seem daunting for a Complete Streets overlay, but not all projects will be multi-million dollar operations. A simple move might be all that is needed to increase safety and accessibility.

SCOPE

Complete Streets aim to extend accessibility to all users, but that accessibility might not be made equally available to pedestrians, bicycle, transit user, cars, and trucks. While one project might aim to create a more complete bike network, freight traffic might be the driving catalyst in another project. The goal is to achieve accessibility for all users while dealing with the primary needs specific to each context.

SYSTEMS

Projects could feature elements such as:

- Crossing and intersection treatments or roundabouts
- Signage, striping, markings
- Streetscape, gateway treatments
- Sidewalks
- Bio-retention features
- Lighting
- Americans with Disabilities Act (ADA) accommodations
- Bicycle lanes, boulevards, and cycle tracks
- Urban trails and crossings
- Bicycle parking and stations
- Traffic calming measures
- Freight accommodation
- Transit accommodation
- Electric vehicle charging stations
- Furnishings
- Frontage improvements
- Roadway construction
- Information technology services (ITS)

The scope of every project is informed by context-specific circumstances. Some rely on pedestrian features while others may focus on cyclist safety.

“FEDERAL PRINCIPLES OF LIVABILITY”

Providing more transportation choices

Promoting equitable, affordable housing

Enhancing economic competitiveness

Supporting existing communities

Coordinating policies and leverage investment

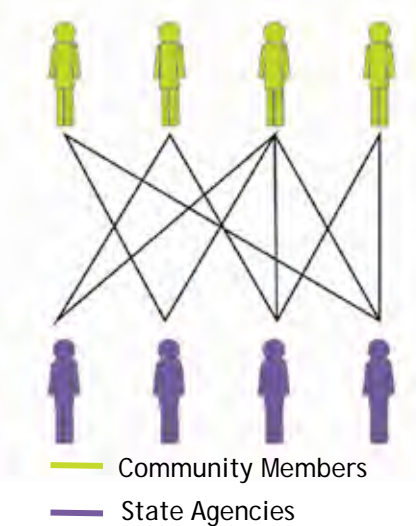
Valuing communities and neighborhood

EPA-HUD-DOT Partnership

How does a project receive grant funding?

Public agencies must have adopted a Complete Streets ordinance or equivalent and have integrated it into a community plan in order to apply for grant funding. All projects will be evaluated by an advisory board based on the following criteria, found in Engrossed Substitute House Bill 1071 :

CURRENT SYSTEM :



MOBILITY

The ordinance promotes healthy communities by encouraging walking, bicycling and using public transportation. The project should improve connections and/or establish safer and fully accessible crossings, sidewalks, trails, bike facilities, and transit connections consistent with AASHTO, ITE or other peer reviewed, context sensitive solutions guides.

SAFETY

The ordinance improves safety on major arterials by including wider sidewalks, bicycle facilities, medians, and pedestrian features. Locations with high speed arterial streets, higher motor vehicle volumes, and housing mixed with commercial attractions, transit service, and other pedestrian and bicycle generators have the most transportation conflicts, collisions and risk.

"In Grandview, we worked with 10 or 11 different funding sources, which each had their own reporting format and methods."

-Brad Smith, Grandview Chamber of Commerce

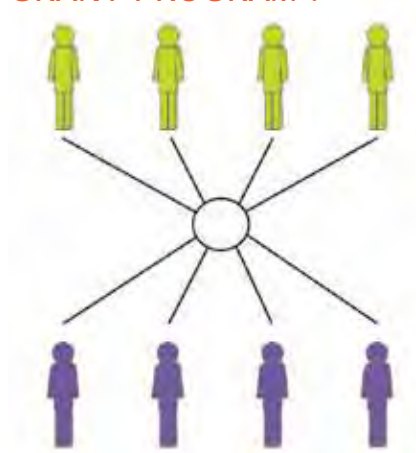
SUSTAINIBILITY

The ordinance protects the environment and reduces congestion by providing safe alternatives to single occupancy driving. In order to make alternatives to single occupancy driving safe and viable, proximity and connections are needed between and among existing housing, centers of employment, education, retail and recreation. The project should support infill, encourage redevelopment and reuse of existing building stock, intensify land uses, and connect housing and employment.

COMMUNITY

The ordinance preserves community character by involving local citizens and stakeholders to participate in planning and design. Transportation projects on urban arterials and Main Street Highways have a greater likelihood of scope, schedule and budget changes that often result in additional costs. Research has shown that more and better up front coordination and communication with the community during the design process can reduce the potential for project delay or cost over-runs.

GRANT PROGRAM :



RATING SYSTEM

5 pts: Substantial long-term impact or improvement
3 pts: Moderate impact or improvement
1 pt: Little to no impact or improvement

The first step towards a Complete Street...

OUTCOME OF AN ORDINANCE

Seattle's Complete Streets ordinance 122386, passed in 2007, is a local example of how enacting an ordinance is the key step to achieving results. This was possible because of a citywide Bicycle Master Plan, a Transportation Strategic Plan, and a Complete Streets policy already in place.



Before



After

Set in the busy International District, 6th Avenue South gained a wide paved sidewalk in 2008. Seattle's 2007 Complete Streets Ordinance made this possible.

THE COMPLETE STREET CONTINUES...

The Complete Street and Main Street Highways program requires a city ordinance to grant money to a community. Community projects would be more feasible if the city would enact a Complete Streets ordinance. Many communities are already working on pedestrian accessibility, bike paths and lanes, efficient transit and traffic systems, and streetscape reactivation. Working with the community, creating a master plan, and proposing an ordinance, a community could enact an ordinance, and gain access to the funds of the Grant Program, taking the first step towards completing the street.



Wenatchee already has existing bike paths, pedestrian walkways, and current construction projects implementing Complete Street concepts.



If Wenatchee were to enact a Complete Streets Ordinance, they might gain access to funding from the Grant Program, enabling projects like this to come to fruition.

Bibliography

Alta Planning & Design, Parisi Associates, San Francisco Department of Parking and Traffic, September 2003. "City of San Francisco Bicycle Plan Update: Supplemental Design Guidelines." <<http://www.wsdot.wa.gov/NR/rdonlyres/40625CF4-F72F-4065-A39C-8A9C78D18DAD/0/SFDesignGuidelines.pdf>>

Arteaga, Cus. Interview by Sara Duffy. 11 Sep 2011.

Association of Washington Cities, July 19, 2011. "Initial Presentation of Statewide Transportation Needs".

Burden, Dan and Peter Lagerwey, March 1999. "Road Diets". Walkable Communities, Inc. <<http://www.walkable.org/assets/downloads/roaddiets.pdf>>

Cascade Bicycle Club, 2011. "A Guide to Complete Streets". http://www.cascade.org/Advocacy/pdf/CompleteStreets-Guide_2011.pdf

City of Grandview, March 2008. "Alive Downtown Improvements." <<http://www.grandview.wa.us/WebPage/PDFFiles/AliveDowntownImprovements.pdf>>

City of Issaquah, undated. "Complete Streets Program". <<http://www.ci.issaquah.wa.us/Page.asp?NavID=1769>>

City of Tacoma, 2010. "Complete Streets Design Guidelines Project". <<http://www.cityoftacoma.org/Page.aspx?hid=11665>>

Davis, Kathleen, 2011. "New Initiative - Washington's Main Street Highways" in 2011 Legislative Session Presentation. Washington State Department of Transportation Highways and Local Programs.

Engrossed Substitute House Bill 1071, Chapter 257. (July 22, 2011) As amended by the State of Washington, 62nd Legislature, 2011 Regular Session.

League of American Bicyclists, 2011. "TrashTalk: Bicyclists Should Get On the Sidewalk". <<http://www.bikeleague.org/action/trashtalk/getofftheroad.php>>

Makers Architecture & Urban Design, April 2007. "Central Business District Subarea Plan: A Vision for Downtown Wenatchee"

Michigan Department of Transportation, 2007. "Guidelines for Traffic Safety Planning and Traffic Control in School Areas".

National Complete Streets Coalition, undated. "Rural Communities and Small Towns". <<http://completestreets.org/webdocs/factsheets/cs-rural-2.pdf>>

National Complete Streets Coalition, 2011. "Complete Streets FAQ". <<http://www.completestreets.org/completestreets-fundamentals/complete-streets-faq/>>

National Complete Streets Coalition, 2010. "Complete Streets: Policy Analysis 2010". <<http://www.completestreets.org/webdocs/resources/cs-policyanalysis.pdf>>

Pedestrian and Bicycle Information Center, undated. "Guiding Principles for Applying Safe Routes to School Engineering Solutions" in SRTS Guide. <http://guide.saferoutesinfo.org/engineering/guiding_principles_for_applying_srts_engineering_solutions.cfm>

Project Groundwork, December 2010. "Downtown Streetscape Enhancement Ideas".

Reeves, Paula, 2010. "Transition Planning: Improving Accessibility in Washington State". Infrastructure Assistance Coordinating Council, Highways and Local Programs Division, Washington State Department of Transportation.

Research and Innovative Technology Administration, 2002. "National Household Travel Survey: Daily Travel Quick Facts". US Department of Transportation. <http://www.bts.gov/programs/national_household_travel_survey/daily_travel.html>

Ross, Courtney. "Grandview in Midst of Downtown Revitalization." Yakima Herald-Republic 22 03 2010. Web. <<http://www.tri-cityherald.com/2010/03/22/v-print/948304/grandview-in-midst-of-downtown.html>>.

Seattle, WA, Council Bill No. 116954, Ordinance No. 123427. (October 11, 2010) <<http://clerk.ci.seattle.wa.us/~scripts/nph-brs.exe?d=CBOR&s1=115861.cbn.&Sect6=HITOFF&l=20&p=1&u=/~public/cbor2.htm&r=1&f=G>>

Smith, Brad. Interview by Sara Duffy. 30 Sep 2011.

Storefront Studio, 2009, 2010, 2011. "Storefront Studio: Roslyn". College of Built Environments, University of Washington.

United States Environmental Protection Agency, September 2, 2011. "HUD-DOT-EPA Partnership for Sustainable Communities". <<http://www.epa.gov/dced/partnership/#livabilityprinciples>>

Transportation Research Board of the National Academies, 2009. "Acoustic Beamforming: Mapping Sources of Truck Noise" in NCHRP Report 635. National Cooperative Highway Research Program. <<http://www.adc40.org/presentations/winter2010/08PresentationTRBWinter2010.pdf>>

Washington State Route Department of Transportation, South Central Region, January 2004. "Route Development Plan: State Route 903". <http://www.wsdot.wa.gov/NR/rdonlyres/82C0EE41-818A-4093-BF2E-CC752F93C311/0/903RDPFINAL_JDO.pdf>

Washington State Department of Transportation, March 2010. "School Walk and Bike Routes: A Guide for Planning and Improving Walk and Bike to School Options for Students", <<http://www.wsdot.wa.gov/NR/rdonlyres/5463FD69-F7B9-477D-B9AA-D21CEEFCF722/0/SchoolWalkandBikeRouteGuide.pdf>>

Wenatchee Valley Transportation Council, December 2010. "Wenatchee Area Existing Bicycle Network Map".

Image Citations

All images not sourced are original photographs by Storefront Studio Summer 2011, University of Washington

Cover page:

Complete Street with wide sidewalks, clear crosswalks, and bus stop. Photo: Complete Streets flickr photostream <<http://www.flickr.com/photos/completestreets/4565462305/sizes//in/photostream/>>

Sidewalk treatment, Grandview. *Grandview "Downtown Alive!"*

N 130th Street, after Complete Streets treatment, Seattle. Photo: Seattle Department of Transportation. <<http://www.flickr.com/photos/completestreets/5437420436/in/photostream>>

Bike and transit lane proposal for Chelan Avenue, *Wenatchee*

Washington State Complete Streets:

"Before" image of 6th Avenue S in Seattle. Complete Street's Flickr Photostream. <<http://www.flickr.com/photos/completestreets/5437420384/in/photostream>>

Bridgeport Way in University Place, after Complete Streets treatment. Photo: Dan Burden. <<http://www.flickr.com/photos/completestreets/3772442248/sizes/m/in/photostream/>>

"Before" image of Columbian Way in Seattle. Complete Street's Flickr Photostream. <http://www.flickr.com/photos/completestreets/5436809663/in/photostream>

"After" image of Columbian Way in Seattle. Complete Street's Flickr Photostream. <http://www.flickr.com/photos/completestreets/5436809279/in/photostream>

N. 130th St. Seattle After Complete Street. <http://www.seattle.gov/transportation/n130thstreet.htm>
Complete Street with wide sidewalks, clear crosswalks, and bus stop. Photo: Complete Streets flickr photostream

<http://www.flickr.com/photos/completestreets/4565462305/sizes//in/photostream/>

"After" image of 6th Avenue S in Seattle. Complete Street's Flickr Photostream. <http://www.flickr.com/photos/completestreets/5437419882/in/photostream>

Wheelchair/dog crossing. showing how Kirkland, WA has made it easy for travelers in wheelchairs by providing good sidewalks, accessible curb cuts, and high visibility crosswalks. Photo: Jan Moser, Complete Streets Flickr Photostream. <<http://www.flickr.com/photos/completestreets/4035849564/>>

Stroller on shoulder: In rural areas, a wide shoulder helps pedestrians, bicyclists, and families with strollers travel from one place to another without needing a car. Photo: Dan Burden, Walkable and Livable Communities Institute. Complete Streets Flickr Photostream. <<http://www.flickr.com/photos/completestreets/3761495921/>>

Rural route with shared path: This two-lane road accommodates motorized traffic and bicyclists who are comfortable sharing the lane. Pedestrians and cyclists are welcome on the shared use path that runs parallel to the road. Photo: Dan Burden, Walkable and Livable Communities Institute. Complete Streets Flickr Photostream. <<http://www.flickr.com/photos/completestreets/4565462399/>>

Bike route over Tacoma Narrow Bridge. Photo: <http://blog.oregonlive.com/terryrichard/2011/02/tacoma_narrows_bridge_offers_a.html>

Tacoma's link light rail. Photo: <http://projects.soundtransit.org/Images/projects/lightrail/tacoma/USS_2trains_view1105.jpg>

City of Tacoma design guide illustrated. Photo: <http://cms.cityoftacoma.org/Planning/CompleteStreets/CS_Project_Summary111709.pdf>

Downtown Sedro-Woolley. Photo: <http://api.ning.com/files/rfuE2*uO3IU6rjpST6nVOWGbGZSmg9o5W3Qo6qKilKfy5wexqFBKygozlqx9ysWgzhLsi7O80Y44AGoroQjcX16WBlAmciS2/Untitled.jpg?width=721>

Downtown Issaquah. Photo: http://farm3.static.flickr.com/2206/1558009812_15c4d59785.jpg

Bike box at intersection, Downtown Seattle. Photo: <http://blog.seattlepi.com/seattle911/files/library/100929_bike_box---470.jpg>

Green bike lane, Seattle. Photo: SDOT <<http://thecityfix.com/blog/top-21-time-saving-cities/>>

Components:

Pedestrians:

Crosswalk marking on Wenatchee Avenue, *Wenatchee, WA*

Pedestrian bulb-out on Main Street in *Cle Elum, WA*

Crosswalk at SR-903 Roundabout with proposed pedestrian implements, *Roslyn, WA*

Bicycles:

Green bike lane, Seattle, WA Photo: SDOT <<http://thecityfix.com/blog/top-21-time-saving-cities/>>

Bike route sign, *Wenatchee, WA*

Share the road bicycle marking. Photo: "Mobilizing the Region" via "WalkBikeJersey" <<http://blog.tstc.org/2008/12/19/nj-cyclist-fatalities-double-in-2008/>>

Bike Parking in Vancouver, WA. <<http://www.cityofvancouver.us/bike.asp?menuid=10466&submenuID=23027&itemID=23513>>

Bikes in the "R-Bike" Program, *Roslyn, WA*

A cyclists view from the bike lane. <<http://www.metaefficient.com/wp-content/uploads/2011/05/>>

Transit:

A group entering the bus. Photo: Ria Novosti <<http://en.rian.ru/analysis/20110310/162946110.html>>

Park and Ride sign. Photo: Art Nectar <<http://artnectar.com/2011/06/textile-street-art-yarn-bombing/>>

Complete Street with wide sidewalks, clear crosswalks, and bus stop. Photo: Complete Streets flickr photostream <<http://www.flickr.com/photos/completestreets/4565462305/sizes//in/photostream/>>

Cars:

Child in carseat. Photo: <<http://bubble-belly.blogspot.com/2011/07/what-happens-in-car-seat.html>>

Angled parking along Wenatchee Avenue, *Wenatchee, WA*

Stop sign and red painted crosswalk on Orondo Avenue, *Wenatchee, WA*

Roundabout on SR-903, *Roslyn, WA*

Vehicle travelling on Wenatchee Avenue, *Wenatchee, WA*

Trucks:

Efficient service alley truck route, Grandview, WA. "*Grandview: Downtown Alive!*"

Truck Route sign, Grandview, WA "*Grandview: Downtown Alive!*"

Engine brake sign. Photo: Adam Dodd <<http://auto.howstuffworks.com/auto-parts/brakes/brake-types/truck-brakes.htm>>

Truck along Main Street in Merna, Nebraska. Photo: "Merna Things to Do Tip by Rich62" <<http://members.virtualtourist.com/m/p/m/1557e1/>>

Semi-Trailer on Wenatchee Ave, *Wenatchee, WA*

Goals & Benefits:

Complete street concepts illustrated at the intersection of Mission & Palouse, *Wenatchee, WA*

Complete Street concepts illustrated along ST-903 at the entrance to *Roslyn, WA*

Suggested landscaping and complete street treatments applied to the SR-903 *Roundabout, Roslyn, WA*

"Health & Safety" Hands. Photo: Crowborough and Wadhurst Physiotherapy and Sports Injury Clinics <http://www.wadhurst-physio.co.uk/common_conditions/running_injuries>

"Access & Mobility" Hands

"Environmental Stewardship" Hands. Photo: Fujitsu <<http://www.fujitsu.com/global/solutions/sustainability/?custom01=mdd>>

"Economic Development" Hands. Photo: Bonita Springs Area Chamber of Commerce <<http://www.bonitaspringschamber.com/the-chamber/economic-development/>>

Washington State Main Street Highways:

Void space along curb, *Caffe Mela, Wenatchee*

Bench and sidewalk treatments, *Grandview*

Bicyclist on Orondo Street, *Wenatchee*.

Bulb-outs and angled parking, *Cle Elum*

Crosswalk button, *Cle Elum*

Proposals for facade and intersection treatments, *Roslyn*

Typical cost diagram. Association of Washington Cities, July 19, 2011. "*Initial Presentation of Statewide Transportation Needs*".

Grandview:

Aerial view of Grandview. Photo: Grandview Chamber of Commerce. <<http://www.visitgrandview.org>>

Sidewalk extension, Grandview. Photo: Grandview Chamber of Commerce. <<http://www.visitgrandview.org>>

Mural on side of VFW building. Photo: Grandview Chamber of Commerce. <<http://www.visitgrandview.org>>

Main Street, Grandview. Photo: Flickr photostream of d4yw41k3r. <<http://www.flickr.com/photos/cdrew-ing/4139773174/in/photostream>>

Alive Downtown. <<http://www.grandview.wa.us/WebPage/PDFFiles/AliveDowntownImprovements.pdf>>

Angle parking and plantings. Photo: Grandview Chamber of Commerce. <<http://www.visitgrandview.org>>

Grandview's gateway entrance. Photo: Grandview Chamber of Commerce <<http://www.visitgrandview.org>>
pages 22-25: All photos from Grandview Chamber of Commerce. <<http://www.visitgrandview.org>>

Grandview intersection Concept. HBB Architects. <<http://www.grandview.wa.us/WebPage/PDFFiles/AliveDowntownImprovements.pdf>>

Roslyn:

Roslyn Sign. Photo: CLC Productions. <<http://www.curtcass.com/roslyn/index.html>>

Wildflower sign. *Credit: Susie Weis*

Roslyn Welcome Sign proposal by Fuji Tjiang, *Storefront Studio 2010*

Roundabout Aerial view: *maps.google.com*

Photo: Marcin Wichary's Flickr photostream <http://farm4.static.flickr.com/3140/2640597270_531c689d71.jpg>

Photo: Dona Sauerburger, Orientation and Mobility Specialist <<http://www.sauerburger.org/dona/cross.htm#roundabout>>

Wenatchee:

Wenatchee Welcome Sign. Photo: "Bratty's Ramblings" blog. ,<http://brattysramblings.blogspot.com/2010/12/thursday-thirteen-13-reasons-to-make.html>>

A view of the LID overlay on Palouse & Wenatchee.

The historically-inspired "trolley" bus of downtown Wenatchee.

The ribbon-cutting ceremony after the LID overlay, 1989. *Courtesy of Wenatchee City Hall*

"Before" image of 6th Avenue S in Seattle. Complete Street's Flickr Photostream. <<http://www.flickr.com/photos/completestreets/5437420384/in/photostream>>

"After" image of 6th Avenue S in Seattle. Complete Street's Flickr Photostream. <<http://www.flickr.com/photos/completestreets/5437419882/in/photostream>>

Grants Program:

Community Involvement in the Grandview Alive! Project. Photo: "Downtown Alive!". <<http://www.grandview.wa.us/WebPage/PDFFiles/AliveDowntownImprovements.pdf>>

Construction process. Photo: Tacoma Daily Newspaper via WSDOT. <<http://www.tacomadailyindex.com/portals-code/list.cgi?paper=88&cat=23&id=2033910&more=0>>

Complete Streets imagined. Photo: Cascade Bicycle Club. <<http://blog.cascade.org/wp-content/aarp-supports-complete-streets-like-this1.jpg>>

Hand pointing at bill. Photo: West Seattle Blog. <<http://westseattleblog.com/blog/wp-content/uploads/2010/04/via-ductbids.jpg>>

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