Attachment 23.F

West Bay Drive Corridor Study

Final Report

May 2005

City of Olympia

Prepared By:
Thurston Regional Planning Council

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Cover: Photo of West Bay Drive in summer of 2004, and Design Visualization concept of preferred alternative for future conditions. Design Visualization is courtesy of the Washington State Department of Transportation, Design Visualization Team.

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I. INTRODUCTION

West Bay Drive is located on the western side of Budd Inlet, and is an important transportation route, linking the west side of Olympia to its downtown. This mile and a half water front street was last improved in the late 1970s, when the roadbed was repaved and sidewalks and a curb were added in the southern sections. At that time the land uses along the north end of the corridor were largely industrial in nature, and was heavily used by large trucks transporting manufactured goods and logs.

In the mid-1990s many of the industrial businesses began to move out of West Bay Drive. In the spring of 2000, Olympia Advance Planning began a planning process which resulted in the comprehensive plan and zoning code amendments for West Bay Drive, changing the zoning designations for most of the area to urban waterfront, which allows for a mix of residential, retail, office, and other commercial activity, and parks. At this time only a few industrial sites remain along the corridor.

In 2004, Olympia Advance Planning, Parks, Arts & Recreation, and Public Works began a planning process to look at the existing street standards for West Bay Drive. The existing street standards for much of West Bay Drive are those of a "Major Collector" and require up to 62 feet of space to accommodate sidewalks, planting strips, bike lanes, and vehicle travel lanes. Some parts of West Bay Drive are so narrow and steep that to accommodate all of these features would require substantial public and private costs. For this reason the Olympia City Council requested that the existing street standards be evaluated to allow for reasonable future street enhancements.

Since West Bay Drive is an important community asset, emphasis was placed on meeting regional transportation goals and considering access for alternative modes of travel such as bicycling, walking, and transit. This study also took into account the safety, environmental, scenic, aesthetic, and community impacts of any future street enhancements.

The result is a community-developed preferred alternative to the existing street standards for the West Bay Drive corridor that fits into the overall vision in the Olympia Comprehensive Plan, but allows for a modified street design that best fits the unique conditions along the West Bay Drive corridor.

II. BACKGROUND

A. Changing Land Use

In the spring of 2000, Olympia Advance Planning began a planning process which resulted in the comprehensive plan and zoning code amendments for West Bay Drive. West Bay Drive had been an active industrial area until the mid-1990s, until a series of plant closures along the waterfront properties sparked an interest in changing the zoning designation of the area from industrial to urban waterfront, which allows for a mix of uses including residential, office, retail development, and open space.

Since the mid-1990s the area has seen a moderate increase in development or redevelopment, both on the waterfront and neighborhood side of the street. New offices have been built at 324 West Bay Drive, replacing those destroyed in a fire in 1999. An office building has also been constructed at the base of Woodard Avenue, and construction has begun on Phase I of Smyth Landing, at the base of Schneider Hill. It is anticipated that many of the remaining waterfront parcels will be redeveloped in the foreseeable future, as will many of the less steep sites on the neighborhood side of the street. As each parcel is developed or redeveloped, the property owner is responsible for making frontage improvements consistent with Olympia Street Standards.

In the center of all of this activity lies the Brown-Minneapolis Tank property, the sole industrial site on the main section of West Bay Drive. At the terminus of West Bay Drive is Dunlop Towing, the source of the numerous logging trucks that utilize the street corridor.

B. West Bay Park and Trail

In the fall of 2004 the Olympia City Council authorized the Parks, Arts and Recreation Department to begin negotiations for acquisition of the Port property along West Bay Drive for development into a city waterfront park. It is anticipated that negotiations will take approximately one year.

The West Bay Trail is envisioned to be a shoreline pedestrian and bicycle trail beginning at the Deschutes Parkway and proceeding northward to a terminus at Frank's Landing, where it will connect into a future sidewalk along West Bay Drive. The trail standard for the Class 1 trail is 10-foot wide paved, with 2-foot shoulders, in a 30-foot trail corridor. The trail will follow the shoreline wherever possible. There is potential for connections between the trail and the Garfield Trail, Brawne Avenue, and proposed Woodard Avenue neighborhood connection. Across the Brown-Minneapolis Tank Company site, the long-term plan is to have the trail follow the shoreline. While the site remains in industrial use, it is anticipated that the trail will be on a widened sidewalk adjacent to West Bay Drive (east side).

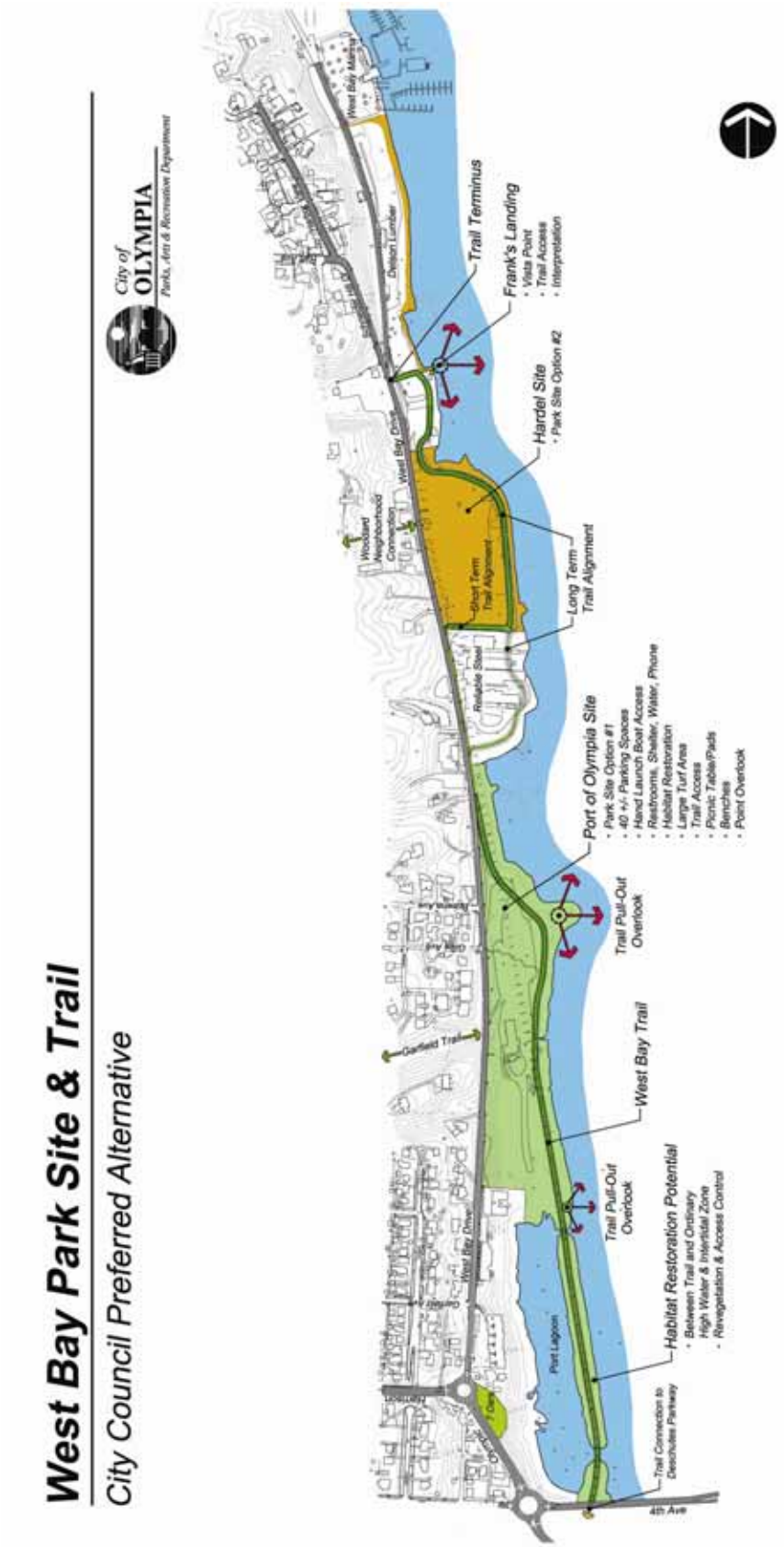


FIGURE 1: MAP OF THE WEST BAY PARK SITE AND TRAIL, CITY COUNCIL PREFERRED ALTERNATIVE.

C. Existing Street Standards

Most of West Bay Drive (from the roundabout to the base of Schneider Hill) and Schneider Hill are designated as Major Collectors in the Olympia Comprehensive Plan. The remainder of West Bay Drive (from the base of Schneider Hill to the Marina) is designated as a Major Commercial Collector.

A Major Collector street is designed to accommodate 70 percent (typically) non-neighborhood traffic with most connections between the arterial and concentrations of residential and commercial activities. These types of streets typically support a daily traffic volume that ranges from 3,000 to 14,000 vehicles. Multi-modal transportation options (bicycle lanes, transit, and sidewalks) are all features of this type of street.

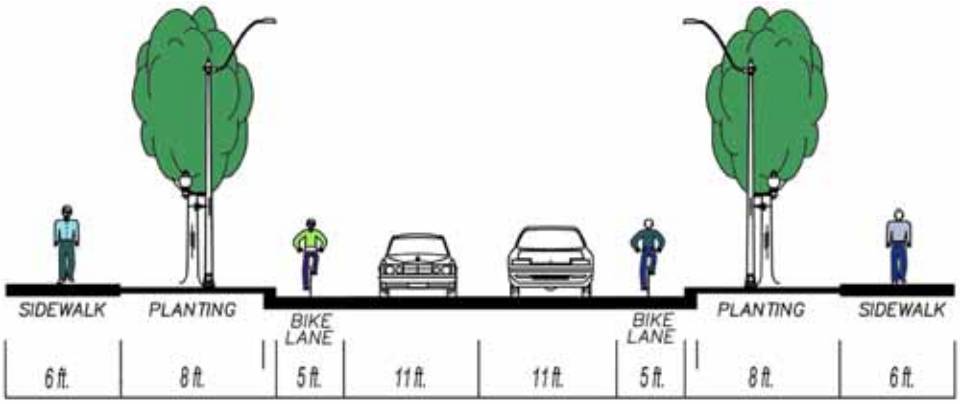


FIGURE 2: MAJOR COLLECTOR STREET STANDARD (NO CENTER TURN LANE), CITY OF OLYMPIA.

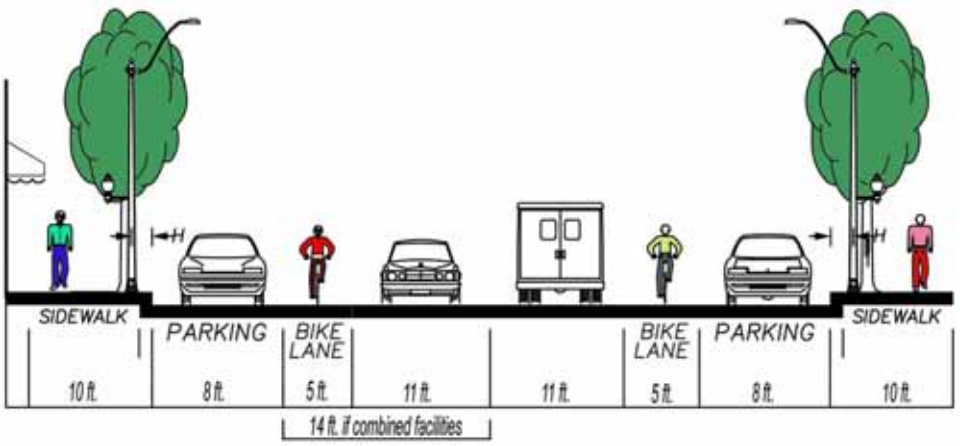


FIGURE 3: MAJOR COMMERCIAL COLLECTOR STREET STANDARD (NO CENTER TURN LANE).

Sidewalks – Sidewalks are required in the design standards for Major Collectors and Major Commercial Collectors. Incomplete sidewalk infrastructure exists on West Bay Drive and Schneider Hill.

Bicycle Facilities – Bicycle facilities are required in the design standards for Major Collectors and can be included in Major Commercial Collectors as either a bicycle lane (5 feet) or an 11-foot vehicle travel lane and 3-foot shoulder. West Bay Drive and Schneider Hill are designated as Class II Bicycle Facilities (separate 5-foot striped bicycle lane). Portions of these facilities may be constructed as frontage improvements associated with new development or the City will construct them as part of other street work.

On-Street Parking – On-street parking is not included in the standard for Major Collectors. The Olympia Comprehensive Plan states that where parking already exists there is an option to either keep the existing parking or remove it for other transportation needs. On-street parking is included in the standard for a Major Commercial Collector.

Planting Strips – Planting strips are required in the design standards for Major Collectors, and provide a buffer between traffic and pedestrians. On a Major Commercial Collector wider sidewalks with street trees are part of the design standards.

Design Speed – Speed limits are generally 25 to 35 miles per hour on Major Collectors and Major Commercial Collectors. West Bay Drive is currently posted at 30 miles per hour. Schneider Hill is currently posted at 25 miles per hour.

D. Existing Rights-of-Way

The typical right-of-way along West Bay Drive up to Schneider Hill has a minimum of 24 feet on the west side of the centerline, and 25 feet on the east side for a total of 49 feet. There appears to be a 40-foot right-of-way along Schneider Hill Road. The section of West Bay Drive from the Marina to the base of Schneider Hill also appears to have a 40-foot right-of-way, but is complicated by the railway and existing easements. To build to full street standards (62 feet of right-of-way) in developed sections of the roadway, the City would have to acquire additional right-of-way. As land develops or redevelops, the City can require right-of-way dedication from the landowner during the permitting process.

E. Transit

Intercity Transit does not provide fixed route service on West Bay Drive at the current time. There are no plans to add service along this stretch of roadway in the immediate future. Concerns do exist regarding both the ability to operate buses on steep street grades that connect with West Bay Drive and extending service into neighborhoods where existing streets may lack the ability to accommodate large vehicles on a regular basis. Intercity Transit does provide Dial-A-Lift van services to this area. Transit is a priority on Major Collectors and the street design should accommodate potential fixed route service in the future, with possible bus stops or pullouts and shelters approximately every two blocks. Driveway easements should also be designed to accommodate Dial-A-Lift vans.

Thus, frontage improvements and street designs must consider the requirements of transit vehicles.

F. Options for Traffic Calming

Design features that can slow traffic along streets like West Bay Drive include curb bulbouts, pedestrian crossing islands, and medians.

G. Street Capacity – Accommodating Future Vehicle Traffic

As the West Bay area redevelops and the city grows as a whole, there will be increased traffic on West Bay Drive. The Thurston Regional Travel Demand Model shows that there are currently around 3,900 vehicles using the street each day. Future projections, which account for regional growth and have been adjusted for the proposed future land uses on Smyth Landing and the Hardel site, show that traffic volumes will increase to approximately 9,700 vehicles per day by 2025. The capacity on this street for vehicle traffic is 17,600 vehicles per day, so by 2025 the street will have more than 45 percent of its capacity remaining. This means that West Bay Drive is not projected to exceed the regional level of service standards after it has been redeveloped; therefore no street widening projects for through lanes is needed at this time, however left turn lanes will be installed at selected intersections when a need is identified. Providing opportunities for transit, efficient bike routes, and safe and pleasant walking routes will provide people with more transportation options and reduce vehicular traffic.

III. ENVIRONMENTAL CONSIDERATIONS

A. Geology and Soils

The topography and soils found near West Bay Drive are a result of a series of glacial advances that occurred in the Pleistocene period, the most recent being the Vashon stage. The advance and retreat of the Puget Lobe during this glacial event was responsible for most of the landforms that are exposed today. The ice sheet advanced as far south as the Tenino region and probably reached its peak around 15,000 years before present.

As glaciers advanced southward into the Puget Sound Lowland, coarse sediment that was carried by the glacier was deposited at its leading edge and transported southward by meltwater to form a layer of sand and gravel. These deposits are referred to as the Vashon advance outwash. They overlay the interglacial fine-grained sediments (Kitsap formation). As the glaciers continued to advance southward, they overrode these outwash deposits and compressed them. The glaciers also deposited till on top of the advance outwash. This material is typically a highly compacted, unsorted mixture of silt, sand, and pebble-to-boulder debris. Later, as glaciers receded, meltwater carried additional sediment to form recessional outwash. These sands and gravels were deposited on top of the till.

As the Puget Lobe retreated glacial lakes formed because the northern drainage was blocked by ice; eventually, when drainage resumed out the Straits of Juan de Fuca, river systems cut through the glacial deposits. As the glaciers melted worldwide sea level increased about 100 meters and flooded these drainage systems. These flooded valleys are the inlets of Puget Sound today.

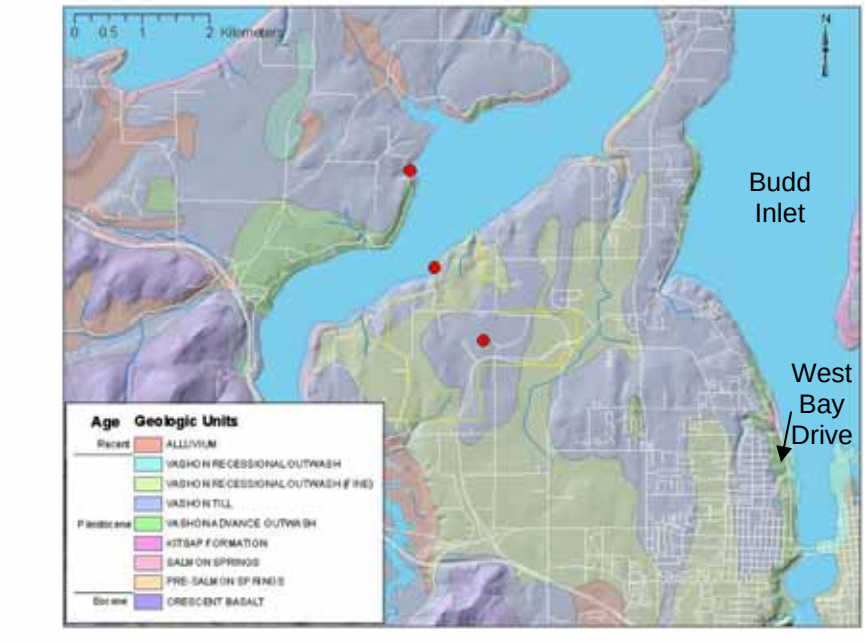


FIGURE 4: GEOLOGY OF WEST OLYMPIA.

B. Slopes

West Bay Drive lies at the bottom of a fairly steep hillside on the western edge of Budd Inlet, the southernmost inlet of the Puget Sound. The street bed varies from 90 feet above sea level at the south, to less than 20 in the north. The natural topography has been altered in many areas due to previous development. This is especially apparent on the waterfront side of the street, where much of the natural slope has been cut to provide for greater buildable area on the industrial sites. On the neighborhood side of West Bay Drive, slopes often reach greater than 40 percent, especially in areas around Garfield and Schneider Creeks.

Homes set above the street are accessed by relatively steep driveways or back alleys. Any modifications of these driveways could decrease accessibility.

C. Streams

West Bay Drive crosses Schneider and Garfield Creeks.

Schneider Creek is a year-round fish-bearing stream draining a basin area of 650 acres, all within Olympia and the urban growth area. The creek discharges to Budd Inlet through a culvert under West Bay Drive. This culvert is currently a fish barrier, but there are plans to replace the culvert to make the downstream portion of the creek accessible to salmon. At this time there is limited use of the creek by Coho salmon. There is also a partial barrier upstream. Schneider Creek basin is highly developed with both commercial and residential uses, and is estimated to have 42 percent impervious surface and 12 percent forest cover. The upstream half of the creek is completely underground but there is a good riparian corridor downstream in sections, with steep canyon walls that help to buffer the creek. The main channel is highly eroded. The water quality is poor to good, and there is high contaminant loading associated with stormwater flows. The water quality is relatively good when it is not impacted by stormwater.

Garfield Creek is an intermittent non-fish bearing stream approximately one-third of a mile in length. The creek drains approximately 75 acres of the westside neighborhood and discharges to Budd Inlet through a culvert under West Bay Drive. The creek forms a very steep and narrow ravine which retains some native forest canopy. Seasonal seeps and springs discharge from various points along the creek length, however, during rain events, the flows are dominated by stormwater from the surrounding residential area.

D. Shoreline

In the Shoreline Master Program (Thurston Regional Planning Council, 1990), policies encourage street locations to be planned to fit the topography so that minimum alterations of natural conditions are necessary. Scenic corridors containing public roadways should have provisions for safe pedestrian and other non-motorized traffic. Also, provisions

should be made for viewpoints, rest areas, and picnic areas in appropriate places. The filling of tidelands, shorelands, and marshes for roads are prohibited unless no viable alternative exists.

E. West Bay Waterbird Habitat Assessment

In the spring of 2000, Olympia Advance Planning began a planning process which resulted in the comprehensive plan and zoning code amendments for West Bay Drive. During that process, a number of habitat questions were raised which resulted in the Olympia City Council authorizing staff to scope out a habitat assessment for West Bay. Staff received input from a team of seven technical experts which helped to generate a range of budgets (high to low) and complementary scopes of work for a West Bay habitat assessment.

On June 12, 2001 the City Council authorized Olympia Advance Planning to prepare a "Limited Snapshot" for West Bay. The scope of work was limited to two tasks. The first task was to collect and catalog all the available habitat information for West Bay, much of which was generated for the 4th Avenue Bridge construction. Notebooks of this West Bay data were prepared with copies available at both Advance Planning and Community Planning and Development Department.

The West Bay technical team indicated that waterbird and blue heron populations were a concern within this area, and they suggested an early investigation was warranted. So the second task of the "Limited Snapshot" was to collect new data about the waterbird and blue heron populations along West Bay Drive.

Several consultants were contacted regarding this task and the City contracted with the firm of R.W. Morse Company to undertake the shorebird study. The project involved bi-weekly field surveys of the West Bay shoreline. This "U" shaped survey area extended south of Reliable Steel, to the Capitol Lake dam, then up the Port Peninsula to the Port Terminal. The geography of the survey area was limited to properties where shoreline access could be obtained.

The survey began in mid-October 2001 and extended to mid-June 2002 and accounted for 56 total surveys. Keith Brady was responsible for collecting the field data and was familiar with the West Bay area through the Christmas Bird Count with the Audubon Society. Bob Morse was the project manager and principal report author. He has also authored several books about bird watching in the Northwest. Their observations, findings, and conclusions are contained in the report titled the *West Bay Habitat Assessment Final Report (2002).*

A summary of the report conclusions are as follows:

- The 4th Avenue Bridge construction work is having a limited effect on the waterbirds that are now using West Bay. Great Blue Heron have moved their

roosting location but they may return to their traditional roosting location along the hillside after the construction work is completed.

- A total of 39 species of waterbirds and 6 species of raptors were recorded during the survey period. The west side shoreline is the most utilized location for feeding and resting waterbirds. This is followed by the cove (south of Reliable Steel) and the Port lagoon.
- The diversity and number of species of waterbirds in West Bay has declined dramatically over the last 15 years. Five (5) species have had stable numbers during this period and seven (7) species have actually increased in numbers. Twelve (12) species have decreased in numbers and another six (6) species are no longer seen in the study area. So, the number of species on the decline is over twice that of those on the increase.
- It would be helpful to better understand what is causing these declines. We know that some waterbird species have had a general population decline. The answer to the question of "causes" is not addressed in this assessment, but may be associated with changes to the food web, climate, or water quality.
- The west shoreline of West Bay from the 5th Avenue Bridge north to Reliable Steel still attracts waterbirds, some of which nest along the shoreline. This habitat is unique in downtown Olympia. If the shoreline is developed or changed so that there is more human presence in this area, then it is likely that the use of West Bay by waterbirds will decline further, unless steps are taken to minimize the impact on waterbirds.
- It is suggested that a waterbird and raptor species survey be conducted for most of the area of West Bay from Reliable Steel north to Dunlop Towing since this is the area that is likely to be developed in the future.

A copy of the full report is available on the Thurston Regional Planning Council website (www.trpc.org).

F. Stormwater

As West Bay Drive stormwater runoff will discharge into a major water body any street project would be exempt from minimum storage, infiltration, and peak discharge flow control requirements. Treatment of the Water Quality Design Event is still required as discussed in Chapter 7 of the Drainage Design and Erosion Control Manual for Thurston County, 1994. A “major water body” includes saltwater body or streams tributary to saltwater bodies up to the limit of tidal influence.

IV. PROCESS

A. Overview

The planning process was designed at the onset of the project to have three public workshops or meetings. The first workshop was designed to both educate the public on the project and to gather community input in order to build some alternatives. The main challenge in designing this workshop was to define or illustrate for the public the main issues along the corridor, and keep the input focused on issues within the realm of the project.

After the first public workshop staff developed three alternatives to the existing street standards based on community input. A second public workshop was held to show these alternatives to the public and gather further input. The main challenge at this workshop was to design materials that asked specific questions to determine community preferences and the *reasons* behind these preferences.

After the second public workshop staff developed a preferred street cross-section alternative based on input gathered at the first and second public workshops. A public open house was scheduled at the end of the process to present the preferred alternative to the public, where further input was gathered. Material was presented in a large variety of formats to make it understandable.

B. Public Workshop One – Collecting Community Input

The first step in collecting community input was ensuring good attendance for the first workshop. Notification was as follows:

- City Council
- Olympia Planning Commission
- Bicycle & Pedestrian Advisory Committee
- Olympia Neighborhood Associations
- 1,636 flyers mailed to West Bay, Crestline, and Northwest Neighborhoods by postal route (every mailbox).
- Press Release and phone call follow-up resulting in:
- KGY Airplay
- Article in The Olympian the morning of the meeting
- TRPC website with link from the Olympia website

This resulted in attendance by 74 community members, and emails, letters, and phone calls from many more members of the public.

Large Group Discussion and General Input

A large group discussion was held by the attendees to answer the following question: *What features are important to YOU and the COMMUNITY for West Bay Drive?* What

follows are the points raised in the discussion or from other general input provided by community members early in the process.

Public Input on Physical Features

Street Standards

- Require full street standards – they were adopted by the Council.
- Narrowness can work to our advantage – can put features at different heights/altitudes.
- In some sections you can get the full 62 feet as part of development. Get the full design where economically possible.
- The right-of-way does not support the full design criteria. Planting strips must be the lowest priority. Vehicle travel lane width at 11 feet is not wide enough to support commercial traffic.
- Don't require full street improvements because it would take too much fill to widen the east side of West Bay Drive, and the east side is privately owned.
- Only make modifications when there is less land available - otherwise full standards.
- Width of street and property does not or should not allow for the 60 foot width. The street needs to be a cross between a neighborhood street and a wider street for park access - not all 60 foot. Most important - safety, environmental concerns, view.
- Bike lanes both sides.
- Planter strips adjacent to sidewalks helps with undulation at driveway cuts; plant trees, separation for pedestrians.
- Can lose planter strips if there are no driveways without it causing sidewalk undulation.
- Buffer of planting between the vehicle travel lanes and pedestrians would be nice in build section where there is already a sidewalk.
- Sidewalks both sides.
- Minimum width (tightest areas) you should still favor pedestrian travel and appearance for water side.

Flow

- Emphasis that West Bay Drive be used as more of a local street not a highway.
- Traffic calming at top and bottom of Schneider Hill.
- Traffic flow.
- Discuss transition between West Bay Drive and Raft Avenue.
- Do not close Raft Avenue.
- Allow it to stay narrow as a natural traffic calming device.
- New stop signs at bottom of Schneider Hill are much needed. Do not encourage travel short-cut up Schneider Hill.

Transit

- Precise plan for public transit.
- Bus stops every 3 blocks.
- Add covered bus stops.
- If public transit uses the West Bay Drive Corridor, buses (30-40 feet) need a turnaround (roundabout?) at this intersection (base of Schneider Hill) or in the vicinity to accommodate buses turning around. Intercity Transit cannot at this point navigate the steeper side streets – Comment from Intercity Transit.

Parking

- More on-street parking.
- Creative thinking on parking.
- Nanaimo – public lower level, street level higher, parking between.
- Parking does not obstruct views, block traffic.
- No on-street parking; provide it on-site.
- Limited parking for park.
- No "back-in" parking on West Bay Drive.
- Provide non-metered parking.
- Exclude parking to improve sight lines and access to trail.

Connections

- Establish a few easily navigated trails down to the water.
- Pedestrian and wheelchair access on community connections to West Bay Drive (Woodard).
- Pedestrian access to Westside neighborhoods.
- Accessibility on connections.
- Make community paths/connections accessible to all.
- Woodard Connection is important.

Public Input on Aesthetics

- Underground overhead utilities (mentioned numerous times).
- Build sidewalks into hillsides to work with nature.
- Remove existing trees and brush on east side; replant the slope with small bushes.

Public Input on Safety

General

- Safe walking for people of all ages.
- Safe bicycling.
- Underground overhead utilities (wires may come down if branches fall off trees in a storm).
- Driveways are a big concern – make sure people don't lose their ability to turn both directions on West Bay Drive.

- Think about increased traffic on Raft Avenue and Harborview that feed the Schneider Hill. It is quite dangerous now and I shudder to think what double or triple traffic would do to the safety of that intersection.

Visibility

- Sight distance at Brawne difficult – needs to be improved.
- Don't plant trees that will grow too large and be blown down in storms or decrease visibility.

Crossings

- Garfield trail needs crossing attention for pedestrians.
- Put bulb-outs at crosswalks that can also serve as bus stops.
- Numerous safe areas to cross West Bay Drive to get to water.
- Add crosswalks – Brawne Avenue, Garfield Trail, Dickinson – with the intent of accessing the future trail.
- Crosswalks need to have a median for safety (planted or unplanted) so that we can pause as the cars whiz by.

Speed

- Speed limits (keep low).
- Allow it to stay narrow as a natural traffic calming device.

Pedestrians and Trucks

- Concerns pedestrians directed in front and along side of an existing business which involves trucks.
- Very concerned with pedestrian access where large trucks enter and leave industrial facility.

Steepness

- Ease steepness (on sidestreets).
- Dickinson should be opened ONLY if it can be developed in such a manner that it is NOT as steep as Brawne. We need to be able to reach the trail without fearing for our safety and the safety of children on bikes.

Public Input on Views

- Planter strips and trees may obstruct views.
- What is the zoned height – may make trees/view issue void (65 feet).
- Want to be able to see view – take advantage of aesthetics.
- I miss the views of the water when driving south in front of Hardels. The trees they were required to plant to cover up the ugly remains of the fire have grown so tall that they are a barrier.
- Restore views for property owners on hillside.
- Limit height of trees.

Public Input on Environment

General

- Light pollution on Olympic Way (new) is a good of example of what shouldn't be done. Street lights should provide indirect light to the street surface and sidewalks without glaring at residents.
- Keep lagoon safe for wildlife.
- Use northwest native plants (they use less water).
- Wildlife protected with vegetative buffer near lagoon.
- Testing for chemicals that may be in ground along trails and in proposed park.
- Edible plantings.
- Build sidewalks into hillsides to work with nature.

Trails/Park

- Keep motorized vehicles and bikes off Garfield Nature Trail and other trails that may be developed in the future along West Bay Drive.
- Keep dogs and other pets off the water access trail. Should only be for people to enjoy.
- No scooters on trail and sidewalks (noise).
- Recognizing it isn't a road, the trail around Green Lake in Seattle mixes bikes and pedestrians and it works for them.
- Hardel property perfect for a park – flat and accessible to all.
- Put trail on water at BMG (formerly Reliable Steel) - there is room and could be safe - the tank people don't own the water; make this accessible to everyone - walkers, bicyclists, wheelchair users.
- Use trail for pedestrian access on east side (on railroad right-of-way) in front of BMG - don't have three walking surfaces along West Bay Drive here.

Stormwater

- Low impact development techniques regarding stormwater.
- Drainage during rainy season.

Other Public Input

Economics

- Know what costs are involved when making these decisions.
- Concern that deviation from full street standards is to benefit private, not public interests.
- West Bay Drive is too narrow and properties to the east of the street are narrow enough. Taking more property away from these owners can hinder their future development plans since some of their property will be used for parks and trails.
- Not making standards changes to help private development pencil out!!
- Have trail and sidewalk people talk about duplication of effort.

Timing

- Construct trail and park as soon as possible.
- It would be nice to have a sidewalk now on West Bay Drive.
- You give no indication of when your grander plan for the area will begin.

Community Involvement

- Keep people informed (who live on West Bay Drive) about projects, lighting, bike paths, road widening, so they keep informed.

FIGURE 5: ATTENDANCE AT THE FIRST WEST BAY DRIVE CORRIDOR STUDY PUBLIC WORKSHOP.

FIGURE 6: LARGE GROUP DISCUSSION AT THE FIRST PUBLIC WORKSHOP.

Design Workshop

After participating in the group discussion, attendees of the first workshop were invited to a design workshop where they were encouraged to design an ideal street section for the West Bay Drive Corridor, constrained by topographic profiles and existing development.

To assist workshop attendees in this effort, panels containing information for specific sections of the street were available. These panels are shown in Figures 7 through 14. A physical description of each street section follows:

In general, unique sections of West Bay Drive were defined based on:

- existing transportation infrastructure (sidewalks),
- relationship to the shoreline,
- relationship to the proposed park trail, and
- classification in the Olympia Comprehensive Plan

A – This section runs from the roundabout, at West Bay Drive and Harrison Avenue to where the sidewalk ends on both sides. On the waterfront side of the street, the sidewalk is 5-feet in width (the standard is 6-feet) and missing in places. The sidewalk on the neighborhood side of the street is 6-feet in width and elevated for a short section. There is on-street parking available in front of existing businesses. There are homes on the neighborhood side of the street, with businesses and vacant land on the waterfront side of the street.

B – Sidewalks on the neighborhood (west) side of the street only to Brawne Avenue. This section currently has a 6-foot sidewalk on the neighborhood side of the street. It is quite steep in places and runs in front of the Garfield ravine and trail access. There is a curb on the other side of the street and no on-street parking. Things to consider in this section are the topography, and the connection between the proposed park and Garfield Trail.

C – This is a small section of street north of Brawne Avenue where the street is very close to the shoreline. There is a 6-foot sidewalk on the neighborhood side of the street that ends part way along this section. There is a curb on the waterfront side of the street. The railroad, which is not in use, is quite close to the street towards the end of this section. This section is quite steep on the neighborhood side of the street and any houses that sit back from the street have steep driveways.

D – This section is where the short term park trail alignment is adjacent to the street. The topography on the neighborhood side of the street varies from being quite flat in some areas to quite steep. There is a curb on the waterfront side of the street and a shoulder on the neighborhood side. There are signs of redevelopment on the neighborhood side of the street. Brown-Minnesota Tank (Reliable Steel), an industrial site, is on the waterfront side of the street.

E – From where the Park trail leaves the street to the base of Schneider Hill. This area is already undergoing changes, and full street improvements have been made in front

of the Woodard Building. The intersection has been redesigned, and work on Smyth Landing should begin soon. There is a curb on the waterfront side of the street, and sloping topography to the Hardel site. On the neighborhood side of the street, the topography varies from quite flat to a moderate slope.

F – This section completes West Bay Drive out to the Marina and has a different street classification than the others. It is characterized by flat terrain on the water side of the street, to steep terrain with several water seeps on the neighborhood side. The railroad runs adjacent to the street, even crossing into the roadway in places.

G – This section represents Schneider Hill. The intersection at the base of the hill may be reconfigured as part of the Smyth Landing Phase I. The topography around the hill is very steep and wet with seeps. The sidewalk on the neighborhood side is 5 feet in width, but constrained by vegetation and a retaining wall.

Public Input on Street Features

Input gathered during this section of the Workshop is summarized below.

Sidewalks

There was unanimous support for pedestrian access and sidewalks on both sides of the street along the West Bay Drive Corridor.

The only comments cautioning against pedestrian access came in relation to the existing industrial uses in the area – two attendees were concerned that having the trail or sidewalk in front of Brown Minneapolis Tank (BMT - formerly Reliable Steel) will place pedestrians at risk of being hit by large trucks. The representative from BMT suggested building a wide sidewalk on the neighborhood side (west), and providing crosswalks. Another attendee suggested building a waterfront trail in front of BMT in the short term (as opposed to the long term).

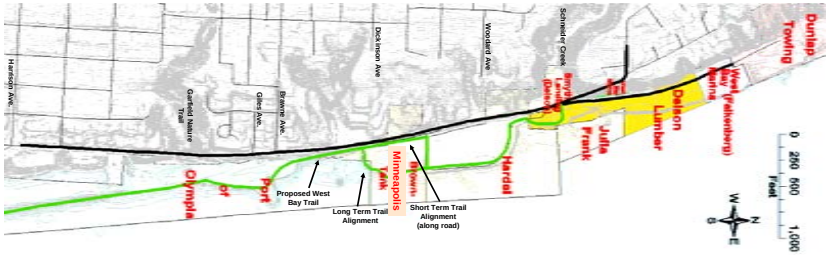
There didn't appear to be a clear preference for waterfront or neighborhood sidewalks, if people were forced to choose between them. Several people stated a preference for a smaller than standard (4- or 5-foot) sidewalk, but these comments came from people who did not attend the workshop. Several people suggested 10-foot wide sidewalks in lieu of a planter strip and sidewalk as separate facilities.

Several people felt that the trail could replace sidewalks in some sections of the street, where the railway right-of-way was close to the street. In Section F (from the base of the hill out to the Marina), one person suggested building a multiuse trail in lieu of sidewalks and bike lanes. Up Schneider Hill there was a preference for sidewalks on the west side of the street (where it now exists); one suggestion was to build a wide multiuse sidewalk on east so that bikers can push their bikes up the hill.

Summary: Sidewalks and safe pedestrian access are a top priority

Attachment 23.F

West Bay Drive - Corridor Study



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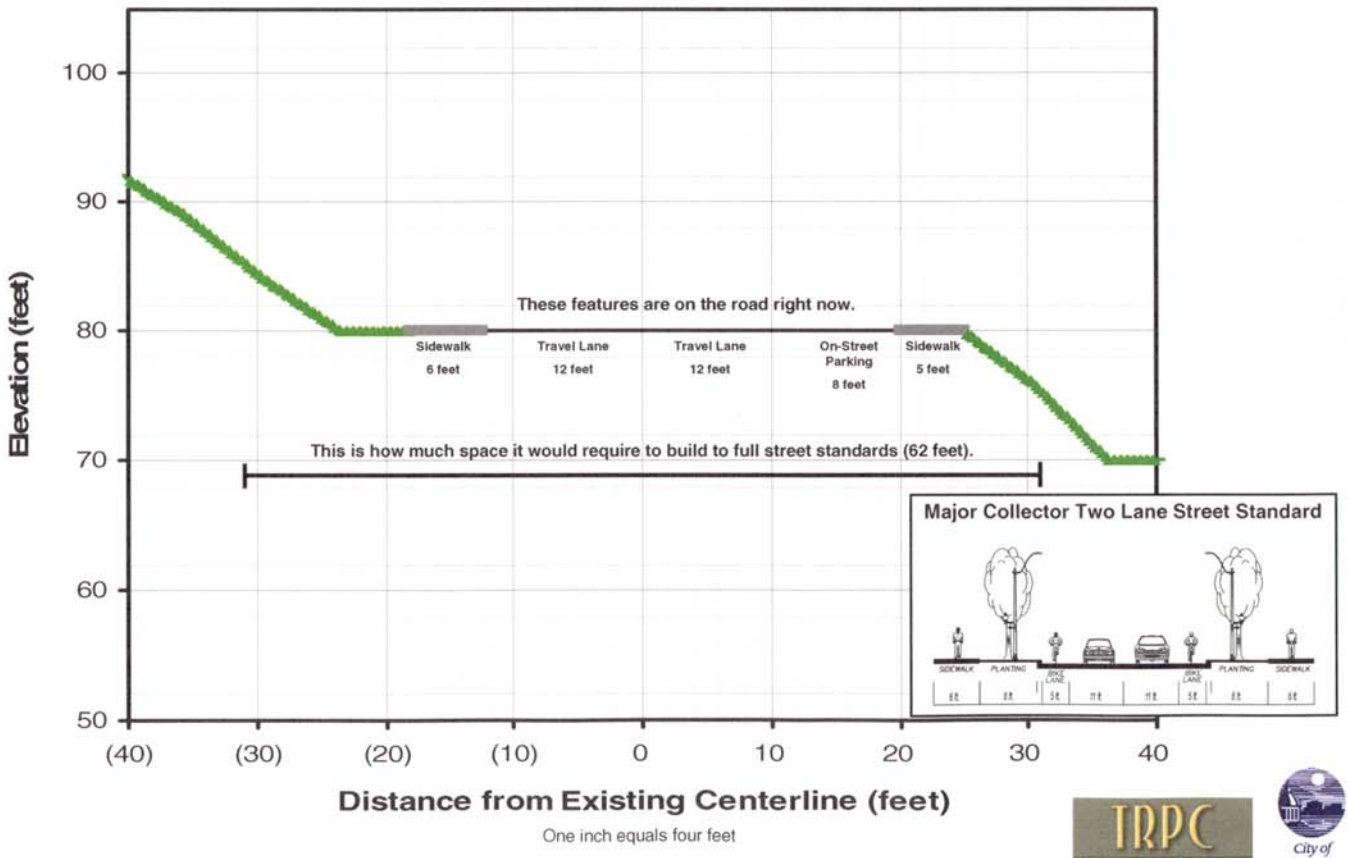
Attachment 23.F

West Bay Drive Road Corridor Study - Section A

The Roundabout to Where the Sidewalk Ends on Both Sides

Typical Street Cross-Section as it Exists Today



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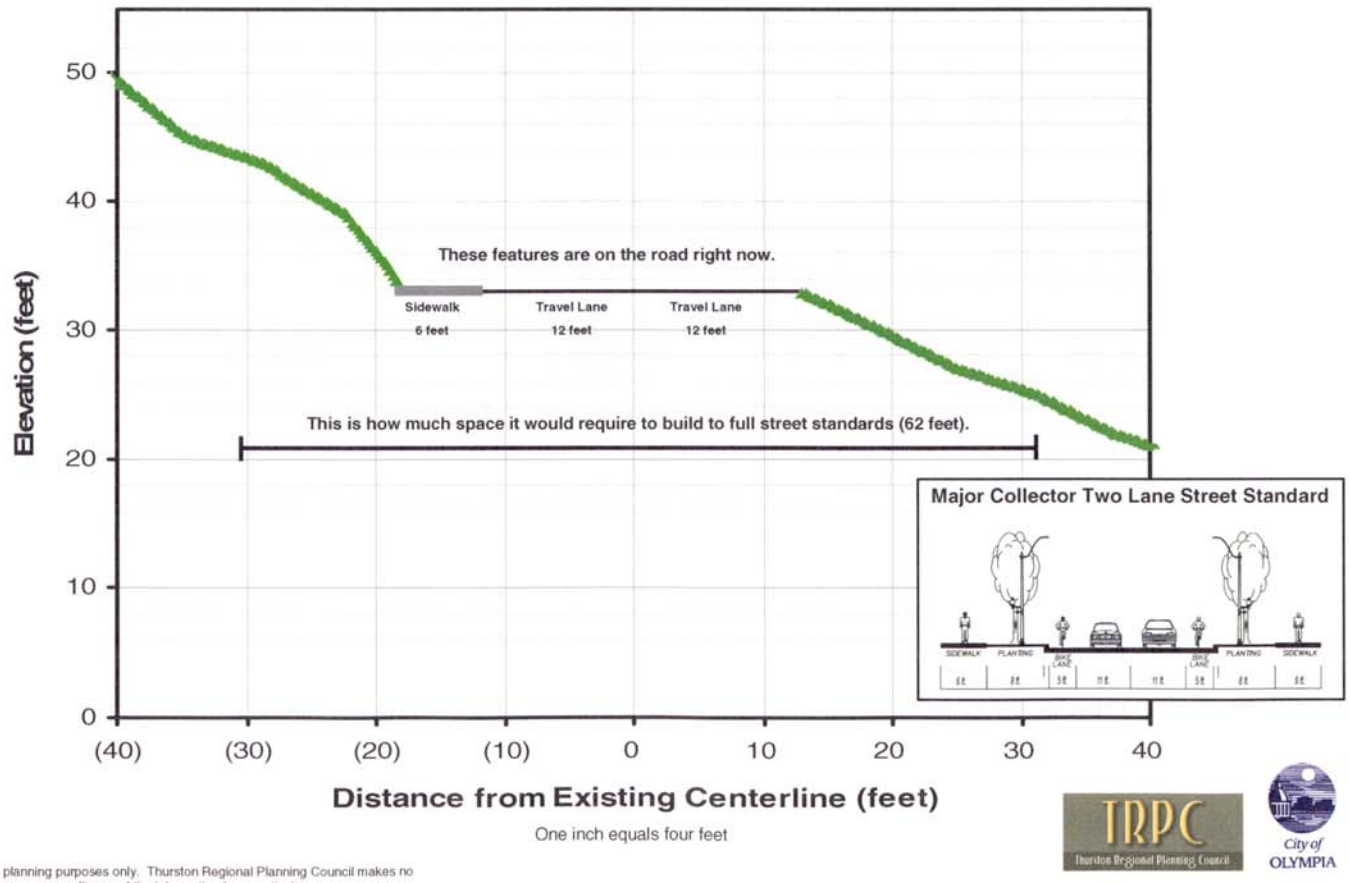
West Bay Drive Road Corridor Study - Section B

Attachment 23.F

Sidewalk on the West Side of the Street Only to Brawne Ave.

Typical Street Cross-Section as it Exists Today



One inch equals four feet

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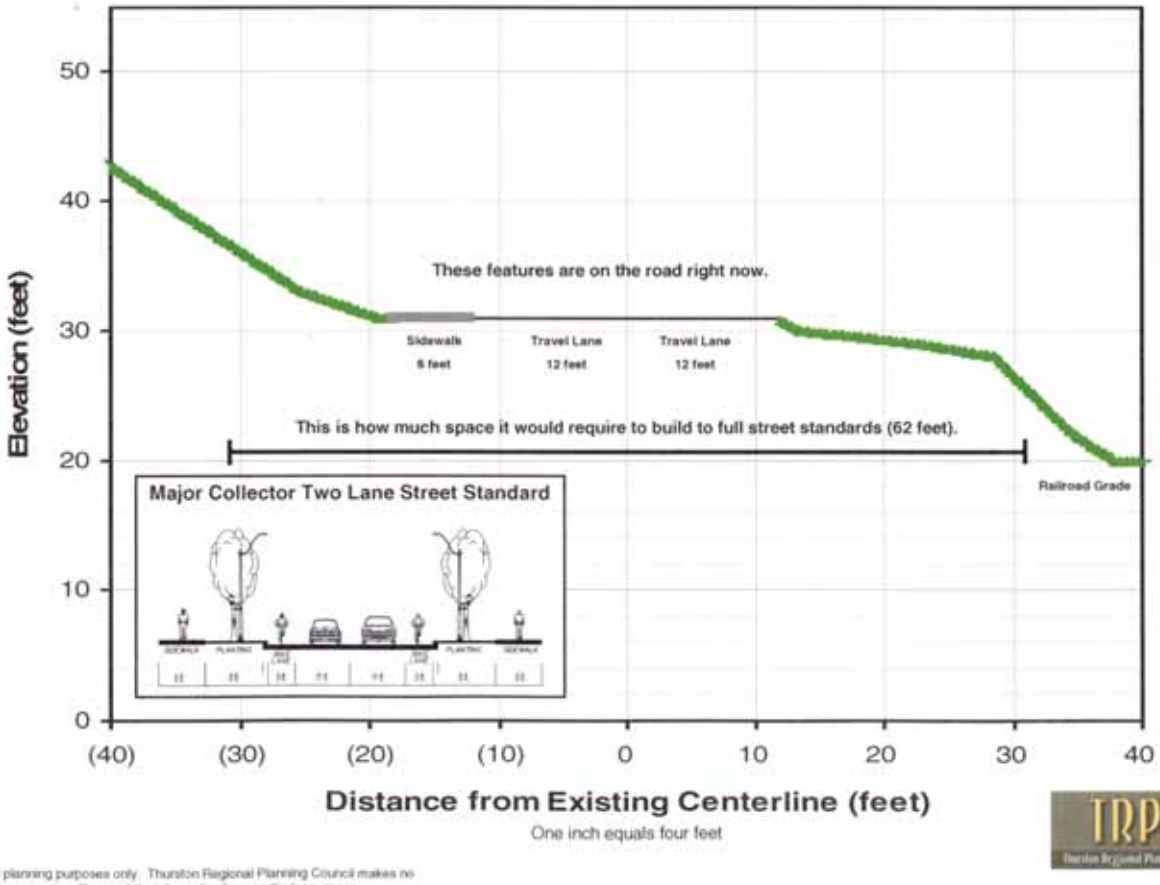
West Bay Drive Road Corridor Study - Section C

Attachment 23.F

North of Brawne Ave. where the Road is Very Close to the Shoreline

Typical Street Cross-Section as it Exists Today



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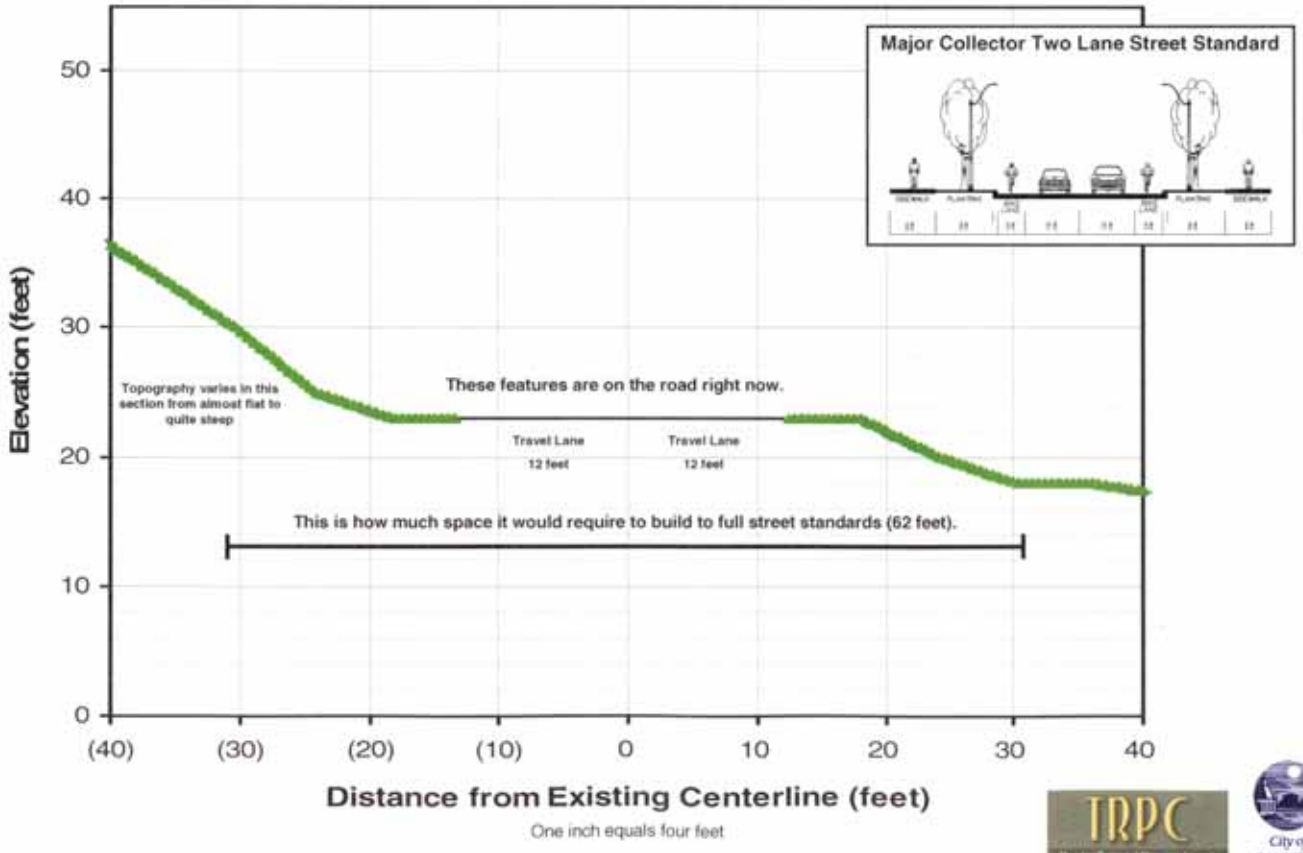
Attachment 23.F

West Bay Drive Road Corridor Study - Section D

Where the Short Term Park Trail Alignment is Adjacent to the Road

Typical Street Cross-Section as it Exists Today



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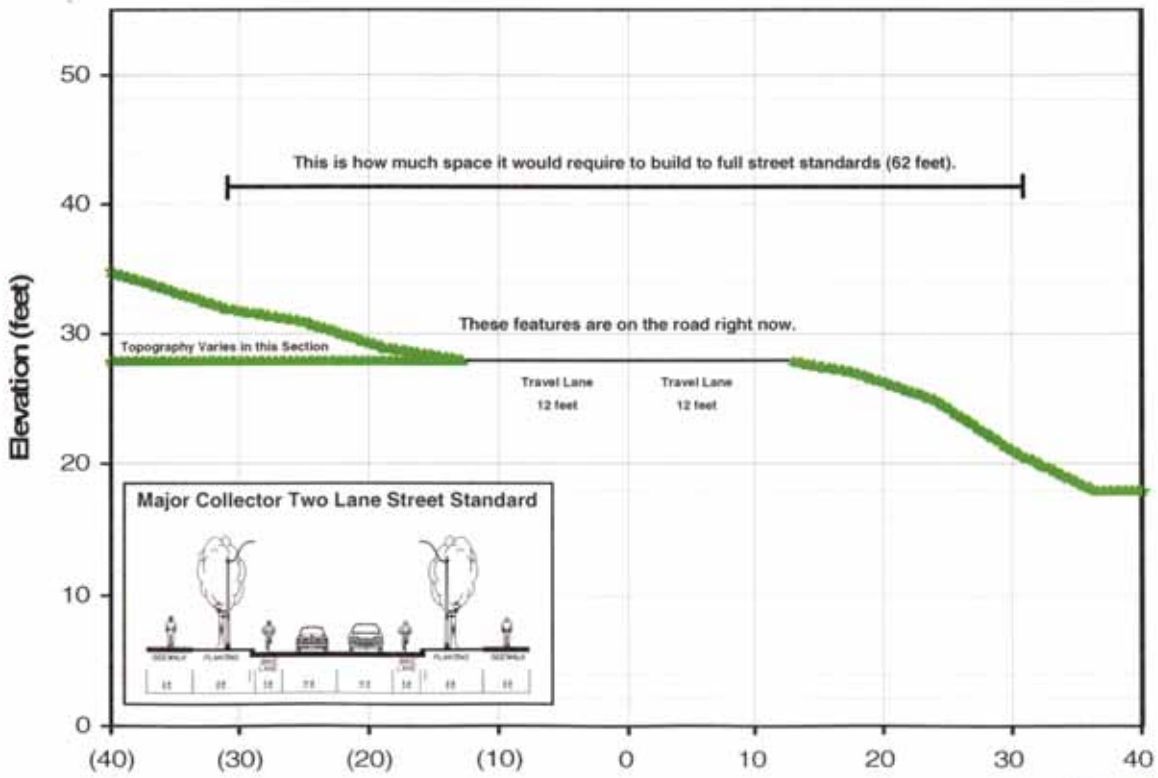
West Bay Drive Road Corridor Study - Section E

Attachment 23.F

From Where the Trail Leaves the Road to the Base of Schneider Hill

Full street improvements have been made in front of the new Woodard Office Building as frontage improvements.

Typical Street Cross-Section as it Exists Today



One inch equals four feet

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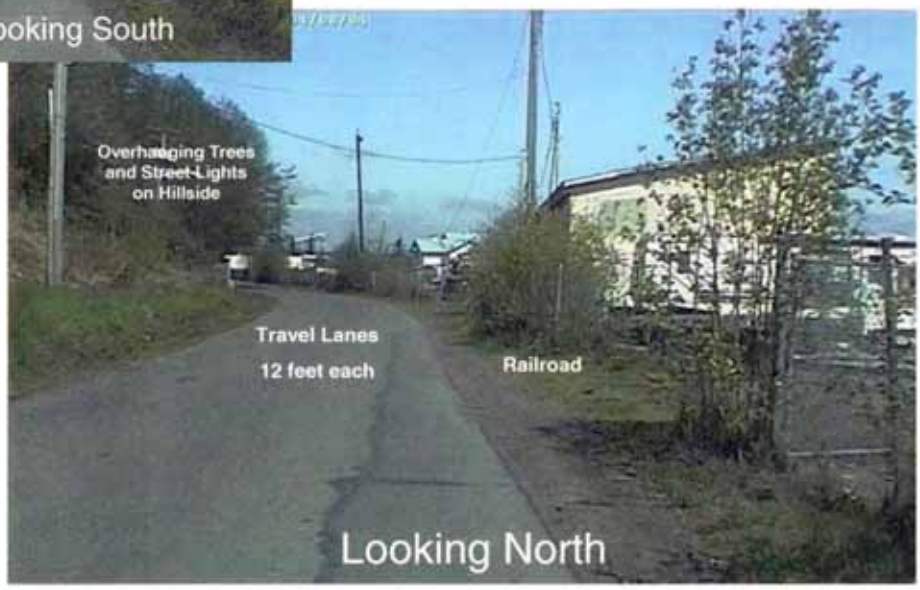
Attachment 23.F

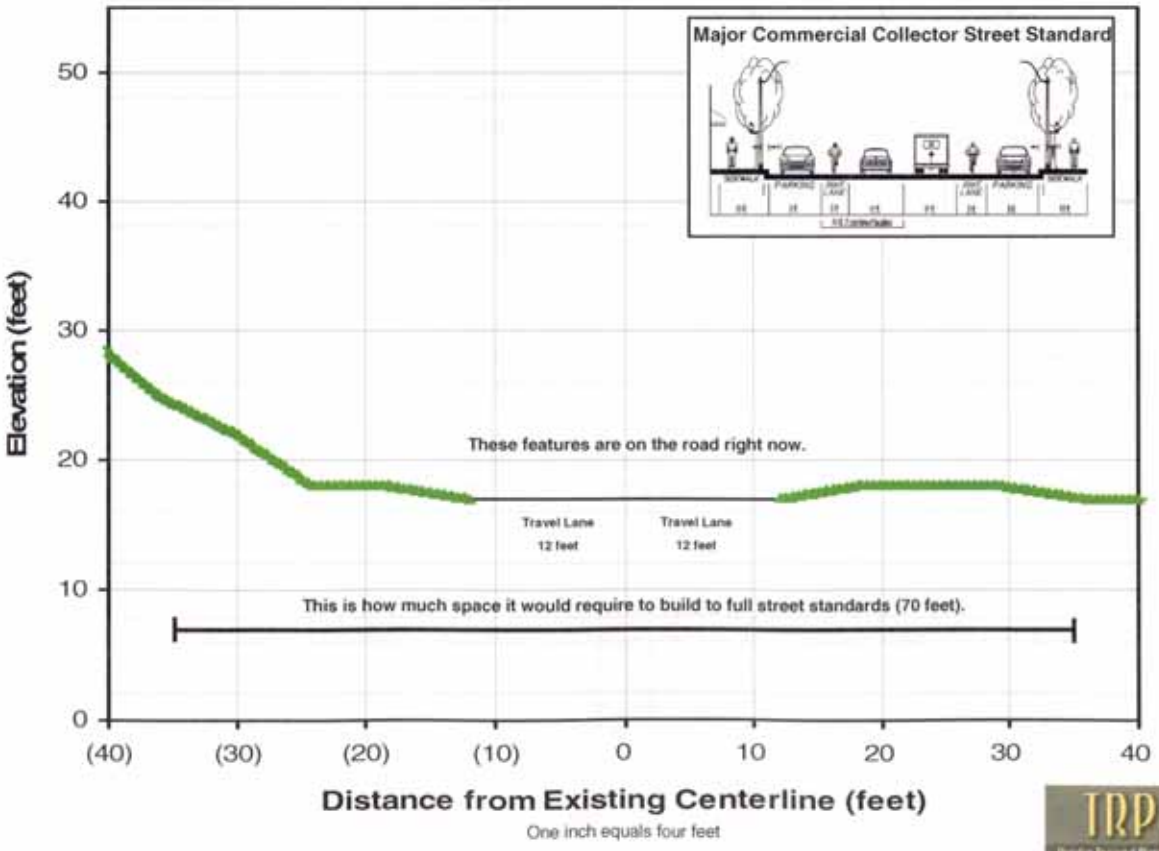
West Bay Drive Road Corridor Study - Section F

Between the Base of Schneider Hill to the Marina

This section of road is classified as a Major Commercial Collector



Typical Street Cross-Section as it Exists Today



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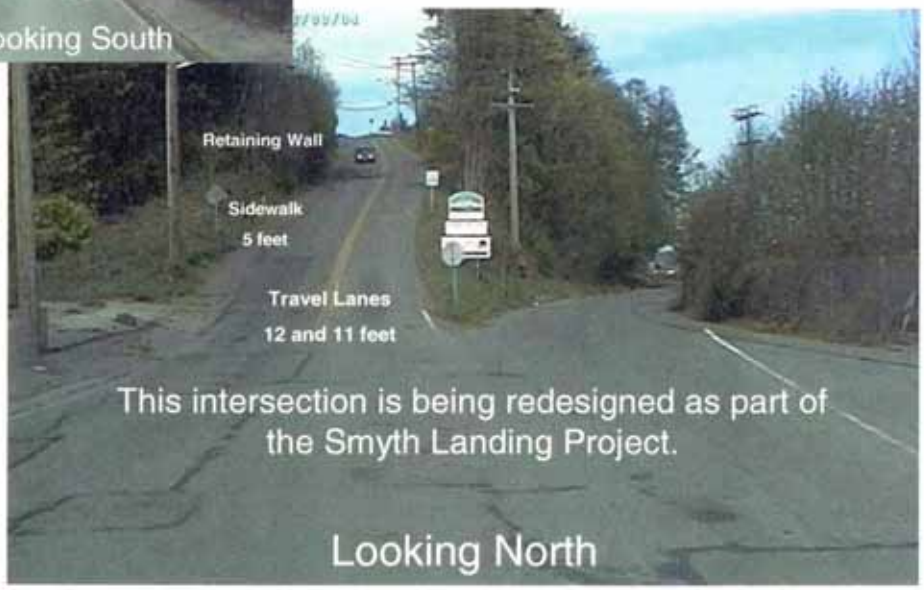
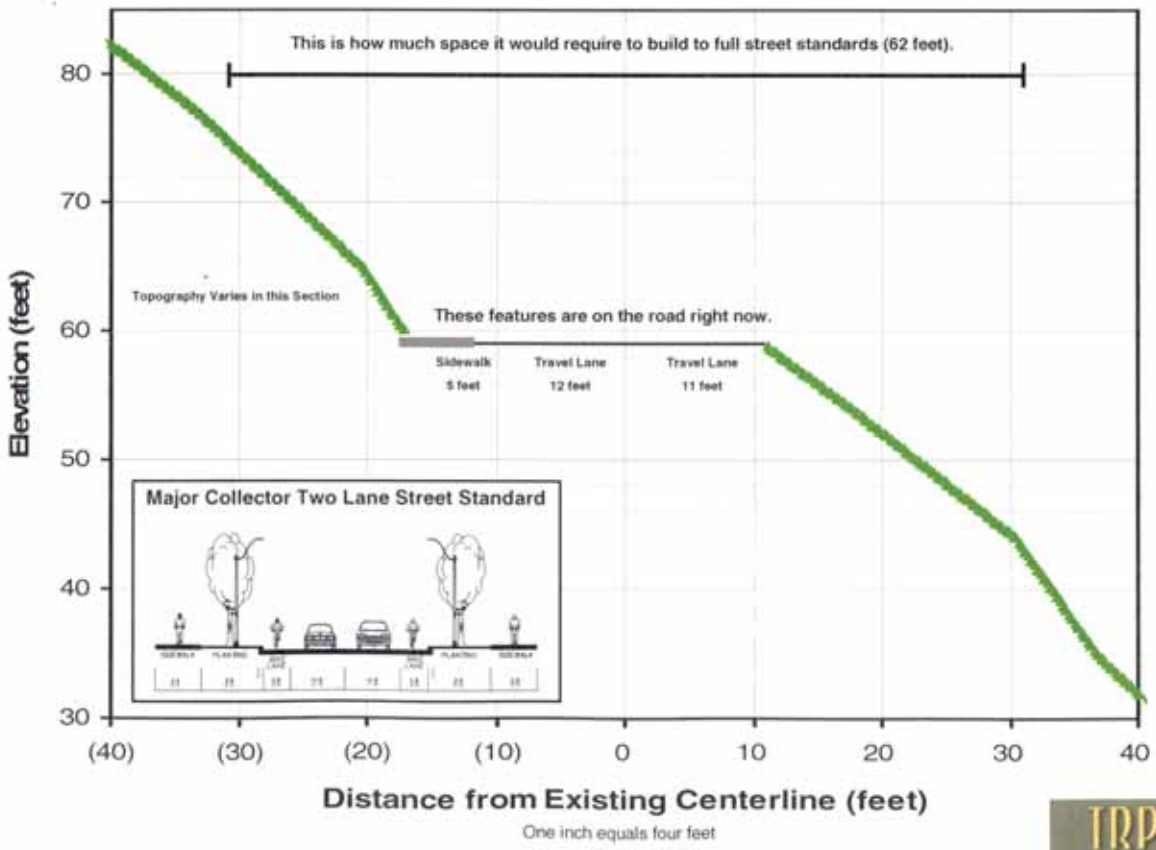
Attachment 23.F

West Bay Drive Road Corridor Study - Section G

Schneider Hill



Typical Street Cross-Section as it Exists Today



One inch equals four feet

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Bicycle Lanes

There was strong (almost unanimous) support for bicycle lanes along West Bay Drive. A few people felt that Class III facilities and an 11-foot travel lane and 3-foot shoulder could work where there was limited space. There was mixed support for bicycle lanes up and down Schneider Hill and out toward the Marina. Only one person suggested using the trail (along the railroad right-of-way when it was close to the street) in lieu of bicycle lanes along the street.

Many attendees stated that bicycle lanes were their TOP priority.

In sections A through E (from the roundabout to the base of Schneider Hill) only one person did not prioritize bicycle lanes as an essential element.

In section F – out toward the Marina - one person suggested building a trail in lieu of sidewalks and bike lanes along both sides of the street.

Due to space limitations and the steepness of Schneider Hill, about half the people who commented prioritized sidewalks over bicycle lanes on the hill, if they were to choose, feeling that a majority of bikers would end up pushing their bikes up the hill anyway.

Summary: Bicycle Lanes are a top priority

Planter Strips

People were divided on whether or not they wanted planter strips along West Bay Drive. Only about half the people who responded felt that planter strips, even reduced in width, were essential. Some of these people felt that they were only essential on the neighborhood side. In section F (base of hill out to the Marina) and G (up Schneider Hill) the majority of people felt that planter strips were not necessary.

About one quarter stated that they would like to see a planter strip if there was room, or a wide sidewalk with street trees as a compromise, but that planter strips should be the lowest priority.

The remaining quarter felt as though planter strips should not be included. Of the people that did not want planter strips, they especially did not want them on the waterfront side of the street where trees may block views. Trees and impedance to views seemed to be the overwhelming reason for not including planter strips even where there might be ample room.

One person suggested replacing the side planter strips with a landscaped median to save room. Others suggested landscaping the adjacent hillsides with bushes or low shrubs in lieu of a planter strip.

Summary:

More than three quarters of the people want full street standards including planters, where it is possible. Planter strips are the lowest priority should full street standards not prove feasible. About a quarter of the people who responded do not want street trees, especially on the waterfront side, even if there is room for planter strips. They feel that it would not be a street enhancement but, rather, a view detriment and the area would be better served with a narrower street.

Vehicle Travel Lanes

Most people felt that vehicle travel lanes were essential on West Bay Drive. One person suggested lowering the width of the vehicle travel lanes to 10-feet. Two people representing the industrial community suggested keeping a lane width of 12-feet rather than reducing it to the 11-foot standard.

Parking

There was mixed support for on-street parking along West Bay Drive. Some people felt that it was essential to support businesses and the existing park. Others felt that it was not an essential feature.

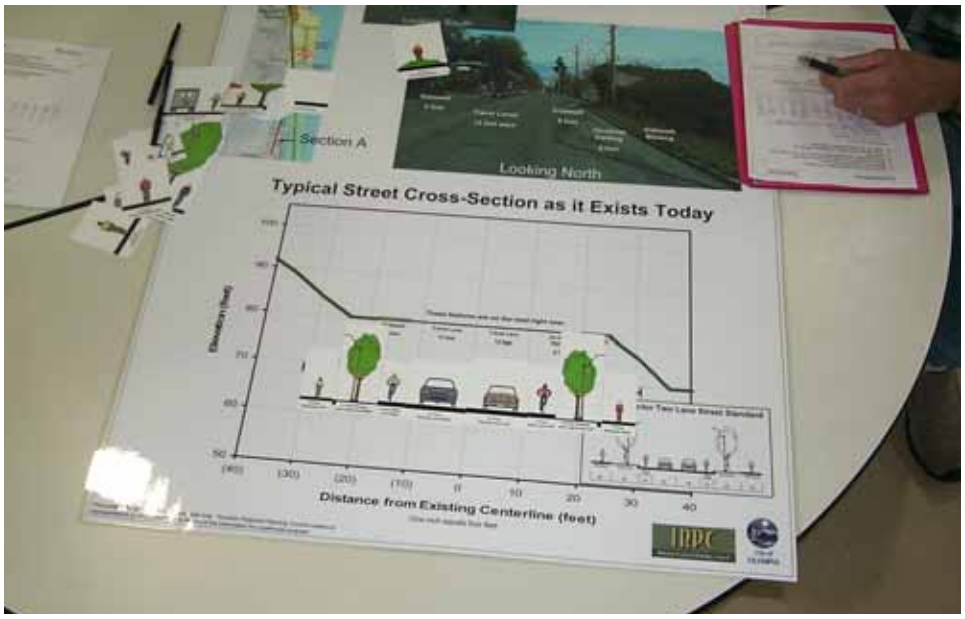
Medians

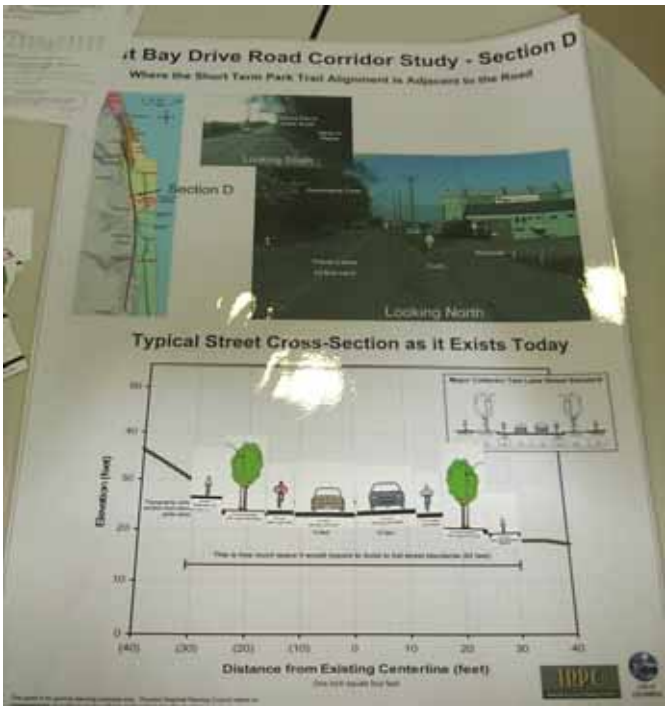
Many people felt that medians or some sort of pedestrian crossing island were important at crosswalks.

Left Turn Lane

Several people felt that a left turn lane was essential at Brawne Avenue.

FIGURE 15: DISCUSSIONS AT DESIGN WORKSHOP.





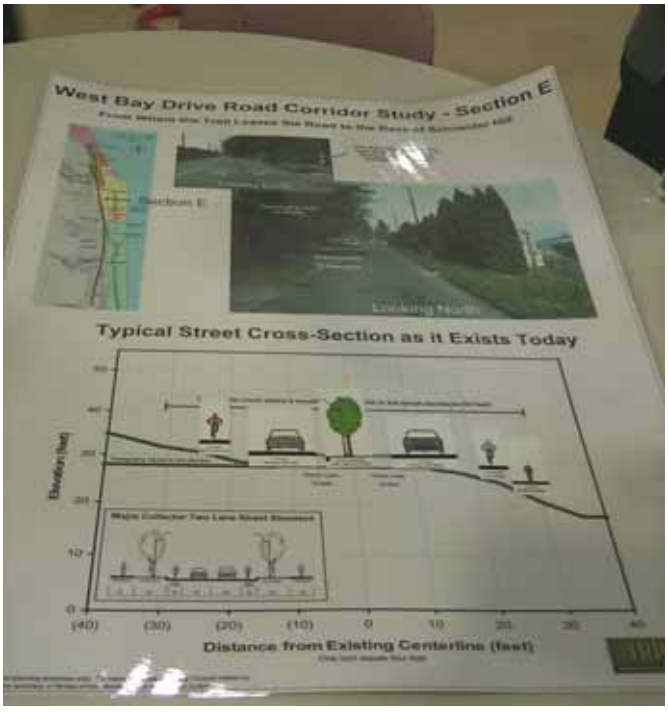


FIGURE 16 (A), (B), AND (C): SOME OF THE IDEAS THAT CAME OUT OF THE DESIGN WORKSHOP. PARTICIPANTS PLACED SCALE CUT-OUTS OF INDIVIDUAL STREET ELEMENTS ON THE WORKSHEET PANELS TO DEVELOP CROSS SECTIONS.

C. Three Alternatives

The ideas gathered at the first workshop were consolidated into three alternatives, representing a variety of choices for the different sections of the street. The alternatives were:

- Alternative A – Existing Street Standards (full street standards, facilities at street level, retaining walls and right-of-way acquisition as required.)
- Alternative B – Minimum Change (facilities at street level, minimum right-of-way acquisition, bicycle lanes and sidewalks throughout corridor, planter strips only where topography is flat.)
- Alternative C – Facilities follow Natural Grade (sidewalks follow natural grade, bicycle lanes at street grade, limited right-of-way acquisition in developed areas, landscape/planter strip likely in redeveloping areas.)

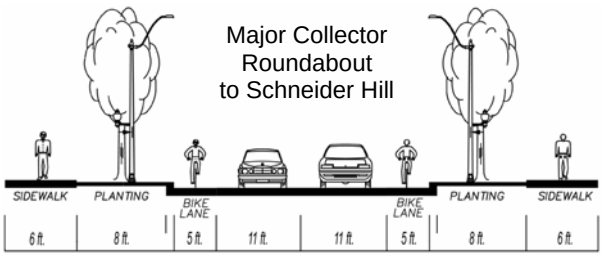
What follows is a detailed overview of the three alternatives, and then a comparison of the three alternatives feature by feature.

In all alternatives:

- Underground utilities
- Provide opportunities for views
- Provide for safe pedestrian crossings (crosswalks and/or pedestrian crossing islands)
- Design street to encourage travel at posted speed limit
- Increase visibility at street and driveways entering West Bay Drive
- Special attention to suitable trees and shrubs for all plantings in the right-of-way or planter strips
- Special attention to lighting and light pollution

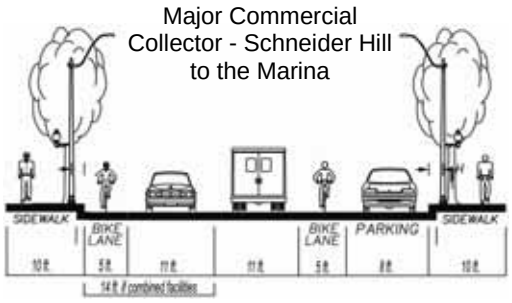
Alternative A: Existing Street Standards

- Full street standards
- Facilities at street level
- Engineering and right-of-way acquisition as required



Public Input:

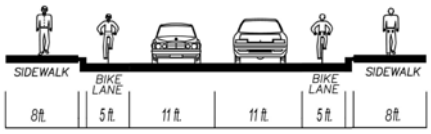
- Full street standards
- No parking



Staff Input:

- No planter strip on Schneider Hill due to physical constraints

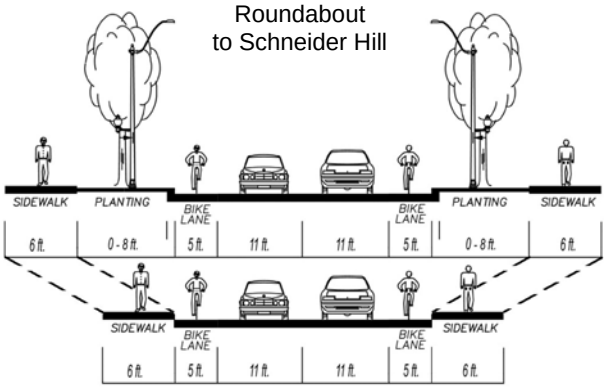
Schneider Hill



- Bike lanes on both sides of the street
- Will require right-of-way acquisition in areas not likely to develop or redevelop; right-of-way can be negotiated in areas being developed or redeveloped
- Large retaining walls will be required in some areas
- Combine sidewalk (street facilities) with park trail where the trail is close to the street (short-term alignment)
- No parking required between Schneider Hill and Marina on neighborhood side (only required on the water side)

Alternative B: Minimum Change

Roundabout to Schneider Hill

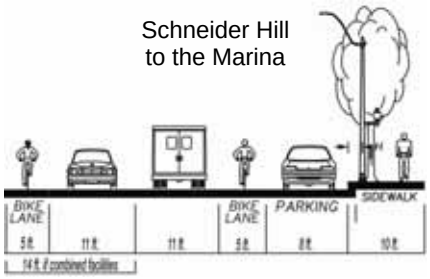


- Facilities at street level
- No large retaining walls
- Minimum right-of-way acquisition

Public Input:

- Sidewalks and bike lanes are top priority
- Full standards are desirable where there is space
- Keep the street profile small wherever possible
- Divided between no parking / parking is necessary
- Planter strips are the lowest priority but provide an important buffer between pedestrians and cars

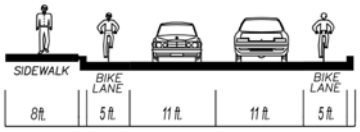
Schneider Hill to the Marina



Staff Input:

- Sidewalks and bike lanes on both sides except Schneider Hill and out to the Marina, where sidewalks will be on one side only
- Park trail comes up to the street (as a wide sidewalk) north of Brawne Avenue to end of Brown-Minnesota Tank (BMT) property

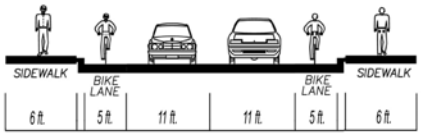
Schneider Hill



- Safer to have pedestrian access in front of BMT than require two crossings (people won't cross and will walk in front of the property anyway)
- May still require retaining walls to get full standards in some places
- Try to keep retaining walls small
- Crosswalks - but no pedestrian crossing islands to save space
- Remove parking on street to make room for bike lanes (near roundabout)
- Right-of-way acquisition in developed areas only where necessary to achieve continuous pedestrian or bicycle facilities

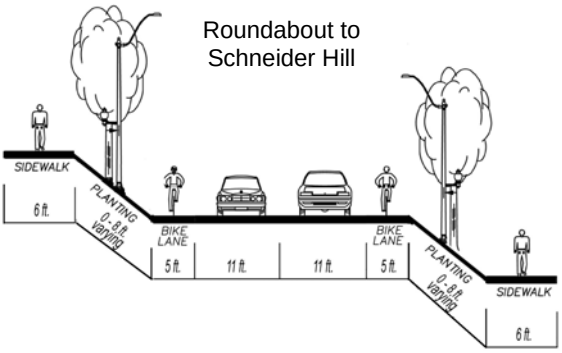
Alternative C: Facilities Follow Natural Grade

Near the Roundabout



- Facilities follow natural grade
- Limited right-of-way acquisition in developed areas
- Full standards more likely in redeveloping areas
- Pedestrian facilities may be placed at a different level than the vehicle travel lanes and bike lanes
- May require engineering – guard rails, retaining walls

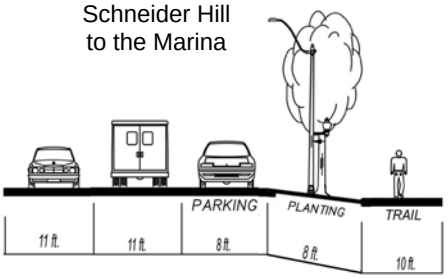
Roundabout to Schneider Hill



Public Input:

- Sidewalks and bike lanes are top priority
- Full standards are desirable where there is space; planter strips are the lowest priority but provide an important buffer between pedestrians and cars
- No parking / parking is necessary
- Design transportation facilities to take advantage of natural grade
- Keep the street profile small where houses already exist (no new right-of-way acquisition in developed areas)
- Integrate trail and street features where possible to save space (duplication)

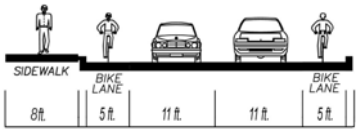
Schneider Hill to the Marina



Staff Input:

- Bike lanes on both sides at vehicle travel lane grade to accommodate commuter travel except out to the Marina where trail replaces sidewalk and bike lanes

Schneider Hill



- Pedestrian facilities on Class I park trail wherever possible
- Safer to have pedestrian access in front of Brown-Minnesota Tank (BMT) than require two crossings (people won't cross and will walk in front of the property anyway)
- Remove parking on street to make room for bike lanes (near roundabout)
- May still require retaining walls and guard rails to get full standards in some places
- Try to keep retaining walls small
- Crosswalks will include pedestrian crossing islands
- Planter strips often replaced by landscaped slope (similar function as buffer between pedestrians and cars)
- Hand rails may be required on pedestrian facilities
- The sidewalk and trail must be far enough away from the street to eliminate road spray
- Sidewalk distance from street must keep safety (lighting) a priority, perhaps a minimum and maximum distance should be set

Comparison of Suggested Street Standard Alternatives

	Alternative A	Alternative B	Alternative C
Brief Description	**Existing Street Standards**	**Facilities at Street Level – Minimum Change**	**Facilities Follow Natural Grade**
General Elements	Underground utilities; provide opportunities for views; encourage travel at posted speed limit; increase visibility at street and driveways entering West Bay Drive; special attention to suitable trees and shrubs for all plantings in right-of-way or planter strips; special attention to lighting and light pollution.		
Crosswalks	At Garfield Avenue; Schneider Trail; Brawne Avenue; proposed Dickinson extension; Proposed Woodard Trail; Bottom of Schneider Hill		
Vehicle Travel Lanes	Two 11-foot travel lanes		
Parking			
Major Collector	Removal of existing on-street parking Parking provided on-site for new parks and any new development		
Major Commercial Collector	On-street – water side only		
Bicycle Facilities			
Roundabout to Schneider Hill	Yes – Class II (5-foot)		
Schneider Hill to Marina	Yes – Class II (5-foot)	Yes – Class II (5-foot)	Yes - Class I (separate trail)
Schneider Hill	Yes – Class II (5-foot)		
Access to Waterfront	Yes – waterfront trail and park		
Pedestrian Crossing Islands at Crosswalks	Yes	No	Yes
Brawne Avenue Intersection	Left turn lane and median	No Change	Left turn lane and median

	Alternative A	Alternative B	Alternative C
Pedestrian Facilities			
Roundabout to Schneider Hill *see below for where trail is close to the street	Yes – 6-foot sidewalk with 8-foot planter strip on both sides	Yes – minimum 5-foot sidewalk where it already exists in areas unlikely to redevelop and very steep (close to roundabout). During redevelopment - minimum 6-foot sidewalk; 6-foot sidewalks with 8-foot planter where topography is less steep. Planter strip will not be added if topography is too steep. 10-foot sidewalk with street trees in places.	Yes – minimum 6-foot sidewalk where it already exists in areas unlikely to redevelop and very steep (close to roundabout). During redevelopment – 6-foot sidewalk follows grade and parallels street. Landscaped slope provides function of planter and varies in width.
Schneider Hill to Marina	Yes – 10-foot sidewalk with street trees both sides	Yes – 10-foot sidewalk with street trees on water side only	Yes – off-street and combined with bicycle path in Class I trail
Schneider Hill	Yes – 8-foot sidewalk beside retaining wall, 6-foot sidewalk water side – no planter or street trees	Yes – 8-foot sidewalk beside retaining wall Path up hillside	Yes – 8-foot sidewalk beside retaining wall Path up hillside
Short-term Trail Configuration (where it parallels street past Brawne Avenue to Hardel Site)	10-foot sidewalk (extra-wide) plus 8-foot planter strip. Trail aligned to follow natural grade and intersect sidewalk past Brawne Avenue.	Trail aligned to come to street level at Brawne Avenue where it turns to 10-foot sidewalk plus pocket vegetation on either side to buffer vehicle traffic and industrial uses.	Sidewalk merges to 10-foot Class I Trail with landscaped slope to buffer from vehicle traffic. Trail aligned to follow natural grade. Sidewalk connection from street to trail at Brawne Avenue.
Engineering			
Handrails	Probably on water side	Probably on water side	Probably on both sides
Guardrails	Not likely	Not likely	Probably
Retaining Walls	Yes	Try to minimize	Yes but smaller
Right-of-way Acquisition	Yes	Less likely but right-of-way deeded during redevelopment	Less likely but right-of-way deeded during redevelopment

D. Planning Level Cost Estimates

Planning level cost estimates for the West Bay Drive corridor are meant to provide a comparison of the *relative* financial cost between various alternatives, as well as highlight where the major differences lie. Planning level cost estimates *do not* include estimates for the reconstruction of Schneider Hill.

The main elements of street construction costs are shown in Table 1. (All figures have been rounded and are reported in 2004 dollars. For West Bay Drive, achieving full street standards (Alternative A) would require quite a large proportion of the overall costs allocated to right-of-way acquisition and building retaining walls. Alternative B, with a smaller street cross-section, would require approximately half the amount of right-of-way acquisition, and have less need for large retaining walls. Alternative C might require more right-of-way acquisition than Alternative A (requiring less near the roundabout, but more in the areas likely to redevelop to achieve appropriate slopes between the sidewalk and roadway.) Alternative C would not require as many large retaining walls as the other alternatives.

TABLE 1: PLANNING LEVEL COST ESTIMATES FOR WEST BAY DRIVE.

	Alternative A	Alternative B	Alternative C
Right-of-Way	$1,325,000	$721,000	$1,407,000
Retaining Walls	$1,512,000	$803,000	$578,000
Handrails	$67,000	$67,000	$57,000
Curb and Sidewalk	$1,037,000	$1,001,000	$1,067,000
Roadway	$1,624,000	$1,600,000	$1,600,000
Stormwater	$363,000	$363,000	$363,000
Landscaping	$568,000	$568,000	$568,000
Street Lights	$336,000	$336,000	$336,000
Underground Utilities	$1,758,000	$1,758,000	$1,758,000
Engineering & Inspection	$2,074,000	$1,641,000	$1,758,000
Total	**$10,664,000**	**$8,859,000**	**$9,491,000**

	Alternative A	Alternative B	Alternative C
Right-of-Way	12%	8%	15%
Retaining Walls	14%	9%	6%
Handrails	1%	1%	1%
Curb and Sidewalk	10%	11%	11%
Roadway	15%	18%	17%
Stormwater	3%	4%	4%
Landscaping	5%	6%	6%
Street Lights	3%	4%	4%
Underground Utilities	16%	20%	19%
Engineering & Inspection	19%	19%	19%
Total	**100%**	**100%**	**100%**

Note: Alternative A- Existing street standards; Alternative B – Minimum change; Alternative C – Facilities follow natural grade.

E. Visualization

The Washington State Department of Transportation, Computer Aided Engineering Office provided Design Visualization products for the corridor study. Using computer enhanced graphics the DesViz team was able to graphically project the street elements of the three alternatives on a photo of current-day conditions. This provided a visual tool to express the differences between the three alternatives.

FIGURE 17: WEST BAY DRIVE CORRIDOR AS IT EXISTS IN 2004.

FIGURE 18: ALTERNATIVE A – FULL STREET STANDARDS.

Note that retaining walls are necessary on both sides of the street where it is steep. Hand rails are also necessary near the pedestrian trail and sidewalk. Trail and sidewalk are combined in front of the industrial site. Landscaping replaces street trees on waterfront side.

FIGURE 19: ALTERNATIVE B – MINIMUM CHANGE.

Sidewalk is brought out to the street where the topography is steep, lessening the need for retaining walls. Handrails are required on the waterfront (right in picture) side of the road.

FIGURE 20: ALTERNATIVE C – FACILITIES AT GRADE.

Sidewalk follows the topographic grade. This reduces the need for retaining walls and may require a landscaped slope. A handrail is required on the neighborhood side (left in picture), and a guard rail on the waterfront side (right in picture).

F. Shoreline Community Corridor Comparison

Recent roadway improvements for Lake Washington Boulevard/Lake Street in Kirkland and Ruston Way in Tacoma were tailored to fit their unique topographic, land use, and transportation conditions. A comparison of these areas with the West Bay Drive Corridor provides insight into different approaches of waterfront street revitalization, and ideas for a preference survey for the second public workshop.

	Ruston Way, Tacoma	**Lake Washington Boulevard, Lake Street, Kirkland**	**West Bay Drive, Olympia**
Constraints	Steep topography; mainline and spur railroad parallels road; limited area on waterfront side.	Moderate to steep topography; existing residential, commercial and industrial development; limited area on waterfront side.	Steep topography, existing residential development and limited right-of-way; limited area on waterfront side; abandoned railroad line close to roadway.
Prior to Redevelopment			
Vehicle Access	Two-lane roadway heavily traveled with commuter traffic, poorly defined waterfront edge.	Four-lane roadway and two lane roadway heavily traveled.	Two-lane roadway moderately traveled.
Parking	No established parking areas. Vehicles often park in the bicycle lane.	Along two-lane roadway.	In places along the roadway.
Bicycle Facilities	Off street bicycle lane often used by smaller vehicles.	No separate bicycle facilities.	No separate bicycle facilities.
Pedestrian Facilities	No sidewalks. Pedestrians travel in right-of-way or on bicycle path.	Sidewalks in places along roadway. No separation of sidewalks and roadway (planter strips).	Sidewalks in places along roadway. No separation of sidewalks and roadway (planter strips).
Pedestrian Access	Access to beach difficult due to large rubble.	Access to lake difficult.	Access to waterfront difficult and only across private property.

	Ruston Way, Tacoma	Lake Washington Boulevard, Lake Street, Kirkland Town Center
After Redevelopment		
Vehicle Access	Two-lane roadway with well defined edges.	Four lane section reduced to three to make room for bicycle facilities. Two lane section remains the same.
Parking	Pocket parking all along corridor providing access to parks and waterfront.	On street parking near city center.
Bicycle Facilities	Along a multi-use trail paralleling the street - commuter traffic must share roadway with vehicles.	Street level bicycle facilities approaching city center - replaced by parking near city center.
Pedestrian Facilities	Crosswalks; multi-use pedestrian trail paralleling roadway.	Crosswalks; sidewalks along roadway. Street trees in sidewalks in some areas; limited areas of planter strips separating sidewalks with roadway as areas redevelop.
Pedestrian Access	Access to beach at many areas; well developed park system.	Access to lake at intervals through pocket parks and public trails (dawn to dusk access).

Ruston Way, Tacoma

Topography is steep, with mainline railroad limiting development to the east, and the shoreline close to the roadway on the west (photo taken looking south). Roadway has well defined edges (curbs). Parking is off-street in small pockets. Trail parallels the roadway.

Multi-use trail parallels the roadway for pedestrian and bicycle use. Trail is offset from roadway with a planter strip of varying width and does not follow road grade.

Commuter bicyclists must share roadway with vehicles. Beach is accessible.

Pedestrian crossings and non-landscaped median to link pocket parking to commercial activities.
Trail runs along the road and is separated from roadway with a planter strip.

Trail parallels roadway and is separated with a planter strip of varying width.

FIGURE 21 (A), (B), (C), AND (D): RUSTON WAY, TACOMA.

Lake Washington Boulevard/Lake Street, Kirkland

Topography is moderately steep, with existing development limiting expansion. Roadway has well defined edges (curbs). Parking is on-street near the city center. Street trees provide a buffer between pedestrians and roadway in some sections.

Bicycle lane replaces on-street parking on Lake Washington Boulevard. Planter strips are added as areas redevelop. Transit shelters are provided. Center turn lane keeps traffic moving with the overall reduction in travel lanes (from four to three) to provide for bicycle lanes without additional right-of-way.

Crosswalks and pedestrian medians are provided to protect pedestrians from vehicle traffic.

Access to lake is provided by pocket parks and public pathways. Views are retained at several locations along the roadway.

FIGURE 22 (A), (B), (C), AND (D): LAKE WASHINGTON BLVD./LAKE STREET, KIRKLAND.

G. Public Workshop Two

The second public workshop was designed both to determine if there was a clear preference for one alternative over the others, and to gather specific input on several of the variables in the alternatives such as the retaining walls, planter strips, and relationship of the sidewalk to the road.

Approximately 45 people attended the workshop.

30-35 attendees participated in the small group discussions. Four small groups were formed: PURPLE, ORANGE, GOLDENROD, AND GREEN. Results differed among the groups due to the various backgrounds of participants (planning commission members, neighborhood association board members, bicycle and pedestrian advisory committee members) and general public and users of the facility in each group.

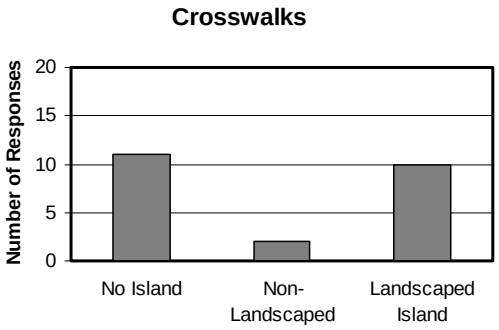
Preference Survey

Participants were asked to choose between two or three options for select features along the road. Questions were designed to solicit input for features such as the relationship of the sidewalk to the street (location and level), compromises between planter strips and retaining walls, and other features. Participants could choose none, one, or all of the options.

Crosswalks

The main issues on crosswalks were:

- Width - (some people didn't want the street widened at all),
- Safety (which one is the safest – wanted to see studies on safety),
- In-pavement lighting may give a false sense of security,
- Visibility (would the landscaping decrease visibility),
- Could be used as traffic calming, and
- Disruption to vehicle travel lanes (deflection to go around landscaped areas or islands).



All participants were in favor of safe pedestrian crossings but how to accomplish this was a source of debate.

West Bay Drive Corridor Study

Attachment 23.F

Facility Options

1 Crosswalks – which do you like the best?

Option X

Option Y

Option Z

2 Parking – on-street or on the site?

Option X

Option Y

3 Sidewalk – next to street or offset on trail (with biking)?

Option X

Option Y

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West Bay Drive Corridor Study

Attachment 23.F

Slope Treatments

4 Size of retaining wall – what size fits best for West Bay Drive?

Option X

Option Y

5 Build a higher retaining wall and have a planter strip – or or drop the planter strip where it gets too steep?

Option X

Option Y

6 Sidewalk by the street or on a separate level?

Option X

Option Y

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West Bay Drive Corridor Study

Attachment 23.F

Where would YOU put in planter strips (8 feet) ?

Where properties are redeveloping and topography varies

7

Flatter

8

Steeper

Where properties are redeveloping, topography varies and sidewalks exist

9

Flatter

10

Steeper

Houses there already, steeper topography, and sidewalks exist

11

12

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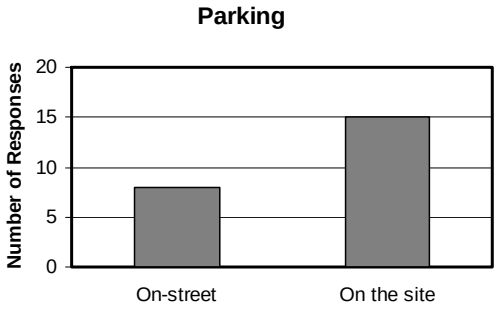
Parking



Parking is an issue between the roundabout at the base of Harrison Hill to the area just south of Garfield trail, where on-street parking currently exists. Parking is on the waterfront side of the street in this section and serves the homes on the neighborhood side as well as the homes and businesses on the waterfront side of the street for overflow and guest parking. Parking is not a component of the street standards for West Bay Drive and can be removed if the room is needed for other transportation facilities, as stated in the Olympia Comprehensive Plan.

The residents and commercial property owners are strongly in favor of keeping the on-street parking where it currently exists. Other users of the corridor are in favor of keeping parking on-site rather than on the street for two reasons:

- space,
- the opinion that the public should not subsidize parking for private individuals.

Position of Sidewalk

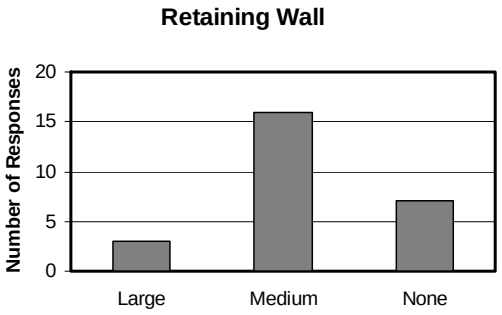
Next to the street or combined with the trail?

One of the major issues on this corridor is whether or not the proposed trail can accommodate some of the facilities that are generally found at street level. Photos offered an option of combining bicycle and pedestrian facilities on a trail offset from the street by a vegetated area, versus the convention configuration of the sidewalk and bicycle lanes at street level. Opinions were split about which was a more favorable option, although no one seemed strongly against either option. The safety of mixing bikes and pedestrians was one of the major reasons mentioned for not combining the sidewalk with the trail. Another reason was the access number and location of access points from the street to the trails. Bus stops and ADA accessibility also came up as issues with having the sidewalk at a different level than the roadway.

There was a general sense that this type of configuration might be more appropriate on the section of street between the base of Schneider Hill and the Marina.

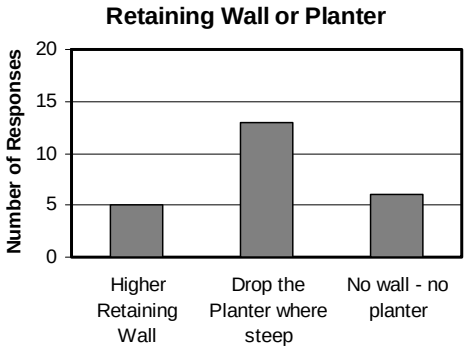
Retaining Walls

Given the option of high- or medium-sized retaining walls, very few participants were in favor of large retaining walls. While many participants favored a smaller retaining wall, quite a few wrote in that they didn't want to see any retaining walls or planter strips along West Bay Drive. Some people did acknowledge that there might be a need for retaining walls even without a planter strip due to the steep topography in the area.



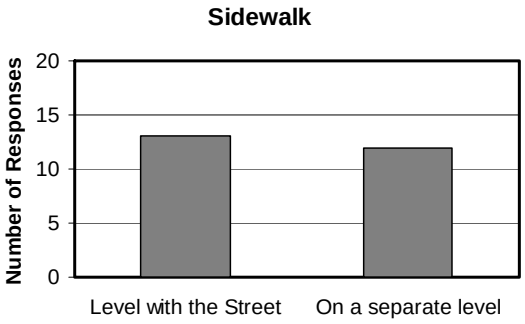
Retaining Wall or Planter Strip

Given the option of a higher retaining wall to fit in a planter strip, or removal of the planter strip and a lower retaining wall, more participants chose to make the width of the planter variable so that the need for high retaining walls would be lessened. Many others also responded that they don't want to see any retaining walls or planter strips along West Bay Drive, because of space, blockage of views, and maintenance. Many property owners felt that they couldn't support any "taking" of land to make room for planter strips, but where space allows, planter strips without trees could be included.



Sidewalk follows Topography

One of the innovative ideas coming out of Workshop One was to use the natural grade to place the street facilities. At Workshop Two participants were split almost evenly about whether they preferred the sidewalk at street level or following grade.



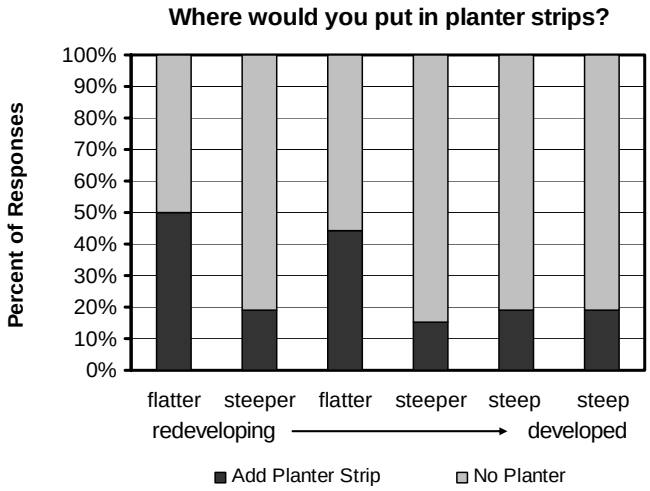
Reasons for keeping it at street level included:

- less space (by dropping the landscaped slope) and
- safety, especially lighting during the evening.

Planter Strips

One of the main differences between the three suggested alternatives for West Bay Drive was the location and extent of planter strips. A panel of the preference survey was designed to determine how participants felt about planter strips. Participants were shown a variety of photos that ranged from undeveloped and redeveloping areas with both flat and steep topography, to fully developed areas with steep topography, and asked the question:

Where would you put in planter strips (8 feet?)



Again, the response varied by group. In some groups every single participant wrote down that they did not want to see planter strips in any section of the road.

Overall there was weak support for planter strips even in the areas where properties were redeveloping and the topography was flat. Reasons cited for not wanting planter strips included:

- space,
- concern that trees would block views,
- maintenance,
- and the "taking" of private property.

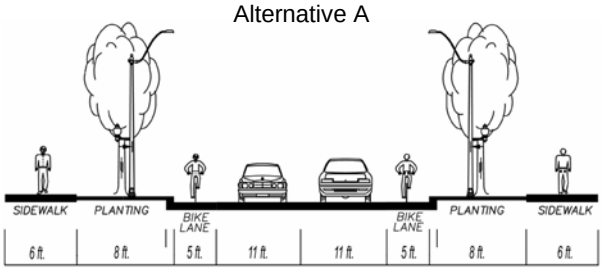
Some participants wrote that they specifically didn't want to see any private property given or taken by the city to create planter strips, and that perhaps the function of making the street more beautiful could be accomplished by private individuals landscaping their front lawns. Some individuals could not consider planter strips without thinking about trees blocking views.

At the first workshop people were divided on whether or not they wanted planter strips, but there was more support for planter strips at the first workshop than the second. In general, people who owned property along West Bay Drive were strongly against planter strips being placed in the corridor, while those from the adjacent neighborhoods who anticipated walking or biking the corridor were in favor of planter strips where there was space. A few individuals felt that planter strips should be placed in all sections of the corridor regardless of topography or existing development.

Opinions on the Three Alternatives

Near the Roundabout

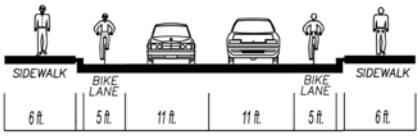
Alternative A



This is the tightest section of the roadway, with homes on the neighborhood side of the street and businesses and condominiums on the waterfront side. There are already sidewalks and large retaining walls on both sides. Many residents who lived along this section of the street attended the meeting.

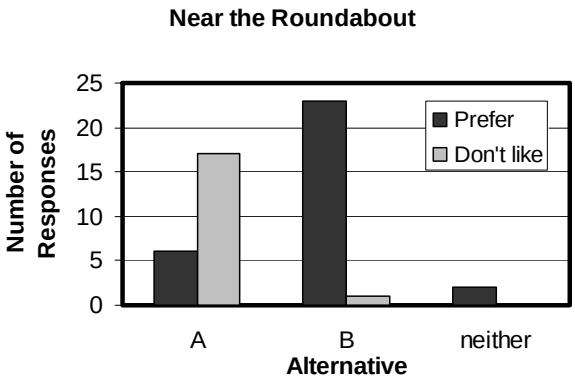
Alternative A was full street standards. This would require right-of-way acquisition and perhaps make existing driveways so steep that some properties would become unusable. Alternatives B and C were identical and suggested removing the existing parking to make room for bicycle lanes and not expanding the street profile (no new right-of-way acquisition.)

Alternative B (same as C)



Preference

There was a preference by most of the attendees for Alternative B in this section. But in many cases there was only a slight preference, and neither alternative ranked well.



The main support for Alternative A was that it provided a buffer (planter strip) between pedestrians and cars. There was a general opinion that the buffer should not contain large, view-blocking trees and take away from the natural amenity of the area.

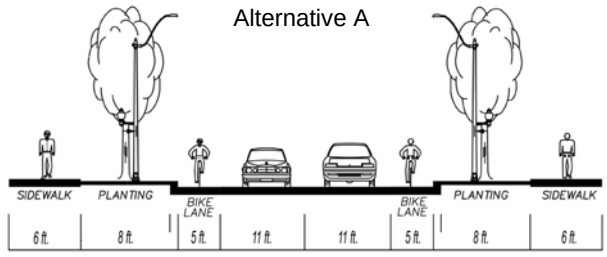
Negative Reaction

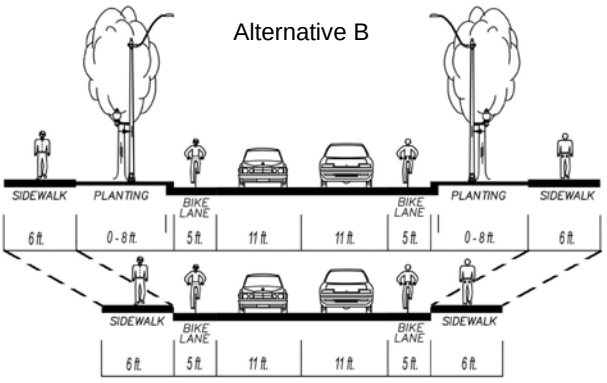
Alternative A evoked a strong negative reaction from many participants.

The main objection to Alternative B was the removal of on-street parking. Residents expressed the opinion that they liked the roadway the way it was and some chose neither alternative.

Roundabout to Schneider Hill

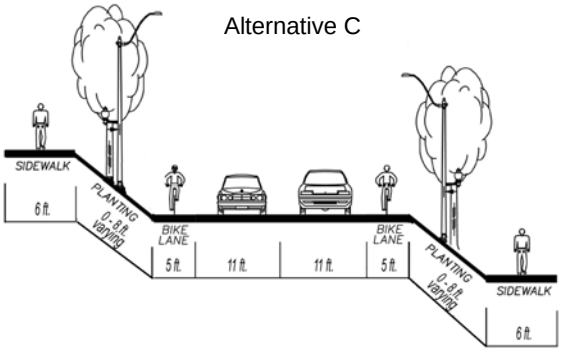
This is the main section of West Bay Drive. Moving away from the roundabout where the properties are developed on both sides, the area changes to a pattern of vacant residential lots, natural areas along the stream corridors, and abandoned industrial areas along the waterfront. This area has great potential for development and redevelopment and is expected to change in the near future.





Alternative A is full street standards.

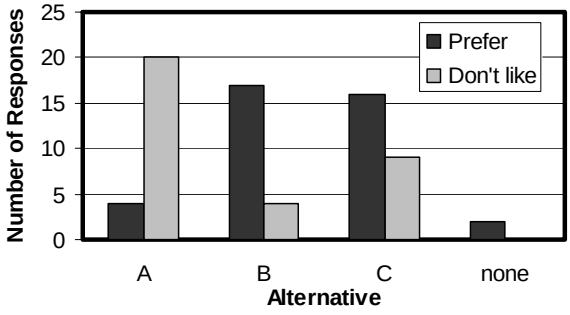
Alternative B varies the standards by making the planter strip optional in areas where it is quite steep. This should lessen the need for retaining walls.



Alternative C suggests building the street facilities at the natural grade. This might require more right-of-way than A and B if there was an effort to place the sidewalk along the railroad track grade. It would require fewer large retaining walls and they could be staggered, but would require handrails and guard rails in places.

Preference

Roundabout to Schneider Hill



There was a split in preference between Alternatives B and C. One reason for choosing Alternative B was that it allowed for the elimination of the planter. Some participants would have rather seen the planter removed completely.

Alternative C was seen as a more innovative idea and some participants felt that it was an appropriate alternative along the waterfront. Some participants suggested combining elements of B and C to make them more desirable.

Negative Reaction

Overall, Alternative A gathered the most negative reaction from participants. The one-size-fits-all approach was considered inappropriate for this corridor.

Some participants were opposed to Alternative B was because they felt that the street profile was still too wide and they have liked to see the bicycle lanes removed with sidewalks only on one side of the roadway. Others reacted negatively to the idea of planter strips anywhere along the corridor.

Negative reactions to Alternative C were also focused on the room required to accommodate all the features in this alternative. Other comments included concerns regarding lighting, transitions, and distance of the pedestrians from the roadway.

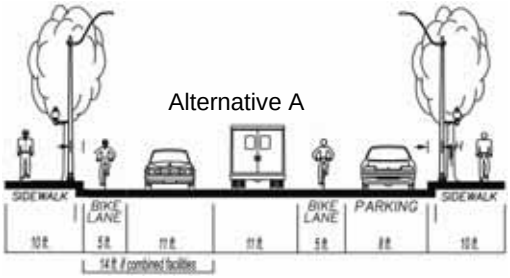
Schneider Hill to the Marina

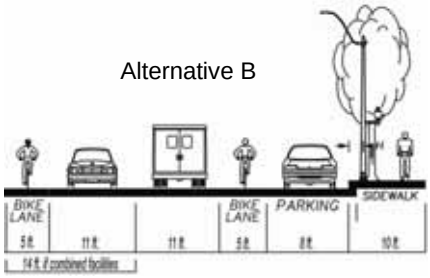
This section of the roadway is classified as a major commercial collector in Olympia's Comprehensive Plan.

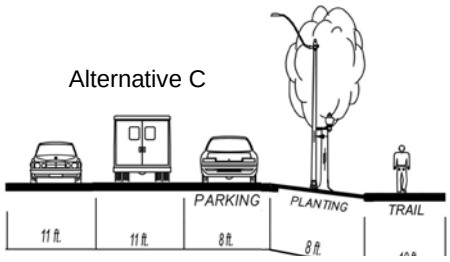
This section of street is in poor condition. The railroad runs through the street in sections, making right-of-way issues very confusing. On the neighborhood side of the street it will remain undeveloped due to steep slopes and natural springs coming through the hillside. Development and redevelopment will occur along the waterfront side of the road.

Alternative A, the full street standards, calls for parking, bicycle lanes, and 10-foot wide sidewalks with street trees.

Alternative B would only call for a sidewalk along the waterfront side of the road.





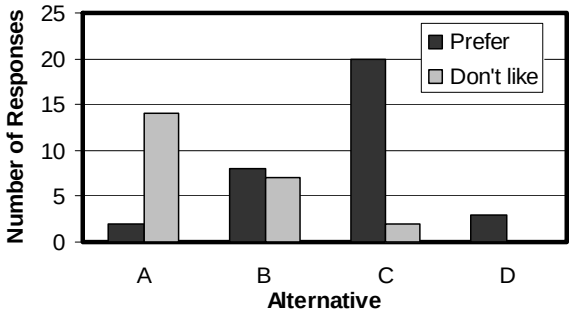


Schneider Hill to the Marina

Alternative C would combine the bicycle and pedestrian facilities along a 10-foot trail, separated from the vehicle travel lanes by a landscaped area.

Preference

Participants preferred Alternative C over the other alternatives, feeling that a trail would be the safest alternative for pedestrian travel.



Alternative B received some support as well. One group came up with their own Alternative – D – which was similar to Alternative C but removed the on-street parking. This group reached consensus on this new alternative in their discussions, but their input sheets didn't reflect this for all participants.

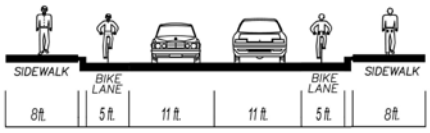
Dislike

Alternative A evoked the strongest negative reaction from participants. Many felt that it was too wide for the roadway and that sidewalks were not necessary on both sides of the road.

Schneider Hill

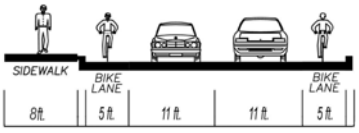
Schneider Hill is a small section of roadway leading from West Bay Drive into the Crestline Neighborhood. It is currently cut into a steep slope with a retaining wall on the neighborhood side, and a steep slope on the waterfront side. Right now the roadway has a sidewalk on one side of the street and two 12-foot vehicle travel lanes.

Alternative A



Alternative A departs from full street standards by removing the planter strips on both sides of the road. On the neighborhood side beside the large retaining wall, the sidewalk would be widened to 8 feet.

Alternative B (same as C)

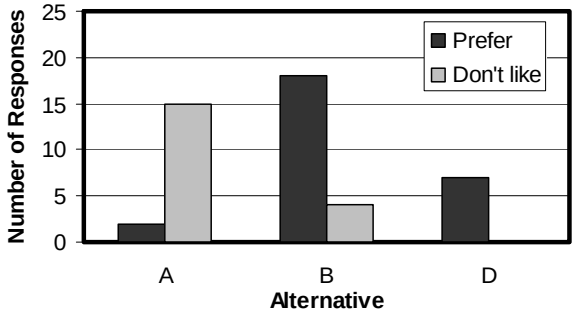


Alternatives B and C are identical to each other and suggest having a sidewalk only on the neighborhood side of the road. A cantilever bridge would not be required for these alternatives.

Preference

Participants showed a strong preference for Alternative B. One group suggested their own Alternative – D – which involved having only an uphill bicycle lane. This is inconsistent with city policy to keep bicycle lanes on both sides of the road.

Schneider Hill



Dislike

Many participants did not like Alternative A feeling that the cost did not justify the benefit of having a sidewalk on both sides of the road, and that widening the street profile was not desirable.

Trail and Street Interaction

Only three of the small groups provided input on this aspect of the study.

The proposed parks/waterfront trail is anticipated to start at the 5th Avenue Bridge/Deschutes Parkway, and run to the base of Schneider Hill. Wherever possible this trail will follow the waterfront, but in one section of land the trail will be very close to the roadway. This section runs from approximately Brawne Avenue to the northern end of the last remaining industrial site on this section of the roadway – the Brown-Minneapolis Tank (BMT) property. The trail could follow the railroad right-of-way and grade through much of this section.

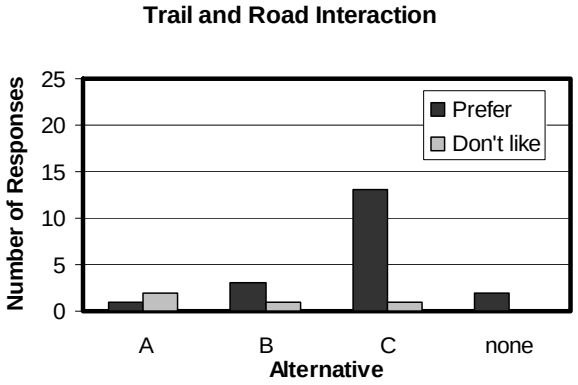
Alternative A suggests keeping the trail and sidewalk facilities separate for as much of the length of the trail as possible. The only place where they would be combined would be in front of BMT until the property redeveloped and a waterfront trail in front of this site was possible. The sidewalk would be widened to 10 feet at this section to accommodate trail users. Leading up to this section, a 6-foot sidewalk would be along the road, and the trail would come up to the street following natural grade along the railway right-of-way.

Alternative B suggests having the trail depart from natural grade and come up to the street at Brawne Avenue where there would be a crosswalk. From this point north there would be a 10-foot wide sidewalk until the edge of the BMT property, where the trail would then swing back to the waterfront and the sidewalk would continue along the road.

Alternative C suggests having the sidewalk depart from the street grade and meander down to the trail as soon as it was possible, probably somewhere around Brawne Avenue. The pedestrian facilities would be combined along a trail facility until north of BMT where the trail would swing back to the waterfront and the sidewalk would continue to parallel the street at a natural grade.

Preference

The participants showed a preference for Alternative C where the trail would replace on-street pedestrian facilities wherever possible.



Dislike

There didn't appear to be a strong negative reaction to any of the Alternatives.

Summary from the Small Groups

Group One

The group felt that the section by the roundabout is a constriction point in the corridor, and it makes widening complicated.

In the next section of the road, out to Schneider Hill, they felt that perhaps a combination of Alternatives B and C would be appropriate.

In the section between the base of Schneider Hill and the Marina the group expressed concern about safety and the conflict between pedestrians and bicyclists if the facilities were combined, but liked the concept.

On Schneider Hill space was the main concern. The group also expressed the opinion that they were leaning towards seeing shrubs in the landscaping rather than street trees to preserve views.

Group Two

This group felt that the area adjacent to the roundabout was also an area of concern and that Alternative B (identical to C) might be appropriate because it would take up less space and not require widening the road. If planter strips were not possible in this area, perhaps the adjacent landscaping could be used.

For the main section of the street out to the base of Schneider Hill this group preferred Alternative A, but felt that B would take up less space, and that C would gain views, separate pedestrians from traffic, and give the area an unique feel.

From the base of Schneider Hill to the Marina this group also expressed concern with the conflict between bicycles and pedestrians if they used a multipurpose trail. They also felt that shrubs would be a better landscaping choice than trees and they questioned whether parking was necessary in this section of the road.

On Schneider Hill, this group felt that they didn't necessarily need to see a planter strip on the water side. Sidewalks would be helpful on both sides of the road, but it would be okay, if necessary, to have them only on one side of the road. This group raised questions about dropping a bike lane on the downhill side of the road.

Group Three

This group felt that near the roundabout, where people live, variations to the street standards may be warranted. They strongly questioned the loss of parking in this section, and countered this with the idea that the public should not provide on-street parking for a private developer. They felt that 8-foot planters would not fit in this area as there was

limited space, although full standards were desirable. They also felt that the section is too tight, as it exists now, to accommodate ADA accessible bus stops.

From the roundabout to Schneider Hill, this group felt that the railroad grade might work for Alternative C, but this alternative would be expensive and require a lot of space in other areas. They discussed parking, on-street or on site, and the concern over guest parking for residents. They discussed varying the width of the planter and how that would make the street feel.

This group reached consensus on the section of the street between the base of Schneider Hill to the Marina. They came up with Alternative D – two 12-foot vehicle travel lanes, an 8-foot landscaped strip on the water side, and a multi-purpose trail. This was a variation on Alternative C which removed the parking strip and added one foot to each of the vehicle travel lanes.

This group also reached consensus on Schneider Hill, coming up with their own Alterative again. This was a variation on Alternative B that suggested dropping the downhill bicycle lane.

Group Four

This group reached consensus that they didn't want to see planter strips along the corridor. Near the roundabout they preferred Alternative B, but were concerned about the loss of parking.

From the roundabout to Schneider Hill this group preferred alternative B, without the planter strips, and a minority preferred Alternative C.

This group preferred alternative C for the section of street out to the Marina. They felt that it was wouldn't require much street widening, and provided some buffer between the trail and road.

On Schneider Hill they also preferred Alternative B as it required less street widening than the other option.

Summary

There was a general recognition among participants that West Bay Drive did have unique topographic and development considerations that made it appropriate to re-examine the street standards. Staff were encouraged to be creative when coming up with a preferred alternative, but to retain the function of the full street standards.

While some participants like the street the way it is and didn't want to see any change, others seemed to welcome the idea that the street would become safer and more pedestrian and bicycle friendly over time. Property owners in particular were concerned with the taking of their land – that their driveways would become too steep or that their front lawns would be removed for street widening.

The main issues that concerned participants, with some participants being in favor and others against, were the removal of existing on-street parking to make room for bicycle lanes near the roundabouts, and the addition of planting strips and landscaping (trees versus shrubs).

FIGURE 26 (A) AND (B): SMALL GROUP DISCUSSIONS AT WORKSHOP TWO.

V. PREFERRED ALTERNATIVE

The input gathered from the first and second public workshops, as well as other comments received from the public through phone calls, letters, and email, led to the development of a preferred alternative. This alternative is best described as having features of all three alternatives presented at the second workshop. What follows is a detailed description of the preferred alternative as it applies to the various sections of West Bay Drive. Map 1 (in back) provides a plan view of the preferred alternative.

A. Detailed Description

Throughout the Corridor:

- Sidewalks and bicycle lanes along both sides of the length of the street
- Combining the trail and sidewalk *north of Brawne Avenue on the Port Property (future park)*
- Planter strips on the west side of the street, only where topography isn't a constraint
- Sidewalk on the east side of the street, north of Brawne Avenue, separated by a landscaped strip, and built to follow the natural terrain
- Landscaping in the planter strips on the east side of the street that does not obstruct views
- Pedestrian crossing improvements at Brawne Avenue, the Garfield Trail, and the proposed Woodard Neighborhood Connection
- Providing opportunities for views – with an emphasis on views from the street and sidewalk
- Providing public benches on the waterfront side of the street
- Design street to encourage travel at posted speed limit
    - Standard vehicle lane widths (11-feet)
    - Raised pedestrian crossing islands
    - Landscaping
- Increase visibility at street and driveways entering West Bay Drive
    - Reconfiguration of Brawne Avenue and Schneider Hill intersections
    - Alignment of future park entrance with Brawne Avenue
- Underground utilities
- Special attention to lighting and light pollution
- Signage to give West Bay Drive a sense of place
- Designing the street so that it doesn't preclude fixed route transit in the future
- *Pervious sidewalks*
- *Evaluating potential for pervious bicycle lanes*
- *Evaluating potential for rain gardens for stormwater treatment*

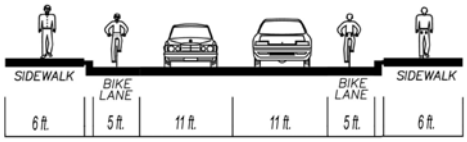
Note: Features in italics were added based on input gathered at Workshop Three.

Near the Roundabout

West Side of the Street:
Harrison Avenue to Brawne Avenue intersection

& Waterfront Side of the Street:
Harrison Avenue to beginning of proposed park property (former site of Solid Wood)

half street - 22 feet



Note: measurements do not include right-of-way behind sidewalk

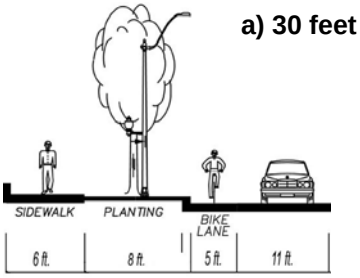
- This area is both developed and steep, therefore no widening is recommended. (Widening in this area would make the steep driveways much steeper and possibly unusable.)
- To make room for the bicycle lanes, the existing on-street parking would be removed. This change will require re-striping of the street rather than construction. (The only way to have *both* bicycle lanes and on-street parking is to widen the street.)
- To give residents other options for parking for guests and during inclement weather, pocket parking is recommended for the area just north of where the existing sidewalk ends today. In this area it is possible to get bicycle lanes and parking without building high retaining walls or impacting any existing businesses or residences. Parking on Sherman Street is also available.
- The missing sections of sidewalk would be added, as would any necessary repairs to existing sidewalks. If possible, an additional 1-foot of sidewalk would be added on the waterfront side to bring it up to the standard of 6-feet. These changes would likely occur as the utilities were placed underground or the road-bed repaired.
- *If this area does redevelop, the potential for planter strips should be evaluated with similar criteria as those in the "West Side of the Street – North of Brawne Avenue" section.*

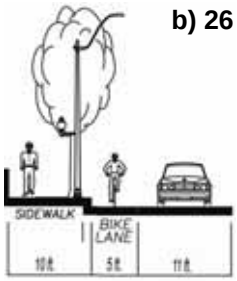
West Side of the Street – North of Brawne Avenue

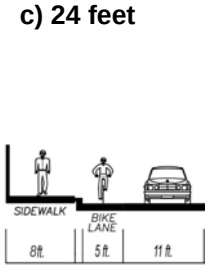
- This section of the street is characterized by steep hillsides alternating with areas of flatter topography. There are sections of existing sidewalks toward the south and other areas with full street improvements, or that will soon have full street improvements, to the north. The flatter parcels are likely to see development or redevelopment in the near future. The steeper areas are less likely to develop or redevelop. Some properties are on the historic register.
- To keep the bicycle network continuous, bicycle lanes will be placed adjacent to the vehicle travel lanes.
- For pedestrian safety, sidewalks (minimum 6-feet) will be added.
- In some areas, retaining walls will likely be needed. In order to minimize the height of the retaining walls, there are three recommended variations on the street improvements which all relate to the width of the landscape strip. The optimum is to keep the retaining walls 3-feet or less in height because this is the threshold where retaining walls begin to require more structured engineering. Smaller retaining walls will also make for a more pleasant pedestrian experience.

  a) Flat slope - retaining wall less than 3-feet – 6-foot sidewalk with 8-foot landscape strip between the sidewalk and bicycle lane.
  b) Moderate slope - retaining wall approximately 3-feet – no separate landscape strip but 10-foot sidewalk with street trees.
  c) Steep slope - retaining wall greater than 3-feet – no landscape strip but an 8-foot sidewalk to provide additional space for pedestrians walking adjacent to the retaining wall.

- These requirements are felt to be the minimum acceptable standards that provide safe vehicle, pedestrian, and bicycle facilities while taking into account the unique requirements of the steep topography in places along the street.
- As areas redevelop, full right-of-way (for full street standards) will be dedicated to the city. This will ensure that the "best engineering solution" be applied to the area, and allow for landscaping behind the sidewalk in areas of steep topography.







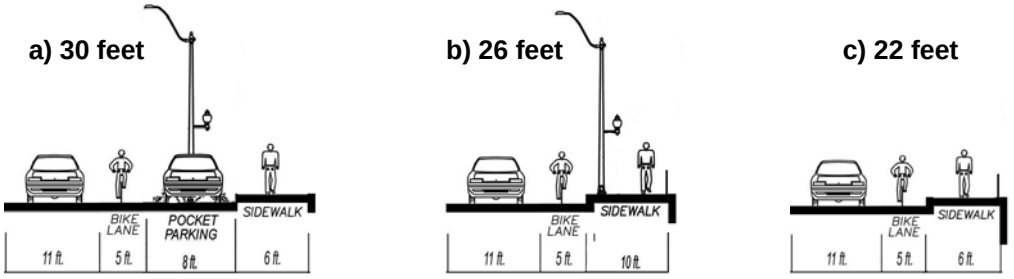
Waterfront

Waterfront: North of 414 West Bay Drive to Garfield Trail

- This area is part of the frontage for the proposed West Bay Park.
- Parts of this area have great potential for panoramic views of downtown Olympia; benches are recommended.
- To keep the bicycle network continuous, bicycle lanes will be placed adjacent to the vehicle travel lanes.
- To accommodate the loss of parking in the section of the street to the south, pocket parking will be added if it can be achieved without requiring a retaining wall greater than 3-feet in height. Parking will be broken up or non-continuous using bulb-out type landscaping to keep the street profile small and encourage slower vehicle speeds. It will replace the landscape strip.
- In parts of this section retaining walls will likely be needed. In order to minimize the height of the retaining walls, there are three recommended variations on street improvements recommended, which all relate to the width of the landscape strip. The optimum is to keep the retaining walls 3-feet or less in height because this is the threshold where retaining walls begin to require more structured engineering.

  a) Flat slope - retaining wall less than 3-feet – 8-foot pocket parking with landscape bulb-outs between the sidewalk and bicycle lane.
  b) Moderate slope - retaining wall approximately 3-feet – no separate landscape strip but 10-foot sidewalk with street trees.
  c) Steep slope - retaining wall greater than 3-feet – no landscape or pocket parking strip.

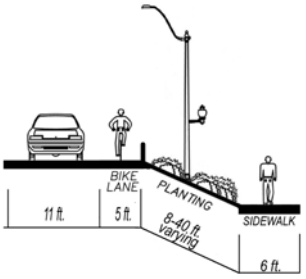
- To provide safety for pedestrians a handrail will be required wherever there is a retaining wall (drop off) next to the sidewalk or if the slope is greater than a 2:1 (horizontal to vertical) grade.



Waterfront: Garfield Trail to Brawne Avenue Intersection

- This area is part of the frontage for the proposed West Bay Park.
- This area has a great potential for panoramic views of downtown Olympia; benches are recommended.
- To keep the bicycle network continuous, the bicycle lanes will remain next to the vehicle travel lanes.
- To preserve flexibility for future park design, sidewalks can be either at street level or down slope slightly.
- Sidewalks will be a minimum of 6-feet wide.
- The landscape strip will be a minimum of 8 horizontal feet if the sidewalk is below grade.
- To provide safety for pedestrians a handrail will be required if there is a retaining wall (drop off) next to the sidewalk, or if the slope is greater than a 2:1 (horizontal to vertical) grade.
- For safety, a guardrail will be required on the backside or curb side of the bicycle lane if the slope is steeper than a 4:1 (horizontal to vertical) grade to the sidewalk.

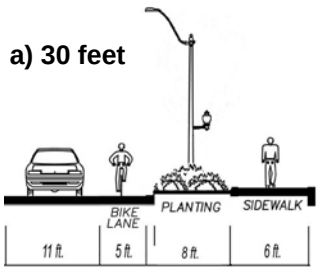
Below Grade Option – 30 or more feet



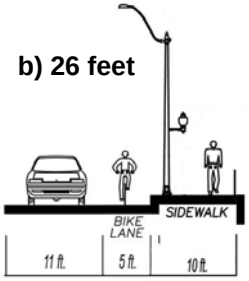
- If the sidewalk is built at street level retaining walls will likely be needed. In order to minimize the height of the retaining walls, there are three recommended variations on street improvements, which all relate to the width of the landscape strip. The optimum is to keep the retaining walls 3-feet or less in height because this is the threshold where retaining walls begin to require more structured engineering.

a) Flat slope - retaining wall less than 3-feet – 8-foot landscape strip between the 6-foot sidewalk and bicycle lane. Pocket parking is *not* recommended in this section.
b) Moderate slope - retaining wall approximately 3-feet – no separate landscape strip but 10-foot sidewalk with landscaping.
c) Steep slope - retaining wall greater than 3-feet – no landscape or pocket parking strip.

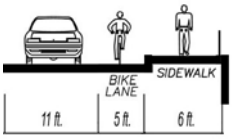
a) 30 feet



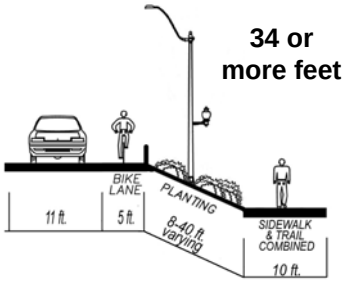
b) 26 feet



c) 22 feet



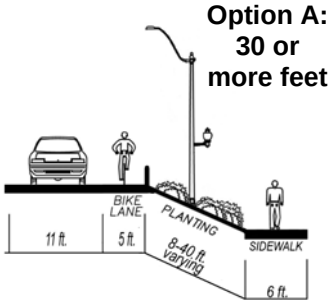
Waterfront: Brawne Avenue to Brown-Minneapolis Tank (part of the frontage for the proposed West Bay Park)



- To keep the bicycle network continuous, bicycle lanes will remain next to the vehicle travel lanes
- The proposed park trail and sidewalk will be combined in a 10-foot multi-use facility.
- The landscape strip will be a minimum of 8 horizontal feet. Maximum separation will be no more than 40-feet.
- The railroad right-of-way will be used for combined trail-sidewalk facility wherever practical and safe.
- For safety, pedestrians will be visible from the street.
- For safety, a guardrail will be required on the backside or curb side of the bicycle lane if the slope is steeper than a 4:1 (horizontal to vertical) grade.

Waterfront: Brown-Minneapolis Tank to base of Schneider Hill

- This area includes current or former industrial properties. The properties that are vacant now are expected to redevelop in the near term. The remaining industrial site (Brown-Minneapolis Tank) will likely remain industrial in the near term.
- To keep the bicycle network continuous, the bicycle lanes will remain next to the vehicle travel lanes.
- Option A: The long-term plan is for the West Bay Multi-Use Trail to follow the shoreline. If the trail is built at the same time or prior to street improvements, then:
  - A 6-foot sidewalk below street grade will complete the pedestrian facilities. The sidewalk will come to grade at driveways and any intersections.
  - The landscape strip is a minimum of 8 horizontal feet. Placing the sidewalk below grade will minimize the need for retaining walls but may require additional right-of-way. The sidewalk may be placed at grade if preferred.
  - For safety, pedestrians will be visible from the street.
  - For safety, a guardrail will be required if the slope is steeper than a 4:1 (horizontal to vertical) grade.



- Option B: Across from the Brown-Minneapolis Tank property the long-term plan is to have the trail along the shoreline. If street improvements are made while the site remains in industrial use, it is recommended that the trail be combined with the sidewalk into a 10-foot multi-use facility. All other conditions from Option A will apply.

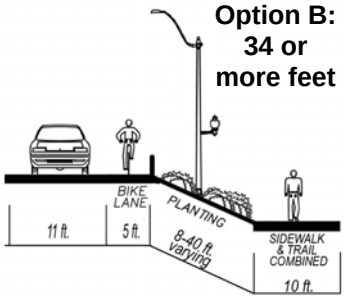


FIGURE 27: WEST BAY DRIVE AS IT EXISTED IN 2004.

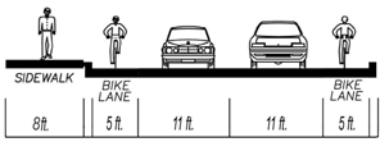
FIGURE 28: WEST BAY DRIVE WITH FULL STREET STANDARDS AS REQUIRED AT TIME STUDY WAS INITIATED.

FIGURE 29: WEST BAY DRIVE WITH PREFERRED ALTERNATIVE STREET STANDARDS.

Schneider Hill

- This is the steepest section of street in the study area. Any street widening will require engineered retaining walls. The existing sidewalk is 5-feet wide, and is adjacent to a high retaining wall.
- Due to the difficulties in street widening, no planter strips will be required.
- To provide for pedestrian safety, a wider (8-foot) sidewalk on the west side of the street is recommended.
- Bicycle lanes are in the Olympia Comprehensive Plan for Schneider Hill to link to the Westside neighborhoods. The City street standards define bicycle lanes in both directions therefore bicycle lanes on both sides of the street are recommended for this section.

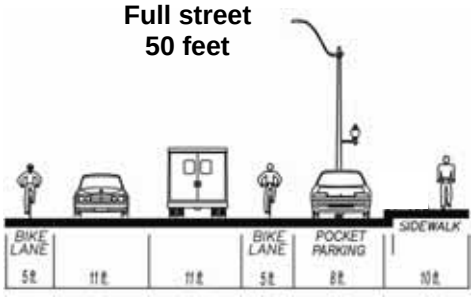
Full street - 40 feet



The Base of Schneider Hill to the Marina

- This section of West Bay Drive is classified as a "Major Commercial Collector" and has slightly different standards than the other sections. There is a steep, wet hill on the west side of this street. On the waterfront side the topography is flatter, but the railroad and railroad right-of-way run through the street.
- To provide a continuous bicycle network out to the Marina, bicycle lanes will be placed next to the vehicle travel lanes.
- As development is only expected to occur on the waterfront side of this street, on-street pocket parking with landscaping bulb-outs, and a 10-foot sidewalk are recommended for this side only.
- The 10-foot sidewalk would link into the proposed West Bay Trail system to provide a continuous, wide, pedestrian facility all the way from the Marina to Downtown.
- Any additional widening or frontage improvements on the west side of the street are not recommended due to the steep, wet slopes.

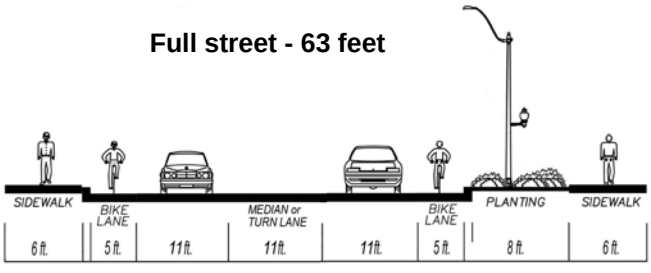
Full street
50 feet



Brawne Avenue Intersection

- A left turn lane is recommended for the Brawne Avenue intersection.
- South of the intersection would be a left turn lane to facilitate vehicle flow.
- North of the intersection would be a landscaped pedestrian crossing island.

Full street - 63 feet



B. Design Elements

Crosswalks

There is a legal pedestrian crossing at the intersection of any two streets, whether a crosswalk is marked or not. The City marks crosswalks at locations based on vehicle volumes, width of street, speed of vehicles, and number of pedestrians. Crosswalks are marked to draw driver's attention to the crossing as well as to direct pedestrians to a particular crossing point. Crosswalks require regular repainting or remarking, and are therefore not marked at every intersection.

In some locations crosswalks alone are not sufficient for safe pedestrian crossings. In these locations, other devices are needed to make a street crossing safer. Some of the devices used in conjunction with crosswalks are: crossing islands, which allow the pedestrian to cross half the street at a time; bulbouts extend the sidewalk into the street and shorten the crossing distance, and; in-pavement flashing crosswalk lighting to warn a motorist that a pedestrian is present. Crossing islands are planned at key intersections along West Bay Drive where high concentrations of pedestrians are anticipated.

Sidewalks

Sidewalks provide a dedicated safe space for walking. Sidewalks physically separate the pedestrian from motor vehicle traffic. A curb and/or planted area between the sidewalk and the street edge distinguish the sidewalk from the vehicle travel lanes. Sidewalks provide a flat, dry, predictable surface making walking safe and inviting. For those with wheelchairs and walking aids, sidewalks significantly enhance mobility and access.

Six-foot sidewalks on both sides of the street are the design standard for Major Collectors. This is enough to allow two people to walk side by side, or for people to pass one another. The City's street standards also include an 8-foot planter strip between the sidewalk and the motor vehicle travel lanes. The planter strip is wide enough for planting street trees and separate the pedestrian from vehicle noise and exhaust.

Along the West Bay Drive corridor, the narrow physical area and steep slopes make conventional design of the street features more costly and difficult. Sidewalks and planter strips have been modified to fit into this topography. In some narrow sections of the corridor, planter strips have been removed. In other sections, in lieu of the planter strip, 10-foot sidewalks with street trees planted in sidewalk grates are recommended. In some locations, the sidewalk is recommended to be placed at a different grade than the street - above or below - allowing for more feasible construction and a separation of pedestrians from motor vehicles.

Width of Sidewalk adjacent to Retaining Wall

The preferred alternative recommends a minimum of 8-foot sidewalks for pedestrians walking adjacent to a retaining wall over 3-feet in height when there is no planter strip

between the sidewalk and street. Although a 6-foot sidewalk is the minimum standard for major collectors, the lack of planter strip separating pedestrians from vehicles, and the physical barrier of a retaining wall further limiting pedestrian space, necessitates an additional 2-feet of space. This is referred to as a "shy" distance, and the Washington State Pedestrian Facilities Guidebook suggests that people prefer a minimum "shy" distance of 2 feet while walking adjacent to buildings, as illustrated in the following figure (OTAK, 1997).

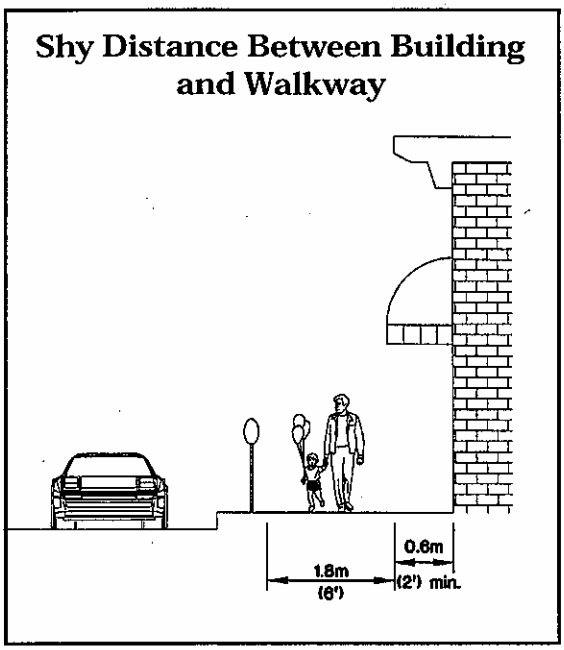


FIGURE 30: SHY DISTANCE BETWEEN BUILDING AND WALKWAY.

Providing a Safe Pedestrian Environment when Facilities vary in Grade

One of the unique features of the preferred alternative is the proposal for a below-grade pedestrian facility on the waterfront side of the street, mainly in the area in front of the proposed park and areas to the north, up to Schneider Hill. This type of pathway was suggested in order to:

- Provide less duplication of pedestrian facilities between the waterfront trail and sidewalk where space was limited;
- Minimize the need for large retaining walls.

This pathway is *not* proposed as a replacement of the proposed waterfront trail but rather as a supplemental facility. The trail and sidewalk are combined *only* where the trail must run adjacent to the street at a distance of no more than 40 feet due to space limitations, or where the short-term alignment of the trail necessitates it being located adjacent to the street.

For pedestrian safety in a below-grade facility the following must be achieved:

- Pedestrians should be visible from the street (drivers), therefore it is recommended that slope should not exceed the guidelines in the table below,
- A guardrail should be placed at the street when slopes are greater than 2:1 (horizontal to vertical),
- Lighting must be provided that illuminates the street and pedestrian facility,
- Safe crosswalks should be provided at appropriate intervals so that pedestrians can choose to use an at-grade facility on the opposite side of the street,
- The facility should come to grade at driveways.

Maximum Slope horizontal:vertical	Horizontal Distance
2:1	10 feet
2.5:1	20 feet
3:1	30 feet
3.5:1	40 feet

TABLE 2: MAXIMUM SLOPE AND HORIZONTAL DISTANCE OF PEDESTRIAN FACILITY FROM ROADWAY.

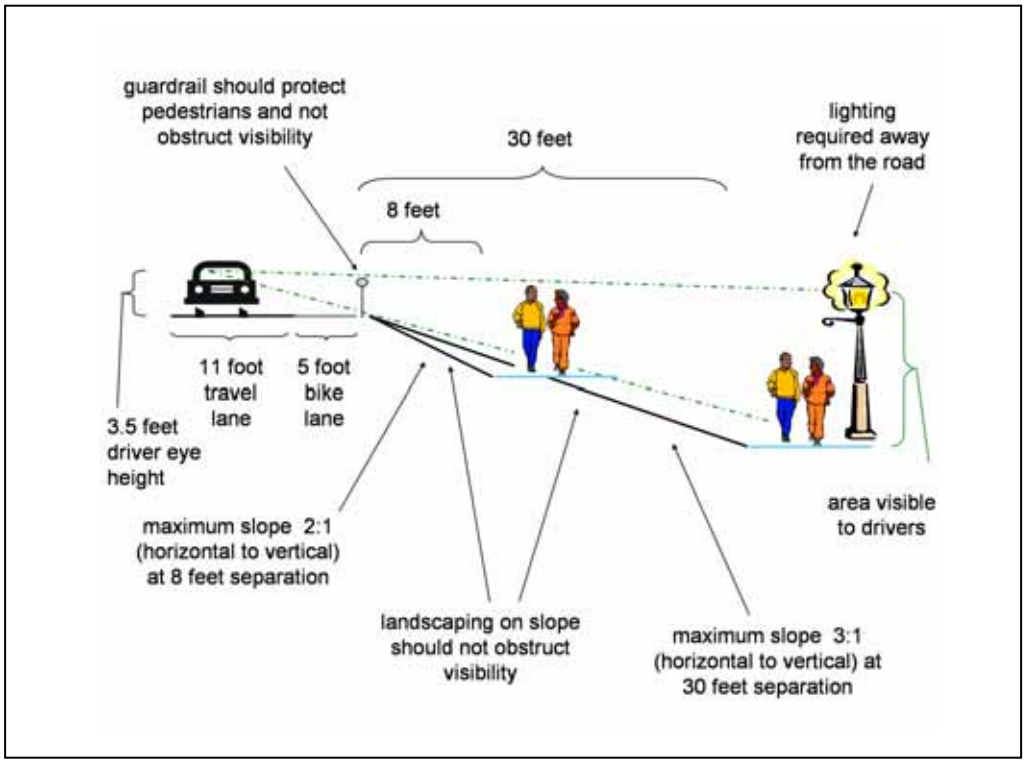


FIGURE 31: SUGGESTED DESIGN ELEMENTS FOR A BELOW-GRADE PEDESTRIAN FACILITY.

Bicycle Lanes

Bike lanes are 5-foot lanes adjacent to motor vehicle travel lanes, specifically dedicated to bicycle travel. Five feet is needed to provide enough room for bicycles to allow some swerving, to avoid debris, and shy away from the curb and large vehicles in the adjacent lane. Bike lanes are a cost-effective way to provide safe space for bicycling. Bike lanes (Class II Bicycle Facilities) are included in the street design standard for Arterials, Major Collectors and selected Neighborhood Collectors. Bike lanes are important on high-vehicle volume streets because they allow motor vehicle drivers and bicyclists to more predictably share the roadway with one another.

Bike lanes are effective in making the street safer for motorists and bicyclists. Studies have shown that a motorist is less likely to move into an opposing or adjacent travel lane to pass a bicyclist if there was a white line separating the bicyclist from the motor vehicle, even given the same amount travel space.

A bike lane is a legal lane, for a special use. Cars can not park or drive in a bike lane and bike lanes can not be blocked. Bike lanes, like motor vehicle travel lanes, must be maintained regularly.

Guard Rails

Guard rails are a critical design element for the West Bay Drive Corridor due to the steep slopes in several sections of the street. All guardrails must conform to the WSDOT Design Manual. In addition, the preferred alternative recommends that guardrails be placed along the street between the pedestrian facility and vehicle lane whenever the pedestrian facility is below grade and the adjacent slope is at a grade greater than 2:1 – horizontal to vertical. To keep pedestrians visible from the street, it is further recommended that special attention to the design and aesthetics of guardrails be made at time of street improvements. There are several types of guardrail systems used elsewhere in the country that may offer the same safety function with greater visual appeal than standard guardrails (Franklin Regional Council of Governments, 2002). Figure 32 and 33 are some examples of possible options.

FIGURE 32: BOX BEAM SEMI-RIGID GUARDRAIL SYSTEM.

FIGURE 33: IRONWOOD GUARDRAIL SYSTEM.

Pervious Sidewalks

West Bay Drive is a good candidate for consideration of pervious sidewalks as a means to reduce stormwater runoff. A pervious concrete sidewalk allows rain water to pass through the concrete and would be absorbed in the soil below. Pervious concrete can reduce stormwater runoff and the need for stormwater drainage and ponds.

Pervious Bicycle Lanes

Pervious bicycle lanes can also be considered for West Bay Drive as a means to reduce stormwater runoff. The condition and infiltration capacity of underlying soils is a consideration when evaluating the potential for pervious bicycle lanes. As the street runoff will be directed into the bicycle lanes, the soils must be capable of rapid infiltration so that the stormwater does not pool on the roadway. Additional concerns are raised in steep areas where stormwater must be redirected so that it does not saturate the soil behind retaining walls. Finally, the strength of the pervious material is a consideration as the bicycle lane must be able to support vehicle travel.

Rain Gardens

Stormwater runoff from West Bay Drive must be treated before it enters any water bodies. While pervious sidewalks and bicycle lanes will help to reduce runoff, rain gardens may offer alternatives to treat the stormwater runoff.

The purpose of a rain garden is to capture and filter stormwater runoff. An additional advantage of rain gardens is that they often provide attractive landscaping options. Rain gardens could be built into the landscape strip provided there is enough width and the slopes are suitable.

VI. WORKSHOP THREE

Workshop Three was designed as an open house to allow members of the public to give input on the Preferred Alternative. Attendees were encouraged to record their comments on the following sheet.

West Bay Drive – Corridor Study

November 18, 2004

Please provide comments on the Preferred Alternative - please be specific.

Use the space below to tell us what you think, include your name and address. Turn it in on your way out, or take it home to fill out, fold and mail to the address on the other side.

Things you like:

_____
_____
_____
_____
_____
_____
_____

Things you would like to see added:

_____
_____
_____
_____
_____
_____
_____
_____

Things you would like to see changed:

_____
_____
_____
_____
_____
_____
_____
_____

name		
address		
city	state	zip
phone	email	

FIGURE 34: DISCUSSION AT MAP OVERVIEW TABLE.

FIGURE 35: PREFERRED ALTERNATIVE SHOWN ON DESIGN PANELS.

The following are the comments received at the workshop.

THINGS YOU LIKE:

1. Parks!!! Yes.
2. Sidewalks, bike lanes, landscape strips.
3. No widening of West Bay Drive.
4. Left turn lane @ Brawne Avenue intersection.
5. Garfield Natural Trail.
6. Woodard Neighborhood Connection.
7. Shoreline trail all the way from marina to downtown.

THINGS YOU WOULD LIKE TO SEE ADDED:

1. Sidewalks up southside of Brawne Avenue with shoulder for bikes.
2. Widen West Bay Drive to the east between Giles and Brawne Avenue for left turn lane – leaving existing sidewalks untouched on west side.
3. More trails up the hill east from West Bay Drive.
4. Down speed on West Bay Drive to 25 m.p.h.

THINGS YOU WOULD LIKE TO SEE CHANGED:

1. I think you have done a great job so far – have listened and responded to public input, have kept us well informed.
2. Keep up the good work!

THINGS YOU LIKE:

1. I like that you are looking ahead and seeking our thoughts and observations.
2. I like the concept of the sidewalk on the Bay side being down and away from the street.
3. Underground utilities.

THINGS YOU WOULD LIKE TO SEE ADDED:

THINGS YOU WOULD LIKE TO SEE CHANGED:

1. The corner of Brawne Avenue & West Bay Drive presently is rather square and I would like to see the corner smoothed sort of.
2. It requires a sharp turn to keep from riding upon the curb.
3. Thank you for your energy to make Olympia a more liveable city!

VI. WORKSHOP THREE

THINGS YOU LIKE:

1. Love the trail, bike lanes, sidewalks. The preferred alternative works for me.

THINGS YOU WOULD LIKE TO SEE ADDED:

THINGS YOU WOULD LIKE TO SEE CHANGED:

1. Ensure bicycle use of the trail along the lagoon – encourage children to ride bicycles.
2. Wildlife is probably desensitized to human activity in view of the urban environment – especially bridge construction.

THINGS YOU LIKE:

1. I generally like it – no complaints.
2. I walk West Bay Drive quite a bit and safer walking conditions will be appreciated.

THINGS YOU WOULD LIKE TO SEE ADDED:

THINGS YOU WOULD LIKE TO SEE CHANGED:

THINGS YOU LIKE:

1. I like the idea of sidewalks to make it safer for pedestrians. Also, adding bike lanes and plant border along West Bay Drive.
2. All in all, it's a good plan.

THINGS YOU WOULD LIKE TO SEE ADDED:

1. It should have bus routes along West Bay Drive and of course, bus tops with covered waiting area.
2. More marked crosswalks for pedestrians.
3. Use up-to-date earthquake standards in designing the roadway.

THINGS YOU WOULD LIKE TO SEE CHANGED:

1. Being able to have entrance to park and ample parking (as users of future buildings along West Bay Drive.
2. Street lights that do not point so much of there light into the sky.

THINGS YOU LIKE:

1. Removal of on-street parking near roundabouts. Private parking isn't the public's responsibility.
2. Including planter strips wherever possible. DO have street trees – the open views by Hardel are going away anyhow, street trees don't obscure views substantially, so please include them.
3. Pedestrian crossing at Brawne Avenue, Garfield Trail & Woodard Trail are crucial!
4. Like Brawne Avenue left turn lane and pedestrian island opposite!
5. Thought retaining wall/planter strip/street tree solution was creative.

THINGS YOU WOULD LIKE TO SEE ADDED:

THINGS YOU WOULD LIKE TO SEE CHANGED:

1. The phrase 'combining the trail and sidewalk wherever possible" concerns me. Please have some criteria that conveys your diagram better.
2. I don't see need for pocket parking at all – minimize impervious surface.

Do anything practicable to get a wider uphill lane on Schneider Hill for bikes – no bike lanes are mentioned as specifically included. Look at wording on that section.

THINGS YOU LIKE:

1. Sidewalks throughout.
2. Bike lanes throughout.
3. Pedestrian islands.
4. Sidewalks along with nature – at grade.
5. Benches.
6. Underground utilities.
7. Future transit option.
8. Eliminating parking near roundabout.
9. The trail by the water.

THINGS YOU WOULD LIKE TO SEE ADDED:

1. More planter strips between street and sidewalk in pavement lighting at Garfield Nature Trail widen sidewalks where possible – 6 feet to too narrow for 2 couples to pass by each other.

THINGS YOU WOULD LIKE TO SEE CHANGED:

1. Put bike lanes in NOW between bridge and new area – don't make it last.
2. Decrease speed limit to 25 m.p.h.

VI. WORKSHOP THREE

THINGS YOU LIKE:

1. The natural design following the lay of the land rather than tearing down and building up the land to meet the full design everywhere.
2. The intersection at Brawne Avenue – the current design is dangerous.
3. The proposed Woodard connection.
4. The public process – you have done a great job!

THINGS YOU WOULD LIKE TO SEE ADDED:

1. Do everything you can to keep the Woodard connection ADA compatible. We own part of the property adjoining the proposed trail, and will contribute land to make it work.

THINGS YOU WOULD LIKE TO SEE CHANGED:

THINGS YOU LIKE:

1. While it is clear that nowhere along the drive can the major collector standard be met I am glad to see two bike lanes everywhere…as well as a pedestrian walkway(s).

THINGS YOU WOULD LIKE TO SEE ADDED:

THINGS YOU WOULD LIKE TO SEE CHANGED:

THINGS YOU LIKE:

1. Bike lanes and sidewalks.
2. I like the variation in the spread.
3. Trees on hillside of road.

THINGS YOU WOULD LIKE TO SEE ADDED:

1. Crosswalks raised to sidewalk level to create speed bumps, slow down traffic, easier pedestrian access.

THINGS YOU WOULD LIKE TO SEE CHANGED:

1. Close off Schneider Hill to cars.
2. No street lights or walkway lights – light pollution.

THINGS YOU LIKE:

1. Attempt to approximate city standards in these difficult areas.
2. Treating public property (Port – soon to be park, we hope) the same as private property.
3. Sensitivity to a wide range of factors.

THINGS YOU WOULD LIKE TO SEE ADDED:

1. Reconfiguration of top of Schneider hill to address accident history.

THINGS YOU WOULD LIKE TO SEE CHANGED:

1. Strive harder to achieve the full city standard or equivalent along West Bay Drive. Move cutting higher retaining walls.
2. Section A and B – preserve opportunity to get sidewalks and planter strips when these areas redevelop in the future – even if it's decades in the future.
3. Consider reclassifying Section F to Major Collector.

Additional comment by email

Here is an additional comment for the record on the West Bay project, which will be in addition to the comments I left last nite. And by the way, I am impressed with the work of the whole staff on this project.

At this point, we have received a recommendation. Period. This becomes a kind of "take it or leave it" situation for the public and the Council.

The Councilmembers, in particular, need more. They need what in finance is called a "sensitivity analysis," so they can reasonably consider options.

I'd suggest that you present the council and public with some idea of the costs and benefits of incrementally moving from the staff recommendation toward the standard street configuration.

As an example, in segment x, if the retaining walls were allowed to be 4 feet tall instead of three, what would happen? The council might feel that in some cases the extra costs would be worth the extra benefit, and in others that they would not.

For instance, if it were a very steep segment and the extra vertical foot of cut or fill would produce only one additional foot of width, and the cost were very high, they would probably stick with the staff recommendation. On the other hand, if the slope were more gentle and the extra vertical foot would allow for a public facility that staff is recommending for omission, and the cost is low, the Council might decide to make the change.

Thanks again for the opportunity to participate in this exercise

VI. WORKSHOP THREE

THINGS YOU LIKE:

1. I like the sidewalks and bike lanes along the length of the road. I agree we do not need trees planted on the bay side of the road. We do not need to block the view of the bay.
2. Pedestrian crossing improvements at Brawne Avenue & Garfield trail are also needed.
3. I am very excited about the proposed park and trail at the Port property.
4. Thank you!

THINGS YOU WOULD LIKE TO SEE ADDED:

1. I would like to see future development kept to the west side of the street, keep the waterfront available to all members of the community. Future development on the west can enjoy the view as well as the public. Any development on the bay side destroys the view for all.

THINGS YOU WOULD LIKE TO SEE CHANGED:

THINGS YOU LIKE:

1. Underground utilities on West Bay Drive.

THINGS YOU WOULD LIKE TO SEE ADDED:

1. Continue underground utilities up Schneider Hill.
2. Link improvements on Schneider with improvements on Crestline and Elliot missing a critical link.

THINGS YOU WOULD LIKE TO SEE CHANGED:

1. Curvature of Schneider Hill is too sharp at top and the proposed base curve will encourage dangerous driving.

THINGS YOU LIKE:

1. Inclusion of bike lanes and sidewalks throughout.
2. Improved intersection at Rabb/West Bay Drive.
3. Median pedestrian crossing relay.

THINGS YOU WOULD LIKE TO SEE ADDED:

THINGS YOU WOULD LIKE TO SEE CHANGED:

1. Breaking up expanse of paved areas more to minimize stormwater.
2. Keep trail close to WATER whenever possible, not along street.

THINGS YOU LIKE:

1. Bike lanes.
2. Pedestrian islands near Garfield trail.
3. I like the preferred alternative.

THINGS YOU WOULD LIKE TO SEE ADDED:

1. Ensure bicycle access to walkway along lagoon.
2. If wildlife is a concern, then have times bikes allowed such as when tide is IN and prohibit bikes when birds are there – when tide is OUT.

THINGS YOU WOULD LIKE TO SEE CHANGED:

THINGS YOU LIKE:

1. You didn't try to force a guideline (or standard) where it doesn't fit. Thank you.

THINGS YOU WOULD LIKE TO SEE ADDED:

1. Please be conscious of planting shrubs and/or trees that don't impact homeowner views.

THINGS YOU WOULD LIKE TO SEE CHANGED:

1. The 3 (& 2 empty lots) on Section A westside have no parking when Garfield is closed for ice and snow.
2. Perhaps you could add some parking at the lower end of the alley on Harrison Avenue for the folks to park, when Garfield Avenue is closed. That way you could clear the scrub trees, ivy and blackberries (& scotch broom now) instead of me.

THINGS YOU LIKE:

1. I like pedestrian crossing feature such as islands and medians for pedestrian safety.
2. I like as many pedestrian crossings as deemed appropriate.
3. I like sidewalks provided and am pleased lanes are narrower to allow for sidewalks.
4. Sidewalks on both sides the whole way would be great, but I understand why it won't be and so sidewalks on one side and wider is acceptable and good compromise.
5. Bike lanes of course are wonderful!

THINGS YOU WOULD LIKE TO SEE ADDED:

1. Greenery in with the pocket parking.

THINGS YOU WOULD LIKE TO SEE CHANGED:

VI. WORKSHOP THREE

Comment received by mail.

I'm unable to attend the meeting on November 18, 2004. The section of West Bay Drive I live at is 225 West Bay Drive, 3rd house down from the roundabout. The parking available in front of our house and our neighbors is where we park every winter when Garfield Avenue is CLOSED OFF from Sherman Street to West Bay Drive when the roads are icy. We will have no access to our homes from Harrison Avenue or Garfield Avenue when it snows or is icy. The last 27 years when the City closed Garfield Avenue, we all park on West Bay Drive across from our homes. People that live in the Kwanchuck Condo also park on West Bay Drive when the weather is foul.

Would appreciate if the City can save that critical parking area located above the Kwanchuck Condos. That's also an area cars and truck pullover all the time if they're lost or having mechanical problems. Police frequently pull people over in that same area so as to keep traffic on the bridge and roundabouts' flowing.

Comments from the West Bay Neighborhood Association.

1. Removing on-street parking at the south end is not fair to the residences on either side, for some it is their only guest parking, their nearest parking will be blocks away. Perhaps the bike lanes can be included in traffic for the first block, leaving the parking in place to Garfield Avenue.
2. The landscaping between the street and sidewalks should be reconfigured to include "Bio Swales" for the treatment of storm water.
3. Very few of the retaining walls will be as low as 3-feet, requiring the additional width of walk at these points acerbates the retaining wall designs significantly, i.e. a 4-foot wall will cost almost twice what 3-foot and it gets worse as the walls get taller. Additionally the soils are poor and very steep also making every foot critical.
4. The down hill bike lane on Schneider Hill is not required. Bikes are better off in traffic on such steep hills.
5. The traffic count is quite low from Schneider hill to the marina and does not indicate a need for bike lanes.
6. Widening, turn lane, and landscaped median at Garfield park and Brawne Avenue are great but they will do little to slow traffic as they come down the hill, this design could be made more of a calming design, with out becoming a problem for the trucks.
7. A great deal of care for the existing conditions of driveways and grades needs to be exhibited, minor modifications could have huge ramifications on adjacent developments.
8. The ability of the new plan to provide flexibility in the future must not be over looked. A process by which it can be amended, with specific criteria relevant to the West Bay Drive Neighborhood set forth. Time will change many issues. Other people may see new opportunities that we can not see today. Providing for inclusion of these unforeseen needs and designs will give the plan a dimension as unique as West Bay Drive Neighborhood itself.

VII. COMPLETING THE PICTURE: FUNDING SOURCES AND IMPLEMENTATION

It is expected that financial costs for any future street and frontage improvements along West Bay Drive will be borne by both the public and private sector. In many ways the timing of any potential street projects will relate to how the costs are distributed. Some possible sources of funding include:

A. Frontage Improvements

Frontage improvements are a requirement of any new development or redevelopment. Frontage improvements are expected to occur predominately on the northern end of the corridor, where both small and large parcels may undergo development or redevelopment in the foreseeable future. Frontage improvements may include sidewalk, bike lanes, street widening for a turn lane if needed, planter strip, pedestrian crossing islands, and street lighting.

B. Sidewalk Construction

Sidewalk needs along West Bay Drive are identified in the City's Sidewalk Program. Sidewalk construction is funded using Capital Improvement Funds and revenues from a public-approved increase to the private utility tax. A project planned between 2006 and 2008 will address missing sections of sidewalk on one side of West Bay Drive from Garfield Avenue to Schneider Hill. City sidewalk construction focuses on completing a walking route on one side of the street for as many streets as possible. Over time, missing sections on the other side of the street will be completed by private development and eventually, a follow up project by the City will fill in missing links creating continuous sidewalks on both sides.

C. Street Paving

Street paving is planned for West Bay Drive within the next 10 years. This work will include an asphalt overlay, public utility improvements within the roadway if needed, and in some sections, the street bed will be rebuilt. As part of this work, the roadway may be widened 10 feet for 5-foot bike lanes on each side. Grant funds will likely be sought to fund this work.

D. Bike Lane Construction

Bike lanes are planned on West Bay Drive. Bike lane construction will be coordinated with planned paving. Bike Program funds are used for the costs associated with widening the road, however, grant funds are also likely to be needed. In some locations, widening for bike lanes will occur when private development constructs frontage improvements.

E. Park Frontage

When the planned park on West Bay Drive is constructed, the City will be responsible for the frontage improvements along the park frontage. Depending on the timing of the street paving and sidewalk projects, these frontage improvements may be constructed prior to the road work, or coordinated as part of the road work. Grant funds may be sought to help complete the park's frontage improvements, whether coordinated with the Public Works projects or done independently.

VIII. COMPREHENSIVE PLAN AMENDMENT TEXT

The following are the proposed additions to pg. 46 of the Transportation Chapter of the Olympia Comprehensive Plan, to be placed after the paragraphs on the Decatur Street Connection. This text will be considered by the Olympia City Council as part of the 2005 Comprehensive Plan Amendment Process.

West Bay Drive

West Bay Drive is a primary link to the west Olympia neighborhoods, and fronts an area that is undergoing redevelopment from primarily industrial waterfront to a mix of urban uses.

West Bay Drive is not projected to exceed the regional level of service standards for the next 20 years therefore a two to three lane street section will be adequate. No additional vehicle travel lanes are needed at the current time, but as development occurs street intersection and driveways may require an exclusive left-turn lane. Plans call for bikelanes and pedestrian facilities to be added as the area redevelops or as other road improvements are made.

The existing street standards for much of West Bay Drive are those of a "Major Collector" and may require up to 62 feet of space to accommodate sidewalks, planting strips, bike lanes, and the roadway. The spur road at the northernmost end of the corridor is classified as a “Major Commercial Collector,” and could require up to 70 feet of space. Some parts of West Bay Drive are so narrow and steep that to accommodate all of these features would require substantial public and private investment.

This corridor was studied in the 2004 West Bay Drive Corridor Study. During this process a preferred alternative was developed that placed emphasis on meeting regional transportation goals and considering access for bicycling, walking, and transit. The study also took into account the safety, environmental, scenic, aesthetic, and community impacts of any future street enhancements.

The preferred alternative recommended:

- Sidewalks and bicycle lanes along the length of the road.
- Combining the recreational multiuse trail and sidewalk north of Brawne Avenue on the Port Property (site of proposed park).
- Planter strips on the west side of the road, only where topography isn’t a constraint.
- Sidewalk on the east side of the road, north of Brawne Avenue, separated by a landscaped strip, and built to follow the natural terrain.
- Landscaping in the planter strips on the east side of the road that does not obstruct views.
- Pedestrian crossing improvements at Brawne Avenue, the Garfield Trail, and the proposed Woodard Neighborhood Connection.

- Providing opportunities for views – with an emphasis on views from the street and sidewalk.
- Providing public benches on the waterfront side of the street.
- Increase visibility at street and driveways entering West Bay Drive.
- Signage to give West Bay Drive a sense of place.

IX. SUMMARY

In 2004, Olympia Advance Planning, Parks, Arts and Recreation, and Public Works began a planning process to look at the existing street standards for West Bay Drive. The existing street standards for much of West Bay Drive are those of a "Major Collector" and require up to 62 feet of space to accommodate sidewalks, planting strips, bike lanes, and vehicle travel lanes. Some parts of West Bay Drive are so narrow and steep that to accommodate all of these features would require substantial public and private costs. For this reason the Olympia City Council requested that the existing street standards be evaluated to allow for reasonable future street enhancements.

Since West Bay Drive is an important community asset, emphasis was placed on meeting regional transportation goals and considering access for alternative modes of travel such as bicycling, walking, and transit. This study also took into account the safety, environmental, scenic, aesthetic, and community impacts of any future street enhancements.

Three public meetings were held over a nine-month period, where community input was sought to first develop three alternatives, and then second, to select a preferred alternative for recommendation to the City Council.

The result is a community-developed preferred alternative to the existing street standards for the West Bay Drive corridor that fits into the overall vision in the Olympia Comprehensive Plan, but allows for a modified street design to take into account the unique conditions along the West Bay Drive corridor.

In 2005, the Olympia City Council will consider the findings in this report and gather additional public comment through the Olympia Comprehensive Plan Amendment process.

REFERENCES

City Planning Commission, Tacoma Washington (1981). Ruston Way Plan: Design and Development Guidelines for Ruston Way Waterfront Revitalization. *City Planning Department, Tacoma Washington.*

Franklin Regional Council of Governments (2002). Design Alternatives for Rural Roads. Chapter 7. Roadside Barriers. www.frorg.org.

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