



COAST MILLENNIUM TRAIL

MASTER PLAN



DRAFT
January 19, 2000



Prepared for:

Whatcom County Parks & Recreation
Bellingham Parks & Recreation
Port of Bellingham
Whatcom County Council of Governments



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JANUARY 18, 2000

► *Prepared for:*

Whatcom County Parks & Recreation
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COAST MILLENNIUM TRAIL MASTER PLAN

—CONTENTS—

1. Introduction	1
2. Project description	3
3. Planning areas & development status	5
3.1 Area #1: Skagit County to Nooksack River	9
3.2 Area #2: Nooksack River to Aldergrove Road	11
3.3 Area #3: Aldergrove Road to White Rock, B.C.	14
3.4 Area #4: Marine Drive to Ferndale & Lummi River	17
4. Planning issues & priorities	18
4.1 Links & destinations	18
4.2 Potential routes & alternatives	18
4.3 Right-of-way issues	19
4.4 Trailheads & trail access	20
4.5 Natural & scenic features	21
4.6 Cultural & historic sites	21
4.7 Other sites of interest	22
4.8 Anticipated use	22
4.9 Trail buffers	23
4.10 Public safety & security	23
5. Recommendations	25
5.1 Preferred routing & alignments	25
5.2 Width, grades & surfacing	28
5.3 Trailhead facilities	31
5.4 Sites of interest	37
► Interpretive sites	37
► Viewpoints	38
► Wildlife & natural areas	38
► Parks	39
5.5 Trail signing	44
5.6 General design themes & continuity	44
5.7 Trail development guidelines	45
5.8 Facility maintenance & management	46
6. Cost estimates	50
7. Potential funding sources	52
8. Funding & development strategy	59
9. Agency & public participation	61

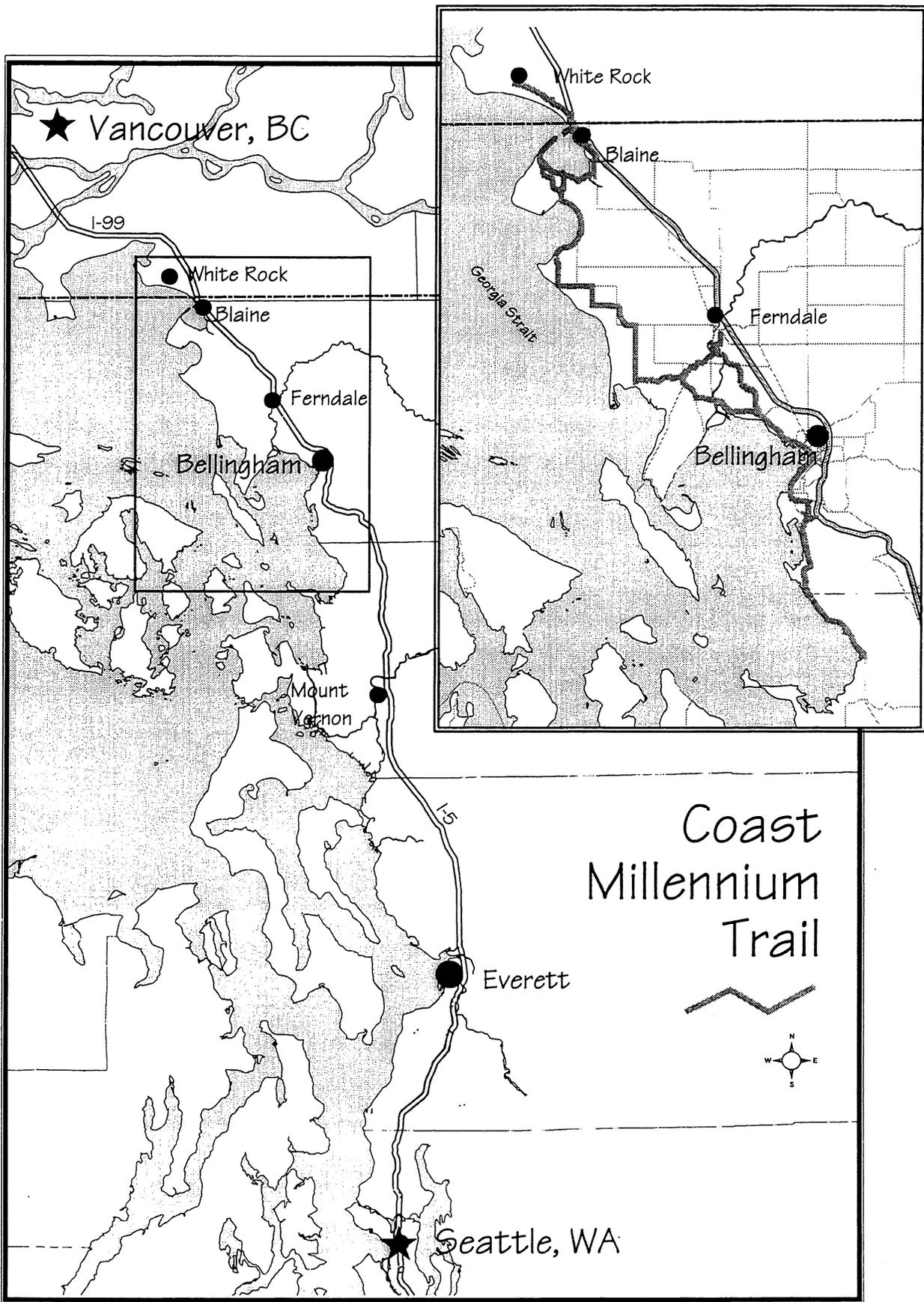
COAST MILLENNIUM TRAIL MASTER PLAN

► List of Tables

Table 3-1, CMT Planning Areas: Corridor Summary	7
Table 3-2, CMT Existing Facilities Summary	7
Table 3-3, CMT Planning Area #1: Existing Facilities Summary	10
Table 3-4, CMT Planning Area #2: Existing Facilities Summary	11
Table 3-5, CMT Planning Area #3: Existing Facilities Summary	15
Table 3-6, CMT Planning Area #4: Existing Facilities Summary	17
Table 5-1, CMT Recommended Facilities Summary	25
Table 5-2, CMT Major Improvements, Phase 1	27
Table 5-3, CMT Trailhead Facility Recommendations	32
Table 5-4, CMT Sites of Interest	37
Table 6-1, General cost Estimates for the CMT	50
Table 7-1, Principal Funding Sources for the CMT	52

► List of Figures

Figure 1-1, CMT Vicinity Map	iv
Figure 3-1, CMT Planning Areas	6
Figure 3-2, CMT Planning Area #1	8
Figure 3-3, CMT Planning Area #2	12
Figure 3-4, CMT Planning Area #3	13
Figure 3-5, CMT Planning Area #4	16
Figure 5-1, CMT Conceptual Routing Plan	24
Figure 5-2, CMT Major Improvements, Phase 1	26
Figure 5-3, Trailheads, CMT Planning Area #1	30
Figure 5-4, Trailheads, CMT Planning Area #2	34
Figure 5-5, Trailheads, CMT Planning Area #3	35
Figure 5-6, Trailheads, CMT Planning Area #4	36
Figure 5-7, Sites of Interest, CMT Planning Area #1	40
Figure 5-8, Sites of Interest, CMT Planning Area #2	41
Figure 5-9, Sites of Interest, CMT Planning Area #3	42
Figure 5-10, Sites of Interest, CMT Planning Area #4	43



COAST MILLENNIUM TRAIL MASTER PLAN

—1. INTRODUCTION—

The idea of a border-to-border, multi-use trail along the coastal region of western Whatcom County, Washington, is not a new concept—in fact, it's an idea that's been around for at least a quarter of a century. In the early to mid-1970s an ambitious effort was undertaken to establish a continuous Pacific Coast bicycle route from southern California to the Canadian border. A route was defined and mapped, and preliminary plans were drafted but never implemented. In the 1980s, plans for coastal trails appeared in several local trail plans, as the public's demand for new trail opportunities increased.

In 1989, the Whatcom County Parks and Recreation Open Space Plan identified the "Coastal Bike Route" as a key component of a county-wide network of trails and bikeways. A few years later, the county's Bicycle Transportation Plan further emphasized the need for such a facility. Of the top ten priority projects identified in that plan, four involved key sections within this coastal corridor. (Chuckanut Dr., Marine Dr., Lummi Shore Rd., and Birch Bay Dr.).

Bellingham's South Bay Trail, an integral link in the coastal trail idea, was developed in the mid-1990s, connecting the downtown area with the Fairhaven community and with the already existing Interurban Trail—an enormously popular multi-use trail that extends six miles south of Bellingham to Larrabee State Park at the Skagit County line. Shorter trail sections along the Whatcom coast have also been developed over the years, especially in the Blaine/Birch Bay area, though many large gaps must be filled in order to complete the dream of a border-to-border trail.

Whatcom County's proximity to the Canadian border makes the notion of an international trail attractive as well. The prospect of a major trail system between the Seattle and Vancouver metropolitan areas is equally appealing, and far more ambitious. Communities throughout the coastal regions of Washington State have seen broad support for waterfront trails. As new facilities and trail plans are developed, coastal links throughout the region are likely to occur. British Columbia has also undertaken regional planning efforts to enhance an already elaborate trail system there. The City of White Rock has shown strong support for development of an international trail. By way of White Rock and the existing Boundary Bay Trail, the CMT can be extended all the way to Point Roberts.

Recognizing these opportunities for a preeminent regional trail system and the broad support that has been demonstrated for it, a public-private partnership was established in the spring of 1999 to pursue the goal of developing a "Coast Millennium Trail" (or CMT) between Skagit County and White Rock, B.C. A CMT Campaign Committee was formed comprising representatives of Whatcom County, the Cities of Bellingham, Ferndale and Blaine, the Port of Bellingham, Washington State Parks, Whatcom County Council of Governments, the Trillium Corporation (who was instrumental in bringing the parties together initially), and others. Representatives from Lynden, the Lummi Nation, Whatcom Transit Authority, Bellingham/Whatcom County Convention & Visitors Bureau, and other organizations also contributed to the effort. Core participants signed a resolution in support of the planning effort, and funding commitments were made by Whatcom County, the City of Bellingham, the Port of Bellingham, and the Trillium Corporation.

On September 24th, 1999, Mayor Hardy Staub of the City of White Rock, B.C., hosted an international signing ceremony for representatives of communities on both sides of the border, as a further demonstration of the broad support this project has received. Representatives of the Semiahmoo First Nation band also expressed support for the trail and its future extension around

Boundary Bay to Point Roberts.

The Campaign Committee's most immediate objectives were to complete the master plan, identify funding sources, begin ground-breaking, and establish a completely signed route, border-to-border, by the year 2000. Recognizing that portions of the CMT may require temporary routing, the committee will continue to pursue full development of permanent facilities as funding and right-of-way become available. If initial fundraising efforts for trail development are successful, portions of the route should be open by mid-2000.

Clearly, the CMT offers tremendous recreation potential, tourism and community health benefits, and economic development opportunities, while serving the needs of cycling and walking as viable and essential modes of transportation in Whatcom County—and beyond.

ACKNOWLEDGEMENTS

This master plan could not have been completed without the enthusiastic support of many people from both the public and private sectors. In addition to positive comments and suggestions offered by citizens, special recognition is due each member of the CMT Campaign Committee which steered the overall planning process. Roger DeSpain (Whatcom Co. Parks & Recreation) and Jim Miller (Whatcom Co. Council of Governments) co-chaired the committee. Thanks also go to Pete Kremen, Whatcom County Executive, and Mayor Hardy Staub and his planning staff with the City of White Rock, B.C.

This multi-agency plan was funded by contributions from Whatcom County, the City of Bellingham, the Port of Bellingham, and the Trillium Corporation.

[CMT PHOTO]

COAST MILLENNIUM TRAIL MASTER PLAN

—2. PROJECT DESCRIPTION—

The Coast Millennium Trail (CMT) consists of a braided corridor of on- and off-street facilities extending northward from the Colony Creek area of northwestern Skagit County to White Rock, British Columbia, just north of the international boundary. The principal route is roughly fifty miles in length, much of it along quiet backroads and existing multi-use trails. The CMT divides just north of Bellingham in order to link the Ferndale community into the system (rejoining near the Lummi River); it divides again at Drayton Harbor (rejoining at Blaine). Several spurs and alternative routes have been identified as well, adding considerably to the total number of miles inventoried for this plan.

The CMT passes through three state parks (Larrabee, Birch Bay and Peace Arch), and a number of city and county parks and natural areas, as well as running close to the marine shoreline in many locations. The route links urban and rural communities to a wide variety of recreation sites, natural areas, viewpoints, water access areas, historic sites, employment centers, tourist destinations, and other connecting trails. Sites of particular interest are noted in Part 3, along with much more detailed descriptions of the trail itself and related facilities.

Where facilities currently exist, off-street portions of the route generally consist of mostly level, limestone-surfaced multi-use paths, typically six to ten feet in width. Bellingham's South Bay Trail is a good example of this type of facility (and a good model for much of the new trail development envisioned in this plan). Short paved sections are found at Boulevard Park and Squalicum Harbor in Bellingham, and at Semiahmoo and Blaine. On-street facilities include designated bikelanes in parts of Bellingham and Blaine, undesignated striped paved shoulders at many locations throughout the corridor, and other shared roadways lacking adequate shoulders for walking or cycling. Shared roadways presently account for more than half the CMT corridor. The lack of paved shoulders, combined with heavier traffic volumes, are a particular concern along Marine Drive, Haxton Way, Lake Terrell Road, and Drayton Harbor Road. This plan addresses these concerns.

As additional rights-of-way become available, it is anticipated that off-street facilities will be extended and that they will eventually account for most of the trail miles through the county. On-street facilities, however, will remain important as well, often serving as needed links in the regional bicycle transportation system. This mix of facilities can provide a full complement of recreation and transportation opportunities. Many scenic, educational, interpretive, economic, and environmental benefits can also be realized in concert with trail development, and the overall vision for the Coast Millennium Trail reflects these opportunities.

Development of the CMT Master Plan proceeded as outlined below:

- ▶ CMT corridor reconnaissance conducted;
- ▶ Field data addressing existing conditions along the route recorded in a data base (see tables in the next section);
- ▶ Working maps produced;
- ▶ Discussion papers drafted for various elements of the plan;
- ▶ Funding sources and strategies considered;
- ▶ Preliminary cost-estimates made for major project elements;
- ▶ Phasing plan developed;

- ▶ Specific recommendations made;
- ▶ Draft plan prepared and reviewed;
- ▶ [Revisions made and final plan completed.]

The process was open to agency and public participation throughout. A summary of comments received at public meetings is found in Section 9 of this plan.

The CMT Master Plan includes a discussion of four major planning areas and the status of trail development within each of these areas, as well as a brief analysis of various planning issues and priorities along the route. Recommendations are provided that address the preferred design and location of the CMT and related facilities. Funding and development strategies, cost estimates, funding sources, and a phasing plan are also included, along with a summary of agency and public participation in developing this master plan.

[CMT PHOTO]

COAST MILLENNIUM TRAIL MASTER PLAN

—3. PLANNING AREAS & DEVELOPMENT STATUS—

Development of the Coast Millennium Trail is an ambitious goal, one that will require a great deal of effort to bring to fruition—an effort commensurate with the extraordinary benefits the trail offers. To ensure a successful outcome, the master plan presents a multi-year, programmed approach that addresses funding, final design and engineering, permitting, environmental review, negotiation of rights-of-way, construction, and other needs.

Fortunately, many sections of the CMT could be developed quickly and inexpensively, while areas with existing facilities may only require minor improvements and signing to establish a temporary or permanent route. Additionally, many segments of the CMT would be viable and useful on their own, even if other nearby segments were incomplete. Thus, the entire trail does not need to be built at once, and instead, improvements can be made on a segment-by-segment basis. From a regional standpoint, more extensive connections are desirable, and trail development priorities should, of course, focus on the most beneficial links in the system, until ultimately the entire CMT corridor is developed. Recommendations in this plan reflect this general approach to developing the CMT.

With that in mind, the CMT corridor has been divided into four general planning areas, as follows:

- ▶ Planning Area #1 - Skagit County to Nooksack River
- ▶ Planning Area #2 - Nooksack River to Aldergrove Road
- ▶ Planning Area #3 - Aldergrove Road to White Rock, B.C.
- ▶ Planning Area #4 - Marine Drive to Ferndale & Lummi River

Planning area boundaries are shown in Figure 3–1 on the next page. Maps for each of the four planning areas accompany the descriptions for those areas. Within each planning area the trail corridor was divided into segments ranging in length between a quarter-mile or less, to more than two miles. Segments were defined based on existing conditions and development opportunities; logical end points were selected; and each segment was delineated on the planning area maps. Alternative routes were identified where appropriate.

The results of the CMT corridor inventory and reconnaissance are provided in table form following a brief introduction to each planning area. The complete database, detailed segment maps, and photos are contained in a separate document. (Included in the inventory are the number, name and ownership of each trail segment, as well as information concerning trail type, use, length, width, grade, surfacing, and condition, as well as the location of trailheads, points of interest, trail junctions and problem areas.) Table 3–1 on the next page provides a general breakdown of the four planning areas and the distances involved. A summary of existing facilities (by type) is provided in Table 3–2. Facility types are defined as:

- ▶ Separated Path/ PAVED or UNPAVED (*off-street trail or sidewalk integral to the CMT*)
- ▶ Designated Bikeline (*on-street lane, 4' minimum width, striped & signed for bicyclists*)
- ▶ 4'+ Striped Shoulder (*paved shoulders both sides, 4' minimum width, undesignated*)
- ▶ Shared Roadway (*all other roads with less than 4' paved shoulders both sides*)
- ▶ No Facilities (*no trail or roadway exists; undeveloped land; or beachwalk*)

TABLE 3-1
CMT PLANNING AREAS: CORRIDOR SUMMARY
 (IN MILES)

	Area #1	Area #2	Area #3	Area #4	Totals
CMT	18.8	12.1	19.8	9.2	59.9
Alternate Routes	1.0	0.0	4.1	4.6	9.7
Spur Routes	0.8	1.7	1.6	0.0	4.1
Totals	20.6	13.8	25.5	13.8	73.7

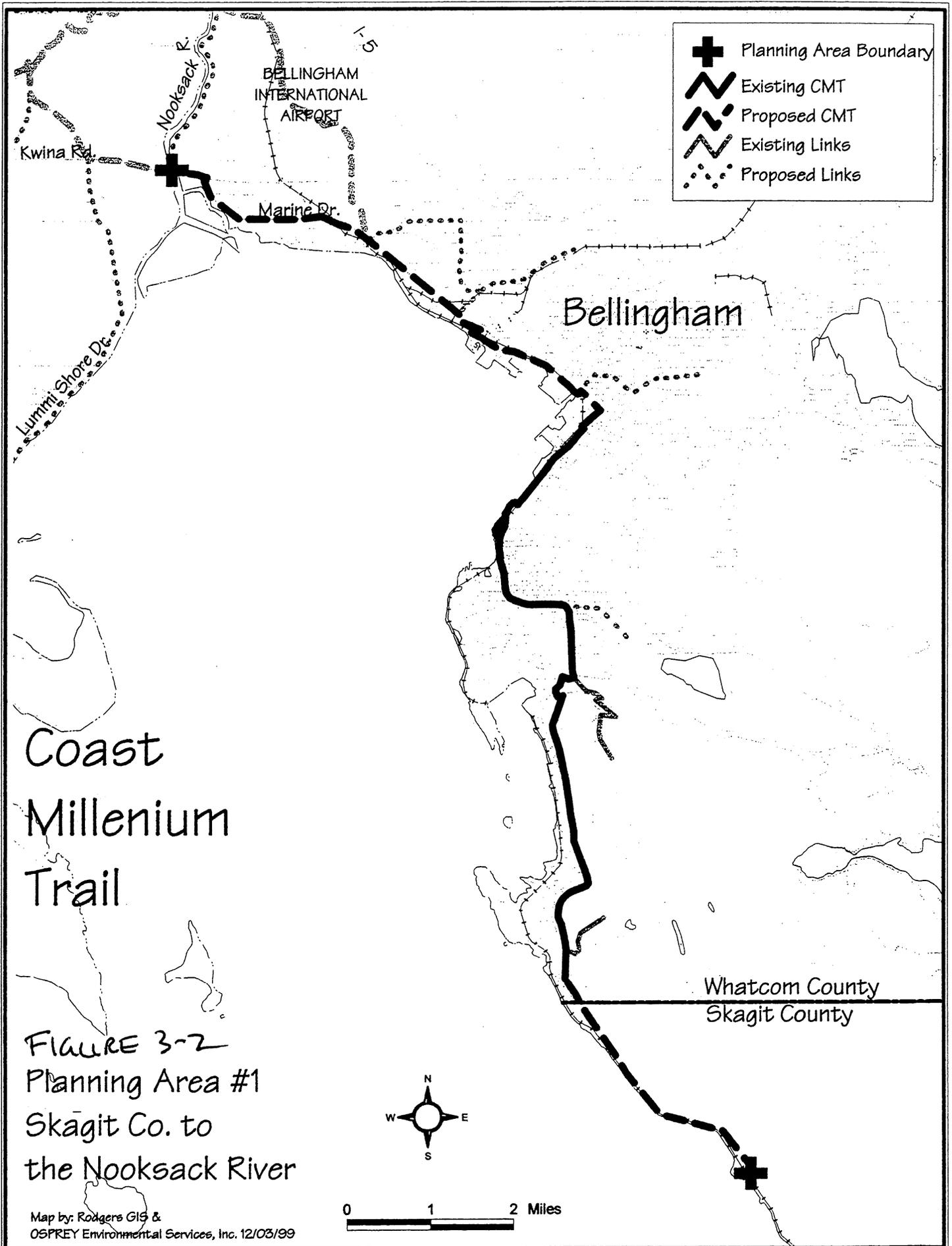
NOTE: Distances are given for corridor length only; in areas where parallel facilities exist (e.g. bikelane and sidepath), the length is counted only once. Where the CMT splits at Ferndale and Drayton Harbor, both routes are included.

As indicated in Table 3-1, the total miles of trail corridor inventoried was close to 74 miles, although a cyclist riding from one end to the other would likely cover just forty-five to fifty miles, depending on the exact route taken. The additional miles involve areas where the route splits (Ferndale and Drayton Harbor), plus alternate routes and spur routes that might be developed in conjunction with the CMT. In some areas, paths and bikelanes coexist, increasing the total inventory to about 81 miles. Two sections addressed by this plan fall outside of Whatcom County: the 3.3-mile link from the Blaine border crossing to White Rock, B.C., and the 5.2-mile stretch along Chuckanut Drive south into Skagit County. (Tables 3-3 through 3-6 contain more detailed descriptions.)

TABLE 3-2
CMT EXISTING FACILITIES SUMMARY
 (IN MILES)

	CMT	Alt. Routes	Spur Routes	Totals
Separated Path/ PAVED	7.9	0.4	1.0	9.3
Sep. Path/ UNPAVED	8.7	0.8	0.5	10.0
Designated Bikelane	4.0	1.0	0.0	5.0
4'+ Striped Shoulder	7.2	1.5	0.0	8.7
Shared Roadway	35.2	5.9	2.6	43.7
No Facilities	4.2	0.2	0.0	4.4
Totals	67.2	9.8	4.1	81.1

NOTE: Distances are given for all existing facility types, as well as areas where potential off-street routes were identified, but where no facilities were present. Thus, the distances shown in this table do not match the distances given in Table 3-1. Where sidewalks are integral to the CMT, the distance is included under paved paths.



Coast Millenium Trail

FIGURE 3-2
Planning Area #1
Skagit Co. to
the Nooksack River

Map by: Rodgers GIS &
OSPREY Environmental Services, Inc. 12/03/99

3.1 CMT PLANNING AREA #1

Skagit County to Nooksack River

Summary of Existing Facilities

As shown in Figure 3–2, Planning Area #1 extends from northwestern Skagit County to the Nooksack River bridge on Marine Drive, about 20 trail miles to the north. Beginning at Legg Road (near SR 11 Milepost 9) the CMT route follows Chuckanut Drive northward for 5.3 miles to the Clayton Beach Trailhead at Larrabee State Park. This section of Chuckanut Drive is narrow and winding, often bounded by steep rocky slopes above and below the road, and famous for its many scenic views of the bays and islands of northwest Washington.

The highway is generally lacking shoulders, and sight distance is limited in some areas. Despite obvious safety concerns, the highway has been a popular cycling destination for many years and will likely remain so into the future. Minor roadway improvements and signing could improve safety for nonmotorized users, and in some areas, off-street paths for hikers may be feasible, particularly between Larrabee State Park and Oyster Creek. Privately-owned conservation areas, and substantial public lands managed by Washington State Parks and the Department of Natural Resources exist along portions of Chuckanut Drive, which may be accessible to limited trail development. Steep and rugged ground, however, will likely limit such paths to a narrow hiking trail standard. At the same time, extensive areas of SR 11 do not appear suitable for pedestrian or equestrian traffic. A number of existing pull-outs along the highway offer viewing and interpretive opportunities, as well as potential sites for local trail access. A unique fossil outcropping exists near one of these pull-outs. A few private homes have been established south of Larrabee State Park. Chuckanut Drive is also the focus of a scenic byway corridor management plan (a separate planning process currently underway) which recognizes the area's unique recreational and scenic value.

Near Milepost 10, south of Oyster Creek, the Pacific Northwest Trail climbs steeply to the east and provides an important regional link between the CMT and the Chuckanut Mountains trail system. Parking in this area is limited to parallel shoulder parking. The Pacific Northwest Trail Association has explored possible links to the Samish Bay dikes to the south, an effort that should be coordinated with development plans for the CMT.

At Larrabee State Park's Clayton Beach Trailhead, the CMT route shifts slightly away from Chuckanut Drive and follows the Interurban Trail another six miles into Bellingham. Washington's first state park, Larrabee, is an outstanding destination facility with extensive mountain trails, forests, lakes, streams, rugged marine coastline, beaches, tidepools, wetlands, and spectacular views. The park offers day-use facilities, camping, and a host of amenities for visitors. While the park would seem to provide a logical site from which to access the CMT, parking facilities are often heavily used in summer and during weekends throughout the year. Thus, some additional parking may be necessary to accommodate the increased demand of trail users who wish to access the CMT from this location. At Larrabee, the CMT connects with two popular trails to Clayton Beach and Fragrance Lake; the latter is open to hikers only.

Immediately north of Larrabee, the Interurban Trail is mostly level, about eight feet in width, surfaced with crushed rock, and in generally good condition; however, a minor slide area, rockfall, and a very steep dip (behind the Chuckanut Fire Hall) require some improvement. A small trail parking area exists where the CMT crosses Hiline and Cleator Road. Farther north, easements along several sections of the trail accommodate nearby residents whose driveways cross or travel along the trail for a short distance. The CMT intersects the Teddy Bear Cove Trail about two miles north of Larrabee.

Another steep grade exists where the trail crosses California Street (a bridge is desirable here). Beyond, the trail narrows and deteriorates as it enters Bellingham's Arroyo Park, steepens on a

descent to a bridge over Chuckanut Creek, then climbs briefly to two small parking areas on Old Samish Highway. A CMT bypass has been discussed for this area and is addressed later in this plan.

The CMT route stays with the Interurban Trail to Fairhaven Park and Padden Creek, passing the recently developed Rotary Interurban Trailhead near 18th Street. At 10th and Donovan, the trail narrows and makes a short, steep rise (another regrade is desirable here). The CMT route follows 10th Street and the South Bay Trail north into the Old Fairhaven Historic District. Combined on- and off-street facilities are followed past Taylor Street Dock (slated for reconstruction) and through Boulevard Park. Two unofficial railroad crossings exist at the north and south ends of the park which are expected to be improved in the near future. The City also expects to extend an existing pedestrian pier at the park perhaps as far south as Taylor Street Dock.

The CMT follows the South Bay Trail into downtown Bellingham, where facilities mostly consist of streets and sidewalks, with a possible off-street bypass running between Holly Street and the Georgia Pacific mill. The route passes west of Maritime Heritage Park (and a future link to Whatcom Creek Trail), then follows Roeder Avenue along the waterfront at Squalicum Harbor to Little Squalicum Beach—a future park site and west terminus for the proposed Bay-to-Baker Trail—before climbing to Eldridge Avenue and continuing on to Marine Drive.

The CMT would link to the Port of Bellingham’s existing trail and parking area near Bellingham International Airport. The south end of this trail offers one the best island/bay views along the CMT between Bellingham and Birch Bay. The link to Ferndale begins here (see Planning Area #4). Beyond, the CMT route follows Marine Drive past an excellent view of the Nooksack Delta (one of the largest undeveloped river deltas in western Washington). The route passes Marietta before reaching the Nooksack River bridge. Other than the Port of Bellingham site and short sections of paved shoulders, facilities are substantially lacking between Roeder Avenue and the Nooksack River.

In many ways, Planning Area #1 will be the easiest to develop, since 10 miles of existing trails and related facilities can easily be incorporated into the CMT. The Interurban and South Bay Trails account for the bulk of these miles, representing nearly one-fifth of the CMT within Whatcom County. The extent of paved and unpaved paths, wide shoulders, bikelanes, and shared roadways, is summarized in Table 3–3. Approximately half the CMT route is comprised of shared roadways having less than ideal paved shoulder width for cycling.

TABLE 3–3
CMT PLANNING AREA #1: EXISTING FACILITIES SUMMARY
 (IN MILES)

	CMT	Alt. Routes	Spur Routes	Totals
Separated Path/ PAVED	2.8	0.2	0.8	3.8
Sep. Path/ UNPAVED	7.1	0.8	0.0	7.9
Designated Bikelane	1.0	0.0	0.0	1.0
4'+ Striped Shoulder	0.5	0.0	0.0	0.5
Shared Roadway	11.8	0.0	0.0	11.8
No Facilities	0.1	0.0	0.0	0.1
Totals	23.3	1.0	0.8	25.1

NOTE: Distances are given for all existing facility types, as well as areas where potential off-street routes were identified, but where no facilities were present. Thus, the total distance shown in this table does not necessarily match the distance given in Table 3-1. Where sidewalks are integral to the CMT, the distance is included under paved paths.

3.2 CMT PLANNING AREA #2

Nooksack River to Aldergrove Road

Summary of Existing Facilities

CMT Planning Area #2 is about 14 miles long, extending from the Nooksack River bridge on Marine Drive to the Aldergrove/Jackson Road intersection, south of Birch Bay. The area is unincorporated and generally rural and agricultural in character, with the exception of heavy industrial development around Cherry Point, and residential areas within the Lummi community and at Sandy Point Heights.

The presently identified CMT route follows the road system through the Lummi Nation (Nooksack River to Slater Road), although there is good potential for alternative routes and off-street trails. (The Lummi Tribe is the principal authority in determining where trails and related facilities should or should not be located for this portion of the CMT corridor.) Several areas are particularly attractive for some level of trail development, including the Nooksack Delta at Marietta, as well as Lummi River, Lummi Flats, dikes along Lummi Bay, and forest and wetland areas northeast of Sandy Point. If trails are approved by the tribe for any of these areas, location and design would need to be sensitive to historic, cultural and environmental concerns unique to the area.

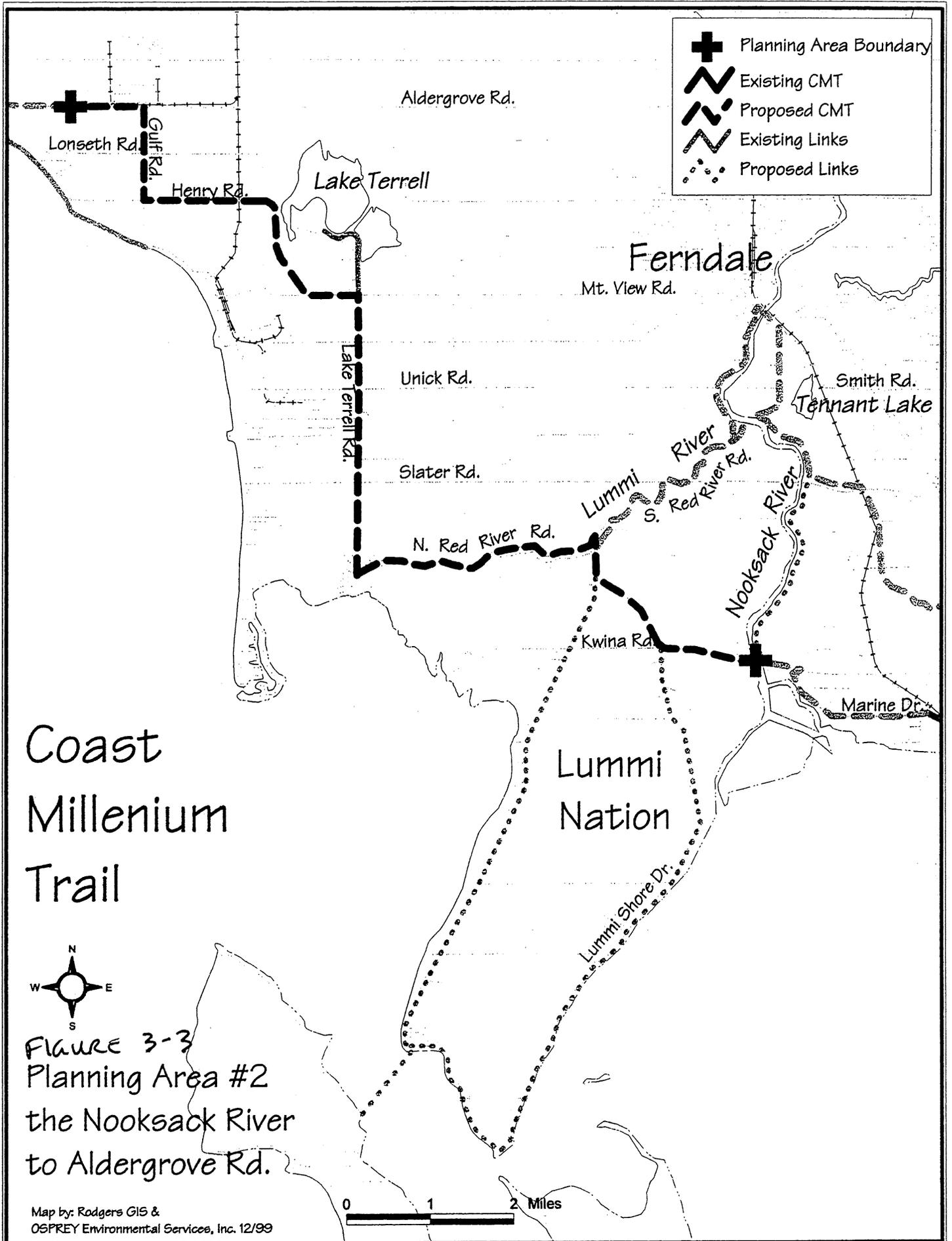
From Marine Drive, the preliminary CMT route heads west to cross Haxton Way near Lummi River (and the west terminus of Planning Area #4), then continues west along North Red River Road through the scenic, wildlife-rich delta, to Lake Terrell Road, 5.2 miles from the Nooksack River. Here, the route heads north (narrow or absent shoulders) 2.8 miles to Mountain View Road and the entrance to the Lake Terrell Wildlife Area. The CMT takes Rainbow Road to Henry Road (with a spur to the Cherry Point beach), then runs north on Gulf Road to Aldergrove Road, and west to Jackson Road and the beginning of Planning Area #3. Extensive undeveloped "buffer lands" surround much of the heavy industrial development in the Cherry Point area, including Intalco Aluminum, and the Arco and Tosco refineries. Some of these areas are attractive for trail development and preliminary inquiries suggest some off-street facilities may be feasible. Further discussions are needed to identify alternatives and address landowner concerns. Several dead-end county roads with extremely low traffic volumes are also found in the area which could potentially be pieced together with new trails.

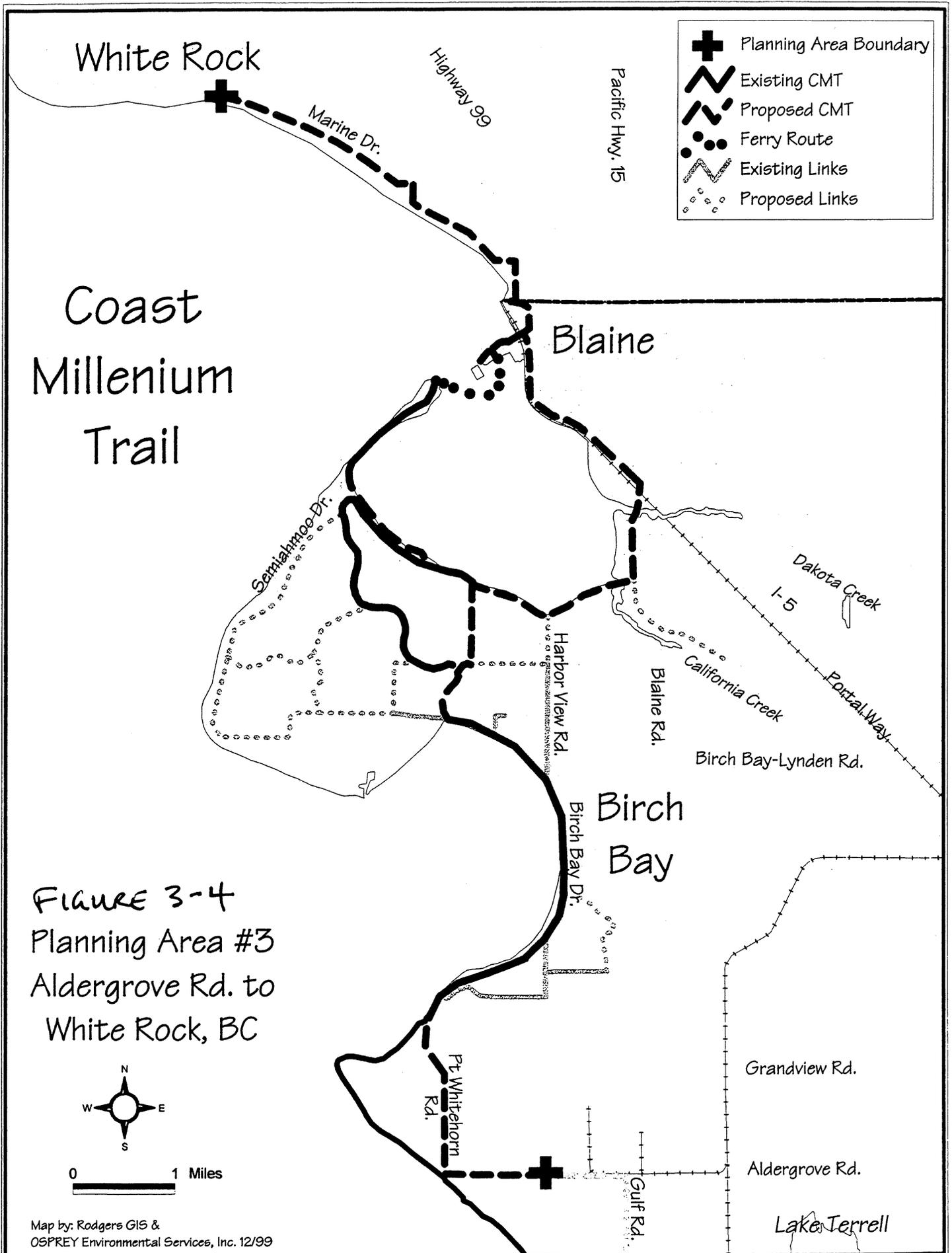
Table 3-4 below summarizes existing facilities within Planning Area #2.

TABLE 3-4
CMT PLANNING AREA #2: EXISTING FACILITIES SUMMARY
 (IN MILES)

	CMT	Alt. Routes	Spur Routes	Totals
Separated Path/ PAVED	0.0	0.0	0.0	0.0
Sep. Path/ UNPAVED	0.0	0.0	0.0	0.0
Designated Bikelane	0.0	0.0	0.0	0.0
4'+ Striped Shoulder	0.3	0.0	0.0	0.3
Shared Roadway	11.8	0.0	1.7	13.5
No Facilities	0.0	0.0	0.0	0.0
Totals	12.1	0.0	1.7	13.8

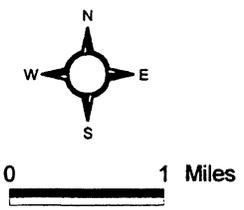
NOTE: Distances are given for all existing facility types, as well as areas where potential off-street routes were identified, but where no facilities were present. Thus, the total distance shown in this table does not necessarily match the distance given in Table 3-1.





- Planning Area Boundary
- Existing CMT
- Proposed CMT
- Ferry Route
- Existing Links
- Proposed Links

FIGURE 3-4
 Planning Area #3
 Aldergrove Rd. to
 White Rock, BC



Map by: Rodgers GIS &
 OSPREY Environmental Services, Inc. 12/99

3.3 CMT PLANNING AREA #3

3. Aldergrove Road To White Rock, B.C.

Summary of Existing Facilities

Planning Area #3 extends from the junction of Aldergrove and Jackson Roads north through the Birch Bay area, then splits east and west around Drayton Harbor (rejoining at Blaine), before continuing across the border to White Rock, B.C. The total length via the easterly route is about 17 miles. The westerly route is slightly shorter, but includes a foot-ferry crossing at the mouth of Drayton Harbor. The foot-ferry, MV Plover, is a registered historic vessel that provides a unique connection for trail users, while enhancing the CMT experience.

Unlike Planning Area #2, significant trail facilities are already in place (paved paths, wide paved shoulders and bikelanes) which can be utilized by the CMT. Where there are major gaps in the system, private landowners have offered to provide substantial public right-of-way for the trail.

From Aldergrove Road to Grandview Road, a temporary two-mile route follows vacated portions of Aldergrove and Point Whitehorn Roads through property owned by the Trillium Corporation. As this property develops, a more permanent multi-use trail system would be constructed for the CMT, and public beach access around Point Whitehorn could potentially be accommodated. From Grandview, another property owner (Malibu) has offered trail access northward to Birch Bay State Park and Birch Bay Drive.

At the park, there is good potential for a mile-long pedestrian trail and boardwalk through Terrell Creek wetlands and along the creek to the park's north end. In addition, it may be feasible to construct a one-mile spur trail (or loop system) to the east to enhance nature enjoyment and wildlife-viewing opportunities in this area, including a possible viewing area for the Birch Bay great blue heron nesting colony—one of the largest in the Northwest.

The CMT route continues north along Birch Bay Drive which was recently improved with 4-foot striped paved shoulders all the way to the north end of the bay (3.6 miles from the state park). Here, the route again crosses Trillium properties east of Shintaffer Road between Birch Bay Drive and Semiahmoo Parkway where it connects with an existing paved path and bikelanes. From near this point, the easterly CMT route follows Shintaffer Road north to Drayton Harbor Road, then turns east to California Creek and Blaine Road (SR 549). Road shoulders are narrow or absent through this area, although road improvements are projected for 2005 in the County's six-year road plan. Busy traffic and narrow bridges at California and Dakota Creeks are also problematic for safe nonmotorized use. Road right-of-way is narrow (40 feet) along Drayton Harbor Road, and the existing roadway runs very close to the shoreline, further complicating the prospects for a separated path along the harbor. Nevertheless, this is an important link in the system and further study will be required to determine the most appropriate CMT alignment through the area.

A temporary route continues north on Blaine Road and Peace Portal Drive (intermittent paved shoulders) into Blaine; a much more attractive alternative follows both developed and undeveloped streets nearer the harbor from the California Creek bridge, northward across Dakota Creek and beyond to a railroad crossing near Bayview and Peace Portal. A high, wide median between the railroad tracks and Peace Portal offers an appealing corridor for the CMT if a public right-of-way can be established. This portion of the trail would rejoin Peace Portal to the north and link with new bikelanes that lead through town to Marine Drive and the I-5 overpass.

The westerly CMT route follows Semiahmoo Parkway through Semiahmoo Park to the north end of Semiahmoo Spit and the foot ferry dock. (At the park, a connecting route could be developed along the old Drayton Harbor Road, which is currently closed and somewhat overgrown, to its end at a residential area where a new trail could be built up the slope to the present Drayton Harbor Road; existing bike lanes or paved path could be extended eastward to Shintaffer.) From Semiahmoo Park,

the main route heads to the north to the ferry dock at the end of the spit. The ferry operates seasonally, but has the ability to carry a small number of bicycles on the short ride to Blaine Harbor. An extended, yet flexible ferry schedule is under consideration in order to accommodate increased demand from cyclists. Sailings to White Rock, B.C. are also being explored. The CMT route follows paved and unpaved paths through Marine Park to Peace Portal Drive where it rejoins the east leg of the route.

From that point, sidewalks and narrow lanes lead beneath two I-5 overpasses to 2nd Street and a temporary route into Peace Arch State Park. A specific alignment to and through Peace Arch Park and the international border crossing has not been determined. Crossing the border by bike or on foot is not well accommodated presently, and nonmotorized travelers are given little or no direction on how or where to make the crossing, or how to avoid the congestion and hazards of motor vehicle traffic queuing up on either side of the border. This important work needs to be coordinated with the redesign of U.S. Customs and Immigration facilities (currently underway), and with the participation of the park agencies involved.

From the border, the route enters Canada, then turns west on Beach Road and passes through the Semiahmoo First Nation Band reserve to reach a short trail at the road end, and footbridge leading into the community of White Rock, B.C. (At meetings, representatives of the tribe expressed support for the CMT, including its future extension to Point Roberts.) An impressive two-mile long system of linear park and promenade facilities (closed to bicycles) has been developed along the waterfront. For purposes of this master plan, the CMT corridor ends at this point; however, a future extension to Point Roberts via the Boundary Bay Trail would be desirable as well. Trail planning efforts underway in British Columbia will also address this link in conjunction with the proposed Trans-Canada Trail through Delta.

As shown in Table 3-5 below, over five miles of paths and more than nine miles of bikelanes or wide paved shoulders which could be utilized by the CMT already exist in Planning Area #3. Trailhead facilities are available at both state parks, at Whatcom County's Semiahmoo Park, at Marine Park in the City of Blaine, and at Blaine Harbor, managed by the Port of Bellingham.

TABLE 3-5
CMT PLANNING AREA #3: EXISTING FACILITIES SUMMARY
 (IN MILES)

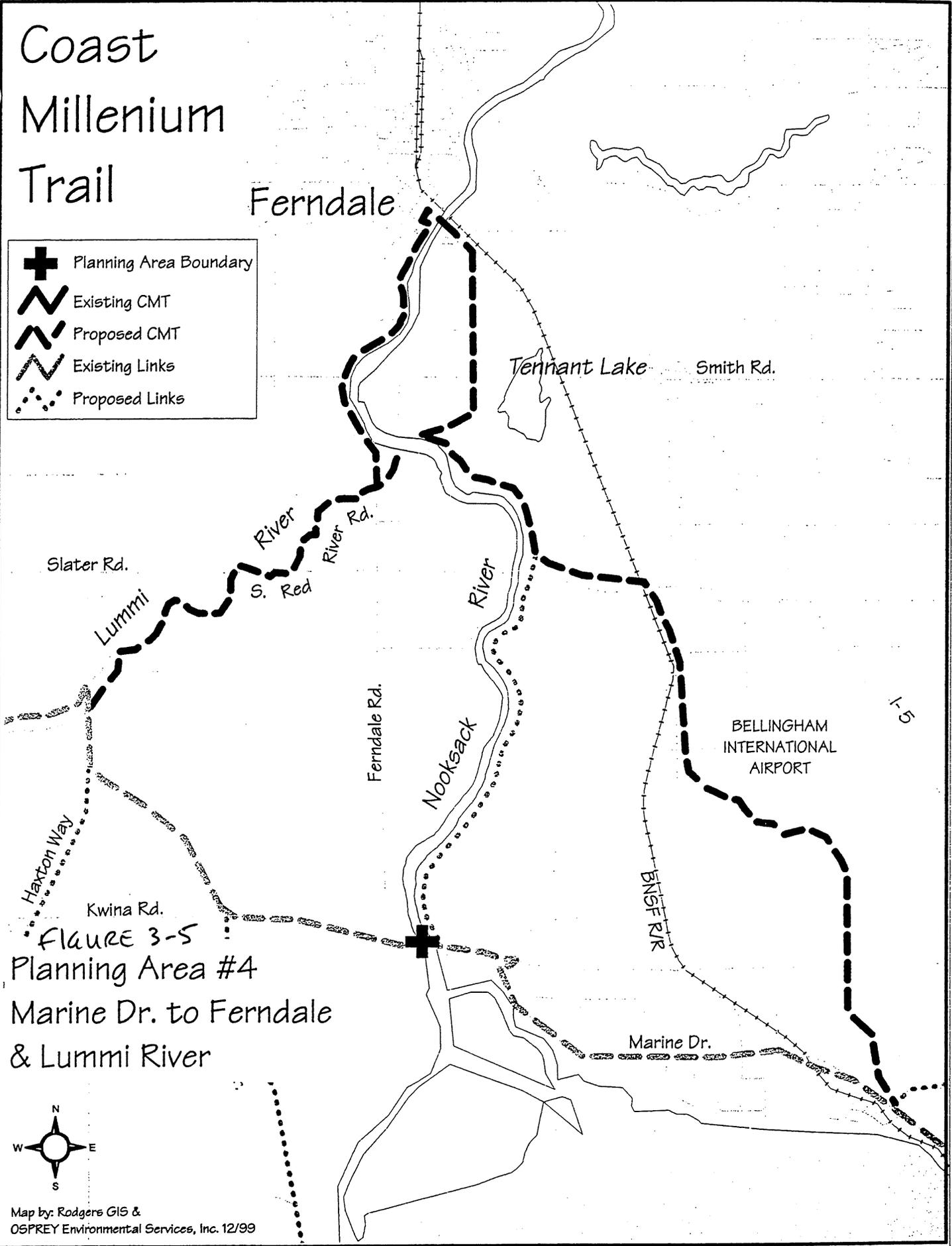
	CMT	Alt. Routes	Spur Routes	Totals
Separated Path/ PAVED	5.1	0.2	0.2	5.5
Sep. Path/ UNPAVED	0.6	0.0	0.5	1.1
Designated Bikelane	3.0	1.0	0.0	4.0
4'+ Striped Shoulder	6.4	1.5	0.0	7.9
Shared Roadway	6.8	1.5	0.9	9.2
No Facilities	0.7	0.0	0.0	0.7
Totals	22.6	4.2	1.6	28.4

NOTE: Distances are given for all existing facility types, as well as areas where potential off-street routes were identified, but where no facilities were present. Thus, the total distance shown in this table does not necessarily match the distance given in Table 3-1. Where sidewalks are integral to the CMT, the distance is included under paved paths.

Coast Millenium Trail

Ferndale

-  Planning Area Boundary
-  Existing CMT
-  Proposed CMT
-  Existing Links
-  Proposed Links



FLAURE 3-5
 Planning Area #4
 Marine Dr. to Ferndale
 & Lummi River



Map by: Rodgers GIS &
 OSPREY Environmental Services, Inc. 12/99

3.4 CMT PLANNING AREA #4

Marine Drive to Ferndale & Lummi River

Summary of Existing Facilities

As the CMT heads northwest out of Bellingham, the route divides in order to provide strong links between communities and the CMT: a westerly route continues along Marine Drive to the Lummi Nation; and a northwesterly route leads through Bellingham Airport property, then heads north to Tennant Lake, Hovander Homestead Park, and Ferndale, before bending to the southwest to follow the Lummi River to Lummi Flats. The route consists largely of shared roadways, with about one mile of unpaved paths at Tennant Lake and Hovander.

From the Port of Bellingham's Marine Drive trailhead, the northwesterly CMT route passes through a large area of deciduous forest and wetlands west of the airport (final trail locations will be dependent on the outcome of proposed development activities on nearby properties also managed by the Port). The route may also traverse land managed by the Washington Department of Natural Resources, before continuing north along Wynn Road, Curtis Road and Rural Avenue to Slater Road.

Heavier, high-speed traffic on Slater Road makes the road crossing here problematic (crossing at the railroad tracks may be the best option). North of Slater, the route turns west and enters a large area of public lands co-managed by Whatcom County Parks and the Washington Department of Fish and Wildlife. The CMT then reaches a dike along the Nooksack River where the dike is followed to Hovander Park with a spur to Tennant Lake (a dike trail heading south along the river to Marine Drive would make another attractive link).

From Hovander, a bicycle/pedestrian bridge across the Nooksack River has been considered which could add tremendously to the trail experience, while providing a fine amenity for users of the park and the Ferndale community. Construction of a dike trail on the west side of the river leading upstream to Ferndale would offer a very appealing connection between Pioneer Park in Ferndale and Hovander Park, with a loop possible by way of Nielsen Road (a river trail to Lynden has also been suggested). A river bridge would also enhance the appeal of Lummi River as a link to the CMT's west leg at Lummi Flats. Development of this corridor requires negotiation with property owners, as well as the Lummi Nation whose authority and concerns would obviously need to be addressed.

TABLE 3-6
CMT PLANNING AREA #4: EXISTING FACILITIES SUMMARY
 (IN MILES)

	CMT	Alt. Routes	Spur Routes	Totals
Separated Path/ PAVED	0.0	0.0	0.0	0.0
Sep. Path/ UNPAVED	1.0	0.0	0.0	1.0
Designated Bikelane	0.0	0.0	0.0	0.0
4'+ Striped Shoulder	0.0	0.0	0.0	0.0
Shared Roadway	4.8	4.4	0.0	9.2
No Facilities	3.4	0.2	0.0	3.6
Totals	9.2	4.6	0.0	13.8

NOTE: Distances are given for all existing facility types, as well as areas where potential off-street routes were identified, but where no facilities were present. Thus, the total distance shown in this table does not necessarily match the distance given in Table 3-1.

COAST MILLENNIUM TRAIL MASTER PLAN

—4. PLANNING & DESIGN ISSUES—

Development of the CMT raises a number of planning and design issues that should be considered prior to final design or construction of facilities. Issues range from identifying and linking destinations; delineating temporary or permanent routes; public right-of-way needs within the trail corridor; trailheads and trail access; natural, scenic, cultural and historic sites and resources; anticipated use; the need for buffers to minimize environmental or land use impacts; as well as public safety and security. These issues are addressed here and in the plan recommendations in the next section.

4.1 LINKS & DESTINATIONS

The CMT offers many opportunities to link communities with a major facility for recreation and nonmotorized transportation, while enhancing public access to natural, scenic and recreation areas, historic and cultural sites, a variety of tourist destinations, and other connecting trails. Opportunities also exist to link many schools, businesses, employment centers, and residential areas within the most populated region of Whatcom County. The CMT also offers a unique and important link between Washington and British Columbia. As much as possible, general routing of the CMT attempts to make many of these connections, while taking advantage of existing facilities and public right-of-way.

In Whatcom County, the CMT would provide links between three incorporated cities—Bellingham, Ferndale and Blaine—as well as several other communities, notably the Lummi Nation, Sandy Point Heights, and Birch Bay. (The proposed Nooksack Trail could eventually connect Lynden to the CMT via Ferndale.) Employment centers in these communities, and in the Cherry Point industrial area, would enjoy easy access to the trail for commute purposes. Visitors to the County would find the CMT attractive as a tourism destination, as well as a means to access many other tourist-oriented facilities and recreation sites.

Three state parks, two county parks, a number of city parks, a few undeveloped local or regional park sites, and several major wildlife areas exist along the CMT corridor. There are also opportunities (discussed below) to develop some portions of the corridor not simply as a trail, but as a linear park or greenway, with additional benefits for fish, wildlife and habitat conservation.

Thus, the CMT is likely to bring direct economic and environmental benefits to local communities, while improving the viability of nonmotorized transportation in the region.

4.2 POTENTIAL ROUTES & ALTERNATIVES

The overall route of the CMT, illustrated in the previous section and in this plan's recommendations, reflects the desire to make many of the linkages addressed above. In locations where a permanent trail alignment could not be identified (generally due to a lack of public right-of-way), temporary routes have been delineated. These typically follow rural roads with reduced traffic volumes, which may be suitable for most bicyclists, although some areas like Marine Drive and Drayton Harbor Road have higher traffic speeds or volumes that diminish their usefulness—especially for equestrians and pedestrians. Parallel paths within the

road right-of-way may be an option in some areas (discussed below). Where temporary links are identified, negotiations should be undertaken with adjacent landowners to determine whether more permanent routes can be established which serve a greater diversity of trail users. (The potential for alternative routes is discussed in the Recommendations in section 5.)

4.3 RIGHT-OF-WAY ISSUES

By definition, trails require lengthy, uninterrupted corridors that are both physically and legally accessible to the public, either by ownership, easement or other means. Streets, roads and highways account for the vast majority of these public corridors, and in some areas, existing roads and paved shoulders may provide an acceptable facility for cyclists. If suitable facilities are absent, rights-of-way may still be wide enough to accommodate wide shoulders or a trail on one or both sides of the road. However, traffic safety, drainage facilities, other utilities, adjacent structures, driveways, noise, and aesthetic concerns tend to substantially limit the suitability of such areas for trail development.

Utility corridors, particularly underground pipelines, can sometimes provide a suitable route, but they often occur on easements that exclude public access. Large blocks of public or private land can provide important trail opportunities, as can certain conservation easements. Developing areas may be subject to land use regulations that encourage or require provisions for public access, and outright donations of trail easements have occurred where landowners or developers are particularly supportive of trails.

The CMT corridor is essentially a "piecing together" of existing public trails, on-street facilities, and areas where public right-of-way either exists or can be readily negotiated. Where no obvious alternatives exist, a temporary route is identified, generally following public roads.

Areas where the lack of public right-of-way is most problematic include the following:

- ▶ Chuckanut Drive south of Clayton Beach Trailhead
- ▶ Marine Drive northwest of Little Squalicum
- ▶ Bellingham International Airport to Slater Road
- ▶ Hovander Park to Slater Road & Haxton Way (Lummi River area)
- ▶ Nooksack Delta & Lummi Flats (Lummi Nation)
- ▶ Slater Road to Lake Terrell
- ▶ Lake Terrell to Arco Refinery
- ▶ Drayton Harbor, south & east shores
- ▶ British Columbia border to White Rock

Established roads may be the only realistic alternative for routing the CMT through these areas until more attractive opportunities emerge. While some roads with lower speed limits or traffic volumes may be acceptable to experienced cyclists, they may not be appropriate for pedestrians, equestrians or less experienced (or very young) cyclists. If permanent routing of the CMT is to ultimately serve users of all ages and abilities, additional public right-of-way may need to be negotiated in the areas listed above.

It should be noted that if road shoulders are the only facility available, a conflict can arise between the cyclist's preference for paved shoulders, and an equestrian's preference for unpaved. On low-speed, low volume roads, cyclists may be able to safely share the traffic lane, while horses and foot traffic may be able to utilize an unpaved shoulder, at least on a temporary basis, although generally accepted transportation design guidelines tend not to encourage such use. Yet, if the road right-of-way is the only public corridor available in a

particular area, unpaved shoulders may be the facility of choice, at least as a temporary solution. Local circumstances (and cost) will influence this decision between using road shoulders or separated paths adjacent to the road. Parallel paths will likely encounter fewer difficulties along roads that border large contiguous areas of undeveloped land. Frequent intersections with driveways or other roads can increase the risk for accidents. If more desirable alternatives are unavailable to foot traffic or those on horseback, parallel paths should be considered. Where pedestrian or equestrian safety cannot be reasonably assured, the route could be identified for cyclists only.

4.4 TRAILHEADS & TRAIL ACCESS

The CMT will function best and serve the recreation and transportation interests of more people if it can be easily accessed at frequent intervals. Trail access can be accommodated by a wide range of facilities, from major formalized trailheads or public parks with substantial parking, restrooms, picnicking facilities and the like, to minor local access sites consisting of no more than a trail sign or bollard, and shoulder parking for one or two cars. A number of established parks, trailheads, and public parking areas can be found throughout the CMT corridor, including:

- ▶ Chuckanut Drive pull-outs
- ▶ Clayton Beach
- ▶ Hiline/Cleator Road
- ▶ North Chuckanut Mountain
- ▶ Arroyo Park
- ▶ Rotary Interurban
- ▶ Fairhaven Park
- ▶ Boulevard Park
- ▶ Maritime Heritage Park
- ▶ Zuanich Park
- ▶ Marine Drive Trail
- ▶ Lake Terrell
- ▶ Birch Bay State Park
- ▶ Birch Bay Drive
- ▶ Bay Horizon Park
- ▶ Semiahmoo Park
- ▶ Blaine Harbor
- ▶ Marine Park
- ▶ Peace Arch Park
- ▶ White Rock Promenade
- ▶ Tennant Lake
- ▶ Hovander Homestead Park
- ▶ Pioneer Park
- ▶ Misc. minor access (many locations)

As the CMT develops, some of these areas will need to be improved or expanded to accommodate a likely increase in demand. New facilities will need to be developed in locations where trail access opportunities are more limited (refer to the maps in Section 5 for more specific trailhead locations). Areas where suitable trail access facilities are lacking include the following:

- ▶ Chuckanut Dr., Colony Creek area
- ▶ South Boulevard Park
- ▶ Little Squalicum Park
- ▶ Bellingham Airport wetlands
- ▶ Nooksack Delta (Lummi Nation)
- ▶ Lummi Flats (Lummi Nation)
- ▶ Birch Bay, north end
- ▶ Drayton Harbor/California Creek area
- ▶ Peace Portal Drive, Blaine
- ▶ Misc. minor access (many locations)

Trailheads should provide for a diversity of users and incorporate universal design techniques and ADA accessibility at each location (discussed under Recommendations).

4.5 NATURAL & SCENIC FEATURES

The CMT corridor passes through a varied natural landscape of rugged coastlines, steep bluffs, forested mountains and lowlands, rocky outcrops, streams, lakes, wetlands, floodplains, meadows, headlands, bays, beaches, tidepools, tidal flats, and other features that contribute immensely to the overall scenic quality of the corridor. In many locations, the route affords spectacular views of the bays and islands extending outward from Whatcom County's extensive marine shoreline.

Many important fish and wildlife areas are encountered along the corridor, including the following regionally significant habitats:

- ▶ Colony Creek
- ▶ Oyster Creek
- ▶ Samish Bay
- ▶ Chuckanut Mountains
- ▶ Chuckanut Creek
- ▶ Padden Creek
- ▶ Whatcom Creek
- ▶ Bellingham Bay
- ▶ Bellingham airport wetlands
- ▶ Nooksack River & Delta
- ▶ Lummi Flats & Lummi River
- ▶ Lake Terrell
- ▶ Tennant Lake
- ▶ Cherry Point & Point Whitehorn
- ▶ Birch Bay
- ▶ Terrell Creek
- ▶ Semiahmoo Spit & Bay
- ▶ Drayton Harbor
- ▶ California Creek
- ▶ Dakota Creek
- ▶ Boundary Bay

All of these areas provide opportunities for recreational and aesthetic enjoyment by trail users, as well as places to learn about ecosystems and the environment. The presence of sensitive species and habitats in some areas requires that extra care be taken in the location, design and use of facilities—not only to provide needed protection, but to further enhance the trail experience for users. Where appropriate, wildlife viewing and interpretive facilities can be provided, along with other improvements that accommodate scenic and educational enjoyment of the natural landscape (or seascape). Blinds, clearings, and even a few viewing platforms or towers would be desirable in some instances. (Recommended viewpoints and interpretive sites are found in Section 5.)

4.6 CULTURAL & HISTORIC SITES

The Lummi Tribe and Semiahmoo First Nation Band have a long history of settlement and sustenance in the geographic areas we now refer to as western Whatcom County and British Columbia. This cultural heritage is, to a large extent, the foundation of our history. While the landscape has changed radically since the arrival of non-native settlers in the mid-1800s, much evidence of the Lummi and Semiahmoo past still exists in the memory, the photographs, and the artifacts of native villages, ceremonial sites, travel corridors, and hunting and fishing grounds. The tribes' affinity for the marine coast and its tributary streams and rivers suggests the need for great sensitivity in locating and developing certain portions of the CMT, especially around known or suspected archaeological or ceremonial sites.

Within the Lummi and Semiahmoo communities that exist today, there is, however, more than indigenous cultural tradition and privacy issues to be concerned about. There are legal and jurisdictional concerns and responsibilities that will require cooperation and consent in the development of new trail facilities within the bounds of the reservations. Thus, the design and development effort for these locations needs to be a cooperative effort that addresses

concerns that might arise for Native American communities, while enhancing the trail experience for all who choose to enjoy it.

Since the 1850's, the region's colorful history has many facets, from urban and rural development and the early mainstays of logging, mining, fishing and agriculture, to the emergence of a much more diversified commercial and industrial economic base. Evidence of this more recent historic period can also be found at many locations along the CMT corridor. As a result, there are numerous opportunities for interpretive and educational facilities that could be integrated with development of the CMT. Examples might include an historic whistlestop along the Interurban Trolley; the era of tall sailing ships on the Bellingham waterfront; an explanation of place names like Whatcom, Nooksack, Cherry Point or Point Whitehorn; or the precise location of Captain George Vancouver's landing at Birch Bay in 1792. Further suggestions for interpretive sites and possible themes are included in the Recommendations in Section 5.

4.7 OTHER SITES OF INTEREST

In addition to the possible enhancement of natural, scenic, cultural and historic sites of interest noted above, other sites may be worthy of noting, if not in the form of interpretive facilities or general trailhead information, perhaps in brochures or other literature that may be published on the CMT. Other sites and facilities of interest to trail users might include campgrounds, hostels, bed and breakfast establishments, restaurants, museums, tourist attractions, multi-modal transportation hubs, community transit stops, bike shops, public restrooms and emergency facilities, among others. One could list perhaps hundreds of sites and facilities within these broad categories. Though most are not specifically identified in this plan, the Bellingham-Whatcom County Convention and Visitors Bureau and others have expressed interest in compiling this information.

4.8 ANTICIPATED USE

The CMT offers a major new facility for recreation and transportation in the Whatcom County area. The trail would likely have strong appeal to recreational and commuter cyclists, as well as mountain bikers, hikers, joggers, equestrians and llama packers. While much of the trail would be open to nonmotorized use and would be developed to a barrier-free standard, a crushed limestone surface in most areas would discourage some uses, such as skating, roller blading, or faster cycling. In time, wheelchairs and strollers would likely be accommodated over virtually the entire distance.

Regardless of the travel mode, people will be able to use the trail for exercise, fresh air, scenic enjoyment, education, or to simply travel from one point to another. Users could enjoy a picnic or a sunset stroll with the family, participate in a class fieldtrip on forestry, geology, history or a multitude of other subjects, go birdwatching, photograph nature, or countless other activities, all of which should generate significant demand for use of this trail. As a backbone trail system between communities, the CMT will become the principal north-south corridor of the regional trail system, complementing other regional trails like the proposed Bay-to-Baker and Nooksack Trails, and the City of Bellingham's developing network of trails and greenways.

The demand for trails in Whatcom County and the city of Bellingham has been documented in several recent comprehensive park and recreation plans. Random household surveys have shown that over half the population uses trails for one or more of the purposes mentioned above, and that the demand for trail-related recreation opportunities is generally

higher than other areas in the Pacific Northwest. The greatest demand tends to come from pedestrian-oriented activities such as walking for pleasure, going on nature walks, hiking and backpacking, and jogging. Participation in mountain biking and horseback riding is less overall, but significant when compared to participation rates for the Northwest as a whole.

Perhaps 80,000 to 100,000 residents of Whatcom County already use and enjoy trails (see Appendix __), albeit at widely varying rates and at different times and seasons. Tens of thousands of kids and adults ride a bicycle at least occasionally. Participation rates appear to be increasing at a rate faster than the growth of the region's population. As the population increases in the years to come, we can expect the number of trail users to grow as well. Yet studies have also determined that the public demand for trails is not currently being met by the total miles of facilities existing in the present system. The CMT's proximity to the most populated area of the county makes the CMT an excellent candidate to help satisfy both the current and future demand for trail-related recreation and transportation.

4.9 TRAIL BUFFERS

In general terms, trails represent a small-scale, low-impact kind of development that can be compatible with a wide range of adjacent land use types. Corridors are often much wider than the actual trail tread, and are almost always bounded by native vegetation which acts as a screen or natural buffer between the trail and adjacent properties. Trails that pass through rural and agricultural areas tend to give a wide berth to private homes, which helps maintain a sense of privacy and security for residents. However, there are circumstances where real or perceived adverse effects on adjoining properties can result from the use or location of a trail or trailhead.

Where a new trail is proposed, nearby residents may express concerns with potential vandalism, theft, fire, litter, noise, trespassing or other problems that trail users might bring to an area. At trailheads, noise, glare, litter and vehicle break-ins can be problematic, and in some instances, adjacent development can adversely impact the experience of trail users. In reality, most of these kinds of impacts rarely occur along well-designed, publicly maintained trails, and most can be averted through proper location and management of facilities. To minimize such effects with the CMT, the Recommendations in Section 5 suggest a number of techniques, such as trail buffers and setbacks, that can be used to keep these impacts to a bare minimum.

4.10 PUBLIC SAFETY & SECURITY

As noted above, real and perceived problems can result from new trail development with implications for public safety and security. Again, proper design will help ensure the development of facilities which are reasonably safe to use and which maintain the security of both trail users and adjacent properties. Facilities can be monitored, and problem areas patrolled as needed to address concerns. Educational programs and enforcement can also help alleviate concerns.

FIGURE S-1
CMT ROUTING PLAN (color map)



Conceptual Routing Plan

White Rock

Marine Park

Peace Arch Park

BRITISH COLUMBIA

WHATCOM COUNTY

Semiahmoo Park

Drayton Harbor

Blaine

Lynden

Birch Bay

Birch Bay

Birch Bay State Park

Bay Horizon Park

Cherry Point

Lake Terrell

Ferndale

Coast Millennium Trail

NORTH

Existing

Proposed

CMT

Links

0 4 MI

Lummi Bay

Lummi Nation

Tennant Lake
Hovander
Homestead

Little Squalicum Park

Bellingham Bay

Maritime Heritage Park

Bellingham

Boulevard Park

Lummi Island

Fairhaven Park

WHATCOM COUNTY
SKAGIT COUNTY

Larrabee State Park

Samish Bay

San Juan Islands

COAST MILLENNIUM TRAIL MASTER PLAN

—5. RECOMMENDATIONS—

Recommendations are provided for overall routing and alignment of trails, including both permanent and temporary routes, as well as the preferred standards for trail width, grades and surfacing. Locations and suggested improvements are provided for trailheads, interpretive sites, beach and water access, viewpoints, natural areas, and other sites of interest. Trail signing is addressed, along with general design themes and continuity, trail development guidelines, and facility maintenance and management.

5.1 PREFERRED ROUTING & ALIGNMENTS

The CMT represents an extensive braided corridor of on- and off-street facilities to be developed in phases, as funding and circumstances allow. In some areas, insufficient funding or right-of-way may delay trail development for several years or more; temporary routes have been identified for these areas. Portions of the route that can be more easily constructed or improved are addressed in the first phase of development. Phase 1 generally consists of the construction of permanent facilities through most of Planning Areas #1 and #3, with additional spot improvements, temporary routing and signing for the entire CMT corridor (a complete phasing plan is provided in Section 8).

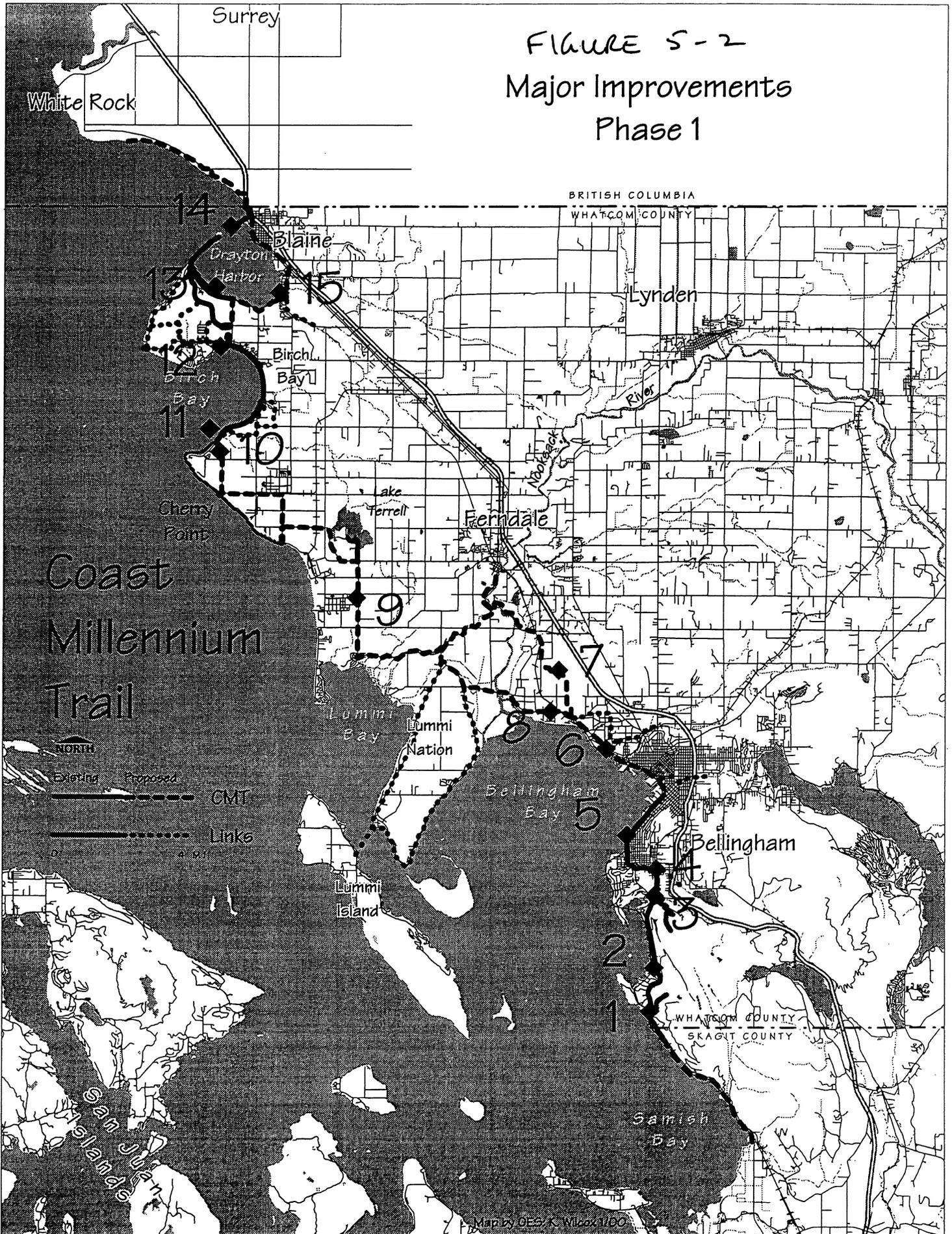
Figure 5-1 on the facing page illustrates an overall routing plan for the CMT, including both permanent and temporary routes. As opportunities arise to develop additional off-street facilities, particularly within Planning Area #2, actual trail alignments will change. Nevertheless, the CMT should remain more or less within the same broad corridor in order to maintain important transportation and recreation links in the system. Table 3-1 below provides a summary of recommended facility types for the entire CMT.

TABLE 5-1
CMT RECOMMENDED FACILITIES SUMMARY
(IN MILES)

Facility	CMT	Temporary Routes	Spur Routes	Totals
Separated Path/ PAVED	8.9	0.4	1.5	10.8
Sep. Path/ UNPAVED	22.7	1.8	0.5	25.0
Designated Bikelane	11.5	1.5	1.0	14.0
4'+ Striped Shoulder	12.2	2.5	1.0	15.7
Shared Roadway	11.2	3.4	0.6	15.2
No Facilities	4.2	0.2	0.0	4.4
Totals	70.7	9.8	4.6	85.1

NOTE: Distances are given for all facilities, including areas where paths and road shoulders (or bikelanes) extend along the same trail segment. Thus, distances shown in this table exceed the actual length of the CMT corridor. Sidewalks integral to the CMT are included under paved paths. Unpaved paths may increase significantly in Areas #2 and #4 if additional right-of-way becomes available.

FIGURE S-2
Major Improvements
Phase 1



Permanent routes are planned at locations where one or more of the following circumstances apply:

- ▶ Substantial facilities are existing
- ▶ Public rights-of-way presently exist or may become available in the near future
- ▶ Funding has been identified for development of proposed facilities
- ▶ Alternatives are generally unavailable

Temporary and alternate routes can provide interim connections in the regional trail system, even if permanent routes are presently unavailable. Temporary routes generally consist of rural roads and highways that can provide through connections until separated paths, bikelanes, striped shoulders, or other more suitable facilities are established. These routes should be appropriately signed.

Specific areas have been identified where new trail construction, or improvements to existing facilities can more readily occur as part of Phase 1. Some of the more substantial construction elements of this initial phase are shown on Figure 5-2, and briefly described in Table 5-2. For more detailed descriptions and locations of proposed improvements, refer to the CMT Technical Supplement (a separate document).

TABLE 5-2
MAJOR IMPROVEMENTS, PHASE 1

Item # (Fig. 5-2)	Location	Description
Planning Area #1		
1	Clayton Beach Trailhead	New link to Interurban
2	Fragrance Creek, steep dip	Regrade; raise crossing w/ new bridge
3	California St., N. Chuckanut Mt. Trailhead	Trail bridge & Arroyo bypass to west
4	Interurban Trail	Misc. repairs (city & county)
5	Boulevard Park area	Railroad crossing
6	Little Squalicum Beach	Trail & elevated boardwalk
Planning Area #2		
8	Marine Dr. bridge	Railroad crossing (bridge or at-grade)
9	Minor improvements	As needed for temporary route
Planning Area #3		
10	Malibu Trail	New trail construction
11	Birch Bay State Park link	New trail construction
12	Birch Bay Drive/Semiahmoo (Trillium)	New trail construction
13	Drayton Harbor Rd. - Old Drayton Hbr Rd.	Improve old roadbed; new trail constr.

14	Plover dock	Misc. dock enhancements
15	Drayton Harbor Rd. & Calif. Cr. bridge	Improve shoulders & widen bridge
Planning Area #4		
7	Route to Hovander & Ferndale	Signing & spot improvements

5.2 WIDTH, GRADES & SURFACING

The principal CMT corridor should be developed to a high, barrier-free standard that will accommodate a diversity of trail users, be functional, enjoyable, reasonably safe, and cost-efficient to build and maintain. Design should be consistent with established guidelines for universal access, while complementing the natural and aesthetic quality of adjacent surroundings.

Generally, an eight-foot minimum tread width, compacted crushed limestone (or asphalt) surface, and maximum grades of five percent will suffice for off-street facilities. Paved shoulders and bikelanes should not be less than four to five feet in width (see below).

The CMT is intended for both nonmotorized transportation and recreational use by foot traffic (walkers, hikers and joggers), cyclists (kids, adults, mountain and touring bikes), equestrians, and llama packers, although some facilities may not be suitable for all user groups. For example, striped paved shoulders at Birch Bay provide an excellent link for cyclists, but are not well suited to pedestrians. A separate pedestrian path along the shore would nicely accommodate foot traffic. Some areas may be unsuitable for stock, such as Chuckanut Drive south of Larrabee State Park. To the extent practical, the proposed mix of facilities and braided routes attempts to accommodate all of these users.

Where possible, trail construction specifications should adhere to the following:

Off-street facilities

Trail width: Generally 10 feet to 12 feet (8 feet minimum; 14 feet maximum), plus 1 to 3 feet of clear space each side. Width will vary according to a variety of factors:

- 8 feet Rural or remote areas; relatively low demand
- 10 feet Urban or rural communities; low to moderate demand
- 12 feet Urban areas; source/destination areas; moderate to high demand
- 14 feet Urban source/destination areas; high demand; unique circumstances

In some instances, a secondary path or spur trail may be constructed to a lower standard if doing so will allow that path to serve its intended purpose. For example, steep and rocky slopes along Chuckanut Drive preclude development of an eight-foot wide multi-use path, yet foot traffic could benefit considerably from a more primitive trail perhaps as narrow as eighteen inches and with sharp vertical and horizontal variation. Equestrians may benefit from a narrow, soft-surface trail separated from a striped paved shoulder that is better suited to cyclists. Where all user groups share the same facility, the full-width standard should apply.

Maximum grades: 5% throughout. A level or gentle grade of 0% to 5% will accommodate a high level of barrier-free access. Steeper grades up to 10% may be acceptable for temporary barrier-free routes, and areas awaiting funding, final design and development of permanent

facilities. Steeper grades should be limited to distances not greater than fifty feet wherever practical. Generally, continuous grades steeper than 10% or extending more than fifty feet should not be designated barrier-free.

Tread surfacing: The preferred surface treatment for off-street facilities is compacted crushed limestone; limited asphalt paving may be acceptable in parks or urban areas where paved paths are already present. Properly installed, crushed limestone over a solid base forms a relatively smooth, durable surface suitable for most bicycles, wheelchairs and strollers.

On-street facilities

There are essentially three types of facilities which make up the on-street portions of the CMT: Designated bikelanes, undesignated striped paved shoulders, and shared roadways with little or no shoulder. Minimum widths, grades and surfacing should normally be as follows:

■ Designated bikelane

Definition: A paved lane or shoulder designated, signed and/or marked specifically for bicycle use (also referred to as a Class II Bikeway under Washington State Department of Transportation (WSDOT) design standards for nonmotorized transportation facilities; a separated path intended for bicycle use is a Class I facility).

Minimum width: Generally 4 feet; 5 feet if a curb is present; higher-speed, higher-traffic volume roads may warrant additional width.

Maximum grade: Same as existing roadway.

Surfacing: Same as existing roadway (asphalt or chip-seal)

■ Shared roadway with striped, paved shoulders (min. 4' width)

Definition: An existing road with striped paved shoulders at least 4 feet in width. If the road is designated as a bike route, it is considered a Class III Bikeway under WSDOT design standards; undesignated, it is a Class IV facility.

Minimum width: Generally 4 feet; 5 feet if a curb is present; higher-speed, higher-traffic volume roads may warrant additional width.

Maximum grade: Same as existing roadway.

Surfacing: Same as existing roadway (asphalt or chip-seal)

■ Shared Roadway without striped paved shoulders (< 4' width)

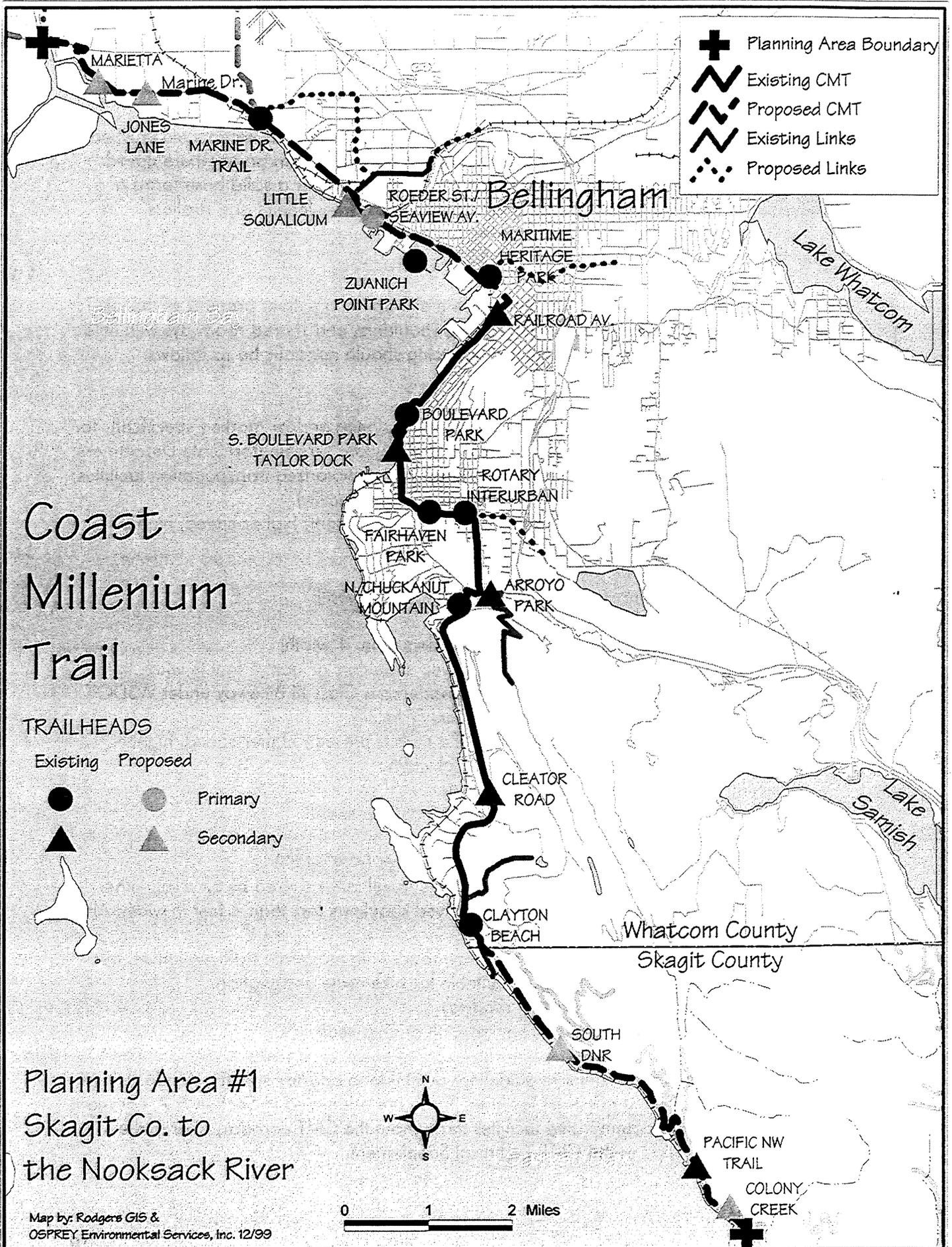
Definition: An existing road with motor vehicle travel lanes shared by bicycles, either lacking striped paved shoulders, or with paved shoulders less than 4 feet in width. Also a Class III or IV Bikeway, as above.

Minimum width: Same as existing roadway; roads with moderate traffic volumes, truck traffic or higher-speeds may not be suitable for bike route designation.

Maximum grade: Same as existing roadway.

Surfacing: Same as existing roadway (asphalt or chip-seal)

There are much more extensive guidelines available to address specific standards that should be applied to on- and off-street facilities. These are addressed in Section 5.7. For more detailed descriptions of recommended facilities throughout the CMT corridor, refer to the maps and tables contained in the CMT Technical Supplement.



5.3 TRAILHEAD FACILITIES

To ensure that the CMT will be reasonably accessible to the public, trailhead facilities are needed at appropriate intervals. Urban areas will require trail access at more frequent intervals than rural areas, due to the higher concentrations of trail users that can be expected within more populated areas. For purposes of convenience and safety in rural areas, a minimum interval of one to two miles is suggested.

Trail access may consist of a wide array of facilities, from large, formally developed trailheads with restrooms and parking for twenty cars or more, to small, local access areas with limited shoulder parking for one or two cars. City, county and state parks, some Port of Bellingham facilities in Bellingham and Blaine, and many other public facilities can also be utilized to access the CMT. Many such sites already exist.

Existing and proposed trailheads are shown for each of the four planning areas in Figures 5-3 through 5-6, and are summarized in Table 5-3 on the next page. Presently, at least thirty trail access areas exist along the CMT corridor; thirteen of them could be considered "minor" sites for local access which do not require significant expansion or costly development of new facilities. Of the remaining seventeen "major" sites, fourteen are public parks and three are established trailheads, most of these also will not require major expansion to accommodate trail access.

This plan recommends an additional twenty-five sites, including ten "major" trailheads and fifteen "minor" access areas. Each major site could serve as a hub for a particular area or community along the corridor. A brief description of each major site follows:

- ▶ *Little Squalicum / Eldridge Ave*: A site on Eldridge Avenue just north of the Little Squalicum bridge could potentially be developed as a major trailhead for the CMT, the Bay-to-Baker Trail, and other trails within the proposed park.
- ▶ *Roeder/Seaview Avenue*: This site would provide access to Little Squalicum Beach from Roeder Avenue; exact location is undetermined.
- ▶ *Kwina Road (Lummi Nation)*: A site near the Northwest Indian College or the Lummi Tribal Center is suggested to enhance commuter cycling and recreation opportunities for the Lummi community; actual location and development will require the Lummi Tribe's involvement and authorization.
- ▶ *Cherry Point*: A small county park has been proposed near the Cherry Point beach at the south end of Gulf Road; the site could provide CMT access by way of a spur.
- ▶ *Point Whitehorn*: Trillium Corporation may develop beach and trail access in this area as part of ongoing development activity south of Birch Bay.
- ▶ *North Birch Bay*: A new trailhead is suggested where the CMT leaves Birch Bay Drive at the north end of the bay (to cross Trillium-owned properties).
- ▶ *MV Plover Dock*: Trailhead facilities may be incorporated into proposed redevelopment of the foot ferry dock at the north end of Semiahmoo Spit.
- ▶ *California Creek*: An intermediate access point is needed between Birch Bay and Blaine; California Cr. offers an attractive location if a specific site becomes available.
- ▶ *Blaine Harbor*: The Port of Bellingham is developing expanded public access and parking at Blaine Harbor which could be used to access the CMT.
- ▶ *Peace Arch Park (BC)*: North of the Canadian border, additional trailhead facilities would appeal to those who wish to use the park as a north- or south-bound starting point.

TABLE 5-3
TRAILHEAD FACILITY RECOMMENDATIONS

PRIMARY TRAILHEAD: ● PROPOSED ● EXISTING
 SECONDARY TRAILHEAD: ▲ PROPOSED ▲ EXISTING

Location	Class	Priority	Parking	Comment
Planning Area #1				
Colony Creek	▲	3	1-3	Shoulder parking; minimal facilities.
Pacific NW Trail	▲	2	4-9	Local access; minimal facilities.
South DNR	▲	3	1-3	Local access; minimal facilities.
Clayton Beach	●	1	25+	Major access; demand from park use.
Cleator Road	▲	2	4-9	Local access; minimal facilities.
N. Chuckanut Mt.	●	1	25+	Major access; extensive facilities.
Arroyo Park	▲	2	4-9	Local access; minimal facilities.
Rotary Interurban	●	2	10-24	Local access; modest facilities.
Fairhaven Park	●	2	10-24	Local access; extensive facilities.
S. Boulevard/Taylor Dock	▲	2	4-9	Local access; modest facilities.
Boulevard Park	●	1	10-24	Major access; extensive facilities.
Maritime Heritage Park	●	1	10-24	Major access; extensive facilities.
Zuanich Park	●	3	10-24	Local access; modest facilities.
Little Squalicum / Marine Drive	●	1	10-24	Major access; extensive facilities.
Roeder/Seaview Avenue	●	1	10-24	Major access; modest facilities.
Marine Drive Trail	▲	2	4-9	Local access; minimal facilities.
Jones Lane	▲	3	1-3	Local access; minimal facilities.
Marrietta	▲	2	1-3	Local access; minimal facilities.
Planning Area #2				
Kwina Rd (NW Indian College?)	●	2	4-9	Local access; modest facilities.
Lummi River	▲	3	1-3	Local access; minimal facilities.
Sandy Point Heights	▲	3	1-3	Local access; minimal facilities.
Lake Terrell	▲	3	1-3	Local access; modest facilities.
Lake Terrell Overlook	▲	3	1-3	Local access; minimal facilities.
Cherry Point	●	2	4-9	Local access; modest facilities.

Planning Area #3				
Point Whitehorn	●	3	??	Local access; modest facilities.
Grandview Road	▲	2	1-3	Local access; minimal facilities.
Birch Bay State Park S	●	1	10-24	Major access; extensive facilities.
Birch Bay State Park N	●	2	10-24	Major access; extensive facilities.
Bay Rim Beach Access	▲	2	1-3	Local access; modest facilities.
Bay Road	▲	3	1-3	Local access; minimal facilities.
Bay Horizon Park	●	2	4-9	Local access; extensive facilities.
Birch Bay	▲	1	4-9	Local access; minimal facilities.
Harborview	▲	1	4-9	Local access; modest facilities.
Cedar Avenue Park	▲	3	1-3	Local access; minimal facilities.
N. Birch Bay	●	1	10-24	Major access; modest facilities.
Semiahmoo Parkway	▲	2	1-3	Local access; minimal facilities.
Semiahmoo Park	●	1	10-24	Major access; extensive facilities.
Tongue Point	▲	2	1-3	Local access; minimal facilities.
MV Plover Dock	●	2	1-3	Major access; modest facilities.
Drayton Harbor Road	▲	2	1-3	Local access; minimal facilities.
California Creek	●	2	10-24	Major access; extensive facilities.
Peace Portal	▲	3	1-3	Local access; minimal facilities.
Blaine Harbor	●	1	10-24	Major access; modest facilities.
Marine View Park	▲	1	4-9	Major access; extensive facilities.
Peace Arch Park (WA)	●	1	10-24	Major access; extensive facilities.
Peace Arch Park (BC)	●	1	10-24	Major access; extensive facilities.
White Rock Promenade (BC)	●	2	10-24	Major access; extensive facilities.
Planning Area #4				
Marine Drive Trailhead	●	2	10-24	Major access; modest facilities.
Wynn Road	▲	3	1-3	Local access; minimal facilities.
Slater Rd. WDFW Access	▲	2	4-9	Local access; minimal facilities.
Tennant Lake	●	1	4-9	Major access; modest facilities.
Hovander Homestead	●	1	10-24	Major access; extensive facilities.
Pioneer Park	▲	2	4-9	Local access; modest facilities.
Nooksack Bike/Ped Bridge	▲	3	4-9	Local access; minimal facilities.
Slater Rd. @ S. Red River	▲	3	1-3	Local access; minimal facilities.

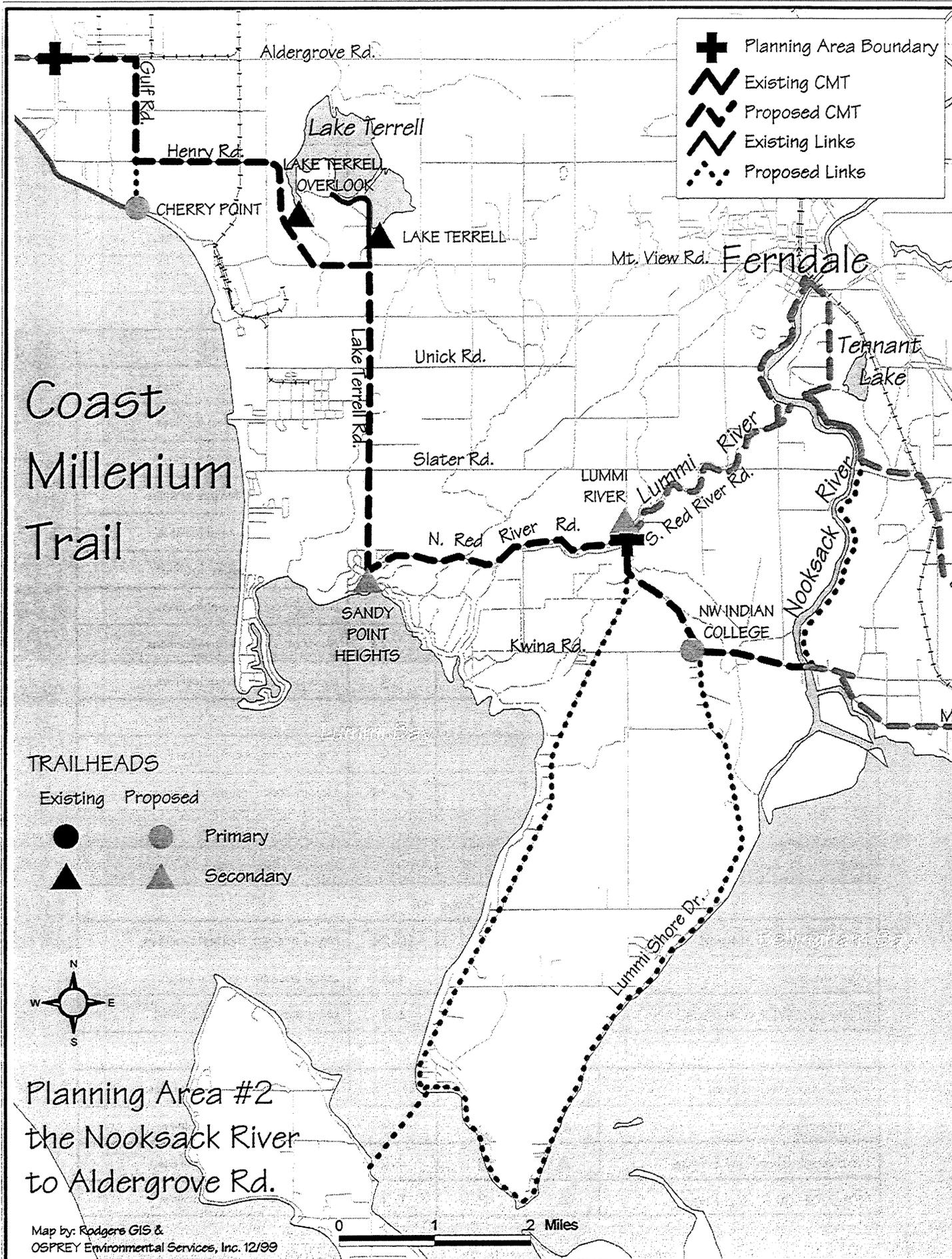
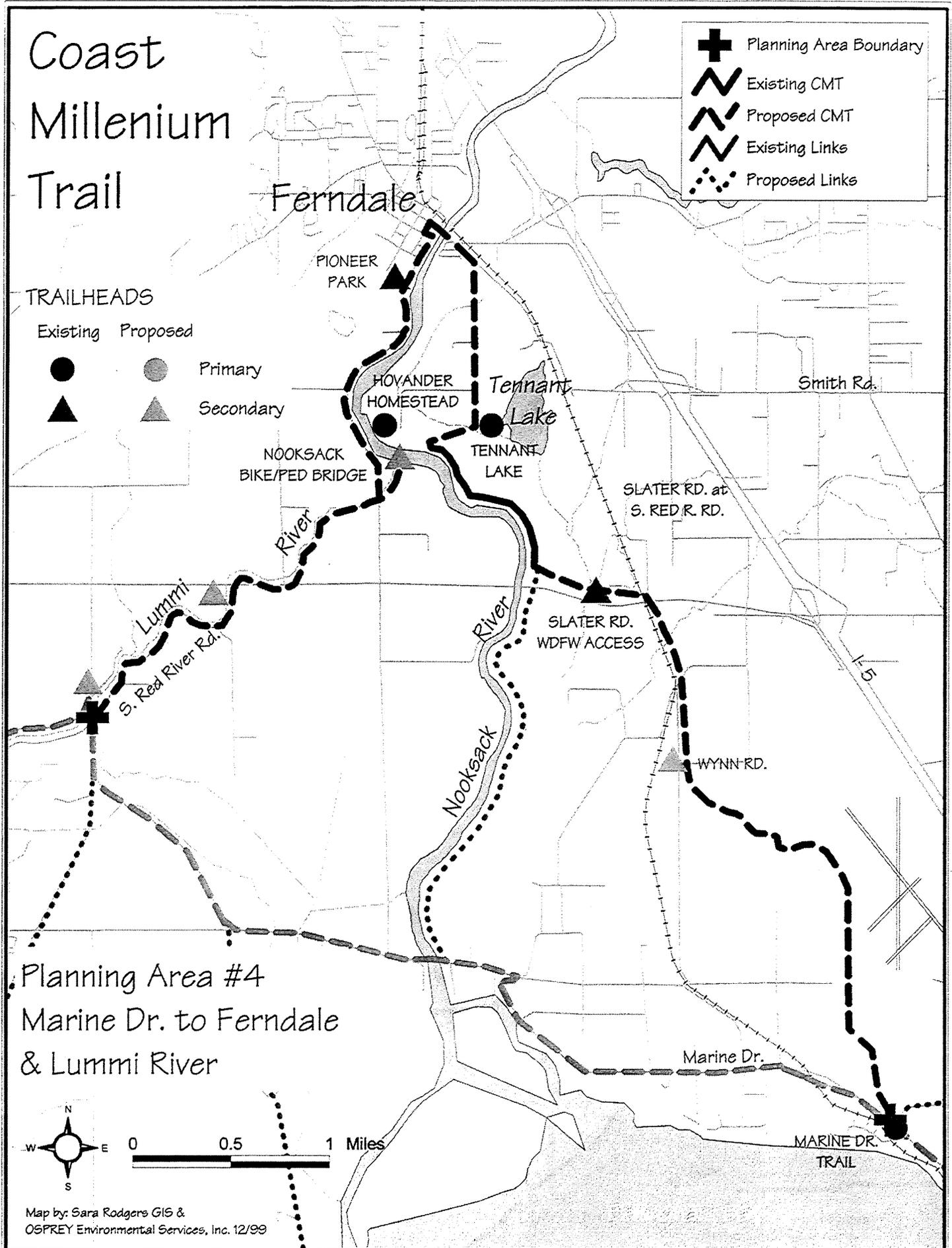




FIG. S-5

Coast Millenium Trail



5.4 SITES OF INTEREST

There are many opportunities to enhance enjoyment of the CMT through the use of interpretive sites, beach or water access, viewpoints, parks, natural areas, wildlife viewing areas, and other sites of interest. A number of specific sites and locations are suggested and briefly summarized in Table 5-4 below. Note that interpretive sites and viewpoints may be feasible at many more locations than those listed; only the more significant or unique sites are noted. Also, some sites are listed more than once, like Tennant Lake, where an excellent view tower near the CMT offers a fine view into an important wildlife area.

Many of the facilities listed in the table already exist. Significant opportunities exist to develop new amenities in conjunction with the trail, including:

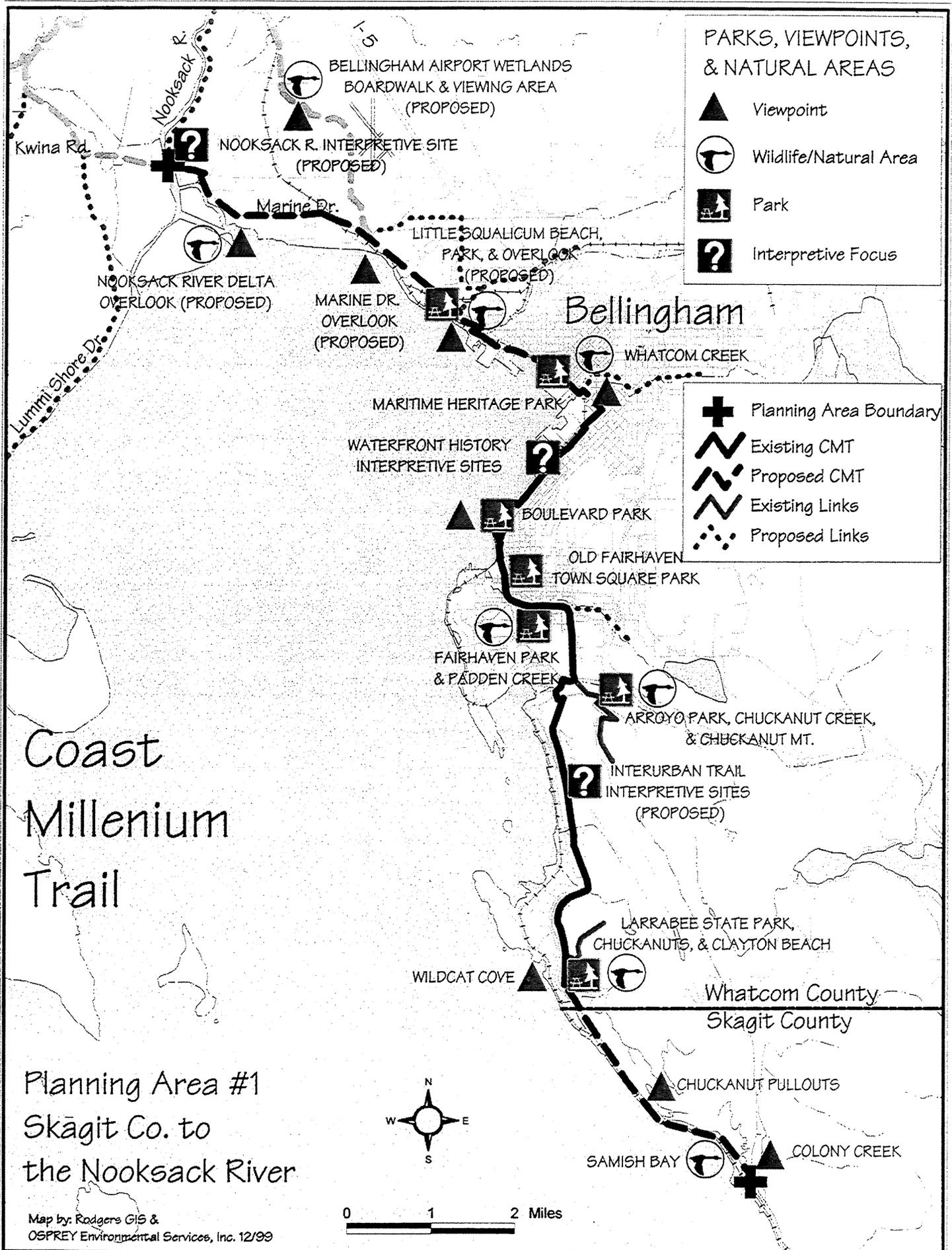
- ▶ *Interpretive sites* along the Interurban Trail, at the Nooksack River Delta, at Terrell Creek, Birch Bay and Drayton Harbor.
- ▶ *Viewpoints* at Colony Creek, Little Squalicum, the Port of Bellingham's Marine Drive Trailhead, Nooksack Delta, Bellingham Airport wetlands, Lummi Flats, Lake Terrell, Cherry Point, Point Whitehorn, and Peace Portal Drive in Blaine. The historic view tower at Tennant Lake was recently reconstructed, and a proposed bicycle-pedestrian bridge over the Nooksack River at Hovander Homestead would add another excellent viewpoint.
- ▶ New parks at Old Fairhaven Town Square, Little Squalicum, Cherry Point, Cedar Avenue (Birch Bay) and Montfort Park in Blaine.

TABLE 5-4
CMT SITES OF INTEREST

Planning Area	Site / Location	Description / Theme
Interpretive Sites		
1	Interurban Trail (multiple locations)	Chuckanut Mt., forests, geology, history
1	Bellingham Bay (multiple locations)	Waterfront history, bays & islands
1	Nooksack River	Nooksack Delta, Native American history
3	Terrell Creek / Birch Bay	Bay, wetlands, Captain Vancouver
3	North Birch Bay	Shorelines, Native American history
3	Dakota Creek	Estuaries, creeks, Drayton Harbor
4	Tennant Lake	Birds & other wildlife, lakes, floodplains
Viewpoints		
1	Colony Creek / Blanchard	Islands, Samish Flats & Bay
1	Chuckanut Drive Pull-outs (multiple)	Islands, bays, Chuckanut coast
1	Wildcat Cove / Larrabee State Park	Islands, bays, Chuckanut coast
1	Boulevard Park	Bellingham Bay & Lummi Is.

1	Maritime Heritage Park	Bellingham waterfront
1	Little Squalicum Beach	Bellingham Bay
1	Marine Dr. Overlook	Bellingham Bay, islands
1	Nooksack River Delta	Delta, estuary, Bellingham Bay
2	Lummi Flats	Lummi Flats, Lummi Bay
2	Lake Terrell	Lake Terrell
2	Cherry Point Beach	Georgia Strait, islands
3	Point Whitehorn	Georgia Strait, islands
3	Birch Bay State Park	Birch Bay
3	Semiahmoo Dock	Semiahmoo Bay, Mt. Baker
3	Marine Park	Semiahmoo Bay, White Rock
3	Montfort Park	Drayton Harbor
3	White Rock Promenade	Semiahmoo Bay, Boundary Bay
4	Bellingham Airport wetlands	Wetlands & wildlife
4	Tennant Lake	Tennant Lake
4	Nooksack River footbridge	Nooksack River, Mt. Baker
Wildlife / Natural Areas		
1	Samish Bay	Major wintering waterfowl area
1	Chuckanut Mt., Larrabee State Park	Coastal montane forest, tidepools
1	Chuckanut Creek, Arroyo Park	Mature forest, spawning salmon
1	Padden Creek, Fairhaven Park	Spawning salmon, urban wildlife
1	Whatcom Creek	Spawning salmon, urban greenway
1	Little Squalicum Beach	Beach, wetlands
1	Nooksack River Delta	Large delta ecosystem, estuary
2	Lummi Flats	Major habitat area for waterfowl, raptors
2	Lake Terrell	Wintering waterfowl
2	Cherry Point Beach	Major wintering waterfowl area
3	Point Whitehorn	Major wintering waterfowl area, seals
3	Terrell Creek	Large wetland, great blue heron colony
3	Semiahmoo Spit	Beaches, wintering waterfowl area
3	California Creek / Drayton Harbor	Intertidal creek, estuary, bay, tideflats
4	Bellingham Airport wetlands	Extensive wetlands
4	Tennant Lake	Wintering waterfowl, wildlife area

Parks		
1	Larrabee State Park	WA State Parks
1	Arroyo Park	City of Bellingham
1	Fairhaven Park	City of Bellingham
1	Old Fairhaven Town Square	City of Bellingham
1	Boulevard Park	City of Bellingham
1	Maritime Heritage Park	City of Bellingham
1	Little Squalicum Park (proposed)	City of Bellingham / Whatcom County
2	Cherry Point Beach (proposed)	Whatcom County
3	Birch Bay State Park	WA State Parks
3	Bay Horizon Park	Whatcom County
3	Cedar Avenue Park (undeveloped)	Whatcom County
3	Semiahmoo Park	Whatcom County
3	Montfort Park	City of Blaine
3	Marine Park	City of Blaine
3	Peace Arch Park	WA State Parks, B.C. Provincial Parks
3	White Rock Park	City of White Rock, B.C.
3	White Rock Promenade	City of White Rock, B.C.
4	Hovander Homestead / Tennant Lake	Whatcom Co., WA Dept. Fish & Wildlife
4	Pioneer Park	City of Ferndale
4	Hastings Park	City of Ferndale
4	Vanderyacht Park	City of Ferndale



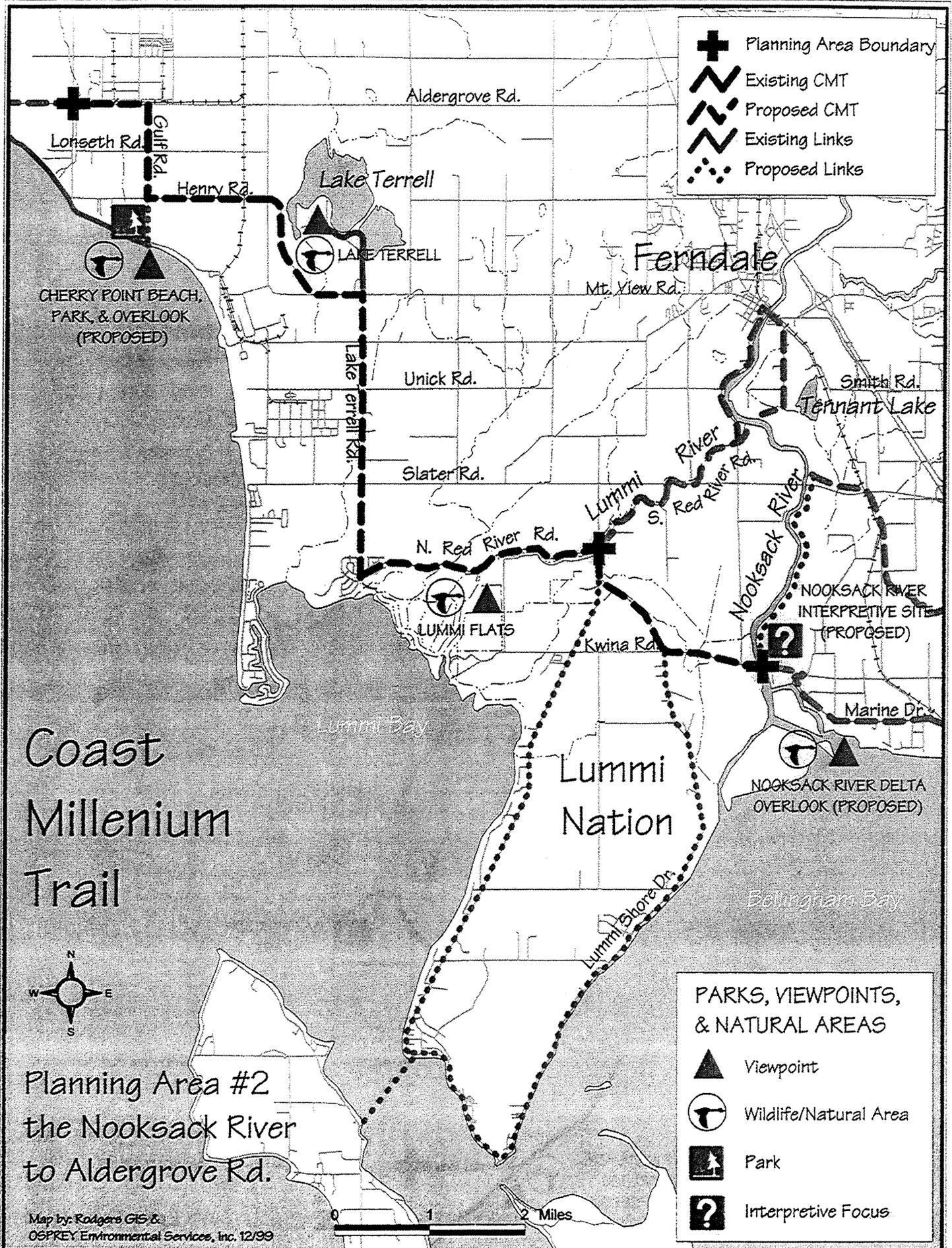
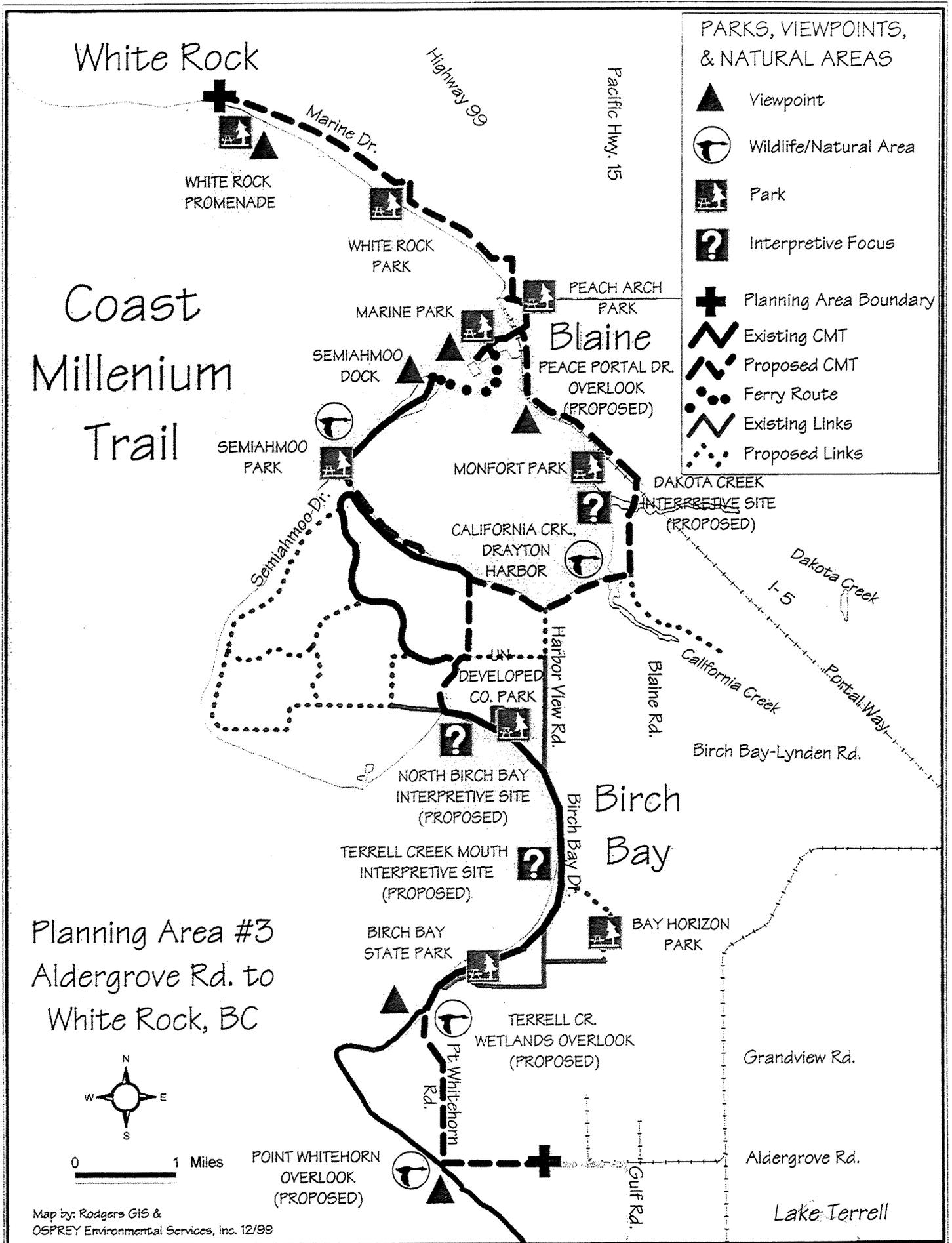


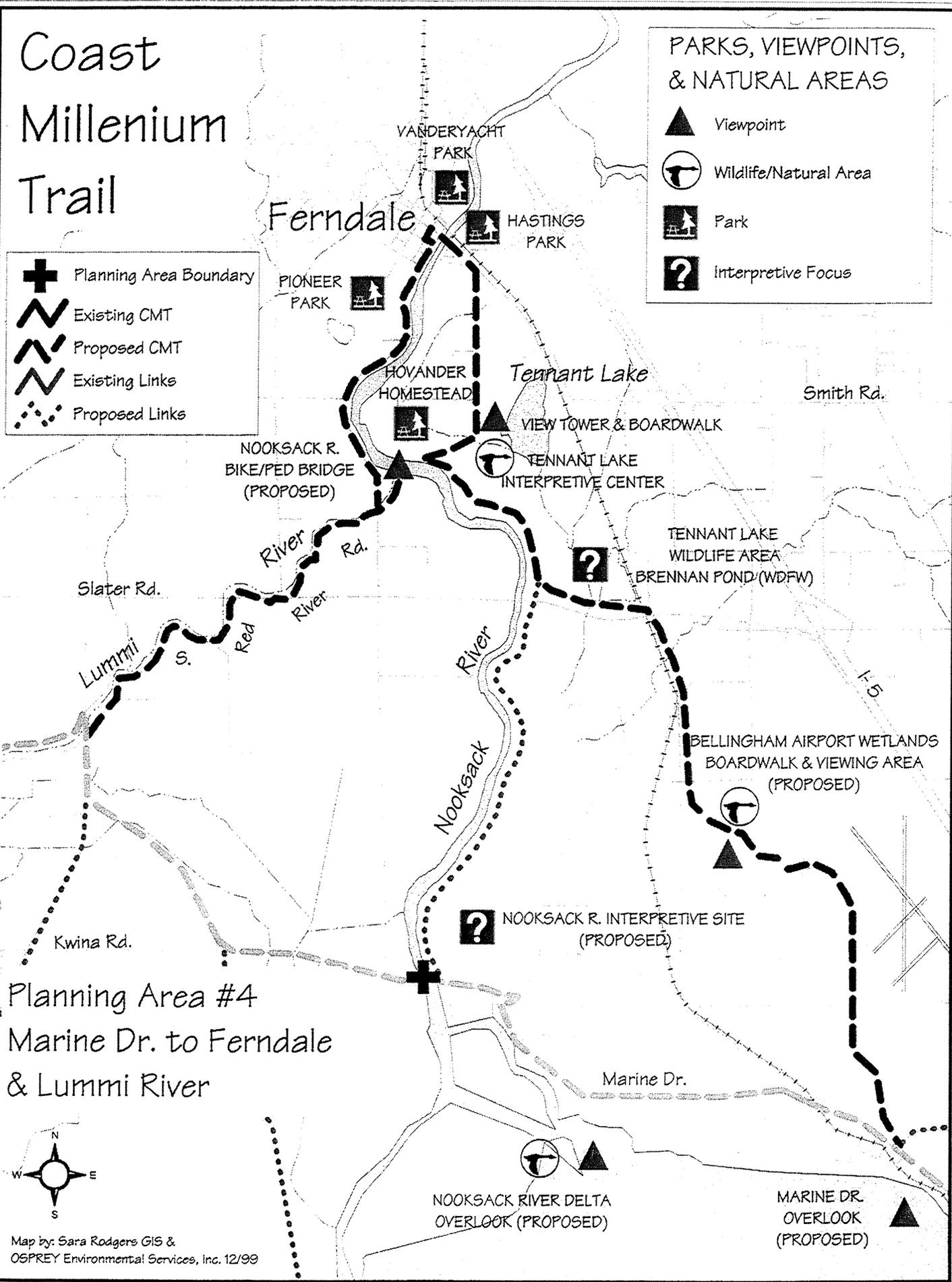
FIG. 5-8



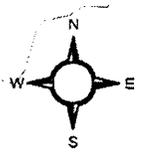
Coast Millenium Trail

Planning Area Boundary
 Existing CMT
 Proposed CMT
 Existing Links
 Proposed Links

PARKS, VIEWPOINTS, & NATURAL AREAS
 Viewpoint
 Wildlife/Natural Area
 Park
 Interpretive Focus



Planning Area #4
 Marine Dr. to Ferndale
 & Lummi River



Map by: Sara Rodgers GIS &
 OSPREY Environmental Services, Inc. 12/99

FIG. S-10

5.5 TRAIL SIGNING

Signing for the CMT accomplishes several purposes, and generally consists of the following types:

- ▶ *Informational*: Signs, kiosks, maps & general information
- ▶ *Interpretive*: Natural, scenic, cultural & historic sites of interest
- ▶ *Directional*: Trailheads, junctions & mileposts
- ▶ *Regulatory*: Rules of the road; trail-specific regulations; restricted areas

Informational signs should be located at most trailheads, parks and other sites maintained for trail access. Limited information may also be posted at major trail junctions. Interpretive signs should be designed consistent with an overall design theme, and their subject matter should reflect the location, surroundings, history or other characteristics of the area in which they are located. Directional signs should mostly be located at trailheads and major trail junctions. Small milepost markers with the CMT logo could be placed low to the ground along the entire route, generally at one-mile intervals. Regulatory signs should be placed as needed to comply with usual traffic safety demands, to encourage appropriate use of facilities, to discourage trespassing, or for other purposes. Rules for the use of the CMT should be posted at trailheads.

Overall, signing should be kept to a reasonable minimum, be tastefully designed, and located in areas that avoid visually interfering with the aesthetic quality of the trail environment. Properly used, signs can help ensure that trails and related facilities remain functional and attractive for both transportation and recreational use.

[Note: Additional sign detail will be added once an official trail name is selected and a trail logo has been designed and approved.]

5.6 GENERAL DESIGN THEMES & CONTINUITY

To ensure continuity of facilities through and between jurisdictions, and to generally satisfy user expectations for a regional facility, consistency should be maintained among the following trail elements:

- ▶ Trail design (widths, grades & surfacing)
- ▶ Signing & interpretation
- ▶ Landscaping treatments
- ▶ Architectural features
- ▶ Trail logos & artistic themes

As a multi-agency project, the CMT passes through several jurisdictions, each with a somewhat different approach to the design of trails, signs, landscaping, architectural features and other amenities. Some effort should be made to coordinate design features so that overall themes for the CMT are maintained through final design and development of major trail facilities. This is not intended to preclude the use of design elements already in use by the various jurisdictions. At a minimum, the trail name and logo should remain consistent and be incorporated into the design of signing and information displays across jurisdictions, if possible.

5.7 TRAIL DEVELOPMENT GUIDELINES

Design guidelines provide a means of ensuring that trails, trailheads and related facilities developed and maintained under this plan can reasonably accommodate their intended use, while controlling costs and minimizing adverse impacts to natural resources, the environment, and other trail users. In some cases, design guidelines help set an overall tone for development, in terms of the scale, appearance, and functionality of trails, trailheads, signing, and other facilities. They also provide a level of consistency and reliability in the construction techniques and materials used.

More specifically, guidelines address trail surfacing, width, grades, and clearances, drainage features, structures like bridges, boardwalks, signs, signposts, and hitching posts, trailhead parking areas, restrooms, bikeracks, viewing platforms, railings, benches, picnic tables, and other site furnishings or facilities. Facilities can and should be tailored to intended or anticipated users. For example, a barrier-free trail may be designed differently from a trail that will receive heavy use by horses. Also, an "easy" barrier-free trail should meet a higher standard than a "moderate" or "difficult" one. Mountain bikers, hikers and equestrians often enjoy a narrower winding path more than a trail that is wide and straight, though the latter becomes important when a facility is specifically designed for nonmotorized transportation. Design can also help reduce user conflicts on multi-use trails.

The guidelines proposed for the CMT are consistent with those for similar facilities in Whatcom County, and Bellingham in particular. The illustrations on the following pages (Figures 5-11 through 5-13) are suggestive of the major types of on- and off-street facilities to be encountered on the CMT. Some variation can be expected in order to address localized conditions or objectives.

Guidelines are derived from a number of sources, including WSDOT's *Facilities for Nonmotorized Transportation* (Section 1020 of the Design Manual, 1989); The American Association of State Highway and Transportation Officials (AASHTO, 1999) *Guide for the Development of Bicycle Facilities*; and *A Design Guide: Universal Access to Outdoor Recreation* (PLAE, Inc., 1993).

The AASHTO guide is widely recognized as a foremost authority for the design of bicycle transportation facilities in the U.S. The PLAE, Inc. guide addresses trail design in light of the need to provide universal access under the 1990 Americans with Disabilities Act. Both documents contain many excellent graphics, charts and technical design tools, but are copyrighted and not reproduced here. Illustrations in Figures 5-11 through 5-13 are from the WSDOT manual which is generally consistent with the AASHTO guide.

Addressing Potential Conflicts Among Trail Users

Occasionally, concerns are expressed about the conflicts that can occur between different trail user groups—an issue that can often be resolved through education and careful design of facilities. For example, some hikers may object to horses or bikes on a particular trail because of the apparent damage they may be causing to trails. Yet when a trail is built correctly to withstand its intended use, the damage is effectively mitigated and the apparent conflict virtually disappears. As another example, if fast-riding cyclists or discourteous hikers become disruptive to equestrians, an effective education program sponsored by responsible cyclists and hikers can help resolve the problem.

A good overview of this subject is contained in a 1994 report prepared for the Federal Highway Administration entitled *Conflicts on Multiple-Use Trails*. The authors suggest twelve principles for minimizing conflicts, as provided below:

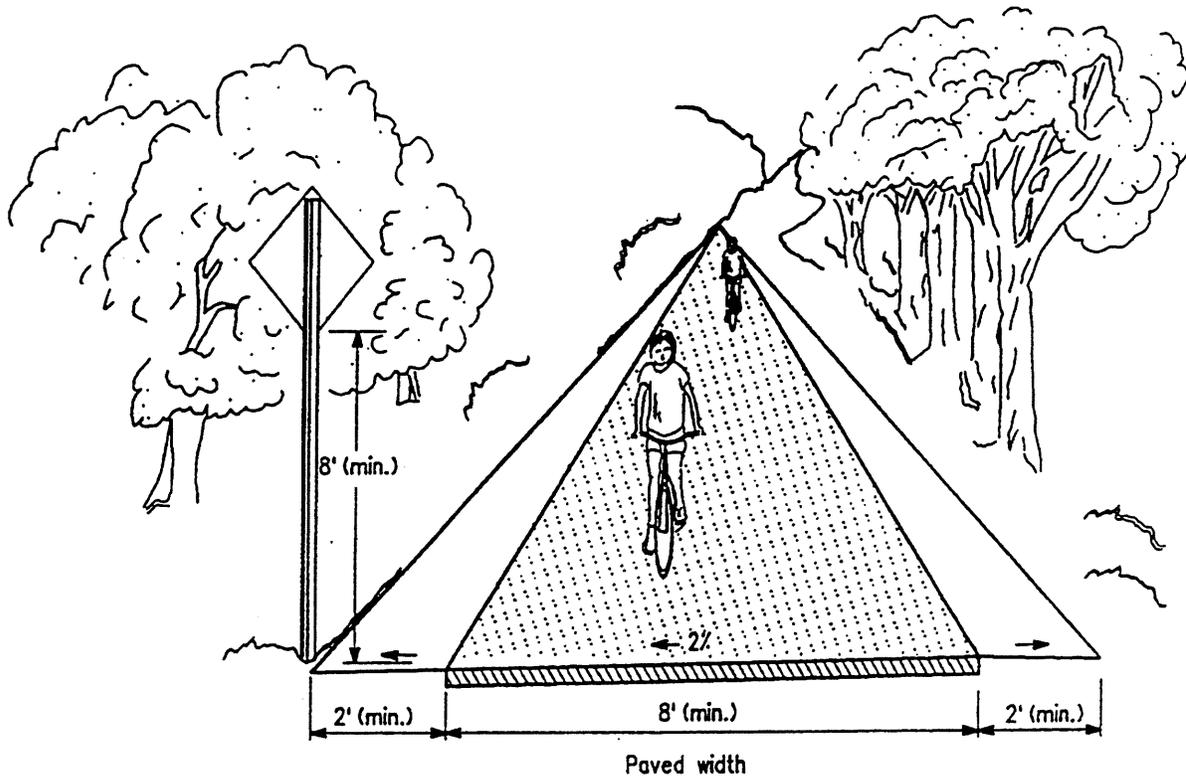
- ▶ Recognize conflict as goal interference
- ▶ Provide adequate trail opportunities
- ▶ Minimize the number of contacts in problem areas
- ▶ Involve users as early as possible
- ▶ Understand user needs
- ▶ Identify the actual sources of conflict
- ▶ Work with affected users
- ▶ Promote trail etiquette
- ▶ Encourage positive interaction among different users
- ▶ Favor "light-handed management"
- ▶ Plan and act locally
- ▶ Monitor progress

Although major problems with user conflicts are not anticipated for the CMT, these techniques can be utilized to address them if needed.

5.8 FACILITY MAINTENANCE & MANAGEMENT

Facility maintenance and ongoing management of the CMT will rest with a number of different agencies; typically, the responsible agency will be the jurisdiction within which a given portion of the CMT is located. Cooperative maintenance agreements should be considered, as needed, to enhance the efficiency of repair and maintenance tasks. Volunteers should be able to contribute significantly to periodic maintenance and repair, and they should be encouraged to become involved. A volunteer coordinator could assist with training and grant-writing, and perhaps planning, enforcement, and other tasks under the direction of one or more agencies.

Responsible jurisdictions should meet regularly to coordinate efforts, address problems, funding issues, opportunities, and to ensure the trail is functioning well overall as intended.



TYPICAL CROSS SECTION

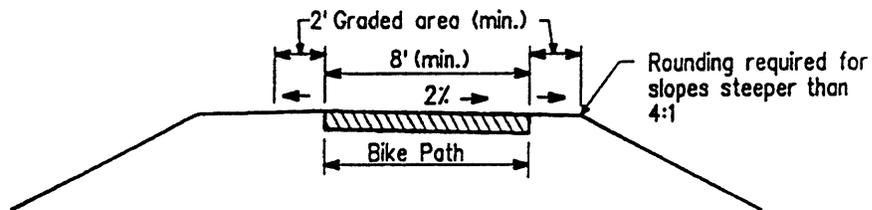
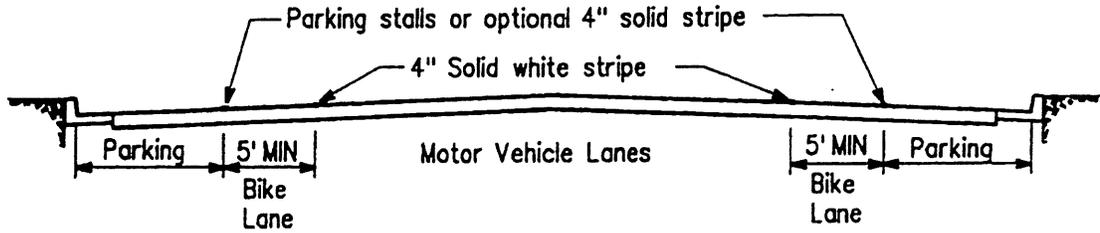


FIG. S-11

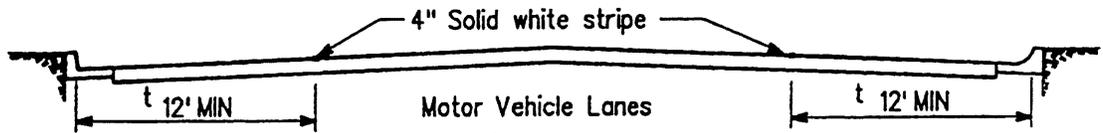
TWO-WAY BIKE PATH ON SEPARATED RIGHT OF WAY

Figure 1020-1a



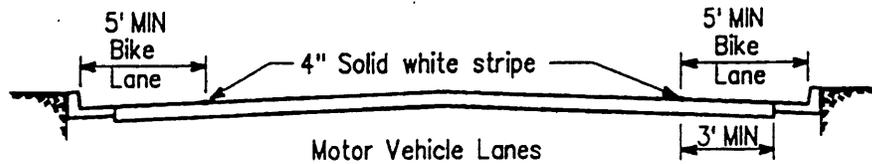
- The optional solid white stripe may be advisable where stalls are unnecessary (because parking is light) but there is concern that motorists may misconstrue the bike lane to be a traffic lane.

DESIGN A STRIPED PARKING

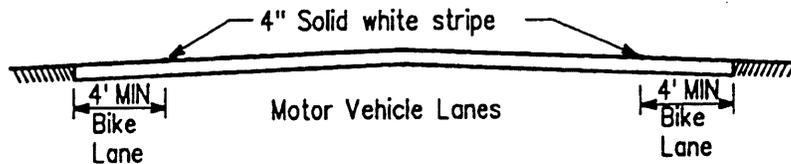


- ^t 13' - 14' is recommended where there is substantial parking or turnover of parked cars is high (e.g., commercial areas).

DESIGN B PARKING PERMITTED WITHOUT PARKING STRIPE OR STALL



DESIGN C PARKING PROHIBITED

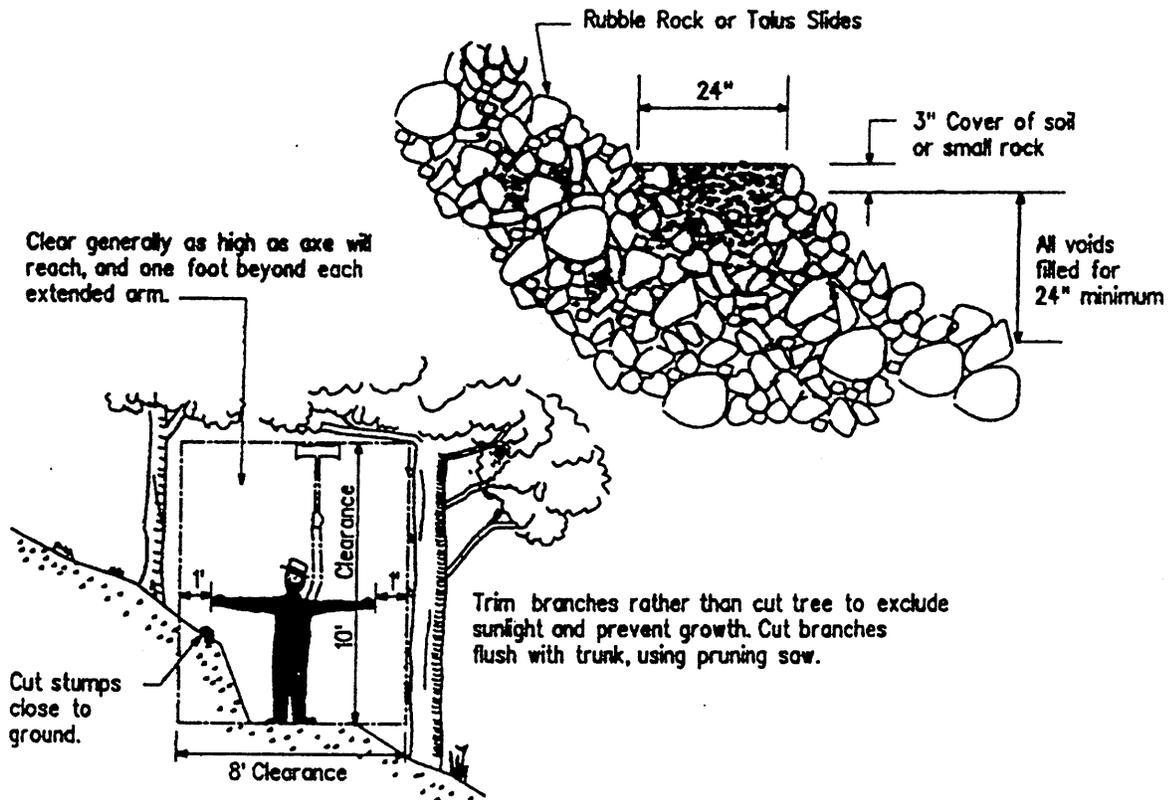


DESIGN D TYPICAL ROADWAY IN RURAL AREAS

Fla. 5-12

TYPICAL BIKE LANE CROSS SECTIONS

Figure 1020-7



Width	2' Minimum tread
Grade	20% Maximum short, 10% Maximum sustained
Alignment	Independent and located beyond 30' safety zone
Clearances	10' Vertical, 8' Lateral
Surface	Gravel or natural material
Access Control	As required (see text)

FIG. 5-13

GUIDELINES FOR HIKING TRAILS

Figure 1020-11

COAST MILLENNIUM TRAIL MASTER PLAN

—6. COST ESTIMATES—

The following table contains general cost estimates for major elements of the CMT. Estimates are useful for general planning, budgeting and grant writing purposes, but should not be construed as actual development costs. Final costs can be more accurately determined once final design and engineering tasks are completed.

TABLE 6-1
GENERAL COST ESTIMATES FOR THE CMT

Item	Phase	Est. Cost
Corridor-wide Improvements		
1. Upgrade/repair/spot improvements for existing facilities	1, 2, 3	\$350,000
2. Improvements to new & existing trailheads	1, 2, 3	\$1,200,000
3. Signing (directional/informational)	1, 2, 3	\$50,000
4. Interpretive facilities	1, 2, 3	\$140,000
5. Bike/ped/driver safety & education	2, 3	\$10,000
6. Trail user map & brochure	2, 3	\$15,000
7. Landscaping & scenic beautification	1, 2, 3	\$60,000
8. Archaeological planning & research	1, 2	\$10,000
9. Engineering & design (trails only)	1, 2, 3	\$250,000
10. Misc. right-of-way acquisition	1, 2, 3	\$300,000
11. Permitting & environmental review	1, 2	\$20,000
12. Project management	1, 2, 3	\$120,000
Subtotal		\$2,525,000
CMT Planning Area #1		
13. Chuckanut Drive improvements (on- & off-street)	1	\$220,000
14. Clayton Beach Trailhead link to Interurban	1	\$35,000
15. Fragrance Creek regrade & bridge	1	\$75,000
16. Calif. St trail bridge, bypass, Chuckanut Mt. Trailhead, etc.	1, 2	\$600,000
17. Interurban Trail, misc. repairs (city & county)	1, 2	\$80,000
18. Taylor St. Dock & pier extension	2, 3	\$250,000
19. Boulevard Park area (railroad crossing)	1, 2	\$50,000

20. Little Squalicum Beach (trail & elevated boardwalk)	1, 2	\$500,000
21. Roeder/Eldridge link	2, 3	\$90,000
22. Marine Dr. trail misc. improvements	1, 2	\$40,000
23. Marine Dr. BNRR crossing	2	\$50,000
24. Other improvements (unspecified)	1, 2, 3	\$250,000
Subtotal		\$2,240,000
CMT Planning Area #2		
25. Marine Dr. improvements	2, 3	\$150,000
26. Misc. improvements, Lummi Nation	2, 3	\$240,000
27. Misc. county road improvements	2, 3	\$200,000
28. Other off-street trails (unspecified)	2, 3	\$200,000
Subtotal		\$790,000
CMT Planning Area #3		
29. Malibu Trail	1	\$60,000
30. Birch Bay State Park, pedestrian trail & bike link	1, 2	\$150,000
31. Birch Bay Drive to Semiahmoo Pkwy	1	\$80,000
32. Drayton Harbor Rd. to Old Drayton Harbor easement	1	\$60,000
33. Plover & dock enhancements	1, 2	\$60,000
34. Peace Portal to Calif. Cr. bridge & Drayton Harbor Rd.	1, 2	\$400,000
35. Other improvements (unspecified)	1, 2, 3	\$250,000
Subtotal		\$1,060,000
CMT Planning Area #4		
36. Bellingham Airport trail	2, 3	\$100,000
37. Wetland boardwalk/nature trails	2, 3	\$80,000
38. Wynn Rd. to Slater Rd. trail & road improvements	2, 3	\$120,000
39. Tennant Lake/Hovander trail improvements	2, 3	\$60,000
40. Nooksack River bike/ped bridge	2, 3	\$300,000
41. Dike trail to downtown Ferndale/Pioneer Park	2, 3	\$50,000
42. Lummi River Trail	3	\$40,000
43. Other improvements (unspecified)	1, 2, 3	\$120,000
Subtotal		\$870,000
TOTAL project costs		\$7,485,000

COAST MILLENNIUM TRAIL MASTER PLAN

—7. POTENTIAL FUNDING SOURCES—

The financial resources needed to develop the CMT are available from a wide variety of federal, state, regional, local, and private sources. However, much of the funding may come from a handful of grant programs, particularly those administered by the Washington Department of Transportation (WSDOT) and the Interagency Committee for Outdoor Recreation (IAC). Local and private contributions, both financial and in-kind, will also be very important, not only to satisfy local matching requirements, but to expedite development over the near-term. Principal funding sources are listed below.

Perhaps the most important grant program administered by WSDOT that may benefit the CMT is the Surface Transportation Program (STP) Enhancement Program. Originally established by Congress in 1991, this competitive program has become a principal funding source for bicycle and pedestrian transportation facilities nationwide. The key is "transportation." Facilities that are purely recreational would not likely qualify for funding. Obviously, the CMT has a strong nonmotorized transportation component that should compete well with other projects in the region. For example, two key sections of the CMT, the South Bay Trail in Bellingham, and the Birch Bay Bikeway, have both received grants from the STP Enhancement Program.

TABLE 7-1
PRINCIPAL FUNDING SOURCES FOR THE CMT

Funding Source	Administered by:	Applications due:	Notes
TEA-21/STP Enhancement Program	WCCOG, WSDOT	Sep 1999	\$21 million statewide in FFY 2000-2001; approx. 75% based on population, 25% discretionary
WWRP (WA Wildlife & Recreation Program)	IAC	May 2000	\$50 million +/-; state budget appropriation varies year to year
NOVA (Non-highway Off-road Vehicle Activities)	IAC	May 2000	Limited circumstances; up to 100% funding; \$100,000 max.
ALEA (Aquatic Lands Enhancement Account)	WA DNR	Oct 2000	Biannual grants enhance public access to shorelines; 25% match
Whatcom Co. Paths & Trails Reserve Fund	Whatcom Co.	N/A	From state fuel tax; an important source of local matching dollars
Whatcom Co. Conservation Futures Levy	Whatcom Co.	N/A	Active levy; for acquisition only
Bellingham Greenways Program	Bellingham	N/A	Voter-approved levy supports trails, etc. in or near Bellingham
Private contributions	CMT committee	N/A	Donations of land, right-of-way, materials, labor, and/or money

Approximately \$21 million in STP Enhancement grants is available statewide for the FFY 2000-2001 biennium (comparable to FFY 1998-1999). About 75% of the money is distributed based on population; 25% is discretionary. The required local match may be less than 20% of the total project cost, depending on circumstances. (An Enhancement grant application for the CMT was submitted to WSDOT for consideration during the current round; a decision will be forthcoming in early 2000.)

The Washington Interagency Committee for Outdoor Recreation (IAC) administers several other major grant programs that are funded by state and federal sources, but which focus more on recreation and conservation objectives. The principal funding programs at IAC are the Washington Wildlife and Recreation Program (WWRP) which is derived from an annual, though somewhat unpredictable, appropriation by the state legislature (\$50 million was allocated in 1999 for projects that were scrutinized in 1998). Generally a 50% local match is required. In limited circumstances, the Non-highway Off-Road Vehicle Activities program (NOVA), also administered by IAC, provides grants up to \$100,000 for nonmotorized trail development, without the requirement of a local match, although a financial or in-kind contribution is recommended. NOVA is funded out of the state motor vehicle fuel tax. Applications for the next grant cycle are due the first of May, 2000.

Other sources may become available through IAC, and new opportunities there should be monitored. The Aquatic Lands Enhancement Account administered by the Washington Department of Natural Resources offers a limited, though still significant, source of funding as well, on a biannual basis. The next round of applications are due in the fall of 2000.

Competition for state and federal funds is on the rise as trail programs increase in popularity and more communities compete for limited funds. For this reason and in view of the fact that most grant programs require local jurisdictions to assume a share of project costs, local funding mechanisms are needed to implement trail and trailhead improvements along the CMT.

Local sources can range from bond issues and special levies, such as Bellingham's two highly successful Greenways levies; increasing the local percentage of state motor vehicle fuel tax proceeds that are dedicated to paths and trails; sale of surplus properties; assessment of impact fees on new development; user fees; and general appropriations. Some of these sources require the County to have a capital facilities plan in place in order to qualify a project for spending.

Potential funding sources in the private sector also exist and should not be overlooked. In fact, portions of this master planning process were privately funded, and some willingness to donate right-of-way or otherwise contribute to trail development costs has also been expressed in the private sector. Donations of land, easements or right-of-way, as well as contributions of cash, expertise, labor and materials by business, industry, organizations and individuals can be a great help to any community that must raise critical funds for matching grants.

A brief summary of all potential funding sources for development of the Coast Millennium Trail follows.

7.1 FEDERAL SOURCES

TEA-21/STP Enhancement Program

As noted above, a variety of transportation-related grants and funding programs under TEA-21 (Transportation Equity Act for the 21st Century) may offer significant resources for some trail projects. Grants are administered through the Washington Department of Transportation,

and are distributed by state, regional and metropolitan planning organizations. Qualifying projects include rail-trails, bikeways, pedestrian facilities, rail corridor acquisition, scenic beautification, historic preservation of transportation structures, archaeological work, and other transportation-related purposes. TEA-21 also includes a national Recreational Trails Program which, although generally underfunded, has the potential to become a meaningful resource in the future.

The state is required to distribute a portion of the TEA-21 funds expended in the Surface Transportation Program (STP) on enhancements; local jurisdictions must typically provide a minimum 13.5% match on enhancement grants for bicycle, pedestrian, or equestrian facilities (a higher match strengthens a proposal). Jurisdictions may direct other STP funds to nonmotorized transportation projects, and may submit for statewide competitive funds which support creative, multi-modal solutions to significant transportation challenges.

Federal Public Lands Highways Discretionary Fund

Bicycle and pedestrian trails that provide access to or within federal lands are eligible for funding under this program (administered by WSDOT). Federal lands along the CMT corridor are obviously very limited (perhaps at the border crossing only), although this potential funding source should be investigated. In 1998, grants totaled \$4 million nationwide under this program.

Federal Aid Bridge Replacement Program

This competitive program is administered by WSDOT and provides 80% federal funding for replacing deficient or obsolete road bridges. If the CMT relies on such a bridge now or in the future, this grant source can be a significant one.

Land & Water Conservation Fund (LWCF)

The LWCF comes from federal appropriations administered in Washington State by the Inter-Agency Committee for Outdoor Recreation (IAC). Funding levels have been well below what was once envisioned by Congress but significant funds could become available in the future for land acquisition and trail development. The Fund should be monitored regularly.

Technical Assistance Programs

The *National Park Service Rivers and Trails Conservation Assistance Program* provides technical support (not funding) for planning and design of trails and greenways. The *U.S. Forest Service Master Performer Program* makes expertise available to local agencies on a partnership basis, including planning, design and assistance with accessibility. The *Washington Department of Transportation* provides limited technical support for bicycle safety and education programs, and facility design and construction. *IAC* provides general information on programs, funding, technical resources, and agency and organization contacts. The *National Center on Accessibility* is a good source of technical information concerning access to trails and recreation facilities by disabled persons. The *Washington State Parks and Recreation Commission* offers limited technical assistance.

Direct Appropriations

Congress occasionally appropriates money directly for certain projects, as occurred with the Centennial Trail in Spokane, and a bicycle route on the Olympic Peninsula.

Community Development Block Grants (CDBG)

These limited funds are available through the Federal Department of Housing and Urban

Development for projects which benefit low and moderate income households and community development projects. Funds may be used for development but not for maintenance and operations. Bellingham has successfully applied these funds to trail projects in the city.

EPA TRAQ Center, Transportation-Related Grants

The U.S. Environmental Protection Agency's Transportation Air Quality Center (TRAQ) maintains a clearinghouse of information on transportation-related projects funded by EPA. Grant projects tend to involve education and public outreach geared toward the reduction of emissions from motor vehicles, and not actual development of facilities.

7.2 STATE SOURCES

Washington Wildlife & Recreation Program (IAC)

As noted above, the WWRP is a major source of recreation and habitat conservation money made available by the legislature through the Governor's capital budget request. The program funds trail acquisition and development, and other projects such as parks, water access, and habitat enhancements which may include trails. While funding requests have become highly competitive, the CMT may compete well considering the unique opportunities it provides, and its importance as a regional and international recreation resource.

NOVA (IAC)

NOVA funds are appropriated from a portion of the motor vehicle fuel tax and off-road vehicle permit fees, and are available under certain circumstances for acquisition and development of nonmotorized recreation trails, as well as off-road vehicle (ORV) trails and facilities. Up to 100% funding may be available.

Motor Vehicle Fuel Tax

To support the construction, operation and maintenance of local transportation projects, 22.78% of fuel taxes collected by the state are disbursed to counties (roughly twice what is allotted to cities). These funds can be supplemented through a local option fuel tax which can also be applied to policing roads. State law requires that a small percentage of these funds be applied to paths and trails, which broadly interpreted at the local level, has included road shoulders and sidewalks along county roads. However, these limited dollars can be extremely important as matching funds for projects like the CMT.

Rural Arterial Program/County Arterial Preservation Program

These are state funds allocated to counties for rural arterials and may be applied to bicycle/pedestrian improvements along arterials.

Public Works Trust Funds

The PWTF provides state-administered low interest loans for public works projects which in certain circumstances could potentially benefit the CMT.

Aquatic Lands Enhancement Account (WDNR)

Administered by the Washington Department of Natural Resources, these funds are available every other year for the acquisition and development of water-oriented recreation or public access projects including trails. A 25% local match is required.

Coastal Zone Management grants (WDOE)

WDOE offers small grants to local agencies for shoreland trails and public access projects with a 50% local matching requirement.

Timber Excise Tax

Counties can tax timber harvesters, subject to state law. There are no limitations on expenditures, although some benefit to forestry-dependent communities may be implied.

Community Economic Revitalization Board (CERB)

CERB offers grants and low interest loans to jurisdictions who wish to develop transportation projects related to private development.

Direct Appropriations

The State Legislature occasionally appropriates money directly for some projects, such as the Centennial Trail in Snohomish County and a number of projects funded by WWRP.

Cooperative Agency Funding

Cities, counties, districts, state, federal or tribal agencies, and non-profit organizations may work together creatively to generate funding for a variety of uses.

7.3 LOCAL SOURCES

General Funds

General funds are those appropriated by local government and include property taxes, local option sales taxes, utility taxes, general state-shared revenues, business license fees, public works trust funds, special purpose district revenues, and other sources. General funds may be used for a variety of needs including public transportation and recreation.

Whatcom County Road Fund

The Whatcom County road fund is largely derived from local property taxes, a portion of the state motor vehicle fuel tax distributed to cities and counties for building and maintaining the road system, and from grant programs administered by the state. The fund is available for on-street bicycle and pedestrian facilities. A six-year planning horizon makes it difficult to access these funds over the near-term for the CMT, except where planned road improvements happen to dovetail with needed improvements for bikes and pedestrians (for example, Marine Dr., Lake Terrell Rd. and Birch Bay Dr. are all scheduled for improvements which will benefit the CMT)).

Development Impact Fees

Impact fees may be imposed on development activities for improvements that are related to a proposed development and which reflect the project's impact or cost to public facilities or infrastructure. However, Whatcom County has not yet adopted impact fee assessments as envisioned under the Growth Management Act. Once that occurs, fees may be collected for transportation or recreation-related impacts which, in some cases, could benefit the CMT.

Development Permits/Impact Mitigation (SEPA)

Facilities or financial contributions may be required as a condition of approval of development permits to ensure compliance with public policies and regulations, or to mitigate transportation and environmental impacts associated with a particular development.

In many instances, specific conditions can be negotiated to better serve the needs of the developer and the public. (Impact fees are closely related and are addressed above.)

Conservation Futures Levy

Under RCW 84.34.210, a county may levy as much as 6.25 cents on every \$1,000 assessed valuation, without voter approval, to generate a modest amount of revenue for land acquisition, including parks, trail corridors, and other recreation and open space areas. The levy can be short or long term but may not be used for development. Whatcom County has taken advantage of this opportunity already in the Chuckanut Mountains, at Squires Lake, and at Canyon Lake Ridge. This levy could become a very important resource for acquiring land or easements for the CMT, particularly where significant opportunities for habitat conservation also exist.

Bond Measures

Bonds are either voter approved or passed by the local legislative body. Voter approved bonds increase property taxes in order to pay the debt incurred and usually require 60% voter approval. Revenue bonds are normally paid from funds generated by an income-producing activity rather than by taxes. Councilmanic bonds, authorized by the legislature, do not increase taxes. There are no limitations on the use of bonds, and they can be structured to be collected over a short or long period of time.

Real Estate Excise Tax (REET)

REET is a tax on the sale of property (up to 1/2 of 1%) which can be used to pay for projects identified in local capital facilities plans.

Special Levies

These include the acquisition of funds through taxation, usually involving property taxes. The approval of 60% of the voters is normally required to pass a special levy. Voters in the City of Bellingham have approved the Greenways and Beyond Greenways levies in recent years, an ongoing program that has brought many tangible results and enjoys wide support. A comparable voter-approved levy for Whatcom County should be seriously considered.

Paths & Trails Reserve Fund

RCW 47.30 requires local jurisdictions to reserve a percentage of fuel tax revenues for transportation-related bicycle, pedestrian and equestrian facilities. Whatcom County has applied two percent of these funds to paths and trails which helps provide a small but reliable source of local matching money for grants. In the past, a substantial portion of these dollars went toward road shoulder widening along routes which may or may not have provided the most benefit to nonmotorized travelers. The money is also available for planning and design services.

Public Works Trust Fund

The PWTF provides low-interest loans from the Washington Department of Community Development which can be used for roads, bridges and capital improvement planning.

Special Assessment Debt

Bonds can be financed through Local Improvement Districts (LID) or Road Improvement Districts (RID) which collect fees from developers and landowners based on the level of benefit realized.

Transit Tax

Transit Authorities may also levy taxes to support their operations, with voter approval. Transit access to certain portions of the CMT would provide significant benefits to the region's multi-modal transportation system.

Hotel/Motel Tax

Proceeds can be used for projects that enhance tourism and opportunities for travelers.

User Fees & Tolls

Fees may be collected locally from the user of a public facility. Parking, entrance, registration, and program fees are among those which may be collected. Tolls are generally intended to pay off construction bonds.

Local Vehicle License Fees

By referendum, counties can collect additional license fees for the benefit of nonmotorized transportation (RCW 82.80.020). Revenues are shared between cities and the county.

Proceeds from sale of surplus property

Surplus public property may be sold to generate funds for land acquisition or other needs.

Franchise Agreements

Franchise agreements with utilities and other entities can include a provision for recreational use of a site or corridor.

Health Grants

Small grants are available under a variety of federal programs that can help pay for facilities which benefit public health.

7.4 PRIVATE SOURCES

Private Contributions

Business, organization and individual donations of money, property, materials or volunteer services can be significant resources for trail projects and trailheads. For example, a local Rotary club made a financial contribution toward a new trailhead for the Interurban Trail, and a number of clubs have organized volunteer trail maintenance and construction activities in the Chuckanuts and elsewhere. The Birch Bay community has raised money to put toward enhancement of the waterfront generally, which could also benefit walkers and cyclists.

Land Exchanges & Donations

Outright donations of land or easements, and public-private land exchanges, such as the land exchange that increased public ownership in the Chuckanuts, can be considered under a variety of circumstances. This can be especially important where land values make up a significant portion of a local match toward other grant programs.

Foundation Grants to Nonprofit Organizations

Non-profit organizations advocating trail, greenway, and habitat conservation projects have had some success in Washington State obtaining modest foundation grants to support their efforts. The proposed Bay-to-Baker Trail received funds from at least two private foundations (in the range of \$5,000 to \$10,000).

COAST MILLENNIUM TRAIL MASTER PLAN

—8. FUNDING & DEVELOPMENT STRATEGY—

Careful coordination of the Coast Millennium Trail's many diverse elements and design challenges will expedite its development. For example, construction in some areas may not be possible until final alignments are determined, easements are secured, or other tasks are completed. Temporary routing of some sections may also be necessary until adequate funding is obtained and a permanent, fully connected corridor has been identified. In addition, certain funding sources may or may not be appropriate for different project elements.

An overall funding and development strategy, as outlined in this section, will help ensure the best use of limited resources, as well as the development of functional, attractive facilities consistent with the master plan.

8.1 PROJECT PHASING

Project development is organized into four phases, as follows:

- ▶ Phase 1 Construction of permanent facilities through most of Planning Areas #1 and #3, with additional spot improvements, temporary routing and signing for the entire CMT corridor.
Est. cost: \$2,400,000
Funded by: Spring-summer, 2000
Construction: Summer-fall, 2000

- ▶ Phase 2 Construction of permanent facilities through most of Planning Area #4, particularly between downtown Bellingham, and the City of Ferndale, including acquisition of land or easements.
Est. cost: \$1,500,000
Funded by: Spring-summer, 2001
Construction: Summer-fall, 2001

- Phase 3 Construction of permanent facilities through most of Planning Area #2, including acquisition of land or easements.
Est. cost: \$2,000,000
Funded by: Spring-summer, 2002
Construction: Summer-fall, 2002

- Phase 4 Final completion of all project elements.
Est. cost: \$1,585,000
Funded by: Spring-summer, 2003
Construction: Summer-fall, 2003

For a detailed listing of suggested improvements within each Planning Area, refer to the Recommendations in Section 5, and the tables describing the work needed to complete each trail segment, trailhead, or other trail amenity.

In essence, Phase 1 emphasizes those elements in Planning Areas #1 and #3 that are relatively affordable and ready to construct, while providing for signing of the entire route. This would result in substantially completed facilities from the Skagit County line to downtown Bellingham, and from Aldergrove Rd north to Semiahmoo Spit. By the end of the second phase, facilities would be substantially completed between north Bellingham and Ferndale, and from Squalicum Harbor to the Nooksack River. Once final trail alignments are determined in Planning Area #2, Phase 3 could complete the more permanent route between the Nooksack River and Aldergrove Rd. It is expected that minor gaps may still remain, and that some higher-cost items, such as major trail bridges, trailheads, outstanding land acquisitions and the like, may require additional time to secure the funds necessary for their completion. Phase 4 addresses these remaining items. If funding, volunteers, or other resources become available to tackle a specific project ahead of schedule, the work should be encouraged.

Development of each phase would be preceded by several steps involving funding, work commitments, and final design, generally as follows:

- ▶ Project details defined for a specific phase of development;
- ▶ Funding sources identified (grant source and local match, if required);
- ▶ Commitments obtained from private contributors and/or volunteers;
- ▶ Project information and grant applications assembled and submitted;
- ▶ Funding approved;
- ▶ Design/engineering consultant selected;
- ▶ Permitting, environmental review conducted;
- ▶ Final design and construction documents completed;
- ▶ Advertise for bids, contractor selected;
- ▶ Construction begins;
- ▶ Improvements completed and approved;
- ▶ Facility maintenance.

8.2 PLAN IMPLEMENTATION

Implementation of the master plan by the various agencies can be realized more effectively if each formally adopts or endorses the plan and commits itself to a cooperative or leadership role in carrying out the recommendations. Agencies should maintain regular communications with each other, coordinate their efforts, assign responsibilities and, at least once a year, assess the progress that has been made and establish new objectives for the coming year. Agencies may wish to apply for grants jointly in some instances.

The ongoing cost of maintenance and operation of facilities should be considered and the needed resources identified prior to development. For trails, these costs are expected to be minimal since most facility maintenance and some construction could be conducted by trained volunteers. The resource potential that exists in a quality volunteer program is substantial, although to be effective such a program may warrant the services of a paid volunteer coordinator. (The City of Bellingham currently employs a volunteer coordinator for its Greenways program, potentially a good model for the CMT.) Many grant programs accept in-kind and volunteer contributions toward the required local match, thus a well-organized volunteer program has the potential to pay for itself many times over.

While volunteer efforts can certainly contribute to many of the facilities identified, some of the larger projects such as the development of trailheads, bridges, and other amenities may require a commitment of staff time to see them through.

COAST MILLENNIUM TRAIL MASTER PLAN

—9. PARTICIPATION OF AGENCIES & THE PUBLIC—

[Summarize all agency and public participation in developing the plan...]

Public Meeting 10/6/99

A public meeting was held in Bellingham once a general routing plan was established and many of the principal issues had been identified. The public was invited to submit additional comments, concerns and suggestions for the proposed trail. The meeting was modestly attended and most of the participating agencies and trail user groups were represented.

Ideas generated by public participants included the following:

- ▶ An affordable alternative to constructing bridges might be to use gangway ramps (e.g. Mantle Industries in Blaine). Ramps up to 100 feet long cost as little as \$40,000 and can be constructed with multiple surfaces, coverings, and made fairly wide.
- ▶ A "Harbor to Harbor" concept was emphasized for the trail overall.
- ▶ There is a need to provide ample bicycle racks along trail and numerous pastry/ice cream shops as natural stopping places.
- ▶ The CMT should tie into plans for the Chuckanut scenic byway.
- ▶ Provide opportunities for Mt. Baker Hiking Club, the Mountaineers, and others to participate as volunteers.
- ▶ Several concerns exist for equestrian facilities. There needs to be off-road facilities with parking lots at ends of segments that accommodate horse trailer parking.
- ▶ Information for hikers should highlight off-road portions of the trail that are open to horses.
- ▶ It was suggested that railroad companies be approached to get involved in the project. (Historically, railroad owners in the NW have been reluctant to accommodate alternative rail corridor users.) It was pointed out that the rail industry is subsidized with tax payer dollars. The railroads "owe us something."
- ▶ Two places in Blaine might be good rights-of-way for the CMT: a strip of state right-of-way between Peace Portal Rd. and the rail line just south of Blaine on a bluff; and a connection to the undeveloped Monfort Park off Sweet Rd. and Peace Portal Rd. Plans were made to explore Blaine with a knowledgeable citizen to investigate these areas.

The public was invited to continue to be involved in the project and comment on the draft master plan when it is completed. Volunteer cards were handed out for those wishing to participate in promoting and developing the CMT.

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BENEFITS OF TRAILS AND GREENWAYS

WHAT ARE TRAILS AND GREENWAYS?

Greenways are corridors of protected open space managed for conservation and recreation purposes. Greenways often follow natural land or water features, and link nature reserves, parks, cultural features and historic sites with each other and with populated areas. Greenways can be publicly or privately owned, and some are the result of public/private partnerships. Trails are paths used for walking, bicycling, horseback riding or other forms of recreation or transportation. Some greenways include trails, while others do not. Some appeal to people, while others attract wildlife. From the hills of inland America to the beaches and barrier islands of the coast, greenways provide a vast network linking America's special places.



Equestrians enjoy the beautiful mountainous scenery along California's Ojai Valley Trail. (Photo: C. Hamley)

WHY ESTABLISH TRAILS AND GREENWAYS?

Trails and greenways positively impact individuals and improve communities by providing not only recreation and transportation opportunities, but also by influencing economic and community development. Some of the many trails and greenways benefits include:

- making communities better places to live by preserving and creating open spaces;
- encouraging physical fitness and healthy lifestyles;
- creating new opportunities for outdoor recreation and non-motorized transportation;
- strengthening local economies;
- protecting the environment; and
- preserving culturally and historically valuable areas.

“**T**O MAKE A GREENWAY
IS TO MAKE A COMMUNITY.”

— CHARLES E. LITTLE,

AUTHOR OF
GREENWAYS FOR AMERICA

TRAILS AND GREENWAYS SUPPORT ECONOMIC DEVELOPMENT

Trails and greenways provide countless opportunities for economic renewal and growth. Increased property values and tourism and recreation-related spending on items such as bicycles, in-line skates and lodging are just a few of the ways trails and greenways positively impact community economies.

- In a 1992 study, the National Park Service estimated the average economic activity associated with three multi-purpose trails in Florida, California and Iowa was \$1.5 million annually.¹
- According to a study conducted by the U.S. Fish and Wildlife Service, birdwatchers spend over \$5.2 billion annually.²

PROMOTING HEALTHY LIVING

Many people realize exercise is important for maintaining good health in all stages of life; however many do not regularly exercise. The U.S. Surgeon General estimates that 60% of American adults are not regularly active and another 25% are not active at all.³ In communities across the country, people do not have access to trails, parks, or other recreation areas close to their homes. Trails and greenways provide a safe, inexpensive avenue for regular exercise for people living in rural, urban and suburban areas.



Minnesota's 20-mile Cannon Valley Trail attracts bicyclists of all ages, as well as walkers, runners, skaters and skiers. (Photo: Patricia Schmid)

“T HREE NEW GIFT SHOPS HAVE RECENTLY OPENED, ANOTHER BIKE SHOP, A JEWELRY STORE, AN ANTIQUE AND USED FURNITURE STORE, A THRIFT SHOP, A WENDY'S RESTAURANT AND A PIZZA AND SANDWICH SHOP HAVE ALSO CROPPED UP...ALL THIS IS HAPPENING, AND ONLY WITH THE PROSPECT OF THE TRAIL OPENING IN JULY...THERE IS AN AIR OF EXCITEMENT AND ANTICIPATION NOW WITHIN THIS COMMUNITY. SOMETHING CONNELLSVILLE HAS NOT FELT FOR MANY YEARS.”

— CHRIS WAGNER, EXECUTIVE DIRECTOR
OF THE GREATER CONNELLSVILLE CHAMBER
OF COMMERCE, PENNSYLVANIA

ENVIRONMENTAL BENEFITS

Greenways protect important habitat and provide corridors for people and wildlife. The preserved Pinhook Swamp between Florida's Osceola National Forest and Georgia's Okefenokee National Wildlife Refuge protects a vital wildlife corridor. This important swampland ecosystem sustains numerous species including the Florida black bear, timber rattlesnake and the Florida sandhill crane.

Trails and greenways help improve air and water quality. For example, communities with trails provide enjoyable and safe options for transportation, which reduces air pollution. By protecting land along rivers and streams, greenways prevent soil erosion and filter pollution caused by agricultural and road runoff.

Greenways also serve as natural floodplains. According to the Federal Emergency Management Agency, flooding causes over \$1 billion in property damages every year. By restoring developed floodplains to their natural state, many riverside communities are preventing potential flood damage.

Finally, trails and greenways are hands-on environmental classrooms. People of all ages can see for themselves the precious and intriguing natural world from which they often feel so far removed.

PRESERVING OUR HISTORY AND CULTURE

Trails and greenways have the power to connect us to our heritage by preserving historic places and by providing access to them. They can give people a sense of place and an understanding of the enormity of past events, such as Native American trails and vast battlefields. Trails and greenways draw the public to historic sites. The six-mile Bethabara Trail and Greenway in Winston-Salem, North Carolina draws people to the birthplace of the city, the original Moravian Christian village founded in the late 1700s. Other trails preserve transportation corridors. Rail-trails along historic rail corridors provide a glance at the importance of this mode of transportation. Many canal paths, preserved for their historic importance as a transportation route before the advent of railroads, are now used by thousands of people each year for bicycling, running, hiking and



People of all ages enjoy Florida's Tallahassee-St. Marks Historic Railroad State Trail. (Photo: Dan Burden)

strolling. Many historic structures along canal towpaths, such as taverns and locks, have been preserved.

“A LIVABLE SUBURB OR CITY IS ONE THAT LETS US GET HOME AFTER WORK FAST... THAT RESTORES AND SUSTAINS OUR HISTORIC NEIGHBORHOODS... THAT PRESERVES AMONG NEW DEVELOPMENT SOME FAMILY FARMS AND GREEN SPACES... A LIVABLE NEIGHBORHOOD LETS YOU AND YOUR SPOUSE WALK THROUGH A NATURAL ECOSYSTEM AS YOU SIMPLY TAKE AN EVENING STROLL DOWN YOUR STREET.”

— VICE PRESIDENT ALBERT GORE

CREATE GREENWAYS AND TRAILS; BUILD A BETTER LIFE

Vice President Al Gore described a way of living that is cherished by most people and, unfortunately, is largely unavailable. Open spaces have disappeared at an alarming rate to make room for new development. People spend far too much time in traffic, detracting from time that could be better spent with their families and friends.

Through their votes, thousands of Americans have said ‘yes’ to preserving open spaces, greenways, farmlands and other important habitat. During the 1998 election, voters in 44 states approved over 150 conservation-related ballot initiatives. Trails and greenways provide what many Americans seek — close-to-home recreational areas, community meeting places, historic preservation, educational experiences, natural landscapes and beautification. Both trails and greenways help communities build pride by ensuring that their neighborhoods are good places to live, so that children can safely walk or bike to a park, school, or to a neighbor’s home. Trails and greenways help make communities more attractive and friendly places to live.

ENDNOTES

¹ *The Impacts of Rail-Trails, A Study of Users and Nearby Property Owners from Three Trails*, National Park Service, Rivers, Trails and Conservation Assistance Program, 1992.

² *Economic Impacts of Protecting Rivers, Trails and Greenway Corridors*, National Park Service, Rivers, Trails and Conservation Assistance Program, 4th edition, 1995.

³ *Physical Activity and Health: A Report of the Surgeon General*, U.S. Department of Health and Human Services, 1996.

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ABOUT THE CLEARINGHOUSE: The Trails and Greenways Clearinghouse provides technical assistance, information resources and referrals to trail and greenway advocates and developers across the nation. Services are available to individuals, government agencies, communities, grassroots organizations and anyone else who is seeking to create or manage trails and greenways. The Clearinghouse is a joint project of Rails-to-Trails Conservancy and The Conservation Fund's American Greenways Program.

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