

Appendix C: Further Study Needed Project Descriptions

Over 9 miles, or 7%, of the Recommended Bicycle Network is listed as “Further Study Needed,” which means that a specific facility type cannot be identified until further analysis of the link is conducted by City staff. Some of these links score very high when compared to other links in the recommended network due to benefits in bicycle connectivity, safety, and mobility. In light of this, the City should commit annual funding to complete the additional studies necessary to identify viable improvement options. Descriptions for each of the network links requiring further study are listed below Table C.1.

Table C.1: Recommended Bicycle Network Links Needing Further Study

Bellingham Bicycle Network Link	Bicycle Master Plan Prioritization Score	Priority Rank (Out of 186)
Lakeway Drive (Queen to Ellis)	57.312	2
Holly (Ellis to Bay)	46.140	5
Chestnut (Bay to Railroad)	46.140	6
James Street (E. Illinois to Iowa)	42.037	8
Meridian Street [SR 539] (McLeod to Telegraph)	34.868	17
Lincoln Street (Lakeway to S Fred Meyer driveway)	28.623	28
Donovan Avenue (32 nd to 21 st)	23.947	45
West Holly Street (Bay to F)	23.760	48
Lakeway Drive (Old Lakeway to Woburn)	22.131	62
Ellis/Maple/N. Samish (Lakeway to Pasco)	21.671	65
Sunset Drive [SR 542] (James to Studio Ln)	19.078	88
Puget Street (Lakeway to Consolidation)	18.671	90
West College Way (Highland to Bill McDonald)	17.993	97
W Telegraph (SR 539 to I-5 northbound off-ramp)	17.326	101
Woburn Street (Sunset to Alabama)	17.218	104
36 th (Fielding to Samish)	16.454	110
Kellogg Road (Tull to Cordata)	16.019	115
San Juan Boulevard (40 th to Pacificview)	15.520	119
Cordata Parkway (Westerly to Bakerview)	14.573	126
Sunset Drive (Ellis to James)	13.631	139
Granary-Bloedel Avenue (through the Waterfront)	10.661	163

Lakeway Drive (Queen Street to Ellis Street) - Rank #2

Approximately 26,000 vehicles per day pass through this 0.78-mile east-west section of Lakeway Drive, which is a 4-5 lane wide principal arterial, posted at 25 mph, and connects the Puget Neighborhood, Civic Field Complex, Lakeway Center commercial area, Carl Cozier Elementary School, Interstate 5, the York Neighborhood, and downtown Bellingham. This section of Lakeway is also an important transit corridor linking the WWU Lincoln Street Park-N-Ride Facility with downtown and other destinations. In 2013, the City installed a transit queue-jump at the intersection of Lakeway/Lincoln to help keep WTA busses on time. The heavily used northbound on- and off-ramps for Interstate 5 are accessed at the intersection of Lakeway/King, which is only 220 feet west of the Lakeway/Lincoln intersection. The City has spent considerable time coordinating these closely spaced and heavily trafficked signals. The southbound on- and off-ramps for Interstate 5 access Lakeway Drive immediately west of I-5. There is not enough physical space on Lakeway beneath the I-5 bridge to add traditional bicycle lanes, but this link received the second highest score on the priority list because there are no viable alternatives to cross Interstate 5 in this part of Bellingham, making it an extremely important link in the bicycle network. Further study is needed to find a solution to accommodate bicycle facilities here.



Holly Street (Ellis Street to Bay Street) - Rank # 5, (Bay Street to F Street) - Rank #48

Approximately 8,700 vehicles per day travel this 0.4-mile southeast to northwest section of West Holly Street, which is a principal arterial that connects Interstate 5, downtown, Maritime Heritage Park, Whatcom Creek trails, and Old Town. On-street parking exists on both sides of the street but there are currently no marked bicycle facilities. Accommodating dedicated bicycle facilities on Holly Street may prove to be very challenging due to the many high demand left and right turns made by vehicles at intersections, driveways, and on-street parallel parking stalls, especially on the downhill section of Holly between Ellis and Railroad.

Chestnut Street (Bay Street to Railroad Avenue) - Rank #6

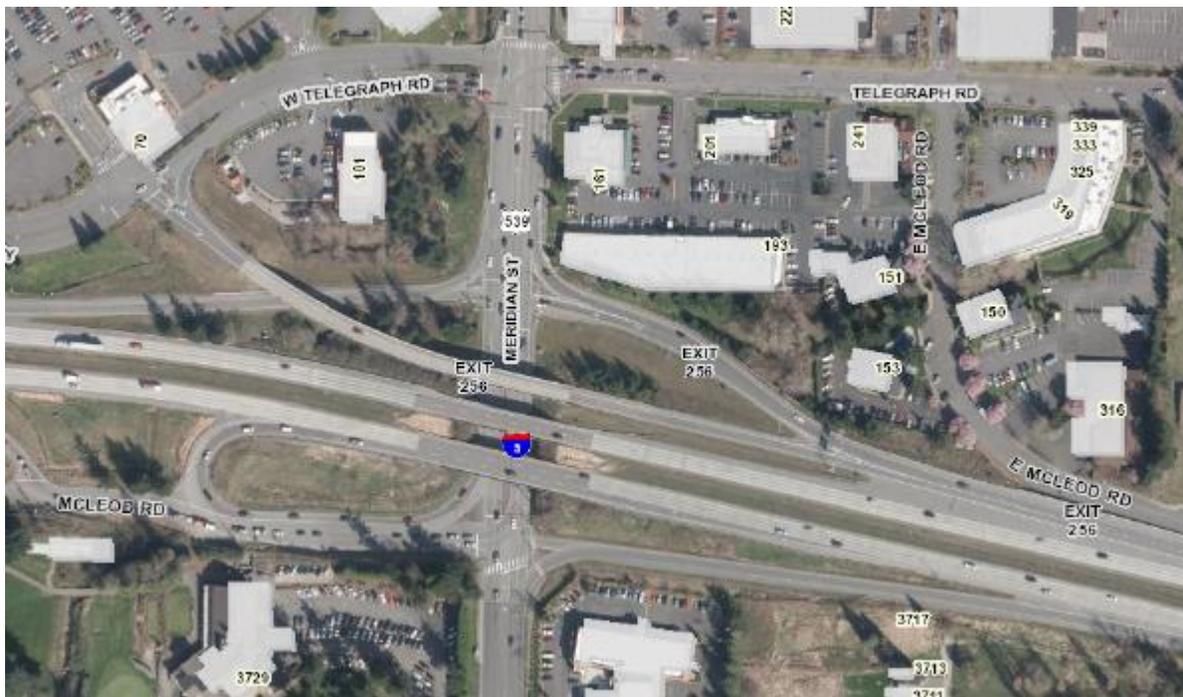
Between 6,000 and 9,000 vehicles per day travel this 3-block northwest-southeast section of Chestnut Street. As part of the Bay-Chestnut deck rehabilitation project in 2014, a marked climbing lane will be installed for southeast-bound bicyclists and shared lane markings will be added for northwest-bound bikers connecting to the marked bike lanes on Roeder Avenue. Between Bay Street and Cornwall Avenue there are two southeast-bound travel lanes, one northwest-bound travel lane and on-street parking in front of ground-floor retail and office establishments. At Cornwall Avenue, Chestnut becomes a one-way street with two vehicle travel lanes between Cornwall and Railroad as well as on-street parallel parking on the west side and front-in angled parking on the east side. Curb extensions on the north side of the Chestnut/Railroad intersection extend to the edge of the two vehicle travel lanes to minimize the pedestrian crossing distance of Chestnut.

James Street (E. Illinois Street to Iowa Street) - Rank #8

Between 12,000 and 16,000 vehicles per day travel this 4-lane 0.90-mile north-south section of James Street, which is a principal arterial posted at 25 mph, and connects Sunnyland Elementary School, the James Street commercial center, and downtown Bellingham. On street vehicle parking exists on both sides of James between Kentucky and Texas, but there are currently no bicycle facilities. Major arterial crossings exist at James/Ohio; James/Iowa/State; and James/Alabama. James Street between Iowa and Ohio is a one-way street and the James/Iowa/State and James/Ohio intersections are part of one of Bellingham's busiest designated trucking routes.

Meridian Street [SR 539] (McLeod Road to Telegraph Road) - Rank #17

Approximately 45,000 vehicles per day pass through this 0.12-mile north-south section of Meridian Street, which is the busiest principal arterial street section in Bellingham and comprises the limited access area of the Interstate 5/Meridian (SR 539) freeway interchange. North of I-5, Meridian Street is officially SR 539 from Bellingham to the U.S.-Canadian border. The 2008 I-5 Master Plan calls for complete reconstruction of the interchange at an estimated cost of \$50 million dollars, but WSDOT is very unlikely to provide any funding to accomplish this in the foreseeable future. In 2013, WSDOT constructed safety and access management improvements from I-5 to Kellogg Road, including widening the radius from the northbound I-5 off-ramp onto Meridian for freight trucks, eliminating the northbound left-turn lane at Meridian/Telegraph, and installing yellow c-curb center median to prevent left turns across heavy traffic. Similar to Lakeway Drive, there are no viable alternatives for bicyclists to cross the barrier of I-5 so further study is required to find a solution to accommodate bicycle facilities here. Finding a viable solution to accommodate bicyclists in this location will be extremely difficult.



Lincoln Street (Lakeway Drive to southern Fred Meyer driveway) - Rank #28

Approximately 12,000 vehicles per day pass through this 4-lane 0.19-mile north-south section of Lincoln Street, which is a secondary arterial that connects Carl Cozier Elementary School, Fred Meyer, Lakeway Center commercial area, Lakeway Estates Senior Mobile Home Park, student apartments, and the WWU Lincoln Street Park-N-Ride facility served by WTA transit busses. Commercial driveways for Fred Meyer and Lakeway Center do not align with each other and create numerous turning conflicts for bicyclists on Lincoln Street.

Donovan Avenue (32nd Street to 21st Street) - Rank #45

Approximately 3,000 vehicles per day travel this 0.68-mile east-west section of Donovan Avenue, which is a collector arterial posted at 30 mph through the south portion of the Happy Valley Neighborhood. An old substandard sidewalk/walking path exists on the south side of the street, but the street itself is very narrow, there are no shoulders, and there are bio-swale ditches in some places.

Lakeway Drive (Old Lakeway Drive to Woburn Street) - Rank #62

Approximately 21,000 vehicles per day travel this 4-lane 0.22-mile east-west section of Lakeway Drive, which is a principal arterial, posted at 35 mph. This section of Lakeway Drive connects the Puget and Whatcom Falls Neighborhoods, is narrower than other sections of Lakeway, and is commonly referred to as 'the dip' due to the topographic depression formed by a creek drainage channel. There is no physical space to accommodate bicycle facilities and the relatively steep slopes on either end of the dip make bicycling in this high traffic area very challenging and uncomfortable. Lakeway Drive is a designated truck route and WTA runs several bus routes on Lakeway and Woburn.

Ellis/Maple/N. Samish (Lakeway Drive to Pasco Street) - Rank #65

Between 13,000 and 16,000 vehicles per day travel this 4-to-5-lane 0.49-mile combination of arterial streets, which is a principal arterial that connects downtown to the York and Sehome Neighborhoods and the North Samish Way Urban Village. Ellis Street is posted at 25 mph and experiences significant northbound traffic congestion between Chestnut Street and Lakeway Drive, with very heavy left turns from Chestnut to Ellis and heavy right turns from Ellis to Lakeway. Southbound travelers encounter the c-curb median protected 'S-curves' on Maple between Ellis Street and the 5-lane North Samish Way, which is posted at 35 mph. On-street parking exists on a small portion of Ellis and future plans for the Samish Urban Village call for on-street parking on North Samish Way between Abbott and Consolidation.

Sunset Drive [SR 542] (James Street to Studio Street) - Rank #88

Approximately 40,000 vehicles per day travel on this 5-lane 0.45-mile east-west section of Sunset Drive, which is a principal arterial, but is officially State Route 542, locally known as "Mt. Baker Highway," from James Street to the Mt. Baker Ski Area in east Whatcom County. The .15-mile west end of this link is also the limited access area of the I-5/SR 542 interchange with southbound on- and off-ramps at the James/Sunset intersection and the northbound on- and off-ramps at a traffic signal on the east side of the freeway. The posted speed limit is 35 mph and access management has been implemented between I-5 and Barkley Boulevard with yellow c-curb median and limitations on driveways accessing Sunset, but the two commercial driveways at Lowe's (south) and Sunset Square (north) both have heavy traffic volumes and turning movements on Sunset. The intersection at Sunset/Barkley has very heavy traffic congestion and heavy right-turn movements south onto Barkley Blvd and north into Sunset Square.



Puget Street (Lakeway Drive to Consolidation Avenue) - Rank #90

Approximately 1,800 vehicles per day travel this narrow 2-lane 0.67-mile north-south section of Puget Street, which is a collector arterial that climbs steeply uphill from Lakeway Drive. The posted speed limit is 25 mph and residential parking exists on both sides of the street in places, but south of Edwards Street, the west side along Puget Street drops off in a very steep and forested slope. Neither bicycle facilities nor sidewalks currently exist on Puget Street and further study is needed to determine if there is a feasible way to provide both. In reality, alternatives are limited due to the fact that there is only 21 feet of asphalt surface and accommodating either bicycle or pedestrian facilities will require the construction of either a paved bicycle climbing lane or a shared use bicycle-pedestrian pathway.

West College Way (Highland Drive to Bill McDonald Parkway) - Rank #97

Approximately 7,000 vehicles per day travel this steep, narrow, curving 2-lane 0.26-mile secondary arterial street that marks the southwest boundary of the WWU campus and connects residential dormitories to the WWU recreation center and south campus parking lots. The posted speed limit is 25 mph and steep slopes and bedrock line the south side of the street and steep forested slopes line the north side of the street. An extruded asphalt curb provides a walking pathway on the north or uphill side of the street, but there is no physical space to accommodate bicycle facilities without widening the physical footprint of the street. In reality, alternatives are limited due to the fact that there is only 21 feet of asphalt surface and accommodating either bicycle or pedestrian facilities will require the construction of either a paved bicycle climbing lane or a shared use bicycle-pedestrian pathway.

West Telegraph Road (Meridian Street [SR 539] to I-5 Northbound Off-ramp to Mall) - Rank #101

Approximately 9,000 vehicles per day travel this 5-lane arterial street into the Bellis Fair Mall regional shopping center, but in 2013, left-turns from SR 539 to West Telegraph into the mall were eliminated for safety reasons and traffic volumes may be lower in 2014.

Allocating space for bicyclists on this street segment will be very challenging, and perhaps not warranted. No bicycle facilities are planned or recommended on SR 539 north of Telegraph Road; the segment of SR 539 between McLeod and Telegraph is listed as "Further Study Needed" (above); left-turns from SR 539 to West Telegraph are no longer allowed; and the segment ends at the northbound fly-over off-ramp from Interstate 5 into the mall. While marked bike lanes are recommended for Telegraph Road between SR 539 and McLeod Road, it will be extremely difficult to justify installing these due to significant traffic volume, congestion, and lack of physical space on asphalt between curbs.

Due to the above, bicycle facilities on West Telegraph should only be installed in conjunction with bicycle facilities on Telegraph Road east of SR 539 and on SR 539 between Telegraph and McLeod.



Woburn Street (Sunset Drive [SR 542] to Alabama Street) - Rank #104

Approximately 16,000 to 19,000 vehicles per day travel this 2-to-5-lane 0.92-mile section of Woburn Street, which is a principal arterial, high-frequency transit route, and designated truck route that connects SR 542 to Barkley Urban Village, Illinois Street, the Railroad Trail, and Alabama Street. The posted speed limit is 35 mph and from Alabama to the Railroad Trail crossing, Woburn is 2 lanes with residential parking on both sides of the street. At the Railroad Trail crossing, pedestrian bulb-outs exist to make pedestrians and bicyclists more visible to drivers and to shorten the crossing distance on Woburn. From Illinois Street where Woburn enters the Barkley Urban Village, the street widens to 4 lanes with a parkway-style landscaped median and dedicated left-turn lanes at the Woburn/Barkley and Woburn/Rimland traffic signals. From Burns to Sunset (SR 542), Woburn is 4 lanes with a center two-way left-turn lane and then dedicated left and right turn lanes at the Woburn/Sunset (SR 542) traffic signal.

36th Street (Samish Way to Fielding) - Rank #110

Approximately 2,400 vehicles per day travel this narrow 2-lane street, which serves as access to the Sehome shopping center. 36th Street is posted at 25 mph and functions like a collector arterial, but is not technically a City street because it is completely within WSDOT right-of-way. Deep bioswale ditches, with both landscaped and wetland vegetation, exist on each side of the road bed and sight distance is less than optimal for vehicles entering and exiting the Sehome shopping center. Alternatives for accommodating bicyclist and pedestrians are limited due to the fact that there is only 21 feet of asphalt surface, which will require the construction of either paved bicycle lanes or shared use bicycle-pedestrian pathways on each side of the street.

Kellogg Road (Tull Road to Cordata Parkway) - Rank #115

Approximately 6,000 to 9,500 vehicles per day travel this 4-lane 0.37-mile section of Kellogg Road, which is a secondary arterial that connects the Cordata Neighborhood, Whatcom Community College, major commercial development, a medical center, and the King Mountain Neighborhood. The posted speed limit is 35 mph and heavily traveled Meridian Street (SR 539) intersects this section of Kellogg Road, with high volumes of left and right turns being made from each approach of the Kellogg/Meridian (SR 539) intersection. Three major driveways exist on the north side of Kellogg between Meridian (SR 539) and Cordata Parkway, with access management provided by parkway-style landscaped medians and dedicated left-turn lanes. Each of these commercial driveways experiences a high volume of right-turning vehicles. Significant additional vehicle traffic is expected on Kellogg in the future due to the remaining development potential throughout the Cordata Neighborhood.

San Juan Boulevard (40th Street to Pacificview Drive) - Rank #119

This link in the Bellingham Bicycle Network does not, and may never, exist. San Juan Boulevard is a planned regional secondary arterial connection that would provide great regional transportation connectivity where none exists today, however, it is probably not feasible to construct due to environmental impacts and associated mitigation and construction costs. The City began engineering, design, and right-of-way acquisition for San Juan Boulevard in the mid-2000's, but the presence of steep slopes, wetlands, and streams reviewed under local, State, and federal critical areas regulations have made the project prohibitively expensive and the City considers the project to be fatally flawed and not constructible. While it is very doubtful that an arterial street will be constructed in this location, it may be possible for the Parks Department to construct a Greenways regional multiuse recreational trail between 40th Street and the regional park planned for the top of Samish Hill purchased with Greenways Levy funds. Due to the steep slopes along this alignment, the trail would need to feature several switchback turns in order to serve as a legitimate recreational biking option.

Cordata Parkway (Westerly Road to West Bakerview Road) - Rank #126

Approximately 13,000 vehicles per day travel this 4-lane 0.13-mile section of Cordata Parkway that connects the Cordata Neighborhood, Whatcom Community College, WTA's Cordata Station transit hub, major commercial development, and the Bellis Fair Shopping Center. Cordata Parkway is a secondary arterial posted at 35 mph. Access management has limited the number of driveways onto Cordata, but there are high volumes of left and right turns onto Cordata from West Bakerview Road. Significant additional vehicle traffic is expected on Cordata in the future due to the remaining development potential throughout the Cordata Neighborhood.

Sunset Drive (Ellis Street to James Street) - Rank #139

Approximately 12,000 vehicles per day travel this 2-to-3-lane 0.33-mile section of Sunset Drive, which connects the Cornwall Park Neighborhood, St. Joseph's Hospital, the Sunnyland Neighborhood, and Interstate 5. This portion of Sunset Drive is a secondary arterial posted at 25 mph, which narrows from 4 lanes plus a dedicated left-turn lane at Sunset/James/I-5 southbound on-/off-ramps to 2 lanes plus dedicated left and right-turns at the Sunset/ Ellis intersection. Both intersections experience heavy traffic congestion and high volumes of left- and right-turning traffic due to Interstate access on the east end and hospital access on the west end. Residential homes line each side of the street, along with a few prominent churches and a former WSDOT site on the south side of Sunset.

Granary-Bloedel Avenue (Roeder Avenue to Cornwall Avenue) - Rank #163

Construction of this new multimodal collector arterial through the mixed-use portion of the Waterfront District is funded and anticipated for 2015. As with all new multimodal arterial streets that the City constructs, facilities for pedestrians, bicycles, transit riders, and vehicles will be provided. While a Waterfront District Master Plan was adopted in 2013, the type and intensity of development that will

actually materialize remains to be seen. At a minimum, bicycle lanes will be required to comply with Bellingham arterial standards and federal funding requirements and the posted speed limit will be 25 mph. Over time, as development occurs, the land use context will inform the City on the type of bicycle facilities that may be needed on Granary-Bløedel.