

Bicycle Strategy

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2013



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We want Kenmore to be known as a bicycle friendly City. This document provides a background on current conditions for cyclists in Kenmore including areas of strength and barriers for cyclists. It then gives general policy suggestions to provide a “tool box” for City officials to make cycling more accessible to the public as well as recommendations.

Table of Contents

| | |
|--|----|
| Introduction | 3 |
| What we know | 3 |
| There is demand for cycling in Kenmore. | 3 |
| There is Potential for Multi-Modal Transportation | 3 |
| There are barriers for cyclists in the City | 4 |
| There are a number of common bicycle corridors in the City | 4 |
| Policies to increase cycling and establish Kenmore as Bicycle Friendly | 5 |
| “Place Making” | 5 |
| Safety Improvements..... | 6 |
| Reducing Speed Limits on Local Streets and Collector Arterials..... | 7 |
| Publicize!..... | 7 |
| Specific Next Steps..... | 8 |
| Short Term | 8 |
| Longer Term | 9 |
| Conclusions | 11 |

Introduction

In November of 2012, a group of citizens and City officials meet and discussed what the City could do to encourage cycling in Kenmore. This report stems from that discussion as well as electronic correspondence afterward and staff research. The information contained herein aims to inform and provide direction for the City with regard to effective bicycle policies.

What we know

There is demand for cycling in Kenmore.

Kenmore is in the fortunate position of already possessing an established cycling population. The Burke-Gilman trail, a multi-use regional trail which runs from Redmond to Seattle, bisects the City from east to west and is one of the most popular bicycle routes in the region. According to a count conducted by the Cascade bicycle club, the trail through Kenmore serves as many as 559 cyclists from 7-9 AM¹. That volume is comparable to the vehicular traffic volume on 68th Avenue (north of SR 522) during that same time period.²

Cyclists already use bicycles as part of larger commute trips. The Bicycle Alliance of Washington rents lockers at park and rides to people who commute by bicycle at least 3 times per week.³ Currently, the lockers at Kenmore Park and Ride have a 100% occupancy rate with names on a wait list⁴.

Kenmore is also a well known center for mountain biking. St. Edwards State Park and neighboring Big Finn Hill State Park together provide one of the most extensive mountain bike facilities in the Seattle metropolitan area.

There is Potential for Multi-Modal Transportation

According to data from the US Census Bureau, most Kenmore residents do not work in the City.⁵ The average commute time for Kenmore residents is nearly 30 minutes and 72% percent of residents commute by car.⁶ The high percentage of people driving to work coupled with the high average commute time implies that Kenmore residents generally work relatively far from the City. With that in mind, residents will likely have to use some form of public transit in addition to their bicycle, as cycling alone would likely increase their commute time to impractical levels.

¹ Ryann Child, Cascade Bicycle Club, Email Correspondence, March 20, 2013

² 68th Avenue NE and NE 182nd Street, 03-15-13

³ King County Metro Transit, "Bike Parking at Transit Facilities" *Metro Online*, <http://metro.kingcounty.gov/tops/bike/parking.html>, updated November 28, 2012

⁴ Bicycle Alliance of Washington Spokesperson, Telephone Correspondence, March 19, 2013

⁵ United States Census Bureau, *2007-2011 American Community Survey: Commuting Characteristics by Sex*, Form S0801

⁶ Ibid.

Currently, Kenmore Park and Ride is listed as being 100% utilized by King County Metro Transit.⁷ This means that during a typical weekday, the parking lot is completely full during peak hours. Due to this high demand for park and ride space, King County Metro leases parking lots from local churches to be used as additional commuter parking. All of the leased lots are also listed as “High-Utilization.”⁸

If people were to ride their bicycles to the bus instead of driving it would free up spaces for commuters who cannot bicycle. By taking their bike with them on the bus, riders would be able to access areas that would have been impractical to reach by transit alone.

There are barriers for cyclists in the City

Although there is demand for cycling in Kenmore, there are factors that limit residents from being able to get around safely by bike. The first is the lack of bicycle facilities in the City. While the Burke-Gilman trail is certainly an asset for the City, without a network of facilities which connect destinations (e.g. schools, libraries, major employers, stores, etc.) there isn’t much incentive for people to leave the trail. With the exception of the Burke-Gilman Trail, most of Kenmore’s bicycle network has no dedicated bicycle facilities.

Further, SR 522, which at its widest carries six lanes of traffic moving at 45 miles per hour, has proven to be an intimidating crossing point for all but the most experienced of cyclists. Only one intersection with SR 522 has any sort of bicycle facility: 80th Ave NE has bike lanes at the intersection. However, these lanes only continue for a few hundred yards before disappearing. See facility inventory in appendix A for a special layout of the bicycle facilities in the City.

There are a number of common bicycle corridors in the City

Through discussions with major stakeholders and members of the cycling community in Kenmore, 5 common bicycle routes were identified. These routes themselves, as well as the major community and regional amenities they connect, are listed below:

- **Burke-Gillman Trail.** In addition to being a regional cycling artery and one of the most popular cycling facilities in the state, this trail serves as the “backbone” of Kenmore’s existing bicycle network. With the exception of one stop-sign at 61st Avenue NE, it provides an uninterrupted East-West corridor for cyclists riding through the City.
- **68th/Juanita Drive (Southbound from the Burke-Gilman).** As a part of the “Lake Washington loop,” a common bicycle route for recreational and enthusiast cyclists which circumnavigates Lake Washington, this stretch of road sees significant bicycle traffic despite its hilly and curvy nature. Further, this road provides a connection to several major destinations both regionally and in the City. This road connects to Kirkland, Arrowhead Elementary and Bastyr University/St. Edwards State Park.
- **61st Ave NE.** The stakeholder meeting and discussion process listed 61st Avenue NE as a common bicycle route in the City. While 61st Avenue NE does not connect many major destinations in Kenmore itself, it does provide a route to the Interurban Trail (a regional mixed use bike trail

⁷ King County Metro Transit, *Park-and-Ride Utilization Report: Fourth Quarter 2012*, January 2013, pp. 5

⁸ Ibid.

similar to the Burke-Gilman) to the north. Due to the high volume and speed of traffic combined with the lack of shoulders on the southern portion of the road, it is currently only accessible to experienced cyclists who are used to riding in traffic.

- **68th Ave NE/NE 202nd Street (Northbound from the Burke-Gilman).** The relatively gentle slope of this street, combined with its low traffic volumes (compared to 61st Avenue NE) and ample shoulder make this a common cycling route for people to reach Kenmore Elementary and Kenmore Jr. High. The combination of 68th Avenue NE that turns into NE 202nd Street provides riders a lower traffic route to the north compared to 61st Ave NE.
- **73rd Ave NE.** The location of the Park and Ride on this street makes this a popular connection point for bicycle commuters in the area.
- **Simonds Road NE.** Although this road has a relatively steep slope, this road has relatively wide lanes which can accommodate cyclists fairly well. Additionally, this street serves as a major connection to Inglemoor High School.

Policies to increase cycling and establish Kenmore as Bicycle Friendly

While there is no “silver bullet” answer to increasing cycling in Kenmore, there are a number of policies that when implemented effectively will synergize to make Kenmore a more bicycle friendly place. Below are a few examples, placed into 4 broad categories.

“Place Making”

Place making can be loosely defined as creating a vibrant location which drives people to use the public space available to them, rather than ignoring it or simply passing through it. Part of Kenmore’s development strategy is creating a more defined, compact downtown. Development with active public spaces will make Kenmore more amenable to cyclists as compact development reduces the distance between destinations and active public spaces create incentive to make the trip in the first place.

However, no matter how appealing a destination may be, people will not ride their bikes to a location without a safe place to park their bikes when they get there. The provision of bicycle parking facilities can be relatively inexpensive to implement and absolutely necessary for people to feel comfortable leaving their bikes while they shop, dine or enjoy everything Kenmore has to offer. Ensuring Kenmore has adequate parking facilities can be done a few ways. First, the City can place bike parking facilities itself on sidewalks by major destinations. Additionally, the City can encourage private developers to provide parking facilities through incentives such as reduced vehicle parking requirements.

Creation of marked bicycle corridors to downtown and other destinations is an activity to both create a more defined identity for Kenmore and increase bicycling. Not only would signed bike routes guide cyclists to major destinations using roads that are safest for cyclists, but it would also provide drivers with an additional reminder to be “on the look-out” for cyclists.

Safety Improvements

Many people refrain from cycling because they do not feel safe.⁹ Surprisingly, it appears that how safe people perceive cycling to be is much more important in increasing the number of people bicycling than actual safety improvements, although increasing both is preferable. Most available research shows that the key to increasing perceived safety for cyclists is in providing dedicated road facilities for bicyclists. Below, the benefits and drawbacks of major bicycle facilities are outlined. For detailed cross-sections or plan views of these facilities see appendix B.

- **Cycle Tracks.** Although they are ubiquitous in some European countries, Cycle Tracks have only recently found a place in the American planning process. Unlike traditional bike lanes, cycle tracks have some form of physical separation from the roadway. This can either be a grade separation or through some form of raised median. Generally, cycle tracks are placed to the right of a line of parking to further separate cyclists from moving traffic. While users of cycle tracks perceive themselves to be the safest on these facilities, there is inconsistent data on if these facilities actually improve safety.¹⁰ However, because of that perceived safety, cycle tracks were shown in a Danish study comparing various bicycle facilities to cause the largest increase in bicycle use at 18-30% over roads without these facilities. Unfortunately, because of the right of way requirements for these facilities, cycle tracks can prove to be expensive due to real estate acquisition and construction costs. Most people are unfamiliar with bicycle tracks, which can increase danger for cyclists unless drivers and cyclists are educated on their use.
- **Bicycle Lanes.** These facilities are striped areas on the road (generally adjacent to general travel lanes) which are reserved for bicycles only. While these facilities have a notable actual safety improvement over no lane, there is not a huge jump in perceived safety.¹¹ In the Danish study conducted on bicycle facilities, bike lanes were shown to modestly increase cycling by 5-7% compared to roads without designated bicycle facilities. However, it should be noted that the increase quoted for ridership numbers may be artificially low compared to the US, considering it was considering Danish cyclists in Copenhagen (where the cycling mode-share is nearly 50% for commuters).¹² This study is primarily used because it is one of the only studies to compare different types of bicycle facilities. Studies in the US show increases closer to 30%.¹³ From a cost perspective, bike lanes are relatively inexpensive when compared to facilities like cycle tracks. In some cases, they can be put in with a simple road restriping, rather than requiring additional ROW and widening the pavement. Actual and perceived safety improvements to bicycle lanes can be achieved with the additions of buffers or striped areas between the vehicle travel lane and the bike lane. See appendix B for examples of both types of facilities.

⁹ Jenson, Søren Underlien, Roskilde, Claus, Jensen, Niels, *Road Safety and Perceived Risk*, City of Copenhagen

¹⁰ Ann Lusk et al., "Risk of Injury for Bicycling on Cycle Tracks versus in the Street," *Injury Prevention*, doi:10.1136/ip.2010.

¹¹ Jenson, Søren Underlien, Roskilde, Claus, Jensen, Niels, *Road Safety and Perceived Risk*, City of Copenhagen

¹² City of Copenhagen, *Good, Better, Best: City of Copenhagen's Bicycle Strategy 2011-2025*, 2010, Copenhagen Denmark, pp. 3-6

¹³ City of San Francisco, 2004. Fell Street Bike Lane (Scott to Baker) and Tow-Away Zone Proposal. City of San Francisco, San Francisco, CA.

http://www.sfmta.com/cms/uploadedfiles/dpt/bike/rewrite%20of%20memo%20for%20website%2011_22_04.pdf

- **“Bike Boxes.”** A large portion of serious bike crashes occur when a vehicle strikes a cyclist. One of the most common types of vehicle-cyclists collisions is the “right-hook” accident. In this situation, a vehicle that is turning right fails to see and yield to a cyclist that is approaching from behind and continuing straight. One solution to help prevent this type of accident is the use of “bike boxes.” These facilities are an intersection safety design which consists of a painted green space ahead of the queue of vehicles and behind the crosswalk. By providing bicycle queuing space ahead of cars, cyclists become more visible to vehicles, which prevents accidents. Bike boxes are increasing in popularity in the Puget Sound Region. A depiction of a bike box is shown in appendix B.
- **“Sharrows.”** In certain situations there may not currently be space on the road for an exclusive bicycle facility. When these constraints are present, putting shared lane markings (or “sharrows”) on the road may offer some form of bicycle facility. Sharrows are intended to guide cyclists on where the best place to ride on the road may be to avoid car doors and to remind drivers to share the road. While these facilities may serve as visual reminders to cyclists and drivers, there is little data to suggest they make a positive impact in the number or safety of cyclists on a given corridor. See appendix B for a depiction of sharrows.

Reducing Speed Limits on Local Streets and Collector Arterials

Another way to increase both the perceived and actual safety of cycling in Kenmore is to lower the speed differential between motor vehicles and bicycles. According to a 2011 study by AAA, a pedestrian’s or cyclist’s risk of death is more than halved when impact speed is reduced from 32 mph to 23 mph.¹⁴

Given that the speed of an individual cyclist is limited by the rider, the only feasible way to reduce this differential is to lower the speed of vehicle traffic along major bike routes where feasible, especially on local streets and areas with large numbers of pedestrians. With the State’s recent passage of SB 5066 (which waives the requirements for engineering studies when reducing speed limits from 25 to 20), implementing this change has been made much easier. Implementation of lowering speed limits is inexpensive and requires new signage.

Publicize!

Increasing the ease of cycling and safety in Kenmore is listed as a priority for the City in the Comprehensive Plan. There are projects currently underway that can make Kenmore a better place for cyclists. Educating the public how projects fit into the context of making Kenmore a friendlier place for cycling should be a priority for the City. The Kenmore Village redevelopment is a prime example of a non-cycling specific project with tangible positive effects on cycling in Kenmore. The denser, multi-use development will reduce distance between residents’ homes and amenities (including transit), making cycling more appealing.

¹⁴ Brian Tefft, *Impact Speed and a Pedestrian’s Risk of Severe Injury or Death*, September 2011, <https://www.aaafoundation.org/sites/default/files/2011PedestrianRiskVsSpeed.pdf>

Specific Next Steps

We have reviewed current conditions for cyclists in Kenmore and examined general policies that can increase cycling. The remainder of this report discusses how we can put general policies to work. These next steps reflect both the suggestions of the citizen group as well as staff recommendations derived from research.

Short Term

- **Promote safety through awareness signage.** One inexpensive means of improving bicycle safety through the busier corridors of the City is through the installation of awareness signage on streets frequented by bicycles. Awareness signage encourages drivers to both “share the road” generally, and also gives them warning to be extra alert for cyclists on designated or known bike routes.
- **Place making improvements through way-finding projects and signed bike routes.** Kenmore already is taking steps to build a sense of “place” in downtown area through way-finding projects. However, these efforts are predominately tailored to vehicle users. By creating signed bicycle routes, cyclists will be able to more successfully navigate the City and find destinations, using routes that are better suited to bicycle users (e.g. on roads with less traffic, or lower road grades). Signage indicating Kenmore as a bicycle-friendly city can also be added to “gateway” signage for people entering the City. Additionally, the City should make sure that Kenmore’s bicycle facilities are accurately represented in regional cycling maps and literature.
- **Step up the City’s marketing efforts.** Promote Kenmore as a bicycle friendly community. Marketing materials, authored articles in cycling publications, and blog entries are a few ways to promote the City and its current facilities.
- **Create a cycling map/brochure for the City.** The City could follow the example of cities like Redmond and Seattle in creating a bicycling map for residents. A map of bike routes, facilities, and “caution areas” (roads with higher traffic or steep slopes) can be made which allows residents a tool to navigate the City on their own. Further, making a facilities map would help establish Kenmore as a bicycle friendly community.
- **Promote and recruit cycling events in Kenmore.** Activities that can promote cycling in the City include rides, races, and education programs. Races and education programs can expose cycling to groups that might not otherwise be interested. Additionally, events in a closed loop can help highlight sections of the City like the downtown zone. Some stakeholder groups the City can partner with are Cascade Bicycle Club (education programs and rides) and the Washington State Bicycle Association (bike races). The City may also consider partnering with neighboring cities to organize cycling events (such as rides, races, or even cycling art exhibitions) that highlight both city’s people and places.
- **Restripe Juanita with bike lanes on one or both side of the street (as feasible).** There are current plans to overlay Juanita Drive (Kenmore’s portion) in 2013. Once an overlay is complete, restriping the road surface is necessary. The City is evaluating the corridor to determine if addition of bicycle lanes is feasible. As the overlay will not be adding additional road surface, it may not be possible to add bicycle facilities to both sides of the road. If only one facility can be

added it should be placed on the southbound stretch of road as it is uphill as the speed differential between cyclists and vehicles is much larger than on the downhill section. Cyclists also ride uphill at slower speeds and are more likely to have a laterally erratic travel path as they struggle to maintain forward momentum. Additionally, two intersections (68th Avenue NE & NE 170th Street and Juanita Drive NE & NE 153rd Place) would be reviewed for the addition of bike boxes.

- **Comprehensive Plan and Street/Road Standards update.** In the next two years, the City will be updating the Transportation Element of the Comprehensive Plan. In addition, the City's Road/Street standards will be updated. At this time, staff utilizes the King County Roads Standards from the 1990s. Update of both of these documents is an opportunity to review bicycle facilities within the City.
- **Ensure mountain bike trails are well maintained and remain open to cyclists.** Kenmore possesses excellent mountain bike facilities that are a regional draw. Making sure that these facilities are well maintained and open to cyclists is essential to keeping Kenmore a regional center for mountain biking. Organizations such as the Evergreen Mountain Bike Alliance and neighborhood groups have previously partnered with parks groups for trail maintenance and improvements and would likely make excellent partners in the future.
- **Work to install more bike lockers in the vicinity of SR 522.** The bike lockers at the Kenmore Park and Ride are utilized and there is a wait list. To encourage bicycle use as component of a commute, the City should make more lockers available to the public. The City could work with King County Metro Transit and the Bicycle Alliance of Washington to increase the number of lockers available at the Park and Ride. Should the City acquire the property on the northwest corner of SR 522 and 67th Avenue NE, it may be possible to install bicycle lockers and other bicycle facilities at this location as well.

Longer Term

- **Street improvements that include separated facilities for cyclists.** As the City grows and improves its road network, it is important to work towards meeting the needs of cyclists. Any time a street is overlaid or widened, special attention should be given to adding bicycle facilities where possible. As the City does not have an unlimited budget for bicycle improvements, care must be given to prioritizing what type of facilities are best for increasing cycling in the particular project. Below is a list of facilities arranged from most beneficial to cycling to least beneficial. The City should use this as a guide and pick the highest benefit facility which is financially feasible for a given project.
 1. **Cycle Track (On existing high utilization bicycle corridors only).** Given the high expense involved in the construction of these facilities, they should only be considered on areas with high bicycle utilization. Further, as this type facility isn't currently covered in Kenmore's road standards, they will need to be evaluated during the planned update.
 2. **Buffered Bike Lanes (both sides).** Like cycle tracks, these standards for these facilities should be added into the planned update of Kenmore's road standards.
 3. **Buffered Bike Lane (one side, preferably uphill), Bike lane downhill**
 4. **Bike Lane (both sides)**

5. **Bike Lane (one side, preferably uphill), “Sharrows” downhill**
6. **Wide Shared Use Shoulders**
7. **Sharrows (both Sides)**

Additionally, special care to put the highest benefit bike facility possible should be given to streets that are on established bike routes.

- **Improve SR 522 crossings for cyclists.** Currently, crossing SR 522 can be a challenge for cyclists. As the streets that intersect SR 522 get improved to include bicycle facilities, it is important to make sure that the crossing is as safe as possible for cyclists. “Bike boxes” would be well suited to the high volume nature of these roads as it gives cyclists as much visibility to cars as possible. However, more study on their traffic effects may be needed considering they will either require additional road infrastructure (a pedestrian island) to separate right-turning traffic in dedicated right turn lanes or the removal of right-turn-on-red abilities for vehicle traffic to be effective. Further, making sure cyclists crossing SR 522 have easy access to the Burke-Gilman trail should be a priority.
- **Compact development in the downtown core.** As outlined in the “policies” section, a compact, defined downtown creates a destination for cyclists as well as general traffic. Further, denser development lowers the distance between destinations for cyclists.
- **68th Ave bridge reconstruction with bicycle facilities.** In the long run, the 68th Avenue Bridge should be retrofitted and/or replaced to include bicycle and pedestrian facilities. The bridges are a “choke point” for cyclists riding the Lake Washington loop (as the bridge has no shoulders or any bicycle facility).
- **Plan for and identify locations for more automobile parking at bicycle trail access points (along NE 175th Street, for example).**
- **Research Liability and other potential costs for a public bike share program or City Employee Bicycle program**
- **Provide cycling concessions near major bicycle facilities.** Providing facilities for cyclists both on and off the road is important. The City could coordinate with private partners looking to set up concession facilities in Kenmore’s city-owned parks that would benefit cyclists. Making sure that the City is amicable to their requests benefits the City in two ways. First, the City will be providing services that will either support existing cyclists (such as with a bicycle parts vending machine), or will encourage new cyclists (with facilities like bicycle rentals). Considering the health effects of cycling, encouraging or supporting these activities constitutes a clear public benefit. Second, by allowing these private ventures on public lands, the City is able to provide services without shouldering the financial burden.
- **Improve the Burke-Gilman crossing at 61st Ave NE.** One of the reasons the Burke-Gilman trail is so popular for cyclists is that it provides a route through Kenmore for cyclists that has almost no conflict points with motor vehicle traffic. One of the two remaining conflict points between motor vehicles and cyclists are at 61st Ave NE. The steep slope of 61st, combined with the tight s-curve between SR-522 and 175th street make it difficult for vehicles to see trail users at that crossing point. Making the trail crossing for this road either above or below grade from cars will

completely remove that risk for cyclists on the Burke-Gillman. However, those solutions may be prohibitively expensive given the low traffic volume on that street. A more cost-sensitive solution to making that intersection safer for cyclists would be to put in some form of traffic calming on 61st Avenue NE (example: investigate opportunity for a roundabout incorporating the trail and 61st/175th Street intersection) or by requiring vehicular traffic to yield to trail traffic (which many motorists already do), or stop before crossing the trail. Any of these solutions will require coordination with King County as the Burke Gillman trail is a County facility.

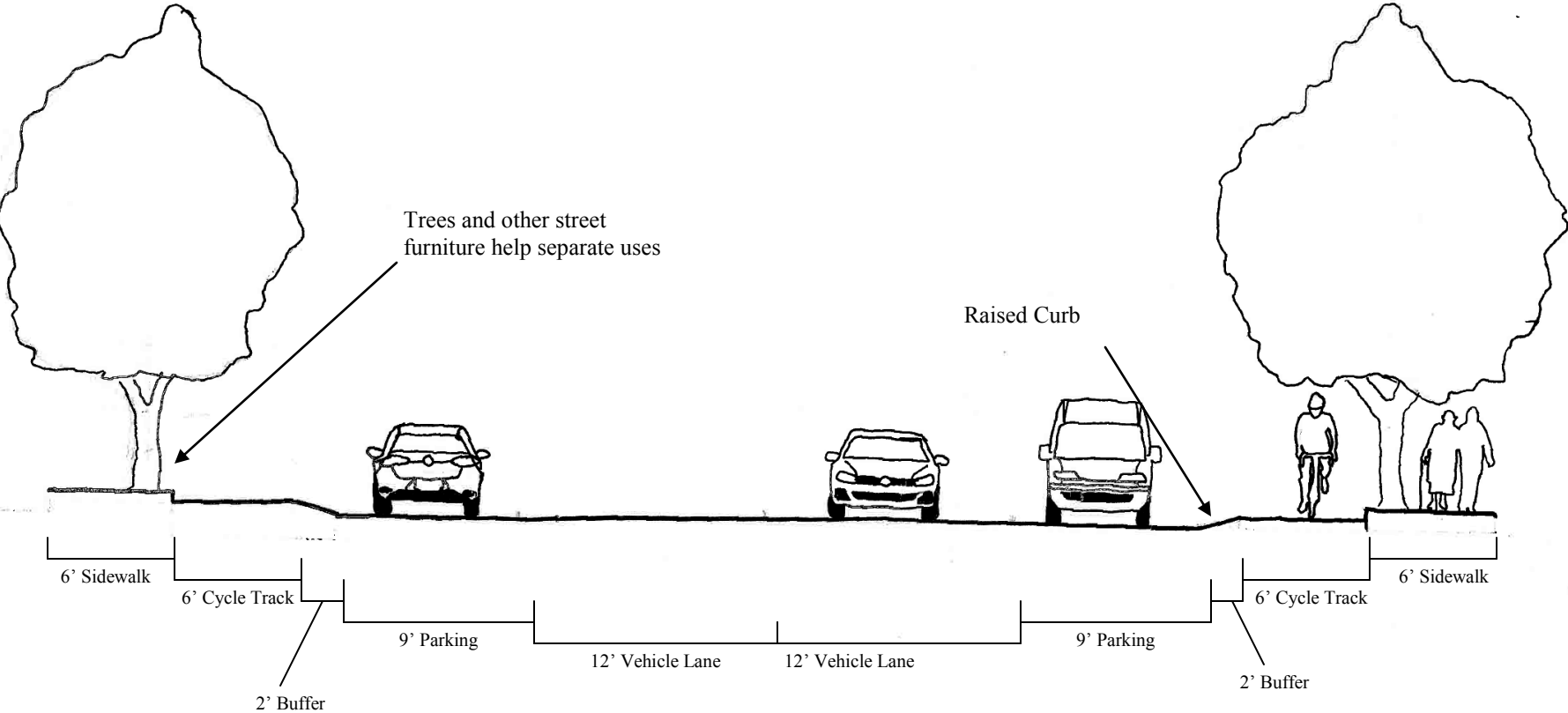
Conclusions

Kenmore possesses the basic building blocks to be a well known and functioning bicycle community. We possess the Burke Gilman Trail which is largely conflict free, mountain bike trails, METRO/Soundtransit service to many regional destinations, and citizens who cycle. However, there are currently barriers for cyclists in the City. The concepts and steps outlined in this Strategy will go a long way towards addressing these barriers will require a short and long-term commitment from the City and community.

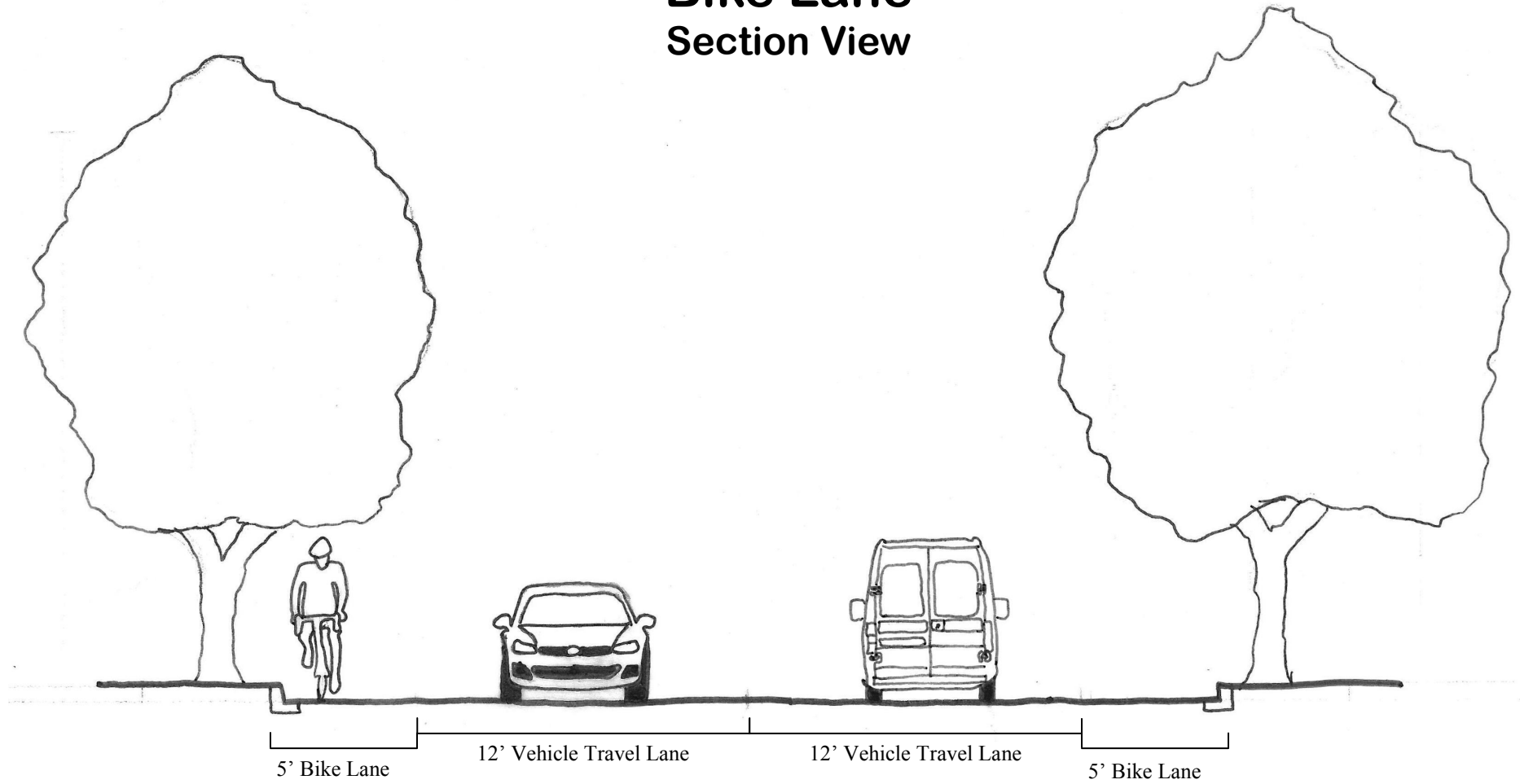
Once this Strategy is set in motion, the City will convene a citizen bicycle advisory group periodically to monitor progress.

Appendix B

Cycle Track Section View

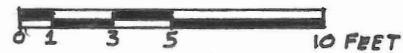
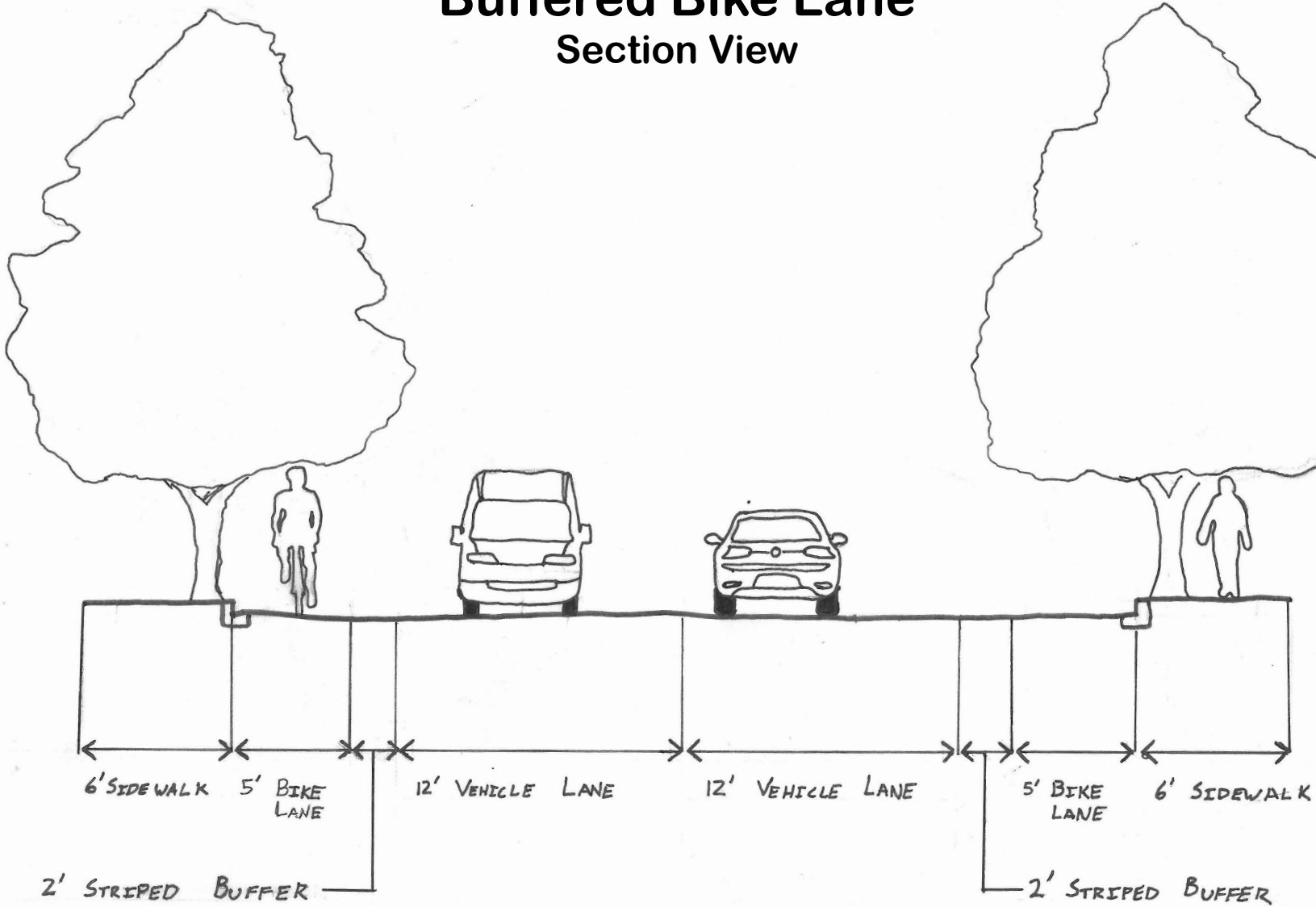


Bike Lane Section View



Buffered Bike Lane

Section View



Bike Box

Plan View



Intersections

Bike Box at a Signalized Intersection with a Bike Lane Approach

