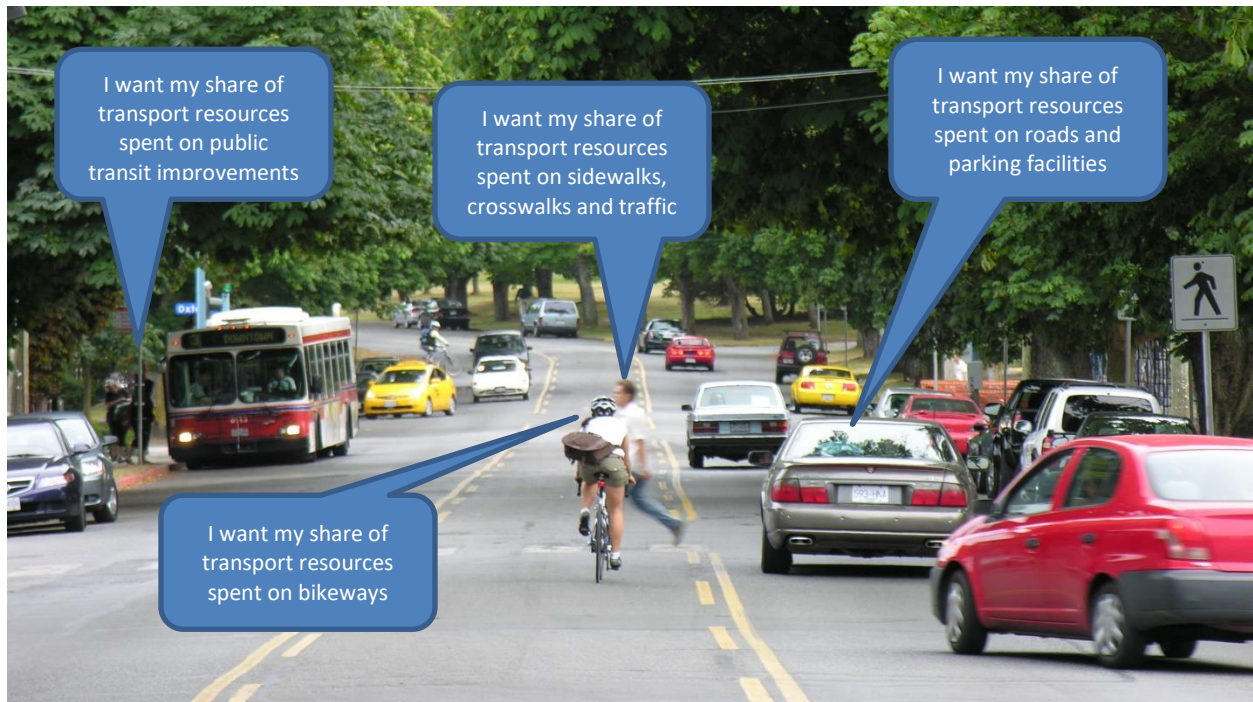


## Evaluating Bikeway Criticisms

*Critics argue that local bikeway programs are wasteful and unfair. This report critically evaluates their claims. The analysis indicates that many of the critics' arguments are inaccurate or greatly exaggerated.*

18 October 2023

By Todd Litman

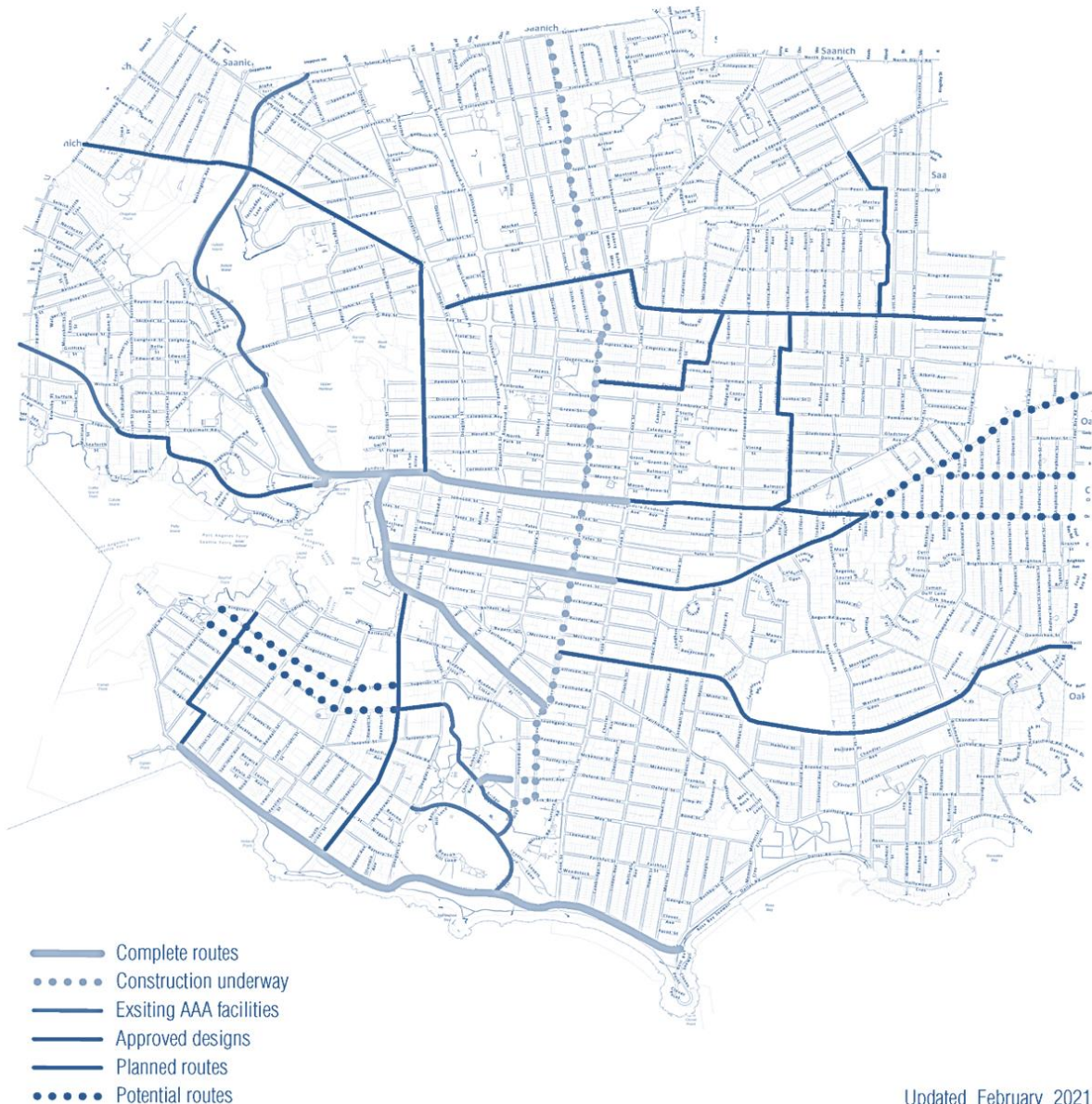


*To be efficient and fair, city streets must serve all users. The majority of local street space and transport funding is currently devoted to serving automobile travel. Bikeways help create streets that serve all users and help achieve the city's strategic goals. Critics are wrong to claim that bikeways are wasteful and unfair; they ensure that everybody can travel safely and receives a fair share of public resources.*

Victoria has ambitious targets to increase *active travel* (walking, bicycling and variants such as scooters and e-bikes), in order to help achieve many community goals. To do this the City is developing an *All Ages and Abilities* (AAA) bikeway network where active modes are prioritized over cars. Critics argue that this program is wasteful and unfair. This report examines these claims.



# All Ages and Abilities Cycling Network



*Victoria's bikeway plan will create 32 kilometers of All Ages and Ability (AAA) protected bikeways where active modes have priority over motor vehicle traffic. This will help the city achieve its transportation targets and community goals. The bikeway network will represent 12% of Victoria's road-kilometers and about 3% of its total street space, which is less than the portion of residents who bicycle or our bicycle mode share targets.*

## Summary of Findings

- Victoria is building an All Ages and Abilities (AAA) bike network to help achieve various community goals. Although most residents seem to support this plan there are vocal critics who argue that bikeways are unnecessary, wasteful, and unfair. These claims are not justified.
- Surveys indicate that many people want to bike more, but fear riding on busy streets. Previous experience shows that bikeways can significantly increase bicycle travel and reduce automobile traffic, and their costs are usually repaid many times over through vehicle and infrastructure savings, health and equity gains, plus environmental and economic benefits.
- A significant and growing portion of Victoria residents bicycle. In 2022, 12% of total trips were by bike, with higher rates during peak periods and in the downtown area. Victoria has more adult bicycles than cars, over a quarter of residents bicycle at least occasionally, and more would do so if riding conditions improved.
- Critics ignore the high costs that vehicle traffic imposes on urban neighborhoods and the large benefits provided by shifts to active modes. Because of their large size, speed and risk, urban automobile travel typically imposes more than ten times the infrastructure, crash and environmental costs as bicycle travel.
- Critics exaggerate negative impacts and ignore many potential benefits. Bikeways slow automobile travel far less than critics claim, and by shifting travel to active modes they reduce traffic problems and provide other benefits. For example, critics cite estimates that the Richardson bikeway adds 5-7 minutes for Oak Bay to downtown car trips but that is already slower than other roads so rational motorists will shift route. Actual delays and detours will be small and offset by mode shifts. Extensive research indicates that residents in walkable and bikeable neighborhoods are safer, healthier and happier, and spend less on transportation. An honest appraisal considers all of these impacts.
- Critics are wrong to claim that Victoria's bikeway investments are excessive and unfair. Bikeways use about 3% of road space, compared with 35% devoted to car parking and 38% devoted to arterial traffic lanes. Less than 7% of regional road spending and less than 2% of total road and parking spending is devoted to bicycle facilities. This is far less than the portion of residents who currently bicycle or our mode share targets. In contrast, more than 90% of Victoria's road space and transport spending is devoted to automobile facilities, larger than auto's 59% mode share. Overall, bicyclists subsidize motorists and Victoria residents subsidize out-of-town car trips.
- To be efficient and equitable, transportation planning should favor affordable, healthy and resource-efficient modes over expensive, dangerous and resource-intensive modes. Our current transport system fails to do this, which increases costs to users and communities.
- Twice as many suburban motorists drive to Victoria as Victorians drive to suburban communities, so Victoria residents subsidize non-residents' road and parking costs.
- Some selfish motorists might prefer that roadway planning continue to favor automobile traffic, but people who bicycle, or want better riding conditions to allow themselves, family members or friends to bicycle more, or who want Victoria to become more affordable, healthy, equitable, livable, and environmentally responsible have good reasons to support Victoria's bikeway plan.

## Introduction

Should transportation planning give more priority to active modes (walking, bicycling and variants such as wheelchairs, scooters and e-bikes)? That’s an important and timely question. For the last century, our streets have been designed primarily to accommodate automobile travel.

Complete streets planning can help achieve new planning goals.<sup>1</sup> Many urban residents want less vehicle traffic and more active travel in in their neighborhoods to improve affordability, provide more independent mobility for non-drivers, improve public health and safety, increase livability and reduce pollution emissions (Table 1). Investing in active travel ensures that everybody, including non-drivers, receives their fair share of public investments. Many jurisdictions have ambitious targets to increase active travel, as summarized below.

**Table 1 Comparing Planning Goals**

Old Goals	New Goals
<ul style="list-style-type: none"> <li>• Maximize traffic speed</li> <li>• Reducing crash rates</li> </ul>	<ul style="list-style-type: none"> <li>• Affordability</li> <li>• Mobility for non-drivers</li> <li>• Public health &amp; safety</li> <li>• Neighborhood livability</li> <li>• Emission reductions</li> </ul>
<p><i>Older transportation planning considered a limited set of goals. Modern planning recognizes additional goals which justify more bikeway investments.</i></p>	

### Box 1 Active Mode Share Targets<sup>2</sup>

- [Victoria](#): Increase active mode shares to 55% and transit mode shares to 25% by 2050.
- [Saanich](#): Increase active mode shares from 11% to 22% by 2036, and 30% by 2050.
- [CRD](#): Increase [walking and bicycling](#) modes share to 30% region-wide and 50% in denser areas by 2038.
- [British Columbia](#): Double active mode shares by 2030. The [CleanBC Roadmap](#) has targets to reduce light duty vehicle travel by 25% and increase the share of trips made by walking, cycling, and transit to 30% by 2030, 40% by 2040 and 50% by 2050.
- [Vancouver](#): Increase active and public transport shares to 66% by 2040, and reduce vehicle travel 20%.
- [California](#): Increase walking, bicycling and transit mode shares, and reduce per capita vehicle travel 15%.
- [Washington State](#): reduce per capita vehicle travel 30% by 2035 and 50% by 2050.
- [Paris](#): Convert half of its on-street parking spaces into walking and bicycling facilities and greenspace.

To help reach these targets Victoria hired Gehl Associates, a world renowned planning firm, to develop a strategic bike network plan.<sup>3</sup> After extensive public engagement the plan was approved. It includes 32 kilometers of *All Ages and Abilities* (AAA) bikeways. There is evidence that Victoria’s bikeways have already increased cycling activity and residents appear to support this plan,<sup>4</sup> but there are vocal critics who complain that bikeways are wasteful and unfair.<sup>5</sup> This report examines these criticisms. It should be of interest to anybody who wants to better understand bikeway benefits, costs and equity impacts.

## Principles for Efficient and Equitable Transportation Planning

Critics claim that bikeway investments are wasteful and unfair, but seldom explain exactly why. Let's consider some basic principles for evaluating transportation planning efficiency and equity.

- **Consumer sovereignty** means that planning responds to user demands, including *latent* bicycle trips that people would only make if riding conditions improved. If demand for bicycling is growing, responsive planning invests more in bike facilities.
- **Horizontal equity** means that similar people are treated similarly, so planning should ensure that each person receives a similar share of resources. For example, if 7% of trips are by bicycle, equitable planning should invest about 7% of money and road space in bicycle facilities.
- **Vertical equity** means that resources are allocated to favor disadvantaged groups, particularly if this helps correct past inequities or to improve long-term opportunities. For example, if people with disabilities or low income rely more than average on bicycling, if previous planning underinvested in bicycling, or if bicycling improvements raise disadvantaged groups' long-term economic prospects by increasing access to education and jobs, it deserves additional support for vertical equity sake.
- **Economic efficiency** means that higher value trips are prioritized over lower value trips, and resource-efficient modes are prioritized over resource-intensive trips. For example, where road space is limited, priority should be given to freight and service vehicles, because of their high value loads, and to buses, rideshare vehicles, bicycles and pedestrians, because of their space efficiency.
- **Cost efficiency** means that resource investments provide the maximum benefits per dollar spent. This means that if bicycle facilities cost less per kilometer of travel planning should prioritize bicycle facilities over automobile facilities.
- **Strategic consistency** requires that individual planning decisions support long-term community goals. For example, if Victoria has goals to increase affordability, reduce congestion, increase mobility options for non-drivers, improve public health and safety, improve community livability, or reduce noise and air pollution, planning decisions should reflect those goals.

Victoria's bikeway investments reflect many of these principles; they can help increase efficiency and achieve social equity goals. Critics sometimes claim that bicycling is less important than automobile travel with statements such as, "bike lanes are an obstacle to commuters," and by suggesting that most bicyclists are affluent recreational riders ("middle-age men in lycra") but such statements only make sense if all commuters drive and never bicycle, and if bikeways prevented all motor vehicle travel. They don't. Bikeways may slow some car trips but improve active travel, so their overall impacts depend on these trade-offs.

Selfish motorists might prefer that roadway planning continue to favor automobile travel, but people who want to bicycle themselves, want better conditions for family members and friends who bicycle, or who want Victoria to become more affordable, healthy, equitable, livable and environmentally responsible have good reasons to support more bikeway investments.

## Why Build Bikeways?

There are many good reasons to improve and encourage bicycling. Bicycling is the most affordable and efficient travel option for many trips. It is three times faster than walking, giving bicyclists convenient access to most local destinations. It is very affordable; bicycling has about 1/20<sup>th</sup> the users costs, 1/10<sup>th</sup> the road and parking facility costs, imposes far less congestion and pollution than automobile travel. It is also healthy and enjoyable.<sup>6</sup> The table below summarizes these benefits.

**Table 2** Bicycling Benefits<sup>7</sup>

Improved Bicycling Conditions	More Bicycle Travel	Reduced Automobile Travel	More Compact Communities
<ul style="list-style-type: none"> <li>Improved user convenience, comfort and safety</li> <li>More independent mobility for non-drivers</li> <li>Option value</li> <li>Higher property values</li> <li>Improved public realm (more attractive streets)</li> </ul>	<ul style="list-style-type: none"> <li>User enjoyment</li> <li>Improved public fitness and health</li> <li>More local economic activity</li> <li>Increased community cohesion (positive interactions among neighbors)</li> <li>Reduced local crime</li> </ul>	<ul style="list-style-type: none"> <li>Reduced traffic congestion</li> <li>Road and parking facility cost savings</li> <li>Consumer savings</li> <li>Reduced chauffeuring burdens</li> <li>Increased traffic safety</li> <li>Energy conservation and emission reductions</li> </ul>	<ul style="list-style-type: none"> <li>Improved accessibility, particularly for non-drivers</li> <li>Reduced sprawl costs</li> <li>Infrastructure savings</li> <li>Openspace preservation</li> <li>More livable communities</li> <li>Higher property values</li> </ul>

*Bicycling can provide many benefits, particularly if it reduces auto travel and creates compact communities.*

Of course, active modes are unsuitable for some trips, but given support it can replace many that are currently made by automobile.<sup>8</sup> About a quarter of personal trips are less than one mile and more than half are less than five miles in length, making them suitable for active modes.<sup>9</sup> One major study, *A Global High Shift Cycling Scenario*, estimated that improving urban bicycling conditions could increase bike and e-bike mode shares up to 17% in 2030 and 22% in 2050.<sup>10</sup> This will require bikeways that serve all types of bicyclists, as illustrated below. These facilities tend to significantly increase active travel.<sup>11</sup>

**Figure 1** Bicyclist User Profiles<sup>12</sup>

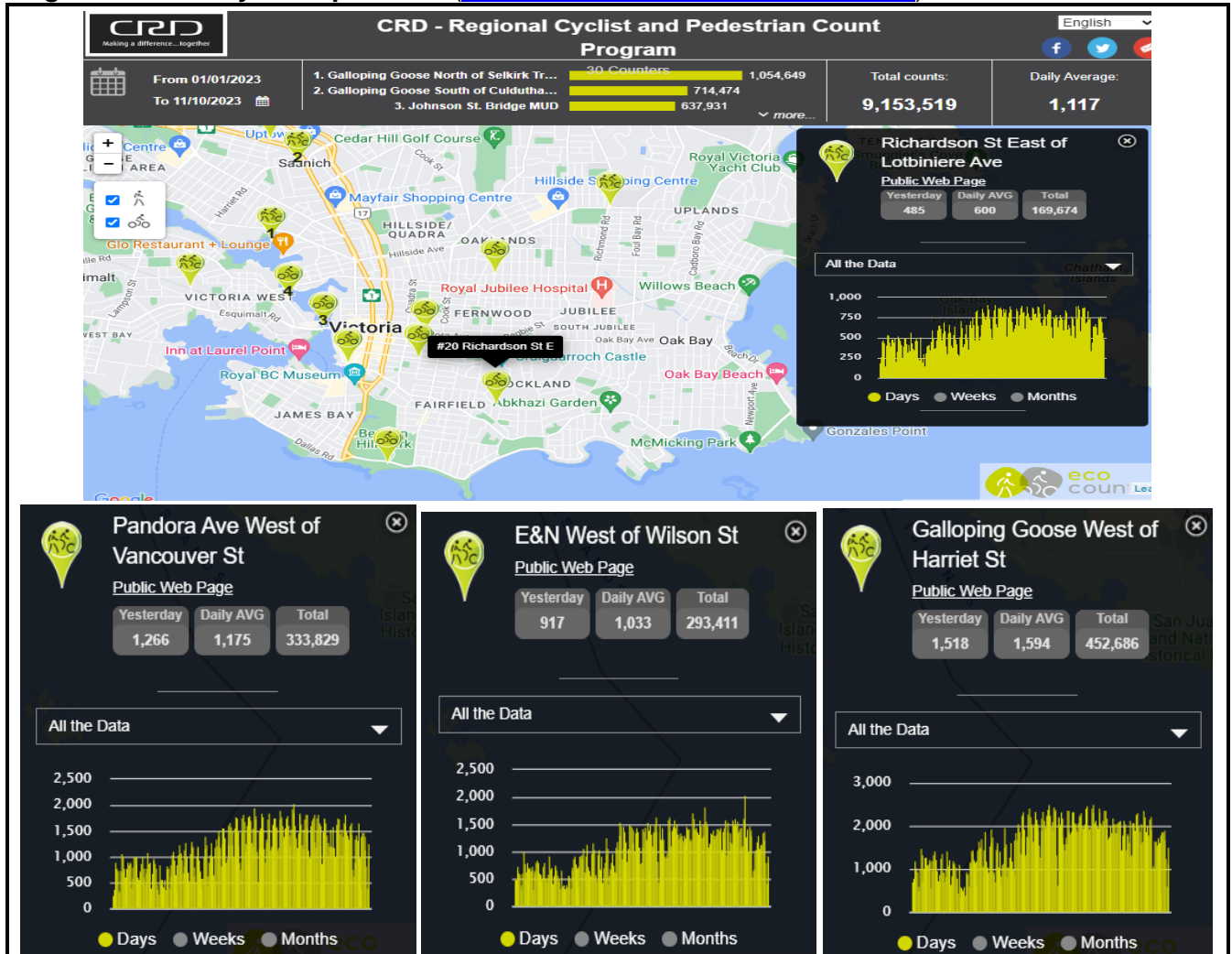


## Evidence from Bike Counters

The CRD maintains pedestrian and bicycle counters along several bikeways and trails. The results are available on their [website](#). The figure below illustrates some results.

These graphs show that bicycle trips on that corridor typically double or triple after bikeways are completed, and are likely to continue growing as the network is completed, allowing more travellers to use bicycles and e-bikes when travelling around the region.

**Figure 2** Bicycle Trip Trends ([www.crd.bc.ca/about/data/bike-counts](http://www.crd.bc.ca/about/data/bike-counts))



*These graphs from the CRD's Bike Count website show that after protected bikeways are completed, bicycle trips on that corridor typically double or triple, and are likely to continue to grow as the network is completed, allowing more travellers to bicycle and reduce driving.*

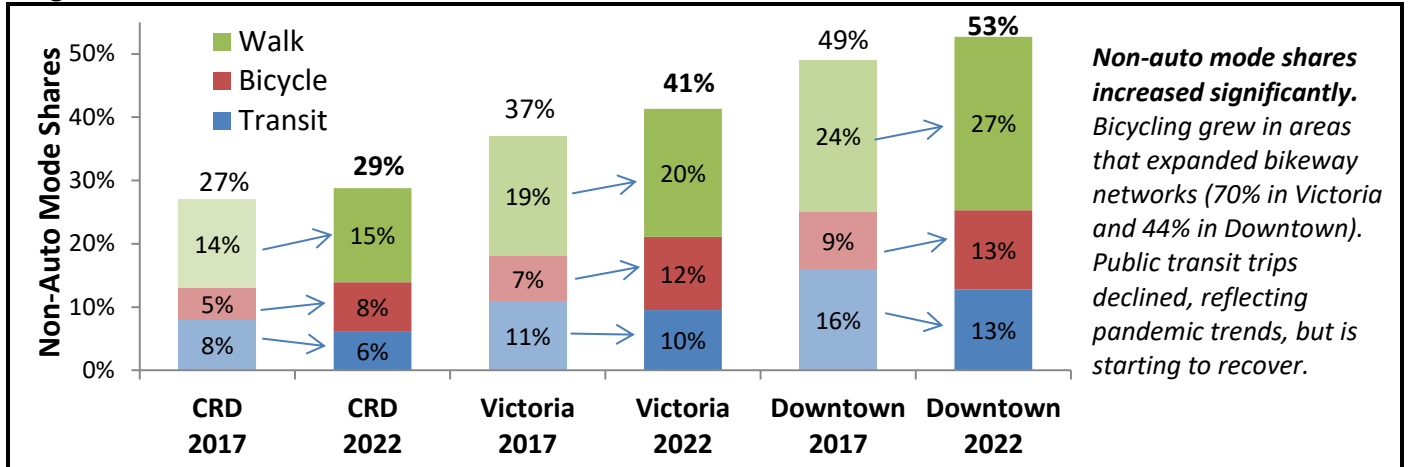
## Evaluating Criticisms

This section evaluates specific bikeway program criticisms.

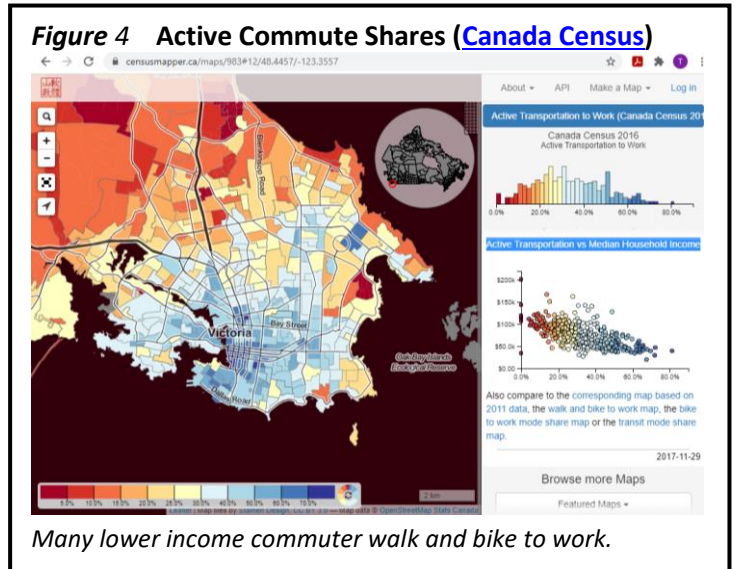
### “Bicycling is Unimportant”

Critics assume that bicycling is unimportant. For example, a newspaper letter, “Richardson Bike Lane an Obstacle for Commuters,”<sup>13</sup> implied that motorists are commuters, and therefore important, while bicyclists are not. Bicyclists are described as a “special interest group” while motorists are described as “regular people.” In fact, a significant and growing portion of Victoria’s population bicycle, often for commuting and other utilitarian trips. In 2022, 12% of Victoria trips, 13% of downtown trips, and 17% of peak-period trips were by bicycle as illustrated below. Bicycle trips have increased throughout the region, with particularly large increases in Victoria, in response to its bikeway improvements.

**Figure 3 Non-Auto Travel Trends, 2017 to 2022<sup>14</sup>**



Of course, most people use multiple modes. 90% of Victoria residents use active modes and there are more adult bicycles than cars in our city, most households have members who rely on non-auto modes,<sup>15</sup> and surveys indicate that many motorists want to drive less and use active modes more, provided that they are safe and convenient to use.<sup>16</sup> This suggests that at least a quarter of Victoria residents bicycle now and more will do so once the network is complete. As a result, most Victoria households benefit directly from bikeways, and all households benefit indirectly from the traffic reductions they provide. Many lower-income travellers rely on active modes, as shown in the figure to the right, indicating that bikeways help increase affordability and economic opportunity.<sup>17</sup>





### *“Bikeways are a Solution Looking for a Problem”*

Critics argue that our streets already accommodate bicycles. Bicyclists are allowed to ride on most streets, drivers usually observe traffic rules, and Victoria has normal traffic crash rates. Why do more to accommodate bicycling?

But current street designs *do* create significant risks and obstacles to bicycling. Between 2015 and 2019, 10% of Victoria traffic casualties were bicyclists, which is about three times their portion of kilometers travelled.<sup>18</sup> The default urban speed limit is 50 kilometers per hour (kph), even on residential streets,<sup>19</sup> and motorists often exceed these limits. This is far faster than is safe and comfortable for most bicyclists. According to the provincial *Road Safety Toolkit*, traffic speeds over 30 kph significantly increase crash frequency and severity, particularly for young children.<sup>20</sup> One major British study found that, after 20 mph (32 kph) speed limits were introduced in urban neighborhoods, total collisions and casualties declined 42%, with larger reductions (about 50%) in children under 15 years.<sup>21</sup>

These risks and discomfort discourage many people from walking and bicycling as much as they want, called the *barrier effect*.<sup>22</sup> In the past, these problems were ignored. Transportation engineers designed roads to maximize traffic speeds, even if that reduced active travel and increased automobile travel.<sup>23</sup> However, communities increasingly recognize the problems caused by excessive vehicle traffic and the benefits of walking and bicycling. Although some bicyclists are rightfully proud of their ability to ride in busy traffic, they are a minority; other people require bikeways.

Critics are in denial when they claim that there is no problem; many potential bicycle trips are foregone because of inadequate facilities. Victoria’s bikeway network will allow a much larger portion of travellers to bicycle, estimated at about half our population.

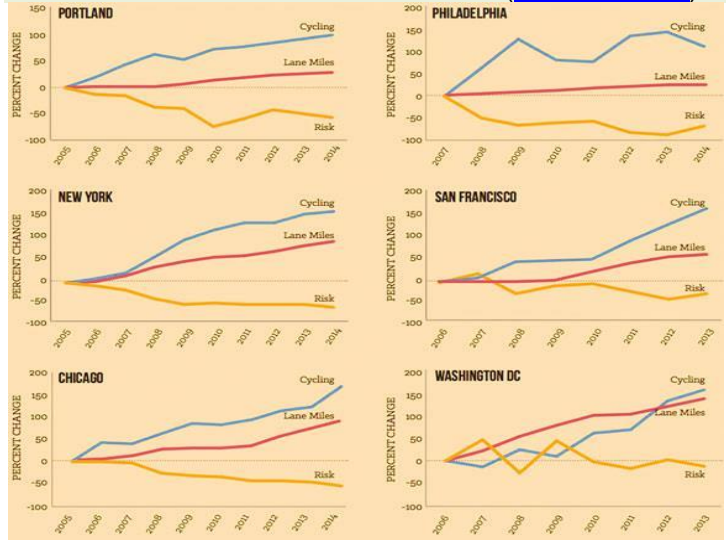
### *“Bikeways are Ineffective and Wasteful”*

Critics claim that bikeways provide few benefits. However, experience here and elsewhere show that bikeways increase bicyclist safety and comfort,<sup>24</sup> increase bicycle travel,<sup>25</sup> reduce car travel and reduce total crash rates, an effect called “safety in numbers.”<sup>26</sup> All road users become safer if their neighbors drive less and rely more on active modes, which reduces their chance of being injured by another driver’s errors.<sup>27</sup> Many traffic safety strategies, such as graduated licenses and anti-impaired driving campaigns, attempt to reduce higher-risk driving; improving active travel helps make that possible, for example, by allowing youths (a high risk category) to bicycle rather than drive, making everybody safer.

There are many bikeway success stories.<sup>28</sup> In our region, bike traffic increases after protected bike lanes are completed.<sup>29</sup> The FHWA’s *Nonmotorized Transportation Pilot Program*, which invested about \$100 per capita on pedestrian and cycling improvements in four typical U.S. communities (Columbia, Missouri; Marin County, Calif.; Minneapolis area, Minnesota; and Sheboygan County, Wisconsin), increased walking trips 23% and bicycling trips 48%, reduced driving about 3%, while reducing pedestrian and bicycle crash rates.

Bikeways generally repay their costs through user savings, roadway cost savings, plus safety, health and environmental benefits. A typical motorist spends \$5,000 annually per vehicle, and businesses spend about \$2,000 annually for a downtown parking space, so Victoria’s bikeways repay their costs if they allow households to shed about 1% of vehicles or reduce 10% of downtown car trips,<sup>30</sup> or if they attract more customers, visitors and residents to our city, which increases business activity and tax revenue. If Victoria achieves its target to double bicycle mode shares and reduce automobile trips by the same amount, Victoria will have 40,000 to 50,000 fewer daily car trips, providing travellers, businesses and governments with many millions of dollars in annual savings and benefits.<sup>31</sup>

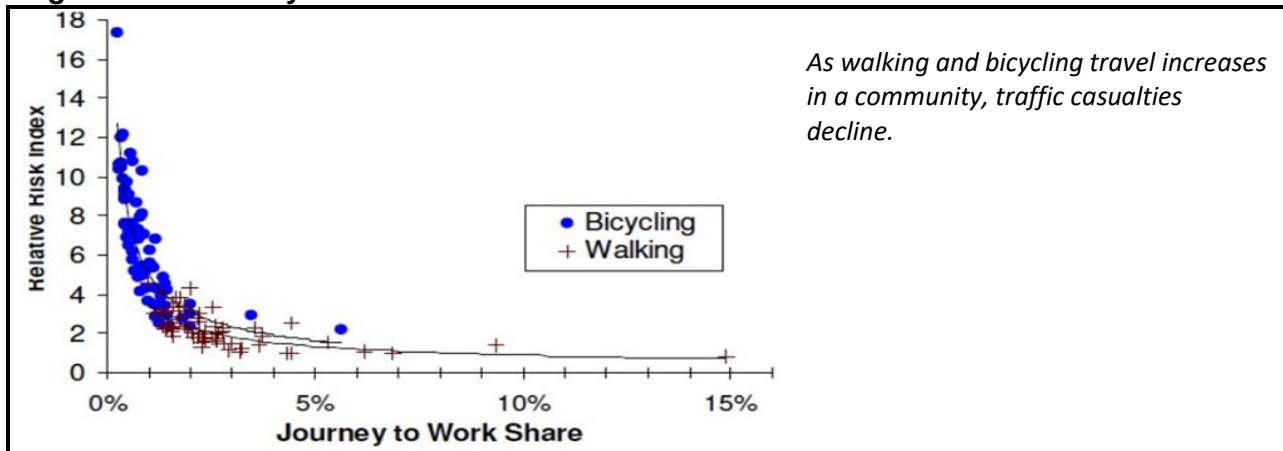
**Figure 5 As Cities Add Bike Lanes, Cycling Increases and Crash Rates Decline (NACTO 2016)**



*Cities that build more bike lane experience more bicycling and lower crash rates, an effect called “safety in numbers.”*

Total (pedestrians, bicyclists and motorists) crash rates tend to decline in a community as active mode shares increases, an effect called “safety in numbers,” as illustrated below. This occurs because many roadway design features that encourage bicycling, including bikeways and lower traffic speeds, increase safety for all road users, and because walking and bicycling impose minimal risk on other road users.<sup>32</sup> As a result, motorists benefit if their neighbors drive less and rely more on active travel.

**Figure 6 Safety in Numbers Effect<sup>33</sup>**



The World Health Organization’s *Health Economic Assessment Tool for Cycling and Walking* calculates the value of active travel.<sup>34</sup> Applying this model to Victoria indicates that our bikeway network can prevent 19 premature deaths and reduce 142 thousand tonnes of carbon emissions, providing \$117 million worth of benefits, which significantly exceed the program’s costs.<sup>35</sup>

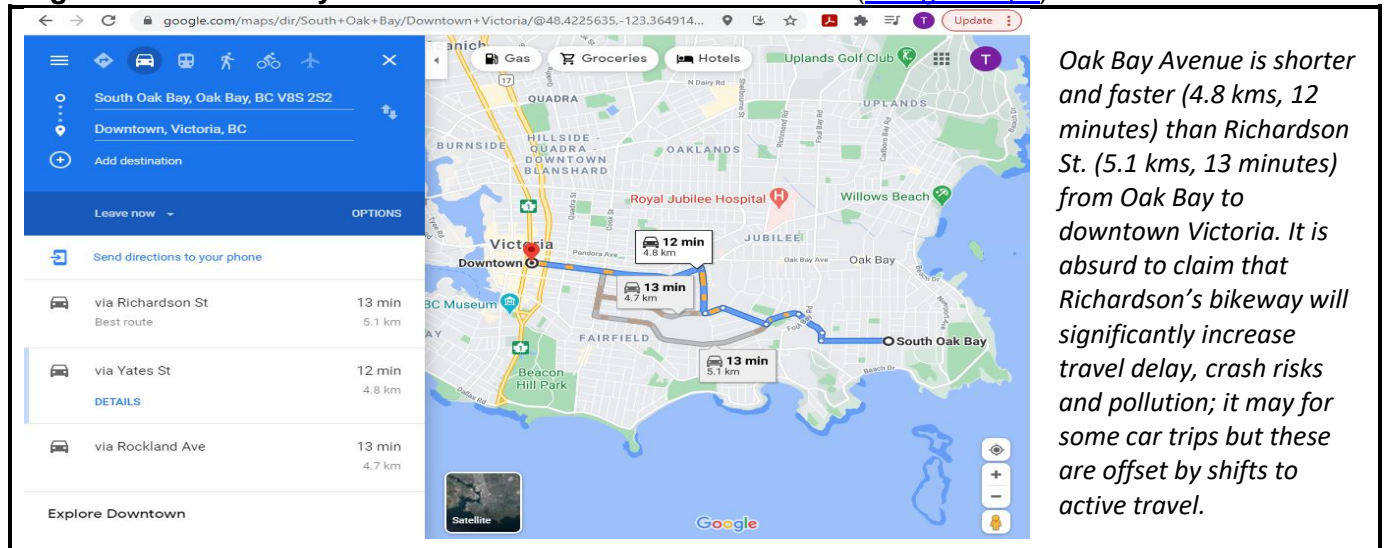
### “Bicycle Facilities Impede Motorists and Cause Traffic Problems”

Critics claim that bikeways detour and delay motorists, wasting time and money, and increasing risks and pollution. For example, a group called *Rethink Richardson* threatens that the Richardson bikeway will increase delivery prices, delay emergency services and redirect 3,000 cars per day onto side streets.<sup>36</sup> They call shared roadways “suicide lanes.” This is fearmongering.

Critics assume that the number of vehicle trips that occur is unchangeable, so all car trips reduced on bikeways shift to other streets. In reality, many trips are likely to shift to active modes, to another arterial, or destinations.<sup>37</sup> Bikeways allow residents to walk, scoot and bicycle rather than drive for commutes and local errands. They may sometimes delay and detour car trips, but these impacts are small overall and offset by the savings and benefits provided by shifts from driving to active modes. For example, a bikeway might add a minute to two to car pizza deliveries and emergency response times,<sup>38</sup> but improves bike deliveries which saves money overall, reduces crash risks and the need for emergency response, and still provides much faster deliveries and emergency response than in most suburban and rural areas. Bikeways help reduce chauffeuring trips, such as parents driving adolescents to and from local destinations, saving drivers’ time, vehicle expenses and traffic impacts. The potential savings are large: chauffeuring represents about 15% of local peak-period vehicle trips.<sup>39</sup> By reducing congestion and chauffeuring burdens, bikeways benefit motorists as well as walkers and bicyclists.<sup>40</sup> Residents of walkable and bikeable communities have much lower crash rates, are healthier and live longer.<sup>41</sup>

For example, a letter to the *Victoria News* claimed that Richardson’s bikeway will add up to seven minutes to an Oak Bay to downtown Victoria car trip,<sup>42</sup> but that is the maximum possible delay for driving the full length of that road, rather than a faster alternative route. According to Google Maps, Oak Bay Avenue is shorter and faster (4.8 kms, 12 minutes) than Richardson Street (5.1 kms, 13 minutes). It is absurd to claim that Richardson bike lanes will delay motorists because it is already the slower route. As a result, actual delays will be much smaller than critics claim.

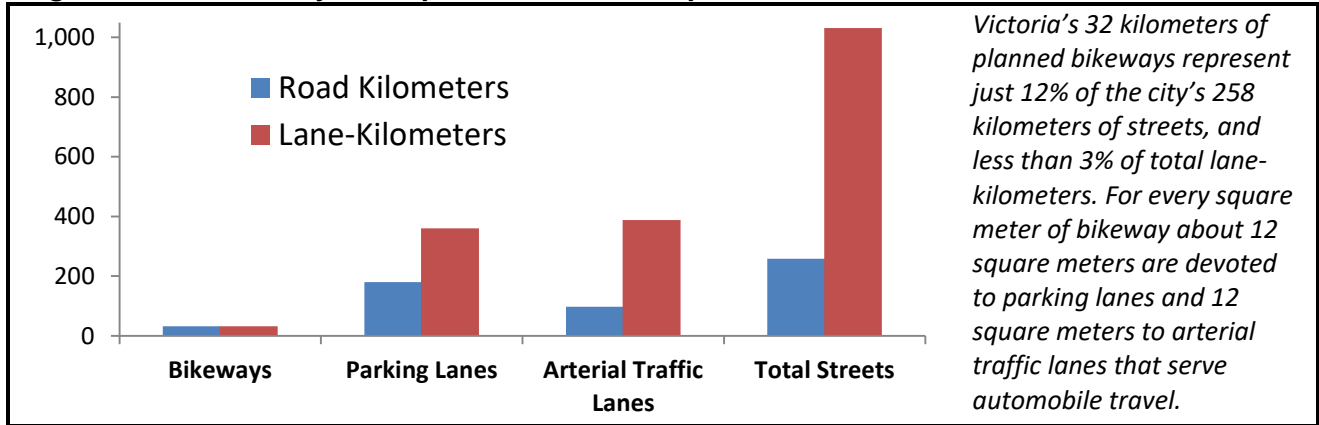
**Figure 7** Oak Bay to Downtown Victoria Vehicle Travel (Google Maps)



**“Bikeways Use an Excessive Portion of Road Space”**

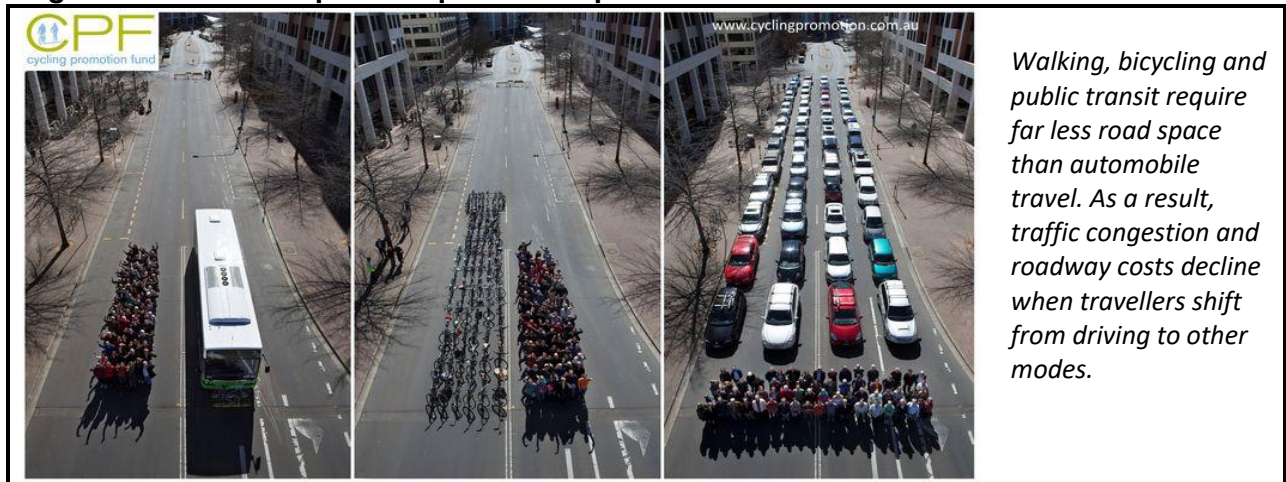
Critics complain that bikeways use an excessive portion of road space. They are wrong. Only about 12% of Victoria streets have bikeways and they are narrow. Bikeways use about 3% of road space, compared with about 35% devoted to vehicle parking and 38% devoted to arterial traffic lanes that serve higher-speed vehicle traffic and are unsuitable for most bicycling. For every square meter of street devoted to bikeways there are about 12 square meters of street devoted to car parking and another 12 square meters devoted to arterial traffic lanes. The share of road space devoted to bikeway is less than half of bicyclists’ current share of trips and less than a quarter of bicycling mode share targets.

**Figure 8 Bikeways Compared with Street Space<sup>43</sup>**



Because of their greater size, speed and risk, automobiles require far more space for roads and parking than other modes, as illustrated below. Including shy distance (extra space required when passing other objects) a typical pedestrian needs about 2 square meters, a bicyclist about 10 square meters, and a car 100 to 300 square meters. 10-30 bikes can park in the space required for one off-street parking space. As a result, shifts from driving to bicycling reduce traffic congestion and parking problems.

**Figure 9 Road Space Requirements per Traveller**

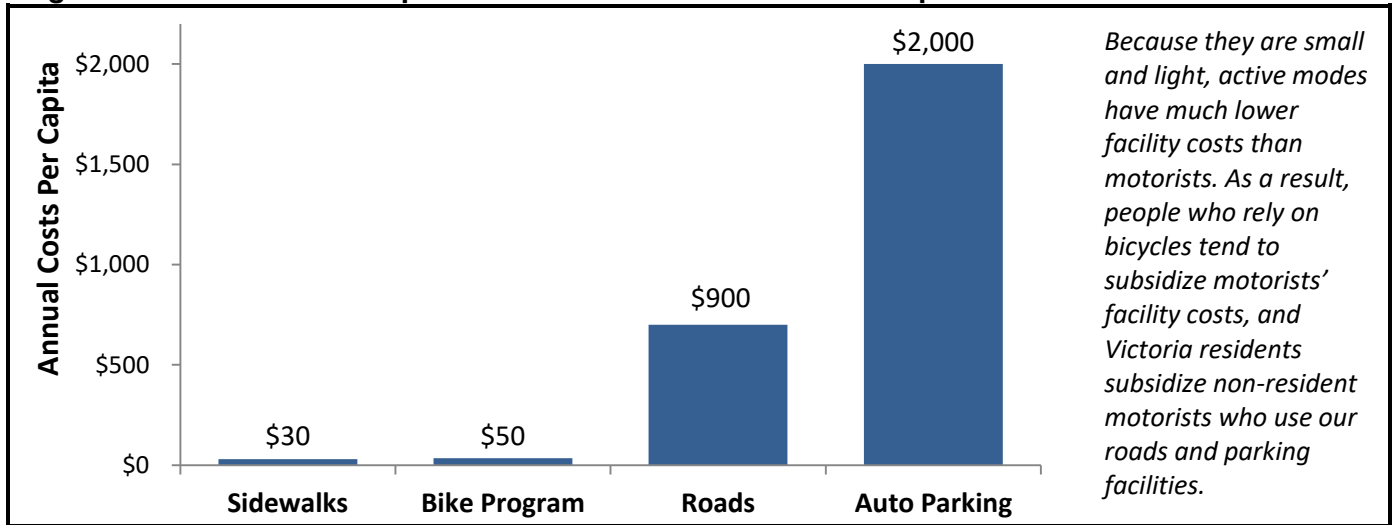


**“Bike Programs Receive an Excessive Portion of Transportation Funds”**

Most communities spend about \$30 annually per capita on sidewalks.<sup>44</sup> Victoria’s bike network costs about \$35 million over ten years, which averages about \$40 annually per capita.<sup>45</sup> In addition, Victoria spends \$288,000 annually for bike parking, which averages about \$3 annual per capita, and CRD parks spends about \$17 million annually, of which perhaps 10% is devoted to building and operating trails that are partly used for bicycling, which averages about \$4 annually per CRD residents.<sup>46</sup> These bicycle infrastructure expenditures total about \$50 annually per capita, which are small compared with automobile infrastructure spending. Victoria spends about \$300 annually per capita on roads and traffic services<sup>47</sup> and the province spends about \$500 annually per capita on roadways.<sup>48</sup> Local governments require businesses to spend more than \$2,000 annually per capita on off-street parking facilities.<sup>49</sup> This indicates that bikeway expenditures represent less than 5% of roadway spending and less than 2% of roads and parking facility expenditures. Although motorists pay a portion of these costs through fuel taxes, road tolls and parking fees,<sup>50</sup> local roads are mostly funded by general taxes, and most parking is subsidized. A typical household pays hundreds of dollars in local taxes to finance roads and traffic services, “free” parking increases housing costs by \$200 per month,<sup>51</sup> and parking subsidies add a few dollars to a household’s weekly grocery bill.<sup>52</sup>

Of course, pedestrians and bicyclists also use public roads and traffic services, but their costs tend to be small due to their smaller size, light weight and lower annual kilometers. As a result, people who rely on active modes tend to subsidize motorists’ facility costs, and Victoria residents subsidize non-resident motorists who use our roads and parking facilities. The table below compares these costs.

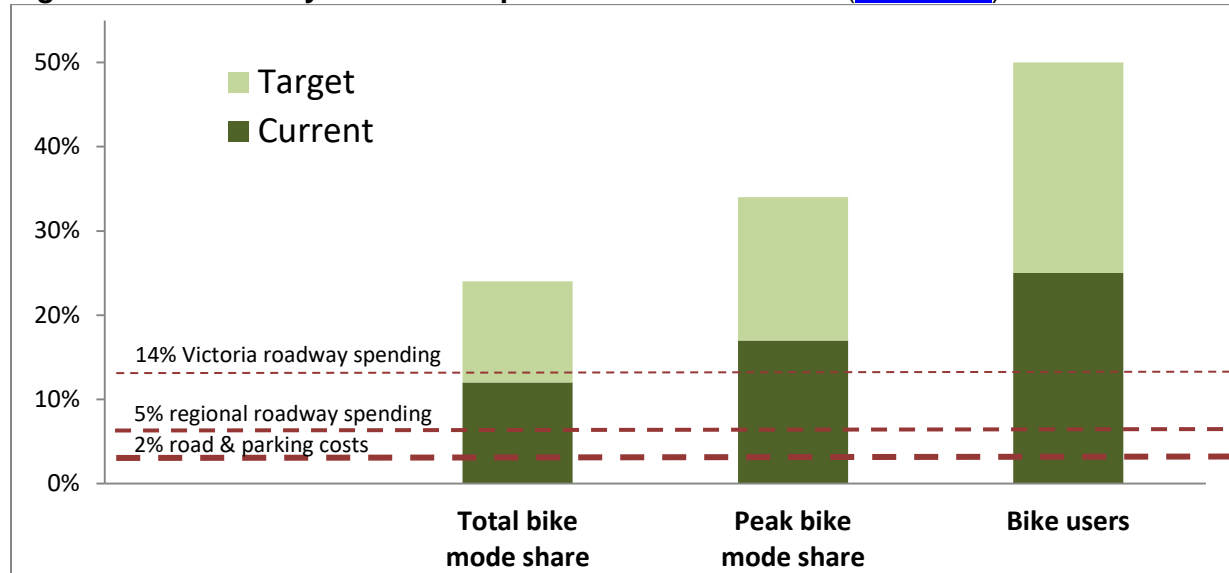
**Figure 10 Annual Transportation Infrastructure Costs Per Capita<sup>53</sup>**



What is a fair portion of transportation funding for bikeways? In 2022 in Victoria, 12% of total trips and 17% of peak period trips were made by bicycle, and an estimated 25% of residents bicycle at least occasionally. The city has targets to double these shares in the future.<sup>54</sup> Figure 9 compares bikeway spending with these indicators of bike use. Bikeway spending represents less than 2% of total road and

government-mandated parking costs, 5% of total local and provincial roadway spending per capita, and 14% of Victoria’s roadway spending, which is less than the portion of residents who at least occasionally bicycle, and far lower than bike share targets. In contrast, more than 90% of roadway spending is devoted to automobiles although they have just 63% mode share and our goal is to reduce this by about half. A typical bicyclist pays about \$300 annually in local taxes that finance roads but imposes less than \$100 in roadway costs, and so overpays about \$200 annually, while a non-resident who frequently drives through Victoria underpays their roadway costs by about \$300.

**Figure 11 Bikeways Costs Compared with Mode Shares (2017 CRD)**



*Victoria’s bikeways represent less than 2% of total road and parking facility spending, 5% of regional roadway spending, and 12% of Victoria’s roadway spending. These are smaller than current or target bike mode shares, and the portion of residents who ride bikes. More than 90% of roads and parking facility costs are to accommodate automobile travel, although autos have just 63% current mode share.*

Out of town motorists might assume that these subsidies are reciprocated – that for every dollar Victoria residents spend subsidizing out-of-town motorists, Victoria motorists impose a dollar of costs on other communities – but that is untrue. Far more suburban motorists drive to Victoria than the other direction. For example, during a typical workday morning, 21,680 motorists drive into Victoria, almost twice the 11,340 Victoria motorists that drive to other destinations, including 4,240 Langford residents who travel to Victoria compared with just 390 Victorian who travel to Langford, and 3,890 Oak Bay residents who travel to Victoria compared with 2,050 Victoria residents travelling to Oak Bay.<sup>55</sup> Since Victoria is a dense city with high land values, vehicle trips impose much higher infrastructure, congestion, crash risk and pollution costs in Victoria than suburban communities.

This indicates that overall bicyclists receive less than their fair share of road space and funding, bicyclists subsidize motorists, and Victoria residents subsidize out-of-town drivers. Motorists have good reasons to support bikeway investments that reduce their traffic problems and chauffeuring burdens.

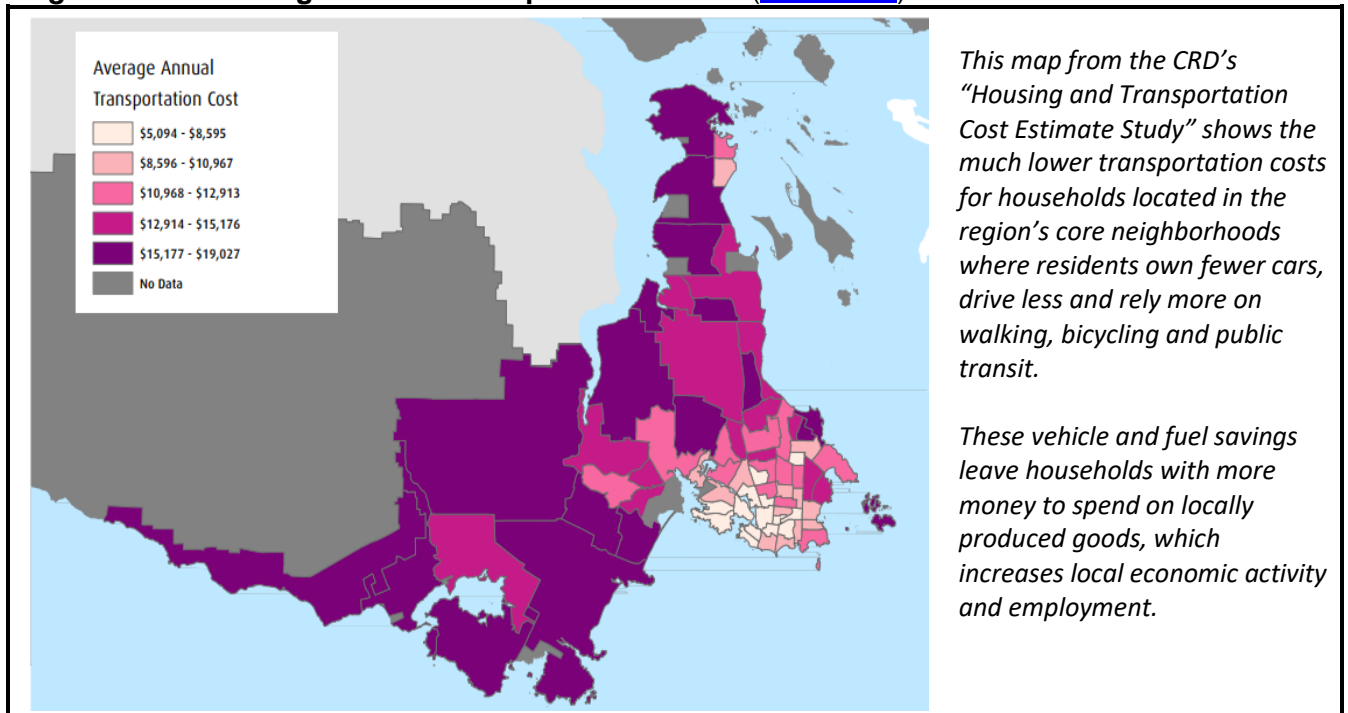
*“Bikeways Harm our Local Economy”*

Critics sometimes argue that bikeways threaten local businesses, describing examples of them discouraging visits by suburban shoppers, but these are offset by their much larger economic benefits. Bikeways that increase bicycling and reduce car traffic support our local economy by reducing traffic and parking problems, making our city more attractive and livable, and reducing vehicle expenses which leaves residents with more money to spend on locally-produced goods.

Although bikeways may discourage a few out-of-town shoppers, they tend to attract more customers overall, including people who shop by bike, tourists and additional residents who appreciate low-traffic environments.<sup>56</sup> A typical out-of-town shopper spends \$50-100 per trip, while a typical urban household spends \$25,000-50,000 annually on local goods and services (rent, food, drinks, household goods, etc.). To be economically harmful, a bikeway would have to reduce 500 out-of-town shopping trips for every additional household attracted by the city’s increased livability. According to surveys,<sup>57</sup> a growing portion of households want to live in walkable and bicycle communities, and many downtown customers arrive by bicycle, indicating that bikeways attract far more customers than they deter.<sup>58</sup>

A typical household that lives in a walkable, bikeable neighborhood saves thousands of dollars in annual vehicle expenses, as illustrated below. Because our region produces no motor vehicles or fuel, our local economy benefits when households spend less on vehicles and more on food, housing, entertainment and other locally produced goods.

**Figure 12** Average Annual Transportation Costs ([2020 CRD](#))



### **Example: Bikeways versus Highway Investments**

Current transportation planning practices favor automobiles over active travel improvements. For example, compare Victoria's \$35 million bikeway network with the \$120 million being spent to expand Highway 14 between Victoria and Sooke.<sup>59</sup> During a typical AM peak there are 9,570 Victoria bicycle trips but only 5,020 Sooke district auto trips. Our bikeways cost \$3,344 per bicycle trip, about one-seventh the \$23,900 expenditure per Highway 14 auto trip. Bikeways also help achieve strategic planning goals such as affordability, social equity, health, parking cost savings and environmental protection, while Highway 14 expansion contradicts those goals by increasing automobile traffic and sprawl. The bikeway program had significant public consultation and was widely criticized, while the Highway 14 project received little public review or debate.

Similarly, Victoria mandates that businesses provide off-street parking. Considering land, construction and operating costs, typical urban parking spaces have \$500 to \$1,500 annual costs, and more for structured or underground parking. Although 20% of Victoria households are car-free, and the City has goals to reduce automobile traffic, in most areas the city requires 1.0 to 1.55 parking spaces per dwelling unit (including secondary suites), and one space per 20 to 37.5 square meters of store space, and despite efforts to discourage impaired driving, restaurants and drinking establishments must provide abundant car parking.<sup>60</sup> The City also mandates bicycle parking, but these are much less expensive than automobile parking (10-30 bikes can park in the space required for one car), so non-drivers subsidize motorists' parking costs. Yet, these costs are never reported and seldom considered in policy discussions: they are a huge but hidden and unfair subsidy to automobiles.

These are just two of many examples of how current planning practices favor motor vehicle travel to the detriment of non-motorized modes.<sup>61</sup> This is inefficient and unfair. It reduces affordable, resource-efficient travel, increases traffic problems, and harms people who cannot or prefer not to drive everywhere. These policies are particularly inappropriate in city neighborhoods where walking and bicycling are efficient alternatives to driving for many trips, and vehicle traffic imposes significant harm.

### **Conclusions**

Victoria is building an All Ages and Abilities bike network to help achieve ambitious targets and goals. Although most residents seem to support this plan there are vocal critics, including out-of-town motorists who complain that bikeways impede their ability to drive through our city. Critics argue that bikeways are unnecessary, wasteful, and unfair. These claims are inaccurate or greatly exaggerated.

A significant and growing portion of Victoria residents bicycle. In 2022, 12% of total trips were by bike, with higher rates during peak periods. Victoria has more adult bicycles than cars, more than a quarter of residents bicycle at least occasionally, and more would do so if riding conditions improved. Experience in Victoria and elsewhere demonstrates that bikeways significantly increase bicycle travel, and their costs are usually repaid many times over through vehicle and infrastructure cost savings, health and equity gains, improved environmental quality, and economic benefits.



Most bikeway criticisms reflect a windshield world view that only considers effects on motorists. Critics ignore the high costs that vehicle traffic imposes on urban neighborhoods and the large benefits provided by shifts to active modes. Motorists say things like, “I just want to drive through Victoria like I used to,” “I drive a low-polluting vehicle,” or “I’m a better than average driver,”<sup>62</sup> implying that their impacts are modest and reasonable, but even a perfect driver operating an electric car imposes significant costs and risks on other people. Because of their large size, speed and risk, cars impose more than ten times the infrastructure, crash and environmental costs as bicyclists travelling to the same destinations. These impacts are particularly large in compact cities like Victoria.

Critics are fearmongering: they greatly exaggerate bikeway costs and ignore many benefits. Bikeways may slow some car trips, although far less than critics claim, but by improving active travel conditions they increase walking and bicycling trips, and reduce traffic problems, which benefits everybody, including motorists. For example, vehicle travel reductions reduce traffic and parking congestion, and bikeways reduce the need to chauffeur non-drivers, saving motorists’ time and money. Extensive research indicates that residents in walkable and bikeable neighborhoods are safer, healthier and happier, and spend less on transportation. An honest appraisal considers all of these impacts, particularly benefits to vulnerable groups who gain a lot from active travel improvements.

Critics are wrong to claim that Victoria’s bikeway investments are excessive and unfair. Bikeways use about 3% of road space, compared with 35% devoted to vehicle parking and 38% devoted to arterial traffic lanes that serve higher-speed vehicle traffic and are unsuitable for most bicycling. Less than 5% of Victoria’s current roadway spending and less than 2% of total road and parking facility spending is devoted to bicycle facilities. This is far less than the portion of residents who currently bicycle or our mode share targets. In contrast, more than 90% of Victoria’s road space and transportation spending is devoted to automobile-oriented facilities although they have only 63% mode share. Overall, bicyclists subsidize motorists and Victoria residents subsidize out-of-town car trips. *That* is unfair.

It is particularly rude for motorists living in low-traffic suburban areas to complain when Victoria tames traffic on our neighborhood streets in order to improve our livability. We welcome visitors, but please come by bicycle or public transit whenever possible, and if you must drive, respect our traffic rules, and be willing to pay your share of parking costs.

To be efficient and equitable, transportation planning should favor affordable, healthy and resource-efficient modes, such as active and public transport, over expensive, dangerous and resource-intensive modes such as private automobile travel. Our current transport system fails to do this, which increases costs to users and communities. We can do better.

Let me offer critics sympathy and advice. Yes, change is difficult. Motorists are understandably frustrated by new street designs that favor slower modes; it may feel as if the rules of a race have changed to favor slower competitors. But bikeways benefit most people overall, including motorists who gain from less congestion and reduced chauffeuring burdens. My advice: give bikeways a chance.

## For More Information

AARP (2016), *10 Ways Bicycle-Friendly Streets Are Good for People Who Don't Ride Bikes*, American Association of Retired Persons ([www.aarp.org](http://www.aarp.org)); at <https://bit.ly/3b26mKK>.

Torsha Bhattacharya, Kevin Mills, and Tiffany Mulally (2019), *Active Transportation Transforms America: The Case for Increased Public Investment in Walking and Biking Connectivity*, Rails-to-Trails Conservancy ([www.railstotrails.org](http://www.railstotrails.org)); at <https://bit.ly/3xLnFcl>.

Peter L. Jacobsen, F. Racioppi and H. Rutter (2009), "Who Owns the Roads? How Motorised Traffic Discourages Walking and Bicycling," *Injury Prevention*, Vol. 15, Issue 6, pp. 369-373; <http://injuryprevention.bmj.com/content/15/6/369.full.html>.

Todd Litman (2005), *Whose Roads? Evaluating Bicyclists' and Pedestrians' Right to Use Public Roadways*, Victoria Transport Policy Institute ([www.vtpi.org](http://www.vtpi.org)); at [www.vtpi.org/whoserd.pdf](http://www.vtpi.org/whoserd.pdf).

NACTO (2016), *Equitable Bike Share Means Building Better Places for People to Ride*, National Association of City Transportation Officials (<https://nacto.org>); at <https://bit.ly/3efeqK5>.

Nicholas Scott and Tamara Krawchenko (2021), "Can New Investments Put a Dent in Canadians' Car Dependence?" *Policy Options* (<https://policyoptions.irpp.org>); at <https://bit.ly/3xKkDft>.

Victoria Interact Study (<https://teaminteract.ca/victoria>).

## Endnotes

---

<sup>1</sup> Complete Streets Canada ([www.completestreetsforcanada.ca](http://www.completestreetsforcanada.ca))

<sup>2</sup> ACEEE (2019), *Sustainable Transportation Planning*, American Council for an Energy Efficient Economy ([www.aceee.org](http://www.aceee.org)); at <https://bit.ly/3a1E82c>.

<sup>3</sup> City of Victoria (2021), *Victoria's AAA Cycling Network*, ([www.victoria.ca](http://www.victoria.ca)); at <https://bit.ly/3tsgbbW>.

<sup>4</sup> *Victoria Interact Study* (<https://teaminteract.ca/victoria>).

<sup>5</sup> See for example, *Times Colonist* letters, 23 March 2021: <https://bit.ly/3aeXVem>.

<sup>6</sup> Kirsty Wild and Alistair Woodward (2019), "Why are Cyclists the Happiest Commuters? Health, Pleasure and the E-bike," *Journal of Transport & Health* (DOI: 10.1016/j.jth.2019.05.008).

<sup>7</sup> Todd Litman (2021), *Evaluating Active Transportation Benefits and Costs*, Victoria Transport Policy Institute ([www.vtpi.org](http://www.vtpi.org)); at [www.vtpi.org/nmt-tdm.pdf](http://www.vtpi.org/nmt-tdm.pdf).

<sup>8</sup> BC (2019), *Active Transportation Strategy General Population Survey*, Clean BC (<https://cleanbc.gov.bc.ca/active>).

Caislin L. Firth, et al. (2021), "Who Bikes? An Assessment of Leisure and Commuting Bicycling from the Canadian Community Health Survey," *Findings* (<https://doi.org/10.32866/001c.22163>).

<sup>9</sup> Torsha Bhattacharya, Kevin Mills, and Tiffany Mulally (2019), *Active Transportation Transforms America*, Rails-to-Trails Conservancy ([www.railstotrails.org](http://www.railstotrails.org)); at <https://bit.ly/3xLnFcl>.

<sup>10</sup> Jacob Mason, Lew Fulton and Zane McDonald (2015), *A Global High Shift Cycling Scenario*, ITDP ([www.itdp.org](http://www.itdp.org)) and the University of California; at <https://bit.ly/3jzbPnS>.

<sup>11</sup> Ralph Buehler (2016), *Moving Toward Active Transportation: How Policies Can Encourage Walking and Bicycling*, Active Living Research (<https://activelivingresearch.org>); at <https://bit.ly/2WpfkKx>.

<sup>12</sup> FHWA (2019), *Bikeway Selection Guide*, Federal Highway Adm. (<https://fhwa.dot.gov>); at <https://bit.ly/3tkVZYx>.

<sup>13</sup> Chris Foord (2021), "Richardson Bike Lane an Obstacle for Oak Bay Commuters," *Victoria News* ([www.vicnews.com](http://www.vicnews.com)) 26 March 2021; at <https://bit.ly/3er1SPY>.

- 
- <sup>14</sup> CRD (2022), *Origin-Destination Survey*, Capital Regional District ([www.crd.bc.ca](http://www.crd.bc.ca)); at <https://bit.ly/3tzGn9G>.
- <sup>15</sup> Ralph Buehler and Andra Hamre (2015), "The Multimodal Majority? Driving, Walking, Cycling, and Public Transportation Use among American Adults," *Transportation* 42 ([doi.org/10.1007/s11116-014-9556-z](https://doi.org/10.1007/s11116-014-9556-z)).
- <sup>16</sup> Cherise Burda (2014), *Home Location Preference Survey: Understanding Where GTA Residents Prefer to Live and Commute*, Pembina Institute ([www.pembina.org](http://www.pembina.org)); at <https://bit.ly/3gc052n>.
- <sup>17</sup> Andrew Keatts (2015), *Memo to Cities: Most Cyclists Aren't Urban Hipsters*, Kinder Inst.; at <https://bit.ly/33mkzO4>.
- <sup>18</sup> According to ICBC's data (<https://tabsoft.co/2RioSHt>), during 2015-19 there were 7,668 total casualty crashes in Victoria of which 757 or 10% were bicyclists. Bike trips are half the average trip length of autos (CRD 2017).
- <sup>19</sup> MoTI (2020), *Frequently Asked Question*, MoTI ([www.th.gov.bc.ca](http://www.th.gov.bc.ca)); at <https://bit.ly/3x51NZB>.
- <sup>20</sup> BC (2018), *British Columbia Road Safety Toolkit: Module 2, Safe Roadway Designs to Protect All Road Users*, BC Ministry of Transportation and Highways ([www2.gov.bc.ca](http://www2.gov.bc.ca)); at <https://bit.ly/3lTvmG>.
- <sup>21</sup> Chris Grundy, et al. (2009), "Effect of 20 Mph Traffic Speed Zones on Road Injuries in London, 1986-2006: Controlled Interrupted Time Series Analysis," *British Medical Journal*, 339 (<https://doi.org/10.1136/bmj.b4469>).
- <sup>22</sup> Todd Litman (2020), "Barrier Effect," *Transportation Cost and Benefit Analysis*, Victoria Transport Policy Institute ([www.vtpi.org](http://www.vtpi.org)); at [www.vtpi.org/tca/tca0513.pdf](http://www.vtpi.org/tca/tca0513.pdf).
- <sup>23</sup> Peter L. Jacobsen, F. Racioppi and H. Rutter (2009), "Who Owns the Roads? How Motorised Traffic Discourages Walking and Bicycling," *Injury Prevention*, Vol. 15, 6, pp. 369-373 (DOI: 10.1136/ip.2009.022566).
- <sup>24</sup> NACTO (202), *Buffered Bike Lanes*, National Association of City Transportation Officials (<https://nacto.org>); at <https://bit.ly/33mkLni>.
- <sup>25</sup> Ralph Buehler (2016), *Moving Toward Active Transportation: How Policies Can Encourage Walking and Bicycling*, Active Living Research (<https://activelivingresearch.org>); at <https://bit.ly/2WpfxKx>.
- <sup>26</sup> Brendan Murphy, David M. Levinson, and Andrew Owen (2017), "Evaluating the Safety in Numbers Effect for Pedestrians at Urban Intersections," *Accident Analysis & Prevention*, Volume 106, Sept., pp. 181-190 (<https://doi.org/10.1016/j.aap.2017.06.004>); at <https://bit.ly/2uO2mta>.
- <sup>27</sup> Wesley E. Marshall and Norman W. Garrick (2011), "Evidence on Why Bike-Friendly Cities Are Safer for All Road Users," *Environmental Practice*, Vol 13/1, March; at <https://bit.ly/3spvVv6>.
- <sup>28</sup> Nicholas Scott and Tamara Krawchenko (2021), "Can New Investments Put a Dent in Canadians' Car Dependence?" *Policy Options* (<https://policyoptions.irpp.org>); at <https://bit.ly/3xKkDft>.
- <sup>29</sup> CRD (2021).
- <sup>30</sup> \$35m bikeway costs depreciated at 3% over 20 years equals about \$2.1m annual, equivalent to about 430 cars at \$5,000 per year or 1,050 parking spaces at \$2,000 per year. In 2017 Victoria households owned about 50,000 vehicles and about 10,000 autos drove to downtown each morning (CRD 2017, p. 88 and 89).
- <sup>31</sup> In 2017 there were 226,290 daily auto trips and 33,490 bike trips (CRD 2017, p. 88). A 7-point mode share shift from auto to bike would reduce auto trips and their costs about 15%. These should increase with population growth.
- <sup>32</sup> Wesley E. Marshall and Norman W. Garrick (2011), "Evidence on Why Bike-Friendly Cities Are Safer for All Road Users," *Environmental Practice*, Vol 13/1, March; at <https://bit.ly/2Li14in>.
- <sup>33</sup> Jacobsen, P. (2003), "Safety in Numbers: More Walkers and Bicyclists, Safer Walking and Bicycling," *Injury Prevention* (<http://ip.bmjournals.com>), Vol. 9, pp. 205-209; at <http://bit.ly/2yDG9gh>.
- <sup>34</sup> WHO (2014), *Health Economic Assessment Tool for Cycling and Walking*, World Health Organization Region Office Europe ([www.euro.who.int](http://www.euro.who.int)); at [www.heatwalkingcycling.org](http://www.heatwalkingcycling.org).
- <sup>35</sup> David G. T. Whitehurst, et al. (2021), *An Economic Analysis of the Health-Related Benefits Associated With Bicycle Infrastructure Investment in Three Canadian Cities*, PLoS ONE 16/2 (doi:10.1371/journal.pone.0246419).
- <sup>36</sup> *Rethink Richardson* ([www.facebook.com/RethinkRichardsonVictoria](http://www.facebook.com/RethinkRichardsonVictoria)). Their estimates are based on selective quotes from the 26 June 2020 *Bicycle Master Plan* report to council (<https://bit.ly/3eveg16>).
- <sup>37</sup> Peter Jacobsen (1997), "Liquid' vs. Gas Models for Traffic," *Los Angeles Times*; at <https://lat.ms/3f0ErMd>.
- <sup>38</sup> Crysttal Atkins and Michael Coleman (1997), "Influence of Traffic Calming on Emergency Response Times," *ITE Journal*, August, pp. 42-47 (<https://trid.trb.org/view/576527>).
- <sup>39</sup> Nancy McGuckin (2009), *Mandatory Travel During Peak Period*, Travel Behavior (<http://travelbehavior.us>); at <http://travelbehavior.us/Nancy-pdfs/Mandatory%20Peak%20Travel.pdf>.
- <sup>40</sup> AARP (2016), *10 Ways Bicycle-Friendly Streets Are Good for People Who Don't Ride Bikes*, American Association of Retired Persons ([www.aarp.org](http://www.aarp.org)); at <https://bit.ly/3b26mKK>.

- <sup>41</sup> Reid Ewing, et al. (2014), "Relationship Between Urban Sprawl and Physical Activity, Obesity, and Morbidity – Update And Refinement," *Health & Place*, Vol. 26, pp. 118-126; at ([doi.org/10.1016/j.healthplace.2013.12.008](https://doi.org/10.1016/j.healthplace.2013.12.008)).
- <sup>42</sup> Foord (2021).
- <sup>43</sup> City of Victoria, *Street Tid Bits* ([www.victoria.ca/EN/main/residents/road-maintenance/streets.html](http://www.victoria.ca/EN/main/residents/road-maintenance/streets.html)). Assumes that 70% of street length has on-street parking.
- <sup>44</sup> Todd Litman (2024), *Completing Sidewalk Networks*, Victoria Transport Policy Institute ([www.vtppi.org](http://www.vtppi.org)); at [www.vtppi.org/csn.pdf](http://www.vtppi.org/csn.pdf).
- <sup>45</sup> "City of Victoria to spend more money to fast-track bike lanes," *Vancouver Island News*, 22 Feb. 2019; at <https://bit.ly/3gKoV9Y>. Assumes that once completed about half of Victoria's 95,000 residents will use bikeways.
- <sup>46</sup> CRD (2023), *Fiscal Plan*, Capital Regional District ([www.crd.bc.ca](http://www.crd.bc.ca)); at [www.crd.bc.ca/about/financial-accountability/budget-overview](http://www.crd.bc.ca/about/financial-accountability/budget-overview).
- <sup>47</sup> City of Victoria (2023), *Fiscal Plan*, ([www.victoria.ca](http://www.victoria.ca)); [www.victoria.ca/EN/main/city/city-budget.html](http://www.victoria.ca/EN/main/city/city-budget.html).
- <sup>48</sup> The BC Ministry of Transportation spends about \$2.5 billion annually on highways, ([www.bcbudget.gov.bc.ca/2021/sp/pdf/ministry/tran.pdf](http://www.bcbudget.gov.bc.ca/2021/sp/pdf/ministry/tran.pdf)). BC has 3.7m registered vehicles and 5m residents.
- <sup>49</sup> A typical community has 3-6 off-street parking spaces per motor vehicle, with \$500-1,500 annual costs, including land, construction and operating expenses. See Eric Scharnhorst (2018), *Quantified Parking: Comprehensive Parking Inventories for Five U.S. Cities*, Mortgage Bankers Association ([www.mba.org](http://www.mba.org)); at <https://bit.ly/2Lfnk4o>. Also see the "Parking Costs" chapter of *Transportation Cost and Benefit Analysis* ([www.vtppi.org/tca](http://www.vtppi.org/tca)).
- <sup>50</sup> Assumes Victoria motorists pay 20¢/liter provincial fuel taxes, average 10 kms per liter and 20,000 annual kms.
- <sup>51</sup> Jesse London and Clark Williams-Derry (2013), *Who Pays for Parking?*, Sightline Institute ([www.sightline.org](http://www.sightline.org)); at [www.sightline.org/research/who-pays-for-parking](http://www.sightline.org/research/who-pays-for-parking).
- <sup>52</sup> Assuming a typical restaurant parking space costs \$6 and accommodates three dinners per day.
- <sup>53</sup> Assumes that 90% of residents frequently walk, 50% will bike once the bikeway network is complete, and 70% frequently travel by auto, based on CRD (2017), p. 87. Assumes bike parking costs 1/25<sup>th</sup> as much as car parking.
- <sup>54</sup> CRD (2017), p. 87.
- <sup>55</sup> CRD (2017), p. 88.
- <sup>56</sup> Daniel Arancibia, et al. (2019), "Measuring the Local Economic Impacts of Replacing On-Street Parking With Bike Lanes," *Journal of the American Planning Association* (DOI: 10.1080/01944363.2019.1638816).
- <sup>57</sup> Burda (2014)
- <sup>58</sup> Ray Straatsma and Tom Berkhout (2014), *Bikes Mean Business: Building a Great Cycling (And Walking) City*, Greater Victoria Cycling Coalition ([www.gvcc.bc.ca](http://www.gvcc.bc.ca)); at <https://bit.ly/3tiGUHc>.
- <sup>59</sup> MoTI (2021), *Highway 14 Corridor Improvements*, BC Ministry of Transportation and Infrastructure ([www2.gov.bc.ca](http://www2.gov.bc.ca)); at <https://bit.ly/3xlbqgU>.
- <sup>60</sup> Victoria (2020), *Zoning Bylaw No. 80-159 Schedule C: Off-Street Parking Regulations*, City of Victoria ([www.victoria.ca](http://www.victoria.ca)); at <https://bit.ly/3gNj0B0>.
- <sup>61</sup> Gregory H. Shill (2019), "Americans Shouldn't Have to Drive, but the Law Insists on It," *The Atlantic* ([www.theatlantic.com](http://www.theatlantic.com)); at <https://bit.ly/3aWAW7u>.
- <sup>62</sup> Michael M. Roy and Michael J. Liersch (2014), "I am a Better Driver than You Think: Examining Self-enhancement for Driving Ability," *Journal of Applied Social Psychology*, 43(8), 1648–1659 (DOI: 10.1111/jasp.12117).