

KIRKLAND
2035 | YOUR VOICE.
YOUR VISION.
YOUR FUTURE.



City of Kirkland TRANSPORTATION MASTER PLAN

Executive Summary | October 2015



FEHR PEERS

Where Are We Today?



Kirkland by the Numbers...

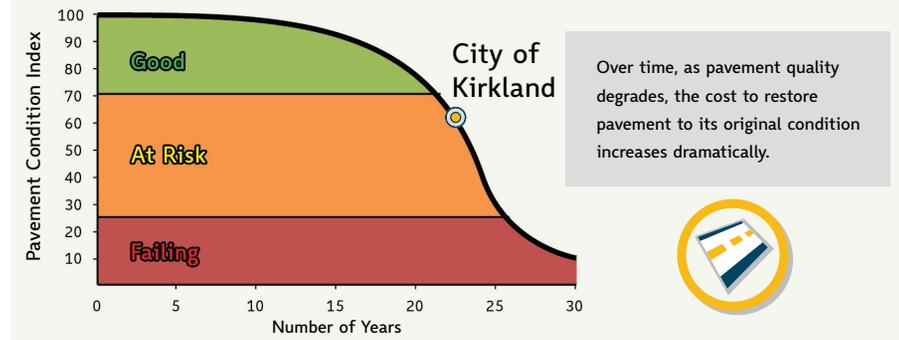
 On an average weekday, the 24 bus routes that serve Kirkland transport nearly 25,000 passengers.

 Approximately 1,000 crashes were reported each year with about one-third of these occurring at signalized intersections.

 Over half of household trips in Kirkland are short (less than 2 miles).



Average Pavement Condition



Traffic Control Devices
Maintained by the City Signal Shop

- Rapid Flashing Beacons – 30
- School Zone Flashers – 17
- Radar Signs – 12
- Traffic Signals – 21
- Street Lights – 1,316



School Walkways

Street Type	Miles
Minor Arterial	0.32
Collector	2.15
Local	7.51

Addressing Future Challenges

		Today's Challenge	Proposed Plan Concept
	Safety	How can we make it safer for everyone to travel in Kirkland?	<ul style="list-style-type: none"> Develop a safety program that starts with a goal of zero fatalities/serious injuries, modeled on what's worked well in other cities.
	Maintenance	Fixing everything would use up all the money we have.	<ul style="list-style-type: none"> Emphasize maintaining traffic signals and pavement markings. Make sure that street surfaces are maintained to a high standard.
	Walking	Too many neighborhoods don't have adequate sidewalks or crosswalks.	<ul style="list-style-type: none"> Improve crosswalks where the safety risk to pedestrians is greatest. Prioritize new sidewalks on routes to schools, and provide connections to parks, shopping and transit.
	Biking	Not everyone will travel by bike. Rain and hills can be a deterrent for many.	<ul style="list-style-type: none"> Create more places where people feel comfortable riding a bike. Make bicycling a viable option for many trips – especially short trips.
	Transit	Kirkland doesn't control bus service, and buses sometimes get stuck in traffic.	<ul style="list-style-type: none"> Create an environment where transit can thrive through mixed use development and transit-friendly streets. Connect Totem Lake to the regional transit system. Make transit stops feel more safe, secure, and comfortable. Coordinate with transit providers for use of the Cross Kirkland Corridor.
	Cars	Congestion is already a problem and more development may worsen the backups.	<ul style="list-style-type: none"> Recognize that there will be congestion during peak commute periods. Make road improvements that improve traffic flow, but that are in line with our overall vision for Kirkland. Make it easier to monitor and improve signal timing.

Investing in the system

The Plan identifies potential transportation investments that reflect the overall transportation goals. The chart below outlines potential investment levels for the next 20 years.

- Maintenance - 41%
- Cars - 23%
- Walking - 18%
- Biking - 10%
- Transit - 8%



▨ 78% of maintenance funding is from a City levy and is specifically dedicated to pavement maintenance



Develop a **Vision Zero** safety plan that is multi-disciplinary and focuses on innovative approaches to safety.

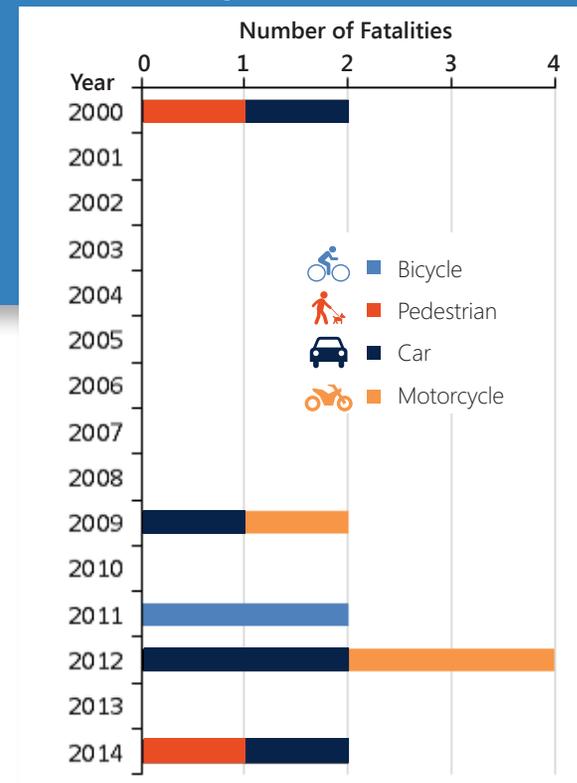
Four Key Elements of a Vision Zero Safety Plan

- 1** **Emphasis** – On crashes resulting in fatalities and serious injuries, with a date specific goal.
- 2** **Partnerships** – Policy makers, Enforcement, Education, Advocacy, Engineering, Emergency Medical Services, and Vehicle Manufactures all work together.
- 3** **System Approach** – Rather than exclusively faulting drivers and other users of the transportation system, Vision Zero places the core responsibility for accidents on the overall system design.
- 4** **Data** – Carefully analyze crashes and use data to make decisions for improvements.

The chart below shows the number of fatalities in Kirkland for the period 2000 through 2014. Note that the number of fatalities is slightly greater than the number of fatal crashes; for example a single motorcycle crash in 2012 resulted in two fatalities.

The pre-2011 annexation area of Kirkland has been fatality-free since 2000 for pedestrians, and for more than 20 years when considering bicycle crashes.

Fatalities by mode (2000-2014)





- Improve the **safety** of walking in Kirkland.
- Identify and **remove barriers** to walking.
- Make it safe and easy for children to **walk to school** and other destinations.

School **Walk** Routes

The City has adopted and maintains a set of elementary school walk routes in Kirkland. In order to get substantial numbers of children to walk to school however, more than walk routes with sidewalks are needed. A multi-dimensional approach that identifies and systematically removes barriers to children walking is necessary.

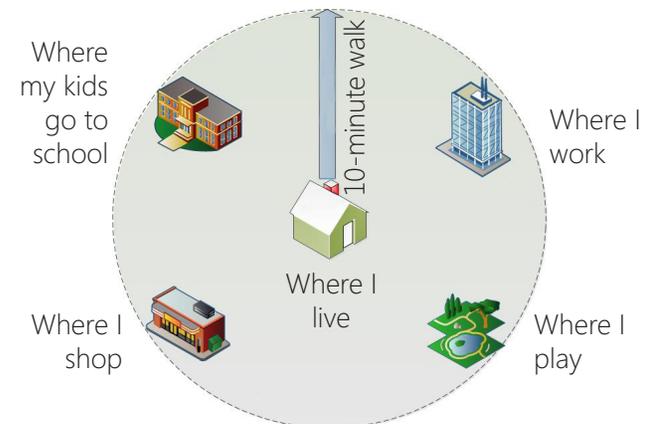
6 possible barriers to kids walking to school and other places:

1. Lack of walkways, safe street crossings.
2. Takes too long, kids have to get up earlier to go to school.
3. Parents are driving anyway, might as well drop the child off.
4. Lack of certainty that the child arrived at destination.
5. Perceived danger outweighs perceived benefits.
6. Societal pressures not to let kids walk.



The **Ten-Minute** Neighborhood

If you live in a “10 minute” neighborhood, you can walk conveniently to stores, parks buses and schools within 10 minutes. Streets in 10 minute neighborhoods that don’t have good sidewalks are excellent candidates for new sidewalk projects.

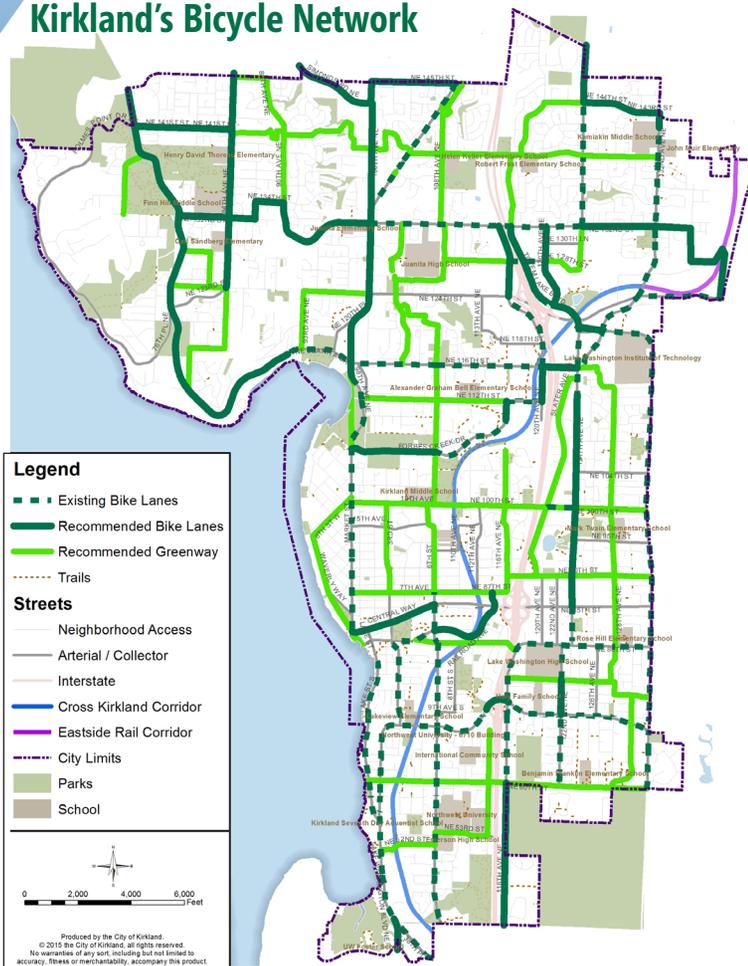


Key Policy: Biking

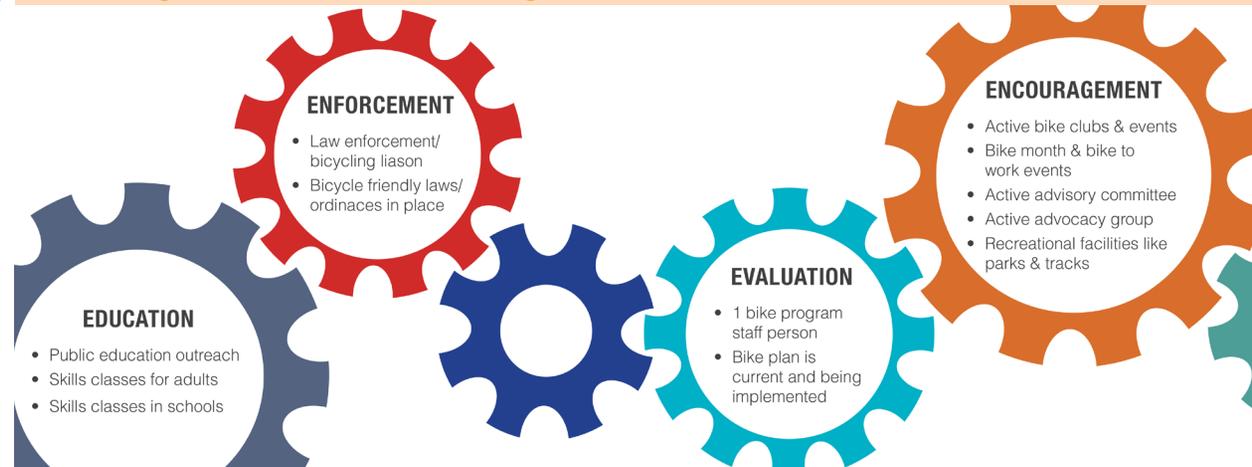


- Make bicycling **safer**.
- **Improve** existing and create **new** on-street bike facilities.
- Build a network of **greenways**.
- Implement elements and programs that make cycling **easier**.

Kirkland's Bicycle Network



What Does it Mean to be a **Bicycle-Friendly** Community?

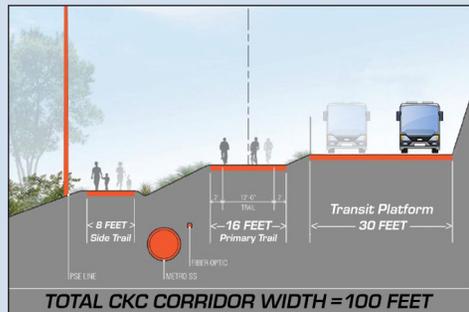


The City's bike network has both on-street bike lanes and greenways – a network of quieter streets with treatments that make biking more accessible for more people.

- Create an **environment** that supports frequent and reliable transit service.
- Support **safe and comfortable** passenger facilities.
- **Integrate** transit facilities with pedestrian and bicycle networks.
- **Partner** with transit providers to coordinate land use and transit service.

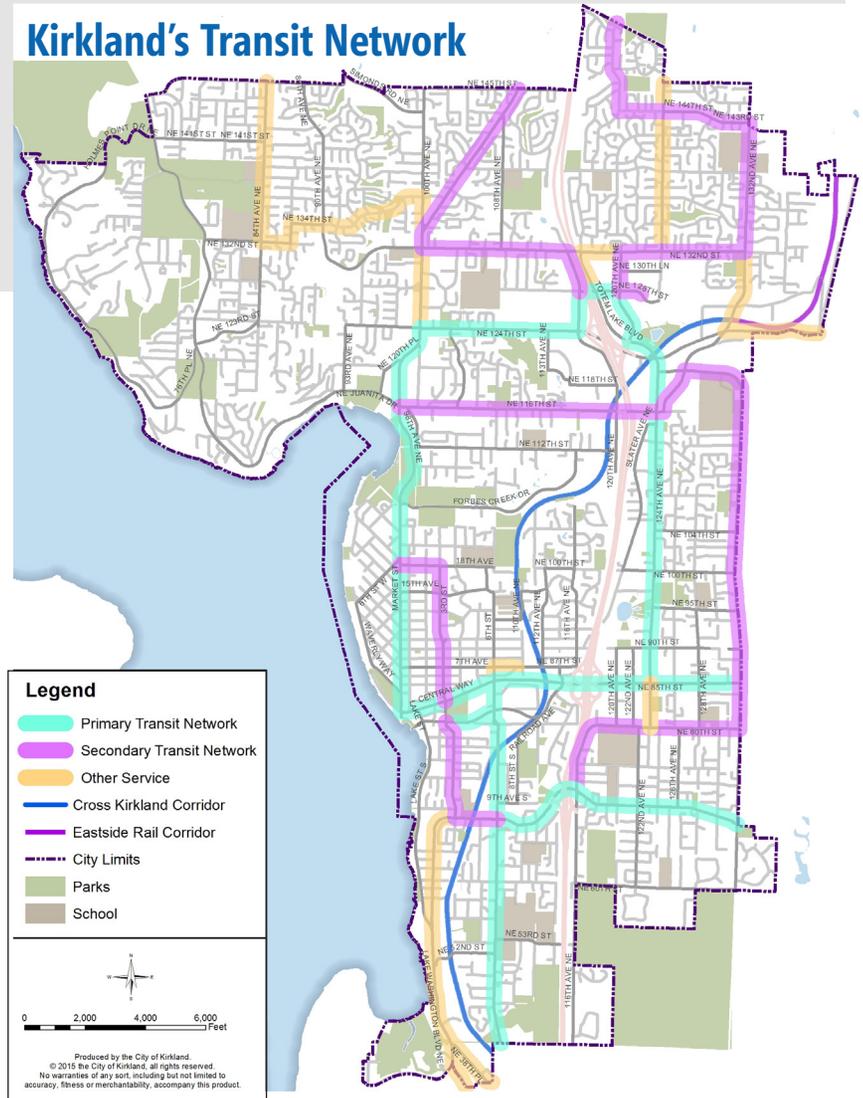
Transit Investments

- Stop Amenities
- Coordinate with transit providers for use of the Cross Kirkland Corridor



Coordination Efforts

Sound Transit, King County Metro, and other area transit agencies prepare long range plans for their service. Kirkland should coordinate with these agencies to ensure provision of high quality transit service.

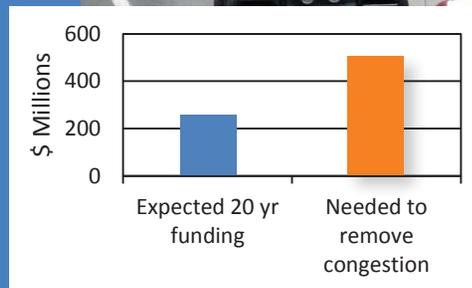




- Strategically invest in intersections and street **capacity** to support land use.
- Use Intelligent Transportation Systems (ITS) to **optimize** roadway network operations.
- Position Kirkland for **technological innovations**, such as electric vehicles and autonomous vehicles.
- Actively manage on-street and off-street **parking**.

Why can't we eliminate Congestion?

It's estimated that a program of widening streets to "eliminate" peak hour congestion would cost more than \$500 million and require widening of streets that would be in contrast to Kirkland's vision and goals for transportation.



Intelligent Transportation Systems

ITS uses a variety of technology centered around a communications network to make the job of optimizing signal operations easier.





- Expand and improve **walkable** neighborhoods.
- Design streets to **support land uses** and other City goals and policies.

Tale of 2 Cities

The illustration shows the differences in travel options between two street networks. The connecting streets in the lower half of the figure make it possible to walk or bike between destinations. Cul-de-sacs and loop roads in the upper part of the drawing make trips between destinations; even those that are physically close, longer and more likely to be auto oriented.



Four elements of Development Review

1. **Concurrency** ensures that rate at which new trips from new development is in keeping with construction of the 20 year network to accommodate those trips has been constructed.
2. The State Environmental Protection Act (**SEPA**) allows jurisdictions to require site-specific mitigations for impacts, such as building a traffic signal at a project driveway.
3. In contrast to SEPA which covers site-specific issues, **Impact Fees** are paid by development to help fund system-wide improvements.
4. **Frontage improvements**, like sidewalks are also requirements of development.



- **Balance** overall public capital expenditures and revenues for transportation.
- Highest priority for funding **maintenance** and operation of existing infrastructure.
- Support modes that are **energy efficient** and improve system performance.
- Implement transportation programs and projects in ways that prevent or minimize impacts to **low-income, minority and special needs** populations.



Environmental Sustainability

38% of Kirkland's greenhouse gas emissions are attributable to transportation.

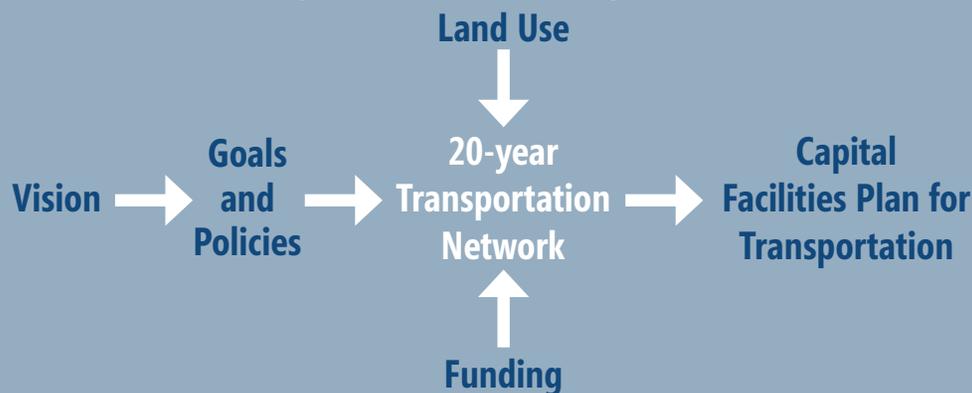
50% lower GHG emissions than 2007 levels is Kirkland's long-term vision.

40% reduction in vehicle-miles-of-travel is central to achieving this goal.

This is an ambitious goal that will require consistent implementation of the goals stated in this plan.

Financial Sustainability

The Capital Facilities Plan flows from the vision, goals and is constrained by a sustainable funding level.



Key Policy: Be An Active Partner



- Play a major role in development of **Sound Transit** facilities in Kirkland.
- **Work with the State** to achieve mutually beneficial decisions on freeway interchanges and other facilities.
- **Coordinate** multi-modal transportation systems with neighboring jurisdictions.
- **Collaborate** with the private sector and other “new” partners.

The City of Kirkland partnered with King County Metro, the City of Bellevue, a Regional Housing Coalition along with private and non-profit developers to create award winning Transit Oriented Development at the South Kirkland Park and Ride.



Sound Transit's long range plan envisions making regional investments in Kirkland, including along the Cross Kirkland Corridor.

Source: Sound Transit

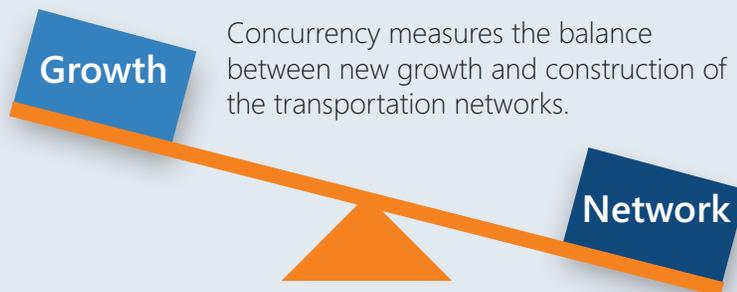




- Use a multi-modal plan based method for **concurrency**.
- Establish **level of service** standards for all modes.
- Adopt a **mode split** goal for the Totem Lake Urban Center.
- Ensure implementation of goals and policies and **monitor progress**.

Concurrency Approach

Concurrency measures whether construction of the transportation system is keeping up with the pace of land use development. This will be measured by tracking how the City's multimodal transportation provides "supply" in balance with person trips generated by the "demand" from new development projects.



Mode Split

Mode split is the term used to describe how trips are allocated among various types of transportation, or modes. Mode split goals are required to be adopted for the Totem Lake Urban Center. These goals are shown below:

- Drive Alone – **45%**
- HOV, Vanpool, Transit – **46%**
- Walk and Bike – **9%**

Level of Completion

Level of service standards for each mode address completeness of various aspects of the transportation network, in order to complement the concurrency system and to directly measure something for which the city has control.

- Pavement **Condition** ITS
- School **Walk Routes**
- Ten-Minute **Neighborhoods** Auto **Projects**
- On-Street **Bike Lanes**
- Greenway **Network** Passenger **Environment**
- Speed **and Reliability** Crosswalks



Thanks to all the citizens of Kirkland who gave of their time and talent to help shape the Transportation Master Plan through their comments, suggestions, criticisms and encouragements.

City Council

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Penny Sweet, *Deputy Mayor*
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Transportation Commission

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Lisa A. McConnell
Thomas Pendergrass
Michael Snow
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Tess Pate, *Youth Member (term ended March, 2015)*
Sandeep Singhal *(term ended March, 2015)*
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Bus Stop 1
Bus Stop 2
Bus Stop 3
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Bus Stop 10



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