



**CITY OF KIRKLAND**  
**Department of Public Works**  
123 Fifth Avenue, Kirkland, WA 98033 425.587.3800  
[www.kirklandwa.gov](http://www.kirklandwa.gov)

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**MEMORANDUM**

**To:** Kurt Triplett, City Manager  
**From:** David Godfrey, P.E., Transportation Engineering Manager  
Kathy Brown, Public Works Director  
**Date:** November 5, 2015  
**Subject:** Adoption of the Transportation Master Plan

**RECOMMENDATION:**

It is recommended that the City Council pass the attached resolution adopting the Transportation Master Plan  
<http://www.kirklandwa.gov/Assets/Public+Works/Public+Works+PDFs/transcom/City+of+Kirkland+Transportation+Master+Plan+2015.pdf>.

**BACKGROUND DISCUSSION:**

**Introduction**

Over the past 3 years, the City Council has had a series of briefings on the Transportation Master Plan (TMP) and related topics, including goals and policies, projects, impact fees and concurrency.

The TMP has several foundational elements:

- **Goals** that follow from the 2035 Vision and that are structured around four main principles that were identified by the Transportation Commission: 1) Move people safely; 2) Link to land use; 3) Be sustainable; and, 4) Be an active partner.
- Specifics woven into the **policies** that support the goals include the following:
  - A vision zero safety approach
  - Balance across all modes of transportation
  - Accessibility to a variety of modes for people of all ages and abilities
  - Improved connections for people riding bikes and people walking
  - Frequent and reliable transit service
  - Smart improvements that reduce delay for drivers
  - Emphasis on using funding to maintain what we have.
- **Actions** for policies that serve as starting points for implementation.

On June 16, 2015 the City Council had an opportunity for final review of the draft document. There were several recommended changes that have been made to the TMP as a result of that review:

- Edits and corrections to language, grammar, punctuation

- Improvements to some graphics
- Information was added to a number of subject areas:
  - Balance on Vision Zero approach
  - All-way walk treatments
  - Flexibility on greenway locations
  - Hills and bicycle route planning
  - Bicycle signals
  - Connections between Cross Kirkland Corridor and Redmond Central Connector
  - City funding of transit
  - Clarification of language around Express Toll Lanes
  - Partnering with others to obtain the portion of the Eastside Rail Corridor in Kirkland.

At its July meeting, the Transportation Commission recommended other small edits, including more information about the City's climate change goals and the role of transportation. At that same meeting, the Commission recommended forwarding the TMP to the Council for adoption. The Planning Commission and the Houghton Community Council have also made recommendations to the Council to adopt the TMP. The Houghton Community Council requested that a reference to roundabouts be included in the plan; the change was approved by the Transportation Commission and it is reflected the final draft document.

Another change to the TMP since it was last viewed by Council is that a table of Capital Improvement Program (CIP) projects has been replaced with a draft Capital Facilities Plan (CFP). Once the CFP is adopted by Council, the table in the TMP will be revised as needed.

The CFP stems from the principle of financial sustainability in the TMP; that is the project list for the CFP is in line with expected transportation revenues. Therefore, there are unmet needs in the form of projects that would be valuable to the transportation system but are not currently contemplated as funded. Two examples are completion of the paved trail on the Cross Kirkland Corridor as envisioned in the Master Plan or improvement of the Pavement Condition Index beyond its current target of 70. Large scale projects and initiatives such as these would require significant additional funding beyond a reprioritization of currently forecasted revenues.

On December 8, Council is scheduled to adopt the Transportation Element of the Comprehensive Plan. That element will primarily be the Goals and Policies of the TMP. Actions and sidebars in the TMP will not be in the Transportation Element, in keeping with the tenor of the rest of the Comprehensive Plan. Some particularly helpful illustrations are planned to appear in both the TMP and the Transportation Element of the Comprehensive Plan, including the following:

- Vision zero safety program
- Cross Kirkland Corridor character zones
- Crosswalk safety
- Illustrations of all ages and all abilities bike facilities
- Greenways
- Intelligent Transportation System (ITS) purpose
- Concurrency
- Level of completion (level of service).

Staff will continue to make improvements to the aesthetics and formatting of the TMP through the end of 2015.

A draft Executive Summary document (Attachment 1) has been prepared for the TMP. The purpose of the document is to collect some of the most important points of the TMP in one easily understood document. Staff would welcome any edits Council would like to propose to the Executive Summary.

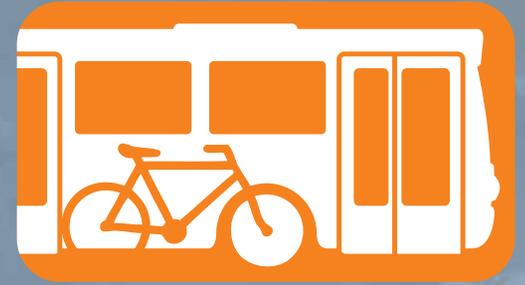
Attachment 1 – Executive Summary

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



# City of Kirkland TRANSPORTATION MASTER PLAN

Executive Summary | October 2015



FEHR PEERS



# Where Are We Today?

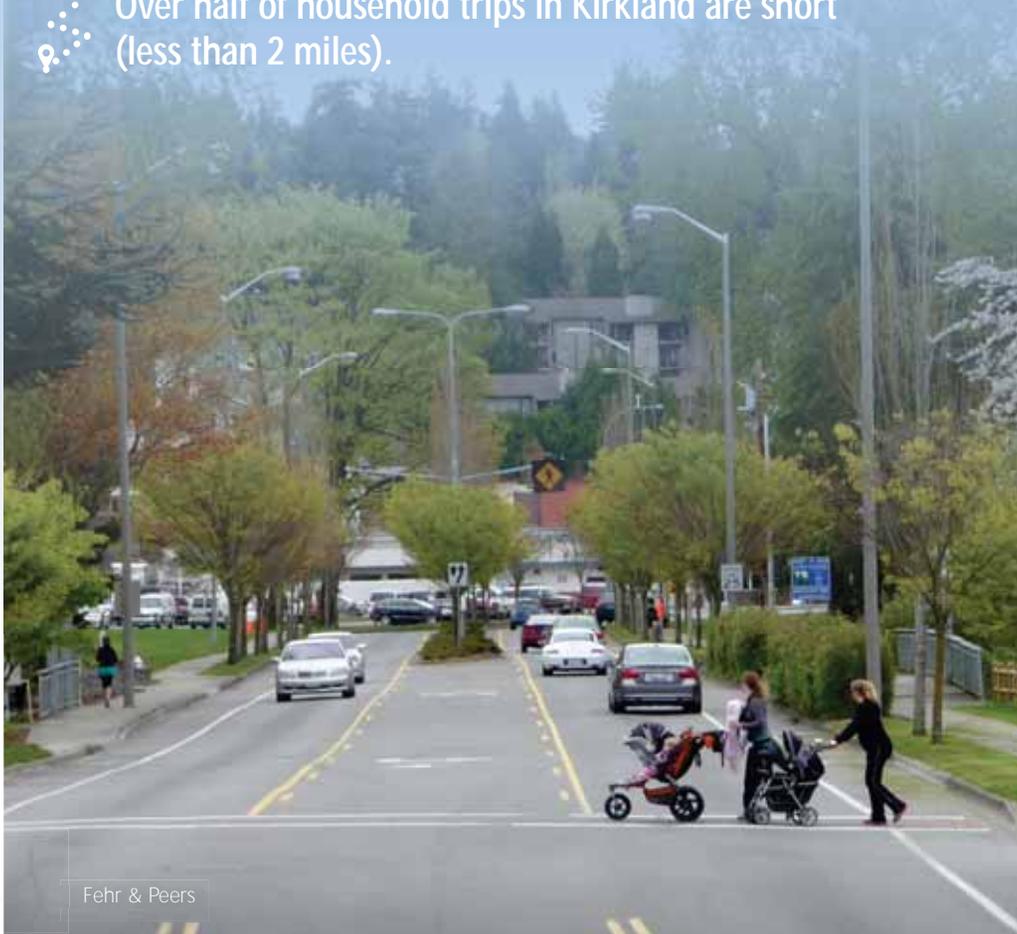


## Kirkland by the Numbers...

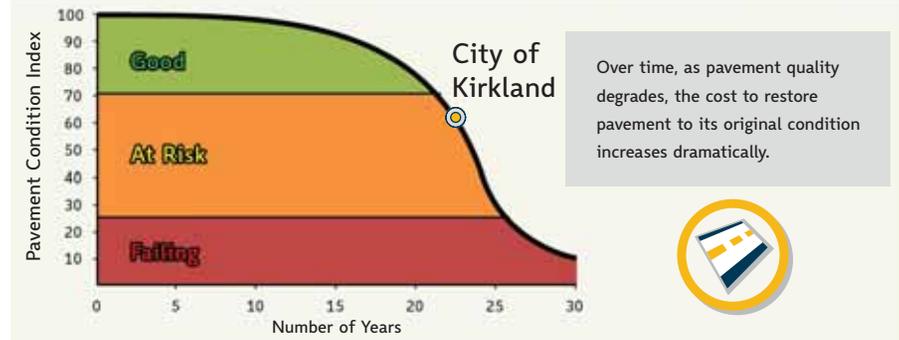
 On an average weekday, the 24 bus routes that serve Kirkland transport nearly 25,000 passengers.

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

## 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.

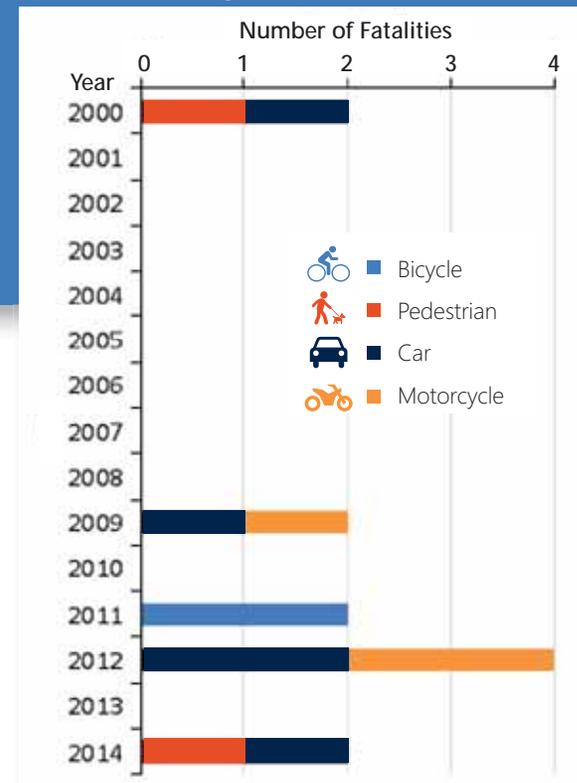
## Four Key Elements of a Vision Zero Safety Plan

- 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.

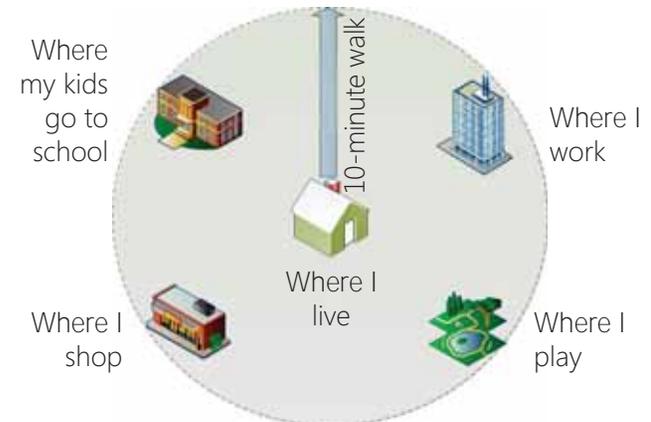
### 6 possible barriers to kids walking to school and other places:

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.

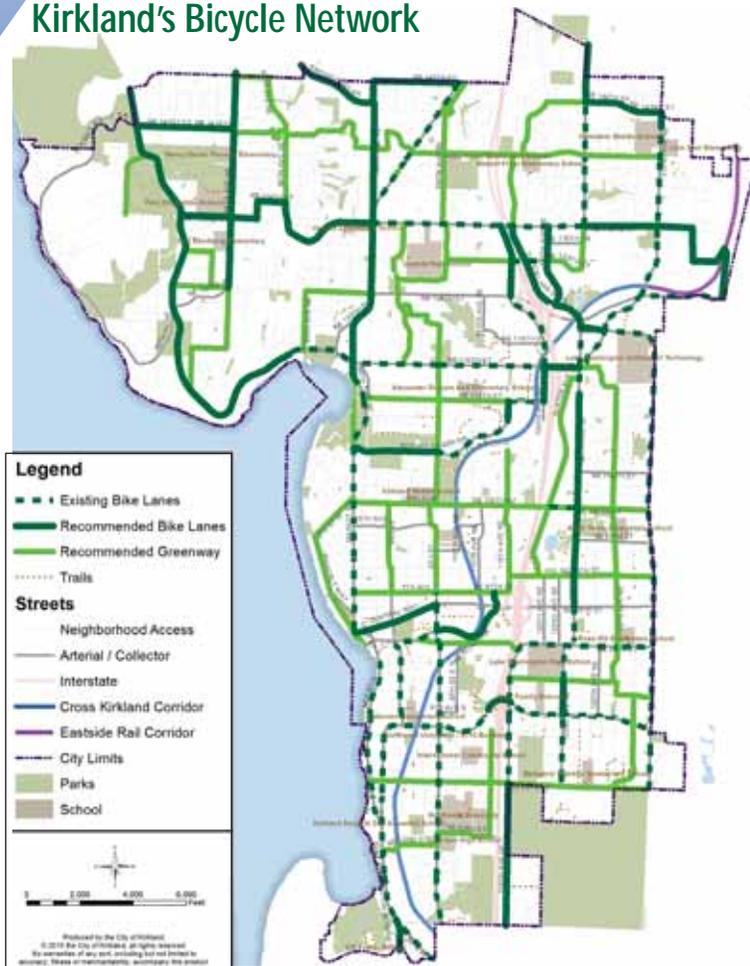


# Key Policy: Biking

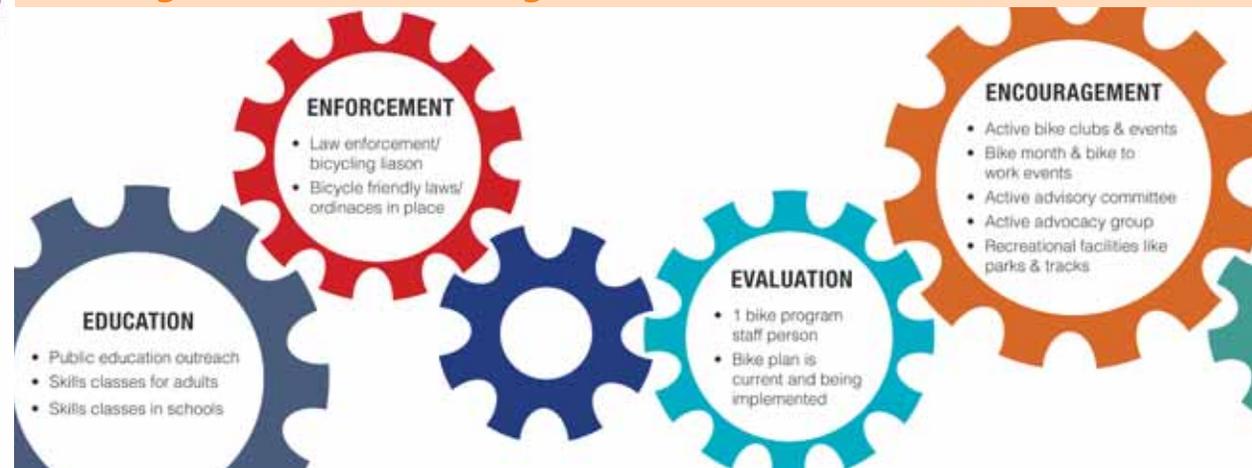


- Make bicycling **safer**.
- **Improve** existing and create **new** on-street bike facilities.
- Build a network of **greenways**.
- Implement elements and programs that make cycling **easier**.

## Kirkland's Bicycle Network



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



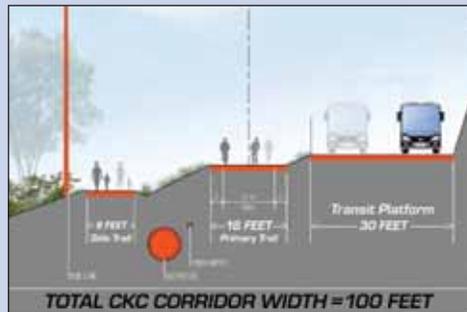
The City's bike network has both on-street bike lanes and greenways – a network of quieter streets with treatments that make biking more accessible for more people.

- 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

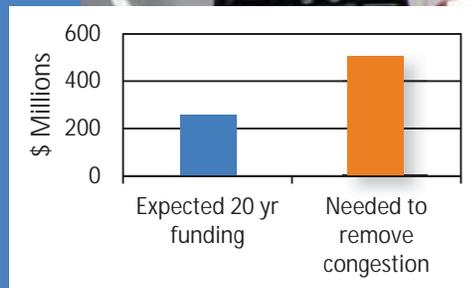
Sound Transit, King County Metro, and other area transit agencies prepare long range plans for their service. Kirkland should coordinate with these agencies to ensure provision of high quality transit service.



- 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.

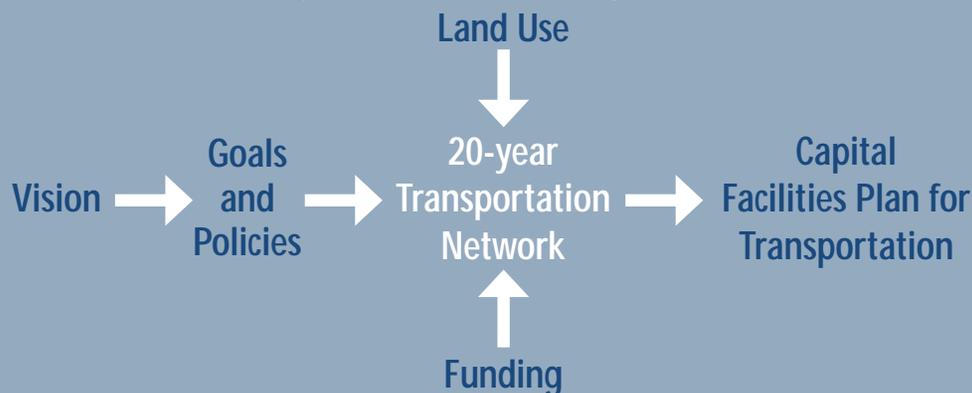
**50%** lower GHG emissions than 2007 levels is Kirkland's long-term vision.

**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

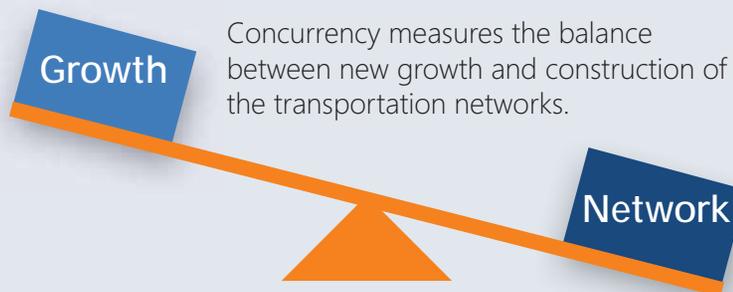




- Use a multi-modal plan based method for **concurrency**.
- Establish **level of service** standards for all modes.
- Adopt a **mode split** goal for the Totem Lake Urban Center.
- Ensure implementation of goals and policies and **monitor progress**.

## 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:



## 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

Amy Walen, *Mayor*  
Penny Sweet, *Deputy Mayor*  
Jay Arnold  
Dave Asher  
Shelley Kloba  
Doreen Marchione  
Toby Nixon

## Transportation Commission

Tom Neir, *Chair*  
John Perlic, *Vice Chair*  
Kurt Ahrensfeld  
Lisa A. McConnell  
Thomas Pendergrass  
Michael Snow  
Carl Wilson  
Tess Pate, *Youth Member (term ended March, 2015)*  
Sandeep Singhal *(term ended March, 2015)*  
Glen Buhlmann *(term ended August, 2015)*

## City Staff

Kurt Triplett, *City Manager*  
Marilynne Beard, *Deputy City Manager*  
Tracey Dunlap, *Deputy City Manager*  
Kathy Brown, *Public Works Director*  
David Godfrey, P.E., *Transportation Engineering Manager*  
Thang Nguyen, *Transportation Engineer*  
Stephen Padua, *Transportation Planner*  
Nicholas Lott-Havey, *GIS Analyst*

## Consultant Team

Fehr & Peers, *Prime Consultant*  
Transpo Group, *Traffic Analysis*  
EnviroIssues, *Public Outreach*  
Henderson, Young & Company, *Funding*



245 FACTORIA

ONLY  
BUS



4

2



| FEHR + PEERS

RESOLUTION R-5171

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF KIRKLAND  
ADOPTING THE TRANSPORTATION MASTER PLAN.

1           WHEREAS, the Transportation Commission of the City of Kirkland  
2 identified a need for the City to develop a Transportation Master Plan  
3 and that need was also recognized and supported by the Kirkland City  
4 Council; and

5  
6           WHEREAS, the City of Kirkland embarked on Kirkland 2035, a  
7 process to update the City's Comprehensive Plan, including the  
8 Transportation Element of the Comprehensive Plan; and

9  
10           WHEREAS, the City's vision for the Comprehensive Plan includes  
11 a transportation system that supports a livable, walkable, green and  
12 connected community; and

13  
14           WHEREAS, the Transportation Master Plan reflects this vision  
15 across a set of multimodal Goals and Policies founded on the principles  
16 of moving people safely, linking to land use, being sustainable, being  
17 an active partner and measuring progress; and

18  
19           WHEREAS, a Vision Zero approach to improving safety, a goal of  
20 eliminating all transportation related fatal and serious injury crashes in  
21 Kirkland by 2035, is the first goal of the Plan; and

22  
23           WHEREAS, the multimodal approach of the Transportation  
24 Master Plan is used to support construction and operation of a  
25 transportation network where walking, biking and transit are realistic  
26 modes of transportation for many trips and this multimodal approach  
27 is used as a basis for revised Concurrency and Impact Fee systems;  
28 and

29  
30           WHEREAS, one of the principles of the Transportation Master  
31 Plan is financial sustainability and therefore the plan sets forth a  
32 multimodal network of projects, the cost of which is intended to be  
33 within the expected revenue projections of the next 20 years, while  
34 recognizing there are still key unmet transportation needs for which  
35 additional funding will be necessary such as completion of the  
36 permanent trail on the Cross Kirkland Corridor or further improvement  
37 of the Pavement Condition Index; and

38  
39           WHEREAS, hundreds of people who live, work and play in  
40 Kirkland have imparted their vision for Kirkland's future transportation  
41 system by giving of their time and talent to help shape this document  
42 through comments, suggestions, critiques and encouragements; and

43 WHEREAS, the Kirkland Transportation Commission has, at the  
44 direction of the City Council, carefully and thoroughly studied and  
45 overseen development of the Transportation Master Plan; and  
46

47 WHEREAS, the Transportation Master Plan has been  
48 recommended for approval to the City Council by the Transportation  
49 Commission, Planning Commission and Houghton Community Council;  
50 and  
51

52 WHEREAS, at multiple meetings, including a Study Session on  
53 June 16, 2015, where City staff and project consultants presented the  
54 final draft Transportation Master Plan, the City Council has conducted  
55 a detailed review of the Plan; and  
56

57 WHEREAS, certain portions of the Transportation Master Plan  
58 will be amended or replaced when final versions of the Capital  
59 Improvement Program, other elements of the Comprehensive Plan,  
60 and amendments to the Kirkland Municipal Code pertaining to impact  
61 fees and concurrency currently pending before the Council are  
62 adopted; and  
63

64 WHEREAS, the Council has determined the Transportation  
65 Master Plan should be adopted in the interest of the health, safety and  
66 welfare of the residents of the City of Kirkland and also to guide  
67 development of a multimodal transportation system.  
68

69 NOW, THEREFORE, be it resolved by the City Council of the City  
70 of Kirkland as follows:  
71

72 Section 1. The document entitled "City of Kirkland  
73 Transportation Master Plan," dated November 2015, as prepared by the  
74 Department of Public Works and as recommended by the Kirkland  
75 Transportation Commission is adopted.  
76

77 Passed by majority vote of the Kirkland City Council in open  
78 meeting this \_\_\_\_ day of \_\_\_\_\_, 2015.  
79

80 Signed in authentication thereof this \_\_\_\_ day of \_\_\_\_\_,  
81 2015.

\_\_\_\_\_  
MAYOR

Attest:

\_\_\_\_\_  
City Clerk