



CITY OF KIRKLAND
Public Works Department
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MEMORANDUM

To: Kurt Triplett, City Manager

From: Truc Dever, Public Works Director
Doug McIntyre, AICP, Transportation Manager

Date: August 20, 2024

Subject: **Transportation Concurrency Overview**

RECOMMENDATION:

Staff recommends that the City Council hears an overview of Kirkland's transportation concurrency program for awareness and consideration as it relates to the City's Draft Transportation Element and Draft Transportation Strategic Plan (TSP).

EXECUTIVE SUMMARY:

- This memo is in response to the Council's request for information on concurrency. No action is requested of Council at this time.
- Concurrency is one of the goals of the Washington State Growth Management Act (GMA) and refers to the timely provision of public facilities and services to support new developments and maintain service levels to established standards.
- The City of Kirkland has established a two-prong approach to concurrency, measuring multimodal level of service (MMLOS) standards, as well as vehicular delay at intersections.
- The project scope for the update to the Transportation Element and Transportation Strategic Plan (TSP) in 2023 and 2024 did not include any revisions to the concurrency program and, therefore, the same program is planned to remain in place for the updated Transportation Element and TSP.
- Concurrency is one tool amongst many to manage and balance the transportation system's functionality with the envisioned land use and needs of the community.
- The City's concurrency program is necessary to permit new development and allows the growth to occur where the City plans for it and provides the flexibility to add multimodal capacity in areas where the need is greatest.

BACKGROUND:

Following the staff presentation on the Draft Transportation Element and Transportation Strategic Plan (TSP) at the [July 16, 2024¹](https://www.kirklandwa.gov/files/sharedassets/public/v/1/city-council/agenda-documents/2024/july-16-2024/3a_study-session.pdf) Study Session, the City Council requested additional information on the City's existing transportation concurrency program to better understand how it fits into the work being done for the Transportation Element and TSP.

Concurrency is one of the goals of the Washington State Growth Management Act (GMA) and refers to the timely provision of public facilities and services to support new developments and maintain service levels to established standards. Concurrency for transportation is codified in

¹ https://www.kirklandwa.gov/files/sharedassets/public/v/1/city-council/agenda-documents/2024/july-16-2024/3a_study-session.pdf

the GMA under RCW 36.70A.070(6)(b), which requires that transportation improvements or strategies to accommodate the impacts of development are made “concurrent” with the development. Concurrent with the development is defined as in place at the time of development, or there is a financial commitment to complete these improvements or strategies within six years. Concurrency is one tool by which local jurisdictions ensure that public infrastructure keeps pace with the impacts of new development.

While the GMA requires that level of service (LOS) standards be adopted as part of a local jurisdiction’s comprehensive plan to measure concurrency on arterials, it does not mandate how those standards are defined. Therefore, local jurisdictions may adopt standards appropriate for the local context. The main purpose of LOS standards and concurrency for transportation is to ensure that the transportation system provides safe, reliable, and convenient access and mobility for people and goods and accommodates the travel demands of anticipated housing and employment growth.

At its core, the GMA concurrency requirement establishes LOS standards against which system performance is measured. LOS is used to determine whether the impacts of a proposed development can be met through existing system capacity and/or to identify if additional facilities or other strategies will be required to provide adequate capacity to accommodate the development. Concurrency by itself is not a panacea, but rather one tool amongst many to manage and balance the transportation system’s functionality with the envisioned land use and needs of the community.

The City of Kirkland has established a two-prong approach to concurrency: measuring multimodal level of service (MMLOS) standards (quantified by “person trips”), and vehicular delay at intersections (measured in seconds of delay and assigned a level A through F). A description of how person trips are calculated follows later in this memo. While this goes above the requirements of the GMA, it helps Kirkland identify needed improvements for all modes of travel throughout the City.

The current concurrency program has been in place since the adoption of the 2015 Comprehensive Plan and the 2015 Transportation Master Plan (with a planning horizon out to 2035). The project scope for the update to the Transportation Element and Transportation Strategic Plan in 2023 and 2024 did not include any revisions to the concurrency program and, therefore, the same program is planned to remain in place for the updated Transportation Element and TSP (with a planning horizon out to 2044).

DISCUSSION/ANALYSIS:

As a policy, concurrency has been directed by the City Council via adoption of the Transportation Element of the 2015 Comprehensive Plan. However, on a day-to-day basis, concurrency is implemented by staff as development applications are submitted for review.

The City of Kirkland manages concurrency and monitors the relationship between growth resulting from new development and the implementation of transportation projects and programs. Transportation Division staff tests each new development project for transportation concurrency to determine whether the current list of transportation improvement projects within the 6-year CIP will provide enough capacity to accommodate the trips generated by the new development or if additional transportation improvement projects are needed to support the new development.

As noted above, the City of Kirkland has a two-prong approach to transportation concurrency. The City measures both vehicular delay at intersections, and investment in the multimodal system.

What Happens if the City Cannot Maintain Concurrency?

The City is required by state law to maintain its adopted transportation concurrency standards. Transportation is the only area of concurrency that actually specifies denial of a proposed project (both private and public) if its impacts on the local transportation system would result in LOS dropping below adopted standards.

The GMA, at RCW 36.70a.070(6)(b), states that, “**local jurisdictions must adopt and enforce ordinances which prohibit development approval** if the development causes the level of service on a locally owned or locally or regionally operated transportation facility to decline below the standards adopted in the transportation element of the comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development are made concurrent with the development.” (Emphasis added.)

To receive approval, private developments must provide improvements or strategies to handle the new demand concurrent with the development (or provide a financial commitment to complete them within six years). If they cannot do so, then they will need to revise their project or face project denial.

The City is also required have programs to correct *existing* deficiencies and bring transportation facilities and services up to its adopted standards. If the City determines that it cannot meet its adopted LOS, then it may, e.g., need to revisit comprehensive plan goals and LOS to consider how they may be adjusted while still implementing the community's vision, or invest in more capacity-providing transportation capital projects and/or programs to add additional capacity projects to the 6-year CIP. The City may not, however, require a private developer to pay for improvements to correct existing deficiencies.

Doing nothing to remedy concurrency failures is not an option for local jurisdictions and would likely result in a challenge to the Growth Management Hearings Board (GMHB), which could lead to sanctions for noncompliance.

The following demonstrates in more detail how Kirkland implements its transportation concurrency program

Development Review for MMLOS

As development applications are submitted, they are reviewed against the supply of person trips to ensure that they are concurrent. Development projects approved in the 6-year CIP window shall not result in a person trip demand that exceeds the number of person trips provided (the “supply”).

When a new development is proposed, the number of person trips the development will generate (the “demand”) is estimated based on the size(s) and type(s) of land use included in the proposed development. Transportation Division staff review development projects and track the supply and demand of person trips in the 6-year CIP to make concurrency determinations. For example, if the balance of person trip supply over the 6-year CIP remains positive, proposed development projects will pass concurrency. A passing Concurrency Test Notice is provided to the applicant, which allows them to proceed in the development review and permitting process. However, if the concurrency test is failed (i.e. the balance of person trip capacity is negative), the applicant is

provided a Concurrency Test Notice with a failed status. In this case, the applicant has several options:

1. Change proposal to reduce the person trip demand so that it does not exceed the person trip supply; or,
2. Fund or build needed facilities to alleviate the concurrency failure; or,
3. Wait for the City to build the needed facilities to alleviate concurrency failure.

This process demonstrates how the City ensures MMLOS concurrency for private development.

Development Review for Intersection Delay

The City of Kirkland's minimum standard for traffic operations at intersections requires individual developments to mitigate intersections at LOS E and F in the PM peak period (see Table 1 below) based on the amount of impacts they are expected to generate. Development applicants submit a Transportation Impact Analysis (TIA) study to document their impacts on the City's transportation system as part of their application. Transportation Division staff review and approve the TIAs for each project, outlining mitigation and the transportation impact fee required to be paid.

Level of Service	Average Delay per Vehicle (in seconds) at Signalized Intersections
A	≤ 10
B	> 10–20
C	> 20–35
D	> 35–55
E	> 55–80
F	> 80

Table 1 Level of Service Standards - Vehicle Delay at Signalized Intersections

Kirkland's MMLOS

Kirkland has a mature vehicular network but does not have a complete network for the other modes of travel, including sidewalks, bicycle facilities, and transit. Therefore, utilizing multimodal level of service standard helps Kirkland measure comprehensive system performance and identify investment needs to build out a transportation system that also serves non-automobile modes consistent with GMA goals.

The Kirkland 2035 Comprehensive Plan proposed a new multimodal concurrency system that includes all modes of transportation and measures future person trip capacity from planned transportation projects and programs rather than traffic operations alone. Kirkland established its current multimodal concurrency system in 2015 with the adoption of [Ordinance 4509](#)². This system balances the planned person trip capacity with anticipated person trip demand generated by new developments in line with the future housing and employment growth targets adopted in the Comprehensive Plan. Therefore, at a macroscopic level, the concurrency system balances planned transportation improvements with the Comprehensive Plan growth targets over a 20-year planning horizon. At a micro level, the City uses a 6-year planning horizon to balance the capacity added from individual transportation projects with the growth generated by specific new developments.

The additional multimodal network capacity to accommodate future growth is derived from the projects and programs in the transportation capital project list, which is adopted as part of Kirkland's Capital Facilities Plan (CFP). Together, these projects and programs provide the added

² <https://docs.cityofkirkland.net/CMWebDrawer/RecordHtml/289298>

multimodal capacity to accommodate the planned housing and employment growth from the Comprehensive Plan over the next 20 years. Kirkland's concurrency system uses dollars spent on transportation capital projects as a measure of additional person trip capacity created by the City's transportation capital projects and programs. The balance of available person trip capacity for development is generated by the funded projects in the 6-year Capital Improvement Program (CIP). As more projects are funded in the CIP, more person trips become available for new development, but as development occurs, person trips are deducted from the available capacity.

Calculating Person Trips and Setting the MMLOS Concurrency Standard

For Kirkland to meet its MMLOS standard, it first measures the level of capital investment in capacity-providing projects which generate new person trip supply across the 6-year CIP. Examples of capacity-providing projects include new sidewalks, new turn lanes, transit supportive projects, bicycle lanes, new Intelligent Transportation System investments, and more. Once the capacity projects are identified, the total cost for those projects across the 20-year planning horizon is calculated, excluding any maintenance project or other non-capacity providing project costs.

Parallel to this process, the Bellevue-Kirkland-Redmond (BKR) Travel Demand Model is used to calculate the future demand in total number of person trips that the envisioned land use will generate in the 20-year planning horizon.

The total costs across the 20-year CFP project list are then divided by the future demand in total person trips across the 20-year planning horizon to get a cost per person trip (see Step 1 below) that is then used to determine how many person trips are added to the total supply by each project (see Step 2 below).

*Step 1: Hypothetical 20-year total project costs = \$300M and the Hypothetical 20-year land use generates 20,000 person trips in demand, the cost per person trip is \$15,000
($\$300,000,000 / 20,000 \text{ person trips} = \$15,000 \text{ per person trip}$)*

*Step 2: Hypothetical CIP Project A = \$3.75M and the cost per person trip = \$15,000, the project will provide 250 person trips
($\$3,750,000 / \$15,000 = 250 \text{ person trips}$)*

The person trips for all capacity-providing projects are then summed up to provide the total person trip capacity that the 20-year CFP project list will create. This is then reduced by the person trips generated by developments that are approved but not yet built (i.e. "pipeline projects") to get to the net new person trips in the 20-year planning horizon (see Step 3 below). This is often referred to as the "supply" of person trips over the 20-year planning horizon.

*Step 3: Hypothetical 20-year new person trips = 20,000, Pipeline Development Projects = 5,000 vested person trips, the 20-year net additional person trips ("Demand") is 15,000
($20,000 \text{ new person trips} - 5,000 \text{ vested person trips} = 15,000 \text{ net additional person trips}$)*

The supply of person trips is then divided by 20 to get an annual allowable rate of development (see Step 4 below).

Step 4: Hypothetical 20-year net additional person trips = 15,000, there will be 750 person trips per year ($15,000 \text{ net new person trips} / 20 \text{ years} = 750 \text{ person trips per year}$)

The final step in setting the MMLOS standard is to estimate the number of person trips generated by new development in the next six years. This step ensures the 6-year CIP is concurrent with anticipated development by providing sufficient capacity for new person trips (or "supply") for

anticipated development growth (or “demand”) within that 6-year window. This is calculated by using the annual rate of development and multiplying by six (see Step 5 below). The resulting number of person trips sets the standard for expenditure in the 6-year CIP that the City must provide to maintain concurrency. The City then demonstrates through the CIP that it is providing sufficient person trip capacity via the projects in the 6-year window.

Step 5: Hypothetical estimated new person trips per year = 750 and CIP covers six years, so 4,500 person trips must be provided in the supply to meet growth targets and be concurrent (750 new person trips per year x 6 years = 4,500 person trips needed in the 6-year CIP)

Once the total required person trips in the 6-year CIP is defined, the City must then demonstrate the appropriate level of investment to remain concurrent with the MMLOS standard (see Step 6 below).

Step 6: Hypothetical estimated person trips required in the 6-year CIP = 4,500 and each person trip costs \$15,000, therefore, the City must have a CIP that invests at least \$67,500,000 in transportation capital improvements that provide person trip capacity. (4,500 required person trips in the 6-year CIP x \$15,000 per person trip = \$67,500,000 worth of minimum investment needed in the 6-year CIP)

This process demonstrates how the City remains concurrent with its envisioned land use. For the purposes of providing context, the City currently has 2,818 person trips of capacity available as of the end of July 2024.

Looking forward to future planned projects, an example of a growth-related project that provides multimodal person trip capacity is 124th Avenue NE widening between NE 85th Street and NE 90th Street. This project supports the growth envisioned in the Station Area Plan, which is projected to create an additional 19,070 person trip demand on the system over 20 years. This project has been identified as one of the prioritized Draft TSP projects and was the subject of past Council questions during TSP presentations. The scope for this project is still conceptual but is proposed as widening the roadway to a five-lane cross section from NE 85th St through the NE 90th St intersection including widened sidewalks and raised protected bike lanes from NE 84th Ln through the NE 90th St intersection. The planning level cost estimate in the Draft TSP, excluding ROW acquisition costs, is \$41,428,000. Once completed, it is expected to add between 2,762 and 4,143 person trips to the system. While these figures are estimates and subject to change, it provides a sense of how the City will accommodate the growth in a growing part of the City (the Station Area) by providing multimodal capacity as part of the roadway widening projects.

Kirkland's Vehicular Delay at Intersections LOS

The City of Kirkland also measures vehicular delay at signalized intersections to develop the 20-year CFP. This is an important complement to the MMLOS to address congestion in Kirkland that results from not only residential growth, but also economic growth. Additionally, it addresses needs for congestion management from emergency responders, transit buses, commerce, deliveries, and more.

For long-range planning, the vehicular delay at intersections standard is LOS E in the PM peak period based on planned future land use in the Comprehensive Plan, with capital projects identified to address traffic operations at intersections performing at LOS F in the PM peak period. Traffic operations at key intersections in 2044 (the planning horizon year for the K2044 Comprehensive Plan) were evaluated using travel demand modeling in conjunction with intersection operational analysis as part of the TSP update effort. Intersections that are expected to operate at LOS F in 2044 are addressed through concurrency projects that would add additional

roadway capacity; these projects are shown in the draft 20-year project list in the CFP and TSP and were also shared at the July 16, 2024 Study Session presentation on the Transportation Element (excerpted in Figure 1 below and Attachment A for a map of the same projects). These projects are included in the draft Capital Facilities Element of the Comprehensive Plan.

Concurrency Mitigation Projects		
Concurrency projects are required to resolve transportation system deficiencies related to land use growth through 2044.		
Project Title	Description	Cost Estimate
NE 68th St & 108th Ave NE	Restripe EB right-turn pocket to shared EB through-right and widen for corresponding receiving lane. Optimize splits.	\$706,707
98th Ave NE & Juanita-Drive-NE 116th Street	Widen for additional NB left turn pocket and optimize splits. Additional NBL receiving lane currently exists.	\$845,370
NE 116th Street & 124th Ave NE	Widen for new SBR turn pocket, optimize splits and modify for lagging NBL phase instead of leading NBL. Additional SBR receiving lane currently exists.	\$654,255
100th Ave NE & NE 132nd Street	Widen for additional WB right-turn pocket, additional EB left-turn pocket and optimize splits. The receiving lanes currently exist.	\$1,594,625
NE 124th Street & 116th Ave NE/I-405 on ramp	Widen for additional SB right turn pocket, EB left turn pocket and EB right turn pocket. Adjust signal timing. The receiving lanes currently exist.	\$2,705,951
NE 124th Street & Slater Ave/132nd Ave NE	Widen for NB right turn pocket and separate the NB right turn movement from the NB through lane. Optimize splits. The receiving lanes currently exist.	\$2,600,000
Concurrency Mitigation Total		\$9,106,908

Figure 1 Draft TSP Concurrency Mitigation Projects

Because the projects listed in Figure 1 are required to mitigate intersection operational failures in the 20-year planning horizon, they are not subject to prioritization amongst the other TSP projects. This subset of projects addresses infrastructure needs in the areas that are expected to see the greatest impacts of growth, both residential and economic.

Example of Concurrency in Action

The City has continually implemented projects that provide capacity for all modes of transportation. A recent example is the development of the Totem Lake Connector (TLC) Bridge, which connects the Cross Kirkland Corridor (CKC) over the NE 124th St and 124th Ave NE intersection. The TLC connects the two ends of the 5.75-mile CKC once severed by one of Kirkland's most complicated intersections: Totem Lake Boulevard and Northeast 124th Street. Beyond providing a critical connection for the CKC in the growing Totem Lake area, the TLC Bridge provided an additional 1,672 person trip capacity to the City's MMLOS supply. Projects such as these add the needed multimodal capacity for person trip supply to ensure that the city remains concurrent with development while also demonstrating the connection between localized growth and transportation capital investments.

What it All Means

The City's concurrency program meets the state requirement to allow it to permit the smart growth projects the City has planned for. This ranges from Middle Housing to mixed-use, multi-family developments served by transit. The City's program also provides the flexibility to add multimodal capacity in areas where the need is greatest or the most benefit can be achieved. The two prongs of MMLOS and Vehicular Delay at Signalized Intersections work together to respond to growth and provide multimodal options for the community. The concurrency policies in place are designed to support the number of dwelling units and jobs inherent in the land use vision while also meeting GMA requirements to provide the infrastructure needed now and into the future.

It is important to note that as growth occurs, the concurrency mitigation projects may change in scope in response to changing conditions. The draft mitigation projects identified for the TSP are based on assumptions and modeling and staff will continue to monitor performance in the system and adjust as needed. Over the course of the 20-year planning horizon, the concurrency mitigation projects will continue to undergo scrutiny and may look different than preliminarily scoped at the time they are implemented. Additionally, there are regular opportunities to revisit

the mitigation projects and their scopes, including annually at the 6-year CIP update, as well as periodically for the ten-year Comprehensive Plan update.

While mitigation projects that are identified through the concurrency process must be undertaken to resolve concurrency failures, the City can always choose to invest in additional areas of need for reasons that are not concurrency-related, such as safety, access, regional coordination, and more.

NEXT STEPS:

The City Council will continue to hear updates on the TSP throughout the year. While changes to the concurrency program are not scoped for the Transportation Element or TSP, if Council has a desire to make changes to the policy, staff would likely undertake such an effort in subsequent years, potentially 2025 or 2026 depending upon the desired changes.

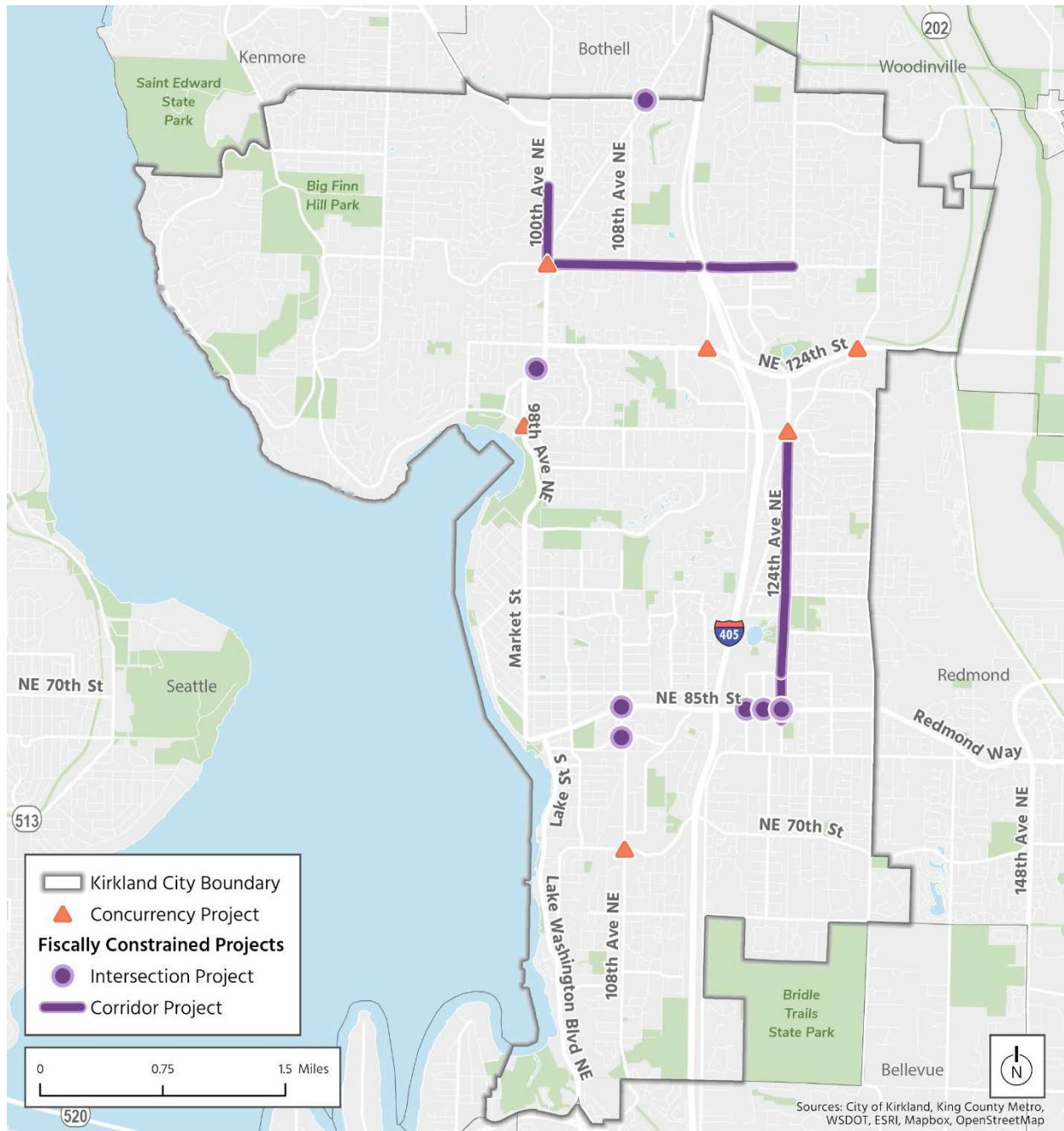
While Council will consider approval of the TSP, the Transportation Commission will continue to work with the project team to refine the TSP in late summer and early fall 2024. The Transportation Commission is slated to hold a public hearing on the Draft TSP at their regular meeting on September 25, 2024, which will conclude their effort on these planning efforts. The City Council will review the recommended version of the TSP in October, with an anticipated adoption in November.

The Transportation Element will be considered by the City Council in conjunction with the rest of the Comprehensive Plan in December 2024. Council is anticipated to take action on the TSP prior to the Comprehensive Plan.

ATTACHMENTS:

Attachment 1 – Map of Concurrency Projects in TSP to Mitigate Intersection Delay in the 20-year Planning Horizon

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