Bellevue Mobility Implementation Plan:

Background, Context, Existing Conditions, and Best Practices

Report

City of Bellevue, WA

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Table of Contents

Introduction **6**

Section 1: Background and Context **7**

State, Regional, and Local Policies 7

Growth Management Act 7

Bellevue Comprehensive Plan 11

Regional Transportation Investments 12

Bellevue Planning Documents 12

Transit Master Plan 13

Pedestrian and Bicycle Transportation Plan 13

MMLOS Metrics, Standards & Guidelines 14

Traffic Standards Code 14

Transportation Development Code 15

Complete Streets Transportation Design Manual 15

Transportation Improvement Program 16

Transportation Facilities Plan 16

Capital Investment Program Plan 17

2016 Neighborhood Safety, Connectivity and Congestion Levy 18

Conclusion 18

Section 2: Long-Range Transportation Project Prioritization **19**

Best Practices 19

Ballard-Interbay Regional Transportation System (BIRT) Study – City of Seattle 19

Transportation Master Plan – City of Sammamish 21

Transportation Master Plan – City of Olympia 22

SMART SCALE – Virginia Department of Transportation 24

NCHRP Cross Mode Project Prioritization 24

Multiple Account Evaluation Framework 27

Conclusion 28

Section 3: Transportation Concurrency **29**

Existing Concurrency Methodology 29

Findings Related to Existing Concurrency System 30

Multimodal Concurrency 30

Best Practices 31

Mode Share....31
Vehicle Miles Traveled....31
Transportation System Completeness....32
Conclusion....32

List of Figures

Figure 1. Washington State Planning Framework, PSRC. 7
Figure 2. VISION 2050 Regional Transportation Plan and Concurrency Policies, PSRC. 10
Figure 3. Potential Project Prioritization Framework, City of Sammamish. 21
Figure 4. Sidewalk Prioritization Criteria, City of Olympia. 22
Figure 5. Sidewalk Priorities, City of Olympia. 23
Figure 6. Citywide System Targets, City of Olympia. 24
Figure 7. Evaluation Metrics, Hampton Roads Transportation Planning Organization. 25
Figure 8. Proposed Cross Modal Project Prioritization Concept, Parsons Brinckerhoff. 26
Figure 9. Proposed Benefit Cost Analysis Concept, Parsons Brinckerhoff. 26
Figure 10. Mobility Management Areas, City of Bellevue. 29
Figure 11. Sequence Toward Multimodal Concurrency, City of Bellevue. 33

List of Tables

Table 1: Transportation Facilities Plan Evaluation Criteria (2021) 17
Table 2: Ballard-Interbay Regional Transportation System Study Evaluation Criteria 20
Table 3: Multiple Account Evaluation Framework Steps 27

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Introduction

Over the past decade, the City of Bellevue has been taking steps to update its transportation planning, design, and implementation practices to better reflect the changing land-use context and the values of the community. These values are largely articulated in the adopted modal plans and Comprehensive Plan (last major update in 2015) and include policies such as: creating a transportation system for all, backed by a multimodal network vision from the modal plans; establishing and utilizing multimodal level-of-service (MMLOS) standards; monitoring MMLOS and adjusting programs and resources to achieve mobility targets; meeting MMLOS standards and complete streets goals; establishing multimodal concurrency; and finally, developing a citywide Mobility Implementation Plan. Since the adoption of the Comprehensive Plan, the City has been acting to advance these policies by defining MMLOS Metrics, Standards, and Guidelines, identifying a framework for multimodal concurrency, and initiating the Mobility Implementation Plan.

The Mobility Implementation Plan will unify the City's prior work on multimodal transportation planning, design, and implementation to:

- Clearly define the current and future gaps in multimodal system performance using updated MMLOS guidelines,
- Develop a system to prioritize new transportation investments, and
- Clearly define how multimodal concurrency will be evaluated and implemented so that new growth supports the development of the multimodal network.

The flowchart below summarizes these critical elements of the Mobility Implementation Plan:

This background document focuses on the latter two elements of the Mobility Implementation Plan, as the MMLOS Analysis is documented in the 2017 *MMLOS Metrics, Standards, and Guidelines Report*. Section 1 of this report provides the overarching background related to project prioritization and multimodal concurrency and Sections 2 and 3 delve into the details of project prioritization and multimodal concurrency, respectively.

Section 1: Background and Context

The City of Bellevue's approach to transportation planning has evolved over the past several decades as the city has grown. As outlined in the Comprehensive Plan, the overarching transportation vision is that "moving into, around and through Bellevue is reliable and predictable." To achieve that the City strives for a multimodal transportation network that provides safe and efficient travel options for residents, employees, and visitors. To attain this vision, and to support continued population and employment growth, Bellevue plans and policies have increasingly emphasized transit, walking, and biking, particularly in denser areas of the city.

A critical policy element of achieving this outcome is to achieve the State-mandated concept of transportation "concurrency," which requires jurisdictions to determine the ability of the transportation system to support the transportation demands of new development; to identify necessary increases in capacity; and to deny such development if the new demand cannot be accommodated. This memorandum provides the background and context within which the City applies concurrency, as well as the existing concurrency framework, best practices used by other jurisdictions, and best practices related to multimodal project identification and prioritization.

State, Regional, and Local Policies

Figure 1 displays the land use and transportation planning framework in Washington state. The overarching regulatory act is the Growth Management Act (GMA), with planning policies that flow from the statewide level to the multicounty and county level, and finally to local jurisdictions.

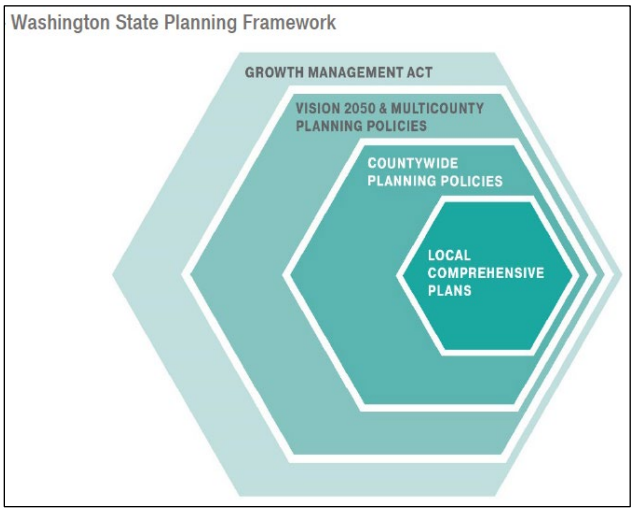


Figure 1. Washington State Planning Framework, PSRC.

Growth Management Act

The Washington legislature enacted the Growth Management Act in 1990, to regulate the way in which cities and counties in the state plan for population and employment growth.[1] In particular, the GMA requires jurisdictions to ensure that the transportation system adequately accommodates planned land use. This concept is called transportation concurrency. The GMA requires local jurisdictions to establish a performance (also known as a level of service)

[1] Growth Management – Planning by Selected Counties and Cities, RCW, Title 36, Chapter 36.70A. Available at: https://app.leg.wa.gov/RCW/default.aspx?cite=36.70A&full=true. Accessed January 13, 2021.

standard[2] and to adopt ordinances to enforce the standard—notably that the jurisdiction deny a building permit when the concurrency performance standard is not met. While the GMA is clear that a concurrency standard must be defined and that a development application must be denied if the standard is not met, the law allows broad flexibility to a community to define concurrency. Each jurisdiction may develop a methodology that is best suited to its unique context. In fact, the GMA emphasizes the following goal, that is based in part on Bellevue's 2009 efforts[3] to reshape transportation concurrency practices in Washington state:

Transportation concurrency should *"encourage efficient multimodal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans."*[4]

The state legislature recognizes that a prescriptive one-size-fits-all definition of level-of-service and concurrency will not meet the diverse needs of communities across the state. Given the local autonomy to address concurrency under the GMA framework, several jurisdictions have taken an explicitly multimodal approach to define a level-of-service/concurrency standard that meets the GMA requirements and reflects local priorities:

- Since the 1990s, the City of Renton has used a person-weighted sum of travel distances, averaged in all directions from the City Center, for SOV, HOV, and transit modes to emphasize the benefits of transit and carpool travel.
- In 2009, the City of Redmond developed a novel "plan-based" concurrency level-of-service standard. Under this approach, Redmond commits to build out its multimodal transportation plan (which includes roadway, transit, pedestrian, and bicycle improvements) at a pace that is ahead of the planned growth in the community.
- Between 2012 and 2020, the cities of Kirkland, Kenmore, and Olympia adopted similar plan-based concurrency level-of-service standards.
- The City of Seattle is transitioning to a mode-share based concurrency level-of-service standard. This standard reflects the conditions in Seattle where there is little space to expand capacity for private vehicles and that each new development is expected to manage or mitigate its trip generation to ensure an outcome of fewer single-occupancy vehicle trips.

[2] The GMA specifically identifies that jurisdictions identify a concurrency standard for locally-owned arterials and transit routes; this definition excludes state highways.

[3] https://www.psrc.org/sites/default/files/multimodal-concurrency-pilot.pdf. Accessed June 1, 2021.

[4] RCW 36.70A.020(3)

VISION 2050

The Puget Sound Regional Council (PSRC) is the federally designated Metropolitan Planning Organization and plans for the areas within King, Pierce, Snohomish, and Kitsap counties. In 2020, the PSRC adopted VISION 2050[5], the regional plan aimed at achieving a more sustainable and equitable future. Transportation is a key element of this shared regional vision as it affects not only mobility and accessibility, but outcomes related to housing choices and affordability, equity, economic vitality, climate change, and public health among others.

VISION 2050—which also includes the Multicounty Planning Policies, Regional Growth Strategy, and Regional Transportation Plan—calls for focusing growth in regional growth centers and high-capacity transit station areas (both of which apply to Downtown Bellevue). Cities within the PSRC geography must adopt local comprehensive plans and subarea plans consistent with VISION 2050 and the GMA and must plan to accommodate the forecasted growth.

VISION 2050 explicitly addresses the need to shift trips from single-occupant vehicles to walking, biking, and transit, particularly within centers, including through concurrency policies: "*As the region's centers and compact communities continue to grow and evolve, future mobility solutions will require integrating multimodal forms of transportation into communities, including transit improvements and more complete bicycle and pedestrian facilities. VISION 2050 calls for addressing multimodal transportation options in concurrency programs and tailoring requirements in centers and subareas to support transit.*"

There are multiple transportation policies in VISION 2050 that call for jurisdictions to direct investments into a multimodal system that supports a shift to modes other than driving, as shown in **Figure 2**. In addition, there are three policies related to development patterns aimed at supporting growth through concurrency.

[5] Puget Sound Regional Council, VISION 2050, October 2020. Available at: https://www.psrc.org/sites/default/files/vision-2050-plan.pdf. Accessed January 13, 2021.

The Regional Transportation Plan

MPP-T-7

Fund, complete, and operate the highly efficient, multimodal system in the Regional Transportation Plan to support the Regional Growth Strategy. Coordinate WSDOT, regional, and local transportation agencies, in collaboration with the state legislature, to build the multimodal system.

MPP-T-8

Strategically expand capacity and increase efficiency of the transportation system to move goods, services, and people consistent with the Regional Growth Strategy. Focus on investments that produce the greatest net benefits to people and minimize the environmental impacts of transportation.

MPP-T-12

Emphasize transportation investments that provide and encourage alternatives to single-occupancy vehicle travel and increase travel options, especially to and within centers and along corridors connecting centers.

MPP-T-13

Increase the proportion of trips made by transportation modes that are alternatives to driving alone, especially to and within centers and along corridors connecting centers, by ensuring availability of reliable and competitive transit options.

Supporting Growth Through Concurrency

MPP-DP-52

Develop, implement, and evaluate concurrency programs and methods that fully consider growth targets, service needs, and level-of-service standards. Focus level-of-service standards for transportation on the movement of people and goods instead of only on the movement of vehicles.

MPP-DP-53

Address nonmotorized, pedestrian, and other multimodal types of transportation options in concurrency programs – both in assessment and mitigation.

MPP-DP-54

Tailor concurrency programs for centers and other subareas to encourage development that can be supported by transit.

Figure 2. VISION 2050 Regional Transportation Plan and Concurrency Policies, PSRC.

Bellevue Comprehensive Plan

As required by the GMA and Multicounty Planning Policies, Bellevue maintains a Comprehensive Plan which is updated regularly to reflect changing circumstances. The most recently adopted Comprehensive Plan[6] includes amendments through May 2019 with the most recent major update completed in 2015. The Comprehensive Plan sets the course on a variety of topics including growth and development and includes specific elements for Transportation, Land Use, Neighborhoods, Capital Facilities, Economic Development, and the Environment.

The Comprehensive Plan includes direction on concurrency to align with the vision for thriving neighborhoods that provide safe and reliable mobility options for all modes of travel. In particular, *Policy TR-30* states that the City should "establish multimodal level-of-service and concurrency standards and other mobility measures and targets for transportation corridors and in each area of the city in consideration of planned development patterns and mobility options." There are also several funding and implementation policies that underscore the long-term commitment to a multimodal network in Bellevue:

- **TR-22.** Implement and prioritize transportation system improvements to meet the multimodal level-of-service standards, Complete Streets goals, and other mobility targets for all transportation modes, recognizing the range of mobility needs of each corridor and Mobility Management Area.
- **TR-61.** Allow for repurposing of travel lanes for other uses such as parking, transit or pedestrian and bicycle facilities where excess vehicular capacity exists and/or to optimize person throughput along a corridor.
- **TR-132.** Balance funding to achieve scheduled progress on mobility targets/level-of-service standards for all modes within the Mobility Management Areas, by using results from monitoring the targets/level of service to prioritize transportation facility and service investments.

Note that in 2021, amendments to the Comprehensive Plan will change policy language and policy numbering.

In addition to a vision, goals, and policies, the Comprehensive Plan identifies specific transportation projects in the Comprehensive Transportation Project List. This list will be moved out of the Comprehensive Plan and into the 2022 update of the Local Transportation Improvement Program. The projects are developed through long-range planning and touch on facilities for all modes of travel.

[6] City of Bellevue, Comprehensive Plan, 2019. Available at: https://bellevuewa.gov/city-government/departments/community-development/planning-initiatives/comprehensive-plan Accessed January 13, 2021.

Regional Transportation Investments

Regional transportation investments contribute a substantial amount of the capacity to support mobility and growth in Bellevue. Interstate 405 runs as a north-south spine through the city. The Washington State Department of Transportation (WSDOT) developed the I-405 Master Plan to address the long-term vehicle mobility needs of the corridor with a series of improvements to accommodate the growth in demand. Beyond the typical highway improvements, such as adding new lanes, an express toll lane system, and local arterial improvements, the I-405 Master Plan calls for a multimodal approach including transit-supportive projects such as park & ride and transit center expansions, Bus Rapid Transit stations, additional transit service, and pedestrian and bicycle improvements.

The transit landscape in Bellevue has evolved substantially over the past several decades as the city has grown, particularly with Downtown Bellevue becoming a transit hub for its dense residential and employment uses. The most fundamental change will occur in 2023 with the opening of Sound Transit's East Link light rail (which will be known as Line 2) that will connect six new Bellevue stations to Seattle and the Central Link line to the west as well as to Redmond to the east. In addition to this regional investment in high-capacity transit, Bellevue has a robust fixed-route bus system. King County Metro and Sound Transit both provide bus services in Bellevue. Sound Transit plans on opening its I-405 STRIDE Bus Rapid Transit line linking Bellevue to Lynnwood, Renton, and Burien (using the I-405 Express Toll Lanes described above) in 2024. King County Metro's future plans are guided by the METRO CONNECTS[7] long-range vision adopted in 2017. Among other improvements, METRO CONNECTS calls for three Bus Rapid Transit lines, one of which is already in operation: the RapidRide B Line connecting the Bellevue Transit Center to the Redmond Transit Center. The RapidRide K Line, which would connect Eastgate to Kirkland via Downtown Bellevue is in the early planning phases.

Bellevue Planning Documents

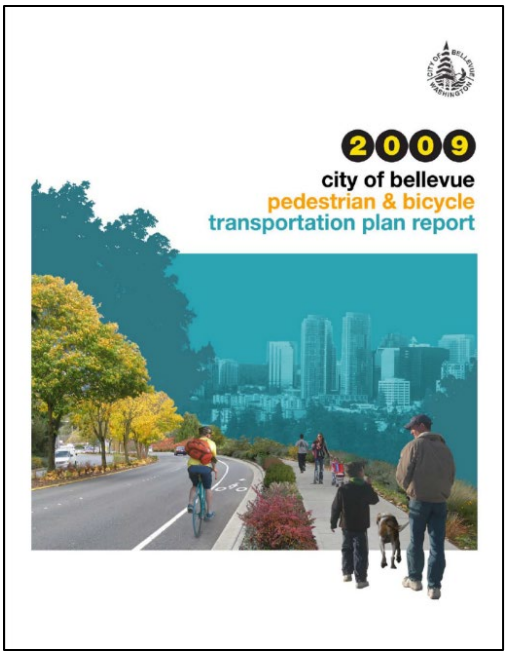
Bellevue develops a variety of planning documents to implement the vision outlined in the Comprehensive Plan. These include plans focused on specific modes of travel—the Pedestrian and Bicycle Transportation Plan and the Transit Master Plan—as well as subarea plans that focus on specific geographies such as the Downtown Transportation Plan. The City also adopts a Transportation Improvement Program, a Transportation Facilities Plan and Capital Investment Program Plan.

[7] King County Metro, 2017. METRO CONNECTS. Available at: https://drive.google.com/file/d/0B44RYEx3kgpoZUJqbXVScnR4cjg/view. Accessed February 5, 2021.

Transit Master Plan

The Bellevue Transit Master Plan[8], (TMP) adopted in 2014, established strategies and projects to support Bellevue's transit service and capital needs through 2030. The vision statement is framed around the concept of "abundant access," specifically to "support planned growth and development with a bold transit vision that provides efficient, useful, attractive service for most people, to most destinations, most of the time, serving maximum ridership." In other words, the vision is not simply to accommodate growth as required by state and regional planning policies, but to foster that growth with a robust transit system that is an asset to the community. The TMP identifies a Frequent Transit Network (FTN) that leverages and complements the regional investment in East Link light rail and upon which local transit service and capital investments are focused.

Pedestrian and Bicycle Transportation Plan



The City of Bellevue published its Pedestrian & Bicycle Transportation Plan Report[9] in 2009; it outlines the vision for Bellevue to become an increasingly walkable and bikeable city. Although not a regulatory document itself, the plan compiles all of the pedestrian and bicycle policies, projects, and maps into a single document to serve as the main resource for the planning, design, construction, and maintenance of active transportation facilities in Bellevue. The plan includes a vision, assessment of the existing facilities and travel, planned network, and action plan.

[8] City of Bellevue, Bellevue Transit Master Plan, July 2014. Available at: https://bellevuewa.gov/sites/default/files/media/pdf_document/TMP-Bellevue-Transit-Master-Plan-2014.pdf. Accessed January 13, 2021.

[9] City of Bellevue, Pedestrian & Bicycle Transportation Plan Report, 2009. Available at: https://bellevuewa.gov/sites/default/files/media/pdf_document/ped-bike-plan-2009.pdf. Accessed January 13, 2021.

MMLOS Metrics, Standards & Guidelines

In 2017, the Bellevue Transportation Commission approved a set of recommendations related to multimodal level-of-service (MMLOS), setting the foundation for the Mobility Implementation Plan. The MMLOS Metrics, Standards & Guidelines[10] are rooted in the commitment to provide a transportation system that accommodates all people using all modes of travel. Such a multimodal transportation system can be considered a "layered network" in which each mode has its own complete network which may overlap with other modes on some facilities.

The Transportation Commission set forth a new approach to mobility by expanding the concept of LOS to apply to all modes rather than only vehicles. The Transportation Commission process included a review of best practices related to MMLOS and consideration of the policy context locally and regionally. Based on this study of the varying approaches, the Transportation Commission recommended specific metrics for vehicles, pedestrians, bicycles, and transit as well as a standard or guideline associated with each metric. These metrics were subsequently incorporated into the Bellevue Complete Streets Transportation Design Manual for implementation purposes. As each modal network evolves to meet these standards and guidelines—increasing system completeness—the vision for an integrated, layered network of all modes will be realized.

This document is of particular importance to the Mobility Implementation Plan and transportation concurrency as it provides key metrics by which to assess the performance of the transportation system and also includes standards/guidelines for what might be considered to be acceptable performance. Moving forward, it is likely that the Mobility Implementation Plan will incorporate this document with updates to the standards/guidelines to reflect the latest planning work in the City.

Traffic Standards Code

The Traffic Standards Code sets forth specific standards that provide for city compliance with the concurrency requirements of the state Growth Management Act (GMA) and for consistency between city and countywide planning policies under the GMA. GMA requires that transportation improvements or strategies to accommodate the traffic impacts of development be provided concurrently with development to handle the increased traffic projected to result from growth and development in the city and region.

[10] City of Bellevue, 2017. MMLOS Metrics, Standards & Guidelines Final Report. Available at: https://bellevuewa.gov/sites/default/files/media/pdf_document/Bellevue_MMLOS%20FINAL.pdf Accessed January 13, 2021.

Transportation Development Code

The Transportation Development Code provides a regulatory framework for transportation impact mitigation requirements relating to redevelopment and new development. The code requires that a traffic impact analysis report be prepared for any proposed development project that is likely to cause significant impacts to existing or planned transportation facilities or may require mitigation. Based upon the findings of the report, the City may require mitigation measures in the form of construction of capital improvements (e.g. traffic signal, intersection modifications); a funding contribution to a future project that will mitigate the project's traffic impacts; and/or developing a transportation management program (TMP) aimed at reducing the peak hour trips generated by the development.

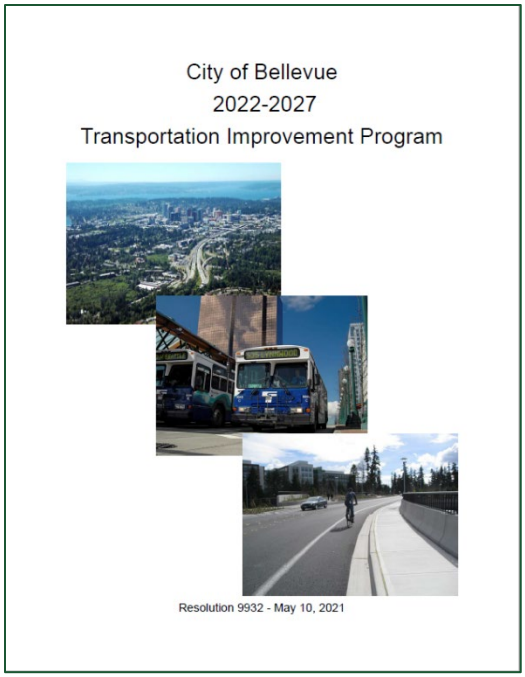
The transportation development code includes a complete streets policy stating that the City will implement complete streets—streets that provide appropriate facilities to meet the mobility needs of people of all ages and abilities who are walking, bicycling, riding transit, driving, and transporting goods—to the maximum extent practical. More detailed design requirements are incorporated into the Transportation Design Manual.

Complete Streets Transportation Design Manual

In 2020, Bellevue developed a draft Complete Streets Transportation Design Manual[11] (Manual) that describes the intent and requirements for the design and implementation of transportation facilities within the public rights-of-way. This Manual provides guidance and context for design elements and facilities that are mandated as part of the Complete Street ordinance enacted in 2016. In addition to identifying the transportation policies that support complete street development, the Manual provides design guidance on pedestrian, bicycle, transit facilities as well as along the roadway, curb space and at intersections. The Manual is intended for use and reference by City staff, private development teams, and other agencies doing work in Bellevue.

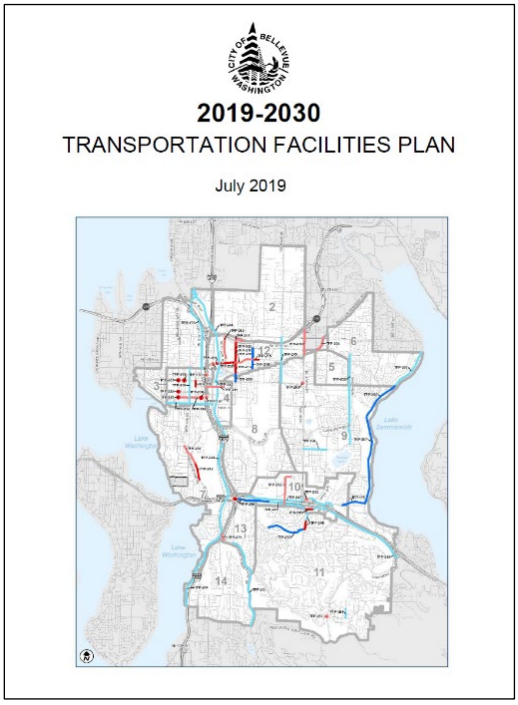
[11] City of Bellevue, 2020. Transportation Design Manual. Available at: https://bellevuewa.gov/city-government/departments/transportation/permits-and-standards/transportation-design-manual. Accessed April 30, 2021.

Transportation Improvement Program



The Local TIP serves as a six-year work plan for the development of local transportation systems and is an important planning component, updated annually, under the Growth Management Act. The Washington State Department of Transportation (WSDOT) and Puget Sound Regional Council (PSRC) use Local TIPs to coordinate the transportation programs of local jurisdictions with those of regional agencies. PSRC monitors Local TIPs for projects of regional significance (to be modeled for Air Quality conformity) and projects supported by federal funds. These projects are incorporated into the Regional TIP, which is then included in the State TIP. For Bellevue, the primary importance of the Local TIP is to create eligibility for funding from state and federal grant programs. Because the Local TIP is not revenue constrained, projects and programs that the City would implement within the 6-year timeframe are included. Local TIPs then, by definition, represent a comprehensive list of projects and programs deemed necessary to ensure a balanced investment in the City's multimodal transportation system.

Transportation Facilities Plan



The Transportation Facilities Plan[12] (TFP) is a comprehensive citywide implementation plan that compiles the priority projects from the various long-range plans discussed above, along with other emerging needs that may not have been previously identified. The TFP covers a 12-year period and, unlike the Transportation Improvement Program, is constrained by revenue projections.

In addition to functioning as an intermediate-range planning tool between the Comprehensive Plan (and other longer-range functional plans) and Capital Investment Program Plan horizons, the TFP sets the basis for the Transportation Impact Fee Program. Through that program, developers pay a share of projects costs that will provide capacity for the users of their developments. The City also conducts a programmatic environmental review of the

[12] City of Bellevue, 2019. Transportation Facilities Plan. Available at: https://bellevuewa.gov/sites/default/files/media/pdf_document/TFP%202019-2030%20final%20071919%20TFP.pdf. Accessed January 13, 2021.

projects included in the TFP to demonstrate how those network enhancements will accommodate the 12 years of land use growth forecast over the Plan period. These determinations are used by Bellevue development review staff to inform decisions to approve or deny development applications.

An important element of the TFP is how the City prioritizes the larger list of projects in the Comprehensive Transportation Project List and other modal plans into a funding constrained list. The TFP begins by including the projects from the most recent CIP Plan adopted by the City Council (discussed below) and the remaining projects are determined using a prioritization process of the projects included in the Comprehensive Transportation Project List, Pedestrian and Bicycle Transportation Plan, Transit Master Plan and other plans like the Downtown Transportation Plan and Eastgate/I-90 Study. Any projects that have arisen from the public involvement process for the TFP or through City staff recommendations are also considered. The prioritization process uses the scoring criteria shown in **Table 1** for roadway and intersection projects. Projects that support transit service and facilities, and projects for non-motorized transportation are typically not listed and are evaluated separately.

Table 1: Transportation Facilities Plan Evaluation Criteria (2021)

Evaluation Criteria	Weight
Safety (vehicular, pedestrian, bicycle)	30%
Level of Service (congestion management)	20%
Transit (improving service, facilities and/or access)	20%
Non-Motorized (serving key locations/populations, providing connected facilities)	20%
Plan Consistency & Outside Funding (integration with local/regional plans, likelihood of attracting non-local funds)	10%

Source: City of Bellevue.

Capital Investment Program Plan

The Capital Investment Program (CIP) Plan considers a period of seven years and focuses on implementation of the highest priority capital projects. The City Council adopts the CIP every two years as part of the biennial budget update. The CIP typically includes a subset of high-priority projects from the TFP that are needed to support growth in the near term as well as other projects identified by City staff, the public, or other sources that do not appear in the TFP. The CIP includes projects that touch on a variety of areas, with transportation accounting for the largest portion of the budget at roughly 40 percent.

2016 Neighborhood Safety, Connectivity and Congestion Levy

In 2016, Bellevue voters passed the 20-year Neighborhood Safety, Connectivity and Congestion Levy to supplement other transportation funding sources.[13] Projects eligible for funding are categorized as follows: neighborhood safety; bicycle facilities; sidewalks, trails, and paths; neighborhood congestion; and technology for safety and traffic management; and system maintenance. The candidate levy projects are compiled from existing plans and programs' lists of candidate project locations; many projects originate from the public.

As there was not an existing framework to prioritize Neighborhood Congestion Reduction Levy projects, City staff worked with the Transportation Commission to develop a three-tier project prioritization process. Tier 0 is a pass/fail criteria: only projects that are not dependent on development or a future outside agency project pass. Tier 1 includes an evaluation of existing vehicle LOS and safety using AASHTO Highway Safety Manual predictive methods. Tier 2 is used prior to final design and has seven components: proposed vehicle LOS (and urban travel time for corridor projects) which is weighted most heavily, potential for grant funding, complexity of implementation, multimodal LOS for pedestrians, multimodal LOS for bicycles, transit impact, and safety.

Conclusion

In summary, state, regional, and local policies are well-aligned in their commitment to developing a robust multimodal transportation network that supports population and employment growth. Moreover, the implementation of these policies is taking form in the massive investments in multimodal options throughout the region and in Bellevue locally. The City has developed a strong foundation of modal plans and funding mechanisms to implement a multimodal system; however, the existing transportation concurrency program and a lack of specific guidance on how to advance projects from the modal plans and Comprehensive Transportation Project List limits a faster transition to a multimodal system in Bellevue. The following chapter provide more context on best practices related to multimodal project prioritization from other communities and Bellevue's concurrency policy.

[13] City of Bellevue, 2021. Available at: https://bellevuewa.gov/city-government/departments/transportation/projects/transportation-levy-projects. Accessed March 12, 2021.

Section 2: Long-Range Transportation Project Prioritization

The Comprehensive Plan's vision for a multimodal transportation system will take time to implement. The Transportation Commission's MMLOS Metrics, Standards, and Guidelines document sets a clear target for the performance of the transportation system, but in a resource-constrained environment, the City will need to make choices about which specific projects move forward in any given year to build out each layer of the modal network. This incremental approach to building a complete transportation system requires a project prioritization process that can be applied across multiple modes. While Bellevue has applied project prioritization frameworks within individual modal plans and the TFP, there is no common citywide framework. Moreover, there is a desire to directly incorporate values such as sustainability and equity into project prioritization, as determined through the Mobility Implementation Plan Performance Metrics. This section describes and summarizes best practices related to project prioritization, a critical component of a successful Mobility Implementation Plan.

Best Practices

Ballard-Interbay Regional Transportation System (BIRT) Study – City of Seattle

The City of Seattle completed the Ballard-Interbay Regional Transportation System (BIRT) Study in 2020 to improve travel in the Ballard-Interbay area including considerations related to bridge replacement, corridor investments, and multimodal transportation improvement projects. As part of the project, a set of project evaluation criteria were developed that applied to a variety of multimodal projects. The criteria were developed to relate directly to the project's goals and each criterion had a low, medium, and high score definition (i.e. 0, 1, or 2 points). A high level summary is listed in **Table 2** and the full table is included in the SDOT BIRT Report Appendices. Each project was assigned a composite score that weighted the score for each goal equally.

Table 2: Ballard-Interbay Regional Transportation System Study Evaluation Criteria

Goal	Evaluation Criteria
Improve mobility for people and freight	Throughput: Project increases person trips and person throughput.
	Transit Mobility: Project improves transit mobility.
	Access: Project increases the geographic reach of who can walk/bike to a key destination (light rail station, existing RapidRide Stop, or major jobs center (Terminal 91, Expedia, Armory)) under low-stress conditions.
	Connectivity: Project improves the number of high-quality travel choices through improved connectivity.
	Travel Time & Reliability: Project reduces or maintains freight travel times on key corridors.
	Route Resiliency: Project adds to available freight paths at key locations in the study area.
Provide a system that safely accommodates all travelers	Safe and Comfortable Options: Project makes biking safer and more comfortable for people of all ages and abilities.
	Safe and Comfortable Options: Project makes walking and rolling safer and more comfortable.
	Safe and Comfortable Options: Project makes using transit safer and more comfortable.
	Crossing Safety: Project makes crossing roadways safer and more comfortable for those walking, rolling, biking, and accessing transit.
	Collision Histories and Factors: Project addresses safety at a location where many collisions have occurred or are identified in the City's Bicycle and Pedestrian Safety Analysis.
	Roadway Geometrics: Project improves mobility for trucks and deliveries.
	Modal Separation: Project limits conflicts with other modes.
Equity	Social Impacts - Residents: Project minimizes impacts on low-income households and people of color that live in the BIRT study area.
	Social Impacts - Employees: Project minimizes impacts on low-wage workers and people of color that work in the BIRT study area.
	ADA Access: Project makes it easier for people with disabilities to travel in the study area.
Support timely and coordinated implementation	Funding Viability: Project is likely to be funded through local, regional, state, or federal funding.
	Timely Implementation: Project is implementable within a reasonable timeframe given technical and right-of-way considerations.
	Constructability, Risk, and Complexity: Project limits construction impacts.
	Environmental Impacts: Project minimizes impacts on the ecological environment.
	Economic Impacts: Project supports the Manufacturing and Industrial Center (BINMIC) and maritime industries.
	Responds to Urgent Needs: Project addresses an identified seismic or structural deficiency.

Source: City of Seattle.

Transportation Master Plan – City of Sammamish

The City of Sammamish used a similar approach to prioritize projects at the citywide level as part of their Transportation Master Plan. **Figure 3** shows an interim potential evaluation process that was considered. Again, metrics were developed to tie in each transportation goal with points weighted and awarded depending on the metric.

Figure 3. Potential Project Prioritization Framework, City of Sammamish.

Transportation Master Plan – City of Olympia

Olympia's Transportation Master Plan used a set of transportation performance thresholds to identify gaps in the system and therefore projects that must be built. These thresholds included:

- Volume/capacity ratio of 0.85 on roadway segments
- Pedestrian crossings of arterial streets within 300 feet of major pedestrian destinations
- Sidewalks on one side of arterials as a basic network, ultimately on both sides of arterials
- A low stress bikeway within a quarter-mile (ultimately a half-mile grid) of all the parcels in the city; basic five foot bike lanes on all arterials

Applying these performance thresholds resulted in a large set of transportation projects that are well outside the ability to fund over the next 20 years. Within each mode, a separate project prioritization was prepared to identify the projects that were most important to meet City transportation, safety, and equity goals (for example, sidewalk prioritization as shown in **Figure 4** with gaps and their relative priority shown in **Figure 5**). This modal prioritization varied somewhat by project type, but generally included elements of:

Prioritization

Points are awarded to missing sidewalk segment as follows:

If the segment is within:	
½ mile of a school	20 points
½ mile of a park	10 points
¼ mile of a public building or grocery store	10 points
¼ mile of a Neighborhood Center	5 points
Either: On an Urban Corridor In an area of dense housing In an area of dense employment	15 points

If the segment is on a street that is:	
A transit route	20 points
An arterial, major collector, or neighborhood collector	20/15/5 points
Missing a bike lane	10 points
Missing a sidewalk on both sides	Double the subtotal of score

Figure 4. Sidewalk Prioritization Criteria, City of Olympia.

- Safety/risk exposure
- Proximity to historically marginalized populations
- Proximity to essential community services
- Potential usage (as evaluated by the jobs/housing density near the project or forecasted use in the case of transit and roadway projects)
- Ability to fill major gaps in the system (e.g., not adjacent to an existing facility)

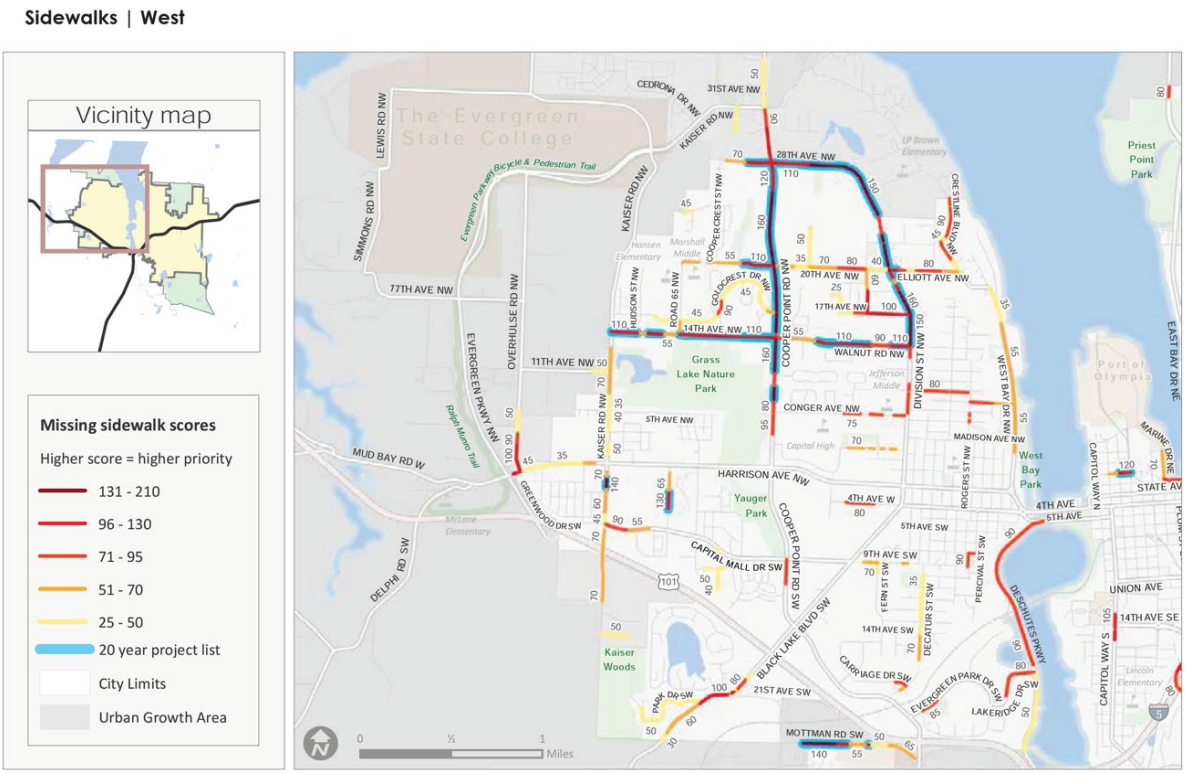


Figure 5. Sidewalk Priorities, City of Olympia.

Once all the modal projects and priorities were identified, the City blended the highest priority projects to develop a realistic list of multimodal projects that align with available funding. A number of algorithm-based processes were discussed that would attempt to quantify the benefits of different modal projects compared to others. However, this numerically-driven approach was ultimately not used because it could perpetuate current unsustainable travel choices (most people in Olympia drive most places and metrics like utilization tend to reinforce these patterns) while also risking inaction on key projects that have strong community or political support (focusing more exclusively on low-carbon modes might not address spot congestion at a particular intersection that is at the top of the public's mind). In summary, any automated/numerical approach was viewed as not being context sensitive or flexible enough to balance all the needs and voices in Olympia.

Ultimately, the City went through a staff and community led process that identified resident/employee/employer expectations about investments in the most important transportation issues. This effort was centered around a robust outreach process through two online open houses, surveys, a storymap, and presentations at boards, commissions, and City Council. The multimodal prioritization approach also reviewed existing and likely funding since some sources are restricted to the types of improvement they can build (e.g., Olympia has a voter-approved utility tax that per City Code must be spent on sidewalks). Using this information, the staff developed, the public weighed in on, and the City Council ultimately approved a 20-year project list that also forms the foundation for Olympia's concurrency system and a new multimodal transportation impact fee.

Type of facility	System target	Existing inventory	Full network list	20 year project list
Sidewalks	There will be sidewalks on both sides of our largest streets: arterials, major collectors and neighborhood collectors. The first priority is to have a sidewalk on at least one side of every major street, then both sides.	137 miles	65 miles	8 miles
Pathways	Existing informal pathways will be improved, followed by building pathways in locations where they are needed.	62	81	15
Enhanced crosswalks	There will be an enhanced crosswalk within 300 feet of major destinations on arterials and major collectors.	188	350	16
Curb ramps	Add or upgrade curb ramps on all sidewalks to comply with current federal standards	1,586 curb ramps are compliant with the current standards	4,014 curb ramps are missing or need to be upgraded	Typically, curb ramps are added or upgraded as part of other projects
Accessible signals	Add accessible devices to all traffic signals	18 audible signals	79 signals need accessible devices	Typically, accessible signals are added when signals are upgraded
Bike corridors	The low-stress bike network provides a route on a ½ mile spacing, so no one is more than ¼ mile from one.	1.5 miles of bike corridors	34 miles of bike corridors	10 miles of bike corridors
Enhanced bike lanes	The low-stress bike network provides a route on a ½ mile spacing, so no one is more than ¼ mile from one.	0 miles of enhanced bike lanes	52 miles of enhanced bike lanes	4.5 miles of enhanced bike lanes through resurfacing, and 2.5 miles as part of major street reconstruction
Intersections	Intersection improvements are built as needed for safety and function at major intersections.	12 roundabouts 97 signals	52 roundabouts	12 roundabouts
Safety projects	Improve the safety of our streets based on a routine analysis of collisions.	NA	56 current projects; ongoing need	23 projects
Resurfacing	Streets surfaces will be in good condition, with an average system rating of 75. (A rating of 100 is excellent.)	Our current system rating is 67	Not yet identified; ongoing need	69 miles in 6 years (20-year project list not defined)

Figure 6. Citywide System Targets, City of Olympia.

SMART SCALE – Virginia Department of Transportation

The Virginia Department of Transportation developed a project prioritization process called SMART SCALE which is used to compare a wide variety of project types from throughout the state. Individual jurisdictions submit project applications that address six evaluation areas: safety, congestion mitigation, accessibility, environmental quality, economic development, and land use coordination. Within each of these areas, there are two to three measures that are weighted to make up the entire score. Each project application includes a benefit-to-cost comparison.

Evaluations are compiled into a staff-recommended funding scenario which is then reviewed by the Commonwealth Transportation Board (CTB). While the CTB is not required to fund projects in the order of their scores and has final decision-making authority, the process does provide transparency. This type of prioritization process is very comprehensive, and requires a substantial amount of data collection and preparation to score each project.

NCHRP Cross Mode Project Prioritization

In 2014, a report on cross mode project prioritization was prepared as part of National Cooperative Highway Research Program (NCHRP) Project 08-36, Task 112[14]. The Cross Mode Project Prioritization

[14] Parsons Brinckerhoff for the American Association of State Highway and Transportation Officials (AASHTO), 2014. Available at: http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP08-36(112)_FR.pdf. Accessed March 17, 2021.

report's authors conducted a survey of Metropolitan Planning Organizations and state DOTs to understand how agencies were approaching project prioritization across modes. The authors found that most agencies prioritize within modal "silos" to determine the top-performing projects within each category and then use a more nuanced method to prioritize among those projects, for example gathering feedback from public officials and stakeholders. A variety of evaluation frameworks are summarized in the report, generally consisting of evaluation criteria tied to specific metrics that are weighted to reflect the agency's values and goals. The report categorizes these approaches in four ways: benefit cost analysis, cost effectiveness analysis, process-based approach (e.g. a political approach), and a goal based approach which is most akin to what the City of Bellevue is striving for: establishing goals and levels of performance within each mode and identifying the projects needed to achieve them so decision makers and the public can understand investment needs in order to reach their desired outcomes.

Among the more integrated approaches is a system developed by the Hampton Roads Transportation Planning Organization which organizes its metrics into three categories that apply to all modes: project utility, economic vitality, and project viability. As shown in **Figure 7,** though the specific metrics within each category vary depending on the type of project, the number of available points is equal across all modes which can provide for comparisons. The composite scores are then considered along with other input from a technical advisory committee, elected officials and other stakeholders.

Highways	Interchanges	Bridge / Tunnel	Intermodal	Transit
Project Utility Congestion Level (30) System Connectivity (25) Safety and Security (15) Cost Effectiveness (15) Land Use (10) Modal Enhancements (5) Total Points (100)	Project Utility Congestion Level (30) System Connectivity (25) Safety and Security (15) Cost Effectiveness (15) Land Use (10) Modal Enhancements (5) Total Points (100)	Project Utility Congestion Level (30) Condition (20) System Connectivity (10) Safety and Security (10) Cost Effectiveness (15) Land Use (10) Modal Enhancements (5) Total Points (100)	Project Utility Enhance Intermodal(30) Improve Access (30) Safety and Security (15) Cost Effectiveness (25) Other Mode Access (15) Total Points (100)	Project Utility Existing Ridership (20) System Connectivity (20) Land Use (15) User Benefits (15) Air/Emissions (10) Cost Effectiveness (15) Modal Enhancements (5) Total Points (100)
Economic Vitality Travel Time (30) Labor Market Access (20) Meet Industry Needs (30) Increase Opportunity (20) Total Points (100)	Economic Vitality Travel Time (30) Labor Market Access (20) Meet Industry Needs (30) Increase Opportunity (20) Total Points (100)	Economic Vitality Travel Time (30) Labor Market Access (20) Meet Industry Needs (30) Increase Opportunity (20) Total Points (100)	Economic Vitality Travel Time (30) Labor Market Access (20) Modal Interaction (30) Increase Opportunity (20) Total Points (100)	Economic Vitality Labor Market Access (45) Meet Industry Needs (20) Increase Opportunity (20) Economic Distress (15) Total Points (100)
Project Viability Funding (50) Project Readiness (50) Total (100)	Project Viability Funding (50) Project Readiness (50) Total (100)	Project Viability Funding (50) Project Readiness (50) Total (100)	Project Viability Funding (50) Project Readiness (50) Total (100)	Project Viability Funding (50) Project Readiness (50) Total (100)

Figure 7. Evaluation Metrics, Hampton Roads Transportation Planning Organization.

The report ends with a recommended concept for cross modal project prioritization, as shown in **Figure 8**. It suggests developing a score based on two evaluation categories: one set of metrics that apply to all modes (for example benefit cost ratio or level of financial matching available) and one set of metrics that are mode-specific, but allow for the same amount of points to be contributed to the overall score.

As shown in **Figure 9**, the benefits considered may vary by project type, but would all be translated to their financial benefit. In other words, the dollar is the common unit among all types of benefits.

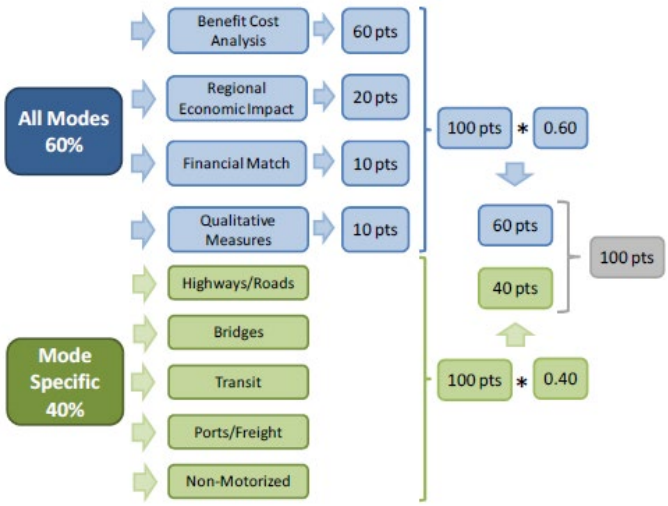


Figure 8. Proposed Cross Modal Project Prioritization Concept, Parsons Brinckerhoff.

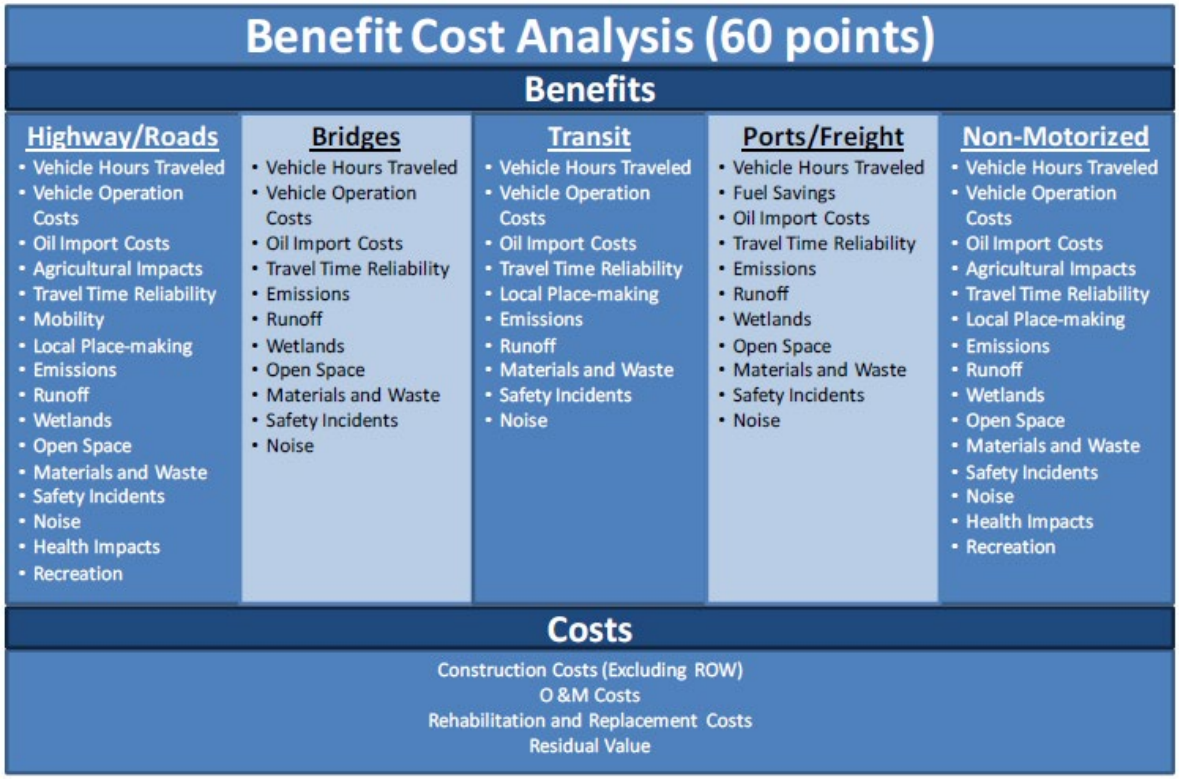


Figure 9. Proposed Benefit Cost Analysis Concept, Parsons Brinckerhoff.

Multiple Account Evaluation Framework

A Multiple Account Evaluation (MAE) framework provides an overarching guide to multimodal evaluation and prioritization. In an MAE, evaluation measures are aligned with community values. Quantitative and qualitative metrics are established for each plan goal to elevate investments that deliver the highest value in advancing the plan vision. This approach allows jurisdictions the opportunity to articulate how factors like the environment, equity, safety, and health and livability factor into transportation decision making.

The evaluation framework process depicted below and described in **Table 3** uses a community's goals and objectives to shape a decision-making approach that elevates investments that are most closely aligned with their desired mobility future. A typical framework uses a four-step process to screen, score, and prioritize projects (and programs and policies, if evaluated) for funding and implementation. MAEs have been used to evaluate tradeoffs and eliminating modally focused long-range planning in cities like Boulder, Corvallis, Spokane, Seattle, Denver, Salt Lake City, and others. The MAE approach is also similar to what was applied in Olympia, as described in detail above.

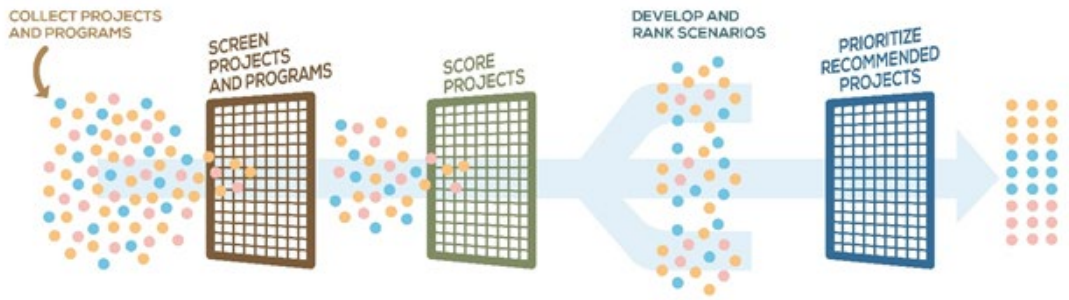


Table 3: Multiple Account Evaluation Framework Steps

Step	Purpose	Outcome
Step 1. Screening	Filter potential projects, programs, and policies for alignment and appropriateness	"Clean" set of projects, programs, and policies
Step 2. Scoring	Rank potential projects and programs to elevate those most aligned with plan goals	Scored list of projects and programs—presented in tiers—to be used for scenario development
Step 3. Developing Scenarios	Envision a mobility future through different combinations of modal investments and programmatic and policy changes	Transportation network scenarios that illustrate how varying combinations of projects and programs achieve plan goals and objectives for public input to inform a recommended scenario
Step 4. Prioritization	Prioritize projects within the recommended scenario and develop a prioritized project list	Prioritized list of final projects and programs based on the recommended scenario

Source: Nelson\Nygaard.

Conclusion

Developing a project prioritization approach that applies to multiple modes is a complex endeavor. Ranking of projects within a single mode can be a straightforward process, but comparing the benefit of projects across modes that create different types of value for different users does not lend itself to a universal approach that can be equally applied across all communities. While many agencies include quantitative metrics for at least part of the process, input from agency staff, elected officials, and the public is often used to develop a final list of priorities. Moving forward, the Consultant team will be working with City staff to identify the most appropriate prioritization framework for long range transportation planning in Bellevue.

Section 3: Transportation Concurrency

The City of Bellevue published a Multimodal Transportation Concurrency Final Report[15] in January 2021 that documented the existing concurrency system in Bellevue, challenges stemming from the system, best practices, and outlined a recommendation for a new multimodal concurrency framework. This section summarizes the key findings.

Existing Concurrency Methodology

Bellevue's existing concurrency system is a vehicle-focused approach to mobility that was developed in the 1980s and has remained largely intact. The concurrency program uses the concept of a volume to capacity (V/C) ratio that measures the capacity of a roadway intersection to accommodate the vehicles that would travel through it, averaged for all approaches. As currently defined, the V/C metric considers only level-of-service for motorized vehicles and is silent with respect to other modes. Therefore, to ensure the concurrency standard is met, vehicle capacity must be added at intersections that fall below the v/c standard or building permit applications must be denied. This approach is not in complete alignment with Comprehensive Plan policies and the Complete Streets Ordinance that maintain the vehicle approach to concurrency while also envisioning a multimodal transportation system that is planned and designed in consideration of all users.

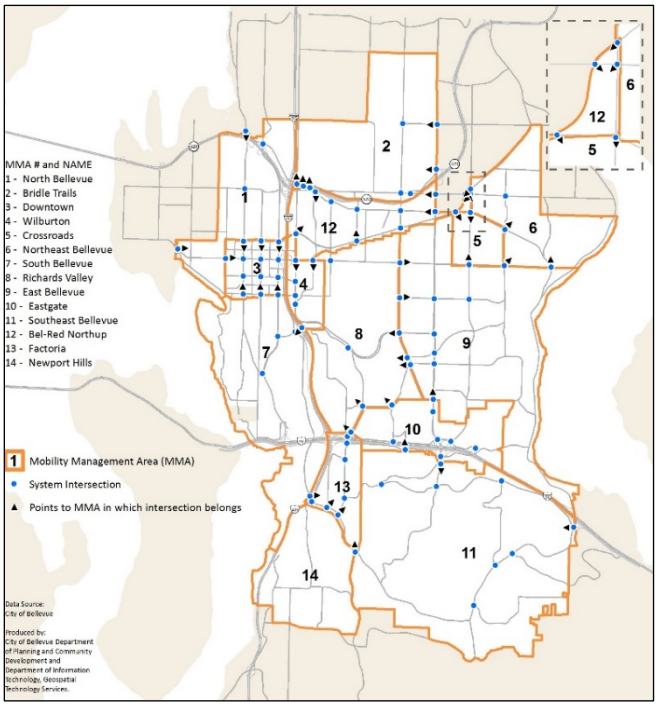


Figure 10. Mobility Management Areas, City of Bellevue.

Bellevue's transportation concurrency policies, are established in the Comprehensive Plan and the standards, and methodologies are adopted in the Traffic Standards Code (Bellevue City Code Chapter 14.10). The Traffic Standards Code defines 14 Mobility Management Areas (MMA) in the city. Within each MMA, there are designated intersections called "system

[15] City of Bellevue, 2021. Available at: https://bellevuewa.gov/sites/default/files/media/pdf_document/2021/Multimodal-Concurrency-Staff-Recommendation-final-report-011421.pdf. Accessed January 27, 2021

intersections" where vehicular performance measures are calculated and reported for the PM peak period. **Figure 10**, the Comprehensive Plan shows the MMAs and system intersections.

The Traffic Standards Code provides two standards for each MMA: the maximum average volume-to-capacity (V/C) ratio at a system intersection; and the maximum number of system intersections allowed to exceed the V/C ratio standard defined for each MMA (congestion allowance). The level-of-service standard varies by MMA in consideration of the land use vision for the area, the availability and level-of-service of each mode of travel, and community input.

Findings Related to Existing Concurrency System

With its sole focus on vehicle level-of-service, the existing concurrency system is out of synch with the envisioned multimodal approach articulated in the Comprehensive Plan and the planning and design direction embedded in the Complete Streets Ordinance. Bellevue has reported in the annual Concurrency Report that some intersections in some Mobility Management Areas approach or exceed the V/C Performance Metrics, yet the concurrency standard is met due to the congestion allowances embedded in the Traffic Standards Code. The existing approach to address volume/capacity performance by expanding intersection capacity is not sustainable fiscally and environmentally in the long-term, and is not consistent with recent policy direction to pursue a multimodal approach. In the event of a concurrency challenge under the existing system, there are alternative choices available: to continue the approach of adding vehicle capacity, to amend the existing concurrency standard, or to deny building permit applications.

Bellevue's evolution to a major regional employment center supported by an increasingly multimodal transportation system is straining the value of the vehicle-focused level-of-service standard. While the city will continue to monitor intersection LOS and will continue to include vehicular capacity projects in the TFP, the V/C-based performance metric at system intersections is no longer the best single indicator to represent the performance of Bellevue's multimodal transportation system. Furthermore, the vehicle-focused level-of-service standard does not identify gaps in the Performance Targets of other modes, which are increasingly key to livability, sustainability and equitable mobility across the City.

Multimodal Concurrency

A modern transportation concurrency approach for Bellevue will incorporate best practices to embed metrics and targets for all modes. This multimodal approach is intended to accommodate the travel demand of a growing community and to equitably allocate resources to create a supply of mobility among a wide range of transportation investments. A multimodal approach to concurrency is sustainable from the perspectives of the environment and the budget because the City may select a wide range of projects and programs that correspond to budget constraints and environmental objectives to meet growing travel demand. Personal and community health also benefits when people have meaningful choices for active transportation.

Ultimately, multimodal concurrency for Bellevue advances the Comprehensive Plan transportation policies and priorities, and implements modal plans for pedestrian, bicycle and transit facilities as it provides

methods and metrics to identify, prioritize and build projects that create a complete transportation system for all modes.

Best Practices

During the spring and summer of 2020, Bellevue staff evaluated several transportation concurrency frameworks that would transition from the automobile-focused V/C ratio-based concurrency system to a multimodal approach. This section describes the best practices studied by the staff through that process.

Mode Share

The City of Seattle uses mode share to determine transportation concurrency. Under this system, Seattle requires a transportation impact analysis of a proposed development to determine whether the mode share of the occupied building would meet single-occupancy vehicle (SOV) mode share standards established for different areas in the City in the Seattle Comprehensive Plan. If analysis shows that a development would generate SOV trips at a mode share at or below the threshold, the project would meet concurrency requirements. If the analysis shows that the development would generate a SOV mode share above the concurrency threshold, mitigation or development project modification would be required. For the most part, a development along a frequent transit corridor, in an urban village, or in an urban center will meet SOV mode share requirements based on the nature of the transportation services and mix/density of land uses in the area. Any development outside of these areas would likely require mitigation (except for land uses exempt from transportation impact analysis requirements). This concurrency policy encourages development in areas of the city where policy seeks to focus new development (i.e., higher-density areas with good transit service) and imposes additional requirements on development outside of transit corridors and urban villages/centers.

Vehicle Miles Traveled

While not employed as a transportation concurrency standard anywhere in Washington state, vehicle-miles traveled (VMT) may serve as a concurrency standard, similar to mode share. Many California jurisdictions use VMT as the primary transportation metric to analyze impacts, apply mitigation and monitor project performance. This methodology applied to a development proposal is similar to how transportation concurrency is applied in Washington.

In California, the state establishes regional per-capita VMT standards that must be met for a new development proposal to proceed. The per-capita component to the VMT standard is important because it recognizes that most communities are expected to grow. Setting a gross or total VMT standard could be unrealistic in a growing community and could stifle new growth that meets the community's land use vision. Focusing on per-capita VMT acknowledges the fact that some communities will add jobs/housing (and thus total VMT might increase), but each new resident or employee is expected to generate less VMT than the status quo – helping to achieve overall environmental and traffic congestion goals.

In some areas, the inherent land use density, travel pattern, mode share, etc. allow proposed land use projects to proceed without any further transportation approvals (i.e., they are in low per-capita VMT-

generating urban areas). However, in other areas, a proposed development must incorporate mitigations to reduce per-capita VMT to be considered for approval. Development mitigations have included such actions as employing a private shuttle program, rebalancing the mix of uses in a development, and charging a fee for residents/employees to enter/leave the development in a car.

Transportation System Completeness

System completeness requires that a community define a set of transportation investments/projects that aligns with a given amount of growth and then build those projects at a rate that keeps pace with or ahead of development. Specific investments and projects are determined by the available resources and the desired performance of the transportation system, as measured using a variety of performance metrics. Typically, the performance metrics and targets for how the transportation system operates are based on the goals and policies of the community's Comprehensive Plan.

The system completeness concurrency standard is met when the community implements the transportation system projects at a rate concurrent with proposed development. In other words, concurrency is achieved and maintained when the supply of transportation capacity created by projects for all modes is greater than the demand for mobility created by the person-trips from new development.

System completeness has also been called "plan-based" concurrency. There are several reasons for this definition:

- The transportation system improvements are identified to meet Comprehensive Plan transportation goals when the planned growth takes place.
- Implementation of the transportation plan is what is being tracked with concurrency; system completeness explicitly implements the planned system rather than identifying projects in reaction to an undesirable transportation outcome, which might not be consistent with the planned transportation system.

In Washington state, the cities of Redmond, Kirkland, Kenmore and Olympia have adopted multimodal system completeness as their transportation concurrency standard. Bellingham and Spokane also have a system completeness element to concurrency, but it is blended with traditional vehicle level-of-service concurrency standards.

Conclusion

Based on the guidance in the Comprehensive Plan and Transportation Commission study sessions from 2014 and 2016, the city staff identified that a multimodal transportation concurrency approach based on "system completeness" would best meet the long-term needs of the community. In the case of Bellevue, the Multimodal Level of Service (MMLOS) Metrics, Standards, and Guidelines document, authored in 2017 by the Transportation Commission would serve as a foundational document that defines the performance expectations of the transportation system. With multimodal performance targets defined, the City can identify transportation investments/projects that can achieve the performance targets, even as the City grows. Therefore, to achieve concurrency, the City would implement the identified system at a rate that is

on pace with the growth that is anticipated and periodically confirm that the performance targets are being met. The key elements of the system completeness transportation concurrency framework and the relationship to performance targets defined by the MMLOS Metrics, Standards, and Guidelines document are shown in **Figure 11**.

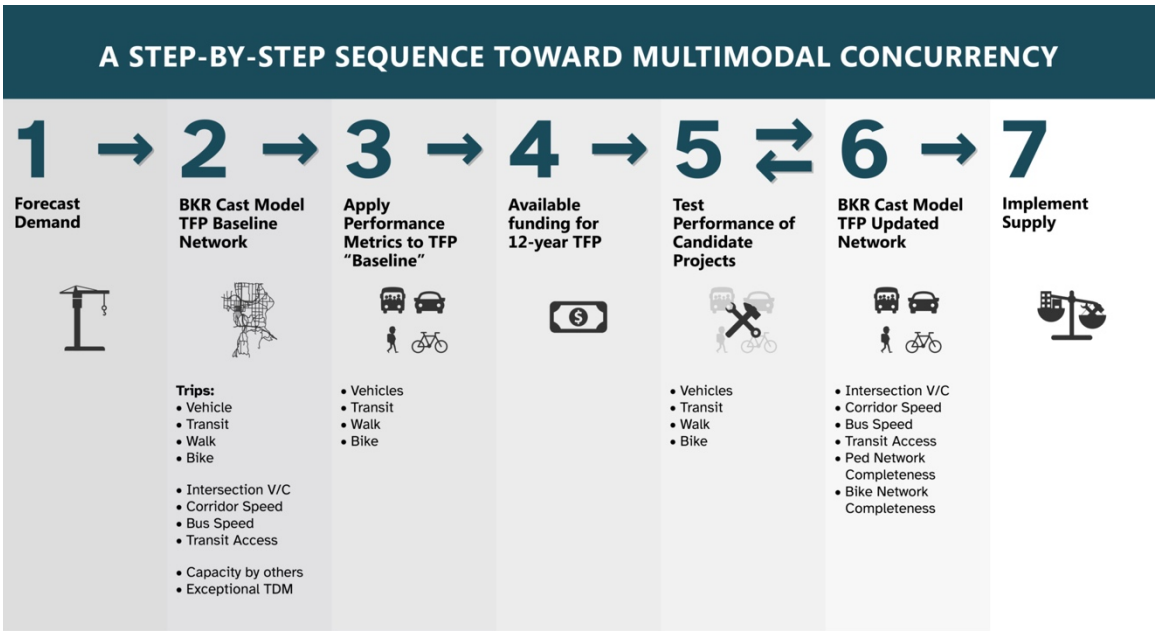


Figure 11. Sequence Toward Multimodal Concurrency, City of Bellevue.

In addition to ensuring a more sustainable approach to implementing Bellevue's transportation vision, the system completeness framework for multimodal concurrency is compatible with the concurrency method adopted by Bellevue's largest neighboring cities, Redmond and Kirkland. By aligning the concurrency frameworks for all three cities, a regional approach to building a multimodal transportation system can be pursued. Under the existing system, a V/C issue in Bellevue could require the expansion of an intersection which could be incompatible with Redmond's system completeness-based concurrency system. So long as all three cities coordinate their transportation plans along their respective borders, regional growth can implement the regional transportation vision.