City of Bellevue

CURB MANAGEMENT PLAN

Volume 2

Adopted July 24, 2023

Resolution No. 10286

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City of Bellevue

CURB MANAGEMENT PLAN

Appendix A: Curbside Practices Guide

July 24, 2023

CURB PRACTICES GUIDE CATEGORIES

The Curbside Practices Guide is a tool for City staff, agency partners, developers, private partners, and other practitioners that covers foundational practices that support the Curb Management Plan (CMP).

The Guide serves as a set of ongoing implementation actions, curb management tools, and programmatic activities that will support Bellevue's efforts to achieve its vision and outcomes for curbs in the Urban Core. Readers can use information in the Guide to direct project implementation, program development, investment decisions, and ongoing stakeholder collaboration.

The Guide is comprised of 28 curb management strategies and tools, which are divided into six categories of curb uses. Each curb strategy documents common and leading practices that ensure sound curb management. These practices will shape how City staff and other stakeholders implement the curb strategies to achieve Bellevue's overarching curb outcomes and objectives. Cross-referencing the CMP's curb typology, each "cut sheet" provides location guidance for each curb strategy. Lastly, the Guide provides implementation guidance including considerations for project design, permitting, innovations, and evaluation.

Curb Regulations (RG)

RG.1: Streamline and digitize curbside regulations

RG.2: Add resources for curbside enforcement and compliance

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AT.5: Consider amending Land Use Code language to better integrate green space with the curb zone

Digital Governance (DG)

DG.1: Collect, Maintain, and Share Curb Asset Information

DG.2: Collect and Analyze Curb Activity Data to Inform Decisions

DG.3: Automate Enforcement and Pricing Processes

DG.4: Create and Maintain Digital Policy Expressions and Management Tools

HOW TO READ THE CURBSIDE PRACTICES GUIDE

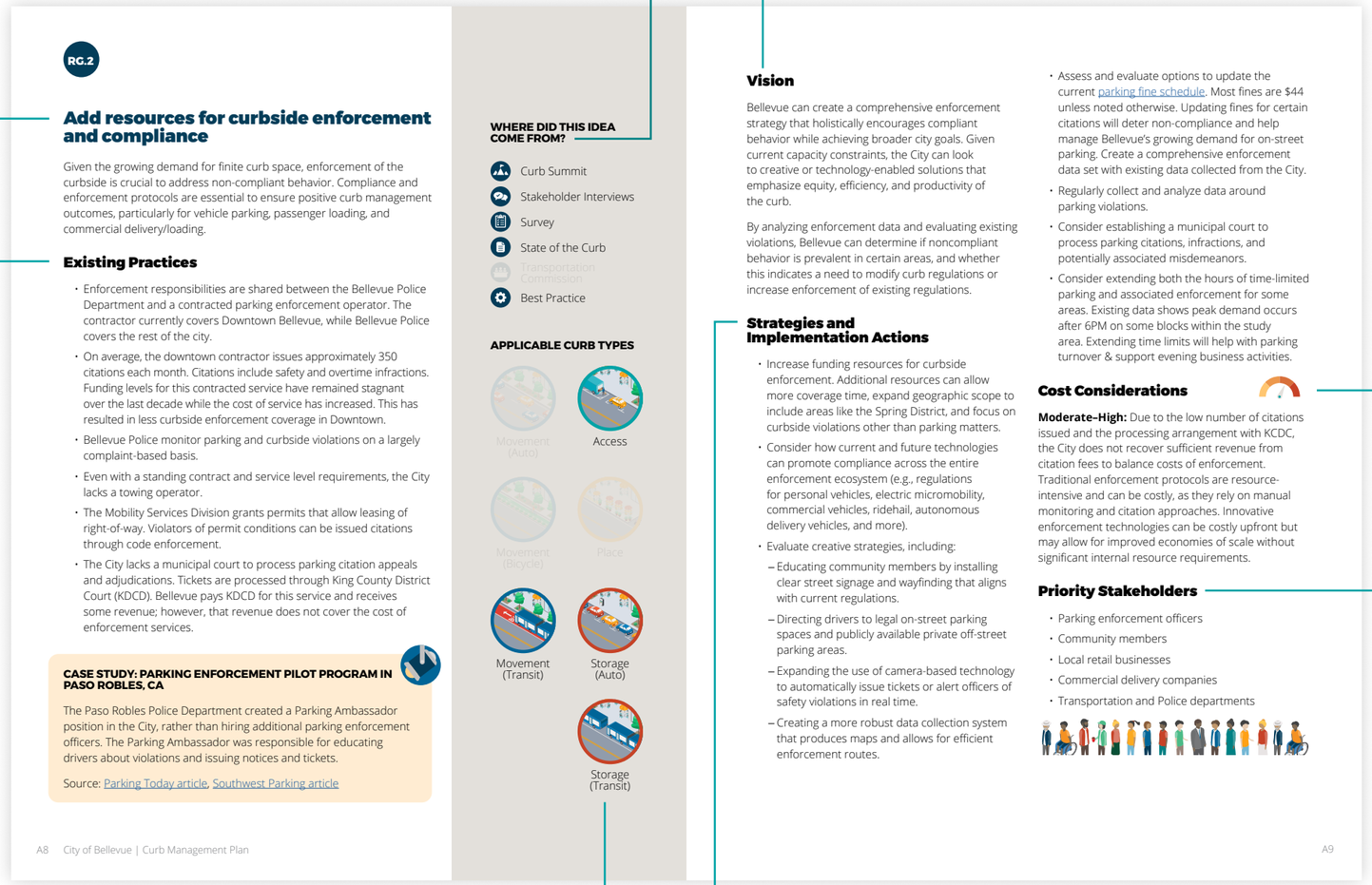
Each cut sheet discusses one actionable curb strategy for Bellevue to consider—ranging from technology interventions and innovative curb uses to updating current programs and making policy and procedural changes.

OVERVIEW

This section describes what the curb strategy is and its importance

EXISTING PRACTICES

Highlights current or past practices Bellevue has implemented. This section will also link to any relevant websites or discuss any relevant processes or policies.



RG.2

Add resources for curbside enforcement and compliance

Given the growing demand for finite curb space, enforcement of the curbside is crucial to address non-compliant behavior. Compliance and enforcement protocols are essential to ensure positive curb management outcomes, particularly for vehicle parking, passenger loading, and commercial delivery/loading.

Existing Practices

- Enforcement responsibilities are shared between the Bellevue Police Department and a contracted parking enforcement operator. The contractor currently covers Downtown Bellevue, while Bellevue Police covers the rest of the city.
- On average, the downtown contractor issues approximately 350 citations each month. Citations include safety and overtime infractions. Funding levels for this contracted service have remained stagnant over the last decade while the cost of service has increased. This has resulted in less curbside enforcement coverage in Downtown.
- Bellevue Police monitor parking and curbside violations on a largely complaint-based basis.
- Even with a standing contract and service level requirements, the City lacks a towing operator.
- The Mobility Services Division grants permits that allow leasing of right-of-way. Violators of permit conditions can be issued citations through code enforcement.
- The City lacks a municipal court to process parking citation appeals and adjudications. Tickets are processed through King County District Court (KDCD). Bellevue pays KDCD for this service and receives some revenue; however, that revenue does not cover the cost of enforcement services.

CASE STUDY: PARKING ENFORCEMENT PILOT PROGRAM IN PASO ROBLES, CA

The Paso Robles Police Department created a Parking Ambassador position in the City, rather than hiring additional parking enforcement officers. The Parking Ambassador was responsible for educating drivers about violations and issuing notices and tickets.

Source: Parking Today article, Southwest Parking article

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES

Movement (Auto) · Access · Movement (Bicycle) · Place · Movement (Transit) · Storage (Auto) · Storage (Transit)

A8 City of Bellevue | Curb Management Plan

Vision

Bellevue can create a comprehensive enforcement strategy that holistically encourages compliant behavior while achieving broader city goals. Given current capacity constraints, the City can look to creative or technology-enabled solutions that emphasize equity, efficiency, and productivity of the curb.

By analyzing enforcement data and evaluating existing violations, Bellevue can determine if noncompliant behavior is prevalent in certain areas, and whether this indicates a need to modify curb regulations or increase enforcement of existing regulations.

Strategies and Implementation Actions

- Increase funding resources for curbside enforcement. Additional resources can allow more coverage time, expand geographic scope to include areas like the Spring District, and focus on curbside violations other than parking matters.
- Consider how current and future technologies can promote compliance across the entire enforcement ecosystem (e.g., regulations for personal vehicles, electric micromobility, commercial vehicles, ridehail, autonomous delivery vehicles, and more).
- Evaluate creative strategies, including:
  - Educating community members by installing clear street signage and wayfinding that aligns with current regulations.
  - Directing drivers to legal on-street parking spaces and publicly available private off-street parking areas.
  - Expanding the use of camera-based technology to automatically issue tickets or alert officers of safety violations in real time.
  - Creating a more robust data collection system that produces maps and allows for efficient enforcement routes.
- Assess and evaluate options to update the current parking fine schedule. Most fines are $44 unless noted otherwise. Updating fines for certain citations will deter non-compliance and help manage Bellevue's growing demand for on-street parking. Create a comprehensive enforcement data set with existing data collected from the City.
- Regularly collect and analyze data around parking violations.
- Consider establishing a municipal court to process parking citations, infractions, and potentially associated misdemeanors.
- Consider extending both the hours of time-limited parking and associated enforcement for some areas. Existing data shows peak demand occurs after 6PM on some blocks within the study area. Extending time limits will help with parking turnover & support evening business activities.

Cost Considerations

Moderate-High: Due to the low number of citations issued and the processing arrangement with KCDC, the City does not recover sufficient revenue from citation fees to balance costs of enforcement. Traditional enforcement protocols are resource-intensive and can be costly, as they rely on manual monitoring and citation approaches. Innovative enforcement technologies can be costly upfront but may allow for improved economies of scale without significant internal resource requirements.

Priority Stakeholders

- Parking enforcement officers
- Community members
- Local retail businesses
- Commercial delivery companies
- Transportation and Police departments

A9

WHERE DID THIS IDEA COME FROM?

The curb strategies were selected within Bellevue's current context, with real community stakeholders and issues in mind. This section describes key pieces of feedback that drove the recommendations and strategies.

VISION

This section details the desired end state for the curb if the strategy is implemented.

COST CONSIDERATIONS

This section indicates planning level or order-of-magnitude costs, as well as assumptions for future costing.

PRIORITY STAKEHOLDERS

This section lists some of the key stakeholders that should be engaged or formalized as partners.

APPLICABLE CURB TYPES

This section lists the most applicable curb types from the CMP's Curb Typology section

STRATEGIES AND IMPLEMENTATION ACTIONS

This section indicates applicable technology, tools, or design considerations as well as programmatic recommendations and actions that Bellevue must consider over the coming years

RG.1

Streamline and digitize curbside regulations

Curb regulations dictate parking, stopping, standing, and loading at the curb. Regulations are typically displayed via on-street signage and illustrated within maps and information on the City's website. As curb regulations become more nuanced, Bellevue should consolidate, simplify, and digitize curb regulation information.

Existing Practices

Currently, Bellevue regulates curb activity in several ways to mitigate common concerns and organize competing curb activities.

- **Curb Use Designations:** Bellevue regulates curb use designations and restrictions such as loading zones, employee shuttle zones, passenger pickup and drop-off zones, and bus transit layover zones. During the COVID-19 pandemic, the City enacted three-minute food pick up zones in front of some dining establishments. Bellevue's Right-of-Way group issues permits to reserve curbside spaces for temporary loading/unloading tied to adjacent properties that require loading activities.
- **On-street Parking:** City Council authorizes on-street parking regulations primarily by enacting time limits, banning a vehicle parking for over 24 hours, and approving residential parking zone geographies. On-street parking regulations are displayed on street signage. The City Traffic Engineer has the authority create special parking areas for loading/unloading, transit operations and taxistands. This person can also restrict parking, stopping, and standing of up to 300-feet of curb length without requiring Council approval. Council action through ordinance is required to create time limited on-street parking and to restrict parking, stopping and standing for more the 300-feet. Curbside operation changes primarily manifest as traffic control signs that restrict parking, stopping, and standing of vehicles. The City also offers *Park Smart* yard signs for individuals to display on private property to instruct drivers about parking regulations near driveways, fire hydrants, mailboxes, stop signs, or corners.
- **Curbside Operations Modifications:** Bellevue's street use permit is the most relevant permit for allowing temporary curbside leases to occur. Examples of permitted curb operation changes include Al Fresco on-street dining areas, employer shuttle zones, food truck permits, street festivals, and more. Applications take approximately one month to process, include a fee, and require supplementary documents such as a Traffic Control Plan.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES


Movement (Auto)


Access


Movement (Bicycle)


Place


Movement (Transit)


Storage (Auto)


Storage (Transit)

Vision

Bellevue's curb vision imagines the curb as a flexible and dynamic place that adapts to changing needs, pressures and preferences. To achieve this, Bellevue should assess current curb regulations and streamline processes.

Bellevue should clearly communicate regulations to the public, both physically and digitally. Digital regulations would complement street signage that shows time limits or permit restrictions. This will allow the curb to be a more dynamic resource for Bellevue. With a strong curb regulation program, the City can easily update for permanent changes or temporary events.

While Bellevue's street use permit provides a mechanism for applying for a variety of street uses, there are opportunities to make the process of modifying or adding new curbside operations more transparent and standardized.

Strategies and Implementation Actions

- Establish a curb regulation API aligned with the Curb Data Specification (CDS), and consider pushing the API to driver-facing mobile apps. Digitizing curb regulations will allow Bellevue to share regulations and make real-time updates quickly. While digitizing regulations can be complex and technologically challenging, there are vendors that can help create a digital map of curb infrastructure and regulations.
- Leverage Bellevue's Curb Typology framework when assessing and refining curb regulations.
- Prioritize simplicity in designing and displaying curb regulations, with clear and concise signage to prevent driver confusion.
- Consider complementary curb uses to maximize efficiency of curb space such as allowing shared transit stops and time-of-day loading zones.
- Gather existing regulations and community input to understand pain points around curb regulations and process modifications.
- Initiate a process to digitize and publish right-of-way information for the Urban Core, including recorded easements and anticipated curb offsets for future right-of-way expansion.
- Conduct a study that evaluates existing sight line requirements in the Urban Core.
- Create a modified Transportation-specific permit system to handle non-disturbance curbside leasing requests and regulation updates (see Practice RG.3).

Cost Considerations

Moderate: This strategy requires a moderate amount of staff time for regulatory coding and materials costs for new signs, posts, and installation labor.

Priority Stakeholders

- Transportation Department
- Commercial vehicle operators and drivers
- Visitors, workers, and residents
- Private property owners and/or managers
- Permit applicants

RG.2

Add resources for curbside enforcement and compliance

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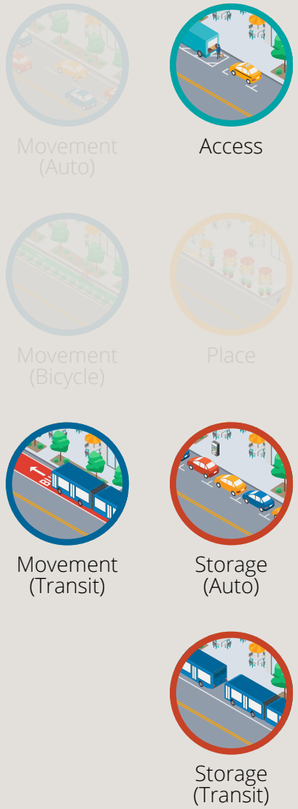
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES



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Priority Stakeholders

- Parking enforcement officers
- Community members
- Local retail businesses
- Commercial delivery companies
- Transportation and Police departments

RG.3

Advance Bellevue's permitting system and procedural processes to optimize curb use

To consolidate and simplify procedural processes for curb use, Bellevue should update it's permit system to accommodate Transportation-specific curb use leases that are independent from the current development-driven program.

Existing Practices

The permit system that Transportation relies on to issue street use permits is owned and maintained by the Development Services department. Permits have conditions outlined in both the City's Traffic Code and Land Use Code. This has created complex and arguably redundant procedures for regulating temporary curbside uses, which slows the City's ability to nimbly respond to the urban core's dynamic curb demands.

The Mobility Services and Mobility Operations teams are most directly involved with curb management pilots and programs within the Transportation Department, with the Right-of-Way group governing permitting issuances and approvals.

Vision

Because the curb is in a constant state of change and disruption, right-of-way permitting processes need to be responsive and owned by Transportation Department staff. Creating new permitting approaches under the stewardship of the Transportation Department will allow for streamlined permit reviews on some lease-based uses in the public right-of-way.

A new Transportation-specific permit system will allow:

- Consistent processes across modal and place-based permits (e.g., commercial delivery, micromobility, bike parking, parklets, etc.).
- Streamlined review of curbside lease functions through a modified Street Use Permit.
- Improved decision-making with clear criteria modeled after the CMP guidance.

Likewise, restructured curb permitting will empower staff to rigorously evaluate new curb uses and requests for curb changes while increasing public understanding of the permitting process.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES

Movement (Auto)

Access

Movement (Bicycle)

Place

Movement (Transit)

Storage (Auto)

Storage (Transit)

Strategies and Implementation Actions

- Establish permitting approaches in the Transportation Department for situations that regulate temporary use of the right-of-way. Permits tied to construction or development-related impacts to the right-of-way will remain under the purview of Development Services.
- To streamline processes, Bellevue Transportation Department should establish a system that is untied from Development Services—this may reduce overhead fees and pair closer with city codes.
- Coordinate internally across city departments to transition the permit system ownership and management.
- Procure a transportation-specific permitting system with cross-functionality with existing asset management systems.
- Revise existing curb-related regulations and agreements to refer to and nest under the new curb permitting mechanism(s).
- Update shared micromobility service requirements, including those that restrict motorized scooters on most Bellevue streets per Bellevue City Code. Scooter restrictions should be revisited to allow for more flexible usage, such as permitting riding in bike lanes, on multi-use paths, and Urban Core streets.

Cost Considerations

Moderate–High: Procuring a new permitting system and building asset management schema is the primary cost consideration. This would be a relatively high upfront cost with lasting operating cost saving due to procedural, staffing, and resource efficiencies.

Priority Stakeholders

- Transportation, Finance, Development Services, and City Attorney's Office departments
- Prospective curb permit applicants (e.g., food truck vendors, commercial delivery companies, and micromobility companies, etc.)

CASE STUDY: STREAMLINED OUTDOOR DINING PERMITTING IN BOSTON, MA

To support local business during the onset of the COVID-19 pandemic, the City of Boston worked quickly to simplify and streamline their permitting process for outdoor dining. Staff across departments collaborated to identify permitting roadblocks and minimize requirements to focus primarily on safety and accessibility. While the old permit approval process involved staff from across the Boston Transportation Department, the new process is now managed by a single division which has the authority to make decisions about curb changes and cross-collaborate with other divisions when needed. The simplified application process also made it easier and more user-friendly for businesses to navigate.

Source: Transportation for America

RG.4

Consider changes to language in the Land Use Code to better integrate the built environment with the curbside

Current requirements in the City's Land Use Code encourage separation of vehicle traffic from the pedestrian realm through the use of amenity areas, landscaping, and street trees. At the same time, right-of-way space is primarily reserved for traffic throughput, which isn't conducive for added curbside activities. Land Use Code language may be modified through future workplans to provide better curbside synchronicity to the built environment as Bellevue grows.

Existing Practices

Currently, the Development Services department is responsible for management and updates to the city's Land Use Code, which dictates building requirements in Bellevue.

Vision

Bellevue's curb aim to be flexible, dynamic, and user-friendly as the city evolves. To address this vision of curb space usage in Bellevue, certain Land Use Code language should be amended to better pair this vision with the built environment.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES


Movement (Auto)


Access


Movement (Bicycle)


Place


Movement (Transit)


Storage (Auto)


Storage (Transit)

Strategies and Implementation Actions

- Implement changes to code language within a broader Land Use Code Amendment (LUCA) process. Collaborate with Development Services and Community Development staff that lead development of LUCA workplans to ensure positive outcomes.
- Land Use Code language modifications should address the following:
  - Improve requirements for continuous planter strips and sidewalk width requirements. For example, Land Use Code 20.25A.090 provides rules for sidewalk widths and planter strip designs per block. Based on public feedback, requirements for sidewalk widths should be revisited to consider more width in some areas, while planter strips should include higher soil volumes to encourage tree growth. Planter strip designs should also be evaluated to allow for more hardscaping between the street and sidewalk in areas where Storage, Place and Access typologies apply.
  - To reduce demand of freight load at the curbside, design more functional loading bays within building sites. Land Use Code 20.25A.160 provides requirements for loading functionality to happen on-site, but does not give direction on location. Better placed loading docks will encourage freight operators to use the loading bays instead of relying on curbside areas for goods delivery.
- Allow for more curbside flexibility. Land Use Code 20.25A.160.B currently requires all passenger loading to occur on-site, while keeping right-of-way clear. Modified code language should allow for certain types of short-term loading accommodation at the curbside while still maintaining that primary passenger loading occur on-site.

Cost Considerations

Moderate: Amending the Land Use Code requires significant staff resources and timeframes to employ. Embedding new code language should be done in conjunction with other LUCA workflows rather than through independent efforts.

Priority Stakeholders

- Transportation, Community Development, Development Services departments
- Developers, retailers, and property owners

CASE STUDY: GENERAL DEVELOPMENT STANDARDS IN SHORELINE, WA

The City of Shoreline municipal code encourages context-sensitive curb design that is informed by the presence of on-street parking.

"Streets with on-street parking shall have sidewalks to back of the curb and street trees in pits under grates or at least a two-foot-wide walkway between the back of curb and an amenity strip if space is available. Streets without on-street parking shall have landscaped amenity strips with street trees."

Source: Shoreline Municipal Code

ST.1

Peform an implementation study for a paid parking program and update on-street parking procedures

On-street parking is a scarce resource in Bellevue's Urban Core. Currently, on-street curbside parking is free but time-limited within the study area. The CMP establishes a framework to manage parking areas dedicated for private passenger vehicles using a variety of regulatory tools, with pricing identified as the most effective strategy.

Existing Practices

Bellevue has several on-street parking options for residents and visitors. All on-street parking is free of charge, although Comprehensive Plan policy language considers the strategy of pricing on-street parking. Generally, vehicles are limited to parking for 24-hours citywide, but are primarily restricted to two-hour parking within the study area.

Vision

Curbside on-street parking will continue to be an important resource for Bellevue as growth occurs. However, current free-of-charge management practices will cause an unfriendly parking experience, increase congestion through block circling, and add to double parking events. Paid on-street parking in other communities has resulted in better user experiences, improved traffic outcomes, and aided the economic vitality of surrounding businesses.

Streamlining parking procedures and establishing a paid parking program in Bellevue can help achieve the vision and principles outlined in the CMP. Added nominal trip costs will be offset by the time savings gained through parking efficiency. A stakeholder-informed implementation analysis for paid on-street parking will ensure clarity and transparency with the community.

CASE STUDY: ON-STREET PARKING PROGRAM IN ASPEN, CO

Aspen implemented paid parking in its downtown in 1995 to manage parking supply and increase availability. Over the last three decades, Aspen's parking program has evolved to address changing demand and incorporate new technology. The City began regularly collecting parking data to monitor demand and inform rate adjustments, rolled out multiple payment methods, began using parking revenue to support TDM programs, and implemented a paid residential parking program to reduce parking overflow in residential neighborhoods.

Source: Federal Highway Administration

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES

Movement (Auto) | Access | Movement (Bicycle) | Place | Movement (Transit) | Storage (Auto) | Storage (Transit)

Strategies and Implementation Actions

- Perform an implementation study for paid on-street parking. This study would engage stakeholders, determine initial rates, provide detailed cost estimates on needed equipment and staffing, identify strategies to address impacts to paid parking operations (i.e. street closures), and establish a phased implementation approach for pricing on-street parking. Prices should be established to achieve a target curb occupancy goal of between 70% and 80% in parking zones (i.e. ensuring 1-2 parking spaces per block are available at any given time). Prices should be adjusted on at least an annual basis using updated data. The study can also explore the following:
  - Potential pilot areas for initial paid parking deployment.
  - Productivity and other non-occupancy metrics.
  - Revenue estimates and program budgeting.
  - Expansions of enforcement time periods in certain areas.
  - Study the impacts to neighborhoods adjacent to the Urban Core, including those with Residential Parking Zones.
- Implement paid on-street parking program based on findings from implementation study.
- Initiate On-Street to Off-Street Curb Diversion pilot alongside parking pricing implementation (see the Curb Pilot Roadmap for more information).
- Streamline code language associated with on-street parking. Establishment of time-limited street parking segments that are longer than 300 feet have historically been created through passage of ordinances. This has established a layered legal structure around allowing street parking in the study area. Additionally, the authorities of the City Engineer can administratively establish street parking, but only in limited areas. Revisiting this procedural change will allow a cleaner procedure to add, remove, or modify curbside functions.
- Streamline process to modify on-street parking regulations. Bellevue should establish a process to ensure consistent application of curbside parking regulations across the city. This would include policy on how to review requests for on-street parking stalls in the Urban Core.
- Explore paid parking in city-owned lots within the study area.

Cost Considerations

Moderate-High: Implementing a paid parking program requires a high upfront cost to procure metering and/or app-based payment systems, as well as staff to manage the program. The implementation study will expand on work completed in the CMP focused on cost expenditures and recovery.

Priority Stakeholders

- Property owners and businesses near time-limited parking spaces
- Residents and other drivers
- Private parking operators
- Transportation, City Attorney's Office, Development Services, and Finance departments

ST.2

Refine and scale residential parking programs

The Residential Parking Zone (RPZ) program restricts parking on certain streets to only residents of the zone. Vehicles without permits can only park during specific times of day. The program was created to address overflow parking onto residential streets from schools, major transit hubs and shopping areas.

Existing Practices

Bellevue's Neighborhood Traffic Safety Services (NTSS) team operates a free RPZ program in 14 different areas across the city. The program restricts non-residential parking on neighborhood streets and was established through a city ordinance. The City Council can create new residential parking zones with majority support from neighborhood residents. RPZ permits are currently free for residents, and the Transportation Department manages resident permit requests.

Vision

As new curb management programs and pricing-based approaches evolve within the Urban Core, it will be important to ensure adjacent neighborhoods are not negatively impacted by spillover parking. The RPZ program should be adjusted accordingly over time. Future RPZs adjacent to the study area may see more active enforcement and potential priced permits to cover additional costs.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES

Strategies and Implementation Actions

- Digitize the RPZ program so residents are able to register their permits, renewals, and license plates online. Digital permitting can streamline enforcement of RPZs.
- Consider implementing a fee associated with RPZ permits that would help recover costs for managing the program.
- Consider outsourcing the management of the RPZ program to be included within a robust downtown parking program.
- Extend geography of Urban Core parking enforcement to include RPZs in adjacent neighborhoods. Some neighborhoods bordering the study area have residential parking zones to limit spillover, but these are currently enforced ad hoc.

Cost Considerations

Low: Costs associated with a modified RPZ program would include staff time, permit issuance, signage, and active enforcement coverage.

Priority Stakeholders

- Neighborhood residents and neighborhood/ homeowner associations
- Property developers and managers
- Current RPZ permit holders
- Transportation department

Example permit-based residential parking sign in Seattle, WA. Photo credit: SDOT.

ST.3

Build and expand accessible parking (ADA) inventory

Accessible curbside parking includes spaces that conform with Americans with Disabilities Act (ADA) requirements. ADA spaces have specific design features that make it easier for people with disabilities to access the sidewalk and curb lane.

Existing Practices

Through its building codes, Bellevue requires developers to create a minimum number of accessible parking spaces on-site as a ratio of the total parking spaces developed. However, there are no ADA-compliant curbside parking spaces in the study area today.

Vision

Bellevue can proactively evaluate and adjust the number of ADA-compliant curbside parking spaces to accommodate its growing population and meet guidelines outlined in the Public Rights-of-Way Accessibility Guidelines (PROWAG). Assessing the number and use of ADA spaces does not require significant cost or effort if it is done in conjunction with a wider curb data collection effort.

CASE STUDY: ADA IMPROVEMENTS IN HOUSTON, TX

Over the past decade, Houston increased the number of ADA compliant parking spaces in its Central Business District from 45 to 245 spaces to keep up with demand. The City simultaneously instituted monthly police efforts to confiscate fraudulent ADA placards and ran trainings for 400 volunteers to enforce proper ADA space usage.

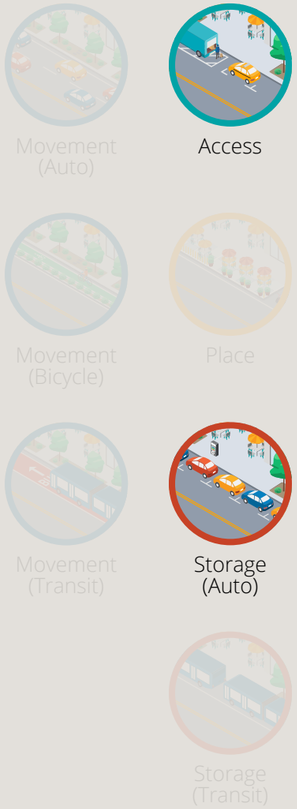
Source: Program website

Further Resources: ADA Parking Guidance

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES



Strategies and Implementation Actions

- Conduct an ADA curbside parking study to determine the location and number of ADA on-street stalls needed within the Urban Core.
- Implement ADA-compliant curbside parking based on the ADA curbside parking study. Follow PROWAG guidelines to ensure equitable access to public on-street parking.
- Clearly mark accessible parking spaces through signage (displaying the International Symbol of Accessibility) and pavement markings as needed.
- Ensure spaces comply with all ADA requirements, and match PROWAG recommendations.Create a digital inventory of accessible parking spaces in the Urban Core.

Cost Considerations

Moderate: Depending on location, implementation of curbside ADA parking ranges from small changes to signage and striping in primarily existing parking areas, to larger changes that involve curbside reconstruction where sidewalks are 14' wide or bigger.

Priority Stakeholders

- Community members
- Bellevue ADA/Title VI Civil Rights Administrator
- Adjacent business owners and residents
- Transportation department

Accessible parking signage. Photo credit: public domain.

ST.4

Create program to allow for car sharing

Cities across the country permit car sharing services that provide on-demand access to shared vehicles for short-term use. Several types of car sharing models exist today, including free-floating, station-based, peer-to-peer, and community-controlled models. A free-floating car share program would likely be most beneficial and space-effective in a curbside environment.

Existing Practices

Bellevue was previously home to a Zipcar program (which only used designated private parking), but currently does not have a car share program.

Vision

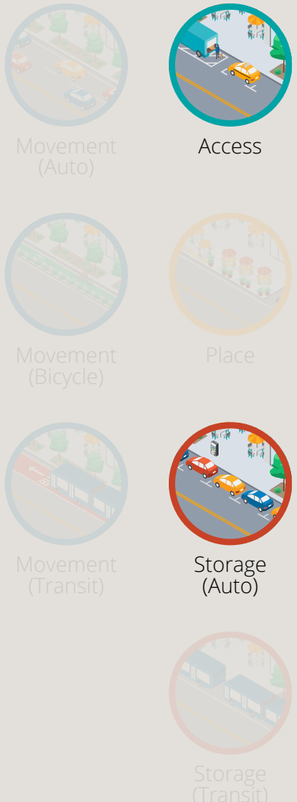
Car sharing programs can enhance public transit systems, housing, and workplaces by providing additional transportation options for residents and visitors. The City should create an environment that allows private-sector car-sharing companies to operate.

Carshare-designated parking in Saint Paul, MN. Photo Credit: Nelson\Nygaard.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES



Strategies and Implementation Actions

- Designate curb spaces near densely populated residential areas, retail areas, and within a five-minute walk of future Link light rail stations as car sharing zones. These zones should replace time-limited parking spaces where possible, rather than loading zones. Consider establishing long-term permit or license agreements to reduce market risk and signal a desire for a long-term partnership.
- Set reasonable permit fees to offset the cost of program administration, while still allowing permitted companies to operate sustainably in the long run. Car sharing permits should require companies to provide approved signage and physical markings, assist with community engagement and educational campaigns, and provide opportunities for low-income discounts. Car sharing zones should include equitable siting and rebalancing, data sharing, performance reporting, community and transit partnerships, and other public interest obligations.
- Create an incentive structure that rewards companies to include substantial numbers of EVs in their fleet. Incentives could include charging infrastructure partnerships, reduced permit fees, robust low-income and equity programs with community partnerships, app-based booking and payment integrations, and other features. Long-term, car sharing services should provide fully electric fleets.
- Integrate dedicated curbside car share and charging infrastructure into the forthcoming 2023 TDM Plan's strategy menu.
- Release a Request for Information (RFI) to gather market information about car share vendors and operators. The program should not begin without deep industry engagement.
- If seeking a free-floating car share program, identify curbside locations for dedicated car share parking in the Storage and Access curb types.
- If seeking a station-based car share program, create a license agreement or permitting process for car share operators to operate in the market and use designated car share parking spaces both within city-owned lots and private parking areas.

Cost Considerations

Low: Program costs consist of staff time to develop a car share permit program, determine fees, identify incentives, release RFIs, and establish curbside locations through signage and information. Car sharing services can limit city costs by providing additional services such as community ambassadors and outreach programs.

Priority Stakeholders

- Car share operators
- Businesses adjacent to potential car share parking spaces
- Transportation and Finance departments
- Community members
- Community-based organizations

ST.5

Implement common carrier locker program

A common carrier locker is a secure central hub where consumers can receive deliveries from any carrier. Delivery drivers deposit packages into any open box in the locker. Upon delivery, customers receive an electronic notification and unique code that allows them to retrieve the package.

Common carrier lockers can consolidate delivery activity into a central point, which has been shown to reduce commercial vehicle dwell time at the curbside. They can be located on public or private property and are typically installed near adjacent commercial vehicle loading zones (CVLZs).

Existing Practices

While companies like Amazon and UPS have installed numerous proprietary Hub and Access Point lockers, the City of Bellevue has not implemented a common locker pilot or facilitated any shared lockers. Company-specific lockers do not allow use by other carriers, while common carrier lockers allow deliveries from all carriers.

CASE STUDY: COMMON LOCKER PILOTS IN SEATTLE, WA

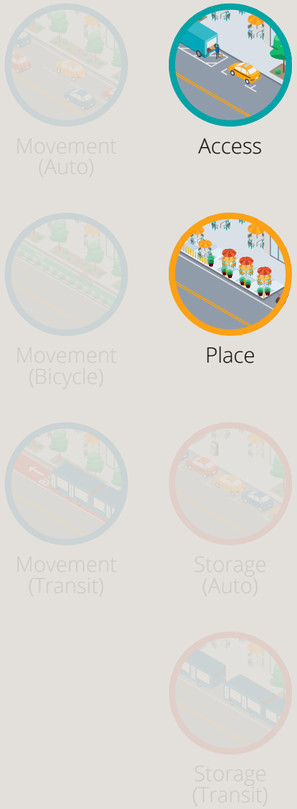
Seattle has implemented common locker pilots in both public and private space. In 2018, it piloted a common locker in the Seattle Municipal Tower with several commercial operators such as Kroger, Ford, Nordstrom, UPS, and USPS. The pilot reduced delivery times to the building by 78% and resulted in no missed deliveries. In 2020, it piloted a shared locker in a public parking lot which focused on residential rather than commercial deliveries. Both pilots were conducted in partnership with the Urban Freight Lab and the University of Washington.

Source: Seattle Municipal Tower pilot, Seattle Belltown neighborhood pilot

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES



Vision

Common carrier lockers are a tool to reduce commercial vehicle emissions and concentrate curbside loading activity. Bellevue can implement a common carrier locker program by:

- Installing lockers for small- to medium-sized packages located in a public space where any downtown worker or resident could access the locker system.
- Considering amendments to the Land Use Code that would be needed to allow installation of lockers within public rights-of-way.
- Partnering with private parties to install publicly accessible lockers at the ground floor or privately-owned outdoor frontage of commercial or residential buildings.

Strategies and Implementation Actions

- Partner with a third-party company to manage lockers, relationships with operators, and private locker hosts.
- Ensure locker security using technologies like SMS to relay codes and camera surveillance. Locker security will build trust from drivers, operators, and delivery recipients.
- Collect data on CVLZ activity near lockers to assess if aggregate curbside dwell time and/or lane blockages decreases.
- Collaborate with the delivery companies, locker management companies, and on-site hosts to identify optimal locker configurations and locations. Locker placement should be as convenient and accessible as possible to both delivery drivers and recipients.
- Conduct a publicly accessible curbside common locker siting analysis with key partners. Curbside lockers will require access to consistent power and internet supply to ensure success.
- Educate locker users—both commercial drivers and delivery recipients.

Cost Considerations

Moderate: As of 2023, secure locker systems range from $5,000-20,000 with additional costs for installation and maintenance. This program requires strong cost sharing arrangements between the City, delivery companies, and locker hosts. Because common carrier lockers provide financial benefits to commercial delivery operators and locker hosts, Bellevue can require these partners to contribute to upfront costs or a revenue sharing structure. Locker pilots can employ a common carrier pricing model, where delivery companies pay a small fee per use rather than paying an upfront or fixed fee.

Priority Stakeholders

- Commercial operators and delivery drivers
- Locker hosts (commercial, residential, or public property managers)
- Transportation, IT, and Development Services departments
- Residents, businesses, and other delivery recipients

AC.1

Create more passenger loading zones

Carpools, ride share services, paratransit services, and future autonomous vehicles will need safe and dedicated curbside zones for passenger pick-up and drop-off (PUDO) activity. To keep up with demand, the City aims to reserve more curb space for PUDO usage. Dedicated passenger loading zones (PLZs) typically have short time limits between three and five minutes.

Existing Practices

State law allows vehicles to momentarily stop at the curb to pick up or drop off passengers, unless otherwise signed. Within the study area, property developers are required to accommodate passenger PUDO within building sites—however, curbside PUDO zones are considered on a case-by-case basis.

Vision

Time-limited PLZs in crowded or busy pedestrian PUDO areas will allow Bellevue to safely and effectively manage curb access. The City should strategically locate PLZs near cultural institutions, residential or commercial centers, areas with nighttime activity, or other locations within an Access curb type. The availability of off-street passenger loading areas within private sites should also be considered in placement of new passenger load zones. Ideally, the reservation of prime curbside zones for PLZs at popular origins and destinations will increase the safety and operation of the street system.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES

Movement (Auto)

Access

Movement (Bicycle)

Place

Movement (Transit)

Storage (Auto)

Storage (Transit)

Strategies and Implementation Actions

- Improve the visibility and legibility of existing PLZs.
- Passenger PUDO accommodation should still be required within development sites. To supplement these amenities, consider curbside PLZ construction in conjunction with development projects:
  - Curbside PLZs should be within the curbside lane along Access, Storage and Place curb types.
  - PLZs should be considered within dedicated pullouts along certain Movement curb types.
  - Pullouts should not replace requirement for planter and sidewalk spaces.
- Use data to determine PUDO hotspots within the study area.
- Add geofencing to easily monitor and enforce ride hailing, especially curbside pick-up activity.
- Set up data sharing agreements with taxi and ride hailing services to better understand geographic and time-of-day demands along the curbside.
- Use curb space monitoring devices to track the use of existing PLZs and assess dwell time compliance. Collect PUDO usage data to develop a preliminary list of potential new PLZs.
- Coordinate with adjacent retailers and property managers to educate residents and employees about need for and benefits of PLZs.
- Deploy temporary supplemental signage during PLZ installation to better inform the public.
- Consider creative solutions such as signed zones in front of fire hydrants for short-term curb access (allowed per RCW). Explore different time limits beyond existing three-minute PUDO zones.
- Continue encouraging passenger loading activity to occur within private sites, such as driveway loops.
- Provide PLZ information through the Commute Trip Reduction program to assist vanpools and carpools identify safe places for passenger PUDO.

Cost Considerations

Low: Program costs include staff time, signage installation, public surveys, data collection, and active enforcement.

Priority Stakeholders

- Ride hailing services, paratransit services, taxis, and carpool drivers
- Private property owners and developers
- Residents, businesses, and other delivery recipients
- Transportation and Development Services departments

Passenger loading zone in Charlotte, NC. Photo Credit: Nelson\Nygaard.

AC.2

Expand and relocate conventional commercial vehicle loading zones

Conventional commercial vehicle loading zones (CVLZs) are dedicated curb spaces for short-term commercial loading and unloading. CVLZs increase street safety and enable more efficient loading and unloading of goods. Commercial vehicles (both freight, small parcel, etc.) as well as personal vehicles used for commercial purposes (i.e., Uber, Lyft, DoorDash, Instacart) require curb space for short-term loading.

Existing Practices

Bellevue installs time-limited curbside loading zones on a primarily ad hoc basis. Zones for passenger, freight, and other parcel delivery are regulated as a single category.

Bellevue's Comprehensive Plan requires that new developments provide for large-scale freight loading on-site rather than in the public right-of-way. Additionally, the Land Use Code requires loading bays be placed with each new development, aiming to capture all commercial vehicle and service vehicle activity. However, the Comprehensive Plan also discusses the provision of curb space to accommodate small-scale parcel delivery.

Vision

Bellevue, like many cities across the country, is experiencing increasing curb demand from commercial delivery vehicles. Rightsizing CVLZ supply to match demand mitigates double parking, loading in bike lanes or crosswalks, and other unsafe and inefficient loading situations. Reserving, expanding, and relocating CVLZs will be continuously important to keep up with rising commercial demands. At the same time, developing and implementing clear information about off-street loading accommodation can prevent curbside lanes from becoming overburdened.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES

Movement (Auto) | Access | Movement (Bicycle) | Place | Movement (Transit) | Storage (Auto) | Storage (Transit)

Strategies and Implementation Actions

- Conduct a technology-enabled data collection effort to understand the current loading activity and usage of loading zones in Bellevue.
- Provide clear communication to delivery drivers and recipients regarding the location and proper use of loading zones through digital expressions like the Curb Data Specification (CDS).
- Deploy enforcement resources to more proactively monitor and enforce loading zones.
- Ensure CVLZs are not located near furniture or infrastructure that would obstruct loading activity, such as continuous planter strips, storage containers, utility cabinets, and bicycle racks.
- Collaborate with private owners of parking lots, garages, and on-site loops to develop information that encourages commercial vehicles to conduct business outside of the public right-of-way. Collect CVLZ usage data to track commercial loading trends over time. Deploy data collection efforts with technology that assesses loading activity both within and outside of CVLZs (see off-street diversion concept in the Pilot Roadmap).
- Interview and survey delivery drivers, property managers, and willing residents about the delivery process in Bellevue. Consider adjustments based on feedback.
- Establish process to create curbside loading zones that considers the CMP Curb Typology. Add new CVLZs to meet increased demand. Proactively manage current and future loading demand to promote more equitable, data-driven, and effective siting of loading zones, rather than establishing new zones ad hoc in response to individual requests.
- Establish flexible time-of-day loading spaces in high-demand areas.

Cost Considerations

Low–Moderate: Program costs include staff time, signage installation, public surveys, data collection, and active enforcement. Technology solutions for enforcement should be considered to help streamline processes and reduce costs.

Priority Stakeholders

- Neighboring brick-and-mortar retailers
- Commercial operators and drivers
- Transportation and Development Services departments

Commercial loading zone in Bellevue.

AC.3

Establish a Smart Loading Zone program

Smart loading zones (SLZs) are designated curbside zones that use technology to enable more efficient commercial loading activity. SLZs typically allow private delivery services to reserve valuable curb spaces for a short amount of time—this provides confidence to drivers that spaces will be available and legal upon arrival. SLZs often pair with app-based systems that digitally manage curb spaces on the city's behalf. Monitored SLZs allow cities to collect data on curb activity, help monetize short-term pickups and drop-offs and provide a platform to evaluate automated enforcement and invoicing. SLZs do not require extensive manual enforcement resources as they rely heavily on technology to collect data and enact interventions.

Existing Practices

Currently, Bellevue does not have a smart loading zone program. The city's curbside technology assessment in 2020-2021 tested cameras for potential SLZ installation but did not advance due to unfavorable accuracy results at the time.

Vision

SLZs provide a safe, efficient, and legal way for commercial delivery drivers to use the curb. The zones can also be used as a mechanism for the City to collect data to understand curb activity and trends. While there are many benefits, the City must commit resources to partner with the private sector and help oversee the management of the zones.

Smart loading zone signage in Pittsburgh, PA. Photo credit: City of Pittsburgh.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES

Strategies and Implementation Actions

- Implementing and managing SLZs requires Bellevue to partner with a technology vendor to meet significant technology requirements:
  - App-based system or integration with existing apps for commercial drivers to find loading zones.
  - License plate reader monitoring of zones.
  - Automated ticketing and invoicing.
  - Notification and routing system for enforcement officers.
- Determine if SLZs will utilize license plate reader (LPR) technology to monitor usage, or rely on a reservation system only.
- Develop a scope and release request for proposal (RFP) for a digital platform that can oversee SLZ management, data collection, and potential billing.
- Define and geofence boundaries of the zones, which should accommodate several larger commercial vehicles.
- Educate enforcement teams about the pilot and any process changes. Enforcement teams should monitor the zones more frequently initially to encourage and incentivize compliant behavior, while increasing enforcement of illegal loading outside of the zones. During the first weeks of SLZ deployment, issue educational warnings instead of citations.
- Assist with onboarding commercial delivery operators, starting with those who have implemented efficiency or sustainability innovations, which may indicate alignment with city environmental values. Because SLZs leverage sensor- or camera-based technology, Bellevue must develop a strong technology services agreement and have a strong understanding of what data the vendor collects and keeps.
- Install enough SLZs to leverage a positive network effect. A greater number of zones may create a more valuable pilot for drivers, increase usage and compliance, and aid city-led data collection efforts.
- Deploy both physical (i.e., curb markings, bollards, signage) and web-based infrastructure to alert drivers of zone locations and regulations.
- During the initial few months of deployment, conduct an education campaign to spread awareness.
- Collaborate with commercial delivery companies and groups like the University of Washington Urban Freight Lab to assess primary objectives for deliveries.
- Research best practices and lessons learned from communities that have deployed SLZs.

Cost Considerations

Low–Moderate: Partnering with vendors to operate and manage the SLZs on behalf of the City requires a recurring cost. This cost can vary dramatically depending on the level of complexity. Should the city choose to price commercial vehicles' use of the SLZ, it can establish revenue share agreements to reduce upfront costs.

Priority Stakeholders

- Commercial delivery operators and delivery drivers
- Brick-and-mortar businesses and community organizations
- Transportation and Finance Departments

Further Resources

- Philadelphia PA Smart Loading Zone FAQs

AC.4

Manage an expanded employer shuttle loading zone program

Washington state law allows employers to provide transportation shuttles for its employees. Various companies in the Puget Sound region operate employer shuttles to backfill gaps in service not met by public transit. Bellevue sees employer shuttles as one of several tools to decrease single occupant vehicle trips and encourage shared mobility. The city allows shuttles to load and unload passengers at select curbside locations in the study area. Long term, employer shuttle loading zones may be shared with bus stops or other passenger loading zones.

Existing Practices

Bellevue is required to maintain a Commute Trip Reduction Plan. Employers with over 100 employees must offer one of several Commute Trip Reduction programs, which include vanpool and shuttle programs. The Transportation Department offers a specific permit for employer shuttles today, which authorizes shuttle operators to pick up and drop off employees in designated curb spaces. Shuttle services are managed by individual employers (e.g., Amazon, Microsoft) and as such, the City has access to only limited program data.

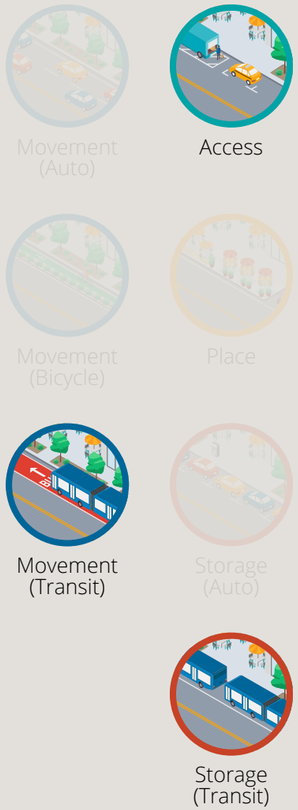
Vision

Employer shuttles can reduce drive alone commute trips, which is a priority for Bellevue. While several shuttles already operate in Bellevue, designating additional strategic curbside zones for expanded shuttle operation has the potential to lessen car dependency for a greater number of residents and employees. Bellevue can set incentives and more stringent requirements for participating employers, ensure that loading zones align with the applicable curb typology, and track other competing demands of the curb. The City's continued involvement can also ensure that shuttle programs complement, rather than duplicate or replace, public transit services.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES



Strategies and Implementation Actions

- Allocate new shuttle loading zones for use by permitted employer shuttle operators. Explore curbside areas that would benefit from time-of-day shuttle use.
- Modify existing permit language to set rules and requirements for shuttle operators, manage the number of operators, and assess program success.
- Require that the shuttle operators provide sufficient data to ensure the program is value additive to project sponsors and the City.
- Collaborate with employers and transit agencies to define shuttle loading zone locations, identify bus stops and shelters that may function well for shared use between shuttles and public transit, and maintain communication between parties.
- Develop requirements for informational signage and physical infrastructure delineating the zones.
- Collect feedback and evaluate stop locations, shuttle operator performance, and the degree to which employer programs are achieving broader TDM goals.

Cost Considerations

Low: Program costs would be low, mostly focused on sign, post, and staffing costs.

Priority Stakeholders

- Shuttle sponsors (i.e., major employers)
- Transportation department
- Brick-and-mortar retailers around zones
- Shuttle operators

Further Resources

- Boston Region MPO Guidebook
- Commute Trip Reduction in Bellevue

Employer shuttle in Seattle, WA. Photo credit: Nelson\Nygaard.

AC.5

Improve the bus shelter and shared stop system

Transit amenities such as bus shelters are primarily owned and maintained by transit agencies, while the city can provide supplementary amenities in the surrounding area. In some jurisdictions, bus stops can be used as shared stops with other services like employer shuttles—this arrangement requires city collaboration.

Existing Practices

The City of Bellevue does not operate its own transit system, but collaborates closely with King County Metro, Sound Transit, and other transit agencies to help provide a seamless rider experience. The city has undertaken initiatives that identify ways to improve the safety, quality, and accessibility of bus stops:

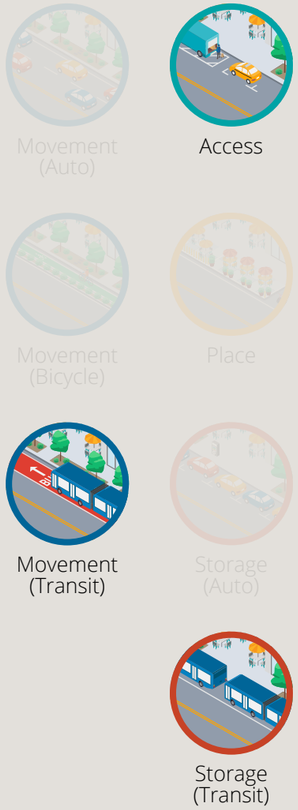
- The 2014 Bellevue Transit Master Plan outlined several priorities for Bellevue's bus shelters.
- The 2021 Mobility Implementation Plan includes bus shelters as a performance tracking indicator for the transit mode.

King County Metro states a minimum ridership threshold for providing a standard shelter and bench at bus stops—as of 2023, this minimum is 25 average daily boardings. The city sometimes requires private developments to design, construct, and maintain transit-specific weather protection within the envelope of the building site—this reduces operating costs for both the city and Metro in the long term.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES



Vision

As stated in Bellevue's Transit Master Plan, the City has a vision 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". To support this vision, the city will actively collaborate with transit partner agencies to determine bus stop amenity improvements, while exploring ways to add supplementary amenities in the proximity of bus stops. Supplementary transit amenities—such as city wi-fi, nearby shared lockers, pedestrian scale lighting, bicycle parking, micromobility hubs, wayfinding, and art installations—can provide services to community members and public transit riders beyond shelters. In a TransitCenter survey, "riders ranked simple amenities like bus stop benches, schedules, and safe street crossings as essential as shelters."

Additionally, bus stops that have current and future projected low ridership should be explored to be shared stops with other services, such as employer shuttles and future community circulators. This will allow the curb to be better utilized throughout the day.

Strategies and Implementation Actions

- Collaborate with transit agencies to help determine bus shelter installations and modifications. Work across City teams to help streamline permit review.
- Dedicate resources towards adding supplementary amenities near transit stops to improve rider experience.
- Develop an approach for determining stops for potential future shared use.
- Work with transit agencies to help survey regular riders to determine their pain points and the highest priority amenities and services.
- Continue tracking transit usage and infrastructure data as outlined in the City's Transit Master Plan and Mobility Implementation Plan.
- Identify criteria for supplementary bus stop amenity installations that benefit the traveling public. Explore ways to include equity within decision making criteria.
- Collaborate with public agencies and private mobility operators to determine shared stop locations. Pilot a shared stop arrangement and study before-and-after usage.
- Explore codifying requirements for transit-specific weather protection within development review.

Cost Considerations

Moderate: supplementary amenities near bus stops may be independent costs associated with the CMP, but may also be installed through other city workstreams. Grant funding and partnering opportunities may exist to aid the rider experience. Local organizations such as Business Improvement Districts or employers may be willing to partner to invest in shelter installation and upgrades.

Priority Stakeholders

- King County Metro
- Transportation Department
- Riders and potential riders
- Adjacent brick-and-mortar establishments

Further Resources

- NACTO Transit Street Design Guidelines
- Design Requirements for Bus Stops in Bellevue
- King County Metro Transit Route Facilities Guideline (Chapter 4)
- WMATA Bus Stop Amenity Reference Guide

AC.6

Establish formal protocols for curbside transit layover

King County Metro and Sound Transit operate a significant amount of transit service in the Urban Core. Several routes begin and end within the CMP study area and require layover between runs. Because the availability of layover is critical to the success of bus transit, Bellevue needs a formal decision-making and communication process to establish and maintain curbside transit layover.

Existing Practices

The City does not have a formal process or protocol to review transit layover needs or requests. The ad hoc nature of layover requests from Metro and Sound Transit is inefficient and does not consider transit layover requests within the context of systemic curb needs. Additionally, employer shuttles are not allowed to layover at the curbside as a condition of their operating right-of-way permit.

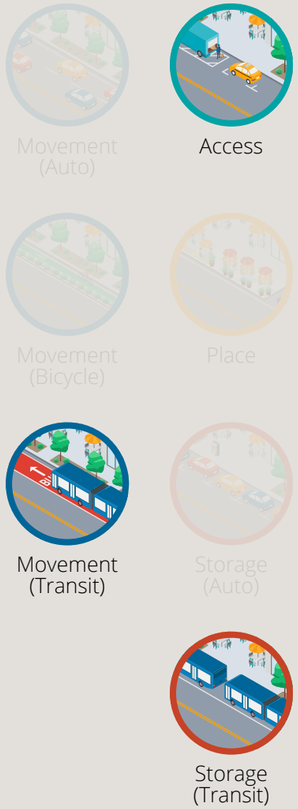
Vision

In the future, transit layover curb assignments balance King County Metro and Sound Transit's operational needs with the City's priorities for curbside areas. Transit layover will align with the CMP's Curb Typology, coupled with a consistent process to assess layover needs. The process establishes a clear protocol for communicating between the City and transit agencies as well as partner expectations for evaluating transit layover spaces.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES



Strategies and Implementation Actions

- Continue ongoing partnerships with King County Metro, Sound Transit, and other transit service providers to track and determine bus layover demands at the curbside. This includes establishing a clear communications process between the City and transit agencies to convey layover needs, site-specific requests, and approval processes.
- Develop a procedure to formalize and evaluate transit layover requests.
- Maintain a database of layover locations and time-of-day curb rules. Develop an approach to track, review, and determine comprehensive bus and shuttle layover demands at the curbside.
- Create a system to formalize transit layover requests and maintain a database of layover locations and time-of-day requirements.

Cost Considerations

Low: Formalizing transit layover spaces is a low-cost strategy, primarily requiring staff time. Much of the cost is shared between the City and its transit agency partners.

Priority Stakeholders

- Public transit operators, including King County Metro and Sound Transit
- Private shuttle operators who work with major local employers
- Adjacent property owners and businesses affected by transit layover
- Transportation Department

Bus layover in Montlake Terrace, WA. Photo credit: Wikimedia.

SE.1

Deploy public charging infrastructure to promote equitable electric mobility

Curbside charging stations include chargers for electric vehicles, rideshare and taxi vehicles, and electric micromobility options, such as bikes, scooters, trikes, and mopeds. Curbside charging infrastructure is typically paired with converting on-street parking spaces into electric vehicle parking spaces or electric micromobility charging docks. In some cases, electric micromobility charging docks can be located on sidewalks.

Existing Practices

Bellevue has taken steps to deploy multimodal public charging infrastructure. Most of these efforts thus far have been focused on installing chargers off-street, rather than at curbside locations. In 2022, the State of Washington released a plan outlining statewide EV charging infrastructure objectives and investments. At the same time, the Bipartisan Infrastructure Law directed the federal government to deploy a national network of electric vehicle chargers and other zero-emission fueling infrastructure. Expanding charging infrastructure is one of the first priorities in Bellevue's 2018 Smart Mobility Plan with recommended initiatives such as an on-street charging pilot.

Vision

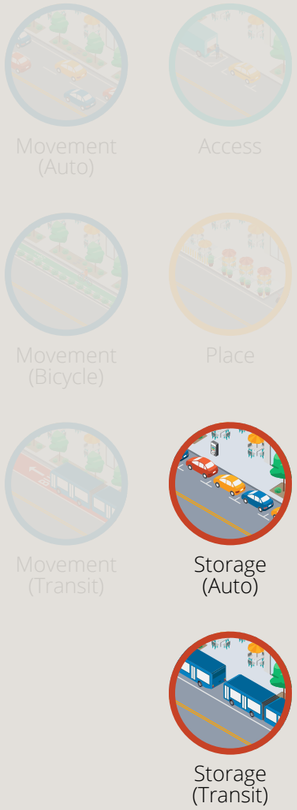
Curbside charging infrastructure is an important strategy to increasing EV and electric micromobility adoption. With publicly accessible, convenient, and reserved charging infrastructure throughout Bellevue, the City can support widespread electric and zero emission vehicle adoption and reduce "range anxiety".

In its charging infrastructure deployment, Bellevue must create charging opportunities for sustainable modes such as e-bikes and e-scooters rather than only provide for single occupancy vehicle charging. Charging infrastructure can also host wayfinding and other curbside community facilities such as bike parking, or shared storage. Curbside charging should be considered a supplementary resource to a broader charging network, as most charging stations are still assumed to be located off-street. Bellevue will continue to support electric charging infrastructure until critical mass adoption is achieved.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES



Strategies and Implementation Actions

- Partner with fast charging, Level 2, and multimodal charging providers to deploy curbside charging pilots. In evaluating the technology of these vendors, Bellevue should focus on vendors with high charger uptimes, strong business models, renewable energy, and low power grid utilization.
- Incorporate high uptimes (>95%) and maintenance requirements from vendors or contract with a vendor that specifically focuses on maintenance and uptime. Charger uptime and maintenance is crucial for the success of electric vehicles and micromobility.
- Develop a curbside EV charging infrastructure deployment approach that prioritizes equity and encourages EV/electric micromobility adoption in underserved areas. The plan should prioritize multimodal chargers.
- Require EV charging companies to provide reduced fueling costs to income eligible customers.
- Require forward compatible infrastructure for future charging infrastructure in current street projects.
- Require curbside EV charging infrastructure as a condition for some development approvals, depending on context. EV chargers would still be assumed to be owned and maintained by the city after installation.
- Initiate or join a collaborative task force to plan for and deploy charging infrastructure. This can include Puget Sound Energy, private vendors, community groups, funders and state governments, and employers.
- Create and adopt curb regulations that designate and dictate use of EV parking at charger-adjacent spaces.
- Establish a curbside charger permit that enables long-term site leases and streamlines siting approvals and grid connections.
- Provide guidance for the vendor on education and outreach campaigns.

Cost Considerations

High: Charging infrastructure that require significant trenching and utility upgrades can range between $25,000 and $100,000 per charger. For the City, installation, utility upgrades, hardware, and ongoing maintenance impact the City's cost of deploying curbside EV charging. Additionally, the power grid may be limited in certain areas of Bellevue to support EV fast charging capabilities. Areas where the power grid is limited may require significant costs in power infrastructure upgrades.

Bellevue can look to secure state or federal funding for EV charging. Depending on the location, developments may also be required to install publicly available EV charging at the curbside as a condition of the project.

Priority Stakeholders

- Adjacent businesses and residents
- Puget Sound Energy
- Transportation, Development Services, Community Development, IT, and Finance Departments
- Charging infrastructure vendors
- Sound Transit, King County Metro, and WSDOT
- Joint Office of Energy and Transportation

CASE STUDY: CURBSIDE EV CHARGING PILOT, LOS ANGELES, CA

Los Angeles, with the support of a CA Energy Commission grant, ran a level 2 curbside charging pilot program in collaboration with the local utility company. The City converted utility poles and streetlights that had existing power, which allowed the City to scale the program in a cost-efficient way.

Source: Curbside Charger Program

Further Resources: Washington State Plan for Electric Vehicle Infrastructure Deployment

SE.2

Develop a mobility hub strategy

Mobility hubs convene multimodal transportation services and infrastructure to accommodate transfers among various transportation modes. More advanced mobility hubs include digital tools that offer data streams and a unified mobile ticketing system. Mobility hubs are often located near major transit stops and other community destinations.

Existing Practices

There are two existing and planned mobility hubs in Bellevue, with several upcoming in partnership with King County Metro and Sound Transit:

- **Spring District Hub (completed in 2021):** Commuter transit facility that incorporates a large bike parking facility, a bike shop, retail and community spaces, and end-of-trip showers and lockers for commuters and employees. This facility is privately owned but will be available to the general public.
- **Eastgate Mobility Hub (anticipated in 2025):** A mobility hub plan was developed in 2019 to identify future improvements for the existing Eastgate Park-and-Ride that would enhance the rider experience and provde access to alternative public and private mobility options.

These mobility hubs still require individual digital platforms for the different modes but take the first step in consolidating modes in a central area.

Bellevue promotes and regulates individual mobility options and services. For example, the City's Street Use Permit provides regulation for micromobility companies to operate within public right-of-way. In 2018, Bellevue partnered with micromobility operator Lime to pilot a one-year electric bike share initiative that resulted in the installation of 50 free-floating bike parking zones.

Vision

Long term, Bellevue seeks to create a comprehensive mobility hub approach that provides both physical infrastructure space and supportive digital systems. In the near and medium term, Bellevue will look to encourage mobility options and integrating modes within hubs at curbside areas. Mobility hubs—and their corresponding multimodal options—will provide residents and travelers a broader suite of possibilities.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES

Movement (Auto)

Access

Movement (Bicycle)

Place

Movement (Transit)

Storage (Auto)

Storage (Transit)

Strategies and Implementation Actions

- Develop an overarching mobility hub plan and implementation strategy.
- Seek digital solutions that Bellevue can use as a unified technology platform. A digital platform would provide information on each travel mode and respective payment options. Work with partner agencies like King County Metro to determine if a regional platform would be more advantageous.
- Design mobility hubs to be universally accessible.
- Utilize existing mobility hub planning and implementation guides and Bellevue's Bicycle Rack Installation Guidelines to advance mobility hub designs and curbside integration. Convene a consortium of operators to discuss outcomes and objectives of Bellevue's mobility programs to promote a culture of collaboration rather than competition between operators.
- Develop a scope of work and concept of operations for a digital mobility hub platform. Release a Request for Proposal (RFP) to solicit interest from digital solutions.
- Design a permit procedure that regulates overarching shared mobility services. Permit conditions should address safety, parking requirements, operations and performance, privacy principles, and data-sharing requirements.
- Require any micromobility or shared mobility operators to integrate with the digital hub.

Cost Considerations

Moderate–High: Establishing functional mobility hubs require significant upfront costs associated with new permit approaches, digital system development, and infrastructure planning. Bellevue can apply for grants and other funding earmarked for mobility hub investments, including Sound Transit System Access funds.

Priority Stakeholders

- Adjacent businesses and residents
- Mobility operators, including King County Metro and Sound Transit
- Transportation, Community Development, and Development Services departments
- Hub users (employees and residents)

CASE STUDY: MOVEPGH PROGRAM, PITTSBURGH, PA

MovePGH, established in 2022, is a two-year pilot that unifies new and existing shared mobility services in the Transit app with a focus on equity and accessibility. To plan and implement the pilot, the City's Department of Mobility and Infrastructure established the Pittsburgh Mobility Collective, a public-private partnership between a group of mobility operators and the City.

Source: MovePGH

Further Resources: Metro Council Mobility Hubs Planning Guide, Minneapolis Mobility Hubs, MTC Mobility Hub Implementation Playbook

SE.3

Proactively evaluate Bellevue's current and future curb policies and tools to manage automated mobility services

Transportation technology has advanced to a level where vehicles can maneuver on streets without a driver. These connected and autonomous vehicles have the potential to revolutionize mobility over the next several decades. It will be increasingly important to ensure curbside practices stay up-to-date to manage, regulate, and accommodate mobility technologies.

Existing Practices

In the 2018 Smart Mobility Plan, Bellevue identified adoption of autonomous vehicles (AVs) and exploring autonomous and connected vehicle demonstration projects as a key initiative. The goal of the initiative was to create the blueprint for larger scale deployments and to attract autonomous mobility operators.

AV companies have expressed interest in conducting testing in Bellevue to enhance their capabilities and experience in inclement weather conditions. In cities such as Phoenix, AZ and San Francisco, CA commercial ridehail AV services, often referred to as "robotaxis", are being offered to the general public.

Governor Jay Inslee signed Executive Order 2017–02 that took steps to enable safe testing of autonomous services. The Governor also established the Washington State Transportation Commission Autonomous Vehicle Work Group, which is tasked to develop recommendations for possible policies, laws and rules to support the safe operation of AVs on public roadways in the state. The Executive Order also established a self-certification process for AV companies to operate on public roadways in Washington state. Currently, this is the only administrative process needed to operate an AV on Bellevue streets.

At the national level, pilot projects are studying deployments of autonomous shuttles, driverless sidewalk delivery robots, and other similar technologies in public rights-of-way.

Vision

If managed well, autonomous mobility has the potential to increase street safety, reduce emissions, and enhance mobility for areas underserved by transit. To date, Bellevue has encouraged automated mobility for ridehail, shuttles, and other shared mobility services, rather than autonomous private vehicles. Future automated mobility programs should complement public transit and replace single occupancy vehicles and be priced and planned such that all members of the community can benefit from the additional services.

Bellevue should consider targeted uses that can provide a positive impact within the Urban Core. Some examples include:

- Last-mile food or package personal delivery devices (PDDs), or delivery robots.
- AVs as a part of first-mile, last-mile oriented transit service.
- Freight loading and unloading within dedicated autonomous or zero emission curbside zones.

Strategies and Implementation Actions

- Designate specific passenger loading zones (PLZs) to provide curb space for autonomous pickup and drop-offs. Require any autonomous vehicle to make safe pickups and drop-offs in designated curbside loading zones, or within off-street private drives.
- Maintain local, regional, and statewide partnerships to respond to AV-related concerns. Participate in working groups to discuss AV activities at the curbside.
- Build public awareness about autonomous technology. Educating the public and soliciting support from local organizations will be crucial to gaining public support.
- Partner with one or more AV mobility operators to provide service. There are several companies in the automated mobility space, with varying philosophies and strategies to partnering with the public sector.
- Create a pilot permit structure to allow for autonomous sidewalk delivery robots. These systems have the potential to minimize vehicle trips and lower emissions by making short deliveries within the Urban Core.
- Ensure autonomous vehicles and shuttle operations are more universally accessible than traditional vehicles.
- Continue monitoring and tracking state legislation regarding AV technology and operations to ensure that the city is aligned with best practices and legal frameworks as it relates to the curbside environment.
- Allow mapping and testing of automated mobility vehicles in the city. Require operators to share data about Bellevue's specific streetscape and weather conditions as systems collect more information.

Cost Considerations

Moderate: The cost to enable AVs to operate in Bellevue consists of staff time and infrastructure costs related to new and expanded curbside loading. As AVs become more prevalent, more staff time and city resources may be needed to address incidents and respond to public questions.

Priority Stakeholders

- Neighboring municipality policymakers
- King County Metro and partner transit agencies
- Transportation, Community Development, and IT Departments
- Autonomous mobility operators
- Community groups
- Washington State Department of Transportation and Department of Licensing

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES

Movement (Auto)

Access

Movement (Bicycle)

Place

Movement (Transit)

Storage (Auto)

Storage (Transit)

SE.4

Leverage Bellevue's Transportation Demand Management (TDM) Plan to manage curb demands

TDM strategies aim to maximize travel options through requirements or incentives. Certain practices can be employed at the curbside to help achieve program goals.

Existing Practices

Bellevue created a comprehensive Transportation Demand Management (TDM) Plan in 2015 which pulls together a cohesive set of strategies that extend through 2023. Washington State has a Commute Trip Reduction (CTR) law that requires certain jurisdictions, including Bellevue, to create plans that guide CTR work. Employers are also required to implement programs that reduce commute trips to their worksites. The City tracks employer, worker and resident TDM programs under the Choose Your Way Bellevue brand and website. Bellevue also requires that large downtown employers implement Transportation Management Programs (TMPs). Bellevue contracts with TransManage, a branch of the Bellevue Downtown Association, to assist with its TDM and CTR programs, and TransManage also directly assists some companies with their TMPs.

Vision

Bellevue's context is different now than it was during the creation of its first TDM Plan in 2015. The City's population is growing significantly, the climate crisis is immediate, the curb is in greater demand, the COVID-19 pandemic has permanently affected travel behavior, and transportation access remains inequitably distributed. Bellevue's TDM plan is being updated in 2023 to guide continuation of programs along with new strategic initiatives for meeting Comprehensive Plan mode share goals.

Bellevue aims to connect TDM with the curbside by employing tools and strategies for encouraging non-drive alone modes. Adding accommodation for services like dedicated shuttle stops, installing additional pick-up and drop-off (PUDO) zones for carpool & vanpool uses, requiring car share, and building additional bike lanes along the curbside can encourage additional modes of travel.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES


Movement (Auto)


Access


Movement (Bicycle)


Place


Movement (Transit)


Storage (Auto)


Storage (Transit)

Strategies and Implementation Actions

- Align TDM programming with the CMP's Curb Typology such that localized curb regulations reinforce drive-alone reduction targets.
- Establish performance metrics that account for curb management and TDM strategies.
- Continue adding curbside features to accommodate non-drive alone modes, such as more frequent CVLZs and PLZs and dedicated lanes for buses, bikes, and HOV travel. Use the Curb Typology to help determine where facilities should be installed or constructed.
- Create partnerships with neighboring municipalities to share how curb management practices are supporting TDM best practices and program goals.
- Highlight improvements to and additions of pedestrian, carpool, transit, and bicycle facilities along strategic curbsides that provide more equitable and sustainable travel choices within the Urban Core.

CASE STUDY: TDM PROGRAM IN ARLINGTON COUNTY, VA

Arlington partners with its TDM provider to design and communicate services that make it easy for residents and workers to change transportation behavior. Initiatives focus on walking, biking, wayfinding and travel planning, business-to-business transportation consulting, and research through the Mobility Lab. The program defined a strong set of performance metrics and created the country's first TDM ROI calculator that highlights the value created by implementing TDM programs. Overall, it has been successful in meeting TDM objectives: it eliminates 50,000 single occupancy vehicle trips every workday, which represents 8% of trips and a 38% reduction in vehicle miles traveled.

Source: Arlington County TDM Plan, Mobility Lab article

Further Resources: Bellevue TDM Plan 2015-2023, Washington State TDM information

Cost Considerations

Low–Moderate: Costs primarily include staff time to coordinate between TDM and curb management initiatives. As of 2023, work to update the TDM Plan is ongoing independent of the CMP.

Priority Stakeholders

- Major employers
- Residents and employees
- Transportation Department
- TransManage and the Bellevue Downtown Association
- Neighbor cities and regional transit agencies

AT.1

Expand the Al Fresco on-street dining program

This City-led program allows restaurants to apply for a permit to operate in the public right-of-way to offer expanded seating options.

Existing Practices

During the COVID-19 pandemic, Bellevue began allowing restaurants to apply for a temporary Street-Use permit to operate food service within parking spaces in the curbside lane. The pilot program was concentrated on Main Street within the Old Bellevue business district. Bellevue's Al Fresco program was well-received by residents in a 2021 feedback survey and resulted in the continuation of the pilot program in 2022. However, permanent permit conditions are required to continue the program long-term.

Vision

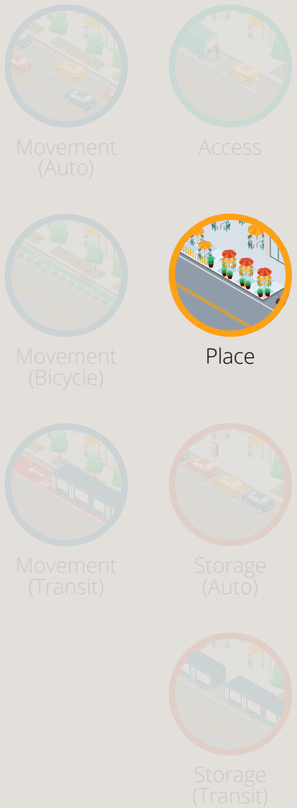
While Bellevue has run a successful on-street dining program in a limited area, the City can expand its program so that more businesses who are interested can participate, and improve placemaking in neighborhood business districts. To accomplish this, Bellevue can replace temporary permits with permanent ones, and expand the eligibility area over time either by enlarging the eligible zone or removing geographic restrictions.

Al fresco on-street dining in Old Bellevue.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES



Strategies and Implementation Actions

- Create a permanent on-street dining program and permit approach based on best practices and lessons learned from other communities.
- Establish permit conditions that allow restaurants to place weather and sun protection in street cafes. Features may include tents, umbrellas, fans, heaters, and planters with trees.
  - Bellevue should establish regulations for electric/natural gas heaters.
  - Provide seating and amenities, which must be moveable for ADA compliance.
  - Provide sufficient lighting.
  - Delineate dining area for user safety with barriers such as fencing, railings or sidewalk markings.
  - Bellevue should establish barrier height requirements.
- Ensure dining areas comply with ADA and City Code requirements for pedestrian access routes adjacent to on-street dining areas. This entails creating a straight path of travel with no obstructions that is 4-7 feet wide depending on road type.
- Explore installation of mobility amenities next to outdoor dining spaces, such as planters and on-street bike parking racks.
- Update the permit process to make it more approachable and user-friendly for interested business owners.
- Identify expansion areas that consider:
  - Priority transit routes and employment destinations
  - Traffic Operations & Safety
  - Competing curb uses
  - Curb Typology and access points
  - Concentration of businesses and residents
- Work with local businesses and other stakeholders to educate users about the program and communicate the economic development, downtown revitalization, and quality of life improvements it can realize. Materials should be multilingual.
- Establish multiple pathways for businesses to express interest.

Cost Considerations

Low–Moderate: City staff time is the primary cost. This time includes permit review, program development and implementation, which may require a project manager with director-level support.

To recover program costs, the City can charge a one-time permit fee and a renewal fee after a certain time period. The City should consider an equitable fee structure that establish a slide fee scale to account for equity considerations.

Priority Stakeholders

- Restaurants, retailers, and other business owners
- Downtown Bellevue Association,Old Bellevue Merchants Association
- King County Metro/Sound Transit
- Residents
- Local artists and construction companies
- Transportation, Community Development, and Development Services departments

Further Resources

- NACTO Outdoor Dining Design Guidelines
- Outdoor Dining in Bellevue: Report on 2021
- Current Bellevue design standards

AT.2

Establish a parklet program

Parklets act as extensions of sidewalk space within the curbside lane. These features oftentimes have public seating, weather protection, tables, and other similar amenities. They are often managed by partnership of surrounding businesses, residents, or cities themselves. Parklets can range from simple seating to vibrant and activated community spaces that include adjacent scooter and bike parking, greenery, programmed events, and cultural activities.

Existing Practices

Currently, Bellevue does not have parklets nor an official process for private parties to apply for a parklet within the curbside lane. General approaches from the Al Fresco dining pilot permit could be applicable to a parklet program.

Vision

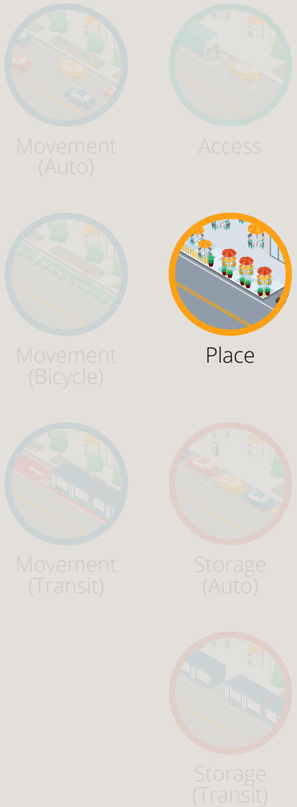
Implementing a parklet program represents an opportunity to reimagine on-street parking spaces into community resources. Parklets also present the opportunity to efficiently evaluate new human-scale infrastructure that repurposes street space historically reserved for vehicles. Stakeholder feedback throughout the CMP indicates a desire to improve quality public space and activate the curb for placemaking purposes.

Like the on-street dining program, the City can start by quickly implementing a temporary pilot program in a designated area to assess demand and effectiveness. After collecting sufficient feedback and evaluating the program based on success metrics, Bellevue can expand to a wider area of eligibility.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES



Strategies and Implementation Actions

- Add parklets into the potential permitted use cases within designated curbside lanes.
- Establish strong parklet design guidance to ensure welcoming and accessible spaces that meet community needs.
- Develop typical parklet designs to assist potential applicants. Parklet designs should feature safety elements such as water barriers to ensure protection and visibility from parking cars and traffic.
- Require that provisions and amenities within parklets are ADA compliant. Ensure parklets are clearly marked as public spaces and display hours of operation.
- Identify potential parklet locations. These locations should be mindful of stormwater access points, utility locations, nearby public spaces, and street safety considerations.
- Update language in the city's Right of Way Use Code to clarify that parklets within the curbside lane fall under a Type D permit.
- Establish permitting process, regulations, maintenance responsibilities, and design guidance.
- Consider piloting a city-owned and operated parklet to garner public feedback.
- Identify programming and activation guidelines for parklets.

Cost Considerations

Low–Moderate: City staff time is the primary cost. This time includes program development and implementation of any city-led parklet initiatives, design guideline development, and permit review of private parklet applications. Parklet program costs would be offset by one-time and renewal permit fees.

Parklet owner costs include permits, building and maintenance.

Priority Stakeholders

- Local businesses and residents
- Downtown Bellevue Association
- Neighborhood and Community Associations
- Transportation, Community Development, and Development Services departments.

CASE STUDY: PARKLET PROGRAM IN DALLAS, TX

The City of Dallas, TX implemented a temporary pilot program in 2020, which was converted in 2021 to the Street Seats program to allow more permanent installations. The program includes removal considerations and the City contracted with nonprofit partner, Better Blocks, to help with parklet design. Parklets are allowed to convert up to two parking spaces and can be either private with restaurant-specific seating or public spaces with general seating.

Source: Dallas Parklet Guidelines

Further Resources: NACTO Parklet Design Guidelines

Diagram of a parklet. Image credit: NACTO.

AT.3

Formalize a program for food trucks and curbside vendors

Similar to Al Fresco Dining and Parklets, permanent permit conditions to allow food trucks to operate in specific locations can improve curbside livability and economic vibrancy in the Urban Core.

Existing Practices

In Bellevue, Food trucks are permitted to operate on private property. In 2021, Bellevue and the Washington State Food Truck Association ran a Street Vending Food Truck Pilot Program which allowed food trucks to operate in the right of way with a permit. The pilot established permit conditions and food truck locations were included within an online map.

Vision

The program would grant temporary, time-of-day reservation of certain curbside spaces to allow vendor activity at the curbside. Temporarily repurposing parking spaces from single-occupancy vehicle parking to community and economic assets can increase street vibrancy, enhance walkability, and provide an affordable and simple path to business ownership.

Curbside vendor in the Spring District

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES

Strategies and Implementation Actions

- Create and maintain a public-facing website and a mobile app that would allow vendors to reserve locations and show when and where vendors would operate to the public.
- Document guidelines and best practices for pedestrian access, trash and recycling disposal, customer behavior, and strategies for promotion.
- Ensure approaches are in alignment with requirements from King County and Bellevue Fire.
- Collaborate with partner agencies to ensure city-issued permits are in alignment with requirements. For example, King County requires that bathrooms must be within five hundred (500) feet of an operating site.
- Update language in the city's Right of Way Use Code to clarify that food trucks and curbside vendors fall under a Type B permit.
- Identify zone locations considering adjacent brick-and-mortar businesses, potential customer and pedestrian activity, and demographic and economic indicators. Restrict food trucks from operating in districts with heavy street-facing retail (i.e., Main Street in Old Bellevue). Zones should be located within curbside lanes where plantings and street trees will not be damaged from foot traffic.
- Publish permit requirements and conduct broad, multilingual community outreach.
- Conduct regular program evaluations, collecting feedback from food truck vendors, residents, and other stakeholders.

Cost Considerations

Low: City staff time to review and issue permits is the primary cost. Upfront costs and time are required to determine ideal curbside vendor locations and requirements.

Priority Stakeholders

- Transportation and Community Development departments
- The Washington State Food Truck Association
- Businesses and residents abutting the zones
- Business and economic development associations
- Tourism and cultural institutions
- Nearby brick and mortar businesses

CASE STUDY: CARTS IN PARKS PROGRAM IN MADISON, WI

In partnership with the Latino Chamber of Commerce the program launched in 2021 and has continued into 2022. It resulted in 14 community food events and the launch of six new businesses.

Source: Madison Carts in Parks program website, NACTO writeup

Carts in Parks in Madison, WA. Photo credit: City of Madison.

AT.4

Establish guidelines for protecting and expanding curbside green space

Street trees, planters, and other greenery play an integral role in curb activation, use, and accessibility. As the City looks to update its curbs with new types of uses and access features, care must be taken to avoid removing these critical green spaces or failing to incorporate them into new curb plans.

Existing Practices

Bellevue's Parks & Community Services Department stewards over 10,000 street trees and associated landscapes located along over 100 miles of streets. Bellevue's Environmental Best Management Practices Manual provides streetscape design guidelines, standard details, materials specs, and overarching guidelines on how to protect, replace, or create new planters and street trees along th curb. The City has set ambitious tree canopy goals, but several parts of the Urban Core prioritized in the Curb Management Plan have limited existing canopy.

Vision

Curbside green space such as street trees and plantings offer social, environmental, and economic benefits. Planting street trees and other greenery along the curb can offset greenhouse gas emissions, capture stormwater runoff, improve roadway safety by reducing travel speeds, and create shadier, cooler, and more livable outdoor spaces for curb users—from delivery drivers to diners.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES


Movement (Auto)


Access


Movement (Bicycle)


Place


Movement (Transit)


Storage (Auto)


Storage (Transit)

Strategies and Implementation Actions

- During the design of new curb pilots, consider the relationship between street trees and the use of the curb zone and sidewalk areas for parking, deliveries, al fresco dining, parklets, etc.
- Consider opportunities for street trees and planters when modifying the curb.
- If increasing the tree canopy is not feasible, protect what currently exists and replace the greenery should the curb project impact any existing trees or plantings.
- The Street Tree and Arterial Landscape Program team should be included in curb pilot reviews/ curb modifications as they relate to any adjacent street trees and planter strips.
- The City can modify existing detailed drawings to reflect the desired end state that curb pilot implementors must follow.
- Develop standard drawings for the landscaping zone. Standard drawings should include soil volume requirements, acknowledge code-mandated planter widths, and allow for strategic pervious hardscaping between the curbside lane and sidewalk to minimize step impact.

Cost Considerations

Low: The City Staff can modify and distribute guidelines and criteria for preserving, replacing, and installing new street trees and plantings in the curb zone without significant upfront costs. Actual street tree investments can range from moderate to high, depending on if sidewalk infrastructure needs to be reconstructed.

Priority Stakeholders

- Transportation and Parks departments
- Businesses and residents adjacent to the pilot site


Tree canopy in Bellevue.

AT.5

Consider amending Land Use Code language to better integrate green space with the curb zone

Because most curb modifications stemming from property development will impact green spaces, the Land Use Code can require assessments and practices that ensure that curb changes do not negatively impact the tree canopy and green spaces.

Existing Practices

The Land Use Code for the Downtown incorporates street trees and soil volume requirements in relation to right-of-way improvements. However, in other parts of the Urban Core, such as Bel-Red, Wilburton or East Main, the Land Use Code either incorporates these requirements to a lesser degree or lack requirements entirely.

Vision

Amending the Land Use Code to ensure street trees and other green space are incorporated into curbside projects and pilots can yield safer streets and a more comfortable and lively curb environment.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES


Movement (Auto)


Access


Movement (Bicycle)


Place


Movement (Transit)


Storage (Auto)


Storage (Transit)

Strategies and Implementation Actions

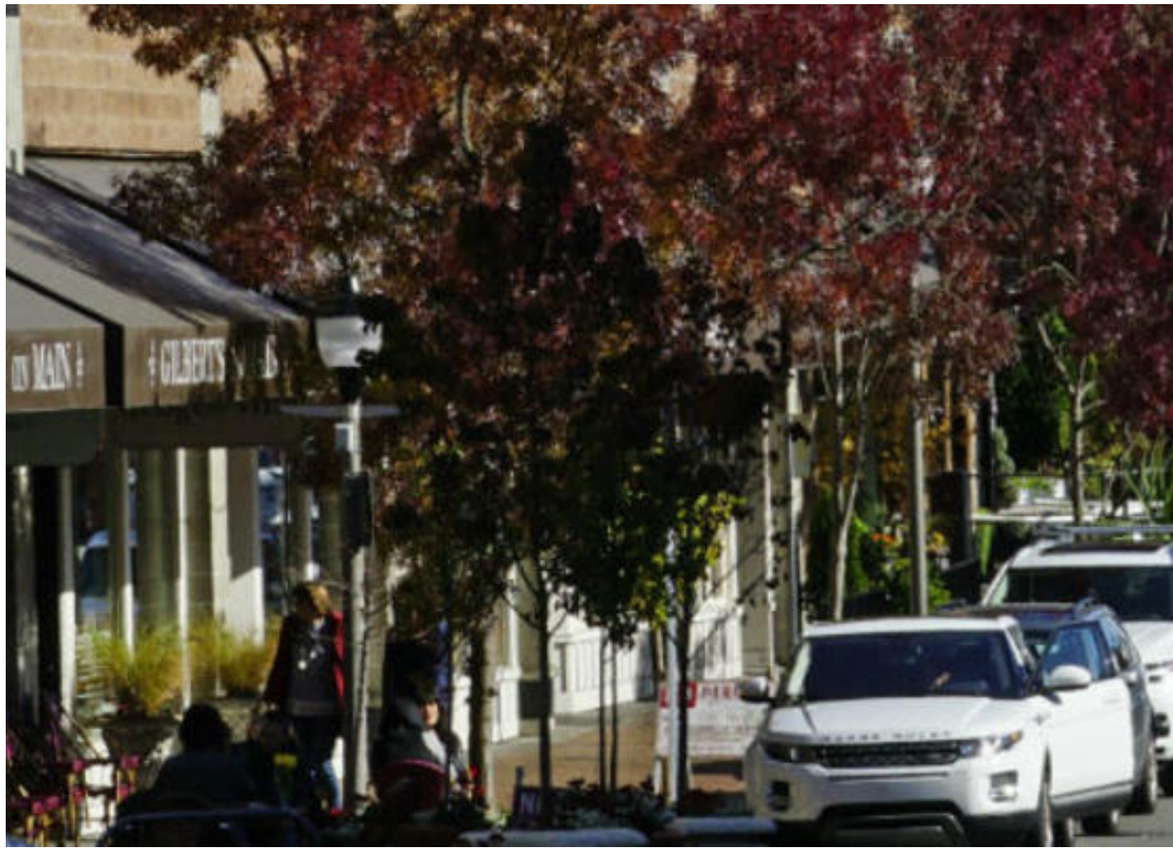
- Amend the Land Use Code to require tree protection, adequate soil volumes, soil preparation standards and root barriers following Chapter 8 of the Parks Environmental Best Management Practices Manual.
- Require a a tree canopy assessment as an integral component of development design and review.
- In certain curb changes, the City can require proper soil volumes by requiring soil cells and/or structural soils within the impacted curb zones.

Cost Considerations

Moderate: Amending the Land Use Code requires significant staff resources and timeframes to employ. Embedding new code language should be done in conjunction with other LUCA workflows rather than through independent efforts.

Priority Stakeholders

- Transportation and Parks deparment
- Businesses and residents adjacent to the affected curb site



Trees near the curb, Old Bellevue district.

DG.1

Collect, maintain, and share curb asset information

To ensure curb asset information is up-to-date, it will be important to track curbside regulations and existing infrastructure such as light and utility poles, furnishings, and curb use inventories.

Existing Practices

Bellevue currently has a digitized inventory of its curb assets and regulations within a digital format called "CurbLR". Other curb asset features are mapped and managed in Esri ArcGIS. Some examples of tracked assets include curbside lane regulations (i.e. parking restrictions), curb cuts (i.e. entrances for parking garages), curbside infrastructure (i.e. streetlights and utility features), and street furniture (i.e., trees, benches, bike racks, light poles).

Vision

Curb information has a wide variety of uses and applications. Bellevue can analyze its curb asset data to make more informed decisions and share takeaways with travelers for smoother trip planning. Collecting and consolidating accurate curb asset information digitally is a common first step in many advanced curb management programs.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES


Movement (Auto)


Access


Movement (Bicycle)


Place


Movement (Transit)


Storage (Auto)


Storage (Transit)

Strategies and Implementation Actions

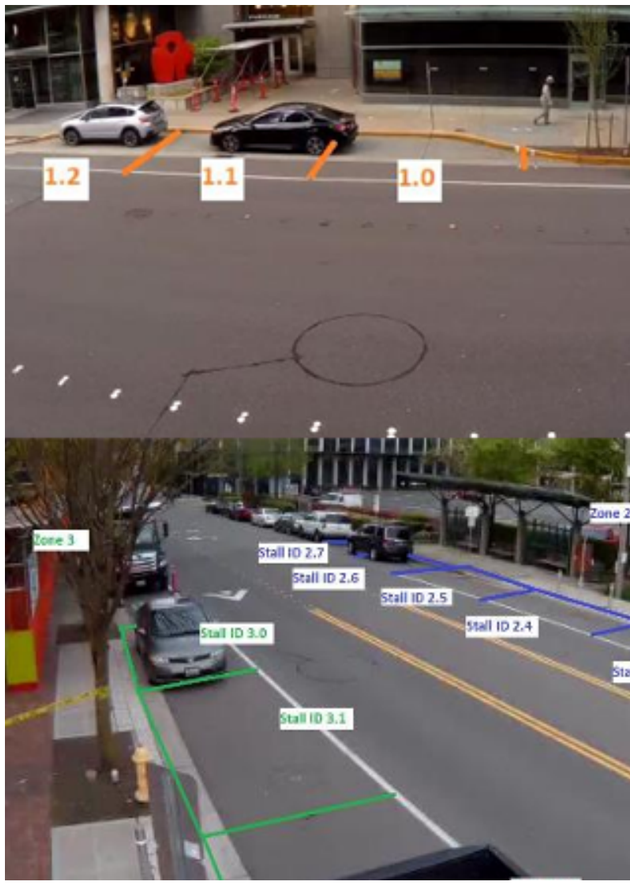
- Establish a curb asset management system that integrates with existing transportation asset management tools.
- Gather and analyze curb asset inventory using modern collection technologies. Seek vendors that help organize and digitize curb asset information.
- Design data collection and storage processes with a focus on data security.
- Establish new processes to ensure that changes and evaluations of curb assets are accurately reflected in the curb asset management system.
- Make some curb asset information available to partners and operators as open source data.
- Improve curb data organization. Convert existing digital curb inventory into the Curb Data Specification (CDS) or similar best practice format.
- Create public curb regulation dataset and tools. Develop a public-facing application that communicates curbside availability, trends, and potential future pricing.
- If not hosted interally, determine a technology platform to host the digital curb asset information, such as ESRI, Google Suite, or other private sector partner.
- Improve public information and awareness of curb regulations. Add signage & wayfinding to publicly accessible private lots to aid traveler information and mitigate illegal curbside behaviors on restricted blocks.
- Release curb asset information such as regulations and infrastructure locations through an open data web portal or a mobile app.

Cost Considerations

Moderate: Establishing and maintaining a curb asset management system have historically been labor-intensive, but new vendor-based solutions have promise to streamline processes. The City will need to dedicate technical staff time to manage curb asset management systems and information workflows.

Priority Stakeholders

- Data platform providers
- Third party data providers
- Transportion and IT departments
- Partners such as the Open Mobility Foundation (OMF)
- Private parking lot owners



Curbside management pilot in Bellevue.

DG.2

Collect and analyze curb activity data to inform decisions

Monitoring activity in curbside areas is essential to understand how curbs are being used and to inform future operational decisions. Data can be collected from both public and private sector sources, with a focus on parking, PLZ and CVLZ activity, pedestrian and bike/scooter activity, and unsafe curb behavior such as double parking and near-misses.

Existing Practices

Bellevue has launched technology-based curbside pilots in recent years in an attempt to collect accurate data. In 2020, the city conducted a pilot and study in partnership with Transportation for America in 2020 to ground-truth curb data collection efforts and evaluate the accuracy of video-based curbside monitoring technologies. The City selected vendors to conduct the analysis with a specific focus on commercial vehicles to assess enforcement and monetization strategies. The pilot was successful in evaluating the technology's accuracy but the COVID-19 pandemic disrupted further efforts.

Vision

Bellevue is well-positioned to implement a strong curb data collection program. After an initial pilot period in a limited testing area, a more regimented curb data collection program can move quickly to full data monitoring and robust data analysis. Best-in-class curb monitoring and data collection programs have strong data privacy and sharing principles, collaborative partnerships with private sector vendors, commercial operators, and community support. A curb management data collection program will include a public-facing platform that will share curb asset information, performance tracking metrics, details from private partners, and curbside behaviors around the Urban Core.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES


Movement (Auto)


Access


Movement (Bicycle)


Place


Movement (Transit)


Storage (Auto)


Storage (Transit)

Strategies and Implementation Actions

- Dedicate annual operational funds towards a curb management data collection program.
- Deploy technology-driven solutions, including:
  - Systems that collect data on the curb. Solutions may include time-lapse cameras, RFID recorders, license plate recognition (LPR) devices, and LIDAR sensors.
  - Data dashboards and visualizations for city staff to use in operational decisions.
  - A user-facing app or website to communicate curb status and behavior changes.
- In collaboration with community partners, identify priority objectives, scenarios, and/or locations for monitoring and data collection, which will inform program design and management.
- Assess existing public data streams to identify gaps in data assets.
- Confirm use of LPR technology to quickly collect curbside trends. Ensure that personal identifiable information (PPI) is scrubbed to ensure individual anonymity and privacy of users. Integrate data analysis and visualization via vendor dashboard. Assign a city staff member as the vendor point of contact.

Cost Considerations

Moderate-High: The City would need to make an upfront investment to collect and analyze curb activity, including sensors/cameras, data platforms, dashboards, and other consumer-facing tools. Strategy costs also include installation, maintenance, as well as ongoing program management costs. Multiple devices will be required to scale the data collection program.

Priority Stakeholders

- Third party data providers
- Transportation and IT Departments

DG.3

Automate enforcement and pricing processes

Automated enforcement and pricing are two common interventions that influence drivers' behavior at the curb. With dynamic pricing approaches, cities set variable curb parking rates or time limits based on demand and utilization. The goal of "demand-responsive pricing" is to achieve 75-80% occupancy, which translates to 1-2 parking spaces per block being available at any given time. This reduces cruising to find parking.

Automated enforcement refers to the remote issuance of citations for violating curb regulations, and the use of technology to reduce staff needs for enforcement. There are various levels of automated enforcement ranging from notifying enforcement officers about violation locations to automated ticketing.

Existing Practices

Bellevue's Police Department currently utilizes enforcement cameras in select locations for red light cameras and school zone speeding cameras to deter and monitor violations and efficiently write and send tickets. There are cameras in three school zones and at four signalized intersections. The downtown parking enforcement contractor also utilizes LPR technology to monitor on-street parking occupancy and issue citations. Bellevue does not have paid on-street parking today.

Vision

With strong privacy principles, appropriate checks and balances, and community engagement, automated enforcement and pricing can incentivize legal curb behavior and manage curb supply and demand. These interventions are tools in Bellevue's technology-driven curb management toolbox that can result in safer roads with fewer infractions and more parking and loading availability.

With dynamic pricing approaches that update regularly, the City can uncover stable revenue streams that can be reinvested back into community infrastructure and enforcement programs. It is also easy for the City to modify pricing based on supply and demand. These interventions require true partnership among city departments.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES

Movement (Auto)

Access

Movement (Bicycle)

Place

Movement (Transit)

Storage (Auto)

Storage (Transit)

Strategies and Implementation Actions

- In conjunction with a launched paid on-street parking program, determine data sources and considerations that would be inputs into an automated performance-based pricing approach. Data could include occupancy, average turnover, and other KPIs.
- Evaluate enforcement technology options for their ability to accurately enforce curb policy and collect curb access revenue, while protecting data privacy and civil liberties.
- Partner with vendors who offer curb management technology to collect and analyze data, create predictive models or enforcement protocols, and provide the underlying APIs to communicate pricing and enforcement updates.
- Communicate with the community about the benefits of a performance-based paid parking program and an equity-driven automated enforcement system that has the potential to minimize interactions with authorities.
- Prioritize equity to ensure the program does not become regressive:
  - Collaborate with community groups and disadvantaged populations to help create program parameters and inform how to educate the broader public.
  - Consider certain exemptions or a sliding scale fee structure.
- Analyze Bellevue's current automated traffic enforcement programs to understand technology capabilities, common community concerns, and applicability to automated parking enforcement.
- Identify priority pilot areas to evaluate pricing technology, install automated enforcement systems, and determine ticketing and tracking processes.
- Initiate the programs with a data collection period to ensure that parking duration and violation data is accurate and that the internal processes work to issue fees and citations automatically.
- Analyze data to understand whether the programs achieve desired outcomes and to make expansion decisions.

Cost Considerations

High: The City would need to make a substantial upfront investment in enforcement technology (e.g., sensor/cameras, data platforms, etc.) installation, maintenance, as well as ongoing program management costs that would partially be covered by parking fee revenue. Bellevue can also explore automated enforcement over time to save enforcement costs.

Priority Stakeholders

- Transportation, IT, Police, and Finance Departments
- Community members
- Local businesses
- Transportation and commercial delivery services

CASE STUDY: PERFORMANCE-BASED PARKING PROGRAM IN SEATTLE, WA

While automated enforcement is not yet implemented in Seattle, the Seattle Department of Transportation (SDOT) uses a data-driven process to adjust rates for 12,500 on-street parking spots. The City adjusts hourly parking rates and/or time limits based on demand based on a predictive model using transactions and regular data collection efforts.

This ensures "peak parking conditions" of one to two available spaces per block so drivers can consistently find available spots which reduces cruising and unsafe situations. In addition to varying pricing, Seattle also released an app that directs drivers to the nearest available on-street or off-street parking.

Source: Seattle Performance-Based Pricing Program website

DG.4

Create and maintain digital policy expressions and management tools

Curb compliance and efficient mobility will rely heavily on digitized code, geofencing tools, and APIs that communicate curb regulations to app-based transportation providers.

Existing Practices

Curb policies and regulations are primarily documented and conveyed through analog methods, including street signs, block-by-block ordinances, and static maps.

The Open Mobility Foundation (OMF) houses the Curb Data Specification (CDS), which allows cities to represent their curb data and regulations dynamically through an open data standard. CDS digitally connects city agencies with commercial operators and curb management technology companies to streamline curb information sharing. Use cases involving CDS include sharing curb zones publicly, wayfinding to curb space, real-time curb status communication, documenting and analyzing passenger and commercial curb usage, and responding to curb violations.

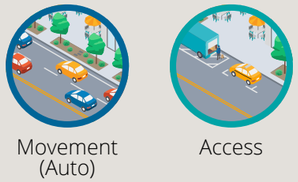
Vision

In an environment where transportation and delivery services operate on digital platforms, responsive curb policy and programming will require communicating the rules of the curb in a digital language. The vision for Bellevue is to express curb regulations (i.e., on-street parking and loading, curbside travel lanes) and ad hoc curb changes (parking pricing, work zones, and closures) in a digital format. Consumers of the digitized curb policies might include navigation/mapping platforms (e.g., Google Maps, Apple Maps etc.), transportation services (e.g., Uber, Lyft, King County Metro, etc.), delivery partners (e.g., UPS, Doordash, Amazon, etc.), and travelers looking to pay for parking via a parking app.

WHERE DID THIS IDEA COME FROM?

- Curb Summit
- Stakeholder Interviews
- Survey
- State of the Curb
- Transportation Commission
- Best Practice

APPLICABLE CURB TYPES



Movement (Auto)

Access

Movement (Bicycle)

Place

Movement (Transit)

Storage (Auto)

Storage (Transit)

Strategies and Implementation Actions

- Join the OMF's Curb Data Specification Working Group to allow Bellevue to inform and benefit from the broader specification.
- Convene an internal team that will manage digital curb policy and CDS implementation.
- Implement the CDS to begin expressing curb policies in a digital format.
- Dedicate resources to implement and manage the CDS database, organize back-end regulations into the new digital format, and regularly update digital policies resulting from legislation and real-time operating conditions. Institute permitting mechanisms, incentives, or regulations to require companies who wish to operate in Bellevue to share data via specific APIs.
- Improve curb data access and organization by converting the existing "CurbLR" digital curb inventory into the CDS format.
- Assist in the creation of a public curb regulation dataset and tool that allows consumer parking and navigation apps to communicate curbside availability, trends, and current/potential future pricing.

Priority Stakeholders

- Open Mobility Foundation
- Puget Sound partner cities, King County Metro, and Sound Transit
- Private mobility providers
- Curb technology vendors
- Community members and businesses that seek digital policies
- Transportation and Parks departments.

Cost Considerations

Low–Moderate: Technology investments to support data management, storage, and analytics range from city-owned systems development to Software-as-a-Service subscriptions. As of 2023, the OMF is in the process of developing open source software and tools that will significantly reduce the cost of CDS implementation and maintenance. The City will need to dedicate technical staff time to manage CDS implementation. At most, the Transportation Department may need to dedicate staff hours for a data analyst position, or integrate these duties into the future curb management team.

City of Bellevue

CURB MANAGEMENT PLAN

Appendix B: Curb Pilot Roadmap

July 24, 2023

INTRODUCTION

The changing nature of the curb necessitates an ethos of innovation, experimentation, and partnership. In addition to facilitating the crucial curb uses identified within the city's Curb Typology, Bellevue also aims to leverage the curb as a platform to evaluate new management, policy, and information sharing strategies. Bellevue's Curb Pilot Roadmap is a tool to further the vision of creating a vibrant, safe, and inclusive curbside environment that remains responsive to changing demand.

The Roadmap is oriented to Bellevue's overarching goals and specific context including past curb pilot efforts and current constraints. The Roadmap articulates key curb user and management problem areas and profiles priority pilots to evaluate new approaches to curb management, operations, experiences, information, safety, permitting and processes, and more.

Why does Bellevue Need a Curb Pilot Roadmap?

Bellevue's curb plays host to far too many problems for the City to solve at once. While the CMP establishes a policy and operations framework to address conflicts at the curb, some project-based pilot ideas need to be prioritized given limited resources. The Curb Pilot Roadmap:

- Establishes key problem areas and priority solutions to test through curb pilots.
- Outlines considerations for curb pilots, including guidance on planning, launch, execution, and evaluation.
- Profiles six priority pilots, including implementation considerations and tactical next steps for pilot delivery.
- Documents considerations for recommended long-term pilots.

Creating the Roadmap

Concepts included in the Curb Pilot Roadmap were informed through public engagement, reviewing nationwide best practices, and discussions with trusted partners during CMP development. Several primary activities created the foundation for recommendations:

- Public engagement activities, including focus groups and the Curb Summit event held in early 2022, helped provide insight into present day curb challenges and initial approaches to solving issues.
- A Curb Pilot Workshop, held in October 2022, reaffirmed best practices, brainstormed ideas, and identified Bellevue-specific curb challenges that pilot projects could help address. Attendees included the project team along with representatives from University of Washington's Urban Freight Lab, the Open Mobility Foundation, and King County Metro Transit.

Curb Pilot Principles and Practices

The project team established curb pilot principles and practices to ensure consistency and completeness across all curb pilots.

Curb Pilot Principles

The City of Bellevue has demonstrated a commitment to pilot design and delivery in accordance with the following principles:

- Advance the policy direction and outcomes reflected in the Curb Management Plan
- Utilize Bellevue's specific Curb Typology
- Design for inclusion, with a particular emphasis on historically underrepresented communities
- Evaluate and report progress and findings
- Engage and communicate with the public
- Build pilots based on strong partnerships

Curb Pilot Practices

The following are the most impactful practices for Bellevue to consider when developing curb pilots. The list of practices below is not comprehensive, but rather a set of practices that should be prioritized to ensure high-quality pilot design and effective delivery.

PRIORITIZE EQUITY AND INCLUSION:

- **Technology access:** While many pilots are technology-driven, they should not be based exclusively on modern technology. For example, drivers for delivery companies should have access to both mobile-based and analog-based payment or information systems.
- **Multiingual Information:** Bellevue will develop multilingual information materials and pilot features.
- **Vendor selection:** As it evaluates vendors, the City should incorporate equity screening criteria. For example, future Request For Proposals (RFPs) or similar solicitations should include prompts that request vendors to provide multiple payment and access options, list strategies for community engagement, and identify productive public feedback processes.
- **Community Input:** Bellevue should seek guidance from local community members on potential locations while also considering local context and stakeholder feedback. The city should include budget to potentially compensate vulnerable populations for their input and engagement.
- **Community education:** Pilot design and deployment must include educational components to allow community members to better understand changes and benefits. Bellevue and its partners should educate the community through a variety of methods and settings. The City can collaborate with vendors, local partners, and organizations to further community engagement and education efforts.

CONFIRM REGULATORY AUTHORITY

- **Collaborate with legal experts:** Pilot managers should confirm with internal legal teams to ensure that Bellevue has regulatory authority to deploy the project.
- **Confirm department responsibility:** Most curb-based pilot projects are assumed to be led by the Transportation Department, with close collaboration from Development Services, Community Development, and the City Attorney's Office.

COMMUNICATE CLEARLY AND PROACTIVELY

- **Planning:** The City should educate the public about upcoming pilot activity several months before and after launch.
- **Accessible communication:** The City should ensure communications are multilingual and clear for all public audiences.
- **Disposition planning:** The City should announce the pilot's conclusion to update all City staff and the general public. It should update websites for pilots it is no longer actively managing and require vendors to create a disposition plan for physical infrastructure.

ENSURE CITY CAPACITY

- **Operations and maintenance:** The City should also allocate resources to actively manage and sustain the pilot for its full duration.
- **Project Management:** Bellevue staff overseeing pilots should ensure that core project team personnel maintain activity during the project.
- **Partnerships:** Bellevue staff should utilize partner organizations, whether academic or community-based, for assistance with data collection, engagement, and evaluation capacity during the pilot.
- **Enforcement:** Bellevue staff should determine enforcement capacity before pilot launch.

VET PARTNERS THOROUGHLY

- **Outcome-oriented pilot scoping:** Ahead of confirming vendor partners, Bellevue should establish a thorough scope with roles, responsibilities, and performance measures that are aligned with the preferred outcomes outlined in the CMP.
- **Acknowledge crowded and evolving market:** As of 2023, there are a growing number of curb management technology companies. Before engaging with vendors, the City should first understand the range of curb management solutions and identify which are aligned with the problem the pilot aims to study or address. The City can also consider developing a bench or on-call contract for a wide range of curb technology vendors, operators, and consultants to efficiently launch pilots and other curb initiatives.
- **Technological capabilities:** The City should request that companies prove their capabilities, either through a demonstration or through references from other cities (including reference contact information and/or pilot evaluations or reports).

CREATE STRONG DATA SHARING PRINCIPLES

- **Data sharing:** Private vendors within the curb management field have sometimes been reluctant to share data with public entities. Bellevue should establish data sharing requirements within the scope of pilot projects and identify required information to be publicized.
- **Data communications format:** The City should consider the format in which vendors share data and consider requiring standardization of APIs, such as through the Curb Data Specification.
- **Data ownership:** Pilot managers should collaborate with Bellevue IT and Smart Mobility teams to ensure that the city owns data upon pilot conclusion. Once the vendor agrees to City ownership, Bellevue should determine whether their terms of data ownership require any ongoing costs.
- **Privacy and accuracy:** Bellevue should assess the vendor's data privacy policies and the quality and accuracy of its data. Many start-up companies within the curb management field are continuing to develop and refine their services, so it is crucial to specify privacy requirements within each pilot scope.

EVALUATE PERFORMANCE

- **Pilot metrics:** At a pilot's onset, Bellevue should work with its vendors and community stakeholders to identify key metrics that will determine pilot success. Focusing on a few key priority metrics will allow more effective tracking of progress.
- **Ongoing evaluation:** Bellevue should regularly track pilot partners and data to determine if the project is meeting its goals. This would allow the City to pivot and test changes while the pilot is running. Meetings held every other week would help track progress and troubleshoot issues.
- **Continuation and scaling:** In the month leading up to the pilot's conclusion, the City should consider adapting the pilot into a permanent program. Bellevue should avoid gaps in operation or service if the pilot is deemed useful. Alternatively, Bellevue should feel comfortable allowing the pilot to end at its planned close-out date if a forward path is deemed infeasible.

PRIORITY PROBLEM AREAS

Through a collaborative prioritization process, City and partner representatives identified several priority problem areas to solve through pilots. Problem statements were developed from the State of the Curb, stakeholder interviews, and the Curb Summit. Focusing City resources on the highest priority pilots will result in optimal pilot delivery and outcomes.

Problem statements and associated priority levels and implementation timelines are identified below. Pilots were conceptualized to address both near-term and long-term challenges.

Priority Problem Statements

Category	Problem Statement	Priority Level	Implementation Timeline
Curb Use	Need to eliminate auto/delivery conflicts with transit, bike, and pedestrian movement at the curb	High	Near-Term (0-2 years)
	Curbs are generally inflexible and single use (e.g., passenger, freight loading, and parcel delivery are regulated as one category)	Mid	Long-Term (Beyond 2 years)
	Not enough passenger and commercial vehicle loading zones due to growing delivery/ ridehail demand	Mid	Near-Term (0-2 years)
Curb Network and Information	Imbalance between the curb's throughput, access/delivery, and place functions	High	Long-Term (Beyond 2 years)
	Perception of parking difficulty: lack of parking at the curb, parking is hard to find, and/or there is a low awareness of off-street parking options	Mid	Near-Term (0-2 years)
Curb Processes	No systematic way to collect, update, manage, and communicate curb data	High	Near-Term (0-2 years)
	Inability to effectively enforce curb regulations (such as loading and lane blockages)	Mid	Near-Term (0-2 years)

PILOT PRIORITIES

The following section describes the six priority pilot concepts to test and drive forward over the next few years based on Bellevue's goals, constraints, and priority problem statements.

Problem Statements and Associated Pilot Concepts

Category	Priority	Problem Statement		Pilot Concepts					
				Low Emission Delivery Zones	Shared AV Ridehail Loading and Digital Curb	"On-Street to Off-Street" Curb Diversion (Commercial and Personal Vehicles)	Loading Zone Supply / Demand Alignment	API Standardization via CDS	Internal Agile Process for Real-Time Workflow, Asset Information, and Regulation Updates
Curb Use	High	Auto/delivery conflicts with transit, bike, and ped movements		✓	✓	✓			
	Mid	Curbs are inflexible and single use		✓	✓	✓	✓		
	Mid	Lack of passenger and commercial vehicle loading zones		✓	✓	✓			
Curb Network and Information	High	Imbalance between curb's throughput, access, and place functions		✓		✓	✓		✓
	Mid	Perception of parking difficulty		✓	✓	✓	✓		
Curb Processes	High	No systematic way to collect, update, manage, and communicate curb data					✓	✓	✓
	Mid	Inability to enforce curb regulations			✓			✓	✓

ENFORCEMENT: THE LYNCHPIN TO SUCCESS

Equitable and effective enforcement is crucial for the success of curb pilot. However, politics, legislative barriers, and capacity limitations can constrain efforts. Below are several enforcement strategies that help mitigate these constraints.

- Engage with vulnerable populations to ensure enforcement design is fair, just, and devoid of explicit or implicit discrimination.
- Collect data on violations, lost revenue, and safety incidents to determine the appropriate level of pilot enforcement.
- Begin pilot enforcement with an initial education period prior to issuing citations. Consider delegating certain responsibilities to organizations outside the Police Department—such as a curbside enforcement contractor—to increase capacity for monitoring violations.
- Leverage technology and automation to reduce staffing requirements and provide capability to enforce short duration violations (e.g., pick-up and drop-off in prohibited areas).

P.1

Low Emission Delivery Zones

Image: Urban Movement Labs

Pilot Definition

Bellevue should test dedicated curb space for innovative low or no emissions commercial delivery modes and methods. Low emission delivery zones (LEDZ) will serve as testbeds for new vehicle types, modes, and processes that can be scaled over time. To encourage innovation, pilot partners can propose new ideas and expand eligible delivery concepts over the course of the pilot. Eligible uses include:

- Electric cars and light duty trucks
- E-bikes, e-cargo bikes, and other micromobility concepts
- Common lockers or delivery hubs at the zone
- Delivery aggregation and microhubs to distribute packages

Pilot Location(s)

Curbs in the Urban Core with a combination of commercial density and residential density and significant on-street delivery activities. Engage delivery partners to select specific sites.

Delivery Timeline

- Months 1–3: Initial data collection and zone siting
- Months 4–9: Technology vendor selection, scope development, procurement, permitting for participating commercial operators
- Months 10–12: Education period
- Months 13–24: Pilot deployment
- Month 25: Publish assessment report

Vision Alignment

This pilot is designed to test emerging delivery technology, enforcement, and incentivizes operators to innovate and more quickly deploy low-emission delivery vehicles. Diverting commercial loading into the zones will also free up curb space for other uses. The pilot is also aligned with goals stated in the city's Environmental Stewardship Plan.

Impacted Population

- Communities adjacent to zones
- Small and local businesses
- Commercial delivery drivers
- Mobility service providers

Implementation Guidance

PARAMETERS

- Define requirements for eligible delivery vehicles and other applicable infrastructure.
- Consider time restrictions for LEDZs to ensure curb spaces are well used. For example, some LEDZs could be active during the peak period to help reduce air pollution.
- Define fee structures for eligible and ineligible users.
- Determine the initial location of zones, balancing supply to incentivize commercial operators to invest in low-emission delivery.

RELEVANT PROBLEM STATEMENTS

- ✓ Auto/delivery conflicts with transit, bike, and ped movements
- ✓ Curbs are inflexible and single use
- ✓ Lack of passenger and commercial vehicle loading zones
- Imbalance between curb's throughput, access, and place functions
- Perception of parking difficulty
- No systematic way to collect, update, manage, and communicate curb data
- Inability to enforce curb regulations

REQUIREMENTS

- This pilot concept requires staff capacity to evaluate LEDZs, review progress, and expand zones and zone enforcement over time.
- The City will need to create a new permit that allow for user and mode restrictions in LEDZs. After the City designates the first few zones, property owners and adjacent businesses should be able to request LEDZs similar to conventional commercial vehicle loading zones.

COMMUNITY

- Identify champions to foster a supportive environment, provide feedback, and ensure the longevity of the program.
- For businesses who lack the resources to invest in new delivery concepts, Bellevue will explore grant funding and supportive programs such as subsidized e-cargo bikes.

ENFORCEMENT

- In addition to enforcing misuse of LEDZs, Bellevue can encourage participation through policy and financial incentives.
- Assess the suitability of automated enforcement processes and technologies.
- Active enforcement of both the LEDZ and adjacent curbside spaces will further encourage behavior change.
- Bellevue can launch enforcement in two phases:
  - **Phase 1: Education** – During the first three months of the pilot, the LEDZs will be temporarily delineated through signage, bollards, and paint. City staff, enforcement personnel and other partners will educate the public about the appropriate uses of the zones.
  - **Phase 2: Enforcement** – After the first three months of the pilot, enforcement officers and/or automated enforcement technologies will impose penalties for non-compliance of the zones and areas adjacent to the zones.

EVALUATION

Potential Metrics

- Experience of delivery drivers (time saved, safety)
- Dwell time
- Emission reductions
- Experience of other curb users (other drivers, walkers, cyclists, etc.)
- Number of unsafe and/or illegal loading incidents (double parking, blocking a crosswalk or median)
- Zone utilization vs. commercial loading in other zones or illegal curbs
- Percentage of local or small business participation
- Number of participating operators
- Number of zones
- Number of near misses

Methods

- Enforcement reports
- Public surveys (drivers and other community stakeholders)
- Automated zone monitoring and associated data collection

Shared AV Loading and Digital Curb

Image: Flickr user Marco Verch (Creative Commons)

Pilot Definition

Bellevue's 2023 Autonomous Vehicle (AV) Strategic Vision identified multiple steps Bellevue and the region should take to prepare for the arrival of AVs. One of the key factors in supporting AV services is providing adequate space at the curb for these vehicles to legally perform pick-up and drop-off activity. The city and its regional partners will need to work closely together to ensure that AV operations in a dense urban environment are performing safely and efficiently at the curb.

Any pilot using AV technology would have the following phased deployment approach:

- **Phase 1: Operational Performance Evaluation** – Develop a common understanding of the service being provided and how the curb will be used. Determine how to encourage use of private pick-up/drop-off space where available and determine where space may be required in the public realm to supplement the private facilities.
- **Phase 2: Digital Mapping** – AV technology requires a detailed digital map of the built environment to safely navigate and make intended stops. A key component to the mapping is determining where curb activities can take place. During this phase, operator(s) will create this map, engage in community outreach, refine the pilot territory, and test its technology in Bellevue's specific weather and curb conditions.
- **Phase 3: Testing and Deployment** – Establish performance criteria for the proposed service. Work with mobility service partners to evaluate curb use throughout the life of the service and coordinate with city to develop a transition plan between testing and deployment.

Pilot Location(s)

Considerations for selecting pilot locations:

- **Safety:** Adequate public and private space to access the proposed service is critical to support our curb management principles.
- **Demand:** Anticipated high ridership locations will need careful consideration for safe access to the proposed service.
- **Equity:** Bellevue should consider deployment or service that supports communities underserved by public transit or face other mobility challenges.

Delivery Timeline

PHASE 1: OPERATIONAL PERFORMANCE EVALUATION

- Months 1–6: Define scope of service and address pilot location considerations

PHASE 2: DIGITAL CURB MAPPING

- Months 7–12: Perform digital mapping of the operational environment and curb; and begin public outreach

PHASE 3: TESTING AND DEPLOYMENT

- Months 13–24: Identify performance criteria, collect data and fine tune service

Vision Alignment

Operators are identifying ways to harness autonomous innovation and new mobility technologies to achieve various municipal goals. With the growing innovation in this sector, Bellevue can leverage the opportunity to incorporate new technology into its transportation ecosystem on its own terms to further sustainability, safety, economic and equity goals.

RELEVANT PROBLEM STATEMENTS

- ✓ Auto/delivery conflicts with transit, bike, and ped movements
- Curbs are inflexible and single use
- Lack of passenger and commercial vehicle loading zones
- Imbalance between curb's throughput, access, and place functions
- ✓ Perception of parking difficulty
- ✓ No systematic way to collect, update, manage, and communicate curb data
- ✓ Inability to enforce curb regulations

Impacted Population

- Mobility service providers (transit operators, taxis, ridehail) and associated unions.
- Traveling public
- Local businesses
- Local property owners

Implementation Guidance

PARAMETERS

- Consider all forms of AV mobility when planning for the implementation of this technology and its relationship with the curbside. As an example, robotaxis and shuttles provide different types of service but have similar access needs.
- Partnership is key to the success of any proposed AV service. This could include finding funding partners in the business community for services that are dedicated to Bellevue. Tracking performance and compliance with local rules also requires close partnership with the operator(s).
- Look to other jurisdictions for lessons learned from similar AV mobility services. The Autonomous Vehicle Strategic Vision provides many considerations for future deployments.

REQUIREMENTS

- Assure future AV mobility services integrate well with other services offered in Bellevue. For example, look for ways to support public transit and not duplicate its service.
- Clear criteria must be established for operating on Bellevue's busy streets to avoid creating new operational issues.
- AV services must comply with all state regulations and motor vehicle laws.

COMMUNITY

- There is an overall lack of public familiarity and comfort with autonomous mobility, so community awareness campaigns are important. Operators should host demonstrations and events to showcase the technology. They should also be available to answer questions from City staff, residents, and community organizations about the technology. The City should collaborate with transit agencies to test shared autonomous technologies at major transit hubs.

ENFORCEMENT

- Enforcement and first responder stakeholders should be included early in the pilot planning process.
- Bellevue should require that operators agree to enforcement protocols or provide enforcement interaction plans before commencing each phase.

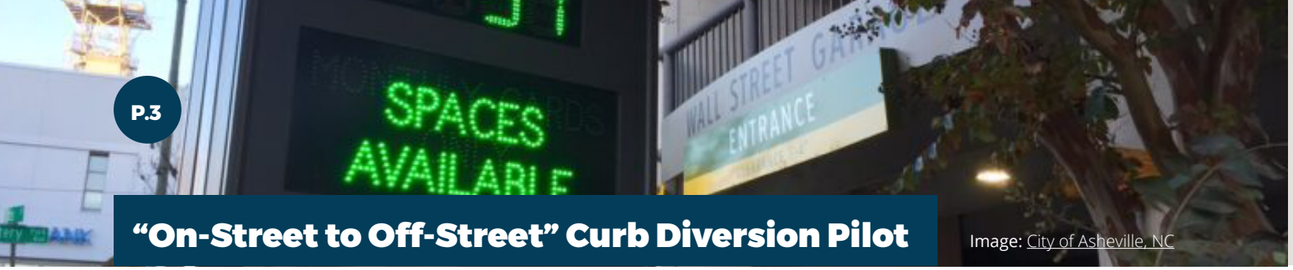
EVALUATION

Potential Metrics

- Accuracy of digital map layer
- Number of single occupancy vehicle rides eliminated
- Number of safety incidents
- Number of traffic violations or lane stoppages
- Percentage change in emissions
- Utilization of passenger pick-up zones

Methods

- Police reports
- Operator data
- Automated zone monitoring



"On-Street to Off-Street" Curb Diversion Pilot

Image: City of Asheville, NC

Pilot Definition

Bellevue can divert commercial and personal vehicles away from the curb and to safer, off-street parking locations for longer term or recurring loading. This pilot has two phases:

Phase 1: Personal Vehicles – Bellevue should partner with a technology company to monitor occupancy for several off-street parking facilities. The vendor will then communicate real-time availability of off-street parking facilities to help divert vehicles away from the curb. Availability can be displayed to drivers via an app, web portal, or digital wayfinding and signage. This pilot phase can be deployed incrementally, beginning with a limited number of private parking garages and lots.

Phase 2: Commercial Vehicles – Bellevue should encourage commercial delivery drivers to use available on-site loading bays, rather than curb space, for most deliveries. Locations of existing loading bays should be mapped and broadcasted with commercial operators. The City should work with property owners and commercial operators to determine strategies that would increase loading bay utilization.

Pilot Location(s)

Select buildings with load bays and publicly available parking garages that are in areas with high frequency of illegally parked delivery vehicles and heavily used on-street parking.

Delivery Timeline

PHASE 1: PERSONAL VEHICLES

- Months 1–3: Procurement
- Months 4–5: Data collection
- Months 6-12: Pilot deployment

PHASE 2: COMMERCIAL VEHICLES

- Month 13–18: Information gathering and mapping
- Months 19–24: Assessment and trial of policy, operations, incentives, and penalties
- Month 25: Publish assessment report for both phases
- Month 25–beyond: Explore permanent integration and solutions

Vision Alignment

Diverting drivers away from the curb will increase reliable access to parking and safe locations for deliveries. It may also reduce congestion, provide more availability within on-street parking and loading zones, and allow for new types of curb uses (i.e., micromobility parking zones, employer shuttle zones, passenger loading zones). Better diversion tactics may also improve the safety and aesthetic of the curbside environment.

Impacted Population

- Drivers
- Commercial drivers who make recurring deliveries in large buildings
- Businesses and residents who receive deliveries

RELEVANT PROBLEM STATEMENTS

- ✓ Auto/delivery conflicts with transit, bike, and ped movements
- Curbs are inflexible and single use
- Lack of passenger and commercial vehicle loading zones
- ✓ Imbalance between curb's throughput, access, and place functions
- ✓ Perception of parking difficulty
- No systematic way to collect, update, manage, and communicate curb data
- Inability to enforce curb regulations

Implementation Guidance

PARAMETERS

Personal Vehicles

- Prominently display off-street occupancy signage and on-street time and use restrictions in high traffic locations.
- Integrate off-street parking occupancy with other parking technology such as paid parking mobile apps.

Commercial Vehicles

- Partner with private building owners that observe high volumes of deliveries to identify mutually beneficial outcomes.
- Establish communication protocols with delivery drivers.

REQUIREMENTS

- Collect data from operators and buildings (if available) on utilization of loading bays.
- Test occupancy monitoring technology before displaying off-street parking occupancy to the public.

COMMUNITY

- Partner with private garage owners to display availability within off-street lots.
- Survey buildings that receive high volumes of freight deliveries to understand pain points, delivery needs and process improvement areas.

ENFORCEMENT

- Partner with law enforcement to increase monitoring of on-street commercial loading.
- Pair greater enforcement efforts with incentives to encourage legal loading activity.
- Encourage building owners to monitor loading bay utilization and compliance.

EVALUATION

Potential Metrics

- Instances of unsafe loading behavior
- Dwell time
- Number of parking or curbside lane violations
- Cruising time
- Public survey: ease of finding short-term, on-street parking
- Freight loading bay utilization percentage

Methods

- Driver surveys
- Commercial operator data
- Building data

P.4

Loading Zone Supply/Demand Alignment

RELEVANT PROBLEM STATEMENTS

- ✓ Auto/delivery conflicts with transit, bike, and ped movements
- ✓ Curbs are inflexible and single use
- ✓ Lack of passenger and commercial vehicle loading zones
- ✓ Imbalance between curb's throughput, access, and place functions
- Perception of parking difficulty
- No systematic way to collect, update, manage, and communicate curb data
- Inability to enforce curb regulations

Pilot Definition

Bellevue should collect data to understand and quantify any supply/demand mismatches for on-street loading space. This includes comparing supply and demand for passenger versus commercial loading. New zones that meet current demand can be differentiated by use to more specifically match supply with demand.

Pilot Location

Reference data to identify overburdened curbs and high activity loading zones. For commercial loading, high demand locations may include curbside areas near high-density residential buildings and commercial buildings. For passenger loading, high demand locations may include retail destinations, parks, and other dense land uses.

Delivery Timeline

- Months 1–6: Initial data collection
- Months 7–9: Planning loading zone expansion
- Months 10–15: Pilot new zones

Vision Alignment

Bellevue's curbside environment was not originally designed to accommodate the number of uses, modalities, and volume of activity that now exist. Studying and allocating appropriate quantity of curb space to accommodate loading demand will help achieve Bellevue's broader curb goals. Refining loading zones even further to differentiate between commercial and passenger loading will allow for data-driven outcomes at the curb.

Impacted Population

- Commercial delivery drivers
- Businesses and individuals who receive deliveries

Implementation Guidance

PARAMETERS

- Bellevue should partner with a technology vendor to collect differentiated data on passenger versus commercial loading to better understand loading activity.
- Bellevue should require or incentivize data sharing by imposing fees to vendors and/or creating new loading zones.
- The process for siting new loading zones should reference the Curb Typology while also considering equity, environmental, and quality of life criteria, rather than responding ad-hoc to individual requests.

REQUIREMENTS

- Assign geofencing to loading zones in order to digitally communicate locations and collect data.
- Install technology to monitor loading zone utilization.

COMMUNITY

- Coordinate with TNCs, taxis, and other for-hire vehicle operators to collaborate on ways to make passenger loading safer and more efficient.
- Install signage at new or removed loading zones with pilot information and justification.

ENFORCEMENT

- Data collection is the primary component of this pilot, rather than enforcement. The Transportation Department can share data with the Police Department and contracted enforcement personnel to align on the current loading context.
- More deliberate enforcement approaches should be explored as the pilot evolves from pure data collection to zone expansion and differentiation.
- Automated ticketing or invoicing technologies may alleviate some resource constraints, but should be scrutinized to ensure equitable outcomes.

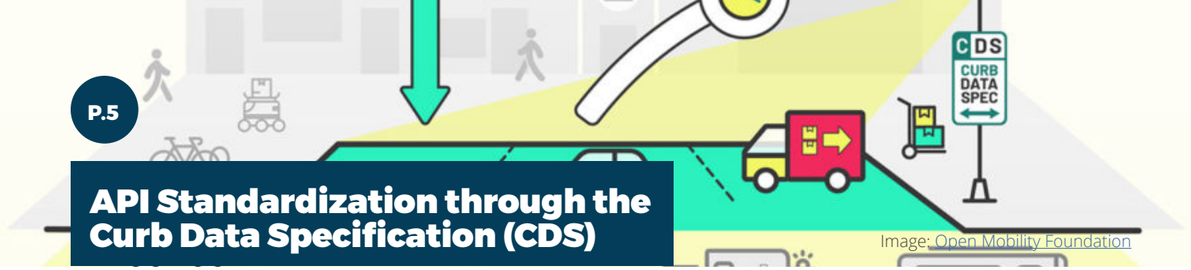
EVALUATION

Potential Metrics

- Utilization of loading zones
- Breakdown of different types of loading (i.e., passenger vs. commercial)
- Percentage of diverted loading zone activity from one location to another
- Number of unsafe loading situations
- Number of illegal loading occurrences

Methods

- Require collection of data from ridehail and for-hire vehicle companies, cell phone records, delivery services, and other sensors.
- Data from City-led data collection efforts
- Police citation and enforcement contractor data



P.5

API Standardization through the Curb Data Specification (CDS)

Image: Open Mobility Foundation

Pilot Definition

The CMP recommends Bellevue to adopt and incorporate the Curb Data Specification (CDS) to manage curb data collection and communications between the City and curb users. This will require the City to update internal processes and test implement standardized application programming interfaces (APIs). This pilot will test CDS' integration into a limited set of curb use cases work in coordination with public and private curb stakeholders.

Pilot Location

N/A

Delivery Timeline

- Months 1–2: Join the OMF and participate in CDS working group
- Months 3–9: Deploy CDS specification within digital format to Bellevue streets; publish digital curb information publicly
- Months 10–beyond: Utilize CDS to begin app-based pilot project

Vision Alignment

Standardizing APIs fosters streamlined and effective communication channels between City staff and the private sector, which benefits all types of curb pilots. Establishing a collaborative relationship with the Open Mobility Foundation (OMF) and other members of the Curb Data Specification working group will develop Bellevue's reputation as an innovator at the curb. Developing a standard method for communicating curb data will support pilot delivery and reduce resources required to administer and evaluate pilots. CDS implementation will also streamline communications with vendors.

Impacted Population

- Private sector mobility providers

Implementation Guidance

PARAMETERS

- Bellevue should proactively inform vendors about data sharing requirements.
- Bellevue should require that vendors who wish to participate in the pilot must follow pre-defined APIs and data specifications. This will allow the City and all operators to communicate efficiently.
- Staff responsible for pilots can connect with other municipalities to learn about how they integrated these conditions, through the Open Mobility Foundation's Working Group or separately.

REQUIREMENTS

- Join the CDS working group and collaborate with likeminded municipalities who are undergoing API and curb technology deployments.
- Assign Bellevue staff members to participate in CDS discussions regularly. A Bellevue project leader should understand both mobility pilot needs, curb data specifications/APIs, and technology/product needs.
- Develop redundancy with CDS management and ensure that multiple staff members are invested in and knowledgeable about CDS.

RELEVANT PROBLEM STATEMENTS

Auto/delivery conflicts with transit, bike, and ped movements	Curbs are inflexible and single use	Lack of passenger and commercial vehicle loading zones	✓ Imbalance between curb's throughput, access, and place functions	Perception of parking difficulty	✓ No systematic way to collect, update, manage, and communicate curb data	✓ Inability to enforce curb regulations

COMMUNITY

- Staff managing pilots can connect with other municipalities to learn about nest practices for standardizing communication via data standards.
- Standardizing APIs will likely not impact the majority of Bellevue residents immediately, so a large-scale communications and awareness campaign is not necessary. However, any pilots that leverage CDS should include broad public communication.

ENFORCEMENT

N/A

EVALUATION

Potential Metrics

- Speed of integration with private sector vendors
- Time spent evaluating pilots, curb operations, etc.
- Effectiveness of two-way communication with vendors (# of complaints, NPS)
- Number of new pilots and vendors

Methods

- Operator/vendor feedback: Interviews, surveys, and focus groups
- City staff feedback: interviews, surveys, and focus groups

P.6

Internal Agile Processes for Real-Time Workflow, Asset Information, and Regulation Updates

Pilot Definition

While the other recommended pilot concepts test new technologies and are largely dependent on external vendors, this pilot concept is process-focused, where the City tests a new internal workflow.

With limited staff resources dedicated to curb management, several teams currently share oversight and management of curb data storage and processes. This results in inefficient and burdensome processes for modifying curb regulations and curb access features. The City should pilot a new agile workflow that will produce a streamlined system for storing and modifying curb data. This includes and mapping all existing processes, involved teams, documents, and data sources related to curb assets. The core project team will closely review this process to identify inefficiencies and process improvements. The project team will clearly document a proposed new workflow and repository for all curb asset data.

Pilot Location(s)

N/A

Delivery Timeline

- Months 1–6: Planning, initial piloting for one element of curb management
- Months 7–12: Expand pilot; plan for permanent process implementation

Vision Alignment

Bellevue can further its innovative vision for the curb by simplifying its internal operations and processes. Implementing this process-focused pilot will allow City staff to more efficiently and effectively manage curb operations and foster a culture of innovation to prepare staff /city operations for forward-looking curb management in Bellevue.

Impacted Population

- City staff

Implementation Guidance

PARAMETERS

- Change internal workflows incrementally, with time built in for education, evaluation, and feedback. The City will start with one process change—such as storing and updating paid parking locations.
- Promote transparency across all teams involved with curb management, with clear documentation of changes and roles.

REQUIREMENTS

- Designate a core project team comprised of a project manager and representatives from each team involved with curb management.
- Staff must have a baseline level of technological proficiency to access new data sources and participate in new protocols.
- Project team should lead trainings and "office hours" for staff to ask questions and troubleshoot issues.

RELEVANT PROBLEM STATEMENTS

Auto/delivery conflicts with transit, bike, and ped movements	Curbs are inflexible and single use	Lack of passenger and commercial vehicle loading zones	Imbalance between curb's throughput, access, and place functions	Perception of parking difficulty	✓ No systematic way to collect, update, manage, and communicate curb data	✓ Inability to enforce curb regulations

COMMUNITY

- Communicate the new processes and highlight positive and negative impacts (if any) the pilot will have. This can be achieved.
- The project team should solicit feedback on the proposed agile workflow from directly involved teams and supportive teams such as information technology and enforcement.

ENFORCEMENT

- Leadership should continue to emphasize and educate staff.
- Each team should designate a staff member who will champion the effort internally, help communicate changes, and escalate feedback.

EVALUATION

Potential Metrics

- Ease of accessing curb information
- Outcomes of other curb pilots (indirect)
- Speed in responding to requests for modified or new curb functions
- Cross-team collaboration within the Transportation Department

Methods

- Employee feedback through surveys and interviews
- Success metrics of other pilots (indirect)

Image: Wikimedia (Creative Commons)

City of Bellevue

CURB MANAGEMENT PLAN

Appendix C: Engagement Summary

July 24, 2023

ENGAGEMENT SUMMARY

Bellevue Curb Management Plan

OVERVIEW

The Curb Management Plan (CMP) aims to establish new policies and guidance on how curb areas should be designed, maintained, allocated, and operated over time. A series of public engagement activities were conducted from January through April 2022 to inform the development of the CMP and ensure that it reflects the community's goals and vision.

Curb management is a broad, intersectional area of planning that has the potential to impact many different types of people and activities. Nonetheless, it can be a challenging topic to engage general members of the public. Jargon can create a barrier to people who aren't familiar with the topic, and curb-related challenges can often seem less urgent than other topics of community concern.

Given these typical challenges, the project team devised a targeted engagement approach to support the CMP. In addition to broad community outreach, the project team sought to engage subject matter experts, City decision-makers, and vested stakeholders who could provide a perspective of broader audiences and populations. Since the project focuses attention on the Urban Core neighborhoods of Bellevue, much of the targeted outreach was focused on how to best manage high-demand curb locations and situations, rather than address concerns in less dense areas of town. As the City moves forward with priority initiatives following the completion of the CMP, there will be ongoing opportunities to directly engage key members of the public about specific aspects of curb management.

Engagement Activities Conducted in early 2022

Engagement activities conducted in support the CMP included:

- A series of six **focus groups,** each of which covered a key theme or topic area related to curb management. Focus groups were conducted virtually. Each group included 5 - 10 participants and 1 - 2 facilitators from the CMP team. Groups were customized to represent a broad range of curb users.
- An online **curb management questionnaire,** which was hosted on the EngagingBellevue.com platform. The questionnaire was open from February 17 through April 15, 2022, and included a series of text-based multiple-choice questions and a mapping component.
- A **Curb Summit**, which was a full-day virtual event held on March 29, 2022, that included informational segments, panels of local and national curb experts, and collaborative breakout group sessions. The summit included a morning session

that was open to members of the public and an afternoon practitioners' workshop for invited stakeholders and City staff.

Key Themes

The Curb Management Plan should make the curb safer and more equitable

- Equity was identified as a top priority for curb management in Bellevue across many different stakeholder groups and within many different discussion topics.
- Stakeholders also emphasized the importance of safe curb access for all modes and curb users. Some stakeholders, including transportation advocates, voiced support for a "vision zero" approach to curb safety in Bellevue.
- Stakeholders identified improved lighting and reduced speed limits as two opportunities to improve safety for pedestrians.
- Participants in several of the focus group conversations expressed the desire for safe and separated bicycle facilities to support safe bicycling and to encourage mode shift from single occupancy vehicles to sustainable modes.
- Stakeholders underscored the importance of supporting safe access to transit and recognized the variety of safety challenges that can arise in areas where transit vehicles, pedestrians, bicyclists, and drivers all intersect. Accessible transit stop design and safe bicycle facility treatments were identified as opportunities to create safer curb environments near transit services.

The allocation of space at the curb in Bellevue does not adequately balance the needs of all users

- Focus group discussions highlighted the need to better address the needs of freight and delivery services. Creating additional designated loading zones in strategic areas could reduce double parking, streamline commercial freight operations, and create a safer environment for drivers, pedestrians, and cyclists.
- Survey respondents expressed strong support for converting some on-street parking spaces to outdoor dining areas, green spaces, and seating areas.
- Local business owners and survey respondents expressed a vision for a more vibrant, welcoming curb environment that included a variety of uses and activities.
- Focus group participants and curb summit attendees recognized the need for the curb to better address the needs of all travel modes to meet growing demand and pressures.
- Some stakeholders recognized the potential for designated passenger pickup/drop-off locations to alleviate some congestion and confusion. However, they also noted that TNC users and other customers who have grown accustomed to unrestricted access may see the change as an inconvenience.

Bellevue's approach to the curb should be equitable and inclusive

- The permitting process for alternative curb uses was noted in both focus groups and the Curb Summit as a barrier to inclusive curb use. Participants felt that streamlining the permit process for developers, restaurant owners, and employee shuttles to utilize the curb would improve curbside outcomes and operations.

Pricing and equitable enforcement could help Bellevue achieve its curb goals

- Curb summit attendees recognized the important role that curbside pricing plays in managing demand at the curb, especially for on-street parking.
- Transportation advocates expressed desire for a consistent and standardized permitting and pricing structure that includes all curb uses.
- Focus group participants and curb summit attendees identified clear and consistent signage as a tool to support more equitable enforcement at the curb.
- Survey respondents and members of focus groups emphasized the potential public pushback of moving to a paid parking model but were excited by the potential to have revenues potentially be used to improve enforcement operations and create more vibrant streetscapes.

New technologies and digital tools will present new opportunities for curb management, but many stakeholders urged caution

- Curb summit attendees identified a range of potential applications for digital curb management tools, including helping people find available parking, managing payments and permits, and creating an online marketplace for publicly available private parking spaces.
- Some stakeholders identified the potential for digital tools to help make curb management and enforcement more efficient.
- Stakeholders also recognized that many curb users prefer to interact with people rather than digital or automated systems, and that digital-only systems could be inaccessible for some users.
- While many stakeholders identified the need for better data to support equitable enforcement and inform decision-making, they also recognized the potential for data to mislead, misinform, and exacerbate inequality.
- EngagingBellevue survey respondents indicated very low interest in leveraging new technologies or tracking autonomous vehicle development for curb management.

DETAILS: FOCUS GROUPS

The project team convened six virtual focus groups between March 1 and March 24, 2022. Each group addressed a different curb management topic and perspective. Table 1 summarizes the topic areas, dates, and attendees for each of the six focus groups.

All six of the focus group conversations were structured in three parts:

1. **Level-setting** – how participants relate to the curb and what outcomes they would like to see from the curb management plan
2. **The curb today** – impressions and assessments about how the curb is working today and what curb-related challenges stakeholders are facing
3. **The curb tomorrow** – impressions and assessments about what changes stakeholders are anticipating and what new challenges or opportunities could arise in the next 0-5 years

Table 1 Focus group topics and invitees

Topic	Date	Groups Represented
Mobility service perspective	3/1/2022	Lime, Delivery Express, Veo Ride, King County Metro, Lyft, Uber, Green Cab Taxi, Gig Car Share, Spin, Sound Transit
Local business perspective	3/3/2022	Kemper Development/Bellevue Collection, Visit Bellevue
Developer perspective	3/10/2022	Bellevue Collection, General Contractors Wright Runstad & Co, Vulcan, GLY Construction, Wallace Properties, GIS International
Transportation advocates	3/15/2022	Bellevue Downtown Association, Move Redmond, Complete Streets Bellevue (written feedback)
Regional employers	3/18/2022	TransWest, Bellevue Downtown Association, Microsoft Commute Team, JLL, Meydenbauer Center, Symetra. PACCAR
Residents	3/24/2022	Bellevue residents (downtown and elsewhere), Bellevue Towers HOA

Notes and themes: mobility service providers

OPERATIONAL NEEDS

- Accessible features (landing pads, ramps) needed for transit bus riders boarding/alighting
- Bus layover spaces needed at the curb
- Short time-limited parking needed for passenger and delivery loading
- Vehicle queuing needed for taxi and ride-hailing services
- Designated parking and charging needed for shared micromobility devices

- Fleet electrification support will be needed

SUCCESS MEANS…

- No impediments to boarding/alighting the bus
- Lower single-occupancy vehicle dependency
- Seamless passenger and goods loading
- Safe interactions between biking and buses

FUTURE OPPORTUNITIES

- More partnerships among public agencies, private sector solutions, and researchers
- Repurposing traditional on-street vehicle parking
- More regional grant opportunities for multimodal facilities (bike lanes, sidewalks, enhanced bus stops)
- Electrification
- District parking model that consolidates on-site and off-site parking inventory

Notes and themes: local businesses

OPERATIONAL NEEDS

- Designated passenger pickup/drop-off zone needed for customers riding Uber/Lyft
- Walkable connections across districts and neighborhood needed for residents and customers
- Events and programming like art performances needed for the vitality of Bellevue

SUCCESS MEANS…

- More people walking on the sidewalk
- Welcoming and vibrant public space (sidewalk space)
- Accessible (ramps, unobstructed) curb and sidewalk space

FUTURE OPPORTUNITIES

- More programming and events on the sidewalks
- More street level mixed use needs mixed use curbs
- More flexible use of the curb to encourage turnover, balance costs with risks

Notes and themes: developers

OPERATIONAL NEEDS

- Safe pedestrian access and use of sidewalk needed during construction

- Streamlined approval process for day-to-day operations needed for property managers
- Active enforcement needed for vehicles parking in the travel lane for passenger and delivery loading

SUCCESS MEANS…

- Embracing and managing future innovations like autonomous vehicle
- Ability to change use accordingly
- A "playbook" - clear path to how to apply and find permits

FUTURE OPPORTUNITIES

- More street vibrancy from outdoor dining
- More population growth management from the city
- New technology that brings about shared and real-time information
- More information about long-term parking

Notes and themes: transportation advocates

OPERATIONAL NEEDS

- Build separated and designated bike lanes to connect to Link Stations
- Establish consistent and standardized permitting and pricing arrangement needed for all uses
- Develop extended bus platforms that are integrated with bike lanes for a better transit experience

SUCCESS MEANS…

- Integrating with Vision Zero safety programs
- Creating well-maintained bus stops with shelters
- Marketing the fact that the curb is for public use

FUTURE OPPORTUNITIES

- Create more universally accessible transportation options for people with disabilities
- Lessen focus on vehicle parking
- Create more bikeable and walkable streets
- Prioritize pedestrians using buses

Notes and themes: regional employers

OPERATIONAL NEEDS

- Designate shuttle pickup/drop-off zone needed for large employer shuttles

- Prompt city announcements about street and sidewalk closure needed for employees
- Establish clear path to "renting" curb space via a fee or permit needed for shuttle service and queueing for employees

SUCCESS MEANS…

- Creating consistent signage and enforcement for designated curb use
- Creating multiple curb uses designated at different times of the day
- Creating shared employer shuttle and transit stop locations

FUTURE OPPORTUNITIES

- More employee travel demand management from the city
- More multi-tenant offices that have varying and aggregated curb use
- More mode shift from driving alone to transit, biking, and walking
- More first-last-mile connections

Notes and themes: residents

OPERATIONAL NEEDS

- Separate/designated bike lanes
- Easy and available parking spaces
- Walkable sidewalk space (unobstructed from constructions)
- Organized use at the curb needed to prevent traffic congestion

SUCCESS MEANS…

- No excessive delays or wait times at the curb
- Safety and clarity for what's allowed and not allowed

FUTURE OPPORTUNITIES

- More population growth management from the city
- Increased retail and commercial opportunities outside of Downtown core
- More parking garages
- More electric vehicle charging stations
- More services and activities like nightlife, walkable streets, and other activities accommodated by densified downtown core

DETAILS: QUESTIONNAIRE

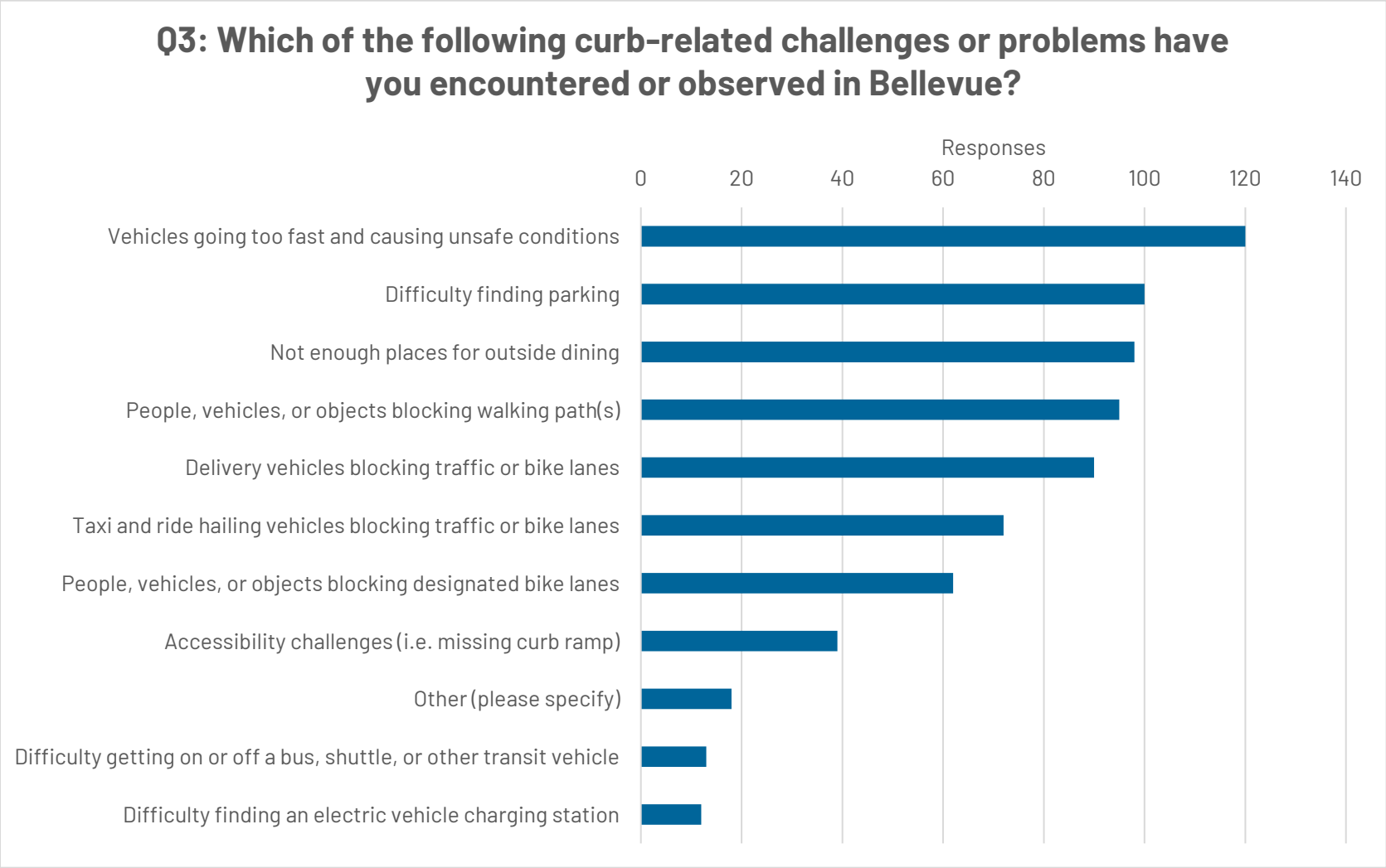
The project team developed and administered a public questionnaire about curb management topics, perceptions, and priorities. The questionnaire, which was hosted on EngagingBellevue.com, included a series of text questions as well as a map-based

component. Between February 17th and April 15th, the questionnaire received 196 responses. A selection of responses is summarized in Figure 1- Figure 3. The complete results for all survey questions are included in the summary report.

Themes observed in survey responses included:

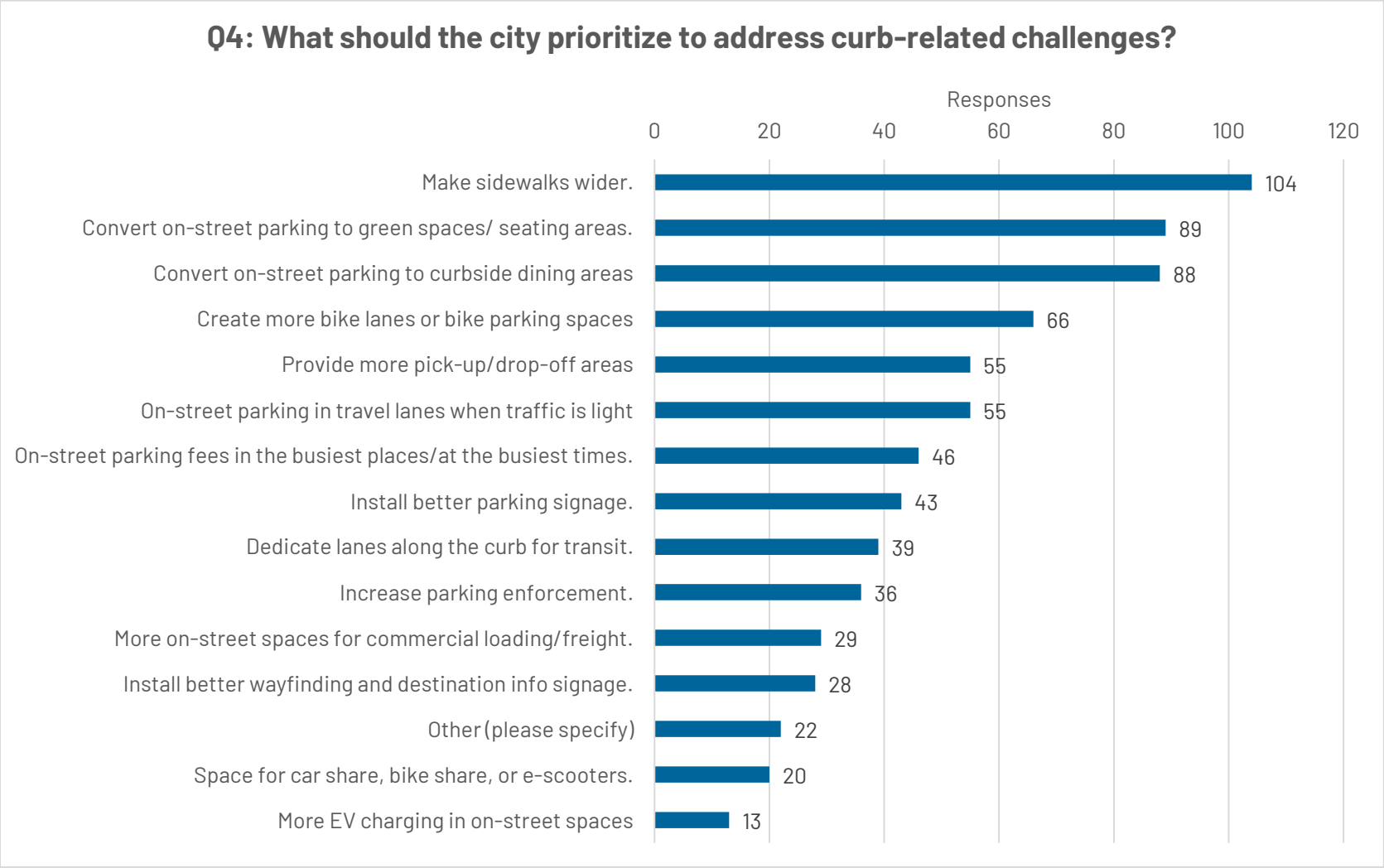
- **Pedestrian safety** - Respondents expressed concern for unsafe conditions caused by fast-moving vehicles (Figure 1), support for wider sidewalks (Figure 2), and interest in curb management strategies that would support safety for all modes including pedestrians (Figure 3).
- **Parking supply vs. information** – Although respondents cited difficulty finding available parking as a common challenge (Figure 1), respondents expressed strong support for converting on-street parking to other uses and limited support for converting travel lanes to parking during off-peak hours (Figure 2).
- **Space for freight and loading** – Respondents expressed limited interest in creating more space for commercial loading and freight. This contrasts with findings from focus group discussions, which identified a strong need to better support of commercial loading and freight services.
- **Future challenges and opportunities** – Respondents identified growth and new development as the greatest curb-related challenge in the next five years and identified the potential to make Bellevue less car-centric and more people-centric as the greatest opportunity (questions 6 and 8).
- **Low interest in new technology** – Respondents expressed low interest or support for technology-driven curb solutions or opportunities such as drones, autonomous vehicles, and curb information systems (questions 5 and 6).

Figure 1 Question 3 results



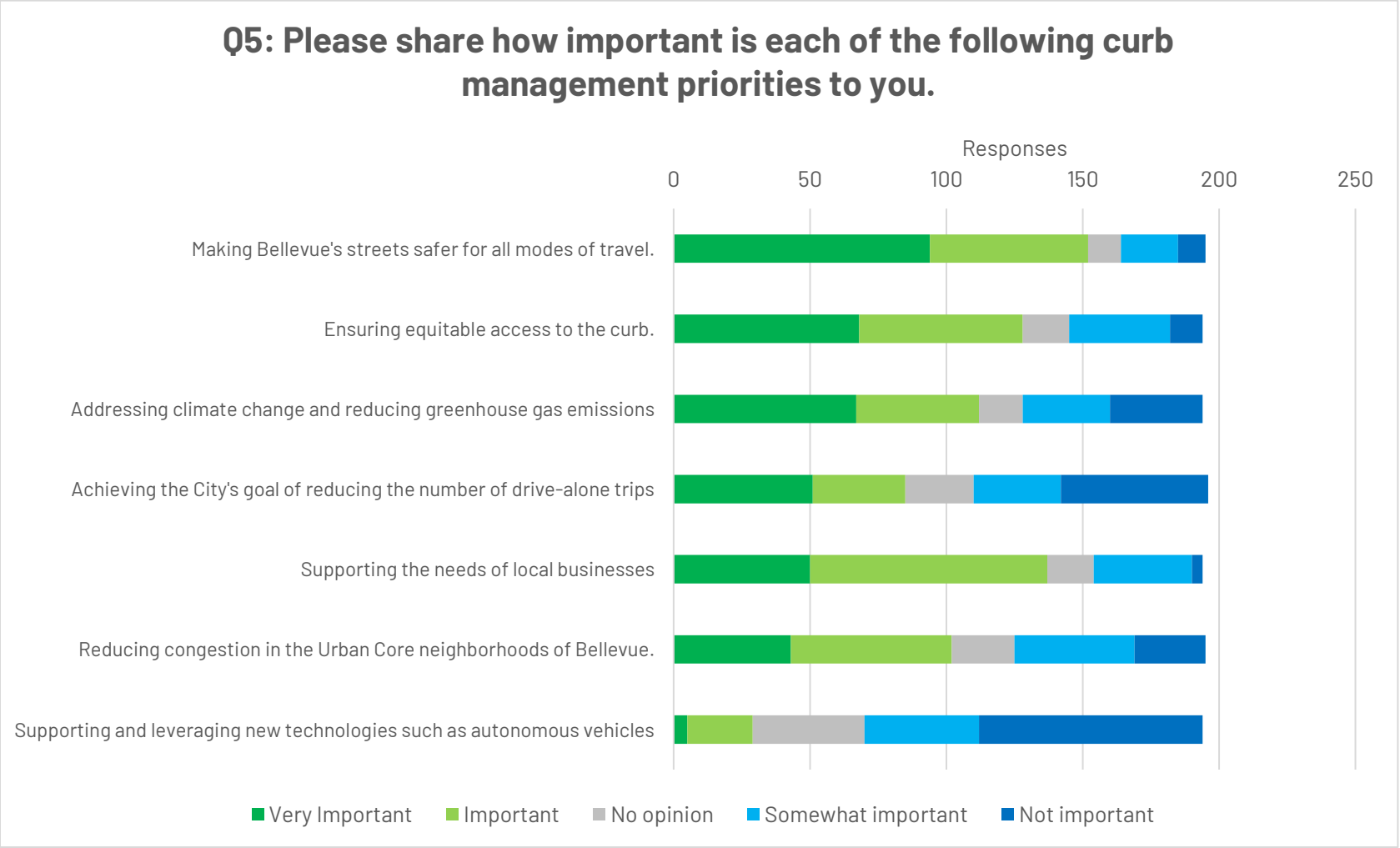
Note: responses have been simplified to fit chart format. For original text and full reslts, see Summary Report.

Figure 2 Question 4 results



Note: responses have been simplified to fit chart format. For original text and full reslts, see Summary Report.

Figure 3 Question 5 results



Note: responses have been simplified to fit chart format. For original text and full reslts, see Summary Report.

DETAILS: CURB SUMMIT

The project team facilitated a virtual Curb Summit event on March 29th, 2022. over Zoom. The goal of the Curb Summit was to convene representatives from cities, agencies, community organizations, and other curb-related stakeholder groups and facilitate discussion about curb management challenges and opportunities, best practices, policy approaches, and potential partnerships.

The curb summit was divided into two sessions. The morning session was open to general members of the public and focused on building a common understanding of curb management goals, challenges, and opportunities. 74 people, including facilitators, participated in the morning session. The agenda for the morning session included:

- A presentation of initial findings about the state of the curb in Bellevue
- A curb users perspective panel, which focused on the challenges and experiences of different types of curb users and included a question-and-answer session with representatives of different types of curb user groups
- A city showcase, which included brief presentations and a question-and-answer session with curb practitioners from other cities across the country

The afternoon session was a practitioners' workshop and was open to invitees only. The practitioners' workshop was focused on curb policy development and implementation. 32 people, including facilitators, participated in the afternoon session. The agenda for the afternoon session included:

- A real-time poll of participants using Mentimeter
- A set of four breakout sessions to crowdsource curb management strategies and policy ideas
- A collaborative report-out and prioritization session to share breakout session findings and identify priority actions
- A check-out process to encourage curb summit participants to commit to carrying forward action items and next steps

Breakout Session Notes

Breakout sessions conducted during the afternoon session were focused on four topic areas: flexible curb use, digital curb, optimized curb use, and the curb experience. Policy priorities and implementation considerations for each session are summarized below.

Flexible Curb Use

POLICY/MANAGEMENT TOOL

- Create mechanism to inform the allocation of curb space based on need – each block/zone is different
- Create user-friendly guidebook for determining treatments and permit systems at any given curb space

- General need to have "a plan" for managing a variety of curb uses (e.g., employer shuttles)
- Add activation and connection/walkability as goals

IMPLEMENTATION CONSIDERATIONS

- "Reliability among flexibility" – the curb will evolve as the city evolves
- Note what can and cannot be controlled – and "defensively" design around the latter to prioritize safety
- Create tools to measure curb supply and demand, and find new ways to monitor curb needs or use over time as it evolves
- Determine short, medium, and long-range curb allocation needs
- Create physical and digital infrastructure pairs that provide clear operational rules
- Ensure resiliency in digital infrastructure systems (i.e., ensuring information is up to date)
- Ensure "Connective tissue" between certain active nodes that help make superblocks in downtown more connected to nearby streets, areas, and destinations
- Establish real-time curb usage tools
- Create better enforcement
- Anticipate increased pedestrian flow around new stations
- Incorporate redundancies
- Make it easy to follow rules

Digital Curb

POLICY/MANAGEMENT TOOL

- Parking Availability Tools
  - Research Public and Private (lots and loading bays) systems
- Enforcement Tools
  - How do you ensure equitability in enforcement?
- Data Collection and Decision-Making Tools (and Merging Datasets)
  - How do we focus on and measure outcomes?
  - How do we bring data sets together to make decisions (i.e. – congestion, emissions, safety, static asset data, etc.)?
- Payment Marketplace
  - Can we create a parking marketplace that crosses public and private sectors (covers both on-street and off-street parking supply)?

IMPLEMENTATION CONSIDERATION

- Privacy and Security

  - How do we use tools but avoid surveillance?
- Operational Updates
  - How do we make sure that the digital and physical are always in alignment?
- Coding Bias
  - How do we make sure that any biases we might already have aren't digitized into the system?
- Human Interaction
  - How do we make sure there is still some level of redundancy and human interaction?

PRICING TOOLS

- Pricing
  - Establish clear goals and communication strategies, including messaging how revenues will be used
  - Coordinate with off-street parking areas
  - Develop dynamic system which is data-driven and reflects time-of-day needs
  - Distinguish permitting (temporary) & curb allocation (permanent) needs
  - Develop a clear prioritization framework
  - Streamline internal decision-making process
  - Establish consistent and fair pricing model, and incentivize what we want to see more of
  - Note the “art” of public policy: create rules that are clear and consistent, yet allow for appropriate amount of flexibility and judgement

IMPLEMENTATION CONSIDERATION

- How do we address spillover parking? How much might this happen?
- Note potential demand shift to off-street parking sites. How much will this happen? What are the impacts?
- Explore possibility of public/private management

Better Curb Experience

POLICY/MANAGEMENT TOOL

- Create multi-functional, context sensitive curb elements
  - Planter design: continuous landscape planter vs. space between planters
  - Lighting
  - Artwork
- Develop prioritization framework for modal considerations
- Develop clear, easy to understand signage/explanations for all users

- Develop thoughtful and consistent wayfinding/navigation tools
  - Color-coding for uses
  - Thematic blocks/streets vs. Predictability
- Ensure ADA and accessibility needs

IMPLEMENTATION CONSIDERATION

- Communicate clearly with the community during both major curb changes and regular use
- Think about dynamic physical elements: seasonality, special events
- Balance private parcel use with curb expectations (off-street parking, loading, etc.)
- Develop “futureproof” curbs: lay conduit for future power needs, anticipate EV charging potential, etc.
- Focus on the “curb feeling” we're trying to create, and how to link elements together

City of Bellevue

CURB MANAGEMENT PLAN

Appendix D: State of the Curb

July 24, 2023

Bellevue Curb Management Plan

State of the Curb

EXISTING CONDITIONS REPORT

CITY OF BELLEVUE WASHINGTON

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Contents

EXECUTIVE SUMMARY

What is the Curb Management Plan?

With a growth trajectory outpacing most mid-sized cities, Bellevue is at a mobility crossroads. Booming growth, ongoing transit investments, new mobility options, and COVID-responsive demands have placed tremendous pressure on Bellevue's already over-burdened curb spaces.

The Curb Management Plan (CMP) is a vital resource to think differently about how curb space is utilized and how it reflects the City's growth aspirations and community goals. The plan aims to thoughtfully manage competing demands in ways that secure Bellevue's growth vision, achieve the mobility and access priorities within the city's unique built environment, and align curb use with new definitions of curb performance and efficiency.

The Curb Management Plan covers some of Bellevue's fastest growing areas with the highest demand for curb space: Downtown, East Main, BelRed, and Wilburton neighborhoods.

The purpose of the plan is to:

- Establish a vision and values framework to root curb decisions and policies
- Establish a contextualized prioritization framework for curb use
- Identify options for managing various curbside demands
- Develop a curbside playbook of tools needed to deliver better curb outcomes
- Build an organizational and staffing framework to implement the Curb Management Plan

The Curb Management Plan will build on many of Bellevue past planning efforts such as the Mobility Implementation Plan (2021) and the Environmental Stewardship Plan (2020). The Plan will also reference existing supportive practices, such as formal on-street parking regulations in downtown, the Residential Permit Parking Zone program, and countywide regulation of Transportation Network Companies (TNCs) like Uber and Lyft.

Policy development in support of curb management, as well as the development of the plan itself, were initiated by City Council in February 2022. The Comprehensive Plan Amendment (CPA) process occurred in 2022 and culminated with policy adoption by City Council in December 2022. The CMP has been under development since late 2021 and is being primarily vetted by the Transportation Commission. Final review from the City Council is anticipated to occur in mid-2023.

Key Findings

This report includes a comprehensive review of data, policy, programs, and practices related to curb use and management in Bellevue. Key takeaways from this analysis include the following:

- Private development design reviews are conducted on a case-by-case basis with no formal guiding curbside policy beyond requirements in the Land Use Code.

- The public is supportive of programs and policies that expand activated use of right-of-way, such as Al Fresco Dining and allowing food trucks along the curbside.
- Curb use is dynamic, as evidenced by the COVID-19 pandemic, and new approaches and policy should provide structure with the ability to adapt to changes in users and volumes.
- Staff within the Transportation Department work on curb-adjacent issues, but there is no formal structure to address broader policy issues and citywide protocols between working groups.
- Most public parking is concentrated downtown. The vast majority of parking supply in downtown is off-street, rather than on-street along the curbside. There is limited public on- or off-street parking in BelRed and Wilburton.
- Today, most curb space within the study area is used as travel lanes or parking lanes, with only a small percent dedicated toward loading or other uses.

What Comes Next

The State of the Curb assessment serves as one foundation for developing project recommendations. Specifically, this report informs:

The Curb Typology: The typology work identifies permissible uses for curbs to align with existing plans and policies outlined in the Mobility Implementation Plan, Bellevue Comprehensive Plan, and more. The goal of this work is to assign priority use types for each curb including auto movement, transit movement, bicycle movement, access, place, auto storage, and transit storage.

Curbside Playbook: A curbside intervention guide, the Playbook will direct City staff, developers, and private partners to the appropriate curb management tools to better achieve overarching curb outcomes. This will include infrastructure options, curb regulation categories, pricing mechanisms, and more.

Pilot Roadmap: The Bellevue Curb Pilot Roadmap is a tool to further the vision of the curb as a platform for innovation and cooperation where the City can test and refine new strategies to support the public good. It articulates curb user and management problem areas and profiles priority pilots to test new approaches to curb management, operations, experiences, information, safety, permitting, and processes.

1. WHAT IS THE CURB, AND WHY IS IT SO IMPORTANT?

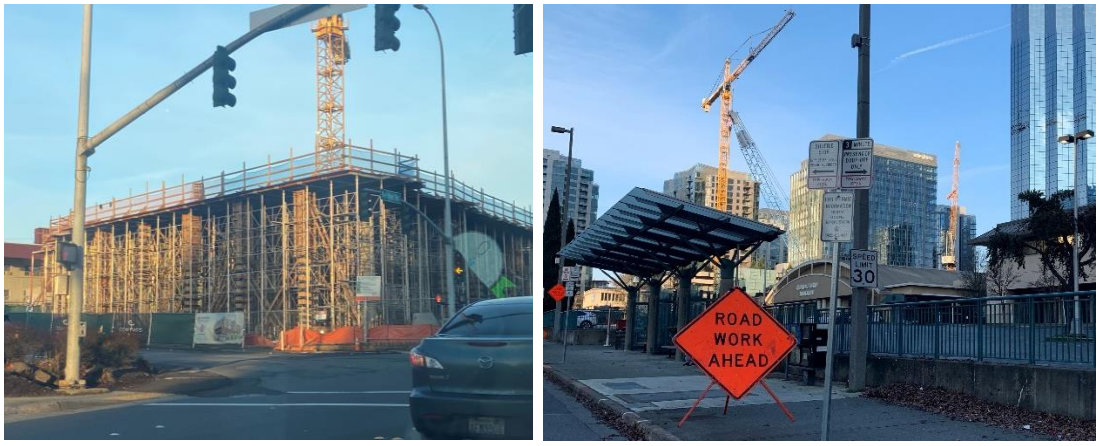
The curb is a critical public asset that supports a wide range of needs and activities every day. Historically in Bellevue, the curb has been indirectly managed through independent policies, processes, and initiatives. However, two key factors underscore the need for a new approach:

2. **Bellevue is growing rapidly.** Recent years have seen the arrival of many new residents and jobs, and this growth is expected to continue. As the city grows, the pressures on the curb increase. A new framework is needed that will maximize the productivity and public benefits of the curb.
3. **Travel behavior in Bellevue is changing.** As the city has grown, demand for different types of activities and mobility services has evolved. New types of businesses have brought workforces with different commuting needs and preferences. The transportation network has changed, with expanded transit service and the imminent opening of East Link Light Rail service creating new travel options and patterns. Demand has increased for new services, including freight, delivery, and app-based rideshare services. The curb—and the approach to managing it—needs to evolve to meet these new and changing demands.

How is Bellevue Growing?

Bellevue is a dynamic, diverse city that is home to a range of housing types, communities, industries, and attractions—and it is growing rapidly. Between 2017 and 2022, Bellevue's population grew by nearly 10%. New residents arriving from across the region, country, and world are drawn to Bellevue's vibrant economy, livability, diverse culture, and proximity to natural beauty. Bellevue is also a growing regional employment hub, with several major corporations moving to or expanding their presence in Bellevue in recent years. Between 2017 and 2022, the number of jobs in Bellevue increased by 20%, twice the rate of population growth. In Downtown and BelRed, there are over 50 major commercial and residential development projects in various stages of design, review, and construction as of December 2022.

In the years ahead, the pace of growth will continue. In alignment with recommendations made by the Puget Sound Regional Council, Bellevue has committed to adding 70,000 new jobs and 35,000 new homes in the coming years. To support recent and future growth, the City will need a new approach that maximizes the productivity of our transportation network—including access to the curb.



Development projects, such as these in Bel Red and Downtown, are putting more pressure on curb areas.

Growing Mobility Needs and Network

To meet the growing mobility needs of its residents and workforce, Bellevue has expanded and diversified its transportation network. The East Link Extension of Sound Transit's Link Light Rail, which is expected to open within the next 1-2 years, is projected to serve up to 52,000 daily riders by 2026[1]. The bike network in Bellevue is also expanding. Eastrail is a 42-mile, multi-use trail that runs through Bellevue and connects to adjacent communities to the north and south. The Eastrail alignment goes through the BelRed and Wilburton neighborhoods and features a direct connection to the future Wilburton Link Station. With support from King County and contributions from private partners, the Wilburton and Wilburton Trestle segments of Eastrail will be completed in 2024. As identified in the 2009 Pedestrian and Bicycle Transportation Plan, Eastrail is one of four bicycle priority corridors (the others are the Lake Washington Loop Trail, Enatai-Northtowne Connection and Downtown-Overlake Connection) that will serve the project study area.

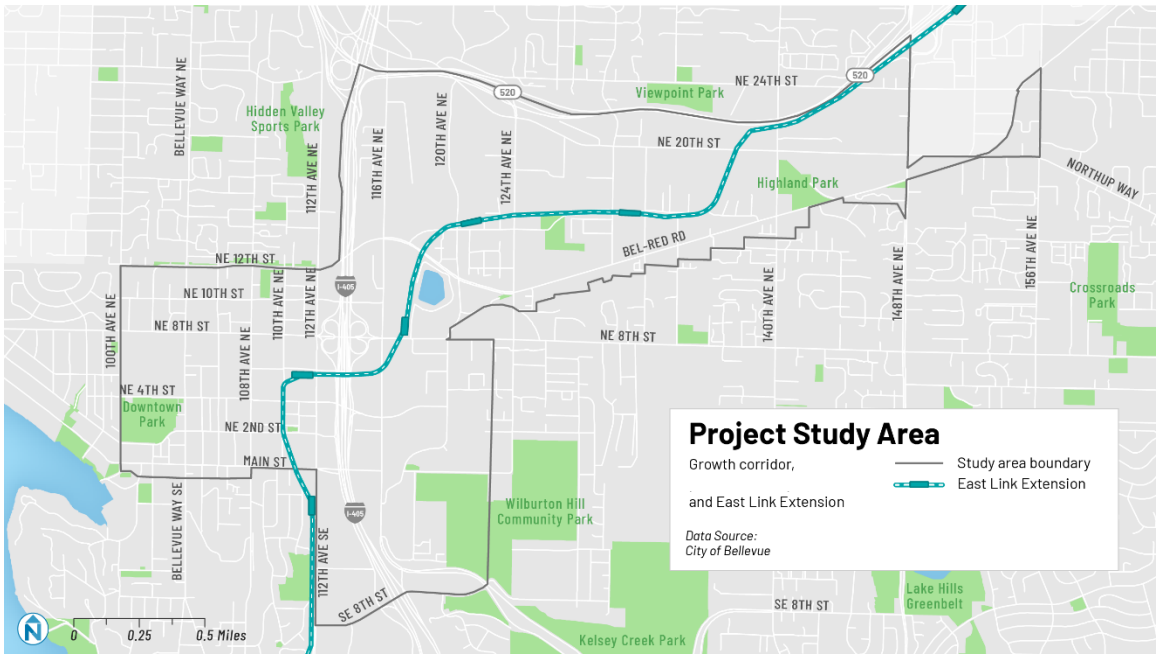
Growth in the Urban Core

Much of the recent job and population growth in Bellevue has been concentrated in the central neighborhoods of Downtown, BelRed, and Wilburton/East Main, which constitute the City's urban core. The Mobility Implementation Plan (MIP) establishes a roadmap for identifying, prioritizing, and implementing multimodal transportation projects in the urban core where the land use density is highest, the expected rate of growth is fastest, and the anticipated changes to transportation options are greatest.

In the dense, fast-growing neighborhoods of the urban core, the curb serves many essential functions and supports the needs of thousands of residents, workers, businesses, and visitors every day. The CMP will focus primarily on the four neighborhoods shown in the project study area (Figure 1). This study area is the same geography as the Type 1 performance management area (PMA) established in the MIP. The Type 1 PMA represents the densest part of the city where the majority of future growth—and curb demand—is expected to occur.

[1] East Link Extension Project Map and Summary, 2022

Figure 1 Project Study Area



How is Travel Behavior in Bellevue Changing?

Bellevue is growing, and the way its residents, workers, and visitors travel is evolving. New transportation options, commuting patterns, technologies, and lifestyle preferences are all impacting how people get around the City every day.

Companies are moving to and expanding in Bellevue.

Continued job growth in Bellevue is bringing new commuters and residents to the city. As of Fall 2021, more than 4.6 million square feet of new office space was under construction in Bellevue. [2] The city's location, resources, and regional transportation connections are one of many factors attracting companies to Bellevue, but the growing population of residents and workers increases the pressure on the City's streets, transit system, and curb space.

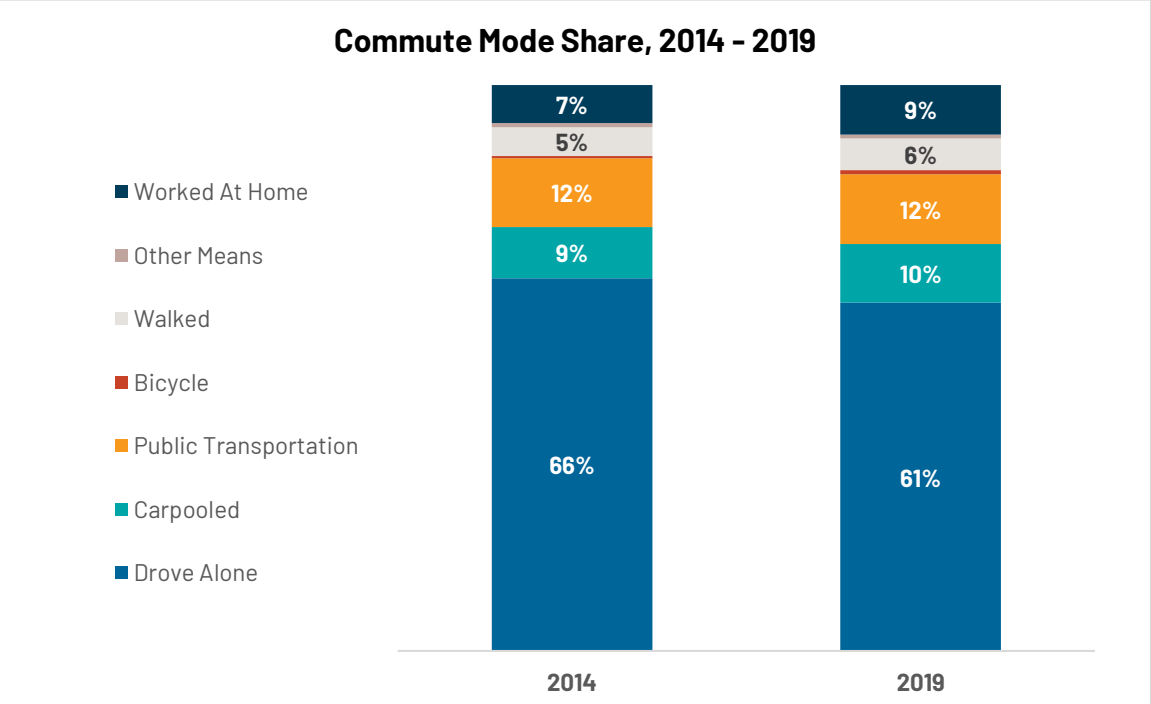
Travel patterns and transportation options in Bellevue are changing

People who work in Bellevue—including 40% of employed Bellevue residents—have experienced an increase in commute times by 17% in the past five years, and the share of households in Bellevue that do not own vehicles has increased from 6.9% to 7.4%. The commute mode share in Bellevue became more diversified during the same period. The drive-alone rate decreased from 65.6% to 61.3%, and the share of people who carpooled, walked, biked, or took the transit to work increased from 26.6% to 28.9%. The significant shift towards teleworking during the COVID-19 pandemic is

[2] Peterson, Blake, *Reports show commercial real estate is on the rise on the Eastside*: 425Business, 2022

beginning to moderate – this shift in travel behavior has meant that the needs, pressures, and performance of the curb have also changed.

Figure 2 Bellevue Commute Mode Share in 2014 and 2019



Source: City of Bellevue analysis of US Census data and King County Assessor's Office data.

The use of delivery services, including commercial freight, parcel delivery, and restaurant delivery, has exploded.

The COVID-19 pandemic accelerated the growth and widespread adoption of delivery-based e-commerce platforms and services. As a result, there are many more delivery trucks and other commercial vehicles on the street today than there were five years ago. Nationwide e-commerce sales increased from 13.6% in 2019 to 18% in 2020[3]. Although Bellevue's Land Use Code requires developments to place accommodative loading areas on-site, many smaller freight operators rely on and use accessible curb space to make short-term stops for loading and unloading goods.

People have more options for shared mobility services, including car share, bike share, and app-based ride hailing companies.

The 2018 Bikeshare Pilot Program deployed 100 Lime electric dockless bikes in downtown Bellevue and other parts of the Urban Core. Rideshare services such as Uber and Lyft have become more common, with the share of Americans who have ever used a ride haling service increasing from 15%

[3] Sawant, Vishal, *At 9.29% CAGR, Last-mile delivery Market size is Expected to reach USD 200.42 Bn in 2027:* Brandessence Market Research, 2021

in 2015 to 36% in 2018[4].While these services have increased mobility options of people who live and work in Bellevue, they have also increased the competition for safe access to space along the curb. The companies that operate these shared mobility services depend on the City to manage the curb effectively.

Walkable, inclusive, people-first streets continue to be central to Bellevue's vision—now more than ever.

The Bellevue Healthy Streets Pilot Program, which began as an emergency response during the COVID-19 pandemic, prompted many Bellevue residents to rethink how streets are designed and used. During the pilot, pedestrian and bicycle volumes increased and vehicle volumes dropped on designated healthy streets. In a post-pilot survey, more than half of respondents said they would like to see the city expand the Healthy Streets program. The highest level of support was observed among younger respondents and people who identified as female. In 2021, the City built on the success of the Healthy Streets program by installing the city's first bicycle greenway in East Bellevue.

Another successful and innovative initiative that emerged from the pandemic was the Al Fresco on-street dining program, which allowed local restaurants and retail businesses to set up outdoor space to give patrons enough space to shop and dine safely. A 2021 survey on the program's impact along Main Street showed that 85% of respondents were more likely to visit the area again because of the outdoor and on-street dining space.

As more people see the street and the curb as a place for people, the tools and policies used to manage these public spaces need to adapt to support this vision. In the future, even more changes will impact how the curb is used.

In the coming years, new technologies, service models, and economic forces will likely impact the way the curb is used in Bellevue. Examples include increased electric vehicle adoption and charging, continued trends toward on-demand and just-in-time delivery systems, pedestrianization of streets (permanent or temporary), automated delivery vehicles (including drones), and climate change driven planting and storm water management mandates.

While it is impossible to say exactly how these future variables will impact the curb, Bellevue needs to have a proactive set of management tools available to ensure that the changes align with the city's core values and support its goals. To accommodate changing pressures, the Curb Management Plan will need to be adaptable but anchored on stable policy goals.

How Can Curb Management Support Growth and Address Change?

As demand for curb access grows and travel behavior in Bellevue continues to shift, the City has identified the need for a comprehensive management framework that strategically, sustainably, and equitably balances curb uses. An effective curb management framework for Bellevue can:

- Ensure safe and inclusive curb access for everyone
- Maximize the benefits of the curb as a public resource

[4] Jiang, JingJing, *More Americans are using ride-hailing apps:* Pew Research Center, 2019

- Prioritize curb use in alignment with citywide policies and plans
- Provide a unified curb policy approach that is comprehensive, consistent, and flexible
- Improve coordination between City staff and curb stakeholders, including residents, workers, visitors, businesses, and public agencies
- Deliver data and information to help the City evaluate performance, address challenges, and make decisions

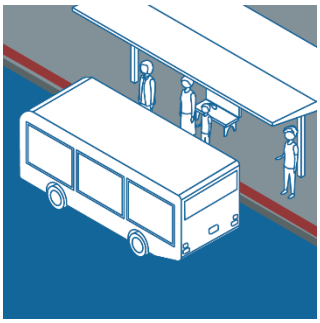
To utilize this potential, the Curb Management Plan starts with a guiding vision for the curb as well as a set of values and principles for curb management and evaluation. Public engagement efforts – including a public questionnaire, user focus groups, a Curb Summit public and practitioner event, engagement of Transportation Commission, Planning Commission, and City Council bodies, oversight by broad range of internal City stakeholders, and discussions with specific organizations engaging in the project – helped inform the vision. A great deal of curb policy direction also has been previously established or directed by existing policy and planning documents. The vision and values align with those established in Bellevue's Comprehensive Plan and Mobility Implementation Plan and will provide a foundation for all curb policy and planning recommendations.

Bellevue's Vision for the Curb

Bellevue envisions a curb that is a vibrant public space where residents, workers, visitors, businesses, and public agencies seamlessly interact. The curb experience is safe, user-friendly, inclusive, and reflects the needs of the community it serves. The curb is a flexible, dynamic place that can be adapted to changing needs, pressures, and preferences. The curb is a platform for innovation and cooperation where the City can test and refine new strategies to support the public good.

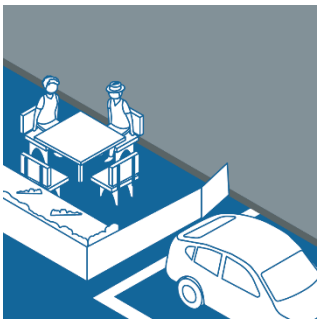
Curb Values

Curb values will help the City set priorities at the curb. They reflect principles established in Bellevue's other citywide plans and policies (such as the Comprehensive Plan and Mobility Implementation Plan) and extend them to the curb.

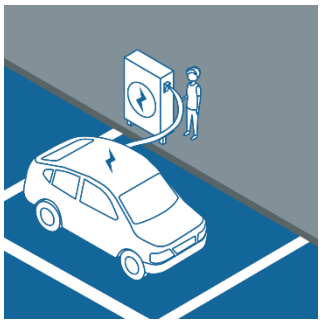


The curb is a connector, where people change their transportation mode, and it is where variety of services that rely on transportation use share.

The curb is a major asset, that the city owns as a public resource. It is a place with the most state of changes throughout the day.



The curb is multipurpose, where it accommodates many types of uses beyond vehicle movement and storage purposes.



The curb is a means to Bellevue goals, where it can be used as a tool to achieve environmental stewardship, land use, transportation, and other city goals.

Curb Principles

Principles established for the curb are tied to values and will help the City make data-driven decisions about how the curb is functioning and how it should be managed. These principles will be reflected in other policies and frameworks developed over the course of the CMP process.

Equity: The curb is a public asset and a limited resource. The CMP will manage shared access to the curb to ensure it supports and benefits those who need it most.

Efficiency and Effectiveness: There are many demands at the curb, especially in the downtown core. To meet all these competing demands, Bellevue will seek to ensure that the performance and benefit of the curb achieves City goals.

User-Friendly: The curb is a place for people. The CMP will help Bellevue guide the curb to be a safe, enjoyable, inclusive, and easy-to-navigate space.

Decision-Making Clarity: Achieving Bellevue's vision for the curb will rely on a clear understanding of what is working—and what is not working—at the curb. The CMP will help deliver curb data and on-the-ground information to support decision makers.

Adaptability and Resilience: Bellevue will continue to grow and change. The CMP will deliver flexible, forward-looking policies and tools that will help the City adapt to new challenges, opportunities, and technologies. Curb priorities will reflect the City's commitment to environmental sustainability.

2. HOW IS THE CURB USED TODAY?

Understanding how the curb functions today is a critical first step in improving curb management policies and practices. The current inventory of regulated curb space and usage of that curb space paints a picture of how efficiently public space is used and where there is room for improvement.

Curb Inventory: How is the Curb Allocated Today?

Parking Allocation and Occupancy

Parking is a significant presence on Bellevue streets within the study area. While much of the downtown network reserves the entire on-street lane for traffic movement, parking takes up the biggest share of more static curb uses by a significant margin. The data also show that a proportionately small amount of curb space is currently dedicated to goods and passenger loading (Figure 3, Figure 4). Old Bellevue contains more than a quarter of the on-street parking in the study area (Figure 5). Parking inventory zones were also established during utilization studies in 2022 (Figure 6).

Figure 3 Downtown Curb Inventory and Allocation

Regulated use (Downtown)	Linear Feet	% of Total Linear Curb
Bus Stop/Parking	242	0.2%
Loading Zone	798	0.8%
Passenger Pickup/Dropoff	121	0.1%
Regulated (Time-Limited) Parking	7,753	7.4%
No Parking	61,924	59.3%
Transit	1,965	1.9%
Other (includes driveways, crosswalks, and unassigned regulations)	31,693	30.3%

Figure 4 Downtown Curb Inventory Map

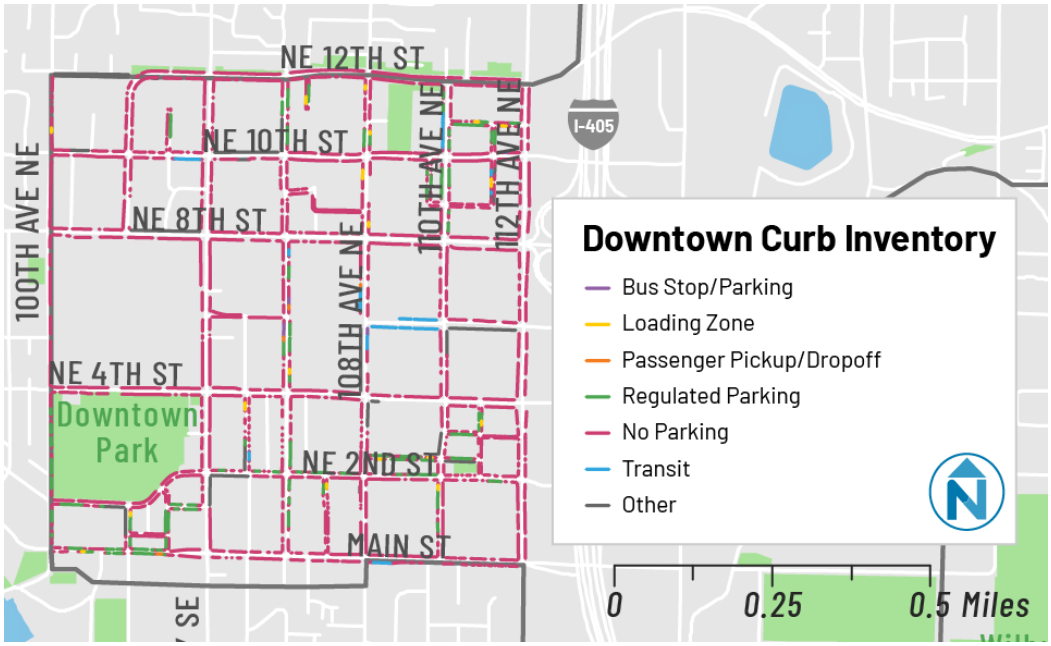


Figure 5 Parking Inventory Table

Zone	Estimated On-Street Parking Spaces	Percent of Total On-Street Spaces	Off-Street Parking Spaces
Old Bellevue	156	26%	32,142
Bellevue Downtown: Southwest	64	11%	
Bellevue Downtown: Northwest	55	9%	
Bellevue Downtown: Southeast	82	14%	
Bellevue Downtown: Northeast	82	14%	
Spring District	98	16%	22,960
Greater BelRed	60	10%	

Figure 6 Parking Inventory Zones

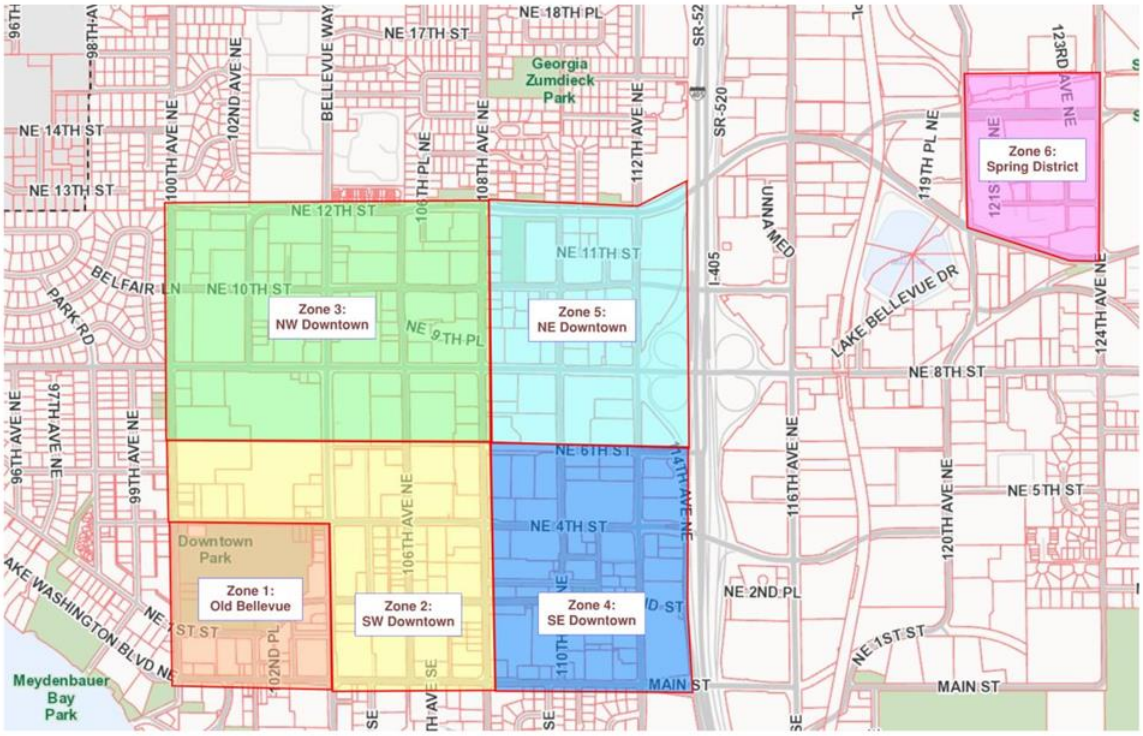
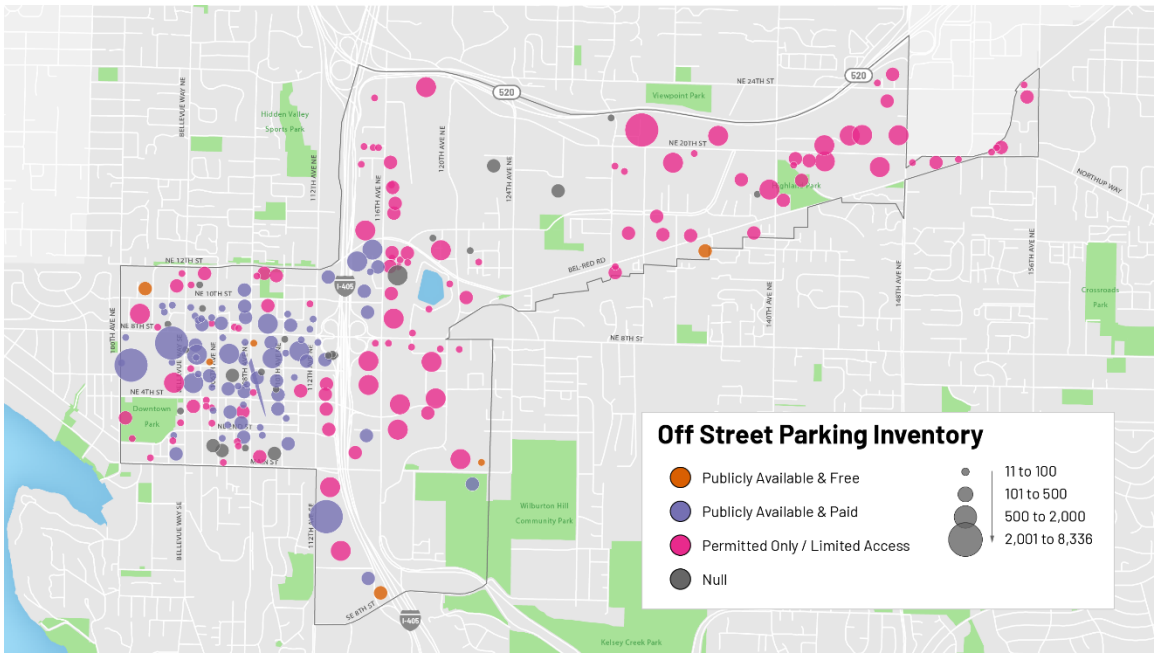


Figure 7 Weekday Off-Street Parking Inventory Map shows the off-street parking inventory in the study area symbolized by parking capacity and parking regulation type. This figure was derived from a data source by INRIX, a traffic data and software solutions company. The downtown Bellevue area has a mix of publicly available paid and permitted/limited access parking. A number of the locations identified as "publicly available & paid" are validation-based areas that require a purchase of goods from or visitation to associated retail destinations. Notably, the overwhelming majority of off-street parking in Wilburton and BelRed is limited access and/or permit parking only.

Figure 8 Parking Occupancy Map shows on-street parking occupancy on certain blocks of the study area. The map shows the percentage of time between 7 a.m. and 8 p.m. that occupancy was above 80%. This threshold of 80% indicates a heavily utilized and potentially overburdened curbside environment. Areas with particularly high occupancy were Old Bellevue, Northeast Downtown, and the Spring District & BelRed areas. It is important to note that many of the blocks in the data collection have on-street parking that regularly see occupancy above 80%.

Figure 7 Weekday Off-Street Parking Inventory Map



Source: INRIX, 2022

Figure 8 Parking Occupancy Map

Source: IDAX, 2022

Loading Violations

Many curbside lanes in downtown Bellevue are reserved for vehicular travel only. Despite this, curbside travel lanes are frequently obstructed by passenger and commercial vehicles loading and unloading people and goods. Data collected in November 2022 and depicted in Figures 9 and 10 shows that travel lane obstructions are caused by both commercial and passenger vehicles that drop off and pick up passengers or goods. Most of these stops are very short, with an average duration of less than a minute. Still, unauthorized stops at the curb on the studied blocks averaged to be nearly 20% of the study timeframe. This can greatly exacerbate traffic congestion and is generally unsafe for both pedestrians and drivers. Currently, funding resources are insufficient to allow for active enforcement of these violation events.

Figure 9 Travel Lane Obstructions

Site	Day	Date	Data Collection Span	Total Unauthorized Dwell Time	Percent of Time Blocked
102nd Ave NE from NE 1st to Main St	Thurs	11/10/2022	13:09:35	2:49:42	21%
110th Ave NE from NE 4th St to NE 6th St	Thurs	11/10/2022	13:23:18	2:20:17	17%
Bellevue Way NE from NE 4th St to NE 6th St	Thurs	11/10/2022	12:51:44	0:57:25	7%
Bellevue Way NE from NE 8th St to NE 10th St	Wed	11/9/2022	13:00:39	3:13:54	25%
		Average	13:06:19	2:20:19	18%
		Median	13:05:07	2:35:00	19%

Source: IDAX, 2022

Figure 10 Travel Lane Obstructions Purpose, Percentage and Dwell Time

Site	Date	Freight Delivery	Pick Up	Drop Off	Driver Entry/ Exit	Waiting for Parking	No Activity
102nd Ave NE from NE 1st to Main St	11/10/2022	6%	27%	44%	14%	6%	14%
110th Ave NE from NE 4th St to NE 6th St	11/10/2022		32%	57%	4%		5%
Bellevue Way NE from NE 4th St to NE 6th St	11/10/2022		38%	50%	3%		10%
Bellevue Way NE from NE 8th St to NE 10th St	11/9/2022	19%	11%	52%	15%	4%	
Average Dwell Time		0:26:28	0:00:32	0:00:26	0:05:12	0:00:59	0:10:55
Median Dwell Time		0:08:44	0:00:24	0:00:17	0:02:22	0:00:57	0:01:41

Source: IDAX, 2022

Curb Demand: Who Uses the Curb, and How Much?

Bellevue's curbs are used by a wide variety of people, pressures, and infrastructure, including:

- Freight/deliveries (commercial loading zone)
- Dedicated bike lanes
- On-street Parking (unregulated, time-limited)
- Bikes, scooter racks (private and shared)
- Private employer shuttle stops
- Curbside activation (e.g., on-street dining, parklets)
- School pick-up and drop-off (PUDO) zones
- TNCs and taxis (passenger loading zones)
- Bus stops, dedicated bus lanes
- Greenery
- Utilities (e.g., hydrants)
- Construction activity
- Electric vehicle charging spaces
- Residential permit parking

What is the Curb Experience?

The factors that shape curb experience go beyond the curb itself.

The curb is experienced as part of a broader public realm that is defined by elements within both private property and public right of way. These elements include building facades, streetscape design, as well as curbside uses. Within this larger curb experience, there are three generalized zones:

1. **Curb zone:** this includes the curb itself, as well as immediate front of curb uses like travel lanes, parking, or loading zones.
2. **Furnishing zone:** this area often forms a buffer between the roadway and pedestrians. Common elements include planting strips, trees, lighting, bicycle racks, as well as street furniture such as seating.
3. **Sidewalk zone:** also known as the pedestrian zone, this is the area that includes a clear zone for walking and sometimes includes additional elements to support adjacent building frontages.

Different stakeholders will have different needs for each of these zones, which makes it important to recognize there isn't a single optimal configuration for curb experience. Most of the recommendations and attention within the CMP is focused on the curb zone, with secondary attention paid to the furnishing and sidewalk zones.

Today, the curb experience varies significantly across Bellevue.

Within the study area, the curb experience often mirrors the urban design character of each subarea. Traditional retail streets like Main Street include café seating and pedestrian oriented brick paving, while large scale office blocks often use the furnishing zone to buffer pedestrians from fast-moving traffic. Examples of current conditions for each curb experience zone are shown below in Figures 11 to 15.

Figure 11 Residential Mixed Use: NE 1st Street

Curb Zone
1. Parking
2. Few Curb Cuts

Furnishing Zone
3. Planting Strip
4. Lighting
5. Break for Curb Acess
6. Transition to Intersection

Sidewalk Zone
7. Zero-lot line street wall

This residential mixed-use streetscape, with its planting strip and on-street parking, reflects the curb experience of many new development sites in downtown Bellevue as well as areas like the Spring District.

Figure 12 Traditional Retail: Main Street

Curb Zone
1. Parking
2. Few Curb Cuts

Furnishing Zone
(No Furnishing Zone)

Sidewalk Zone
3. 5-7' Ped Clear Zone
4. Full Curb Access
5. Brick Paving
6. Cafe Seating

Traditional main streets were developed before widespread use of the automobile, and this is still reflected in many elements of the curb experience such as quick transitions from curb to sidewalk zone, active frontages that engage with the street, and few to no curb cuts for driveways or garage entrances.

Figure 13 Internal Street: NE 6th Street

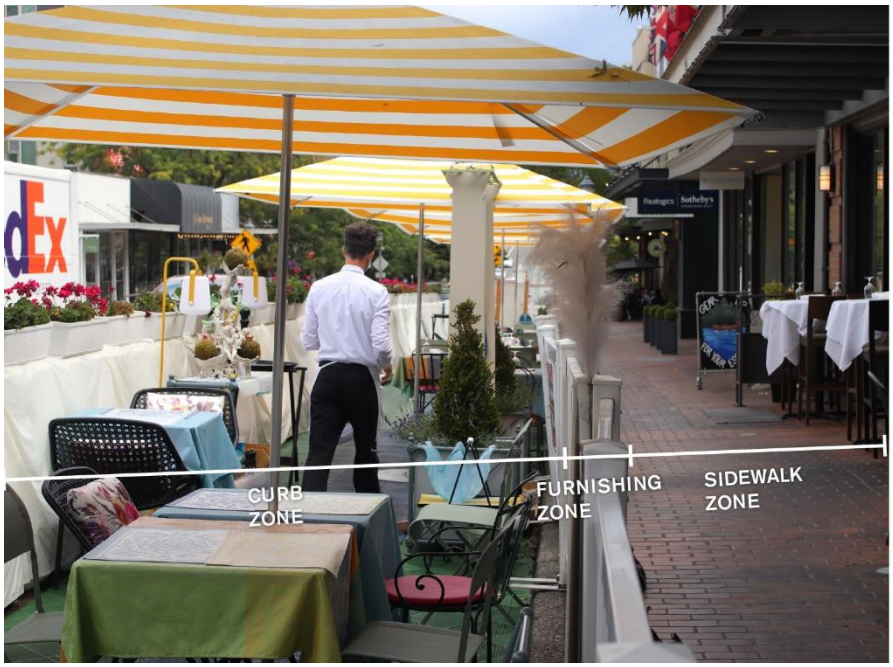
Curb Zone
1. Travel Lane Slow Speed
2. No Parking Zone

Furnishing Zone
3. Hardscape Brick
4. Tree Grates & Lighting

Sidewalk Zone
5. 10' Ped Clear Zone
6. Matching Brick paving
7. Zero-lot line active uses

Within the arterial road network, downtown Bellevue has several smaller internal streets. These often have decorative paving across the roadway and sidewalk to emphasize the pedestrian experience. Parking and loading are sometimes prohibited on these streets.

Figure 14 Temporary Curb Use: Main Street



Curb Zone
1. Visual Screening
2. Temporary Cafe Seating

Furnishing Zone
3. Temporary Barriers

Sidewalk Zone
4. 5-7' Ped Clear Zone
5. Brick Paving
6. Cafe Seating

In response to a greater desire for outdoor space, many curbs have started to include café seating, small parklets, and other public realm uses.

Figure 15 Main Street

Pedestrian-supportive curb treatments along Main Street

Across this diversity of curb experiences, there are recurring themes.

- **Curbside uses such as parking and loading zones are not always supported by furnishing zone design.** Linear elements like planting strips, large objects like planters or receptacles, and seating help create a buffer between the sidewalk zone and curb zone. In many cases, this creates a valuable sense of safety for pedestrians, especially along major arterials with curbside travel lanes. However, in some cases these linear elements can make it more difficult for parked cars or loading vehicles to access the sidewalk and building frontages.
- **Retail and other active uses need significant attention to how the curb experience is managed.** The public realm has always been critical to the success of pedestrian oriented active uses, even prior to the recent demand for additional outdoor uses. In many cases, temporary curbside seating areas and permanent seating, signage, and other frontage uses of the sidewalk zone can co-exist. As seen in the previous figures, this can have the effect of creating a narrower clear zone for pedestrians with seating on both sides. Supporting these emerging needs for the curb while maintaining core functions for the public realm will be important.
- **Curb flexibility is uneven across Bellevue.** Given the diverse requirements of different users, curb design and management should be flexible enough to anticipate changing needs. However, many sites across the study area have elements, particularly in the furnishing zone, which make adaptation difficult. Linking regulatory requirements and guidelines to the potential future needs of curbside uses will help to "futureproof" the curb experience.

How Do Transportation Networks and Land Use Shape the Curb?

Curb use is shaped by a multitude of land use and transportation network factors, both within the curb area itself as well as in adjacent buildings and parcels. Some of these factors are localized—for example, the interface between a local shop and the sidewalk along the storefront. Others are networks which extend beyond a single block or curb face—for example, the speed and reliability of a bus route. A range of different potential curb configurations and management strategies may be needed to address and balance the competing needs of these adjacent uses and networks.

Land Use

Figure 16 shows zoning designations in Bellevue today. Most commercial land uses in Bellevue are concentrated within the study area, as is higher-density multifamily housing. These land uses demand multifunctional curbs that function as a public space and can support a range of travel modes and activities including daily commutes, customer access, and recreational uses. The curb in these areas should also reflect and support the City's commute mode share goals.

New development

Curb design and management should reflect not only where the City is today but also where it is headed. New developments (Figure 17) present an opportunity to advance and implement both localized and network-level improvements at the curb. Some parts of Bellevue that have been historically auto-centric are being re-envisioned as walkable, multimodal environments—the curb must evolve as well to support these changes.

Figure 16 Study Area Zoning Designations

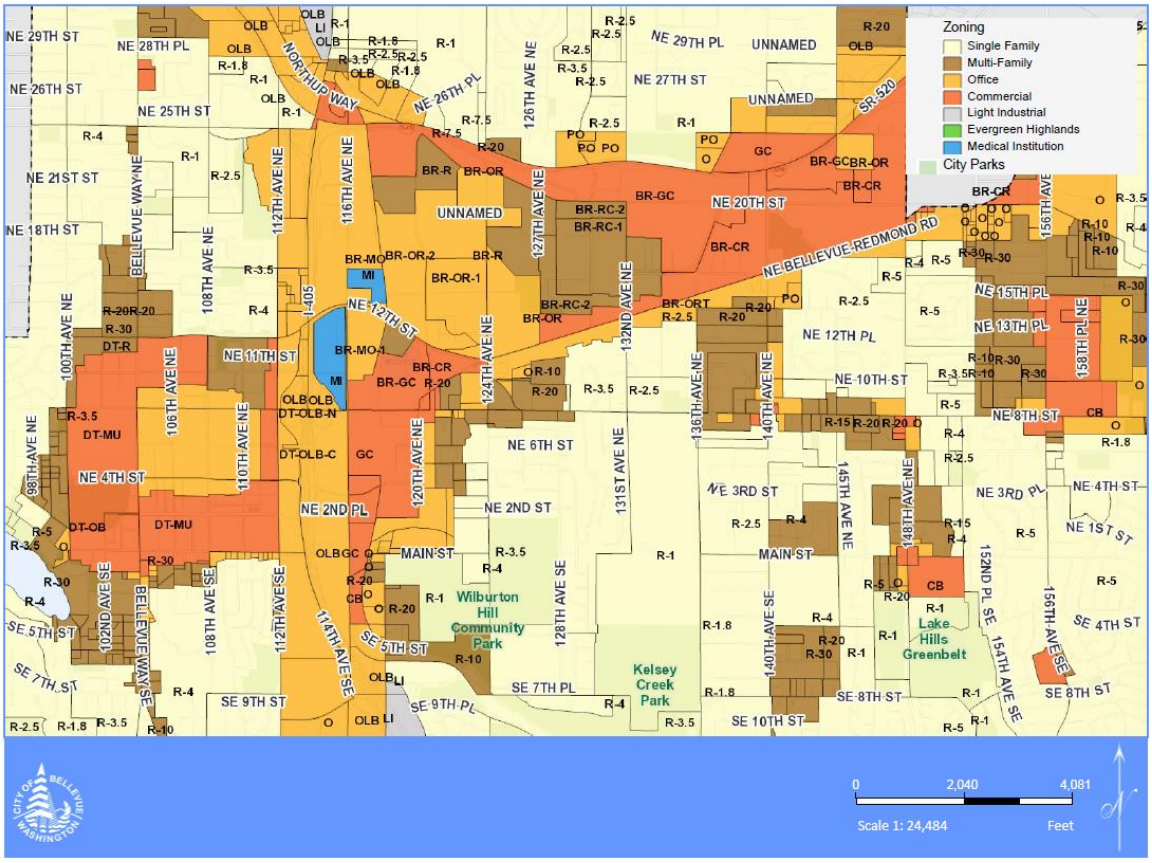
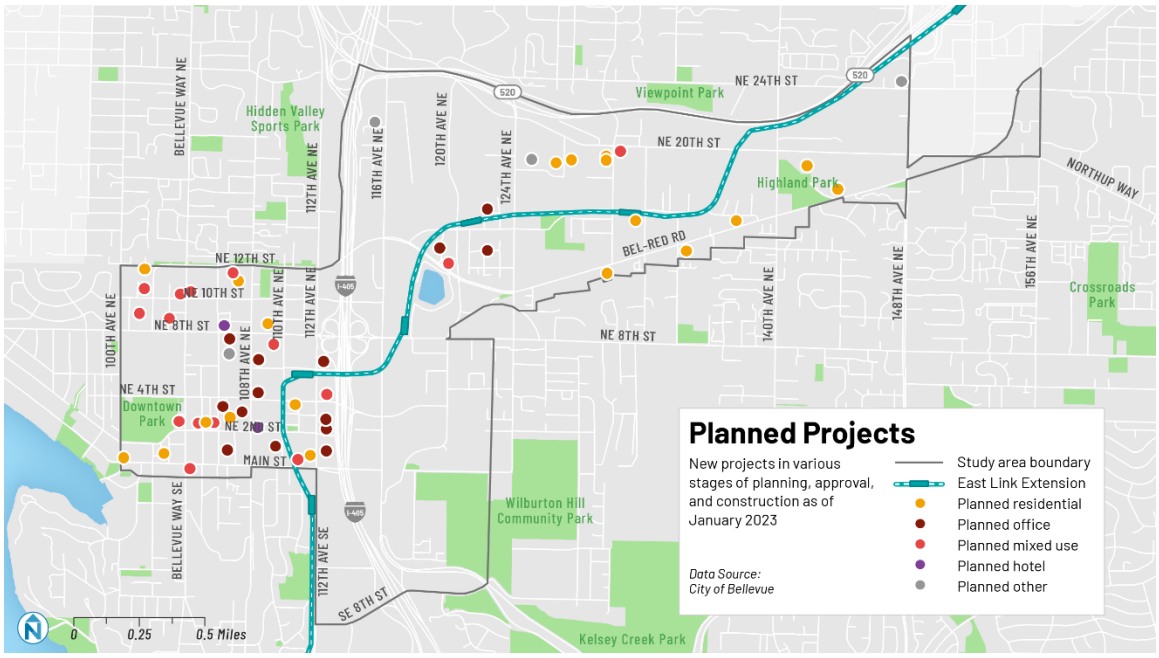


Figure 17 Major Projects within study area (January 2023)



Transportation Network

Major transportation networks in the study area include the road network, public transit network, and the bicycle network. For each of these networks, the curb plays a pivotal role in supporting both throughput along the curb as well as access at the curb.

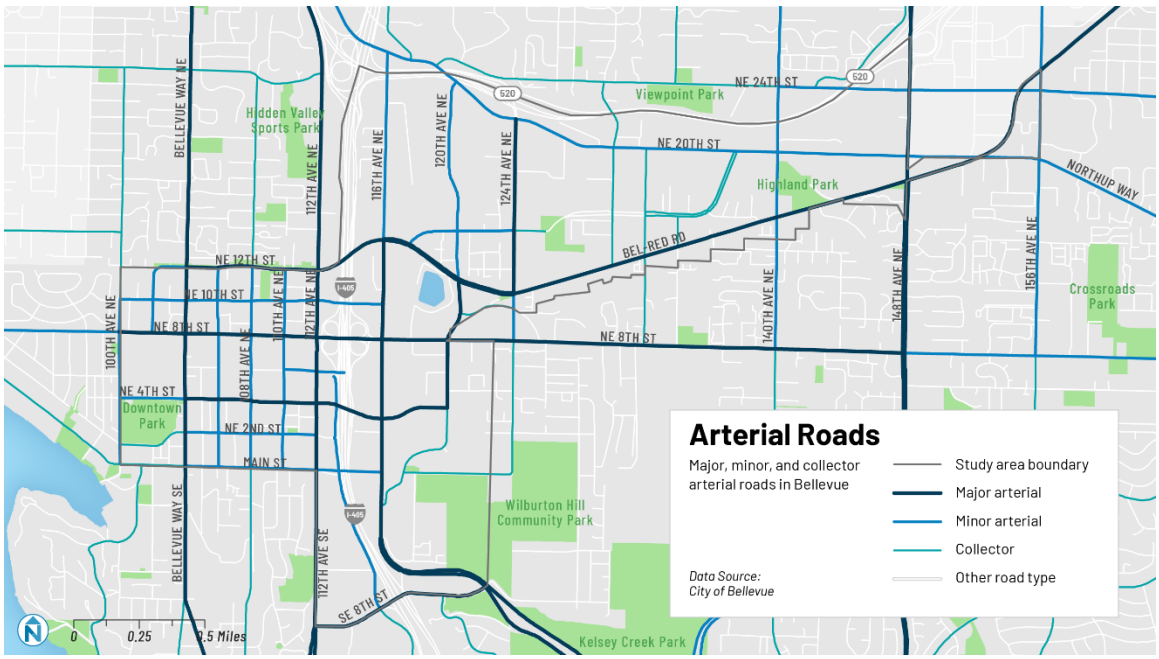
Road network

Although typical roadways within the study area have some elements of travel and curbside access (Figure 18), the study area includes corridors that vary from narrow, pedestrian-oriented streets to multi-lane auto-centric arterials (Figure 19). As discussed earlier in this chapter, treatments along the curb can act as a buffer between vehicles and pedestrian areas. In some cases, this is desirable; it the curb space safer and more enjoyable for pedestrians. In other cases, it can make the sidewalk less accessible for people walking to and from cars, transit, or other mobility options. Curb management is especially important in areas with high levels of modal mixing – when pedestrians, cars, transit, and micromobility devices all share the same space. Curb management can help by allocating space to the different modes and making sure users have safe access to their destinations.

Figure 18 110th Ave NE

A typical road configuration in Downtown along 110th Avenue NE

Figure 19 Current Arterial Classification



Public transit network

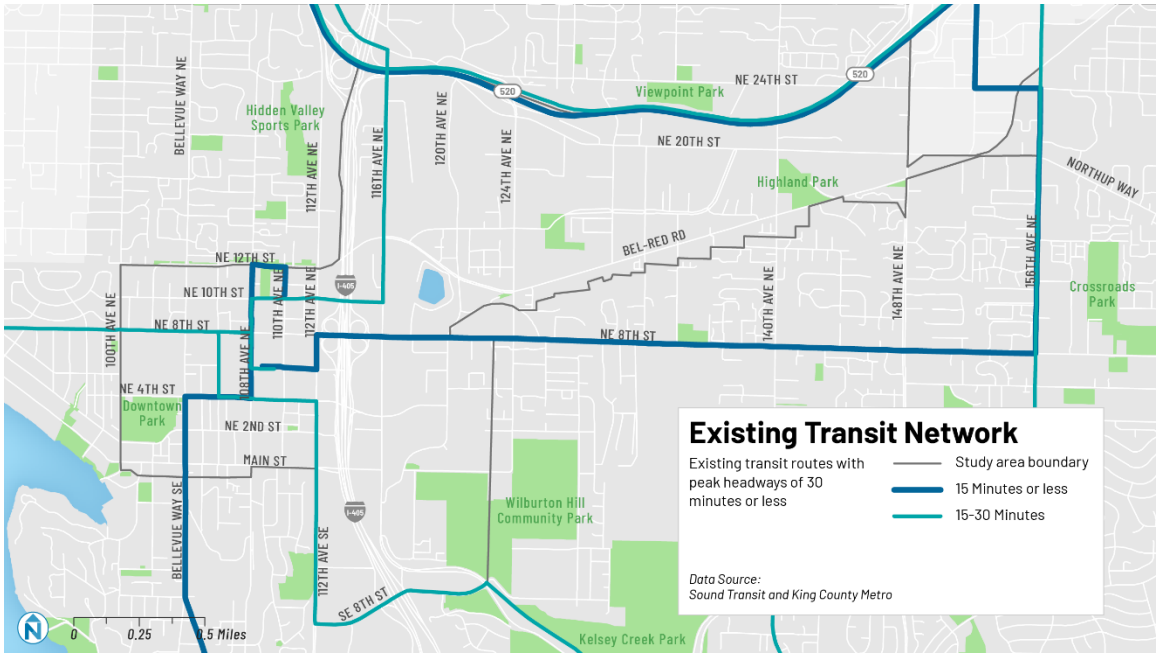
The study area includes elements of modern transit infrastructure (Figure 20) and is served by frequent bus service today (Figure 21). In the coming years, the opening of light rail service and

additional supportive King County Metro service will further improve access to reliable, high-speed transit (Figure 22). The space along the curb is essential for supporting transit—it provides space for people to wait at transit stops, it supports safe and accessible boarding and alighting, and it is the site for most first-mile/last-mile transit connections by foot, bike, and micromobility devices, such as shared e-bikes and scooters. Successful transit-oriented development also depends on vibrant, walkable street life, which the curb plays a critical role in fostering and supporting transit-supportive communities.

Figure 20 152nd Ave NE (Redmond)

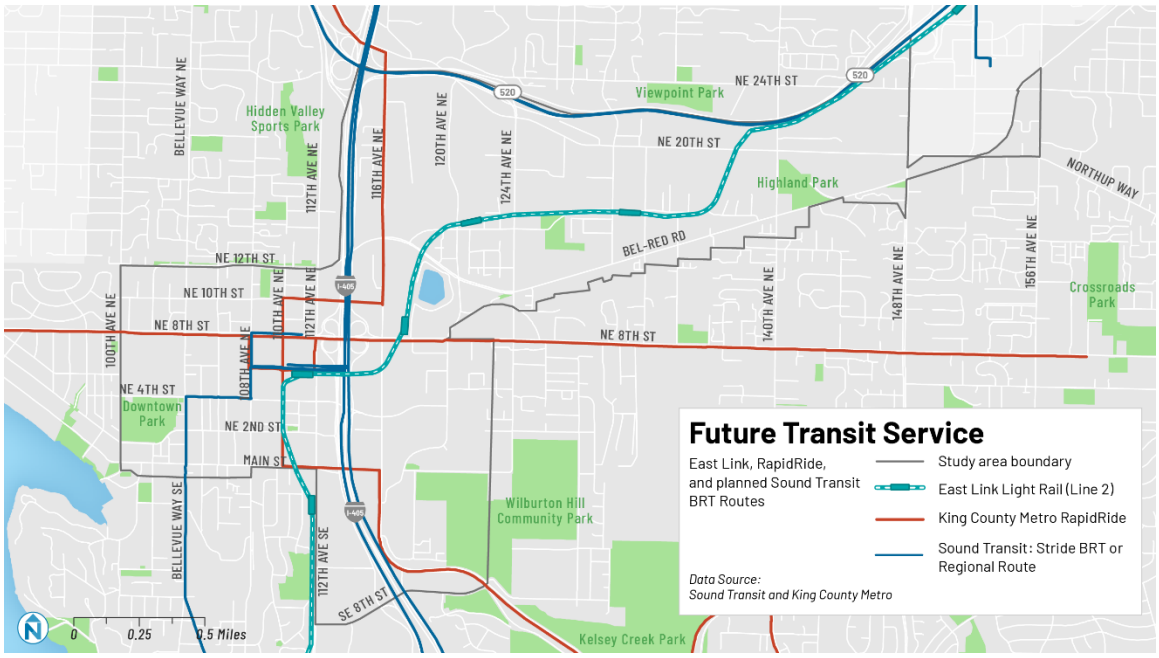
Transit and pedestrian access are prioritized at a RapidRide station on 152nd Avenue NE in Redmond

Figure 21 Existing Transit Network



Note: route alignments to be updated after East Link Light Rail is operational, refer to Figure 23

Figure 22 Planned Transit Network Corridors



Note: final alignment for the K Line RapidRide is not yet determined.

Figure 23 King County Metro East Link Connections

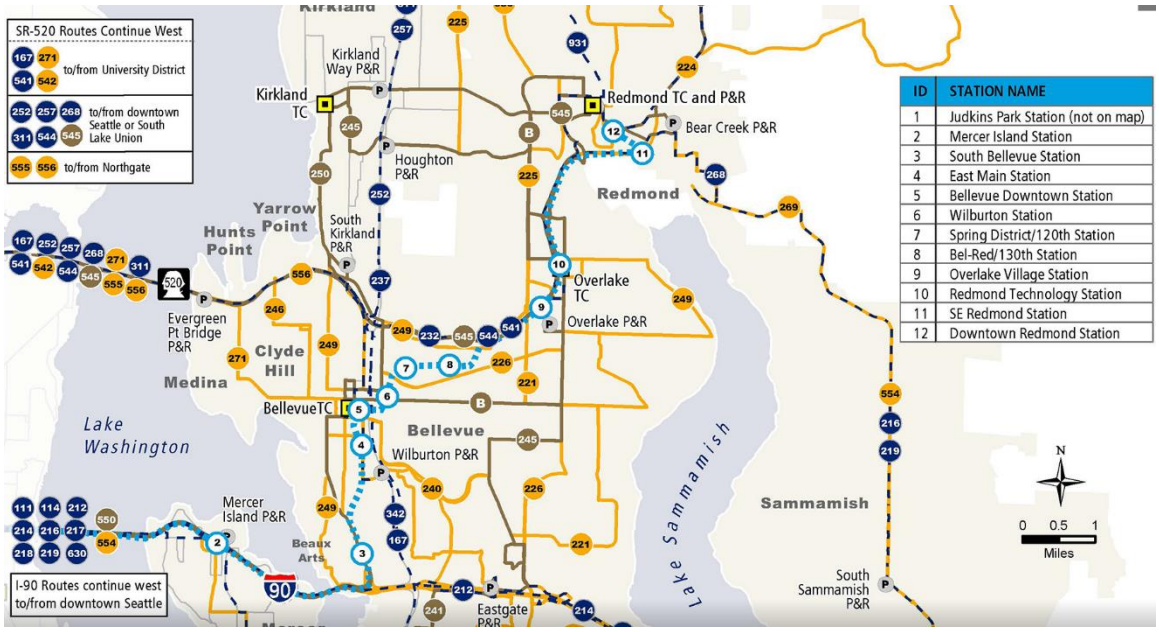


Figure 23 shows anticipated new bus routes as part of the East Link Connections effort. This effort will update bus route alignments in conjunction with the opening of East Link Light Rail.

Bicycle Network

In most cities, bicycle facilities oftentimes exist along the curbside, taking the form of a bike lane, protected bike lane, or cycletrack. The curb also plays the beginning and ending of bicycle rides, sometimes hosting bike racks or secure lockers. Creating a safe bicycle network that is accessible to people of all ages and abilities (Figure 24) requires a combination of infrastructure design, support facilities, curb organization and prioritization, and supporting policies.

Figure 24 Spring District

Protected bike lane along NE Spring Blvd provides safe and reliable route for cyclists

Today, Bellevue's bicycle network consists of a mix of protected bikeways, dedicated lanes, and shared bicycle routes (Figure 25). While some parts of the study area today have access to bicycle facilities that meet level-of-traffic stress performance targets, there are considerable gaps in the network. Some bicycle network corridors, such as Bel-Red Road, are arterials that are currently identified by the City as caution areas for bicyclists.

Bellevue has taken novel approaches to implementing bicycle infrastructure. In 2018, the city completed the Downtown Demonstration Bikeway project along 108th Avenue NE. This demonstration approach allowed the City to test and refine bicycle facilities and priority treatments while gaining ongoing public feedback about route performance. The Bicycle Network Vision presented out in the MIP lays out Bellevue's ideal network that expands cycle access to people of all ages and abilities across the study area (Figure 26).

Completing a safe, well-connected bicycle network will require developing strategies and policies that allow the city to apply citywide plans and policy goals to the curb.

Figure 25 Existing Bicycle Facilities

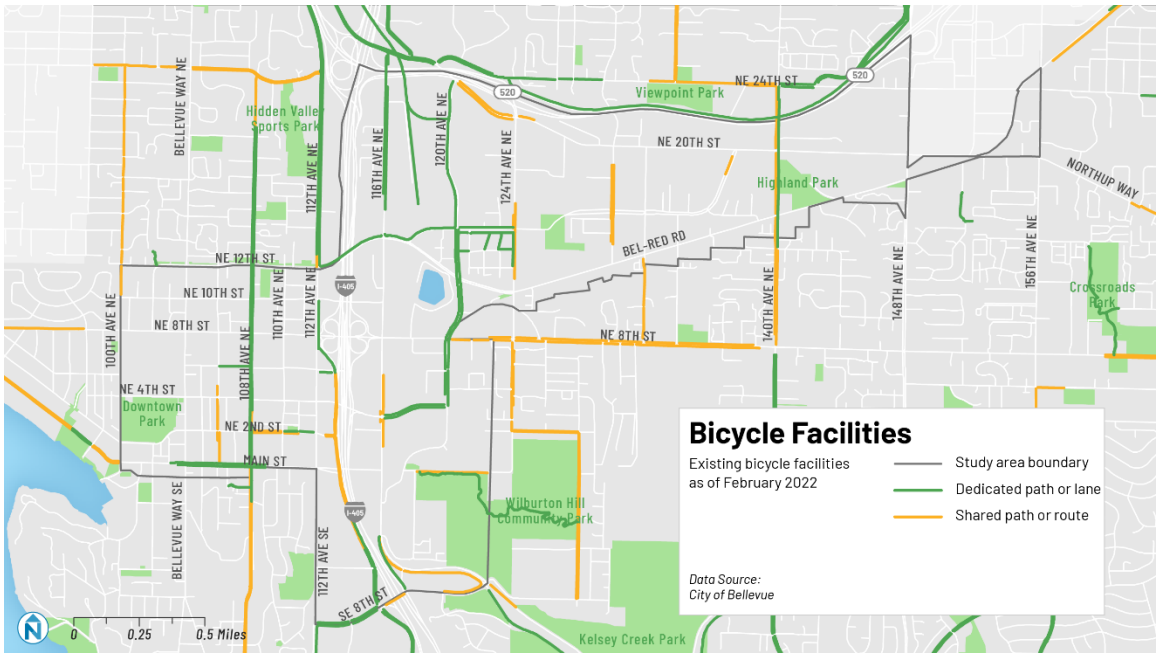
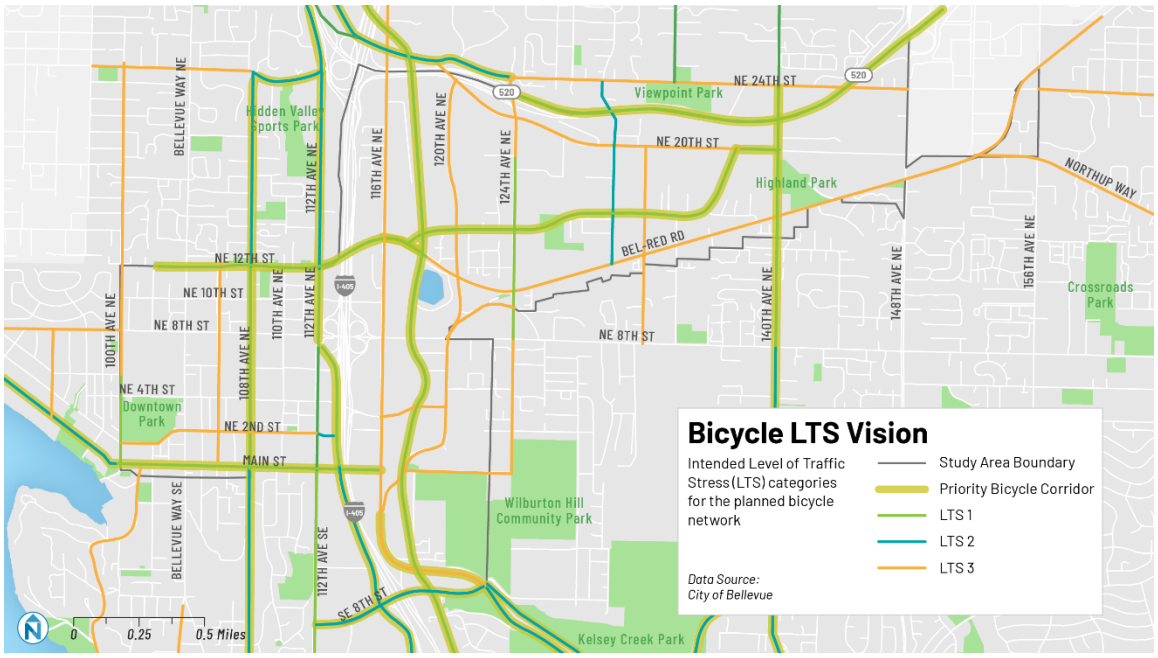


Figure 26 Bicycle Network LTS Vision



Freight and loading

Freight movement is essential to ensure that people and businesses have the goods they need to keep Bellevue's economy running smoothly. Freight relies heavily on curbside space to load and unload goods from trucks of all sizes. However, this demand is not evenly distributed across the city;

it is concentrated in business districts and along major arterials. Figure 27 shows the designated truck routes in Bellevue, established via City Ordinance 3692. These routes allow large vehicles to travel efficiently to their destinations, prevent traffic congestion on smaller neighborhood roads, and ensure that the road infrastructure is substantial enough to withstand truck weights.

Figure 27 Truck Routes from Bellevue Comprehensive Plan

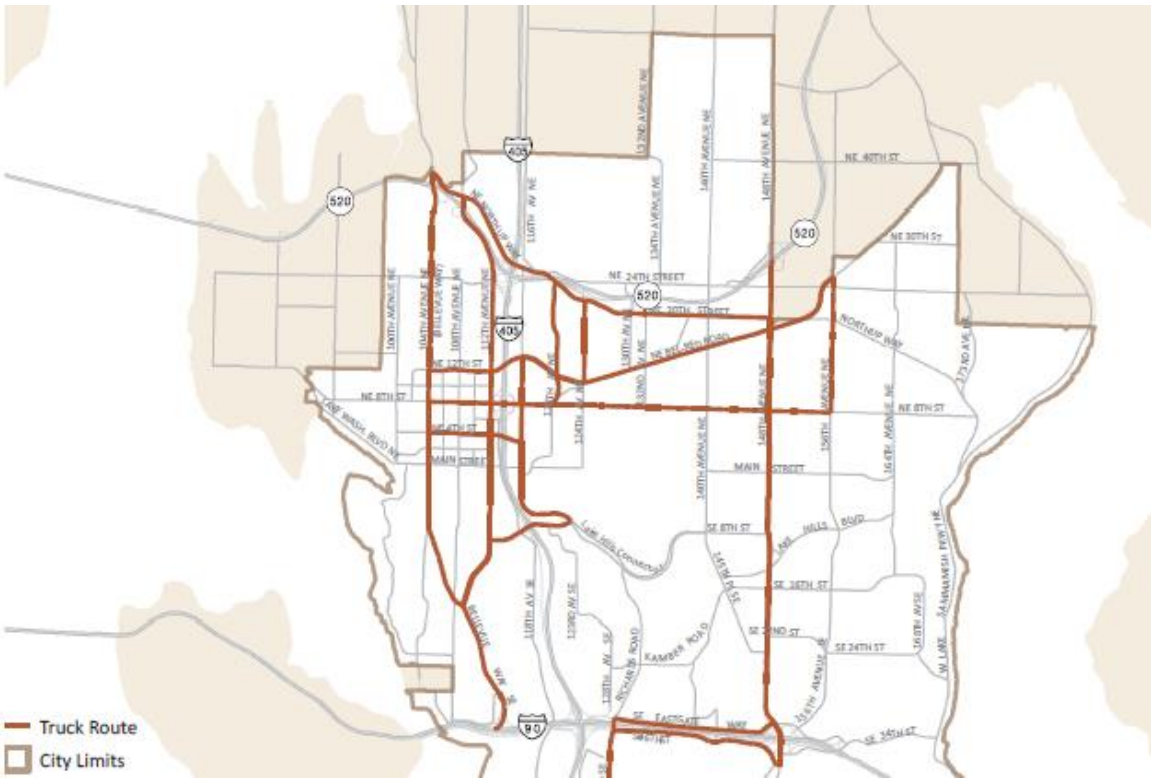


Figure 28 shows total number of parked events for aggregated commercial freight activity. Data was collected in March and October 2019 from Populus[5] by referencing anonymized geospatial data tied to commercial freight activity. Data show activity in both public and private rights-of-way.

Parked events are a good indicator of the number of vehicles that stop to load or unload for any length of time over the data collection period. Streets in the study area with heavy loading traffic include NE 4th St and NE 8th St in Downtown, 120th Avenue NE north of the Spring District, and 124th Ave NE, 130th Ave NE, and 132nd Ave NE in BelRed.

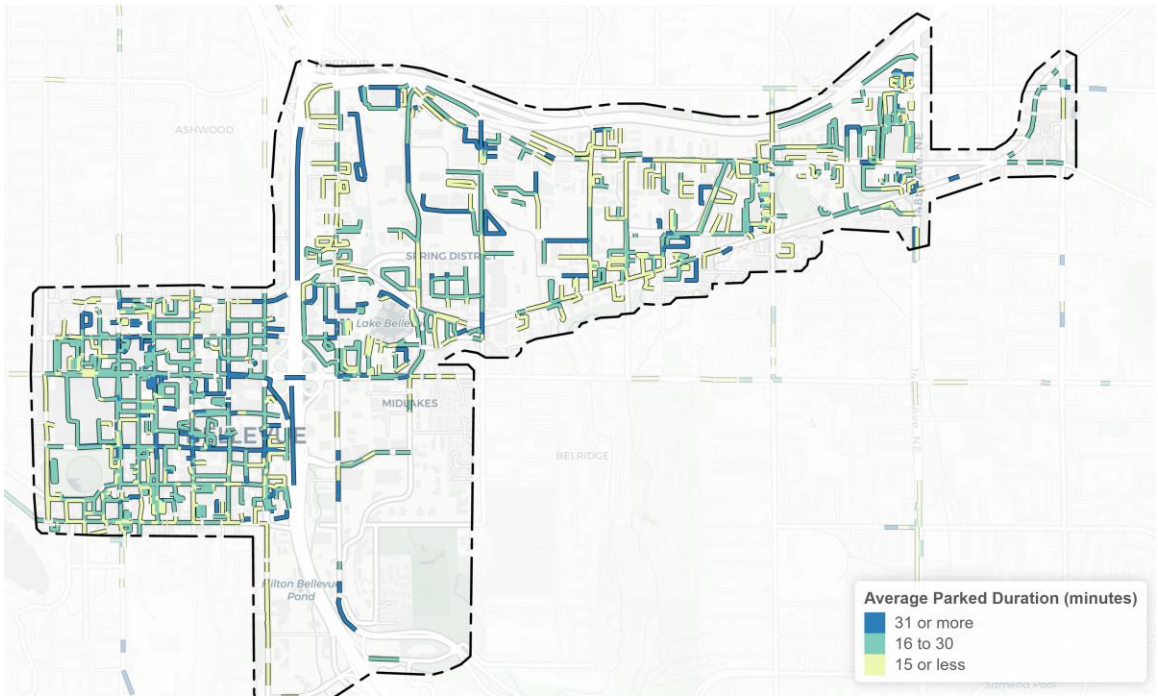
[5] Populus is a data and information company that specializes in curb management and mobility services.

Figure 28 Freight Parked Events, March and October 2019

Source: Populus, 2022

Figure 29 shows the average parked duration (in minutes) for freight in March and October 2019. This represents where freight loading and unloading had significant dwell time, and where loading zones were likely being highly utilized. In downtown Bellevue, most of the streets can be seen as long-term freight parking with 15 minutes or more in average duration. In BelRed, most of the long-term freight parking is shown to occur in private streets.

Figure 29 Freight Average Parked Duration (Minutes), March and October 2019



Source: Populus, 2022

Who Are the Curb Stakeholders?

Curb stakeholders are people and organizations who use, are impacted by, are invested in, or are responsible for any curb activity. Stakeholders can be categorized based on how they interact with the curb or what their role is in overseeing or implementing curb management efforts. Figure 30 summarizes these stakeholder groups and provides examples of each type of stakeholder.

Figure 30 Curb Stakeholders

Stakeholder Groups	Examples
Decision-makers *City leaders who make decisions that guide curb investment and policy development*	▪ City Council ▪ City Manager ▪ Transportation Department leadership
Implementation Leads *City staff who are responsible for directing curb policy implementation in departments*	▪ Department heads and staff
Guides and Analysts *City staff and commission members who direct, inform, and oversee policy development and implementation*	▪ Transportation Commission ▪ Planning Commission
Advocates *Community members and organizations who are invested in advancing transportation or curb-related policies and initiatives*	▪ Community-Based Organizations (CBOs) ▪ Disability Rights Advocates

Stakeholder Groups	Examples
Curb Users *Visitors and residents that are making trips to/from jobs, shopping and dining, services, and entertainment and recreation*	▪ People who walk ▪ People who bike ▪ People who take transit ▪ People who use micromobility services ▪ People who take shuttles ▪ People who use or would like to use car share services ▪ People who use rideshare services and taxis ▪ People who drive ▪ People who park in on-street parking areas ▪ People with accessibility challenges ▪ People visiting local businesses ▪ People who live in or would like to live in the area ▪ People who work in the area ▪ People and businesses in the area who receive goods
Mobility Service Operators *Public entities and private companies who access, impact, or are impacted by curb activities and uses.*	▪ King County Metro and Sound Transit ▪ Goods delivery services ▪ Shuttle operators ▪ Micromobility operators ▪ Microtransit and car share users ▪ TNCs and taxis ▪ Future automated operators (e.g., AV, delivery robots)
Interests *Groups and organizations who have a vested interest in curbside policies and outcomes*	▪ Employers ▪ Businesses ▪ Residents (current and aspiring)
General Public *Mobility affects day-to-day lives*	▪ Community groups and organizations

Curb Pilot Performance: What New Strategies Have Been Tested?

Bellevue has piloted several curb management strategies with the goal of better understanding how the curb is used today and how it is performing. These pilot projects fit into five general categories:

1. Pandemic-Related Permitting Changes
2. Curbside Video-Based Technology Assessments
3. Curbside Data and Asset Management Inventory
4. Food Truck Permitting
5. Micromobility

In addition to these pilots, Bellevue contracted with a consulting firm in 2020 to develop a curb inventory in Downtown. All arterials in Downtown Bellevue, related to curb regulations, physical assets such as curbs and driveways, and street furniture, were mapped using the CurbLR specification.

Bellevue's pilot projects have mostly been isolated in nature, with final outcomes failing to become programmatic or operationalized. In the absence of a formal curb management program, the primary outcome of the pilots has been building a snapshot understanding of curb data and information. These projects have provided valuable insight into the existing conditions at the curb and provide insights on areas for improvement, but results are not always broadly applicable when developing citywide policy.

While the pilots have informed the City's perspective on the curb to date, pilots have mainly served as auxiliary projects. Dedicated curb management staff would be better equipped to manage current and future pilot projects, interpret results, and assess feasibility of scaling up pilots to serve other parts the city and contribute to a broader curb management vision.

Pandemic-Related Permitting Changes

In response to impacts related to the COVID-19 pandemic in March 2020, the City of Bellevue quickly implemented several short-term programs aimed at helping customers continue to be able to dine at local restaurants and supporting local businesses through economic uncertainty.

Outdoor dining permits

Sidewalk cafés have been allowed under the right-of-way code for many years. During the pandemic, a new permitting process was established and fees waived that allowed businesses to expedite establishment of on-street outdoor dining areas along the curb. The issuance of such permits depended on several factors, including the type of street, parking availability, and sightlines.

Curbside Video-Based Technology Assessment

Smart Cities Collaborative Curb Management Pilot

Bellevue – along with Boston and Minneapolis – were selected as pilot cities to participate in the 2020 Smart Cities Collaborative. The Collaborative, sponsored by Transportation for America, was originally designed to bring public and private interests together to solve novel transportation issues. Bellevue received support from King County Metro, Bellevue Downtown Association, Bellevue Chamber of Commerce, and others in establishing a curb management pilot to better understand the rapidly evolving uses of the curb.

The original intent of the curb pilot was to make operational changes at the curbside with the goal of balancing curbside access among competing uses. When the COVID-19 pandemic disrupted travel patterns, the Collaborative pivoted and became a multiagency brain trust for curb-related rapid-response strategies, such as creating best practices for app-based food delivery curbside pickup zones, on-street dining areas, and "healthy street" networks. In addition to COVID-19-related rapid-response strategies, Bellevue continued to pursue and examine technology solutions with the intention of accurately monitoring curb space utilization (Figure 31). The video-based curb

monitoring pilot project aligned well with the City's vision to address the emerging challenges associated with growth in curbside activity volumes and complexity.

Figure 31 Curbside Management Pilot Program

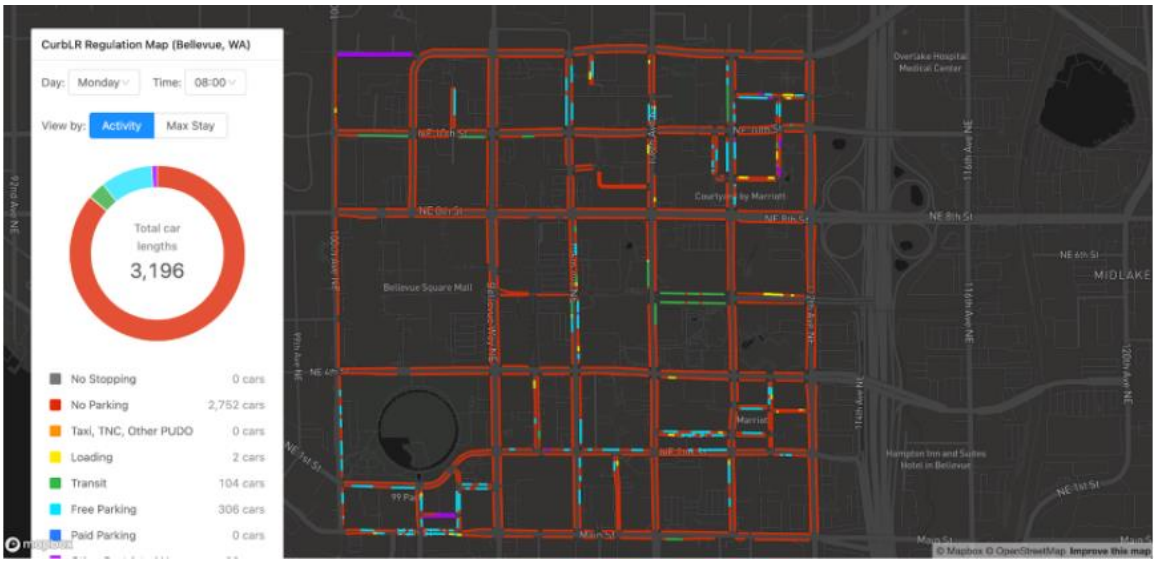
U.S. Department of Energy Technology Assessment Pilot

Like the large assessment started with Transportation for America, Bellevue also participated in a technology assessment pilot project that was implemented with a range of partners including the University of Washington Urban Freight Lab and funded by a $1.5M grant from the US Department of Energy. This project tested the ability to accurately predict parking seeking behavior for delivery vehicles and created an app that could predict load zone availability at the curb. The app development is being led by the Pacific Northwest National Laboratory and is still in progress.

Curbside Data and Asset Management Inventory

In 2020, Bellevue staff collected inventory of curb regulations in downtown. This inventory was collected using hand-written notes and translated into a digital format under the CurbLR specification (Figure 32). Future curb inventory efforts will focus on refining curb rules, collecting additional curb regulation data in the BelRed and Wilburton neighborhoods, and converting the digital inventory into the Curb Data Specification (CDS), which is becoming a new standard in the industry.

Figure 11 Curb Regulations Downtown



TNC and Freight Data Collection

More recently, Bellevue has begun to investigate data techniques that may potentially isolate specific activities such as TNCs and freight. The City worked with SharedStreets – an independent nonprofit that is part of the Open Transport Partnership – to collect data to attempt to identify hot spots for passenger pickup and drop off (Figure 33). Additionally, the City has worked with a range of probe data providers to attempt to identify data mining techniques to isolate freight vehicles.

Figure 33 Pick-up/Drop-off Conditions Downtown

4. Food Truck Permitting

Food Truck Permitting Pilot (2021)

In 2020, the City of Bellevue developed a pilot program to expand food truck vending in Bellevue by permitting spaces for food trucks within the public right-of-way. This program looked to advance Comprehensive Plans and Policies by:

1. Supporting the livability of Downtown Bellevue
2. Supporting the creation of an active pedestrian environment
3. Creating incentives for "pedestrian-scaled, diverse, and unique urban lifestyle experiences and options" (as described in policy S-DT-54) serving residents and employees living and working within Downtown.

Before the pilot program, food trucks operated on private property locations but were not permitted in the public right-of-way.

The goal of the food truck permitting pilot was to issue permits to one or more qualified food truck management companies and begin with a modest number of food trucks in the study area while managing potential issues and cultivating positive public reception prior to expansion. The pilot generated significant interest. Future potential applicants are awaiting guidance from the City on how to continue this type of arrangement. Potential issues related to traffic and competition with brick-and-mortar restaurants created new challenges for the pilot during the pandemic.

5. Micromobility

Bike Share Pilot (2018-2019)

The City of Bellevue launched a one-year bike share pilot on July 31, 2018 with Lime, a private operator, under a permit issued by the city. Over the course of the pilot, more than 9,000 people took more than 40,000 trips on the company's e-bikes in Bellevue. The permit to use public right-of-way for providing bike share service was subject to specific conditions, including requirements related to safety, parking, operations, and data-sharing. The operator paid a fee to offset costs associated with managing the pilot. However, after extending the permit through November of 2019, the private operator notified Bellevue that it had chosen to end service in the city due to lack of profitability.

3. WHAT PLANS AND POLICIES ARE IN PLACE TODAY?

In Bellevue today, the curb is managed through a collection of city policies and planning documents, including:

- The Comprehensive Plan, Downtown Subarea Plan (updated 2022)
- The Comprehensive Plan, Transportation Element (updated 2022)
- Mobility Implementation Plan (adopted 2021)
- The Environmental Stewardship Plan (adopted 2020)
- Transit Master Plan (adopted 2014)
- The Downtown Transportation Plan (finalized 2013)
- Pedestrian & Bicycle Transportation Plan (adopted 2009)
- City Code guidance, such as Part 20.25A

While these documents provide some of the necessary policy tools for managing the curb effectively, critical gaps remain. The Curb Management Plan will address these policy gaps and establish a comprehensive framework for managing the curb in Bellevue today and into the future. This chapter presents an overview of Bellevue's curb-related plans and policies in place today, summarizes key themes, and identifies gaps or opportunities to be addressed in the Curb Management Plan. Plans and policies are summarized in five categories:

1. On-Street Parking
2. Loading Zones
3. Multimodal Access
4. Growth and Development
5. Livability and Sustainability

On-Street Parking

In most Bellevue neighborhoods, on-street parking is the most common use of curb space. Adequate parking management strategies—including pricing, time limits, enforcement, and strategic parking ordinances—are key tools for promoting vehicle turnover and ensuring that the curb benefits as many users as possible.

Key findings

- **All on-street parking in Bellevue is currently free of charge**. Although the Comprehensive Plan identifies priced parking as a potential strategy for managing parking, the City has not yet adopted or amended code to enable priced parking.
- **City plans call for more flexible on-street parking approaches**. The Downtown Subarea Plan in the Comprehensive Plan includes a policy to explore creating off-peak parking in curbside travel lanes. The curbside dining program and Healthy Streets program allow on-street spaces to be shared for other types of uses.

- **Without a unified policy, parking enforcement is ad-hoc**. Enforcement duties are shared between third-party contractors (downtown) and Bellevue Police Department officers (non-downtown) . This division of responsibilities makes it difficult to pursue specific enforcement priorities or targets that align with City plans. Funds generated from ticket issuances do not currently cover the cost of enforcement.

Figure 34 On-Street Parking References

Topic	Source	Geography	Details
24-hour time limit	Bellevue City Code BCC 11.23.020	Citywide	▪ Prohibits vehicles from parking for 24 consecutive hours on the same Bellevue street ▪ Vehicles in violation can be impounded
Residential parking zones (RPZ)	Bellevue City Code BCC 11.23.010	Downtown and Wilburton (RPZ 4, RPZ 7, RPZ 9, RPZ 15, RPZ 16)	▪ Enables City Council to establish residential permit parking zones (RPZ)
Growth corridor parking review	Environmental Stewardship Plan M.1.4	Growth Corridor	▪ Recommends studying the impacts of light rail on parking supply, demand, and requirements near transit stations

On-Street Parking: Time Limits

Time limits encourage parking turnover and make it easier for drivers to find an available parking space. Currently, the city uses time limits to manage on-street parking primarily on Downtown streets[6], and in small pockets throughout other neighborhoods like Wilburton and BelRed. Time limits range from 3 minutes to 2 hours, depending on the location and intended use. The city is able to work with developers and businesses to designate time limits. For areas with no time-limit signs, Bellevue's city code prohibits vehicles parking in the same public place for more than 24 hours. The penalty for violating the 24-hour limit is indexed to the regional cost of living—as of January 2023, it is $47.

On-Street Parking: Pricing

Priced parking can help manage demand and encourage vehicle turnover. In many cities, revenue from priced parking provides dedicated funding for parking enforcement and maintenance. Currently, all curbside parking in Bellevue is free of charge, although pricing was recommended as a potential strategy in both the Downtown Subarea Plan and Downtown Transportation Plan (DTP).

The DTP identifies opportunity areas in Downtown where pricing could make curbs more productive and support current and future land use. However, it does not identify how any future revenue from priced parking revenue should be directed or prioritized.

[6] City of Bellevue, *Downtown On-Street Parking:* City of Bellevue, 2011

On-Street Parking: Increasing On-Street Supply in Downtown

After careful evaluation, The DTP identified several blocks in downtown as suitable to accommodate additional on-street parking The report identified capacity for 73 additional spaces in high-opportunity areas and 65-125 additional spaces in moderate opportunity areas. The majority of these spaces would be available for on-street parking during off-peak hours only. The Plan recommends further analysis prior to installation to determine the impact of additional parking on economic vitality, residential access, and levels of traffic.

On-Street Parking: Residential Parking Permit Zones

Section 11.23.010 of Bellevue's City Code allows the City Council to establish Residential Parking Permit Zones (RPZ) to restrict non-residential parking on neighborhood streets. RPZ restrictions can include time limits or time-of-day restrictions for non-permit holders. Residents and their guests are exempt from RPZ restrictions if they are parking legally and displaying an RPZ permit. Establishing an RPZ requires majority support from neighborhood residents, as well as City Council approval. Individuals living within an existing RPZ can request a parking permit from the Bellevue Transportation Department. RPZ permits are currently free of charge for residents within the zone. Each household may receive up to four vehicle permits and 2-4 visitor permits, depending on the zone. Currently, enforcement of RPZ's is complaint-based.

Loading Zones

Loading zones allow for delivery vehicles, rideshares, and individual vehicles to drop off or pick up freight and passengers. These zones mitigate double-parking, provide a safe place for people to get into or out of their vehicles, and prevent vehicles from obstructing bicyclists, pedestrians, and other vehicles. In Bellevue, loading zones can be designated during the development approval process in collaboration with private developers or installed ad-hoc at the request of business and property owners.

Key Findings

- **Loading zones exist today, but are limited in quantity and specificity.** Bellevue currently has time-limited loading zones with posted time limits of 3 minutes for passenger loading and 15 minutes for general curbside usage. The needs, constraints, operational profiles, and high-demand times of day differ among loading zone types. Long term large-scale freight loading activity is required to occur on-site per the land use code.
- **Loading zones are designated in informal coordination with developers.** A centralized policy for designating loading zones would provide more consistency in zone designation and design, support more seamless loading and pick-up/drop-off activity, and improve safety for all curb users.
- **Enforcement of loading zones is ad-hoc.** Effective enforcement of freight and passenger loading activity is subject to similar constraints as parking enforcement.
- **Loading activity is regulated by a mix of both state and local policies.** The City traffic engineer designates curb space for general, first-come first-serve loading. Conversely, the Right of Way division issues permits for reserved curbside activity (i.e. employer shuttles).

Figure 35 Code References for Loading Zones

Topic	Source	Geography	Key Details
Traffic	Bellevue City Code BCC 11.23.025 A	Citywide	No person may park or leave any vehicle upon the travel portion of the roadway in such a manner as to block traffic
Passenger Loading	Bellevue City Code BCC 11.23.026	Citywide	For hire vehicles may only stop, stand, or park in a designated taxicab stand unless actively loading or unloading passengers.
Passenger Loading	Revised Code of Washington RCW 46.61.570	Washington State	Provides detailed regulations on parking, stopping, and standing laws.

Loading Zones: Passengers

Passenger loading zones are reserved for passengers to quickly enter or exit their rideshare vehicle or carpool near a curb. Taxis, rideshare services, and the broader traveling public can benefit from designated passenger loading zones. These zones generally have short time limits and ensure pedestrians and drivers are safe while minimizing traffic disruptions during a stop.

Passenger loading zones are available for any vehicle to use if they are done quickly and not waiting or stalling for passengers (BCC 11.23.026). Vehicles do not need a special permit to use passenger loading zones. Time-limited loading zones can help more effectively manage curb demand without risking pedestrian safety.

Currently in Downtown Bellevue, property developers can create passenger pick-up and drop-off (PUDO) zones through development review. The property developers can propose changes to curb regulations, such as replacing permanent on-street parking with passenger PUDO zones. However, the Development Services and Transportation Departments have final say on whether such plans are approved and can move forward.

The City does have several designated PUDO zones, but installation has been ad-hoc, and there is not currently "best practices" guidance or policy on when and where to appropriately designate passenger PUDO zones. With development review, approval of the passenger PUDO zone is on a case-by-case basis. Alternatively, the city also does not have any taxi queueing zones (taxi stands) on public curb spaces. The DTP notes that temporary taxi stands on public curbs may be desirable during evenings and weekends near entertainment venues.

Loading Zones: Freight

Freight loading zones are reserved for vehicles with parcels and shipments that require loading and off-loading time at the curb. These parcels and shipments are often delivered to individuals, retail stores, restaurants, and other businesses. These zones typically have longer time limits than Passenger PUDO zones, but shorter time limits in comparison to on-street parking.

The Land Use Code requires that new development provide for large-scale freight loading and unloading on-site rather than on the public right-of-way. Large-scale freight loading differs from

smaller parcel-related loading services like Amazon, FedEx, Instacart, and meal delivery. The requirement to designate on-site loading can help reduce the number of conflicting curb use types, but the ultimate utilization of on-site accommodation is often based on the design of the building and relationship to the surrounding land use.

Loading Zones: Curbside Food Pickup

In March 2020, as a temporary measure to help restaurants operate during business closures due to the COVID-19 pandemic, Bellevue created temporary 3-minute "Curbside Food Pickup" zones to be installed around Downtown[7]. Most locations were removed in 2022 and restored to their original curb regulation (primarily two-hour parking).

Multimodal Access

Multimodal curb uses include public transit stops, curbside transit lanes, bicycle lanes, bicycle parking, dedicated sidewalk space for micromobility parking, shuttle stops, and pedestrian space. Some of these spaces are shared or could be shared between multiple users. The Environmental Stewardship Plan establishes two key goals related to multimodal curb access and prioritization:

- Minimize the environmental impacts of transportation and development in Bellevue by focusing development in existing and future designated growth centers
- Provide all residents with access to a variety of mobility options

Key findings

- **Bellevue is committed to improving mobility options.** Existing plans such as the Pedestrian and Bicycle Transportation Plan, Transit Master Plan, the Downtown Transportation Plan, Transportation Demand Management (TDM) Plan, and the Environmental Stewardship Plan prioritize improving multimodal access in Bellevue's urban core.

Figure 36 Multimodal Access References

Topic	Source	Geography	Key Details
Environmental Impact	Environmental Stewardship Plan	Citywide	Minimize environmental impacts of transportation and development in Bellevue and give people access to variety of mobility options
Travel lanes	Bike Ped Plan (Ordinance No. 5861)	Citywide	Require new development to incorporate physical features designed to promote use of alternatives to single-occupancy vehicles Preferential parking for carpools and vanpools Special loading and unloading facilities for carpools and vanpools

[7] https://bellevuewa.gov/city-news/short-term-restaurant-parking

Topic	Source	Geography	Key Details
Land Use	Bellevue City Code BCC 14.30 BCC 20.30	Citywide	Right of Way Use code
Pedestrian and bicycle infrastructure	Comprehensive Plan, Transportation TR-84	Citywide	Secure sidewalk and trail improvements and easements, and on-site bicycle parking and storage consistent with the Pedestrian and Bicycle Transportation Plan through the development review process.
Pedestrian and bicycle access	Comprehensive Plan, Transportation TR-77	Citywide	Consider pedestrians and bicycles along with other travel modes in all aspects of developing the transportation system.
Transit	Bellevue Transit Master Plan	Citywide	The TMP establishes short- and long-term strategies and projects that foster a high-quality transit system that effectively connects residents, employees, and visitors in Bellevue with the places they want to go.
Bike parking	Land Use Code 20. 25D.120.G	Citywide	Office, residential, institutional, retail, and education uses are required to provide bicycle parking, following requirements listed in the code.

Bicycle Parking and On-Street Bike Corrals

City policies governing on-street bicycle parking identify safe, accessible, operationally efficient places for people to park their personal or shared bicycles. The Bellevue Parking Program, outlines citywide bicycle rack installation guidelines to provide convenient short-term bicycle parking to support surrounding land uses. The installation guidelines gives the following placement considerations:

- Do not create an obstacle or hazard
- Avoid fire hydrants
- Align with other sidewalk features
- Allow two feet of clearance around the rack

The Transportation Department and individual developers are responsible for installing on-street bike racks. Bellevue's existing land use code dictates a ratio for on-site, off-street bicycle parking spaces in office, residential, institutional, retail, and educational spaces. These off-street spaces provide additional support for on-street and curb lane bike use. Currently, this ratio is:

- One bicycle parking space per 10,000 square feet for nonresidential uses greater than 20,000 square feet.
- One bicycle parking space per 10 dwelling units for residential uses.

Public Transportation

The Downtown Transportation Plan outlines four policy components for improving transit and meeting the mobility needs of Downtown Bellevue in a corridor context, all of which have implications for curb use and management. The transit coverage component demonstrates that Bellevue's expanding frequent transit network is on track to serve nearly all Downtown residents and workers by 2030. The plan recognizes, however, that achieving transit coverage goals depends on providing and maintaining safe and accessible walking routes to and front transit stops.

The transit capacity component outlines expectations for how transit operations will evolve to continue meeting ridership demand as Downtown continues to grow. Increased transit capacity means higher volumes of buses on the road in Downtown during peak hours. Effectively managing curb access and curb travel lanes will be essential for supporting bus operations and achieving capacity and throughput targets.

Similarly, the transit speed and reliability component recognizes the pivotal role that the City plays in managing the flow of traffic, which has a direct impact on transit operations and performance. Curb management and transit priority infrastructure along the curb are central to a well-performing transit system.

Lastly, the transit passenger comfort, access, and information component highlights the importance of passenger-friendly amenities, resources, and information to make riding transit pleasant, accessible, and attractive. Many key passenger-facing elements, including transit shelters, information and wayfinding features, seating, and lighting, are located along the curb.

While the DTP provides a clear framework for organizing and prioritizing transit-supportive curb management policies and initiatives, this framework has not yet been extended with the same level of detail and analysis to other neighborhoods outside the downtown core.

The Environmental Stewardship Plan identifies strategies for reducing per capita vehicle miles traveled (VMT) by prioritizing non-single-occupancy-vehicles, including public transit. The Bellevue Transit Master Plan, while giving a holistic vision of transportation in the city, does not make specific recommendations about bus stop locations and focuses instead on bus stop amenities, commuter parking, and bus layover needs.

Commuter Shuttle Services

Companies such as Microsoft and Amazon operate commuter shuttles in Bellevue, encouraging employees to commute to the office by means other than personal vehicle. For a company to install a shuttle stop in an area on Bellevue, they must obtain a Type D Long-Term and Permanent Right-of-Way Use permit. Most companies do not publish their shuttle routes to the public – however, operators are required to provide frequencies of shuttle routes the utilize the curbside per the conditions of their Right-of-Way Use Permit. In some cities, these stops are collocated with public transit stops, providing transfers to employees and optimizing curb space.

Growth and Development

The neighborhoods within the study area include most of the current and forecasted growth in Bellevue. As these neighborhoods continue to develop, curb management pressures will shift, and opportunities will arise to implement new strategies and policies that support CMP goals.

Key findings

- Developers play a role in informing curb operations today. Collaboration between developers and the City can make curb policy implementation more location-sensitive but also potentially fragmented or piecemeal.
- The transportation impact fee can be a key source of revenue for the city and are tied to impacts associated with development.
- When construction crews use the right-of-way to stage equipment, they require a curbside construction lease to occupy the space.

Curb management and the development review process

Today, several key curb planning steps occur during the development review process. On one hand, this approach can help leverage private investment to improve the public right-of-way and allows developers to collaborate with the city to meet the specific needs of their project. On the other hand, this can lead to a piecemeal implementation of policies or infrastructure which may be better served with a centralized, coordinated approach.

Developments in Bellevue are required to pay a transportation impact fee. Revenue from these fees is used to add capacity to the transportation system to accommodate travel demand associated with the new development. Eligible projects for transportation impact funds must be included within the capital facilities plan in the City's comprehensive plan.

The Comprehensive Plan include several policies that encourage developers to take initiative to accommodate certain curb uses, including on-street parking, shuttle stops, bicycle parking and lanes, and loading zones. A key opportunity for the CMP will be to provide Bellevue with a standardized framework that allows the city to respond to requests quickly and confidently in alignment with broader planning goals and initiatives.

Design guidelines

To support the creation of a vibrant, livable streetscape and transportation network, Bellevue maintains a set of design criteria, standards, and guidelines in the Land Use Code. Curb-related design guidelines in the code vary from neighborhood to neighborhood depending on the district. The Land Use Code dictates sidewalk and planter design requirements today and provides a foundation for debate of curb variations. While the CMP will not directly change the Land Use Code, it may contain recommendations for future code updates.

Sustainability and Livability

In 2020, Bellevue City Council approved the ESP, which aims to drastically reduce the city's environmental impact city-wide and create more livable streetscapes for its residents by 2050. Bellevue hopes to utilize curb space to promote sustainability and livability such as providing on-street electric vehicle charging stations, creating additional greenery in select curb spaces, and support the local food scene by providing outdoor dining opportunities and food truck permits.

Figure 37 Sustainability and Livability References

Topic	Source	Geography	Key Details
Environmental Impact	Environmental Stewardship Plan	Citywide	▪ Minimize environmental impacts of transportation and development in Bellevue and give people access to variety of mobility options
Land Use	Bellevue City Code BCC 14.30.090	Citywide	▪ Right of Way Use code
Food safety and restaurant regulations	Bellevue City Code BCC 9.06.020B	Citywide	▪ Prohibits the preparation of food on a mobile food truck

Environmental Stewardship Plan

The ESP, adopted in 2020, sets goals related to climate changes, energy, waste, mobility and land use, and natural systems. The CMP will provide opportunities to help Bellevue reach its goal of reducing greenhouse gas emissions by 80% by 2050 (using 2011 as a benchmark). The plan outlines steps to reduce per capita VMT including improving transit access and building infrastructure to support electric vehicles.

- The City aims to have 50% electric vehicles registered in Bellevue by 2050. So far, the City has installed 23 EV charging stations, 15 of which are for public use at city facilities.
- The ESP notes City staff will work to streamline the permitting process and reduce costs to homeowners and businesses for installing charging stations as well as identify the code changes necessary to install these stations.
- Businesses must apply for a Right-of-Way permit to install an EV charging station on the curb adjacent to their business. Due to this permitting process, over 175 public charging stations exist in Bellevue.

Outdoor dining

The COVID-19 pandemic caused many restaurants to temporarily close or shift to a take-out-only model of operation. As throughout many parts of the country, Bellevue allowed businesses to apply for a Street-Use permit to operate food service on the curb using a program known as the Al Fresco on-street dining program. To use curb space as outdoor dining spaces, restaurants follow the Street-Use permit process.

- Restaurant operators must apply for a Street-Use permit by submitting an application with the property owner's authorization, if different from the restaurant owner
- These applications are reviewed and approved by Transportation
- An application fee for this type of permit is $232

Bellevue residents, in surveys conducted by the City in the summers of 2020 and 2021, showed strong support for the program and responded as willing to reduce the number of on-street parking stalls to continue the Al Fresco program.

Parklets

Parklets are sidewalk extensions, usually installed on parking lanes, which provide space and amenities for people using the street. In Bellevue, aside from a street-use permit, no official process to apply to operate a parklet is outlined by the city.

4. WHAT SYSTEMS, ORGANIZATIONS, AND PROCESSES SUPPORT THE CURB?

Staffing, administrative functions, and organizational structure

Curb management for the City of Bellevue is a shared responsibility across departments and work groups; however, there is no dedicated staff, program, or funding sources to address curb management. Currently, most curb-related work falls to both the Mobility Services and Mobility Operations Divisions. This manifests itself through existing department working groups including Development Review, Right of Way, Traffic Engineering, Smart Mobility / ITS, and Neighborhood Traffic & Safety Services (NTSS).

Figure 38 Curb Management Teams and Responsibilities

Team	Responsibilities	Common Collaborators
Transportation Development Review	Vets public and private parking proposals from private developers Informs curb design and operation	Traffic Engineering, Land Use
Traffic Engineering	Establishes development conditions for private development Oversees and installs signs and markings	Development Review, NTSS
Land Use	Establishes development conditions	Development Review
Right of Way	Reviews and issues permits for ROW usage	Traffic Engineering
Smart Mobility / ITS	Provides technical support on technology evaluations and impacts to traffic signal operations	Traffic Engineering
NTSS	Manages Residential Parking Zone (RPZ) program	Traffic Engineering
Bellevue Police Department	Oversees parking enforcement outside of downtown	Transportation Department

Team Size

Depending on the context, curb decision making can occur ad-hoc among approximately 30 full time positions. Having a manageable number of people involved in day-to-day decisions around curb management can be advantageous through closer coordination. However, with a small staff that is

already significantly burdened with several primary responsibilities, having curb management as a secondary or tertiary responsibility can compromise the consistency, capacity, and specific expertise of the team.

Mobility Services

In addition to parking services as well as the recent pilot programs summarized in Chapter 2, the City provides a myriad of other services through its Mobility Services division that are either directly or indirectly related to curb management:

- **Employer Shuttles Permits -** As part of the City's commute trip reduction program, Bellevue permits employer shuttle operators to utilize dedicated curb space for pick-up and drop-off activity.
- **Sidewalk Cafe Permits -** The City has a long-standing permitting program for utilizing the public right-of-way for dining on specific sidewalk areas.
- **Construction Activity Permits -** The City permits construction activities such as temporary construction leases, roadway closures, and utility maintenance access in the curb lanes across the city.
- **Special Events Permits -** The City permits time limited events, such as the annual Snowflake Lane activities, that close or provide limited access to the curb lane or sidewalk areas.
- **Move In Move Out Permits -** The City provides permits for short term curb lane usage for move in and move out activities of residents and businesses.
- **Waste Service Permits –** The City is regularly engaged with residents, business owners, and the City's waste management provider Republic Services related to issues and complaints about obstructions of sidewalks with rolling waste containers.
- **Pilot Permits** – Bellevue has issued permits on a pilot basis for various curb uses. Pilot permit programs include pet waste station permits, food truck permits, and on-street dining permits.

Today, all permits are tied to city's Fee Ordinance, which is adopted by City Council on an annual basis. The Fee Ordinance is led by the city's Development Services Department and also includes permits tied to development activity. Feedback from stakeholders has indicated that this arrangement of Transportation-specific lease fees and permits existing within the Fee Ordinance can be overly cumbersome.

Enforcement

Enforcement of the curbside within Downtown is managed by Bellevue's Transportation Department. The department contracts enforcement services for Downtown. For areas outside of Downtown Bellevue, the Bellevue Police Department utilizes Support Officers to enforce parking violations and issue citations. Bellevue PD resources; however, do not always have the capacity to support parking enforcement as they are often fully utilized for other critical efforts related to public safety. Should Bellevue decide to implement new parking regulations, additional funding and personnel will be required to ensure adequate enforcement.

Currently, the main enforcement activity by the downtown contractor includes issuing warnings, overtime infractions, and safety infractions. In 2021, the city's contracted parking enforcement service resulted in 2,099 warnings, 1,405 overtime infractions, and 2,447 safety infractions.

Technology and Data

In addition to the technologies that have been tested through recent pilot projects described in Chapter 2, Bellevue utilizes several technologies in its daily curb management operations:

- **License Plate Readers -** The City currently owns license plate reader (LPR) technology being utilized by the downtown parking enforcement contractor for monitoring occupancy durations related to enforcement activities.
- **ArcGIS -** The City currently utilizes the Esri ArcGIS suite to map some asset features that need additional more descriptive fields such as parking restrictions, curb infrastructure (i.e., driveways, curbs), and street furniture (i.e., trees, benches, bike racks).
- **AMANDA-** The City currently utilizes a custom software called AMANDA for its permitting activities.
- **MyBellevue App -** The City currently uses the MyBellevue App to engage with the public and receive service requests.

Land Use Code

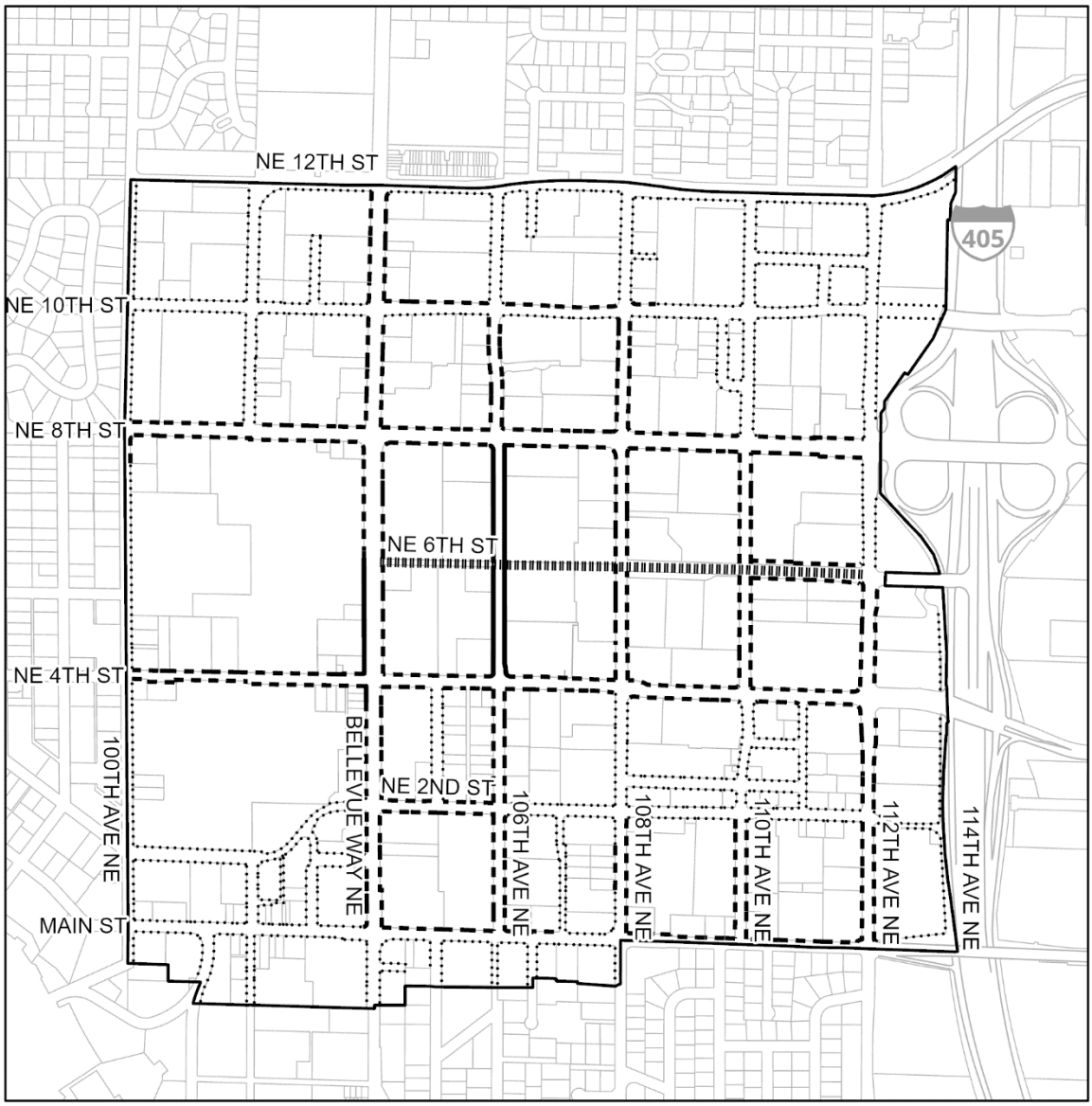
The Bellevue Land Use Code is the primary tool for regulating land development in the city. Although land use focused, the code also has several provisions that affect how the curb is designed and used, and any development impacting the curb must operate within the bounds of the existing code. The code dictates sidewalk and planter design and is also the main driver for approving or denying pullouts and other curb design variations requested by developers like curbside step-offs adjacent to continuous planter strips.

The Land Use Code also provides specific guidance for Downtown and BelRed areas in Ch. 20.25, Special and Overlay Districts. Examples of these elements are covered in the section below. These are intended to be illustrative of the types of regulations found in the Code that affect the curb — not comprehensive.

Ch. 20.25A Downtown

- 20.25A.090, Street and pedestrian circulation standards: This section establishes minimum sidewalk widths, planter requirements, and pedestrian clear zone requirements.
- 20.25A.110, Landscape development: This section specifies tree species, planting strip location and design criteria, and vegetation-based buffer standards, including at the curb edge.
- 20.25A.170, Streetscape and public realm: These design guidelines include recommendations for seating, vegetation, and other public realm elements that affect curb design and management
- 20.25A.160, Site organization: Parking garage entrances, taxi stands, and loading zones are addressed in this section.

Figure 39 Downtown Sidewalk Requirements



Ch. 20.25D BelRed

- 20.25D.110, Landscape Development, Outdoor Storage, Retail Display, and Fence Standards: This section specifies sidewalk width, planting strip dimensions, and tree selection and location.
- 20.25D.150, Design Guidelines: This section includes guidance for sidewalk and frontage design, landscape and furnishing zone elements, and lighting placement.

Although the CMP will not alter the Land Use Code as it exists today, it can provide recommendations for future code updates that better support Bellevue's broader vision for curb management and use.

5. GAPS AND OPPORTUNITIES

Bellevue's curbs are a dynamic asset with high demand and great potential. The existing curb management strategies are a strong foundation on which to build, but there are some gaps and challenges that the CMP can address, such as the following:

- Curb areas are managed on a piecemeal, ad-hoc basis by many different personnel across multiple teams and departments.
- Parking and curbside enforcement is very light and cannot keep up with the demand at current funding levels.
- Decisions about the right-of-way at the curb are oftentimes made in isolation, with no way to ensure consistency of application across the city.
- There is no formal curb operation guidance during development review.
- Curb interventions have been focused on pilot projects, isolated in geographic and temporal scope.

The CMP will highlight and plan for opportunities to improve Bellevue's curb efficiency and operations to better serve all who use it. These include, but are not limited to:

- Setting a coherent curb use priority structure that recognizes trade-offs, competing uses, and emerging new use cases.
- Ensuring curb policy is both durable and flexible, with the ability to anticipate and adapt to future uses, technologies, and development patterns.
- Addressing accessibility challenges, especially in new uses such as outdoor dining areas.
- Support sustainability and livability goals by using curb space strategically to help reduce VMT and GHG emissions and create a more active and connected network for non-SOV travel, electric vehicle charging, and micromobility storage.
- Potential Future Staffing

    A core curb management team, led by a program manager, could take responsibility for curbside policies and programs while still interfacing and collaborating regularly with subject matter experts in other workgroups. A team of 2-3 full-time staff could manage multiple curbside programs, such as on-street parking, loading zones, residential

parking program, and street cafes. For example, the staff member responsible for managing the Al Fresco dining program would oversee communication with participants and coordination of details but work closely with Right-of-Way permitting and Traffic Engineering staff to ensure on-street dining infrastructure is safe and does not interrupt traffic operations.

Adopted July 24, 2023

Resolution No. 10286