MEETING AGENDA

Steering Committee Meeting #6

MEETING DATE: Wednesday, January 2020
MEETING TIME: 1:00 p.m. – 4:00 p.m.
LOCATION: City Council Chambers, Bend City Hall, 710 NW Wall Street

Objective

- Preliminary approval of three draft chapters of the TSP Update:
  - Chapter 2: Goals, Policies & Actions
  - Chapter 4: Transportation Projects and Programs
  - Chapter 5: Transportation Funding Strategy

Agenda

1. **Welcome and Introductory Agenda Items (20 min)**
   a. Welcome and convene meeting (Mayor Russell)
   b. Approval of previous minutes (Mayor Russell)
   c. Public comment – (Mayor Russell)
   Note: time for public comment is also provided later in the agenda
   d. Where we are in the process and look ahead - (Joe Dills, facilitator)

2. **TSP Overview and Big Picture (informational item - 15 min)**

This agenda item will provide the framing for the TSP draft chapters to be presented in the subsequent agenda items.

3. **Draft Chapter 2: Goals, Policies and Actions (action item – 35 min)**

CTAC recommends and requests preliminary approval of the draft Goals, Policies and Actions chapter. Final approval will occur at the June Steering Committee meeting. Please see packet materials for recommendations.

   a. Recommendation and comments by the Co-Chairs
   b. Staff briefing (Karen Swirsky, Project Manager, City of Bend)
   c. Steering Committee discussion, refinements as needed
   d. Steering Committee action

4. **Draft Chapter 4: Transportation Projects and Programs (action item – 45 min)**

CTAC recommends and requests preliminary approval of the draft Transportation Projects and Programs chapter. Final approval will occur at the June Steering Committee meeting. Please see packet materials for recommendations.

   a. Recommendation and comments by the CTAC Co-Chairs
   b. Staff briefing (Matt Kittelson, Kittelson and Associates and Chris Maciejewski, DKS)
   c. Parkway Update (Gary Farnsworth, ODOT)

d. Steering Committee discussion, refinements as needed
e. Steering Committee action

5. **Break (10 min)**
6. **Draft Chapter 5: Transportation Funding Strategy (action item – 50 min)**

CTAC recommends and requests preliminary approval of the draft Transportation Funding Strategy chapter. Final approval will occur at the June Steering Committee meeting. Please see packet materials for recommendations.

a. Recommendation and comments by the Co-Chairs
b. Staff briefing (Lorelei Juntunen, ECONorthwest)
c. Steering Committee discussion, refinements as needed
d. Steering Committee action

7. **Public Comment (5 min)** – Mayor Russell
8. **Close/next meeting**

Accessible Meeting Information

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Agenda Item No. 1: Meeting Minutes from Steering Committee #5, June 20, 2019

Minutes

Steering Committee Meeting #5

Bend's Transportation Plan

June 20, 2019

City Hall, Council Chambers
710 NW Wall Street, Bend, Oregon

CITY OF BEND

Steering Committee Members	
Sally Russell, **Chair**	City Councilor / Mayor
Bruce Abernethy, **Vice-Chair**	City Councilor / Mayor Pro Tem
Barb Campbell	City Councilor and MPO Policy Board
Gena Goodman-Campbell	City Councilor
Justin Livingston	City Councilor
Bill Moseley	City Councilor
Chris Piper	City Councilor
Tony DeBone	Deschutes County Commissioner
Lindsey Hopper *(absent)*	Planning Commission
Bob Townsend	ODOT Area Manager

City Staff & Consultants
David Abbas*, Transportation Services Director*
Nick Arnis, *Growth Management Director*
Libby Bakke, *Barney & Worth*
Tyler Deke, *MPO Manager*
Joe Dills, *Angelo Planning Group*
Russ Grayson, *Community Development Director*
Susanna Julber*, Senior Policy Analyst*
Eric King, *City Manager*
Matt Kittelson, *Kittelson & Associates*
Ian Leitheiser, *Assistant City Attorney*
Robin Lewis, *Transportation Engineer*
Chris Maciejewski, *DKS Associates*
Elizabeth Oshel, *Assistant City Attorney*
Brian Rankin*, Principal Planner*
Karen Swirsky, *Senior Planner*
Jenny Umbarger, *Administrative Support Specialist*

CTAC Co-Chairs
Karna Gustafson
Mike Riley
Ruth Williamson

1. Welcome and introductory agenda items

Chair Russell called the meeting to order at 1:05pm.

Chair Russell called for approval of the January 30, 2019 minutes. Member Livingston moved to approve, Member Abernethy seconded. Yes – 7, No – 0, Abstain - 0. Members DeBone and Hopper were absent during the vote.

Public Comment:

Alex Anderson spoke about equity in the Transportation System Plan (TSP), and bias in the telephone survey.

Erin Foote Morgan, Hubbell Communications, spoke about planning coordination with Cascades East Transit (CET).

Rory Isbell, Central Oregon LandWatch (COLW), expressed support for the TSP project list.

Mr. Dills reviewed the goals of this meeting and the Phase 3 Schedule Check-In, as outlined in the presentation.

2. Transportation Outreach Strategy

Ms. Bakke reviewed the Transportation Outreach Strategy, as outlined in the presentation.

3. Project Prioritization Criteria

Mr. Kittelson reviewed Project Prioritization Criteria, as outlined in the presentation. He indicated there is not ranking amongst the criteria.

Member Livingston expressed concern about the subjectivity of the term 'comfortable' under the Protect Livability and Ensure Equity and Access goal. Member Piper recommended removing the word from the language.

Member Moseley moved to replace the word 'comfortable' with 'appealing'. Member Livingston seconded. Following committee discussion, voting resulted in Yes - 5, No - 3, Abstain – 1 (Member Townsend).

Member Townsend inquired why 'Support regional economic health' was deleted from the 'Have a Regional Outlook and Future Focus' goal.

Member Moseley moved to retain the language 'Support regional economic health'. Member Livingston seconded.

Member Russell recommended replacing the term 'health' with 'connections'.

Member Abernethy recommended replacing the language with "Support regional connections and economic vitality'. Member Piper seconded. Yes – 9, No – 0, Abstain – 0.

Member Moseley recommended breaking apart the first bullet point under the 'Increase System Capacity, Quality, and Connectivity for All Users' goal into two, to read as follows:

- Add to or enhance the street network?
- Address known areas of existing or future congestion and bottlenecks?

Member Livingston seconded. Yes – 8, No – 0, Abstain – 1 (Member Abernethy).

Member Campbell moved to add a bullet point under the 'Protect Livability and Ensure Equity and Access' goal that states 'By avoiding options that use eminent domain to acquire property'. The motion did not receive a second.

Member Livingston moved approval of the Project Prioritization Criteria memorandum, as amended. Member Russell seconded. Yes – 9, No – 0, Abstain – 0.

4. 2040 TSP Project List

Mr. Kittelson, Mr. Maciejewski and Ms. Swirsky reviewed the 2040 Project List, as outlined in the presentation.

Member Townsend recommended a study be done on the 27th Street and Hwy 20 intersection.

Member Goodman-Campbell moved approval of the 2040 Project List, with the addition of the Hwy 20 / 27th Street intersection evaluation, for further evaluation using the travel demand model and project prioritization criteria. Member Campbell seconded. Yes – 9, No – 0, Abstain – 0.

5. Check-In on Working TSP Policies

Ms. Swirsky reviewed Transportation System Plan Policies, as outlined in the presentation.

Members generally discussed draft policies on the subjects of prioritization, safety, and mobility. Member Moseley recommended language be added that requires sufficient arterials and collectors be built to mitigate neighborhood cut-through traffic.

6. Public Comment

Robin Vora, member of the Metropolitan Planning Organization Technical Advisory Committee, spoke about several topics, including greenhouse gas emissions, congestion pricing, and roads that serve affordable housing versus single-family housing.

Foster Fell spoke in support of the committee's work.

Dave Carlson, chair of the City of Bend Accessibility Advisory Committee, requested the committee consider mobility and accessibility.

7. Close and next meeting

Meeting adjourned at 3:50pm.

Respectfully submitted,

Jenny Umbarger
Growth Management Department

Accessible Meeting/Alternate Format Notification

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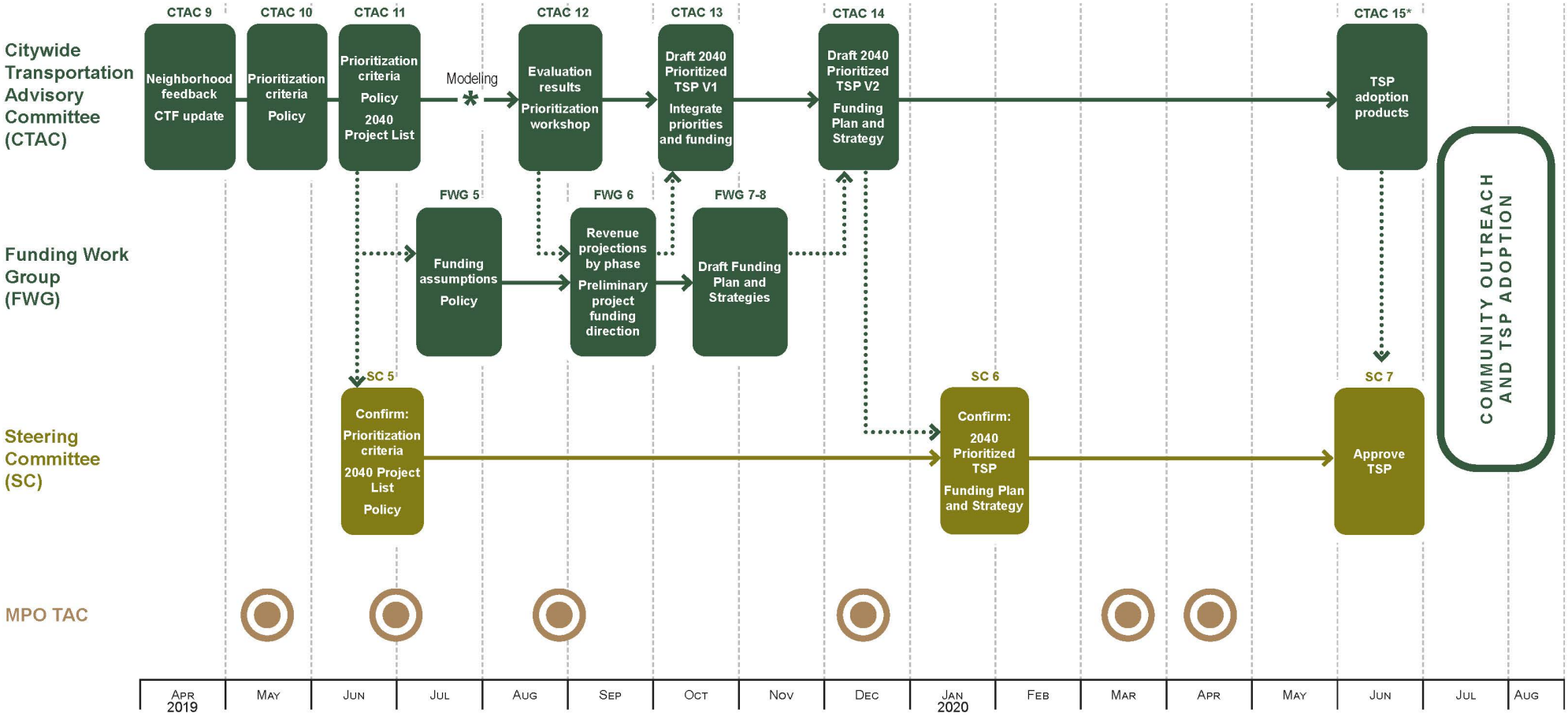
Agenda Item No. 1: Bend Transportation Plan Phases 3-4 Work Plan Diagram

BEND TRANSPORTATION PLAN

Phases 3-4 Work Plan and Process

Bend's Transportation Plan



*may require two meetings

Updated: 1/14/2020

Agenda Item No. 3: Draft Chapter 2: Goals, Policies and Actions

2

Goals, Policies & Actions

The goals shape the policies and actions in the TSP and guide its projects and programs.

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Questions This Chapter Answers

- What goals guide the 20-year Transportation System Plan?
- What policies and actions will be set to carry out these goals?
- What is the difference between a goal, an objective, a policy and an action?

2

Goals, Policies & Actions

Introduction

Bend's Transportation System Plan (TSP) Goals define the community's desired outcomes for the transportation system. The Goals shape the policies and actions in the TSP and guide its projects and programs.

Goals

Preamble: The Goals articulated in this document were developed by the Citywide Transportation Advisory Committee (CTAC) after consideration and review of the City Council's articulated goals for CTAC, and through an extensive CTAC-led process of identifying issues and potential solutions from stakeholders in our regional and city transportation systems.

1 Increase System Capacity, Quality, and Connectivity for All Users

(e.g., drivers, walkers, bicyclists, transit riders, mobility device users, commercial vehicles, and other forms of transportation)

- Increase route choices and connections for all users
  - **Roads**: increase capacity and efficiency
  - **Sidewalks:** increase access and connectivity
  - **Bicycle facilities:** increase total miles of bike routes/facilities
  - **Transit:** increase transit participation
- Use technology to enhance system performance, including accessible technology (i.e., audible signals)
- Increase the number of people who walk, ride a bike, and/or take transit
- Provide reliable travel times for commuters, emergency vehicles, and commercial users
- Minimize congestion
- Reduce vehicle operating and maintenance costs due to poor pavement conditions
- Emphasize asset management

2 Ensure Safety for All Users

- Reduce serious injuries and fatalities
- Maximize safe routes within and between neighborhoods and throughout the community for all users
- Design and build facilities and routes that maximize safety for pedestrians and bicyclists
- Ensure safe speeds

3 Facilitate Housing Supply, Job Creation, and Economic Development to Meet Demand/Growth

- Build new roads and upgrade existing roads to serve areas targeted for growth (prioritizing opportunity and expansion areas) and job creation
- Provide access and connectivity to expanded housing supply
- Improve connectivity and route choices for commercial users

4 Protect Livability and Ensure Equity and Access

- Incorporate a complete streets approach for all new road projects and road reconstruction
- Increase Safe Routes to Schools
- Ensure that people of all income levels and abilities have access to the transportation options that best meet their needs
- Encourage the use of roads for their stated classification
- Keep through freight traffic on ODOT facilities

5 Steward the Environment

- Minimize the impacts of the transportation system on natural features
- Minimize the impacts of the system on air and water quality and noise
- Reduce carbon emissions from transportation

6 Have a Regional Outlook and Future Focus

- Coordinate and partner with other public and private capital improvement projects and local/regional planning initiatives
- Create a system that is designed to implement innovative and emerging transportation technologies

7 Implement a Comprehensive Funding and Implementation Plan

- Identify stable, equitable, adequate, and achievable funding for transportation programs and projects
- Ensure that the financial plan and investment priorities are transparent, understandable, and broadly supported by the community
- Produce a funding plan that includes contributions from residents, visitors, and businesses and that delivers benefits to all users and geographies equitably and in a timely manner
- Include performance measures/benchmarks and a formal process to periodically assess progress to date and adjust or update the plan as needed
- Achieve financial stability


LEFT TURN
YIELD TO
ONCOMING
TRAFFIC

Policies & Actions

Introduction

The public policies in the TSP form the long-term foundation for the City of Bend's transportation system. They provide a consistent course of action to move the community toward the goals of the TSP. These policies are used to evaluate any proposed changes to the Bend Development Code and Bend Comprehensive Plan, of which the TSP is an element, and other regulatory documents. They are used to guide other work programs and long-range planning projects and to prepare the budget and capital improvement program. The policies are implemented through the City's land use regulations such as the zoning ordinance, subdivision ordinance, and Standards and Specifications.

Decisions about the City's transportation system will be guided by the goals and policies, but ultimately will be made within the overall context of the City's land use plans and the practical constraints of the City. This includes but is not limited to funding availability and compliance with all applicable federal and state laws, rules and regulations, and constitutional limitations.

Policies may be followed by actions, which are guidelines for implementing the policies. Actions are suggested approaches designed to help the City implement the TSP through its land use regulations and other City actions. The actions listed here are advisory recommendations for achieving the stated policies and do not limit the City to a single approach.

Safety

The City of Bend aspires to an accessible, welcoming, and comfortable transportation system for all users, including the most vulnerable. This system should allow zero serious injuries or fatal crashes. The City recognizes that we must design and manage our transportation system with this end in mind.

1. The City will balance safety, connectivity, and travel time reliability for all modes of transportation in design and construction of transportation projects, and in transportation program implementation.

>>> Actions:

- Adopt and implement the 2019 Transportation Safety Action Plan, including mapping identified crash emphasis areas.
- Amend the Bend Development Code to include safety mitigation as part of development review.

2. The City is committed to zero transportation-related fatalities or serious injuries through design, operation, maintenance, and enforcement activities.

>>> Action:

- By 2021, the City will develop and adopt an action plan to move the City towards zero traffic deaths or serious injuries (e.g. Vision Zero). The plan will set a clear goal of eliminating traffic deaths and serious injuries among all road users within an explicit timeframe and actively engage key City departments.

3. The City will consider the needs and safety of all users in transportation projects, programs, and funding decisions, with special attention to the needs of vulnerable users (including but not limited to older people, children, people with disabilities, and other users of the transportation system).

>>> Action:

- Identify, prioritize, and/or allocate funding for projects and programs to improve safety for vulnerable users.

4. The City will establish and enforce appropriate motorist speeds based on street context.

>>> Actions:

- The City will plan for, design, construct, and/or reconstruct streets to achieve consistency between motorists' speeds and target speed limits and prioritize speeding and reckless driving enforcement programs on problematic routes.
- Create a citywide speed management program to address safety issues related to speed.
- Review street design in coordination with emergency services; amend Standards and Specifications accordingly.

5. The City will provide transparent, easy to understand, and effective communication programs to encourage safe travel on the transportation system.

>>> Action:

- Develop a comprehensive education program that promotes safe behavior by all roadway users. Apply an interdisciplinary approach that aims to adjust community norms regarding identified crash causation factors including, but not limited to, speeding, DUII, crosswalk yielding, red-light running, and distracted driving.

6. Emergency response times are an important component of transportation planning. Emergency response time goals will be considered in maintenance activities and intersection design, including roundabout design, traffic calming devices, and installation of traffic signals that allow preemption for emergency vehicles.

Mobility

The City will design, construct, maintain, and operate its transportation system to provide a comprehensive and integrated network that safely serves all modes and people of all ages and abilities. The transportation system will promote commerce and support the Comprehensive Plan's vision for responsible, efficient growth and development.

7. The City will plan for efficient access for employees, customers, emergency services, and freight carriers to and from employment, commercial, and industrial lands by all modes of travel.

8. The City will improve connectivity and address deficiencies in the street network with the understanding that connectivity needs and conditions may vary based on an area's existing and planned land uses and street network (e.g., large lot industrial areas may have different needs than residential areas).

9. The City will limit the location and number of driveways and vehicular access points on higher order streets (arterials and collectors) to maintain public safety and future traffic carrying capacity, while preserving appropriate access to existing and future development.

10. The City's preferred intersection treatment is a roundabout, for reasons of capacity, traffic flow, and safety. The City may select a different intersection treatment, considering land acquisition needs, operational considerations, topography, and other engineering factors.

>>> Action:

- Update the Bend Roundabout Design Guide, incorporate in Standards and Specifications.

11. The City's standard for collectors and arterials is a three-lane configuration, but it will also consider a two-lane configuration with medians where appropriate for pedestrian crossing safety and traffic flow.

12. The City will design roadways to reflect the land use context as well as the roadway classification.

13. The City will strive to relieve congestion through management of the roadway network to achieve travel time reliability for all users.

14. The City requires applicants with new land use proposals to assess the adequacy of the transportation system and ensure that safety and operation needs are met for people using all modes of transportation. The City currently uses volume to capacity (v/c) targets and safety to evaluate intersection performance. The City may adjust the v/c target, temporarily or permanently, for a specific intersection based on locational constraints, safety concerns, road classification, and/or surrounding existing or planned land uses. The City may impose reasonable conditions and mitigation requirements on development in proportion to their impacts. The City may use a measurement other than v/c in the future.

15. The City may waive off-site improvements for certain development types based on Council goals and other identified City priorities. If the City implements such waivers, it will identify other funding sources for infrastructure development. The City will monitor the effect of any waiver and adjust as needed based on its funding needs.

>>> Action:

- Consider supplemental SDCs, LIDs, or other funding mechanisms to supplement or replace infrastructure that would otherwise be provided by new development.

16. The City's policy is to manage congestion/corridor demand before adding motor vehicle lanes. Adding travel lanes for motor vehicles will be considered only after the City has:

    a. Evaluated the safety effects for all users and modes of travel

    b. Evaluated the potential to add capacity through intersection improvements

    c. Evaluated the potential to add capacity through increasing system connectivity with parallel routes

    d. Provided appropriate transit, bicycle and pedestrian facilities, including safe crossings

    e. Implemented transportation demand management or other tools

    f. Assessed the full cost of property acquisition in monetary and social terms

17. The City's policy is to preserve the function of both local and State of Oregon transportation facilities through continued coordination with the Oregon Department of Transportation (ODOT).

>>> Action:

- Continue to coordinate with ODOT to determine when to implement modifications to City streets and closures or modifications to approaches on City streets that will be impacted by improvements to US 20 or US 97.

Equity

The City of Bend believes that we thrive when all individuals, from all parts of our City, have affordable and equitable access to a full range of transportation choices to meet their daily needs, including, but not limited to employment, housing, healthcare, education, recreation, and shopping. The City recognizes that the transportation system has historically underserved some residents, and that their needs require particular attention as transportation investments, programs, and services are prioritized and funded. Those historically underserved populations include but are not limited to: people who cannot or choose not to drive (including children); persons with disabilities; people who cannot afford a motor vehicle; people living in areas where there are concentrations of impoverished and/or minority populations; and groups that have been subjected to racism and/or discrimination.

The City defines transportation equity as being achieved when everyone has access to safe, comfortable, affordable, and reliable transportation choices to meet their daily transportation needs. Transportation equity helps ensure that disparities are reduced and access to daily needs and key destinations are fairly provided.

18. The City is committed to equitably distributing the benefits and costs of transportation system plans and improvements. The City will develop and support programs and projects, both capital and maintenance, that reduce transportation-related disparities faced by populations that have historically had significant unmet transportation needs or who have experienced disproportionately negative impacts from the existing transportation system.

>>> Actions:

- Fund data collection to identify historically underserved populations in order to better identify and understand their transportation needs, and to target projects and programs to improve transportation-related conditions for these residents.
- Analyze crash and fatality data to determine if rates are higher in neighborhoods that are more diverse than the City as a whole. Ensure that the annual CIP process includes projects that will improve safety outcomes and processes that build trust within these areas.
- Create an equity lens for analyzing transportation project and program benefits and shortcomings.
- Analyze the impacts of transportation projects and programs on areas with greater proportions of low-income, health-challenged, minority, youth and/or elderly citizens than the City as a whole. Use national best practices as a guide.

19. The City will actively engage and support all populations with respect to age, race, disability, gender, income, or location in the City in transportation planning issues, outcomes and decisions. It will actively engage and support those who have been historically underserved, especially in identified areas with concentrations of poverty and/or minority populations.

>>> Actions:

- Develop, fund, and implement a set of citywide outreach and engagement protocols that build trust and promote community empowerment in transportation issues and planning.
- Ensure that transportation planning staff have the training resources they need to address equity and diversity issues in infrastructure planning.

20. The City will strive to avoid, minimize, and/or mitigate disproportionately high and adverse human health, economic, or environmental effects of transportation projects on those who have been historically underserved, especially in identified areas with concentrations of impoverished and/or minority populations.

Technology, Transit, & Transportation Demand Management

Technology, transit, and transportation demand management tools (including parking management) are critical tools for maximizing the efficiency and effectiveness of the transportation system and the regional and local environmental, economic, and social benefits of the Bend transportation system.

21. The City will partner with the public and private sectors to test new mobility technologies and consider implementing them. Pilot and/or demonstration projects will create efficient opportunities to test emerging mobility techniques and technologies and better understand their impacts, costs, and opportunities.

22. The City will develop the capability for collecting, managing, integrating, and analyzing transportation data to inform City decision-making on transportation.

>>> Actions:

- The City will create guidelines to require mobility providers, connected vehicle infrastructure, and any private data communications devices installed in the City right-of-way to use open data standards to report anonymized, accurate, complete, and timely information on use, compliance, and other aspects of operations.

- The City will establish a centralized transportation data system and provide transportation-related data to the public to increase transparency and accountability in meeting identified transportation performance measures.
- The City will explore regional and national initiatives for transportation data collection, management, analysis, and reporting, adopting regional and national data and interoperability standards wherever appropriate and established.
- The City will provide public access to all anonymized transportation data to the degree legally permitted, including dashboard reporting on identified transportation performance measures and tools to enable data interrogation, extraction, and analysis by third parties.

23. The City recognizes that micromobility devices (e.g., small-wheeled vehicles such as bikes, e-bikes, e-scooters, etc.) that provide increased mobility options may be an important part of our transportation system, and that demand for such services will likely increase in the future.

>>> Action:

- The City will evaluate and develop clear guidelines to maximize benefits, and address concerns, governing the location and management of shared active transportation (or "micromobility") vehicles in the right-of-way, as approved by the City.

24. The City will support the expansion of infrastructure to accommodate and encourage electric vehicles and other alternatives to the internal combustion engine. The City will act as a role model by replacing appropriate City fleet vehicles with alternatives to the internal combustion vehicle as replacement opportunities occur.

>>> Action:

- Create a Community Electric Vehicle Infrastructure Plan that identifies how the City will prepare for and implement actions that support increased use of electric vehicles in Bend. The plan will identify appropriate policies, ordinances, outreach programs, zoning, and permitting practices that encourage use of electric vehicles and provide infrastructure to support electric vehicle growth. Amend the Bend Development Code and Standards and Specifications to implement.
- Identify City fleet vehicles best suited for electrification and develop standards for replacing vehicles with electric when opportunities arise. Develop a plan to convert vehicles that are not suited for electrification to alternative fuels.

25. The City recognizes that autonomous vehicles (which do not require the performance of a human operator for part or all of their functions) will be a part of the City's transportation system in the near future.

>>> Action:

- The City will develop and implement autonomous vehicle strategies to ensure safety, equity, travel time reliability, and system efficiency, and to reduce vehicle miles traveled and carbon emissions.

26. The City will manage the curb zone area of the right-of-way to ensure flexibility and adaptability as parking and mobility technologies change.

>>> Actions:

- Create guidelines for curb management and amend the Standards and Specifications and Bend Development Code to implement.
- The City will use adjacent land use characteristics, building type, and other physical attributes to determine the appropriate curb use (e.g., on-street parking,


712
YIELD TO BUS
CITY OF BEND
DIAL-A-RIDE
ON
Hawthorne Station
STOP


cascades east transit
call 541.385.8680 | 866.385.8680
cascadeseasttransit.com
cet

pick-up/drop-off of passengers or freight, shared active transportation facilities, bikeways, transit stops, and enhanced transit stops).

27. The City will implement the Intelligent Transportation System Plan and work with ODOT and the Metropolitan Planning Organization (MPO) to regularly update the Plan.

28. The City will develop a program to require institutions and businesses with larger institutions to implement and track a transportation demand management (TDM) plan that outlines targets, strategies, and evaluation measures to reduce vehicle miles traveled and single-occupancy vehicle trips, particularly at peak hours.

29. In coordination with the City's public transportation provider, the City will work to improve the availability of all forms of transportation and transportation technologies by establishing mobility hubs.

>>> Action:

- Establish mobility hubs in all four city quadrants and in the core to improve the accessibility of all forms of transportation and transportation technologies. Mobility hubs are a concentration of transportation services that may include but are not limited to transit stops or transfer stations, secure bicycle parking, car- and bike-share services, shuttle services, and other assistance for the traveling public.

30. The City will continue to develop, document and promote its own internal TDM plan to serve as a role model for others.

31. In order to increase transportation options and support existing and planned land uses, the City will work with its public transportation provider to improve the efficiency and effectiveness of existing services in Bend; expand services to underserved areas; and support regional systems that encourage residents of nearby communities to travel to Bend by public transit.

32. The City will plan, prioritize, and implement needed improvements on corridors identified for high-capacity transit, including complete street elements and signal prioritization.

33. The City will work with its public transportation provider to develop mobility on demand and mobility as a service trip planning and payment tools across multiple mobility platforms.

34. The City will support its public transportation provider in replacing the fleet of transit vehicles with energy-efficient and/or alternative-fuel vehicles that minimize the transit system's impact on the environment as replacement opportunities occur.

35. The City will fully implement the Downtown Parking Plan (2017).

36. The City will adopt parking management and enforcement technologies to optimize use of existing public and private parking supply, to reduce conflicts, and to reduce the share of land occupied by parking.

37. The City will enable the creation of parking districts in areas where residents or stakeholders have identified an issue that could be resolved by parking management, and/or in locations where data supports the development of a parking district.

>>> Actions:

- Amend the Bend Code Title 6 to implement parking districts and identify and fund staff to manage them.
- If needed, amend the Bend Development Code to adjust parking requirements.

38. The City will monitor and update parking requirements to allow for adjustments based on changes in behavior and parking demand over time.

Bicycles, Pedestrians, & Complete Streets

The City of Bend's transportation system will be an interconnected network of complete streets that provides safe, optimized travel for all modes. The system is intended to increase connectivity, safety, and travel time reliability while encouraging walking, biking, and opportunities for using transit and other transportation options.

39. The City's policy is that all streets should be "complete streets." A complete street is one that is designed to allow everyone to travel safely and comfortably along and across the street by all travel modes. Arterials, collectors, and most local streets will have buffered sidewalks. Arterials, collectors, and select local streets will have facilities in compliance with the Low Stress Network and the Pedestrian Master Plan.

>>> Actions:

- Adopt the Low Stress Bikeway Map and Bikeway Design Guide.
- Create and adopt a Pedestrian Master Plan..
- Update the Standards and Specifications and/or Bend Development Code to identify how complete street elements will be incorporated during development and redevelopment, new construction, reconstruction, and maintenance activities.

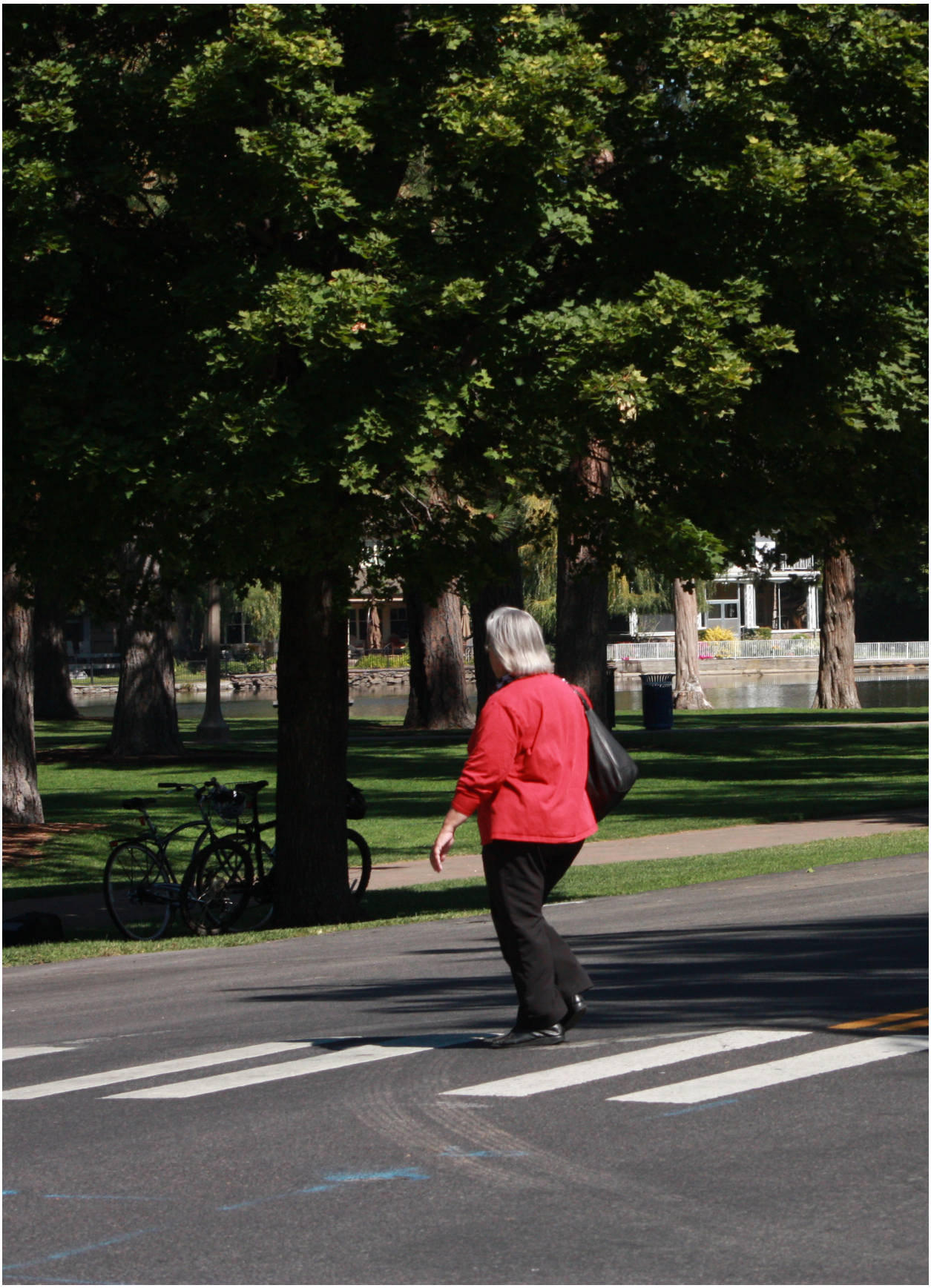
40. The City will create and implement a Pedestrian Master Plan to establish a pedestrian network that safely and comfortably serves the community year round. The Master Plan will identify key pedestrian routes, including crossings.

>>> Actions:

- Create and adopt a Pedestrian Master Plan that identifies key routes including enhanced crossing locations. The Pedestrian Master Plan will include (1) an infill program to systematically fund the construction of missing sidewalks and crosswalks on key routes with identified mechanisms for funding, and (2) identify appropriate pedestrian facilities for local streets and how to implement those facilities in existing neighborhoods.
- The Pedestrian Master Plan will include a Sidewalk Maintenance Plan to address issues including but not limited to: sidewalk maintenance, winter operations and snow removal, and ADA Compliance.
- Amend the Bend Development Code and Standards and Specifications for sidewalk construction.
- Develop and implement a wayfinding program for the pedestrian network.

41. The City will establish a network of low stress bikeway facilities (level of traffic stress 1 or 2; See Bikeway Design Guideline) as shown on the bicycle Low Stress Network Map, to provide connections to schools, parks, and other destinations, as well as cross-City travel. It will accommodate small-wheeled vehicles, including shared micromobility transportation solutions, within local regulation and legal requirements. Implementation will focus on the key routes shown on the bicycle Low Stress Network Map.

42. The City may use traffic calming and traffic management tools as appropriate to manage motor vehicle speed, volume, and turning movements to meet the requirements of the bicycle Low Stress Network and Pedestrian Master Plan.



43. The City is committed to providing safe and comfortable walking and biking routes to schools.

>>> Action:

- In collaboration with the school district, the City will develop Safe Routes to School plans and implementation programs for existing schools. The school district, in collaboration with the City, will develop Safe Routes to School plans and implementation programs for new schools.

44. The City is committed to providing safe and comfortable walking and biking routes to parks.

>>> Action:

- In collaboration with the Bend Park and Recreation District (BPRD), the City will develop low stress route plans and implementation programs for existing parks. BPRD, in collaboration with the City, will develop low stress route plans and implementation programs for new parks.

45. The City recognizes the BPRD Urban Trails map, as represented in BPRD's Comprehensive Plan, as an element of the transportation system and will collaborate with the BPRD for bikeway and pedestrian facility planning and construction within the City.

46. The City requires enhanced crosswalks at key intervals to complete the walking and bicycling networks (established by the respective master plans), including school and trail crossings. All intersections are legal crosswalks; "enhanced" means that there are additional pedestrian safety treatments including, but not limited to, striping, safety islands, and enhanced lighting and flashing beacons where warranted.

>>> Actions:

- Develop requirements and clear and objective criteria for the installation of enhanced crosswalks and amend the Bend Development Code and the City's Standards and Specifications to incorporate these.
- Update the Standards and Specifications to provide adequate illumination at crosswalks and intersections.

47. The City is committed to maintaining bicycle and pedestrian facilities along key routes (as identified on the bikeway Low Stress Network map) for year-round use.

>>> Actions:

- Update the City's Maintenance and Operations plan to incorporate walking and biking facilities along key routes.
- Create an intergovernmental agreement with BPRD and other agencies to clarify ownership, construction, and maintenance responsibilities for trails and other walking and biking facilities.

48. The City will work with BPRD to acquire, develop, and maintain the trails designated on the Bikeway Low Stress Network and Urban Trails maps. Construction and dedication of these trails for public use will be required as part of new development and capital transportation projects whenever possible. The alignments depicted should be considered general in nature. Flexibility should be permitted during the development and design of private lands and transportation construction projects to locate these trails to fit the context of the natural terrain, to minimize trail grade, to consider street crossings and other safety issues, to account for the pattern and design of the development, and/or to consider right-of-way extents and any other topographic or geographic barriers or issues.

>>> Action:

- Update Bend Development Code if necessary.

Funding

The City's Transportation Plan defines capital projects and programs that add system capacity; improve safety; increase transit, pedestrian and bicycle mobility; support new growth; and meet ongoing operating and maintenance needs.

49. The City's transportation funding plan will use a variety of tools to achieve balance and resilience, intended to generate revenues that are stable and flexible over the planning period and through economic market cycles, and that provide sufficient funding for the full range of project types and programs.

50. The City's transportation funding plan will ensure that all transportation system users, including but not limited to visitors, commuters, residents, new development, institutions, and businesses (including property tax exempt organizations and entities), and freight pay a fair and equitable share for transportation system development and maintenance.

51. The City's transportation funding plan will generate sufficient capital and operations/maintenance revenue to cover the full life-cycle costs of priority projects, from initial construction to ongoing operations and maintenance, including depreciation. It will also cover programs and staffing required to successfully manage and accomplish projects with an explicit focus on near-term and priority projects.

52. The City will implement a transportation funding plan that is broadly supported by the community.

>>> Actions:

- Discern community priorities and build community support for new funding tools, especially those that require a public vote, through outreach, polling, education, and other efforts to gather and share information.
- Where possible and appropriate, identify alternate tools (a "plan B") for those funding sources that have a lesser degree of predictability or stability. These might include mechanisms subject to voter approval, subject to a sunset or limited duration, or vulnerable to variability due to the nature of larger economic cycles or other factors.

53. The City's transportation funding plan will recognize that technologies will change in ways that affect costs and also change the City's ability to monitor, use, and collect revenues. The transportation funding plan should consider funding for innovation and adaptation/inclusion of new technologies that may become available over time.

54. The City will regularly evaluate existing funding sources and explore the use of new funding opportunities to increase resources for maintenance operations and capital improvements.

55. The selection of transportation improvements to be funded within the City's capital improvement program (CIP) will be based on the prioritized list of projects included in this TSP. The CIP is subject to public review and comment through a City Council public hearing process.

56. Funding for transportation infrastructure in expansion areas, as identified in the 2016 urban growth boundary (UGB) expansion, will be determined either before or upon area plan and/or master plan approval (unless exempted). Funding must be established prior to, or concurrently with, annexation. Transportation and infrastructure funding agreements will be memorialized for each expansion area property or properties in a development agreement as part of master plan or area plan approval and/or annexation. City/private developer cost sharing may be based on the following:

a. Construction and modernization of existing infrastructure is to City standards and specifications

b. The investment in transportation infrastructure helps solve existing transportation safety, capacity, and/or other apparent functional issue within the existing City limits

c. There is an opportunity for local, state and/or federal grants to leverage the private investments and provide partnerships

d. Other factors as determined by the City Manager.

57. The City will continuously seek and leverage interagency and other outside funds whenever possible throughout the implementation of the 20-year TSP.

Environmental

The City recognizes the need to steward the environment when constructing and maintaining transportation infrastructure. The City has many policies embedded throughout this Chapter intended to reduce greenhouse gases and vehicle miles traveled (VMT) by encouraging bicycling, walking, transit, and electric or other alternately fueled vehicles, as well as using appropriate new technologies to efficiently manage the system. The following policies were identified as gaps in the City's environmental policies.

58. The City will consider the environmental impacts of the overall transportation system and act to mitigate negative effects and enhance positive features.

>>> Action:

- As part of project design, evaluate and implement (where feasible) the use of environmentally friendly materials and design approaches.

59. The City understands the importance of managing stormwater runoff from transportation infrastructure and will design and operate transportation infrastructure to keep stormwater properly collected, treated, and out of water supplies.

Agenda Item No. 4: Draft Chapter 4: Transportation Projects and Programs

2040 Transportation System Plan
DRAFT Chapter 4: Transportation Projects and Programs

Introduction

This chapter of the TSP provides an overview of a set of coordinated transportation investments that address transportation needs within the City of Bend over the next 20 years, including planning level cost estimates.

The Role of the TSP in Prioritization and Funding

The TSP is Bend's long-term transportation planning document. It addresses a comprehensive set of Bend's transportation system needs, integrated with land use and other community needs and aspirations. The priorities and funding plans in the TSP create clarity for Bend regarding **what** projects and programs are most important, **when** they should be constructed or implemented, and **how** they should be funded.

It is important to note that these are planning-level recommendations and subject to refinement and change over time. Typical factors influencing refinements include population and employment growth rates; more concentrated growth in specific areas (such as opportunity areas and Urban Growth Boundary (UGB) expansion areas); City Council priorities expressed through goals, budgets, and the Capital Improvement Program (CIP); partner agency projects; annual fluctuations in revenue collections; and external grants or funding opportunities. The scope and scale of projects may also be revised as each is more fully developed through a specific design process. Using the TSP as guidance, the City Council will authorize the funding of programs and the design and construction of individual projects.

Elements of the Transportation Investment Priorities

Transportation investments within this chapter are organized into the following categories:

- **Existing Capital Improvement Program** (CIP) – These projects were included in the CIP at the time the TSP was adopted. Existing funding sources are dedicated to these projects.
- **Capital Projects** – These projects are intended to meet identified roadway capacity, safety, key walking and biking routes, and transit-supportive infrastructure through the year 2040.
- **Existing Failed Roadway Reconstruction Projects** – These are roadway reconstruction projects that address existing roads in a state of disrepair. The City intends to address these projects with capital and programs through the horizon of the TSP.

- **Transportation Programs** – These programs can help to improve roadway conditions, prioritize the continued addition of multimodal facilities throughout the City, implement key plan recommendations, and reduce vehicular demand.

The following sections expand of the details of these elements and an overall assessment of the effectiveness of implementation.

Defining the Timing of Priorities

The Bend TSP organizes projects into those that should be funded within the near-, mid-, or long-term planning horizon. Chapter 5 identifies the existing funding gap and additional funding sources the City needs to fund all the planned projects and programs within these phasing categories.

(1) ***Near-term Priorities (Implementation Years 1 – 10)*:** This category includes the projects within the current 5-year CIP (2020-2024) as well as additional projects and programs that rank as high priorities appropriate for the 6- to 10-year timeframe.[1]

(2) ***Mid-term Priorities (Implementation Years 11 – 15)*:** This category includes projects and programs that support TSP goals and economic and community health, or which are anticipated to be triggered by growth.

(3) ***Long-term Priorities (Implementation Years 16-20)*:** This category includes projects and programs that are not likely to be triggered by growth or system needs until the long-term horizon. Even with that long-term frame of reference, these projects and programs help meet year 2040 transportation system needs and implement the Bend Comprehensive Plan.

(4) ***Expansion Area Projects***: The timing for this category of projects is driven by significant land development near the project or program. Expansion Area projects may address important system needs, such as neighborhood streets needed to connect pedestrians, cyclists and motorists in growth areas with the regional arterial and collector roadway system. They may also include improvements that are implemented using "public" funding sources, such as Transportation System Development Charge (TSDC) funding, Development Agreements, or an area-planning process. Specific timing for implementation is dependent on market conditions related to the pace of development in specific areas. These projects and programs contribute to the overall multimodal system and are an important component of the TSP.

A detailed funding action plan recommendation[2] was developed by the Citywide Transportation Advisory Committee (CTAC) for the near-term priorities. The mid-term and long-term project lists have more general funding strategies to reflect the need to be flexible and adaptable over time. The improvements to City of Bend roads and facilities included in the 2040 project list are reasonably likely to be provided by the end of the planning period with projected revenue, as detailed in Chapter 5 of this TSP. The City also has the projected revenue to provide its assumed match for projects on the ODOT system as indicated by the funding assumptions in

[1] The City's fiscal commitment in the TSP is for project planning. All actual funding authorizations are subject to subsequent Council action. City Council may also modify the 2020-2024 CIP to add, remove, or refine projects and programs to reflect funding availability, but only in compliance with the City's TSP. Pursuant to the City's fiscal policies, the 5-year CIP is prepared and updated annually.

[2] See Appendix A of Chapter 5.

the project table, and in certain cases the TSP assumes the City will fully fund identified projects on the ODOT system. Those projects are also reasonably likely to be provided by the end of the planning period. NOTE: Text revised based on ongoing updates to reasonably likely funding assumptions on ODOT facilities.

The TSP is a living document that should be updated every 5-7 years and can be amended as needed based on new information or changing conditions.

Existing Capital Improvement Program

Table 1 presents the current transportation projects included in the 2020-2024 City of Bend CIP. This list includes projects with funds allocated for construction or design and totals approximately $73 million. The list reflects thoughtful review and consideration based on a public process initiated by the City Council. The City has allocated funds and staff resources to initiate these projects by 2024. Several projects on the CIP are already in-process as of the adoption of this TSP.

In addition to the CIP, ODOT and other partner agencies have projects programmed within the near-term horizon that have direct benefits to the City's transportation system. Most notably, ODOT is pursuing Phase 1 of the North Corridor Final Environmental Impact Statement (FEIS) in partnership with the City of Bend and Deschutes County. This is a major project that would realign US 97 on Bend's north end to address existing congestion at several at-grade intersections.

Table 1. 2020-2024 City of Bend Transportation Capital Improvement Program

Project	Cost Estimate
Neff & Purcell Intersection Design	$4,150,000
14th Street Reconstruction Plant Establishment	$50,000
Reed Mkt: 3rd to Newberry Plant Establishment	$100,000
Murphy & Brosterhous Roundabout	$2,518,500
15th & Murphy Roundabout	$2,972,500
15th Street Sidewalk	$84,300
Empire Avenue Extension	$8,647,200
Hwy 20/Greenwood Sidewalk Improvement	$1,500,000
Empire & 27th Intersection	$3,001,800
Purcell/Butler Market	$2,206,500
Murphy extension from Brosterhous to 15th	$3,089,400
Murphy & Country Club Intersection Design	$608,000
Murphy Railway Overcrossing	$4,869,700
Bicycle Greenways	$620,000
Bond & Reed Market Roundabout	$750,000
Archie Briggs Bridge Replacement Design	$72,000
Citywide Safety Improvements	$1,000,000
Murphy Corridor Improvement from Parrell to Brosterhous	$10,356,700

Project	Cost Estimate
Purcell Blvd Modernization	$1,604,100
Newport Ave Pipe Replacement and Road Upgrade	$4,022,000
Columbia & Simpson Roundabout	$1,000,000
3rd & Reed Market Intersection	$5,000,000
9th & Wilson Traffic Signal Improvement	$5,000,000
Brosterhous & Chase Intersection	$5,000,000
27th & Conners Intersection	$2,500,000
Butler Market & Wells Acres Intersection Improvement	$3,000,000
Total:	**$73,722,700**

Capital Projects

A major component of Bend's transportation plan is identifying capital projects that are needed to support household and employment growth consistent with the adopted Comprehensive Plan. These projects address vehicular congestion, identified safety needs, pedestrian and bicycle system needs, and the transit system.

Each of the identified Capital Projects were assessed based on Prioritization Criteria and categorized into one of the phasing categories through robust input and deliberation from the TSP advisory committee[3]. In general, project categorization considered the following questions:

- Which projects most meaningfully address the project and program prioritization criteria?
- What is the likely funding available for each of the phasing categories and how can the City "right-size" the project and program list to best match the funding sources?
- What projects and programs build upon and/or rely on synergies provided by other capital improvements projects within each timing phase?

Based on that process, Tables 3 through 6 present the projects identified in each of the priority categories.

Key Walking & Biking Route Priority Recommendations

The TSP update process identified Key Walking and Biking Routes that are essential to implementing portions of the bicycle Low Stress Network as well as continuous walking routes throughout the City. Based on recommendations from the Citywide Transportation Advisory Committee, these Key Walking and Biking routes are all included as a near-term priority. The routes will be implemented through the capital projects identified in Table 3b.

Transit System

The City of Bend had regular and ongoing coordination with Cascades East Transit (CET), the transit provider for Central Oregon and the City of Bend, through the development of the TSP in order to collaborate regarding long-term vehicular, bicycle, pedestrian and transit needs. Those discussions revealed several key synergies between the projects planned within the TSP and those that support the long-term vision of the area transit system. The City TSP, which owns

[3] As documented in Volume 2,

and plans for improvements within the City right-of-way, identifies several projects that support transit by:

- Planning for infrastructure needs to support future north-south and east-west high capacity transit routes (as identified by CET), which may include sidewalk infill, bus stop improvements, etc.
- Identification of up to 5 mobility hubs;
- Traffic signal infrastructure upgrades to better serve transit; and
- Facilities that enhance pedestrian and bicycle access to transit improvements.

In addition, the implementation of this TSP would result in a well-connected transportation network, which benefits transit through reduced congestion, increased route choice, and robust infrastructure for all travel modes. The coordination between the TSP and CET's transit planning is an on-going process; the TSP is intended to be dynamic and adaptive to transit strategies and investments over time.

ODOT Coordination

The Bend TSP was developed in close coordination with the ODOT Parkway Study, which identifies near-term and long-term improvement projects for the US 97 corridor through Bend. The specific improvement projects identified through that effort have been incorporated into this TSP, reflected in both the project list and associated cost estimates[4].

Other Planning Efforts

Key outcomes from several other ongoing or completed planning efforts have been included in this TSP, including the Deschutes County and Bend Transportation Safety Action Plan, the Deschutes County Intelligent Transportation Systems (ITS) Plan, and the Bend Park and Recreation District Trails Map.

Transportation Programs

In addition to Capital Projects, the TSP identifies a number of programs in the near-term that will continue to be refined and used throughout the duration of the TSP. These programs will improve roadway conditions and safety, prioritize the continued addition of multimodal facilities throughout the City, and implement key plan recommendations.

The implementation, timing and ongoing operational elements of these programs will be further refined as the City moves forward with implementation of the TSP. However, for the purpose of allocating estimated funding revenues, the TSP includes estimates of funding needed to implement each program and the funding needed to operate the program on a year to year basis. Each element is described further below. The recommended programs and estimated costs are shown in Table 2.

[4] Cost estimates generally reflect a 10% City funding contribution to ODOT projects. Higher contributions are assumed for some projects based on various factors, including City priorities. Actual City funding shares will be determined as specific projects are implemented.

Existing Failed Roadway Reconstruction Projects

The City has identified existing failed roadways that require approximately $56 million for reconstruction (i.e., roads that require full reconstruction due to a state of disrepair). These facilities are primarily classified as local roads. City staff is currently addressing reconstruction needs with existing Operation and Maintenance (O&M) funding but is unable to address the full reconstruction needs without additional funding becoming available either through new sources or the reallocation of existing sources.

To fully address the reconstruction needs, the current estimate for reconstruction of existing failed roads in the system has been included as part of the TSP project list. The full project costs have been divided amongst the near-term, mid-term, and long-term priority lists, acknowledging that these needs will be addressed with capital and programs over time in coordination with the existing Streets Department O&M Program, other City Utility projects, and CIP projects. Existing, new, or leveraged (i.e., grants, etc.) funding sources should be considered to proactively address these reconstruction needs as funding becomes available.

Effectiveness of Transportation Investments

The transportation investments identified in this chapter were evaluated based on a variety of criteria to determine the effectiveness against the specific goals and objectives of this TSP. Specifically, the TSP includes projects and programs that were shown to have significant benefits in the following categories:

- **Mode Split**: There is a significant shift to modes other than single-occupancy vehicles (SOVs) and a decrease in daily SOV trips by 3.5% with implementation of the 2040 Investment Priorities over the 2040 Baseline Scenario. This shift was achieved through the combination of land use planning[5] aligned with key services and programs, including planned traffic demand management; downtown parking pricing; high capacity transit lines with mobility hubs; and investment in the bicycle Low-Stress Network and connected pedestrian system (Key Routes).
- **Vehicle Miles Travelled (VMT) per Capita**: With the additional mode shift and intentional investment in a combination of multimodal and connectivity projects, the 2040 Investment Priorities decreases projected VMT per capita by over 4% when compared to the 2040 Baseline Scenario. This reduces VMT per capita to levels similar to 2010 conditions even with expansion of the Bend UGB.
- **Vehicle Hours of Delay**: Similarly, there is also an improvement (i.e., reduction) in vehicle hours of delay across the system during the projected PM peak hour in the 2040 TSP Project List Scenario. Total vehicle hours of delay decreases by nearly 18% with the combined investment of the TSP Project List compared to the 2040 Baseline Scenario.

Beyond citywide metrics, the 2040 Investment Priorities address several significant specific transportation needs identified through the TSP update process, including the following:

[5] Plan, zone and policy recommendations adopted in Bend's 2016 Comprehensive Plan update.

- **Bend Parkway (US 97) Congestion and Safety:** With the implementation of the North Parkway FEIS, the Powers Road Interchange, and other Parkway Study Improvements, such as ramp metering and right-in right-out closures, the entire length of US 97 in Bend is anticipated to operate under capacity during an average weekday, which is a significant improvement over the 2040 Baseline Scenario. These improvements are also expected to significantly improve safety by limiting at-grade access on the Parkway.
- **East-West Corridor Congestion**: Improvement projects will make notable improvements in congestion and queuing at spot locations along east-west corridors, including Portland Avenue, Colorado Avenue, and Reed Market Road. Overall vehicle demand is reduced through TDM strategies, improved facilities for people walking and biking, and improved high capacity transit connecting the east and west sides of the city. However, the system in 2040 is still constrained and over capacity at the major bridge crossings. Some solutions include:
    - A study for a new long-term southern river crossing between Powers Road and Murphy Road connecting Century Drive to US97 or 3rd Street may help identify a solution for the continued congestion on east-west corridors. Beyond the transportation solution analysis, such a study would address land use and natural resource considerations.
    - Congestion at the major bridge crossings should continue to be monitored to determine if/when additional improvements are appropriate at key locations on east-west routes. Improvements may include targeted widening or other intersection improvements as indicated by future conditions and application of TSP policies. Improvements may also include further use of demand-management strategies, or adoption of alternative mobility standards.
- **North-South Corridor Congestion in Eastern Bend**: Intersection improvements along 27th Street and 15th Street, in addition to the Empire Avenue Extension currently under way, will help alleviate some congestion on the north-south routes in eastern Bend.

  However, portions of these corridors are expected to still be over capacity in the 2040 even with the identified Transportation Investment Priorities and should continue to be monitored to determine if/when additional improvements are appropriate. Improvements may also include further use of demand-management strategies, targeted widening or intersection improvements, or adoption of alternative mobility standards.
- **Bicycling and Walking Facilities**: With the addition of projects to complete key walking and biking routes, a commitment to building complete streets, and an emphasis on programmatic approaches to addressing walking and bicycling needs on all levels of the system, the 2040 Transportation Investment Priorities make important steps to address the need for a connected network of low stress facilities. Starting these programs in the near term will help address existing needs while continuing to make improvements into the future.
- **Transit**: The TSP identifies east-west and north-south high-capacity transit routes combined with five future mobility hubs. These transit-supportive improvements make significant improvements in the transit network in Bend. The specific alignment of the high capacity routes and mobility hubs will be determined in coordination with CET.

These improvements (combined with investment in low stress pedestrian and bicycle networks and TDM strategies) will help contribute to the shift away from SOVs, reduce VMT per capita and reduce p.m. peak hour motor vehicle delay.

Table 2. Recommended Near-term Program Funding Allocation

Program IDs	Program	Description	Estimated Initial Cost	Estimated Annual Cost[6]	Notes
P-1	Address ongoing maintenance needs for new capital projects identified within the TSP	City program to fund new maintenance needs associated with new capital projects, including new roads, intersections, bridges, and other transportation infrastructure.	N/A	$500k to $1 million	Program to ensure operation and maintenance funding associated with new capital projects.
P-2	TDM Program for major employers and institutions	TDM program for major employers and institutions.	$200k (Initial study)	$150k (1-2 FTE)	Travel demand modeling has shown TDM implementation to be an effective tool for addressing future and existing congestion by limiting demand on the transportation system.
P-3	Transportation Safety Action Plan (TSAP) implementation	Safety projects and programs as defined by the Transportation Safety Action Plan including street lighting and other systemic treatments.	N/A	$1 million	Improving transportation safety is a goal of the Bend TSP and has been continually highlighted as a priority among CTAC members. Program would include implementation of key elements of the TSAP report, including systemic treatment options.
P-4	Bicycle Program	This includes implementing the bicycle Low Stress Network, Neighborhood Greenways, wayfinding, crossings, and traffic calming.	$200k (Initial study)	$1 million	This is a comprehensive program to facilitate bicycle travel within the city. Program would include implementation and updates to the bicycle Low Stress Network Plan.
P-5	Pedestrian Program	This includes creating a Pedestrian Master Plan to identify and prioritize pedestrian system improvements (local, collector, arterial sidewalk infill), transit access, safe routes to schools and parks, and wayfinding.	$200k (Initial study)	$2 million	This is a comprehensive pedestrian program to plan for and implement pedestrian infill and enhancement projects, including the Pedestrian System Master Plan and safe routes to school program. This may include enhanced access to transit facilities in collaboration with Cascades East Transit.
P-6	Bicycle and Pedestrian Facility Maintenance Program	City program to improve snow and year-round debris clearing along key pedestrian and bicycle facilities.	$2 million (Equipment purchase)	$500k	Program will require coordination with partner agencies, including the Bend Parks and Recreation District, which own and maintain key elements of the walking and biking system within Bend.
P-7	Parking pricing and management in downtown Bend	Implement the 2017 Downtown Parking Plan.	$1 million (Equipment purchase)	TBD[7]	Program will be coordinated with other City of Bend parking efforts and may be consolidated within a citywide program, as appropriate.
P-8	Implementation of the Deschutes County ITS Plan, including traffic signal coordination improvements along signalized corridors, including freight and transit Signal Priority	Includes US 97 (mainline and ramp terminals), 3rd Street, 27th Street, Colorado/Arizona couplet, and US 20 (3rd Street and Greenwood) corridors.	N/A	$500k	Program will require coordination with partner agencies, especially ODOT, which maintains traffic signals within the city. Program cost estimates may be updated upon completion of the Deschutes County ITS Plan.
P-9	Transportation Equity Program	City program to address equity in funding and implementation of transportation projects.	N/A	$150k (1-2 FTE)	Program would fund staff and data collection to better identify and understand transportation needs and target projects/programs to improve transportation-related conditions for underserved populations. Would also implement outreach and engagement protocols to address equity issues in transportation infrastructure.

[6] Actual annual funding requirements will be based on further review by the City of Bend during the implementation phase of each program.

[7] Program costs may be covered by parking revenue

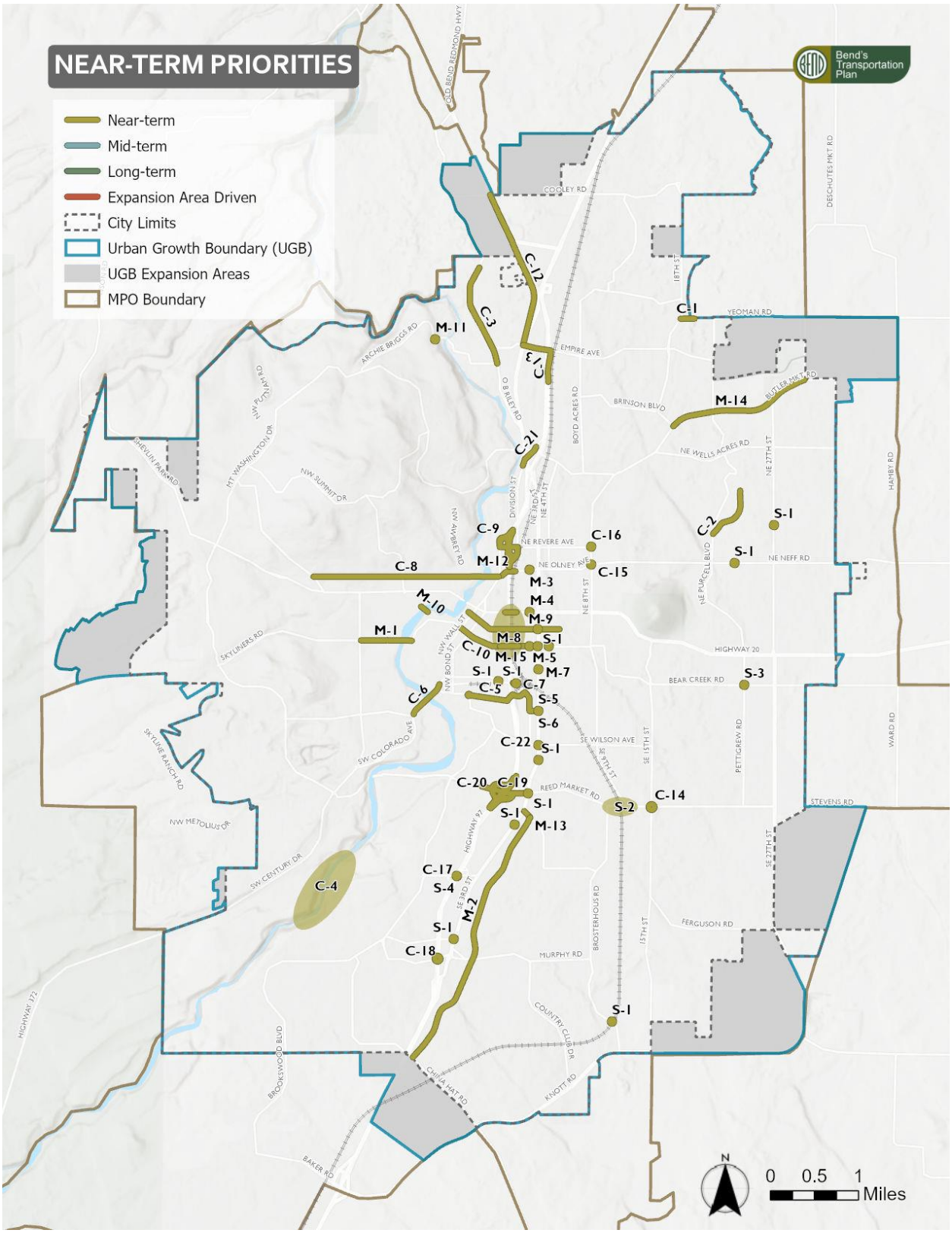

NEAR-TERM PRIORITIES
Near-term
Mid-term
Long-term
Expansion Area Driven
City Limits
Urban Growth Boundary (UGB)
UGB Expansion Areas
MPO Boundary
Bend's Transportation Plan
C-12
C-3
C-13
M-11
C-1
YEOMAN RD
EMPIRE AVE
BRINSON BLVD
M-14
BUTLER MKT RD
C-21
NE WELLS ACRES RD
C-2
S-1
C-9
C-16
NE REVERE AVE
M-12
NE OLNEY AVE
C-15
C-8
M-3
M-4
M-10
M-9
M-1
M-8
S-1
C-10
M-15
M-5
S-1
S-1
M-7
HIGHWAY 20
S-3
C-5
C-7
BEAR CREEK RD
C-6
S-5
S-6
C-22
S-1
SE WILSON AVE
C-20
C-19
REED MARKET RD
S-1
S-2
C-14
S-1
M-13
STEVENS RD
C-17
S-4
C-4
M-2
S-1
C-18
FERGUSON RD
MURPHY RD
S-1
N
0 0.5 1
Miles

Table 3a: Near-term Investment Priorities

Project ID	Project	Description/Location	Project Type	Total Cost	City Proportionate Cost
C-1	Yeoman Road extension from 18th Street to western terminus	Includes two lane extension and bridge to cross canal.	Connectivity/Capacity	$5,000,000	$5,000,000
C-2	Purcell Boulevard extension From Full Moon Drive to Jackson Avenue	Includes two lane extension.	Connectivity/Capacity	$2,288,000	$2,288,000
C-3	O.B. Riley Road Arterial Corridor upgrade from Hardy Road south to Archie Briggs Road	Includes upgrade to three-lane arterial with curb, sidewalk, and bike lane improvements.	Connectivity/Capacity	$6,700,000	$6,700,000
C-4	Study for southern river crossing	Study to identify new river crossing location between Powers Road and Murphy Road, connecting Century Drive to US 97 or 3rd Street.	Connectivity/Capacity	$500,000	$500,000
C-5	Aune Road extension from Bond Street to 3rd Street	Two lane extension of Aune Road to connect 3rd Street and Bond Street. Includes intersection improvement at 3rd Street and a RAB at the intersection of Bond Street and Industrial Way.	Connectivity/Capacity	$13,500,000	$13,500,000
C-6	Colorado Avenue corridor capacity improvements from Simpson Avenue to Arizona Avenue	Includes incremental approach for Colorado Avenue widening, including right-of-way acquisition and monitoring for if/when widening is appropriate. Implement alternate mobility targets and identify smaller projects to incrementally improve mobility, reliability and safety. Includes intersection capacity improvements at Colorado Avenue/Simpson Avenue roundabout and Colorado Avenue/Industrial Way. Includes complete streets upgrade.	Connectivity/Capacity	$21,000,000	$21,000,000
C-7	Colorado Avenue/US 97 northbound ramp intersection safety and capacity improvements	Includes traffic signal or roundabout.	Connectivity/Capacity	$4,300,000	$430,000 (Contribution to ODOT project)
C-8	Portland Avenue corridor project from College Way to Deschutes River; assumes two intersection improvements	Multi-modal transportation facility and safety improvements to help with pedestrian, bicycle, and vehicular connectivity.	Connectivity/Capacity	$17,700,000	$17,700,000
C-9	Revere Avenue interchange improvements	Parkway coordination project to construct roadway upgrades, including modifications to the existing traffic signals and an improvement at the Wall Street/Revere Avenue intersection.	Connectivity/Capacity	$8,500,000	$8,500,000
C-10	Franklin Avenue corridor study	Conduct a corridor study to determine roadway and intersection improvement needs to serve all users.	Connectivity/Capacity	$200,000	$200,000
C-11	Study to evaluate congestion pricing	Add study to evaluate the feasibility of congestion pricing within the City of Bend. Study should consider effect of congestion pricing on demand management.	Connectivity/Capacity	$75,000	$75,000
C-12	US 20 southbound roadway widening from Cooley Road to Empire Avenue	US 20 southbound widening to two lanes.	Connectivity/Capacity	$4,800,000	$4,800,000 (Contribution to ODOT project)

Project ID	Project	Description/Location	Project Type	Total Cost	City Proportionate Cost
C-13	Empire Avenue widening to five lanes near US 97 interchange, widening at northbound off ramp, and install traffic signal at southbound ramp	Widen Empire Avenue to five lanes from US 20 to US 97 northbound ramp and widen northbound off ramp to two lanes.	Connectivity/Capacity	~~$2,900~~10,000,000	~~$1,450~~1,000,000 (Contribution to ODOT project)
C-14	Reed Market Road/15th Street intersection safety and capacity improvements	Includes expanding the partial multi-lane roundabout to a full multi-lane roundabout.	Connectivity/Capacity	$1,100,000	$1,100,000
C-15	Olney Avenue/8th Street intersection improvement	Improve intersection capacity.	Connectivity/Capacity	$3,700,000	$3,700,000
C-16	Revere Avenue/8th Street intersection improvement	Improve intersection capacity.	Connectivity/Capacity	$3,700,000	$3,700,000
C-17	Powers Road/US 97 preliminary engineering and ROW acquisition for interchange	May include interchange or overcrossing, pending outcome of the Parkway Study.	Connectivity/Capacity	$6,500,000	$650,000 (Contribution to ODOT project)
C-18	US 97 northbound on ramp and southbound off ramp at Murphy Road	Construct northbound on ramp and southbound off ramp at Murphy Road.	Connectivity/Capacity	$10,000,000	$10,000,000 (Contribution to ODOT project)
C-19	Reed Market Road/US 97 interchange improvement study	Study at Reed Market Road/US 97 interchange.	Connectivity/Capacity	$500,000	$50,000 (Contribution to ODOT project)
C-20	Construct Reed Market Road/US 97 interchange improvement	Construct improvement.	Connectivity/Capacity	$~~50~~10,000,000	$~~5~~1,000,000 (Contribution to ODOT project)
C-21	Butler Market ~~Interchange Frontage Road at US 20/US97~~ Road/US 20/US 97 Improvement.	~~Construct frontage road from US 97 southbound off-ramp to Division Street.~~Improve connectivity, functionality, and safety. Consider addition of frontage roads.	Connectivity/Capacity	$6,180,000	$3,090,000 (Contribution to ODOT project)
C-22	3rd Street/Wilson Avenue intersection improvement	Improve intersection capacity and safety.	Connectivity/Capacity	$5,000,000	$5,000,000
T-1	East-west high-capacity transit (to be completed with T-3)	Includes HCT transit service connecting key east-west destinations (to be coordinated with CET). Includes improved transit connections from neighborhoods to HCT stops.	Transit	$2,000,000	$2,000,000
T-2	North-south high-capacity transit (to be completed with T-3)	Includes HCT transit service connecting key north-south destinations (to be coordinated with CET). Includes improved transit connections from neighborhoods to HCT stops.	Transit	$2,000,000	$2,000,000
T-3	Mobility hubs (to be completed with T-1 & T-2)	Citywide implementation of mobility hubs in coordination CET and HTC routes. Assumes up to five hubs, including consideration of Hawthorne Station (owned by CET).	Transit	$7,500,000	$7,500,000
S-1	Citywide safety improvements	Includes 3rd Street/Hawthorne Avenue, 3rd Street/COID Canal, 3rd Street/Pinebrook Boulevard, Brosterhous Road/railroad bridge, and Colorado Avenue/US 97 improvements.	Safety	$1,000,000	$1,000,000

Project ID	Project	Description/Location	Project Type	Total Cost	City Proportionate Cost
S-2	Study of crossing solutions to at-grade railroad crossing near Reed Market Road	Study the cost and feasibility of relocating the BNSF switchyards compared to a Reed Market Road overcrossing of the railroad.	Safety	$200,000	$200,000
S-3	Pettigrew Road/Bear Creek Road long term safety improvement	Construct single lane roundabout.	Safety	$3,700,000	$3,700,000
S-4	US 97/Powers Road interim improvements identified by TSAP	Includes enhanced pedestrian crossings and exit ramp widening.[8]	Safety	$100,000	$100,000
S-5	3rd Street/Miller Avenue intersection improvements and 3rd Street modifications study (Phase 1)	Study of intersection improvements and 3rd Street modifications.	Safety	$100,000	$100,000
S-6	3rd Street/Miller Avenue intersection improvements and 3rd Street modifications implementation (Phase 2)	Construct intersection improvements and 3rd Street modifications.	Safety	$3,100,000	$3,100,000
M-1	Galveston Avenue corridor improvements	Multi-modal transportation facility improvements from 14th Street to Riverside Boulevard to help with pedestrian, bicycle, and vehicular connectivity in Galveston Avenue corridor. City is currently completing design effort for this project.	Pedestrian/Bicycle	$3,900,000	$3,900,000
M-2	Parrell Road Urban Upgrade from China Hat Road to Brosterhous Road	Construct complete street upgrades and reconstruct roadway from China Hat Road to Brosterhous Road including a roundabout at Chase Road and Powers Road (upon completion of Chase Road extension).	Pedestrian/Bicycle	$29,100,000	$29,100,000
M-3	Olney Avenue/2nd Street intersection improvement	Pedestrian/bicycle crossing improvement.	Pedestrian/Bicycle	$210,000	$210,000
M-4	Greenwood Avenue/2nd Street intersection improvement	Pedestrian/bicycle crossing improvement.	Pedestrian/Bicycle	$210,000	$210,000
M-5	Franklin Avenue/2nd Street intersection improvement	Pedestrian/bicycle crossing improvement.	Pedestrian/Bicycle	$210,000	$210,000
M-6	Franklin Avenue/4th Street intersection improvement	Pedestrian/bicycle crossing improvement.	Pedestrian/Bicycle	$210,000	$210,000
M-7	Clay Avenue/3rd Street intersection improvement	Pedestrian/bicycle crossing improvement.	Pedestrian/Bicycle	$210,000	$210,000
M-8	Midtown Bicycle & Pedestrian Crossing Study	Conduct a study to identify the timing, feasibility, and needs associated with the Midtown Crossing projects including the Greenwood Avenue undercrossing, Franklin Avenue undercrossing, and Hawthorne Avenue overcrossing.	Pedestrian/Bicycle	$500,000	$500,000

[8] Through ARTS funding is allocated for crosswalk treatments and illumination at US 97/Powers. The City is responsible for the cost of exit ramps. The cost estimate reflects the exit ramps only.

Project ID	Project	Description/Location	Project Type	Total Cost	City Proportionate Cost
M-9	**Midtown Bicycle & Pedestrian Crossings** Greenwood Undercrossing Sidewalk Widening Hawthorne Parkway Overcrossing Franklin Avenue Underpass	Widen Parkway undercrossing to include improved multimodal facilities. Close sidewalk gap along Hawthorne and create a grade-separated footbridge over BNSF RR and Hwy 97. Shared use path adjacent to roadway: Widen sidewalk paths under RR and Hwy 97 to modernize design for roadside safety.	Pedestrian/Bicycle	$24,000,000 (Assumes one complete crossing improvement and interim improvements to two other crossings)	$24,000,000
M-10	Improve Drake Park pedestrian bridge across the Deschutes River	Evaluate and repair/replace bridge to accommodate pedestrian and bicycle traffic.	Pedestrian/Bicycle	$1,275,000	$1,275,000
M-11	Archie Briggs Road trail crossing improvement design	Design to improve pedestrian crossing at the Deschutes River Trail crossing of Archie Briggs Road.	Pedestrian/Bicycle	$500,000	$500,000
M-12	Olney Avenue protected bicycle lanes and Parkway undercrossing	Provide protected bicycle lanes on Olney Avenue at Parkway undercrossing.	Pedestrian/Bicycle	$1,820,000	$1,820,000
M-13	3rd Street canal crossing just south of 3rd Street/Brosterhous Road	Construct pedestrian facilities on 3rd Street across the canal bridge.	Pedestrian/Bicycle	$980,000	$980,000
M-14	Butler Market Road Sidewalk Improvements	Fill in sidewalk gaps on Butler Market Road between Brinson Boulevard to Deschutes Market Road Project will be coordinated with private partnerships and current CIP projects to complete infill.	Pedestrian/Bicycle	$3,100,000	$3,100,000
Q-1	Existing failed roadway reconstruction project	Reconstruction up to $25 million in identified roadway reconstruction needs.	Reconstruction	$25,000,000	$25,000,000
		Near-Term Total		**$~~285,068~~252,168,000**	**$~~225,358~~220,908,000**
		Key Route Projects (Listed in Table 5b):			**$24,139,000**
		Subtotal			**$245,~~497~~047,000**
		Estimated Administrative Costs		***~12% of Subtotal***	***$29,~~940~~406,000***
		Total			***$~~279~~274,~~437~~453,000***

TSDC – Project is on current Transportation System Development Charge Project List (TSDC) and eligible for existing TSDC revenue

Core Area Urban Renewal Area – Project is within possible Core Area Urban Renewal Area and may be eligible for future funding from that area.

Murphy Crossing or Juniper Ridge Urban Renewal Area – Project is within existing urban renewal area and may be eligible for funding from that area.

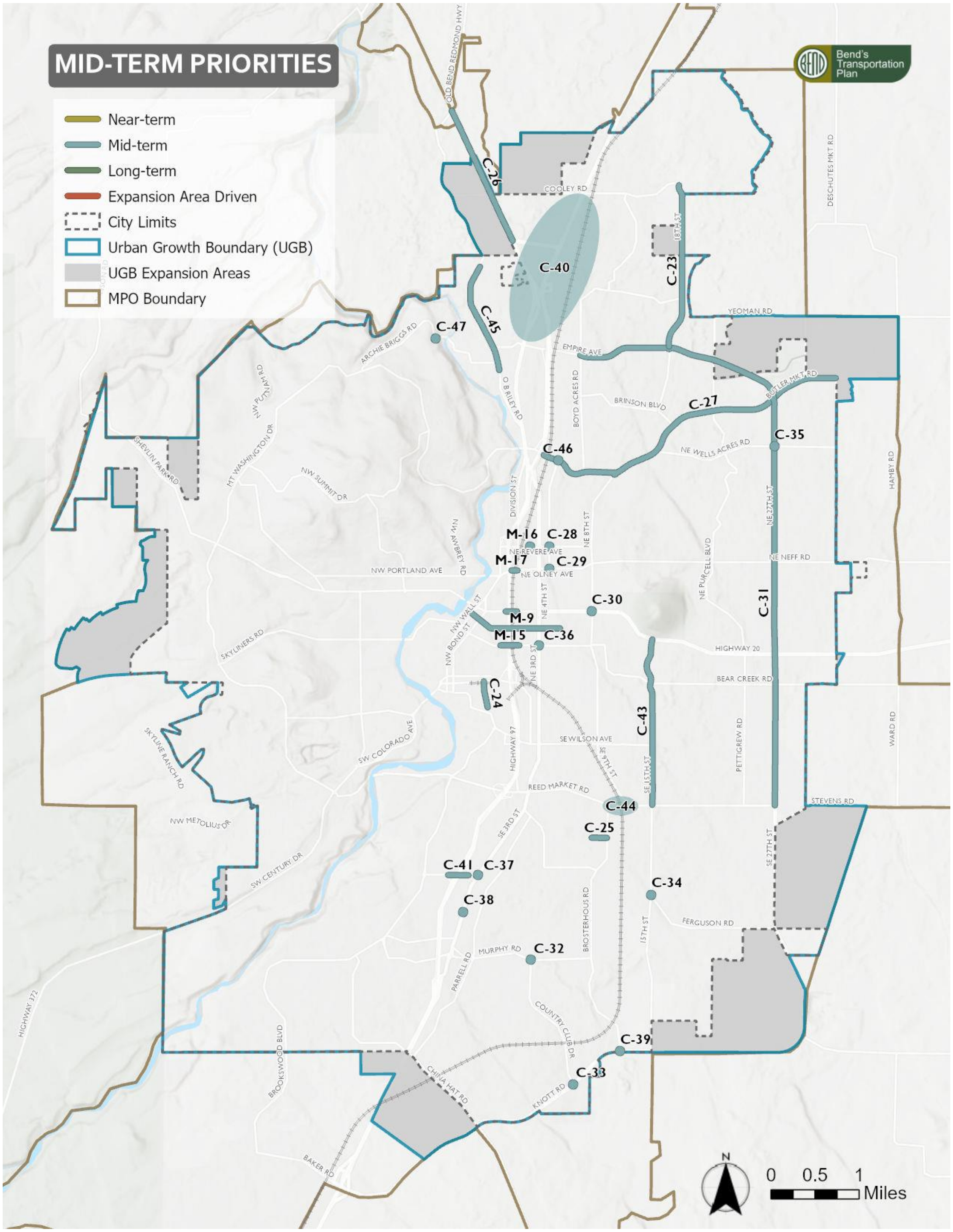
TSDC and Urban Renewal Area – Project is on the current Transportation System Development Charge Project List and in one existing or proposed Urban Renewal Area.

Table 3b: Key Walking & Biking Routes & Associated Capital Improvement Projects

Key Routes & Projects	Project Extents	Facility Type & Description	Cost Projection
ROUTE 1: Juniper Ridge to SE Elbow: Route runs north-south through the central portion of Bend connecting SE 15th Shared Use Path, 6th St Neighborhood Greenway, Boyd Acres Rd Shared Use Path			
R1-A	SE 9th St: Wilson Ave to Reed Market Rd	Shared use path adjacent to roadway: Close sidewalk gap and create low-stress bikeway.	$1,155,000
R1-B	SE 9th St: Wilson Ave to Glenwood Ave	Buffered bike lane: Re-stripe roadway to include buffered bike lanes when roadway is repaved.	$3,000
R1-C	NE Boyd Acres Rd: Butler Market Rd to Empire Ave	Shared use path adjacent to roadway: Close sidewalk gap and create low-stress bikeway.	$1,884,000
R1-D	SE 15th Street: Reed Mkt Rd to 300’ south of King Hezekiah	Shared use path adjacent to roadway: Convert an existing curb-tight sidewalk to a separated shared use path.	$1,185,000
ROUTE 2: NW Crossing to new Affordable Housing: Route runs east-west connecting Skyliners Rd, Franklin Ave and Bear Creek Rd			
R2-A	NW Franklin Ave: Harriman Ave to RR undercrossing	Improve transition at Hill St: Project would manage the conflict between right turns and crosswalk to sidewalk under RR. Crosswalk: Create safe crossing of Franklin at Harriman.	$176,000
R2-B	Franklin Ave Underpass: Hill St to 1st St	Shared use path adjacent to roadway: Widen sidewalk paths under RR and Hwy 97 to modernize design for roadside safety.	Cost assumed as part of “Midtown Bicycle & Pedestrian Crossings” project
R2-C	Franklin Ave: 1st St to 5th St	Buffered bike lane: Re-stripe roadway to include buffered bike lane westbound; includes crosswalks at 2nd St & 4th St and signal timing enhancements at 3rd St.	$164,000
R2-D	Bear Creek SRTS: Larkspur Trail to Coyner Trail	Trail: Close sidewalk gap and create a connection between Coyner and Larkspur Trail.	$385,000
R2-E	Bear Creek Rd: Cessna Ave to east UGB	Shared use path adjacent to roadway: Close sidewalk gap and create low-stress bikeway extending to 170 new affordable housing units.	$2,700,000
ROUTE 3: Shevlin Park to Big Sky Park: Route runs east-west connecting Shevlin Park Rd, Portland Ave, Olney Ave, and Neff Rd			
R3-A	Norton Ave: NE 6th St to NE 12th St	Neighborhood greenway: Create a low-stress bikeway on NE Norton Ave (SRTS3).	$196,000

Key Routes & Projects	Project Extents	Facility Type & Description	Cost Projection
R3-B	Hillside Trail: Connects NE 12th to Neff Rd	Hillside path: Close sidewalk gap and create a switchback shared use path (SRTS); includes school zone enhancements.	$241,000
R3-C	Neff Rd: NE 12th to Big Sky Park	Shared use path adjacent to roadway: Close sidewalk gaps and create a low-stress bikeway.	$3,634,000
R3-D	Deschutes River Footbridge: Drake Park	Upgrade footbridge: Accessibility upgrades and widen to reduce user conflicts.	Cost captured in M-10
R3-E	Olney Avenue: Wall Street to railroad	Shared use path adjacent to roadway: close sidewalk gap over railroad and remove existing barrier to east-west bicycle connectivity and create right-turn hook crash countermeasure.	$421,000
Route 4: West UGB to Portland Ave: Route runs north-south connecting Haul Rd Trail to 15th St Neighborhood Greenway			
SW-1	Newport Ave: NW College Way to NW 9th St	Sidewalks: Close sidewalk gap on Newport Ave and connect Newport Ave to 15th St neighborhood greenway	Section included on current CIP list
R4-A	NW 15th St: Lexington Ave to Milwaukie Ave	Hillside path: Close sidewalk gap and create a hillside switchback shared use path within the 15th St neighborhood greenway.	$110,000
R4-B	NW 14th St: Ogden Ave to Portland Ave	Hillside path: Close sidewalk gap and create a hillside switchback shared use path within 14th St right-of-way to connect route to Portland Ave.	$110,000
Route 5: Route runs along Butler Market Rd			
R5-A	Butler Market Rd: Brinson Blvd to NE 6th St	Shared use path adjacent to roadway: Close sidewalk gap along both sides of Butler Market Rd and create low-stress bikeway.	$1,962,000
Route 6: Hawthorne Overcrossing: Core Area connectivity			
R6-A	Hawthorne Overcrossing Bridge: NE 1st St to NE 5th St	Grade separated overpass: Close sidewalk gap along Hawthorne and create a grade-separated footbridge over BNSF RR and Hwy 97.	Cost assumed as part of "Midtown Bicycle & Pedestrian Crossings" project
Route 7: 3rd St at RR to Connect KorPine to 3rd St			
R7-A	3rd St	Crosswalk: Create a safe crossing of 3rd St between BNSF RR and Wilson Ave using RRFB5 and safety islands.	$215,000
R7-B	3rd St	Crosswalk: Create a safe crossing of 3rd St between BNSF RR and Franklin Ave using RRFB and safety islands.	$215,000

Key Routes & Projects	Project Extents	Facility Type & Description	Cost Projection
R-7C	3rd St	3rd Street Underpass: Near Term Enhancements to sidewalk.	$210,000
Route 8: 27th St: Route runs north-south connecting neighborhoods to services and transit			
R8-A	27th St: Hwy 20 to Reed Mkt Rd	Shared use path adjacent to road: Close sidewalk gap along 27th Street and create a low-stress bikeway.	$4,815,000
Route 9: Route runs north-south parallel to 3rd Street			
R9-A	Parrell Rd: Murphy Rd to Brosterhous Rd	Shared use path adjacent to road: Close sidewalk gap along Parrell Rd and create a low-stress bikeway on both sides of the street.	Costs captured in M-2
Route 10: O.B. Riley Rd: Route runs north-south along O.B. Riley Road to Blakely Road			
R10-A	O.B. Riley Road & Blakeley Road: North of Cooley Road to Knott Road	Shared use path adjacent to roadway: Close sidewalk gaps and create a low-stress bikeway.	Cost captured in C-45, C-3, M-30. No further capital projects associated with Route 10
Route 11: Route runs along Murphy Road			
R11-A	Murphy Road: Powers Road to 15th Street	Shared use path adjacent to roadway: Close sidewalk gaps and create a low-stress bikeway.	Route on current CIP list
Route 12: Wilson Ave: Route runs east-west connecting neighborhoods to services and transit			
R12-A	Wilson Ave: 2nd Street to SE 9th Street	Shared use path adjacent to roadway: Close sidewalk gap along Wilson Avenue and create a low-stress bikeway.	$2,179,000
R12-B	Wilson Avenue: 9th to 15th Street	Shared use path adjacent to roadway: Create a low-stress bikeway to connect near SE neighborhoods to Old Mill and Deschutes River Trail.	$2,179,000


MID-TERM PRIORITIES
Bend's Transportation Plan
Near-term
Mid-term
Long-term
Expansion Area Driven
City Limits
Urban Growth Boundary (UGB)
UGB Expansion Areas
MPO Boundary
C-26
C-40
C-23
C-45
C-47
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C-35
C-46
M-16
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M-17
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Table 4: Mid-term Investment Priorities

Project ID	Project	Description/ Location	Project Type	Total Cost	City Proportionate Cost
C-23	18th Street arterial corridor upgrade from Cooley Road to Butler Market Road	Includes upgrade to three lane arterial.	Connectivity/Capacity	$7,800,000	$7,800,000
C-24	Sisemore Street extension	Construct street extension from Arizona avenue to Bond Street.	Connectivity/Capacity	$2,400,000	$2,400,000
C-25	Brentwood Avenue extension	Extend a 2-lane collector from Whitetail Street to American Lane	Connectivity/Capacity	$2,300,000	$2,300,000
C-267	US 20 intersection safety and capacity improvements	~~. Intersection control improvements to be determined~~ Intersection improvement at US20/Robal Road and the roadways in the vicinity.	Connectivity/Capacity	$~~20~~10,000,000	$~~21~~,000,000 (Contribution to ODOT project)
C-278	Butler Market Road intersection safety and capacity improvements	From US 97 to 27th Street. Includes roundabouts or traffic signals at 4th Street, Brinson Boulevard, and Purcell Boulevard. Wells Acres Road roundabout as a separate baseline project.	Connectivity/Capacity	$7,000,000	$7,000,000
C-289	Revere Avenue/4th Street intersection improvement	Improve intersection capacity.	Connectivity/Capacity	$3,700,000	$3,700,000
C-2930	Olney Avenue/4th Street intersection improvement	Improve intersection capacity.	Connectivity/Capacity	$3,700,000	$3,700,000
C-301	Greenwood/8th Street intersection improvement	Pedestrian/Bicycle Crossing Improvement	Connectivity/Capacity	$2,100,000	$2,100,000
C-312	Incremental mobility, reliability, and safety improvements to Empire Boulevard/27th Street Corridor from Boyd Acres Road to Reed Market Road	Includes incremental approach for Empire Boulevard/27th Street widening, including right-of-way acquisition and monitoring for if/when widening is appropriate. Implement alternate mobility targets and identify smaller projects to incrementally improve mobility, reliability and safety. Includes complete streets upgrade.	Connectivity/Capacity	$41,800,000	$41,800,000
C-323	Country Club Road/Murphy Road intersection improvement	Improve intersection capacity and safety	Connectivity/Capacity	$3,700,000	$3,700,000
C-334	Country Club Road/Knott Road intersection improvement	Improve intersection capacity and safety	Connectivity/Capacity	$3,700,000	$3,700,000
C-345	Ferguson Road/15th Street intersection improvement	Improve intersection capacity and safety	Connectivity/Capacity	$3,700,000	$3,700,000
C-356	NE 27th Street/Wells Acres Road intersection improvement	Improve intersection capacity and safety	Connectivity/Capacity	$3,700,000	$3,700,000
C-367	3rd Street/Franklin Avenue signal modification	Improve intersection capacity and safety	Connectivity/Capacity	$500,000	$500,000
C-378	3rd Street/Powers Road signal modification	Improve intersection capacity and safety	Connectivity/Capacity	$500,000	$500,000
C-389	3rd Street/Badger Road signal modification	Improve intersection capacity and safety	Connectivity/Capacity	$500,000	$500,000

Project ID	Project	Description/ Location	Project Type	Total Cost	City Proportionate Cost
C-3940	Brosterhous Road/Knott Road intersection improvement	Improve intersection capacity and safety	Connectivity/Capacity	$3,700,000	$3,700,000
C-401	US 97 North parkway extension (Phase 2)	Includes remaining improvements in the US 97 Bend North Corridor Project FEIS after construction of initial phase.	Connectivity/Capacity	$20030,000,000	$203,000,000 (Contribution to ODOT project)
C-412	Powers Road interchange	Grade separated interchange or overcrossing of US 97 (pending Parkway Study).	Connectivity/Capacity	$20,000,000	$2,000,000 (Contribution to ODOT project)
C-423	US 97 operational and safety management improvements (as identified in the Parkway Study) and associated City street improvements Phase 1 – Consider right-in, right-out turn restrictions Phase 2 – Analyze ramp metering based on outcomes of Phase 1	Includes elements of the Parkway Study not currently defined in the project list, such as turn restrictions on and off the parkway, improvements to implement ramp metering or other interchange improvements.	Connectivity/Capacity	$100,000,000 (Tentative estimate)Phase 1 - $20,000,000 Phase 2 – 15,000,000	$10,000,000 (Contribution to ODOT project)Phase 1 - $2,000,000 Phase 2 - $1,500,000 (Contribution to ODOT project)
C-434	15th Street corridor safety and capacity improvements	From US 20 to Reed Market Road. Includes roundabout at Wilson Avenue.	Connectivity/Capacity	$16,800,000	$16,800,000
C-445	Reed Market rail crossing implementation	Project to implement outcomes of Reed Market at-grade rail study. Implementation costs could vary significantly based on study findings.	Connectivity/Capacity	$25,000,000	$25,000,000
C-456	O.B. Riley Road/Empire Road intersection safety and capacity improvement	Intersection Improvement.	Connectivity/Capacity	$1,900,000	$1,900,000
C-467	4th Street/Butler Market Road intersection improvement	Improve intersection capacity and safety.	Connectivity/Capacity	$3,700,000	$3,700,000
C-478	Archie Briggs Road bridge replacement	Replace Archie Briggs Road bridge.	Connectivity/Capacity	$6,000,000	$6,000,000
M-15	**Midtown Bicycle & Pedestrian Crossings** Greenwood Undercrossing Sidewalk Widening Hawthorne Parkway Overcrossing Franklin Ave. Underpass	Widen Parkway undercrossing to include improved multimodal facilities. Close sidewalk gap along Hawthorne and create a grade-separated footbridge over BNSF RR and Hwy 97. Shared use path adjacent to roadway: Widen sidewalk paths under RR and Hwy 97 to modernize design for roadside safety.	Pedestrian/Bicycle	$12,000,000 (Assumes funding to address remaining crossing improvements needed)	$12,000,000

Project ID	Project	Description/ Location	Project Type	Total Cost	City Proportionate Cost
M-16	Revere Avenue/2nd Street Intersection improvement	Pedestrian/Bicycle Crossing Improvement.	Pedestrian/Bicycle	$210,000	$210,000
M-17	Olney Avenue Railroad Crossing Improvements	Upgrade the railroad crossing to include dedicated sidewalks and bike lanes.	Pedestrian/Bicycle	$500,000	$500,000
Q-2	Existing Failed Roadway Reconstruction Project	Reconstruction of up to $16 million in identified roadway reconstruction needs.	Reconstruction	$16,000,000	$16,000,000
		Mid-Term Total		**$~~14,710~~267,910,000**	**$~~207,090~~182,410,000**
		Estimated Administrative Costs		***~12% of Mid-term***	***$~~24,851~~21,889,000***
		Total			***$~~231,941~~204,299,000***

TSDC – Project is on current Transportation System Development Charge Project List (TSDC) and eligible for existing TSDC revenue

Core Area Urban Renewal Area – Project is within possible Core Area Urban Renewal Area and may be eligible for future funding from that area.

Murphy Crossing or Juniper Ridge Urban Renewal Area – Project is within existing urban renewal area and may be eligible for funding from that area.

TSDC and Urban Renewal Area – Project is on the current Transportation System Development Charge Project List and in one existing or proposed Urban Renewal Area.

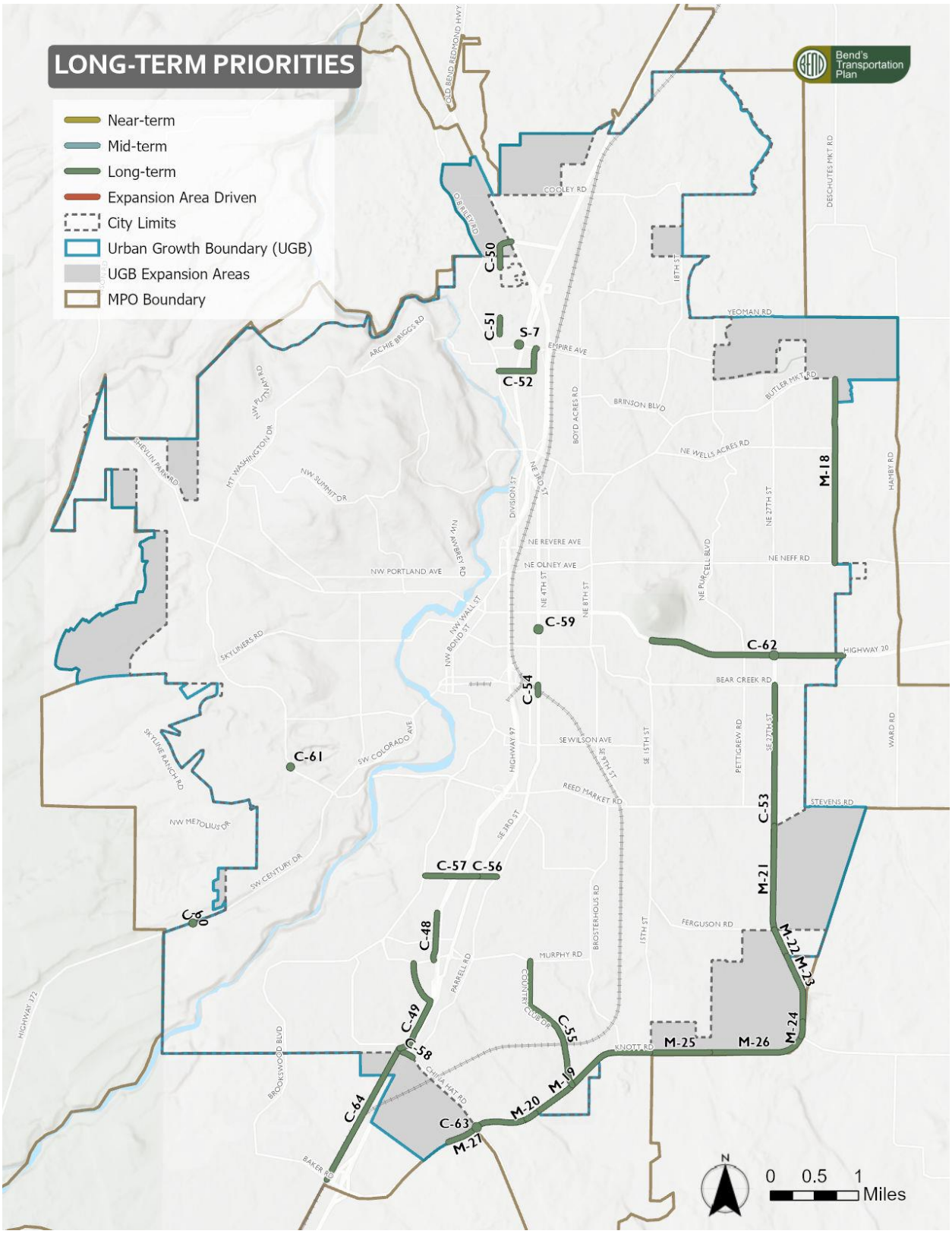
LONG-TERM PRIORITIES
Near-term
Mid-term
Long-term
Expansion Area Driven
City Limits
Urban Growth Boundary (UGB)
UGB Expansion Areas
MPO Boundary
Bend's Transportation Plan
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Table 5: Long-term Investment Priorities

Project ID	Project	Description/ Location	Project Type	Total Cost	City Proportionate Cost
C-489	New North Frontage Road near Murphy Road	Improvements to be determined.	Connectivity/Capacity	$5,400,000	$5,400,000
C-4950	New South Frontage Road near Murphy Road	Improvements to be determined.	Connectivity/Capacity	$13,800,000	$13,800,000
C-501	Britta Street extension (north section)	Includes two lane extension from Hardy Road to Robal Road.	Connectivity/Capacity	$2,700,000	$2,700,000
C-512	Britta Street extension (south section)	Includes two lane extension from Halfway Road to Ellie Lane.	Connectivity/Capacity	$1,000,000	$1,000,000
C-523	Mervin Sampels Road / Sherman Road Collector Corridor upgrade	Includes upgrade to two lane collector roadway and a traffic signal at US 20 from O.B. Riley Road to Empire Boulevard.	Connectivity/Capacity	$6,100,000	$6,100,000
C-534	27th Street Arterial Corridor upgrade from Bear Creek Road to Ferguson Road	Includes upgrade to three lane arterial and intersection improvements at Ferguson Road	Connectivity/Capacity	$8,600,000	$8,600,000
C-545	3rd Street railroad undercrossing widening	Widen 3rd Street to 4-lanes under the railroad, including complete street design from Emerson Avenue to Miller Avenue.	Connectivity/Capacity	$13,700,000	$13,700,000
C-556	Country Club Road Urban Upgrade from Knott Road to Murphy Road	Upgrade roadway to urban standards including pedestrian/bicycle improvements	Connectivity/Capacity	$10,900,000	$10,900,000
C-567	Powers Road urban upgrades from 3rd Street to Parrell Road	Construct complete street upgrades and reconstruct roadway	Connectivity/Capacity	$1,000,000	$1,000,000
C-578	Powers Road urban upgrades from Brookswood Boulevard to 3rd Street	Construct complete street upgrades and reconstruct roadway	Connectivity/Capacity	$4,200,000	$4,200,000
C-589	Ponderosa Street / China Hat Road overcrossing	Vehicle, pedestrian and bicycle access over US 97 at Ponderosa Street/China Hat Road. Includes intersection improvement at Parrell Road/China Hat Road.	Connectivity/Capacity	$15,000,000	$15,000,000 (Contribution to ODOT project)
C-5960	Hawthorne Avenue/3rd Street Intersection improvement	Improve intersection capacity.	Connectivity/Capacity	$3,800,000	$3,800,000
C-601	Century Drive/Skyline Ranch Road roundabout	Address existing and future safety and operational needs at intersection; specific improvements to be evaluated in next phase of work.	Connectivity/Capacity	$3,700,000	$3,700,000
C-612	Mt. Washington Drive/Metolius Drive roundabout	Address existing and future safety and operational needs at intersection; specific improvements to be evaluated in next phase of work.	Connectivity/Capacity	$3,700,000	$3,700,000
C-623	US 20 Operational Improvements from 15th Street to east UGB~~US 20/27th Street Intersection Improvement~~	Identify and construct improvements that enhance mobility along the corridor, including at the US 20/NE 27th Street intersection	Connectivity/Capacity	$~~2,100~~10,000,000	$~~210~~1,000,000 (Contribution to ODOT project)
C-634	China Hat Road/Knott Road Intersection Improvement	Improve intersection capacity and safety	Connectivity/Capacity	$3,700,000	$3,700,000

Project ID	Project	Description/ Location	Project Type	Total Cost	City Proportionate Cost
C-6~~45~~	US 97 Frontage Road	Construct frontage road from Ponderosa Street to Baker Road.	Connectivity/Capacity	$6,550,000	$3,275,000 (Contribution to ODOT project)
S-7	Empire Avenue/Jamison Street Turning Restrictions	Restrict turning movements on the Jamison approach to right in, right out	Safety	$107,000	$107,000
M-18	Eagle Road Functional Urban Upgrade	Classify roadway as Minor Collector from Neff Road to Butler Market Road and construct complete street upgrades.	Pedestrian/Bicycle	$14,500,000	$14,500,000
M-19	Knott Road Urban Upgrade from China Hat Road to 15th Street	Upgrade roadway to urban standards including pedestrian/bicycle improvements	Pedestrian/Bicycle	$15,600,000	$15,600,000
M-20	Knott Canal Crossing	Widen the Knott Road Canal to accommodate multimodal facilities	Pedestrian/Bicycle	$700,000	$700,000
M-21	SE 27th Street rural road upgrade from Stevens Road to Ferguson Road	Includes curb, sidewalk, and bike lane on east side of 27th Street.	Pedestrian/Bicycle	$1,300,000	$1,300,000
M-22	SE 27th Street rural road upgrade from Ferguson Road to Diamondback Lane	Includes curb and sidewalk on east side, bike lanes for both directions on 27th Street.	Pedestrian/Bicycle	$600,000	$600,000
M-23	SE 27th Street rural road upgrade from Diamondback Lane to access road	Includes curb and sidewalk on east side of 27th Street.	Pedestrian/Bicycle	$100,000	$100,000
M-24	SE 27th Street rural road upgrade from access road to Knott Road	Includes curbs and sidewalks on both sides of 27th Street.	Pedestrian/Bicycle	$1,300,000	$1,300,000
M-25	Knott Road rural road upgrade from 15th Street to Raintree Court	Includes curbs, sidewalks and bike lanes for both directions on Knott Road.	Pedestrian/Bicycle	$500,000	$500,000
M-26	Knott Road rural road upgrade from Raintree Court to SE 27th Street	Includes curbs, sidewalks and bike lanes for both directions on Knott Road.	Pedestrian/Bicycle	$5,500,000	$5,500,000
M-27	Knott Road rural road upgrade south of China Hat Road	Includes curb and sidewalk on north side of Knott Road.	Pedestrian/Bicycle	$300,000	$300,000
Q-3	Existing Failed Roadway Reconstruction Project	Reconstruction up to $15 million in identified roadway reconstruction needs.	Reconstruction	$15,000,000	$15,000,000
		Long-Term Total		**$~~161,457,000~~169,357,000**	**$~~156,292,000~~157,082,000**
		Estimated Administrative Costs		***~12% of Long-term***	***$18,~~755~~850,000***
		Total			***$175,~~047~~932,000***

TSDC – Project is on current Transportation System Development Charge Project List (TSDC) and eligible for existing TSDC revenue

Core Area Urban Renewal Area – Project is within possible Core Area Urban Renewal Area and may be eligible for future funding from that area.

Murphy Crossing or Juniper Ridge Urban Renewal Area – Project is within existing urban renewal area and may be eligible for funding from that area.

TSDC and Urban Renewal Area – Project is on the current Transportation System Development Charge Project List and in one existing or proposed Urban Renewal Area.

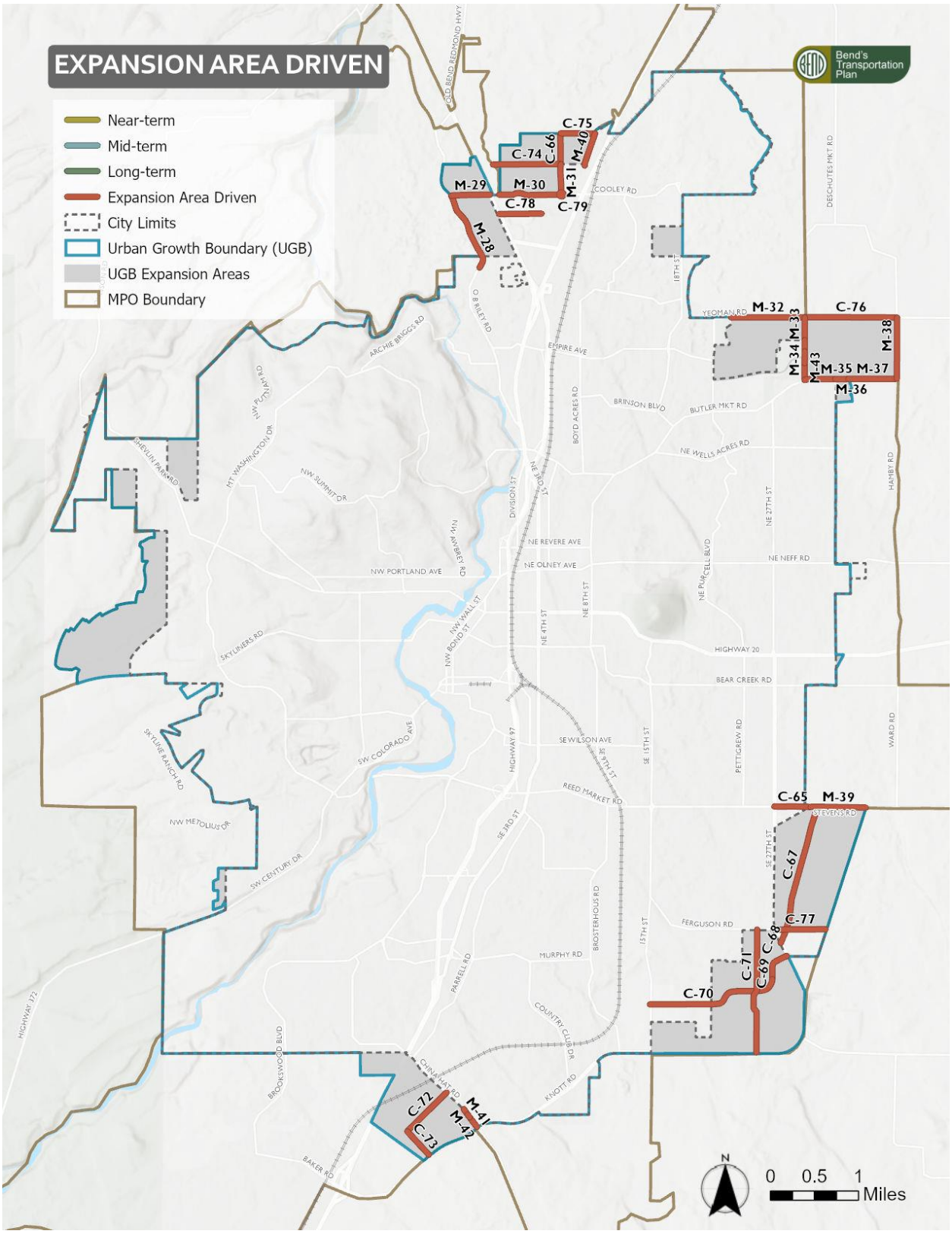

EXPANSION AREA DRIVEN
Near-term
Mid-term
Long-term
Expansion Area Driven
City Limits
Urban Growth Boundary (UGB)
UGB Expansion Areas
MPO Boundary
Bend's Transportation Plan
C-75
C-74
C-66
M-40
M-31
M-29
M-30
C-78
C-79
M-28
M-32
C-76
M-33
M-38
M-34
M-43
M-35
M-37
M-36
C-65
M-39
C-67
C-77
C-68
C-71
C-69
C-70
C-72
M-41
C-73
M-42
COOLEY RD
DESCHUTES MKT RD
EMPIRE AVE
YEOMAN RD
BRINSON BLVD
BUTLER MKT RD
NE WELLS ACRES RD
NE REVERE AVE
NE OLNEY AVE
NE NEFF RD
NW PORTLAND AVE
HIGHWAY 20
BEAR CREEK RD
SE WILSON AVE
REED MARKET RD
STEVENS RD
FERGUSON RD
MURPHY RD
COUNTRY CLUB DR
KNOTT RD
CINNAMON RD
BAKER RD
HIGHWAY 97
0 0.5 1
Miles

Table 6: Expansion Area Driven Projects

Project ID	Project	Description/ Location	Project Type	Total Cost	City Proportionate Cost
C-6~~5~~6	Stevens Road realignment	Includes connection to Reed Market Road and bridge to cross canal	Connectivity/Capacity	$4,700,000	$4,700,000
C-6~~6~~7	Hunnell Road extension	Construct a two-lane collector roadway in the Triangle UGB expansion area.	Connectivity/Capacity	$2,400,000	$2,400,000
C-6~~7~~8	New Road in DSL UGB expansion area	Construct a two-lane collector.	Connectivity/Capacity	$9,500,000	$9,500,000
C-6~~8~~9	New Road in DSL UGB expansion area	Construct a two-lane collector.	Connectivity/Capacity	$1,100,000	$1,100,000
C-69~~70~~	New Road in the Elbow UGB expansion area	Construct a two-lane collector.	Connectivity/Capacity	$4,000,000	$4,000,000
C-70~~71~~	New Road in the Elbow UGB expansion area	Construct a two-lane collector.	Connectivity/Capacity	$10,200,000	$10,200,000
C-7~~1~~2	New Road in the Elbow UGB expansion area	Construct a two-lane collector.	Connectivity/Capacity	$7,100,000	$7,100,000
C-7~~2~~3	New Road in the Thumb UGB expansion area	Construct a two-lane collector.	Connectivity/Capacity	$4,300,000	$4,300,000
C-7~~3~~4	New Road in the Thumb UGB expansion area	Construct a two-lane collector.	Connectivity/Capacity	$2,500,000	$2,500,000
C-7~~4~~5	Loco Road extension	Construct a two-lane collector.	Connectivity/Capacity	$5,300,000	$5,300,000
C-7~~5~~6	New Road in Triangle UGB expansion area	Construct a two-lane collector.	Connectivity/Capacity	$2,500,000	$2,500,000
C-7~~6~~7	Yeoman Road extension from Deschutes Market Road to Hamehook Road	Construct a two-lane collector.	Connectivity/Capacity	$10,900,000	$10,900,000
C-7~~7~~8	New Road in DSL UGB expansion area	Construct a two-lane collector.	Connectivity/Capacity	$3,900,000	$3,900,000
C-7~~8~~9	Collector between US20 and Hunell Rd	Construct new collector between US 20 and Hunnell Road. Road would be south of Cooley road and north of Robal Road.	Connectivity/Capacity	$4,000,000	$4,000,000
C-79~~80~~	Cooley Road/Hunnell Road Intersection Improvement	Add intersection improvement at Cooley/Hunnell to Cooley Road.	Connectivity/Capacity	$3,700,000	$3,700,000
S-8	Projects of Regional Significance from Subarea Planning Efforts	Subarea planning efforts will identify infrastructure needs to serve Opportunity and Expansion Areas, which are key development areas for the City. Projects that result should be added to the 2040 project list as necessary.	Safety	TBD	TBD
M-28	O.B. Riley Road rural road upgrade from Hardy Rd to Cooley Rd	Includes curb and sidewalk on east side, bike lanes both directions.	Pedestrian/Bicycle	$2,400,000	$2,400,000
M-29	Cooley Road rural road upgrade from O.B. Riley Road to US 20	Includes curbs, sidewalks and bike lanes both directions.	Pedestrian/Bicycle	$1,300,000	$1,300,000
M-30	Cooley Road rural road upgrade from US 20 to Hunnell Road	Includes curb and sidewalk on north side, bike lanes both directions, and an intersection improvement at Cooley Road/Hunnell Road.	Pedestrian/Bicycle	$1,100,000	$1,100,000
M-31	Hunnell Road rural road upgrade from Cooley Road to Loco Road	Includes sidewalk on west side of Hunnell Road.	Pedestrian/Bicycle	$200,000	$200,000

Project ID	Project	Description/ Location	Project Type	Total Cost	City Proportionate Cost
M-32	Yeoman Road rural road upgrade from western terminus to Deschutes Market Road	Includes curbs, sidewalks and bike lanes both directions.	Pedestrian/Bicycle	$2,500,000	$2,500,000
M-33	Deschutes Market Road rural road upgrade from Yeoman Road to canal	Includes curb and sidewalk on east side, bike lanes both directions.	Pedestrian/Bicycle	$500,000	$500,000
M-34	Deschutes Market Road rural road upgrade from canal to Butler Market Road	Includes curb and sidewalk on east side of Deschutes Market Road.	Pedestrian/Bicycle	$400,000	$400,000
M-35	Butler Market Road rural road upgrade from Deschutes Market Road to Eagle Road	Includes curb and sidewalk on north side of Butler Market Road.	Pedestrian/Bicycle	$300,000	$300,000
M-36	Butler Market Road rural road upgrade from Eagle Road to Clyde Lane	Includes curbs, sidewalks and bike lanes for both directions on Butler Market Road.	Pedestrian/Bicycle	$400,000	$400,000
M-37	Butler Market Road rural road upgrade from Clyde Lane to Hamby Road	Includes curb and sidewalk on north side, bike lanes for both directions on Butler Market Road.	Pedestrian/Bicycle	$1,100,000	$1,100,000
M-38	Butler Market Road rural road upgrade from Hamby Road to Hamehook Road	Includes curbs and sidewalks on both sides of Butler Market Road.	Pedestrian/Bicycle	$1,100,000	$1,100,000
M-39	Stevens Road rural road upgrade from Stevens realignment to Bend UGB boundary	Includes curbs, sidewalks and bike lanes for both directions of Stevens Road.	Pedestrian/Bicycle	$1,900,000	$1,900,000
M-40	Clausen Drive rural road upgrade from Loco Road to northern terminus	Includes sidewalk on west side of Clausen Drive.	Pedestrian/Bicycle	$200,000	$200,000
M-41	China Hat Road rural road upgrade north of Knott Road	Includes sidewalks on both sides of China Hat Road.	Pedestrian/Bicycle	$200,000	$200,000
M-42	China Hat Road canal bridge widening	Widen bridge to include sidewalk on both sides of China Hat Road.	Pedestrian/Bicycle	$400,000	$400,000
M-43	Deschutes Market Road canal bridge widening	Widen bridge to include sidewalk on west side of Deschutes Market Road.	Pedestrian/Bicycle	$400,000	$400,000
		Expansion Area Driven Total		**$90,500,000**	**$90,500,000**

TSDC – Project is on current Transportation System Development Charge Project List (TSDC) and eligible for existing TSDC revenue.

Core Area Urban Renewal Area – Project is within possible Core Area Urban Renewal Area and may be eligible for future funding from that area.

Murphy Crossing or Juniper Ridge Urban Renewal Area – Project is within existing urban renewal area and may be eligible for funding from that area.

TSDC and Urban Renewal Area – Project is on the current Transportation System Development Charge Project List and in one existing or proposed Urban Renewal Area.

Agenda Item No. 5: Draft Chapter 5: Transportation Funding Strategy

5 – Transportation Funding Strategy

This chapter provides direction about how to fund the projects identified in the BTP, using a range of existing and new sources. This chapter includes the following:

- Existing transportation funding sources, including estimated revenue expectations and revenue commitments.
- Summary of rough cost estimates for the transportation facilities and major improvements, organized by general estimate of the timing for planned facilities, and a summary of the estimated costs associated with operations, maintenance, and on-going programs (collectively referred to as OM&P).
- A discussion of the City's existing funding mechanisms and the ability of these and possible new mechanisms to fund the development of each transportation facility and major improvement, and the estimated funding gap based on expected revenue from existing sources.
- A preferred set of new and expandable funding tools to address the funding gap.

Legal Framework

This chapter addresses requirements for the Transportation Financing Plan, OAR 660-012-0040, under the Transportation Planning Rule. Specifically, it responds to the requirement for transportation system plans to identify the City's existing funding mechanisms and describe how these, along with possible new funding sources, can fund the projects identified in the plan.

In addition to the legal requirements that guide this chapter, this chapter is supported by the lists of transportation facilities and major improvements planned through 2040, the estimate of costs and timing of those projects (Chapter 4), and the City's funding policies (Chapter 2).

Funding Analysis

Existing Funding

Summary of Existing Funding Mechanisms

The City of Bend currently collects revenue for transportation from federal, state, and local funding sources, including:

- **Surface Transportation Block Grant Program (STBG).** A major federal transportation program that provides flexible funds for transportation projects at the state and local level. Funds may be used to preserve and improve the conditions and performance of any Federal-aid highway, bridge, and tunnel projects; on any public road, pedestrian, and bicycle infrastructure; and on transit capital projects (including intercity bus terminals). The City of Bend has historically allocated all STBG revenue to bringing the Pavement Condition Index

to an acceptable level. As the City reaches its goal of improving pavement conditions, a portion of STBG revenue is expected to be allocated to capital projects (local street reconstruction).

- **State Highway Fund (SHF).** A state funding program, composed of several major funding sources: State Motor Vehicle Registration and Title Fees, Driver License Fees, State Motor Vehicle Fuel Taxes, and Weight-Mile Tax. SHF funds are apportioned to three jurisdictional levels in the following amounts: State (50%), Counties (30%), and Cities (20%). Funds must be spent on roads, including bikeways and walkways within the State-owned highway right-of-way. State funds can be used for both capital expenditures and OM&P of state roads. The City of Bend historically allocated all SHF funds to OM&P.
- **General Fund Subsidy.** Revenues that come from the City of Bend's discretionary General Fund resources. The allocation of these revenues to transportation and to specific transportation expenditures is determined by City Council each biennium through the budget process. Funding amounts fluctuate over time based on Council priorities and available revenues.
- **Water and Sewer Franchise Fees.** A charge on revenue generated by water and sewer franchises. The majority of revenues are currently used for transportation capital expenditures, but this funding allocation is determined by City Council through the biennial budget process.
- **Garbage Franchise Fees.** A charge on revenue generated by garbage waste franchises. The City of Bend has historically used these revenues for OM&P, but funding allocation is determined by an ordinance adopted by the City Council.
- **Transportation System Development Charges (TSDCs).** Fees collected when new development and some redevelopment occurs within the City. Revenues are used to fund growth-related capital improvements that are on the City's adopted TSDC project list, as prioritized by Council.
- **Urban Renewal.** A tool that diverts property tax revenues from growth in assessed value inside an urban renewal area (URA) for investment in eligible capital projects. Eligible projects must be located within the URA boundary, be identified in the URA plan, and contribute to the alleviation of blight within the URA. The City has two existing URAs, both of which have funding for transportation projects included in their project lists. However, revenues have been slow to accumulate, making the actual timing and amount of available funding uncertain.
- **Grants.** The City of Bend applies for and receives grants for specific transportation capital projects. Grants are not included in the funding forecasts in this chapter because they are too project-specific and uncertain to predict. However, project costs listed in this plan are the City's share of total costs; some projects (such as those on state highways) are assumed to receive state funding.
- **Other, or Miscellaneous, Tools.** Miscellaneous revenues allocated to capital expenditures and OM&P.

Existing Funding Revenue Projections and Commitments

The City's existing funding sources for capital projects are estimated to generate roughly $138 million in years 1-10 and approximately $151 million in years 11-20. However, some revenues from existing sources are already committed to paying debt obligations on transportation

projects that have already been built and to projects in the City's existing, five-year Capital Improvements Program (2020-2024 CIP). All Water/Sewer Franchise Fee revenues are fully committed over the 20-year planning horizon to paying debt service on transportation projects. In the near-term (first 10 years), TSDC revenues are fully committed to debt service and the 2020-2024 CIP project list. In the mid- and long-term, a portion of TSDC revenue is committed to on-going debt payments.[1]

Table 1 summarizes the projected revenue and estimated existing commitments to show the approximate amount of funding from existing sources available to pay for new transportation facilities and major improvements (capital projects).

Table 1. Summary of Revenue from Existing Sources by Phasing Bucket, Available for Capital Expenditures after accounting for Funding Commitments (2018 dollars), FY Ending 2021–2040

	Near-Term (Years 1–10)	Mid- and Long-Term (Years 11–20)
Total Revenue from Existing Sources	$138,147,000	$150,977,000
Committed Revenue	($122,950,000)	($45,000,000)
Total Available for New Projects	**$15,192,000**	**$105,977,000**

Source: Calculations by ECONorthwest.

Note: Values are in 2018 dollars and rounded to the thousand.

On average, the City's existing funding sources will generate approximately $12.5 million per year to fund OM&P. Existing OM&P obligations are largely on-going needs that will continue throughout the planning horizon, including pavement and right-of-way maintenance on the existing road system, street sweeping, snow removal and winter operations, etc. This means that existing funding for OM&P is fully committed to continuing the current OM&P activities.

[1] Debt service obligations are estimated at a total of $4.5 million per year. TSDC revenue is assumed to pay the portion of the obligation that is not paid by Water/Sewer Franchise Fees.

Funding Gap: Project and Program Costs and Existing Sources

As shown in Table 2, the projected available revenue from existing funding sources will not be adequate to fund the capital projects identified in this plan. The total funding gap is approximately $655.8 million over the 20-year planning horizon.

Table 2. Estimated Funding Gap for Capital Projects by Estimated Project Timing, (2018 dollars), FY Ending 2021–2040

	Near-Term (Years 1–10)	Mid- and Long-Term (Years 11–20)	Expansion Areas (Development Driven)
Existing Revenue Available for New Projects	$15,192,000	$105,977,000	N/A
Total New Project Costs (including administration/ overhead where applicable)	($279,437,000)	($406,988,000)	($90,500,000)
Estimated Funding Gap	**($264,245,000)**	**($301,011,000)**	**($90,500,000)**

Source: Calculations by ECONorthwest.

Note: Values are in 2018 dollars and rounded to the thousand.

In addition, the new programs recommended for implementation in this plan along with the new OM&P costs attributable to planned new transportation facilities are estimated to cost a total of $5.8-6.3 million per year. As with the capital project needs noted above, the new OM&P costs are based on significant new capital projects identified in this plan.

The OM&P expenditures identified in this plan will all require funding beyond what has historically been available for OM&P, since nearly all existing revenue will continue to be needed for existing OM&P activities. This means the City has a gap of approximately $5.8-6.3 million per year to fund the desired new and increased OM&P identified in the plan.

Potential New Funding

Preferred New and Expanded Tools

To address the funding gap and fund the transportation facilities identified to meet the City's transportation needs through the year 2040, seventeen funding mechanisms were evaluated, including new tools and expansion of existing tools. The evaluation covered a range of criteria to gauge the tools' ability to close the funding gap, including the impact new or expanded tools would have on payers. The analysis identified the preferred new or expanded tools described below. Tools are organized by project eligibility as some tools may only be used to fund capital projects and others may be flexibly used for capital projects or OM&P.

Funding Sources for Capital Projects Only

- **General Obligation (GO) Bonds.** GO Bonds are debt issued for infrastructure improvements. The GO bond, which requires a public vote, is paid for by increased property taxes over the life of the bond, which typically last for 20 to 30 years for transportation projects. Funds must be used for capital projects, and because the tool requires a public vote, projects are often selected that will resonate with voters city-wide. The City of Bend has used GO bonds for transportation in the past. The City currently has outstanding GO bond debt of $19.4 million (total). State statute (ORS 287A.050(2)) limits cities to issuing GO bonds equal to or less than 3% of the real market value (RMV) of taxable property within its

boundaries. Based on the Deschutes County 2019-2020 certified tax assessment roll, 3% of Bend's RMV exceeds $670 million. This limit will increase as RMV grows. Based on the current RMV limitations and outstanding GO bond debt, the maximum the City could issue in additional GO bond is over $650 million, for all City capital needs, including but not limited to transportation. The assumed GO bond amount for transportation projects is a smaller amount, detailed below.

- **City-wide Transportation System Development Charges (TSDCs): rate increase.** TSDCs are charges on new development, set by City Council, and established based on a list of projects to be funded with the revenues and a methodology for uniformly assessing costs. The City of Bend currently imposes a TSDC (see *Existing Sources*); however, the rate the City charges is not the maximum possible under the current methodology, and an update to the methodology and project list could result in a higher rate and additional funding. The City is planning an update to the TSDC project list and methodology to reflect eligible components identified in this TSP, which may result in a different maximum rate.
- **Supplemental Area-Specific TSDCs**. Supplemental TSDCs are additional one-time fees (layered on top of the City-wide TSDCs). These fees are paid by new development within a defined geographic area. Funds can only be used for TSDC-eligible capital projects that increase capacity and benefit/serve the defined area. The City's Expansion Areas or other places with concentrated transportation needs and substantial growth expected could be appropriate locations to implement these fees.
- **New Urban Renewal Areas (URAs).** URAs divert property tax revenues from growth in assessed value inside a defined area. The City currently has two URAs (see *Existing Sources*) but is considering a third URA in the Core Area, which would expand the urban renewal funding available for transportation projects in that area. Revenue must be spent on capital projects located within the URA (projects must also be identified in the URA plan and contribute to the alleviation of blight within the URA). Projects that make the URA more desirable for development or that alleviate conditions that were a barrier to development are the best candidates for URA revenues.
- **Local Improvement Districts (LIDs).** LIDs are a type of special assessment district where nearby property owners inside a defined area are assessed a fee to pay for capital improvements within the LID boundary. Local infrastructure improvements that benefit specific properties in a defined area may be funded by LID assessments. For example, LIDs may be appropriate for use in the City's Expansion Areas, or in other areas to support infrastructure with a localized benefit to surrounding properties. The City already has regulations that allow LIDs, but they have not been widely used for transportation infrastructure. To generate additional revenue from this tool, a more robust program would need to be developed and implemented.

Flexible Funding Sources for Capital or OM&P

- **Transportation Utility Fee (TUF).** A TUF applies the same concept as water and sewer utility fees to collect revenues for transportation projects. Fees are assessed to all businesses and households in the jurisdiction. While jurisdictions typically use TUF revenue for OM&P (because of the on-going nature of the funding), there are no restrictions on use of funds and revenues may be used for capital projects as well. The fee may be assessed by the City Council.

- **Vehicle Registration Fee (VRF).** VRFs are recurring charges to businesses and individuals that own cars, trucks, and other vehicles. VRFs are assessed and collected at the county level and revenue is allocated to the county and cities within the county: 60% to the county and 40% to the cities. Revenue allocated to each city is based on the share of registered vehicles located in each city. The current maximum allowed rate is set in statute ($56 per vehicle per year).[2] Funds may be flexibly used for capital projects or OM&P related to the roads. The fee may be assessed by Deschutes County, following approval at a county-wide vote. If implemented, it may be appropriate to target the use of the City's portion of VRF revenue to projects with regional or county-wide benefits, so that County officials and voters county-wide see more value in implementing the fee.
- **Fuel Tax with Seasonal Variation.** The seasonal fuel tax is a tax on the sale of fuel with levy rates that fluctuate based on the month. Funds may be used flexibly for capital projects or OM&P. The tax may be assessed by the City Council, following approval at a city-wide vote, pursuant to the Bend Charter. [3]
- **Prepared Food and Beverage Sales Tax with Seasonal Variation.** A tax on the sale of prepared food and non-alcoholic beverages, typically added to the price at the point of sale.[4] The recommended version is a seasonal, targeted tax with a levy rate that would fluctuate based on the time of the year (such as peak tourist seasons).[5] The tax may be assessed by the City Council, following approval at a city-wide vote, pursuant to the Bend Charter. Funds may be used flexibly for capital projects and OM&P.

Estimated Revenue Potential of New Sources

Table 3 summarizes the estimated revenue potential of the possible new mechanisms (the preferred new funding sources) to fund the development of the transportation facilities and improvements identified in this plan.

[2] The $56 per year VRF rate is legal, but no Oregon county currently imposes a rate this high (yet).

[3] Local jurisdictions in Oregon may enact their own fuel taxes, which apply in addition to state and federal taxes on fuel. Local fuel tax revenues can be used for operations, maintenance, and capital costs but are restricted to roadway use (which includes sidewalks, enforcement, etc.) and cannot be used for transit.

[4] Oregon does not currently have a state sales tax, though state law does not preclude cities from adopting one. It is possible for a jurisdiction to adopt a sales tax on specific items, such as prepared foods or transportation-related items. However, state law prohibits local taxation of alcoholic beverages, whether wholesale or retail (restaurant). Bend's charter requires a citywide vote on any direct sales tax. Based on input from the FWG, this tax is assumed to apply to prepared food and non-alcoholic beverages for immediate consumption.

[5] This reflects the input of the FWG and a preference for a tax that would vary seasonally; however, the practical implications of varying the rate seasonally merit additional evaluation to determine whether this is a reasonable approach.

Table 3. Potential New and Expanded Funding Tools and Reasonably Likely Revenue (2018 dollars)

Funding Tool	Overall Revenue Assumptions	Projected Revenue Potential Years 1-10	Projected Revenue Potential Years 11-20	Applicability to Expansion Area Projects
General Obligation Bond	Bond amounts of up to $225-250m may be possible based on FWG conversations and early testing in focus groups.	One bond of up to about $250m is reasonably likely in the near-term, depending on Council and community support. The amount and potential projects would be determined through public opinion research.	A second bond, of up to about $250m, is reasonably likely towards to the end of the 20-year planning period, to allow more time to pass after the City has finished implementing the first bond.	Potentially applicable, depending on timing of need relative to timing of bond, but not assumed.
City-wide Transportation System Development Charge (TSDC) increase	With a rate increase from $8,000 per Peak Hour Trip (the rate as of Jan. 1, 2020) to $10,000 per Peak Hour Trip, TSDC revenue could generate approximately $3.0m of additional revenue per year above the revenue from the current rate.	A rate increase is reasonably likely about mid-way through the first 10 years of the plan. If implemented in year 5, this expanded tool could generate approximately $14.6m.	With the assumed rate increase, this expanded tool could generate approximately $29.2m in additional revenue over the mid- and long-term.	Potentially applicable, for appropriate projects with development of additional project lists and methodology.
Supplemental Area-Specific Transportation System Development Charge (TSDCs)	The revenue potential of this tool would depend on the amount of development expected to occur in areas selected for the additional charge, and how much developers already pay toward the citywide TSDC.	Revenue potential would be dependent on the timing of implementation, the rate, and the timing of development.	Revenue potential would be dependent on the timing of implementation, the rate, and the timing of development.	Assumed as a likely funding source for Expansion Area projects.
Urban Renewal (Proposed Core Area)	Transportation funding from the proposed Core Area URA is estimated at roughly $21.4m for projects in the BTP through 2040, plus additional funding for streetscape enhancements that are outside the BTP project list. The amounts, timing, and project allocations will be determined through the urban renewal plan process and through subsequent implementation of the urban renewal plan.	Implementation of an additional URA in the Core Area is reasonably likely in the near-term, with the area collecting initial revenues in 2022. Based on preliminary analysis of a new URA, roughly $10.4m could be available for transportation projects in the BTP in the near-term.	Based on preliminary analysis of a new URA, roughly $11.0m could be available for transportation projects in the BTP in years 11-20.	Not applicable given current proposed new URA boundaries. Forming a new URA to fund expansion area transportation (or other infrastructure) projects may not be feasible or desirable and is not assumed as a possible new funding mechanism in this plan.

Funding Tool	Overall Revenue Assumptions	Projected Revenue Potential Years 1-10	Projected Revenue Potential Years 11-20	Applicability to Expansion Area Projects
Local Improvement Districts (LIDs)	Assumed to be used for smaller, local projects, of about $350,000 in project costs per LID. The City is unlikely to establish more than two per year.	Dependent on projects selected and number of LIDs formed.	Dependent on projects selected and number of LIDs formed.	Assumed as a likely funding source for Expansion Area projects.
Transportation Utility Fee (TUF)	A fee rate of $10 per month per household and a charge to businesses of $2 per month per employee could generate approximately $5m per year.	Implementation of this source is reasonably likely within the first 10 years. If implemented in year 1 (collecting revenue in year 2), this fee could generate approximately $47.1m through year 10.	Over 10 years, this fee could generate approximately $48.5m.	Potentially applicable, but not assumed.
Vehicle Registration Fee (VRF)	A $56 per year ($112 per biennium) rate – the maximum allowed under statute – could generate approximately $3.5m per year for the City of Bend.	Implementation of this source is reasonably likely roughly mid-way through the first 10 years of the plan. If implemented in year 5 at $56 per year per vehicle, this fee could generate approximately $18.6m for the City of Bend.	Over 10 years, at $56 per year per vehicle, this fee could generate approximately $34.1m for the City of Bend.	Potentially applicable, but not assumed.
Seasonal Fuel Tax	A fuel tax of 1-5 cents per gallon with fluctuating rates by season could generate approximately $1.2m per year.	Implementation of this source may be possible, if needed, roughly mid-way through the first 10 years of the plan. If implemented in year 5, the tax could generate approximately $6.8m.	Over 10 years, this tax could generate approximately $10.8m.	Potentially applicable, but not assumed.
Seasonal Food and Non-alcoholic Beverage Sales Tax	A 5% seasonal, prepared food and non-alcoholic beverage sale tax could generate approximately $5.0m per year on average (assuming revenue collection during one-third of the year).	This option was identified as less promising in the near-term by the FWG. If implemented in year 5, the tax could generate approximately $22.3m.	If implemented mid-term, over 10 years, this tax could generate approximately $53m.	Potentially applicable, but not assumed.

Conclusion

Funding for Capital Projects

The combined revenue potential of new or expanded tools described above as "reasonably likely" and primarily intended for capital projects is up to $712.5 million[6] over the 20-year planning horizon (based on the assumptions described in Table 3). This exceeds the total funding gap of approximately $655.8 million for capital projects over the 20-year planning horizon based on estimated available revenue from existing sources and provides options for the City to select tools to implement or reduce the revenue required from a given tool. **This demonstrates that the City's existing funding mechanisms, with some combination of the potential new and expanded funding tools, are reasonably likely to be sufficient to fund the development of the transportation facilities and major capital improvements identified in this plan.** In addition, the City of Bend will continuously seek to identify potential funding partners, where possible and appropriate.

Projects identified on the Expansion Area project list (those not included on the City's near-, mid-, or long- term priority list), are assumed to funded by development either directly through developer contributions or indirectly through tools such as local improvement districts, supplemental transportation system development charges, and/or negotiated agreements.

Funding for Operations, Maintenance, and Programs

New revenue from the transportation utility fee (TUF) at the rates analyzed is projected to cover most, but not all, of the estimated cost of new OM&P. Additional revenue for OM&P could come from higher TUF rates, funding capital elements of the programs through small contributions from new capital funding sources (such as a GO bond), or directing a portion of new flexible funding sources towards OM&P.

Implementation Actions

Appendix A provides a Near-Term Funding Action Plan that presents options for how the City could implement the potential new and expanded funding tools over the next 10 years to fund the projects identified as prioritized for FY Ending 2021-2030.

[6] This estimate aggregates the 20-year revenue projections for the following sources: (1) vehicle registration fee; (2) seasonal fuel tax; (3) seasonal, prepared food and non-alcoholic beverage sales tax; (4) transportation system development (i.e., additional revenue from a rate increase); (5) Core Urban Renewal; and (6) general obligation bond (i.e., two bonds at $250 million each).

Appendix A. Near-term Funding Action Plan

The City wants to ensure that there is a realistic plan in place to fund the near-term project and program list within the first 10 years. To support this goal, the City will need to implement new or expanded funding sources to address the capital project funding gap of approximately $264.2 million in the near-term (see Chapter 5, Table 2).

This Action Plan is intended as guidance for implementing the funding strategy described in Chapter 5. The Action Plan identifies approaches recommended by the Citywide Transportation Advisory Committee (CTAC) to implement the TSP funding strategy in the near-term. The Action Plan is an advisory recommendation for achieving the stated strategy and policies and does not limit the City to a single approach.

This section outlines CTAC's recommendation of two potential approaches (a preferred and an alternative option) to fund the near-term capital projects and operations, maintenance and programs (OM&P). The intent here is to provide clear guidance on what will be needed to fund Bend's near-term transportation needs, recognizing that these approaches are not binding; the City Council will have discretion about which new / expanded funding tools to implement. Additionally, the implementation of many of the proposed funding tools will rely on a successful public vote. Given that uncertainty, Figure 1 and Figure 2 are presented as alternative ways to fund the vision of the BTP, between FY Ending 2021–2030.

- Option A (presented in Figure 1) emphasizes a large GO bond as the primary source of new revenue to fund the capital costs of the near-term project list, with supplemental revenue from an increase to TSDCs and urban renewal funding in a new URA in the Core Area of the city.[7] Option A also assumes that a TUF is implemented to fund new and increased OM&P costs.

- Option B (presented in Figure 2) assumes the City implements a suite of new and expanded funding tools to complement a smaller GO bond, including a vehicle registration fee, a targeted seasonal sales tax (e.g. fuel tax or prepared food and beverage tax), an increase to TSDCs, and/or greater reliance on Core Area urban renewal funding to pay for transportation. Like Option A, it assumes that a TUF is implemented to fund new and increased OM&P costs, though other new flexible sources may contribute to these as well.

Either Option A (the preferred approach) or Option B could fully fund the near-term project list and the expanded OM&P recommendations; however, Option B would require more separate actions and public votes to implement a larger number of new or expanded funding sources. In addition, and because funding from the TUF is insufficient to fully cover the near-term OM&P funding gap, both options assume a small amount of GO bond revenue flowing into the pool of funds for OM&P.[8]

In the diagrams below, the left column shows recommended funding tools. Existing funding sources are listed at the bottom of the diagrams in red, with new sources listed at the top in

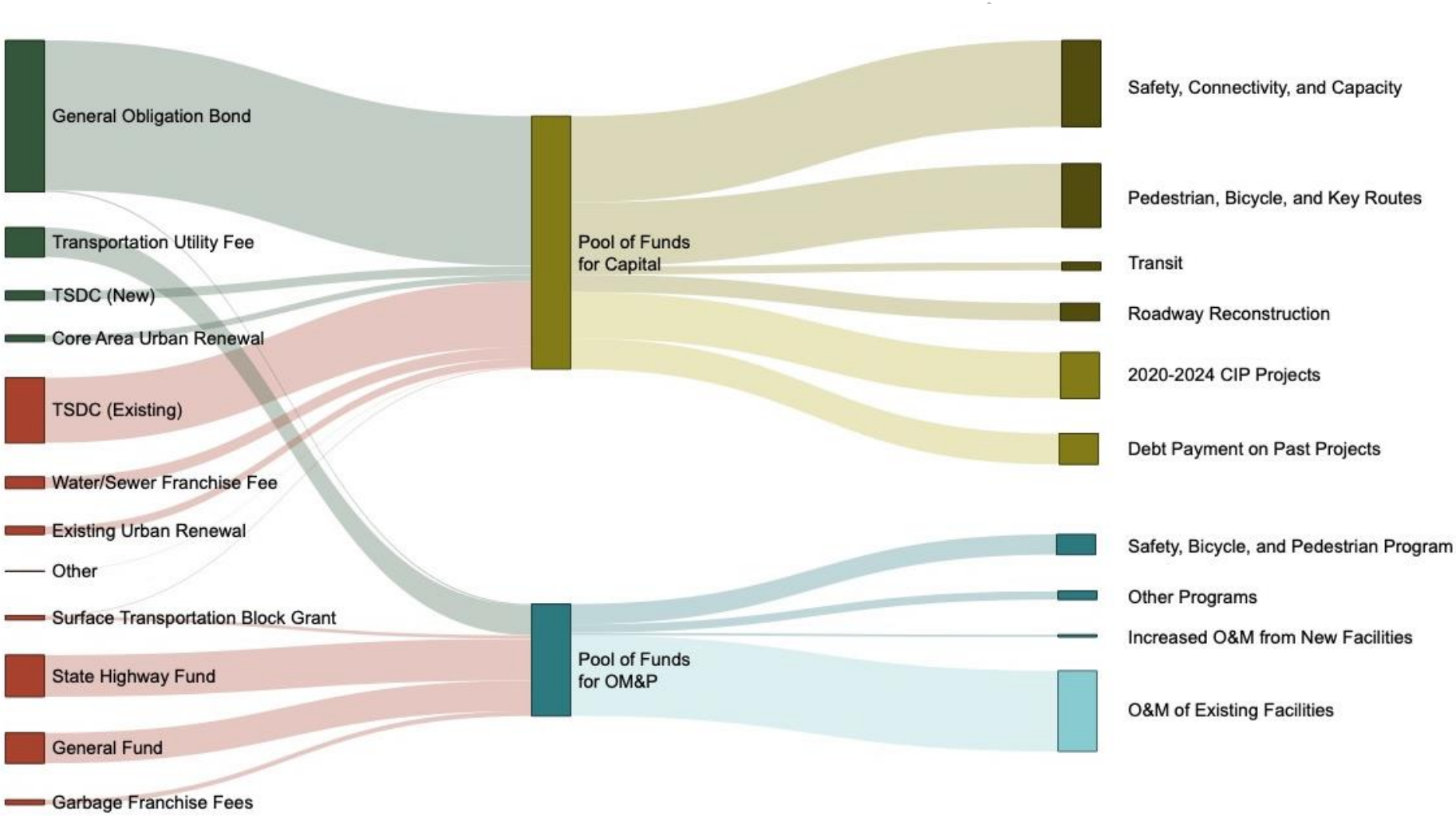
[7] These supplemental funding sources in Option A, including a TSDC rate increase, will not be sufficient to reduce the financial impact of a large general obligation bond.

[8] GO bond dollars would fund the capital components of programs (such as sidewalk infill, safety improvements, the purchase of parking meters, etc.).

green. Each funding source is allocated between the “Pool of funds for Capital Projects” and the “Pool of funds for OM&P” (middle column) consistent with the assumptions and requirements for that source. The “Pool of funds for Capital Projects” and the “Pool of funds for OM&P” are allocated to project and program categories based on the near-term project list and the recommended program allocations[9] from Chapter 4 (right column). The total funding potential (all bars in the left column) matches the total cost of priority projects / OM&P (all bars in the right column). Note that the figures show the portion of existing funding sources that is allocated towards existing debt obligations and the 2020-2024 CIP as well as the portions that are available to fund new projects.

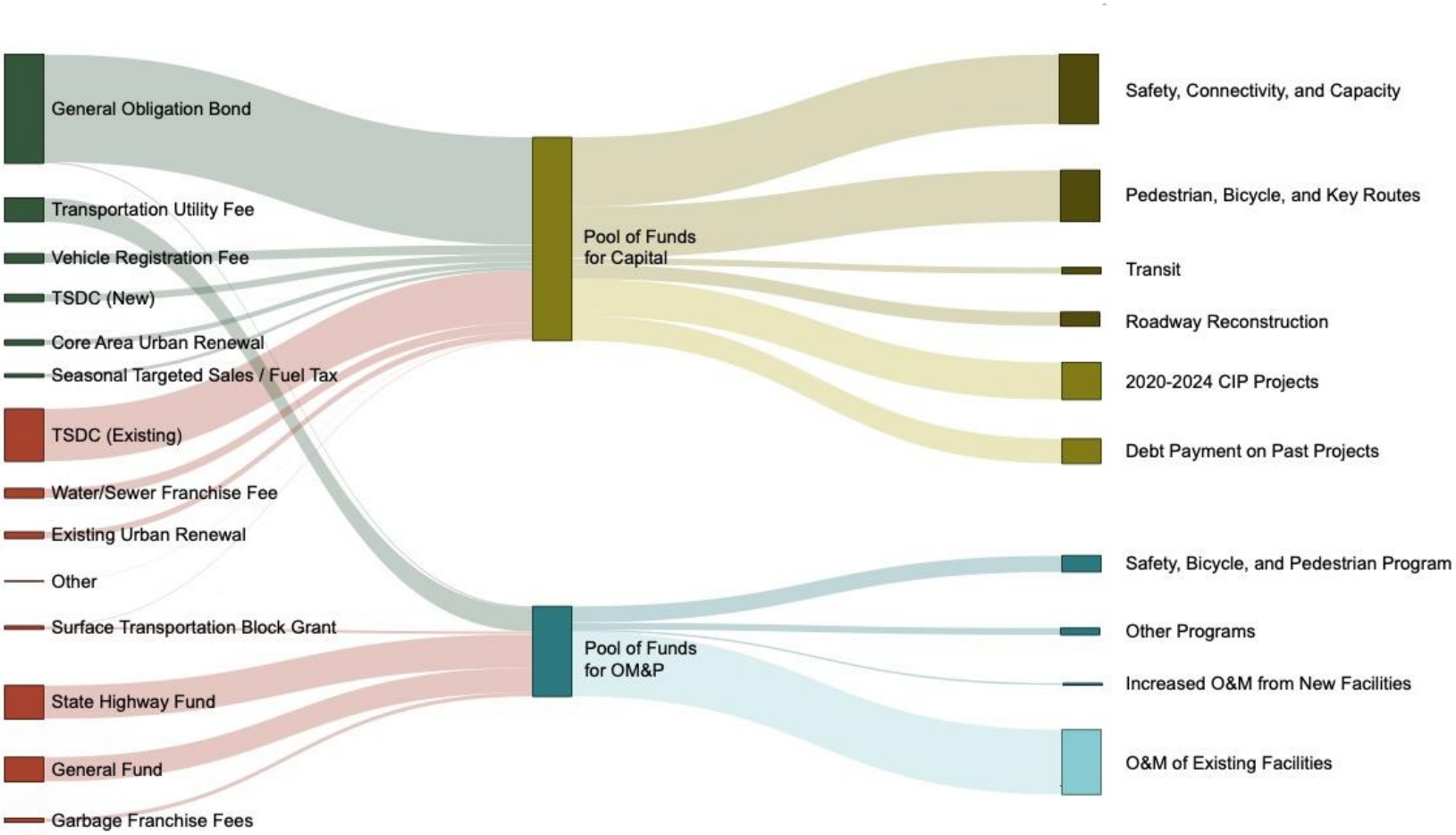
[9] The near-term action plan assumes the following for OM&P: 10 years of costs for “O&M of Existing Facilities,” five years of costs for “Increased O&M from New Facilities,” eight years of costs for “Safety, Bike, and Pedestrian Improvements,” and eight years of costs for “Other Programs.”

Figure 1. Diagram of Near-term Funding Plan (Option A - Preferred), FY Ending 2021–2030



Source: Calculations by ECONorthwest.

Figure 2. Diagram of Near-term Funding Plan (Option B), FY Ending 2021–2030



Source: Calculations by ECONorthwest.

Appendix B. Funding Strategy Analysis and Methods

This appendix presents additional details of the assumptions and methodology used to develop the funding strategy presented in Chapter 5 of Bend's Transportation Plan.

Summary of Analysis

The approach to developing the funding strategy included:

- Worked with consulting teams and staff from relevant State, regional, and local agencies to discuss financials, transportation services, and funding plans and policies.
- Reviewed existing data and previous studies, such as: City of Bend Adopted Biennial Budgets and financial summaries, the City of Bend's existing Transportation System Plan (TSP), and the City of Bend's existing Capital Improvement Plans (CIP).
- Developed an Initial Funding Assessment (IFA) with a preliminary analysis of funding needs and funding capacity from existing funding tools and potential new / expanded tools. The IFA presented the evaluation of potential new / expanded tools and preliminary funding packages to fund transportation needs.
- Using recommendations outlined in the IFA, refined a funding strategy to (1) consider the costs of needed projects and programs as identified by CTAC, and (2) identify suitable new / expanded funding tools to cover funding needs that exceed the City's current funding capacity.

Analysis of Existing Sources

ECONorthwest worked with City staff to project transportation revenues that could be available from existing funding sources over the 2020–2040 planning horizon. The two forecasts, on subsequent pages, display revenue projections of existing revenue sources. One way of thinking about these projections is that they estimate the amount of revenue available for implementation *if nothing changes in the future* (e.g. no new funding tools, rates of existing tools remain unchanged, etc.). Combined with the estimated capital and OM&P costs, the existing tools inform a funding gap to determine the amount of additional revenue that is needed to implement Bend's transportation system needs over the planning horizon.

Existing funding tools are forecast to generate approximately $544.1 million over the planning period, with approximately $293.7 million (or 54% of the total) available for capital costs and approximately $250.4 million (or 46% of the total) for OM&P costs.

Table 4 presents the revenue projections for capital expenditures and

Table 5 presents the revenue projections for operations, maintenance, and programs (OM&P). In summary, ECONorthwest estimates that on average, existing revenue sources will generate approximately $14.7 million per year for capital needs and approximately $12.5 million per year for OM&P.

Table 4. Forecast of Existing Revenues (2018 dollars) for Capital Projects, FY Ending 2021–2040

FYE	Water / Sewer Franchise Fees [a]	TSDCs (Existing) [b]	Surface Transp. Block Grant [c]	Urban Renewal (Juniper Ridge) [d]	Urban Renewal (Murphy Crossing) [d]	Other [e]	Total
2021	$1,699,400	$9,138,450	-	$0	$0	$466,788	$11,304,638
2022	$1,737,889	$9,138,450	-	$0	$0	$20,000	$10,896,339
2023	$1,777,250	$9,138,450	-	$0	$1,238,679	$20,000	$12,174,379
2024	$1,817,502	$9,138,450	-	$0	$0	$20,000	$10,975,952
2025	$1,858,666	$9,138,450	$242,172	$6,222,457	$0	$20,000	$17,481,745
2026	$1,900,762	$11,685,485	$240,064	$0	$0	$20,000	$13,846,311
2027	$1,943,812	$11,685,485	$237,966	$0	$0	$20,000	$13,887,263
2028	$1,987,837	$11,685,485	$235,885	$0	$0	$20,000	$13,929,207
2029	$2,032,859	$11,685,485	$233,827	$3,482,156	$0	$20,000	$17,454,327
2030	$2,078,900	$11,685,485	$231,781	$0	$2,180,683	$20,000	$16,196,849
2031	$2,125,984	$12,323,436	$229,753	$0	$0	$20,000	$14,699,173
2032	$2,174,135	$12,323,436	$227,751	$0	$0	$20,000	$14,745,322
2033	$2,223,376	$12,323,436	$225,764	$0	$0	$20,000	$14,792,576
2034	$2,273,732	$12,323,436	$262,150	$0	$1,115,473	$20,000	$15,994,791
2035	$2,325,229	$12,323,436	$259,863	$0	-	$20,000	$14,928,528
2036	$2,377,892	$12,402,052	$257,599	-	-	$20,000	$15,057,543
2037	$2,431,748	$12,402,052	$255,349	-	-	$20,000	$15,109,149
2038	$2,486,824	$12,402,052	$253,121	-	-	$20,000	$15,161,997
2039	$2,543,147	$12,402,052	$250,908	-	-	$20,000	$15,216,107
2040	$2,600,746	$12,402,052	$248,716	-	-	$20,000	$15,271,514
20-year Total	**$42,397,690**	**$227,747,115**	**$3,892,669**	**$9,704,613**	**$4,534,835**	**$846,788**	**$289,123,710**
Near-term Total	**$18,834,877**	**$104,119,675**	**$1,421,695**	**$9,704,613**	**$3,419,362**	**$646,788**	**$138,147,010**
Mid-/long-term Total	**$23,562,813**	**$123,627,440**	**$2,470,974**	**$0**	**$1,115,473**	**$200,000**	**$150,976,700**
Average	**$2,119,885**	**$11,387,356**	**$243,292**	**N/A**	**N/A**	**$42,339**	**$14,456,186**

Source: ECONorthwest.

Note: Values are in 2018 dollars and rounded to the dollar. Dashes indicate there is no revenue from that source in that year. Averages only include the years in which the source is generating revenue.

[a] The projection is based on budgeted amounts for 2021 and assumes a 2.3% annual increase in subsequent years to account for population growth. Because water and sewer rates tend to increase over time with inflation, these projections are not discounted for inflation.

[b] Based on estimated new peak hour trip ends at $8,000 per Peak Hour Trip. Total new peak hour trip ends are based on the model results for the 2040 full TSP project list, which includes measures to reduce peak hour vehicle trips. Total growth in trip generation over the 2020-2040 period was allocated to 5-year periods using population projections from Portland State University and converted to an average annual number of new trip ends for each 5-year period. The projection is not discounted for inflation because the TSDC rate ($8,000 per Peak Hour Trip as of January 1, 2020) is annually adjusted based on an established cost index to account for inflation.

[c] The projection is based on ODOT's Long Range Revenue Tables. The City of Bend's share is based on 75% of the allocation to the Bend MPO. Revenues to the City are discounted by 6% to account for a federal funds conversion rate. The projection assumes the full allocation (100%) of Bend's STBG revenue is directed to operations, maintenance, and programs (OM&P) expenses until 2023. In 2024 and onwards, 25% of STBG dollars are allocated to capital expenditures and 75% to OM&P. Values are discounted for inflation.

[d] Revenue estimates for existing urban renewal areas are based on recent financial analysis that indicates the likely borrowing potential for each area and the amount expected to be available to fund new projects. The specific timing and amounts available may differ from these assumptions. Most projects likely to be funded in both urban renewal areas are transportation projects; however, the funding is not guaranteed to be allocated to transportation or to projects in the TSP project list.

[e] Other sources of revenue include rental income, charges for service, loan repayments, investment income, and miscellaneous revenues. The projection is based on the City of Bend's budget for 2021. In year 2022 and onward, $20,000 is assumed to account for some investment income.

Table 5. Forecast of Existing Revenues (2018 dollars) for Operations/Maintenance and Programs, FY Ending 2021–2040

FYE	State Highway Fund [f]	Surface Transportation Block Grant [g]	General Fund [h]	Garbage Franchise Fees [i]	Other [j]	Total
2021	$7,223,540	$745,866	$6,827,281	$814,325	$23,358	$15,634,370
2022	$6,926,661	$739,339	$4,811,358	$807,711	$10,000	$13,295,069
2023	$6,929,584	$732,904	$4,760,147	$801,189	$10,000	$13,233,824
2024	$6,849,913	$484,343	$4,721,647	$794,709	$10,000	$12,860,612
2025	$6,753,939	$480,129	$4,683,530	$788,294	$10,000	$12,715,892
2026	$6,529,922	$475,933	$4,645,546	$781,901	$10,000	$12,443,302
2027	$6,324,384	$471,770	$4,607,838	$775,554	$10,000	$12,189,546
2028	$6,349,822	$467,654	$4,570,531	$769,275	$10,000	$12,167,282
2029	$6,388,840	$463,561	$4,533,412	$763,027	$10,000	$12,158,840
2030	$6,427,217	$459,507	$4,496,612	$756,833	$10,000	$12,150,169
2031	$6,465,148	$455,502	$4,460,251	$750,713	$10,000	$12,141,614
2032	$6,502,388	$451,528	$4,424,140	$744,635	$10,000	$12,132,691
2033	$6,539,140	$524,301	$4,388,401	$738,620	$10,000	$12,200,462
2034	$6,575,188	$519,726	$4,352,875	$732,641	$10,000	$12,190,430
2035	$6,610,737	$515,198	$4,317,685	$726,718	$10,000	$12,180,338
2036	$6,645,595	$510,698	$4,282,692	$720,828	$10,000	$12,169,813
2037	$6,679,970	$506,242	$4,248,019	$714,992	$10,000	$12,159,223
2038	$6,713,693	$501,815	$4,213,545	$709,190	$10,000	$12,148,243
2039	$6,746,972	$497,432	$4,179,391	$703,441	$10,000	$12,137,236
2040	$6,779,655	$493,080	$4,145,452	$697,729	$10,000	$12,125,916
20-year Total	**$132,962,308**	**$10,496,528**	**$91,670,353**	**$15,092,325**	**$213,358**	**$250,434,872**
Near-term Total	**$66,703,822**	**$5,521,006**	**$48,657,902**	**$7,852,818**	**$113,358**	**$128,848,906**
Mid-/long-term Total	**$66,258,486**	**$4,975,522**	**$43,012,451**	**$7,239,507**	**$100,000**	**$121,585,966**
Average	**$6,648,115**	**$524,826**	**$4,583,518**	**$754,616**	**$10,668**	**$12,521,744**

Source: ECONorthwest.

Note: Values are in 2018 dollars and rounded to the dollar.

[f] The projection is based on ODOT's Long Range Revenue Tables, which allocates funds to ODOT, counties, and cities. Bend's share of the revenue allocated to cities is based on City of Bend population as a percent of the total population of all cities in the state as of 2018, based on population estimates from Portland State University (3.1%). Values are discounted for inflation.

[g] The projection is based on ODOT's Long Range Revenue Tables. The City of Bend's share is based on 75% of the allocation to the Bend MPO. Revenues to the City are discounted by 6% to account for a federal funds conversion rate. The projection assumes the full allocation (100%) of Bend's STBG revenue is directed to operations, maintenance, and programs (OM&P) expenses until 2023. In 2024 and onwards, 25% of future allocations goes to capital expenditures and 75% to OM&P. Values are discounted for inflation.

[h] The General Fund Subsidies for fiscal year 2021 include one-time funding to support City Council's 2019-2021 goals to improve neighborhood safety and make investments in street infrastructure. The estimates for 2022 and beyond are based on a previous fiscal policy to dedicate 75% of all franchise fee revenue to Street Maintenance, but actuals will be determined by City Council as part of future goal setting and biennial budgeting processes. Values are discounted for inflation.

[i] The projection is based on historical revenues received in Bend from this source, increasing by 2.3% to account for population growth each year prior to being discounted for inflation. (Garbage service rates historically have not increased with inflation.)

[j] Other sources of revenue include licenses and permits, charges for services, investment income, and other miscellaneous revenues. The projection is based on the City of Bend's budget for 2021. In year 2022 and onward, $10,000 is assumed to account for some investment income.

Analysis of New / Expanded Funding Tools

The analysis of new funding tools and potentially expandable existing funding tools provide the City with options to generate new revenue over the planning horizon. The preferred new / expanded tools do not include project-specific tools or potential grants; these types of tools are desirable when available and should be pursued, but they are too specific and uncertain to be factored into Bend's overall funding strategy.

The evaluation of new / expanded tools looked at the dimensions of equity, political acceptability, efficiency, legality, and magnitude of funding potential. It assessed funding potential using a range of levy rates, calibrated for reasonableness to address the BTP funding gap, after revenues of existing sources was factored into the equation.

Table 6. Forecast of New Revenues (2018 dollars) for Capital Projects, FY ending 2021–2040

FYE	Vehicle Registration Fee [k]	Seasonal Fuel Tax [l]	Seasonal Food and Beverage Tax [m]	City-wide Transp. SDC (Rate Increase) [n]	Urban Renewal (Core Area) [o]	General Obligation Bond (high-end est.) [p]
2021	-	-	-	-	-	$250,000,000
2022	-	-	-	-	-	-
2023	-	-	-	-	$1,300,000	-
2024	-	-	-	-	$1,300,000	-
2025	-	-	-	-	$1,300,000	-
2026	$3,818,929	$1,435,733	$4,271,230	$2,921,371	$1,300,000	-
2027	$3,773,187	$1,392,540	$4,367,968	$2,921,371	$1,300,000	-
2028	$3,728,071	$1,350,674	$4,466,896	$2,921,371	$1,300,000	-
2029	$3,683,401	$1,310,034	$4,568,065	$2,921,371	$1,300,000	-
2030	$3,639,282	$1,270,622	$4,671,526	$2,921,371	$1,300,000	-
2031	$3,595,803	$1,232,435	$4,777,329	$3,080,859	$1,100,000	-
2032	$3,552,809	$1,195,383	$4,885,529	$3,080,859	$1,100,000	-
2033	$3,510,393	$1,159,466	$4,996,180	$3,080,859	$1,100,000	-
2034	$3,468,422	$1,124,609	$5,109,337	$3,080,859	$1,100,000	-
2035	$3,426,992	$1,090,812	$5,225,056	$3,080,859	$1,100,000	-
2036	$3,385,987	$1,058,009	$5,343,397	$3,100,513	$1,100,000	-
2037	$3,345,502	$1,026,201	$5,464,417	$3,100,513	$1,100,000	$250,000,000
2038	$3,305,437	$995,330	$5,588,179	$3,100,513	$1,100,000	-
2039	$3,265,883	$965,397	$5,714,744	$3,100,513	$1,100,000	-
2040	$3,226,754	$936,351	$5,844,175	$3,100,513	$1,100,000	-
20-year Total	**$52,726,852**	**$17,543,596**	**$75,294,028**	**$45,513,715**	**$21,400,000**	**$500,000,000**
Near-term Total	**$18,642,870**	**$6,759,603**	**$22,345,685**	**$14,606,855**	**$10,400,000**	**$250,000,000**
Mid-/long-term Total	**$34,083,982**	**$10,783,993**	**$52,948,343**	**$30,906,860**	**$11,000,000**	**$250,000,000**
Average	**$3,515,123**	**$1,169,573**	**$5,019,602**	**$3,034,248**	**$1,188,889**	**N/A**

Source: ECONorthwest.

Note: Values are in 2018 dollars and rounded to the dollar. Dashes indicate there is no revenue from that source in that year. Averages only include the years in which the source is generating revenue.

[k] The vehicle registration fee (VRF) can only be levied at the county level; statute dictates that county VRF revenue must be shared with cities (cities receive 40% of total revenue and the county receives 60%). The projection is based on a flat rate of $56 per year —the maximum rate currently allowed under statute—per registered vehicle in Deschutes County (using registration data from the Oregon DMV). To estimate revenue allocated to the City of Bend (out of the total share of revenue allocated to cities), ECONorthwest used a factor of 74%, which is based on Bend's share of registered vehicles of total registered vehicles in Deschutes County cities (US Census Bureau, ACS). ECONorthwest assumed the number of registered vehicles county-wide would grow by 1.9% based on the rate of population growth in Deschutes County for 2015-2035 (source: Portland State University's Population Research Center). The value of the fee was discounted for inflation as the rate is not indexed to inflation and does not automatically adjust over time. The fee is assumed to start in year 6 to allow time to build support among the other jurisdictions, including allowing time to update their transportation system plans to identify needed projects.

[l] The projection is based on a seasonally-adjusted flat rate per gallon of fuel (gasoline and diesel) sold. ODOT provided the fuel volume data (gallons sold in Bend per month). The flat rates are 1 cent in November through January (off season); 3 cents in March, April, May, and October (shoulder season); and 5 cents in June through September (peak season). The volume of fuel sold per year and the rates were assumed to remain constant over time. Estimates were discounted for inflation to reflect the fact that the rate is not assumed to automatically adjust with inflation over time.

[m] The projection is based on a 5% rate per dollar spent on prepared food and beverage applied during June, July, August, and September. Estimates of spending on prepared food and beverage are based on City of Bend sales data by 2-digit NAICS code and statewide data on the share of spending in that NAICS code dedicated to prepared food and non-alcoholic beverages (to overcome data availability limitations) using data from the 2012 Economic Census (inflated to 2018 dollars and adjusted for estimated population growth from 2012-2018). Spending on prepared food and beverages subject to the tax was assumed to increase with population growth at a rate of 2.3%. In the absence of reliable data on food and beverage expenditures by month, the projection assumes that one-third (four months out of 12) of the projected annual food and beverage spending will be subject to the tax. The estimates were not discounted for inflation since the cost of prepared food and beverages that are the basis for the tax is assumed to rise with inflation.

[n] Based on total trip generation over the 2020-2040 period, allocated to 5-year periods based on projected population growth in each 5-year period, at $10,000 per Peak Hour Trip. Annual estimated revenue is total estimate revenue at $10,000 per Peak Hour Trip, with revenue generated off $8,000 per Peak Hour Trip (Bend's existing TSDC rate) subtracted. The projection is not discounted for inflation because the TSDC rate is annually adjusted based on an established cost index to account for inflation.

[o] Revenue estimates for a new urban renewal area in the Core are based on preliminary finance plan analysis that is likely to change prior to and/or following adoption of an urban renewal plan for the area. The annual estimate is based on the total funding estimated to be available for transportation projects from 2022 (when the urban renewal area would first begin collecting revenues) through 2030 and from 2031 through 2040, converted to an average annual amount over each period. Note that while the urban renewal area would begin collecting revenues in 2022, it would not generate funding for projects until 2023.

[p] The maximum reasonable revenue potential of a GO bond is based on input from the Funding Work Group. The assumed timing reflects a bond in the near-term and another in the long-term, but the specific timing is unknown.

Table 7. Forecast of New Revenues (2018 dollars) for Operations/Maintenance and Programs, FY Ending 2021–2040

FYE	Transportation Utility Fee [q]
2021	-
2022	$5,412,317
2023	$5,368,615
2024	$5,325,194
2025	$5,282,204
2026	$5,239,365
2027	$5,196,837
2028	$5,154,761
2029	$5,112,897
2030	$5,071,394
2031	$5,030,384
2032	$4,989,657
2033	$4,949,350
2034	$4,909,283
2035	$4,869,595
2036	$4,830,129
2037	$4,791,024
2038	$4,752,143
2039	$4,713,624
2040	$4,675,346
20-year Total	**$95,674,119**
Near-term Total	**$47,163,584**
Mid-/long-term Total	**$48,510,535**
Average	**$5,035,480**

Source: ECONorthwest.

Note: Values are in 2018 dollars and rounded to the dollar.

[q] The actual rate structure for the Transportation Utility Fee will be determined if/when City Council implements the new fee. The projection is based on a flat rate of $10 per household per month and $2 per employee per month. Households were estimated using U.S. Census American Community Survey data and employees were estimated using the US Bureau of Labor Statistic's Quarterly Census of Employment and Wages data. The analysis assumes a growth rate of 2.3% per year, which is based on Bend's forecasted population growth from 2020 to 2040 (source: Portland State University's Population Research Center). Estimates were discounted for inflation, since the rate is not assumed to adjust automatically with inflation over time.