CONNECT 2050

A Long-Range Transportation Plan for Greater Portland, Maine

NOVEMBER 2025

FINAL DRAFT

ACKNOWLEDGMENTS

PROJECT TEAM (GPCOG)

Chris Chop
Andrew Clark
Kristina Egan
Jon Gagne
Diane Girling
Rick Harbison
Becca Hoskins
Maggie Johnson
Ron Landis
Aubrey Miller
Sara Mills-Knapp
Laura Qualey
Kelly Rehberg
Christian Roadman
Lucy Sinclair
Harold Spetla
Cashel Stewart
Shukria Wiar
Hazel Zhang

DESIGN CREDITS

Georgia Brown (graphic design)
Rick Harbison (graphic design)
Scott Whitehouse (illustrations)

PACTS / GPCOG

The Portland Area Comprehensive Transportation System (PACTS) is a federal metropolitan planning organization that coordinates transportation planning and investment decisions with the state, municipalities, and public transportation partners.

In 2020, PACTS became part of the Greater Portland Council of Governments (GPCOG) as approved by the former PACTS Policy Committee and GPCOG General Assembly. PACTS has retained its responsibilities as the region's metropolitan planning organization while GPCOG provides staff support and implements PACTS policies and projects.

GPCOG
GREATER PORTLAND COUNCIL OF GOVERNMENTS

PACTS
PORTLAND AREA COMPREHENSIVE TRANSPORTATION SYSTEM

ABOUT THIS UPDATE

FEDERAL REGULATION requires an MPO's long-range transportation plan be updated periodically; typically, every four or five years. The update of Connect 2045 into Connect 2050 after only three years reflects two key factors: First, the preparation and adoption of Connect 2045 were delayed due to the disruptions caused by the COVID-19 pandemic in 2020 and 2021. Second, when adopting Connect 2045, PACTS established the understanding that the plan's project lists would be updated sooner than required, as the call for projects — though better aligned with federal guidance — was a new process.

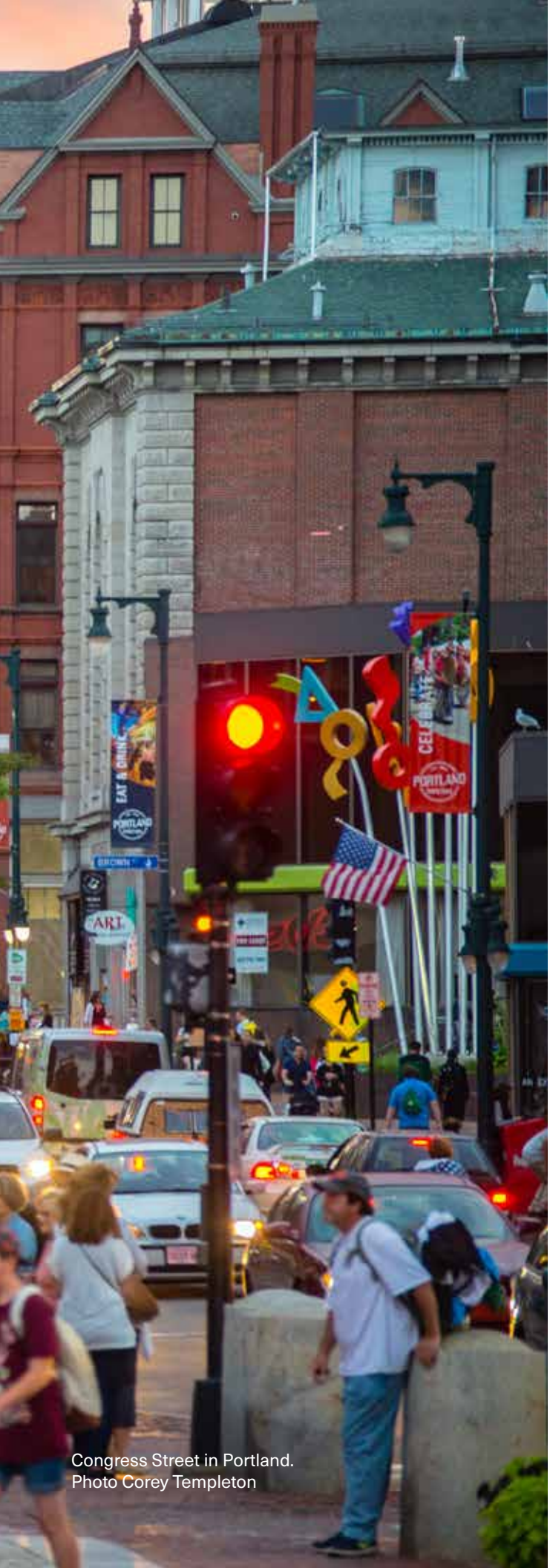
At its June 2024 meeting, PACTS' Executive Board established guidance for staff regarding updates to Connect 2045:

- **Solicit new projects and updates to existing projects.** This allowed PACTS members the opportunity to more fully identify priorities and needs.
- **Maintain the existing vision and goals.** The processes used to develop these in Connect 2045 were ambitious and comprehensive, bringing together extensive stakeholder engagement, public feedback, and input from municipal leadership. The majority of this information remains relevant today, though some supplemental updates have been included.
- **Make administrative updates as necessary,** with a focus on implementation and alignment with the PACTS-MaineDOT MOU. This new agreement brings the potential for a significant shift in some of PACTS' and MaineDOT's internal processes.

Staff have also taken the opportunity to make administrative edits to modernize and clarify. Since Connect 2045 was adopted in December 2022, PACTS studies and planning efforts have advanced or been completed, and new studies have begun. The pandemic has subsided. There are new data products and methods of analysis. A new administration has shifted federal priorities.

So while Connect 2050 articulates a clear vision for the future of the region's transportation system, and the actionable steps we can all take to reach that vision, it builds on a foundation of PACTS Policy Board leadership, stakeholder engagement, public input, and national best practice — continuing the legacy of transportation planning for Greater Portland.


SHOP
PORTLAND
CENTER



Congress Street in Portland.
Photo Corey Templeton

CONTENTS

*Appendices available at the *Connect 2050 project webpage*

CONNECT 2050

Planning Greater Portland's Transportation Future

01

Connect 2050

CONTEXT

WHAT IS A LONG-RANGE TRANSPORTATION PLAN & HOW IS IT DEVELOPED?

FOR THOSE not immersed in it, the world of transportation planning can be a complicated and inaccessible field. This chapter puts everything in context, providing a high-level summary to questions like: “What is a long-range transportation plan?” “What function does it serve?” And, “How was it developed?” We document — in a straightforward way — how we created Connect 2050, everything that went into it (from public opinion, to data, to state and federal requirements, to recent planning efforts), and how we intend to use it over the next four or five years. Ultimately, Connect 2050 is both a shared vision for what we want our transportation system to look like 20 years from now, as well as an action plan for how to get there.

What is PACTS?

The Portland Area Comprehensive Transportation System (PACTS) is the metropolitan planning organization (MPO) for the Greater Portland region. In this role, PACTS coordinates transportation planning and investment decisions with the state and the region's municipalities, and transit providers, influencing the spending of nearly $100 million in regional transportation funding each year.

Primary Responsibilities

All MPOs must produce and periodically update the following work products:

- **Long-Range Transportation Plan**
  Updated every four or five years, this plan establishes a regional vision for transportation decisions and investments and has a time horizon of at least 20 years. Connect 2050 is the region's long-range transportation plan.
- **Transportation Improvement Program (TIP)**
  Updated annually, this is a four-year fiscally constrained list of projects in the region to be completed with Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funds.
- **Unified Planning Work Program (UPWP)**
  Updated every two years, this documents transportation studies and other planning tasks in the region the MPO intends to undertake.

The TIP, UPWP, and many other policies and decisions are informed by the vision and direction of the long-range transportation plan.

Organizational Structure

PACTS is governed by a Policy Board comprised of a diverse mix of local, state, and federal officials, public transportation providers, and other regional representatives.

The Role of an MPO

Metropolitan Planning Organizations (MPOs) are required by the U.S. Department of Transportation in metropolitan regions with populations over 50,000 in order to qualify for federal highway and transit funds.

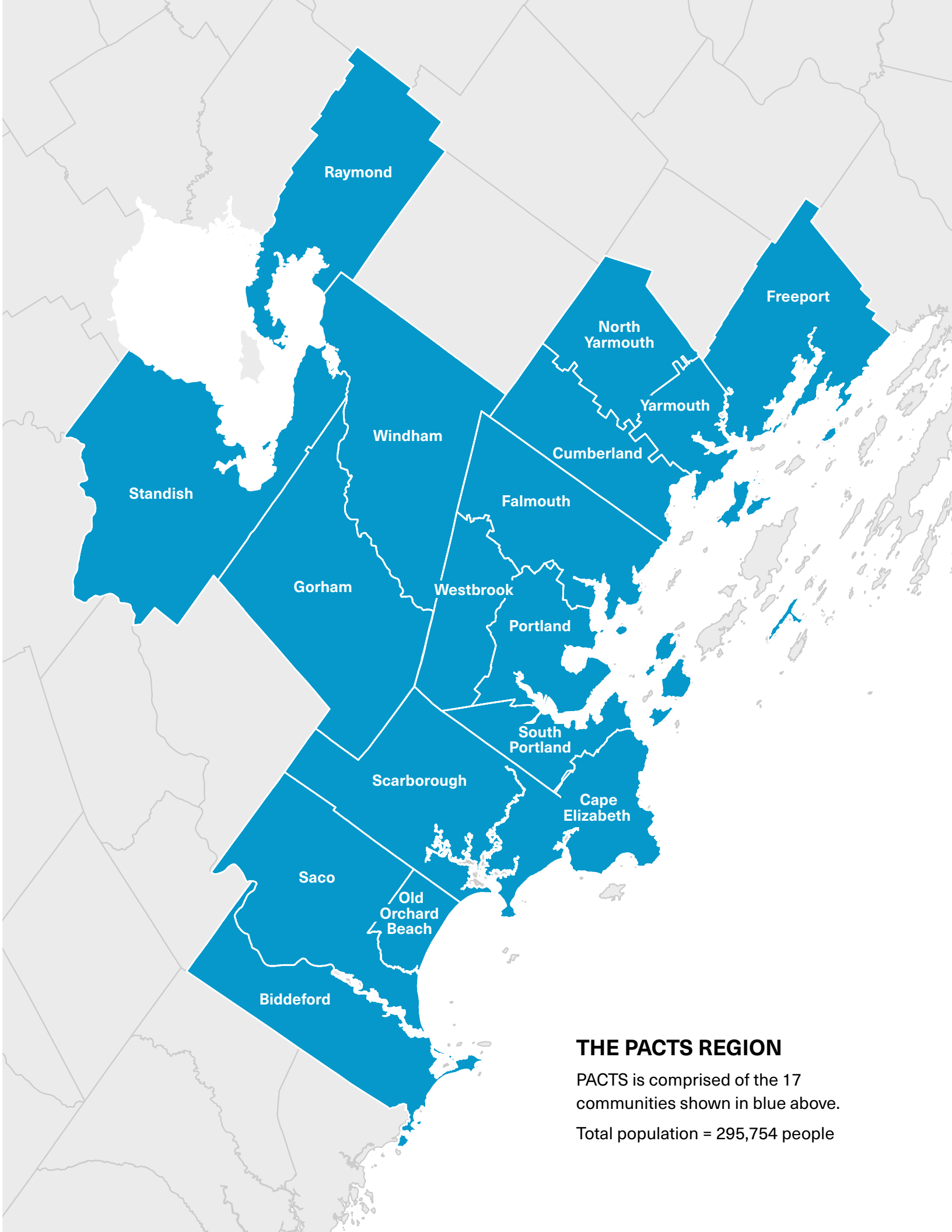
MPOs provide ongoing regional coordination of transportation investment decisions and develop solutions to regional transportation challenges. Among other responsibilities, MPOs maintain a regional transportation vision, conduct transportation studies, allocate federal funds, and engage the public in planning processes.

The Policy Board is the primary decision-making body of PACTS and endorses all policies, projects, and programs, including the long-range transportation plan. The Policy Board is supported by the Executive Board (a subset of the Policy Board) and the Regional Transportation Advisory Committee.

In 2020, PACTS became part of the Greater Portland Council of Governments (GPCOG) as approved by the former PACTS Policy Committee and GPCOG General Assembly. PACTS has retained its responsibilities as the region's metropolitan planning organization while GPCOG provides staff support and implements PACTS policies and projects.

The PACTS Region

The PACTS region includes 17 municipalities in Cumberland and York Counties (see map on next page), representing a population of nearly 300,000 people. Arundel withdrew from PACTS in 2024, reducing the number of member municipalities from 18 to 17. The federally designated urbanized area (adjusted based on local and state input) determines eligible locations for capital investments, such as design, engineering, and construction projects.



THE PACTS REGION

PACTS is comprised of the 17 communities shown in blue above.

Total population = 295,754 people

What is a Long-Range Transportation Plan?

FEDERAL LAW requires that all urbanized areas with populations over 50,000 in the United States develop a long-range transportation plan in order to maintain eligibility for federal programs. The long-range transportation plan serves two major functions. First, it establishes the collective vision and goals of the region. Second, it guides decision-making and prioritizes investments.

Among other requirements, long-range transportation plans must focus on all modes of travel. This includes driving, taking transit, biking, walking, and more; even things like shipping freight. A long-range transportation plan must consider a time horizon of at least 20 years (the horizon of Connect 2050 is 25 years) and include performance measures to track progress toward the plan's goals. It must also be updated every four or five years to account for shifts in national policy, local community issues and concerns, growth and development patterns, travel behavior, technological advances, fluctuations in available funding, and other factors.

Connect 2050 is the long-range transportation plan for Greater Portland. It is a shared, regional vision that guides decision-making and outlines how we intend to invest in the transportation system over the next 25 years. The plan establishes goals and objectives for the region and sets a bold, strategic direction for how we can improve our network of roadways, transit services, and walking and biking facilities to meet our present and future needs.

Connect 2050 sets a bold, strategic direction for how we can improve our network of roadways, transit services, and walking and biking facilities to meet our present and future needs.

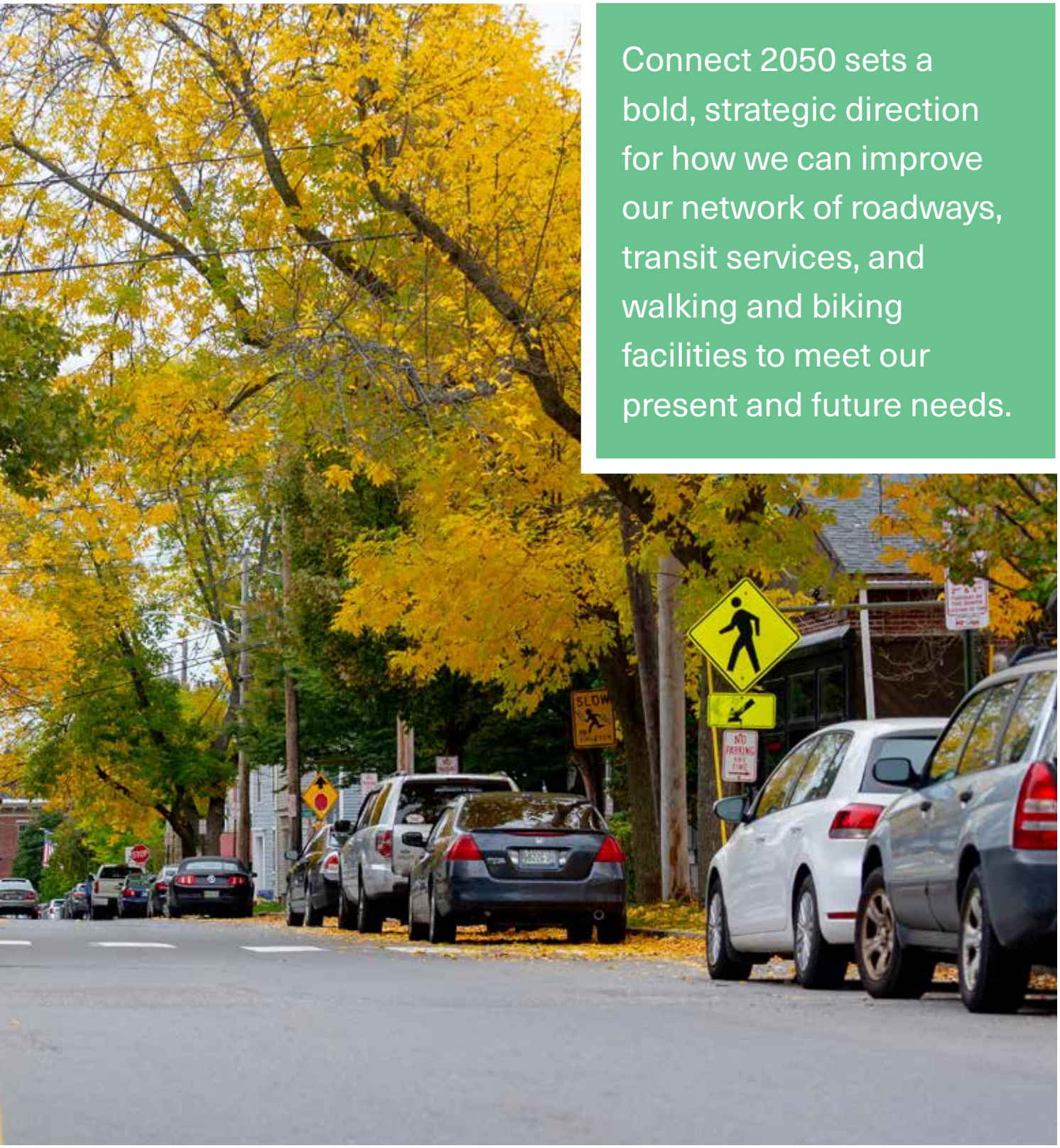


Photo: Corey Templeton

Complementary PACTS Plans and Studies

Vision Zero Greater Portland
is an action plan that combines data-driven insights with community input to develop strategies and actions needed to achieve our goal of zero fatalities and serious injuries on our roadways. Adopted in 2023, the plan serves as a blueprint for how to get to zero deaths and serious injuries by 2045.

Transit Tomorrow
is the region's long-range transit plan. Adopted in 2021, the plan established the regional goals of making transit easier, creating frequent connections, investing in rapid transit, and creating transit-friendly places.

Transit Together
identified opportunities for increased coordination and integration among the region's transit providers. Adopted in 2022, the study directly advances two goals of Transit Tomorrow: making transit easier and creating frequent connections.

Gorham-Westbrook-Portland Rapid Transit Study
advanced Transit Tomorrow's goal of to improving rapid transit in the region. This conceptual planning phase evaluated rapid transit options connecting Gorham, Westbrook, and Portland. The study identified an alignment along Brighton Avenue and Route 25 to be served with bus rapid transit, and in 2024 the project was handed off to Greater Portland Metro for design and implementation.

Reimagining Route 1
is an in-depth assessment of the Route 1 corridor from Biddeford to Freeport. The study is helping to develop a regional vision of Route 1 and an action plan of safety, infrastructure, and placemaking improvements to support pedestrians, bicyclists, transit users, motorists, and freight operators. The study will also identify electrification initiatives and consider additional housing and mixed-use development opportunities. It is anticipated that the study will identify 15-20 prioritized transportation projects.

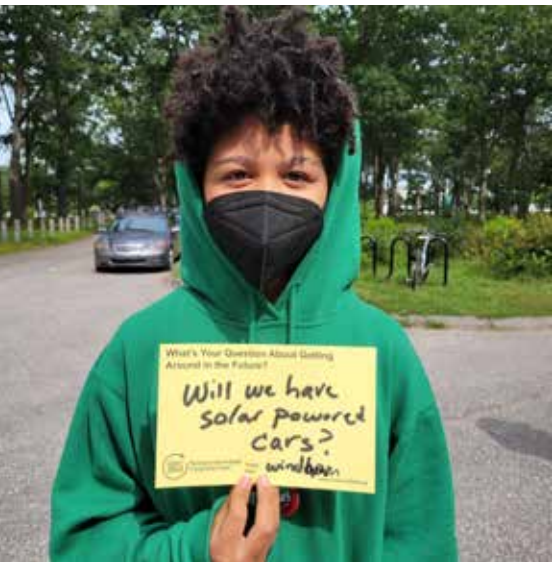
Regional Trail Plan is developing a vision for an interconnected web of trails and multi-use paths, with a goal of making active transportation a safe and convenient option for people who live, work, and play in the Greater Portland region. The final plan will include maps of trails and multi-use paths in the region, including connections to the on-road active transportation system. It will also include a prioritized list of trail projects.

Regional Complete Streets Policy and Design Guidebook
In 2023, PACTS adopted the Regional Complete Streets Policy, requiring all PACTS-funded projects to include Complete Streets principles. In 2025, the Regional Complete Streets Design Guidebook was adopted, giving municipalities resources, street typologies, and design guidance to plan streets that are safe and accessible for everyone, whether walking, biking, taking transit, or driving. Together with MaineDOT's Complete Streets Policy, these tools help communities create safer, more connected, and welcoming streets across Greater Portland.

Public Involvement Plan outlines PACTS' goals, strategies, and procedures for involving the public — particularly underrepresented communities and key stakeholders — in the transportation planning process. Currently being updated, the plan is guided by PACTS' value that broad and robust public involvement will result in transportation investments that better address the needs of those that use the system.

Inclusive Transportation Planning Toolkit also currently being updated, is used by staff, our consultants, and member municipalities and transit agencies for guidance on inclusive transportation planning. The toolkit helps ensure that PACTS planning and decision-making involves people who experience barriers to transportation.

Transportation Access Analysis is evaluating the impacts of transportation investments to ensure a fair distribution of benefits and burdens across the region, stemming from a recommendation in Connect 2045 and federal Civil Rights requirements.



Happy participants of all ages hold up their question about the future of our region's transportation system.

Photos: GPCOG

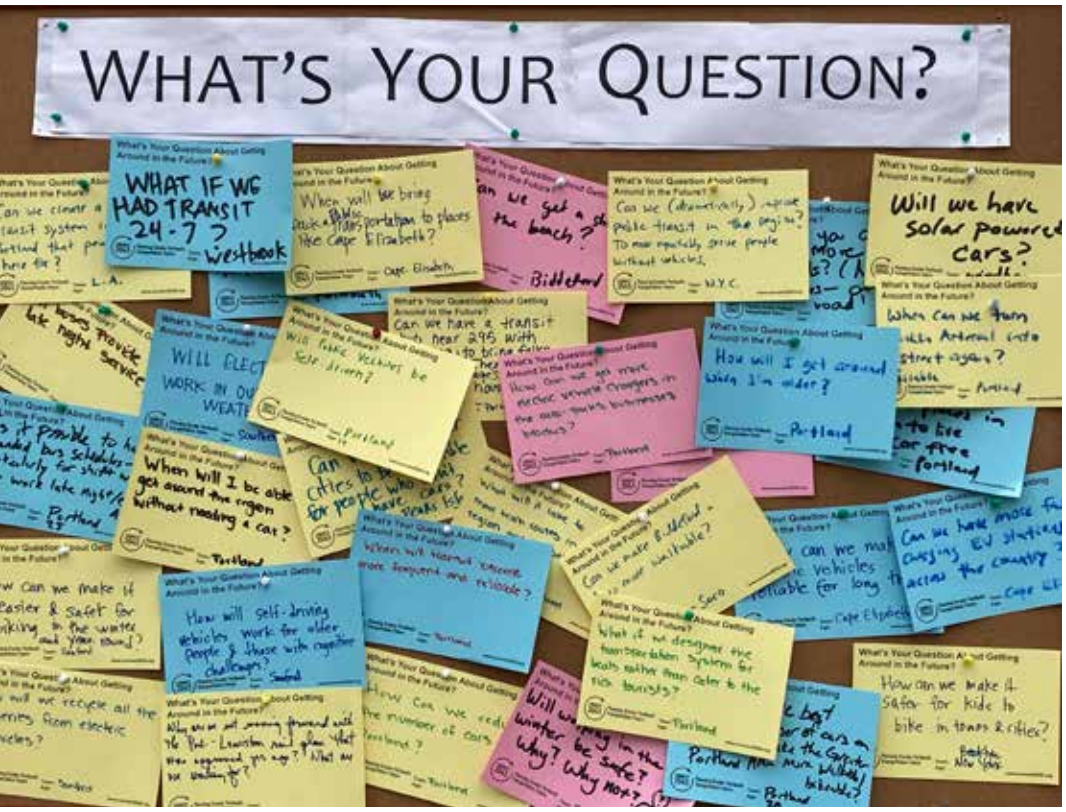
How is the Plan Developed?

DRAWING ON THE STRENGTHS OF CONNECT 2045, Connect 2050 presents a shared vision for the Greater Portland region. Crafting the vision, initially developed for Connect 2045, involved engaging as many people and stakeholder groups as possible, and maintaining a continuous dialogue with PACTS' municipal members, transit agencies, and boards and committees.

In the summer of 2024, PACTS approved an approach to updating Connect 2045:

- **Affirm the current vision and goals rather than rebuilding the plan from scratch.** As the development of Connect 2050 began less than two years after the adoption of Connect 2045, the vision and goals of Connect 2045 remain relevant.
- **Make factual updates to account for the passage of time.** Since Connect 2045 was adopted in December 2022, demographic data and revenue assumptions have changed, new plans and policies have been adopted, and trends and issues have shifted; these components of the plan have been updated.
- **Focus on implementation of the plan in alignment with PACTS' new memorandum of understanding with MaineDOT.** The intent of the new memorandum of understanding is to enhance cooperation between PACTS and MaineDOT to ensure that the investment priorities established in the long-range transportation plan are reflected in the TIP in accordance with federal regulations. Connect 2050 strives to ensure the investment priorities are clear, and that PACTS and MaineDOT can easily use the plan to cooperatively select projects for the TIP.

Connect 2050 is organized into three phases: First, understanding where we are now: *What is the current state of our transportation system?* Second, identifying where we want to go: *What is our shared vision for the future?* Third, figuring out how we get there: *What are the policies, actions, and projects that will help us achieve our vision?*

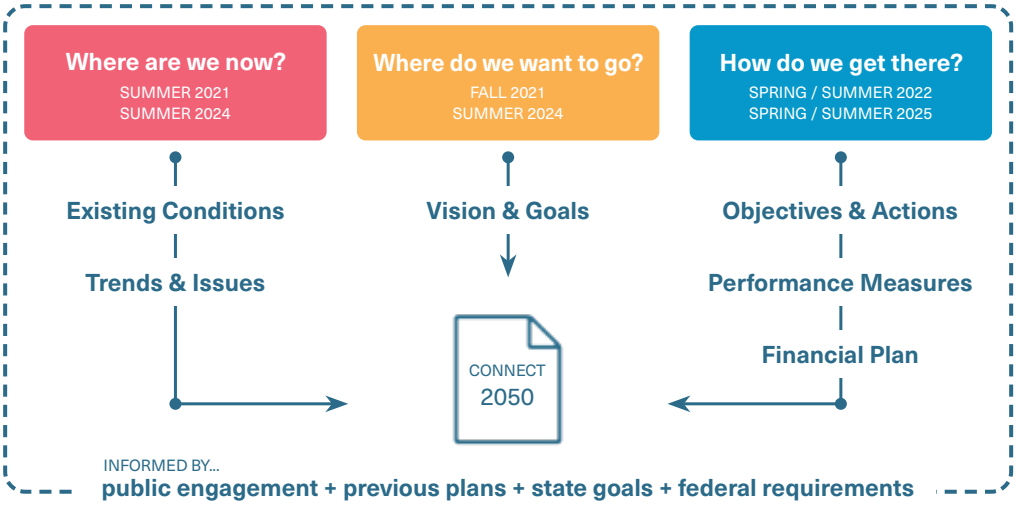


Photos from the Question Campaign

The Connect 2045 team collected hundreds of questions from people all around the region to help develop the plan's vision. **Top left**: A bulletin board with dozens of submitted questions for others to see. **Top right**: a person holds up their question about frequent transit service to Lewiston. **Bottom left:** The Connect 2045 team set up in downtown Biddeford to collect questions. **Bottom right:** a person holds up their question about the ethics of green energy. Photos: GPCOG

See Appendix A for more information on Connect 2050's public engagement process.

Connect 2045 was developed in three major phases. First, understanding where we are now; second, developing a vision for where we want to go; and third, identifying the policies, actions, and projects needed to get there. Each phase drew on public engagement, previous plans, state goals, and federal requirements. Connect 2050 followed the same three-phase framework, with updates made between 2024 and 2025.



Phase 1: Where Are We Now?

In developing Connect 2045, we evaluated regional demographics and the current state of the transportation system. This effort, combined with input from key stakeholders, forms the backbone of the plan's needs assessment, detailed in Chapter 2. In developing Connect 2050, we updated this information.

Phase 2: Where Do We Want To Go?

Connect 2045 was informed by an extensive public outreach effort, including a "Question Campaign" with over 500 responses and a virtual "Visioning Lab" where the public could share their thoughts and feedback with the Connect 2045 team and each other. The Connect 2050 team supplemented this outreach with a "Pennies and Jars" exercise that helped establish and affirm public priorities, and an online survey to understand regional trends and issues with the transportation system.

Phase 3: How Do We Get There?

The final step was identifying the policies and projects for how we get there. To do this, the Connect 2045 project team met individually with municipalities, transit agencies, and other key stakeholders to discuss specific improvement ideas. A public survey launched in the summer of 2022 received more than 1,000 responses. The feedback from the stakeholder meetings, the survey, and a public workshop held in May 2022 directly informed Connect 2045's objectives, actions, and performance measures.

In the summer of 2022, PACTS launched a call for projects, and received more than 60 proposed projects from the region's municipalities and transit agencies. The projects were evaluated according to Connect 2045's six major goals as well as state and federal policies and guidelines, and included in the plan's fiscally constrained or aspirational project lists.

The fiscally constrained and aspirational project lists of Connect 2050 supplement and update that initial process. PACTS launched a new call for projects in fall of 2024, yielding over 120 project submissions, some of which reaffirm existing project priorities and some of which are completely new.

State Goals & Policies

IN ADDITION TO considering what we heard from the public, and incorporating key elements of recent planning efforts, Connect 2050 is strongly guided by the goals and policies of two key statewide documents: Maine Won't Wait and MaineDOT's Complete Streets Policy.

Maine Won't Wait

In 2024, the State released an update to its climate action plan, Maine Won't Wait, which calls for reducing greenhouse gas emissions 45 percent by 2030 and 80 percent by 2050, reaching 100 percent clean electricity by 2040, and achieving carbon neutrality by 2045. Because transportation accounts for nearly half of Maine's emissions, the plan emphasizes the following strategies:

- Accelerate Maine's transition to light-duty electric and plug-in hybrid electric vehicles
- Accelerate Maine's adoption of zero-emission medium- and heavy-duty vehicles (MHDVs)
- Invest in public, active, and shared transportation
- Improve the resilience of Maine's transportation system

The state is actively funding these priorities and tracking progress. By 2023, more than 50 percent of Maine's electricity came from renewable resources, signaling real progress toward a sustainable future.

Complete Streets

Updated in 2024, MaineDOT's Complete Streets Policy strives to consider the needs of all transportation system users, while factoring in context and project scope in the planning, design, construction, and implementation of projects. The policy now uses the MaineDOT Roadway Context Classifications to guide context-appropriate Complete Streets elements. It also recognizes that accessible pedestrian and bicycle infrastructure such as sidewalks, bike lanes, separated facilities, and transit stops are crucial parts of the system.

Transportation
is responsible for

49%

of Maine's annual greenhouse gas emissions.

Maine Won't Wait,
A Four-Year Climate Action Plan

In November 2024, the Maine Climate Council released an updated climate action plan to continue guiding the state toward cutting emissions by 45% by 2030, 80% by 2050, and achieving carbon neutrality by 2045. The Council, composed of scientists, industry leaders, community stakeholders, and public officials, builds on the original 2019 legislation to advance clean energy, equity, and resilience across Maine.

To meet the state's ambitious emissions-reductions goals, we'll need to drive less; walk, bike, and take public transit more; and transition to electric, hybrid, and alternative fuel vehicles.

Route 1, Saco / Photo: GPCOG

Federal Requirements

CONNECT 2050 is a federally-required document. To maintain regional eligibility for federal programs, the plan must meet certain requirements — in particular, the 10 FAST Act planning factors.

Bipartisan Infrastructure Law

Federal surface transportation funding is currently authorized under the 2021 Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law. The five-year authorization bill, covering 2022 to 2026, is due for renewal beginning in federal fiscal year 2027. Among other requirements, the IIJA and its predecessor, the 2015 Fixing America's Surface Transportation (FAST) Act, identify 10 transportation planning factors (shown to the right) that must be applied to all projects and programs of MPOs, including the long-range transportation plan. While the vision, policies, and projects included in Connect 2050 reflect local and regional priorities, they do so within the context of the 10 planning factors outlined in federal law. To ensure this requirement was met, the planning factors were incorporated into every phase of the plan's development.

The 10 Federal Planning Factors

The FAST Act established 10 planning factors that must be applied to all projects and programs of MPOs. These are:

1. Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
2. Increase the **safety** of the transportation system for motorized and nonmotorized users.
3. Increase the **security** of the transportation system for motorized and nonmotorized users.
4. Increase **accessibility** and **mobility** of people and freight.
5. Protect and enhance the **environment**, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
6. Enhance the **integration** and **connectivity** of the transportation system, across and between modes, for people and freight.
7. Promote efficient **system management** and operation.
8. Emphasize the **preservation** of the existing transportation system.
9. Improve the **resiliency** and **reliability** of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
10. Enhance **travel** and **tourism**.

02

Connect 2050

WHERE ARE WE NOW?

PART 1: OUR TRANSPORTATION SYSTEM

PART 2: TRENDS & ISSUES

EVERY PLAN presents a snapshot in time and reflects the moment it is in. The first step in the process, therefore, is to have a full understanding of where we have been and where we are now. To ask questions like: "In what areas does our transportation system excel?" And, "In what ways can it serve us better?"

We also need to anticipate where we are headed. "How is the region growing and changing?" And, "What are the trends and issues likely to impact the transportation system in the future?"

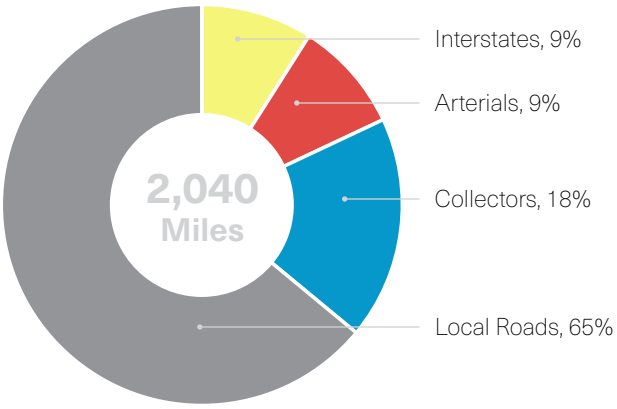
This chapter is split into two sections. Part 1 summarizes the state of the system across the Greater Portland region as it exists today. Part 2 discusses the trends and issues that are likely to impact the transportation system in the years ahead.

PART 1:

OUR TRANSPORTATION SYSTEM

The Road Network

IN THE PACTS REGION there are approximately 2,040 miles of publicly-maintained roads. Of these, 719 miles (35 percent) are interstates, arterials, and collector roads that MaineDOT, Maine Turnpike Authority, and PACTS are tasked with maintaining and improving. The remaining 1,321 miles (65 percent) are local roads maintained by the municipalities.



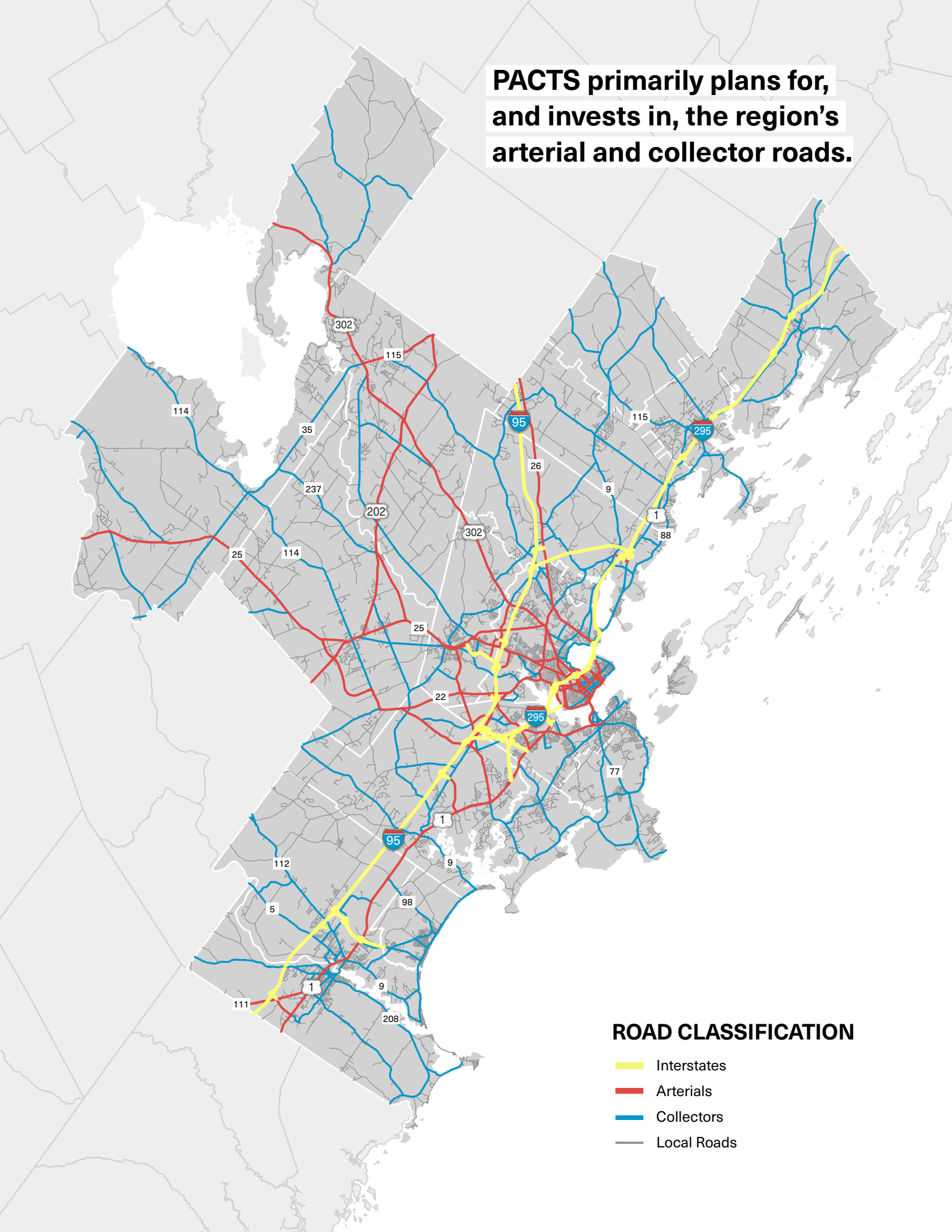
Road Classification in the PACTS Region
Although collector, arterial, and interstate roadways represent roughly 1/3 of total miles, they carry the majority of vehicle traffic.

Road Classification

Roadways are classified based on the federal functional classification system, using established guidelines to determine how roads are planned and engineered. A road's classification helps inform speed limits, design, and accessibility, among other considerations.

- **Interstates** are designed for high-speeds, long-distance travel. Interstates in the region include I-95 (under the jurisdiction of the Maine Turnpike Authority) and I-295 (under the jurisdiction of the MaineDOT). There are 176 miles of interstate to maintain in the region.
- **Arterials** are the main routes connecting cities and towns. They often have limited access from adjacent roads and driveways, and provide the fastest, most direct method of travel — though speed limits are typically lower in urban areas. There are 175 miles of arterials in the region. Although it varies by location, responsibility for maintaining arterial roads is shared between MaineDOT, PACTS, and the municipalities.
- **Collectors** link smaller towns, villages, neighborhoods, and arterial roads. There are 368 miles of collector roads in the region. Similar to arterials, responsibility for maintaining collector roads is shared between MaineDOT, PACTS, and the municipalities, depending on the location.
- **Local Roads** include neighborhood streets and low-traffic rural roads, connecting to collector and arterial roads and typically not used for thru-traffic. In the PACTS region, there are 1,321 miles of local roads, which are maintained by municipalities.

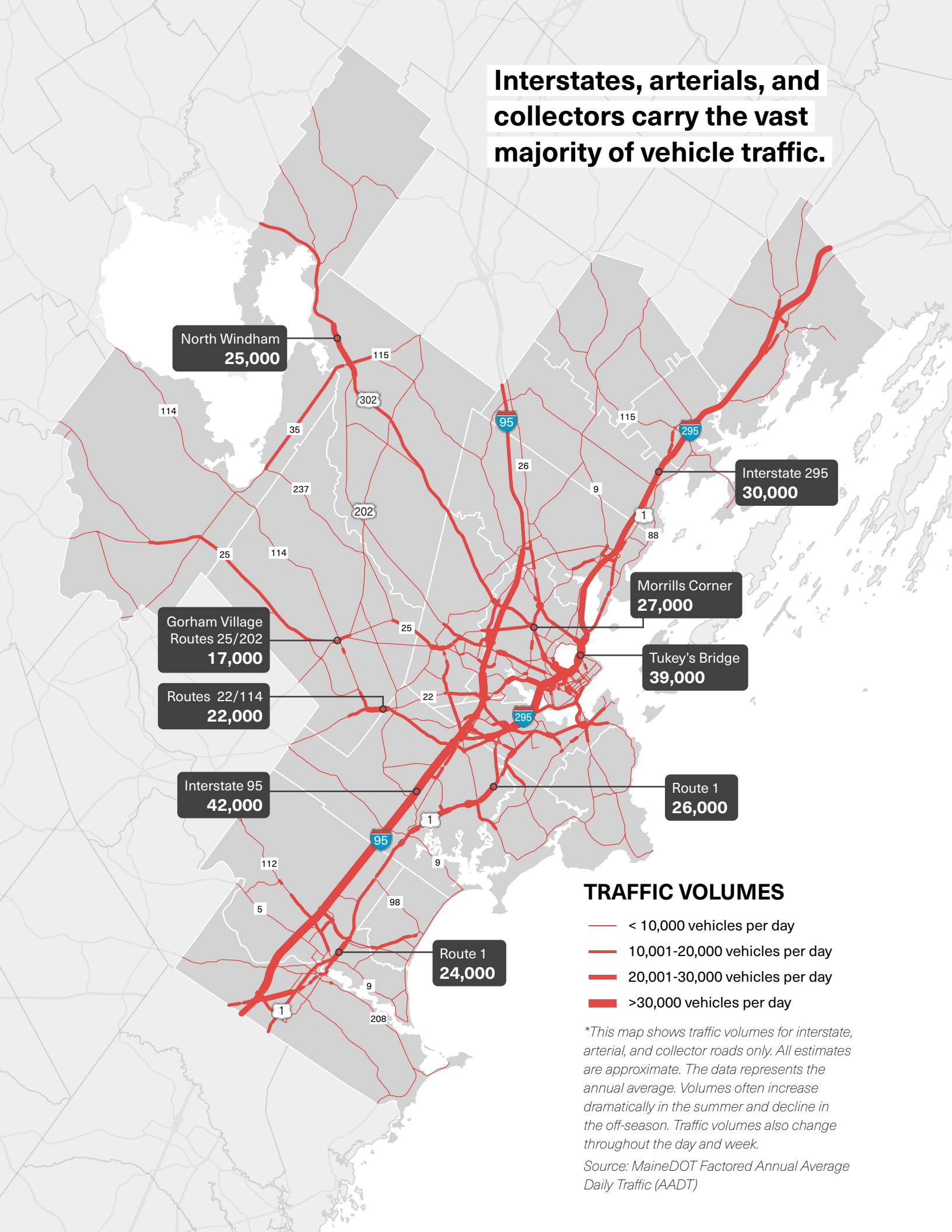
PACTS primarily plans for, and invests in, the region's arterial and collector roads.



ROAD CLASSIFICATION

- Interstates
- Arterials
- Collectors
- Local Roads

Interstates, arterials, and collectors carry the vast majority of vehicle traffic.



TRAFFIC VOLUMES

- < 10,000 vehicles per day
- 10,001-20,000 vehicles per day
- 20,001-30,000 vehicles per day
- >30,000 vehicles per day

**This map shows traffic volumes for interstate, arterial, and collector roads only. All estimates are approximate. The data represents the annual average. Volumes often increase dramatically in the summer and decline in the off-season. Traffic volumes also change throughout the day and week.*

Source: MaineDOT Factored Annual Average Daily Traffic (AADT)

Traffic Volumes

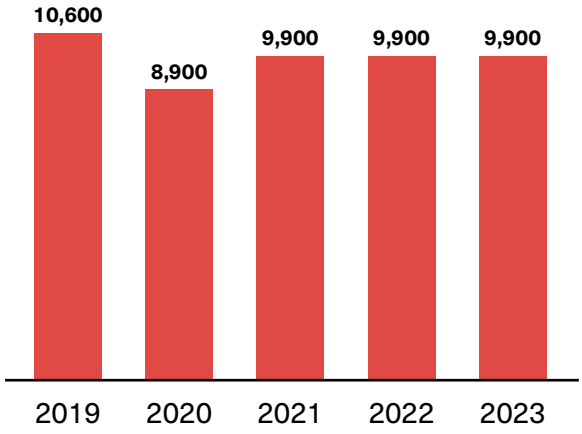
Traffic volumes generally match the hierarchy of the federal functional classification system of interstates, arterials, collectors, and local roads. As the map on the previous page shows, traffic volumes are highest on interstates and arterials where the annual average of vehicles per day often ranges between 20,000 to 30,000 or more. In particular, Interstate 95 from Biddeford to Portland and Interstate 295 from Freeport to Portland experience the most vehicle traffic in the region. Traffic volumes are also highest at major chokepoints, or bottlenecks, in the road network. For example, Morrills Corner in Portland, Route 1 in Saco, and Route 302 in Windham all experience high levels of traffic.

Traffic Volume Trends

While the map on the previous page shows average daily traffic volumes (the total volume of vehicle traffic on a road per year divided by 365 days), traffic is never static. Here in Maine, it often increases substantially in the summer and decreases in the off-season. Likewise, volumes change throughout the day and week. Additionally, global factors such as the strength of the economy and gas prices can impact traffic volumes.

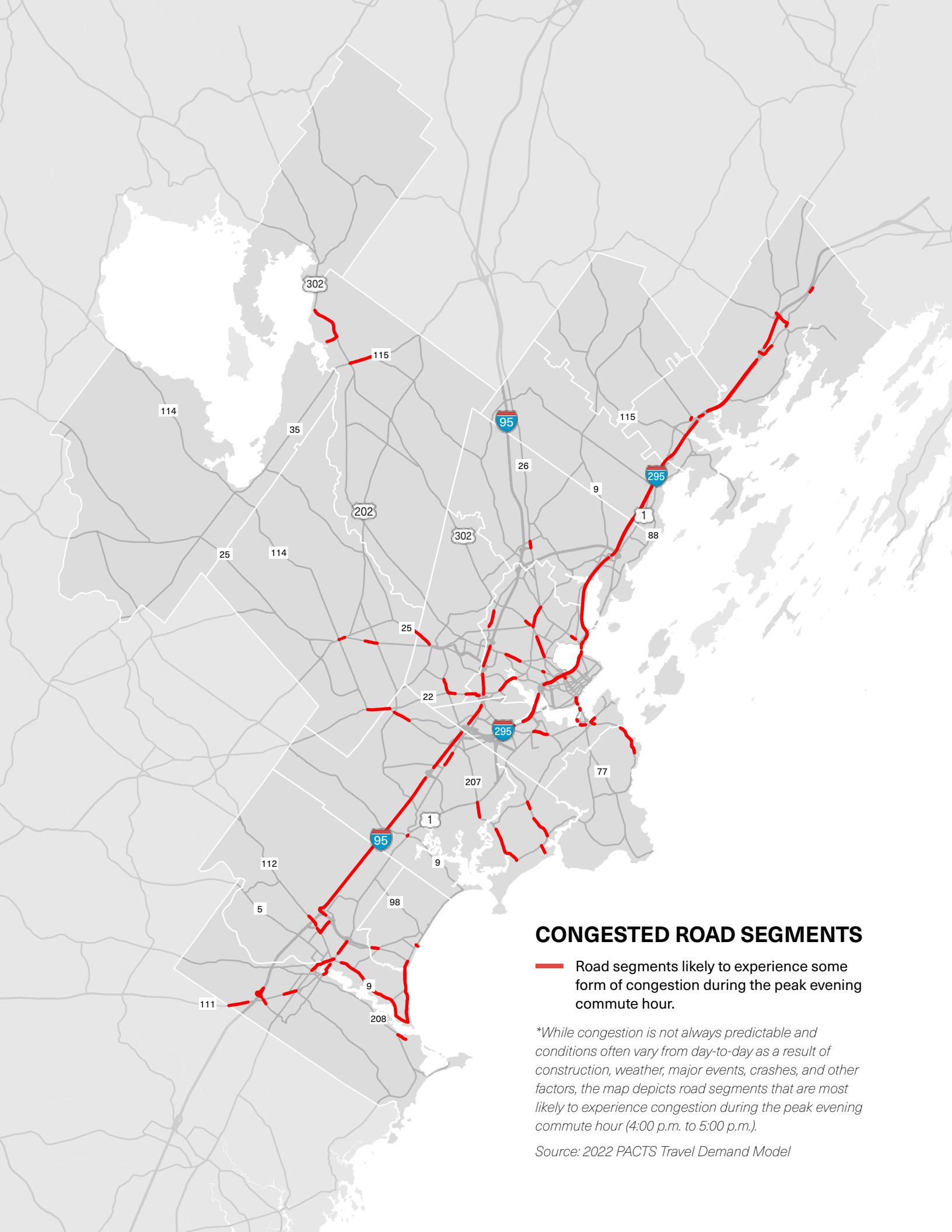
One trend that has emerged since the COVID-19 pandemic is a change in commute patterns. Rush-hour traffic is now spread more throughout the day, and peak commute hour has shifted to later in the morning. This is largely attributed to a newfound ability among many to work from home as well as increasingly flexible work arrangements.

For example, someone may start their workday at home, take a short break to take their kids to childcare, then make their way to the office later in the morning. For someone else, a flexible schedule may mean they work from home two-to-three days a week and commute to work on the other days. These small changes can add up to noticeable differences in traffic patterns and congestion. Whether they remain lasting trends will likely depend on the extent to which remote work remains commonplace.



Traffic Volume Trends

The graph above shows the region's total annual vehicle miles traveled per capita from 2019 to 2023. The amount has largely returned to pre-pandemic levels and is holding steady. However, it is PACTS' goal to cut the region's VMT per capita in half by 2050.



CONGESTED ROAD SEGMENTS

Road segments likely to experience some form of congestion during the peak evening commute hour.

**While congestion is not always predictable and conditions often vary from day-to-day as a result of construction, weather, major events, crashes, and other factors, the map depicts road segments that are most likely to experience congestion during the peak evening commute hour (4:00 p.m. to 5:00 p.m.).*

Source: 2022 PACTS Travel Demand Model

Congestion

As the number of people living and working in the region continues to increase, so will the demands placed on our transportation system. Congestion occurs when the demand for transportation infrastructure and service exceeds the supply of transportation infrastructure and service.

Some congestion is good. Thriving city, town, and village centers are at the heart of communities, providing healthy local economies and a high quality of life. Eliminating the "hustle and bustle" from these places in the name of congestion reduction is neither realistic nor desirable. On the other hand, excessive congestion — particularly vehicular congestion — leads to poor economic, environmental, and community impacts. It chokes a place of its vibrancy. People start to feel unwelcome, or unsafe. Identifying and intervening in these situations can help avoid undesired outcomes.

Federal regulation requires MPOs to maintain a Congestion Management Process to inform and guide decision making when it comes to identifying and, if necessary, managing congestion. PACTS' Congestion Management Process seeks to reduce travel time delay and improve travel time reliability throughout the region's transportation system, including on the region's interstate, arterial, and collector roadways, the region's bicycle and pedestrian network, and the region's transit network.

Traffic flow is a continuum, ranging from free flowing traffic to total gridlock, so identifying congestion requires the use of specific performance measures to eliminate the guesswork. Once congestion has been identified, the region can determine what, if anything, to do about it.

When evaluating congestion management strategies, it is important to consider:

- A **regional** approach. Congestion in one part of the region has ripple effects throughout the entire region, so the entire region has a role to play in identifying and implementing congestion management strategies.
- A **multimodal** approach. Expanding transit, bicycle and pedestrian, micromobility, and shared ride service and infrastructure may be preferable to expanding infrastructure for single-occupant vehicles.
- A **systems** approach. A narrow focus on eliminating congestion can hinder and harm progress on other regional goals. Congestion management strategies should be carefully selected to help advance each of the region's goals, including building walkable places, increasing community access, reducing climate impacts, and more.

Congestion management strategies have been successfully implemented across the country; for example, installing adaptive traffic signals, converting signalized intersections to roundabouts, leveraging employer-based transportation demand management, installing dedicated bus lanes, and many more. PACTS' Congestion Management Process will evolve as new techniques and national best practices evolve.

Pavement Conditions

Because arterial and collector roads experience so much demand and provide such critical connections, it is essential to keep them in good condition.

According to a 2018 assessment of the pavement condition of the region's collector roads, of the 228 miles evaluated, approximately 11 percent were in poor condition, 9 percent were in very poor condition, and 3 percent were in serious condition. Taken together, 23 percent (53 miles) of collector roads need immediate attention.

MaineDOT collects similar data for arterial roads. An analysis of this data indicates that of the 172 miles of arterial roads evaluated, approximately 7 percent were in unacceptable condition, and 10 percent were in poor condition. Altogether, 17 percent of arterial roads need immediate attention.

Pavement Management

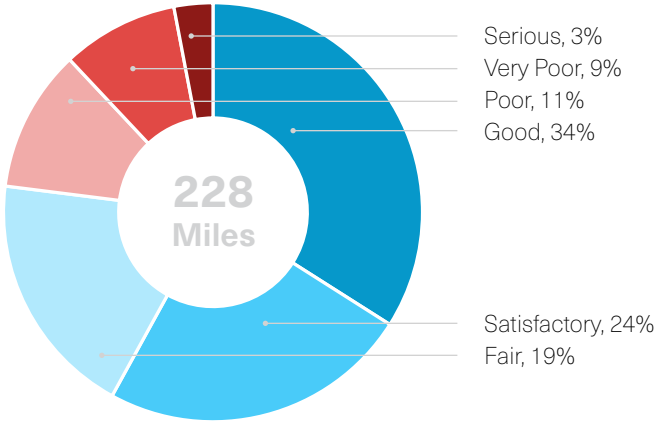
Preventive maintenance of roadways saves money in the long run. A road starts out in excellent condition when it is newly constructed. Midway through its life, a low-cost repair can slow the deterioration of the road. However, if these low-cost preventive maintenance treatments are not made, it takes only a few years for this window of opportunity to pass. Afterwards, the road will need vastly more expensive treatments or a complete rebuild.

Costs of Maintaining the System

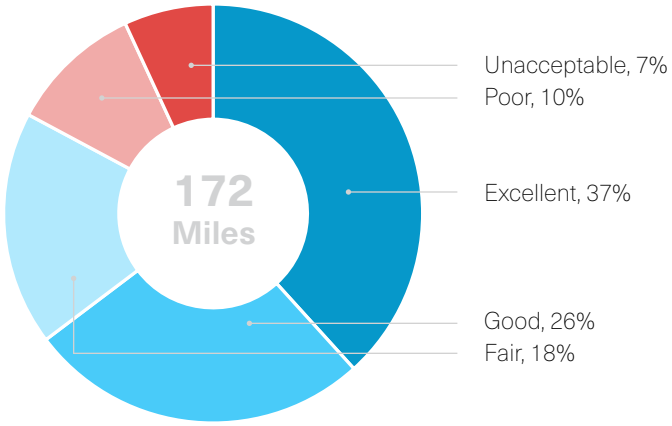
The estimated cost to maintain the region's bridges, arterials, and collectors is about $59 million per year. Local roads (not eligible for PACTS' federal funding), active transportation infrastructure, and public transit also require significant investment. Climate change will further exacerbate these upkeep challenges.

23% of **collector** roads are in poor, very poor, or serious condition.

17% of **arterial** roads are in poor or unacceptable condition.



Collector Road Conditions
In 2018, 23%, or 53 miles, of collector roads were in poor, very poor, or serious condition.



Arterial Road Conditions
Approximately 17%, or 28 miles, of arterial roads are in unacceptable or poor condition.

The bottom line is we are managing a transportation system in decline. It is challenging to maintain what we have, let alone build for the future — yet we must do both. In order to succeed we must repurpose existing infrastructure, raise new revenues, and change how we travel.

We are managing a transportation system in decline.

Balancing Competing Interests

Unlike local roads and interstates, which have relatively straightforward functions, arterial and collector roads need to strike a tricky compromise between multiple competing interests. Arterial and collector roads are asked to balance high demand, and a desire to get places quickly, with maintaining access to important destinations. Moreover, they are tasked with doing so in a way that is safe and accommodates all users and modes (pedestrians, cyclists, public transit, semi-trailer trucks, etc.). In short, arterial and collector roads in urban, village, and sometimes suburban settings are where the "hustle and bustle" happens. For this reason, they are often the most challenging to plan for and design.

Modern Roadway Design

There is a growing movement in our region, and across the country, to rethink the way we've been designing our major roadways. For many years we designed and built roads as though they had one function — to move as many vehicles as quickly as possible. Unfortunately, this type of design is unsafe, presents accessibility challenges (for nearby residents, pedestrians, bicyclists, people with disabilities, and transit riders), and often results in high levels of noise and air pollution. Despite our best efforts, major roadways are also prone to congestion, travel delays, and unreliable travel times that make them unpleasant for all users.

The reality is our roadways can — and should — do much more than just move cars. They can move people on foot, on bikes, and on transit, without hurting vehicular throughput or safety. Our roads can be more than a way to get somewhere else; they can be places, too — public places where people meet, sit and socialize, conduct business, wander about, play, and more.

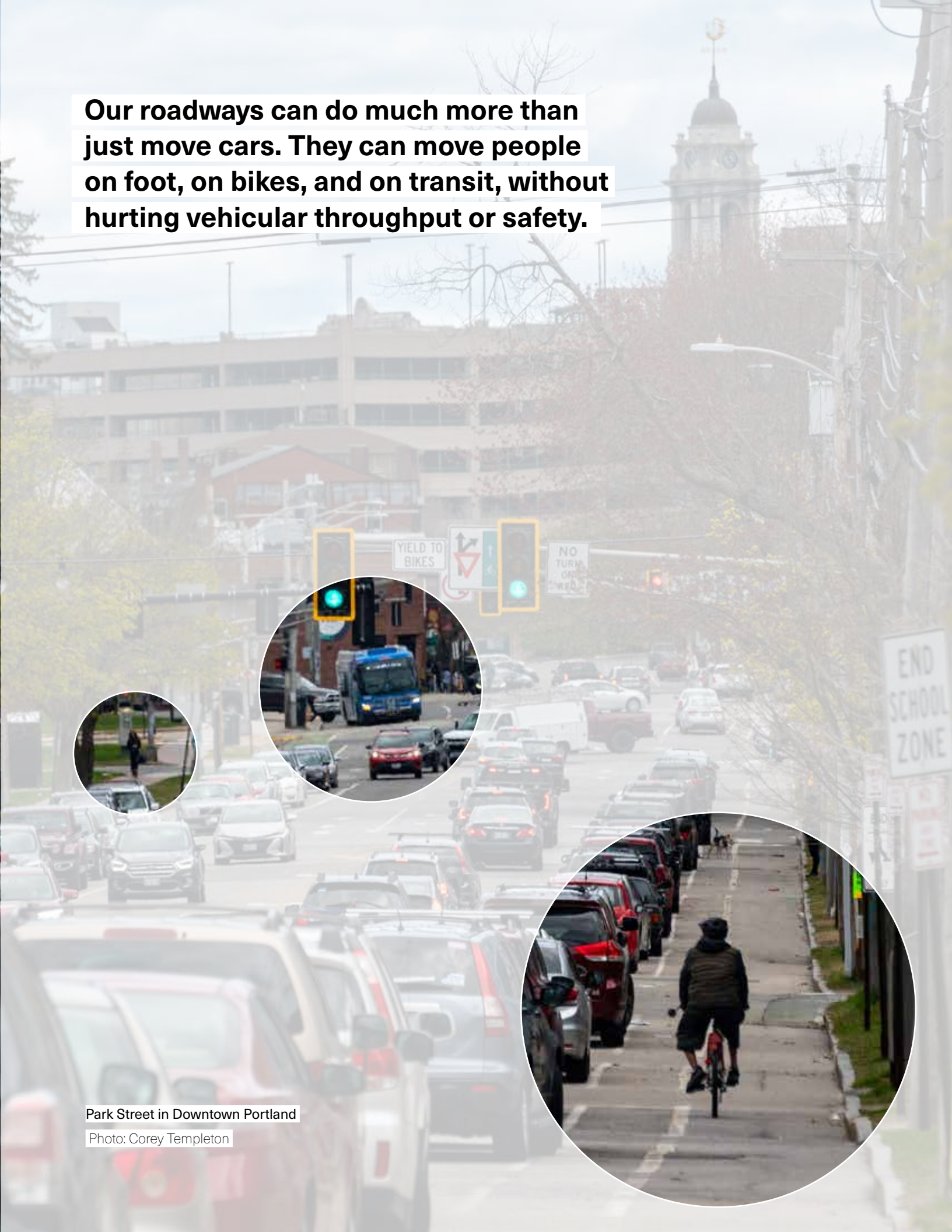
Arterial and collector roads are where the "hustle and bustle" happens. For this reason, they are often the most challenging to plan for and design.

The Federal Highway Administration has acknowledged this shift in approach and recently updated its design standards for roads on the national highway system. The administration now, "encourages the use of flexibility and a context-sensitive approach to consider a full range of project and user needs and the impacts to the community and natural and human environment."[1]

State departments of transportation are taking notice. In 2020, MassDOT added three new "controlling criteria" to its own design guidance, requiring pedestrian and bicycle infrastructure (including transit stop improvements) in the design of new state-run projects. Here in Maine, MaineDOT updated its Complete Streets Policy in 2024. The Department also launched its Village Partnership Initiative in 2022, a new funding program focused on developing "place-making" transportation projects that improve Maine's villages and downtowns.

[1] *Final Rule on Design Standards for Highways.* FHWA, 2022.

Our roadways can do much more than just move cars. They can move people on foot, on bikes, and on transit, without hurting vehicular throughput or safety.



Park Street in Downtown Portland

Photo: Corey Templeton

Photo Corey Templeton

The Bicycle & Pedestrian Network

THE ROAD NETWORK is essentially built-out for vehicles because in most cases we do not have the space, resources, or need to add lanes or build new roads. However, there are many opportunities to expand the region's bicycle and pedestrian network. In fact, to meet the state's ambitious emissions reduction goals we must cultivate more sustainable options like walking, biking, or taking public transit — especially in our urban areas.

Due to growing demand, bicycle and pedestrian facilities have proliferated in recent years. This includes sidewalks and crosswalks, bike lanes, shared use lanes, roads with paved shoulders, multi-use paths, trails, and other amenities. However, substantial gaps remain. Many places in the region are simply inaccessible — and unsafe — for walking and biking.

Active Transportation Planning

Developed in 2025, the PACTS Regional Trail Plan considers how the region's growing networks of existing and proposed multi-use paths and trails connect with each other and with the region's on-road active transportation system. The primary purpose of the plan is to provide a prioritized list of trail corridor recommendations that are poised to help further a more connected and robust on- and off-road transportation system. The Regional Trail Plan utilizes the goals of this plan, Connect 2050, and understands that to reach our region's goals, active transportation infrastructure needs to play a key role.

The result of the plan includes a prioritized list of trail project gaps, generated by an analysis of existing conditions and vetted by regional stakeholders and members of the public. In total, over 50 projects were identified and prioritized across 15 PACTS municipalities. The plan includes conceptual planning for seven of the highest-scoring trail projects, meant to move some of the region's trail priorities closer to implementation.

This work builds off an earlier active transportation plan — Getting There From Here, developed in 2018 — which provided a blueprint for how we can improve walking, biking, and access to public transportation throughout the region. The plan envisioned a future where the region has, "a complete network of accessible trails, paths, ways, and modes serving all people and places, promoting a culture of healthy living and a vibrant economy."

Complete Streets

Complete Streets provide convenient, safe, and intentional access on our roads for all users. Adopting a Complete Streets policy formalizes a community's intent to plan, design, operate, and maintain streets so they are safe for vehicles, pedestrians, cyclists, and transit users, regardless of age or ability.

As each street is unique, there is no singular design prescription for Complete Streets. Context should be used to determine appropriate treatments.

In 2023, PACTS adopted the Regional Complete Streets Policy, which ensures that a Complete Streets approach is used for all projects in the PACTS region.

In 2025, PACTS also adopted a Regional Complete Streets Design Guidebook that contains resources, design guidance, and street typologies for municipalities to consider as they develop Complete Streets designs.

Coupled with MaineDOT's Complete Streets Policy, Complete Streets design considerations are further embedded into projects throughout the region.

Key Bicycle & Pedestrian Facilities

Based on the region's variety of traffic patterns, land use, and distances between destinations, we need a range of context-sensitive bicycle and pedestrian infrastructure. To determine the facility type with the most benefits for each setting, we must consider compatibility with surroundings and spatial limitations. What follows are descriptions of key active transportation facilities.

Protected Bike Lanes

Protected bike lanes have some form of vertical separation between moving vehicle traffic and the bike lane. Examples of separation include plastic posts, bollards, curbs, planters, raised bumps, or on-street parking. Protected bike lanes offer a high amount of protection and are exclusively for people on bikes.

Bike Lanes

Bike lanes are designated bikeways that have stenciled bicycle symbol pavement markings and often have accompanying roadside signs. Bike lanes are designated for exclusive or preferential use by bicycles. They may be located on streets with or without on-street parking.

Paved Shoulders

Paved shoulders are located to the right of the travel lane and delineated by a white pavement stripe. They are not designated specifically for bicycles, but are available for bicycle, walking, and wheeled use and provide room for separation from vehicle traffic. Paved shoulders are located on roads with and without curbing.

Shared Lanes

Shared lanes are travel lanes shared by motorists and bicyclists. They are often used when the roadway is not wide enough to provide a bike lane. "Share the Road" signs are typically placed along roads where a bike lane, or paved shoulder, transitions to a shared lane due to reduced pavement width.

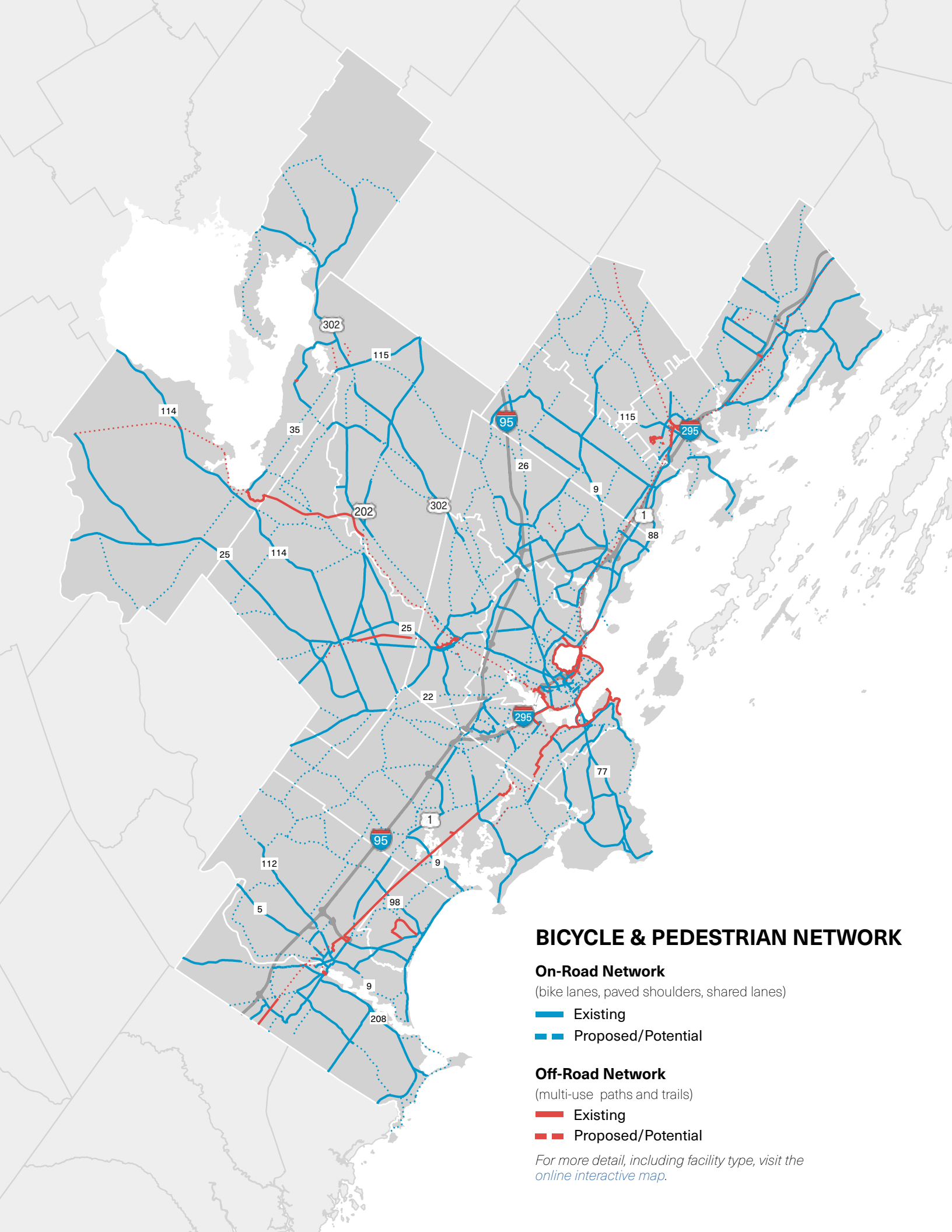
Multi-Use Paths

Multi-use paths are physically separated from vehicle traffic and intended for multiple types of users including bicyclists and pedestrians. They have a firm, compacted surface (paved, stone dust, etc.) that can typically accommodate wheelchair use and road bicycles.

Trails

Trails are intended primarily for pedestrians and mountain bikers. They are distinct from pathways by surface type and width, often with a dirt surface and narrower width. Trails primarily serve recreation purposes, such as loop trails through conservation lands. However, trails can provide an important transportation function when they connect one area to another.

*For additional guidance see the Federal Highway Administration's Bikeway Selection Guide.



BICYCLE & PEDESTRIAN NETWORK

On-Road Network

(bike lanes, paved shoulders, shared lanes)

- Existing
- Proposed/Potential

Off-Road Network

(multi-use paths and trails)

- Existing
- Proposed/Potential

For more detail, including facility type, visit the online interactive map.

Existing and Proposed Network

To track progress and identify gaps, PACTS works with each municipality to maintain a spatial database of key bicycle and pedestrian facilities. The map on the previous page shows the current inventory of existing and proposed facilities. To simplify viewing at the regional scale, it highlights major on-road and off-road facilities. An interactive version provides local detail and breaks out each facility type (e.g., bike lane, paved shoulder, shared lane).

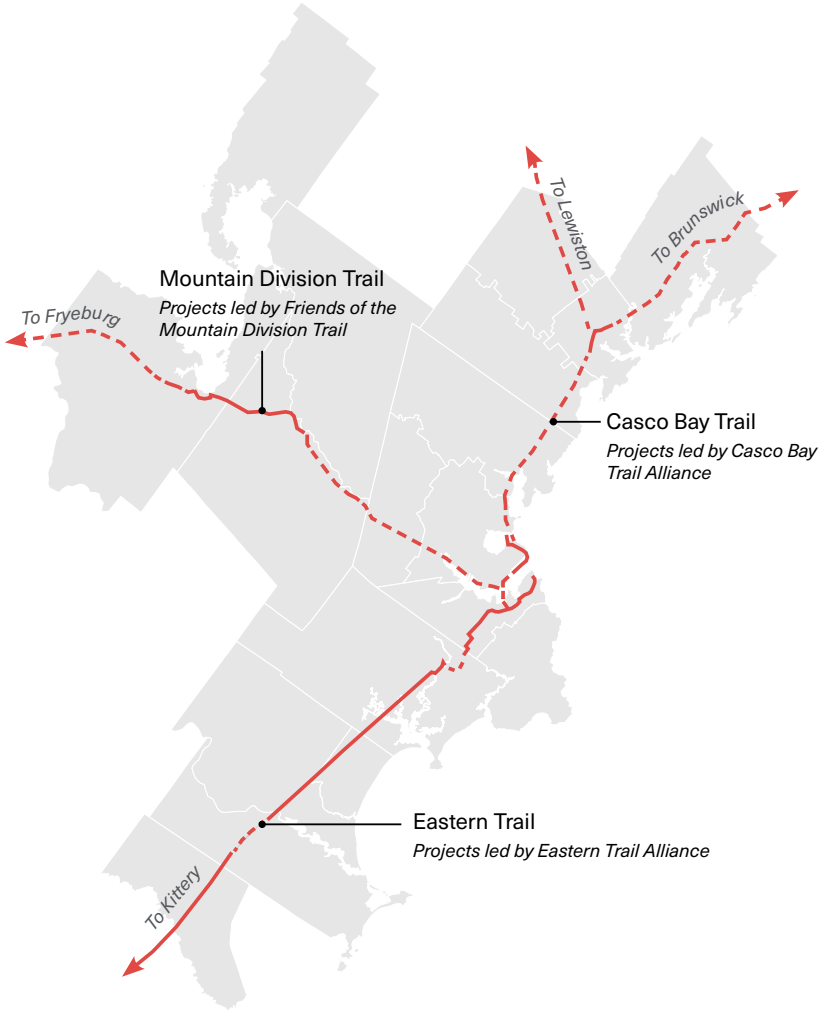
As noted earlier, the region lacks safe and accessible bicycle and pedestrian infrastructure, limiting people's ability to bike to work, let children walk to school, or even take a safe walk. As more dashed lines on the map become solid, what looks like a small change can open up a new lifestyle for many.

Regional Off-Road Routes

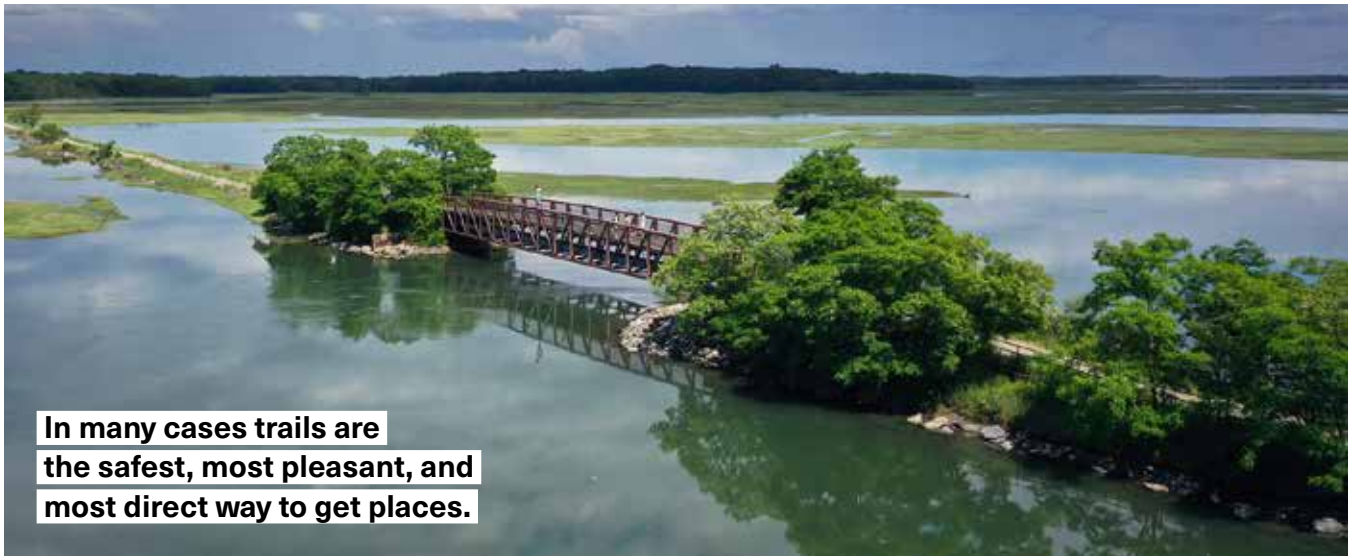
A network of regionally significant on- and off-road active transportation routes is emerging. These initiatives provide recreation opportunities and can also function as transportation corridors, enabling commutes to work or school, trips to the beach, or errands across town.

Several groups are advocating for a regional off-road trail network connecting communities and destinations. The map on this page shows completed (solid red) and proposed (dashed red) segments, along with the lead organization for each.

The proposed Mountain Division and Casco Bay trails would follow rail corridors. In 2021, the Maine Legislature authorized Rail Use Advisory Councils to review future use of these corridors. After a seven-month review, the Mountain Division council recommended converting 31 miles of rail to a paved multi-use trail. In 2023, the Legislature authorized MaineDOT to construct it, and in 2024 MaineDOT published a feasibility study. A similar council recommended a trail along 26.5 miles of the St. Lawrence and Atlantic corridor (the Berlin Subdivision) between Portland and Auburn, envisioned as part of the Casco Bay Trail.



The Vision for a Regional Off-Road Trail Network
A number of groups have organized to advocate for the build out of a regional off-road trail network that would connect multiple communities and key destinations throughout the region.



Trail organizations and land trusts throughout the region are making great strides to both maintain the trails we have and build out a network of new ones. **Top**: Eastern Trail, Scarborough (GPCOG). **Bottom Left**: Fore River Trails in Portland (Corey Templeton). **Center**: Randall Orchard Trail in Standish (Rachelle Curran-Apse). **Bottom Right**: Baxter Woods in Portland (Corey Templeton).

Local Trail Networks

Local, neighborhood-scale trails are a vital transportation resource in Greater Portland that should not be overlooked. Trail organizations and land trusts throughout the region are making great strides to both maintain the trails we have and to build out a network of new ones.

Trails are a key part of a healthy, walkable community. Local trail networks connect individuals with nature, but also to businesses, neighborhoods, schools, and other key destinations. A low-cost option that can go where roads cannot, in many cases trails are the safest, most pleasant, and most direct way to get places. Especially in urban areas, trails are the connective tissue supporting our transportation network and a respite from other more heavily trafficked routes.

City of Portland's
Bike Share Program

In August of 2022, Portland launched Maine's first bike-share program. When fully implemented, the program will offer 200 bikes (including 50 electric bikes) with docking stations and racks widely distributed throughout the City.

Photos: City of Portland, Claire Luning

Electric Bikes

In the last several years, electric bicycles (e-bikes) have seen tremendous growth and are now outselling electric cars. The sudden popularity of e-bikes is largely attributed to advances in battery technology, the "pandemic bike boom," rising gas prices, and a growing desire by many to reduce their carbon footprint. Young people are purchasing e-bikes as a preferred way to get around congested urban areas, young families are purchasing e-cargo bikes as a way to transport children and run errands, and older adults who may have thought their riding days were over are using e-bikes to stay active.

With e-bikes, people can go farther with less effort, which means they are more likely to use them to commute longer distances. Additionally, because they are so easy to use, and fun, e-bike owners are also more likely to use them for short errands around town. A recent study found that people who buy e-bikes more than double their bicycle use.[2] While not for everyone, the rising popularity of e-bikes (and other personal electric vehicles such as e-scooters and e-skateboards) is a promising trend that can potentially shift more people away from private vehicle use.

Bike Sharing

In August of 2022, Maine's first bike-share program was introduced in Portland, offering over 200 bikes (including 50 electric bikes) for short-term use from over 40 docking stations across the city. Riders can unlock up to two bikes at a time through an app by scanning a QR code or entering the bike's number at one of the docking stations. Riders can unlock a bike for an initial upfront fee and a smaller per-minute rate. A monthly or annual membership is also available, which removes unlock fees and cuts the per-minute rate in half. When done, riders can return bikes to any docking station.
With the number of bikes, the wide distribution of docking stations throughout the city, and affordability of rentals, Portland's bike-share program seeks to create more multi-modal transportation options for residents and visitors whether commuting, running errands, or simply recreating around town. South Portland, too, is considering bike share expansion in their community pending further discussion and adoption of a bike share ordinance.

[2] *Do People Who Buy E-bikes Cycle More?* Science Direct, 2020.

The Transit Network

GREATER PORTLAND is home to Maine's largest transit network, with six transit agencies providing bus, ferry, rail, and demand-response service across 13 municipalities. The network also provides access to and from other key destinations outside the region, including Brunswick to the northeast, the Lakes Region to the northwest, and New Hampshire and Boston to the south. The region enjoys a truly multimodal transit system, with fixed-route bus, demand-response, rail, and ferry services.

BUS & DEMAND RESPONSE SERVICE

Biddeford Saco Old Orchard Beach (BSOOB) Transit operates flex-route bus and pilot microtransit service in Biddeford, Saco, and Old Orchard Beach, with regional service to Scarborough, South Portland, and Portland.

Greater Portland METRO operates fixed-route bus service in Portland, South Portland, Scarborough, Westbrook, Gorham, and Falmouth, with regional service to Yarmouth and Freeport, and beyond to Brunswick and Bath. GP Metro also operates a pilot microtransit service in Falmouth. In October 2025, the agency announced a partnership with Scarborough, MaineDOT, and the Maine Turnpike Authority to expand its fixed-route service into Scarborough.

Regional Transportation Program (RTP) operates demand-response service throughout Cumberland County, pilot microtransit service in Windham, Standish, Gorham, and Raymond, and a fixed route bus service connecting Portland to Windham, Casco, Naples, and Bridgton.

York County Community Action Corporation (YCCAC) operates a fixed-route bus service connecting Biddeford to Sanford, and additional services in the Sanford area.

FERRY

Casco Bay Lines (CBL) operates ferry service connecting several islands in Casco Bay to each other and mainland Portland.

RAIL

Northern New England Passenger Rail Authority (NNEPRA) operates the Amtrak Downeaster, a passenger rail service connecting Portland with Brunswick to the north and Boston to the south.

Above Left: Casco Bay Lines ferry with Fort Gorges in the background. **Above Right**: The Mill Creek Transit Hub in South Portland. **Center Left**: A BSOOB Transit bus on Main Street in Biddeford. **Center**: A METRO bus picking up passengers in Downtown Portland. **Center Right**: An RTP shuttle picking up a passenger. **Bottom Left**: YCCAC's Sanford Transit vehicle. **Bottom Right**: An aerial view of the Downeaster en route.

Photos: Casco Bay Lines, GPCOG, YCCAC, and NNEPRA

GP Metro & South Portland: A Successful Regional Partnership

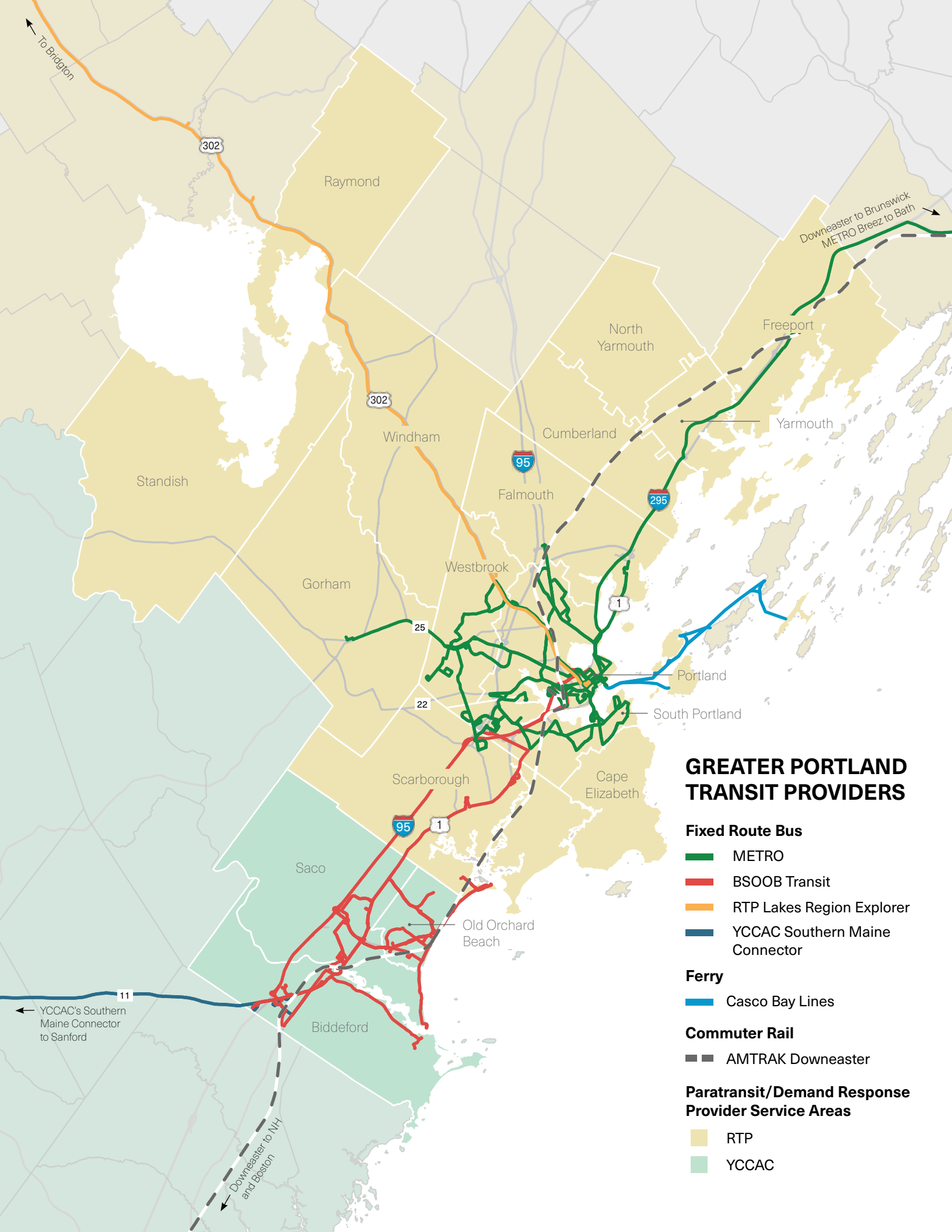
Connect 2045 showed one more transit agency in the region: the South Portland Bus Service. In Spring 2024 after the departure of key staff, the City of South Portland approached GP Metro seeking interim management of the service while working toward a full merger. Working with the South Portland City Council, the parties carefully identified and worked through a number of priorities, including the integration of staff, ensuring continued transit coverage in South Portland, and retaining a level of local control as the city service merged into a larger agency. By the end of the year, agreement was reached and the South Portland Bus Service was fully merged into GP Metro.

City and agency staff have noted the importance of communication, coordination, and collaboration to ensure concerns are considered and addressed. And, GP Metro providing transit service to South Portland unlocks new opportunities for routing, scheduling, and cost savings — providing faster, more convenient service to riders in South Portland and throughout the region.

Transit Modes in Greater Portland

The map on the next page shows the extent of Greater Portland's existing public transportation network. The following briefly outlines the extent of existing services.

- **Fixed-route bus service** is provided to 13 municipalities in the region, though some operators provide connections beyond the region. Much of this service is concentrated in Portland, South Portland, Westbrook, Biddeford, Saco, and Old Orchard Beach. These municipalities have the relatively higher populations and higher densities necessary to sustain fixed-route service. Frequencies and hours of operation vary, but vehicles typically run at least every 60 minutes, with service generally starting up by 6:00 am on weekdays. Weekend service is typically less frequent and has shorter hours of operation. There are several longer-distance routes extending beyond the urban core. GP Metro operates the BREEZ to Bath and the Husky Line to Gorham, RTP operates the Lakes Region Explorer to Bridgton, and YCCAC operates the Southern Maine Connector from Biddeford to Sanford. These services run fewer trips per day and have fewer stops, generally focused on serving town and neighborhood centers.
- **Microtransit service** is is being piloted by BSOOB Transit, GP Metro, and RTP in various municipalities throughout the region.
- **Demand-response and ADA paratransit service** is provided by RTP and YCCAC in Cumberland and York counties, respectively.
- **Passenger rail service** is provided by NNEPRA, operating as the Amtrak Downeaster, across and beyond the region. In addition to stations in Saco, Old Orchard Beach (seasonally), Portland, and Freeport, service continues north to Brunswick and south to southern Maine, New Hampshire, and Boston. There are five trains per day, with service departing Portland southbound between approximately 5:00 a.m. and 6:30 p.m. and northbound between approximately 11:30 a.m. and 1:00 a.m.
- **Ferry service** is provided by Casco Bay Lines which operates passenger and car ferry service to Peaks, Great Diamond, Little Diamond, Long, Chebeague, and Cliff Islands in Casco Bay, as well as freight hauling service.



GREATER PORTLAND TRANSIT PROVIDERS

Fixed Route Bus

- METRO
- BSOOB Transit
- RTP Lakes Region Explorer
- YCCAC Southern Maine Connector

Ferry

- Casco Bay Lines

Commuter Rail

- AMTRAK Downeaster

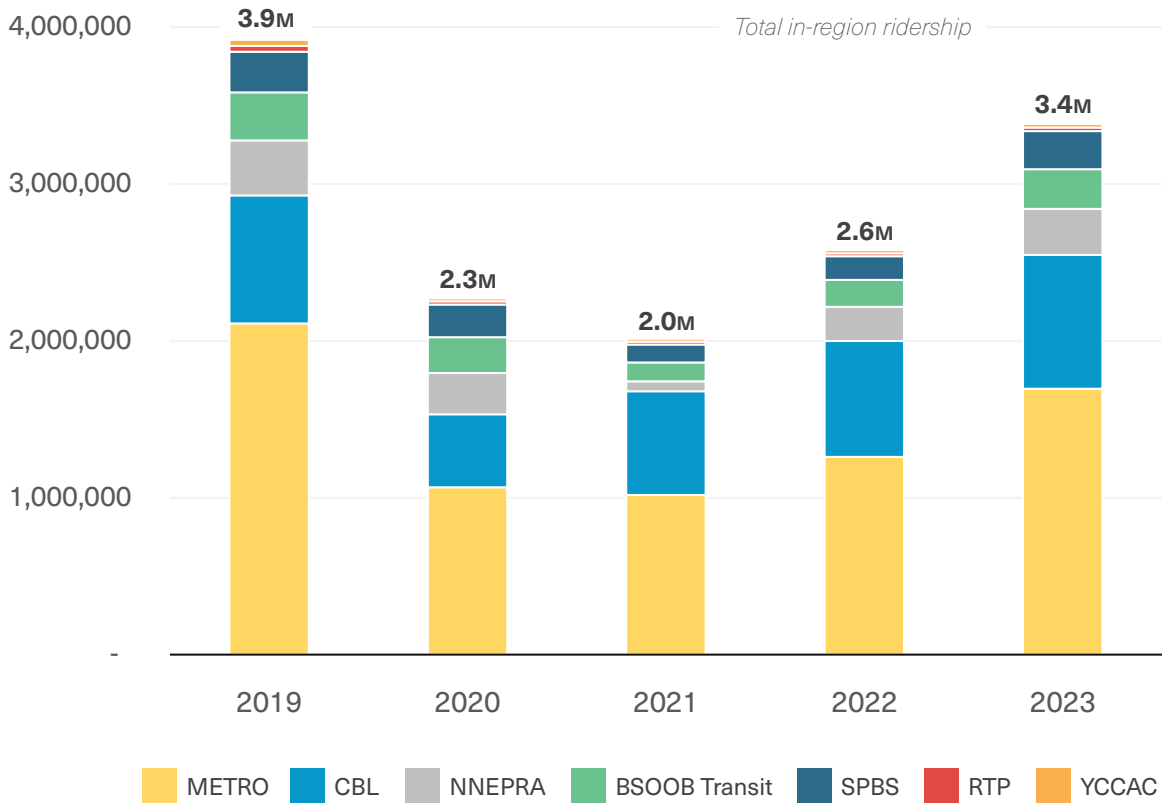
Paratransit/Demand Response Provider Service Areas

- RTP
- YCCAC

Peer Region Analysis

There are six transit providers operating in our region. Public feedback tells us it can create confusion among riders and discourage new riders from learning the system. It also can create administrative challenges. On the other hand, the region enjoys a truly multimodal system that gives riders travel options both throughout and beyond the region.

Analysis conducted as part of the Transit Tomorrow plan (discussed in the following pages) found that the performance of our transit system lags behind that of our peers. Several of our peer cities feature 15- to 20-minute frequencies during peak times and have longer hours of operation. Low frequencies and short hours of operation are among the most critical system deficits. Without these investments transit is often not a competitive alternative to driving.



Ridership Trends

As a result of the COVID-19 pandemic, ridership in 2020 and 2021 was roughly 60% of its pre-pandemic peak in 2019. However, ridership post-pandemic has continued to return to pre-pandemic levels.

Transit Tomorrow

The region has a clear direction forward in how we want our transit system to evolve. Adopted in 2021, Transit Tomorrow is an ambitious 30-year strategic plan for enhancing transit in the region, doubling down on transit as an essential strategy for achieving the region's economic, environmental, transportation access, and land use goals.

A core tenet of the plan, shown in the vision statement to the right, is to strive for a transit system that is faster and more affordable than driving a car. To achieve this bold and transformative vision, the plan is centered around four major goals.

1. **Make Transit Easier** through such measures as developing welcoming stops and adopting innovative customer service technologies (among other strategies);
2. **Create Frequent Connections** by improving the core functions of our existing service (increasing frequency, expanding service to new places, extending hours of operation);
3. **Improve Rapid Transit** on key corridors to make transit faster and more affordable than driving a car; and
4. **Create Transit-Friendly Places** that support more development intensity in urban areas already served by transit.

Two major follow up studies have advanced the goals of Transit Tomorrow: Transit Together and the Gorham-Westbrook-Portland Rapid Transit Study.

Transit Tomorrow's

Vision

Our vision is that by 2050...

"Using our region's public transportation is **faster and more affordable than driving a car**. Our system is funded sustainably and provides reliable and seamless transportation for our community, including commuters, mainland and island residents, and those with limited mobility options. Our communities support the long-term viability of public transportation by focusing new homes and jobs where people already live and work."

Above: The region's transit agencies met to discuss potential changes to the transit network at a workshop in June 2022.

Below: The *Transit Together* team collecting feedback from the public on proposed scenarios for improving the region's bus network.

Photos: GPCOG

Transit Together

Guided by the "Make Transit Easier" and "Create Frequent Connections" goals of Transit Tomorrow, the Transit Together study identified opportunities to cultivate a more seamless and integrated regional transit system. Adopted in 2023, the study included two major efforts:

1. **A regionwide network design.** The region's transit network has developed over many years in a piecemeal and uncoordinated fashion. Informed by public priorities and input from other key stakeholders, the region's transit agencies reviewed the network from a regional perspective based on where existing demand for transit is across the region and what resources are available to serve that demand. This resulted in recommendations for a network that is better coordinated and more convenient for riders. Network redesigns around the country have been effective in driving increased ridership and better serving both transit-dependent people and new riders.
2. **Regional initiatives.** Multiple transit agencies in a region our size has created administrative challenges and confusion for riders. This task identified opportunities and developed recommendations for increased coordination and collaboration across agencies, including regional service standards such as unified fare payment, integrated branding, and more.

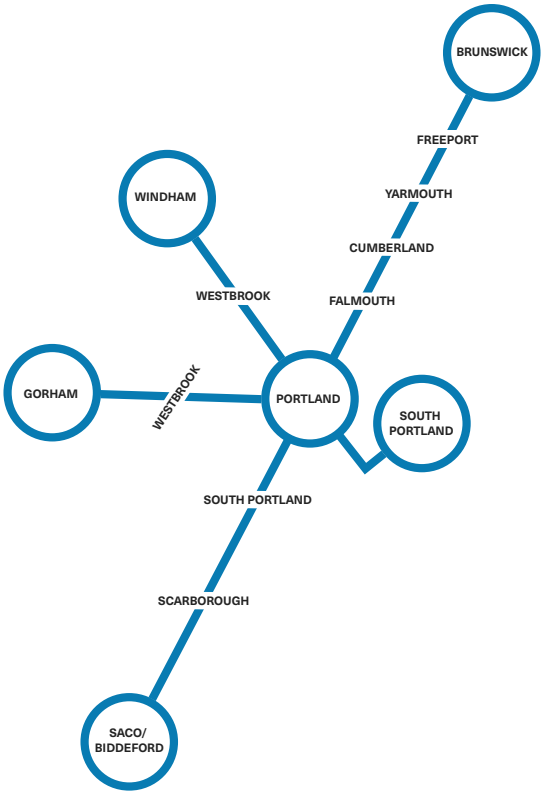
The region has made significant progress in advancing the recommendations of Transit Together, including implementing changes to routes and schedules, coordinating on planning for system expansion, and creating efficiencies by partnering on multi-agency projects.

Gorham-Westbrook-Portland Rapid Transit Study

A major regional goal is that taking transit be a viable alternative to driving. To do this, it is necessary to significantly increase frequencies and decrease travel times. Rapid transit can accomplish this by separating transit service from general traffic congestion with dedicated lanes and signal priority at intersections. The Gorham-Westbrook-Portland Rapid Transit Study was a critical step towards implementing a regional rapid transit network. The Gorham-Westbrook-Portland corridor was the first corridor for in-depth analysis because these communities are some of the fastest growing in Maine and they are connected by a high concentration of residents, jobs, and underserved population groups.

The conceptual planning-level study identified a "locally preferred alternative" of bus rapid transit primarily along Brighton Avenue and Route 25. This study evaluated other routes and modes, as well, but ultimately determined that those alternatives, including rail service, were not viable. Having a locally preferred alternative identified positions the region for federal discretionary funding for design, engineering, and construction. GP Metro now serves as the project lead and is working to complete conceptual design, which includes station location, amenities, and project impacts.

The phased implementation of rapid transit would mark a major transformation in how we move around the region. It would allow us to meet the growing demands placed on our transportation network without building new roads or inducing more vehicle travel. Put simply, if transit is the fastest and most convenient option, people are more likely to take it.



The Vision for Rapid Transit
Transit Tomorrow identified four potential rapid transit corridors in the region. For each corridor, specific route and mode choices will need further evaluation. An "alternatives analysis" is the process for evaluating these options and is required for federal funding eligibility. The Gorham-Westbrook-Portland Rapid Transit Study was an alternatives analysis for the Gorham-Westbrook-Portland corridor. The study identified a "locally preferred alternative" of bus rapid transit primarily along Brighton Avenue and Route 25.

Microtransit: The Metro Connect takes riders to an event in Falmouth. Photo: GP Metro

Transit Fleet Electrification: A rendering of Casco Bay Lines new hybrid/ electric ferry boat, estimated to be deployed in 2026. Photo: Casco Bay Lines

Microtransit

Across the country, transit agencies are introducing new technologies to better match the level of service they provide with rider demand. In rural and suburban areas where transit demand is low, microtransit can provide service in place of fixed-route transit or expand service into new areas. In urban areas, it can fill the gaps between fixed routes and help with first mile and last mile connections.

Microtransit is an on-demand service where riders can request a ride in real-time using an app on their phone. A software program then uses this information to dynamically match riders and drivers. The service uses multi-passenger vans, shuttles, or small buses so people traveling in the same direction can share a vehicle. Microtransit is typically offered within a specified geography or neighborhood. People within the zone can then request a ride to anywhere else within the zone.

As an emerging new technology, microtransit helps transit agencies focus fixed-route service on corridors with higher densities and higher ridership, while still providing service to areas with more scattered demand when it is needed.

In the last several years, bus agencies across the region have launched microtransit pilot projects, replacing some fixed route bus service and providing more transportation options in many communities.

Vehicle Electrification

Converting transit fleets to electric is a major priority for the region's transit agencies. In addition to reducing air pollution and environmental impacts, electric buses are quiet. In 2022, GP Metro and BSOOB Transit announced the addition of four electric buses to their fleets. Additional planning and investments are necessary to increase the fleet of electric buses. In 2023, MaineDOT published individual Bus Electrification Transition Plans for the region's five bus service transit providers to help transit agencies with this transition.

Converting transit fleets to electric vehicles is not limited to buses. A new vessel for Casco Bay Lines, anticipated to arrive in 2026, will feature a diesel-electric hybrid propulsion system. This will be the first ferry of its kind in the region.

An aerial view of the Portland International Jetport. Photo: Paul Bradbury

Air Travel

PORTLAND INTERNATIONAL JETPORT is a small hub commercial airport owned and operated by the City of Portland, serving over 2 million passengers annually.

The jetport is served by most major airlines and continues to add non-stop service to destinations across the United States. Air freight also makes up a significant part of airport operations.

The jetport is Maine's largest and New England's fastest-growing airport. It strives to be "Maine's Home Airport" and works to establish itself as a convenient, safe, and environmentally conscious gateway. Development is guided by the Sustainable Airport Master Plan. Recent projects include the rehabilitation of the primary runway, the opening of Maine Turnpike Exit 46, and a terminal expansion which nearly doubled the size of the facility and achieved Leadership in Energy and Environmental Design Gold certification. In January 2025, the Portland planning board approved plans for an additional 265 parking spaces.

To better serve the needs of travelers and employees, in 2024 GP Metro reorganized its services in the jetport and Maine Mall area. Route 7 was extended from downtown Portland to regularly serve Outer Congress Street and the jetport. Route 5 now bypasses the jetport and runs directly to the Maine Mall area. These improvements allow for more regular service to the jetport and faster travel times to and from the Maine Mall area and downtown Portland.

Finally, the aviation industry is also looking at ways to reduce emissions and some of these changes may come to the Jetport soon. Several companies are developing all-electric or hydrogen-electric aircraft. Small electric planes are expected for production in the next few years and are particularly well suited for commuter airlines that offer short trips like Cape Air's daily service from Portland to Boston.

Maine's Freight Network Includes:

HIGHWAY

5,176 miles of interstate, arterial, and collector highways. Trucking is the dominant mode for freight shipments in Maine.

RAIL

1,072 miles of Class I, II, and III railroads that connect the state to the North American and Canadian rail systems and play a particularly important role for the forest products industry.

MARITIME

3 major seaports (Portland, Searsport, and Eastport) that serve as hubs for maritime goods movement and connections between modes.

AIR

4 major airports important for transporting low-weight, high-value commodities (such as semiconductors) and perishable items like seafood. The Portland International Jetport handles roughly 90% of inbound and outbound air cargo tonnage (freight and mail) in the state.

INTERMODAL

4 active intermodal facilities (the International Marine Terminal in Portland, and rail-to-truck terminals in Auburn, Waterville, and Presque Isle).

PIPELINE

4 companies that maintain a network of pipelines that transport refined petroleum products, crude oil, and natural gas in Maine.

The Freight Network

THE GREATER PORTLAND REGION relies on the multimodal freight system to move millions of individual products. This network of rail lines, truck routes, ports, and intermodal facilities connects Greater Portland's economy to the rest of the state, country, and world.

As the table below shows, freight traffic in Maine is dominated by truck service. In 2024, MaineDOT published the Maine Integrated Freight Strategy, which reported that 75 percent of freight shipments travelling in Maine traveled by truck, which represents 63 percent of total value.

Mode Split by Weight and Value in Maine

MODE	WEIGHT	VALUE
Truck	82%	69%
Multiple Modes	4%	22%
Air	0.01%	2%
Rail	5%	5%
Pipeline	9%	2%
Total	*~91 Million Tons*	*~$91 Billion*

Data Source: 2019 FHWA Freight Analysis Framework
Multiple modes includes: mail (parcel, U.S.P.S. or courier), truck and rail, and truck and water.

Types of Commodities Shipped

According to a statewide freight study commissioned by MaineDOT, the top commodities by weight in Maine are logs, foodstuffs, miscellaneous manufacturing products, wood products, and coal. The study projects the top commodities moved by weight will remain the same in 2050. By value, the top commodities include mixed freight, pharmaceutical products, meat, pulp and paper products, and machinery. The study projects that by 2050 transport equipment will account for roughly one-quarter the total value of all goods moved.[3]

[3] *2024 Maine Integrated Freight Strategy* prepared for MaineDOT by Cambridge Systematics.

Trucked Freight

Trucks carry the vast majority of freight in Maine. Approximately 82 percent of freight tonnage and 69 percent of freight value moved by truck in 2019. Maintaining the highway system and network of roads that make up the state's "Heavy Haul Truck Network" is a priority for MaineDOT and essential for truck traffic to efficiently reach large portions of the state.

However, Maine's reliance on trucks also comes at a cost and has important implications for the state's infrastructure and ability to sustain growth. Some of the impacts of a higher share of truck traffic include:

- Increased costs for highway construction and maintenance;
- More unwanted truck traffic traveling through neighborhoods, villages, downtowns, and urban areas;
- Increased use of fossil fuels resulting in higher emissions; and
- Higher costs to transport some goods.

While moving freight by truck will likely remain the dominant mode for the foreseeable future, Maine would benefit from shifting a greater proportion of heavy freight to the more efficient rail and water transportation modes.

According to the *Maine Integrated Freight Strategy*, this is a challenge because, "trucking dominates freight haulage in the northeast U.S. region, and Maine's robust highway capacity and lack of any serious congestion allows trucking to overcome the natural price advantage of rail or water by providing a higher level of service that is both cost competitive and predictable."

Where it is not practical to shift from truck to rail or water, improving the efficiency of the trucks themselves is another way to cut down on environmental and public health impacts. In fact, significantly increasing participation in the Environmental Protection Agency's (EPA) SmartWay program is a recommendation in the state's climate action plan *Maine Won't Wait*.[5]

An 18-wheeler on Route 1 in Yarmouth. Photo: GPCOG

Maine would benefit from shifting a greater proportion of heavy freight to the more efficient rail and water transportation modes.

Among other freight sustainability initiatives, the SmartWay program helps the trucking industry improve efficiency and save money with new technologies such as vehicle electrification, aerodynamic design, low-resistance tires, and reduced idling. *Maine Won't Wait* recommends increasing participation in the program via loans or grants, by ensuring technology is available, and recognizing excellence within the program.

[4] *Maine Won't Wait: A Four-Year Climate Action Plan*; prepared by the Maine Climate Council in 2020.

A Pan Am freight train crossing the Fore River (next to Veteran's Memorial Bridge) between South Portland and Portland. Photo: Corey Templeton

Freight Rail

While trucks are the primary means for shipping freight in Maine, railroads still provide significant capacity for domestic and international trade — especially for high-volume, low-value commodities such as forest products. Since one train can efficiently carry the freight of hundreds of trucks, moving more goods by rail can reduce emissions, congestion, and wear and tear on our roads and highways.

The primary freight rail corridor in southern Maine is the CSX (formerly Pan Am) rail line that generally follows the coast from the New Hampshire-Maine border up through Portland to Brunswick.[5] This track is also shared with the Amtrak Downeaster passenger rail service. At a junction north of Portland in Yarmouth, another rail line branches due north to an intermodal facility in Lewiston/Auburn and connects to numerous points north including Bangor.

Following CSX's acquisition of Pan Am Railways, major upgrades are now underway along Maine's key freight corridors. These include rail replacement, tie and switch improvements, siding extensions, and modernization of grade crossings and signal systems, with Positive Train Control being implemented along the Downeaster route between Brunswick and Haverhill, MA. These investments have already increased allowable train speeds on several segments and will help bring portions of the network up to modern national standards.

Despite these improvements, many sections of Maine's freight rail network cannot yet accommodate the larger and heavier 286,000-pound railcars and double-stack container service that are industry standard nationwide. This limits Maine's competitiveness and contributes to a reliance on trucking.

Another barrier for freight rail is the need to share track with passenger trains. In Greater Portland, for instance, freight trains must coordinate their movements with the AMTRAK Downeaster. Since much of the corridor between Brunswick and Boston is single track, this can cause delays. In 2024, NNEPRA installed six miles of double track in Wells, but further investment is needed to modernize rail infrastructure in Maine for both freight and passenger service.

---

[5] In 2022, Florida-based shipping company CSX received approval from the Surface Transportation Board to acquire Pan Am Railways.

Terminals in the Port of Portland: 1. Merrill; 2. Sprague Energy; 3. Irving/Buckeye; 4. Global; 5. Citgo/Turner's Island; 6. International Marine Terminal; 7. Portland Pipeline Pier #1; 8. Gulf Oil; 9. Portland Pipeline Pier #2.

International Marine Terminal The Eimskip ship "Skogafass" docked at the IMT in Portland. Photo: Corey Templeton

Marine Freight

Maine has three marine freight ports: Eastport, Searsport, and Portland. The Port of Portland is the largest of the three. As shown above, it supports nine marine terminals, seven of which include refined petroleum products. The International Marine Terminal (IMT) is the largest terminal in the Port. Formerly an abandoned space off Commercial Street used by the City to dump snow, the IMT now specializes in containerized freight and is a hive of activity. It has nearby connections to the highway system, the Portland Jetport, and the Pan Am rail line via a spur.

In 2013, the Icelandic shipping company Eimskip began to use the IMT as its logistical hub for North America. Eimskip's container service from Portland to Iceland and Europe has increased shipping at the port by roughly 20% per year,[6] provided an anchor business for the Port, and stimulated additional investment in the terminal.

In 2015, the IMT expansion project doubled the size of the facility, modernized the security areas, and connected the terminal to the freight rail network. In 2025, the 107,000 square foot

Eimskip's container service from Portland to Iceland and Europe has increased shipping at the port by roughly 20% per year, provided an anchor business for the Port, and stimulated additional investment in the terminal.

Maine International Cold Storage Facility was completed. The facility meets the refrigerated cargo demands of Eimskip and is large enough to serve customers from Maine's growing food, beverage, and bio-pharmaceutical industries.

These investments reflect a growing interest in keeping a portion of the Portland and South Portland waterfronts dedicated to industrial and maritime port uses.

[6] Portland Press Herald (2021). *With other ports in chaos, Portland is sailing toward a record year*.

Above: The Portland International Jetport handles roughly 90% of inbound and outbound air cargo tonnage in the state.

Below: Trucks queue on West Commercial Street in Portland outside the International Marine Terminal (IMT). The IMT is also connected to the freight mainline via a recently constructed rail spur.

Air Freight

Airports are particularly important for transporting low-weight, high-value commodities, such as semiconductors, and for shipping perishable items like seafood. While air travel is the fastest way to transport goods over long distances (and internationally), it is more expensive.

There are four airports in Maine equipped to accommodate air cargo: the Portland International Jetport, the Auburn-Lewiston Municipal Airport, the Bangor International Airport, and the Northern Maine Regional Airport. The vast majority of air cargo is handled by the Portland International Jetport. In 2012, it handled roughly 71 percent of inbound and outbound air cargo tonnage in the state.[8]

Intermodal Facilities

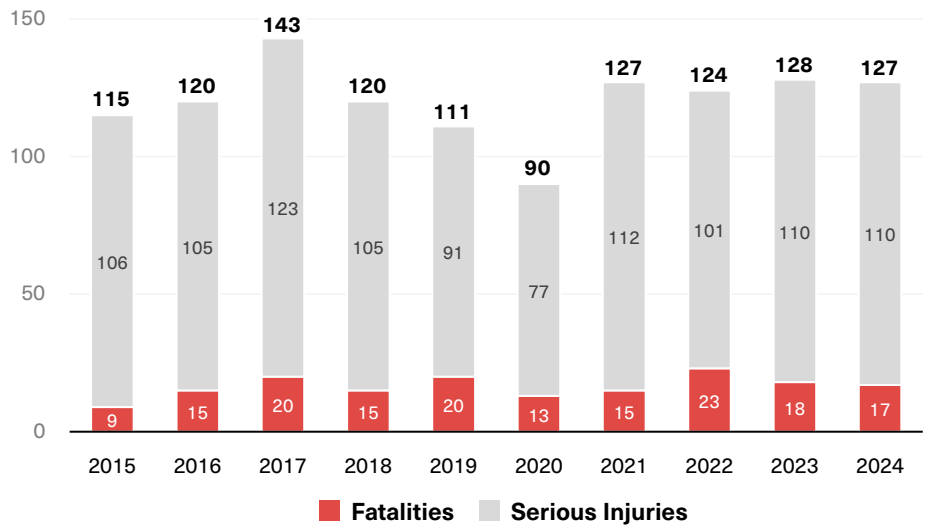
Intermodal facilities are critical nodes in the freight system and vital for increasing the use of marine and rail. These hubs help facilitate the transfer of goods from one mode to another and provide alternatives for shippers and receivers. They are also a high priority for investment since they can act as bottlenecks if not operating efficiently. Maine has a number of intermodal facilities, many of which are located in Portland.

For transfers between marine freight and truck/rail, the International Marine Terminal and Merrill Marine Terminal in Portland are the primary facilities. As mentioned above, the Portland International Jetport is a significant hub for the transfer of air cargo to trucks (and vice versa). Currently there are no road-to-rail facilities in Greater Portland. The closest such facility is the Maine Intermodal Terminal in Auburn.

[7] *2024 Maine Integrated Freight Strategy;* prepared for MaineDOT by Cambridge Systematics.

Roadway Safety

TRAFFIC-RELATED DEATHS and serious injuries are a critical, and preventable, public health and social justice issue. PACTS, and our partner agencies and municipalities, can help reduce crashes by providing safer transportation systems in our region. All people should be able to get to where they want to go safely. Whether a person is riding the bus to work, driving to the grocery store, or walking to the park, they should have confidence their trip will be safe.



National Trends

Nationally, 39,345 people died in traffic-related crashes in 2024, a 3.8 percent decrease from 40,901 fatalities in 2023. This was the first year since 2020 that fewer than 40,000 people were killed in traffic crashes. While this decrease is promising and indicates that national efforts to address traffic safety are working, nearly 40,000 people dying on US roads annually is far too many and still higher than pre-pandemic fatalities even when accounting for increases in vehicle miles traveled.

State Trends

In Maine, 187 people died in crashes in 2024, a 27 percent increase from 2023, and the highest number of fatalities in the past 10 years (just slightly more than the 186 fatalities in 2022). Much like national statistics, the state is seeing a downward trend from pandemic-level high fatalities.

Regional Trends

Crashes in our region remain a concern. An analysis of crash data from 2015 to 2024 shows that the number of people killed or seriously injured each year has remained relatively stable, averaging 17 fatalities and 104 serious injuries annually. While overall numbers have not significantly increased, the ongoing toll highlights the continued need for safer road design, enforcement, and education.

Cyclists and pedestrians account for a disproportionately high share of these severe outcomes. Over the past decade, the region has averaged one cyclist and three pedestrian fatalities each year, along with about seven cyclist and 15 pedestrian serious injuries. These figures underscore the vulnerability of people walking and biking and the importance of infrastructure and policy changes that prioritize their safety.

The region's Vision Zero plan seeks to eliminate all transportation-related fatalities and serious injuries by 2045, reflecting a long-term commitment to safer streets for everyone.

What is **Vision Zero?**

Vision Zero is a transportation safety philosophy based on the principle that death is not an acceptable mobility outcome.

Vision Zero is a useful framework to guide decisions to eliminate traffic deaths and serious injuries in the transportation system. Vision Zero recognizes that humans make mistakes and therefore the transportation system should be designed to minimize the consequences of human error. The Vision Zero approach is different than a traditional traffic safety approach in the following key ways. Vision Zero:

- Reframes traffic deaths as preventable.
- Integrates human error into the approach.
- Focuses on preventing fatal and serious crashes rather than eliminating all crashes.
- Aims to establish safe systems prioritizing human life when designing a road network.
- Applies data-driven decision making.
- Establishes road safety as a social justice issue.

Crash Locations

Crashes occur everywhere but are more likely to occur in densely populated areas and on high traffic roadways. The heat map on the next page represents the distribution of the 657 fatal and serious injury crashes that occurred in Greater Portland between January 2020 and June 2025. As the map shows, the majority of crashes occurred in downtown Portland, followed by downtown Biddeford and Saco. However, localized "hot spots" exist throughout the region. Intersections, in particular, are common locations for crashes, since vehicles, bicyclists, and pedestrians are more likely to come into conflict with one another. According to the Federal Highway Administration, more than 50 percent of fatal and serious injury crashes occur at or near intersections.[8]

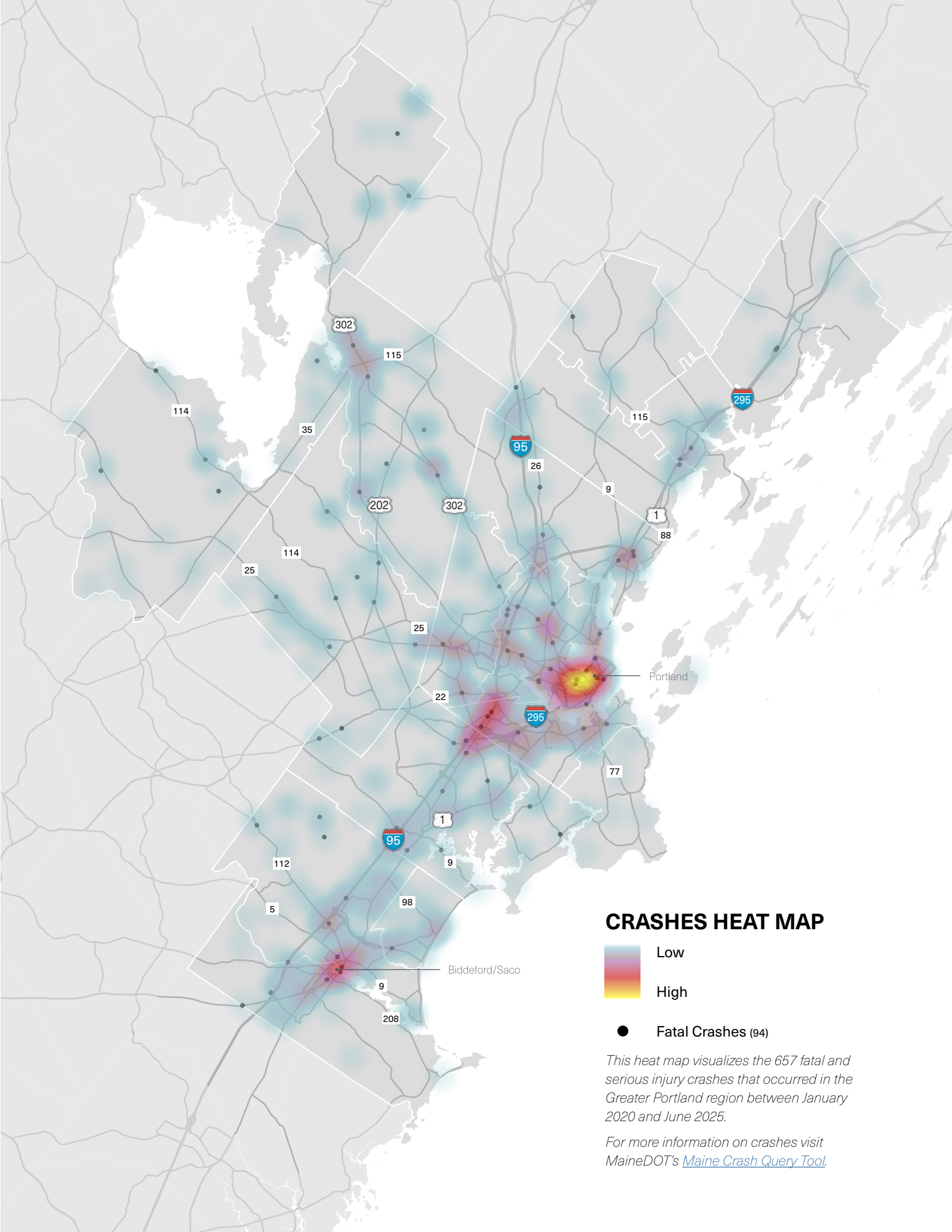
MaineDOT also maintains a statewide database of high crash locations. Traffic engineers rely on several factors when it comes to determining where high crash locations are across the state. Data, including the number of crashes, traffic volume, pedestrian fatalities, and other violations are combined to create a "critical rate factor." Locations that have eight or more crashes and a high critical rate factor (greater than one) over a three-year period are added to the list, which is updated every year and posted to the Maine Crash Query Tool, an interactive portal that allows users to view crash data throughout the state.[9]

Moving Towards Zero

In May 2023, PACTS adopted a Vision Zero action plan, establishing a goal of reducing traffic fatalities and serious injuries to zero by 2045. Similarly, a Vision Zero action plan for the rural and island PACTS communities was adopted in October 2024. Vision Zero policies assert that transportation fatalities and injuries are preventable — in other words, traffic crashes are not simply accidents, but the result of poor behavior combined with unforgiving roadway designs. USDOT has also set a goal of zero traffic fatalities and serious injuries.

[8] *Intersection Safety,* Federal Highway Administration, 2021.

[9] *Maine Crash Public Query Tool*, MaineDOT, 2022.



CRASHES HEAT MAP

Low

High

● Fatal Crashes (94)

This heat map visualizes the 657 fatal and serious injury crashes that occurred in the Greater Portland region between January 2020 and June 2025.

For more information on crashes visit MaineDOT's Maine Crash Query Tool.

PART 2:

TRENDS & ISSUES

Casco Bay Lines ferry to Peaks Island. Photo: GPCOG

Making Connections

THIS SECTION HIGHLIGHTS many of the key trends and issues relevant to the Greater Portland region. The biggest drivers of disruption affecting our transportation system (and our lives) include:

- A **changing climate** and efforts to **decarbonize transportation**
- The dynamics of **population and employment change**
- The relationship between **where people live and work**
- A **lack of housing**
- Increased awareness of **social inequalities**
- The accelerating pace of **technological innovations**
- An influx of **federal funding** opportunities

These trends are not exclusive to our region. In most cases they are being observed in metropolitan areas throughout the country and the world. While each trend is described individually, it is important to step back and observe how they are interconnected.

What We Can Do

While many of the trends and issues discussed in this section are largely outside our control, there are actions we can take (now, and in the next twenty years) to prepare and adapt. The next two sections (Where Do We Want to Go? and How Do We Get There?) focus on our desired future and outline the actions we can take to navigate these trends.

Route 1 in Scarborough flooded in the Christmas Eve storm of 2022. This section of roadway is currently included in MaineDOT's 2025 Work Plan for preliminary engineering to combat sea level rise.

Photo: GPCOG.

A Changing Climate

EXTREME WEATHER continues to impact our region and our state as a whole. Transportation infrastructure is already experiencing damage from flooding and rising temperatures. In Scarborough in 2021 a winter storm caused flooding along Route 1, a major travel route for the region, leaving it inaccessible as municipal crews worked to clear it. In 2023, a series of winter storms brought devastation across the state, causing the worst river flooding since the 1800s. The region will see more damage as the climate warms and changes.

Given the inevitability of disruptions based on changing weather patterns, adaptation at the local and regional level will be necessary in the coming years. Additionally, ambitious mitigation measures (like those outlined in the state's climate action plan) are critical for staving off more significant repercussions.

Extreme weather exposes people, infrastructure, and ecosystems to a wide range of hazards and impacts. Transportation infrastructure is uniquely vulnerable, and the impacts strain a network already facing challenges.

Rising Temperatures

In Maine, the average annual temperature has increased 3°F since 1895. Temperature increase is most pronounced along the coast where it is expected to rise 3.5-4°F by 2050. Additionally, extreme heat days (where temperatures exceed 90°F) are expected to increase two to four times by 2050.

Warming has also shifted Maine's seasons. From the early 1900s to 2000s, the "warm season" (defined as when average daily temperature is above freezing) has increased by two weeks and projections indicate it will increase two more weeks by 2050.[10]

Larger Temperature Variation

The weather is also becoming more variable. Extreme winter cold snaps are increasingly frequent along with rapid shifts from freezing to thawing conditions.

[10] *Maine's Climate Future: 2020 Update*. University of Maine.

The **Average Annual Temperature** in Maine has increased

3°

Fahrenheit since 1895.

Extreme Heat Days are expected to increase

2-4x

in Maine by 2050.

The changing temperatures degrade roadways by shortening the lifespan of pavement. Higher temperatures cause pavement to soften, expand, or buckle, while freeze-thaw cycles increase cracking in the pavement. This creates dangerous driving conditions and requires more frequent and extensive repair. Maine is already in the unique position of investing significantly more than many states in pavement preservation programs due to this freeze-thaw phenomenon.

Rising Sea Levels

The transportation network will be impacted by increasing temperatures and flooding due to rising sea levels and increased precipitation. Flooding is already impacting the region's infrastructure. Sea levels around Portland have risen 7.5 inches since 1912. This is three to four times the rate of sea level rise globally. Since 1990, the rate has accelerated to 0.12 inches annually. Sea level rise, and increased storm severity, are already threatening coastal communities and causing regular flooding of roadways and critical infrastructure, even on sunny days. Sea level rise and storm surge are expected to increasingly inundate roads in the region, and most critically portions of I-295, a key corridor for travel in and out of the region.[14]

Increased Precipitation and Flooding

Flooding is not just a problem for coastal towns; many inland towns are experiencing worsening flooding due to an increase in strong storms and precipitation. Flooding threatens Mainers' livelihoods and further burdens vulnerable communities. The statewide average annual precipitation (rainfall and snowfall) has increased by six inches since 1895. Within the Greater Portland area, precipitation is expected to increase another four-to-five percent from current totals by 2050. The majority of this will fall as rain, as snowfall has decreased because of warming.[11]

Along with increased precipitation overall, precipitation events have become more intense, with more powerful storms and more rainfall in shorter periods of time. Heavy storms with two to four inches of precipitation are becoming more frequent, which increases the probability of floods that will overwhelm culverts, erode infrastructure, and degrade

[11] *Maine's Climate Future: 2020 Update*. University of Maine.

Flooding on Wharf Street in Portland. Photo: Corey Templeton

water quality in ponds, lakes, streams, rivers, and coastal areas.

According to the Cumberland County Hazard Mitigation Plan, flooding is one of the top three hazards for the County. Increased flooding threatens stormwater management and wastewater treatment systems and an estimated 198 miles of county roads.[12] Culverts are a critical failure point for roads during flood events. Culverts allow water to flow under roads. However, when they're undersized or poorly functioning, flooded culverts cause roads to wash out, endangering the community and degrading habitat and water quality. A recent analysis of a municipality in Cumberland County found that over 20% of culverts were at risk of being flooded due to extreme weather.

[12] *2022 Cumberland County Hazard Mitigation Plan*. Cumberland County Emergency Management Agency.

Decarbonization of Transportation

MAINE HAS SET A GOAL to reduce greenhouse gas emissions by 45 percent by 2030 and 80 percent by 2050, and to achieve net-zero carbon emissions by 2045. In line with these goals, Connect 2050 calls for a 70 percent reduction in transportation greenhouse gas emissions by 2050 (see Chapter 4, Part 2: Evaluating Progress).

Reducing emissions through clean transportation is a crucial step to meeting these aggressive goals. Transportation is responsible for nearly half of Maine's annual greenhouse gas emissions. Our state's rural character and relatively low emissions from other sectors (for example, electricity generation) make transportation emissions disproportionately high compared to other states.

Connect 2050 calls for a **70% reduction** in transportation greenhouse gas emissions by 2050.

There are three major ways to decarbonize transportation: 1) electrify light, medium and heavy-duty vehicles, 2) use alternative fuels for vehicles that cannot be electrified, and 3) reduce the number of miles we drive. The 2024 Update to Maine Won't Wait highlighted the need to invest in public, active, and shared transportation to reduce the miles we drive.

1 VEHICLE ELECTRIFICATION

Combined with reducing the total number of miles traveled and improving vehicle efficiency, the most significant reductions of greenhouse gas emissions in the transportation sector will come from the long-term and large-scale electrification of transportation systems. To achieve its emission reduction goals, Maine will need to put 150,000 light-duty electric vehicles on the road by 2030.[13] Currently, EVs account for about 1 percent (15,000 light-duty vehicles) of registered vehicles in Maine, but that number is increasing rapidly as the number and diversity of EV car models increases.[14]

Medium- and heavy-duty vehicles produce 27% of Maine's transportation greenhouse gas emissions, so the electrification of these vehicles is also key to reaching the state's climate goals.

Our region's bus transit agencies are doing their part — Greater Portland METRO and BSOOB Transit are aiming to be all-electric by 2040. The first few electric buses are already in service, and more are on the way. School buses are also being electrified as national funding is made available through the EPA. In 2022, 13 school districts in Maine were awarded a total of over $13.3 million to purchase 34 zero-emission school buses.

While electric vehicles can play an important role in reducing emissions, their batteries require large amounts of raw materials, including lithium, nickel, and cobalt — mining for which has climate, environmental, and human rights impacts. When the batteries reach the end of their useful lives, they must also be properly recycled to avoid widespread

[13] *Maine Won't Wait: 2024 Update.* prepared by the Maine Climate Council in 2024.

[14] *USDOE Alternative Fuels Data Center.*

The region's bus agencies are aiming to be all-electric by 2040. The first electric buses are already in service.

Greater Portland METRO's new electric bus driving past a recently installed creative bus shelter. Photo: Denise Beck

electronic waste. As electric vehicles gain in popularity, these issues must be properly addressed.

EV Charging Stations

Increasing the number of electric vehicles will require significant investment in charging infrastructure. There are currently over 1,000 public EV charging ports across Maine, with Greater Portland now hosting over 150 public charging ports. However, several communities have no public chargers. To stay on target to meet Maine Won't Wait's emissions reductions goals, more than 700 public EV charging ports will need to be installed across the state by 2028.

To meet our emissions reductions goals the transition to electric vehicles will need to go beyond just light duty passenger vehicles.

Top: An electric school bus on display at an event in Boston. Electric school buses exist and are on the cusp of widespread adoption. Mount Desert Island High School was the first school in Maine to add an electric bus to its fleet in 2021. Photo: GPCOG

Middle: A Mack electric work truck at the the electric/alternative fuel vehicle event in Boston. Photo: GPCOG

Bottom: BSOOB Transit's new electric bus. Photo: BSOOB Transit

EV Policies, Programs, and Incentives

Shifting to clean transportation will require policy changes, updated regulations, and increased incentives (not everyone can afford an EV). In addition to encouraging travel that does not rely on private vehicles, municipalities will need to adopt policies that promote the use of EVs and the installation of charging infrastructure. For example, municipal governments have a key role to play in updating codes and regulations to require new developments to incorporate charging stations.

Several programs and initiatives across the state are already helping advance the use of alternative fuels for clean transportation.

- **Efficiency Maine Trust** provides rebates and incentives for electric vehicles and charging stations to encourage consumers to go electric.
- **Maine Clean Communities (MCC)** is a coalition of stakeholders working to reduce emissions from transportation. With support from the Department of Energy, the coalition holds educational webinars, provides vehicle demonstrations, and supports fleets with technical assistance and training.
- **Drive Electric Maine** is a public and private-sector electric vehicle stakeholder group working together to accelerate the adoption of electric vehicles and the expansion of charging infrastructure throughout Maine.
- The **Environmental Protection Agency's SmartWay Program** helps improve efficiency and save money with new technologies within the heavy-duty freight transportation sector.

2 ALTERNATIVE FUELS

Electrification of some medium- and heavy-duty vehicles (and vehicles with long-duty cycles) is technically and financially challenging. Where electrification is not currently practical, alternative fuels like renewable natural gas, renewable diesel, hydrogen and other fuels are being evaluated. The state is using renewable biofuels as an immediately available, cleaner option in state and municipal fleets. Up to a B20 biodiesel blend can be used immediately in vehicles without additional modification to reduce lifecycle emissions as other alternative fuel technologies are evaluated and developed.

Directing more growth and development towards the region's villages, downtowns, and urban areas, where people can easily access their most basic day-to-day needs within walking distance (or take transit for longer trips), can reduce our reliance on driving and significantly cut down on emissions. **Left:** The pedestrian bridge connecting Biddeford's Mill District to Saco Island. Photo: Corey Templeton. **Right:** The pedestrian bridge connecting Downtown Westbrook. Photo: Roger McCord

3 EXPANDING TRANSPORTATION CHOICES

While transitioning to electric vehicles is something we can do immediately — with quantifiable results — reducing our overall reliance on driving can also deliver big gains. Changing how we get around and minimizing the number of trips we take by car will require overcoming deeply embedded behaviors and lifestyles. Alternative transportation options, such as walking, biking, and taking public transportation are more environmentally friendly than driving and essential for many residents who cannot or do not drive. For those who do have access to a car, these options must also be as convenient and reliable as driving, if not more so, to encourage widespread use.

The way our streetscapes and public spaces are designed can play an outsized role in deciding what choices we make. If there are no sidewalks, bike lanes, or transit service in sight when you walk out the door, the most obvious option is to drive. With the rise of "micromobility" solutions, such as electric bikes and scooters, there are more options than ever before, but they must be convenient and safe to gain traction.

Taking away from lessons learned through the COVID-19 pandemic, many communities in the region are rethinking the role of the public right-of-way. To support local businesses, communities have transformed parking spaces into dining spots. To encourage walking and bicycling, communities have closed some streets to vehicle traffic. Many communities have also adopted Complete Streets policies to ensure that all users and all modes are considered in future roadway projects.

In the big picture, directing more growth and development towards the region's villages, downtowns, and urban areas — where people can easily access their most basic day-to-day needs within walking distance or on public transit — can reduce our reliance on driving and significantly cut down on emissions.

Congestion on Franklin Street. Photo: GPCOG

Reducing Emissions

CONNECT 2050 maintains the Connect 2045 goal of reducing regional transportation greenhouse gas emissions by 70 percent. This target aligns with the State's climate action goals outlined in Maine Won't Wait and is adjusted to reflect the region's population. A key part of the Connect 2045 implementation process was assessing both the feasibility of this goal and the strategies required to achieve it.

GPCOG's Sustainability Team modelled emissions reductions based on four key strategies:

- Doubling transit ridership
- Halving vehicle miles traveled (VMT)
- Increasing the share of electric passenger vehicles to 60 percent
- Fully electrifying the region's transit bus fleets

Full implementation of these strategies would result in an estimated 87 percent reduction in transportation greenhouse gas emissions, exceeding the 70 percent target. While this provides flexibility in implementation, progress toward these strategies will be closely monitored to ensure the region remains on track to meet its reduction goals.

Strategies	2050 Emissions Impact*
Doubling transit ridership	- 312,387
Halving vehicle miles traveled	- 467,729
Increasing EV adoption to 60%	- 561,275
Electrifying bus transit fleets	- 120,893
Remaining emissions	***202,090***

*Estimated metric tons of CO_2 equivalent (CO_2e)

Population Change

UNLIKE OTHER PARTS OF THE STATE, the Greater Portland region is growing. The pace of growth — and where and how it occurs — has major implications for quality of life, the environment, and the demands we place on the transportation system.

Population Growth

Between 2010 and 2020, Maine grew by 33,998 people and now has a total population of approximately 1,362,359 people. Compared to previous decades, this growth is relatively modest. (For reference, Maine experienced a population boom during the 1970's when we added over 130,000 people).

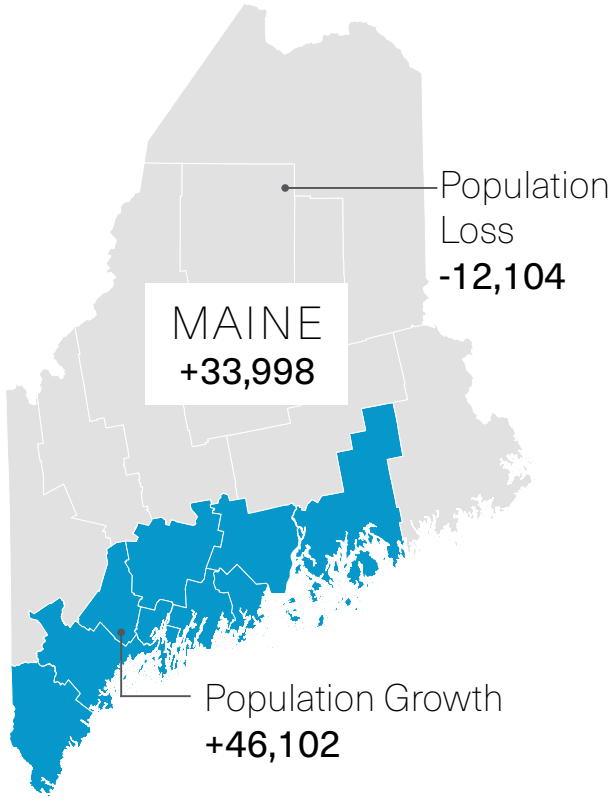
As the map shows, the southern and Midcoast counties (blue) are driving population growth in Maine. In fact, these are the only counties that experienced growth in the last decade. The central and northern rim counties (grey) all lost population.

The PACTS region, comprised of 14 municipalities in Cumberland County and three in York County, added 22,489 people — going from 274,910 people in 2010 to 297,399 people in 2020.

Pandemic In-Migration

Because the Census Bureau conducts such a thorough count, the decennial Census is typically considered the gold standard for demographic data. However, since data collection for the 2020 Census was conducted in 2019, the count predates the COVID-19 pandemic which began in the spring of 2020.

A post-pandemic Census estimate indicates the state's total population may have grown by nearly 32,500 people from April 2020 to July 2023, the greatest population growth in Maine in nearly two decades.



Population Change by County (2010-2020)

Between 2010 and 2020, the southern and Midcoast counties (blue) grew by over 46,000 people. However, these gains were offset by population losses of just over 12,000 people in the central and northern rim counties (grey). Factoring in this population loss, Maine grew by approximately 34,000 people.

Source: U.S. Census Bureau Decennial Census (2010, 2020)

Real estate brokers have also observed that more homes in Maine are being bought by out-of-staters. Typically, a quarter of home sales in the state involve buyers from outside the state, but during the pandemic that number rose to nearly 40 percent.[15]

[15] *Maine Population Grows from In-Migration During Pandemic;* Portland Press Herald. December 2021.

What is the difference between a **refugee** and an **asylum seeker?**

Both refugees and asylum seekers are people fleeing persecution, but they enter the U.S. in different stages of their journey.

Refugees arrive in the U.S. with their status as people fleeing persecution already recognized by the government. They have often spent time in humanitarian camps abroad where they have applied for and been granted refugee status. When they are granted refugee status, they may also be given permission to enter another country by that country's government. Because refugees arrive in the U.S. with their status already recognized, they are authorized to work in the U.S. upon arrival.

Asylum seekers are people fleeing persecution who have not yet been granted refugee status — though they, too, enter the U.S. through a lawful process. After declaring their intent to seek asylum, seekers must go through an application process to have their refugee status confirmed or denied. Because their status has not yet been granted, asylum seekers are not authorized to work in the U.S. They can apply for work authorization, but they cannot receive a work authorization permit until their asylum application has been pending for 180 days.

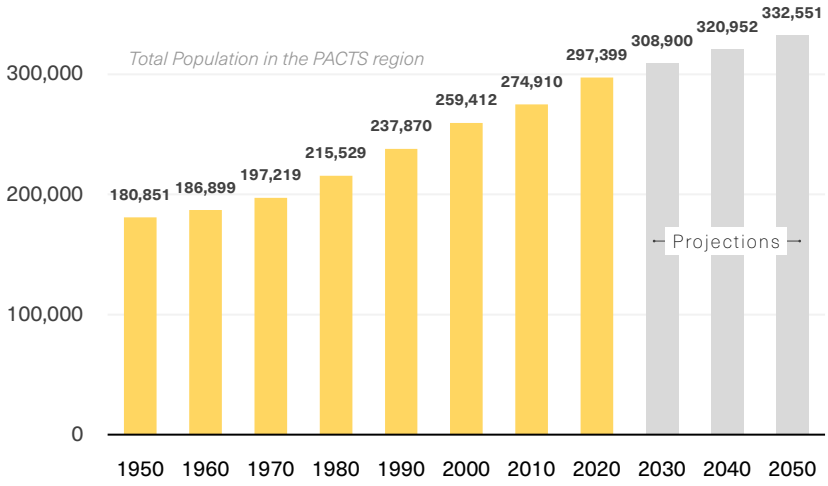
Formerly sheltered at the Cumberland Expo, a mother and daughter are relocated to a "host home" in South Portland while they await permanent housing. Photo: GPCOG

New Mainers

Another area of growth is in "New Mainers." The Maine Immigrants' Rights Coalition estimates there are around 87,000 immigrants and refugees living in Maine. Immigrants in Maine have come from over 30 countries in Southeast Asia, Eastern Europe, the former Soviet Republics, the Middle East, Africa, South and Central America, and the Caribbean.

Current immigrants that are coming to Maine comprise both asylum seekers and refugees. In recent years, due to federal limits placed on the number of refugees accepted into the United States, there have been more asylum seekers arriving in the region than refugees. Trends in global population movement often mirror conflicts and tragedies that are happening worldwide. As such, recent asylum seekers have come primarily from the Democratic Republic of the Congo, Angola, Congo Brazzaville, Haiti, Rwanda, Burkina Faso, Nigeria, Ghana, Gabon, and Niger.

In the PACTS region, Portland and South Portland have experienced the largest influxes of immigrants. Over 1,000 asylum seekers arrived to the region in late 2021 and early 2022. With family shelters full and not enough housing, city staff and nonprofit organizations pieced together housing solutions including hotels, motels, and inns throughout the region. However, this is an expensive and only temporary solution.



Population Growth in the PACTS Region

The region has experienced steady population growth since 1950, increasing from about 180,000 to nearly 300,000 by 2020. Projections for 2030, 2040, and 2050 show continued growth, reaching roughly 333,000 by mid-century, about 35,000 more people than in 2020. These estimates were derived using a compound annual growth rate based on the previous Connect 2045 projection to maintain a consistent trend for planning purposes. Note: Updated projections exclude Arundel, which is no longer part of the PACTS region.

Data sources: Decennial Census; Woods & Poole Economics, Inc.

Where Population Growth is Occurring

Between 1950 and 2000, the vast majority of population growth in Greater Portland has occurred in suburban and rural communities, away from job centers and services. Over time, this sprawling development pattern, which is difficult to serve by public transit, has contributed to a reliance on vehicle travel, traffic congestion, longer commutes, increased air and water pollution, and the weakening of town and city centers.

Recent trends, however, suggest a renewed interest in urban areas. As the graph above shows, since 2000 the urban communities in the region (Biddeford, Portland, Saco, South Portland, and Westbrook) have stopped losing population and are now attracting new people and development.

The map on the next page provides a more detailed perspective of population change in the last decade. While Scarborough, which is predominantly suburban, grew the most of any community (3,216 people), the cities of Westbrook (2,906), Portland (2,214), Saco (1,899), South Portland (1,496), and Biddeford (1,275) also experienced considerable growth. Additionally, much of the growth in Scarborough occurred in compact, highly walkable neighborhood developments such as Scarborough Downs and the Eastern Village.

> Encouraging growth in the region's villages, downtowns, and urban areas is a key strategy for meeting our transportation goals.

Encouraging growth in the region's villages, downtowns, and urban areas is a key strategy for meeting our emissions reductions goals. Among other benefits, research shows that people who live in more compact neighborhoods with a diversity of housing, jobs and services nearby make less vehicle trips and are more likely to walk, bike, or take public transportation to get around.[16]

[16] *Effects of the Built Environment on Transportation: Energy Use, Greenhouse Gas Emissions, and Other Factors.* Cambridge Systematics (2013).

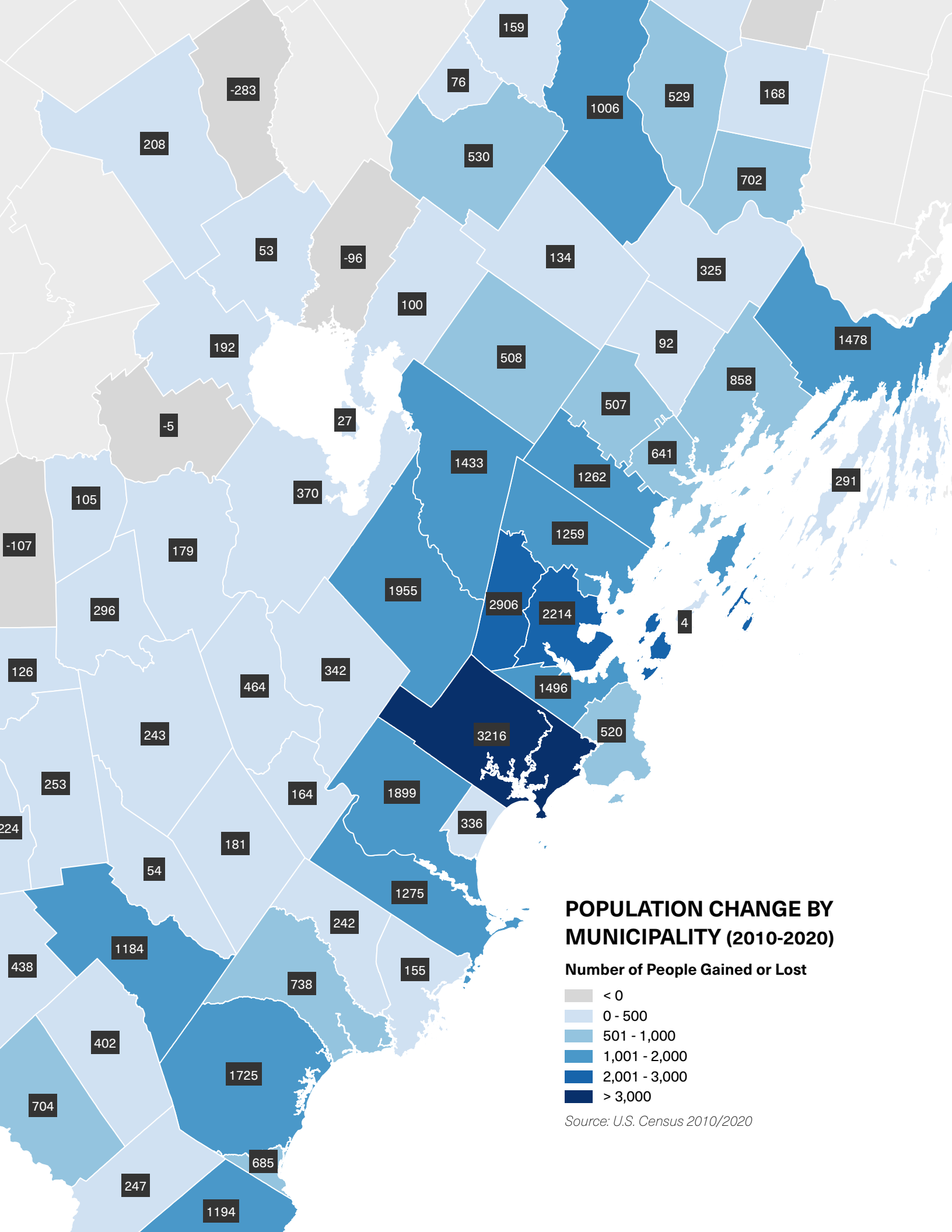

159
76
-283
1006
529
168
208
530
702
53
-96
134
325
100
1478
192
92
508
858
507
27
-5
641
1433
1262
291
105
370
1259
-107
179
1955
2906
2214
296
4
126
342
464
1496
243
3216
520
253
164
1899
336
224
181
54
1275
242
1184
438
155
738
402
1725
704
685
247
1194
POPULATION CHANGE BY MUNICIPALITY (2010-2020)
Number of People Gained or Lost
< 0
0 - 500
501 - 1,000
1,001 - 2,000
2,001 - 3,000
> 3,000
Source: U.S. Census 2010/2020

Photo: GPCOG

Old Orchard Beach

Future Population Projections

While developing population projections is always challenging, the uncertainty imposed by the influx of in-migration to Maine posed by the COVID-19 pandemic made the Connect 2045 forecasts (which form the basis for the Connect 2050 projections) especially difficult.

Year-to-year population changes are beginning to trend more towards pre-pandemic figures, but if Maine is seen as a place of refuge from the impacts of climate change, the next decade could mimic the rapid growth experienced during the back-to-the-land movement of the 1970's. However, a major barrier hindering growth is a widespread shortage of available housing.

Keeping these uncertainties in mind, the Connect 2050 forecast predicts Greater Portland will continue to gain new residents. Between 2020 and 2050 the combined population of the PACTS communities is projected to grow by nearly 35,000 people (from 297,399 people in 2020 to 332,551 people in 2050), for an increase of 12 percent. Unlike previous projections, the 2050 forecast suggests more growth may occur in the region's urban communities than in our outlying communities over the next 25 years. The Connect 2050 forecast, however, is not a prophecy. Where and how we grow in the future is ultimately shaped by the decisions we make and the actions we take.

Other Population Changes

While the Greater Portland region continues to grow in population, as the table to the right shows, in the last decade our demographic and socioeconomic makeup has also changed. The following are a few key takeaways:

- **Our population is aging.** Older adults (people age 65 and over) were the fastest growing age group between 2010 and 2020, increasing from 14% to 18% of the population (from 38,594 people to 51,015 people). In the coming decades, the region's population and workforce will become increasingly older, with all Baby Boomers entering the 65+ category by 2030.
- **Our population is more racially and ethnically diverse.** Another rapidly growing population is made up of those whom self-identify as People of Color and/or Hispanic, which increased from 8% to 14% of the population between 2010 and 2020 (from 22,878 people to 40,820 people). Although our region's total population remains more than 85% non-Hispanic White, our racial and ethnic make-up is changing rapidly.
- **Fewer people can afford homes.** The gap between incomes and home values increased threefold. The median household income increased by approximately $20,000, while the median household value increased by nearly $60,000. Although the percent of people below poverty level declined slightly (from 11% to 8%), this is partly because the 2010 Census occurred amidst the Great Recession.
- **Our households are smaller.** The average household size continued its long running decline, from 2.31 people in 2010 to 2.28 in 2020. This nationwide trend is attributed to smaller family size and the rise of nuclear families which has resulted in fewer extended family living arrangements and smaller households, among other factors.

	2010	2020
Total Households	114,989	126,421
Average Household Size	2.31	2.28
Median Household Income*	$59,706	$79,163
Median Home Value*	$265,655	$323,655
Population Below Poverty Level*	11%	8%
Population Over Age 65*	14%	18%
Population Under Age 25*	21%	18%
People of Color and/or Hispanic	8%	14%

Population Characteristics

The table above shows how the population in the PACTS region has changed in the last decade. Key takeaways are that we are getting older, becoming more diverse, the gap between incomes and home values has increased threefold, and our average household size continues to get smaller.

Sources: U.S. Census ACS Est. 2016-2020/Census 2020

These demographic trends are not unique to our region. For example, the Census estimates the number of older adults could nearly double to about 90 million by 2050, and Census projections suggest the country will be "minority White" by 2045.

It is important for PACTS to understand how social characteristics and identities relate to people's preferences, behaviors, and access to resources. For example, a significant portion of older adults will likely want to age in place and may require more supportive transportation services (e.g., dial-a-ride and volunteer transportation programs). Likewise, among other challenges, racial and ethnic minority groups are more likely to rely on public transportation, more likely to live near heavily trafficked roads, and less likely to own a vehicle. These are just some of the factors we will need to consider in the years ahead to develop a transportation system that is equitable and supports the needs of the people who live here.

Photos: GPCOG

Employment Change

THE GREATER PORTLAND REGION is the largest employment center in Maine. True to form, in the period between 2002 and 2022 (the most recent data available), the PACTS communities added nearly 34,000 jobs — going from 161,889 jobs in 2002 to 195,715 jobs in 2022.[17]

Despite the cumulative growth, in many ways the economic history of the last two decades is the story of slow economic recovery after a recession in 2005 and the bursting of the U.S. housing bubble and global financial crisis of 2007-2009. Known as the Great Recession, its effects were most harshly felt in the PACTS region in 2009 when we lost nearly 4,500 jobs.

Starting in 2010, the PACTS region gradually began to recover from the Great Recession, even adding a record number of jobs between 2016 and 2019. Unfortunately, 2019 would be the last "normal" year for the foreseeable future.

With the onset of the COVID-19 pandemic, Greater Portland experienced one of the most dramatic reversals of economic fortune in the region's history. All told, approximately 94,000 jobs were lost across the state in the first few months following the onset of the pandemic.[18]

Pandemic Recovery

As the pandemic subsided, jobs growth returned to pre-pandemic levels across the state by early 2022. Economic trends continue to stay favorable, with Maine's current labor market being its strongest in decades.[19] As the graph on the next page shows, the total number of jobs in the PACTS region plummeted from a high of 192,657 jobs in 2019 to 175,564 jobs in 2020 — a loss of 17,093 jobs. However, more recent employment figures suggest the initial shock of job losses in 2020 has subsided and we are transitioning into a period of rebuilding and recovery. In 2021, we gained 6,826 jobs. Although the data shows we have not fully recovered from the pandemic, this is significant progress, and recent short-term forecasts predict employment to return to its pre-pandemic peak by 2023.[20]

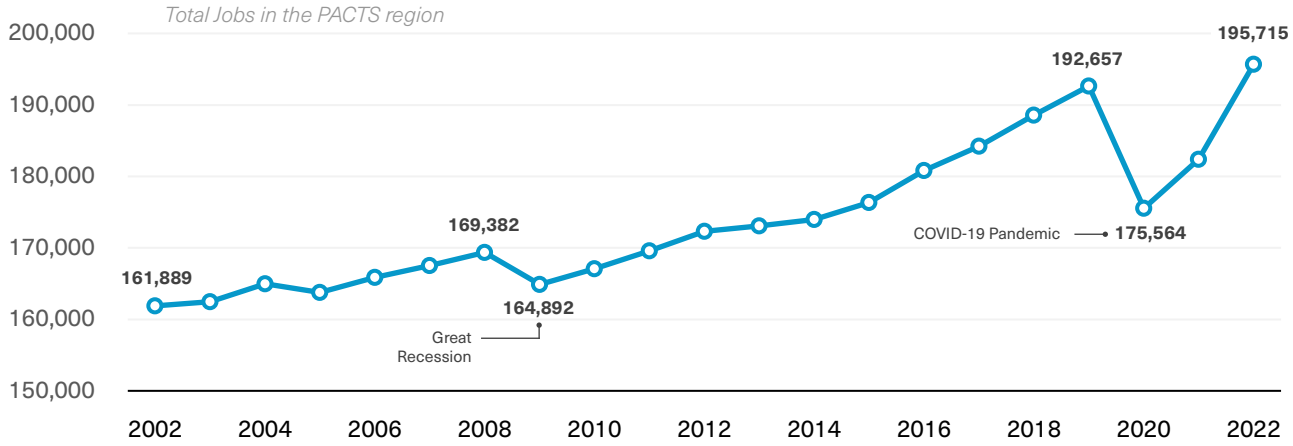
---

[17] U.S. Census Bureau. (2022). LEHD Origin-Destination Employment Statistics (2002-2022).

[18] *Maine's Economy During COVID-19: 2020 Year in Review.* Office of the State Economist. 2020.

[19] *State of Working in Maine: 2024* Maine Center for Economic Policy

[20] *Report of the Consensus Economic Forecasting Commission* Maine Department of Labor. February 2022.



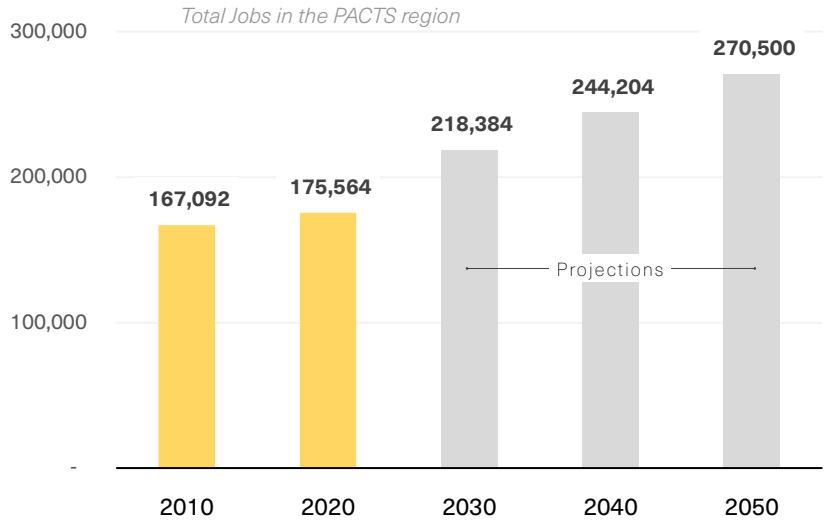
Total Jobs by Year in the PACTS Region

Despite notable dips during the Great Recession (2008–2009) and the COVID-19 pandemic (2020), employment has rebounded, reflecting steady long-term growth. Note: Y-axis starts above zero to better show trends

Future Employment Projections

As with population forecasting, today's accelerated pace of change and increased uncertainty make it ever more difficult to anticipate what is to come. With that in mind, the Connect 2050 employment forecast predicts a prolonged period of continued job growth. The forecast predicts the municipalities that make up the PACTS region will add nearly 95,000 jobs by 2050 (going from 175,564 jobs in 2020 to 270,500 jobs in 2050).

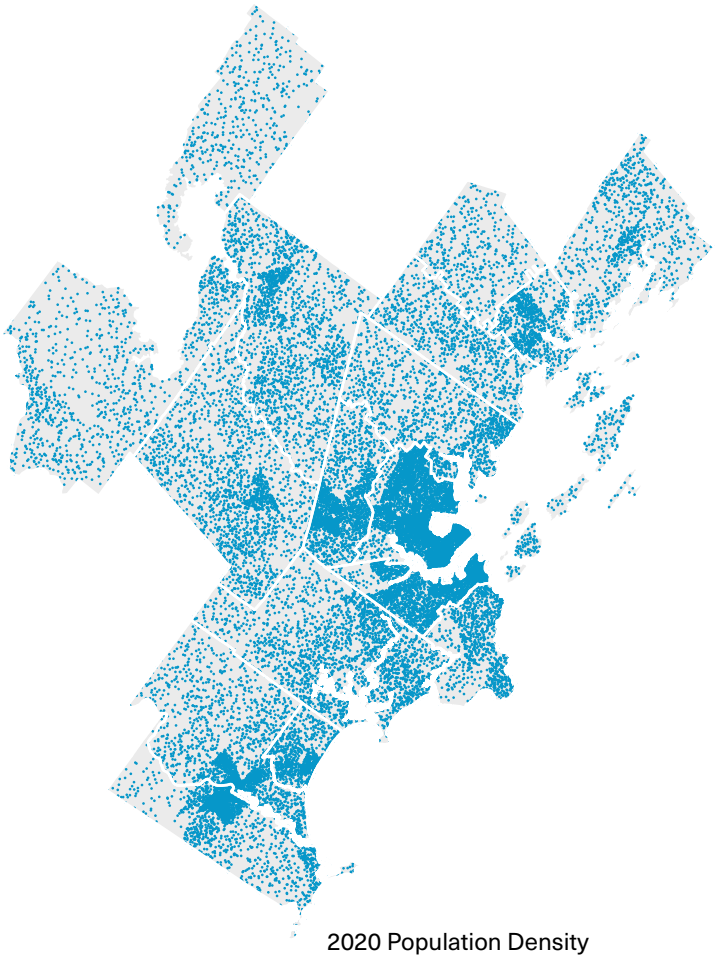
This level of employment growth may be realized if we continue to attract migrants from other states (and countries) to replace aging baby-boomers, and, if young people growing up in Maine choose to stay here as they enter the workforce and progress through their careers. One significant barrier to employment growth is the lack of available housing. If the region cannot increase our supply of available housing more people will need to commute from outside the region or work remotely.



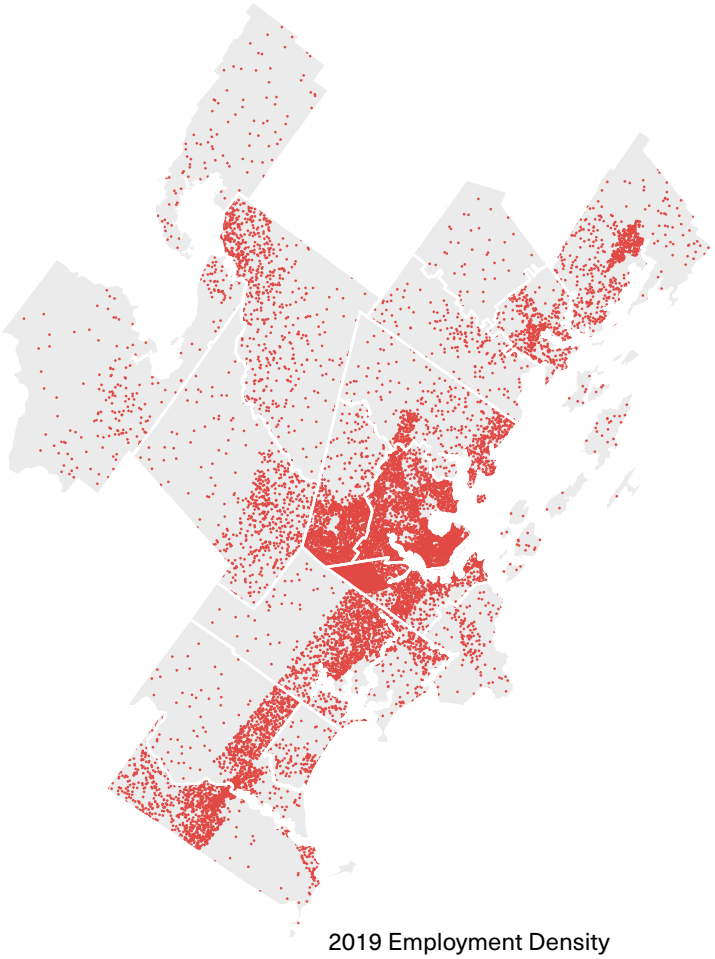
Future Employment Projections

The Connect 2050 forecast predicts continued job growth in the PACTS region over the next three decades. Employment is projected to rise from 175,564 jobs in 2020 to roughly 270,000 by 2050, an increase of nearly 95,000 jobs. These projections were derived by applying a compound annual growth rate to the previous Connect 2045 forecast to provide a consistent trend for planning purposes. Note: Updated projections exclude Arundel, which is no longer part of the PACTS region.

Data sources: Decennial Census; Woods & Poole Economics, Inc.



2020 Population Density
1 dot = 10 people
Source: 2020 Census



2019 Employment Density
1 dot = 10 jobs
Source: 2019 Census

Where People Live & Work

WHERE PEOPLE WORK, in relation to where they live, strongly influences travel behavior. The farther people live from work, the more likely they are to drive. Proximity to jobs can also affect employment. People who live closer to jobs are more likely to work. They also face shorter job searches and spells of joblessness.[21]

Existing Commute Patterns

As the maps show, residences are more dispersed than jobs, leading to longer commutes and greater reliance on driving. In the PACTS region, 66% drive alone, 19% work from home, 7% carpool, 5% walk, and 1% bike or take transit.

Since 2019, solo driving has decreased 14%, largely due to a 178% increase in remote work. Solo driving is lower in Portland and Raymond (56% and 54%) than the regional average.

To meet emissions goals, we need to transform living and travel patterns. Proven strategies include:

- **Directing future growth to appropriate areas** where jobs, housing, and services are in close proximity. In some cases, this may mean expanding housing choices

[21] *The Growing Distance Between People and Jobs in Metropolitan America.* Brookings Institute. 2015.

How do people **commute to work** in the PACTS region?

66% Drive Alone*

19% Work from Home

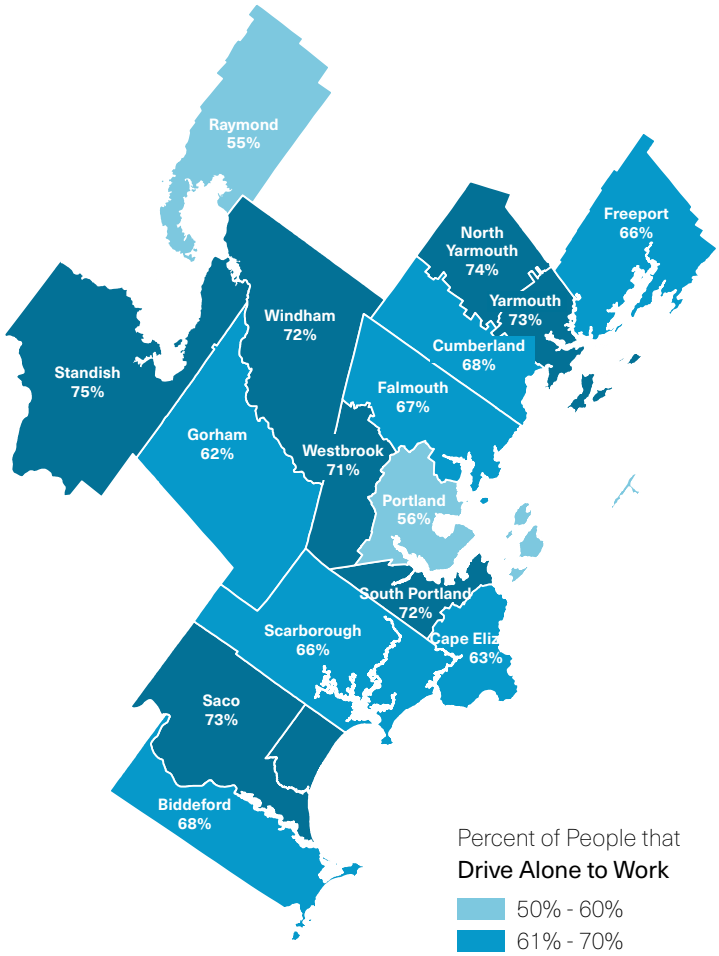
7% Carpool

5% Walk

1% Public Transportation

1% Bike

Source: Census Bureau ACS 5-year Est 2019-2023
*PACTS' goal is to reduce the percentage of people who drive alone to work to 40 percent.



Source: Census Bureau ACS 5-year Est 2019-2023

in employment centers, and expanding employment in residential neighborhoods. Ensuring housing affordability is also critical.

- **Investing in public transit** so it is frequent, fast, and convenient.
- **Providing safe and accessible walking and biking facilities** so people can walk or bike to work (or to access transit).
- **Investing in broadband** so more people can work from home (or if a commute is necessary make fewer trips to meetings or appointments that can be held virtually).

Portland is one of few communities where the percentage of people who drive to work alone is considerably less (62% vs. 74% regional average). However, there are many places in the region where this is becoming more common — in particular Downtown Biddeford/Saco, Westbrook, and South Portland.

A Lack of Housing

THE GROWING LACK of affordable housing for low-, moderate-, and middle-income people over the last decade has become the top barrier to quality of life and economic opportunity for residents of Greater Portland.

In the last ten years rents and housing prices have risen sharply, mirroring national trends, but making our region's aging demographic challenge even worse. In brief, we have too few people to fill available and future jobs, and too few homes that people can afford to let them live in reasonable proximity to their jobs, their families, and their community.

The high price of housing in Greater Portland, and nationwide, is largely attributed to low housing supply and high housing demand, producing a widespread shortage of available homes and apartments that people can afford, exacerbated by in-migration during and after the pandemic that has exceeded new housing construction and added more market pressure to housing prices.

A recent report that quantifies the underproduction of across the United States found the Portland-South Portland metropolitan area is short by approximately 14,781 housing units.[22] This undersupply of housing, combined with other factors, including interest rate hikes, inflation, and supply chain disruptions, is making it increasingly difficult for many people to find housing they can afford. And simply put, without places to live, people cannot contribute to society or the local economy.

Over the past decade, median home values in the region rose from $265,655 in 2010 to $460,339 (according to the most recent 2019-2023 five-year estimate), while median rent increased from $915 to $1,547. Housing costs

Portland Housing Authority's Bayside Anchor project under construction in 2020. Photo: GPCOG

are rising faster than incomes. About 44 percent of renters are considered "cost-burdened," spending more than 30 percent of their income on rent, compared with 23 percent of homeowners.[23]

When a cost-burdened renter, or homeowner, is spending more than 30% of their income on housing, they must constrain spending on other basic needs such as food, healthcare, or transportation. Additionally, these budget trade-offs make it virtually impossible to have any income left over for savings.

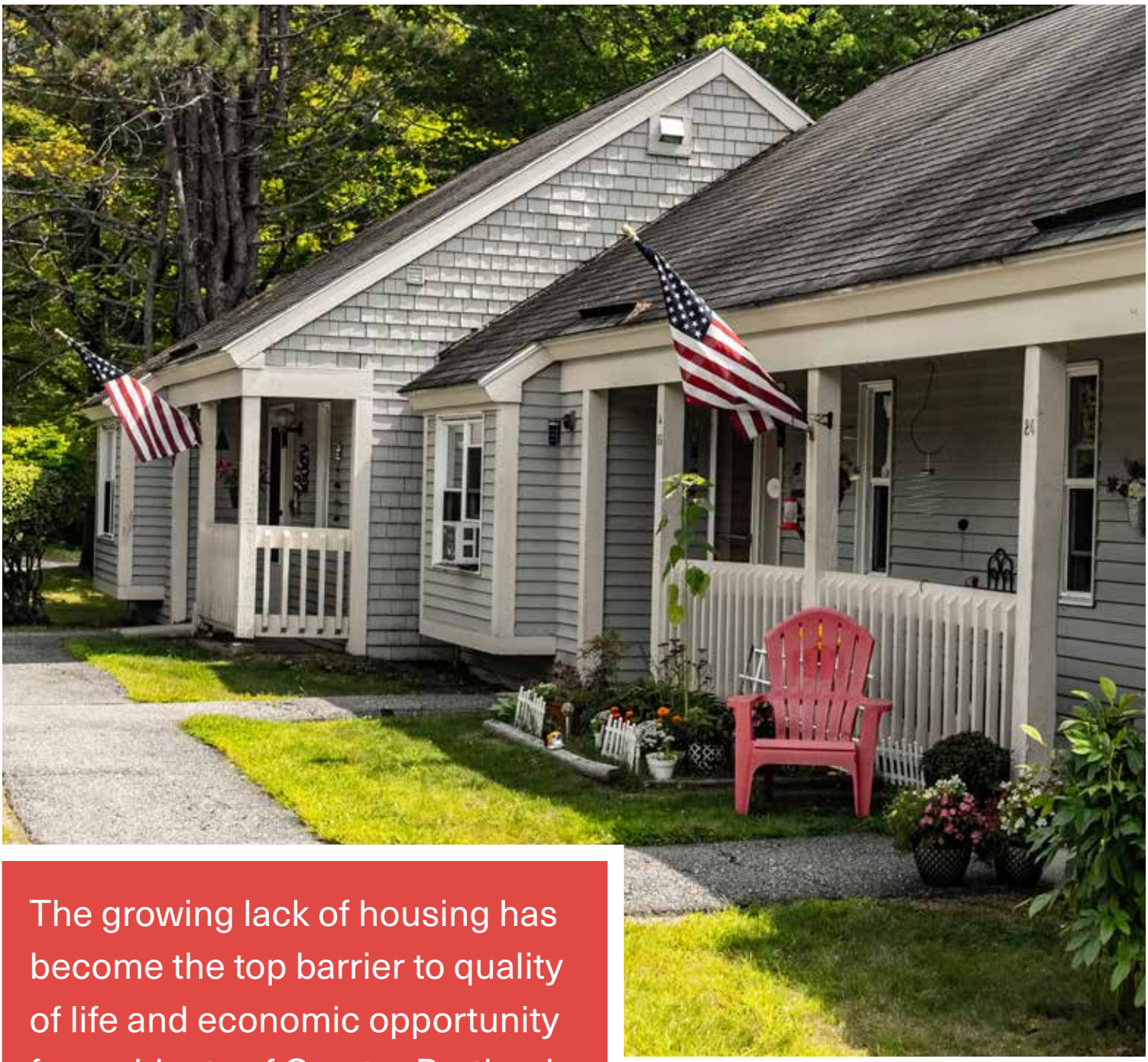
Disproportionate Impacts

The lack of affordable housing has a disproportionate impact on vulnerable population groups, such as older adults wishing to age in place and people of color. For example, the median income for a family of four to afford the average home in the Greater Portland Housing Market Area is $129,800 in 2025.[24] According to the most recent Census

[22] *Housing Underproduction in the U.S.* Up for Growth, 2024.

[23] U.S. Census Bureau: 2010 Census; ACS 5-year Est. 2019-2023.

[24] The Area Median Income for metropolitan areas is set by the Department of Housing and Urban Development (HUD).



The growing lack of housing has become the top barrier to quality of life and economic opportunity for residents of Greater Portland.

estimates, the median white household in the region earns an income of $96,829, while the median black household earns $53,620.[25] Both incomes are below what is needed to afford a home in the region, but the median income for black households is nearly half as much as the white household and far below what is needed to purchase a home.

Other Consequences

Although high housing costs affect those with low incomes the most, the housing crisis is a problem that ultimately impacts everyone. The following are a few additional reasons why:

- **Increased traffic:** A lack of affordable housing in urban areas and job centers often means people are forced to move far from their places of work, family and friends, or support systems and services. Faced with long commutes, most people then drive to work (or other places) which creates more traffic and emissions. Those with long commutes are also saddled with added costs for gas and maintenance.
- **Lack of workers:** Employers have a hard time filling jobs if people lack reliable transportation. The geographic divide between jobs and workers is often referred to as "spatial mismatch" and it can significantly impact economic growth. If people do not have access to jobs, growth slows down.
- **Less purchasing power:** People who spend most of their income on housing or transportation to get to work naturally have less money to devote to other things.
- **Less diversity:** When low-income people are priced out of urban areas and job centers it usually leads to a decrease in racial, ethnic, and economic diversity. Additionally, high-income earners taking their place typically use transit less frequently even though they live in some of the region's most transit-rich neighborhoods.
- **Increased homelessness:** Rising costs of housing, combined with inflation, also leads to increased homelessness. In Portland, the current demand for shelter beds and social services far outstrips supply.

Zoning Reform

The accelerating gap between what housing costs and what people can afford is a complex, national issue and there is no simple remedy. However, zoning reform is one concrete way in which local and state governments can make a difference. Many existing zoning regulations, such as single-family zoning districts, parking requirements, and density restrictions, for example, can create constraints for affordable housing. These regulations keep densities low and limit overall supply, which increases housing costs in both urban and suburban communities.

A new State law ("An Act to Implement the Recommendations of the Commission To Increase Housing Opportunities in Maine by Studying Zoning and Land Use Restrictions", commonly referred to as LD 2003), seeks to ease the state's affordable housing crisis. Among other provisions, the bill expands the ability to build accessory dwelling units and multi-unit properties in residential zones by loosening zoning restrictions statewide.

In 2023, municipalities across the region and the state started to implement new housing friendly state requirements. However, the outlook for closing the housing gap in our region remains uncertain. Additional transportation policies that support housing density are needed to help people find housing choices that meet their needs and their budgets.

[25] U.S. Census Bureau ACS 5-year Est. 2019-2023

Morrils Corner, Portland. Photo: GPCOG

Transportation Access

THERE IS INCREASING RECOGNITION of inequalities that exist in our society today. Since transportation touches every aspect of our lives (where we live, work, play, and go to school) it is critical to consider access in all transportation decisions and investments.

Historically, in the United States, and in our region, not all communities have received the same benefits from transportation investments, and some communities have had to shoulder a disproportionate share of the burden. Past policies and planning decisions — including restrictive lending policies, highway building in established neighborhoods, and lack of investment in mass transit — have shaped our current housing and transportation systems.

PACTS recognizes the important role we play in addressing disparities and developing an accessible transportation system that is available to everyone going forward. As the region's population continues to grow and change, PACTS is committed to evaluating all decisions, policies, and investments with a transportation access lens. The first step in doing so is to have a full understanding of where traditionally — and currently — underserved communities reside and how our transportation investments are serving their needs.

Traditionally Underserved Communities

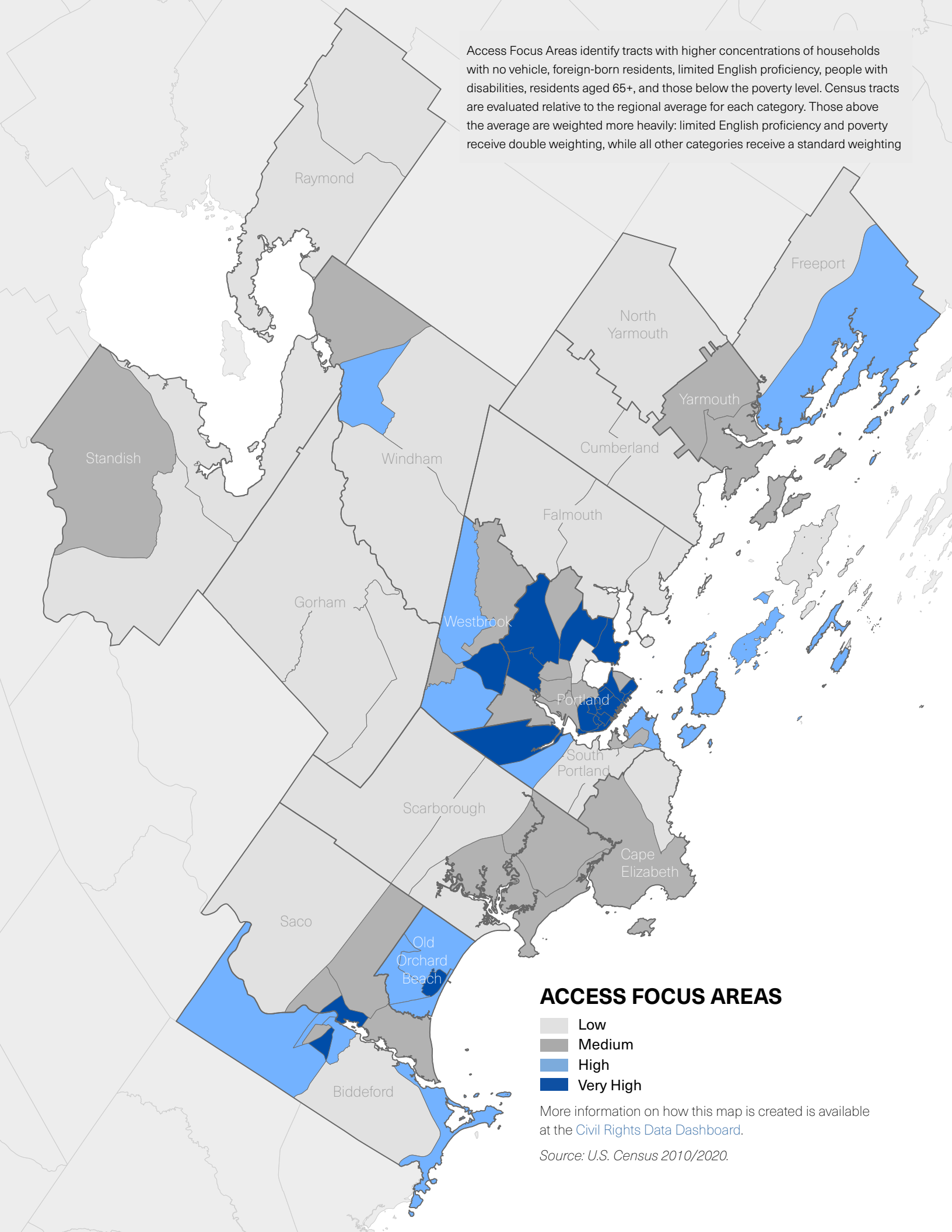
To identify traditionally underserved communities in the region, PACTS routinely evaluates census data and maintains a Civil Rights Data Dashboard.[26] The dashboard is a series of interactive maps that identify neighborhoods where there are higher proportions of older adults, people with low-incomes, people with disabilities, people with limited vehicle access, people born outside the U.S., and people with limited English proficiency.

The above considerations are then combined to create an "Access Focus Areas (AFA)" index (see map on next page). The index classifies each census tract as low, medium, high, or very high based on the proportion of traditionally underserved community members who live there.

PACTS uses the Civil Rights Data Dashboard and Access Focus Area index as a resource when making investment decisions and scoring projects, and to evaluate where we have funded projects in the past (and whether those investments have played a role in perpetuating inequalities).

---

[26] *Civil Rights Data Dashboard.* PACTS, 2025.


Access Focus Areas identify tracts with higher concentrations of households with no vehicle, foreign-born residents, limited English proficiency, people with disabilities, residents aged 65+, and those below the poverty level. Census tracts are evaluated relative to the regional average for each category. Those above the average are weighted more heavily: limited English proficiency and poverty receive double weighting, while all other categories receive a standard weighting
Raymond
Standish
Windham
Gorham
Falmouth
Cumberland
North Yarmouth
Yarmouth
Freeport
Westbrook
Portland
South Portland
Scarborough
Cape Elizabeth
Saco
Old Orchard Beach
Biddeford
ACCESS FOCUS AREAS
Low
Medium
High
Very High
More information on how this map is created is available at the Civil Rights Data Dashboard.
Source: U.S. Census 2010/2020.

In Greater Portland...

8% of people are **below poverty level** (22,360 people)

7% of households **have no vehicle available** (9,482 households)

7% of people were **not U.S. Citizens at birth** (20,712 people)

3% of people **speak English "less than very well"** (7,756 people)

11% of people **have a disability** (33,358 people)

19% of people are **age 65 and over** (56,727 people)

Sources: U.S. Census ACS 5-year Est. 2019-23

How PACTS Considers Transportation Access

Identifying where traditionally underserved communities exist, however, can only take us so far. To this end, PACTS is committed to actively seeking out and understanding the needs of those who experience barriers to transportation. The following are a few of the key ways in which PACTS does this:

- **Federal Requirements:** PACTS periodically updates two federally-required documents: a Public Involvement Plan that lays out goals and strategies to better engage the public in the decision-making process, and a Civil Rights Plan to ensure that public funds are not spent in a manner that encourages, subsidizes, perpetuates, or results in discrimination. In addition to these required documents, PACTS has developed its own Inclusive Transportation Planning Toolkit to help staff and consultants more easily find and access guidance on inclusive transportation planning and decision-making.
- **"Mobility for All" Programs:** PACTS engages a broad range of community members and organizations in improving transportation access for people who experience barriers. Mobility for All initiatives include: the Community Transportation Leaders Program, the Moving Maine Network, the Bus Ambassadors Program, the Transportation and Community Network, the Southern Maine Mobility Guide, the Ride with Me event, Mobility Liaisons, and the Travel Helpers Program.
- **Accessible Communications:** PACTS complies with Title VI Act and Executive Order 13166 to provide limited English proficiency individuals with meaningful access to its programs and services. PACTS regularly translates communications materials into five languages (Spanish, French, Portuguese, Arabic, and Somali) and ensures they are screen-reader friendly for those with visual impairments. PACTS also ensures that virtual engagement complies with the international Web Content Accessibility Guideline standard.
- **Meaningful Involvement:** PACTS has changed its committee structure to add individuals from underrepresented communities.

Photos: GPCOG

Mobility for All

THE PACTS MOBILITY FOR ALL PROGRAM engages a broad range of community members and organizations in improving transportation access for people who experience barriers. Mobility for All initiatives use inclusive practices to involve older adults, people with disabilities, people of color, people with limited English proficiency (LEP) and other underserved communities in transportation planning and decision-making. Mobility for All initiatives include:

COMMUNITY TRANSPORTATION LEADERS

People with first-hand experience encountering all kinds of barriers to transportation are recruited to learn about and participate in PACTS decision-making. The training for this program results in a strong peer-to-peer community of advocates who are able to participate meaningfully in transportation planning and decision making, with some Community Transportation Leaders even sitting on PACTS committees and serving as advisors to our planning processes.

BUS AMBASSADORS

Bus Ambassadors work directly with individuals and families who need support to learn how to ride the bus and understand transportation options. The program increases cross-cultural and multilingual access to information about public transit in the Greater Portland region.

SOUTHERN MAINE MOBILITY GUIDE

The Southern Maine Mobility Guide is a guide to transportation resources in Cumberland and York counties intended to help people who live, work, and play in Southern Maine connect to where they need to go. The guide is focused on transportation options and mobility support for people who cannot drive or cannot afford to own a car. It is helpful both for individuals seeking transportation and those in caregiving or support roles.

RIDE WITH ME

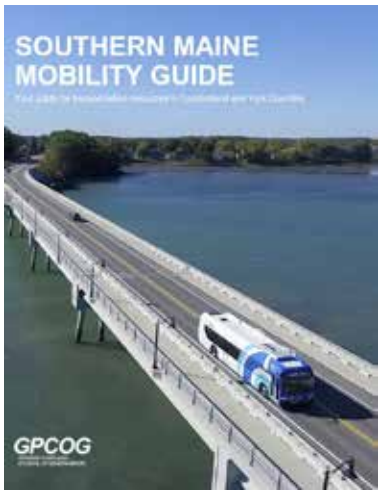
Ride with Me events pairs decision-makers with individuals who have lived experience of transportation barriers to spend a few hours riding together — on either the bus, the train, or on paratransit. The event is meant to empower transit riders to share their experience, perspectives, and ideas with decision-makers. These decision-makers — from municipal government, transportation agencies, and planning organizations — benefit from first-hand insight into the transportation challenges experienced by community members.

MOBILITY LIAISONS

Mobility Liaisons are individuals with personal experience of mobility-related transportation challenges (this may be because of disability, age, income, language, or other reasons). They develop and co-facilitate the Community Transportation Leaders program, assist with focus groups, and collect feedback from community members. They also help inform the community of plans and decisions, promote surveys and assist neighbors in sharing public input, and recruit other stakeholders to participate in transportation planning processes.

TRAVEL HELPERS

With special funding from the Federal Transit Administration, GPCOG and PACTS developed and piloted a Travel Helpers Training. This training module for staff of human services and healthcare agencies prepares them to offer travel training (the practice of teaching people about transportation options and how to travel independently on public transit and paratransit) to their clients and patients.



The Southern Maine Mobility Guide

A common point of public feedback is that navigating the many options for transportation in the region can be complicated and confusing. To address this problem, GPCOG's Mobility for All program worked with transportation providers, key stakeholders, and the public to develop the Southern Maine Mobility Guide. The guide comprehensively documents transportation options in Cumberland and York Counties, including fixed-route transit service, paratransit and dial-a-ride service, private operators, and more.

See the *Southern Maine Mobility Guide (PDF)* for more information.

Transportation Access Analysis

THE TRANSPORTATION ACCESS ANALYSIS is a key step in ensuring a fair distribution of transportation benefits and burdens across the region. As part of implementing Connect 2045 and complying with federal Civil Rights requirements, PACTS is evaluating how transportation investments from 2022–2027 have impacted Access Focus Areas compared to other communities.

Currently underway, the analysis evaluates transit, roadway, and multimodal projects against the transportation needs of underserved community members. Priorities were identified through multiple sources:

- Recent regional plans and studies, including Connect 2045, Vision Zero Greater Portland, and Transit Together
- USDOT's Climate and Economic Justice Screening Tool, as available in 2024
- Direct input from Community Transportation Leaders and other stakeholders representing underserved communities

Based on these needs, 21 indicators were selected to measure whether transportation investments address underserved community needs and distribute benefits and burdens fairly. For example:

- Underserved communities need more access to jobs via transit. The analysis measured the number of jobs accessible within a 45-minute transit commute.
- Underserved communities need better sidewalk maintenance, especially in winter. The analysis measured the amount of federal funding invested in projects relating to sidewalk and trail improvements.
- Underserved communities need clean air. The analysis measured the amount of federal funding invested in roadway and multimodal projects related to congestion mitigation and air quality.

Each indicator's results will be compared between Access Focus Areas and non-Access Focus Areas to identify disparate impacts. The project will conclude in November 2025 with an action plan outlining strategies to address any disparities, ensuring future transportation investments serve all community members fairly and support the region's goal to improve access.

Technological Innovations

THE TRANSPORTATION SECTOR is one of the most disrupted industries today. The invention of the smart phone and recent developments in artificial intelligence and automation combined with the success of the sharing economy have transformed how we get around and how we think about mobility. The following are a few current and future innovations, in various stages of development, that are poised to shape our transportation system in the future.

Micromobility

Micromobility refers to a range of small, lightweight vehicles operating at speeds typically below 15 mph and driven by users personally. Micromobility devices include bicycles, electric bikes, electric scooters, electric skateboards, and shared bicycle fleets. Many cities are using short-term rental programs for bikes, electric bikes, and scooters to help with general mobility needs, and to address the "first mile/last mile" issue for commuters using public transportation. In August 2022, Portland launched a bike share program, with stations and racks throughout the city and a fleet of over 200 bikes (including 50 electric bikes).

Mobility-as-a-Service

Mobility-as-a-Service (MaaS) is a concept that is being piloted by major cities throughout the world. MaaS allows users to plan, book, and pay for multiple types of mobility services (for example, transit, micromobility, ridehailing and taxi service, car rental, etc.) all within one software platform or app. The concept represents a shift away from personally owned vehicles and towards mobility provided as a service. For example, users can pay a monthly fee to have unlimited access to a range of mobility options, or pay per trip, or only pay for the mobility options they need. If MaaS takes off, transportation providers will no longer exist in their separate "train" or "bus" or "rideshare" bubble. Rather, they will negotiate pricing with MaaS operators, who will package services and offer plans and payment options to better suit consumers.

Connected and Autonomous Vehicles

Connected vehicle technology will allow vehicles to communicate with one another (and other connected infrastructure such as signs and traffic signals) and share safety and mobility information in real time. For example, a connected vehicle could alert a driver when another connected vehicle is about to run a red light, or to

Above: Mobility-as-a-Service, or MaaS, is being piloted in major cities throughout the world. MaaS allows users to plan, book, and pay for multiple types of mobility options within one app. Much the same way Netflix and Spotify have revolutionized how we access tv, movies, and music, MaaS provides convenient access to multiple forms of transportation without actually owning them. Photo: Shutterstock.

Below: Connected vehicle technology will allow vehicles to communicate with one another (and other connected infrastructure such as signs and traffic signals) and share important safety and mobility information in real time. Photo: Getty Images.

Electric Vertical Take-Off and Landing (eVTOL) Aircraft
Battery-powered eVTOL aircraft, like this one by Joby Aviation, could operate like a taxi one day. Photo: Joby Aviation

determine who has the right-of-way at a four-way stop, or when merging onto a highway.

Autonomous Vehicles, or AVs, are vehicles that can operate at least one driving task independently from a driver using sensors. Although some vehicles on the road today have autonomous features, fully autonomous vehicles that can operate independently of a driver are not yet a reality.

When fully implemented, AVs have the potential to completely revolutionize transportation and are predicted to have both positive and negative impacts. On the positive side, many believe AVs will reduce congestion, increase safety, and provide greater accessibility for those who cannot drive, among other benefits. On the negative side, many have raised concerns about job loss (for those who drive for a living), and that people will travel more miles if they are not actually driving. There are also ethical concerns such as how algorithms make moral judgments when faced with multiple unfavorable outcomes; and, who is at fault if an AV makes a mistake?

Delivery Robots

Drawing on the same technology as autonomous vehicles, some cities are allowing companies to pilot autonomous delivery robots for ground delivery. Delivery robots have been piloted in cities such as Pittsburg, Pennsylvania and San Jose, California. Although they help decrease street traffic, they take up pedestrian space on sidewalks, and, like AVs pose a threat to human employment.

Urban Air Mobility

The market for autonomous aircraft has grown substantially in the last few years. Dozens of companies are spending billions of dollars to make electric vehicle take-off and landing (eVTOL) aircraft that will operate like air taxis — taking off and landing from what are called “vertiports” on the tops of buildings, parking garages, or helipads in congested cities.

Multiple cities around the world are already piloting such technologies. A “vertiport” is planned in the U.K. and Paris will have flying taxi service during the 2024 Olympics. At the Detroit Auto Show this year, there were so many eVTOL aircraft on display they nearly outnumbered land-bound cars. While Greater Portland is probably not big enough to support eVTOL flight within the region, autonomous flight from Portland to other cities such as Portsmouth, Boston, Bangor, or Burlington could someday become a possibility.

Other Innovations

Transportation technology is always evolving. Other innovations (that also avoid the roadways) include urban gondolas, high-speed magnetic trains, underground hyperloops, and flying delivery drones. Under the right circumstances, these too could someday find their way to our region.

Construction of the intersection redesign at Main Street and Water Street in Biddeford, now complete.
Photo: GPCOG

An Influx of Federal Funding

2021's INVESTMENT AND JOBS ACT (IIJA) transformed transportation funding in the early 2020s with new grants and programs. It was the largest long-term investment in our nation's infrastructure and economy in nearly a century.

Of the funds available through IIJA, a considerable portion is apportioned to states via formula. The remaining funds are provided through discretionary grant programs (competitive grants).

With Washington gearing up for the next authorization bill, due in October 2026, it is the hope that continued investment in the safety, efficiency, and economic benefits of the nation's transportation systems continues to be a federal priority.

With Connect 2050's bold vision and goals, and tangible action steps, the region is well-positioned to take advantage of continued federal investment.

03

Connect 2050

WHERE DO WE WANT TO GO?

PART 1: OUR DESIRED FUTURE

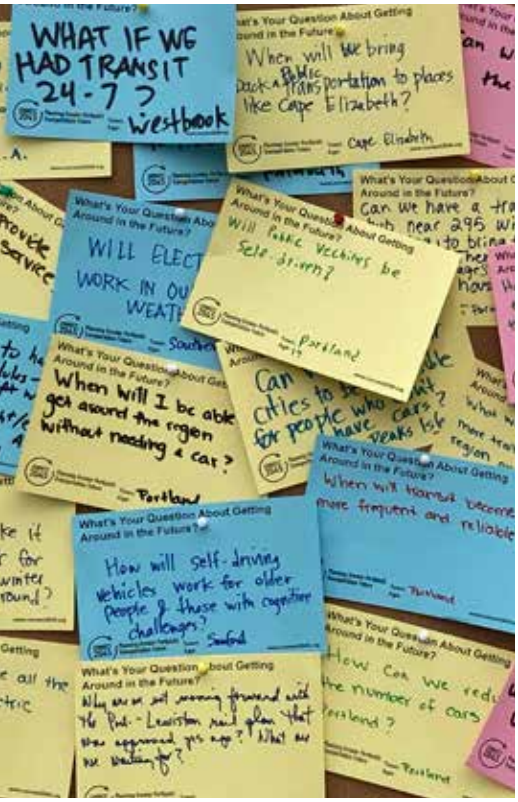
PART 2: OUR PRIORITY GROWTH AREAS

AFTER CONSIDERING where we are at now, the next step is to develop a vision for where we want to go. To ask questions like: "Where do we want to be in 20 years?" And, "What is our desired future?" Crafting a shared vision for a region of nearly 300,000 people is no easy task. During this phase, the Connect 2045 and Connect 2050 teams conducted an extensive public engagement campaign in an effort to meet with as many people and stakeholder groups as possible. The team also met with municipal representatives to learn more about each community's priorities and preferred locations for future growth and development.

This chapter is split into two sections. Part 1 presents the region's shared vision for the future and accompanying six major goals. The vision and goals are the backbone of the plan and a distillation of the key themes we heard from the public. Part 2 discusses how the region can grow to meet our transportation goals. It lays out a revised map of priority centers and corridors as places where PACTS can target its limited resources to have the most beneficial impact.

PART 1:

OUR DESIRED FUTURE



"What's your question about getting around Greater Portland in the future?"

During the Question Campaign, people who live, work, or visit the region were asked: "What's your question about getting around Greater Portland in the future?" After collecting over 500 questions, both in person and virtually, they were analyzed and sorted into six major themes.

Photo: GPCOG

Background

TO DEVELOP A VISION that best represents the values and desires of the many people who make up our region, the team responsible for crafting Connect 2045 conducted an extensive two-part public engagement campaign in the fall of 2021.

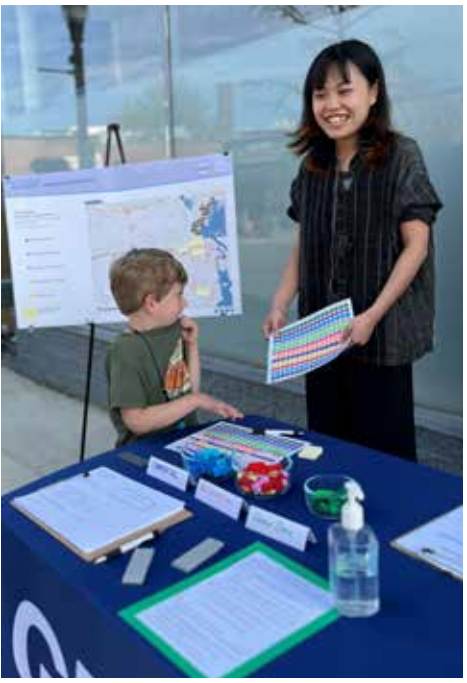
Initial Public Engagement for Connect 2045

In the fall of 2021, the Connect 2045 team hit the streets and conducted an extensive two-part public engagement campaign to develop a shared vision and goals for the future. First, they launched a "Question Campaign" modeled after the highly successful public engagement method of the Go Boston Transportation Plan.

People who live in, work, or visit the region were asked, "What's your question about getting around Greater Portland in the future?" Listening to people's questions served as a way to understand the breadth of relevant issues, what people's diverse experiences are, and what individuals value most. Anyone can have a question, even if they do not see themselves as "experts" on transportation planning. Crafting opportunities for people to donate their questions online and in person across the region provided an easy, low-barrier way for hundreds of people to participate.

After collecting more than 500 questions from the public, the Connect 2045 team analyzed and sorted the questions based on the major themes that emerged. Six themes were selected as the best way to organize the questions: access, livability, safety, mobility choices, environment, and stewardship.

A virtual "Visioning Lab" was then created to collect people's specific ideas for how we can do better in each category. The "Visioning Lab" resembled a cork board where people could add sticky notes with their ideas and "like" or comment on other people's ideas.



Pop-up pennies & jars activity. Photo: GPCOG

Committee Review & Adoption

With the Question Campaign and the Visioning Lab complete, the Connect 2045 team refined the vision and goals during a workshop with the Connect 2045 Project Advisory Committee. They were then further refined by both the Regional Transportation Advisory Committee and the Policy Board. After this review period, the vision and goals were ultimately adopted by the Policy Board at their November 2021 meeting.

Updated Public Engagement for Connect 2050

One task in updating Connect 2045 into Connect 2050 was conducting additional public engagement to understand current trends and issues. This is what we heard.

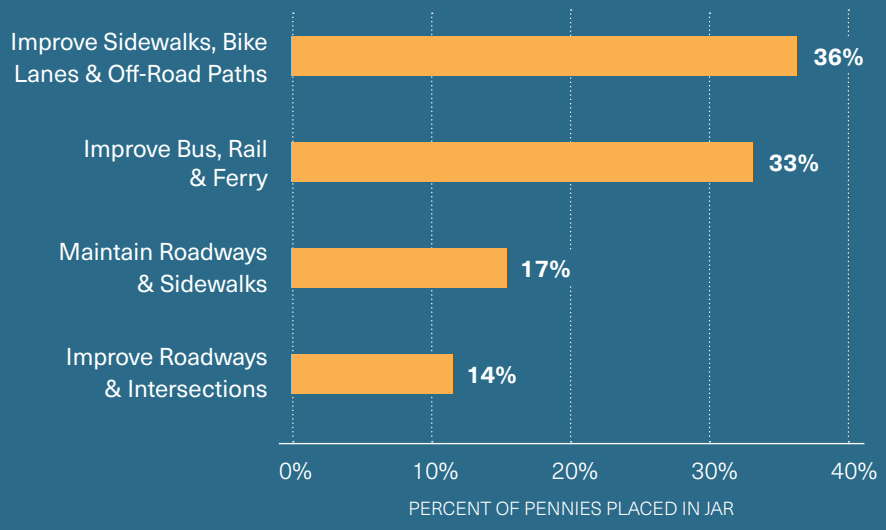
Pennies and Jars Activity: In the spring of 2025, the Connect 2050 project team hosted several pop-up events across the region to gauge how members of the public would like to see transportation infrastructure dollars spent. Using a "Pennies and Jars" activity, participants were asked to place four pennies into four jars according to their priorities:

- Maintain existing roadways and sidewalks
- Improve bus, rail, and ferry service
- Improve sidewalks, bike lanes, and off-road paths
- Improve roadway and intersections

A public survey launched in April 2025 similarly asked respondents to rank the four funding categories. With nearly 500 respondents, improving sidewalks, bike lanes, and off-road paths emerged as the highest priority category.

Travel Trends by Mode Survey: As part of the online survey, we asked folks to share with us how they typically travel around the region, and whether that travel is most typically by driving, walking, biking, or taking transit. We also asked how folks would like to travel around the region in the future. The response is clear: people want the region to be a place where they can drive less — and walk, bike, and take transit more (especially walk).

Connect 2050 Public Engagement Highlights

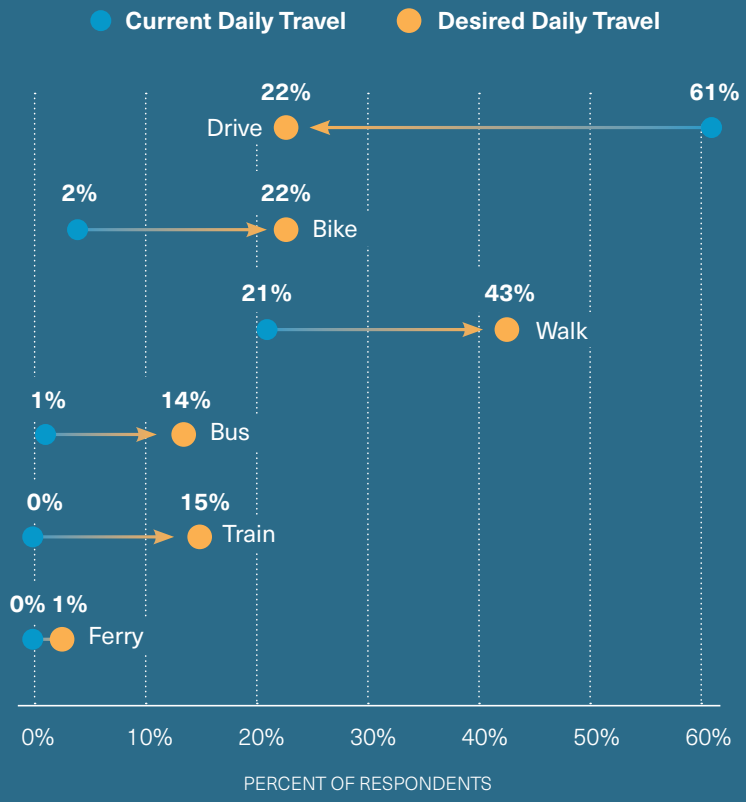


Pennies & Jars Activity

In spring 2025, the Connect 2050 project team hosted pop-up events across the region to understand public priorities for transportation spending. Participants used a "Pennies and Jars" activity, placing four pennies into jars representing different priorities. Across the region, **the highest priority was improving sidewalks, bike lanes, and off-road paths**, followed closely by improving bus, rail, and ferry service. Maintaining existing roadways and sidewalks and improving roadways and intersections were lower priorities.

Travel Trends by Mode

The online survey asked respondents how often they currently walk, bike, drive, or take transit, and how often they would like to in the future. The chart to the right shows the change in the percentage of people who selected "daily" for each mode. The question highlights a gap between current travel behavior and future aspirations. While 61 percent of respondents currently drive daily, only 22 percent say they would like to in the future. Meanwhile, **interest in walking, biking, and taking transit far exceeds current daily use**, though ferry use is an exception (most people, unless they live on an island, are unlikely to use it daily). Overall, this suggests strong demand for infrastructure that makes it safer and easier to travel without a car.



See Appendix A for full results

OUR VISION

All people have access to transportation choices that are safe, reliable, and environmentally responsible. The transportation system optimizes infrastructure, reduces harm to the environment, and supports great places and a thriving economy.

OUR GOALS

Improve Access

Expand Choices

Support Great Places

Protect the Environment

Improve Safety

Optimize Infrastructure

Improve Access

What We Want

Our transportation system allows all people to reach the places they want to go with dignity and comfort. Regardless of form of travel, purpose, or destination, trips are made affordably, conveniently, and reliably.

What We Heard

How can I **safely get around** with my kids without a car?

How will I get around **when I'm older**?

People with disabilities and elders should have **access to transportation**.

Can we have better transportation for people with **mobility challenges**?

What if all the **elderly populations** could get to the supermarkets without falling on the ice?

How can we build higher prioritization for **equity** into what we fund for infrastructure and programs?

Representative comments from the Question Campaign

Support Great Places

What We Want

Our transportation system is coordinated with land use to support and connect vibrant and healthy places where people live, work, visit, and play.

What We Heard

How can we **celebrate communities** rather than cars?

How can we get leaders who **support livable streets**?

How can we have our many **systems work together** more, while maintaining their identities and constituencies?

Will self-driving cars **reduce** the need for parking?

How can we **make arterials nicer** places to live, walk and bike?

How can we build and/or renovate to have way more affordable housing that is close to **public transportation** routes?

If land use and transportation are so intertwined, why aren't we creating the right situation so that we can **travel without a car**?

Representative comments from the Question Campaign

Improve Safety

What We Want

Our transportation system prioritizes real and perceived safety and has eliminated all transportation fatalities and severe injuries.

What We Heard

How can we make it **safer for kids** to bike in towns and cities?

When can I safely **walk my dog** on my road again?

How can I **travel without worrying** about crashes?

How can we make **crosswalks safer**?

Will I be able to ride to work **safely on my ebike**?

Will it **be safe** to make biking my primary form of transportation, rather than driving?

What can we do to improve **pedestrian safety**?

Representative comments from the Question Campaign

Expand Choices

What We Want

Our transportation system offers a range of convenient options for moving people and freight. An integrated and connected system enables a shift toward more sustainable forms of travel.

What We Heard

How can we get **more public transit**?

How can biking and pedestrian **safety be improved** in rural areas where population density is lower?

Will there be public transit to **rural areas**?

How can we best limit the number of cars on the road and make the Greater Portland Area **more walkable/ bikeable**?

What is the plan to **reduce the reliance** on automobiles by transforming trips by car to one's made on foot, by bike, by bus, or train?

Representative comments from the Question Campaign

Protect the Environment

What We Want

Our transportation system minimizes its harmful impacts on the natural environment and has sufficiently reduced emissions. Current and future generations enjoy healthy communities and move throughout the region without further damaging habitat or contributing to climate change.

What We Heard

Will all our vehicles be fully **electric**?

Which roads will we abandon due to **sea level rise**? Which ones will we keep?

Will there be **eco-friendly options** to better impact our environment in Maine?

Will we have **solar powered** cars?

What's the most **environmentally friendly** and healthy way for me to get around?

Representative comments from the Question Campaign

Optimize Infrastructure

What We Want

Our transportation system efficiently accommodates a growing region with existing infrastructure. Investments make the most of our financial resources to maintain critical infrastructure and services, while introducing new technologies and innovations to most efficiently and cleanly move people and goods.

What We Heard

Will some roads be converted from **asphalt to gravel**?

Why do we prioritize using our public space for storing cars over using our **public space** for people to walk and bicycle safely?

When will the priority be for governments to support transit and active **commuting infrastructure** more than auto infrastructure?

How much space do we need to dedicate to **parking**?

PART 2:

OUR PRIORITY GROWTH AREAS

Priority Centers & Corridors

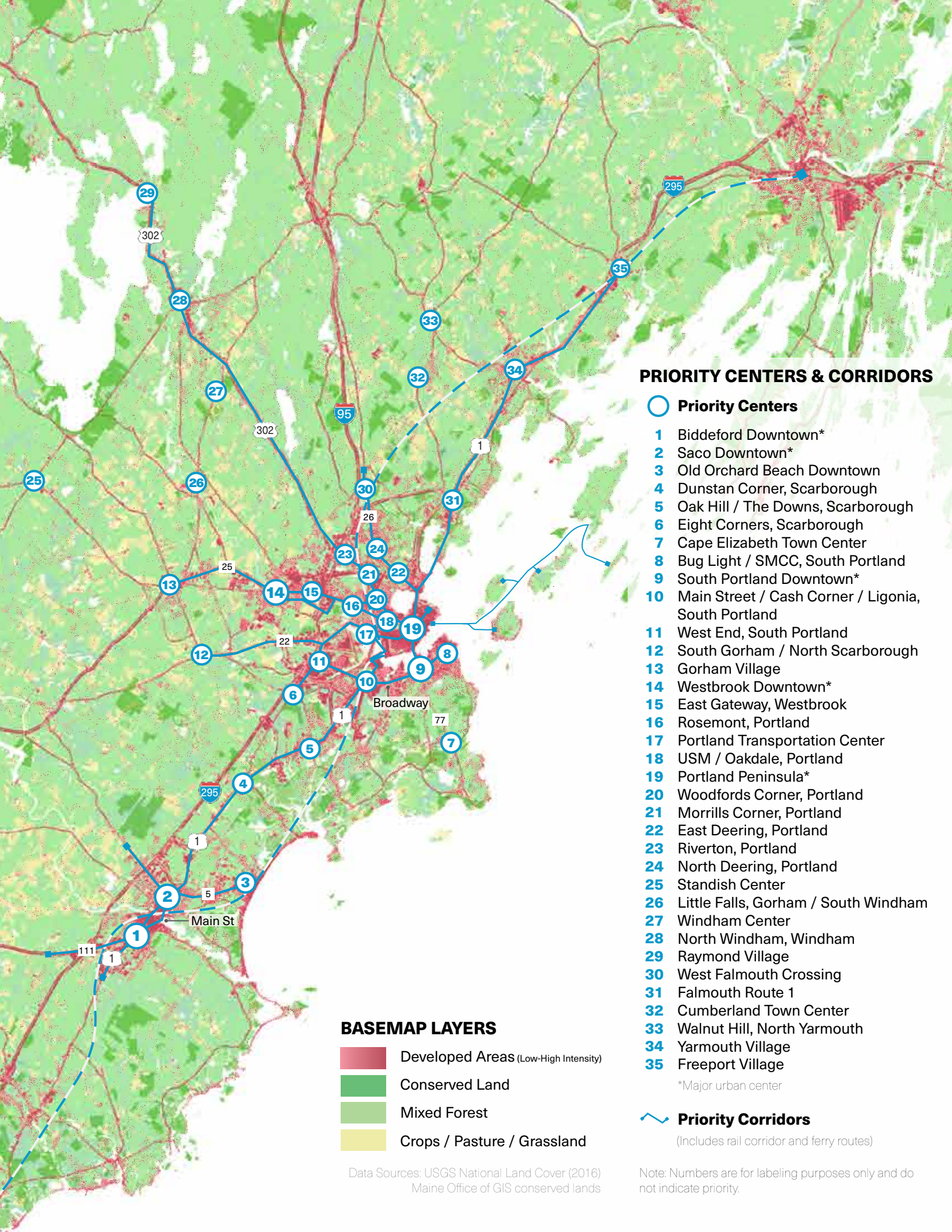
THE REGION'S priority centers and corridors are places that have the most promising opportunities to absorb future population and job growth. In the spirit of "supporting great places," one of Connect 2050's six major goals, these are places that are, or have the potential to be vibrant, walkable neighborhoods. These are our villages, our downtowns, our major urban centers, and the corridors that connect them.

PACTS uses priority centers and corridors as a way to inform limited funding to areas that best advance the region's goals. These are priority places for technical assistance on zoning, policy, and design. When prioritizing projects for funding, projects that are in or near a priority center or corridor receive extra points in scoring.

Connect 2050 maintains the priority centers and corridors established in Connect 2045, and the priority centers and corridors established in Connect 2045 are largely based on those first defined in that plan's predecessor, Destination 2040. However, several refinements were made based on conversations with municipal representatives and the most up-to-date population, employment, and traffic volume data. The following highlights the process for how the priority centers and corridors were refined.

- **Data driven approach:** Since priority center and corridor designations could have funding implications, we used the most up-to-date population, employment, and traffic volume data to inform the total number of centers and corridors within each community. In short, communities that are the same size should have a similar number of centers and corridors.
- **An eye towards consolidation:** In several cases, centers that were close together were consolidated into one center. For example, the Portland Peninsula previously had three centers (East End, Munjoy Hill, and West End). These were consolidated into one, larger center.
- **Conceptual locations:** The priority centers intentionally do not have specific locations or boundaries. For funding purposes, ultimately it will be the applicant's responsibility to explain how a project is within the general influence area of a particular center or corridor.
- **"Major urban centers:"** A few places with exceptionally high population and job densities are designated as "major urban centers." While the boundaries for all centers are conceptual, these places have a larger area of influence.

The map on the next page shows the region's priority centers and corridors.



PRIORITY CENTERS & CORRIDORS

Priority Centers

1 Biddeford Downtown*
2 Saco Downtown*
3 Old Orchard Beach Downtown
4 Dunstan Corner, Scarborough
5 Oak Hill / The Downs, Scarborough
6 Eight Corners, Scarborough
7 Cape Elizabeth Town Center
8 Bug Light / SMCC, South Portland
9 South Portland Downtown*
10 Main Street / Cash Corner / Ligonia, South Portland
11 West End, South Portland
12 South Gorham / North Scarborough
13 Gorham Village
14 Westbrook Downtown*
15 East Gateway, Westbrook
16 Rosemont, Portland
17 Portland Transportation Center
18 USM / Oakdale, Portland
19 Portland Peninsula*
20 Woodfords Corner, Portland
21 Morrills Corner, Portland
22 East Deering, Portland
23 Riverton, Portland
24 North Deering, Portland
25 Standish Center
26 Little Falls, Gorham / South Windham
27 Windham Center
28 North Windham, Windham
29 Raymond Village
30 West Falmouth Crossing
31 Falmouth Route 1
32 Cumberland Town Center
33 Walnut Hill, North Yarmouth
34 Yarmouth Village
35 Freeport Village

*Major urban center

Priority Corridors

(Includes rail corridor and ferry routes)

BASEMAP LAYERS

- Developed Areas (Low-High Intensity)
- Conserved Land
- Mixed Forest
- Crops / Pasture / Grassland

Data Sources: USGS National Land Cover (2016)
Maine Office of GIS conserved lands

Note: Numbers are for labeling purposes only and do not indicate priority.

04

Connect 2050

HOW DO WE GET THERE?

PART 1: OUR NEXT STEPS

PART 2: EVALUATING PROGRESS

NOW THAT we have a vision for where we want to be in 20 years, the final step is to figure out how to get there. To ask questions like, "What can we do in the next four or five years to make progress towards our vision?" And, "What actions can we take to improve in each of our goal areas?" While the vision and goals provide a bird's eye perspective of our desired future, this chapter takes us back down to ground level and focuses on the here and now. Put simply, it is a "to do" list. When Connect 2050 is updated four or five years from now, our progress will be measured by how well we accomplished these tasks.

PART 1:

OUR NEXT STEPS

Background

Connect 2050 maintains the goals and objectives established in Connect 2045. To develop Connect 2045's next steps, staff met individually with municipalities, transit agencies, and key stakeholders representing a wide array of interests. These informal meetings were a way to discuss our transportation system's strengths and weaknesses with those most directly acquainted with it, as well as brainstorm ideas for how to achieve Connect 2045's vision and goals. Following these meetings, the Connect 2045 team developed draft objectives and actions for each goal. The objectives define focus areas within each goal, while the actions are steps we can take to achieve the objectives.

The draft objectives and actions were reviewed and refined by the Connect 2045 Project Advisory Committee and the Regional Transportation and Advisory Committee. They were then presented at a public workshop in May 2022 and revised based on feedback from that meeting. Lastly, they were informed by the results of a public survey, launched in the summer of 2022, that received over 1,000 responses. The collective input from all the above-mentioned initiatives formed the basis for the objectives and actions that follow. Over the next two years, PACTS will track progress towards these goals, objectives, and actions.

GOAL

Improve Access

Our transportation system allows all people to reach the places they want to go with dignity and comfort. Regardless of form of travel, purpose, or destination, trips are made affordably, conveniently, and reliably.

OBJECTIVES	ACTIONS
Invest more equitably	**1 Prioritize underserved communities** Prioritize traditionally underserved communities in planning and investments. (These communities are identified in the PACTS Civil Rights Plan).
	2 Cultivate leaders Continue to organize the Community Transportation Leaders program and designate membership in PACTS committees to members of vulnerable community groups.
	3 Evaluate impacts Conduct social impact assessments of PACTS plans, policies, and investments.
Remove barriers	**4 Expand universal design** Support implementation of Americans with Disabilities Act (ADA) and All Ages and Abilities (AAA) infrastructure and operations.
	5 Equitably maintain the network Provide better routine and seasonal maintenance (snow clearing, street sweeping, re-striping, spot improvements) to the active transportation network so that sidewalks, curb ramps, transit stops, crosswalks, and bike facilities are visible and accessible year-round.
	6 Explore equitable transit pricing Explore the feasibility of subsidies to offer discounted or free passes for certain public transportation routes and services.
Plan for everyone	**7 Engage meaningfully** Develop thoughtful and effective public involvement strategies for more people to easily and conveniently contribute diverse perspectives to transportation plans, projects, and policies.

GOAL

Support Great Places

Our transportation system is coordinated with land use to support and connect vibrant and healthy places where people live, work, visit, and play.

OBJECTIVES	ACTIONS
Foster compact development	**1 Create complete communities** Target planning and transportation investments to the region's priority centers and corridors to support walkable, bike-able, transit-oriented places and safe connections in between.
	2 Support housing choice Conduct a regionwide housing study and support cities and towns to implement the recommendations.
	3 Manage development projects for success Provide integrated place-based planning to help emerging large developments be the best they can be with a focus on managing traffic, parking, and emissions, and enhancing transportation choice, resilience, and broadband.
	4 Encourage parking reform Encourage and create resources for more equitable, efficient, and sustainable management of parking supply.
Design streets for everyone	**5 Make streets complete** Implement a regional Complete Streets policy and provide additional resources and guidance for new projects to accommodate all users of all ages and abilities.
	6 Fund demonstration projects Encourage experimentation and innovation by investing in low-cost demonstration projects prior to design and engineering.
	7 Create attractive public spaces Support the creation of safe, welcoming, and accommodating public spaces, such as car-free streets, parks, plazas, and other placemaking amenities.

GOAL

Improve Safety

Our transportation system prioritizes real and perceived safety and has eliminated all transportation fatalities and severe injuries.

OBJECTIVES	ACTIONS
Set ambitious targets	1 **Move towards zero** PACTS has adopted a Vision Zero policy (a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all).
Understand the problem	2 **Monitor/analyze the data** Routinely monitor and analyze safety and security data by mode, severity, location, and other factors to identify causes, trends, and priorities, as well as to track progress.
	3 **Traffic incident management** Continue convening the traffic incident management group as a forum for information sharing and emergency response and preparedness.
Calm traffic	4 **Improve roadway and intersection design** Redesign roadways and intersections to calm traffic and provide safe access for all users. Improvements such as road diets, narrowing lane widths, crossing islands, raised crossings, reducing curb radii, roundabouts, speed limit reductions, contiguous sidewalks, leading pedestrian intervals at intersections, and other Complete Streets treatments can improve safety for all users, especially vulnerable users such as pedestrians and cyclists.
	5 **Bring awareness to the issue** Support education and enforcement programs that promote the safety of all road users.

GOAL

Expand Choices

Our transportation system offers a range of convenient options for moving people and freight. An integrated and connected system enables a shift toward more sustainable forms of travel.

OBJECTIVES	ACTIONS
More and better public transit	**1 Make transit easier** Continue to implement the "Make Transit Easier" recommendations of *Transit Tomorrow* — to improve the transit experience with innovative customer service technology, better first/last mile connections, and enhanced door-to-door options.
	2 Create frequent connections Improve transit frequency system-wide and implement the recommendations of Transit Together to create a more seamless, integrated, and efficient public transit system.
	3 Invest in rapid transit Upon the selection of a preferred alternative, secure funding and begin preliminary design and NEPA on the Gorham-Westbrook-Portland rapid transit corridor. Begin planning phases of additional corridors identified in *Transit Tomorrow*.
Connect the bicycle and pedestrian network	**4 Connect gaps in local walking and biking networks** Construct appropriate on and off-street active transportation facilities (sidewalks, trails, bike lanes, bike parking) and pursue public access agreements to fill bicycle and pedestrian network gaps.
	5 Support regional multi-use paths Encourage the development of multi-use paths for mobility, recreation, and tourism and support rail-to-trail or rail-with-trail opportunities pending the recommendations of the Rail Use Advisory Councils.
Increase freight efficiency	**6 Identify freight opportunities** Work collaboratively with MaineDOT, MTA and the Port Authority to identify areas of opportunities to exchange information on projects that will positively impact the movement of freight in the region.

GOAL

Protect the Environment

Our transportation system minimizes its harmful impacts on the natural environment and has sufficiently reduced emissions. Current and future generations enjoy healthy communities and move throughout the region without further damaging habitat or contributing to climate change.

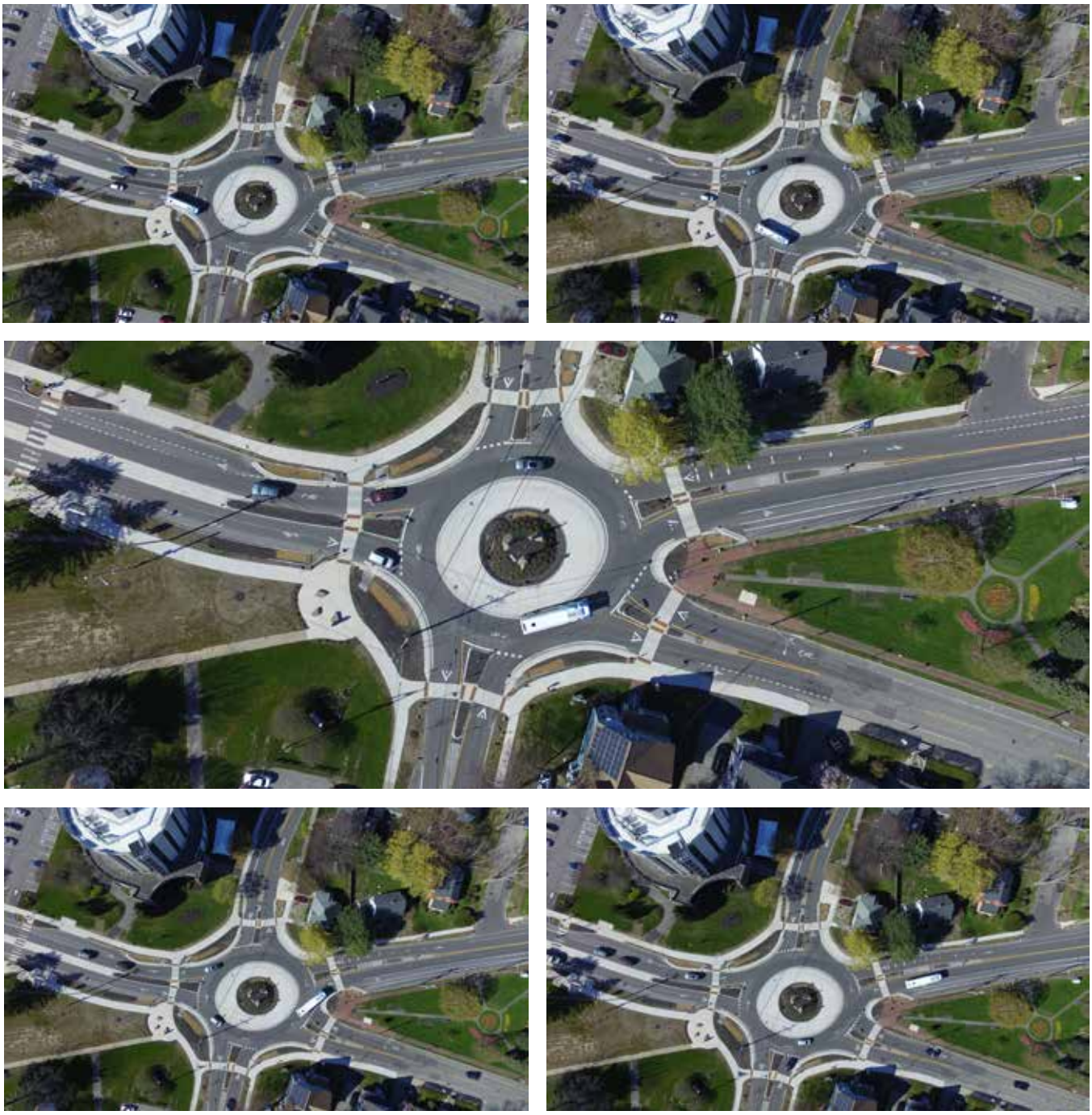
OBJECTIVES	ACTIONS
Reduce emissions	**1 Reduce car-dependence** Reduce the amount of driving in the region through Transportation Demand Management (TDM) strategies with particular emphasis on high-impact strategies like large employer commuter incentives and remote work infrastructure.
	2 Accelerate transition to electric vehicles Accelerate the transition to electric, hybrid, and alternative-fuel vehicles including cars, public transportation, school buses, ferries, and trucks.
Minimize pollution	**3 Minimize stormwater runoff** Incorporate natural elements and low impact development techniques into PACTS projects to protect water quality.
Build resilience	**4 Evaluate vulnerability** Assess the region's vulnerability to identify infrastructure, populations, and habitat most susceptible to the impacts of climate related events such as extreme weather, higher temperatures, storm surge and sea level rise.
	5 Coordinate key stakeholders Strengthen the role of local conservation and environmental stakeholders in PACTS decision-making.
Protect habitat	**6 Minimize habitat fragmentation and degradation** Minimize habitat fragmentation by incorporating best management practices such as natural buffers, stream smart crossings, and wildlife underpasses/overpasses into PACTS projects.

GOAL

Optimize Infrastructure

Our transportation system efficiently accommodates a growing region with existing infrastructure. Investments make the most of our financial resources to maintain critical infrastructure and services, while introducing new technologies and innovations to most efficiently and cleanly move people and goods.

OBJECTIVES	ACTIONS
Expedite projects	1 **Shorten project delivery** Complete all preliminary design reports — a key step in the project delivery process — within two years of signing three-party agreements. Proactively discuss pending projects with project sponsors and MaineDOT.
Maintain the assets	2 **Fix-it-First** Adopt a fix-it-first approach that incorporates Complete Streets and prioritizes upgrading roads over expanding them.
Use assets efficiently	3 **Move freight efficiently** Support rail and port infrastructure capacity improvements to enable a shift toward greater use of freight rail. Encourage transition to smaller and zero-emissions vehicles for local pick-ups and deliveries.
	4 **Reduce congestion** Implement the recommendations of the forthcoming congestion management plan.
Innovate the system	5 **Enhance data collection/sharing** Provide continuous and strategic data collection and sharing for all modes to inform more effective investment prioritization.
	6 **Invest in intelligent transportation systems** Expand deployment of intelligent transportation systems, such as coordinated and/or adaptive signals and signals with transit priority, throughout the region.



Optimizing Infrastructure

The Deering Avenue roundabout is a PACTS-funded example of optimizing infrastructure. What used to be a five-way intersection is now a free-flowing area that no longer requires maintenance of traffic signals and includes space for drivers, cyclists, and pedestrians alike (as well as public art). Research has shown that roundabouts are safer than other intersections, resulting in a 90% reduction in fatalities, 76% reduction in injuries, and 35% reduction in all crashes (Federal Highway Administration).

From top left to lower right: a METRO bus makes its way around the roundabout. The roundabout can easily accommodate large vehicles such as transit buses and trucks and has reduced travel times on METRO's Route 4 and Husky Line routes. Photo: GPCOG

PART 2:

EVALUATING PROGRESS

Background

THE POLICY BOARD adopted a series of performance measures to help track progress towards our vision and goals. The performance measures are based on:

- Availability of regularly updated and reliable data sources,
- Use of measurable, quantitative information, and
- Compatibility with federal requirements and MaineDOT measures and targets.

For each performance measure, Connect 2050 includes a baseline of the current state for that measure, a 2050 target, and a desired trend arrow (up or down) for a quick understanding of the direction the region needs to move in.

Connect 2050 is not the only way that can track our progress towards meeting our shared goals. Some of the measures are tracked more frequently through other initiatives. For example, the Transportation Improvement Program (our four-year funding program that is updated annually), includes performance measures for roadway and transit safety. Similarly, the transit agencies track ridership and vehicle revenue hours daily which is then packaged into annual reports to FTA's National Transit Database. Other measures, like transportation greenhouse gas emissions, are more time intensive to track and lack the precision that would warrant annual updates. Where applicable, PACTS will update its implementation tracker to report progress towards these performance measures.

Our approach to performance measurement is dynamic. Future updates to the plan may include additional (or revised) measures as new information becomes available or state, federal, or other requirements and targets change. PACTS will continue to coordinate with MaineDOT, regional transit agencies, and other relevant stakeholders to integrate their performance measures into our planning process. We will also continue to direct our investments to plans and projects that have the potential to support the performance measures included here.

PERFORMANCE MEASURE	BASELINE	2050 TARGET	DESIRED TREND
Transit ridership (NTD)	3,400,000 annual unlinked trips	6,800,000 annual unlinked trips	↑
Transit ridership per capita (NTD and U.S. Census)	11.3 rides per capita	22.6 rides per capita	↑
Transit service provided (NTD)	220,000 annual vehicle revenue hours	440,000 annual vehicle revenue hours	↑
Transit service provided per capita (NTD and U.S. Census))	0.75 vehicle revenue hours per capita	1.5 vehicle revenue hours per capita	↑
Percent of commuters who drive alone to work (U.S. Census)	66% drive alone	40% drive alone	↓
Vehicle Miles Traveled (VMT) per capita (MaineDOT)	10,000 annual VMT per capita	5,000 annual VMT per capita	↓
Transportation greenhouse gas emissions (SMPDC GHG Emissions Calculator)	1.33 MMTCO2e	0.40 MMTCO2e	↓
Percentage of electric light-duty vehicles (MaineDEP)	2%	60%	↑
Number of fatalities (MaineDOT)	22/year	0/year	↓
Rate of fatalities per 100 million VMT (MaineDOT)	0.74	0	↓
Number of serious injuries (MaineDOT)	121	0/year	↓
Rate of serious injuries per 100 million VMT (MaineDOT)	4	0	↓

05

Connect 2050

PROJECTS & FUNDING

ANTICIPATED FUNDING & PRIORITY PROJECTS

ACHIEVING THE REGION'S bold vision requires implementing bold changes to the region's transportation system. The region's municipalities and transit agencies are ready to meet the moment by advancing a number of priority projects that will best serve our goals. From safety improvements, complete streets redesigns, environmental resiliency efforts, to increased transit service and more, over 100 projects were submitted to be included in Connect 2050. Once included in the plan, these projects can be considered for planning and construction funding through the annual Transportation Improvement Program (TIP).

But we have limited resources. The projects we choose to fund reflect the region's priorities and values. With insufficient funding, it is a challenge to maintain what we have, let alone build for the future. We must make the most of every dollar to balance investments that take care of today's needs with those that move us in the direction we want to go. The fiscally constrained financial plan attempts this balance.

Project Priorities

PACTS SOLICITED PROJECT APPLICATIONS from October to December 2024 from municipal and transit agency members. Through the application, project sponsors explained how their project aligns with and advances regional goals and priorities, how much it might cost, and how ready it is to advance through the project construction lifecycle. Over 100 applications were submitted.

Project applications were evaluated against several criteria based on the six Connect 2050 goals, as well as other relevant state and federal policy directives. This is the best practice among metropolitan planning organizations and a way to ensure a strong connection between a long-range transportation plan's vision and goals, and the projects selected for funding. As the table to the left shows, the six Connect 2050 goals accounted for 75 of the 100 possible points. The maximum points for each goal reflect the results of a public survey used in the development of Connect 2045, where respondents were asked to weigh the importance of each goal. In this way, public input is incorporated into the project scoring process.

SCORING CATEGORY	MAX POINTS	SCORED BY
Project References	5	Staff
Goal 1: Improve Access	12	Volunteers/Staff
Goal 2: Support Great Places	11	Volunteers/Staff
Goal 3: Improve Safety	12	Volunteers/Staff
Goal 4: Expand Choices	12	Volunteers/Staff
Goal 5: Protect the Environment	15	Volunteers/Staff
Goal 6: Optimize Infrastructure	13	Volunteers/Staff
Regional Significance	20	Staff
Total	100	--

Project Evaluation Criteria

The table above shows the categories included in the evaluation criteria. Each project was evaluated partially by an external consultant and partially by staff based on alignment with the six Connect 2050 goals as well as project references and regional significance. The six goals accounted for 75 of the 100 points. The maximum points for each goal were weighted based on the results of public input.

The Project Funding Journey

"Projects begin the journey toward funding eligibility when the metropolitan planning organization [PACTS] includes them in the long-range transportation plan [Connect 2050] that creates the 20–25-year framework of policies, goals and recommended investments. They move a step closer when included in the Transportation Improvement Program, which lists projects to be funded in the upcoming four or five years. Metropolitan planning organizations lead the process for shaping and approving both documents. The challenge is to make sure these are not just 'stapling exercises' — merely compiling local and state wish lists with little attempt to shape the complete package to make the most efficient and beneficial use of resources for the region as a whole."

~ The Innovative MPO, Transportation for America

In January 2025, project applications were evaluated by an external consultant with assistance from staff. The tables on pages 116-117 show the applications sorted by score. With each new long-range transportation plan — every four or five years — PACTS launches a new call for projects. By then, some projects may have advanced to implementation, others may no longer be priorities, and some may have evolved. A new call ensures the region stays focused on the most relevant and critical projects.

A rectangular rapid flashing beacon (RRFB) getting installed on Brighton Avenue in Portland. Photo: GPCOG

Franklin St., Portland / Photo: GPCOG

Main St., Westbrook / Photo: GPCOG

RANK	PROJECT	SPONSOR
1	Commercial Street	Portland
2	Forest Avenue	Portland
3	Main Street	Freeport
4	Broadway Corridor Improvements	South Portland
5	Maine Mall Area SS4A	South Portland
6	Mallet Drive	Freeport
7	Brighton Avenue	Portland
8	State Street and High Street Two-Way Conversion	Portland
9	Knightville Complete Streets	South Portland
10	Spring Street Phase 2	Portland
11	Franklin Street	Portland
12	Bike Share	South Portland
13	Main Street	Yarmouth
14	I-195 and Ocean Park Road	Old Orchard Beach
15	Route 1 Complete Streets	Yarmouth
16	Route 1 South Multi-Use Path	Freeport
17	Mallet Drive Multi-Use Path	Freeport
18	Broadway (Church to Lincoln) Sidewalks	South Portland
19	Bus Stops	GP Metro
20	Mill Creek	South Portland
21	Shared-Use Pathway Network	Portland
22	Downtown Gateway	Saco
23	East Grand Aveue	Scarborough
24	Greenbelt Widening	South Portland
25	Signal Technology	South Portland
26	Mountain Division Rail Trail to Portland	Westbrook
27	Waterfront	Yarmouth
28	Lower Main Street Sidewalk	Freeport
29	Downtown Portland Hub	GP METRO
30	Separated Bikeway Network	Portland

RANK	PROJECT	SPONSOR
31	Mountain Division Rail Trail to Windham	Westbrook
32	High-to-Middle School Pedestrian Access	Windham
33	Arterial and Collector Pedestrian Crossings	Portland
34	Haigis Parkway	Scarborough
35	Route 1 Sidewalk	Yarmouth
36	Casco Bay Trail	Yarmouth
37	I-295 Exit 6	Portland
38	Outer Congress and Johnson Road	Portland
39	Beth Condon Memorial Pathway	Yarmouth
40	Elm Street Phase 2	Biddeford
41	Route 1 South Sidewalk	Freeport
42	Casco Bay Trail Phase 1	Casco Bay Trail Alliance
43	Route 100	Falmouth
44	West Falmouth Station	Falmouth
45	Peaks Island Ferry Landing	Portland
46	Payne Road	Scarborough
47	Main Street East Streetscaping	Westbrook
48	North Windham Active Transportation	Windham
49	Falmouth Road Bike-Ped	Falmouth
50	Systemwide Frequency Upgrades	GP Metro
51	North Road Sidewalk	Yarmouth
52	Elm Street Phase 3	Biddeford
53	Route 1 and Route 88	Falmouth
54	Multi-Use Path West	Freeport
55	Mobility Hubs	GP Metro
56	Signal Technology	Portland
57	Payne Road and Ginn Road	Scarborough
58	Mountain Division Trail	Windham
59	Highland Avenue Multi-Use Path	Scarborough
60	Falmouth Road and Tandberg Trail	Windham

Elm St. (Rt. 1), Biddeford / Photo: GPCOG

Alfred St., Biddeford / Photo: GPCOG

RANK	PROJECT	SPONSOR
61	School Street Pedestrian Lighting	Gorham
62	Shore Road	Cape Elizabeth
63	Community Park-School Connector	Falmouth
64	Transportation Master Plan Recommendations	Saco
65	Gorham Road Phase 4	Scarborough
66	Five Points	Biddeford
67	Main Street Sidewalk	Gorham
68	South Street Pedestrian Lighting	Gorham
69	Memorial Highway Sidewalk	North Yarmouth
70	Gorham Road Phase 5	Scarborough
71	Gorham Road Phase 6	Scarborough
72	Route 302	Westbrook
73	Route 302 River Road to Page Road	Windham
74	Windham Center Road Sidewalk	Windham
75	Trail Connections	Windham
76	Rural Shoulders for Cyclists	Yarmouth
77	Dolphin Replacement	Casco Bay Lines
78	Main Street Pedestrian Lighting	Gorham
79	Signal Technology	Gorham
80	Systemwide Expansion	GP Metro
81	Crosstown Connector	South Portland
82	Alfred Road	Biddeford
83	Route 1 Signal Technology	Yarmouth
84	Route 1 and Route 88	Yarmouth
85	Crosstown Trail White Birch Connection	Gorham
86	New Portland Road Pedestrian Lighting	Gorham
87	Route 202 Pedestrian Lighting	Gorham
88	New Portland Road Sidewalk	Gorham
89	Narragansett Street Sidewalk	Gorham
90	Fleet Electrification	GP Metro

RANK	PROJECT	SPONSOR
91	On-Route Charging	GP Metro
92	Cash Corner Truck Route	South Portland
93	Transit Signal Priority	GP Metro
94	Route 202 and Route 25 Signal	Gorham
95	Scarborough Connector and Route 1	Scarborough
96	South Street	Biddeford
97	Crosstown Trail Hutcherson Road to Mosher's Corner	Gorham
98	Real-Time Information Signage	GP Metro
99	North Scarborough Signals	Scarborough
100	Stroudwater Street Bike-Ped	Westbrook
101	Route 202 and Route 25 Realignment	Gorham
102	I-195 and Ocean Park Road	Saco
103	Ferry Road Sidewalks	Saco
104	Riverfront Park	Windham
105	Blackstrap Road	Falmouth
106	Transit Facility	GP Metro
107	Route 35 Moulton Hill	Standish
108	Electrify Public Parks	Windham
109	Frazier Trail	Gorham
110	Scarborough Route 1 Resiliency	MaineDOT
111	Transit Access	Windham
112	Crosstown Trail Upgrades	Gorham
113	Route 25 and Route 237 Signal	Gorham
114	South Street and Weeks Road Signal	Gorham
115	Observation Tower	Windham
116	Route 22 and Deering Road	Gorham
117	Route 1 North (RR1)	Saco
118	Scarborough Route 9 Resiliency	MaineDOT

Fiscally Constrained Project Priorities

FEDERAL REGULATION requires a MPO's long-range transportation plan to be fiscally constrained. With the region's limited resources, it is not possible to fund each of the 118 projects submitted through the Connect 2050 call for projects. Instead, we must consider the anticipated funding available and the projects' costs to understand how much we are able to accomplish, and how much funding would be necessary if we wanted to go further.

Federal Highway Administration Formula Funding

Each year, the Federal Highway Administration apportions funding to states through a number of formula programs, shown in the table below.

PROGRAM	DETAILS	2025 STATEWIDE AMOUNT
National Highway Performance Program	Supports the condition and performance of the National Highway System, construction of new facilities on NHS, and increasing the resiliency of NHS	$140,755,378
Surface Transportation Block Grant Program	Supports state and local transportation needs through flexible decision making	$68,475,589
Highway Safety Improvement Program	Supports projects that result in a significant reduction in traffic fatalities and serious injuries on public roads, identified through data-driven, performance-focused strategies	$14,669,327
Railway-Highway Crossing Program	Supports safety improvements to reduce the number of fatalities, injuries, and crashes at public railway-highway grade crossings	$1,291,988
Congestion Mitigation and Air Quality Improvement Program	Supports projects that reduce congestion and improve air quality	$11,906,288
Metropolitan Planning Program	Supports a cooperative, continuous, and comprehensive framework for making transportation investment decisions in metropolitan areas	$2,578,902
National Highway Freight Program	Supports efficient movement of freight on the National Highway Freight Network	$6,793,634
Carbon Reduction Program	Supports projects that reduce carbon dioxide emissions from on-road highway sources	$6,105,740
PROTECT Formula Program	Supports projects that Improve resiliency to natural hazards, including climate change, sea level rise, flooding, extreme weather events, and other natural disasters	$6,942,664

While there is a degree of flexibility in determining where to spend these funds, some of the programs are suballocated; certain funding levels are directed to specific areas of the state based on population. These include the programs shown in the table below.

PROGRAM	STATEWIDE	LARGE URBANIZED AREAS
Surface Transportation Block Grant Program	$27,467,437	$5,062,050
Transportation Alternatives Program (STBG set-aside)	$1,887,881	$409,504
Carbon Reduction Program	$2,137,009	$598,229

Note: Statewide funds may be used anywhere in the state, but large urbanized area funds are restricted to the Greater Portland urbanized area, Maine's only large urbanized area. The remainder of the funding apportioned to the state cannot be used in large urbanized areas.

This funding must be matched by state and local contributions. Specific amounts vary by program, but in general projects are funded through 80 percent federal dollars, 10 percent state dollars, and 10 percent municipal dollars. When developing the TIP, only eligible projects will be programmed for the various FHWA funding programs. For more information on FHWA programs, eligibilities, and funding levels, visit the *FHWA Infrastructure Investment and Jobs Act webpage* for program details.

Federal Transit Administration Formula Funding

The Federal Transit Administration also annually apportions funding through a number of formula programs, but this funding is apportioned partially to states and partially to large urbanized areas directly. These programs are shown in the table below.

Like FHWA funding, FTA funding must also be matched by state and local contributions, though amounts vary by program and by project type. When developing the TIP, only eligible projects will be programmed for the various FTA funding programs. For more information on FTA programs, eligibilities, and funding levels, visit the *FTA Grant Programs webpage*.

Flexing FHWA Funding to Transit Projects

Many FHWA funding programs can be "flexed" to an FTA funding program, so long as the project satisfies the eligibility requirements of both programs. This can be a critical source of additional funding for transit projects when most FTA funding is otherwise programmed to ongoing operations and maintenance. As high-priority transit projects are selected from Connect 2050's fiscally constrained project list for the TIP, the Policy Board endorsed a strategy of striving to fund 50 percent of eligible costs through FHWA-flexed funding.

Funding from the following FHWA programs can be flexed to support transit projects:

- National Highway Performance Program
- Surface Transportation Block Grant Program
- Highway Safety Improvement Program
- Congestion Mitigation and Air Quality Improvement Program
- Carbon Reduction Program
- PROTECT Formula Program

For more information on flexing FHWA funding to transit projects, visit the *FTA Flexible Funding for Transit and Highway Improvements webpage*.

Programmatic Transit Expenses

Most FTA funding to the region is considered "programmatic", supporting the continued operation and maintenance of the existing transit network:

- **Section 5307** is the primary source of operations and preventive maintenance funding for bus service, and a source of preventive maintenance funding for rail and ferry service.
- **Section 5310** supports projects that enhance mobility for seniors and people with disabilities. The region receives a relatively small apportionment, and projects are selected based on priorities identified by the agencies and GPCOG's Community Transportation Leaders.
- **Section 5337** is a source of preventive maintenance funding for rail and ferry service.
- **Section 5339** is a source of fleet replacement funding for bus service, among other uses. This is another relatively small apportionment, especially considering the need. Assuming $1 million for a new electric bus but only a $350,000 annual apportionment, fleet replacement will need to be funded primarily though other sources (particularly discretionary funding).

With most funding needed to support the existing system, it is difficult to find funding to put towards service expansions, frequency increases, and other transformative projects. Per PACTS policy, 12 percent of the region's Section 5307 funding will be directed towards the projects in Connect 2050, but this is only about $1.8 million per year. PACTS will need to find "new" funding to fully implement these projects, including flexed FHWA funding, discretionary grant awards, increased state funding, or other sources.

GP Metro Pulse, Portland / Photo: Corey Templeton

PROGRAM	2025 AMOUNT
Section 5307: Urbanized Area Formula Grants Supports transit capital, operating, and planning in urbanized areas	$15,118,792
Section 5310: Enhanced Mobility of Seniors and Individuals with Disabilities Formula Grants Supports meeting the transportation needs of older adults and people with disabilities	$306,923
Section 5337: State of Good Repair Grants Supports maintenance, replacement, and rehabilitation of fixed guideway systems in urbanized areas	$13,228,053
Section 5339(a): Bus and Bus Facilities Formula Grants Supports replacing, rehabilitating and purchasing buses, vans, and related equipment, and to construct bus-related facilities	$356,733

Note: In addition to the region's directly apportioned Section 5339(a) funding, the region's transit agencies are also eligible to receive the state's apportionment of that program, which in FFY 2025 was $4,000,000.

Federal Discretionary Funding

In addition to regular federal formula funding apportionments, the region has had recent success with several federal discretionary grant programs, for example:

- In 2024, MaineDOT received a $25 million RAISE Grant in support of its East Deering: Pathways to Bridge the Gap project.
- In 2023, MaineDOT received a $25 million RAISE Grant in support of its North Windham Moves project.
- In 2023, GPCOG received a $636,772 Safe Streets for All grant in support of its Safe System Demonstration projects throughout the region.
- From 2017 to 2021, Casco Bay Lines received over $16 million in Passenger Ferry Grant Program funding in support of vessel replacements.
- From 2019 to 2024, BSOOB Transit, GP Metro, and MaineDOT received a combined $9 million in Bus and Bus Facilities Competitive Grants to support vehicle replacements, including $2 million from the Low- and No-Emissions Grant Program to support transitioning the region's fleet to electric vehicles.

For more information on FHWA and FTA discretionary grant programs, see the *FHWA's IIJA grant program's webpage* and the *FTA's grant programs webpage*.

Roadway and Multimodal Revenue Assumptions

Federal formula funding is the predominant source of roadway and multimodal project funding for the region, but specific amounts vary based on total annual apportionments and final project selection statewide.

PROGRAM	AMOUNT
Revenue: Annual Funding	$60,000,000
Set-Aside: Bridges and Pavement	($42,000,000)
Set-Aside: Urban Partnership Initiative	($1,500,000)
Revenue: Discretionary Awards	$1,250,000
Total FHWA Funding for Connect 2050 Projects	**$17,750,000**

The table above summarizes total annual roadway and multimodal project funding estimates. Based on the most recent Transportation Improvement Program (TIP), Connect 2050 assumes approximately $60,000,000 in FHWA funding will be directed to the region. From that, approximately 70 percent — $42,000,000 — is reserved for asset management, maintaining the region's bridges and keeping pavement conditions adequate. A further $1,500,000 is reserved for MaineDOT's Urban Partnership Initiative to support small-scale active transportation projects in the region. Finally, an estimated $1,250,000 is added based on the region's recent successes in securing discretionary funding.

Urban Partnership Initiative

Created by the 2024 Memorandum of Understanding between MaineDOT and PACTS, the Urban Partnership Initiative (UPI) funds primarily active transportation projects on or

connected to the state or state-aid roadway system. Modeled after MaineDOT's Municipal Partnership Initiative (MPI), it provides $3 million in state funding (split among Maine's four MPOs), with a 50% minimum local match. Each project can receive up to $750,000 in state funds.

Transit Revenue Assumptions

As with funding for roadway and multimodal projects, federal formula funding is again a dominant source of funding for transit projects and service in the region.

PROGRAM	AMOUNT
Section 5307: Urbanized Area Formula Grants	$15,000,000
Section 5310: Enhanced Mobility of Seniors and Individuals with Disabilities Formula Grants	$300,000
Section 5337: State of Good Repair Grants	$13,000,000
Section 5339(a): Bus and Bus Facilities Formula Grants	$350,000
Total FTA Funding	**$28,650,000**
Programmatic Expenses	**($26,850,000)**
Funding for Connect 2050 Projects	**$1,800,000**

Most of the FTA formula funding is directed to programmatic expenses, including expenses necessary for ongoing operation and maintenance of the existing regional transit system. However, PACTS maintains a policy of directing 12 percent of the region's Section 5307 funding to "Transit System Enhancement" projects; i.e., those submitted by a transit agency through the Connect 2050 call for projects. PACTS further maintains a goal of directing 20 percent of the region's Section 5307 funding to such projects. The table to the left summarizes total annual transit project funding estimates based on the region's most recent apportionments.

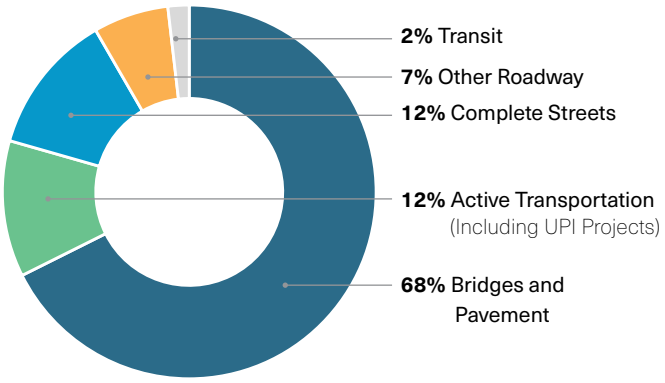
Fiscally Constrained Project List

Based on anticipated revenues and project costs, the 118 prioritized projects were evaluated to determine what could reasonably be funded over the next 25 years. Assuming $17,750,000 in annual revenue available for projects, they are funded in priority order, with any remaining balance carried forward to the next year. In addition, costs are escalated to year-of-expenditure dollars.

Projects that can be funded within the plan's 25-year horizon are placed on the "fiscally constrained" list. Those that cannot be funded are considered "aspirational." The aspirational list includes high-scoring projects with costs that exceed the project funding cap, which was set by the Policy Board to equal the annual funding amount of $17,750,000. The cap allows more projects to be funded, and encourages high-cost projects to seek discretionary funding.

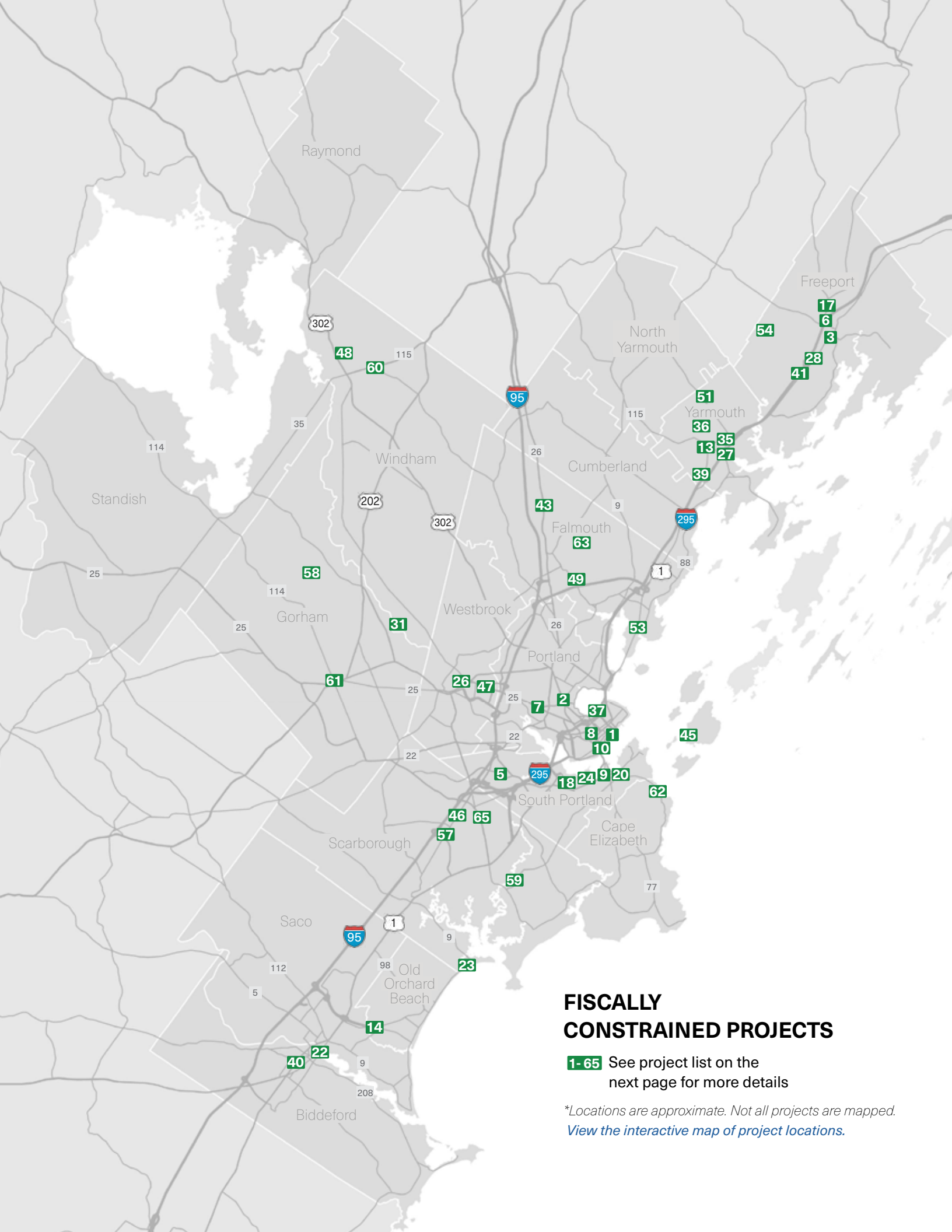
The map on the following page shows the locations of the selected fiscally constrained projects, followed by a table of those projects and a separate table of the aspirational projects.

With each update of the long-range transportation plan — every five years — PACTS will update these lists with a new call for projects, ensuring that regional priorities remain relevant and reflect current readiness and refined cost estimates.



Financial Plan Investment Mix

The graph above shows anticipated expenditures by project type for the fiscally constrained plan.



FISCALLY CONSTRAINED PROJECTS

1-65 See project list on the next page for more details

**Locations are approximate. Not all projects are mapped.*

View the interactive map of project locations.

Fiscally Constrained Project List

RANK	CODE	PROJECT	SPONSOR	PRESENT COST	YEAR	FUTURE COST
N/A	WIN 23715	Rosemont Brighton Ave	Portland	$10,975,800	2027	$11,419,222
N/A	WIN 25653	Elm Street Ph 1	Biddeford	$7,325,000	2028	$7,773,349
N/A	WIN 25056	Forest Ave Ph 1	Portland	$3,261,000	2028	$3,460,599
N/A	WIN 25983	Main Street Pedestrian Lighting	Gorham	$390,200	2028	$414,083
N/A	WIN 26055	Libbytown	Portland	$9,100,000	2029	$9,850,133
N/A	WIN 25985	Beth Condon Path	Yarmouth	$2,415,000	2029	$2,614,074
N/A	WIN 25981	Main Street Sidewalk	Yarmouth	$1,493,750	2029	$1,616,883
N/A	WIN 26980	Saco Island Multimodal Bridge	Saco	$8,850,000	2029	$9,579,525
N/A	WIN 28486	Main Street Streetscaping	Westbrook	$5,000,000	2030	$5,520,404
N/A	WIN 28488	Alfred Street Sidewalk	Biddeford	$1,760,000	2030	$1,943,182
N/A	WIN 27986	Route 1 North	Falmouth	$8,081,000	2030	$8,922,077
N/A	TBD	PACTS MPI and Collector Paving	Various	$15,861,212	2025	$15,861,212
N/A	Various	MaineDOT Projects	Various	$24,157,163	2027	$25,133,112
N/A	Various	One-Time Set-Aside: Ongoing Planning Efforts	TBD	$10,000,000	2031	$11,261,624
1	C50-PORT-02	Commercial Street	Portland	$7,500,000	2031	$8,446,218
2	C50-PORT-03	Forest Ave	Portland	$13,500,000	2032	$15,507,257
3	C50-FREE-04	Main Street	Freeport	$7,500,000	2032	$8,615,143
5	C50-SOPO-08	Maine Mall Area SS4A	South Portland	$12,500,000	2033	$14,645,742
6	C50-FREE-05	Mallet Drive	Freeport	$5,282,900	2033	$6,189,759
7	C50-PORT-01	Brighton Ave	Portland	$14,000,000	2034	$16,731,296
8	C50-PORT-12	State Street and High Street Two-Way Conversion	Portland	$5,500,000	2034	$6,573,009
9	C50-SOPO-02	Knightville Complete Streets	South Portland	$3,000,000	2034	$3,585,278
10	C50-PORT-11	Spring Street Ph 2	Portland	$3,000,000	2035	$3,656,983
12*	C50-SOPO-10	Bike Share	South Portland	$300,000	2035	$365,698
13	C50-YARM-04	Main Street	Yarmouth	$4,349,712	2035	$5,302,275
14	C50-OOBE-01	I-195 and Ocean Park Road	Old Orchard Beach	$16,570,000	2036	$20,602,712
15*	C50-YARM-10	Route 1 Complete Streets	Yarmouth	$5,500,000	2036	$6,838,559
16*	C50-FREE-01	Route 1 South Multi-Use Path	Freeport	$8,200,000	2037	$10,399,583
17	C50-FREE-02	Mallet Drive Multi-Use Path	Freeport	$2,000,000	2037	$2,536,484
18	C50-SOPO-01	Broadway (Church to Lincoln) Sidewalks	South Portland	$650,000	2037	$824,357
19*	C50-GPM-01	Bus Stops	GP Metro	$2,000,000	2037	$2,536,484
20	C50-SOPO-05	Mill Creek	South Portland	$420,000	2037	$532,662
21*	C50-PORT-10	Shared-Use Pathway Network	Portland	$17,500,000	2038	$22,638,116
22	C50-SACO-02	Downtown Gateway	Saco	$2,170,000	2038	$2,807,126
23	C50-SCAR-01	East Grand Ave	Scarborough	$3,600,000	2038	$4,656,984
24	C50-SOPO-07	Greenbelt Widening	South Portland	$9,000,000	2039	$11,875,309

Note: All projects are eligible for FHWA funds. Transit projects are eligible for FTA funds, and may also be eligible for "flexed" FHWA funds. As noted above, FHWA funding programs can be "flexed" to an FTA funding program, so long as the project satisfies the eligibility requirements of both programs. Projects with an asterisk (*) are not included in the map on page 123.

Fiscally Constrained Project List [continued]

RANK	CODE	PROJECT	SPONSOR	PRESENT COST	YEAR	FUTURE COST
25*	C50-SOPO-11	Signal Technology	South Portland	$8,000,000	2039	$10,555,830
26	C50-WEST-05	Mountain Division Rail Trail to Portland	Westbrook	$2,400,000	2039	$3,166,749
27	C50-YARM-05	Waterfront	Yarmouth	$713,175	2039	$941,019
28	C50-FREE-03	Lower Main Street Sidewalk	Freeport	$1,000,000	2039	$1,319,479
29*	C50-GPM-02	Downtown Portland Hub	GP Metro	$10,000,000	2040	$13,458,683
30*	C50-PORT-09	Separated Bikeway Network	Portland	$16,000,000	2041	$21,964,571
31	C50-WEST-07	Mountain Division Rail Trail to Windham	Westbrook	$16,200,000	2041	$22,239,128
32	C50-WIND-06	High School to Middle School Pedestrian Access	Windham	$3,800,000	2042	$5,320,917
33*	C50-PORT-08	Arterial and Collector Ped Crossings	Portland	$7,000,000	2042	$9,801,690
35	C50-YARM-06	Route 1 Sidewalk	Yarmouth	$500,000	2042	$700,121
36	C50-YARM-08	Casco Bay Trail	Yarmouth	$6,457,436	2042	$9,041,969
37	C50-PORT-04	I-295 Exit 6	Portland	$15,000,000	2043	$21,423,694
39	C50-YARM-01	Beth Condon Memorial Pathway	Yarmouth	$1,732,224	2043	$2,474,042
40	C50-BIDD-04	Elm Street Ph 2	Biddeford	$10,560,000	2044	$15,383,926
41	C50-FREE-07	Route 1 South Sidewalk	Freeport	$500,000	2044	$728,406
43	C50-FALM-06	Route 100	Falmouth	$9,000,000	2045	$13,373,527
45	C50-PORT-07	Peaks Island Ferry Landing	Portland	$10,500,000	2045	$15,602,448
46	C50-SCAR-09	Payne Road	Scarborough	$14,000,000	2046	$21,219,329
47	C50-WEST-04	Main Street East Streetscaping	Westbrook	$3,600,000	2046	$5,456,399
48	C50-WIND-05	North Windham Active Transportation	Windham	$480,000	2046	$727,520
49	C50-FALM-03	Falmouth Road Bike-Ped	Falmouth	$6,800,000	2047	$10,512,662
51	C50-YARM-03	North Road Sidewalk	Yarmouth	$1,437,636	2047	$2,222,556
53	C50-FALM-04	Route 1 and Route 88	Falmouth	$8,500,000	2047	$13,140,827
54	C50-FREE-06	Multi-Use Path West	Freeport	$12,500,000	2048	$19,711,241
55*	C50-GPM-04	Mobility Hubs	GP Metro	$6,000,000	2048	$9,461,396
57	C50-SCAR-08	Payne Road and Ginn Road	Scarborough	$5,750,000	2048	$9,067,171
58	C50-WIND-07	Mountain Division Trail	Windham	$12,700,000	2049	$20,427,153
59	C50-SCAR-06	Highland Ave Multi-Use Path	Scarborough	$1,350,000	2049	$2,171,390
60	C50-WIND-01	Falmouth Road and Tandberg Trail	Windham	$6,800,000	2049	$10,937,373
61	C50-GORH-15	School Street Pedestrian Lighting	Gorham	$375,000	2049	$603,164
62	C50-CAPE-01	Shore Road	Cape Elizabeth	$8,900,000	2050	$14,601,393
63	C50-FALM-02	Community Park-School Connector	Falmouth	$1,500,000	2050	$2,460,909
65	C50-SCAR-02	Gorham Road Ph 4	Scarborough	$2,400,000	2050	$3,937,454
			Total	**$468,168,208**		**$605,390,650**

Aspirational Project List

RANK	CODE	PROJECT	SPONSOR	PRESENT COST
4	C50-SOPO-03	Broadway Corridor Improvements	South Portland	$19,250,000
11	C50-PORT-13	Franklin Street	Portland	$33,500,000
34	C50-SCAR-05	Haigis Parkway	Scarborough	$22,100,000
38	C50-PORT-06	Outer Congress Street and Johnson Road	Portland	$26,000,000
42	C50-CBTA-01	Casco Bay Trail Ph 1	Casco Bay Trail Alliance	$30,000,000
44	C50-FALM-07	West Falmouth Station	Falmouth	$20,000,000
50	C50-GPM-08	Systemwide Frequency Upgrades	GP Metro	$30,000,000
52	C50-BIDD-05	Elm Street Ph 3	Biddeford	$18,100,000
56	C50-PORT-05	Signal Technology	Portland	$19,000,000
64	C50-SACO-06	Transportation Master Plan Recommendations	Saco	$22,500,000
66	C50-BIDD-01	Five Points	Biddeford	$15,180,000
67	C50-GORH-08	Main Street Sidewalk	Gorham	$325,000
68	C50-GORH-16	South Street Pedestrian Lighting	Gorham	$850,000
69	C50-NYAR-01	Memorial Highway Sidewalk	North Yarmouth	$110,000
70	C50-SCAR-03	Gorham Road Ph 5	Scarborough	$2,000,000
71	C50-SCAR-04	Gorham Road Ph 6	Scarborough	$1,500,000
72	C50-WEST-01	Route 302	Westbrook	$6,000,000
73	C50-WIND-02	Route 302 River Road to Page Road	Windham	$3,500,000
74	C50-WIND-09	Windham Center Road Sidewalk	Windham	$1,100,000
75	C50-WIND-10	Trail Connections	Windham	$31,000,000
76	C50-YARM-07	Rural Shoulders for Cyclists	Yarmouth	$3,500,000
77	C50-CBL-01	Dolphin Replacement	Casco Bay Lines	$8,400,000
78	C50-GORH-07	Main Street Pedestrian Lighting	Gorham	$1,350,000
79	C50-GORH-11	Signal Technology	Gorham	$150,000
80	C50-GPM-07	Systemwide Expansion	GP Metro	$610,550,000
81	C50-SOPO-06	Crosstown Connector	South Portland	$10,000,000
82	C50-BIDD-02	Alfred Road	Biddeford	$16,445,000
83	C50-YARM-09	Route 1 Signal Technology	Yarmouth	$1,299,168
84	C50-YARM-12	Route 1 and Route 88	Yarmouth	$2,515,078
85	C50-GORH-01	Crosstown Trail White Birch Connection	Gorham	$500,000
86	C50-GORH-10	New Portland Road Pedestrian Lighting	Gorham	$475,000
87	C50-GORH-14	Route 202 Pedestrian Lighting	Gorham	$575,000
88	C50-GORH-04	New Portland Road Sidewalk	Gorham	$425,000
89	C50-GORH-09	Narragansett Street Sidewalk	Gorham	$600,000
90	C50-GPM-03	Fleet Electrification	GP Metro	$64,860,000
91	C50-GPM-05	On-Route Charging	GP Metro	$11,250,000
92	C50-SOPO-04	Cash Corner Truck Route	South Portland	$9,230,000
93	C50-GPM-10	Transit Signal Priority	GP Metro	$312,500
94	C50-GORH-06	Route 202 and Route 25 Signal	Gorham	$2,250,000
95	C50-SCAR-10	Scarborough Connector and Route 1	Scarborough	$23,500,000

RANK	CODE	PROJECT	SPONSOR	PRESENT COST
96	C50-BIDD-06	South Street	Biddeford	$10,700,000
97	C50-GORH-02	Crosstown Trail Hutcherson Road to Mosher's Corner	Gorham	$1,250,000
98	C50-GPM-06	Real-Time Information Signage	GP Metro	$1,200,000
99	C50-SCAR-07	North Scarborough Signals	Scarborough	$1,010,000
100	C50-WEST-06	Stroudwater Street Bike-Ped	Westbrook	$360,000
101	C50-GORH-13	Route 202 and Route 25 Realignment	Gorham	$4,500,000
102	C50-SACO-01	I-195 and Ocean Park Road	Saco	$19,250,000
103	C50-SACO-04	Ferry Road Sidewalks	Saco	$2,500,000
104	C50-WIND-11	Riverfront Park	Windham	$6,000,000
105	C50-FALM-01	Blackstrap Road	Falmouth	$12,000,000
106	C50-GPM-09	Transit Facility	GP Metro	$40,000,000
107	C50-STAN-01	Route 35 Moulton Hill	Standish	$163,000
108	C50-WIND-03	Electrify Public Parks	Windham	$25,000
109	C50-GORH-05	Frazier Trail	Gorham	$125,000
110	C50-MDOT-01	Scarborough Route 1 Resiliency	MaineDOT	$40,000,000
111	C50-WIND-08	Transit Access	Windham	$1,200,000
112	C50-GORH-03	Crosstown Trail Upgrades	Gorham	$250,000
113	C50-GORH-17	Route 25 and Route 237 Signal	Gorham	$750,000
114	C50-GORH-18	South Street and Weeks Road Signal	Gorham	$1,250,000
115	C50-WIND-04	Observation Tower	Windham	$120,000
116	C50-GORH-12	Route 22 and Deering Road	Gorham	$1,500,000
117	C50-SACO-03	Route 1 North (RR1)	Saco	$17,500,000
118	C50-MDOT-02	Scarborough Route 9 Resiliency	MaineDOT	$12,000,000
			Total	**$1,243,854,746**

Notes:

- While the projects in the fiscally constrained and aspirational lists are eligible for FHWA and/or FTA funding, requirements and applicability vary by funding program. Only projects eligible for a certain funding program will be programmed in the TIP for that funding source.
- These lists are for planning purposes only and are intended to identify regional priority projects, guide the annual selection of project candidates for the TIP, and to support the pursuit of external funding. The lists do not establish the year of construction or funding amount for construction.
- Revenues and project costs are assumed to escalate at 2 percent per year.
- Several projects at the top of the fiscally constrained list do not have a rank, reflecting projects for which funding has already been committed through previous project selection processes.
- C50-MDOT-01 and C50-MDOT-02 are funded in the 2025–2027 MaineDOT Work Plan for preliminary engineering, see WINs 25657 and 25659.

MTA's I-95 Exit 35 Interchange Project

Shown above, this project will add a new direct interchange with Route 112 (Exit 35) to improve regional connections at Saco's Exit 36 area. The project is expected to be completed by the end of 2025.

Rendering: MTA

Other Regionally Significant Projects

AN MPO HAS OVERSIGHT OF FHWA (Title 23) and FTA (Title 49) funding in its region; this funding is programmed to priority projects in the TIP. Other funding sources, such as the Federal Railroad Administration (FRA) and Federal Aviation Administration (FAA), can support transportation investment for other entities. The projects listed below, many of which will not use FHWA or FTA funds, do not necessarily align with the goals of Connect 2050 and are not officially endorsed by the MPO. This is not a complete list, but a selection of projects by other organizations meant to show awareness of major efforts planned or underway in the region.

PROJECT NAME	STATUS	SPONSOR
I-95 EV Charging Stations	Current	Maine Turnpike Authority
I-95 Exit 35 Interchange	Current	Maine Turnpike Authority
Cumberland Service Plaza Truck Parking Expansion	Future	Maine Turnpike Authority
I-95 High Speed EZ Pass Lanes	Future	Maine Turnpike Authority
I-95 Mainline Widening	Future	Maine Turnpike Authority
Portland Station Relocation	Current	NNEPRA
West Falmouth Station	Future	NNEPRA
Terminal Apron Expansion	Current	Portland Jetport
Surface Parking Expansion	Current	Portland Jetport
Service Access Road Relocation	Future	Portland Jetport
Air Cargo Taxiway Construction	Future	Portland Jetport
Baggage Claim Expansion	Future	Portland Jetport
Parking Garage Expansion	Future	Portland Jetport

Beyond the Long-Range Plan

Selecting Projects for the TIP

INCLUSION OF A PROJECT in the long-range transportation plan is only the first step towards it being funded. It is a critical step that establishes a project as a regional priority, positions that project relative to other regional priorities, and affords project sponsors a reality check as to whether that project might be able to be funded in the short-, medium-, or long-term — or at all. It does not establish a commitment to a particular level of funding or year of construction. Those decisions are made annually as the projects contained in Connect 2050's fiscally constrained and aspirational lists are selected for the TIP.

Given that the fiscally constrained and aspirational project lists show priorities ordered by score — solely based on their ability to advance regional goals — other factors also shape what is proposed for the TIP, including:

- **Cost.** Project sponsors submitted cost estimates with their applications. (Or, staff developed estimates if none were provided.) The accuracy of these figures will understandably vary based on any number of factors. As time passes and project scopes come into focus, staff will coordinate with project sponsors to ensure we have the most refined cost estimates available.

  Further complicating the exercise is the fact that, per the PACTS-MaineDOT MOU, the amount of funding directed to the region — and the number of projects we will be able to fund — is unknown from year to year. Staff will develop a target funding amount and select projects accordingly, sometimes requesting less, sometime requesting more. High-scoring aspirational projects can be considered if the project sponsor has secured discretionary funding.

- **Readiness.** Project sponsors indicated project readiness according to one of five levels:
  - » Level 5: The project is immediately ready for construction/ implementation.
  - » Level 4: The project is fully designed, but requires engineering and construction/implementation.
  - » Level 3: The project has been through preliminary design, but requires final design, engineering, and construction/ implementation.
  - » Level 2: The project is planned, but requires design, engineering, and construction/implementation.
  - » Level 1: The project requires additional planning and/or a feasibility study.

  Here too, accuracy varies, and staff will coordinate with project sponsors and MaineDOT to establish a shared understanding of a project's status.

  A project's status has an impact on the total funding request. Levels 3, 4, and 5 can be considered ready to receive full construction funding. Level 2 can be considered ready to receive funding for preliminary design. This is a much small figure, assumed to be 10 percent of the total project cost or $300,000, whichever is higher. (Level 1 projects will not be considered for inclusion in the TIP, but can be considered for enhanced project scoping or some other feasibility study.) The final portfolio of proposed projects will have a mix of Level 3, 4, and 5 projects with Level 2 projects, striving for a balanced approach between implementing as many projects as possible and having shovel-ready projects in the pipeline as funding becomes available.

The PACTS-MaineDOT MOU

Federal regulation requires MPOs and their respective state-level departments of transportation to maintain a cooperative agreement outlining the roles and responsibilities of each party. In October 2024, PACTS and MaineDOT entered into an updated memorandum of understanding (MOU) doing just that. Developed over the course of a year, the MOU marks a new chapter in the collaborative relationship between PACTS and MaineDOT, and establishes processes that better formalize the connection from planning to funding. The MOU will be reviewed and updated periodically to ensure its continued effectiveness.

The MOU outlines eight key initiatives toward which funding is directed:

1. Planning and Scoping Transformative Projects
2. Corridor Management Plans
3. Urban Partnership Initiative (UPI)
4. Paving-Highway Corridor Priorities 3 & 4
5. Safety & Mobility, HCP 1 & 2 (including NHS) paving, Interstate and Bridge Improvements, etc.
6. General Highway, Bridge and other Work Plan Items
7. Enhance the State's Transit System
8. Prioritize Climate-Friendly Investments

Projects submitted for the long-range transportation plan are assumed to satisfy the intent of Initiatives 6, 7, and 8. For more information, *see GPCOG's web page "MOU with MaineDOT"*.

- **Sponsor Commitment.** A commitment to a project's success is essential across all levels of a sponsoring organization — especially between the staff level, who compose and submit the applications, and the elected or board level, who guide broad policy direction and authorize annual budgets. Staff will coordinate with project sponsors and MaineDOT to ensure there is clear sponsor support for a project, including commitment to deliver any requisite local match.
- **Sponsor Capacity.** Overseeing the implementation of a transformative project can be a significant undertaking, particularly in terms of staff capacity. If a municipality or transit agency is struggling to deliver projects in a timely manner, it may be better for the region as a whole to consider advancing projects from other sponsors.
- **Preferred Timing and External Factors.** Informed by all of the above, any number of factors can impact whether the moment is right for a particular project to advance. Perhaps summer construction would be overly disruptive to an area with high levels of tourism. Local priorities can shift in the short-term. Broader economic conditions can impact the availability of contractors. Staff will coordinate with project sponsors to identify a preferred timing of implementation.
- **Statewide Collaboration.** Per the PACTS-MaineDOT MOU, project selection for the TIP is a collaboration based on an identification of priorities and an evaluation of available resources. PACTS can identify its priorities through internal processes, but available resources are affected by federal apportionments, statewide priorities, the availability of external funding opportunities, and other factors. Staff will coordinate with MaineDOT to advance as many regional priorities as possible, and will report back to PACTS as to which projects are ultimately selected or not. It is the hope that through this approach the region will see progress on its highest priorities as they are accepted into the TIP, demonstrating a clear link between planning and investment. While the MOU reshapes the relationship of PACTS and MaineDOT, it does not limit PACTS' authority as a Transportation Management Area (TMA) under federal law: "nothing contained in this Agreement is intended to or shall limit the authority or responsibilities assigned to signatory organizations under Maine law or federal law."

Acronyms & Abbreviations

AAA	All Ages and Abilities
AADT	Annual Average Daily Traffic
ACS	American Community Survey
ADA	Americans with Disability Act
AIM	Accelerating Innovative Mobility
AV	Autonomous Vehicle
BAU	Business as Usual
BIL	Bipartisan Infrastructure Law
BRT	Bus Rapid Transit
BSOOB	Biddeford Saco Old Orchard Beach
BUILD	Better Utilizing Investments to Leverage Development
CBL	Casco Bay Lines
CMAQ	Congestion Mitigation and Air Quality
CO2	Carbon Dioxide
EPA	Environmental Protection Agency
ETA	Equitable Target Areas
EV	Electric Vehicle
eVTOL	Electric Vertical Take-Off and Landing
FAST	Fixing America's Surface Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	Greenhouse Gas Emissions
GPCOG	Greater Portland Council of Governments
HUD	Department of Housing and Urban Development
HSIP	Highway Safety Improvement Program
IIJA	Infrastructure Investment and Jobs Act
ISTEA	Intermodal Surface Transportation Efficiency Act
ITS	Intelligent Transportation Systems
LEHD	Longitudinal Employer–Household Dynamics
LRT	Light Rail Transit
MaaS	Mobility-as-a-Service
MaineDOT	Maine Department of Transportation
MAP-21	Moving Ahead for Progress in the 21st Century Act
MCC	Maine Clean Communities
MMTCO2e	Metric Tons of Carbon Dioxide Equivalent
MPO	Metropolitan Planning Organization
MTA	Maine Turnpike Authority
NHS	National Highway System
NHTSA	National Highway Traffic Safety Administration
NEPA	National Environmental Policy Act
NNEPRA	Northern New England Passenger Rail Authority
NTD	National Transit Database
PAC/PAG	Project Advisory Committee/Group
PACTS	Portland Area Comprehensive Transportation System
PDR	Preliminary Design Report
PTC	Portland Transportation Center
RTP	Regional Transportation Program
SGR	State of Good Repair
SMPDC	Southern Maine Planning and Development Commission
TAP	Transportation Alternatives Program
TCRP	Transit Cooperative Research Program
TDM	Transportation Demand Management
TIP	Transportation Improvement Program
TMA	Transportation Management Association
TNC	Transportation Network Companies
TOD	Transit-Oriented Development
TSP	Transit Signal Priority
USM	University of Southern Maine
UZA	Urbanized Areas
VMT	Vehicle Miles Traveled
YCCAC	York County Community Action Corporation