
TRANSIT TOGETHER
The State of Regional Transit
Summary Report
September 2022
The Future of Transit
1811
GPCOG
GREATER PORTLAND
COUNCIL OF GOVERNMENTS
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1 INTRODUCTION

Before the COVID-19 pandemic, about 16,500 riders used the Greater Portland region's transit services on an average day—to get to and from work, to shop, for medical appointments, to see friends, and do all the other things that are important in our lives. Many riders in Greater Portland use public transit because it is the travel option that works best for them. For others, public transit is a lifeline that connects them to daily needs that would otherwise be difficult to access.

Transit agencies throughout the world experienced significant declines ridership during the pandemic. While ridership in Greater Portland has returned to roughly 70% of pre-pandemic levels, other transit systems have avoided such significant declines and recovered more quickly by investing in transit improvements that make transit more competitive with auto trips.

Public transit providers in Greater Portland are also committed to improving the attractiveness of transit and achieving the goals outlined in the region's long-range transit plan, Transit Tomorrow: Make Transit Easier, Create Frequent Connections, Improve Rapid Transit, and Create Transit-Friendly Places.

The Transit Together effort is designed to determine how to best advance these goals so using transit is easier, faster, more reliable, and a more competitive option for more people.

Today, the Greater Portland region is served by seven public transit providers, each with a distinct service area, route structure, facilities, funding, and brand. Although the region's independently operated agencies do work together in some ways, the Transit Together study will recommend how these providers might increase collaboration to

make regional transit more seamless to use and efficient to deliver—all with the aim of improving regional mobility.

This State of Regional Transit summary report is an overview of the state of Greater Portland's regional public transit system. It identifies potential improvement opportunities and sets the stage for specific improvement recommendations. The summary report has five main sections:

- The demand for transit in the Greater Portland region
- The region's transit services
- Ridership
- Regional practices
- Findings and opportunities

The State of the Regional Transit outlines existing conditions and needs in the region, as well as to identifies opportunities for a more coordinated service network. More detailed information on these subjects is available in three companion documents:

- State of Regional Transit Part 1: Market Analysis
- State of Regional Transit Part 2: Existing Service
- State of Regional Transit Part 3: Regional Service Delivery and Coordination

Route profiles of each existing transit route in the Greater Portland region have also been developed as part of this effort. All documents are all available on the project website, www.transittogether.org.

Image source: GPCOG

2 THE DEMAND FOR TRANSIT IN GREATER PORTLAND

The underlying demand for year-round transit in Greater Portland varies greatly and is strongly related to six factors:

Population and Population Density: Because transit relies on having more people near service, higher population density makes it feasible to provide higher levels of service.

Socioeconomic Characteristics: Different people have a different likelihood to use transit, with some differences related to socioeconomic characteristics. For example, households with many cars are much less likely to use transit than those with one or none.

Employment and Employment Density: The location and density of jobs is also a strong indicator of transit demand, as traveling to and from work often accounts for the most frequent type of transit trip.

Development Patterns: There is a strong correlation between development patterns and transit ridership. Areas with denser development, mixed-use development, and a good pedestrian environment are the most conducive to transit use.

Major Activity Centers: Large employers, universities, tourism destinations, and other high-activity areas attract large volumes of people and can generate many transit trips.

Travel Flows: People use transit to get from one place to another. Major transit lines such as commuter rail and high-frequency bus corridors are designed to serve corridors with high-volume travel flows. Some travel flows are constrained by geography, such as those from Casco Bay islands to the mainland.

More than any other factor, population and employment density drives the underlying demand for transit. This is because:

- The reach of transit is generally limited to a quarter-mile of a transit stop. As a result, the size of the travel market is directly related to the density of development in that area.
- Transit service frequencies, in turn, are closely related to market size. Bigger markets support more frequent service, while smaller markets support less frequent service.
- To attract travelers who have the option of using private automobiles, transit service must be relatively frequent and get riders to their destination in a time and at a cost competitive with private vehicle travel.

Population and job densities also indicate demand for transit in terms of the type and frequency of service that is most appropriate. For example, to support 30-minute service, there generally must be at least 15 households or more than 15 jobs per acre, or a combination thereof. However, these densities broadly indicate demand across contiguous and nearby areas. Clusters of density throughout an area or along a corridor are strong indicators of demand, while a dense but small neighborhood in an isolated area would not produce sufficient demand by itself. Demand can also accumulate along corridors to produce demand for more frequent service than the densities alone would indicate. For example, long corridors where most places have the density to support 15- to 30-minute service will often produce accumulated demand for 15-minute or better service.

Areas with fewer than 10 residents or five jobs per acre, or a combination thereof, rarely provide an environment where fixed-route transit can succeed. In very low-density areas with specific needs, fixed-route transit alternatives such as shuttles, demand-response (for example, microtransit), and volunteer-driver services are more appropriate. In longer-distance markets, point-to-point or limited-stop services are most appropriate.

Land Use			Transit	
Land Use Type	Residents per Acre	Jobs per Acre	Appropriate Types of Transit	Frequency of Service
Local Transit				
Urban Core	>30	>15	Commuter rail, light rail/streetcar, BRT, express bus, local bus	15 mins. or less
Urban and Mixed-Use Neighborhoods	15-30	10-15	Commuter rail, light rail/streetcar, BRT, express bus, local bus	15-30 mins.
Mixed-Density neighborhoods	10-15	5-10	Light rail/streetcar, express bus, local bus	30-60 mins.
Low Density	2-10	2-5	Demand response (microtransit)	60 mins. or less, or on-demand
Rural	<2	<2	Demand-response (microtransit)	On-demand
Mid- to Long-Range Point-to-Point Services				
Community-to-Community	Varies		Passenger rail or ferry	Varies

POPULATION-BASED DEMAND

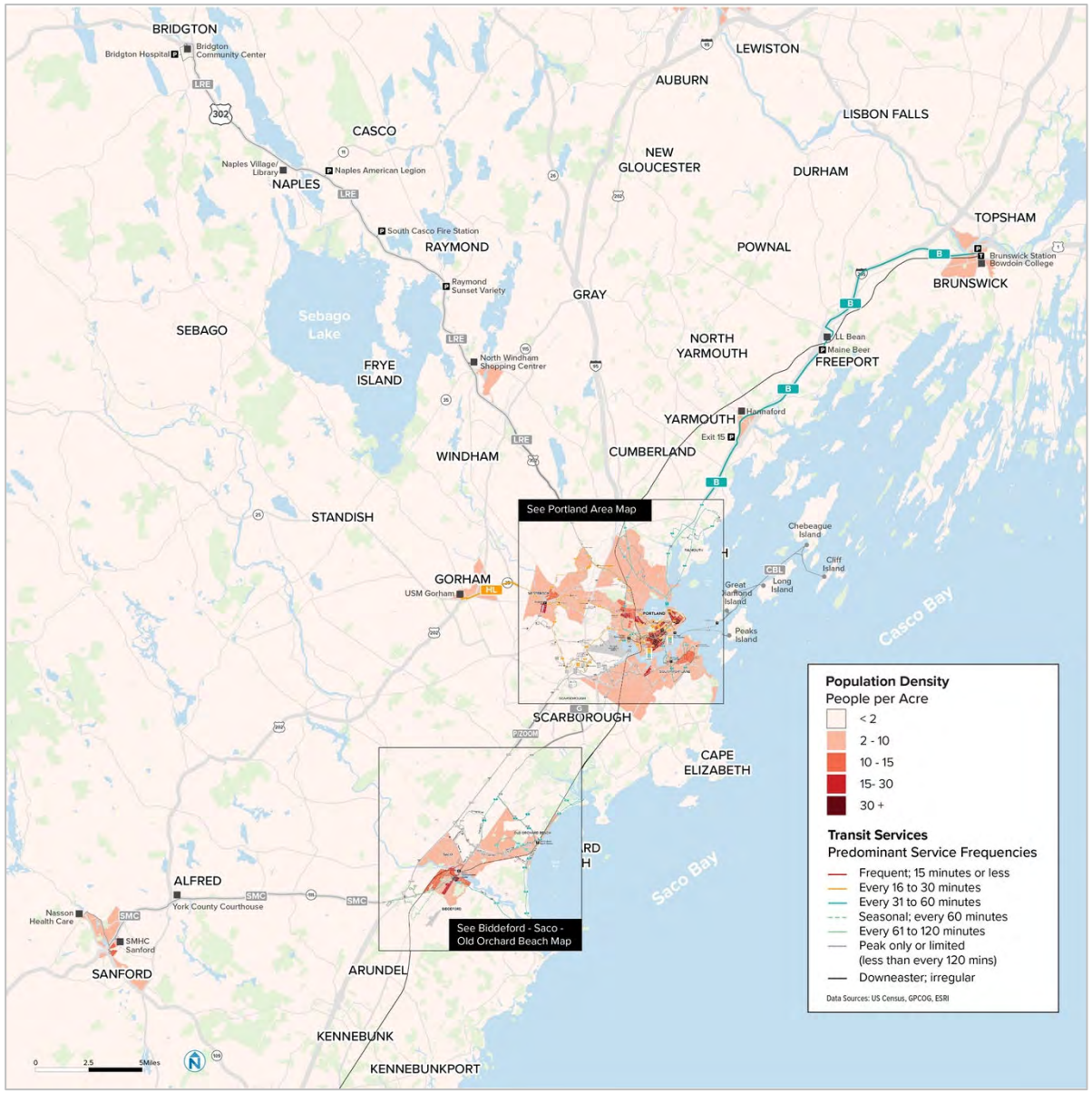
Population Density

The highest population densities are in the Portland area and the Biddeford-Saco-Old Orchard Beach area.

Population density is one of the most important factors in determining underlying demand for transit. Not only does density indicate where there are many people in close proximity, it also indicates land use types more suited for transit. Denser areas tend to be more walkable and less auto-oriented, with more limited access to parking and less reason and incentive to own a private automobile.

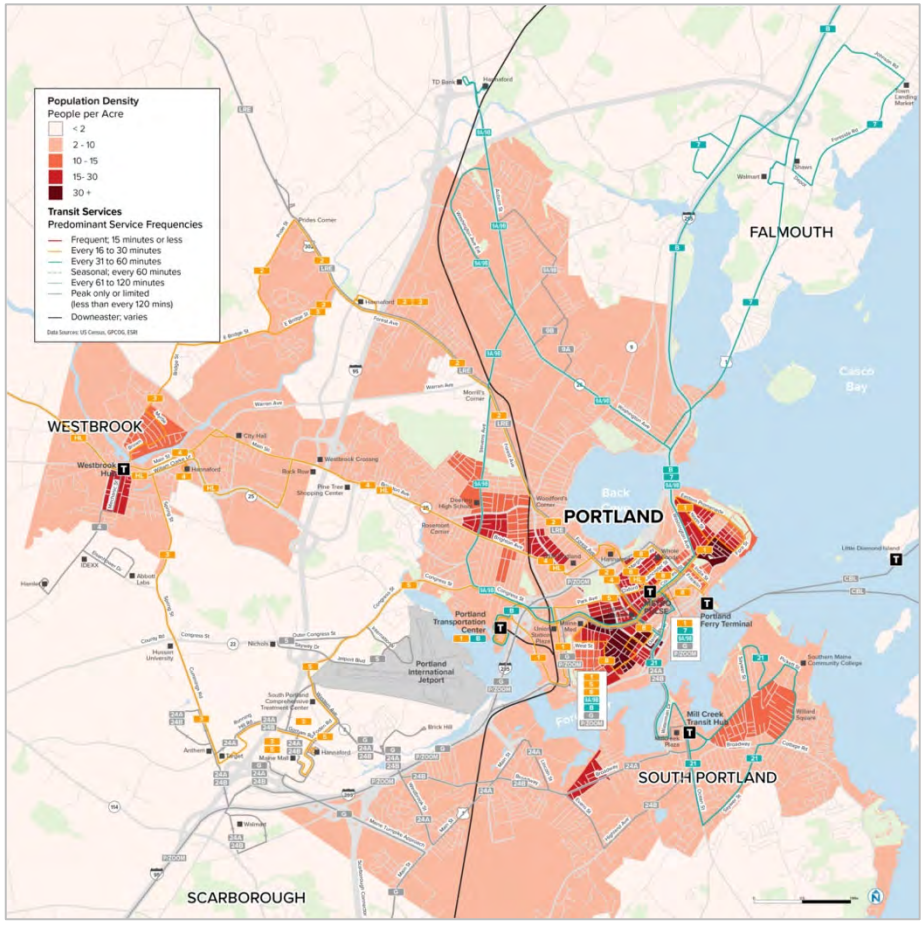
As shown in the map to the right, population in the Greater Portland region is heavily concentrated in the Portland and Biddeford-Saco-Old Orchard Beach areas, with much smaller pockets of population in places like Brunswick, Freeport, Yarmouth, Windham, Gorham, and Sanford. All other areas in the Greater Portland region are very lightly populated. Some unique places, like islands, have inherently different relationships between population density and transit demand.

Greater Portland Region Population Density



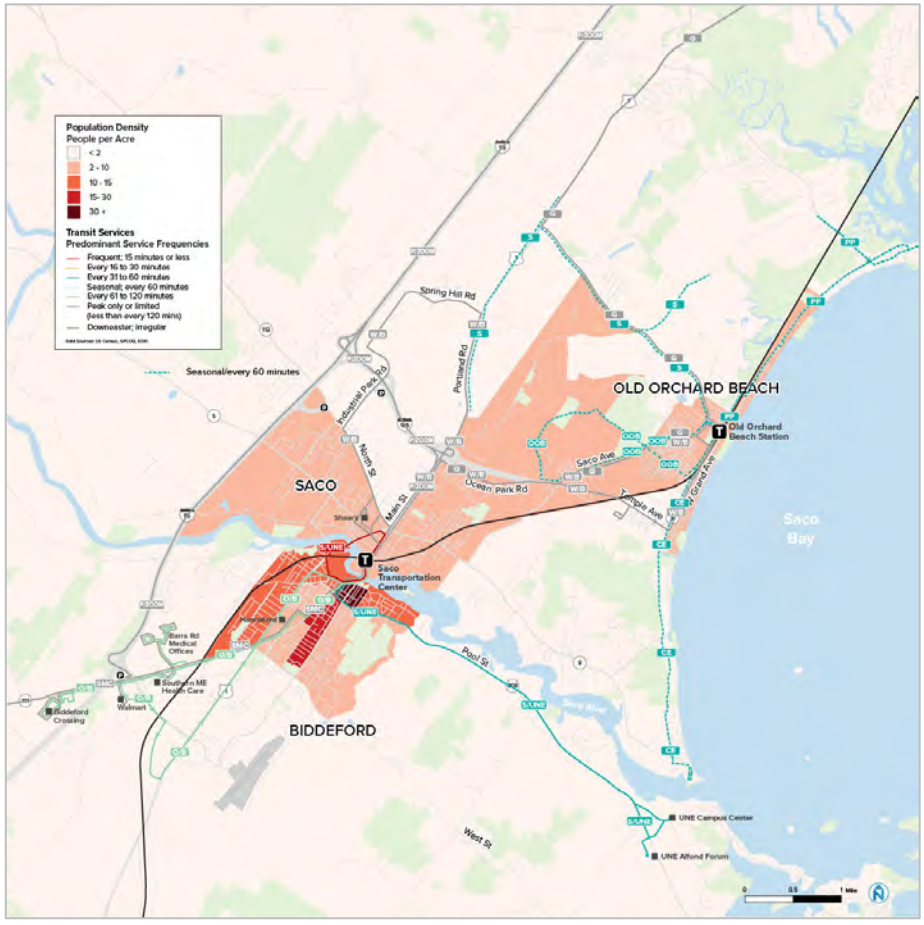
In the Portland area, population densities are highest on the Portland Peninsula, Portland's Deering neighborhood, South Portland's Willard Square and Pleasantdale neighborhoods, and parts of Westbrook north and south of downtown. Even in the Portland area, population densities are low in many places, particularly in Falmouth and in some places near the Maine Mall and Jetport.

Portland Area Population Density



In the Biddeford-Saco-Old Orchard Beach area, population is most heavily concentrated in downtown Biddeford. Population densities are moderate in Old Orchard Beach and Saco northwest of downtown and between downtown and Old Orchard Beach. Elsewhere, population densities are very low.

Biddeford-Saco-Old Orchard Beach Population Density



Socioeconomic Characteristics

Minority residents, low-income residents, and zero-car households use transit at higher rates than the population at large. About 12% of the region's residents are people of color, 25% earn below 200% of the federal poverty level, and 9% of households do not have access to a vehicle.

In addition to population density, socioeconomic characteristics influence people's propensity to use transit. National research shows that many population groups have a higher propensity for transit use than the overall population. Socioeconomic characteristics that are particularly important include:

Race and Ethnicity

Minority residents generally have higher rates of transit use, and the provision of effective transit service to minorities is also particularly important to the Federal Transit Administration as a requirement under Title VI of the Civil Rights Act of 1964. **In Greater Portland, 88% of residents are white and 12% are people of color.** The highest densities of people of color live in:

- Portland's Bayside and East End neighborhoods
- South Portland's Pleasantdale neighborhood
- Westbrook's Frenchtown neighborhood
- Biddeford, south of Alfred Street
- Parts of Sanford

Income

Residents with lower incomes tend to use transit more because it is less expensive than owning and operating a personal vehicle, and many rely on transit as their primary mode of transportation. Members of households earning fewer than $35,000 a year use transit more than higher-income people.

About 25% of Greater Portland residents earn below 200% of the federal poverty level. Low-income populations are densest in:

- Much of the Portland Peninsula
- Portland's Deering Center and Oakdale neighborhoods
- South Portland's Pleasantdale neighborhood
- Westbrook's downtown and Frenchtown neighborhood
- Downtown Biddeford
- Downtown Saco

Vehicle Ownership and Access

Households with limited or no access to a personal vehicle, either by choice or by necessity, are more likely to rely on transit. Some living on the Portland Peninsula may choose to live car-free because they can access jobs and other amenities via transit or by walking or biking. Other residents may use transit for other reasons, such as cost or inability to drive. Some households have fewer cars than workers, and one-vehicle households also typically have higher rates of transit use than households with two or more vehicles.

In the Greater Portland region, 9% of households do not have a vehicle. The highest density of zero-vehicle households is on the Portland Peninsula, where the street network is highly walkable, there is a high concentration of key destinations and jobs, and more frequent transit service operates.

Impact on Transit Demand

When people and households from high-transit propensity groups cluster together, they can influence the underlying demand for transit to an extent that is not captured when simply considering total population. In many locations, the clustering of people with a high propensity of transit use increases transit demand to levels higher than those indicated by population density alone. Similarly, in areas with populations with a lower propensity to use transit, demand will be lower. In the Greater Portland area, and as shown left, Black residents are 8.8 times more likely to use transit as the average resident, while white residents are only 0.8 times as likely to take transit. Very low-income riders are two times as likely to use transit as the average resident, and higher-income households are only 0.6 times as likely.

Relative Transit Propensity by Population Group

Demographic Group	Relative Transit Propensity
Race and Ethnicity	
White Alone	0.8
Black	8.8
Asian	1.2
Hispanic/Latino	2.3
Other	2.3
Household Vehicle Ownership	
No Car	9.8
One Car	1.1
Two or More Cars	0.7
Household Income	
Less than $10,000	2.0
$10,000 - $14,999	1.7
$15,000 - $24,999	1.2
$25,000 - $34,999	1.3
$35,000 - $49,999	0.6
$50,000 - $64,999	0.6
$65,000 - $74,999	0.4
$75,000 and more	0.6

Note: Propensities developed using 2019 American Community Survey five-year estimates.

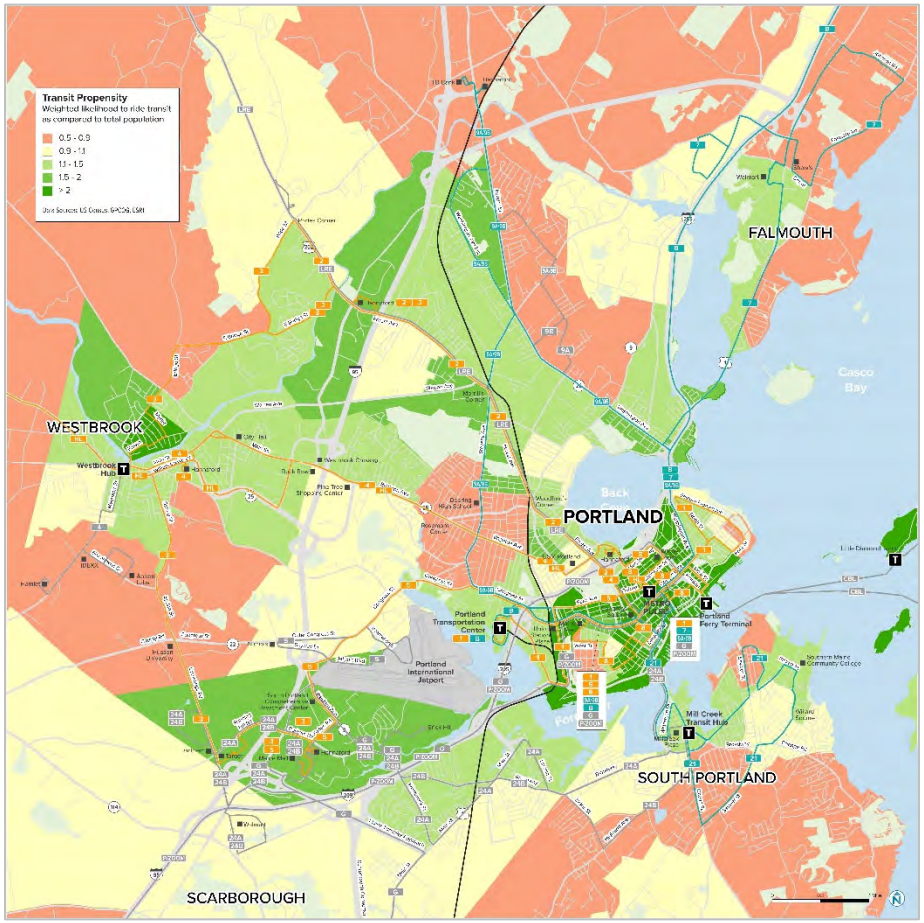
Image source: GPCOG

In the Greater Portland region, residents of a few key areas have a higher propensity to use transit than the average resident, and these areas are shown on the maps below in green. These areas include:

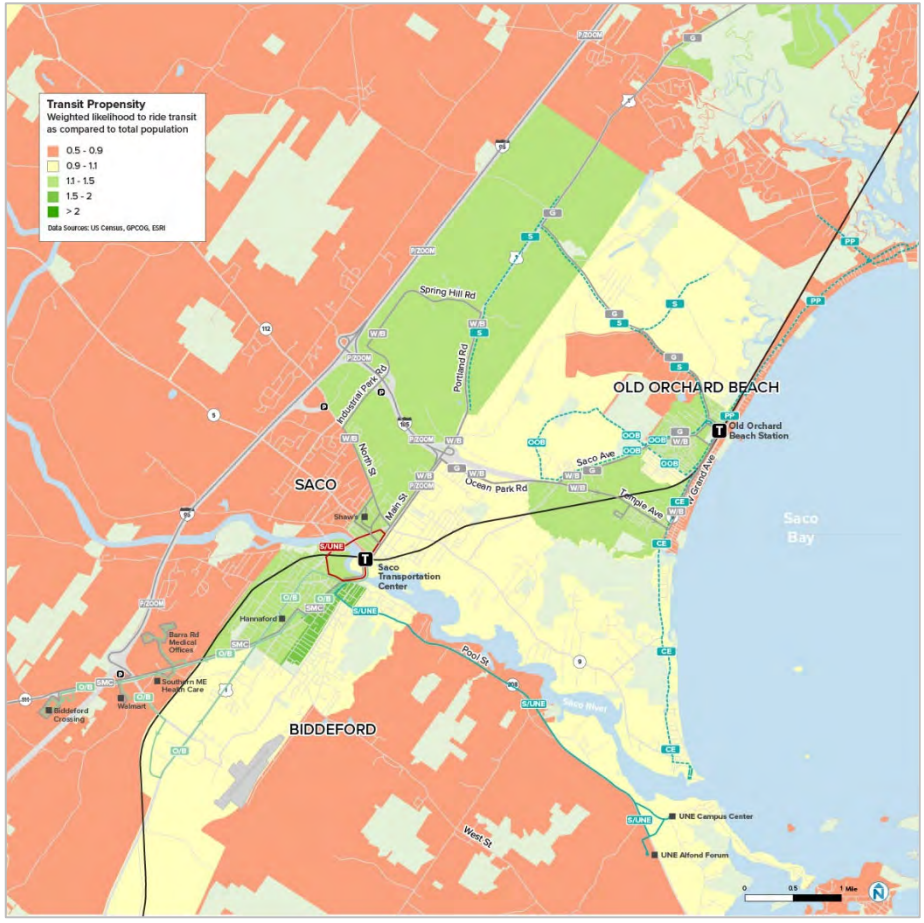
- Most of Portland, particularly on the Portland Peninsula
- Much of South Portland
- Much of Westbrook
- Downtown Biddeford
- Parts of Saco
- Much of Old Orchard Beach

Conversely, the residents of most areas have a lower propensity to take transit. These areas are shown in pink and red on the maps.

Portland Area Population Relative Propensity to Use Transit



Biddeford-Saco-Old Orch. Beach Population Relative Prop. to Use Transit



EMPLOYMENT-BASED DEMAND

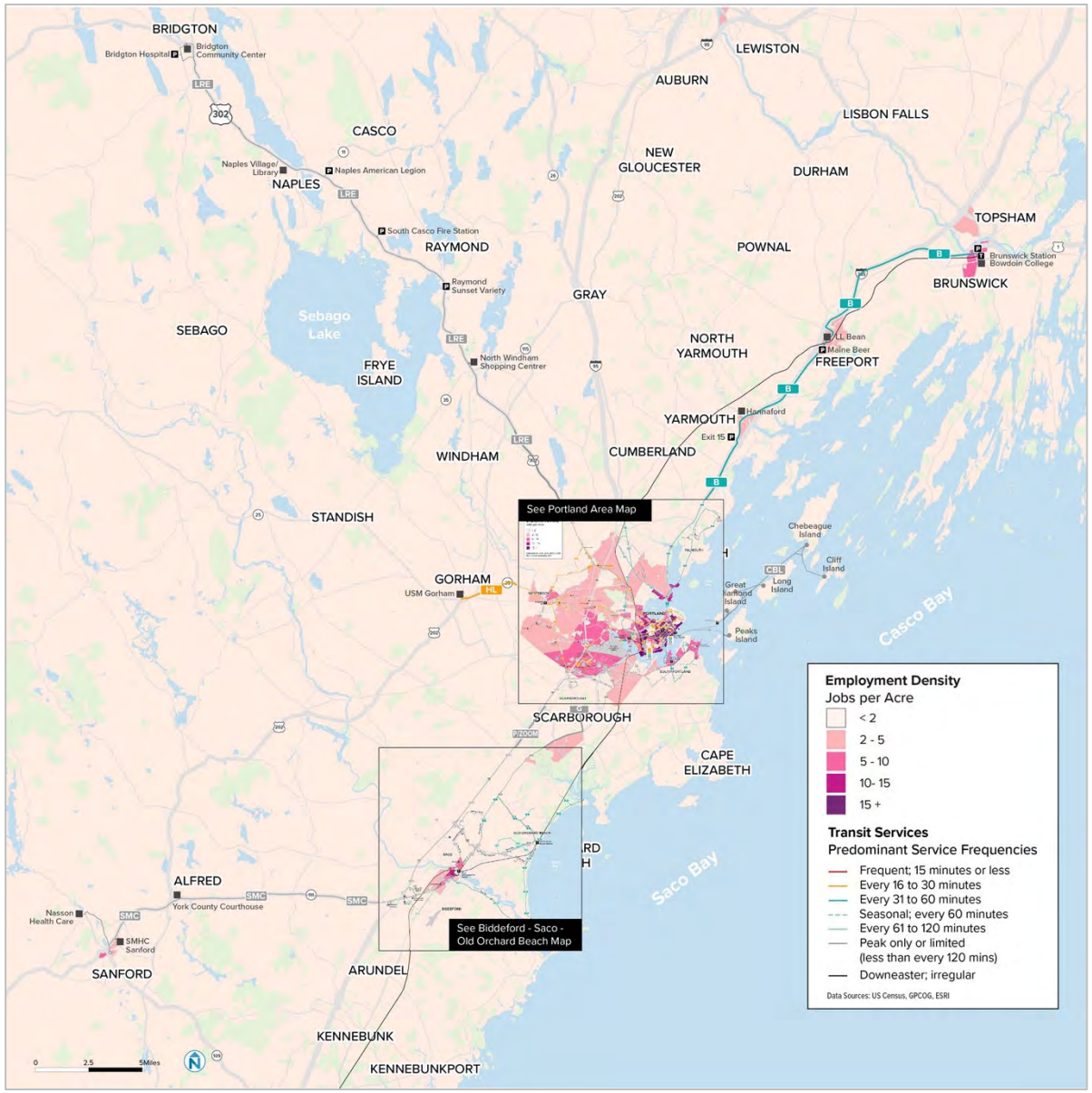
Employment Density

The highest employment densities are in the Portland and Biddeford-Saco-Old Orchard Beach areas.

Commutes are one of the most common and consistent reasons riders take transit. As a result, employment density is another major source of transit demand. Employment density is also an important indicator of demand because it is one of the easiest ways to represent other types of potential travel activity as well; where restaurant and retail employees commute to is also where their customers are traveling, for example. As densities increase, the demand for transit grows, particularly for more frequent service.

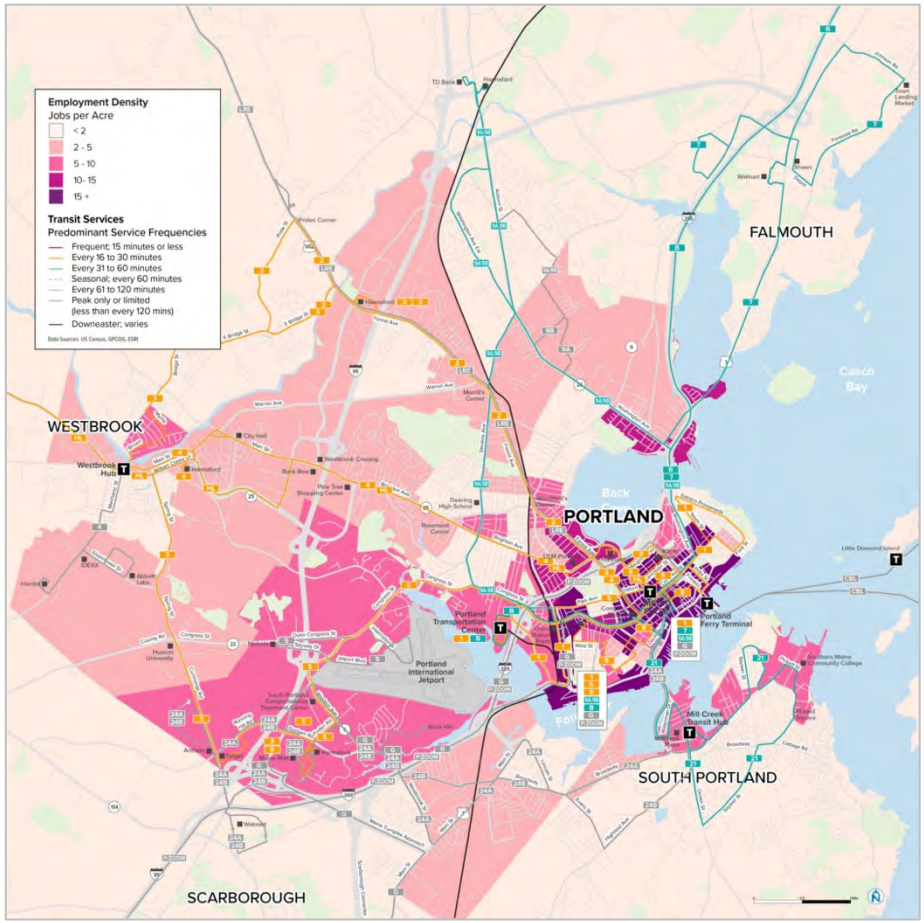
The highest employment densities in the Greater Portland region are very concentrated in the Portland area and the Portland Peninsula, specifically. There are smaller concentrations of employment in the Biddeford-Saco-Old Orchard Beach area, and in Brunswick, Freeport, Yarmouth, Scarborough, and Sanford.

Greater Portland Region Employment Density



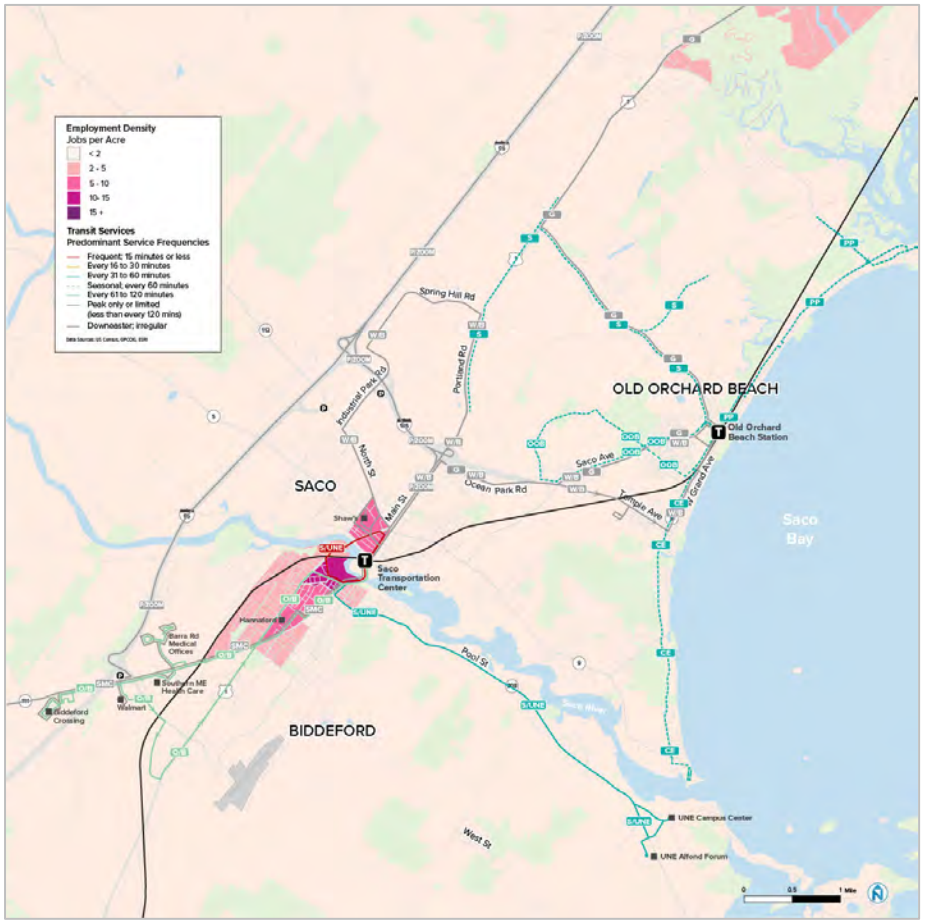
In the Portland area, employment densities are highest on the Portland Peninsula, particularly in Old Port/Downtown and the Valley Street/Maine Medical Center (MMC) area. They are also high in Portland's East Deering and Oakdale neighborhoods. Employment densities are much lower in other areas but still significant on the east side of South Portland, in the Maine Mall area, and northwest of the Jetport.

Portland Area Employment Density



In the Biddeford-Saco-Old Orchard Beach area, employment is most heavily concentrated in downtown Biddeford and downtown Saco, and along US Route 1 in Scarborough. Elsewhere, employment densities are very low. This includes the many areas in Saco and Biddeford where there are industrial parks, as employment is spread relatively thinly throughout these parks. Employment density likely increases considerably in Old Orchard Beach in the summer.

Biddeford-Saco-Old Orchard Beach Employment Density



KEY ACTIVITY CENTERS

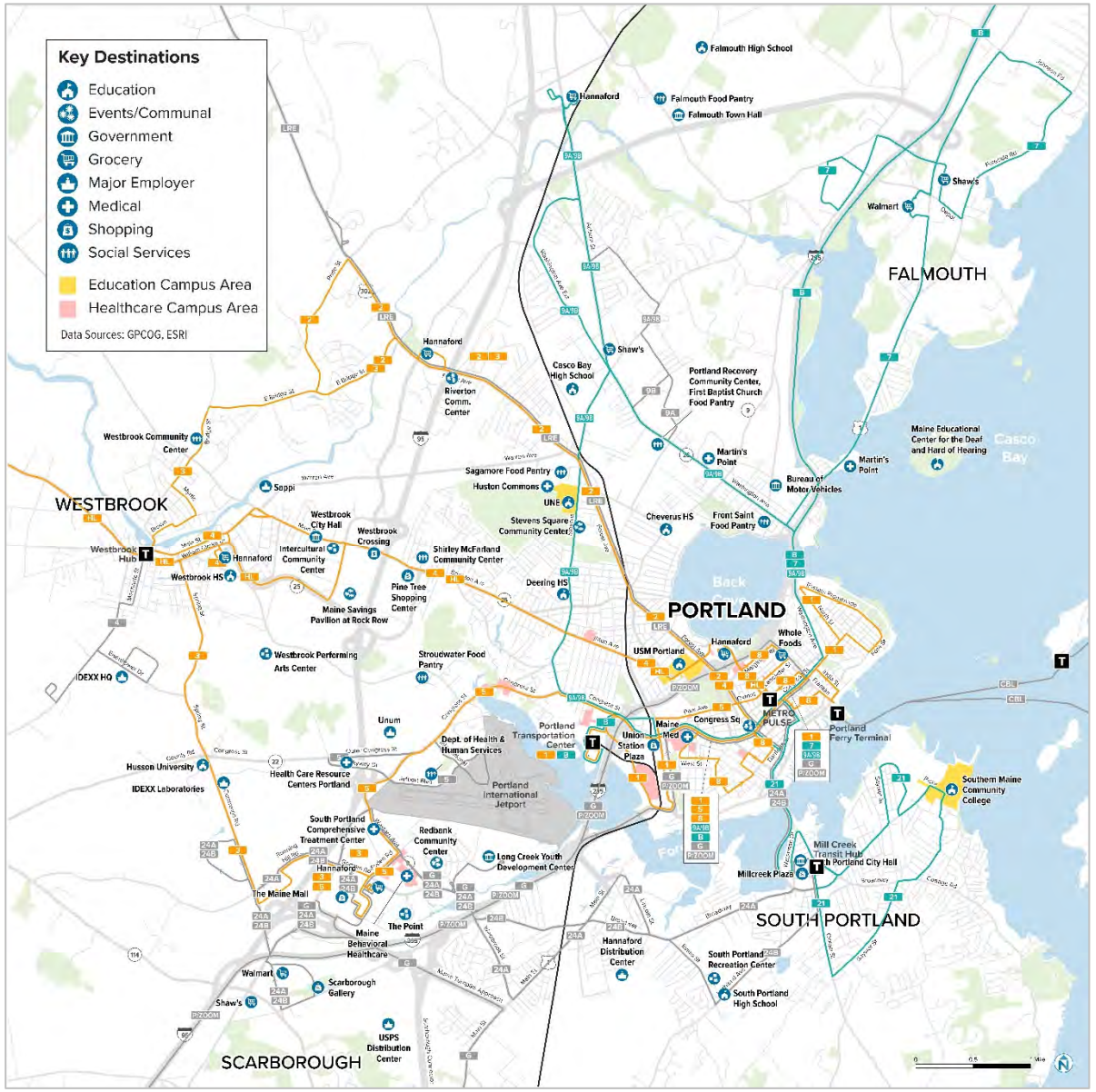
Key locations for transit demand are those that typically generate high numbers of transit trips, or trips made by riders with few other travel options. In many cases, these key destinations are the same places that auto and active transportation users travel to, such as grocery stores and major employment centers. Other types of destinations, such as social services, are also heavily frequented by transit riders.

Key activity centers in the Greater Portland region are heavily concentrated on the Portland Peninsula, where shopping, major employment, medical, government, and social service organizations are clustered. Social services, in particular, are concentrated in Portland's Bayside neighborhood.

Maine Medical Center

Image source: "Maine Medical Center - Level 1 Hospital in Portland, ME, Main Entry" by Medic454 CC BY SA 4.0.

Key Activity Centers in Portland Area



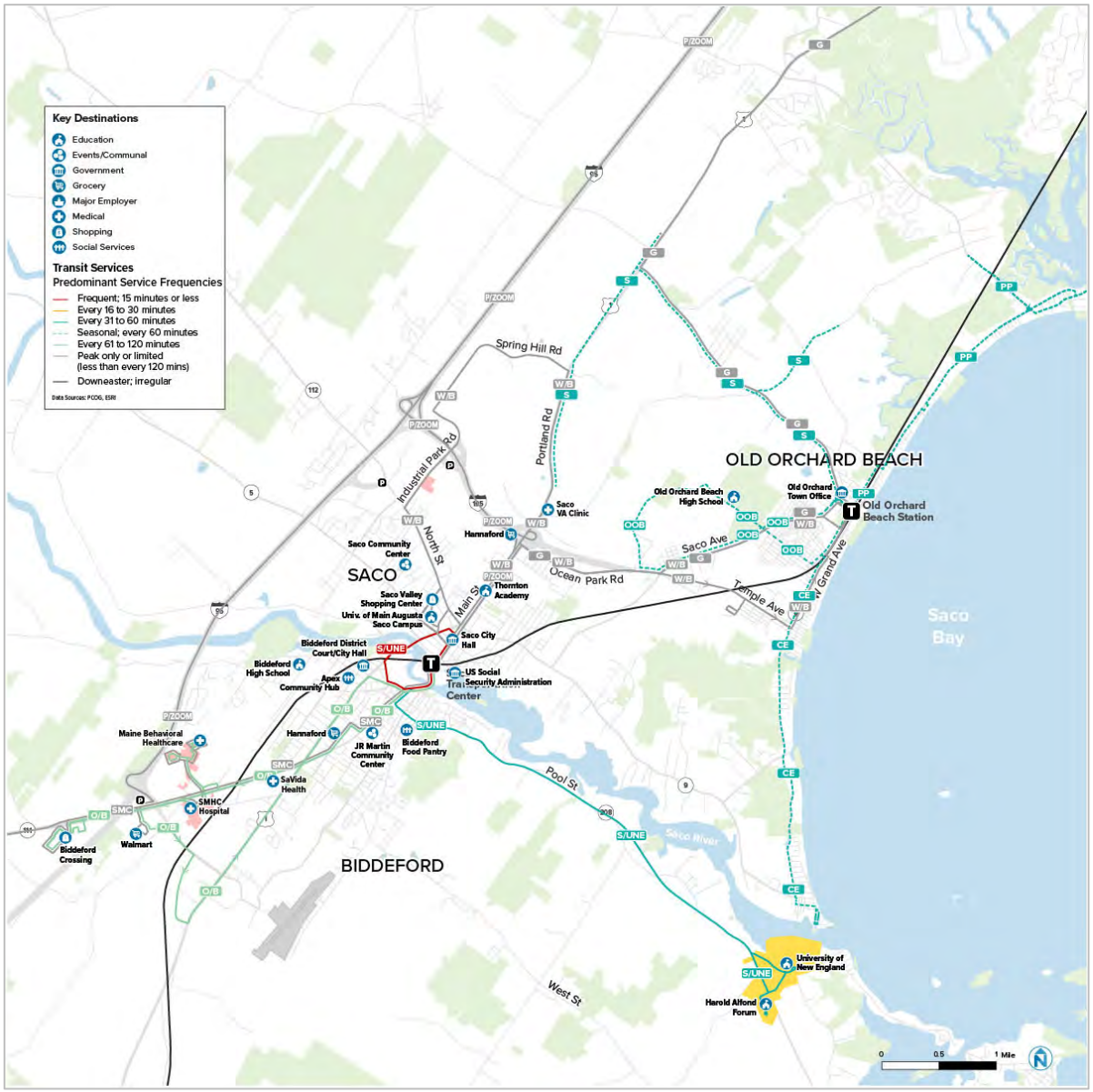
Outside downtown Portland, there are clusters of key activity centers:

- In the Maine Mall area
- In South Portland's West End and Knightville neighborhoods
- Near MaineHealth facilities on US Route 1 in Scarborough
- In Saco and Biddeford
- In downtown Sanford and along Main Street/Route 109
- In downtown Brunswick

Key transit locations that are clustered together can usually be efficiently served with fixed-route transit. However, key locations that are isolated typically cannot be efficiently served with fixed-route transit and are better served with social service or specialized transportation. Examples of these types of locations include:

- The Westbrook Community Center
- Healthcare facilities on Barra Road in Biddeford
- Isolated employment sites like the Unum campus in Portland

Key Activity Centers in Biddeford-Saco-Old Orchard Beach



COMPOSITE UNDERLYING DEMAND

The previous sections described how population density, socioeconomic characteristics, employment density, and activity centers separately produce demand for transit. Looking at them combined, however, is the best way to get a complete understanding of the underlying demand, as none of the individual measures paint the entire picture.

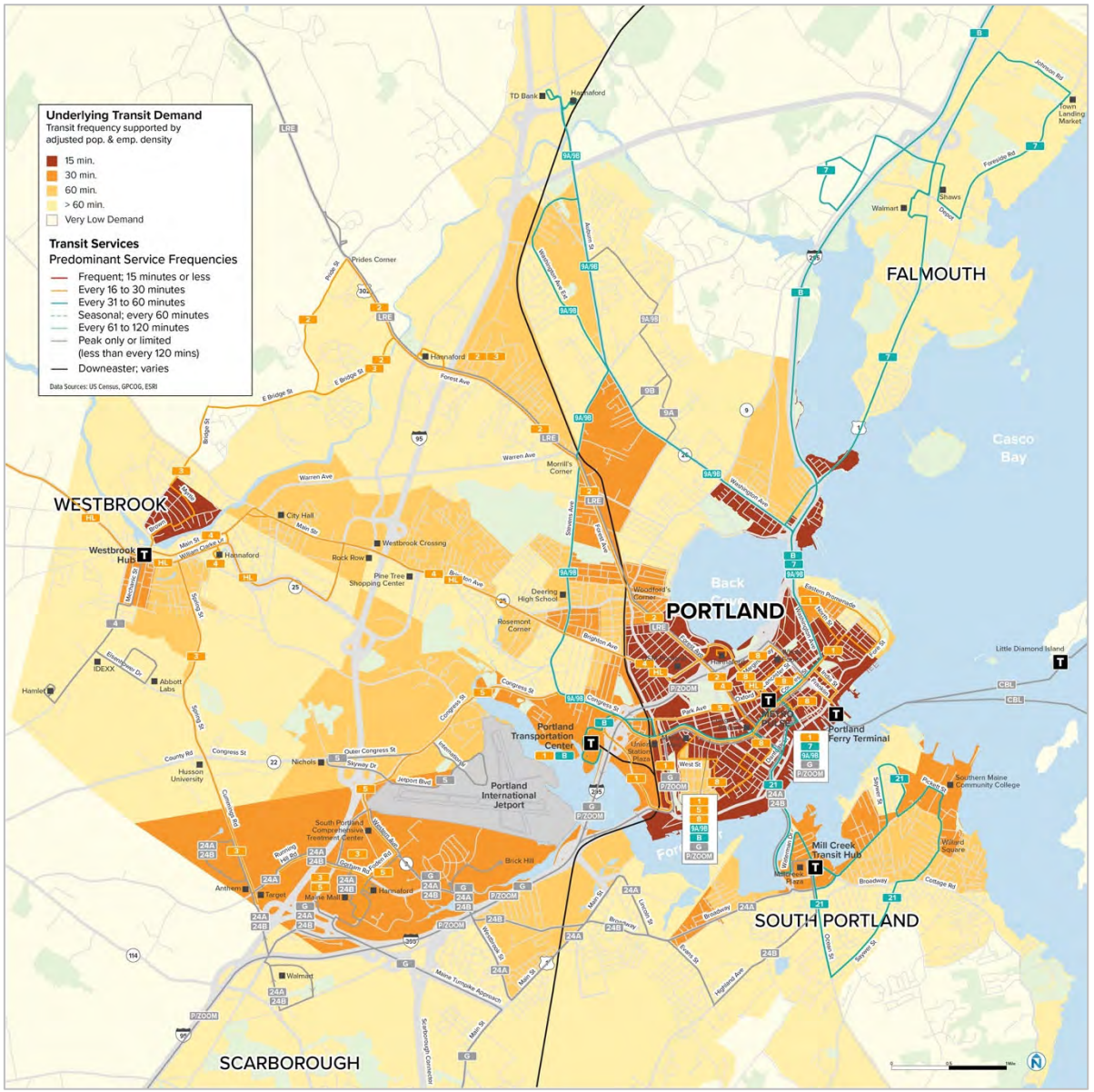
Portland Area

Demand is moderate to high in many areas.

The overall underlying demand for transit is highest in Portland, with demand concentrated on the Portland Peninsula, Portland's Washington Avenue and Forest Avenue corridors, and downtown Westbrook. These areas are already served by some of the region's most frequent services, but there appears to be underlying demand for more frequent service.

Demand is also relatively high in South Portland in the Maine Mall/Redbank Village area, and the Knightville and Willard Square areas of South Portland. Most of these areas are served by South Portland Bus Service (SPBS) 24A and 24B Maine Mall routes, which only operate infrequently.

Transit demand is highest on the Portland Peninsula, but is also high in many other areas



There are also some areas with fixed-route transit where the demand for transit is low. These include:

- All of Falmouth, except the Walmart and Shaw's
- Most of South Portland south of Broadway
- Westbrook, between Cumberland Street and Forest Avenue

Ridership in these areas is very low, which matches the demand analysis in this report. If service in these places is to be maintained, alternative service models, such as microtransit, should be considered. Potential microtransit services could include:

- Falmouth, with service focused on the Falmouth Walmart
- Parts of Westbrook, with service focused on the Westbrook Hub
- South Portland south of Broadway, with service focused on the Mill Creek Transit Hub

Ridership demand on the Casco Bay islands is unique, as most island residents must take transit to access the mainland. For many island residents, transit is a lifeline service.

Biddeford, Saco, and Old Orchard Beach Area

Demand ranges from high to very low.

The Biddeford-Saco-Old Orchard Beach urban area is smaller and less dense than much of Portland. Year-round underlying demand is strongest in and around

Underlying demand is highest in and around downtown Biddeford and Saco

downtown Saco and Biddeford and the area's major destinations such as supermarkets, Walmart, Biddeford Crossing, and the University of New England. Year-round demand is moderate in Old Orchard Beach. Demand is low to very low in other areas, including nearly all the area served by Biddeford-Saco-Old Orchard Beach (BSOOB) Transit's Route 52 White/53 Blue.

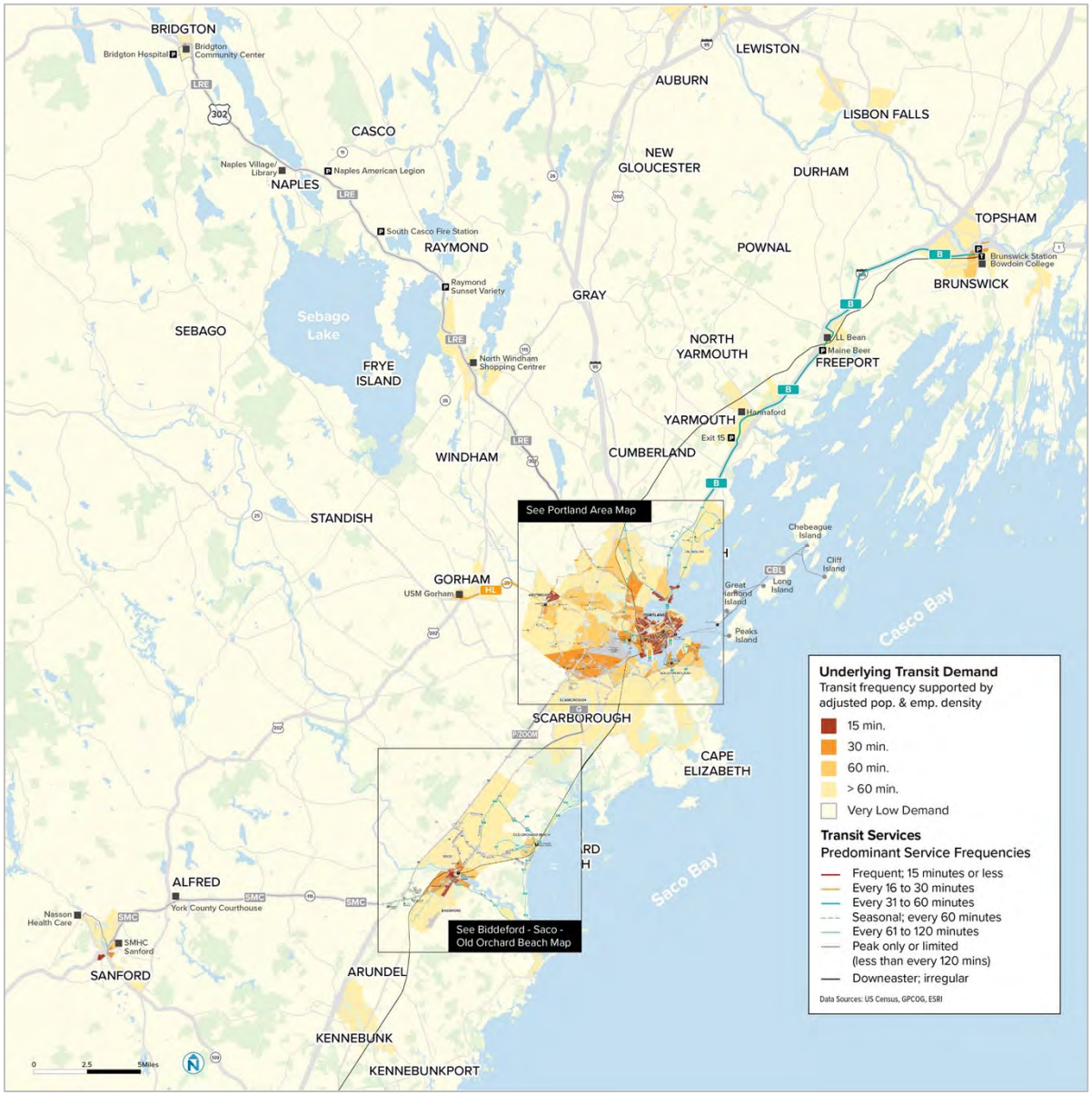
Although limited tourism data are available, we know that Old Orchard Beach's population swells by over 700% in summer, which creates significant demand for BSOOB Transit's seasonal services. Most of this demand appears to be focused in Old Orchard Beach.

Other Communities

There is some demand in small downtowns but demand in most areas is very low.

Although much of the remaining Greater Portland region is very low-density, there are pockets of relatively high composite transit demand outside Portland and Biddeford-Saco-Old Orchard Beach. These include Brunswick, Freeport, Yarmouth, the University of Southern Maine campus in Gorham, and Sanford. These areas are served by Greater Portland Metro's (METRO) BREEZ and Husky Line, and York County Community Action Corporation's (YCCAC's) Southern Maine Connector.

Outside of Portland and Biddeford-Saco-Old Orchard Beach, transit demand is low in all but a few key communities



TRAVEL FLOWS

Travel flows are heavily focused on Portland.

For transit to be effective, it must take people from where they are to where they want to go. In Greater Portland, the highest volumes of commute trips (by all modes) are:

- Within Portland
- Between Portland and outlying communities
- Within Biddeford-Saco-Old Orchard Beach

Other significant flows include:

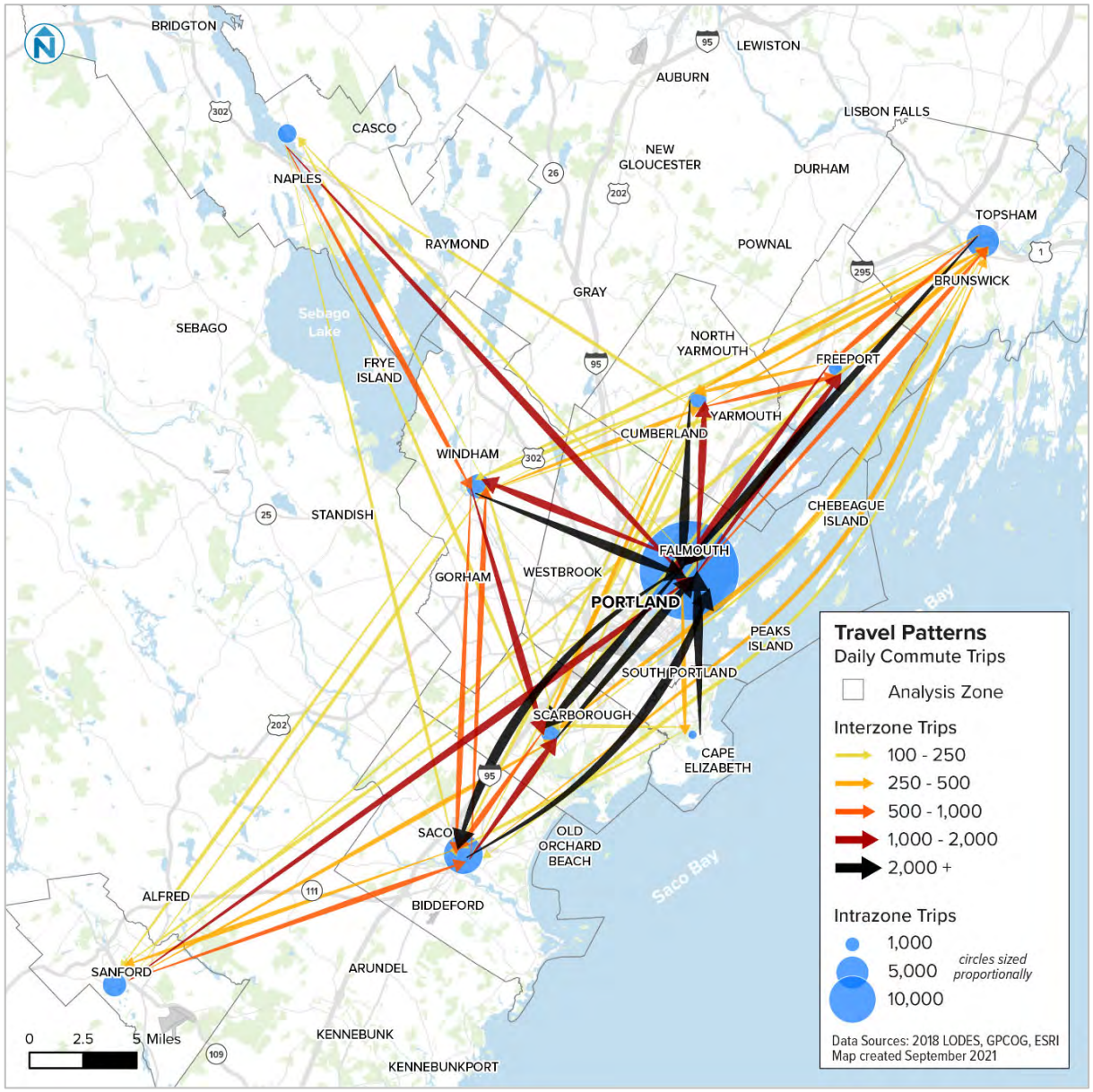
- The Biddeford-Saco and Gorham/Windham areas to Scarborough

It is also notable that many people reverse commute from Portland to Biddeford-Saco-Old Orchard Beach and Scarborough.

In the Portland area, and as shown on the map on the next page, most commute flows are from residential neighborhoods to downtown Portland. In addition:

- Relatively few commute trips are made to and from Falmouth.

Greater Portland Regional Commute Flows



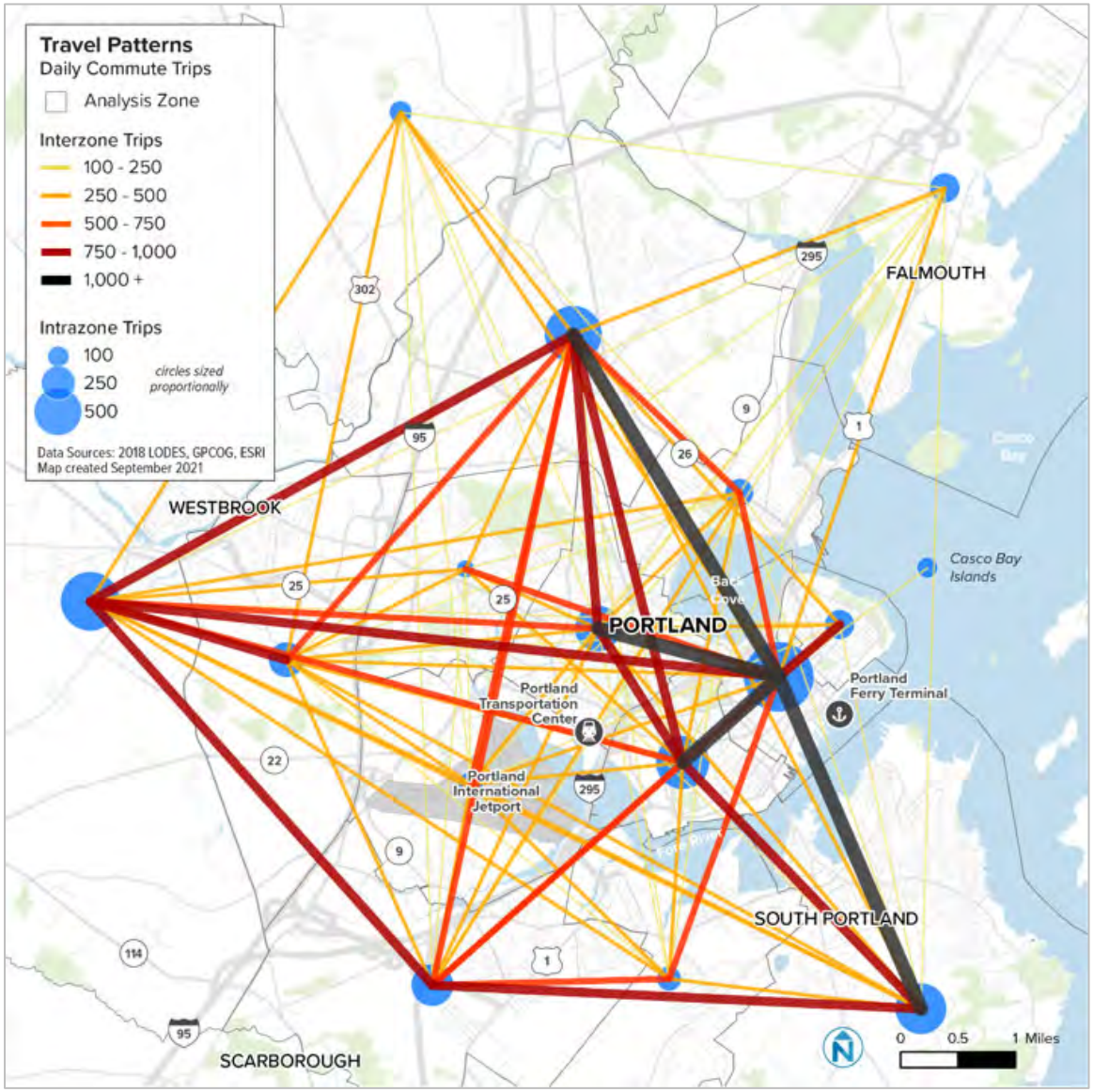
- A similar number of trips are made between the Westbrook and North Deering areas as between Westbrook and the Portland Peninsula.
- More trips are made between the Scarborough and South Portland areas, and the Scarborough and Westbrook areas, than between the Scarborough area and downtown Portland.

TOURISM

The summer tourist season is a major driver of transit demand in Greater Portland.

Tourism plays a major role in travel demand in Maine and especially in the Greater Portland region. In 2018, over 37 million people visited Maine. In the Greater Portland region, many of those visitors travel to area cities, beaches, and the Lakes Region. Old Orchard Beach, in particular, has a population growth of over 700% in summer. The Casco Bay islands also see dramatic summer population increases. All these visitors travel, and many choose—or want—to use public transit. For the vast majority of Casco Bay island tourists, ferry is the only means of transportation to and from the islands.

Portland Area Travel Flows



SUMMARY

The underlying demand for transit in the Greater Portland region is heavily concentrated in the Portland, Westbrook and South Portland areas, in and around downtown Saco and Biddeford, and at key destinations within and near these areas. In these areas, underlying demand ranges from moderate to high. Elsewhere, there are smaller pockets of moderate demand, including in Old Orchard Beach, Brunswick, Freeport, Yarmouth, Gorham, and Sanford. Beyond these areas, the underlying demand for transit is very low.

Areas that have moderate to high demand for transit all have fixed-route bus service today, and some are also served by other modes. However, with a few exceptions, the level of service provided is not adequate to meet underlying demand. As will be discussed in the next chapter, the most frequent consistent routes operate every 30 minutes. Especially on the Portland Peninsula and other parts of Portland and Westbrook, there is demand for service that operates as frequently as every 15 minutes. There is also demand for more frequent service along South Portland's Broadway corridor.

There are also some areas that have only low or very low underlying demand for transit that are currently served with fixed-route transit. These include Falmouth, Westbrook between Cumberland Street and Forest Avenue, much of South Portland south of Broadway, and most of Saco. In these areas, alternative service approaches such as microtransit could provide more convenient service at similar or lower costs.

Note: transit demand for some non-local transit services, like long-distance rail and ferries, can be very different from that for local transit services. Discussion in this chapter has focused primarily on local transit service, and conclusions drawn may not be fully applicable to rail and ferry service.

Image source: Nelson\Nygaard

3 THE REGION'S TRANSIT SERVICES

The Greater Portland region is primarily served by seven public transit providers: Greater Portland Metro (METRO), South Portland Bus Service (SPBS), Biddeford-Saco-Old Orchard Beach Transit (BSOOB Transit), Casco Bay Lines, the Northern New England Passenger Rail Authority (NNEPRA), Regional Transportation Program (RTP), and York County Community Action Corporation (YCCAC). These agencies provide local, regional, and express bus service, ferry service, intercity rail service, and paratransit and human-service transportation.

	The Greater Portland Transit District, which operates under the name **Greater Portland Metro (METRO)**, is the region's largest transit provider. METRO provides local and express bus service in many communities in the Portland area.
	South Portland Bus Service (SPBS) provides fixed-route service within South Portland with connections to and from Portland and the Scarborough Gallery mall district.
	Biddeford-Saco-Old Orchard Beach Transit (BSOOB Transit) provides year-round and seasonal fixed-route bus service in its namesake member communities, as well as service to and from Scarborough, South Portland, and Portland.
	The Casco Bay Island Transit District, also known as **Casco Bay Lines (CBL)**, provides passenger, vehicle, and freight ferry service between Portland and the Casco Bay islands.
	Amtrak Downeaster, which is administered by the **Northern New England Passenger Rail Authority (NNEPRA)**, provides intercity rail service between Brunswick and Boston, with stops in the Greater Portland region in Portland, Freeport, Old Orchard Beach (seasonally), and Saco.
	Regional Transportation Program (RTP) provides demand-response and volunteer-driver service in Cumberland County and deviated fixed-route bus service between the Lakes Region and Portland. RTP also provides paratransit service for METRO and SPBS.
	York County Community Action Corporation (YCCAC) provides demand-response and volunteer driver service in York County and operates the Southern Maine Connector deviated fixed-route bus between Sanford's Springvale neighborhood and Saco.

TRANSIT SERVICES

The region's seven major transit agencies provide a variety of local bus, express bus, deviated fixed-route bus, ferry, rail, and demand-response services.

Local Bus

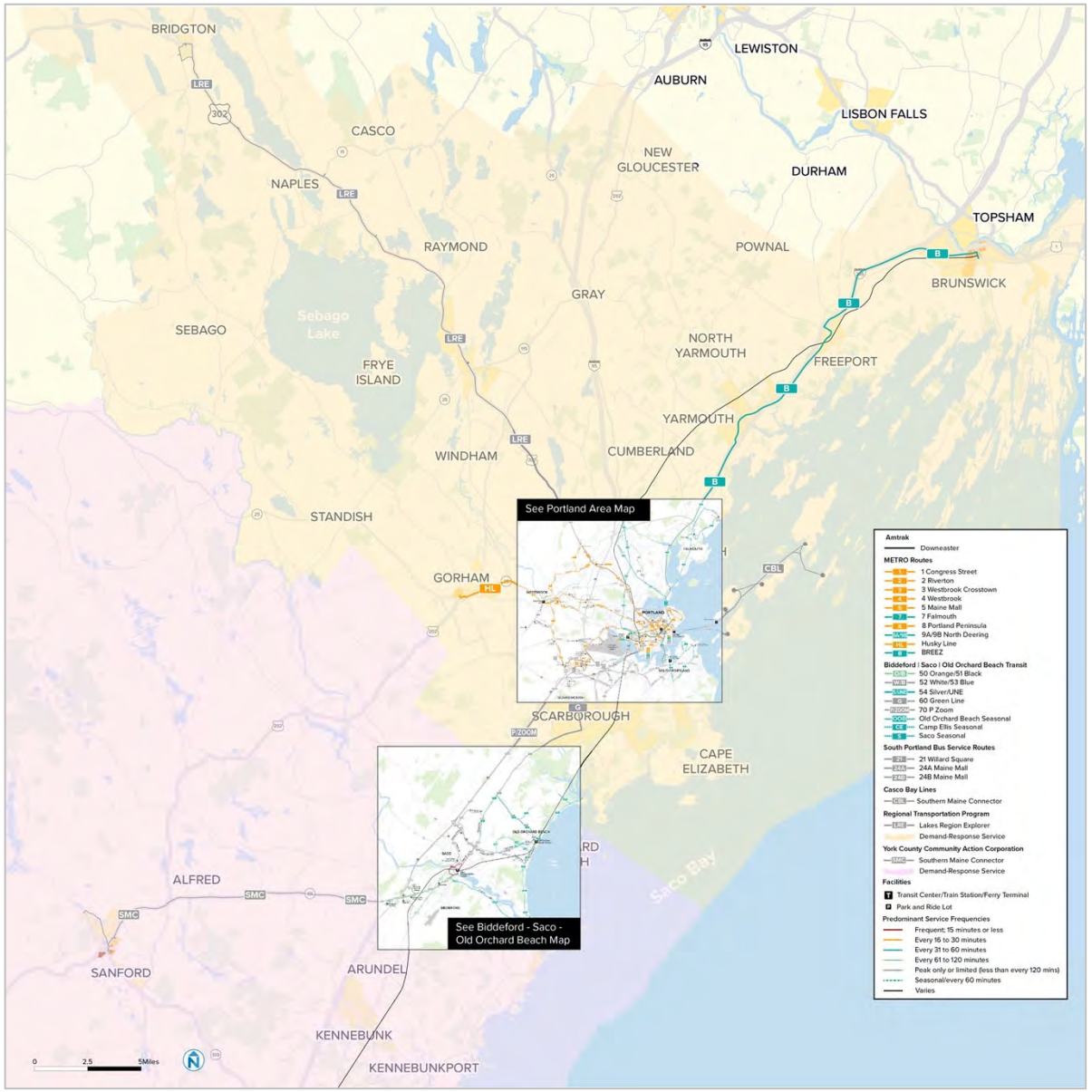
METRO, SPBS, and BSOOB Transit all provide local bus service:

METRO operates nine local bus routes, all of which operate seven days a week. These routes serve Falmouth, Gorham, Portland, South Portland, and Westbrook. METRO's routes include:

- 1 Congress Street
- 2 Forest Avenue
- 3 Portland - Westbrook – S. Portland
- 4 Westbrook
- 5 Maine Mall
- 7 Falmouth
- 8 Peninsula Loop
- 9A/9B North Deering/West Falmouth
- Husky Line

Service is most heavily concentrated on the Portland Peninsula and all routes except

Greater Portland Region Transit Services



Route 3 operate to, from, or via the METRO PULSE transit center on Elm Street near Monument Square in downtown Portland.

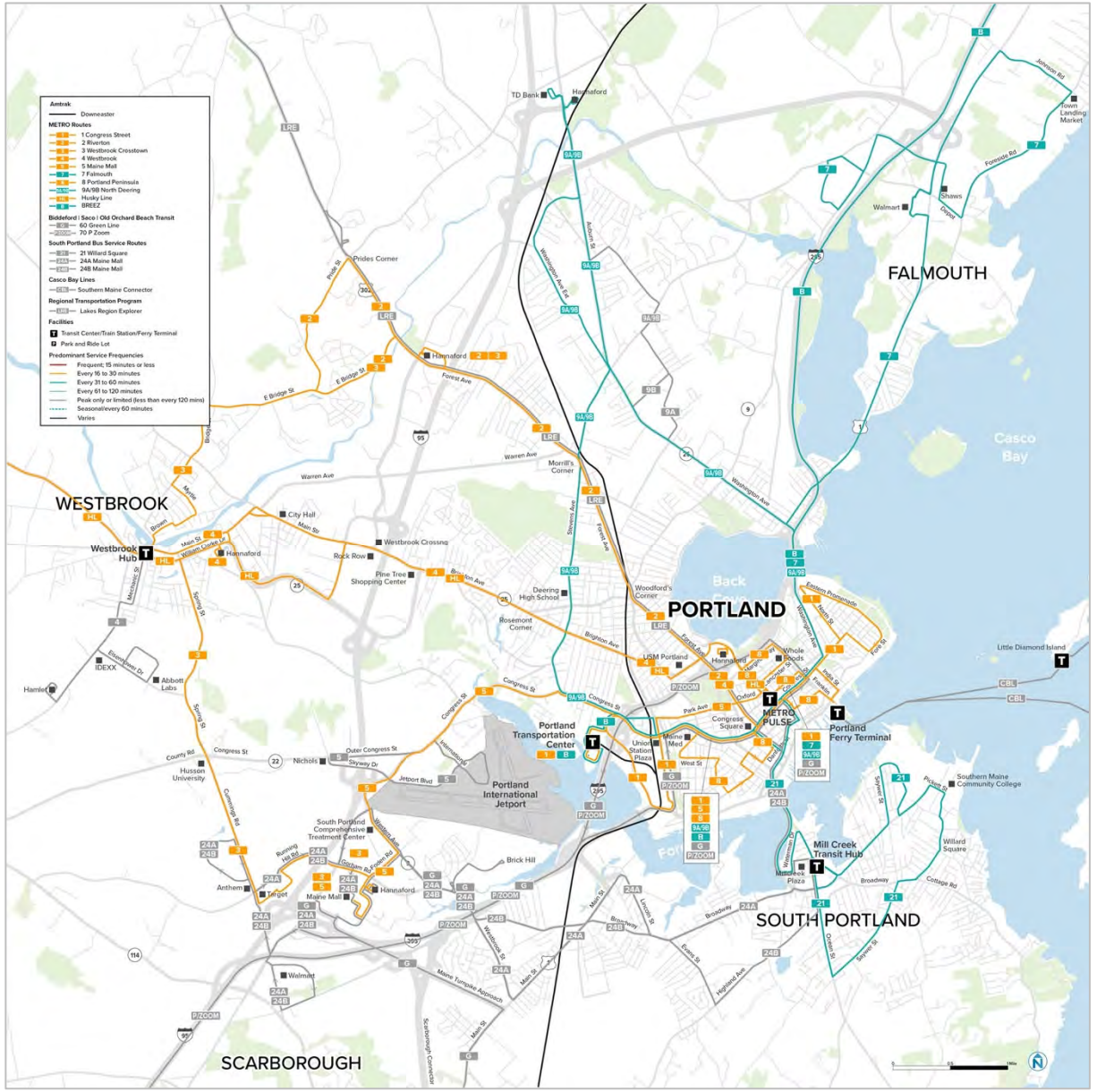
South Portland Bus Service (SPBS) operates three routes, all of which travel between South Portland and Portland, with a focus on service to downtown Portland and the Maine Mall:

- 21 Willard Square
- 24A Maine Mall
- 24B Maine Mall

SPBS' Mill Creek Transit Hub

Image source: GPCOG

Portland Area Transit Services



Biddeford-Saco-Old Orchard Beach Transit (BSOOB Transit) operates four year-round local fixed routes, all of which operate seven days a week and are focused on service to and from the Saco Transportation Center:

- 50 Orange/51 Black
- 52 White/53 Blue
- 54 Silver/UNE
- 60 Green

BSOOB Transit also operates five seasonal trolley routes. These routes serve Old Orchard Beach, Scarborough, and Saco and are focused most heavily on serving Old Orchard Beach seasonal tourism. Each operates seven days a week between mid-June and Labor Day, with limited service in May, early June, and September:

- Camp Ellis
- Old Orchard Beach 1
- Old Orchard Beach 2
- Pine Point
- Saco

BSOOB Transit buses also deviate to provide ADA paratransit trips.

Biddeford-Saco-Old Orchard Beach Transit Services

BSOOB Transit Buses at Saco Transportation Center

Image source: Nelson\Nygaard

Express Bus

The region is served by two express bus routes that provide regional, limited-stop service:

METRO operates the BREEZ, which operates between Brunswick and Portland with stops in Freeport and Yarmouth.

BSOOB Transit operates Route 70 Purple/ZOOM, which provides weekday service between Saco, Biddeford, and Portland.

Deviated Fixed-Route Bus

RTP and YCCAC each operate deviated fixed-route bus service along a designated route but also make reservation-based deviations:

RTP operates the Lakes Region Explorer between Portland and Bridgton via Naples, Casco, Raymond, Windham, and Westbrook.

YCCAC operates the Southern Maine Connector between Sanford's Springvale neighborhood and Saco, with stops in downtown Sanford, Alfred, and Biddeford.

Ferry

Casco Bay Lines ferries provide year-round passenger, vehicle, and freight service between the Casco Bay Ferry Terminal in Portland and the six regulated Casco Bay islands. Four ferries (and one spare) provide service to Peaks, Little Diamond, Great Diamond, Long, Chebeague, and Cliff islands. All routes operate seven days a week. Seasonal service is also provided to Bailey Island, although this service has been temporarily discontinued due to the COVID-19 pandemic. These ferries provide a lifeline transportation link between the islands and the mainland.

Casco Bay Lines Ferry

Image source: Casco Bay Lines

Rail

Amtrak's Downeaster provides intercity rail service between Brunswick and Boston with stops in the Greater Portland region in Freeport, Portland, Old Orchard Beach (seasonally), and Saco.

Demand Response

Both RTP and YCCAC provide demand-response services that are available to the general public. These services require reservations.

RTP provides demand-response service throughout Cumberland County, under the service name RTP Rides. RTP Rides is available to the general public, with fare discounts for seniors, low-income people, and people with disabilities. Reservations must be made 48 hours in advance, except for complementary paratransit trips.

YCCAC provides multiple demand-response services to transport people to cancer care facilities, medical and other appointments, educational opportunities, and shopping.

Volunteer Driver

Both RTP and YCCAC provide volunteer-driver services, where volunteers use their own vehicles to provide demand-response service and are reimbursed based on mileage.

Fixed-Route Complementary Paratransit

RTP provides complementary paratransit service for METRO and SPBS routes, and throughout Cumberland County. This service is called ADAPT (Americans with Disabilities Act Paratransit). BSOOB Transit provides complementary paratransit by deviating its fixed-route buses on request.

NETWORK DESIGN

Most transit services in the Greater Portland region are designed to operate to, from, or via one or more transit centers.

Each of Greater Portland's transit providers design their fixed-route services to operate to, from, or via a transportation center:

METRO operates a largely radial system, with nearly all service operating to, from, or via the PULSE.

SPBS service is designed primarily to connect South Portland residents with downtown Portland via the PULSE and Mill Creek Transit Hub, as well as with the Maine Mall.

BSOOB Transit's year-round services largely operate radially to and from the Saco Transportation Center, plus express service to Portland. Its seasonal services operate radially to and from downtown Old Orchard Beach.

RTP's single deviated fixed route, the Lakes Region Explorer, operates to and from the PULSE.

YCCAC's Southern Maine Connector operates to and from the Saco Transportation Center.

Casco Bay Lines ferry routes all operate to and from the Casco Bay Ferry Terminal.

The **Downeaster** operates via the Portland Transportation Center.

This network design facilitates transfers among routes provided by the same provider, and often between systems. However, there are also missing links, the most significant of which are between the Casco Bay Ferry Terminal, the PULSE, and the Portland Transportation Center. Although connections can be made between these locations, they are not particularly convenient due to relatively infrequent service.

SERVICE DESIGN

Many local services prioritize service coverage over convenience.

Note: Discussion in this section is primarily focused on land transit and is not as applicable to ferry and rail service.

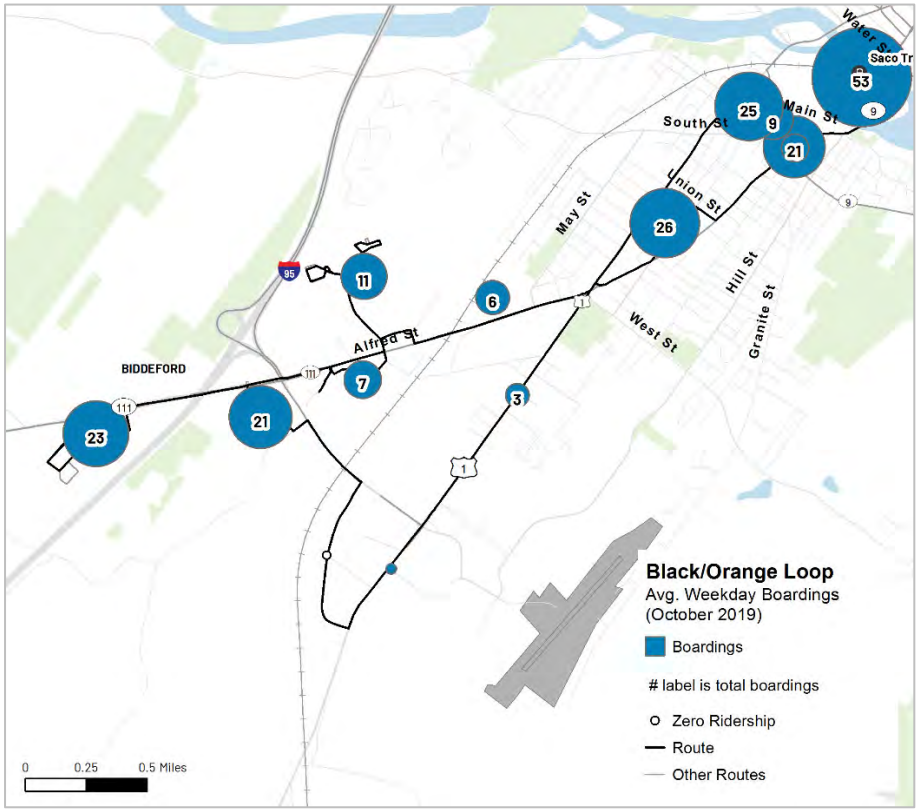
There are two fundamentally different ways to provide transit service. The first is to focus it in areas where demand is highest and make it as convenient as possible. This is called **demand-based service**. The second is to provide service to as many places as possible. This requires service to be spread much more thinly, meaning less frequent service and service for fewer hours. It also typically means that routes are designed to be more circuitous, to serve as many areas as possible. This is called **coverage-based service**.

Coverage-based services are generally available to more people. However, because the service is less convenient, fewer people actually use it. Demand-based services are generally available to fewer people, but because they are more convenient, more people use them.

Most transit systems provide both types of service, but a key to providing great transit service is to provide the most appropriate types of service to different markets. A 'family of services' approach can help better match services with demand. For example, many transit systems are built around frequent local routes. Other services fill gaps, provide connections to the frequent network, and extend service coverage to lower demand areas.

Today, the Greater Portland region's transit services lean more towards providing coverage-based service, which creates a gap in service quality in higher-demand areas. One example of a coverage route is BSOOB Transit's Route 50 Orange/51 Black, which operates as a figure-eight with multiple deviations. As shown in the figure below, one leg of the figure-eight along US Route 1 has very low ridership, and that service is provided largely so some service is available and not because there is significant demand in that area.

Service is provided along US Route 1 on BSOOB Transit's Route 50 Orange/51 Black largely so service is available, and not due to demand



Note: Ridership data in this map are segment-based. The bubbles on the map indicate the general area in which passengers board the vehicle, not the precise location.

A second example is METRO Route 8 Peninsula Loop, which is used mostly by people travelling to and from Hannaford. Because Route 8 is so circuitous, buses take 50 minutes for each trip and, consequently, traveling between two places that are close together on this route can take a long time on transit.

A third example is METRO's Route 5 Maine Mall. Most Route 5 trips deviate to either Nichols or the Portland International Jetport. Boardings at stops on each of these deviations is relatively low, and they take through-passengers a significant distance out of their way.

METRO's Route 8 Peninsula Loop takes 50 minutes, end-to-end

A major opportunity to make transit service in the Greater Portland region more convenient—and to attract more riders—will be to shift toward a demand-based service model. This will mean making service straighter and more direct, and minimizing deviations. This will make service faster, which is the improvement passengers generally want most. There are likely also opportunities to develop microtransit to expand the coverage network.

METRO Route 5 Maine Mall's alignment includes two deviations to relatively low-ridership locations

SERVICE FREQUENCIES AND SPANS

The best way to make transit convenient is to make it frequent and operate when people need it.

People want transit to be convenient, and an essential element of convenience is frequency. This is because people want and need the flexibility to travel when they desire and on their own schedule. Infrequent service means long waits—both waiting for the bus and needing to get somewhere early because that is when the bus arrives.

The generally accepted definition of frequent local service is transit that arrives every 15 minutes or less. This allows people to make trips without planning them around a transit schedule. Frequencies of up to 30 minutes are moderately convenient. However, as frequencies lengthen to beyond 30 minutes, transit demand drops off significantly, as most people will choose other ways to travel. Beyond 60 minutes, demand decreases to the relatively few people without other options.

Service Frequencies

Most transit services in Greater Portland do not provide frequent service, and many bus routes operate very infrequently.

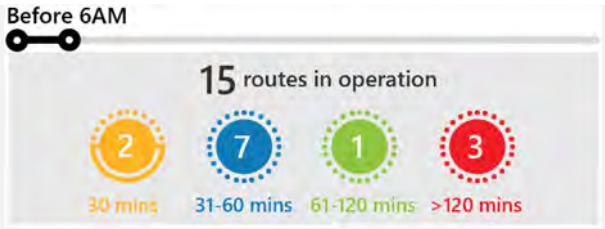
The most frequent route—part of BSOOB Transit's Route 54 Silver/UNE—operates every 15 minutes, but irregularly. Only five routes—all operated by METRO—consistently operate every 30 minutes from the beginning of the AM peak to the end of the PM peak:

- Husky Line
- 1 Congress Street
- 2 Forest Avenue
- 4 Westbrook
- 5 Maine Mall

Two others fall just short:

- 3 Portland - Westbrook - S Portland, which operates every 30 to 36 minutes
- 8 Peninsula Loop, which provides service every 30 to 31 minutes

One BSOOB Transit year-round route (Route 54 Silver/UNE) switches between providing 15- and 45-minute service on one of its patterns, and one BSOOB Transit seasonal route (Old Orchard Beach 1) operates every 30 minutes from the beginning of the AM peak to the end of the PM peak.



Early AM Frequencies

Before 6 AM

Most routes begin service before 6:00 AM

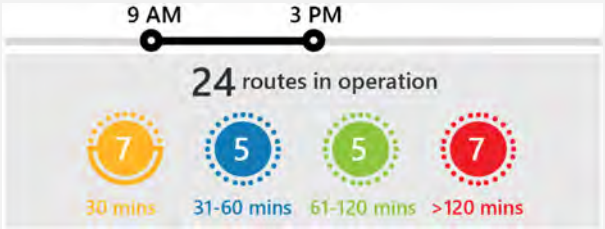
- Only two provide service every 30 minutes
- Most provide service every 31 to 60 minutes
- Four provide infrequent service

AM Peak Frequencies

6 AM – 9 AM

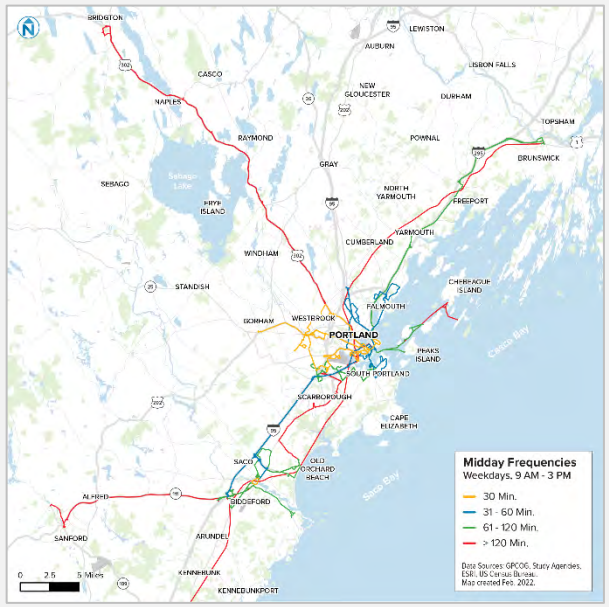
All 24 routes operate in the AM peak

- Nine provide service every 30 minutes
- Four provide service every 31 to 60 minutes
- 11 provide infrequent service



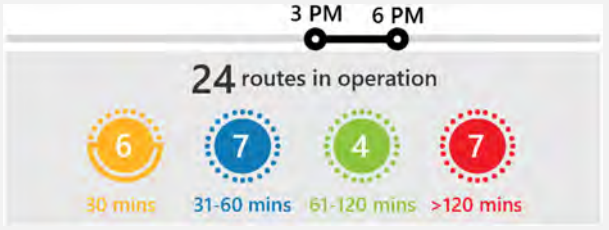
Midday Frequencies

9 AM – 3 PM



All 24 routes operate during the midday

- Seven provide service every 30 minutes
- Five provide service every 31 to 60 minutes
- 12, or about half of all routes, provide infrequent service

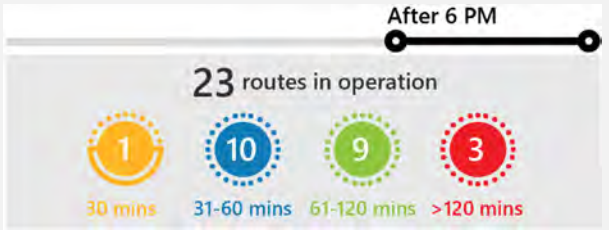


PM Peak Frequencies

3 PM – 6 PM

All 24 routes operate during the PM peak

- Six provide service every 30 minutes
- Seven provide service every 31 to 60 minutes
- 11, or nearly half of all routes, provide infrequent service



Evening/Night Frequencies

6 PM – 9 PM

23 routes operate after 6:00 PM

- Only one provides service every 30 minutes
- 10 provide service every 31 to 60 minutes
- 12, or about half of all routes, provide infrequent service

Two routes provide service every 30 to 60 minutes:

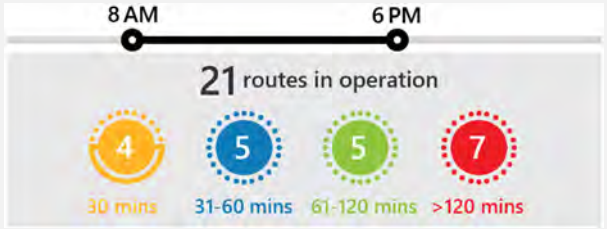
- METRO Route 9A/9B North Deering/West Falmouth, which provides service every 60 minutes during the midday (and every 30 minutes during the peaks)
- SPBS Route 21 Willard Square, which operates every 50 minutes in the AM peak and every 60 minutes in the midday and PM peak

One route, METRO Route 7 Falmouth, operates every 60 minutes. Eight routes operate less frequently than every 60 minutes and some operate less frequently than every two hours:

- SPBS routes 24A Maine Mall and 24B Maine Mall
- BSOOB Transit routes 50 Orange/51 Black, 52 White/53 Blue, 54 Silver/UNE, and 60 Green
- RTP Lakes Region Explorer
- YCCAC Southern Maine Connector

On weekends, service is less frequent.

- As on weekdays, no routes or lines provide consistently frequent service

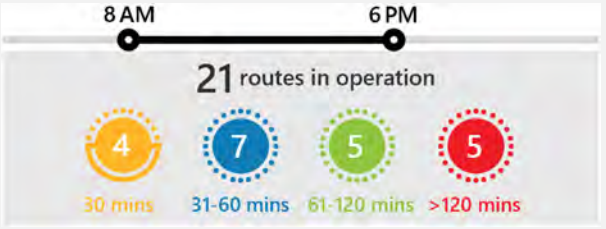


Saturdays

8 AM – 6 AM

21 of 24 routes operate on Saturdays

- Only four METRO routes provide service every 30 minutes
- Most provide very infrequent service



Sundays

8 AM – 6 AM

21 of 24 routes operate on Saturdays

- Only four METRO routes provide service every 30 minutes
- Most provide very infrequent service

- Only four year-round routes operate every 30 minutes for most of the day
- Most BSOOB Transit seasonal routes only operate every 60 minutes
- About half of all routes operate less frequently than every 60 minutes
- As on weekdays, many routes operate less than every two hours for significant parts of the day

One of the most important improvements that can be made to Greater Portland region transit is to improve frequencies.

Hours of Service

Weekday and Saturday spans of service—or the hours that services operate in the Greater Portland region—are generally good.

Service that runs for a long period of time throughout the day is more convenient, as it allows people to travel when they want. While transit service in the Greater Portland region is generally infrequent, weekday and Saturday hours of service are generally good, while Sunday spans are more limited, especially in the case of METRO services.

Weekdays

On weekdays, 14 of 25 year-round routes begin service by 6:00 AM and operate until at least 10:00 PM:

METRO

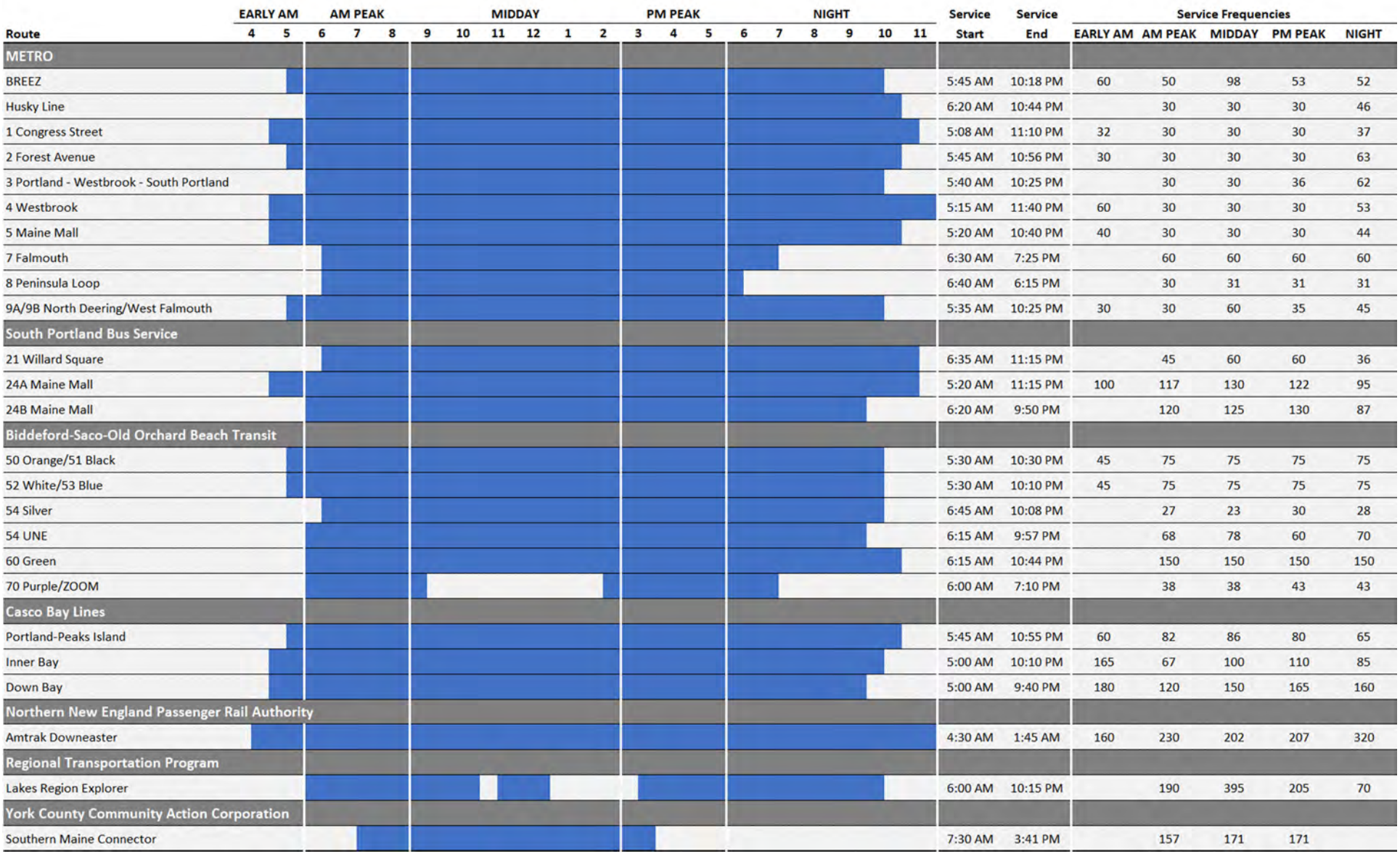
- BREEZ
- 1 Congress Street
- 2 Forest Avenue
- 3 Portland - Westbrook - South Portland
- 4 Westbrook
- 5 Maine Mall
- 9A/9B North Deering/West Falmouth

South Portland Bus Service

- 24A Maine Mall

Weekday 6 AM to 10 PM Services

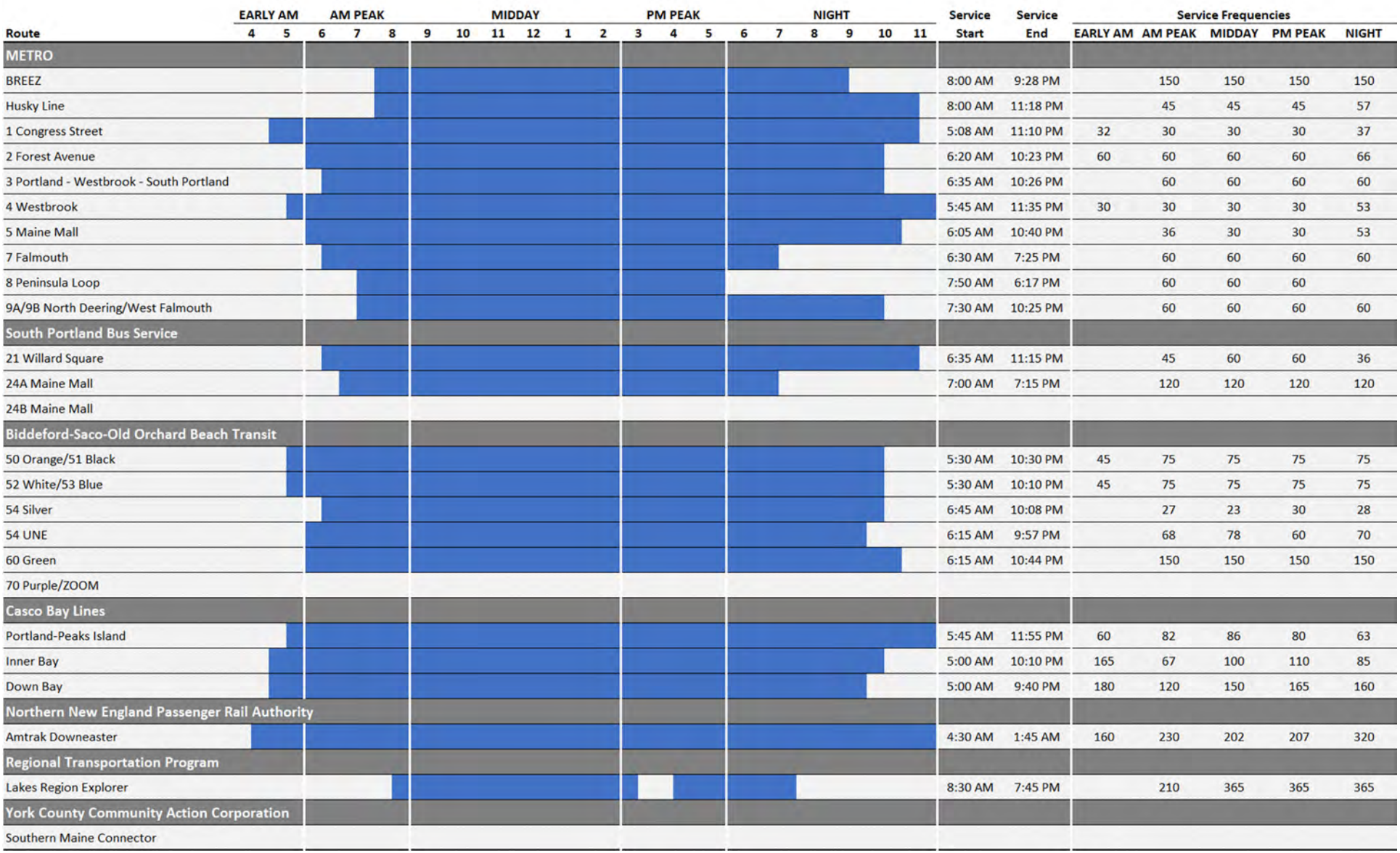
Weekday Spans of Service and Service Frequencies



Route	Service Start	Service End	Service Frequencies EARLY AM	AM PEAK	MIDDAY	PM PEAK	NIGHT
METRO							
BREEZ	5:45 AM	10:18 PM	60	50	98	53	52
Husky Line	6:20 AM	10:44 PM		30	30	30	46
1 Congress Street	5:08 AM	11:10 PM	32	30	30	30	37
2 Forest Avenue	5:45 AM	10:56 PM	30	30	30	30	63
3 Portland - Westbrook - South Portland	5:40 AM	10:25 PM		30	30	36	62
4 Westbrook	5:15 AM	11:40 PM	60	30	30	30	53
5 Maine Mall	5:20 AM	10:40 PM	40	30	30	30	44
7 Falmouth	6:30 AM	7:25 PM		60	60	60	60
8 Peninsula Loop	6:40 AM	6:15 PM		30	31	31	31
9A/9B North Deering/West Falmouth	5:35 AM	10:25 PM	30	30	60	35	45
South Portland Bus Service							
21 Willard Square	6:35 AM	11:15 PM		45	60	60	36
24A Maine Mall	5:20 AM	11:15 PM	100	117	130	122	95
24B Maine Mall	6:20 AM	9:50 PM		120	125	130	87
Biddeford-Saco-Old Orchard Beach Transit							
50 Orange/51 Black	5:30 AM	10:30 PM	45	75	75	75	75
52 White/53 Blue	5:30 AM	10:10 PM	45	75	75	75	75
54 Silver	6:45 AM	10:08 PM		27	23	30	28
54 UNE	6:15 AM	9:57 PM		68	78	60	70
60 Green	6:15 AM	10:44 PM		150	150	150	150
70 Purple/ZOOM	6:00 AM	7:10 PM		38	38	43	43
Casco Bay Lines							
Portland-Peaks Island	5:45 AM	10:55 PM	60	82	86	80	65
Inner Bay	5:00 AM	10:10 PM	165	67	100	110	85
Down Bay	5:00 AM	9:40 PM	180	120	150	165	160
Northern New England Passenger Rail Authority							
Amtrak Downeaster	4:30 AM	1:45 AM	160	230	202	207	320
Regional Transportation Program							
Lakes Region Explorer	6:00 AM	10:15 PM		190	395	205	70
York County Community Action Corporation							
Southern Maine Connector	7:30 AM	3:41 PM		157	171	171	

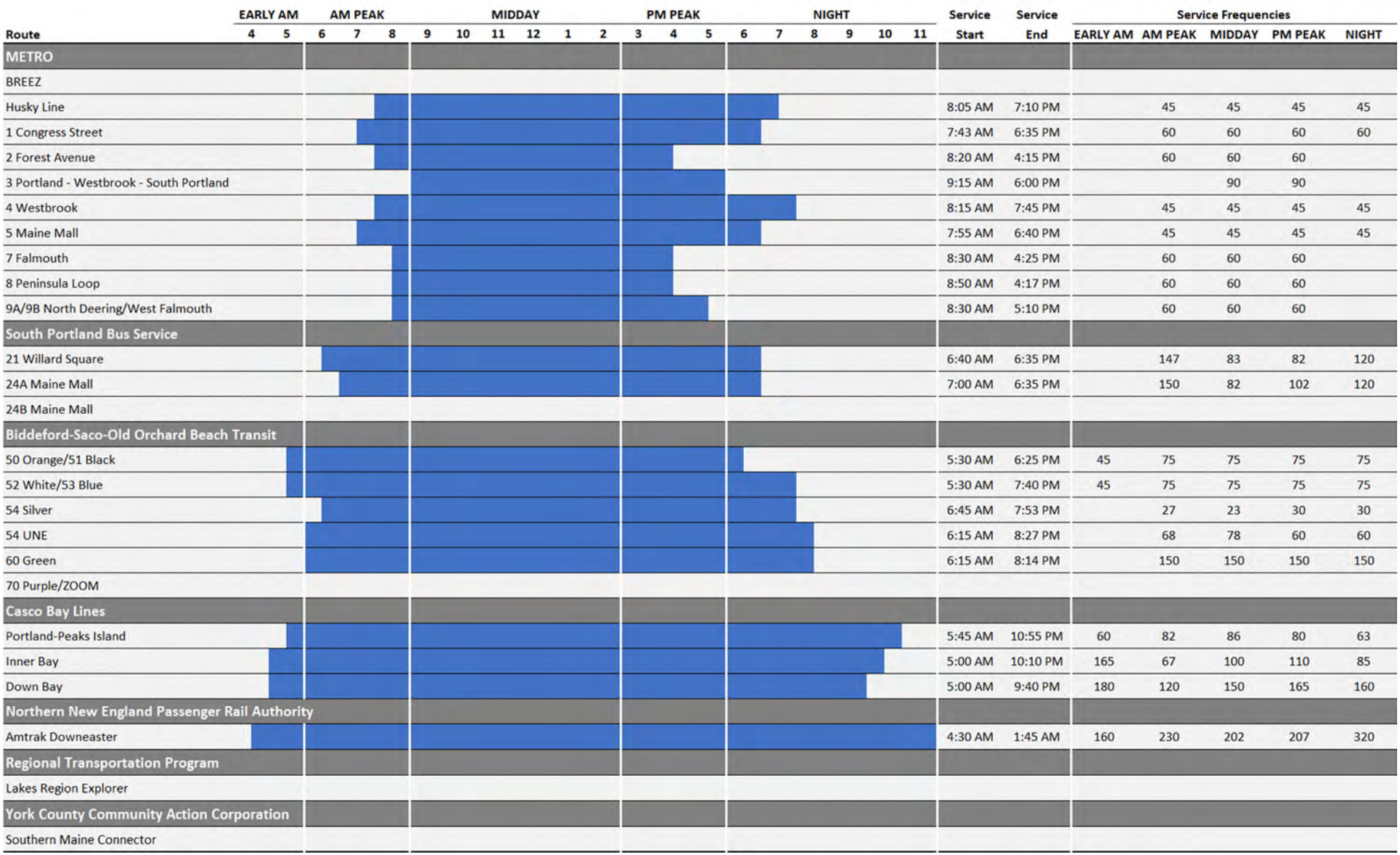
Note: South Portland Bus Service plans to operate Route 21 every 30 minutes, as it has in the past. Current operator shortages have prevented this.

Saturday Spans of Service and Service Frequencies



Route	Service Start	Service End	Service Frequencies EARLY AM	AM PEAK	MIDDAY	PM PEAK	NIGHT
METRO							
BREEZ	8:00 AM	9:28 PM		150	150	150	150
Husky Line	8:00 AM	11:18 PM		45	45	45	57
1 Congress Street	5:08 AM	11:10 PM	32	30	30	30	37
2 Forest Avenue	6:20 AM	10:23 PM	60	60	60	60	66
3 Portland - Westbrook - South Portland	6:35 AM	10:26 PM		60	60	60	60
4 Westbrook	5:45 AM	11:35 PM	30	30	30	30	53
5 Maine Mall	6:05 AM	10:40 PM		36	30	30	53
7 Falmouth	6:30 AM	7:25 PM		60	60	60	60
8 Peninsula Loop	7:50 AM	6:17 PM		60	60	60	
9A/9B North Deering/West Falmouth	7:30 AM	10:25 PM		60	60	60	60
South Portland Bus Service							
21 Willard Square	6:35 AM	11:15 PM		45	60	60	36
24A Maine Mall	7:00 AM	7:15 PM		120	120	120	120
24B Maine Mall							
Biddeford-Saco-Old Orchard Beach Transit							
50 Orange/51 Black	5:30 AM	10:30 PM	45	75	75	75	75
52 White/53 Blue	5:30 AM	10:10 PM	45	75	75	75	75
54 Silver	6:45 AM	10:08 PM		27	23	30	28
54 UNE	6:15 AM	9:57 PM		68	78	60	70
60 Green	6:15 AM	10:44 PM		150	150	150	150
70 Purple/ZOOM							
Casco Bay Lines							
Portland-Peaks Island	5:45 AM	11:55 PM	60	82	86	80	63
Inner Bay	5:00 AM	10:10 PM	165	67	100	110	85
Down Bay	5:00 AM	9:40 PM	180	120	150	165	160
Northern New England Passenger Rail Authority							
Amtrak Downeaster	4:30 AM	1:45 AM	160	230	202	207	320
Regional Transportation Program							
Lakes Region Explorer	8:30 AM	7:45 PM		210	365	365	365
York County Community Action Corporation							
Southern Maine Connector							

Sunday Spans of Service and Service Frequencies



Route	Service Start	Service End	Service Frequencies EARLY AM	AM PEAK	MIDDAY	PM PEAK	NIGHT
METRO							
BREEZ							
Husky Line	8:05 AM	7:10 PM		45	45	45	45
1 Congress Street	7:43 AM	6:35 PM		60	60	60	60
2 Forest Avenue	8:20 AM	4:15 PM		60	60	60	
3 Portland - Westbrook - South Portland	9:15 AM	6:00 PM			90	90	
4 Westbrook	8:15 AM	7:45 PM		45	45	45	45
5 Maine Mall	7:55 AM	6:40 PM		45	45	45	45
7 Falmouth	8:30 AM	4:25 PM		60	60	60	
8 Peninsula Loop	8:50 AM	4:17 PM		60	60	60	
9A/9B North Deering/West Falmouth	8:30 AM	5:10 PM		60	60	60	
South Portland Bus Service							
21 Willard Square	6:40 AM	6:35 PM		147	83	82	120
24A Maine Mall	7:00 AM	6:35 PM		150	82	102	120
24B Maine Mall							
Biddeford-Saco-Old Orchard Beach Transit							
50 Orange/51 Black	5:30 AM	6:25 PM	45	75	75	75	75
52 White/53 Blue	5:30 AM	7:40 PM	45	75	75	75	75
54 Silver	6:45 AM	7:53 PM		27	23	30	30
54 UNE	6:15 AM	8:27 PM		68	78	60	60
60 Green	6:15 AM	8:14 PM		150	150	150	150
70 Purple/ZOOM							
Casco Bay Lines							
Portland-Peaks Island	5:45 AM	10:55 PM	60	82	86	80	63
Inner Bay	5:00 AM	10:10 PM	165	67	100	110	85
Down Bay	5:00 AM	9:40 PM	180	120	150	165	160
Northern New England Passenger Rail Authority							
Amtrak Downeaster	4:30 AM	1:45 AM	160	230	202	207	320
Regional Transportation Program							
Lakes Region Explorer							
York County Community Action Corporation							
Southern Maine Connector							

Biddeford-Saco-Old Orchard Beach Transit

- 50 Orange/51 Black
- 52 White/53 Blue

Casco Bay Lines

- Peaks Island
- Inner Bay

Amtrak

- Downeaster

Regional Transportation Program

- Lakes Region Explorer

In addition, there are five routes that begin service just after 6:00 AM and/or end service just before 10:00 PM:

South Portland Bus Service

- 21 Willard Square
- 24B Maine Mall

Biddeford-Saco-Old Orchard Beach Transit

- 60 Green
- 54 Silver/UNE

Casco Bay Lines

- Down Bay

Three routes operate for much more limited hours, starting service between 6:00 AM and 6:30 AM and ending service between 6:15 PM and 7:10 PM:

METRO

- 7 Falmouth
- 8 Peninsula Loop

Biddeford-Saco-Old Orchard Beach Transit

- 70 Purple/ZOOM

Finally, the YCCAC Southern Maine Connector operates from 7:30 AM to 3:43 PM.

Saturdays

Twenty-one routes operate on Saturdays with spans of service that are very similar to weekday spans, but in some cases slightly shorter:

- 10 routes operate from before 6:00 AM to at least 10:00 PM.
- Four routes begin service just after 6:00 AM and/or end service just before 10:00 PM.
- The remaining routes start service between 6:30 AM and 8:30 AM and end service between 6:17 PM and 7:45 PM.

Sundays

Nineteen routes operate on Sundays, with significantly shorter spans of service than on weekdays and Saturdays:

- METRO has the shortest Sunday spans, with service beginning between 7:00 AM and 8:00 AM and ending between 4:00 PM and 7:00 PM.
- SPBS routes begin service between 6:30 AM and 7:00 AM and end at 7:00 PM.
- BSOOB Transit routes begin service between 5:30 AM and 6:00 AM and end between 6:30 PM and 7:30 PM.

- Casco Bay Lines service begins at 5:30 AM and operates until between 9:30 AM and 10:30 PM.
- Amtrak's Downeaster operates from 4:30 AM until 1:45 AM.

SUMMARY

As described above, Greater Portland is served by seven transit providers that provide a combination of regional and local service. Although local and regional bus routes provide some service to many destinations, service frequencies are low throughout the region. Nationally, transit is generally considered convenient when it operates every 15 minutes or less and inconvenient when it operates every 60 minutes or more. No transit services in the Greater Portland region consistently operate every 15 minutes and many services operate every 60 minutes or more.

Over the last several years, public input has identified more frequent service as one of the transit improvements the public wants most. For METRO, SPBS, and BSOOB Transit, providing more frequent service in a cost-neutral manner will require making trade-offs—for example, balancing serving more areas with inconvenient service or fewer areas with convenient service. One example of this trade-off is SPBS' two Maine Mall routes, both of which serve similar areas in different ways, and each of which operates only every two hours. An alternative approach would be to consolidate the two routes along a single alignment that focuses on higher-demand areas, with consolidated service operating every 60 minutes.

The public also identified the need for faster service. The current focus on maximizing coverage results in many routes operating in a very circuitous pattern and/or including many alternative service patterns. These practices can make many short trips time-consuming. Focusing transit service in places where demand is higher would also allow routes to be straightened, which would make them faster.

Another important transit improvement the public wants is better connections between routes and services. When the Greater Portland transit system is viewed purely in terms of lines on a map, connections appear available. However, these connections are often between infrequent services. A shift toward more frequent service would also greatly improve connections locally and throughout the region.

Image source: GPCOG

4 RIDERSHIP

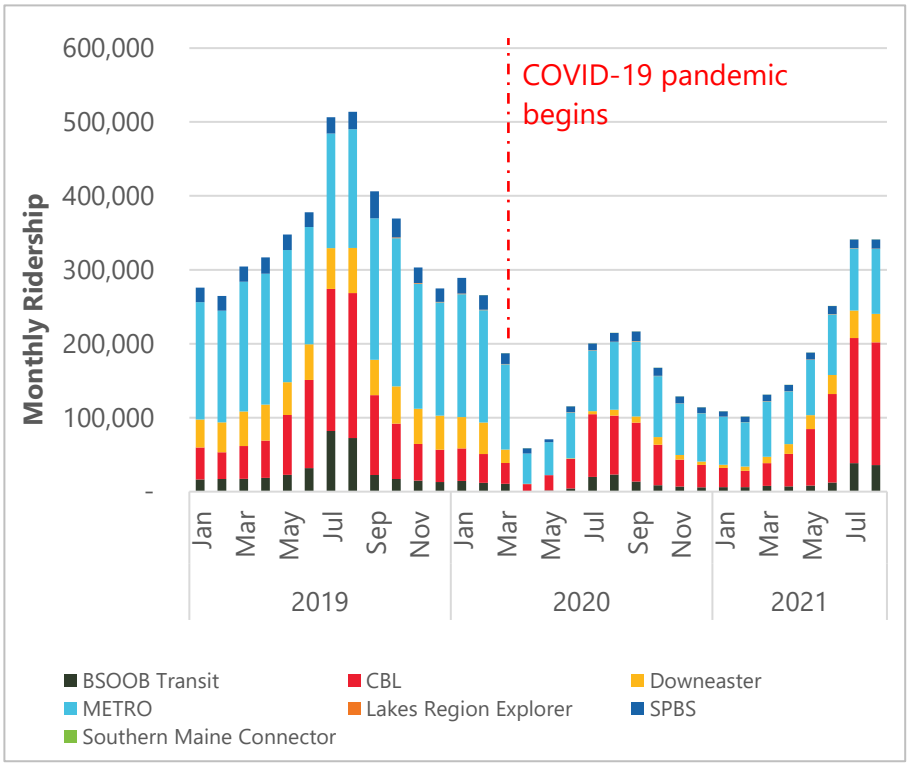
Pre-pandemic, Greater Portland's transit services provided about 16,500 passenger trips per day. Ridership declined dramatically during the pandemic but has since recovered to about 11,000 average daily passenger trips.

Ridership declined sharply due to the pandemic, but riders are starting to come back

	Aug. 2019	Aug. 2020	Aug. 2021
Average Daily Ridership	16,500	6,900	11,000
Percent Change from 2019	-	-58%	-34%

As the region recovers from the pandemic, it is unknown how many former transit riders will return and how their use of transit may change. Ridership recovery modeling being conducted by some of the nation's larger transit systems suggests ridership will return to about 85% to 90% of pre-pandemic levels. The lower overall level assumes many people will continue to work from home, at least part-time, as well as other factors. This modeling also assumes many employees' working hours will continue to be flexible, which will shift

Transit ridership in Greater Portland declined precipitously during the pandemic but has begun to return



the hours that people travel. These shifts will likely be from the peaks to the shoulders of the peaks, rather than more dramatic changes such as from day to night.

Even with these changes, future ridership patterns will likely be much more like pre-pandemic conditions and for this reason, the following analysis focuses primarily on ridership data collected in fall 2019.

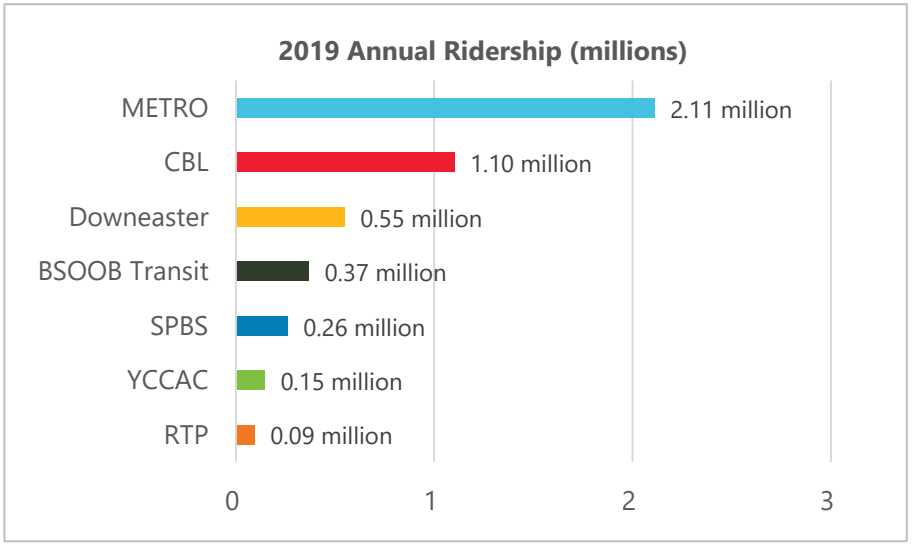
RIDERSHIP BY TRANSIT PROVIDER

The highest numbers of passengers ride METRO, Casco Bay Lines, and the Downeaster.

In 2019, Greater Portland's transit providers carried about 4.6 million passengers. Ridership was highest on METRO, at about 2.1 million passenger trips per year, followed by Casco Bay Lines, at about 1.1 million, and the Downeaster, with about 550,000. BSOOB Transit and SPBS each carried fewer than 400,000 passenger trips. RTP's Lakes Region Explorer and YCCAC's Southern Maine Connector each carried fewer than 5,000 riders annually.

In terms of pre-pandemic weekday ridership, METRO carried about 8,000 passengers, Casco Bay Lines approximately 2,100, the Downeaster about 1,600, SPBS about 1,100, and BSOOB Transit approximately 730. In 2021, RTP's Lakes Region Explorer and YCACC's Southern Maine Connector carried fewer than 15 passengers per weekday.

METRO carries the most riders in Greater Portland



Note: This chart includes all transit service provided by each agency; YCCAC numbers include passenger trips from Southern Maine Connector, WAVE, Sanford Transit, Kennebunk In Town Transportation, Orange 5, and other services. Source: National Transit Database.

RIDERSHIP BY ROUTE

Pre-pandemic ridership per route ranged from over 1,800 passengers per day to fewer than 50. METRO's Route 9A/9B North Deering/West Falmouth, Casco Bay Lines' Peaks Island Ferry, and the Downeaster carried the most riders.

In the fall of 2019, weekday ridership on individual routes averaged from over 1,800 passengers to fewer than 50. Three services had much higher ridership than any others:

- METRO's Route 9A/9B North Deering/West Falmouth, with 1,850 passengers per weekday[1]
- Casco Bay Lines' Peaks Island route, with 1,734 passengers per weekday
- The Downeaster, with 1,625 average daily passengers

The next five-highest average-weekday ridership routes were all METRO routes:

- The Husky Line, with 1,050 passengers
- Route 5 Maine Mall, with 1,043 passengers
- Route 4 Westbrook, with 1,040 passengers
- Route 2 Forest Ave, with 946 passengers

South Portland Bus Service's highest-ridership route was Route 21 Willard Square, which carried an average of 535 passengers per weekday. The agency's other two routes, 24A Maine Mall and 24B Maine Mall, carried 304 and 246 riders, respectively.

BSOOB Transit's highest-ridership route was Route 50 Orange/51 Black, which carried 212 passengers per weekday. Its other year-round routes carried from 120 to fewer than 50 passengers per day.

Pre-pandemic ridership data are not available for RTP's Lakes Region Explorer or YCACC's Southern Maine Connector (this route launched during the pandemic). However, as of March 2021, the Lakes Region Explorer and the Southern Maine Connector provided very few passenger trips, at only 13 and five average trips per weekday, respectively.

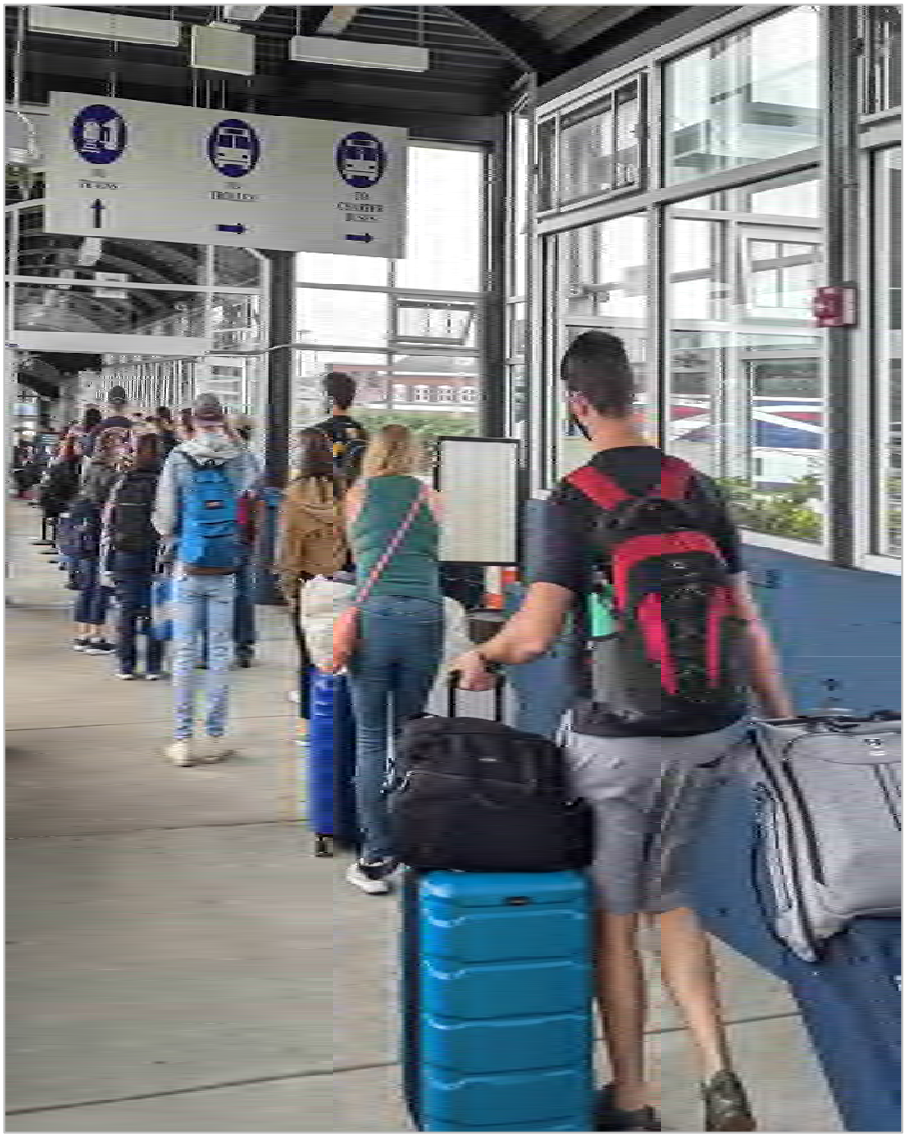
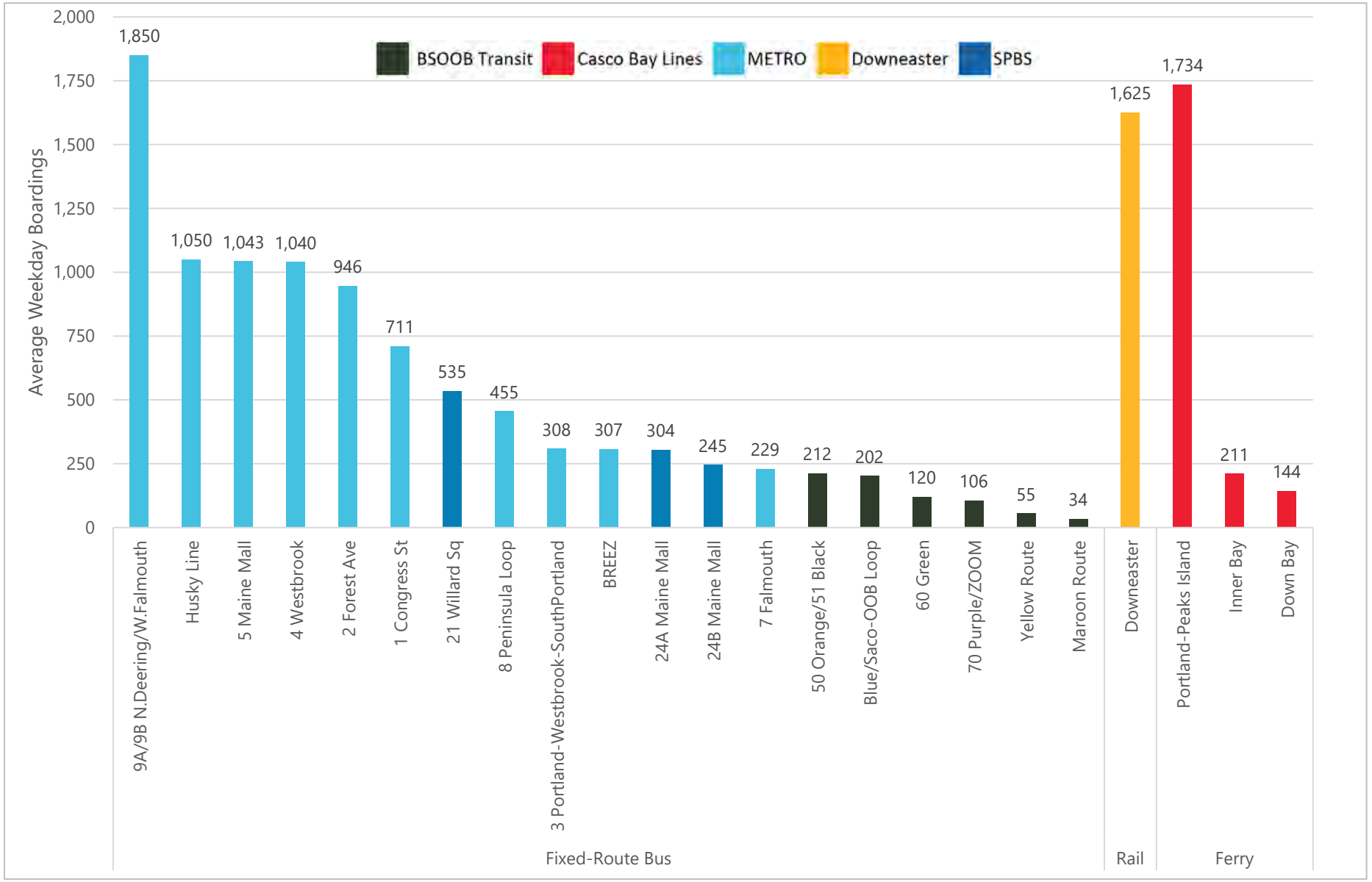


Image source: Nelson\Nygaard

[1] These figures are from October 2019 data; ridership may be higher during certain times of year and lower during other times of year. A considerable portion of METRO ridership on some routes is Portland Public Schools students; this is the case on Route 9A/9B.

Fixed-Route Weekday Boardings by Route, October 2019



Note: Weekday ridership data are not available for RTP's Lakes Region Explorer or YCCAC's Southern Maine Connector. 2021 ridership on each was less than 15 trips per weekday. Downeaster ridership shown above is average daily.

RIDERSHIP BY STOP

The highest-ridership stops in the Greater Portland region are the METRO PULSE and the Casco Bay Ferry Terminal. Other very high-ridership stops are on Congress Street in Portland, USM Portland, the Westbrook Hub, and the Maine Mall.

The highest-ridership stop in the Biddeford-Saco-Old Orchard Beach area is the Saco Transportation Center.

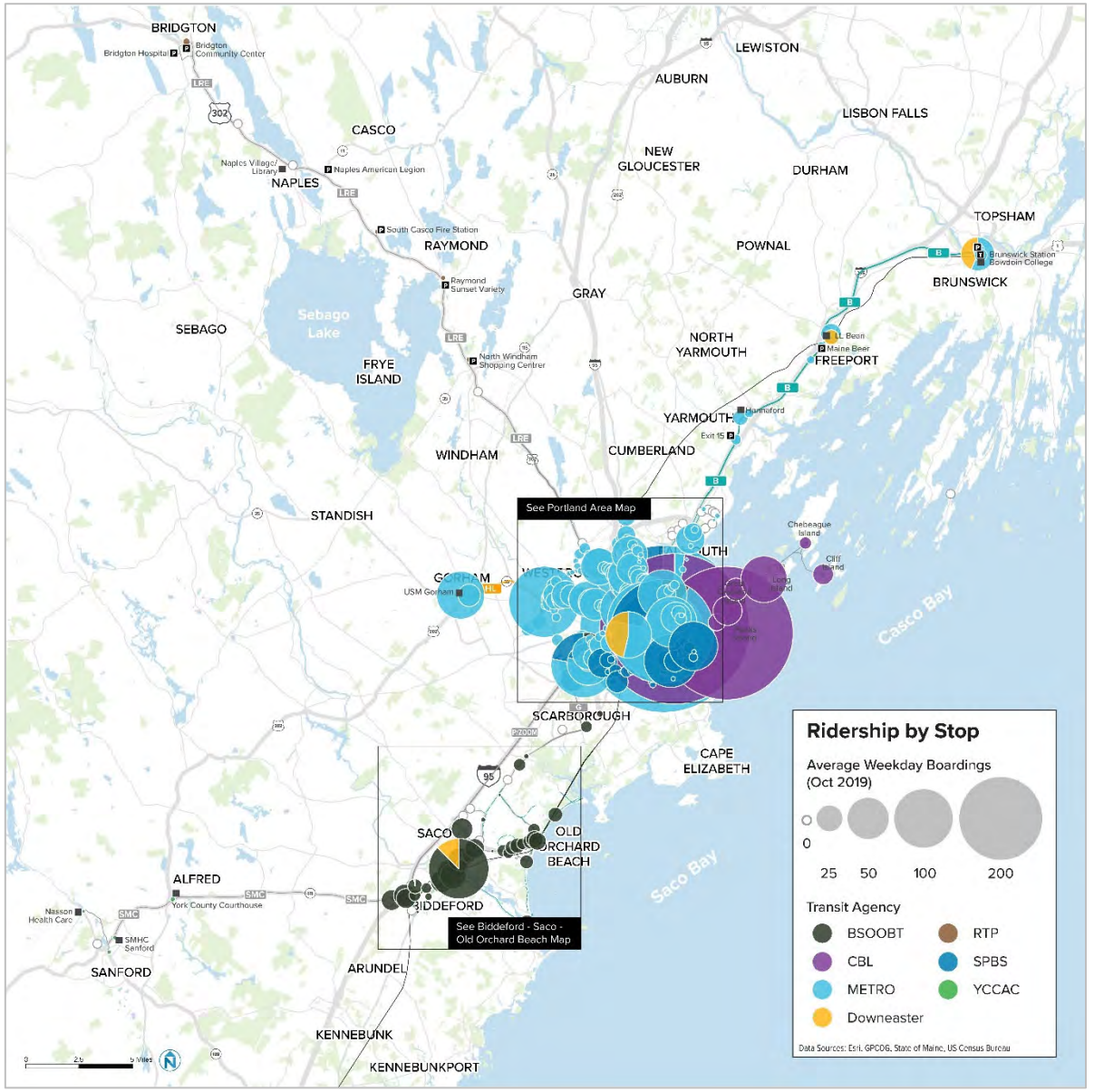
Ridership by stop is highest in the Portland area and second highest in the Biddeford-Saco-Old Orchard Beach area. There are also pockets of significant ridership in Brunswick, which is served by the METRO BREEZ, at USM Gorham, which is served by METRO's Husky Line, and at UNE, which is served by BSOOB Transit's Route 54 Silver/UNE. Ridership is relatively low in most other areas.

Portland Area

In the Portland area, ridership is high on the Portland Peninsula and along:

- Forest Avenue
- Stevens Avenue
- Washington Avenue
- Brighton Avenue/Main Street

Ridership is highest in the Portland area



Other high-ridership locations include:

- Deering High School
- Downtown Westbrook
- The Maine Mall area
- The Mill Creek Transit Hub
- Southern Maine Community College
- The Rock Row/Westbrook Crossing area

Some areas with bus service have very low ridership. These include:

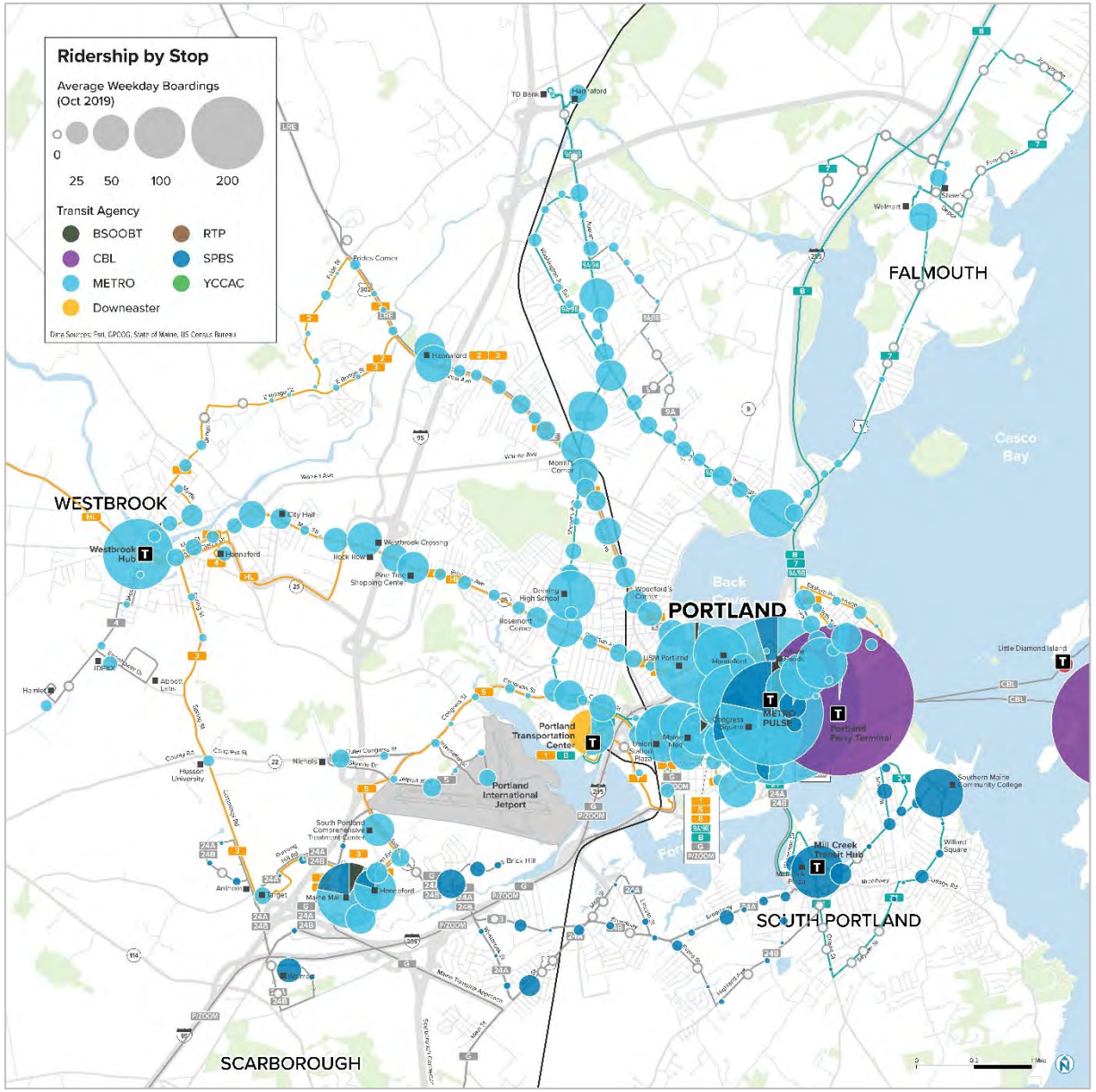
- METRO Route 7 Falmouth service north of Walmart and west of I-295.
- METRO Route 3 Portland – Westbrook – South Portland between Westbrook and Forest Avenue and between Westbrook and the Maine Mall area
- Variant services on METRO Routes 9A/9B North Deering/West Falmouth east of Forest and Washington Avenues
- Some segments of SPBS' Routes 24A and 24B Maine Mall routes

Portland Peninsula

On the Peninsula, bus ridership is highest along Congress Street, especially near the PULSE, and at:

- Stops serving Maine Medical Center
- USM Portland
- Hannaford

Portland-area ridership is highest on the Portland Peninsula, at the Westbrook Hub, at South Portland's Mill Creek Transit Hub, and in the Maine Mall area



- Union Station Plaza
- The intersection of Forest and Park avenues
- 100 State Street apartments
- Harbor Terrace Apartments on Danforth Street
- The intersection of Congress Street and Washington Avenue

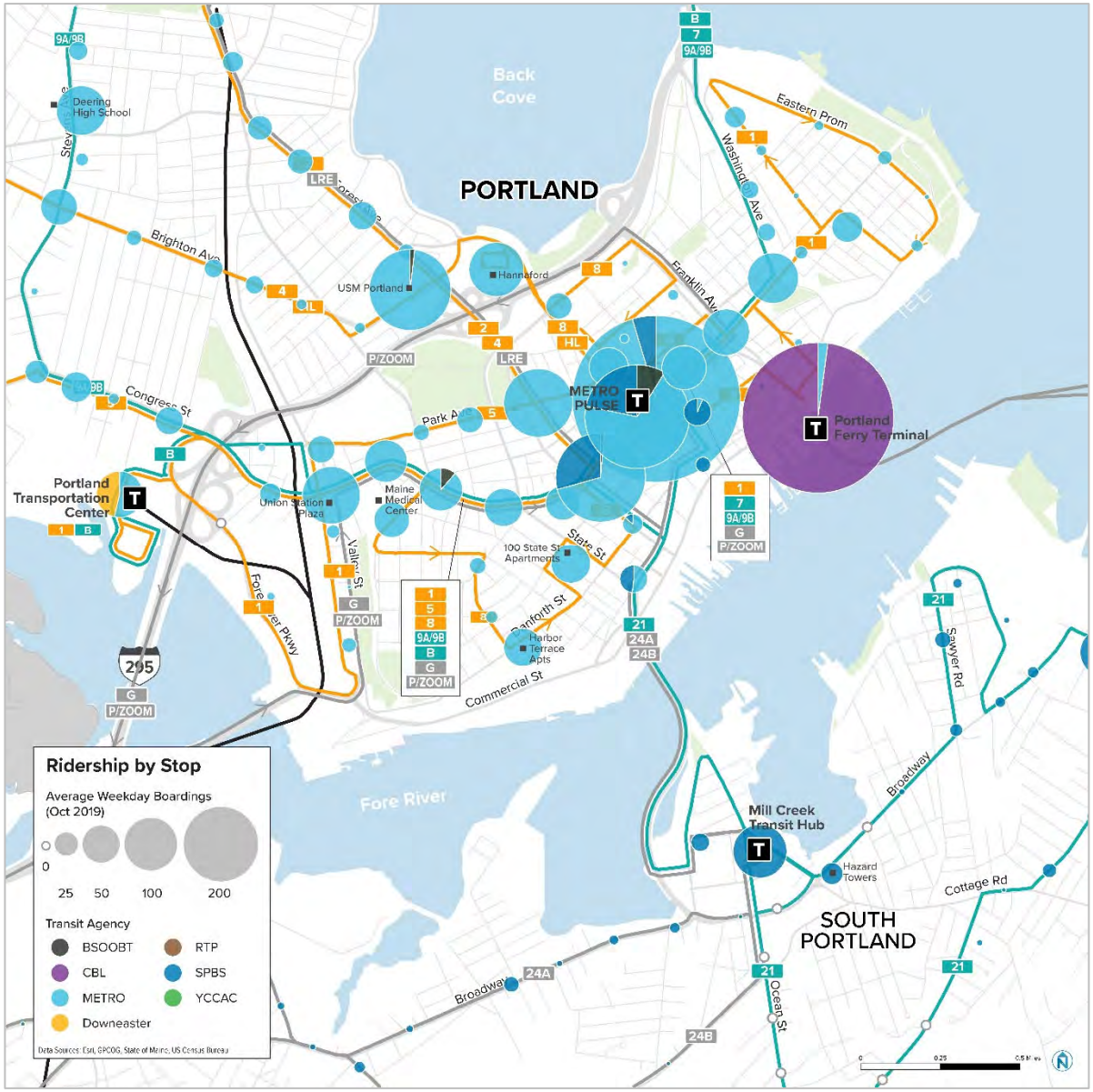
Ridership at the Casco Bay Ferry Terminal is high, at over 600 passengers on an average winter day and over 3,000 per day in the summer. Nearly all these boardings are ferry riders; METRO's Route 8 has only fewer than 10 average weekday boardings at the ferry terminal.

Biddeford-Saco-Old Orchard Beach Area

In the Biddeford-Saco-Old Orchard Beach area, year-round ridership is highest:

- In downtown Saco, primarily at the Saco Transportation Center
- Along the Route 111 corridor, particularly at Hannaford, Walmart, and Biddeford Crossing
- At UNE

Ridership on the Portland Peninsula is highest along Congress Street



Aside from the Saco Transportation Center, the highest-ridership stops in Saco are the Saco Valley Shopping Center, Hannaford, and park-and-rides.

Ridership along Ocean Park Road/Saco Avenue between Old Orchard Beach and Saco is higher than elsewhere in Saco and Old Orchard Beach. Ridership in the Industrial Park Road area is very low.

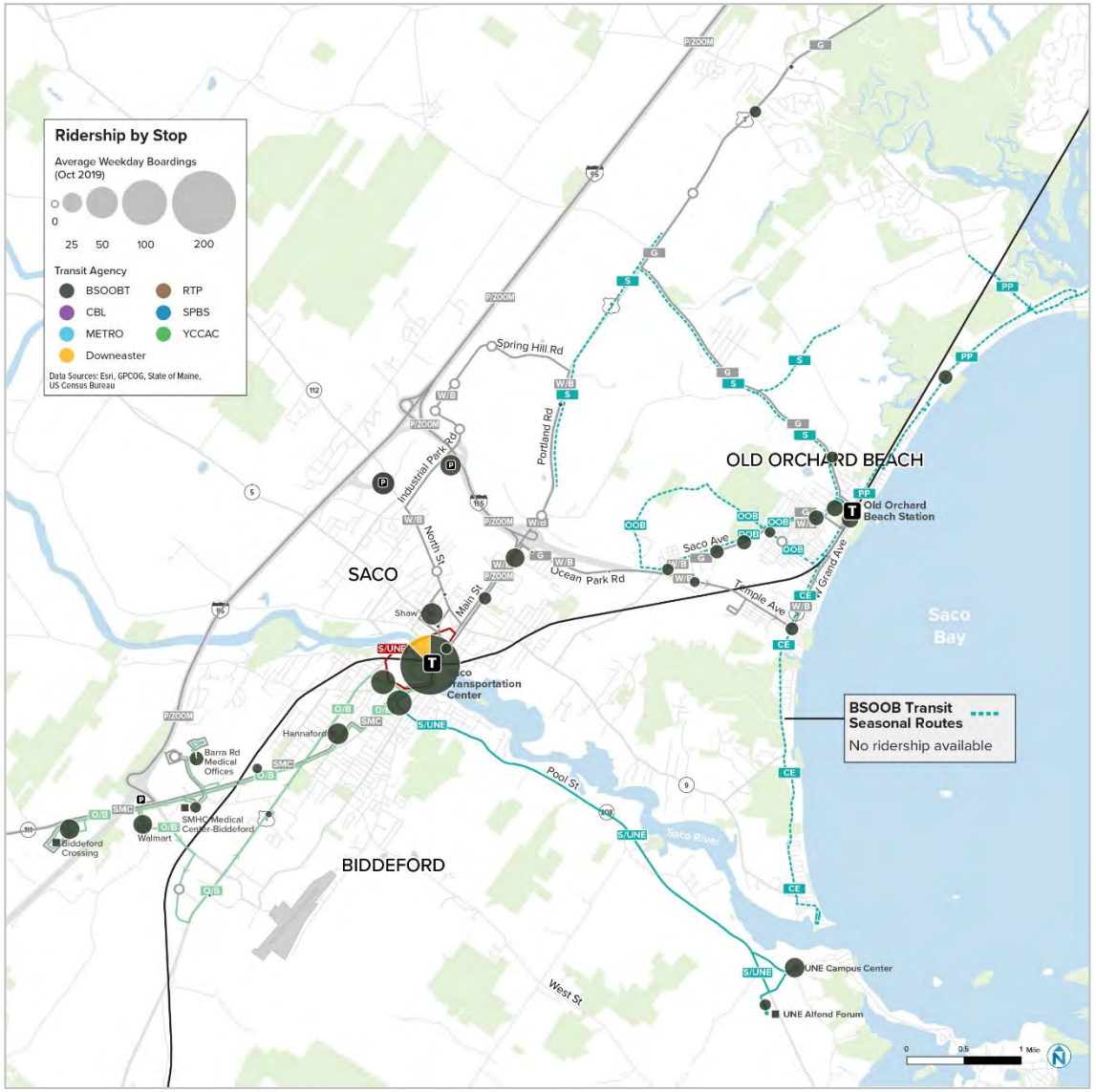
SEASONAL RIDERSHIP VARIATIONS

Millions of tourists visit Maine each year, with most of these visits in the warmer months. This influx translates into much higher peak-season ridership on BSOOB Transit and Casco Bay Lines.

Ridership on BSOOB Transit starts to increase in April, peaks in July, and then drops through September. July ridership is approximately four times year-round levels, and to serve this ridership, BSOOB Transit operates five seasonal routes:

- Camp Ellis
- Old Orchard Beach 1
- Old Orchard Beach 2
- Pine Point
- Saco

Biddeford-Saco-Old Orchard Beach ridership is highest in downtown Saco



Note: The map above shows ridership by segment, where the size of the bubble indicates the average weekday boardings that occur on the segment of the route near the location of the bubble.

Ridership on Casco Bay Lines also starts to increase in April. It then peaks in July and August at approximately 350% of off-season ridership, and then declines through November. Casco Bay Lines also runs additional peak-season service.

Seasonal changes on other services are much smaller (although ridership on YCCAC's Southern Maine Connector also shows seasonal peaks, the increase in riders, in absolute terms, is very small).

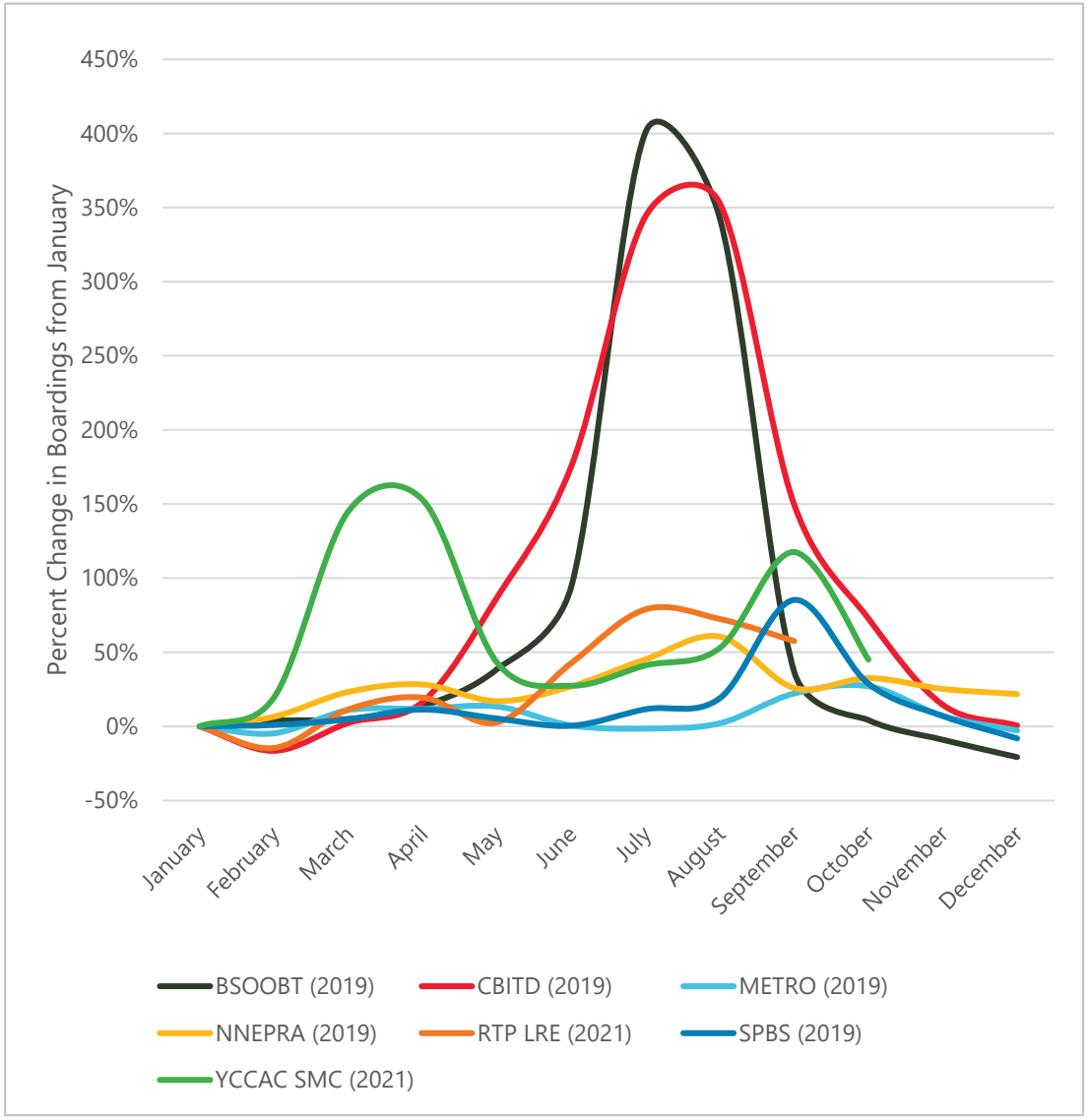
BUS RIDERSHIP COMPARED TO UNDERLYING DEMAND

There are mismatches between current bus ridership and underlying demand. These mismatches are related to the types and amount of service provided.

In most cases, actual bus ridership levels match underlying demand. However, there are exceptions:

- Areas that can support more frequent service than what is currently provided.
- Areas where ridership levels are lower than what would be expected based on underlying demand. In many of these cases, lower-than-expected ridership is likely because available services are infrequent and circuitous, and these characteristics deter many from using transit.

Ridership on BSOOB Transit and Casco Bay Lines in mid-summer is about four times as high as other times of the year



Note: 2019 and 2021 data are used to avoid using 2020 data, which was skewed by the COVID-19 pandemic.

There are also some areas that are served by bus routes where the underlying demand for transit is very low and ridership is also very low. These are areas where alternative service approaches such as microtransit should be considered.

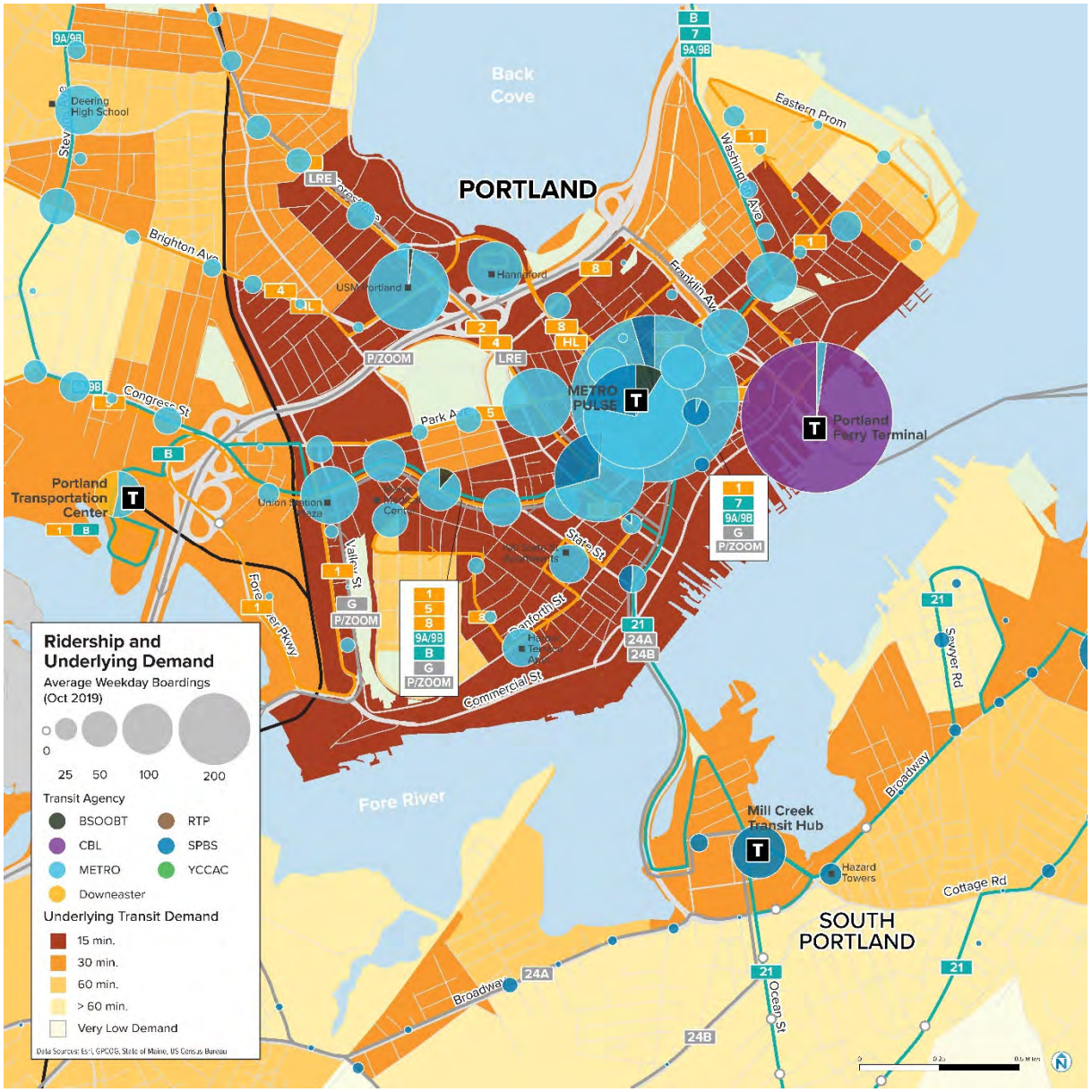
Portland Peninsula

Most of the Peninsula can support frequent service (every 15 minutes). At present, the combination of service on Congress Street provides frequent service, with one route—Route 9A/9B—providing continuous service along the corridor. Additional continuous service could be provided by coordinating routes that operate from the east and west. Ridership and service levels along Congress Street could also warrant transit priority and infrastructure improvements to turn Congress Street into a transit-priority corridor.

Other areas could also support more frequent service. These include:

- Parts of the East End, which are now served every 30 minutes by METRO's Route 1 Congress Street.
- Parts of the West End, which is now served by METRO's Route 8 Portland Peninsula, which is very circuitous and operates every 30 minutes.

Portland Peninsula Actual Ridership Compared to Underlying Demand



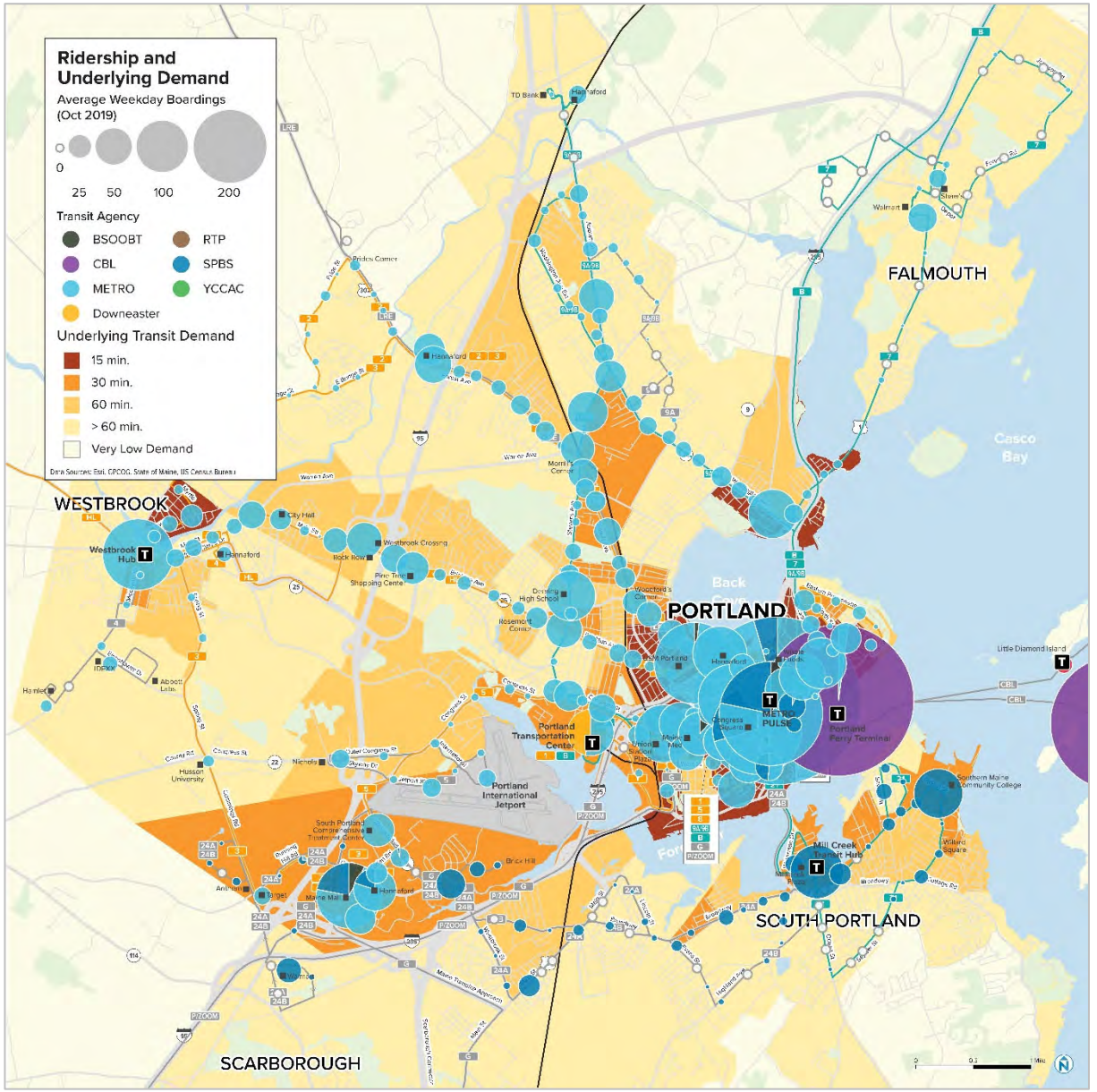
Portland Area

Beyond the Portland Peninsula, parts of East Deering and Westbrook can likely support more frequent service. Conversely, there are some areas where fixed-route transit is provided but the underlying demand for transit is low. In some of these areas, key destinations drive ridership. However, in many of these areas, the low current ridership is consistent with underlying demand:

- Most of Falmouth east of I-295, where the only significant ridership drivers are Walmart and Shaw's.
- West Falmouth, where the only significant ridership driver is Hannaford.
- Westbrook, between Cumberland Street and Forest Avenue.

In South Portland, underlying demand is generally moderate to high north of Broadway and low south of Broadway. However, ridership in areas where demand is moderate to high is lower than would be expected. This is almost certainly because Route 24A Maine Mall and Route 24B Maine Mall operate infrequently and are circuitous. Across the length of South Portland, this indicates that service should be

Portland Area Actual Ridership Compared to Underlying Demand



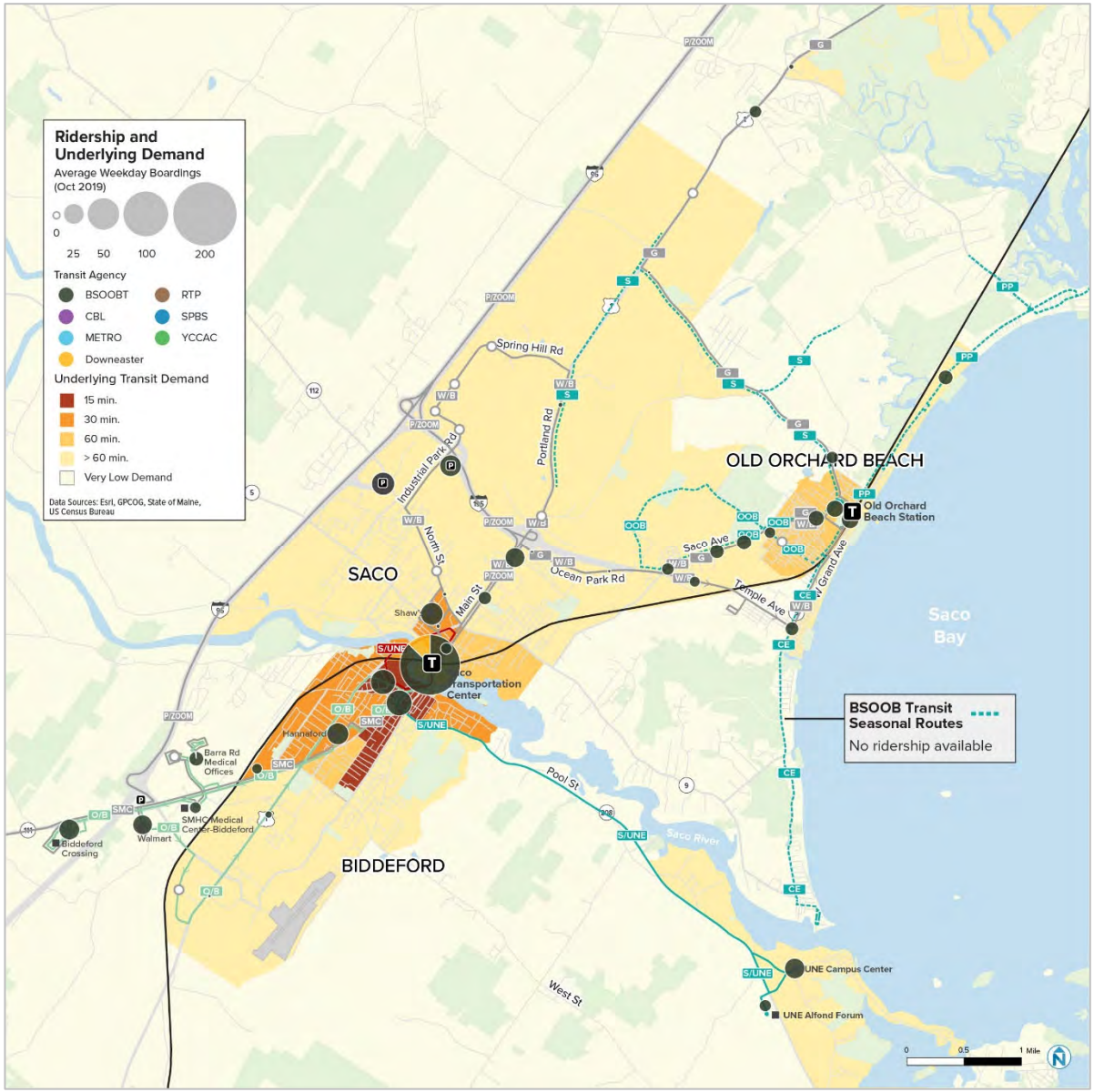
improved to be more direct and frequent in ways that better serves areas with higher demand. This could include straightening service and combining Route 24A and 24B to provide service with one route that is stronger than the existing two routes.

Biddeford-Saco-Old Orchard Beach Area

In the Biddeford-Saco-Old Orchard Beach area, underlying demand is high in downtown Biddeford and parts of Saco, moderate in Old Orchard Beach, and low almost everywhere else. In areas with low overall underlying demand, ridership is driven almost exclusively by key destinations. Much of BSOOB Transit's service is coverage-based and serves low-demand places and/or key destinations. These areas include:

- The US Route 1 corridor in Biddeford that is served by BSOOB Transit's Route 50 Orange/51 Black.
- Most of the alignment served by BSOOB Transit's Route 52 Blue/53 White in Saco.

Biddeford-Saco-Old Orchard Beach Area Ridership Compared to Underlying Demand



The same also may be the case with at least some segments of BSOOB Transit seasonal trolley routes, although sufficient ridership data are not available to know if this is the case.

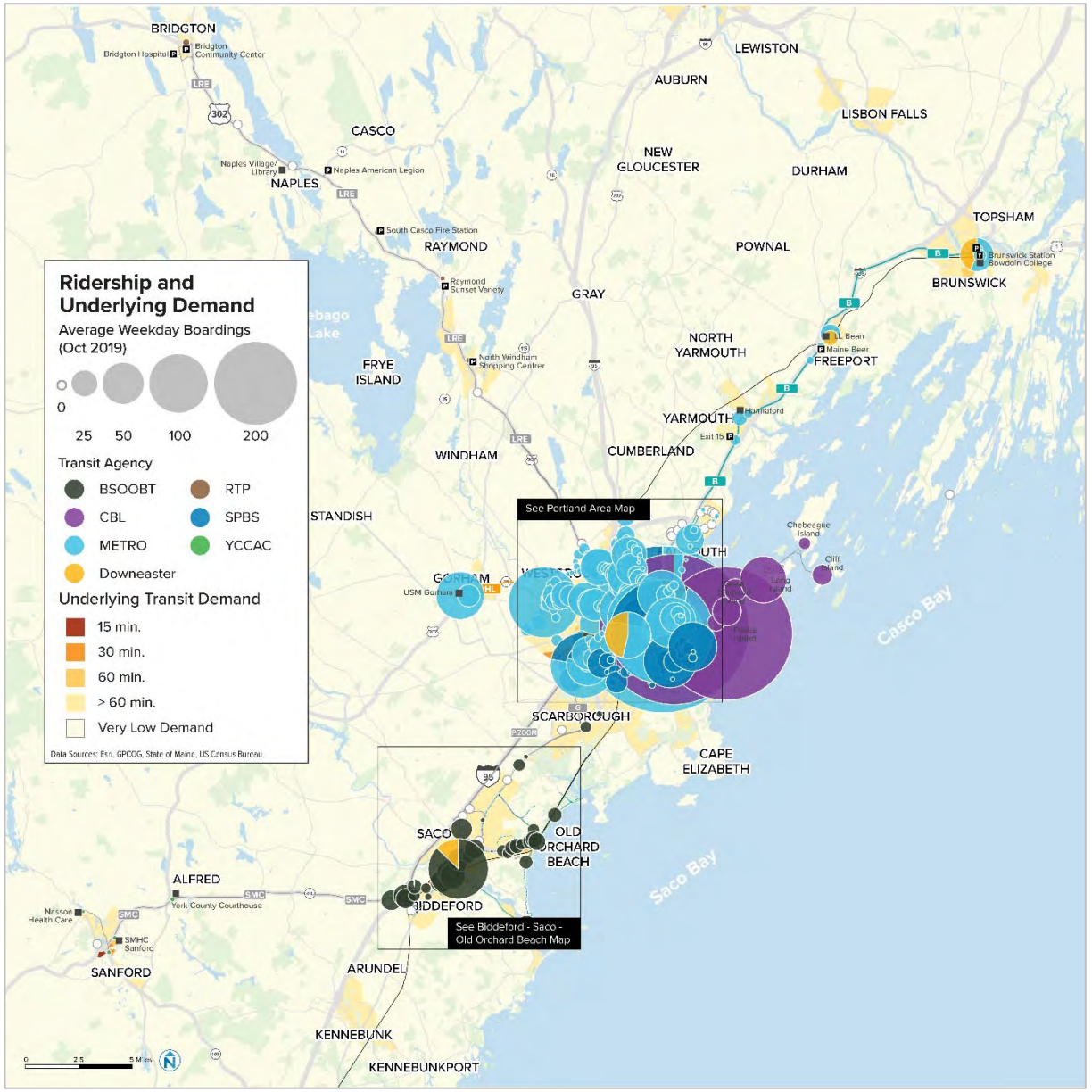
In these areas, it may be appropriate to discontinue service to improve service frequencies on other routes, and/or to explore alternative service models such as microtransit.

Outer Communities

Demand in outer areas of the Greater Portland region is generally concentrated in downtown centers and shopping areas in places like Brunswick, Yarmouth, Gorham, and Sanford. Key takeaways from these areas are:

- I-295 corridor communities are served by the METRO BREEZ, which operates infrequently. This market could potentially support 60-minute service.
- The Route 302 corridor is served by RTP's Lakes Region Explorer. Demand and ridership on this are very low. One reason for this low ridership is the infrequency of the route (it operates every two hours or less). However, very low underlying demand is likely the major reason ridership is very low. In this market, alternative approaches such as volunteer-driver service or microtransit may be

Greater Portland Region Ridership Compared to Underlying Demand



appropriate. The market could also be served with RTP's demand-response services.

- Demand in Gorham is driven by USM Gorham, which is well-served by METRO's Husky Line.
- The Alfred Street (Route 111) corridor is served by YCCAC's Southern Maine Connector. Demand along this corridor is very low, as is ridership. Issues with this route are similar to those with the Lakes Region Explorer: service is very infrequent and underlying demand is very low. Potential alternative approaches for this route are volunteer-driver service, microtransit, and serving the corridor with existing demand-response services.

SUMMARY

Transit ridership in the Greater Portland region generally reflects the underlying demand for transit, and the array of transit services provided are largely matched to demand. However, as described above, there are several exceptions, the most significant of which are:

- Some areas, particularly in the Portland area, can likely support more frequent service than is provided.
- Transit ridership in South Portland is lower than would be expected based on underlying demand. This is almost certainly because existing resources are stretched thinly; service operates infrequently to serve as many areas as possible, including some areas with very low transit demand. Making service simpler, more direct, and more frequent could serve more riders.
- Fixed-route service is provided in many areas where demand is very low. In these areas, providers should consider either discontinuing service to focus resources in higher-demand areas—particularly for more frequent service—or alternative service approaches such as microtransit.
- The Lakes Region Explorer and Southern Maine Connector both serve areas with very low demand and carry very few riders, and alternative service models such as volunteer driver, microtransit, or traditional demand-response service could be more effective alternatives and provide additional coverage.
- Casco Bay Lines ferry service is a lifeline service and so service levels cannot be matched to demand the same way bus service can be.

Image source: GPCOG

5 REGIONAL PRACTICES

Transit Together is tasked with identifying opportunities for increased coordination and integration among Greater Portland's seven public transit providers. This chapter describes existing regional practices, as well as regional assets including bus stops, transit facilities, fleets, and technology. The chapter also explores where the different providers already or could better collaborate around the design and delivery of services, including in the general areas of:

- Branding
- Public information
- Fares
- Transit facilities
- Vehicles
- Technology

BRANDING

The use of seven different brands, including some sub-brands, makes service difficult to learn and understand.

All seven providers operate under separate brands and largely market only their own information to the public. While some brand autonomy may be necessary and appropriate, it is difficult for riders to learn and understand the full array of service. As described in the Opportunities chapter of this document, there are several options to develop common branding for Greater Portland transit services while still allowing each agency to operate independently. Transit information could also be provided in a manner that makes it easier for the public to find and understand.

The region's transit providers use seven different major brands. There are also many sub-brands for different services and programs.

PUBLIC INFORMATION

Public information is mostly provided through separate channels, which makes service difficult to learn and understand.

All seven agencies provide their own public information, and the type and format of this information varies greatly. Each agency publishes schedules and real-time information (when available) on their own websites; METRO, SPBS, and Casco Bay Lines also publish real-time information on the Southern Maine Transit Tracker. Regional transit information is available on the Transit Together website map, but this map is difficult to use.

The quality of transit information in the Greater Portland region also varies greatly. METRO, RTP, and SPBS publish schedules with geographically accurate maps that are easy to interpret. BSOOB Transit's maps are primarily diagrammatic and harder to understand (BSOOB Transit has recently begun redesigning some maps to be geographically accurate). YCCAC publishes a simple map for the Southern Maine Connector which only highlights the first and last stops. One way to make service easier to understand would be for all local transit providers to publish maps in a consistent manner, using a geographic template and—when relevant—including the routes and services of other providers.

METRO's route maps are geographically correct and show activity centers to help riders orient themselves and understand service.

To understand BSOOB Transit's route maps, users must already have a fundamental understanding of the service area.

FARES

Although there are similarities among the fare structures of Greater Portland transit agencies, there are also differences.

Greater Portland's transit agencies use three base fare structures:

- METRO, SPBS, BSOOB Transit, and RTP's Lake Region Explorer charge a **flat fare** for each service type. This is the most common structure for local transit service throughout the country.
- Casco Bay Lines and the Downeaster charge **distance-based fares**. This is a common approach for long-distance services.
- YCCAC's Southern Maine Connector uses a **hybrid of flat and distance-based fares** with "In Town" and "Out of Town" fares.

Each agency sets its own fares. METRO and SPBS charge the same fares and BSOOB Transit, RTP, and YCCAC charge similar but slightly different fares:

- For local trips, METRO, SPBS, and BSOOB Transit all charge an adult cash fare of $2; YCCAC charges $2 for in-town trips and $4 for out-of-town trips on the Southern Maine Connector; and RTP charges $3 for Lakes Region Explorer trips.
- For express trips, METRO charges $4 and BSOOB Transit charges $4 on Route 60 Green and $5 on Route 70 Purple/ZOOM.

These base fares are very similar and only minor changes would be required to implement a more unified fare across all bus services. Transfer policies and fare discounts differ considerably across agencies. For example, CBL child fares end at age 13, while agencies using DiriGO have child fares for riders 18 and younger.

Casco Bay Lines and Downeaster fares are generally higher and reflect the types of service provided and, for the Downeaster, the longer trip lengths and fact that the service is part of a national network. Casco Bay Lines also charges higher single-ride fares in the peak season than during the rest of the year:

- Casco Bay Lines off-season round-trip fares range from $4.10 (Peaks Island) to $7.45 (Cliff Island), or the equivalent of $2.05 to $3.75 each way. During the peak season, these fares increase to $7.70 to $11.55, or the equivalent of $3.85 to $5.78 each way.
- Downeaster fares range from $3 for short trips to approximately $60 for longer trips.

The seven agencies provide a wide variety of multi-ride discount fares, including:

- METRO, SPBS, and BSOOB Transit all cap total costs for DiriGO users (see below) at $6 per day and $60 per month for local trips.
- Round trips can be purchased for YCCAC's Southern Maine Connector for only 50% more than the single-ride price. 15-ride tickets can also be purchased for $15 for in-town trips and $25 for out-of-town trips.
- RTP sells a Lakes Region Explorer 10-ride pass for $25 and a monthly pass for $50.

Greater Portland's different transit providers charge similar but different fares.

	Local	Express	Daily Pass	Monthly Pass	General-Public Demand Response	Paratransit
metro	$2	$4	$6 local $12 express	$60 local $120 express	--	$2.50
South Portland Bus Service	$2	--	$6.00-$7.50	$60	--	$2.50
Transit	$2	$4-$5	$6 local $12 express	$60 local $120-$150 express	--	$4 (via route deviation)
Casco Bay Lines	$4.10-$11.55	--	--	$82.45-$125.15 (annual pass available)	--	--
Downeaster	$3-$58	--	--	--	--	--
rtp **Lakes Region Explorer**	$3	--	--	$51	$2.50-$5.00	--
York County Community Action Corporation **So. Maine Connector**	$2-$4	--	--	--	$3-$6 (WAVE)	--

- Casco Bay Lines sells commuter books with five round-trip tickets for a cost of slightly more than three round trips. As with round-trip fares, these fares are higher during the peak season. It also sells monthly passes that range in price from $82.45 to $125.15. These passes cost the same year-round. Ferry fares are regulated by the Maine Public Utilities Commission.
- Amtrak offers 10-ride and monthly passes.
- All the providers also offer 50% discounts for children, and most provide this same discount to seniors.

The wide variety of discount fares would make the implementation of a unified structure for multi-ride tickets and passes more complicated.

TRANSIT FACILITIES

The region has eleven major transit facilities for passenger service, administration, operations, and maintenance.

Transit Centers

Major passenger facilities, most of which are also transfer locations, include transit centers, ferry terminals, and Downeaster stations:

- The **Downtown Transportation Center/METRO PULSE**, in downtown Portland, is the major hub for bus service in greater Portland. The PULSE is served by almost all METRO and SPBS routes, two BSOOB Transit routes, and RTP's Lakes Region Explorer. This facility has some passenger amenities, including a waiting area, vending machines, water fountain, lost and found, and customer service desk where DiriGO cards can be purchased and reloaded.
- **The Portland Transportation Center (PTC)**, which is just west of I-295, is the Portland stop for the Downeaster and Concord Coach Lines. The PTC is a large facility with very good passenger amenities, including a waiting area, bathrooms, vending machines, and customer service counters, as well as short- and long-term parking. However, the location is not close to major activity centers in Portland. The station is served by METRO's Route 1 Congress Street and BREEZ, which provide connections to the PULSE. The METRO bus stop is not incorporated into the facility's indoor space, so passengers waiting for a METRO bus do not have access to PTC passenger amenities while waiting.

The PULSE is the focal point of METRO service

The Saco Transportation Center provides a comfortable waiting environment

Image sources above: Nelson\Nygaard

Many major passenger facilities support transit service throughout the region

	Owner	Operator	Description	Served by
Passenger Facilities				
METRO PULSE	City of Portland	METRO	Downtown Portland Transit Center	METRO, SPBS, RTP, BSOOB Transit
Casco Bay Ferry Terminal	City of Portland	Casco Bay Lines	Casco Bay Lines' Portland Terminal	Casco Bay Lines, METRO
Portland Transportation Center	Concord Coach Lines	Amtrak/Concord Coach Lines	Intercity bus and train station	Downeaster, METRO, Concord Coach Lines
Mill Creek Transit Hub	City of South Portland	City of South Portland	South Portland's transit center	SPBS
Saco Transportation Center	City of Saco	City of Saco	Transit center and Downeaster station	BSOOB Transit, Downeaster, YCCAC
Old Orchard Beach Station	Town of Old Orchard Beach & OOB Chamber of Commerce	Town of Old Orchard Beach & OOB Chamber of Commerce	Summer-only Downeaster station	Downeaster, BSOOB Transit
Freeport Station	L.L. Bean & Town of Freeport	Town of Freeport	Downeaster station	Downeaster
Brunswick Station	NNEPRA & private owner	Town of Brunswick & Brunswick Downtown Association	Downeaster Station and Brunswick transit center	Downeaster, METRO, Brunswick Link, BlueLine Commuter

- **The Casco Bay Ferry Terminal,** which is the Portland terminal for all Casco Bay Lines services. It is also served by METRO's Route 8 Peninsula Loop, which serves the PULSE.
- The **Mill Creek Transit Hub**, which serves as a transfer point for SPBS routes. This transit hub has an indoor waiting area but lacks many amenities.
- **The Saco Transportation Center,** which is the transportation hub for the Biddeford-Saco area and a Downeaster station. It is served by BSOOB Transit, the Amtrak Downeaster, and YCCAC's Southern Maine Connector.
- **Old Orchard Beach Station**, which is served by the Downeaster and BSOOB Transit seasonal trolleys.

Casco Bay Lines operates to and from the Casco Bay Ferry Terminal.

The Mill Creek Transit Hub is the focal point of SPBS service.

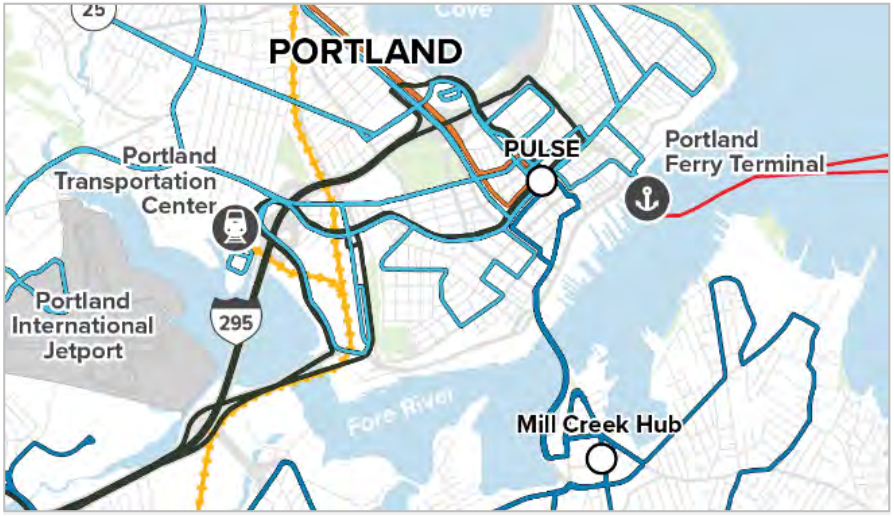
The Saco Transportation Center is BSOOB Transit's hub and a Downeaster station.

Image sources, this page: Nelson\Nygaard

- **Freeport Station**, which is served by the Downeaster and METRO BREEZ.
- **Brunswick Station**, which is served by the Downeaster, Brunswick Link, BlueLine Commuter, and METRO BREEZ.
- **Old Orchard Beach Station:** During the tourist season, connections can be made at Old Orchard Beach Station between Amtrak's Downeaster and BSOOB Transit's 52 White/53 Blue and seasonal trolley routes.

In general, these locations provide convenient connections between services. One significant exception, however, is that Portland's three major transit centers are not well linked. As a result, it can be difficult to make connections among the Downeaster, downtown Portland, and the Casco Bay Ferry Terminal.

Portland's three major transit centers are not well connected



Administration, Maintenance, and Operating Facilities

Each agency oversees its own administration, operating, and maintenance operations. NNEPRA and CBL are unique in their fleet type and operating needs, and the one bus-agency exception to in-house maintenance is that BSOOB Transit maintains YCCAC's vehicles at their Biddeford base.

Many major operating facilities support transit service throughout the region

	Owner	Operator	Description
Administrative, Operating, and Maintenance Facilities			
Brunswick Layover Facility	NNEPRA	Amtrak	Maintenance and storage of Downeaster trains
BSOOB Transit Base	BSOOB Transit	BSOOB Transit	Maintenance for BSOOB Transit and YCCAC vehicles. Administrative and operating facility for BSOOB Transit.
Casco Bay Ferry Terminal	City of Portland	Casco Bay Lines	Casco Bay Lines' Portland Terminal
RTP Base	RTP	RTP	Administrative, operating, and maintenance facility
METRO Base	METRO	METRO	Administrative, operating, and maintenance facility
SPBS Base	City of South Portland	City of South Portland	Administrative, operating, and maintenance facility shared with other City of South Portland departments.
YCCAC Base	YCCAC	YCCAC	Administrative offices and bus storage

Stops, Shelters, and Signage

Stops are one of the most important elements of transit service. Regular riders use transit stops every time they make a trip, and non-riders often gauge the quality of a service based on stops they see in their community. Good stops are easy to identify, provide shelter from the elements, allow safe and easy boarding and alighting of a vehicle, and include clear information on what service is available. Most of this section is about bus stops.

There are approximately 940 bus stops in the Greater Portland region, 26 of which are served by multiple agencies. BSOOB Transit and YCCAC share several stops in Biddeford, and METRO shares several stops with SPBS, BSOOB Transit, and RTP's Lakes Region Explorer in Portland. BSOOB Transit and RTP also allow passengers to flag down buses at any safe location along a route.

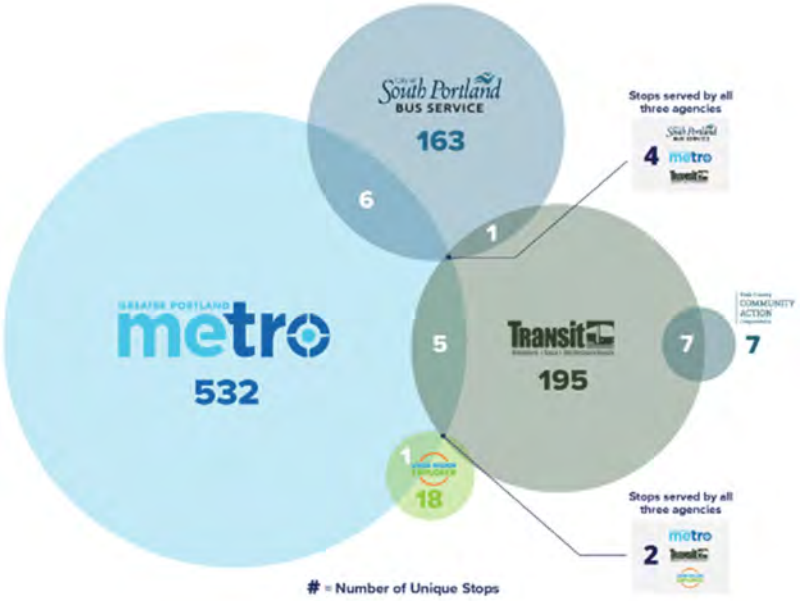
The quality of these stops varies greatly. Some stops include shelters, benches, and trash barrels, while others are unmarked or have signs on the wrong side of the road.

It is unknown how many stops have shelters, as there is no comprehensive stop and amenity database. Shelters are particularly important for passenger comfort, especially in New England, where rain and snow are common. For some riders, having a shelter at their bus stop is one of the factors that leads them to choose transit over other travel modes. Typically, stops with higher ridership are prioritized for amenities such as shelters, benches, and trash barrels.

Stop signage in the Greater Portland region varies greatly. All five bus operators use different signs to identify their stops. They also provide different information.

Images source to right: Nelson\Nygaard

There are about 940 bus stops in Greater Portland



Bus stop quality varies greatly throughout the region

Each bus operator uses different sign styles and provides different information.

Image source: Nelson\Nygaard

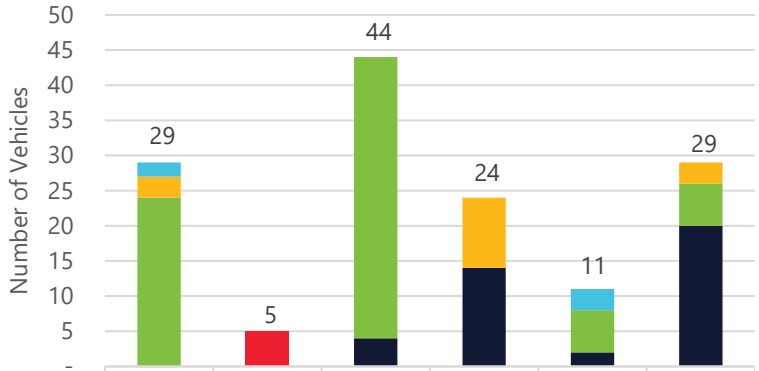
VEHICLES

The region's transit providers have a total of about 140 vehicles, excluding Downeaster trains, which are owned by Amtrak. METRO, BSOOB Transit, and YCCAC have the largest fleets, with 44, 29, and 29 vehicles, respectively. METRO and BSOOB Transit primarily operate standard transit buses (including BSOOB Transit's 12 vintage trolley replicas). YCCAC primarily operates smaller cutaway vehicles, and RTP operates cutaway vehicles, vans, and minivans.

Transit vehicle replacement costs are relatively significant capital outlays for each of the agencies (except for NNEPRA), and for the region as a whole. This is particularly true for ferries, which are expensive compared to buses and vans.

None of Greater Portland's transit agencies have transitioned to fully zero-emission vehicles, although METRO and BSOOB Transit are preparing to, and MaineDOT is conducting a study to help develop electrification plans for several transit providers in the region and across the state. As the State of Maine shifts public transit vehicles to zero-emissions models, there will be opportunities to further consider shared fleet procurements and charging infrastructure.

Most service is provided with standard transit buses, although many smaller vehicles are also used.



	BSOOB Transit	CBL	METRO	RTP	SPBS	YCCAC
Non-Revenue Vehicle	2	-	-	-	3	-
Minivan or Van	3	-	-	10	-	3
Heavy-Duty Bus	24	-	40	-	6	6
Cutaway	-	-	4	14	2	20
Ferry	-	5	-	-	-	-

Note: Chart above includes spare vehicles. For example, Casco Bay Lines operates four ferries with one spare.

TECHNOLOGY

METRO, SPBS, and BSOOB Transit use a common fare payment system called DigiGO. In addition, METRO, SPBS, and Casco Bay Lines participate in the Southern Maine Transit Tracker, which provides real-time information for those services. These systems could be expanded to many other transit services in the region and provide a model for how other technologies could be shared. One exception to regional transit technology implementations is the Downeaster, which is commonly incorporated into national systems administered by Amtrak.

Fare Payment

All the region's transit providers accept cash for payment; Casco Bay Lines and Amtrak also accept credit cards for ticket purchases. METRO, SPBS, and BSOOB Transit have most recently focused on fare payment through the joint DiriGO system, which allows riders to pay using a mobile app or smartcard. To use this system, users load money into their DiriGO account via the app or their smartcard at CVS, 7-Eleven, or transit agency locations in the Portland area. The DiriGO system also tracks daily and monthly usage to cap fares at $6 per day and $60 per month.

DiriGO makes fare payment easier and enables fare capping

The DiriGO system provides the opportunity to implement a uniform fare payment system and fare capping throughout the Greater Portland region. There are also many examples of joint fare arrangements between local agencies and Amtrak that could potential be utilized for Downeaster service.

Automatic Vehicle Location

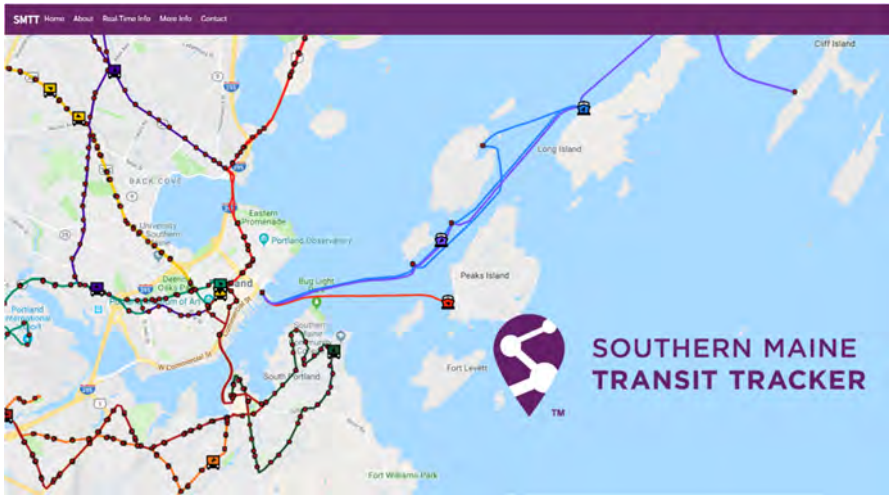
METRO, SPBS, BSOOB Transit, RTP, Casco Bay Lines, and Downeaster fixed-route vehicles are equipped with automatic vehicle location (AVL) technology, which provides real-time information on vehicle locations. AVL provides several benefits, including the ability to understand and address service problems, and to provide real-time

passenger information. This technology could be extended to YCCAC vehicles to provide similar benefits.

Real-Time Passenger Information

Transit AVL data can be sent to websites and smartphone apps to give riders real-time information about the current location of their vehicle and expected arrival times. METRO, SPBS, and Casco Bay Lines already do this, sharing their information via the Southern Maine Transit Tracker. This system publishes the information on its own website and to widely used third-party smartphone apps such as Transit App and Google Maps. RTP and BSOOB Transit provide real-time information via their own website and—in the case of RTP—smartphone app. The BSOOB Transit real-time tracker is currently down. Amtrak provides real-time information on the Downeaster on its website and third-party apps.

The Southern Maine Transit Tracker website provides real-time transit information for METRO, SPBS, and Casco Bay Lines



Because BSOOB Transit and RTP equip their fixed-route vehicles with AVLs, they could join other regional agencies and publish real-time information via the Southern Maine Transit Tracker. YCCAC could also install AVLs on their fixed-route vehicles and join the Southern Maine Transit Tracker.

SUMMARY

The region's transit providers already share or jointly serve many of the same facilities and have collaborated on efforts such as DiriGO and the Southern Maine Transit Tracker. However, most efforts are still undertaken independently. Stronger collaboration and coordination in several areas could further the development of a seamless regional system:

- Unified branding
- The provision of public information in common formats and via the same channels
- Bus stop standards
- Coordinated fleet planning
- The adoption by all providers of schedule information via GTFS-RT (General Transit Feed Specification Realtime) for inclusion on mapping websites and third-party travel apps
- The use of DiriGO fare payment by all providers

Other efforts, such as joint service planning and joint procurement, could provide additional benefits.

Image source: GPCOG

6 FINDINGS AND OPPORTUNITIES

Public transit services in the Greater Portland region largely operate independently, rather than as a cohesive system. As a result, it can be difficult to fully understand what services are available. In addition, services are not as frequent, convenient, or direct as riders desire, and many could attract more riders if better matched to underlying demand. Ways to do this are described below, and are mostly (but not entirely) related to bus services:

1. Plan together/work together

While Greater Portland's transit systems do collaborate in some ways, the collaboration is typically between select operators and on select efforts. Greater collaboration among all operators would improve transit across the entire region, rather than just parts of it.

2. Provide more frequent service

Greater Portland's bus services operate too infrequently to make service convenient and attractive, and infrequent schedules can make for long travel times.

3. Better match bus service with demand

One major reason Greater Portland bus services operate infrequently is that they are stretched thin to maximize coverage in places where demand is low. A greater focus on serving higher-demand areas with fixed-route service and consideration of microtransit for lower-demand areas could provide the resources necessary to increase bus frequencies.

4. Make service easier to understand and use

Greater Portland's transit services are provided under many primary brands. In addition, many similar services, such as regional express routes, have their own unique names. Comprehensive information is not provided in one place and is also provided in different ways across agencies. Unified branding and marketing, and the use of common information formats and distribution methods, could present the overall system in a seamless manner.

5. Make service more reliable and faster

Travel times are long due to the challenges outlined above: service is infrequent and many bus routes are indirect, to maximize service coverage. Combined with long wait times for transfers, travel times by transit can be very long. Making routes more direct by focusing on higher-demand areas and providing more frequent service could significantly reduce travel times.

6. Improve bus network design

A large proportion of existing bus services prioritize service coverage over meeting demand. This is done through circuitous alignments and variants that provide part-time service to low-ridership locations. These factors are major reasons that travel times are long and service is infrequent. These service characteristics also typically deter more people from using transit than they attract. A comprehensive redesign of bus services based on service-design best practices could improve service for nearly all existing riders and attract new riders.

7. Improve bus stops

Bus stops are the front door to most transit services, but most stops in Greater Portland are very basic and present information in different ways. The implementation of a regional bus stop improvement program could improve stops in a consistent manner throughout the system.

1. PLAN TOGETHER/WORK TOGETHER

Developing a more seamless transit system will require the region's transit providers to collaborate more.

Although the Greater Portland region's transit providers work together in many ways, developing a truly seamless transit system will require more collaboration, cooperation, and coordination in many areas, including to:

- Develop regional approaches to service improvements and investments (for example, a regional bus stop improvement program and the implementation of microtransit)
- Develop common information formats and distribute this information via the same channels
- Develop a regional route-numbering and naming convention

- Expand the DiriGO fare-payment system to more agencies
- Collaborate to ensure consistency across technology platforms, for example, fare collection, vehicle electrification, and regional charging
- Identify clear roles for all regional stakeholders and clearly define the standards or metrics upon which capital investment and other decisions are made. Develop regional service standards that ensure appropriate levels of consistency for service in similar areas.

Today, the region's transit providers collaborate through both formal and informal means. However, the implementation of the types of improvements described above would require additional collaboration on more topics and at multiple levels of agency leadership.

One way to do this is through the PACTS Transit Task Force, which can provide a more formal mechanism to determine, address, and coordinate regional transit needs and activities. Meeting on a regular basis could further support increased coordination among agency staff to implement Transit Together recommendations. Working in a framework of agreed-upon service standards and performance metrics would ensure a more consistent approach to service planning and transit decision-making.

In addition, periodic joint board meetings could help ensure agency and community support to further advance regional goals.

At a Joint Transit Board Workshop in 2019, board members voiced support for better unifying the regional network to provide more seamless travel and invest in:

- ***Common regional branding***
- ***Priority corridors***
- ***Transit frequency***

2. PROVIDE MORE FREQUENT SERVICE

For people to want to use transit, it must be reasonably convenient, and to be reasonably convenient, it must be reasonably frequent.

People want transit to be convenient, and an essential element of convenient transit is frequency. This is because people want and need the flexibility to travel when they desire and when their schedules require. Infrequent service means long waits—waits for the bus and the need to get somewhere early because that is when the bus runs. Recent regional planning efforts have identified more frequent transit as one of the public's top desired improvements.

A common industry definition of frequent transit for local services is every 15 minutes or less. This frequency allows people to make trips without planning them around a schedule. Frequencies of up to 30 minutes are moderately convenient. However, as frequencies lengthen to beyond 30 minutes,

demand drops off significantly, as most people will make other transportation choices. Beyond 60 minutes, demand decreases to the relatively few people who don't have other options.

At present, no Greater Portland region transit routes provide consistently frequent service, and only six routes (including one seasonal route) operate every 30 minutes or better from the beginning of the AM peak period to the end of the PM peak period. Most other weekday services operate less frequently than every 60 minutes and many operate less frequently than every two hours. On weekends, service is even less frequent.

One of the most important improvements that can be made to Greater Portland regional transit is improving service frequencies. For local services, frequencies are typically set in one of two ways: (1) based on demand, which means providing enough service to meet demand, and (2) based on policy minimums, which are most often set at 60 minutes.

The Transit Together market analysis shows that much of the Portland Peninsula can support service every 15 minutes, and that other parts of the region can support more frequent service than is currently provided. One potential approach to developing regional policy frequencies is to adopt minimum frequencies of every 60 minutes for local bus routes and every 120 minutes for regional bus routes. This would improve service on many SPBS and BSOOB Transit routes, the Lakes Region Explorer, and the Southern Maine Connector.

Most service is infrequent, much is very infrequent

	Service Frequencies (Minutes)				
Route	**Early AM**	**AM Peak**	**Midday**	**PM Peak**	**Night**
METRO					
BREEZ	60	50	98	53	52
Husky Line		30	30	30	46
1 Congress Street	32	30	30	30	37
2 Forest Avenue	30	30	30	30	63
3 Portland - Westbrook - S Portland		30	30	36	62
4 Westbrook	60	30	30	30	53
5 Maine Mall	40	30	30	30	44
7 Falmouth		**60**	60	60	60
8 Peninsula Loop		30	31	31	31
9A/9B North Deering/West Falmouth	30	30	60	35	45
South Portland Bus Service					
21 Willard Square		45	60	60	36
24A Maine Mall	100	117	130	122	95
24B Maine Mall		120	125	130	87
Biddeford-Saco-Old Orchard Beach Transit (Year-Round Routes)					
50 Orange/51 Black	45	75	75	75	75
52 White/53 Blue	45	75	75	75	75
54 Silver		27	23	30	28
54 UNE		68	78	60	70
60 Green		150	150	150	150
70 Purple/ZOOM		38	38	43	43
Regional Transportation Program					
Lakes Region Explorer		190	395	205	70
York County Community Action Corporation					
Southern Maine Connector		157	171	171	

Note: Ferry and rail service not included in above table. Frequencies shown above are approximate, as some service frequencies vary throughout the day.

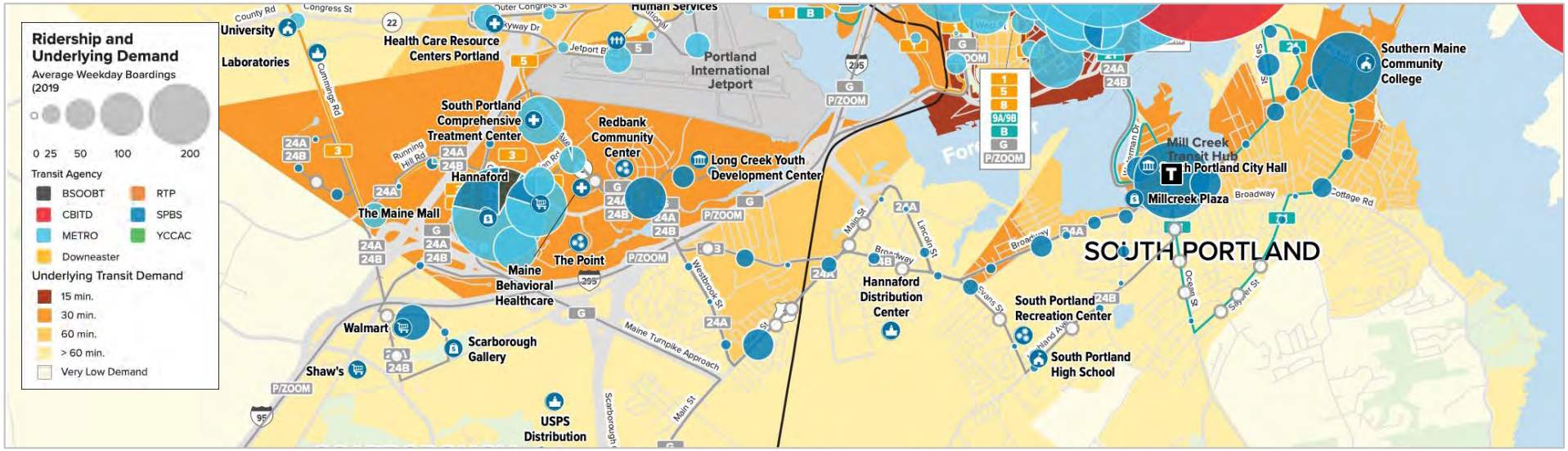
3. BETTER MATCH BUS SERVICE WITH DEMAND

A shift to more demand-based service would increase ridership.

As described earlier in this report, there are two fundamentally different ways to provide transit service. The first is to focus service in areas where demand is highest and make it as convenient as possible. This is called demand-based service. The second is to provide service to as many places as possible. This requires service be spread much more thinly, which results in less frequent service and service for fewer hours. It also typically means that routes are less direct, to serve as many areas as possible. This is called coverage-based service.

Coverage-based services provide availability to more people, but because the service is less convenient, fewer people will use it, and ridership is typically low. In some instances, bus routes provide approximately as much service to low-demand areas as to high-demand areas. Service to low-demand areas is only lightly used while service to higher-demand areas is much better used. A greater focus on more-direct and frequent service to higher-demand areas, and less service to low-demand areas, could provide better service to most riders, making these routes more useful to more people.

In South Portland, about as much service is provided to low-demand areas as to higher-demand areas



4. MAKE SERVICE MORE RELIABLE AND FASTER

Faster service would attract more riders.

Greater Portland regional transit outreach has shown that shorter travel times (and faster service) is one of the public's most-desired improvements. Faster service is important for two reasons: (1) people want to get places faster rather than slower, and (2) slower service means less access to opportunities and activities—when it takes too long to get somewhere by transit, those opportunities and activities are out of reach for many riders.

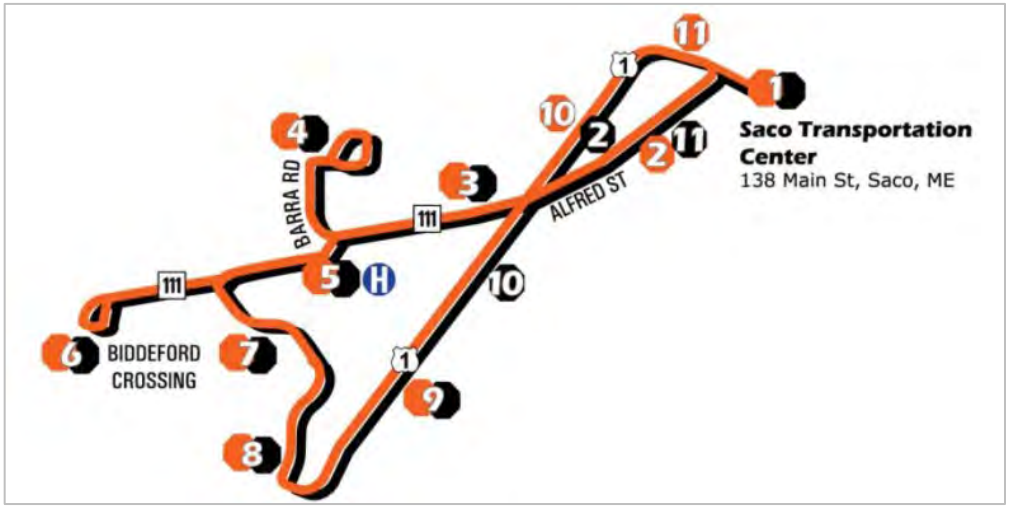
Today, many transit trips in the Greater Portland region take a long time because many routes are circuitous. Two examples (at right) are BSOOB Transit's 50/51 and METRO's Route 8. These types of circuitous alignments are a consequence of trying to maximize service coverage.

Another reason transit trips take a long time is because service is infrequent. This means transit riders often must spend a long time waiting for a bus that then operates circuitously to their destination. Trips that involve transfers can be especially long, as riders can then encounter two long waits. Some of the most effective ways to make trips faster are to straighten routes, minimize off-route variations, and improve frequencies.

An additional opportunity to improve overall travel times will be to develop transit priority corridors that incorporate transit-priority measures such as bus lanes, queue jumps, and transit signal priority, along with other infrastructure improvements such as high-quality stops. Portland's Congress Street corridor is the most likely transit priority corridor, although other corridors are planned for upgrades. Transit priority measures could also be implemented on a more targeted basis to avoid delays at chokepoints and other areas where service is slow.

METRO Route 8 Portland Peninsula

BSOOB Transit's Route 50 Black/51 Orange



5. MAKE SERVICE EASIER TO UNDERSTAND AND USE

Several actions could make service much easier to learn and understand.

Greater Portland is served by seven different transit providers, which is a high number for an urban area of its size. This is confusing, especially for new riders and the region's many visitors. Several measures could make service easier to understand and use:

- Develop a unified brand
- Improve rider information and create one consistent, common source for regional information
- Develop regional route numbering and naming convention
- Use DiriGO on all systems

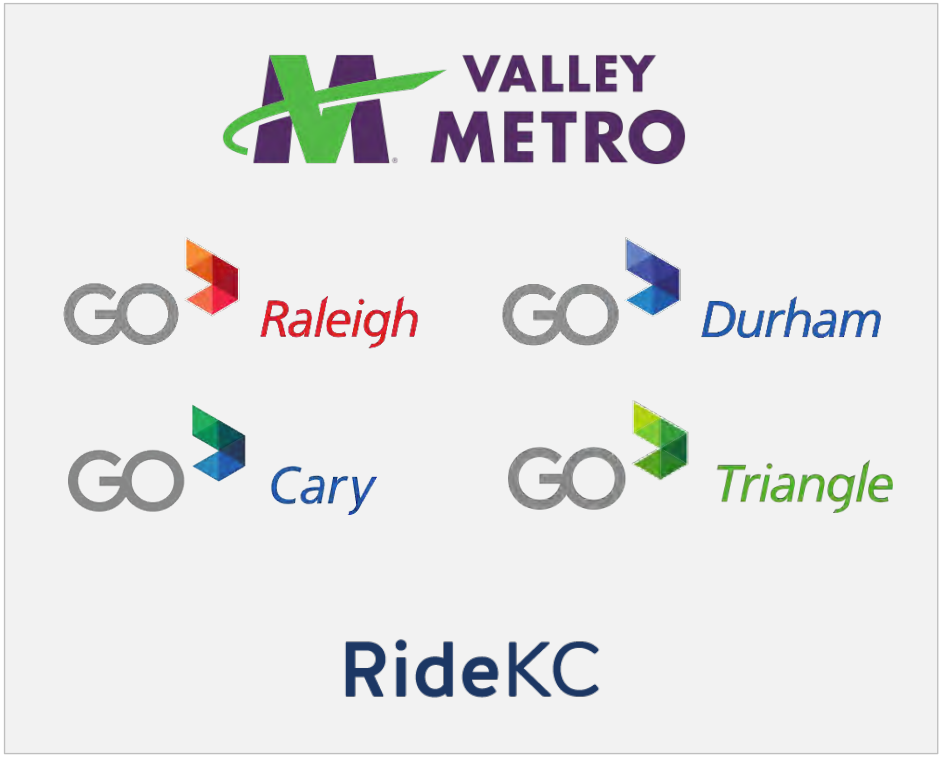
Develop a Unified Brand

Several other regions in the United States are served by multiple providers and present their services to the public using a single brand. In these cases, different agencies still provide their own services, but it appears to the public that all services are part of a single system.

One of the best examples of this approach is the Phoenix area, where services are all presented to the public as Valley Metro. Kansas City transit operators have also recently taken this approach and three agencies are now operating under the RideKC brand.

A third example is North Carolina's Research Triangle, where most operators wanted to develop a common brand while maintaining their own unique identities. In this case, services were rebranded using a "GO" name and brand following by the geographic location of the individual system (e.g., GoRaleigh, GoTriangle, GoDurham, GoCary).

Phoenix, North Carolina, and Kansas City are examples of places with multiple providers that use common branding



An important note about these approaches is that the unified branding is designed solely to make service easier for the public to understand and does not prevent individual agencies from determining how or when service operates. In the Greater Portland region, bus riders would benefit most from improved branding; however, a cohesive, regional transit brand would benefit all users. A regional brand may not be applicable to all agencies, as some brands, like Amtrak, are national.

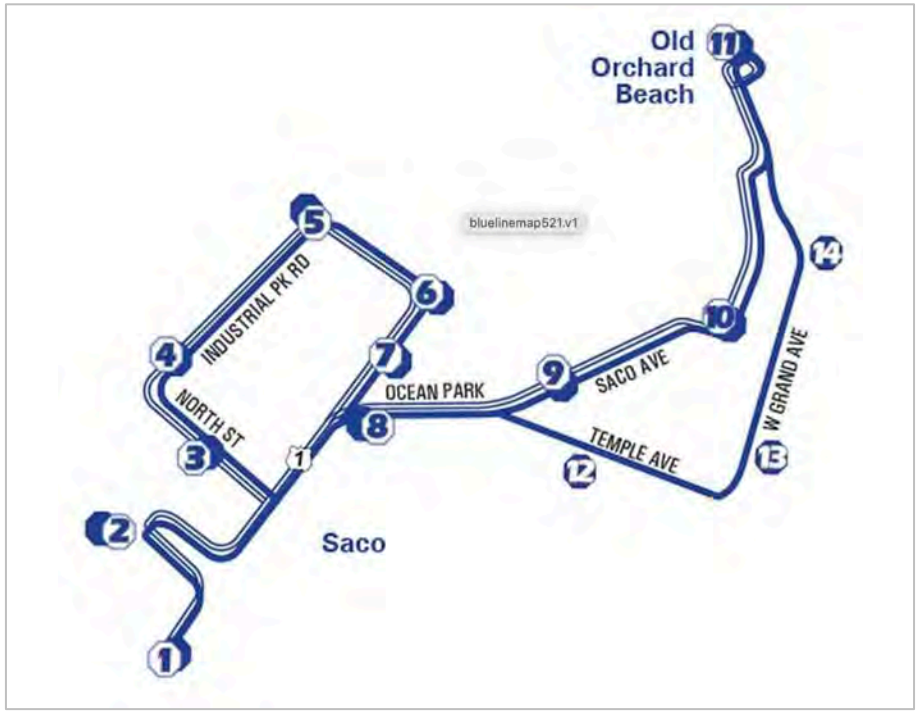
Improve Information

Each transit agency in the Greater Portland region provides information on its services in different ways, and the quality of information varies significantly. There is also no single source of information, either via a local website or more broadly used platform such as Google Maps. This makes it difficult for riders to learn and understand the full array of available services.

METRO's maps are clear and informative

For example, a potential rider who wants to travel from Saco to most locations in Portland won't be able to find a trip option on either the BSOOB Transit or METRO websites. This rider will not use Google Maps or third-party transit apps unless they know to search two different websites to plan their trip. Potential new riders often won't know they have to search multiple websites, and nor will short-term visitors who make up a significant proportion of the summertime population.

BSOOB Transit's maps have less detail and are difficult to interpret



Ways to make information easier for the public to find are for all operators to:

- Provide transit information through a single website with a real-time regional transit map, schedule, and other information.
- Provide information in the same formats across all systems.
- Publish GTFS-RT files of schedule information for third-party applications such as Google Maps and Transit App.
- Provide a common real-time information source for all transit agencies; consider an already-available provider, such as Transit App, which requires little to no staff time to keep updated and provides a useful, intuitive interface that reaches many people.

Develop Regional Route-Numbering and -Naming Conventions

Each provider currently develops its own route-naming conventions. For local routes, METRO and SPBS use a route number and a name that describes the area or areas served. This is, by far, the most common approach to route numbering and naming used in the United States.

NNEPRA, Casco Bay Lines, RTP, and YCCAC simply name their routes. The Downeaster name is part of Amtrak's national naming convention, and Amtrak service is sufficiently different than other Greater Portland services that the name and brand is well understood. Casco Bay Lines routes are named after the islands they serve and are also well understood. RTP's and YCCAC's Lakes Region Explorer and Southern Maine Connector names provide a general idea of the areas served.

BSOOB Transit mostly gives their year-round routes color names, and in some cases two routes are numbered and named together to represent variations or directions of a similar alignment. This naming convention does not indicate areas served.

The simplest way to implement a regional naming convention would be to use a number and name for all routes, including express bus routes but excluding the Downeaster and ferry services.

Use DiriGO on All Systems

METRO, SPBS, and BSOOB Transit have most recently focused on fare payment through the joint DiriGO system, which allows riders to pay using a mobile app or smartcard. To use this system, users load money into their DiriGO account via the app or their smartcard at CVS, 7-Eleven, or transit agency locations in the Portland area. The DiriGO system also tracks daily and monthly usage to cap fares at three times the one-way fare per day and 30 times the one-way fare per month, with any use over those levels being free.

DiriGO makes fare payment easier and enables fare capping

Standardized fare payment and fare capping could be implemented throughout the region by expanding use of the DiriGO system to Casco Bay Lines, RTP's Lakes Region Explorer, and YCCAC's Southern Maine Connector. Through investment in fare technology, RTP, YCCAC and CBL may be able to accept DiriGO stored-value payment. Establishment of regional fare capping and transfer policies between the five bus providers would ensure more seamless, affordable travel among systems. Although more complicated, it may be possible for the Downeaster to accept DiriGO, as Amtrak has other joint fare agreements with local transit providers in the United States.

6. IMPROVE BUS NETWORK DESIGN

A comprehensive redesign of services could make them more attractive to more people.

As described in detail in the Transit Together route profiles, the design of many existing bus routes in the Greater Portland region is circuitous and/or overly complex, and there are many opportunities for improvement. The redesign of individual services based on fundamental service design principles can make service more convenient for the overwhelming majority of existing riders, and attract new riders. These types of changes can be implemented on a route-by-route basis but

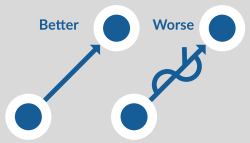
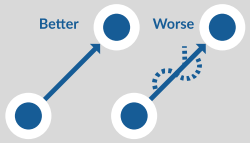
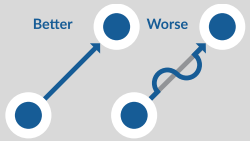
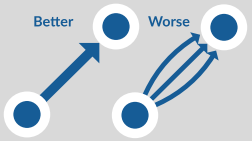
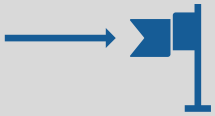
could produce the greatest improvements if implemented systemwide or regionally—for example, comprehensively redesigning Biddeford-Saco-Old Orchard Beach, South Portland, Maine Mall area, and Portland Peninsula service all at once.

Network design improvements could also include using a 'family of services' approach to assign different service types to different markets. For example, rail can be matched with high-volume markets, express bus with long-distance markets, local bus with moderate-volume local markets, and microtransit with critical low-volume markets. This approach is already used to some extent in the Greater Portland region but could be strengthened.

Additional network design opportunities include:

- Better connections between air, rail, ferry, and bus service. In this respect, it appears that the potential relocation of the Portland Downeaster station to the mainline could significantly improve connections.
- Sharing costs and vehicles for 'cross-border' services, which could make service more seamless for riders.
- Changes to or the development of new seasonal services, particularly in the Old Orchard Beach area.

Using service-design best practices can improve service

	**Simple is better than complicated:** A simpler route structure will attract more riders than a complex system.
	**Alternative patterns should be minimized:** Alternative patterns should be provided only when there is a very sound basis for doing so.
	**Fast is better than slow:** Virtually all passengers prefer to get places faster rather than slower. Service will be made faster by making it more direct, consolidating stops, and—where possible —implementing transit-priority measures.
	**Routes should operate along a direct path:** Routes should not deviate from the most direct alignment unless there is a compelling reason.
	**Major routes should operate along arterials:** Keeping bus routes on major arterials will make transit service easier to understand.
	**A few good choices are better than many mediocre choices:** Providing better service on fewer routes can provide most riders with better choices.
	**Routes should serve well-defined markets:** Reconfiguring service around clearly defined markets will make service easier to understand, provide a basis for developing premium bus services, and minimize service duplication.
	**Routes should operate to and from strong anchors:** Routes should have a strong anchor on at least one end or, where possible to serve demand in both directions, at both ends.
	**Routes should be bi-directional:** Wherever local street networks allow, routes should operate along the same alignment in both directions to make it easy for riders to know how to make their return trip

7. IMPROVE BUS STOPS

Stop improvements make using transit easier and more comfortable.

As described by TransitCenter, which is a foundation that works to improve public transit in the United States: *"Bus stops are the front door to American public transit systems: they are where half of transit riders wait for service, they are a visual representation of transit service in every region in the country, and they can and do serve all transit riders. Great bus stops are comfortable places to wait, surrounded by safe and accessible walking conditions—and they are important drivers of bus ridership and customer satisfaction."*[1]

Example Bus Stop Hierarchy and Amenity Types

SIGNATURE STOP	ENHANCED STOP	REGULAR STOP	BASIC STOP
USE: Stops with high boarding volumes Stops near major activity centers **STANDARD ELEMENTS:** Distinctive standardized design Large shelter with seating and lighting Raised platform/level boarding Real-time schedule information and maps Bicycle racks Trash receptacles **OTHER POTENTIAL ELEMENTS:** Off-board fare payment Local maps and information Landscaping Artwork Scooter coral **RIDERSHIP:** 200+ daily boardings **NUMBER OF STOPS:** 11 inbound; 8 outbound 	**USE:** Stops with moderate boarding volumes **STANDARD ELEMENTS:** Distinctive standardized design Medium-sized shelter with seating Raised platform/level boarding Real-time schedule information Maps Lighting Bicycle racks Trash receptacle **OTHER POTENTIAL ELEMENTS:** Off-board fare payment Local maps and information Landscaping Scooter coral **RIDERSHIP:** 50-199 daily boardings **NUMBER OF STOPS:** 31 inbound; 15 outbound 	**USE:** Stops with lower boarding volumes **STANDARD ELEMENTS:** Distinctive standardized design Regular-sized shelter with seating Raised platform/level boarding Bus stop sign Trash receptacle **OTHER POTENTIAL ELEMENTS:** Lighting (if street lighting insufficient) **TYPICAL RIDERSHIP:** 15-49 daily boardings **NUMBER OF STOPS:** 33 inbound; 31 outbound 	**USE:** Stops used mostly for alightings **STANDARD ELEMENTS:** Bus stop sign Bench **TYPICAL RIDERSHIP:** <15 daily boardings **NUMBER OF STOPS:** 7 inbound; 38 outbound 

[1] From Sorry to Superb: Everything You Need to Know about Great Bus Stops, TransitCenter, October, 2018.

The most effective way to improve stops and ensure consistency throughout the region would be to implement a regional program that develops a hierarchy of stops based on boarding levels and other factors, and that defines the specific elements that should be implemented at each type of stop.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