TRANSIT STRATEGIES

OUTLYING TRANSIT HUBS

In small and medium-size cities, most transit services operate to and from downtown. This is because downtowns usually represent that largest market for transit service, and often the only market that is large enough to support transit service. However, as cities grow, the amount of travel between non-downtown destinations grows. As this happens, the demand for transit service between non-downtown destinations also grows.

In cities with grid-based road networks (for example, Phoenix and Houston), this demand is typically met by developing a grid-based transit network and growing it outward with demand. However, in most older urban areas, as well as in many newer ones, the road network is radial and not suitable to a grid-based transit network, or even a partial grid network. In these types of cities, most transit systems provide connections between non-downtown area by developing a hub and spoke-type network in which service to non-downtown locations is provided through outlying transit hubs. Outlying transit hubs are a type of transit center, although some cities reserve that terminology for transfer facilities located in a downtown. The two terms—outlying hubs and transit centers—are used interchangeably in this strategy paper.

MOUNTLAKE TERRACE TRANSIT CENTER (MOUNTLAKE TERRACE, WA)

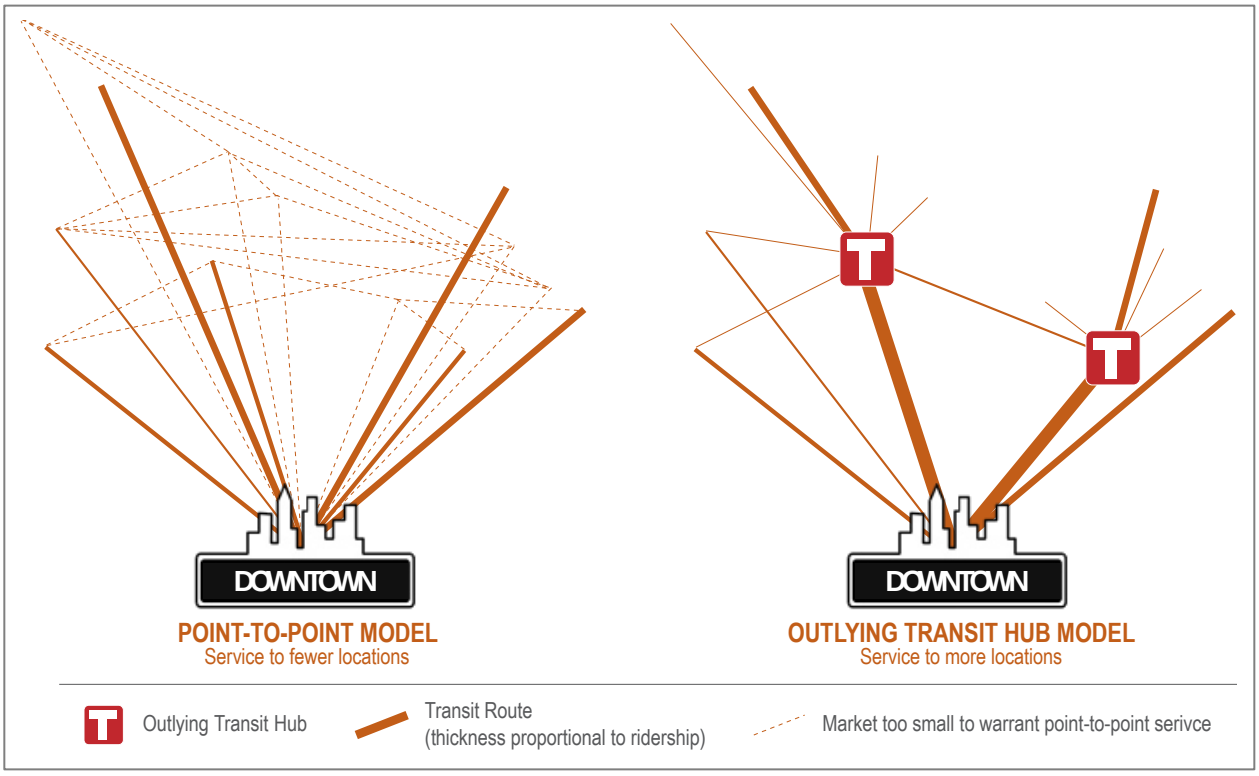
MISSION TRANSIT CENTER (MISSION, KS)

SERVICE WITH OUTLYING TRANSIT HUBS

Outlying transit hubs are an important way to develop a more interconnected network that serves more locations. While most passengers prefer one-seat service to connecting service, many markets are too small to support transit service on their own. However, when passengers are "funneled" through a transit center, they can be combined into volumes that can support connecting transit service. This, in turn, can make service possible to areas where service could not otherwise be cost-effective. As shown in the diagram on the following page, service can be provided between many more areas: between more outlying areas and downtown, and between more outlying areas.

This model is very similar to that used by most large airlines. For example, American Airlines flies planes from many small markets to Dallas/Fort Worth International Airport (DFW). From there, passengers can connect to nearly anywhere in the United States, including other small markets as well as to destinations throughout the world. Without service through DFW, many of those small markets would not have any air service, or at least much less. In the same manner, without outlying transit hubs, many small communities and neighborhoods would not have transit service.

POINT-TO-POINT VERSUS OUTLYING TRANSIT HUB MODEL



OUTLYING TRANSIT HUB SERVICE EXAMPLES

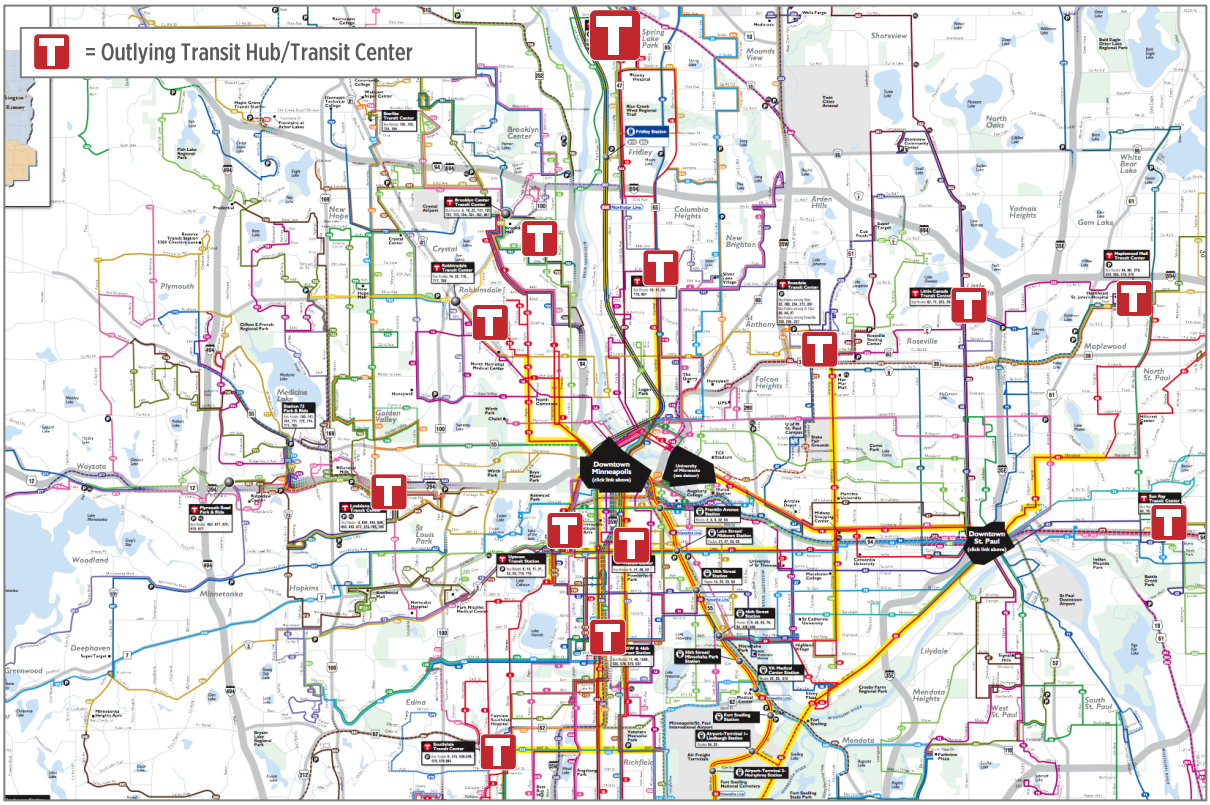
MINNEAPOLIS/ST. PAUL'S METRO TRANSIT

Metro Transit provides service to over 1,000 square miles in the Minneapolis/St. Paul area. Most services are focused on downtown Minneapolis and downtown St. Paul. However, Metro Transit also serves trips to many other areas and does so, in part, through the use of 14 outlying transit hubs. Most are located along or at the end of routes that provide frequent service (highlighted in yellow on the map on the following page), and all serve three or more routes (with most serving more).

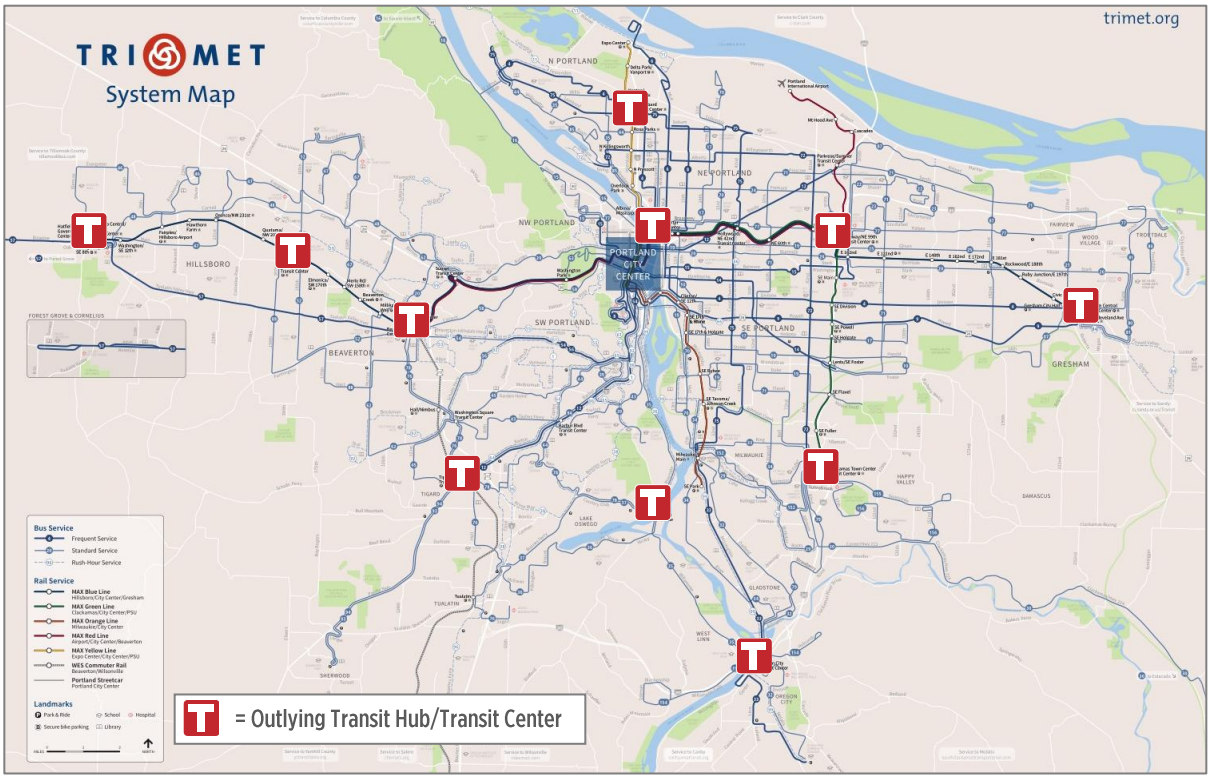
PORTLAND'S TRIMET

In the Portland, OR area, TriMet operates a network of light rail lines and bus routes. Its system consists of a large number of radial rail lines and bus routes to and from downtown Portland, grid-like crosstown routes to the east of downtown, and feeder routes to outlying transit hubs. Most hubs are located along TriMet's light rail lines and frequent bus routes. At most of its transit centers, local routes act as feeders to the light rail lines and frequent bus routes. This is a common model with transit centers along rail lines—bus routes feed the rail lines, which provide mainline service to and from downtown and other high volume locations.

METRO TRANSIT OUTLYING TRANSIT HUBS (MINNEAPOLIS/ST. PAUL, MN)



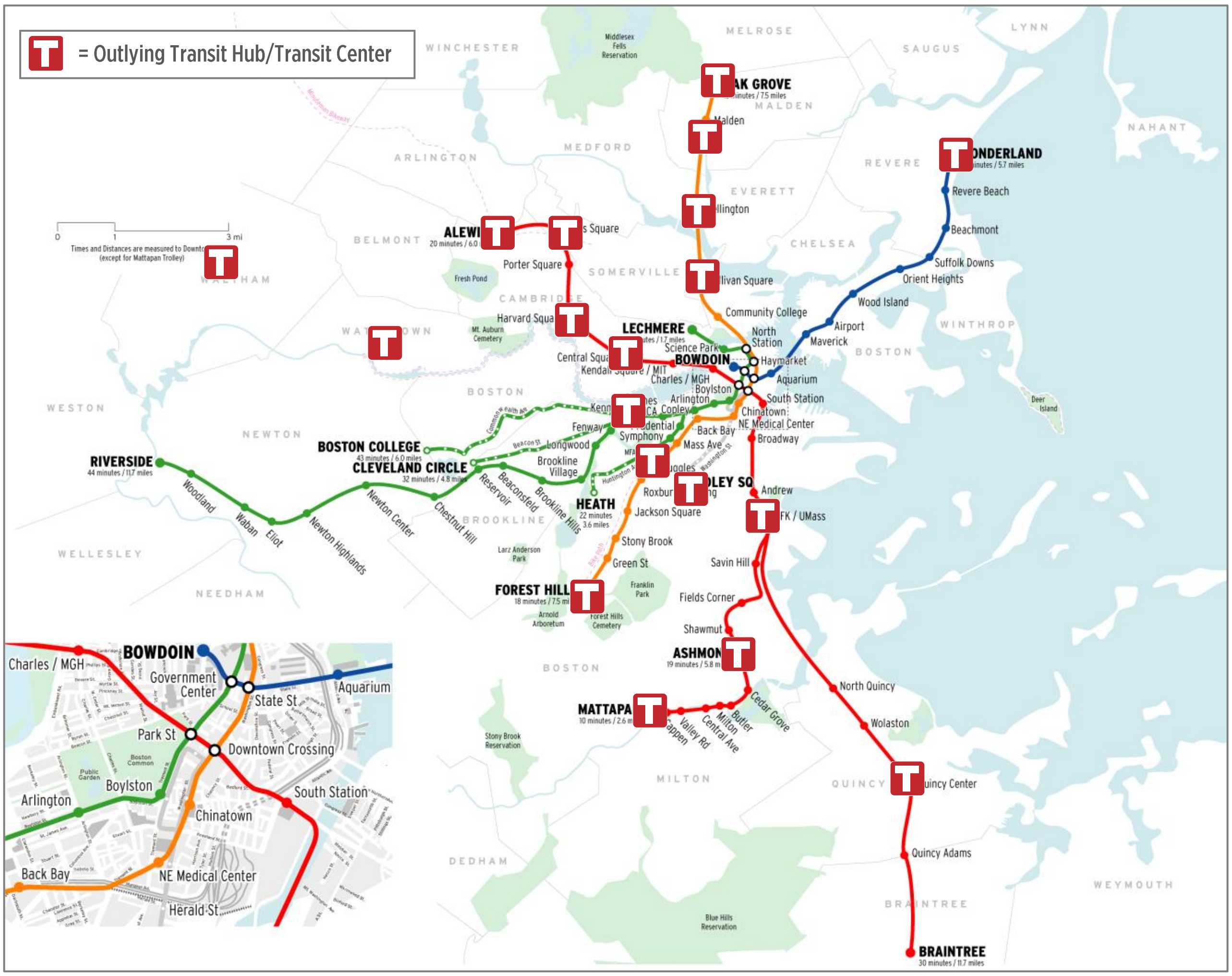
TRIMET OUTLYING TRANSIT HUBS



BOSTON'S MBTA

Greater Boston is an area within an extensive rapid transit system. The MBTA system is designed so that the highest volume corridors are served by the rapid transit system (which includes light rail), and bus services fill gaps in the rapid transit system (including crosstown services) and feed the rapid transit system. As such, most of the MBTA's outlying transit hubs are at rapid transit stations. Exceptions include Dudley Station, which is the terminal station for the Washington Street Silver Line BRT line; Lynn and Salem, which are along a commuter rail line; and Waltham Center and Watertown Square, which are two suburban locations to the west of Boston.

MBTA OUTLYING TRANSIT HUBS (BOSTON, MA)



Nearly all bus routes that serve these transit hubs act as feeders to rapid transit, BRT, or other frequent bus routes. Few continue to downtown Boston, and those that do are designed to fill gaps in the rapid transit system and operate via a rapid transit station incidentally rather than to duplicate rapid transit service to downtown.

CHARACTERISTICS OF OUTLYING TRANSIT HUBS

Beyond the transit service that is provided, outlying transit hubs or transit centers can be thought of as a place where people make transit connections—either access to transit, egress from transit, or connections between transit services. The major difference between outlying transit hubs and downtown transit centers and regular stops is that a much larger proportion of trips involve connections than access and egress, and thus transferring passengers make up the

greatest volume of people at an outlying hub. As described by Metro Transit in the Minneapolis/St. Paul area: "Transit centers are sheltered waiting areas where several bus routes meet. Customers converge at these 'hubs' to take advantage of route-to-route transfers and access to more destinations."

The size of transit centers ranges from small to very large, depending upon the volume of buses serving the facility and associated passenger volumes. Some are simple on-street facilities that are effectively large stops, but most are purpose-built off-street facilities that provide a wide range of amenities, including parking and climate-controlled waiting areas.

ON-STREET TRANSIT CENTER (RENTON TRANSIT CENTER, RENTON, WA)

OFF-STREET TRANSIT CENTER (OXNARD TRANSIT CENTER, OXNARD, CA)

Common features of outlying transit centers include:

Bus Operating Facilities

- Bus berths and bus circulation areas

Passenger Amenities

- Enclosed waiting area
- Restrooms
- Real-time information
- Shelters
- Seating
- Schedule information

- Transit system maps
- Local maps and information
- Wi-Fi
- Landscaping
- Public art

Access/Egress

- Passenger drop-off area
- Parking
- Bicycle storage
- Bikeshsre
- Carshare

OUTLYING TRANSIT HUB EXAMPLES

MINNEAPOLIS/ST. PAUL METRO TRANSIT

Metro Transit has 16 designated transit centers, 14 of which function as outlying transit hubs. These facilities range from relatively small to very large.

Robbinsdale Transit Center

The Robbinsdale Transit Center was developed using a former police and fire station. It serves five routes and features a climate controlled waiting area and restrooms.

Rosedale Transit Center

The Rosedale Transit Center is located at the Rosedale Shopping Center and consists of stops along the east side of the shopping center. There is also a small waiting area within the shopping center. It serves five routes.

ROBBINSDALE TRANSIT CENTER (ROBBINSDALE, MN)

ROSEDALE TRANSIT CENTER (ROSEDALE, MN)

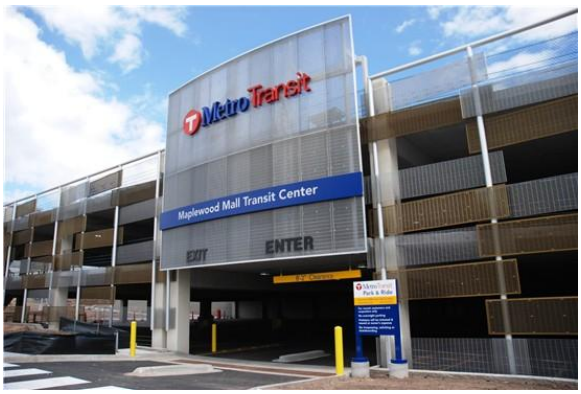
Maplewood Mall Transit Center

The Maplewood Mall Transit Center is located in the southwest corner of the Maplewood Mall parking area. Between the parking structure and adjacent surface lots, the transit center provides 1,000 total parking spaces, of which nearly 600 are covered. In addition, the transit center has a lobby area, geothermal heating and cooling system, LED lighting, and outdoor bike racks. Metro Transit, Maplewood Mall, and the City of Maplewood also improved pedestrian and bicycle access to the transit center as part of its development.

South Bloomington Transit Center

The South Bloomington Transit Center is a relatively simple facility that is served by four routes and has 200 surface parking spaces. Although it is a simple facility, it includes enclosed, climate-controlled waiting areas for improved comfort, real-time information, and rentable bike lockers.

MAPLEWOOD MALL TRANSIT CENTER (MAPLEWOOD, MN)



SOUTH BLOOMINGTON TRANSIT CENTER (MINNEAPOLIS, MN)

CHARLOTTE'S CATS

In Charlotte, NC, the Charlotte Area Transportation Authority (CATS) has four transit centers, three of which serve as outlying transit hubs. The Rosa Parks Place Community Transit Center is an on-street neighborhood-scaled facility that provides connections between four routes and can serve up to 10 buses. It provides weather-protected waiting areas, sidewalks, landscaping, and public art. CATS also provides on-site surveillance during service hours.

ROSA PARKS COMMUNITY TRANSIT CENTER (CHARLOTTE, NC)

MEMPHIS' MATA

Memphis' MATA has four transit centers, two of which are outlying transit hubs and both of which provide climate-controlled waiting areas, route and schedule information, and customer service personnel who assist with trip planning and sell passes. Airways Transit Center is the newest facility and serves as a hub for both MATA and Greyhound, which relocated from downtown Memphis. MATA owns the transit center, and Greyhound is a tenant.

AIRWAYS TRANSIT CENTER (MEMPHIS, TN)

The new transit center was designed to be the major focal point for local transit service and improve connections with Greyhound. It also provides better connections to Memphis International Airport, which is less than two miles away.

POTENTIAL USE OF OUTLYING TRANSIT HUBS IN MIDDLE TENNESSEE

At the present time, nearly all Nashville MTA and RTA services are radial services that operate to and from downtown Nashville. However, as the city and region grow outward, more and more trips are made between areas outside of downtown. In addition, many MTA routes are long and operate circuitously along their outer ends or with multiple branches (examples are Routes 12 Nolensville Pike and 23 Dickerson Road). In large part, this is because outlying service traditionally has not been designed around outlying transit hubs.

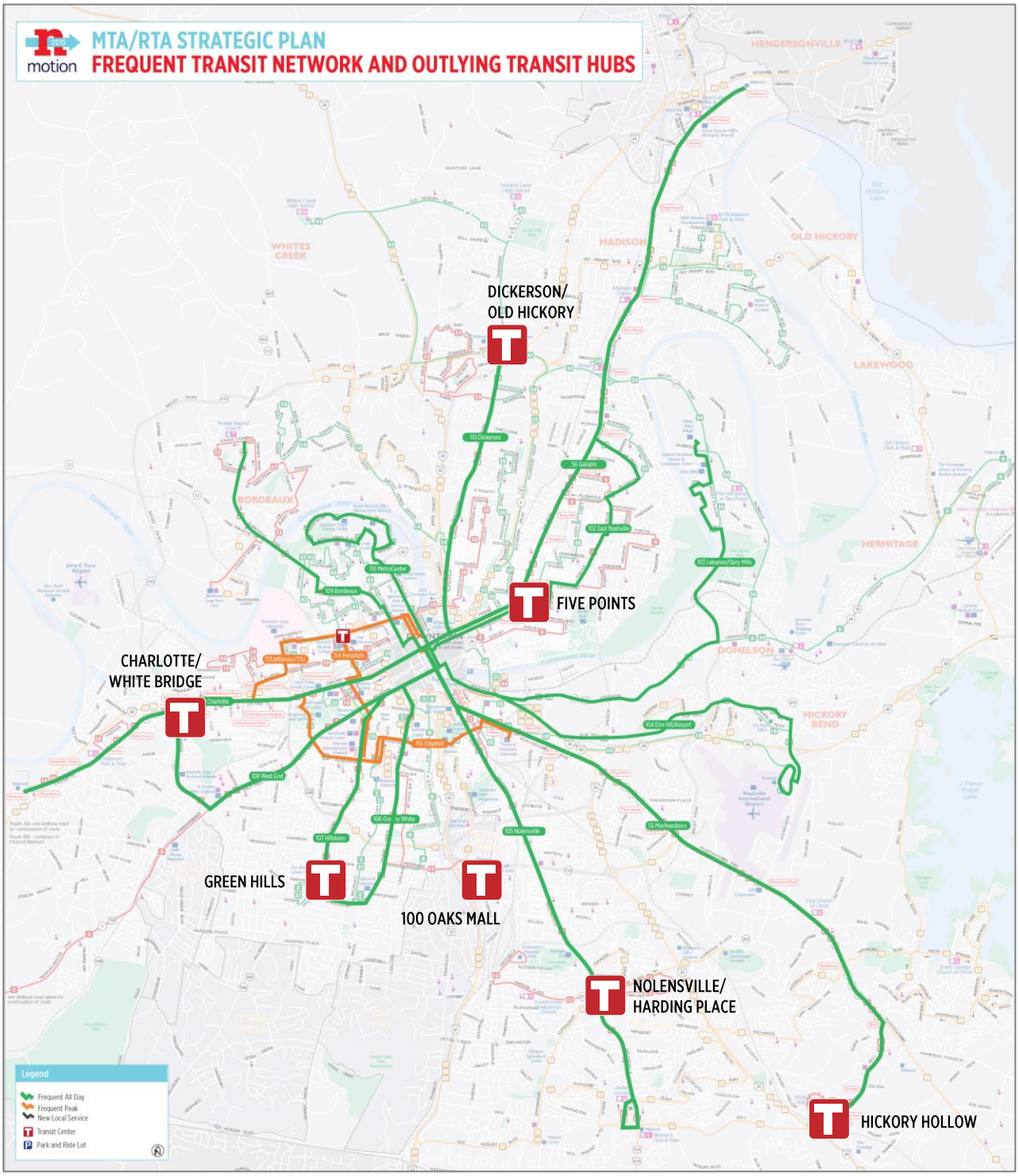
Opportunities for outlying transit hubs have been studied, both in Nashville and in Cool Springs. The Cool Springs Circulation Study proposed a transit center for that growing area; if express or commuter service is offered to Cool Springs in the future (either by RTA or Nashville MTA), a new hub will certainly be needed. Nashville MTA identified two locations for mini-outlying hubs and received funding for construction through the Nashville Area Metropolitan Planning Organization's Active Transportation Program. The two hubs will be located in North Nashville in the area around 26th Avenue N and Clarksville Pike and in South Nashville around the Nolensville Pike and Harding Place area.

Further development of outlying hubs in Middle Tennessee could:

- **Provide service to areas that cannot be served cost-effectively with long radial routes**
- **Improve service between non-downtown locations**
- **Provide opportunities to "right size" and simplify service**
- **Provide focal points for local area service**
- **Provide connecting points between RTA and local services**
- **Provide connections with first mile/last mile services**
- **Provide more comfortable waiting environments for passengers**

In Davidson County—especially with the development of a Frequent Transit Network—there would be many opportunities to develop outlying transit hubs to provide the benefits presented above. A number of these potential opportunities are shown in the figure on the following page.

FREQUENT TRANSIT NETWORK AND POTENTIAL OUTLYING TRANSIT HUBS



In the nine counties surrounding Davidson County, there are two outlying transit centers, which are the Clarksville Transit Center in Clarksville and the Rover Transit Center in Murfreesboro. The Clarksville Transit Center serves as the hub for Clarksville Transit System services but does not provide connections between local and regional services. The Rover Transit Center provides connections between two RTA routes (84X Murfreesboro Express and 96X Murfreesboro

Relax and Ride) and local Rover transit services and is Middle Tennessee's only outlying transit hub that provides local and regional connections.

Looking forward, as service is expanded and new services are developed in outer counties, connections between Nashville MTA, RTA, and local services will become more important. Desirable future connections would include connections between RTA and Nashville MTA services outside of downtown Nashville; between RTA and local services such as Clarksville Transit, Franklin Transit, and Murfreesboro Rover; and, potentially, between local services in outer counties and Nashville MTA services. Potential locations for these connections at outlying transit hubs could include:

Northwest

- Clarksville

Northeast

- Goodlettsville, Hendersonville, and Gallatin, if local services are developed in those communities

East

- At Music City Star Stations, if local services are developed

Southeast

- La Vergne

South

- Franklin
- Cool Springs
- Brentwood, if local services are developed