

SCENARIOS DETAILS: IMPROVE EXISTING SERVICES & DEVELOP PREMIUM SERVICES

MAKE SERVICE FASTER

Virtually all travelers want to reach their destination as quickly as possible, and the ability to get most places much faster by car than by transit discourages many people from using transit. A common theme heard through the values exercise conducted at the beginning of this project has been that “transit should be as fast as driving.” In most cases, this is not possible. However, it is possible to make transit faster than it is today, and if transit travel times can be reduced, more people will use transit for more trips. Strategies to make transit service faster include:

- Develop new services that emphasize speed:
 - Light rail
 - Bus Rapid Transit
 - Rapid Bus
 - Commuter Rail
 - Freeway BRT
 - Express Bus on Shoulder
- Implement transit priority measures, such as dedicated rights-of-way or signal priority
- Make existing services more direct to reduce in-vehicle travel times
- Consolidate stops to better balance the need to provide both faster service and convenient walk distances and times

NEW SERVICES THAT EMPHASIZE SPEED

Fast services that appear to be most appropriate for Middle Tennessee include light rail, Bus Rapid Transit, Rapid Bus, commuter rail, Freeway BRT, and express bus on shoulder service:

LIGHT RAIL

Light rail (LRT) is electric powered rail service that is designed to operate in high volume urban corridors. It typically operates in dedicated lanes, but can also operate in mixed traffic (see Figure 1). Light rail

FIGURE 1 | LIGHT RAIL SERVICE (PORTLAND, OR AND PITTSBURGH, PA)



vehicles, which typically can carry approximately 200 passengers, can be operated independently or as multiple units to increase capacity. Stations are typically one-half to one mile apart.

BUS RAPID TRANSIT

Bus Rapid Transit (BRT) services are designed to provide bus service that is similar in quality to light rail (see Figure 2). Enhanced features include:

- Dedicated transit-only lanes
- Stations with level boarding and real-time information, with similar spacing as for light rail
- Off-board fare payment (allowing passengers to board at all doors, reducing delays)
- Traffic signal priority (early green lights for buses only, and extension of green lights for approaching buses)
- Higher capacity vehicles
- Specialized branding
- Frequent service

FIGURE 2 | BUS RAPID TRANSIT (CLEVELAND HEALTHLINE BRT AND BOSTON SILVER LINE)



RAPID BUS

Rapid Bus services provide most of the same features as BRT except without exclusive transit lanes. Rapid Bus service also tends to have more modest stations, and closer station spacing (see Figure 3). MTA's BRT-lite service is a low cost version of Rapid Bus service.

FIGURE 3 | RAPID BUS (LA METRO RAPID AND SEATTLE RAPIDRIDE STOP)



COMMUTER RAIL

Commuter rail provides high capacity regional service, with electric or diesel trains typically connecting outlying communities to city centers (see Figure 4). Service is most frequent during peak commute periods in the peak direction. Trains often share existing railways with other freight and passenger rail services. Stations are typically one to four miles apart, allowing trains to operate at higher speeds than light rail. RTA currently runs Music City Star commuter rail service between Nashville and Lebanon.

FIGURE 4 | COMMUTER RAIL (MINNEAPOLIS NORTHSTAR AND NASHVILLE MUSIC CITY STAR)



FREEWAY BRT

Freeway BRT is an emerging mode in which buses operate in high speed restricted freeway lanes and with stations constructed with the freeway rights-of-way (see Figure 5). The restricted lanes can be High Occupancy Vehicle (HOV) lanes, High Occupancy Toll (HOT) lanes, or other forms of managed lanes. In nearly all cases, these lanes are also used by other specific types of traffic, but with measures to limit total volumes to levels that ensure free flowing traffic.

FIGURE 5 | FREEWAY BRT STATIONS (SEATTLE MOUNTLAKE TERRACE STATION AND MINNEAPOLIS 46TH STREET STATION)



EXPRESS BUS ON SHOULDER

One way to provide travel time advantages to express bus service is to operate service on freeway shoulders (see Figure 6). Bus-on-shoulder operations make service more reliable by providing the ability to navigate around congestion. These policies allow buses on selected freeway and arterial shoulders in order to bypass congestion and maintain transit schedules.

FIGURE 6 | BUS-ON-SHOULDER OPERATIONS (MINNEAPOLIS AND RALEIGH, NC)



Additional information on these modes is provided in the Transit Strategies series of documents:

- Light Rail: nmotion2015.com/wp-content/uploads/2015/10/nMotion-LRT-151012_FINAL.pdf
- Bus Rapid Transit: nmotion2015.com/wp-content/uploads/2015/08/nMotion-BRT-150712_FINAL.pdf
- Rapid Bus: nmotion2015.com/wp-content/uploads/2015/09/nMotion-Rapid-Bus-150712.pdf
- Commuter Rail: nmotion2015.com/wp-content/uploads/2015/09/nMotion-Commuter-Rail-150918-Final.pdf
- Freeway BRT: nmotion2015.com/wp-content/uploads/2015/08/nMotion-Freeway-BRT-150712_FINAL.pdf
- Express Bus on Shoulder: nmotion2015.com/wp-content/uploads/2015/11/nMotion-Express-Bus_151031_FINAL.pdf

TRANSIT PRIORITY

One important way to make transit faster is to give it priority over regular traffic. In addition to, or in combination with the services described above, this can be done through the use of a variety of measures:

- **Exclusive transit lanes**, which can be developed in a number of ways, including in medians and in curb lanes.

FIGURE 7 | EXCLUSIVE BUS LANES



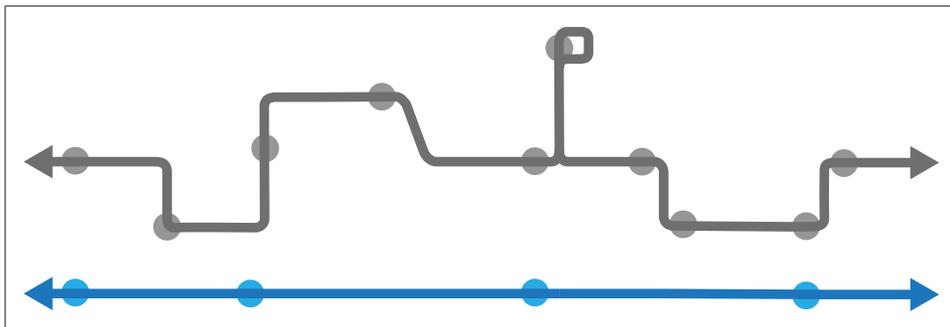
- **Queue jump lanes**, which typically substitute a short stretch of parking for a curbside bus lane that allows buses to jump to the front of the queue at bus stops or traffic signals.
- **Transit signal priority** that extends green signals for approaching buses, which allows them pass through the intersection before the light turns red and provides them with an early green signal.
- **Transit Emphasis Corridors** that combine the above measures in urban corridors with high volumes of transit service.

Additional information on transit priority is provided in the Transit Priority Transit Strategy document: nmotion2015.com/wp-content/uploads/2015/10/nMotion-Transit-Priority-151001.pdf

MAKE SERVICE SIMPLER AND MORE DIRECT

Because Nashville MTA operates a small number of routes relative to Nashville’s size, it attempts to do many things with many of its routes. The result is that some service is very complicated, with many route variants and indirect service. Straighter, faster service is generally preferred, and would make most existing riders happier and attract new riders.

FIGURE 8 | DIRECT AND INDIRECT SERVICE



Faster, more direct service will attract more riders than slower, indirect service. It is also less expensive to operate.

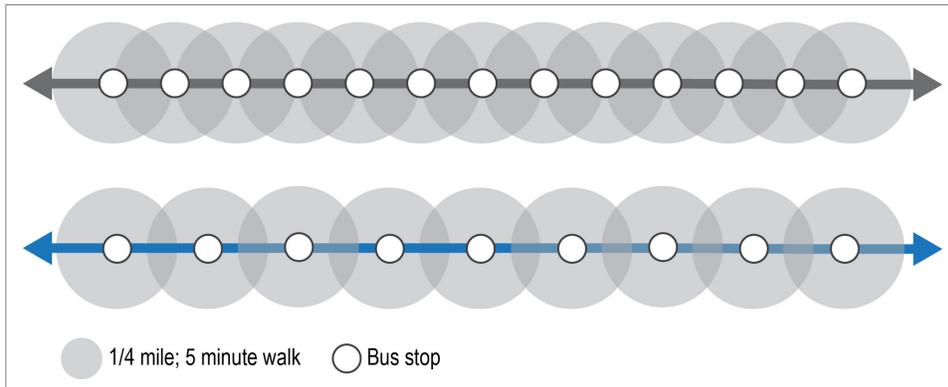
Additional information on making existing service simpler and more direct is provided in the Route Simplification Transit Strategy document: nmotion2015.com/wp-content/uploads/2015/10/nMotion-Route-Simplification-151018_FINAL.pdf

CONSOLIDATE STOPS

Another important way to make service faster and more reliable is to consolidate stops to achieve a better balance between walk distances and travel times. Bus stops are one of the most significant reasons that transit service is slower than automobile travel.

With more stops, it is easier for passengers to get to and from transit, but many stops also slow service and degrade reliability. With fewer stops, it takes some passengers longer to get to and from the stop, but service is faster and more reliable. Most riders want service that balances convenience and speed, and the number and location of stops is a key component of determining that balance. Moreover, as the success with Bus Rapid Transit (BRT) and other forms of enhanced bus have shown, most passengers prefer a greater emphasis on faster service than on shorter walks. Stop consolidation done right makes service faster and more attractive while maintaining convenient access.

FIGURE 9 | AREA WITHIN A FIVE MINUTE WALK WITH EIGHT STOPS PER MILE VERSUS FIVE STOPS PER MILE



Additional information on stop consolidation is provided in the Stop Consolidation Transit Strategy document: nMotion2015.com/wp-content/uploads/2015/09/nMotion-Stop-Consolidation-150902.pdf

IMPROVEMENTS INCLUDED IN SCENARIOS

Scenario 1 would implement a full range a new fast services, including light rail, new and improved commuter rail service, and Freeway BRT. Scenario 2 would focus on bus-related improvements – similar to those included in Scenario 1 minus light rail and new commuter and with fewer new faster services. Scenario 3 would be much more limited in the development of new types of faster service – Rapid Bus and Express bus on shoulder service. All three scenarios would include changes to make service more direct and to consolidate stops.

TABLE 1 | SUMMARY OF TRANSIT PRIORITY MEASURES BY SCENARIO

	Scenario 1 Comprehensive Regional System	Scenario 2 Bus-Focused Expansion	Scenario 3 Modest Improvements
Fast Services			
Light Rail	4 lines	--	--
BRT	3 lines	6 lines	--
Rapid Bus	9 lines	10 lines	7 lines
Commuter Rail	NW Corridor & MCS	MCS	MCS
Freeway BRT	11 routes	11 routes	None
Express Bus on Shoulder	6 routes	6 routes	21 routes
Make Service More Direct	Similar improvements in all three scenarios		
Consolidate Stops	Similar improvements in all three scenarios		

SCENARIO 1 COMPREHENSIVE REGIONAL SYSTEM

Scenario 1 includes making service more direct, stop consolidation, and the extensive use of transit priority (see Figure 8 and Figure 9):

LIGHT RAIL

Scenario 1 includes the development of four light rail lines:

- Route 12L Nolensville light rail in the Nolensville Pike corridor
- Route 50L Charlotte light rail in the Charlotte Pike corridor
- Route 55L Murfreesboro light rail in the Murfreesboro Pike corridor
- Route 56L Gallatin light rail in the Gallatin Pike corridor

For additional information on light rail service, see the Commuter Rail Scenario Details document.

BUS RAPID TRANSIT

BRT would be developed in three corridors:

- Route 3B West End BRT in the Broadway/West End Avenue corridor
- Route 7B Hillsboro BRT in the Broadway/21st Avenue South corridor
- Route 43B Dickerson BRT in the Dickerson Pike corridor

For additional information on the BRT services included in Scenarios 1 and 2, see the Bus Rapid Transit Scenario Details document.

RAPID BUS

Scenario 1 includes nine metro area Rapid Bus lines and four Regional Rapid Bus lines:

Metro Area

- Route 4R East Nashville Rapid between Gallatin Road at Ardee Avenue and downtown via areas east of Gallatin Pike
- Route 9R MetroCenter Rapid between MetroCenter and downtown
- Route 17R 12th Avenue South Rapid via 21st Avenue South and 12th Avenue South
- Route 18R Elm Hill/Airport Rapid between Murfreesboro BRT and downtown Nashville via Nashville International Airport
- Route 22R Bordeaux Rapid between Bordeaux and downtown via Clarksville Pike
- Route 25R Edgehill Rapid between Charlotte Pike and Trevecca Nazarene University via Edgehill Avenue
- Route 29R Jefferson/TSU Rapid between Charlotte Pike and downtown Nashville via TSU and Jefferson Street
- Route 31R Hospitals Rapid between Jefferson Street and Blakemore Avenue via Metro General Hospital, Saint Thomas Midtown Hospital, and Vanderbilt Medical Center
- Route 34R Opry Mills Rapid, between Gallatin Pike and downtown Nashville via Opry Mills

Regional

- Route 80R Gallatin between Gallatin and the end of the Gallatin Pike light rail line
- Route 81R Nolensville between Nolensville and the end of the Nolensville Pike light rail line
- Route 86R Smyrna/La Vergne Rapid between Smyrna and La Vergne and downtown Nashville via Murfreesboro Pike and I-24
- Route 96R Murfreesboro Rapid between Murfreesboro and downtown Nashville via Murfreesboro Pike and I-24

For additional information on Rapid Bus services included in all three scenarios, see the Rapid Bus Scenario Details document.

FIGURE 8 | SCENARIO 1 LIGHT RAIL, BRT, AND RAPID BUS SERVICES

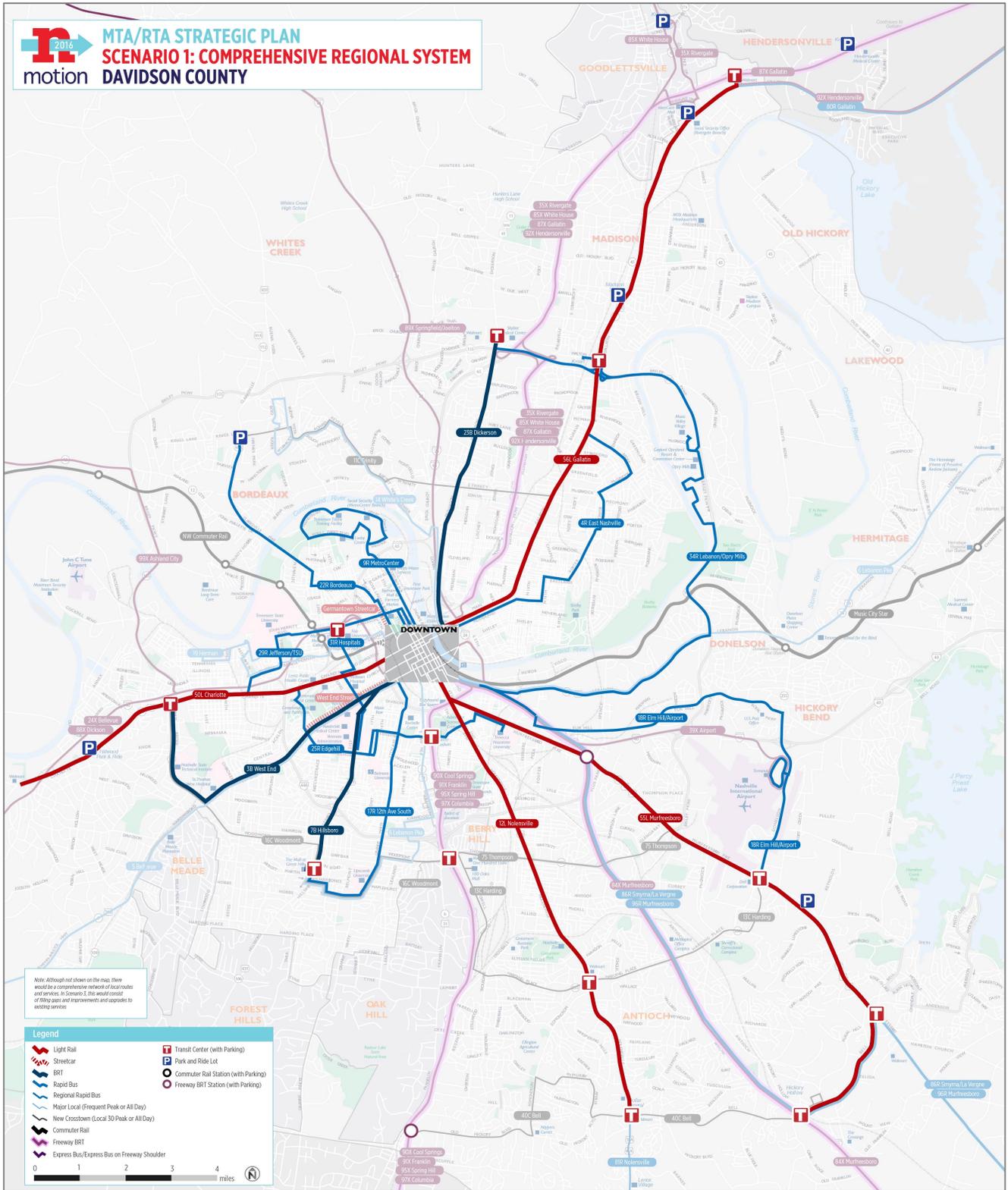
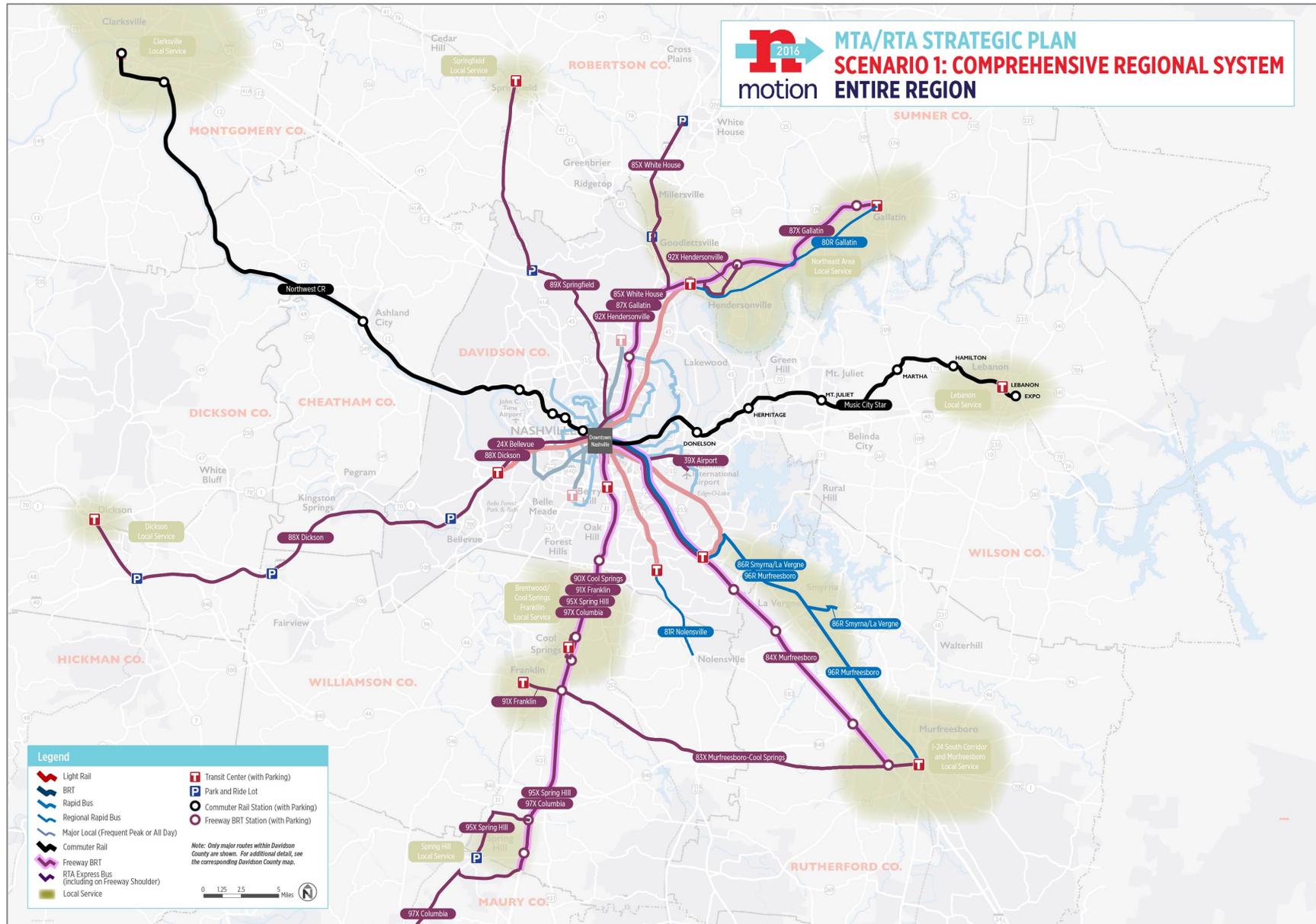


FIGURE 9 | SCENARIO 1 COMMUTER RAIL, FREEWAY BRT, EXPRESS BUS ON SHOULDER, AND REGIONAL RAPID SERVICES



COMMUTER RAIL

Scenario 1 includes major improvements to Music City Star service and the development of Northwest Corridor commuter rail. Improvements to Music City Star service would include an extension to Lebanon’s planned Expo Center, seven day a week service, more frequent service, new equipment and infrastructure upgrades.

Commuter rail service would also be developed in the Northwest Corridor between Clarksville and Nashville. The details of how this service would operate are now being determined through the Northwest Corridor Transit Study (more information, see <http://www.nwcorridorstudy.com>). Based on the most recently available information:

- The line would include two stops in Clarksville, one in Ashland City, and six stations in Davidson County (including the terminal).
- Two types of service would be provided along the line: (1) service between Clarksville and Nashville, and (2) supplemental service within Davidson County.
- Service would be operated with self-propelled rail cars (Diesel Multiple Units, or DMUs) that would be similar in appearance to light rail vehicles.
- For the purposes of nMotion, Scenario 1 assumes that both services would operate with the same spans and frequencies as described above for the Music City Star (although this may change pending the recommendations of the Northwest Corridor Transit Study).
- The combination of Clarksville and Davidson County service would provide frequent light rail-like service within Davidson County – every 15 minutes during weekday peak periods and every 30 minutes at other times (including on weekends).

For additional information on commuter rail improvements included in all three scenarios, see the Commuter Rail Scenario Details document.

FREEWAY BRT

Scenario 1 includes the development of Freeway BRT facilities in three corridors:

- Northeast: Ellington Parkway/State Route 386 between Gallatin and downtown Nashville
- Southeast: I-24 as far south as Murfreesboro
- South I-65 as far south as Franklin or Spring Hill

In each Freeway BRT corridor, there would be a primary Freeway BRT route that would provide seven day a week all day service. Weekday service would operate from 5 AM to 11 PM, every 30 minutes during peak periods and every 60 minutes during other times. Weekend service would operate every 60 minutes for slightly shorter hours.

Other express and Regional Rapid routes would also use the BRT facilities. These routes, although they would operate via Freeway BRT facilities, would provide the same level of service as other express or Regional Rapid routes. In total, 11 routes would operate via the Freeway BRT facilities:

I-24 South

- Route 84X Murfreesboro Express (Freeway BRT)
- Route 86R Smyrna/La Vergne Rapid (Regional Rapid Bus)
- Route 96R Murfreesboro Rapid (Regional Rapid Bus)

I-65 South

- Route 90X Cool Springs Express (Express/Commuter)
- Route 91X Franklin Express (Freeway BRT)



- Route 95X Spring Hill (Express/Commuter)
- Route 97X Columbia (Express/Commuter)

Ellington Parkway/State Route 386

- Route 85X White House Express (Express/Commuter)
- Route 87X Gallatin Express (Freeway BRT)
- Route 89X Springfield (Express/Commuter)
- Route 92X Hendersonville Express (Express/Commuter)

For additional information on the Freeway BRT services included in Scenarios 1 and 2, see the Freeway BRT Scenario Details document.

EXPRESS BUS ON SHOULDERS

As described above, a major focus of Scenario 1 would be the development of Freeway BRT service in high ridership commuter corridors that would not be served by commuter rail. In lower volume commuter corridors, express buses would operate on freeway shoulders when regular lanes are congested. Five routes would operate in this manner:

I-24 West

- Route 89X Springfield

I-65- North

- Route 85X White House (north of I-65/State Route 386 intersection)

I-40 East

- Route 39X Airport

I-40 West

- Route 24X Bellevue
- Route 88X Dickson

For additional information on the Express Bus on Shoulder services included in all three scenarios, see the Express Bus on Shoulder Scenario Details document.

MORE DIRECT LOCAL SERVICES

In all scenarios, and as described in more detail in the Simplify Service Details documents, as a short-term way to improve service, MTA and RTA will conduct a Comprehensive Operations Analysis. This will entail an in-depth analysis of existing services to determine short-term improvements that can be made within existing budget levels.

CONSOLIDATE STOPS

In all scenarios, MTA would consolidate stops to better balance walk times and travel times. At present, MTA has bus stop spacing guidelines that are based on a combination of service area and service type. However, they have not been systematically applied and they are also based on minimum, maximum, and target spacing. The minimum spacings are very close – up to 18 stops per mile – meaning that even though the MTA's stops are very close, most meet the guidelines.

MTA will reassess these guidelines and revise them in a manner that will allow stops to be consolidated with an emphasis on improving speeds while maintaining convenient access. A secondary benefit will be that with fewer stops, MTA will be better able to improve stop facilities and amenities.

TRANSIT PRIORITY

In Scenario 1, MTA and RTA would extensively implement transit priority to speed service:

- **Exclusive Transit Lanes:** Exclusive transit lanes would be developed along four light rail and three BRT lines. In addition, and as described below, exclusive transit lanes would be included in the development of Transit Emphasis Corridors in downtown Nashville.
- **Queue Jump Lanes:** Queue jump lanes would be developed as conditions permit along 13 Rapid Bus lines
- **Transit Signal Priority:** Transit signal priority would be implemented at most intersections along the light rail, BRT, and Rapid Bus lines. It would also be implemented along Transit Emphasis Corridors (as described below), and at other key intersections with high volumes of bus service (that have yet to be determined).
- **Transit Emphasis Corridors:** Transit Emphasis Corridors would be developed in downtown Nashville to make transit service faster and more efficient.

For additional information on Transit Priority, see the Transit Priority Scenario Details document.

SCENARIO 2 BUS-FOCUSED EXPANSION

In the same manner as Scenario 1, Scenario 2 includes making service more direct and the consolidation of stops. It also includes extensive use of transit priority, but to a lesser extent than in Scenario 1 (see Figure 10 and Figure 11):

LIGHT RAIL

Scenario 2 does not include the development of light rail.

BUS RAPID TRANSIT

In Scenario 2, BRT would be the highest level of metro area service, and would be developed in six corridors:

- Route 3B West End BRT in the Broadway/West End Avenue corridor
- Route 12B Nolensville BRT in the Nolensville Pike corridor
- Route 43B Dickerson BRT in the Dickerson Pike corridor
- Route 50B Charlotte BRT in the Charlotte Pike corridor
- Route 55B Murfreesboro BRT in the Murfreesboro Pike corridor
- Route 56B Gallatin BRT in the Gallatin Pike corridor

RAPID BUS

Scenario 2 includes seven metro area Rapid Bus lines and three Regional Rapid Bus lines and three Regional Rapid routes:

Metro Area

- Route 4R East Nashville Rapid between Gallatin Road at Ardee Avenue and downtown via areas east of Gallatin Pike
- Route 7R Hillsboro Rapid in the 21st Avenue South/Hillsboro Pike corridor
- Route 9R MetroCenter Rapid between MetroCenter and downtown

FIGURE 10 | SCENARIO 2 LIGHT RAIL, BRT, AND RAPID BUS SERVICES

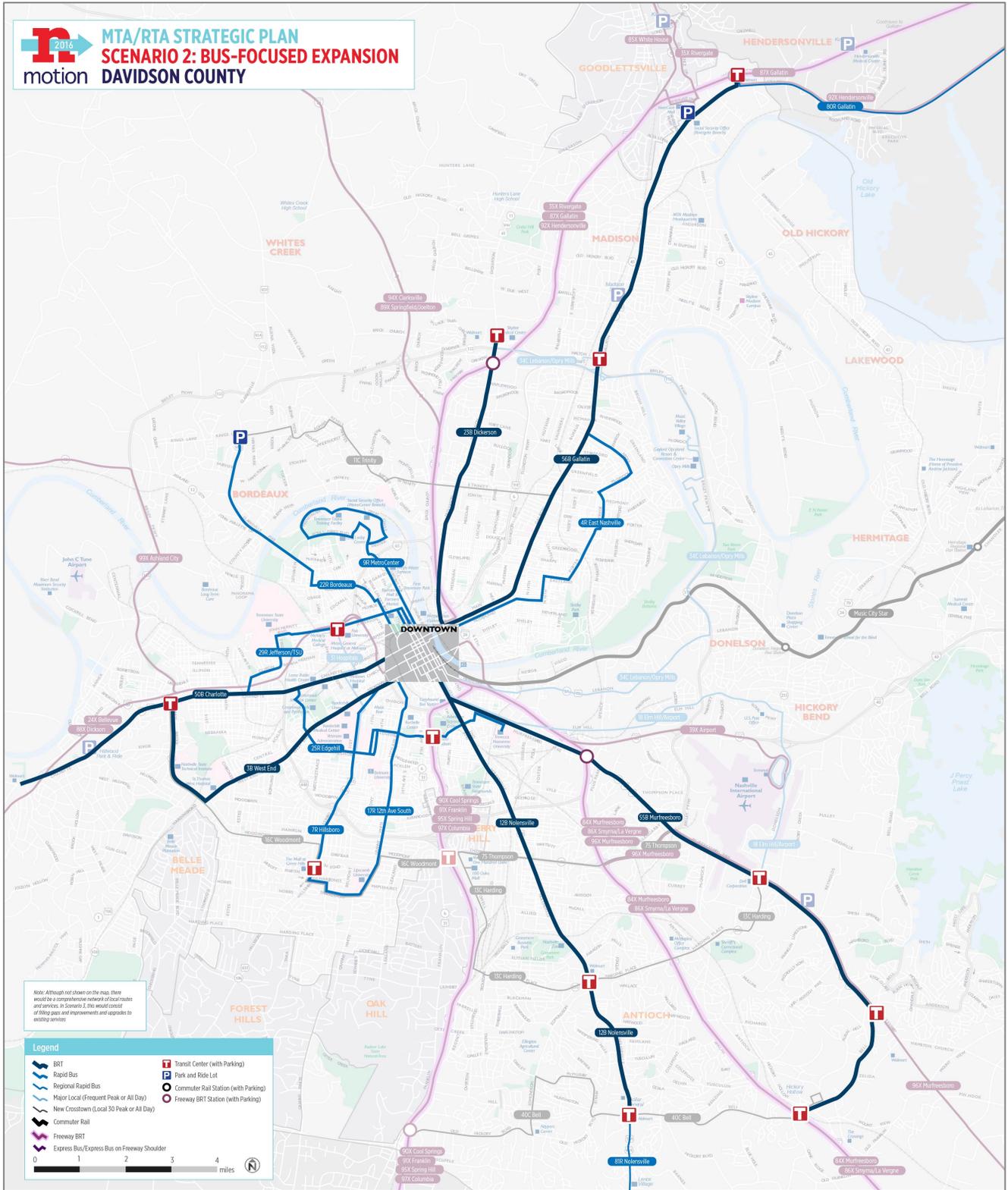
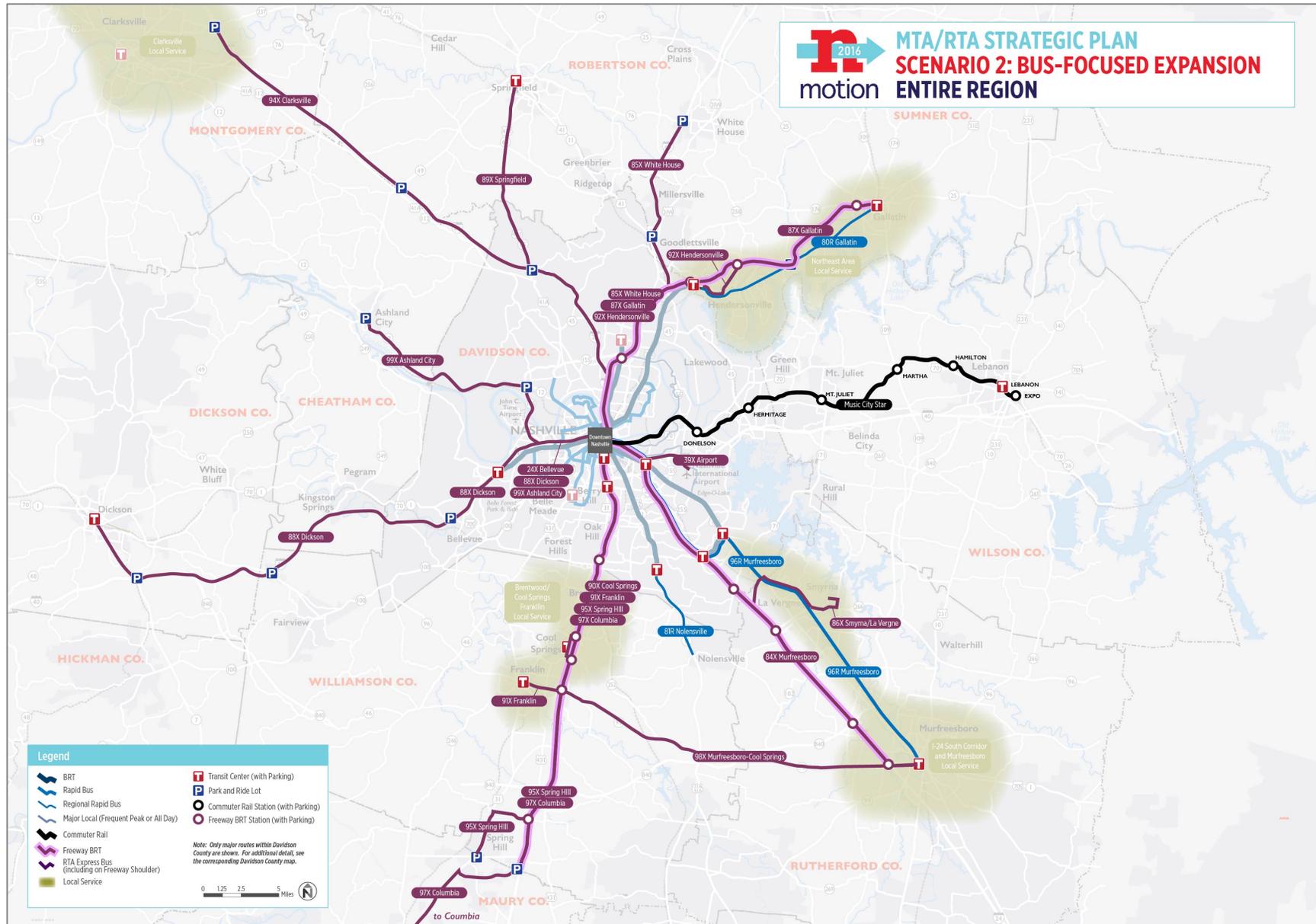


FIGURE 11 | SCENARIO 2 COMMUTER RAIL, FREEWAY BRT, EXPRESS BUS ON SHOULDER AND REGIONAL RAPID SERVICES



- Route 17R 12th Avenue South Rapid via 21st Avenue South and 12th Avenue South
- Route 22R Bordeaux Rapid between Bordeaux and downtown via Clarksville Pike
- Route 25R Edgehill Rapid between Charlotte Pike and Trevecca Nazarene University via Edgehill Avenue
- Route 29R Jefferson/TSU Rapid between Charlotte Pike and downtown via TSU and Jefferson Street

Regional

- Route 80R Gallatin between Gallatin and the end of the Gallatin Pike BRT line
- Route 81R Nolensville between Nolensville and the end of the Nolensville Pike BRT line
- Route 96R Murfreesboro Rapid between Murfreesboro and downtown Nashville via Murfreesboro Pike and I-24

COMMUTER RAIL

Scenario 2 includes improvements to Music City Star service, but does not include Northwest Corridor commuter rail. Improvements to Music City Star service would include an extension of service to Lebanon’s planned Expo Center, all day service on Monday through Saturday, new equipment, and infrastructure improvements.

FREEWAY BRT

In a similar manner as with Scenario 1, Scenario 2 includes the development of Freeway BRT service in high volume corridors to provide very fast service. Compared to Scenario 1, the routes and infrastructure improvements would be similar. However, in the Northeast Corridor, Freeway BRT facilities would be developed along I-65 rather than Ellington Parkway. This would be done because Scenario 2 includes express bus service to Clarksville rather than commuter rail, and through the shifting of the Freeway BRT facilities to I-65, Clarksville service could take advantage of Freeway BRT facilities south of the I-24/I-65 split.

Twelve routes would operate in these corridors; four that would provide service throughout the day (Freeway BRT and Regional Rapid Bus service levels), and seven that would operate via Freeway BRT facilities but provide the same level of service as other express routes (as indicated by the service types in parentheses):

I-24 South

- Route 84X Murfreesboro Express (Freeway BRT)
- Route 86X Smyrna/La Vergne Rapid (Express/Commuter)
- Route 96R Murfreesboro Rapid (Regional Rapid Bus)

I-65 South

- Route 90X Cool Springs Express (Express/Commuter)
- Route 91X Franklin Express (Freeway BRT)
- Route 95X Spring Hill (Express/Commuter)
- Route 97X Columbia (Express/Commuter)

I-65 North/State Route 386

- Route 85X White House Express (Express/Commuter)
- Route 87X Gallatin Express (Freeway BRT)
- Route 89X Springfield (Express/Commuter)
- Route 92X Hendersonville Express (Express/Commuter)
- Route 94X Clarksville (south of I-24/I-65 junction) (Express/Commuter)



EXPRESS BUS ON SHOULDERS

As in Scenario 1, in lower volume commuter corridors, express buses would operate on freeway shoulders when regular lanes are congested. In Scenario 2, six routes would operate in this manner:

I-24 North

- Route 89X Springfield
- Route 94X Clarksville (north of I-24/I-65 junction)

I-65- North

- Route 85X White House (north of intersection with State Route 386)

I-40 East

- Route 39X Airport

MORE DIRECT LOCAL SERVICES

In the same manner as in Scenario 1, MTA and RTA will conduct a Comprehensive Operations Analysis to determine short-term improvements that can be made within existing budget levels.

CONSOLIDATE STOPS

In Scenario 2, MTA would consolidate stops to better balance walk times and travel times in the same manner as in Scenario 1.

TRANSIT PRIORITY

In Scenario 2, MTA and RTA would extensively implement transit priority to speed service, but to a lesser extent than in Scenario 1:

- **Exclusive Transit Lanes:** Exclusive transit lanes would be developed along six BRT lines. Exclusive transit lanes would be included in the development of Transit Emphasis Corridors in downtown Nashville.
- **Queue Jump Lanes:** Queue jump lanes would be developed as conditions permit along 10 Rapid Bus lines
- **Transit Signal Priority:** Transit signal priority would be implemented at most intersections along the BRT and Rapid Bus lines. It would also be implemented along Transit Emphasis Corridors, and at other key intersections with high volumes of bus service.
- **Transit Emphasis Corridors:** Transit Emphasis Corridors would be developed in downtown Nashville to make transit service faster and more efficient in a similar manner as in Scenario 1.

SCENARIO 3 MODEST IMPROVEMENTS

In the same manner as Scenarios 1 and 2, Scenario 2 includes making service more direct and the consolidation of stops. It also includes the use of a significant amount of transit priority, but to a much lesser extent than in Scenarios 1 and 2 (see Figure 12 and Figure 13):

LIGHT RAIL

Scenario 3 does not include the development of light rail.

FIGURE 12 | SCENARIO 3 RAPID BUS SERVICES

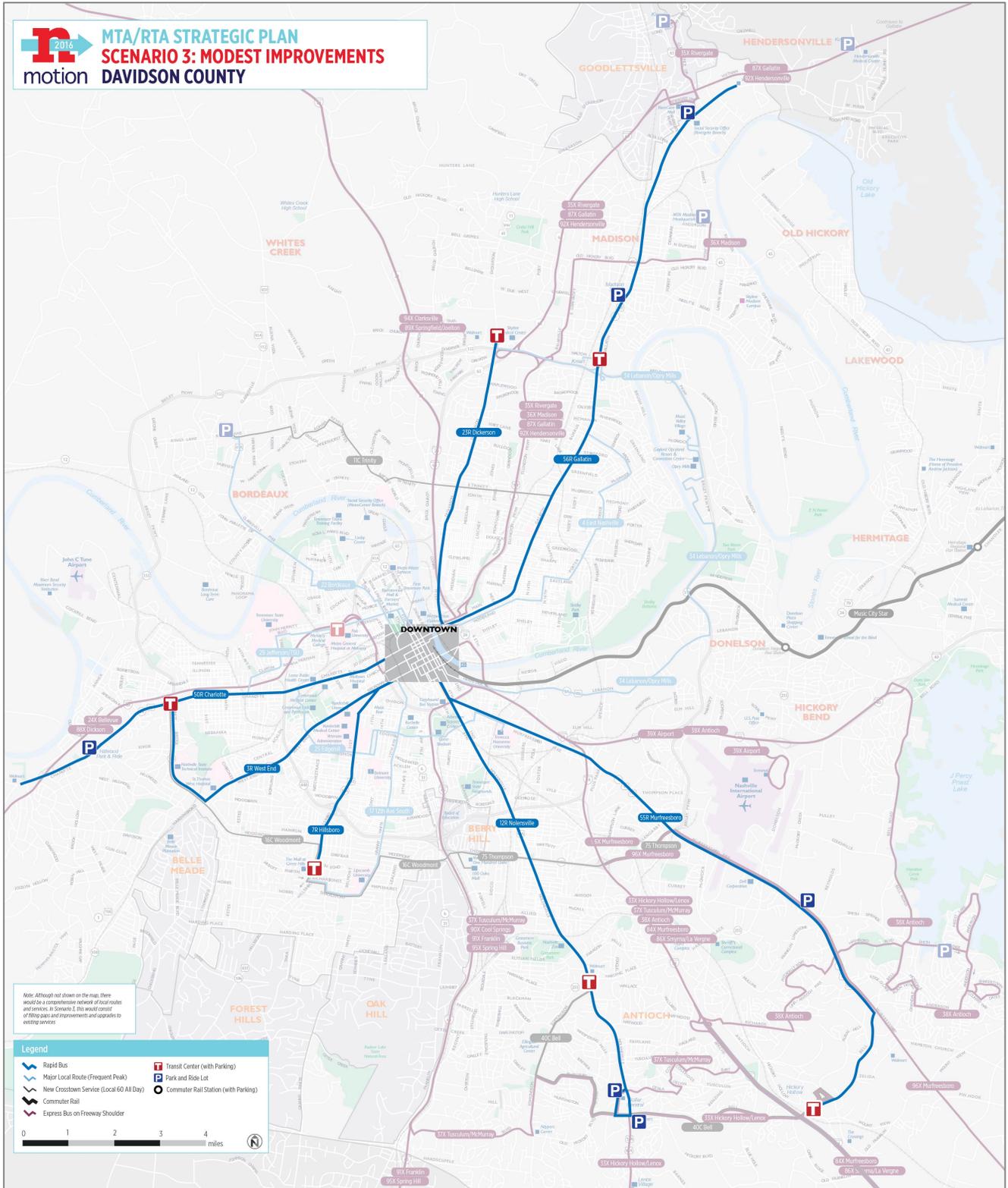
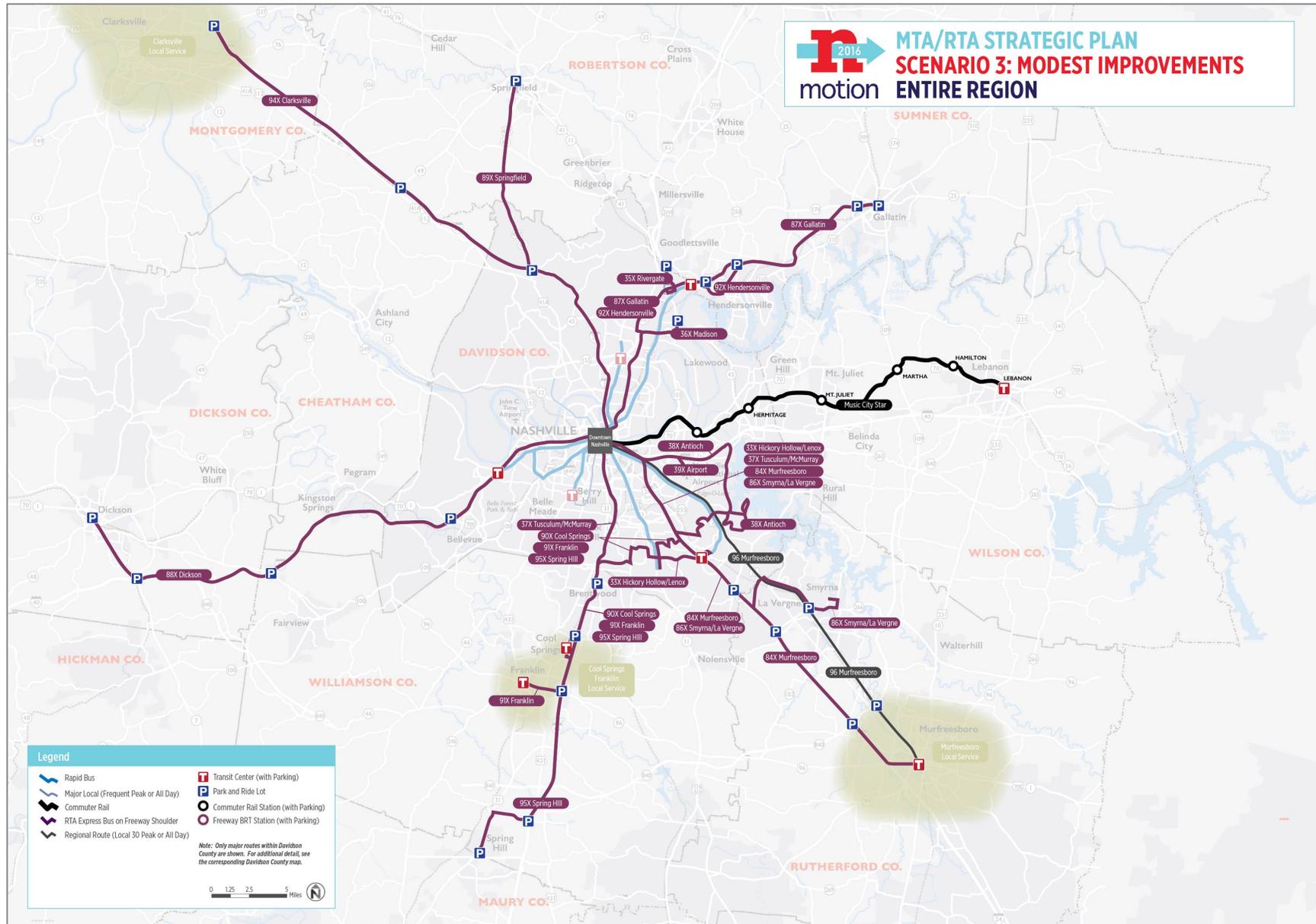


FIGURE 13 | SCENARIO 3 COMMUTER RAIL AND EXPRESS BUS SERVICES





BUS RAPID TRANSIT

Scenario 3 does not include the development of BRT.

RAPID BUS

Scenario 3 includes seven metro area Rapid Bus lines, but no Regional Rapid Bus lines:

- Route 3R West End Rapid in the Broadway/West End Avenue corridor
- Route 7R Hillsboro Rapid in the Broadway/21st Avenue South corridor
- Route 12R Nolensville Rapid in the Nolensville Pike corridor
- Route 43R Dickerson Rapid in the Dickerson Pike corridor
- Route 50R Charlotte Rapid in the Charlotte Pike corridor
- Route 55R Murfreesboro Rapid in the Murfreesboro Pike corridor
- Route 56R Gallatin Rapid in the Gallatin Pike corridor

COMMUTER RAIL

Scenario 3 includes modest improvements to Music City Star service, including the provision of all day service on weekdays, from 5 AM to 9 PM Monday through Thursday, and until 11 PM on Fridays, new equipment and infrastructure improvements.

FREEWAY BRT

Scenario 3 does not include the development of Freeway BRT.

EXPRESS BUS ON SHOULDERS

In Scenarios 1 and 2, many express services would be replaced by other premium services such as Freeway BRT, light rail (including connections to light rail), and Rapid Bus. Scenario 3, conversely, would maintain existing express routes, and in a few cases, develops new routes. Without Freeway BRT facilities, Express Bus on Shoulder service would be implemented in all major freeway corridors. Twenty-one routes would operate in this manner:

I-24 North

- Route 89X Springfield/Joelton
- Route 94X Clarksville

Ellington Parkway/I-65- North/State Route 386

- Route 35X Rivergate
- Route 36X Madison
- Route 87X Gallatin
- Route 92X Hendersonville

I-40 East

- Route 38X Antioch
- Route 39X Airport

I-24 South

- Route 33X Hickory Hollow/Lenox
- Route 37X Tusculum/McMurray
- Route 38X Antioch



- Route 84X Murfreesboro
- Route 86X Smyrna/La Vergne
- Route 96X Murfreesboro

I-65 South

- Route 37X Tusculum/McMurray
- Route 24X Bellevue
- Route 90X Cool Springs
- Route 91X Franklin
- Route 95X Spring Hill

I-40 West

- Route 24X Bellevue
- Route 88X Dickson

MORE DIRECT LOCAL SERVICES

In the same manner as in Scenarios 1 and 2, MTA and RTA would conduct a Comprehensive Operations Analysis to determine short-term improvements that can be made within existing budget levels.

CONSOLIDATE STOPS

In the same manner as in Scenarios 1 and 2, MTA would consolidate stops to better balance walk times and travel times.

TRANSIT PRIORITY

In Scenario 3, MTA and RTA would increase its use of transit priority, but to a much lesser extent than in Scenario 1:

- **Queue Jump Lanes:** Queue jump lanes would be developed as conditions permit along seven Rapid Bus lines
- **Transit Signal Priority:** Transit signal priority would be implemented at most intersections along the Rapid Bus lines. It would also be implemented along Transit Emphasis Corridors, and at other key intersections with high volumes of bus service.
- **Transit Emphasis Corridors:** Transit Emphasis Corridors would be developed in downtown Nashville in a similar manner as in Scenarios 1 and 2.