## Interstate 65 Multimodal Corridor Study Technical Memorandum 4: 65 Project Priorities

January 2018

## TN

Prepared for the Tennessee
Department of Transportation by
$G \quad R \quad E \quad S \quad H \quad A \quad M$
$S M I T H$


## Table of Contents

1. Introduction. .....  1
2. Priority Setting and Phasing Tool. ..... 2
2.1 Approach and Methodology .....  2
2.2 Prioritization Criteria and Measures ..... 2
Mobility/Safety
Multimodal Investment Opportunity
Accessibility and Economic Development
Implementation
Cost Efficiency
3. Project Rankings ..... 4
3.1 Project Rankings by Mode and Strategy ..... 4
Highway Capacity
Safety
Intelligent Transportation Systems
Freight
Transit
Walking and Bicycling
3.2 Key Findings ..... 8

## Figures

Figure 3-1. Recommended Multimodal Solutions: North Sub-Area ..... 9
Figure 3-2. Recommended Multimodal Solutions: Central Sub-Area ..... 10
Figure 3-3. Recommended Multimodal Solutions: South Sub-Area ..... 11
TABLES
Table 1-1. I-65 Corridor Goals and Objectives ..... 1
Table 2-1. I-65 Prioritization Criteria and Measures by Mode and Strategy ..... 3
Table 3-1. Highway Capacity Improvements: Highly Ranked Projects ..... 5
Table 3-2. ITS: Highly Ranked Projects ..... 6
Table 3-3. Transit Improvements: Highly Ranked Projects ..... 7
Table 3-4. Walking and Bicycling Improvements: Highly Ranked Projects ..... 8
Table 3-5. Highway Capacity Improvements: Project Rankings ..... 13
Table 3-6. Safety Improvements: Project Rankings ..... 17
Table 3-7. ITS Improvements: Project Rankings ..... 19
Table 3-8. Freight Improvements: Project Rankings ..... 23
Table 3-9. Transit Improvements: Project Rankings ..... 25
Table 3-10. Walking and Bicycling Improvements: Project Rankings ..... 27

## I-65 MULTIMODAL CORRIDOR STUDY Technical Memorandum 4: Project Priorities

## 1. Introduction

Today's decisions on how to improve the transportation system in the l-65 corridor will play an important role in how growth and development unfold in the study area. Accordingly, the purpose of this technical memorandum, representing the project recommendations of the l-65 Multimodal Corridor Study, is twofold:

- First, to provide a project priority and phasing tool that builds on the goals and objectives for the corridor; and
- Second, to rank the study's proposed multimodal improvements that address the identified transportation deficiencies and needs in the corridor.

The goals and objectives for the l-65 corridor (Table 1-1) were developed early in the study and reinforce the three strategic emphasis areas in the Tennessee Department of Transportation's (TDOT) 25-Year Long-Range Transportation Policy Plan: efficiency, effectiveness, and economic competitiveness. The priority and phasing tool, in turn, extends the goals and objectives and associated performance measures, and defines a set of criteria that serve as the basis for project ranking. It is important to underscore that the project ranking criteria represent only one source of data and information. Other policy, planning, and programming factors, beyond the scope of this study, will determine all final project development and funding decisions.

## Table 1-1. I-65 Corridor Goals and Objectives

| Goals |  | Objectives |  |
| :--- | :--- | :--- | :--- |
| Provide efficient and reliable <br> travel within and through the I-65 <br> corridor. | Improve travel times among destinations in <br> the region, with an emphasis on reducing <br> peak period travel times. | Provide transportation options for <br> people and freight. | Optimize freight movement in <br> and through the region. |
| Improve safety conditions in the <br> corridor, both on I-65 and parallel <br> and connecting routes, for all <br> transportation users. | Reduce crash rates along the corridor, <br> especially crash "hot spots" for motorists and <br> non-motorists. | Implement or upgrade <br> technologies that promote <br> safety and effective incident <br> management. |  |
| Coordinate transportation <br> investments with land use <br> decision-making. | Improve street networks and access <br> management in interchange areas. | Encourage transit-oriented <br> development along proposed <br> high-capacity transit routes. |  |
| Invest in transportation <br> improvements equitably <br> throughout the corridor. | Expand transportation options for <br> traditionally underserved populations within <br> the corridor. |  |  |
| Protect the natural environment, <br> and historic and cultural resources <br> within the corridor. | Identify transportation improvements that <br> are not likely to result in major impacts to <br> environmental, social, and cultural resources. | Pursue investments and strategies <br> that minimize greenhouse gas |  |

[^0]
## 2. Priority Setting and Phasing Tool

### 2.1 Approach and Methodology

Prior TDOT interstate corridor studies have used a common set of guidelines to prioritize recommended improvements and identify priorities by time horizon. Previous prioritization guidelines include:

- Projects located in the same place should be coordinated such that corresponding construction phases are completed at the same time;
- Projects with lower costs should be completed first given that funding for more budget intensive projects may not be readily available;
- Consistency with the status of the project in the MPO planning process, if applicable, should be considered; and
- Projects should be ranked based on benefit/cost ratio.

For the I-65 Multimodal Corridor Study, the proposed prioritization and phasing approach builds on the common set of guidelines from the earlier corridor studies, but shifts the focus from developing a single, static list of priorities to generating data and information that can serve as a flexible decisionmaking support tool. Assuming system preservation will remain the highest priority, the priority setting and phasing tool centers on proposed new transportation improvements in the l-65 corridor. The tool evaluates proposed improvements in each modal and strategy area across five categories, and orders the results by weighted scores. Importantly, the weights for each criterion can be adjusted based on policy, planning, and programming direction, and the results of the analysis can be considered separately or compared as different scenarios. Table 2-1 summarizes the five prioritization criteria and related measures for the modal and strategy areas included in the study.

### 2.2 Prioritization Criteria and Measures

## Mobility/Safety

Base Year (2010) and 2040 Existing Plus Committed (E+C) Volume-to-Capacity (V/C) ratios, derived from the Tennessee Statewide Travel Demand Model, Version 2 (TSM), serve as the mobility/safety prioritization measures for the proposed highway capacity, intelligent transportation systems (ITS), and freight improvements in the study. For freight improvements, the mobility/safety criterion also includes Base Year truck percentages from the TSM. While there is also a standalone list of safety improvements focused primarily on interchange areas and separately measured by crash rates, many of the mobility improvements will also generate safety benefits and the mobility criterion includes "safety" in the title to reflect those benefits. As reported in "Technical Memorandum 2: Assessment of Existing and Future Deficiencies," 84 percent of all crashes in the study area between 2013 and 2015 were in Davidson and Williamson Counties in areas with higher levels of congestion.
Additionally, for transit, the prioritization tool utilizes fixed-route hours of service as the Level of Service (LOS) to evaluate mobility/safety. Although there are a number of capacity and service quality variables available to describe transit LOS, fixed-route hours of service were identified as a specific deficiency in Technical Memorandum 2 and were a prime concern in public meetings. Finally, assuming that proposed improvements will provide the greatest benefits where demand is likely highest, the mobility/safety prioritization criterion for bicycle and pedestrian projects is measured using Base Year and 2040 population within a one-mile buffer of the recommended project.

## Multimodal Investment Opportunity

The multimodal investment opportunity criterion captures the number of other proposed study improvements that occurr along the same general route or alignment as a given recommended project. This criterion builds on the prior studies' guideline to coordinate projects in close proximity, and flags opportunities to integrate recommendations across modes and strategies. For prioritization purposes, the measure helps to identify locations where multimodal

Table 2-1. I-65 Prioritization Criteria and Measures by Mode and Strategy

| Mode/ <br> Strategy | Prioritization Criteria and Measures |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mobility/ Safety | Multimodal | Accessibility/ Economic Development | Implementation | Cost Efficiency |
| Highway Capacity | Base V/C | Number of Modal Projects | Base Total Employment | cost | Benefit/Cost Ratio (Method 1) |
|  | 2040 E+CV/C |  | 2040 Total Employment |  | Benefit/Cost Ratio (Method 2) |
| Safety | Crash Rate | Number of Modal Projects | Base Total Employment | Cost | Benefit/Cost Ratio (Method 1) |
|  |  |  | 2040 Total Employment |  | Benefit/Cost Ratio (Method 2) |
| ITS | BaseV/C | Number of Modal Projects | Base Total Employment | Cost | Benefit/Cost Ratio |
|  | $2040 \mathrm{E}+\mathrm{CV} / \mathrm{C}$ |  | 2040 Total Employment |  |  |
| Freight | BaseV/C | Number of Modal Projects | Base Total Employment | Cost | Benefit/Cost Ratio (Method 1) |
|  | $2040 \mathrm{E}+\mathrm{CV} / \mathrm{C}$ |  | 2040 Total Employment |  | Benefit/Cost Ratio (Method 2) |
|  | Truck Percentage |  |  |  |  |
| Transit | LOS | Number of Modal Projects | Base Total Employment | Cost | n/a |
|  |  |  | 2040 Total Employment |  |  |
| Bicycle and Pedestrian | Base Total Population | Number of Modal Projects | Base Total Employment | Cost | Benefit/CostRatio |
|  | 2040 Total Population |  | 2040 Total Employment |  |  |

solutions could be a critical strategy for improving the transportation system.

## Accessibility and Economic Development

The ability to reach a destination (accessibility) and the ability to reach markets (economic development) rely heavily on the safety, convenience, and comfort of the transportation system for all users. While there are many types of destinations and markets to reach, improvements in each of the modal and strategy areas can affect employment-related accessibility and economic development. As a proxy for overall accessibility and economic development, the criterion then relies on the Base Year and 2040 employment within a one-mile buffer of the proposed improvement.

## Implementation

Implementing projects clearly relies on a wide variety of factors, including community support, environmental constraints, constructability, costs, and funding availability. For prioritization purposes in the l-65 study, and recognizing the overlap with the cost efficiency criterion below, the implementation criterion uses planning level project costs to measure the proposed improvements. This criterion also dovetails with earlier interstate corridor study
guidelines. Of course, lower costs by themselves are not necessarily a good indicator of when a project should be implemented, but in conjunction with the other criteria, can highlight improvements that are more feasible in the short-term. Again, as is the case with all of the criteria, cost can be weighted as needed and lower cost projects do not have to receive equal consideration with other measures.

## Cost Efficiency

The fifth and final project criterion in the prioritization tool evaluates potential benefits against the planning level costs to understand relative cost efficiency. For the highway capacity, safety, and freight improvements, two summary benefit/cost (B/C) ratios are calculated. The "B/C-1" ratio estimates the value of project travel time savings based on average speeds for the network surrounding the project. The " $B / C-2$ " ratio estimates the value of aggregate travel time savings based on the change in total Vehicle Hours Traveled (VHT) for the network surrounding the project. While B/C-1 emphasizes project specific benefits, B/C-2 quantifies network benefits. Taken together, the two measures, which are snapshots in time, support a relatively easy and balanced way to evaluate cost efficiency. The methodologies for both measures follow:

## - B/C-1 Method:

1. Calculate the overall average speeds for the network surrounding the Trend and Build area by dividing VMT by VHT;
2. Calculate the project travel time based on the average speeds from step 1 and the project length;
3. Calculate the travel time saving by subtracting values from step 2;
4. Calculate operational benefits by multiplying the travel time saving by 250 working days a year and value of time, and
5. Calculate the $\mathrm{B} / \mathrm{C}$ ratio.

## - B/C-2 Method:

1. Calculate the travel time saving by subtracting Build VHT from Trend VHT for the network surrounding the project;
2. Calculate operational benefits by multiplying the travel time saving by 250 working days a year and value of time; and
3. Calculate $B / C$ ratio.

B/C ratios for the ITS improvements were derived using the Federal Highway Administration's (FHWA) Tool for Operations Benefit Cost Analysis (TOPS-BC), Version 1.2. B/C ratios for the bicycle recommendations were calculated based on the Benefit-Cost Analysis of Bicycle Facilities Tool from the University of North Carolina Highway Safety Research Center. A benefit-cost ratio was not calculated for the transit improvements because this study did not include the modeling of transit routes. Finally, since different benefit-cost methods were used for different modes and strategies, the B/C ratios should not be compared across modes and strategies.

## 3. Project Rankings

As noted earlier, the project rankings included here represent just one way of prioritizing the proposed improvements and the measures represent only one source of data and information. The priority setting tool itself includes a high degree of flexibility by allowing a criterion's weight to be set to any value relative to the other criteria. Over time, as data is refined or additional data sources become available, prioritization criteria and measures can also be updated and expanded. Ultimately, whether and when improvements are implemented will depend again on a much broader decision-making process that reflects policy, planning, and programming factors beyond the scope of this study.

### 3.1 Project Rankings by Mode and Strategy

The following sections highlight the recommended improvements that rank highly when the prioritization criteria are all assumed to have the same weight. Maps of all proposed improvements can be found in Figures 3-1, 3-2, and 3-3. The full list of project rankings, under the same assumption of equal weighting, are included by mode or strategy in Tables 3-5 through 3-10.

## Highway Capacity

Table 3-1 summarizes the ten proposed highway capacity projects that rank the highest when the prioritization criteria are weighted equally. Importantly, many of the higher ranked projects focus on improving travel to, from, and through downtown Nashville on I-65. Reconstructing the downtown interstate loop and extending High Occupancy Vehicle (HOV) lanes to the loop, in particular, emphasize the need to improve operations and modal choices between downtown Nashville and surrounding communities. The complete highway capacity project ranking (Table 3-5) identifies a number of parallel and intersecting arterials, especially in Williamson County, that are high priorities, including Nolensville Road (US-41A/SR-11), Mack Hatcher Parkway (SR 397), Columbia Pike (US-31/SR 6), and Franklin Road (US-31/SR 6).

Table 3-1. Highway Capacity Improvements: Highly Ranked Projects

| ID | Project Name | Termini (From) | Termini <br> (To) | Description | Length (miles) | County | Source | Source Horizon |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| H-19 | Downtown Nashville Loop | N/A | N/A | Roadway/Junctions Reconstruction | 12.2 | Davidson | MPO RTP* | 2040 |
| H-20 | I-65 | 1-40 (Exit 210) | 1-40 (Exit 208) | Weaving Patterns | 2.0 | Davidson | Task 3 | 2030 |
| H-21 | \|-65 | Armory Drive | Nashville Core | Extend HOV lanes | 3.4 | Davidson | Task 3 | 2030 |
| H-22 | 1-24 | 1-40 | 1-840 | Widening, $1-40$ to Haywood Lane -8 to 10 lanes; Haywood Lane to I-840-6 to 8 lanes | 23.2 | Davidson and <br> Rutherford | Task 3* | 2030 |
| H-16 | \|-65 | Briley Parkway | Nashville Core | Extend HOV lanes | 4.2 | Davidson | Task 3 | 2030 |
| H-24 | Nolensville Pike (US-41A/SR-11) | South of Old Hickory Blvd (SR-245) | South of Burkitt Road | Reconstruction and widening, 2 to 5 lanes | 4.5 | Davidson and Williamson | MPO RTP | 2020 |
| H-10 | \|-65 | Long Hollow Pike (SR-174) | Blue Star Road (US-31) | Widening, 4 to 6 lanes | 1.8 | Sumner | MPO RTP* | 2030 |
| H-25 | \|-65 | Old Hickory Blvd (SR-254) | Concord Road (SR-253) | New Interchange | 0.0 | Williamson | MPO RTP | 2030 |
| H-32 | Mack Hatcher <br> Pkwy (SR-397) | SR-96 east of Franklin | Columbia Pike (US-31/SR-6) south of Franklin | Widening, 2 to 4 lanes | 3.2 | Williamson | Task 3* | 2030 |
| H-7 | 1-65 (SB only) | Blue Star Road (US-31) | Bethel Road (SR-257) | Widening, 4 to 6 lanes | 5.2 | Robertson | MPO RTP* | 2030 |

* Project included on IMPROVE Act project list


## Safety

With the exception of three proposed improvements ( $\mathrm{S}-22, \mathrm{~S}-3$, and $\mathrm{S}-16$ ), all of the standalone safety projects (Table 3-6) are relatively low cost (\$1 million or less) and recommended for further analysis and implementation in the short-term or in conjunction with other planned near-term improvements, for example, the widening of I-65 to the state line with Kentucky.

## Intelligent Transportation Systems

For data reasons, only nine of the nineteen ITS projects were ranked using the prioritization tool (Table 3-2). Similar to the highway capacity improvements, ITS projects, including dynamic on-ramp assignment and active arterial management, in, near, or closely linked to downtown Nashville rank the highest, and highlight the importance of a coordinated and multimodal strategy for improving l-65 through Davidson and Williamson Counties in particular. The unranked ITS
projects are primarily statewide and ramp metering improvements, and even though they were not evaluated with the prioritization tool, many have potentially strong B/C ratios and should be studied further.

## Freight

Table 3-10 ranks the full list of standalone freight projects. Consistent with other findings, improving the system-to-system interchanges of I-65 and I-40 in downtown Nashville are a high priority - again, stressing the importance of loop operations to all modes. Other projects of note include improving east-west connectivity, specifically Old Hickory Boulevard (SR 254) and Harding Place (SR 255), between I-65 and freight generators located near I-24 and Nashville International Airport (BNA).

Table 3-2. ITS Improvements: Highly Ranked Projects

| ID | Project Name | Termini (From) | Termini (To) | Description | Length <br> (miles) | County | Source | Source Horizon |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-17 | Active Arterial Management (AAM) Hillsboro Rd (US-431) | Broadway (US-70A) | Mack <br> Hatcher | Last mile connectivity between intersections, install detection for all intersections, MOUs, and Consultant Operations to optimize signal timing and detect incidents along corridor | 16.0 | Davidson and Williamson | Task 3 | 2030 |
| 0-9 | Dynamic on-ramp assignment Southbound | Charlotte Ave | \|-40/|-65 Split | Add arterial DMS along 14th Ave, add interstate shields or use gantries for junction pre-positioning on on-ramps and interstate facilities | 1.0 | Davidson | Task 3 | 2030 |
| 0-10 | Dynamic on-ramp assignmentNorthbound | Broadway (US-70A) | \|-40/|-65 Split | Add arterial DMS along 14th Ave, add interstate shields and deploy lane control gantries for junction pre-positioning on on-ramps and interstate facilities | 1.0 | Davidson | Task 3 | 2030 |
| 0-15 | Active Arterial Management (AAM) Nolesville Pike (US-41) | Korean <br> Veterans Blvd | Old Hickory Blvd | Last mile connectivity between intersections, install detection for all intersections, MOUs, and Consultant Operations to optimize signal timing and detect incidents along corridor | 9.0 | Davidson | Task 3 | 2030 |
| 0-14 | Active Arterial Management (AAM) Franklin Rd | Demonbreun | Mack Hatcher | Last mile connectivity between intersections, install detection for all intersections, MOUs, and Consultant Operations to optimize signal timing and detect incidents along corridor | 18.0 | Davidson and Williamson | Task 3 | 2040 |
| 0-12 | Active Arterial Management US-31 E/Gallatin Pike | Rivergate Pkwy | Spring Street | Last mile connectivity between intersections, install detection for all intersections, MOUs, and Consultant Operations to optimize signal timing and detect incidents along corridor | 10.0 | Davidson | Task 3 | 2030 |
| 0-16 | Active Arterial Management (AAM) Old Hickory Blvd | Hillsboro Rd (US-431) | US-41 | Last mile connectivity between intersections, install detection for all intersections, MOUs, and Consultant Operations to optimize signal timing and detect incidents along corridor | 15.0 | Davidson | Task 3 | 2030 |
| 0-18 | Active Arterial Management (AAM) Nolensville Pike (US-41) | 1-840 | US-231/ <br> Colloredo <br> Blvd/Lane <br> Pkwy | Last mile connectivity between intersections, install detection for all intersections, MOUs, and Consultant Operations to optimize signal timing and detect incidents along corridor | 28.0 | Williamson, Rutherford, and Bedford | Task 3 | 2040 |
| 0-13 | Active Arterial Management (AAM) Dickerson Pike | US-31 W/ Louisville Hwy | US-431/ <br> Trinity Ln | Last mile connectivity between intersections, install detection for all intersections, MOUs, and Consultant Operations to optimize signal timing and detect incidents along corridor | 10.0 | Davidson and Sumner | Task 3 | 2030 |

## Transit

Transit improvements in the l-65 corridor between downtown Nashville and Williamson and Maury Counties and along Nolensville Road rank the highest, reinforcing growth trends in the central sub-area and public input during the study (Table 3-3). The series of Northeast Transit (NET) Corridor recommendations in Davidson and Sumner Counties also rank highly. With so much overlap between the highly ranked highway capacity and transit improvements, strategically coordinating projects across modes will be paramount

## Walking and Bicycling

The fast-growing areas of south and east Williamson County and north Maury County present a number of opportunities to implement important walking and bicycle facilities (Table 3-4). In higher speed, higher vehicle volume environments, multi-use paths provide a safe and comfortable option for all ages and abilities to walk and bike. Highly ranked projects include multi-use paths in the Buckner Road area and along Columbia Pike (US 31/SR 6) and Murfreesboro Road (SR 96). Closer to downtown Nashville, the Trinity Lane and Broadway interchange areas with l-65 both experience recurring pedestrian safety issues and rank highly in the prioritization tool.

## Table 3-3. Transit Improvements: Highly Ranked Projects

| ID | Project Name | Termini (From) | Termini <br> (To) | Description | Length <br> (miles) | County | Source | Source Horizon |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| T-24 | South Corridor Regional Express Bus Service | Several routes between Nashville, Franklin, Spring Hill, and Columbia |  | Provide new and expanded service to Williamson and Maury County, including additional express trips, reverse commute trips, additional service hours, and new Park-and-Ride opportunities | 45.9 | Davidson/ <br> Sumner | nMotion | 2030 |
| T-11 | Nolensville Pike (US-41A) LRT | Downtown Nashville | Lenox Village Drive | Construction of light rail transit along US-31A (Nolensville Pike) | 5.5 | Davidson and Williamson | Central/ <br> South | Central/ <br> South |
| $\begin{gathered} \text { T-13- } \\ 18 \end{gathered}$ | I-65 South Freeway BRT Stations (6) | Downtown Nashville | Franklin | Construction of freeway BRT transit stop and park-and-ride lot | 0.0 | Davidson | nMotion | 2030 |
| T-10 | Dickerson Pike (US-31W) BRT | Hunters Lane | Downtown Nashville | Construction of bus rapid transit amenities along US-31W (Dickerson Pike). Project includes dedicated bus lanes and improved pedestrian facilities. | 4.7 | Davidson and Williamson | MPO RTP / <br> nMotion | 2030 |
| T-25 | Rapid Transit/ Managed Lanes between Nashville and Franklin | Downtown Nashville | Murfreesboro Road (SR-96) | Construction of managed lanes for freeway Bus Rapid Transit along I-65 from Nashville to Murfreesboro Road (SR-96) | 18.8 | Davidson/ Williamson | nMotion | 2030 |
| T-1 | NET Corridor Regional Express Bus Service | Several routes between Nashville and Gallatin |  | Provide new and expanded service to Sumner County, including additional express trips, additional service hours, and new park-and-ride opportunities | 30.0 | Davidson and Sumner | MPO RTP | 2020 |
| T-9 | US-31E (Gallatin Pike) LRT | Downtown Nashville | Conference Drive | Construction of light-rail transit along US-31E (Gallatin Pike) | 4.9 | Sumner | nMotion | 2030 |
| T-3-5 | I-65 North Freeway BRT Stations (3) | Goodlettesville | Gallatin | Construction of freeway BRT transit stop and park-and-ride lot | 0.0 | Davidson | MPO RTP | 2030 |
| T-6 | NET Corridor Interchange 2 | Vietnam Veterans Pkwy (SR-386) at Conference Drive |  | Interchange modification for Traffic NB onto Conference Drive | 0.0 | Davidson and Sumner | nMotion | 2030 |
| T-7 | NET Corridor Interchange 1 | Vietnam Veterans Pkwy (SR-386) at l-65 |  | Interchange modification WB to NB and SB to EB Traffic | 0.0 | Sumner | nMotion | 2030 |

## Table 3-4. Walking and Bicycling Improvements: Highly Ranked Projects

| ID | Project Name | Termini (From) | Termini (To) | Description | Length (miles) | County | Source | Source Horizon |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-38 | Buckner Road | Buckner <br> Road//-65 Interhchange | Lewisburg Pike (SR-106/ US-431) | Network - Construction of bike lane(s) or multi-use trail; can be constructed in concert with H-22 | 2.1 | Williamson | Task 3 | 2040 |
| B-34 | Columbia Pike (US-31/ SR-6) | Goose Creek Bypass | Wilson Pike (SR-252) | Construction of Multi-Use Path | 3.9 | Williamson | Connect <br> Franklin | 2030 |
| B-33 | Murfreesboro Road (SR-96) | East of Arno Road | Veterans <br> Pkwy | Network - Construction of on-road or off-road bicycle facilities | 18.3 | Williamson/ Rutherford | Task 3 | 2030 |
| B-37 | Buckner Road | Columbia Pike (SR-6/US-31) | Buckner Lane | Network - Construction of bike lane(s) or multi-use trail; can be constructed in concert with H-24 | 1.9 | Williamson | Task 3 | 2040 |
| B-35 | Goose Creek Bypass (SR-248) | $\begin{aligned} & \text { Columbia Pike } \\ & \text { (US-31/SR-6) } \end{aligned}$ | Long Lane | Construction of bike lanes and sidewalks | 4.1 | Williamson | Connect <br> Franklin | 2040 |
| B-7 | James Robertson <br> Parkway (US-31) | Rosa Parks Boulevard (SR-12) | Church Street | Construction of Separated Bike Lanes | 0.5 | Davidson | Nashville <br> WalknBike | 2030 |
| B-36 | US-31 | SR-248 (Goose Creek Bypass) | North of Buckner Lane | Network - Construction of bike lane(s) or multi-use path | 3.8 | Williamson | Task 3 | 2020 |
| B-11 | Broadway (US-431) | George L. <br> Davis Blvd. | 14th Avenue South | Reconstruction of sidewalks along US-431 (Broadway). Project includes landscaping, lighting, crosswalks, in-roadway warning lights at on-ramps, and pedestrian amenities. | 0.1 | Davidson | Task 3 | 2020 |
| B-4 | Trinity Lane (US-431) | Whites Creek Pike (US-431) | Dickerson <br> Pike (US-41) | Safety - Reconstruction of sidewalks along US-431 (Trinity Lane). Project includes landscaping, lighting, crosswalks, in-roadway warning lights at on-ramps, and pedestrian amenities. | 1.3 | Davidson | Task 3 | 2020 |
| B-30 | Mack Hatcher Pkwy (SR-397) | SR-96 east of Franklin | Columbia <br> Pike (US-31/ <br> SR-6) south <br> of Franklin | Network - Construction of Multi-Use Path; Can be constructed with in concert with H-30 | 3.2 | Williamson | Connect <br> Franklin | 2030 |

### 3.2 Key Findings

The priority setting and phasing tool provides a performance-based framework for ranking projects by mode and strategy that builds on the goals and objectives identified in the l-65 corridor study. Incorporating weighted criteria, the tool can be used to evaluate different policy scenarios across a wide range of variables including mobility, safety, accessibility, and cost. The rankings generated by the tool can then serve as a resource for much broader discussions surrounding project development and funding.

The rankings reported in this technical memorandum reflect a scenario where all criteria and measures are
weighted equally. With that assumption in mind, the rankings spotlight two closely related opportunities: first, improving the downtown Nashville interstate loop and the highways connecting to it, both interstates and arterials, should be a high priority for future travel in the I-65 corridor; and second, all modes and strategies have an important role in improving the I-65 corridor, especially for travel to, from, and through the Nashville core. Significantly, the IMPROVE Act, the state transportation funding bill signed into law in 2017, has set the stage for many of the recommended improvements to move forward, with specific project studies already underway.

Figure 3-1. Recommended Multimodal Solutions: North Sub-Area


Figure 3-2. Recommended Multimodal Solutions: Central Sub-Area


Figure 3-3. Recommended Multimodal Solutions: South Sub-Area


Table 3-5. Highway Capacity Improvements: Project Rankings

| ID | Project Name | Termini (From) | Termini (To) | Description | Length (miles) | (1) Mobility/Safety |  | (2) <br> Multimodal <br> \# of Projects | (3) Access/Econ Dev |  | (4) Implementation <br> Cost (millions\$) | (5) Cost Efficiency |  |  |  | $\begin{aligned} & \text { ते } \\ & \text { 気 } \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | $\begin{aligned} & \text { Base } \\ & V / C \end{aligned}$ | $\begin{gathered} 2040 \mathrm{E}+\mathrm{C} \\ \mathrm{~V} / \mathrm{C} \\ \hline \end{gathered}$ |  | BaseTotal Employment | 2040Total Employment |  | $\begin{gathered} B / C \\ \text { (Method 1) } \end{gathered}$ | $\begin{gathered} B / C \\ (\text { Method 2) } \\ \hline \end{gathered}$ |  |  |  |  |  |
|  |  |  |  |  |  | BaseV/C Weight | $\begin{aligned} & \text { 2040 E+C } \\ & \text { V/CWeight } \end{aligned}$ | Multimodal Weight | BaseTE <br> Weight | $\begin{aligned} & \text { 2040TE } \\ & \text { Weight } \\ & \hline \end{aligned}$ | CostWeight | B/C-1 Weight | $\begin{aligned} & B / C-2 \\ & \text { Weight } \end{aligned}$ |  |  |  |  |  |
|  |  |  |  |  |  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |  |  |  |  |  |
| H-19 | Downtown Nashville Loop | N/A | N/A | Roadway/Junctions Reconstruction | 12.2 | 1.04 | 1.32 | 5 | 136,041 | 229,874 | \$189.42 | 19.40 | 0.17 | 4.9402 | 4.7755 | Davidson | $\begin{aligned} & \text { MPO } \\ & \text { RTP** } \end{aligned}$ | 2040 |
| H-20 | 1-65 | 1-40 (Exit 210) | 1-40 (Exit 208) | Weaving Patterns | 2.0 | 0.83 | 1.13 |  | 107,513 | 177,211 | \$8.60 | 0.90 | 1.44 | 4.5972 | 4.7647 | Davidson | Task 3 | 2030 |
| H-21 | 1-65 | Armory Dive | Nashville Core | Extend HOV Ianes | 3.4 | 0.93 | 1.21 | 3 | 76,609 | 116,299 | \$39.59 | 0.30 | 0.12 | 4.0895 | 4.1014 | Davidson | Task 3 | 2030 |
| H-22 | 1-24 | 1-40 | $1-840$ | Widening, I-40 to Haywood Lane - 8 to 10 lanes; Haywod Lane to --840 - 6 to 8 lanes | 23.2 | 0.97 | 1.25 | 0 | 63,064 | 107,575 | \$192.75 | 104.60 | 0.65 | 3.7204 | 2.7994 | Davidson and Rutherford | Task3* | 2030 |
| H-16 | 1-65 | Briley Parkway | Nashville Core | Extend HOV Ianes | 4.2 | 1.01 | 1.39 | 2 | 13,257 | 40,398 | \$50.79 | 1.60 | 0.08 | 3.2815 | 3.2756 | Davidson | Task 3 | 2030 |
| H-24 | Nolensilile Pike (US-41A/SR-11) | South of Old Hickory Blvd (SR-245) | South of Burkitt Road | Reconstruction and widening, 2 to 5 lanes | 4.5 | 1.02 | 1.46 | 1 | 4,261 | 7,771 | \$29.77 | 11.20 | (0.11) | 3.1652 | 3.0443 | Davidson and Williamson | MPO RTP | 2020 |
| H-10 | 1-65 | Long Hollow Pike (SR-174) | Blue Star Road (US-31) | Widening, 4066 lanes | 1.8 | 0.72 | 0.87 | 5 | 5,461 | 7,560 | \$15.36 | 1.00 | 0.02 | 3.1244 | 3.1169 | Sumner | $\begin{aligned} & \text { MPO } \\ & \text { RTP* } \end{aligned}$ | 2030 |
| H-25 | 1-65 | Old lickory Blvd (SR-254) | Concord Road (SR-253) | New Interchange | 0.0 | 0.86 | 1.19 | 2 | 9,417 | 15,584 | \$8.20 | 0.20 | 0.73 | 3.0717 | 3.1591 | Williamson | MPO RTP | 2030 |
| H-32 | Mack Hatcher Pkwy (SR-397) | SR-96 east of Frankin | Columbia Pike (US-31/SR-6) south of Franklin | Widening, 2 to 4 lanes | 3.2 | 0.71 | 1.28 | 1 | 7,830 | 16,076 | \$26.07 | 21.00 | 1.48 | 2.9191 | 2.8985 | Williamson | Task $3^{*}$ | 2030 |
| H-7 | 1-65 (SB only) | Blue Star Road (US-31) | Bethel Road (SR-257) | Widening, 406 lanes | 5.2 | 0.58 | 0.71 | 6 | 1,767 | 2,955 | \$39.03 | 4.90 | (0.08) | 2.9142 | 2.8580 | Robertson | $\begin{aligned} & \text { MP0 } \\ & \text { RTP** } \end{aligned}$ | 2030 |
| H-33 | Columbia Pike (US-31/SR-6) | Fowkes Street | Mack Hatcher Pkwy (SR-397) | Widening, 2 to 4 lanes | 1.9 | 0.55 | 0.89 | 1 | 12,542 | 19,986 | \$11.25 | 14.60 | 3.10 | 2.5655 | 2.8042 | Williamson | Task $3^{*}$ | 2030 |
| H-27 | Franklin Road (US31/SR 6) | SR-441 (Moore' Lane) | Harpeth River Bridge | Widening, 2 to 5 lanes | 3.7 | 0.38 | 0.72 | 2 | 20,509 | 33,149 | \$24.48 | 16.50 | (0.15) | 2.5176 | 2.3413 | Williamson | Task 3 | 2040 |
| H-12 | 1-65 at Springfield Highway (US-41/SR-11) | N/A | N/A | New Interchange | 0.0 | 0.64 | 0.79 | 2 | 351 | 517 | \$8.20 | 0.40 | (0.17) | 2.4559 | 2.4312 | Davidson | MPO RTP | Illustrative |
| H-4 | 1-65 | Bethel Road (SR-257) | SR-25 | Widening, 4066 lanes | 8.7 | 0.52 | 0.65 | 4 | 3,031 | 7,265 | \$60.22 | 6.10 | (0.06) | 2.4116 | 2.3459 | Robertson | $\begin{aligned} & \text { MPO } \\ & \text { RTP* } \end{aligned}$ | 2030 |
| H-26 | Franklin Road (US31/SR6) | Concord Road (SR-253) | Moores Lane (SR-441) | Widening, 2 to 5 lanes | 2.3 | 0.51 | 0.92 | 1 | 11,454 | 21,696 | \$15.21 | (2.80) | (1.53) | 2.3601 | 2.1996 | Williamson | MPO RTP | 2020 |
| H-40 | 1-65 | 1-840 | SR-396 (Saturn Parkway) | Widening, 4 to 6 lanes | 5.8 | 0.53 | 0.79 | 3 | 412 | 4,501 | \$48.15 | 2.80 | (0.12) | 2.3503 | 2.3090 | Williamson | MPO RTP | 2020 |
| H-11 | Vietnam Veterans Pkwy (SR-386) at Forest Retreat Road | N/A | N/A | New Interchange | 0.0 | 0.61 | 0.85 | 1 | 2,888 | 4,633 | \$8.20 | 0.00 | 0.05 | 2.3343 | 2.3399 | Sumner | Task $3^{*}$ | 2030 |
| H-17 | Dickerson Pike (US-41) | SR-155 (Briley Pkwy) | Spring St | Widening, 406 lanes | 4.7 | 0.32 | 0.65 | 1 | 21,659 | 54,987 | \$20.73 | 9.60 | 0.40 | 2.3022 | 2.2593 | Davidson | Task 3 | 2040 |
| H-18 | Clarsville Hwy (US-41A/SR-112) | SR-12 (Ashland City Hwy) | SR-155 (Briley Pkwy) | Widening, 2 to 5 lanes | 2.4 | 0.67 | 1.02 | 0 | 3,771 | 6,264 | \$18.88 | 0.20 | 0.22 | 2.3018 | 2.3271 | Davidson | Task $3^{*}$ | 2030 |
| H-13 | NET Corridor Section 1 - Vietnam Veterans Pkwy (SR-386) | 1-65 | US-31E/Saundersville Road | Transit Capital Expansion - Widening, 4 to 6 lanes for freeway Bus Rapid Transit service from Nashville to Gallatin | 8.9 | 0.68 | 0.87 | 1 | 21,702 | 34,412 | \$85.26 | 1.90 | 0.01 | 2.3014 | 2.2842 | Sumner | MPO RTP/ nMotion* | 2030 |
| H-28 | Nolenssille Rod (US-41A/SR-11) | Burkit Road | 1-840 | Widening with realignment from south of Clovercroft Road to north of Sunset Road in Nolensville | 10.6 | 0.30 | 0.97 | 3 | 741 | 7,786 | \$49.75 | 4.20 | (0.15) | 2.2742 | 2.2155 | Williamson | MPO RTP | Illustrative |
| H-34 | Murfreesboro Road (SR-96) | East of Arno Road | Wilson Pike (SR-252) | Widening, 205 lanes | 5.8 | 0.39 | 1.24 | 1 | 1,034 | 5,953 | \$44.37 | 7.30 | (0.03) | 2.2641 | 2.1906 | Williamson | $\begin{gathered} \text { MPO } \\ \text { RTP* } \end{gathered}$ | 2020 |
| H-6 | 1-65 | New interchange at New | Hall Road in White House | New Interchange | 0.0 | 0.52 | 0.65 | 2 | 556 | 1,489 | \$8.20 | 0.20 | (0.23) | 2.2485 | 2.2186 | Roberison | Task 3 | 2030 |
| H-41 | Buckner Road Widening | Columbia Pike (SR-6/US-31) | Buckner Lane | Widening | 1.9 | 0.53 | 0.85 | 1 | 909 | 4,141 | \$14.38 | 0.10 | (0.16) | 2.2095 | 2.1887 | Williamson | MPO RTP | Illustrative |
| H-14 | NET Corridor Transit - Ellington Pkwy (US-31E/SR-6) and I-65 | Ellington Pkwy (SR-6) southern terminus | SR-386 | Construction of managed Lanes along Ellington Pkwy (SR-6) and 1-65 for freeway Bus Rapid Transit service from Nashville to Gallatin | 10.0 | 0.49 | 0.63 | 2 | 34,245 | 63,436 | \$123.98 | 9.20 | 0.06 | 2.2084 | 2.1282 | Davidson | $\begin{gathered} \text { MPO } \\ \text { RTP/ } \\ \text { nMotion* } \end{gathered}$ | 2030 |
| * Project | ded on IMPROVE Act project list |  |  |  |  |  |  |  |  |  |  |  | Techni |  |  | roject |  | Page 1 |

## Table 3-5. (cont.)



* Project included on IMPROVE Act project list


## Table 3-6. Safety Improvements: Project Rankings

|  |  |  |  |  | Length (miles) | (1) <br> Mobility/ Safety | (2) <br> Multimoda | (3) <br> Access/Econ Dev |  | (4) Implementation <br> Cost (millions\$) | (5) <br> Cost Efficiency |  |  |  | $\begin{aligned} & \vec{\Sigma} \\ & \text { 仓̀ } \\ & \end{aligned}$ | $\begin{aligned} & \ddot{\Xi} \\ & \text { Ü } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ID | Project Name | Termini (From) | Termini (To) | Description |  |  |  |  |  | $\stackrel{-}{\overleftarrow{y}}$ |  |  |  |  |  |  |
|  |  |  |  |  |  | Crash Rate | \# ofProjects | BaseTotal Employment | 2040Total Employment |  | B/C (Method 1) | $\begin{gathered} B / C \\ (\text { Method 2) } \end{gathered}$ |  |  |  |  |
|  |  |  |  |  |  | Mobility/ SaferyWeight | Multimodal Weight | BaseTE Weight | $\begin{aligned} & \text { 2040TE } \\ & \text { Weight } \end{aligned}$ |  | CostWeight | B/C-1 Weight | $\begin{aligned} & B / C-2 \\ & \text { Weight } \end{aligned}$ |  |  |  |  |
|  |  |  |  |  |  | 1.00 | 1.00 | 1.00 | 1.00 |  | 1.00 | 1.00 | 1.00 |  |  |  |  |
| S-9 | 1-65 at Rosa L Parks Blvd (Exit 85) | 1-65 at RosaL Parks Blvd (Exit 85) |  | NB/OffTurn Lanes, SB/OffTurn Lanes, SB/On Turn Lanes | 0.0 | 2.72 | 1 | 16,387 | 28,949 | \$0.99 | 2.86 | 6.70 | 3.7171 | 3.7622 | Davidson | Task 3 | 2020 |
| S-13 | 1 -65 at Moores Lane | $1-65$ at Moores Lane |  | Interchange Modification | 0.0 | 0.63 | 0 | 17,292 | 25,925 | \$0.60 | 2.15 | 26.01 | 3.0560 | 3.7578 | Williamson | MPO RTP* | 2020 |
| S-8 | 1-65 at Trinity Lane (Exit 87) | 1-65 at Trinity Lane (Exit 87) |  | NB/Off Ramp Auxiliary Lane Length | 0.0 | 5.67 | 1 | 3,324 | 14,207 | \$0.75 | 2.05 | 4.12 | 2.9566 | 2.9672 | Davidson | Outreach |  |
| S-10 | 1-65 at Wedgewood Ave (Exit 81) | 1-65 at Wedgewood Ave (Exit 81) |  | SB/On Auxiliary Lane, NB/SB Signal Timing | 0.0 | 0.84 | 1 | 15,433 | 21,492 | \$0.88 | 0.31 | 8.28 | 2.9370 | 3.1826 | Davidson | Task3 | 2020 |
| S-14 | 1-65 at SR-96 Murfresboro Rd (Exit 65) | 1-65 at SR-96 Murfiesboro Rd (Exit 65) |  | NB/OffTurn Lanes, SB//offturn Lanes, NB/SB Signal | 0.0 | 0.87 | 0 | 5,015 | 9,921 | \$0.77 | 17.01 | 31.40 | 2.6862 | 2.6862 | Williamson | Task 3 | 2020 |
| S-6 | I-65 at Rivergate Pkwy, Long Hollow Pk, US-31W | N/A |  | Interchange Lighting | 0.0 | 1.34 | 1 | 7,422 | 10,985 | \$0.44 | 1.10 | (1.24) | 2.3022 | 2.1982 | Davidson | mpo RTP | 2020 |
| S-15 | SR-96 | Intersection with US-41A |  | Intersection Improvements | 0.0 | 0.63 | 4 | 38 | 852 | \$0.82 | 0.24 | 6.98 | 2.0511 | 2.2593 | Williamson | Outreach |  |
| S-4 | 1-65 at US-31W Louisille Hwy (Exit 98) | I-65 at US-31W Louisville Hwy (Exit 98) |  | NB/OffTurn Lanes, SB/On Auxiliary Lane, NB/SB Signal Timing | 0.0 | 0.62 | 3 | 666 | 953 | \$0.44 | 1.73 | (1.14) | 1.9755 | 1.8372 | Sumner | Task 3 | 2020 |
| S-5 | 1-65 at US-31W (Exit 98) | $1-65$ at US-31W (Exit 98) |  | NB to WB Flyover | 0.0 | 0.62 | 3 | 602 | 853 | \$0.55 | 1.82 | (1.47) | 1.9592 | 1.8054 | Sumner | Outreach |  |
| S-17 | 1-65 at US-412/SR-99 (Exit 46) | $1-65$ at US-412/SR-99 (Exit 46) |  | NB/SB Signalized Intersection | 0.0 | 1.1 | 3 | 31 | 61 | \$0.33 | 0.07 | 20.70 | 1.9090 | 2.5644 | Maury | Task 3 | 2020 |
| S-19 | $1-65$ at SR-99 (US-412) | 1-65 at SR-99 (US-412) |  | Interchange Modification | 0.0 | 1.1 | 3 | 31 | 61 | \$0.40 | 0.13 | 15.11 | 1.9043 | 2.3777 | Williamson | MPO RTP* | 2020 |
| S-7 | 1-65 ta SR-174 Long Hollow Pike (Exit 97) | I-65 at SR-174 Long Hollow Pike (Exit 97) |  | SB/Offturn Lanes, NB/SB Signal Timing | 0.0 | 0.55 | 1 | 4,772 | 6,575 | \$0.77 | 1.78 | 1.61 | 1.8548 | 1.8012 | Davidson | Task 3 | 2020 |
| S-11 | 1-65 at SR-254 Old Hickory Bivd (Exit 74) | 1-65 at SR-254 Old Hickory Blvd (Exit 74) |  | Convert to to Diverging Diamond Interchange | 0.0 | 2.62 | 0 | 6,390 | 11,024 | \$4.41 | 2.06 | 2.44 | 1.7624 | 1.7187 | Davidson | Task 3 | 2020 |
| S-2 | 1-65 at Bethel Road (SR-257) Interchange Lighting Improvements | 1-65 at SR-257 (Exit 104) |  | Install interchange lightring | 0.0 | 0.58 | 2 | 408 | 961 | \$0.49 | 0.76 | (2.24) | 1.6410 | 1.5249 | Sumner | mPO RTP | 2020 |
| S-1 | 1 -65 at SR-257 (Exit 104) | 1-65 at SR-257 (Exit 104) |  | NB/Off Ramp Queuing | 0.0 | 0.58 | 2 | 419 | 995 | \$0.66 | 0.90 | (0.87) | 1.6284 | 1.5474 | Robertson | Outreach |  |
| S-12 | $1-65$ at SR-253 Concord Rd (Exit 71) | $1-65$ at SR-253 Concord Rd (Exit 71) |  | NB/On Auxiliary Lane, SB/On Auxiliary Lane, NB/SB Signal Timing | 0.0 | 0.66 | 0 | 3,853 | 7,537 | \$1.10 | 1.55 | 2.88 | 1.5477 | 1.5486 | Williamson | Task 3 | 2020 |
| S-20 | 1-65 at SR-11/US-31A (Exit 22) | 1-65 at SR-11/US-31A (Exit 22) |  | NB/SS Signalized Intersection | 0.0 | 2.46 | 0 | 52 | 54 | \$0.60 | 0.01 | (0.63) | 1.3620 | 1.3416 | Giles | Task 3 | 2020 |
| S-21 | 1-65 at SR-15/US-64 (Exit 14) | 1-65 at SR-15/US-64 (Exit 14) |  | NB/SS Signalized Intersection | 0.0 | 1.21 | 0 | 17 | 13 | \$0.37 | 0.00 | (0.79) | 1.1663 | 1.1410 | Giles | Task3 | 2020 |
| S-18 | 1-65 atSR-129 Lynnvill Highway (Exit 27) | 1-65 atSR-129 Lynnvill Highway (Exit 27) |  | NB/On Turn Lane, SB/On Turn Lane | 0.0 | 1.04 | 0 | 48 | 56 | \$0.42 | 0.00 | 1.26 | 1.1341 | 1.1741 | Marshall | Task 3 | 2020 |
| S-22 | Main Street (SR-7) | Union Hill Road (Ardmore) | Morrow Rod (Ardmore) | Safety Improvements | 0.9 | 0.86 | 0 | 399 | 484 | \$1.98 | 0.01 | (0.06) | 0.9347 | 0.9326 | Giles | Task 3* | 2030 |
| S-3 | Bethel Road (SR-257) | Lake Road | 1-65 | Widen shoulders and correct substandard horizontal geometries | 2.3 | 0.58 | 0 | 806 | 1,528 | \$2.87 | 1.65 | (0.17) | 0.9275 | 0.8248 | Robertson | Outreach |  |
| S-16 | $1-65$ at SR-396Saturn Parkway (Exit 53) | I-65 at SR-396 (Exit | Parkway | NB to WB Flyover | 0.0 | 1.56 | 2 | 260 | 1,385 | \$7.72 | 0.78 | (0.33) | 0.8839 | 0.8274 | Maury | Task 3 | 2020 |




Table 3-8. Freight Improvements: Project Rankings


## Table 3-9. Transit Improvements: Project Rankings

|  |  |  |  |  |  | (1) Mobility/ Safety | (2) <br> Multimoda | Access/: |  | (4) Implementation | (5) | 5) ficiency |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | LOS (hrs/day) | \# ofProjects | BaseTotal Employment | 2040Total Employment | $\begin{gathered} \text { Cost } \\ \text { (millions\$) } \end{gathered}$ | $B / C$ (Method 1) | $\begin{gathered} B / C \\ (\text { Method 2) } \\ \hline \end{gathered}$ |  |  |  |  |  |
|  |  |  |  |  |  | LOSWeight | Multimodal Weight | BaseTE Weight | $\begin{aligned} & \text { 2040TE } \\ & \text { Weight } \end{aligned}$ | CostWeight | $\begin{aligned} & B / C-1 \\ & \text { Weight } \end{aligned}$ | $\begin{aligned} & B / C-2 \\ & \text { Weight } \end{aligned}$ | $\bar{\vdots}$ | $\begin{aligned} & \text { N } \\ & \underset{z}{\underset{z}{2}} \end{aligned}$ |  |  | ¢ ¢ |
| ID | Project Name | Termini (From) | Termini (To) | Description | Length (miles) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | $\underset{\text { < }}{\stackrel{2}{2}}$ | $\underset{\underset{y}{c}}{\underset{\sim}{c}}$ | 气̃ | $\stackrel{y}{\hat{0}}$ | 윽Nㅜㄴ |
| T-24 | South Corridor Regional Express Bus Service | Several routes between Nashvil Colum | e, Franklin, Spring Hill, and bia | Provide new and expanded service to Williamson and Maury County, including additional express trips, reverse commute trips, additional service hours, and new Park-and-Ride opportunities | 45.9 | 0.21 | 5 | 110,014 | 187,412 | \$26.71 |  |  | 4.2138 |  | Davidson/ Sumner | nMotion | 2030 |
| T-11 | Nolensville Pike (US-41A) LRT | Downtown Nashville | Lenox Village Drive | Construction of light rail transit along US-31A (Nolensville Pike) | 5.5 | 0.77 | 2 | 90,279 | 139,56 | \$430.50 |  |  | 3.3069 |  | Davidson and Williamson | $\begin{aligned} & \text { Central/ } \\ & \text { South } \end{aligned}$ | 2030 |
| $\begin{gathered} T-13- \\ 18 \end{gathered}$ | 1-65 South Freeway BRT Stations (6) | Downtown Nashville | Frankin | Construction of freeway BRT Transit top and park-2nd-ride lot | 0.0 | 0.21 | 0 | 91,642 | 144,168 | \$3.97 |  |  | 2.8469 |  | Davidson | nMotion | 2030 |
| T-10 | Dickerson Pike (US-31W) BRT | Hunters Lane | Downtown Nashville | Construction of bus rapid transit amenities along US-31W (Dickerson Pike). Project include dedicated bus lanes and improved pedestrian facilities. | 4.7 | 0.83 | 2 | 26,326 | 63,219 | \$235.00 |  |  | 2.6582 |  | Davidson and Williamson | MPO RTP / nMotion | 2030 |
| T-25 | Rapid Transit/Managed Lanes between Nashville and Franklin | Downtown Nashville | Murfreesboro Road (SR-96) | Construction of managed lanes for freeway Bus Rapid Transit along I-65 from Nashville to Murfreesboro Road (SR-96) | 18.8 | 0.21 | 0 | 91,642 | 144,168 | \$335.50 |  |  | 2.3977 |  | Davidson/ Williamson | nMotion | 2030 |
| T-1 | NET Corridor Regional Express Bus Service | Several routes between | lashille and Gallatin | Provide new and expanded service to Sumner County, including additional express trips, additional service hours, and new park-andride opportunities | 30.0 | 0.21 | 3 | 19,852 | 39,278 | \$1.25 |  |  | 2.2383 |  | Davidson and Sumner | MPO RTP | 2020 |
| T-9 | US-31E (Gallatin Pike) LRT | Downtown Nashille | Conference Drive | Construction of light-rail transit along US-31E (Gallatin Pike) | 4.9 | 0.79 | 1 | 55,853 | 96,068 | \$738.00 |  |  | 2.1703 |  | Sumner | nMotion | 2030 |
| T-3-5 | 1-65 North Freeway BRT Stations (3) | Goodlettessille | Gallatin | Construction of freeway BRT transit stop and park-znd-ride lot | 0.0 | 0.21 | 2 | 11,296 | 22,370 | \$1.99 |  |  | 1.8693 |  | Davidson | MPO RTP | 2030 |
| T-6 | NET Coridor Interchange 2 | Vietnam Veterans Pkwy (SR-30) | -386) at Conference Drive | Interchange modificaion for Traffic NB onto Conference Drive | 0.0 | 0.21 | 2 | 8,351 | 12,636 | \$13.42 |  |  | 1.7751 |  | Davidson and Sumner | nMotion | 2030 |
| T-7 | NET Corridor Interchange 1 | Vietnam Veterans Pkw | (SR-386) at l-65 | Interchange modification WB to NB and SB to EBTaffic | 0.0 | 0.21 | 2 | 5,897 | 9,292 | \$26.84 |  |  | 1.7168 |  | Sumner | nMotion | 2030 |
| T-22 | Rapid Bus Service - Route 96R Murfreesboro | Downtown Nashville | Murfresboro | Provide new rapid bus service to Murfreesboro | 33.6 | 0.21 | 1 | 14,088 | 23,011 | \$6.52 |  |  | 1.6920 |  | Davidson | nMotion | 2030 |
| T-2 | White House Express Service | SR-76 | SR-386 | Widening and strengthening of shoulders to 12-ff for bus on shoulder service. Further study of ramp metering for SR-174 (Long Hollow Pike), US-31W, and SR-257 (Bethel Road) to determine if necessary for safe routing | 12.0 | 0.00 | 3 | 716 | 1,708 | \$2.40 |  |  | 1.6124 |  | Davidson | MPO RTP | 2030 |
| T-20 | Rapid Bus Service - Route 81R Nolensille | Nolensuille | Murfresboro Road (SR-96) | Provide new rapid bus service to Triune | 7.0 | 0.00 | 3 | 38 | 845 | \$1.36 |  |  | 1.6030 |  | Williamson and Rutherford | nMotion | 2030 |
| T-21 | Rapid Bus Service - Route 86R Smyrna/LaVergne | Downtown Nashville | Smyrna/LaVergne | Provide new rapid bus service to Smyrna and Lavergne | 24.0 | 0.19 | 1 | 2,96 | 3,892 | \$4.66 |  |  | 1.4594 |  | Davidson | nMotion | 2030 |
| T-8 | Rapid Bus Service - Route 80R Gallatin | Outer end of Gallatin Pike LRT | Gallatin | Provide new rapid bus service to Gallatin | 17.5 | 0.21 | 0 | 8,339 | 18,155 | \$3.40 |  |  | 1.4181 |  | Sumner | nMotion | 2030 |
| T-12 | Rapid Bus Service - Route 81R Nolensville | Outer end of Nolensille Pike LRT | Nolensuille | Provide new rapid bus service to Nolensille | 5.8 | 0.00 | 2 | 156 | 1,678 | \$1.13 |  |  | 1.4088 |  | Davidson | $\begin{aligned} & \text { Central/ } \\ & \text { South } \end{aligned}$ | 2030 |
| T-23 | Franklin to Mufreesboro Express Bus Service | Routes between Frankli | n and Mufressboro | Provide new service express service to from Franklin (Cool Springs) to Murfreesboro | 31.2 | 0.00 | 0 | 21,411 | 34,091 | \$6.05 |  |  | 1.3683 |  | Davidson | nMotion | 2030 |
| T-19 | Transit-Pedestrian Network Improvements | Various Loc | ations | Construction of transit-supportive pedestrian amenities, including sidewalks, landscaping, lighting, crosswalks, and ADA ramps |  |  |  |  |  |  |  |  |  |  | Maury and Williamson | nMotion | 2030 |

Table 3-10. Walking and Bicycling Improvements: Project Rankings

| ID | Project Name | Termini (From) | Termini (To) | Description | Length (miles) | (1) <br> Mobility/Safety |  | (2) <br> Multimodal <br> \# of Projects | (3) Access/Econ Dev |  | (4) Implementation <br> Cost (millions\$) | (5) Cost Efficiency |  |  |  |  | $\begin{aligned} & \text { U } \\ & \text { U } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | BaseTotal Population | 2040Total Population |  | BaseTotal Employment | 2040Total Employment |  | $\begin{gathered} B / C \\ (\text { Method 1) } \end{gathered}$ | $\begin{gathered} B / C \\ (\text { Method 2) } \end{gathered}$ |  |  |  |  |  |
|  |  |  |  |  |  | Base Pop Weight | $\begin{gathered} \text { 2040 Pop } \\ \text { Weight } \end{gathered}$ | Multimodal Weight | BaseTE <br> Weight | $\begin{aligned} & \text { 2040TE } \\ & \text { Weight } \end{aligned}$ | CostWeight | $\begin{array}{r} B / C-1 \\ \text { Weight } \\ \hline \end{array}$ | $B / C-2$ Weight |  |  |  |  |  |
|  |  |  |  |  |  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |  |  |  |  |  |
| B-38 | Buckner Road | Buckner Road/l-65 nterchchange | Lewisburg Pike (SR-106/US-431) | Network - Construction of bike lane(s) or multi-use trail; can be constructed in concert with H-22 | 2.1 | 24,464 | 33,418 | 1 | 88,161 | 140,390 | \$1.60 | 1.85 |  | 4.6953 |  | Williamson | Task 3 | 2040 |
| B-34 | Columbia Pike (US-31/SR-6) | Goose Creek Bypass | Mack Hatcher Parkway (SR-397) | Construction of Multi-Use Path | 3.9 | 15,895 | 23,826 | 1 | 96,939 | 158,412 | \$2.93 | 0.91 |  | 4.0847 |  | Williamson | Connect Franklin | 2030 |
| B-33 | SR-96 (Murfreesboro Road) | East of Arno Road | Veterans Pkwy | Network - Construction of on-road or off-road bicycle facilities | 18.3 | 15,063 | 22,254 | 3 | 79,274 | 130,917 | \$4.58 | 1.43 |  | 4.502 |  | Williamson/ Rutherford | Task 3 | 2030 |
| B-37 | Buckner Road | Columbia Pike (SR-6/US-31) | Buckner Lane | Network - Construction of bike lane(s) or multi-use trail; can be constructed in concert with H-24 | 1.9 | 12,185 | 19,221 | 1 | 81,870 | 137,173 | \$1.44 | 3.80 |  | 3.8094 |  | Williamson | Task 3 | 2040 |
| B-35 | Goose (reek Bypass (SR-248) | Columbia Pike (US-31/SR-6) | Long Lane | Construction of Bike Lanes with Sidewalks | 4.1 | 15,330 | 23,560 | 1 | 62,470 | 109,651 | \$1.02 | 2.37 |  | 3.7273 |  | Williamson | Connect <br> Franklin | 2040 |
| B-7 | James Robertson Parkway (US-31) | Ross Parks Boulevard (SR-12) | Church Street | Construction of Separated Bike Lanes | 0.5 | 11,062 | 16,834 | 0 | 78,329 | 124,476 | \$0.69 | 8.38 |  | 3.4237 |  | Davidson | Nashville WalknBike | 2030 |
| B-36 | US-31 | SR-248 (Goose (reek Bypass) | $\begin{aligned} & \text { North of Buckner } \\ & \text { Lane } \end{aligned}$ | Network - Construction of bike lane(s) or multi-use path | 3.8 | 11,201 | 18,34 | 1 | 74,818 | 128,374 | \$2.89 | 1.17 |  | 3.3512 |  | Williamson | Task 3 | 2020 |
| B-11 | US-431 (Broadway) | George L. Davis Blvd. | 14th Avenue South | Reconstruction of sidewalks along US-431 (Broadway). Project includes landscaping, lighting, crosswalks, in-roadway warning lights at on-ramps, and pedestrian amenities | 0.1 | 5,767 | 28,574 | 1 | 780 | 7,842 | \$0.05 | 105.00 |  | 3.3427 |  | Davidson | Task 3 | 2020 |
| B-4 | US-431 (Trinity Lane) | US-431 (Whites Creek Pike) | $\begin{gathered} \text { US-41 } \\ \text { (Dickerson Pike) } \end{gathered}$ | Safety- Reconstruction of sidewalks along US-431 (Trinity Lane). Project includes landscaping, lighting, crosswalks, in-roadway warning lights at on-ramps, and pedestrian amenities. | 1.3 | 10,520 | 16,681 | 0 | 69,453 | 113,166 | \$0.57 | 13.16 |  | 3.3013 |  | Davidson | Task 3 | 2020 |
| B-30 | Mack Hatcher Pkwy (SR-397) | SR-96 east of Franklin | Columbia Pike (US-31/SR-6) south of Franklin | Network - Construction of Multi-Use Path; Can be constructed with in concert with H-30 | 3.2 | 25,502 | 36,777 | 1 | 16,485 | 28,068 | \$2.42 | 3.27 |  | 3.2495 |  | Williamson | Connect <br> Franklin | 2030 |
| B-22 | Franklin Road (US-31/SR-6) | SR-441 (Moore' Lane) | Harpeth River Bridge | Construction of Multi-Use Path; Can be constructed in concert with H-37 | 3.7 | 18,570 | 38,410 | 1 | 15,936 | 28,856 | \$2.81 | 2.45 |  | 2.9455 |  | Williamson | Connect Franklin | 2040 |
| B-19 | Nolensille Road (SR-11) | Burkitt Road | $1-840$ | Network - Construction of on-road or off-road bicyle facilities | 10.6 | 12,931 | 29,137 | 2 | 20,499 | 33,131 | \$2.65 | 1.85 |  | 2.9148 |  | Williamson | Task 3 | 2040 |
| B-31 | Columbia Pike (US-31/SR-6) | Fowkes Street | Mack Hatcher Pkwy (SR-397) | Construction of On-Road Bike Lanes; Can be constructed in concert with H-31 | 1.9 | 15,417 | 20,750 | 1 | 8,843 | 15,840 | \$0.47 | 11.21 |  | 2.6897 |  | Williamson | Connect Franklin | 2030 |
| B-6 | Rosa Parks Boulevard (SR-12) | Buchanan Street | James Robertson Parkway (US-31) | Construction of Separated Bike Lanes | 1.2 | 11,001 | 16,381 | 0 | 50,466 | 86,396 | \$1.80 | 4.03 |  | 2.6539 |  | Davidson | Nashville WalknBike | 2030 |
| B-29 | SR-96 (Murfiestoro Road) | Southwind Dirive | Carothers Parkway | Safety - Construction of sidewalks or multi-use path along SR-96. Project includes landscaping, crosswalks, and pedestrian amenities. | 1.0 | 11,223 | 22,946 | 1 | 11,308 | 17,571 | \$0.63 | 7.10 |  | 2.5520 |  | Williamson | Task 3 | 2020 |
| B-21 | SR-441 (Moore' Lane) | Mallory Lane | Carrothers Parkway | Network - Construction of on-road facility or multi-use trail | 0.8 | 13,877 | 27,891 | 0 | 10,675 | 15,051 | \$0.61 | 4.45 |  | 2.4054 |  | Williamson | Task 3 | 2020 |
| B-9 | Rosa Parks Boulevard/8th Ave $S$ (US-31) | Church Street | Korean Veterans Boulevard | Construction of Separated Bike Lanes | 0.5 | 8,433 | 38,940 | 0 | 1,541 | 11,077 | \$0.78 | 7.75 |  | 2.3592 |  | Davidson | Nashville WalknBike | 2030 |
| B-14 | SR-109 | 1-40 | 1-840 | Network - Construction of shared roadway yacility | 4.0 | 13,544 | 21,109 | 0 | 2,526 | 13,440 | \$0.08 | 8.97 |  | 2.2561 |  | Wison | Task 3 | 2020 |
| B-2 | Johnny Cash Parkway/East Main Street (US-31E) | Big Station Camp Road | $\begin{aligned} & \text { Center Point Road } \\ & \text { South } \end{aligned}$ | Construction of Buffered Bike Lanes | 8.8 | 13,444 | 18,443 | 1 | 5,010 | 20,576 | \$2.20 | 4.91 |  | 2.1927 |  | Sumner | Hendersonville Bicycle Plan | 2040 |
| B-5 | Clarksville Pike (SR-12) | Ashland City Highway (SR-12) | Rosa Parks Boulevard (US-41 Alt) | Construction of Bike Lanes | 1.1 | 9,717 | 18,943 | 0 | 7,466 | 14,947 | \$0.23 | 16.59 |  | 2.1582 |  | Davidson | Nashville WalknBike | 2030 |




[^0]:    Maintain and enhance partnerships with both regional and local partners.

