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TRANSPORTATION
CABINET

KENTUCKY TRANSPORTATION CABINET **US 27 CORRIDOR STUDY**

July 2026
Executive Briefing



EXECUTIVE SUMMARY

In 2021, the Lexington-Fayette Urban County Government (LFUCG) completed the Imagine Nicholasville Road (INR) study, which was subsequently formally adopted by the Lexington Planning Commission. INR recommended transforming US 27 for approximately six miles from Main Street to Toronto Road (Figure ES1) into a Complete Street featuring transit-oriented development (TOD), bus rapid transit (BRT), improved bicycle and pedestrian safety and connectivity, and enhanced placemaking. The US 27 Corridor Study advances those recommendations by evaluating their feasibility, particularly the transportation elements, and developing conceptual designs and cost estimates to guide the next phases of implementation.

THE GOALS OF THE STUDY ARE TO:

- » Forecast future conditions by developing the following three scenarios for traffic/transit volumes and land use density:
 01. No changes to land use patterns and minor transit service improvements
 02. Partial land use build-out and moderate transit service improvements
 03. Full land use build-out and full implementation of BRT service
- » Identify corridor solutions that transform Nicholasville Road into a Complete Street
- » Evaluate the combined impacts to all modes of transportation across the three future scenarios
- » Incorporate public and stakeholder input to align with the vision set forth in the INR study
- » Develop phased project packages for a 5-year, 10-year, and long-term implementation

The corridor encompasses major trip generators such as the University of Kentucky and associated hospital and medical facilities, Baptist Health Hospital, The Fayette Mall, The Summitt, and serves as a connector between Jessamine County and Lexington, with numerous neighborhoods and the Brannon Crossing shopping center to the south.

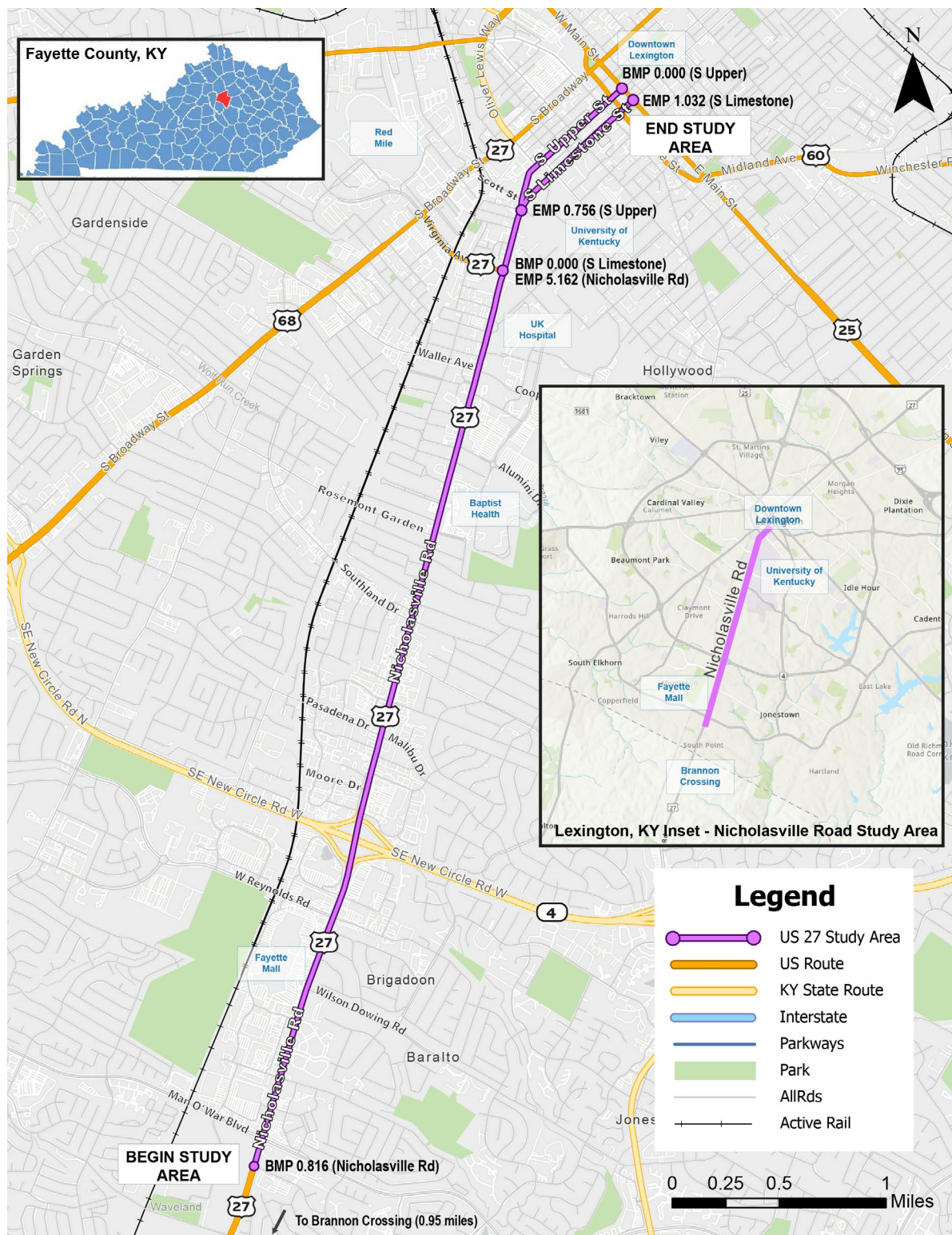


FIGURE ES1. US 27 CORRIDOR STUDY AREA

SAFETY

A total of 5,679 crashes were reported between 2018 and 2022.

Of these, 25 were fatal or suspected serious injury (KA), 702 were apparent minor injury or suspected minor injury (BC), and 4,952 were property damage only (PDO). Vulnerable road users (VRUs), including bicyclists and pedestrians, resulted in 48 pedestrian crashes (one fatal, five suspected serious injuries) and nine bicyclist crashes (one suspected serious injury). The majority of crash types along Nicholasville Road are rear end (2,397, 42%), side-swipe same direction (1,289, 23%), and angle (932, 16%). The remaining 19% of crashes were dispersed amongst other crash types. Crashes are highest between 11:00 am and 7:00 pm with 5:00 pm being the peak.

The corridor has a mix of crash hot spots, specifically at major intersections like Man O' War Boulevard, Reynolds Road, the New Circle Interchange, and the area from Moore Drive to Southland Drive and Rosemont Garden to Virginia Ave. From a vehicular standpoint, areas with the reversible lanes, higher speeds, access point density, and wider intersections can differ from typical driver expectation and cause confusion, raising crash risks. The southern portion of the corridor has varying land uses and longer crosswalks, raising the risks of the three main metrics of the Safe System Approach: likelihood, exposure, and severity, for VRUs crossing US 27.

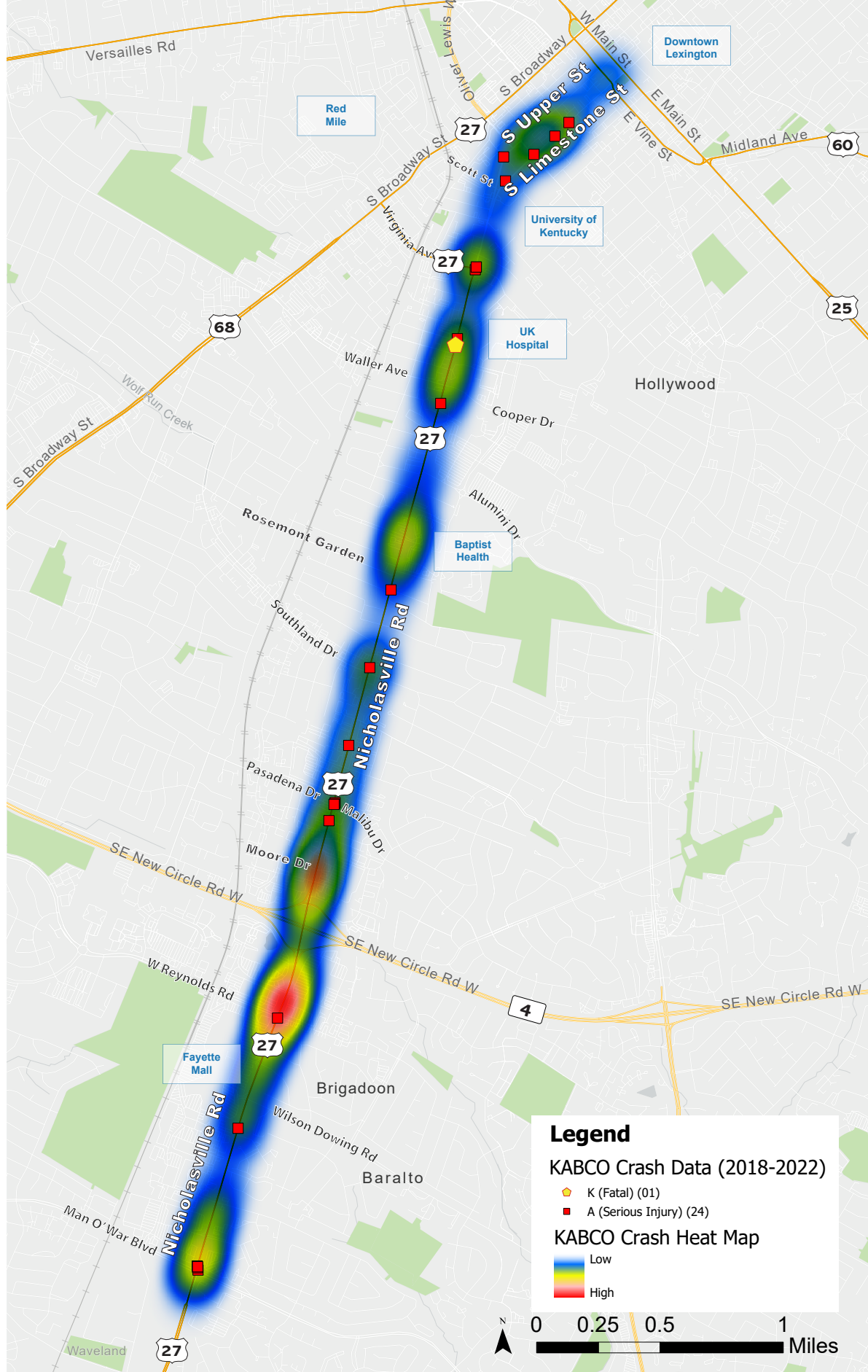


FIGURE ES2. CRASH DENSITY, 2018 – 2022

TRAFFIC

A traffic forecast was prepared for this study and included:

- › 2023 Annual Average Daily Traffic (AADT) And Design Hourly Volume (DHV) Volumes
- › 2023 Truck AADT And DHV Volumes
- › 2023 And 2050 Turning Movement Forecasts
- › 2050 Transit Ridership Forecasts

Future year traffic volumes were developed for three potential BRT and land use scenarios:

- › **Scenario 1:** 2050 Scenario of the Lexington Area Metropolitan Planning Organization (LAMPO) regional travel demand model (TDM) based on the most recent census projections. Existing transit with limited improvements.
- › **Scenario 2:** 2050 Scenario with medium growth and development adjustments made to the LAMPO model. Adds rapid transit service to Brannon Crossing with fewer stops and other transit service improvements such as transit signal priority and queue jumps but does not contain dedicated lanes for rapid service.
- › **Scenario 3:** 2050 Scenario with medium growth and development adjustments made to the LAMPO model. This scenario was originally scoped to show high growth and development as shown in the INR study; however, recent expansions to the Lexington Urban Service Boundary resulted in the project team agreeing that medium growth would more accurately reflect this scenario. Full Bus Rapid Transit (BRT) scenario, adding the transit improvements from Scenario 2, with the addition of dedicated lanes for service, such as a Bus Access Transit (BAT) lane in both directions between Southland Drive and Man O' War Boulevard, and a bi-directional center running bus-only lane between Scott Street and Alumni Drive.

POTENTIAL IMPROVEMENT CONCEPT EVALUATION

Traffic simulation models were utilized to evaluate potential improvement concepts for the three scenarios, and a high-level safety analysis was performed to determine the safety benefits. During the evaluation phase, the project management team agreed that Scenarios 1 and 2 did not meet the goals of making Nicholasville Road a Complete Street. These two scenarios do not make transit as much of a viable option for travel through the corridor as Scenario 3 does through the reduction of transit travel times. Scenarios 1 and 2 keep Nicholasville Road car-centric and do not promote mode shift to bicycle, pedestrian, or transit options, which does not make the roadway safer for all modes.



Image Source: Baptist Health

RECOMMENDATIONS

Figures ES3 through ES7 show the recommended improvement concepts along the corridor. Cost estimates were developed for the potential improvement concepts. Estimates include the Design, Right-of-Way, Utility, and Construction (DRUC) costs for roadway capital improvements, as well as capital costs for the transit infrastructure and vehicles. Additional costs not included in this study are the yearly operational costs for Lextran to operate the BRT line.

An implementation plan was developed, which created project packages that estimated when each segment for the roadway capital improvements would likely be funded. Projects were assigned to one of three time periods: 2026-2030, 2031-2035, or 2035 and beyond. These projects will likely be funded through a combination of the Kentucky Highway Plan and the City of Lexington's transportation funding.

Transit infrastructure improvements will likely be funded through the Federal Transit Administration (FTA) Capital Investment Grant (CIG) program. Based on current ridership forecasts from this study, if the project were to seek CIG funding as a Small Starts project under the current guidance¹, the maximum federal share² the project could reasonably seek and still anticipate receiving a medium rating for cost effectiveness is between \$60-\$100 million in federal funds. Additionally, project sponsors in the CIG program, utilizing federal funds for a project, must also provide non-federal local match contribution of 20% or more.

Figure ES8 shows the implementation plan and project packages. Because the total transit infrastructure costs are close to the maximum federal share for the CIG grant, the majority of the roadway capital improvements will need to be completed prior to entering into CIG Project Development. Roadway segments 6, 7, and 10, which are the center-running bi-directional bus-only lane section, could be included in the CIG Project Development phase because of the tie between those improvements and the start of the BRT service. Additionally, the roadway costs for that section could be used as the local match for the grant.

¹ 49 USC 5309 (g)(5)(B) – States that FTA must issue updated policy guidance “each time the Secretary makes significant changes to the process and criteria, but not less frequently than once every 2 years”

² Federal share includes all federal funds used for project. So this would include FTA formula funds, FHWA funds, other discretionary grants, or any other federal funds used for the project. It is not limited to the CIG grant amount.

LEGEND

-  BRT BUSINESS ACCESS TRANSIT LANE
-  BRT LINE IN MIXED TRAFFIC
-  10-FOOT SHARED USE PATH
-  TRANSIT STOP

Transit Signal Priority (TSP) at all signalized intersections

- Lengthening right turn lane or add BAT lane on blocks where necessary to maintain 3 full access travel lanes in each direction between New Circle Road and Man O'War Boulevard

The diagram illustrates a 10-lane highway cross-section. The lanes are labeled from left to right as follows:

- 1' (Shoulder)
- 20' (Lane)
- 11' (Lane) - Car
- 11' (Lane) - Single turn lane
- 11' (Lane) - Single turn lane
- 11' (Lane) - Single turn lane
- 11' (Lane) - Center turn lane
- 11' (Lane) - Single turn lane
- 11' (Lane) - Single turn lane
- 11' (Lane) - Single turn lane
- 20' (Lane)
- 1' (Shoulder)

 The diagram shows a bus in the first 11' lane, a car in the second 11' lane, and a car in the last 11' lane. A central turn lane is marked with a white arrow. The background shows a blue sky with clouds and a road with streetlights and a utility pole.

WILSON DOWNING RD

E TIVERTON WAY

viii

SOUTHLAND/MAN O' WAR SECTION - NEW CIRCLE RD TO SOUTHLAND DR

Scenario 3



FIGURE ES4. RECOMMENDATIONS FROM NEW CIRCLE ROAD TO SOUTHLAND DRIVE



FIGURE ES5. RECOMMENDATIONS FROM SOUTHLAND DRIVE TO ALUMNI DRIVE

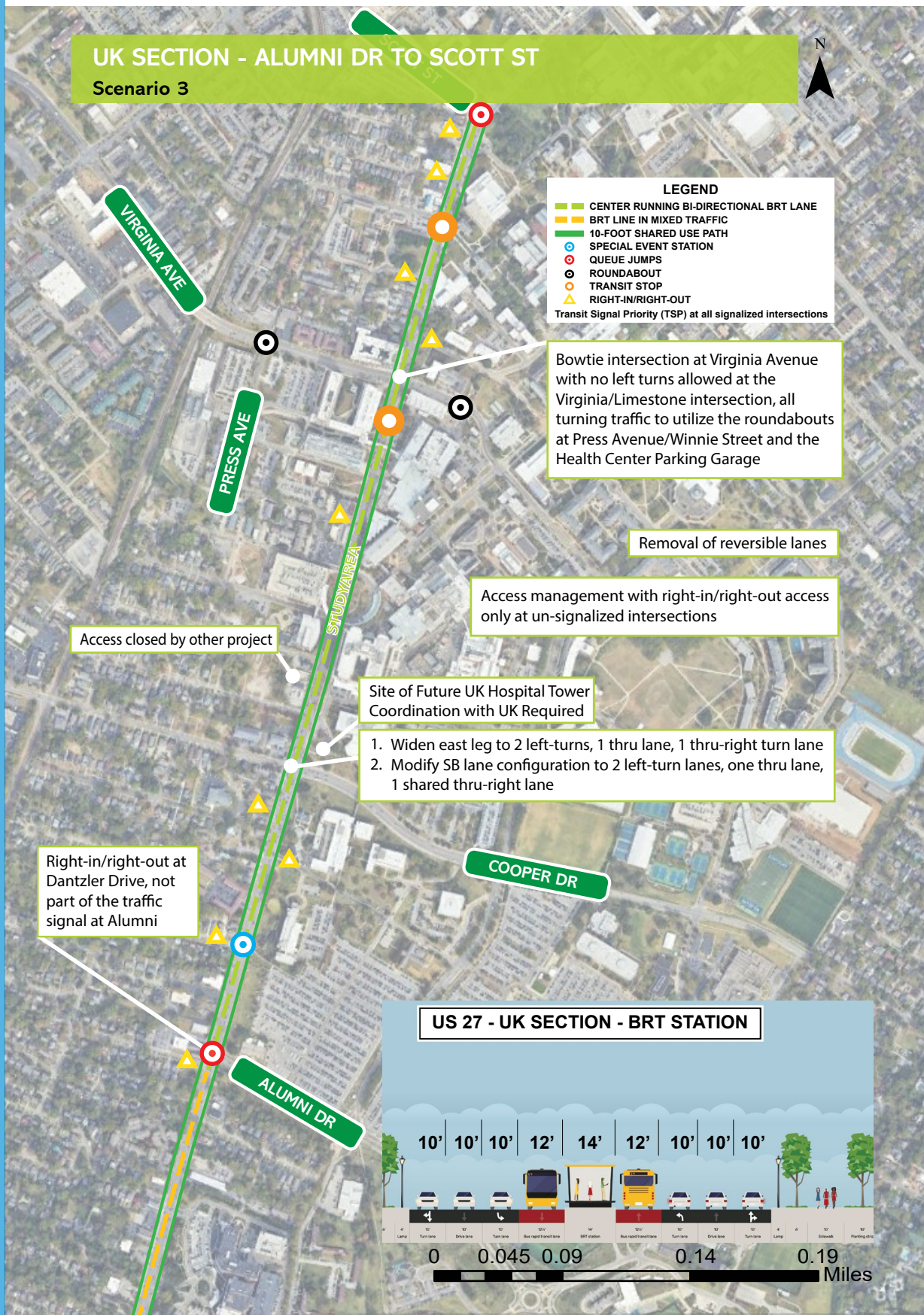
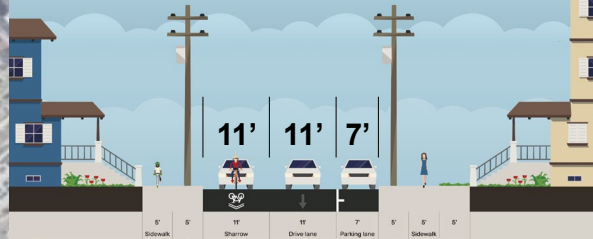


FIGURE ES6. RECOMMENDATIONS FROM ALUMNI DRIVE TO SCOTT STREET

DOWNTOWN SECTION - SCOTT ST TO MAIN ST Scenario 3



S. UPPER STREET - MAINLINE SB



UPPER ST
S LIMESTONE
MAIN ST
END OF STUDY AREA

HIGH ST

STUDY AREA

MAXWELL ST

PROTECTED PARKING
BIKE LANE

AVE OF CHAMPIONS

TRANSIT STOP

Center Running
Bi-Directional
BRT Lane

SCOTT ST

LEGEND

- BRT LINE IN MIXED TRAFFIC
 - CENTER RUNNING
 - BI-DIRECTIONAL BRT LANE TRANSIT STOP
 - PARKING AND PROTECTED BIKE LANE
 - RESTRIPING
 - HISTORIC LIGHTING
 - SIDEWALK IMPROVEMENTS
 - URBAN INTERSECTION UPGRADES
 - RIGHT-IN/RIGHT-OUT
- Transit Signal Priority (TSP) at all signalized intersections

S. LIMESTONE - MAINLINE NB

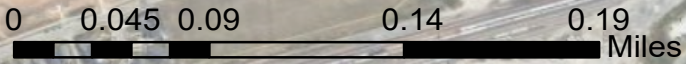
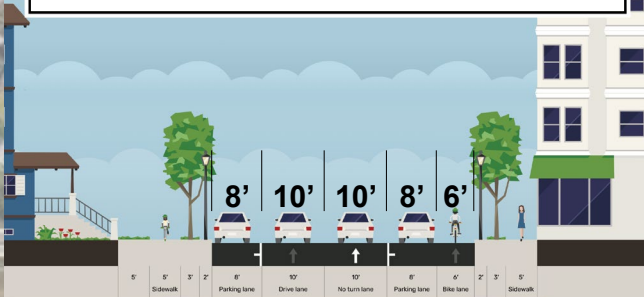
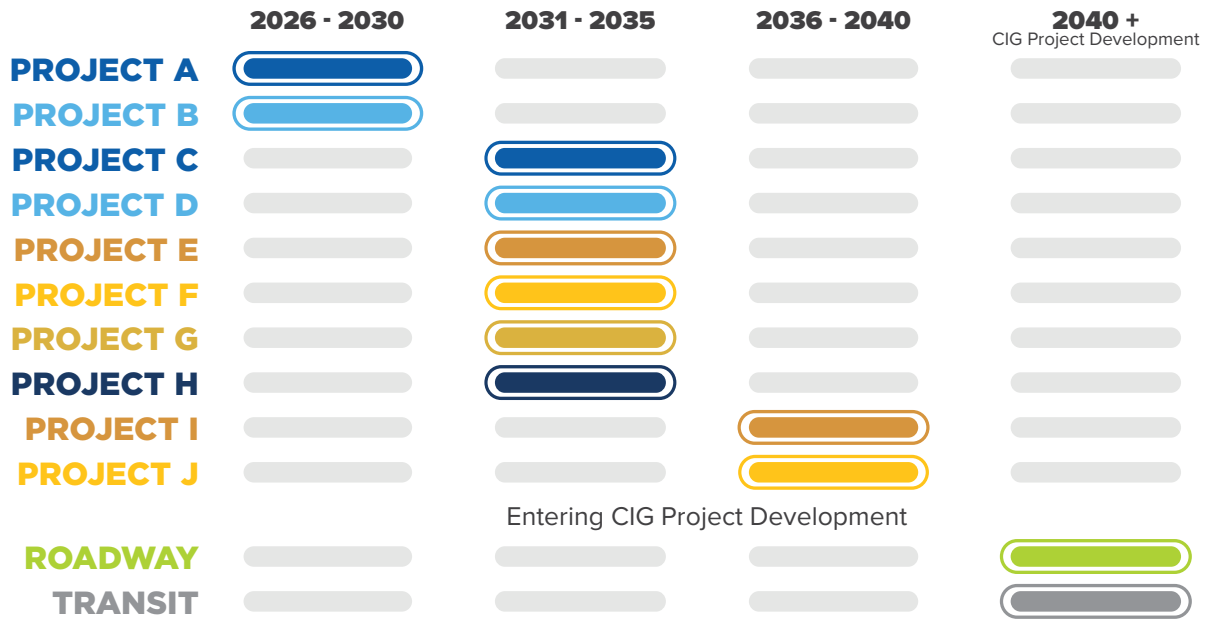
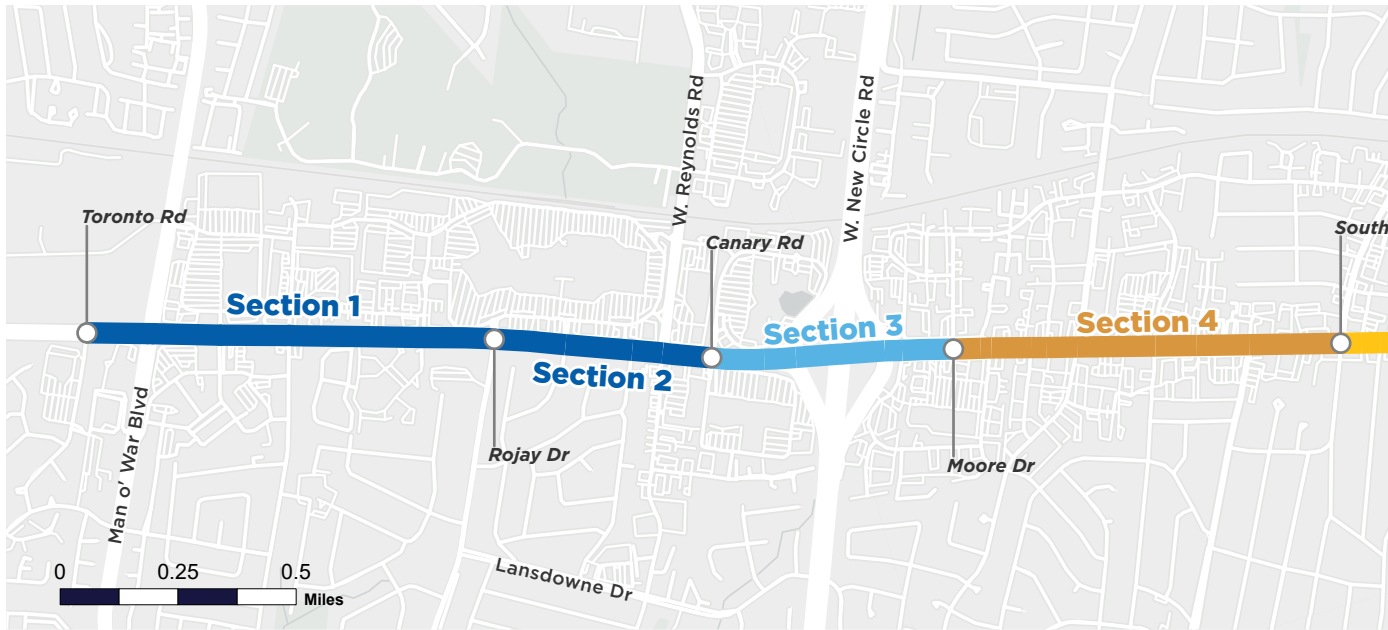


FIGURE ES7. RECOMMENDATIONS FROM SCOTT STREET TO MAIN STREET





PROJECT A

**Section 1-2
Design**
\$6.4 M

PROJECT B

**Section 3
Design**
\$3.0 M

PROJECT C

**Section 1-2
Right-of-Way**
\$2.2 M
Utilities
\$7.9 M
Construction
\$45.2 M

PROJECT D

**Section 3
Right-of-Way**
\$0.7 M
Utilities
\$3.3 M
Construction
\$21.8 M

PROJECT E

**Section 4
Design**
\$3.5 M

PROJECT F

**Section 5
Design**
\$3.0 M

PROJECT G

**Section 8 & 9
Design**
\$2.6 M
Right-of-Way
\$3.1 M
Utilities
\$5.3 M
Construction
\$17.0 M

PROJECT H

**Section 11
Design**
\$3.3 M
Right-of-Way
\$2.3 M
Utilities
\$3.7 M
Construction
\$26.7 M

PROJECT I

**Section 4
Right-of-Way**
\$2.0 M
Utilities
\$3.7 M
Construction
\$25.1 M

PROJECT J

**Section 5
Right-of-Way**
\$2.5 M
Utilities
\$5.2 M
Construction
\$22.3 M

CIG Project Development

Roadway

**Section 6 - 7 & 10
Design**
\$6.6 M
Right-of-Way
\$5.6 M
Utilities
\$10.8 M
Construction
\$46.7 M

Transit

Transit Stations
Side Stations
\$26.4 M (\$1.65 M/Station)
Center Stations
\$6.6 M (\$2.2 M/Station)

General Streetscape
\$25.2 M
Vehicle Procurement
\$46.0 M

ITS
\$2.75 M (\$125,000/Station)
TSP
\$2.9 M

FIGURE ES8. US 27 BRT PROPOSED IMPLEMENTATION PLAN

