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NC 54 WEST CORRIDOR STUDY

I-85 in Graham to Carrboro

Town of Chapel Hill, Town Council Meeting

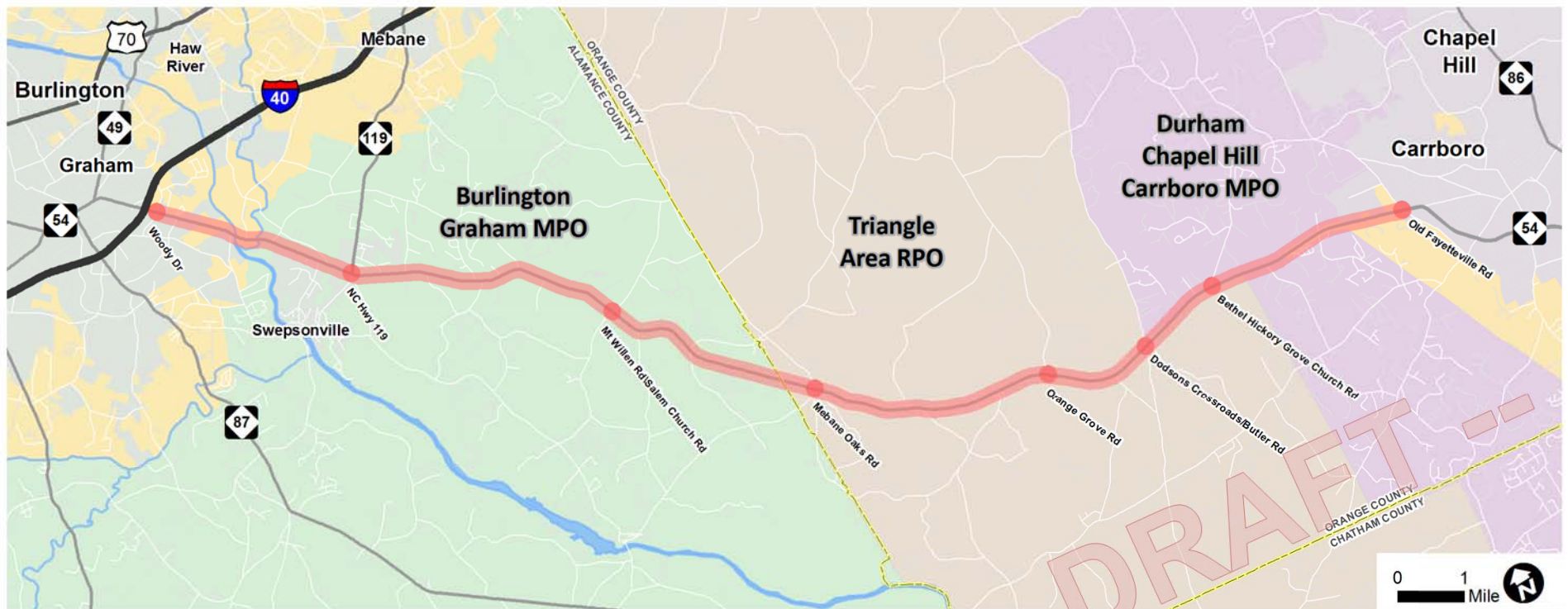
Presented by
VHB

October 30, 2019

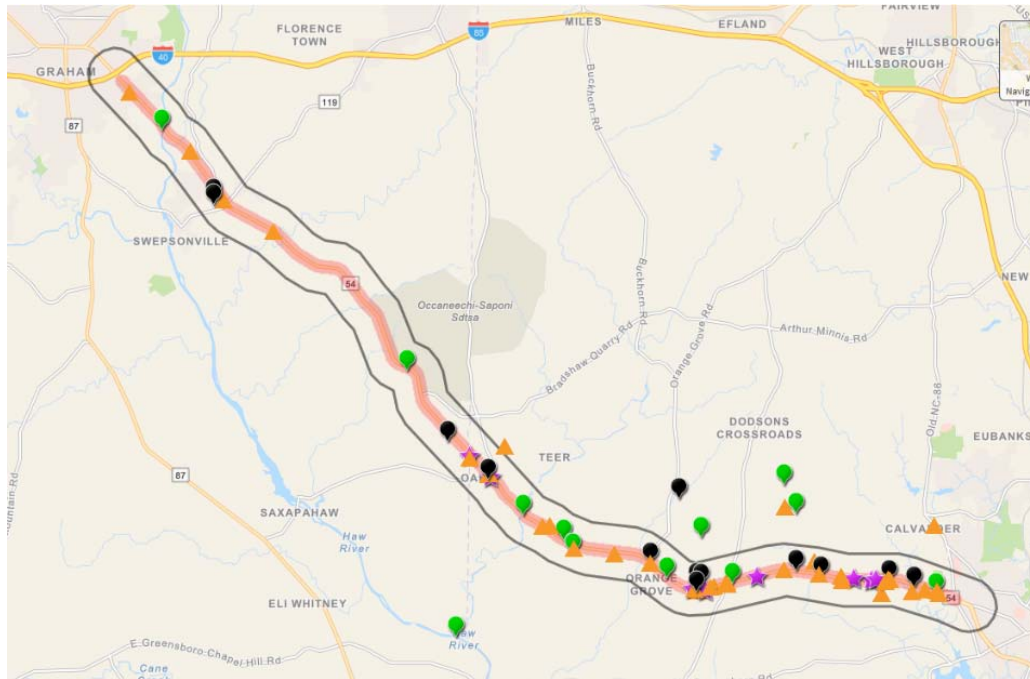
NC 54 Study Overview

- Analyze existing & future transportation & land use conditions along this >20-mile corridor between Graham & Carrboro
- Review existing plans & proposed projects
- Clarify needs & long-term vision for the corridor
 - Safety
 - Multimodal options
 - Community character & environmental preservation
 - Economic viability
- Identify & evaluate trade-offs:
 - Low cost, low impact, easily implemented near-term solutions
 - Longer-term infrastructure improvements
 - Supportive land uses & development policies

NC 54 Planning Jurisdictions



Public Engagement



NC54 WEST CORRIDOR STUDY

NEWSLETTER 2 | APRIL 2018

Corridor Study Schedule

Phase 1 | Fall 2017
Existing Conditions and
Market & Economic
Assessment

Phase 2 | Early 2018
Round #1 of Community Meetings
and Long-Range Forecasts

Phase 3 | Spring 2018
Round #2 of Community
Meetings and Draft Report

Phase 4 | Summer/Fall 2018
Draft Report – Summer 2018,
and Final Report

NC 54 Corridor Study

The NC 54 Corridor Study is an in-depth review of the 20+ mile stretch of NC 54 between Old Fayetteville Road in Carrboro and I-85 in Graham. Over the past several months, the NC 54 Corridor Study project team has completed data collection, sought community feedback, and completed an Existing Conditions report. Read on for more information on these project milestones.

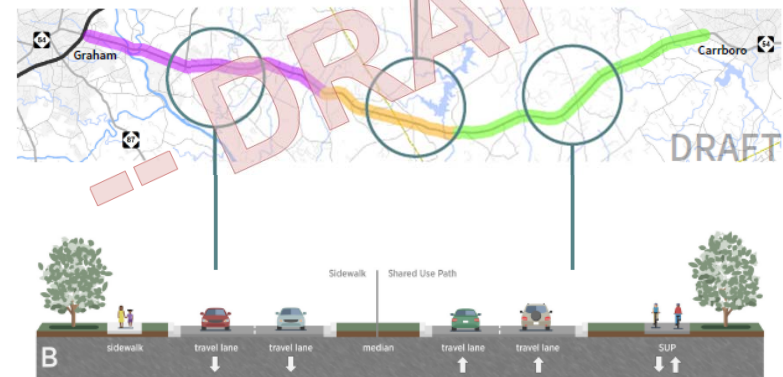
A series of draft options will be presented at the **upcoming Community Meetings in May 2018**, and your feedback is important in developing final recommendations!

Corridor Study Status

After examining the existing conditions, traffic volumes, future travel demand models, and key issues identified by the public, the NC 54 Corridor Study project team is narrowing the potential improvements down to a series of recommendations for improving the corridor. These include:

- Three- and four-lane sections
- Medians in some locations
- Shared use path (SUPs) connecting recreational areas
- Multiple options for improving access to existing and future land uses

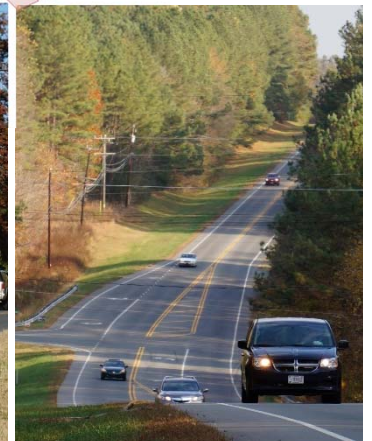
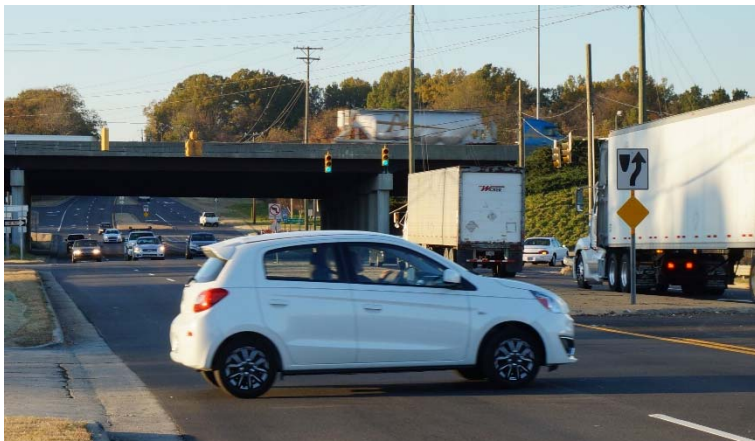
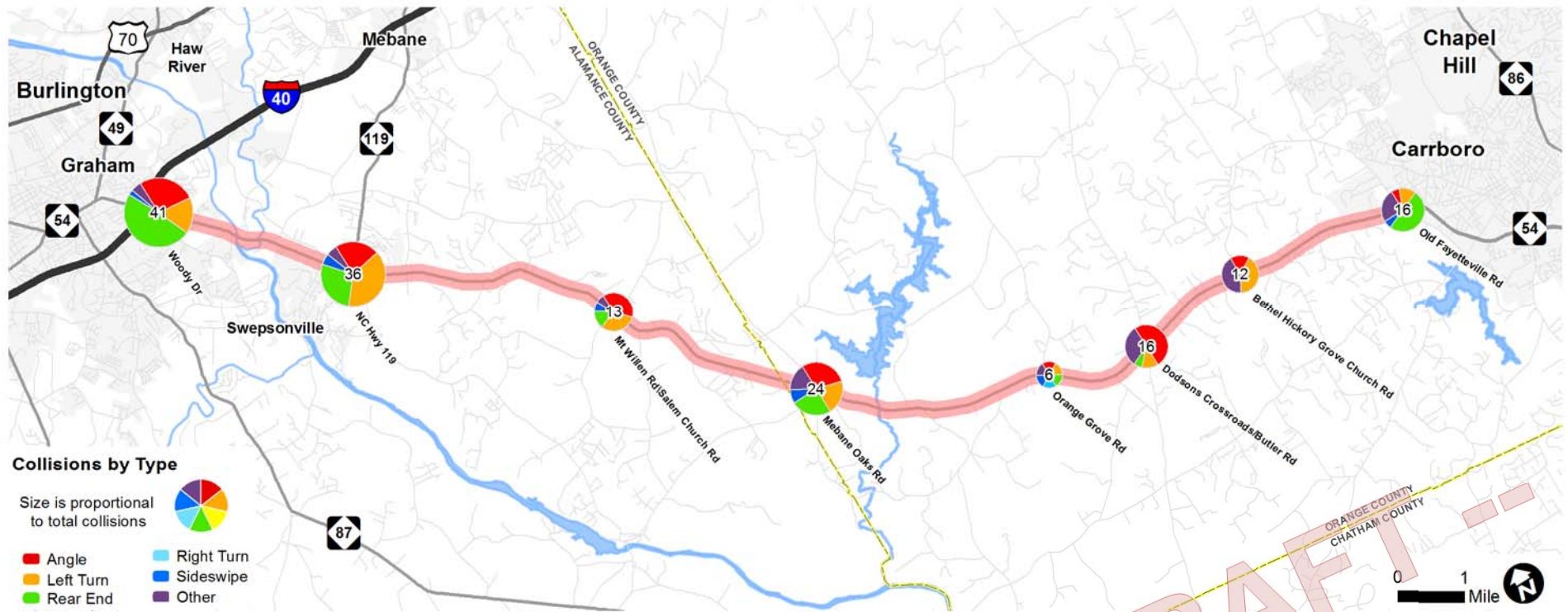
Potential roadway cross sections for consideration



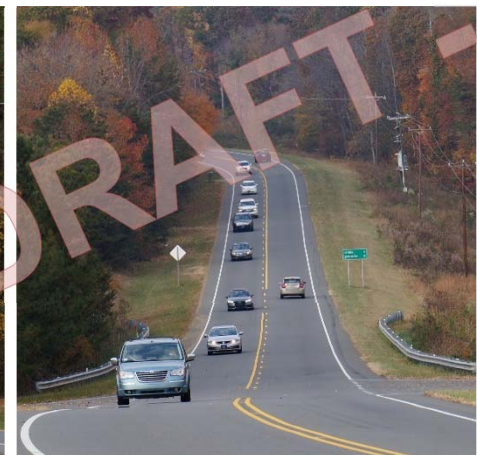
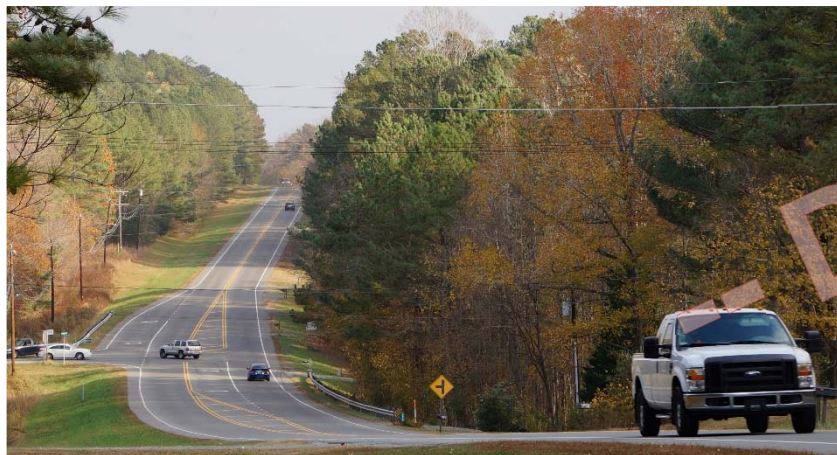
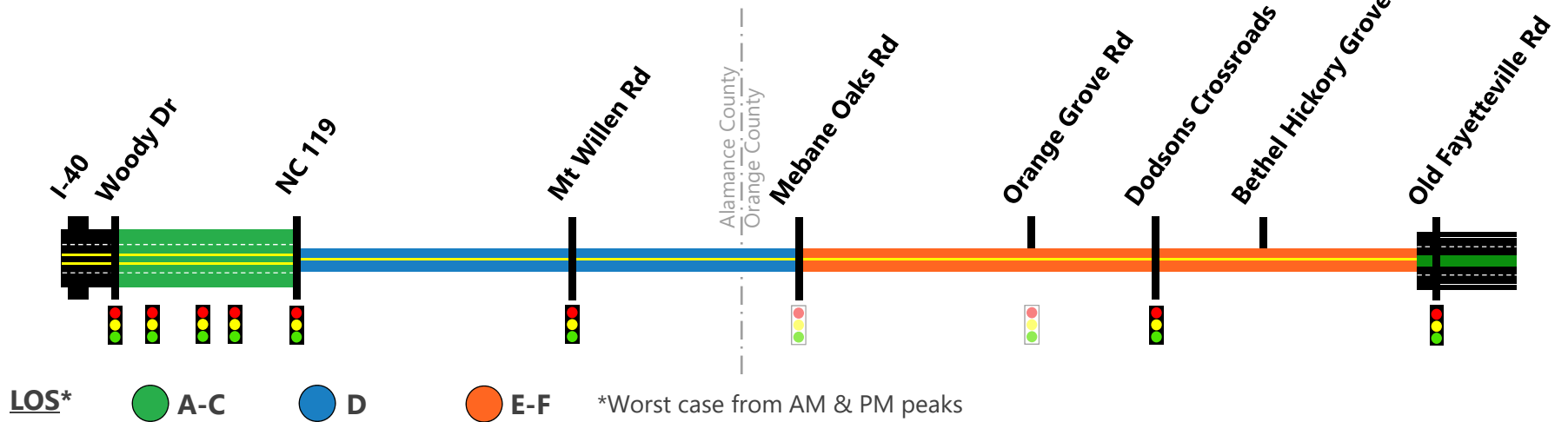
Corridor Conditions



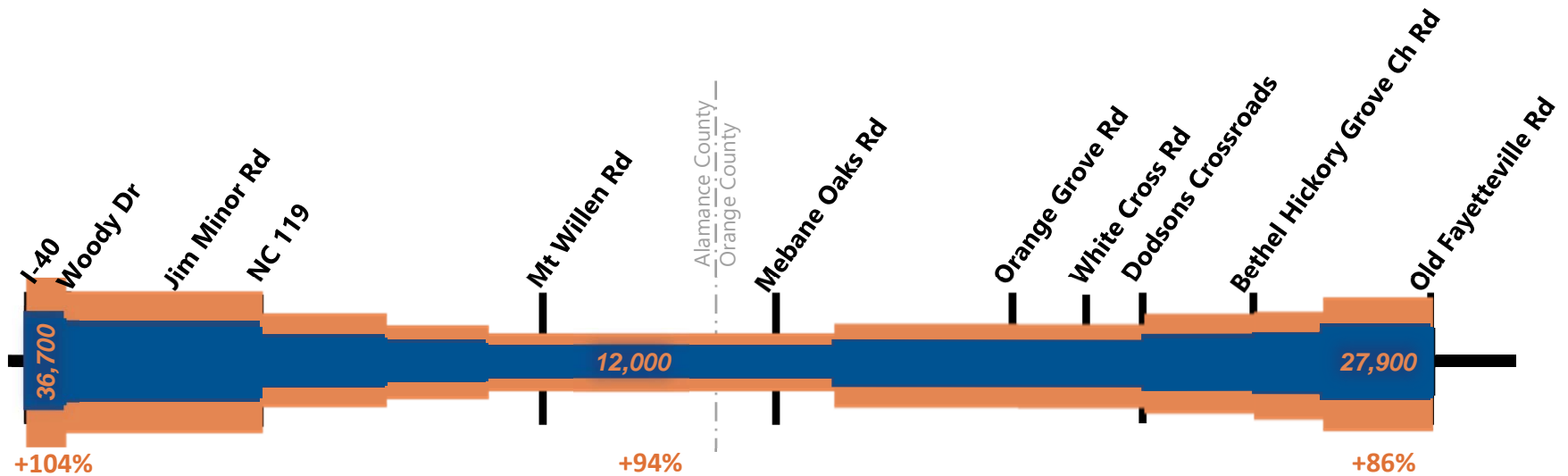
NC 54 West Corridor Crashes



Highway Segment Analysis



NC 54 Traffic Volumes



Average Annual Daily Traffic (AADT) - 2017

Average Annual Daily Traffic (AADT) – 2045

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Potential Solutions



Priorities

- ✓ Safety, especially for bicyclists & pedestrians
 - Both crossing & along NC 54
- ✓ Intersection improvements (short-range)
- ✓ Ultimate cross-sections (long-range)
- ✓ Transit and other options
- ✓ Supportive land uses & policies
- ✓ Environmental protection & mitigation
- ✓ Implementation phasing

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Preliminary Assumptions

- ✓ No dramatic land use changes
- ✓ 1.5% average annual traffic growth
- ✓ 45 - 55-mph speeds
- ✓ Primarily Shared-Use Path (SUP) east of Long Dairy Road, shown on north side
- ✓ Primarily sidewalks (both sides) west of NC 119

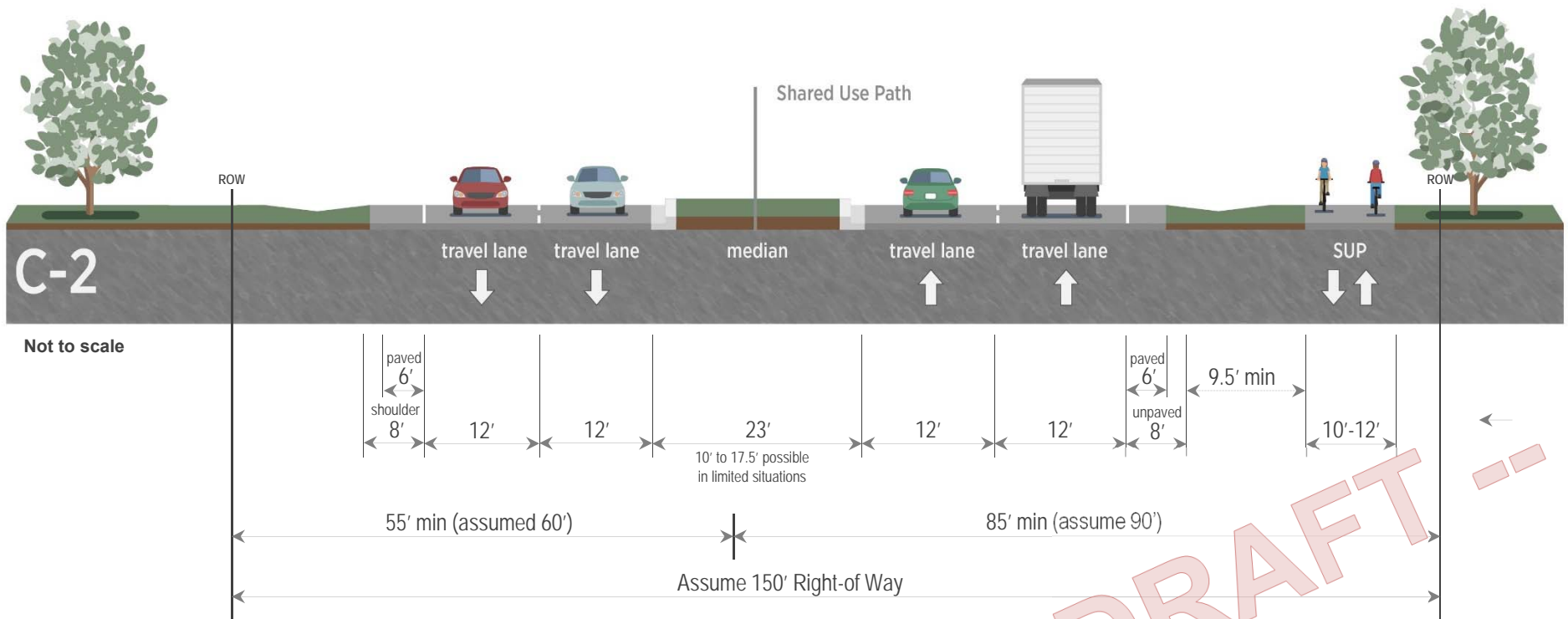
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The background is a solid olive green color. Overlaid on this are several faint, white, stylized line patterns. These patterns include concentric arcs, intersecting straight lines forming a grid-like structure, and various geometric shapes like diamonds and rectangles. The patterns are distributed across the entire slide, creating a textured, organic feel.

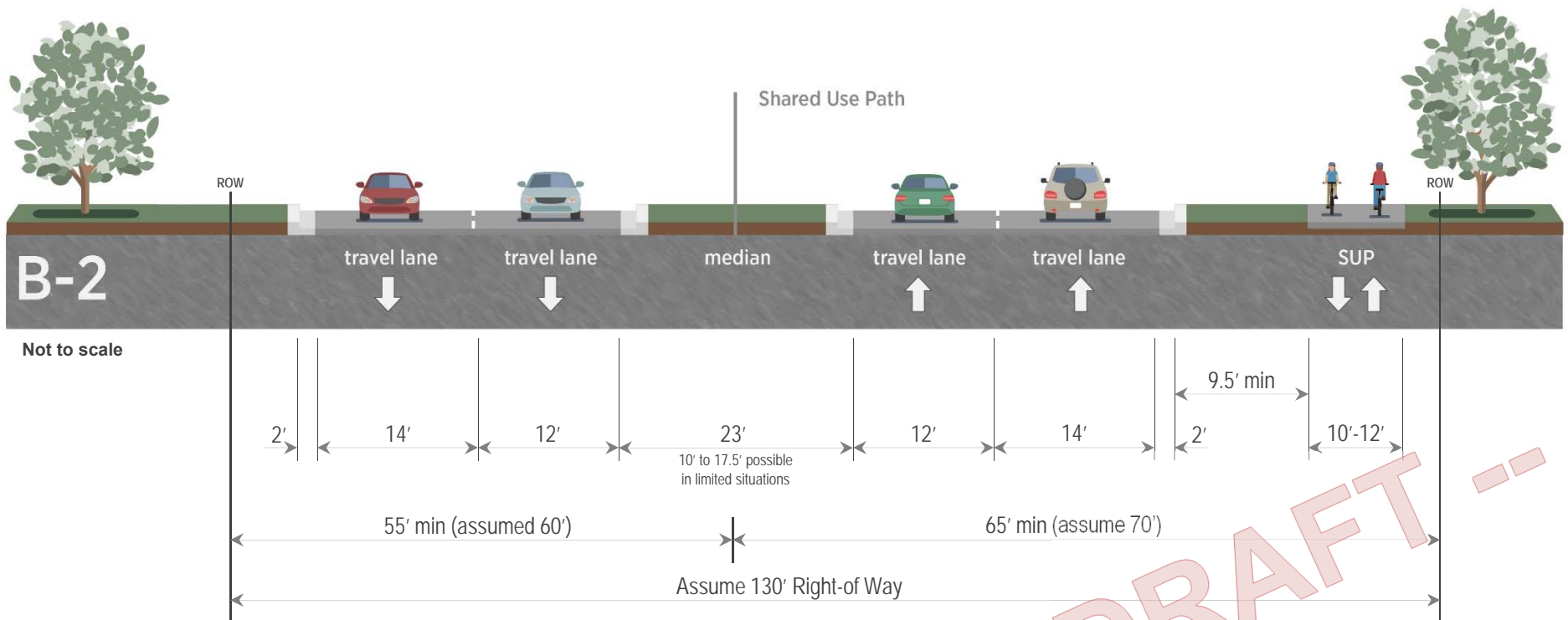
Options & Recommendations

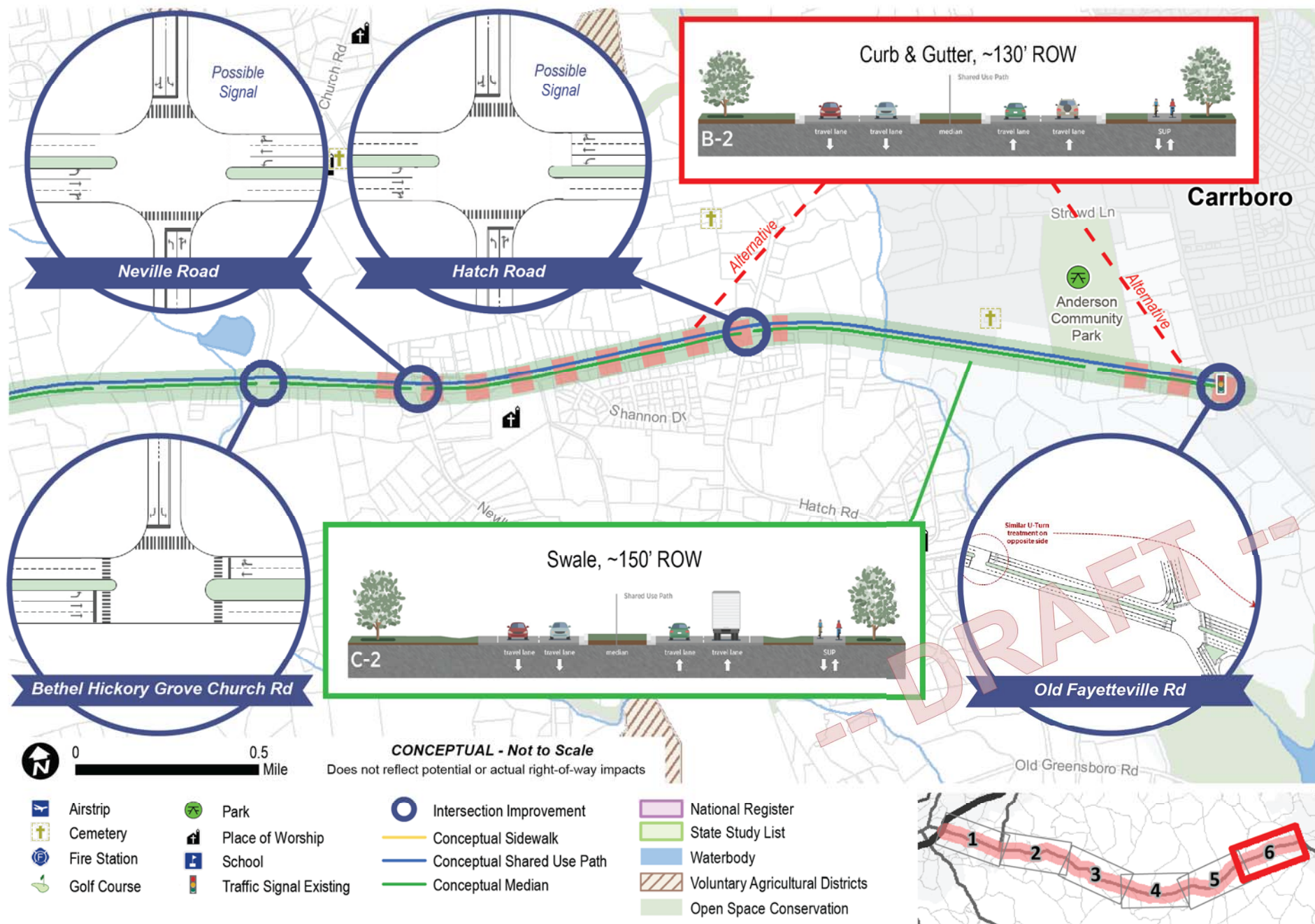
Main Findings

- ✓ 4 lanes eventually needed throughout the corridor
- ✓ Phasing is feasible (ends → middle)
- ✓ Access management will be critical, especially along existing 5-lane section
- ✓ Most likely 23-foot raised grassed median with ditches east of NC 119
 - Potentially narrower median in limited locations
 - Curb-&-gutter appropriate in some locations

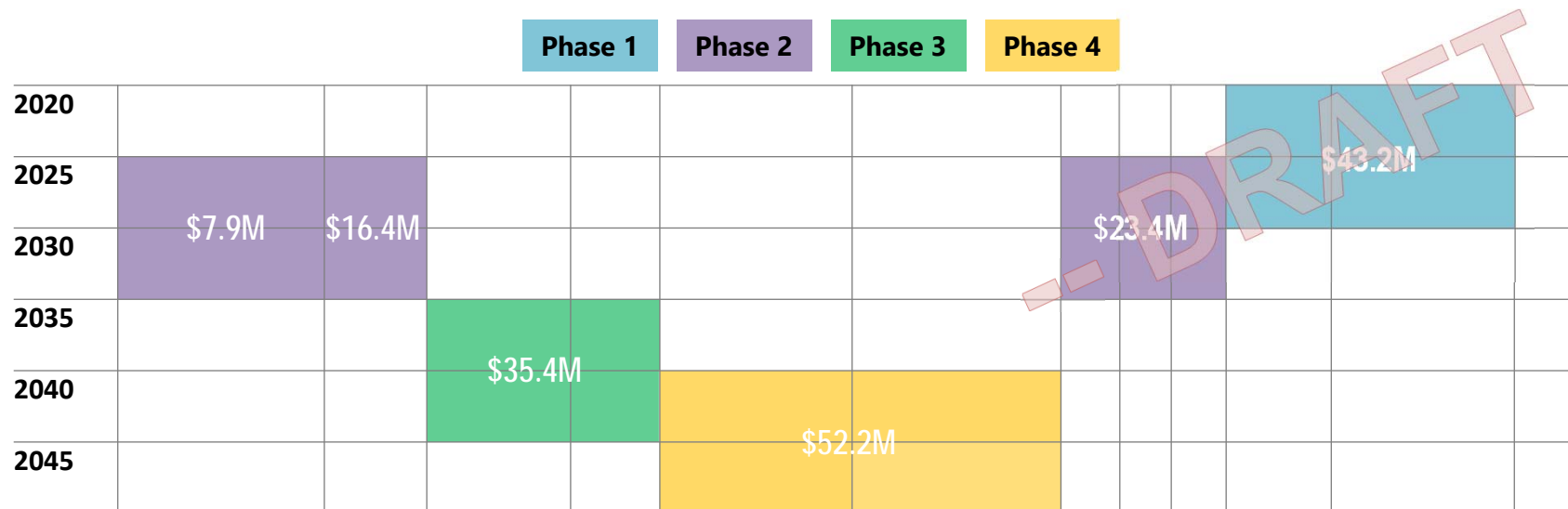
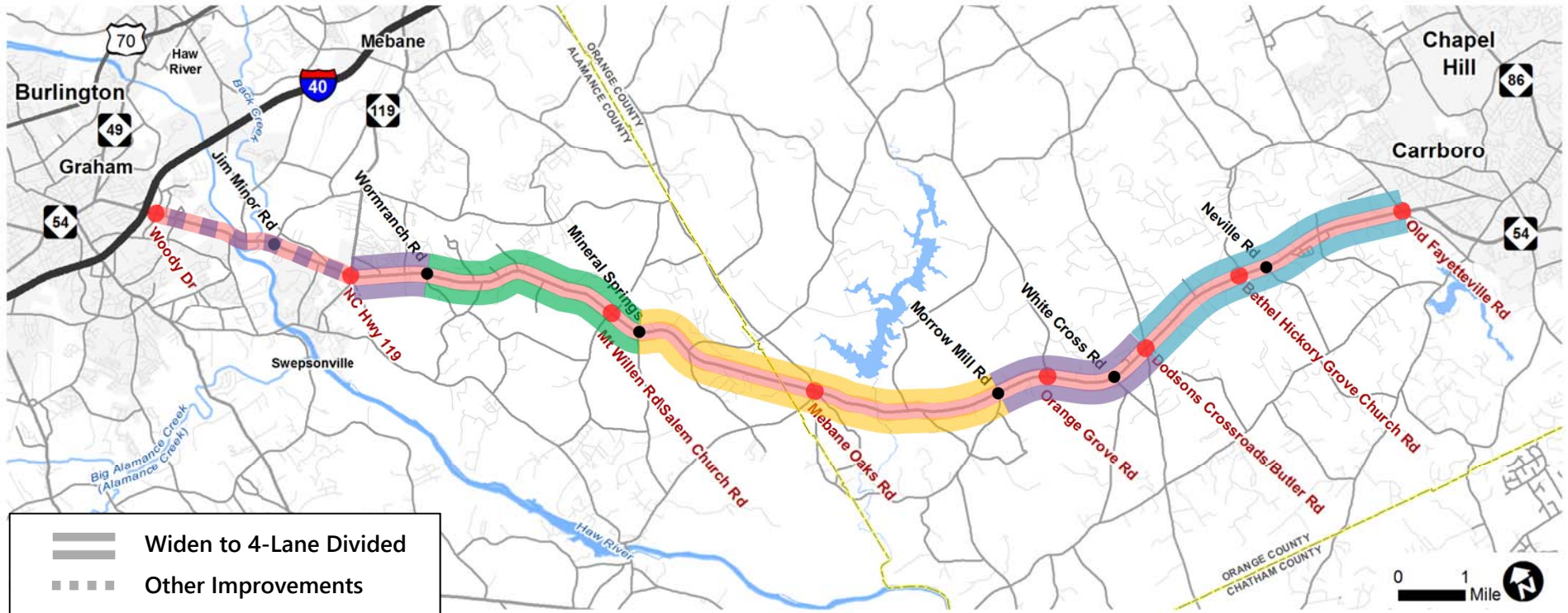


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Implementation



Supplemental Analysis



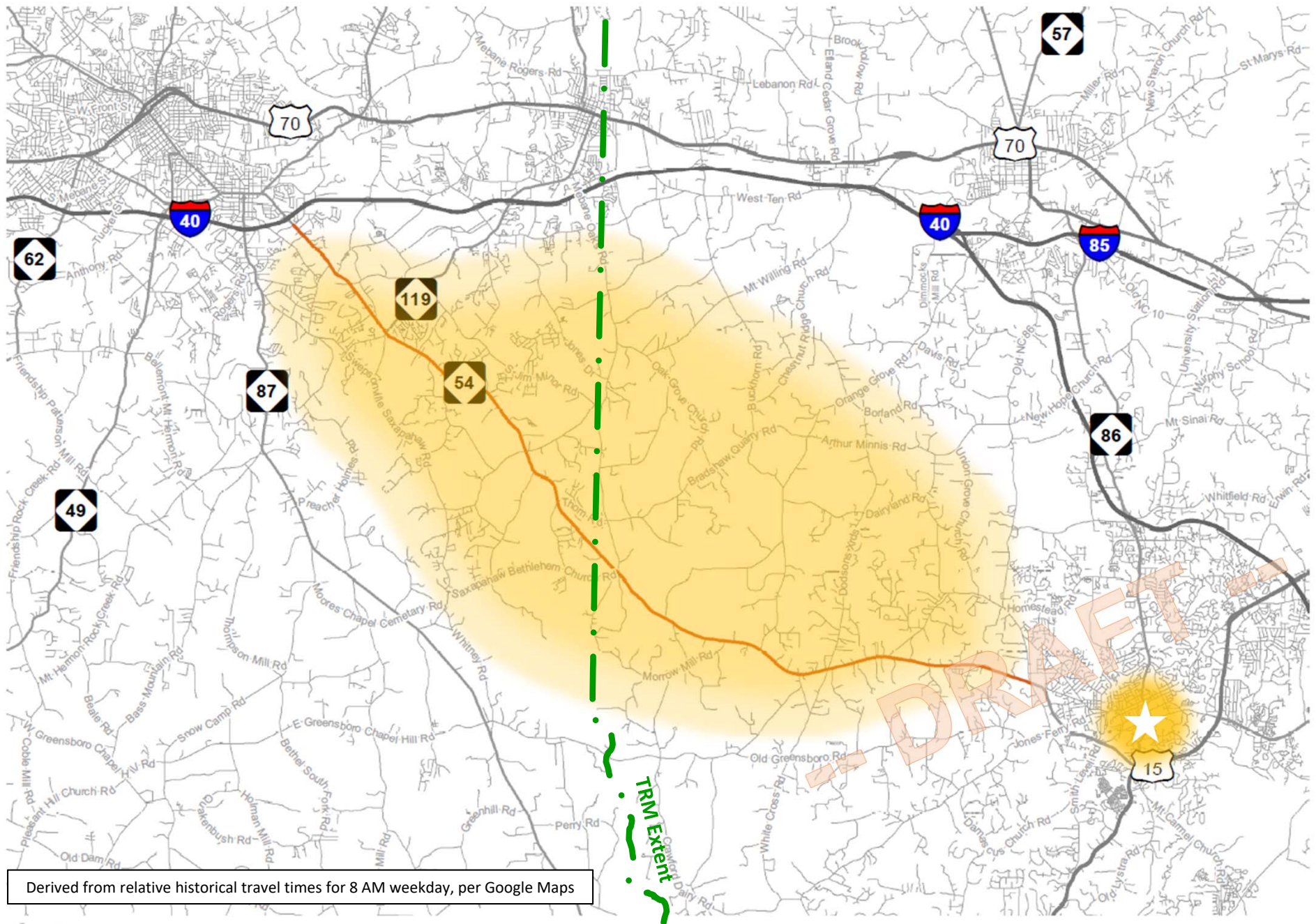


Figure 1: Estimated NC 54 Travelshed for Trips to Chapel Hill



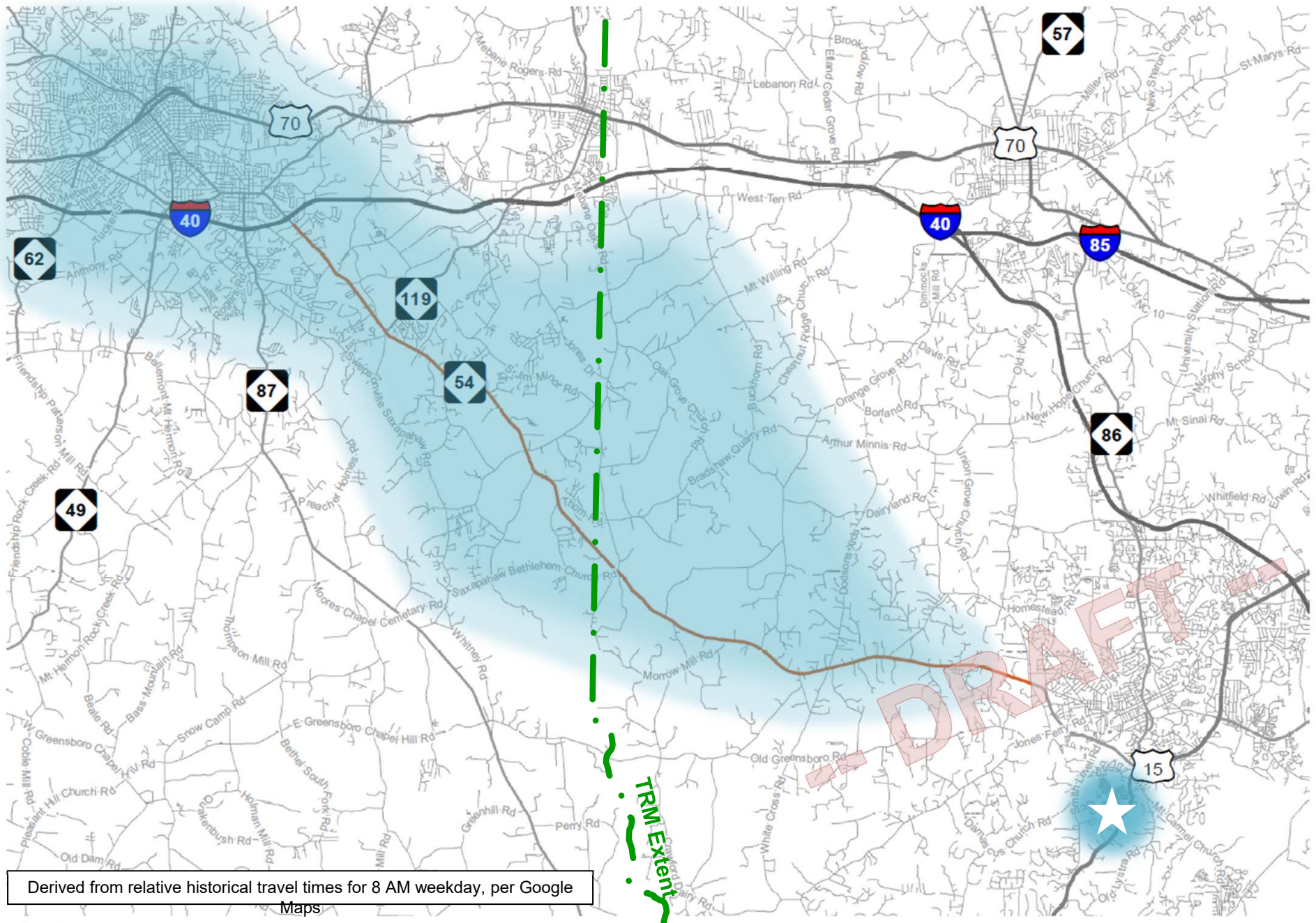


Figure 2: Estimated NC 54 Travelshed for Trips to Southern Village



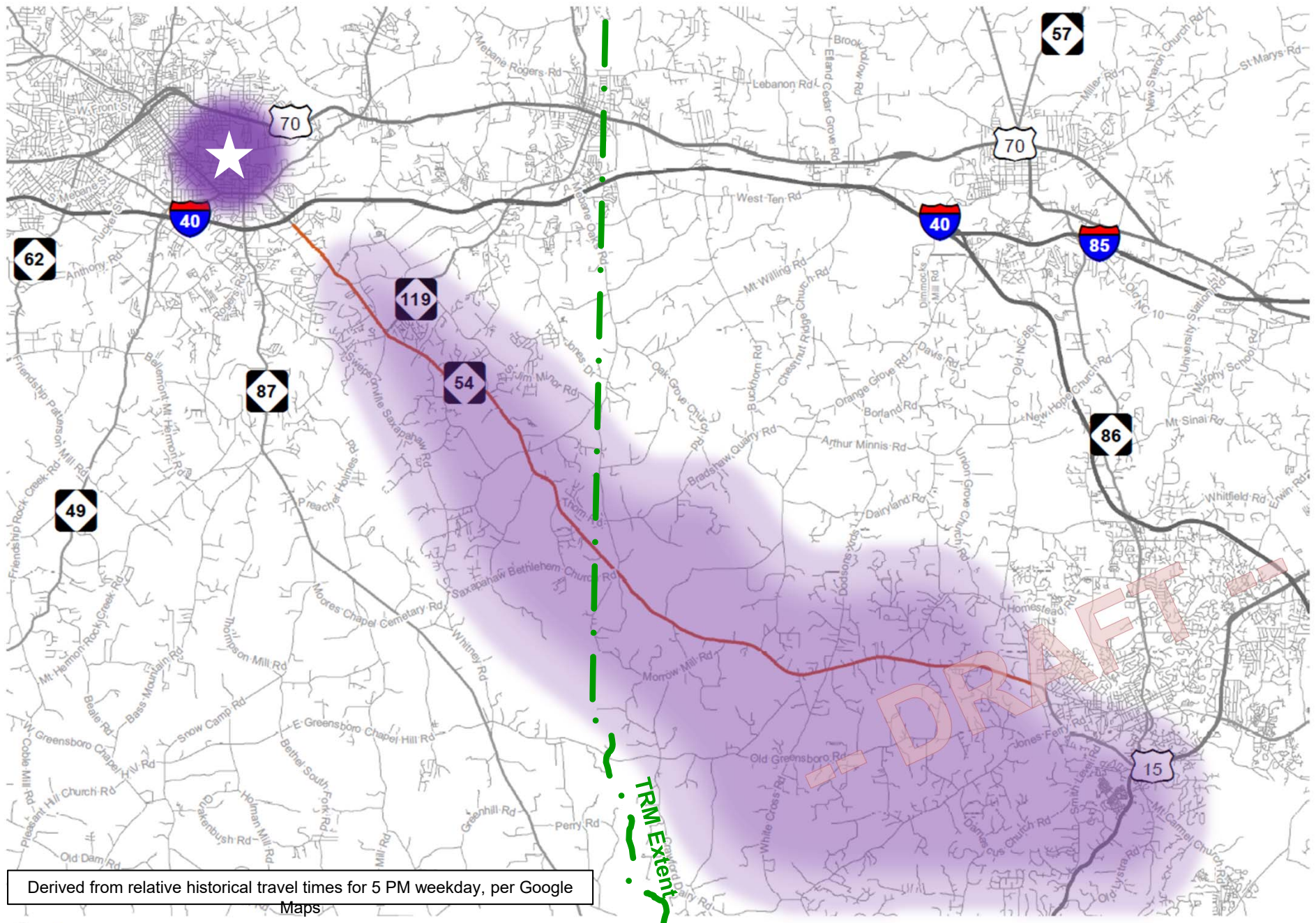


Figure 3: Estimated NC 54 Travelshed for Trips to Burlington



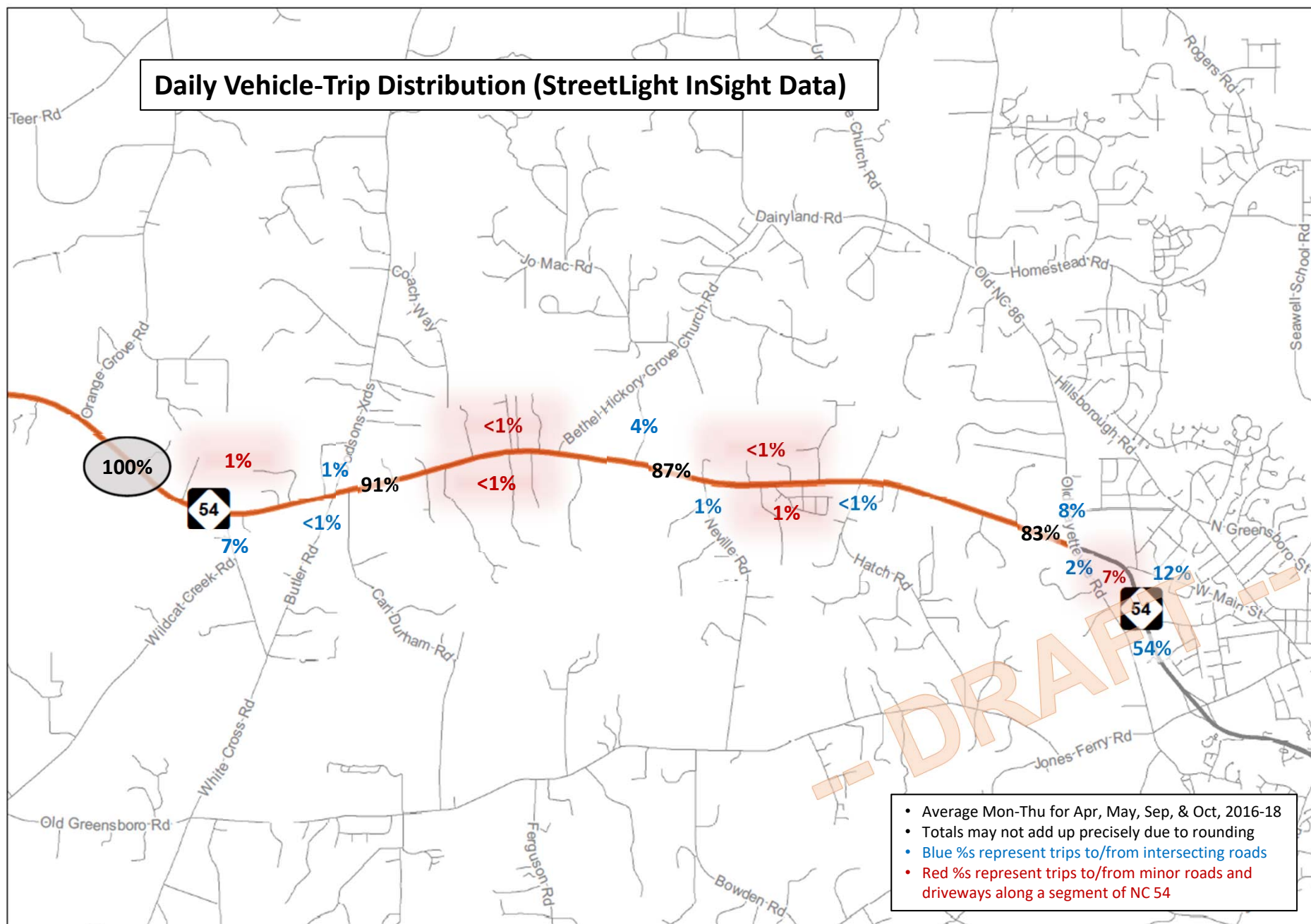


Figure 10b: TRM & PTRM Population Growth (2013 – 2045)

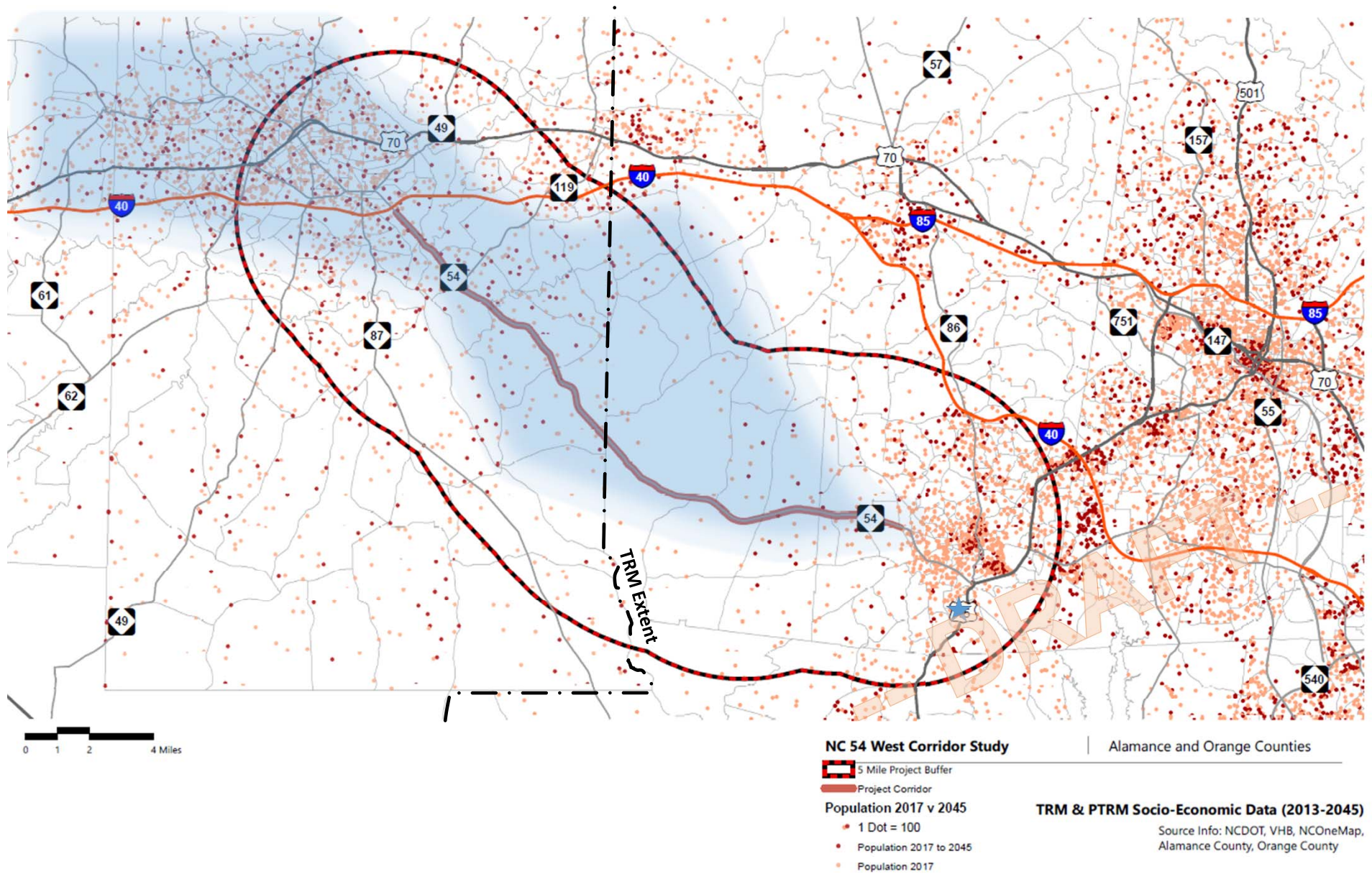


Figure 11b: TRM & PTRM Employment Growth (2013 – 2045)

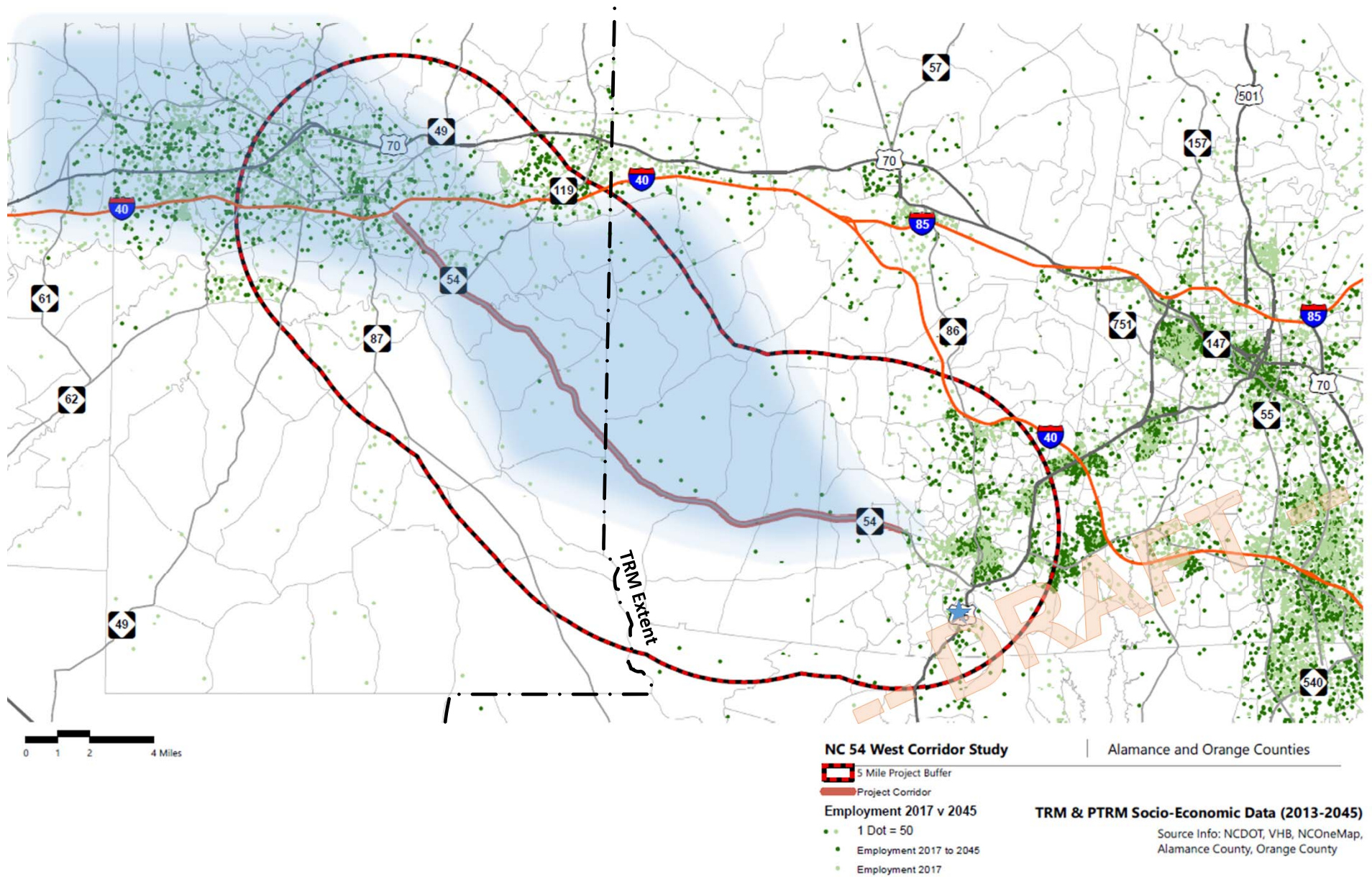




Figure 13: TRM – Daily Traffic Differences between 2045 NC 54 Widened and No-Build Scenarios

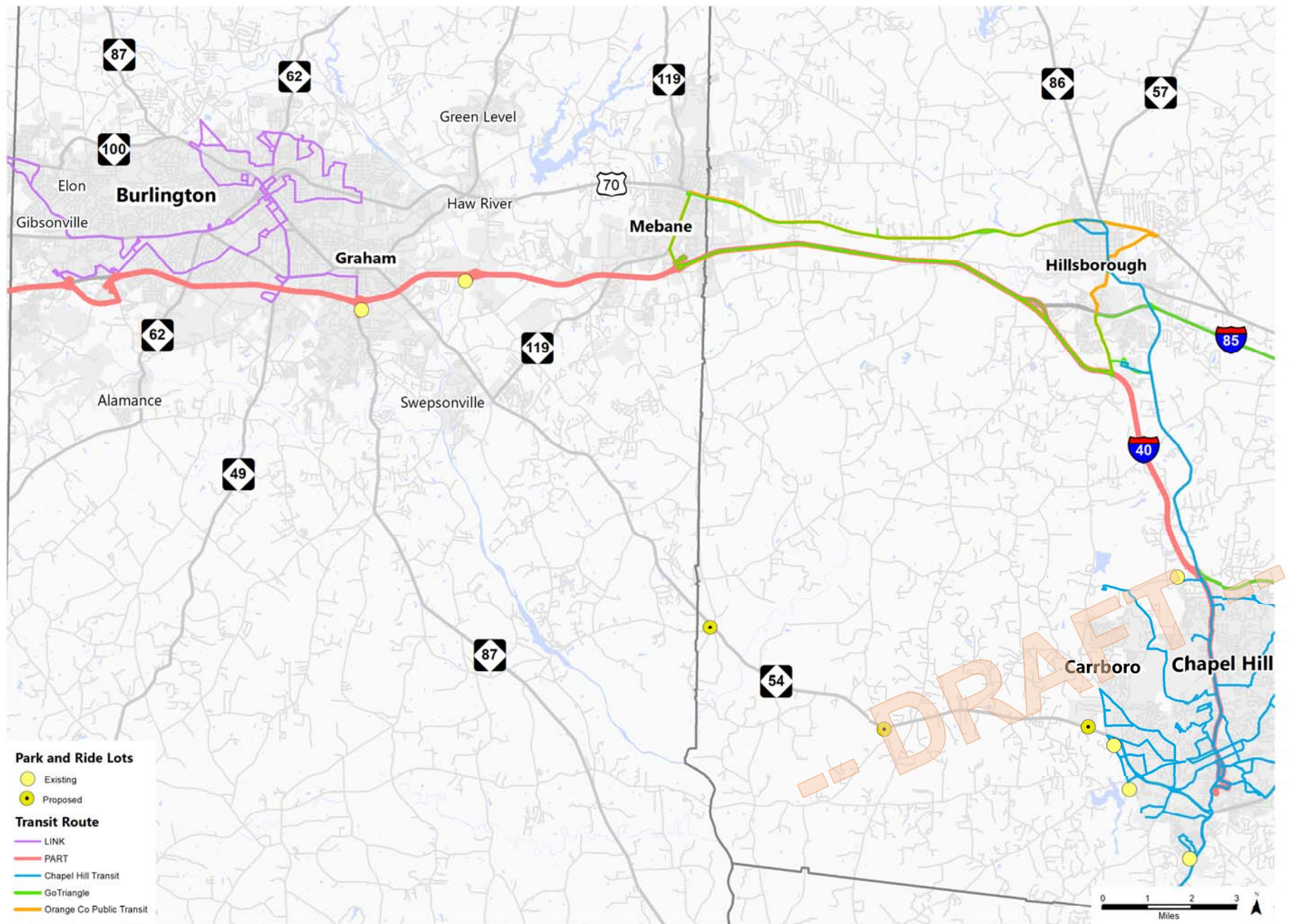
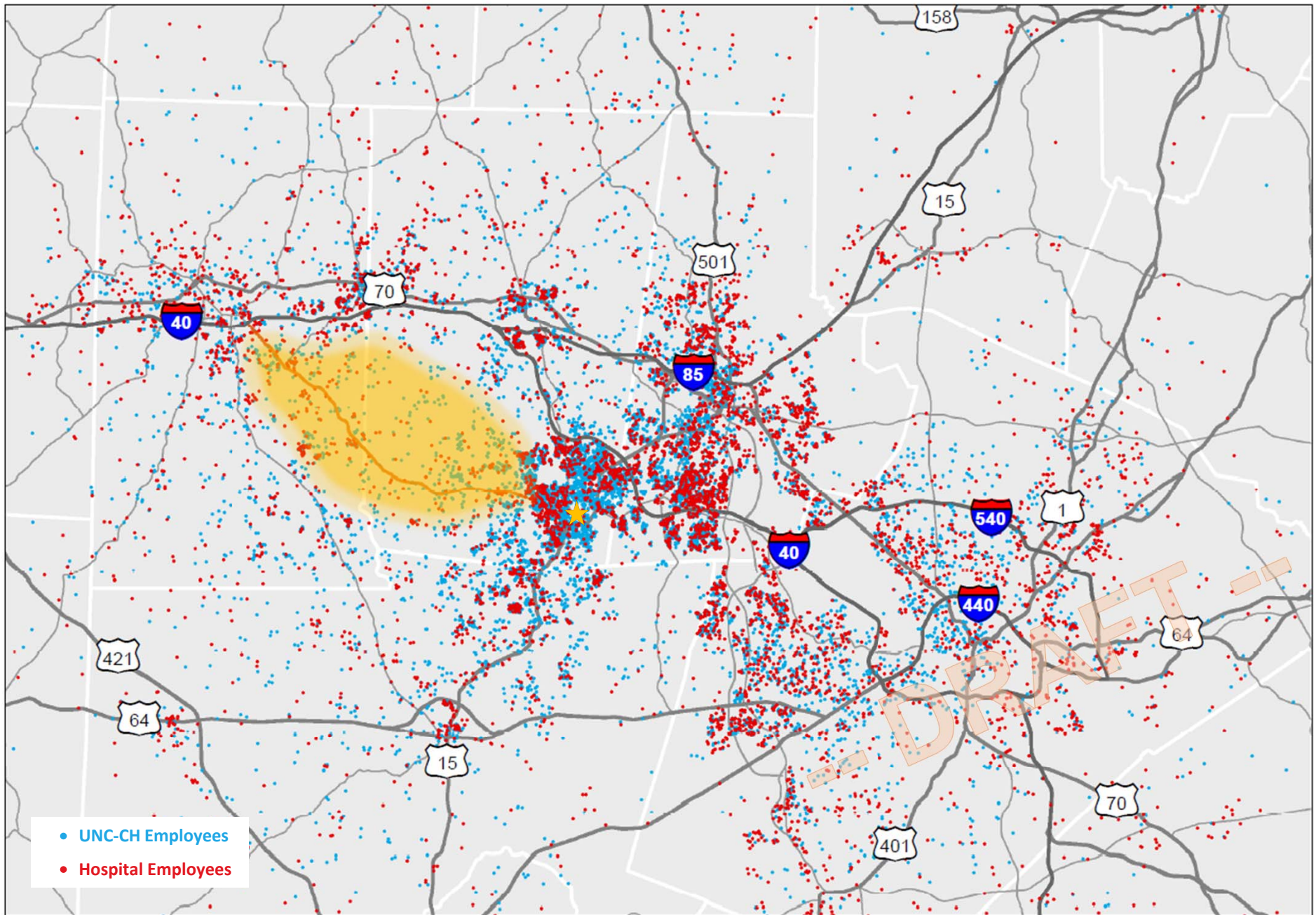


Figure 18: Transit Routes and Park-&-Ride Lots



Source: UNC-CH Development Plan, 2017 TIA Update



Figure 19: Regional Distribution of UNC-CH and Hospital Employee Residences (2017)