

VIRGINIA STATEWIDE HIGHWAY CONDITIONS ASSESSMENT

Presentation to Annual Planning and Programming Meeting
on Composite Index and Corridor Analysis

February 2016

BACKGROUND

KEY NEEDS, METHODOLOGY

Statewide Highway Conditions Assessment

Key Components

The diagram consists of two overlapping circles on the left. The top circle is dark blue and contains the text 'Identifying Needs'. The bottom circle is orange and contains the text 'Cost-Effective Solutions'. To the right of each circle is a grey rectangular box containing a descriptive paragraph. The background features a stylized road with white dashed lines receding into the distance.

Identifying Needs

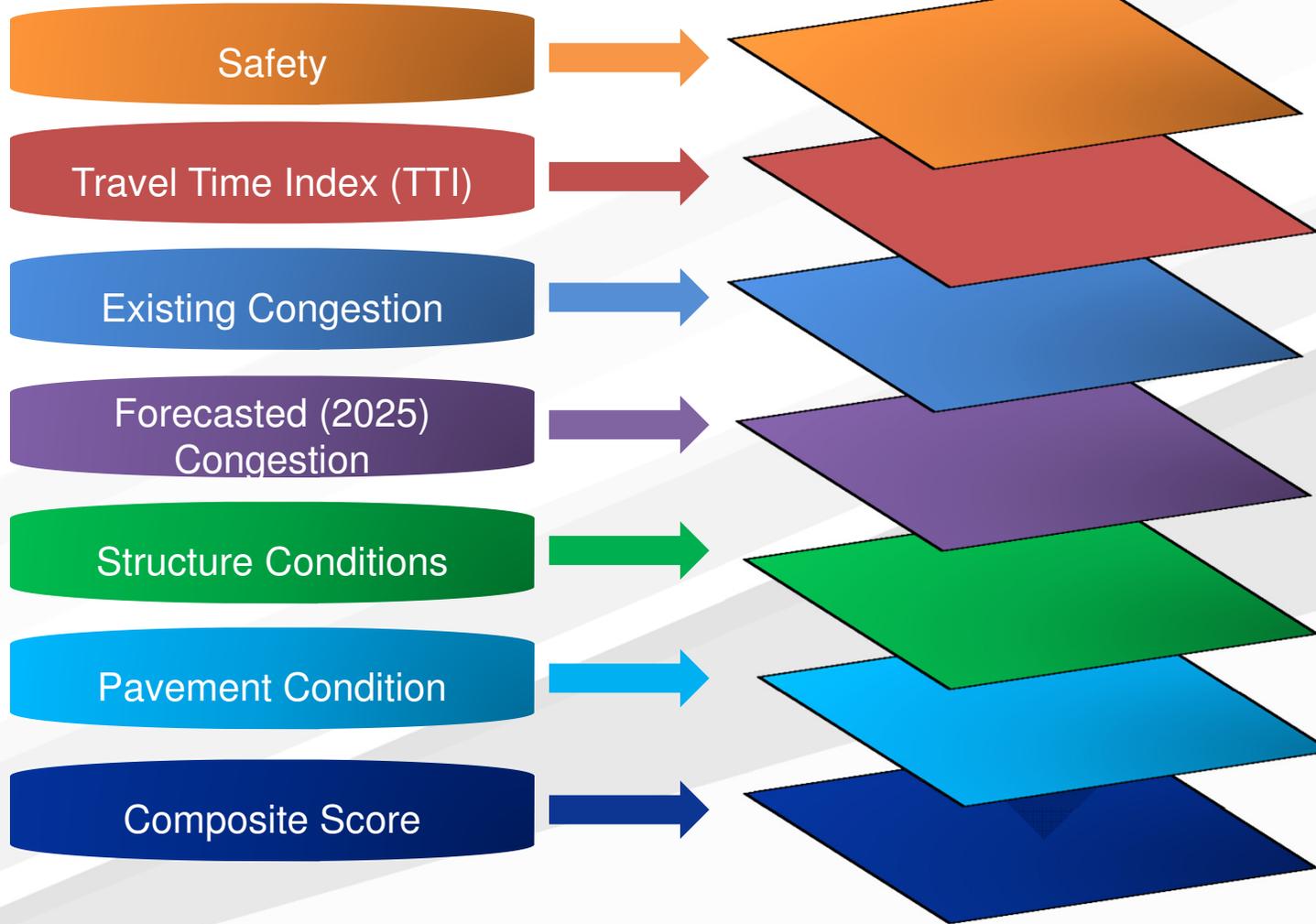
Quantitative assessment that accounts for safety, congestion, structure conditions, and pavement conditions using internal VDOT data resources.

Cost-Effective Solutions

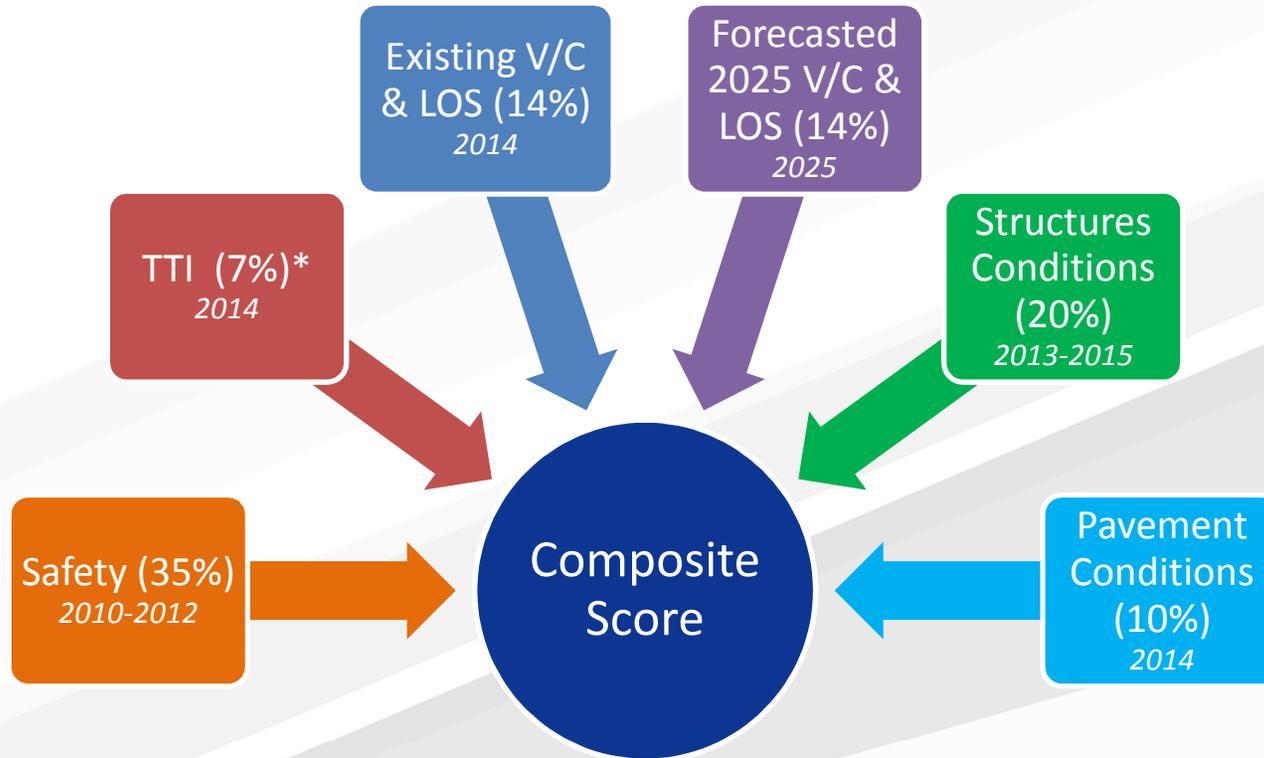
Cost-effective approach that focuses on coordinated, short-term investments.

Identifying Needs

Data Layers



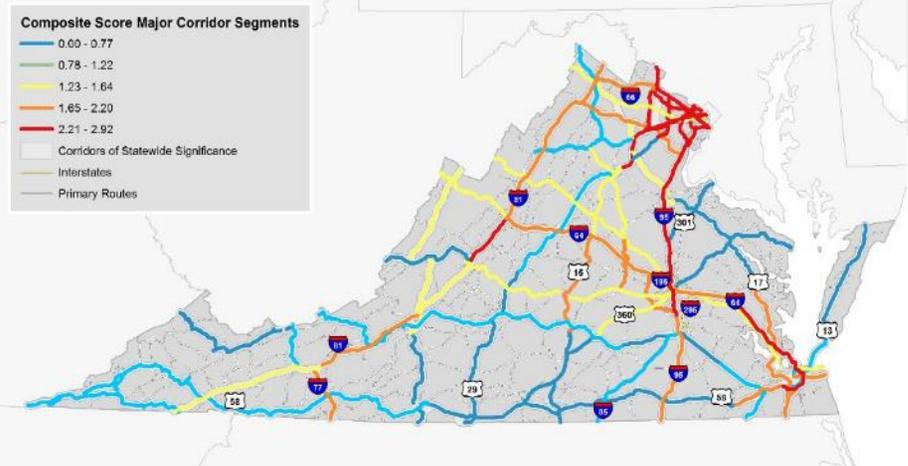
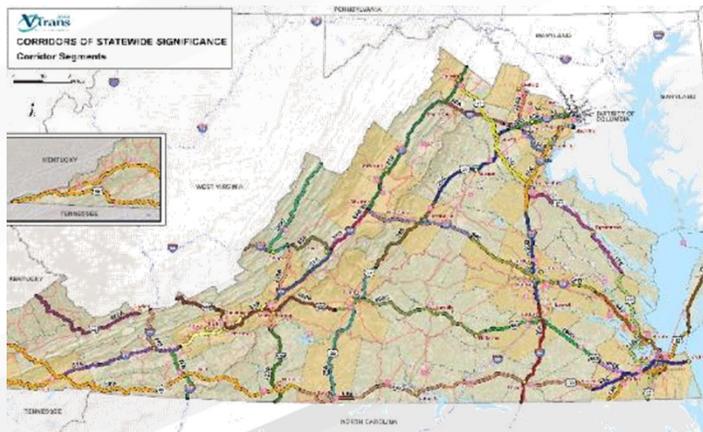
Methodology and Weights



Identifying Corridors

1. Selected corridor segments that aligned with the VMTP Corridors of Statewide Significance (CoSS)

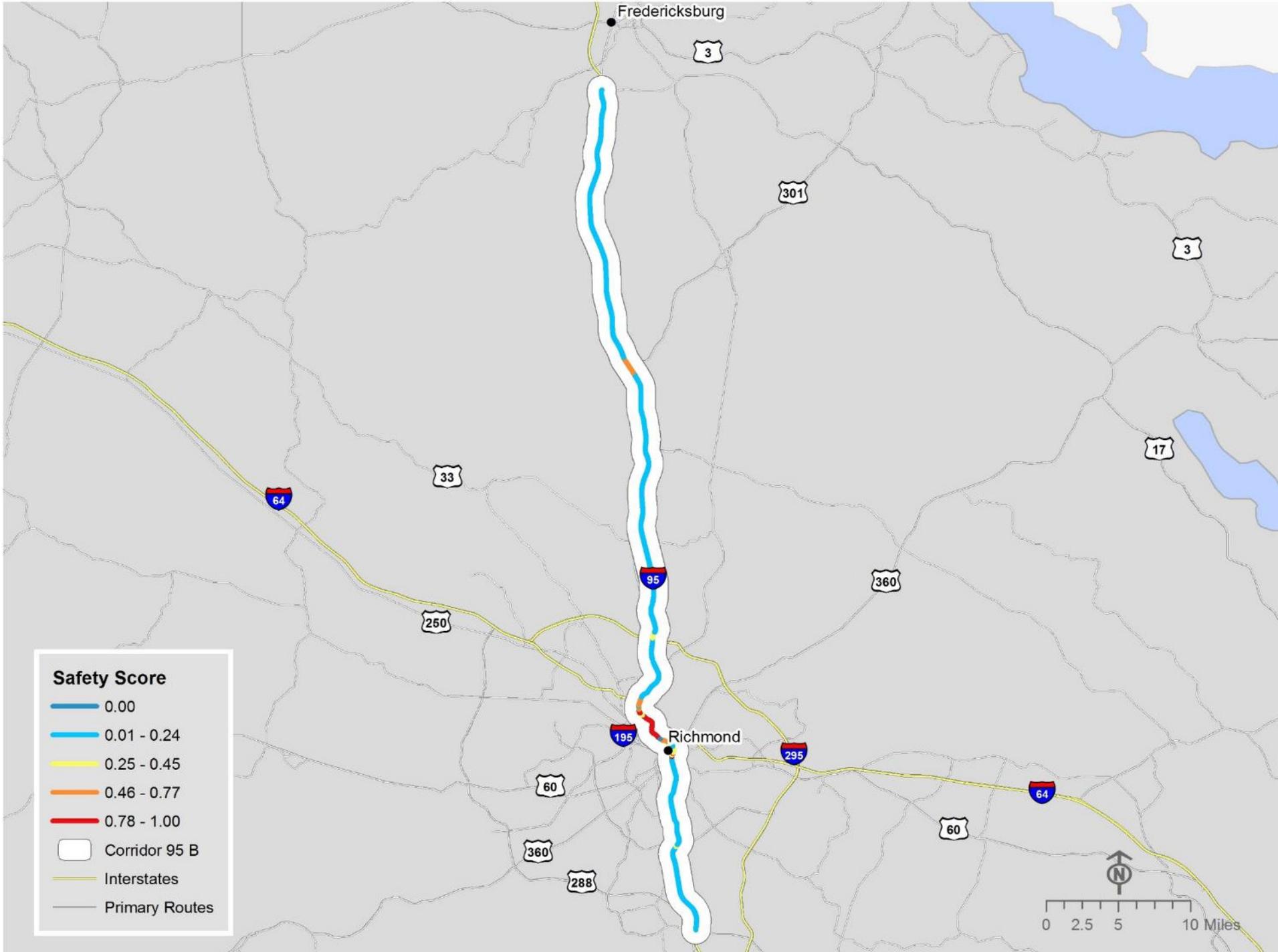
2. Conducted preliminary composite score screening to identify other high need corridors

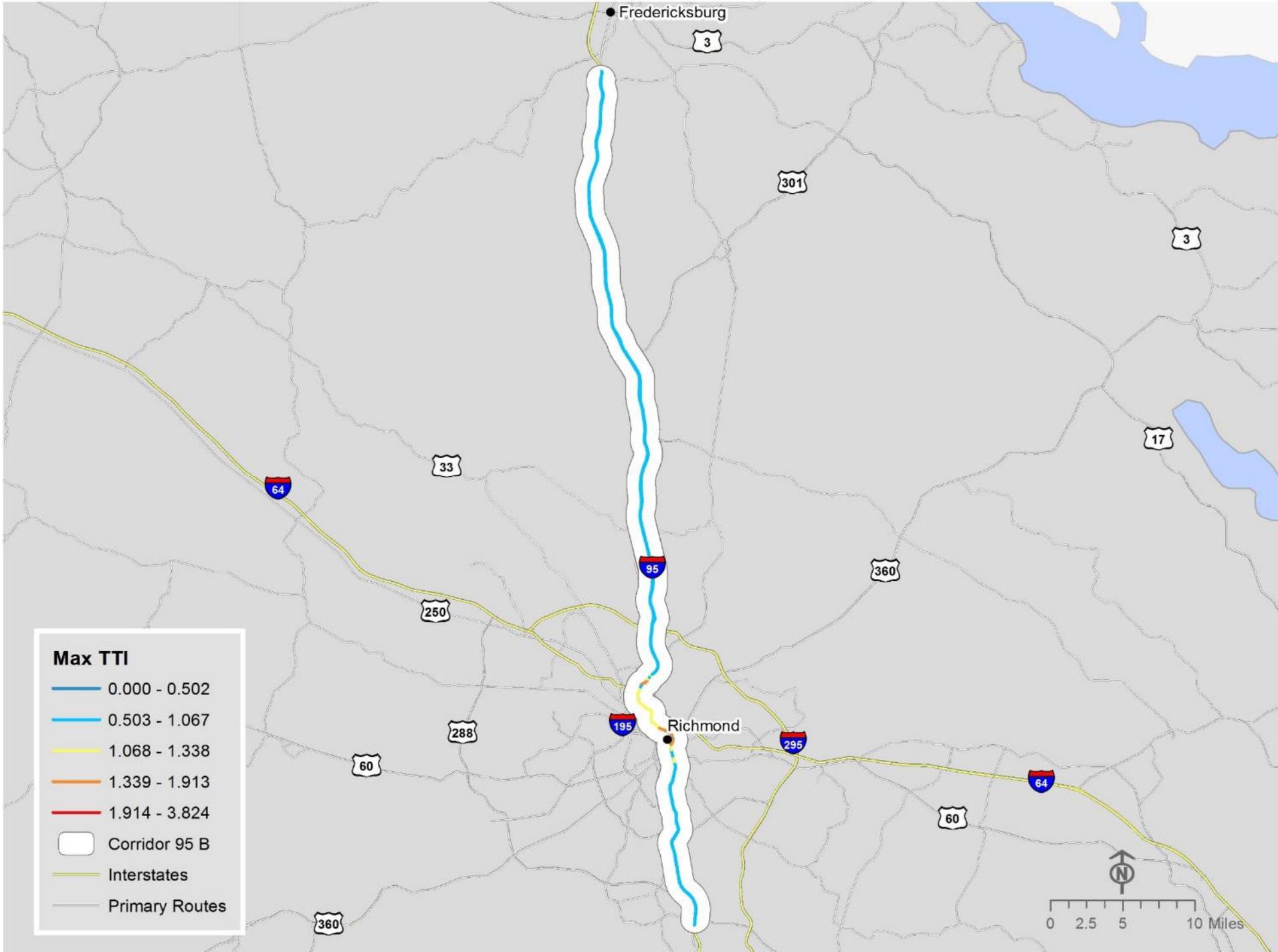


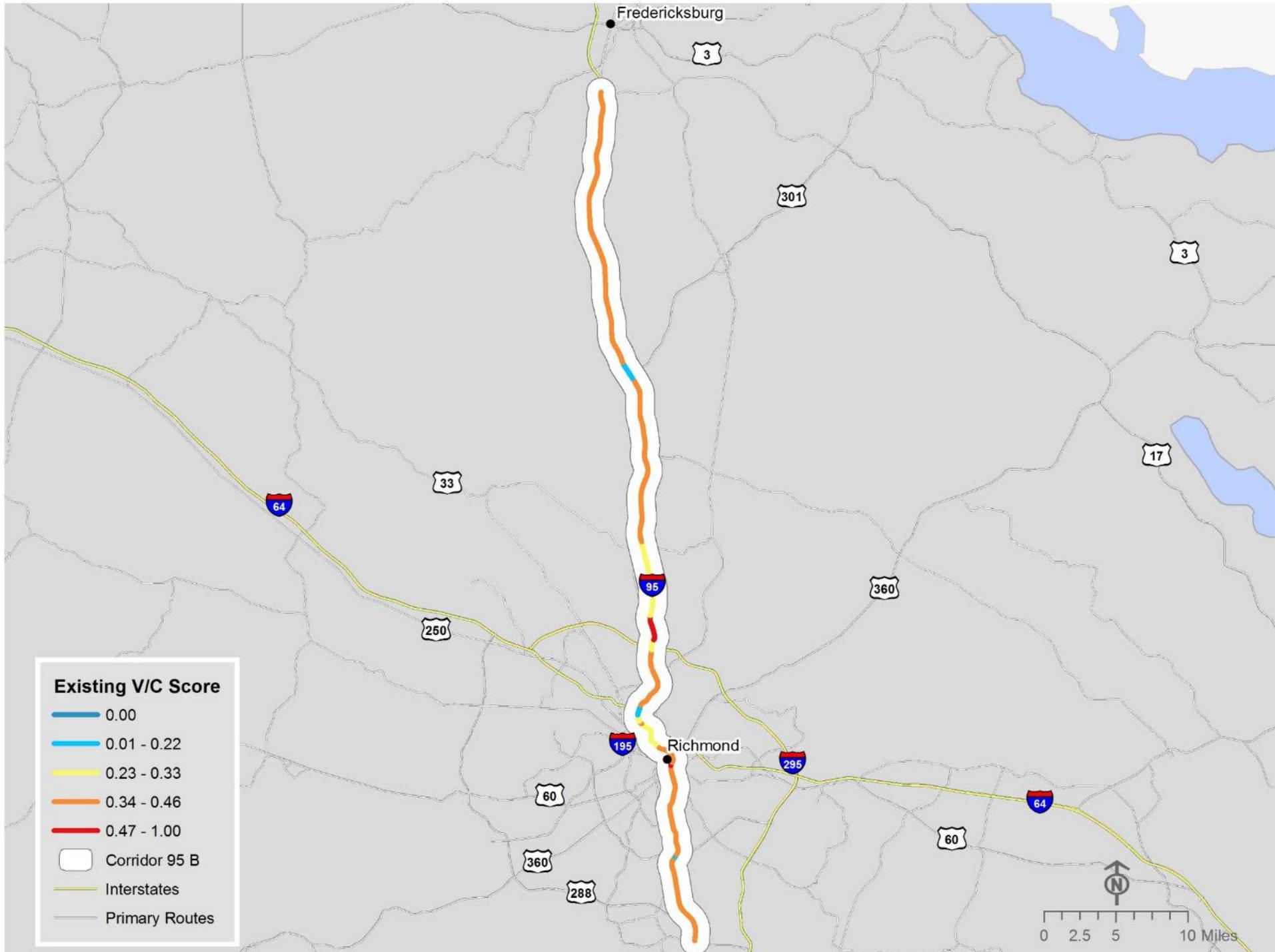
| | | |
|-------------------|----------|---------------------|
| Looked at: | Safety | Existing VC & LOS |
| Structures | Pavement | Forecasted VC & LOS |

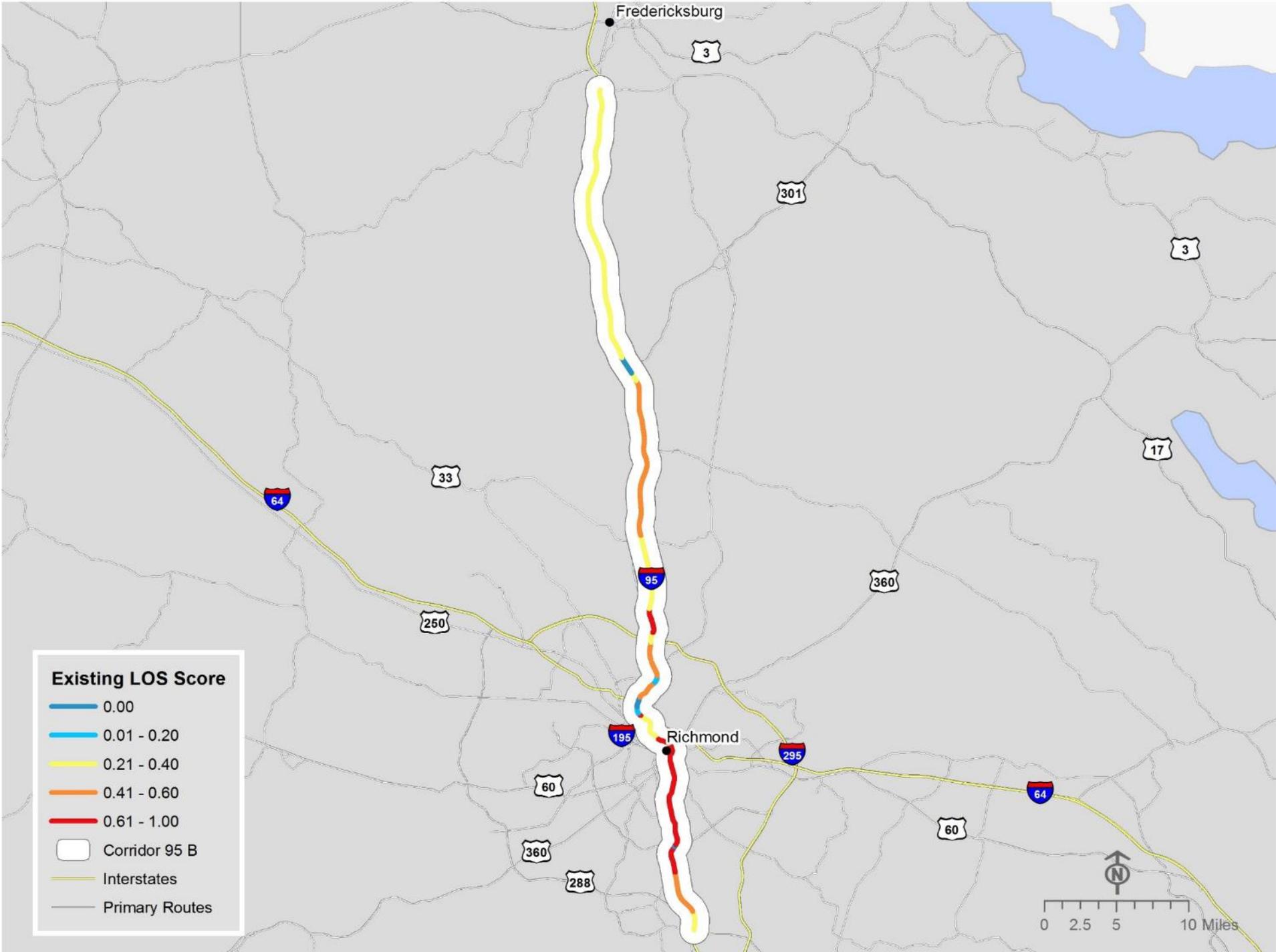
RESULTS

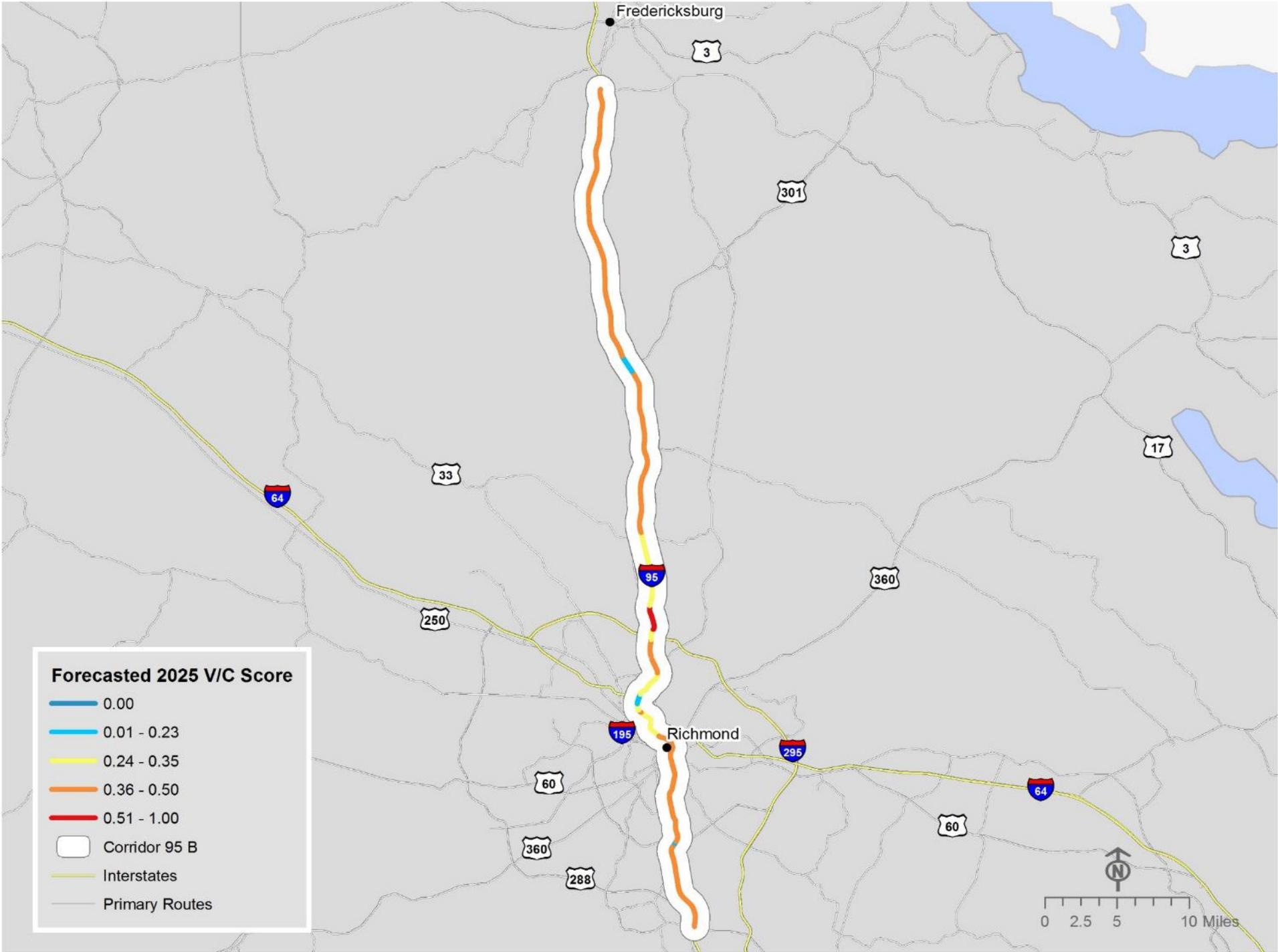
***EXAMPLE: I-95 SR 10 (CHESTER) TO
US 17 (SOUTH OF FREDERICKSBURG)***

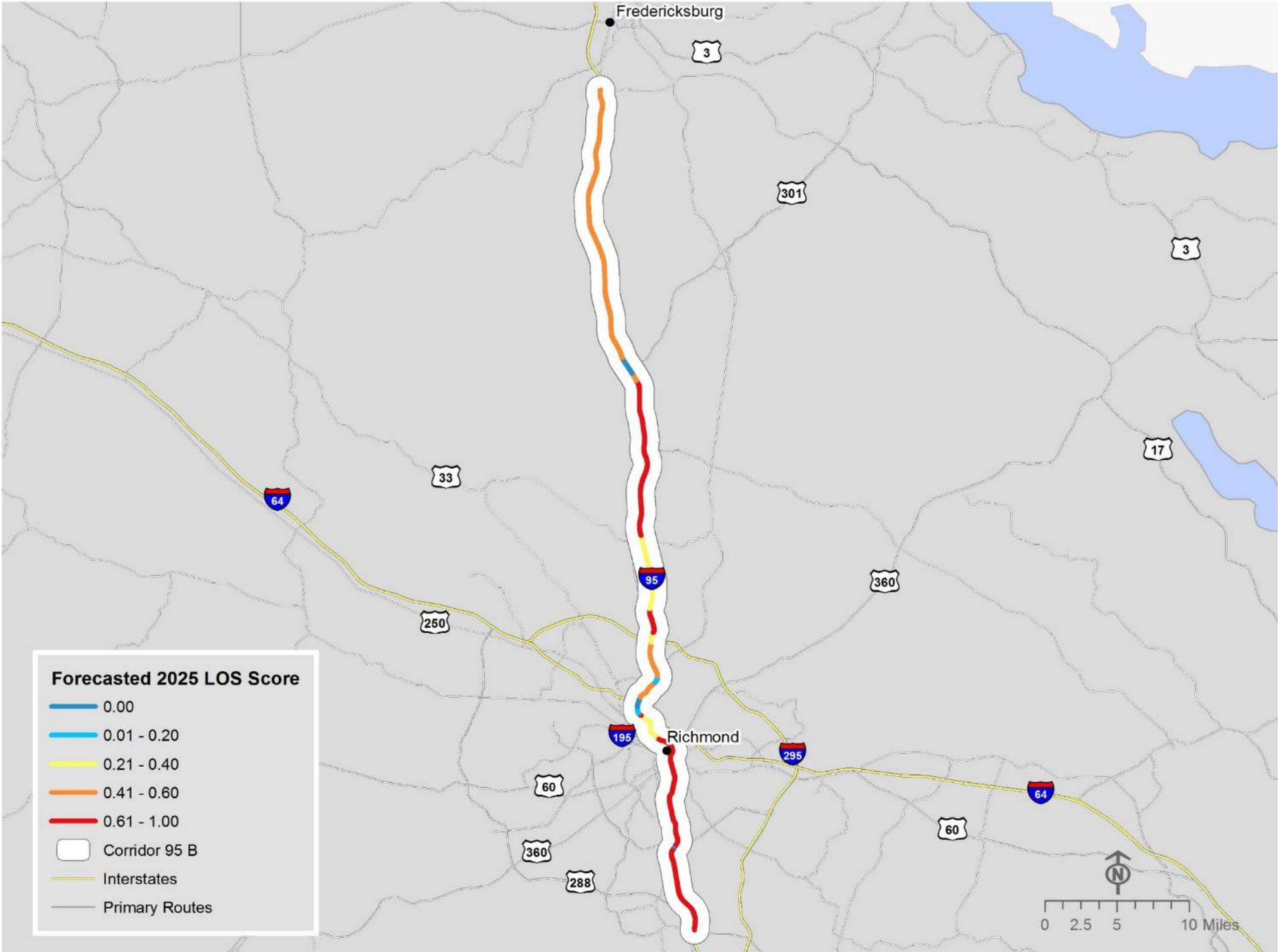


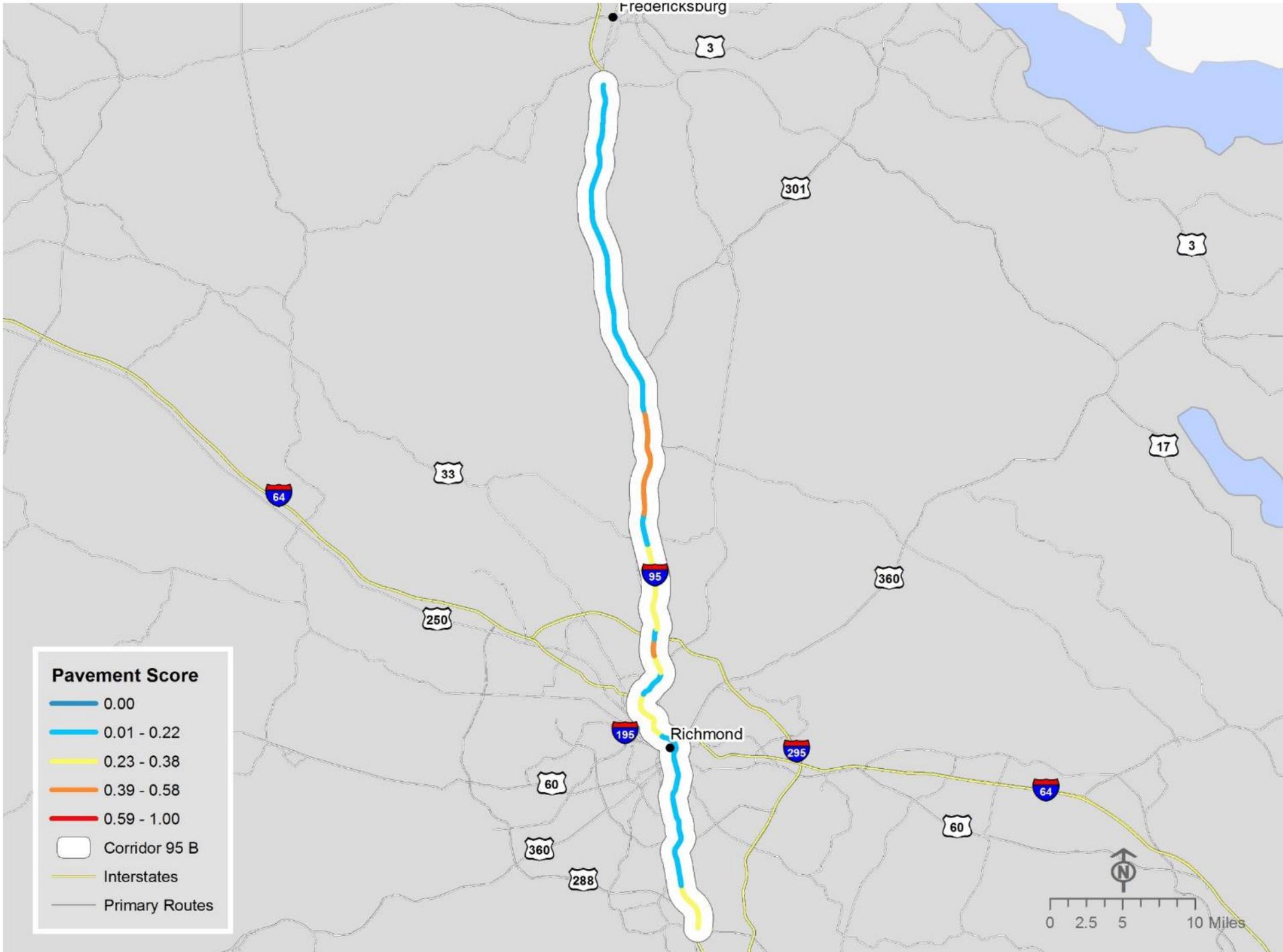


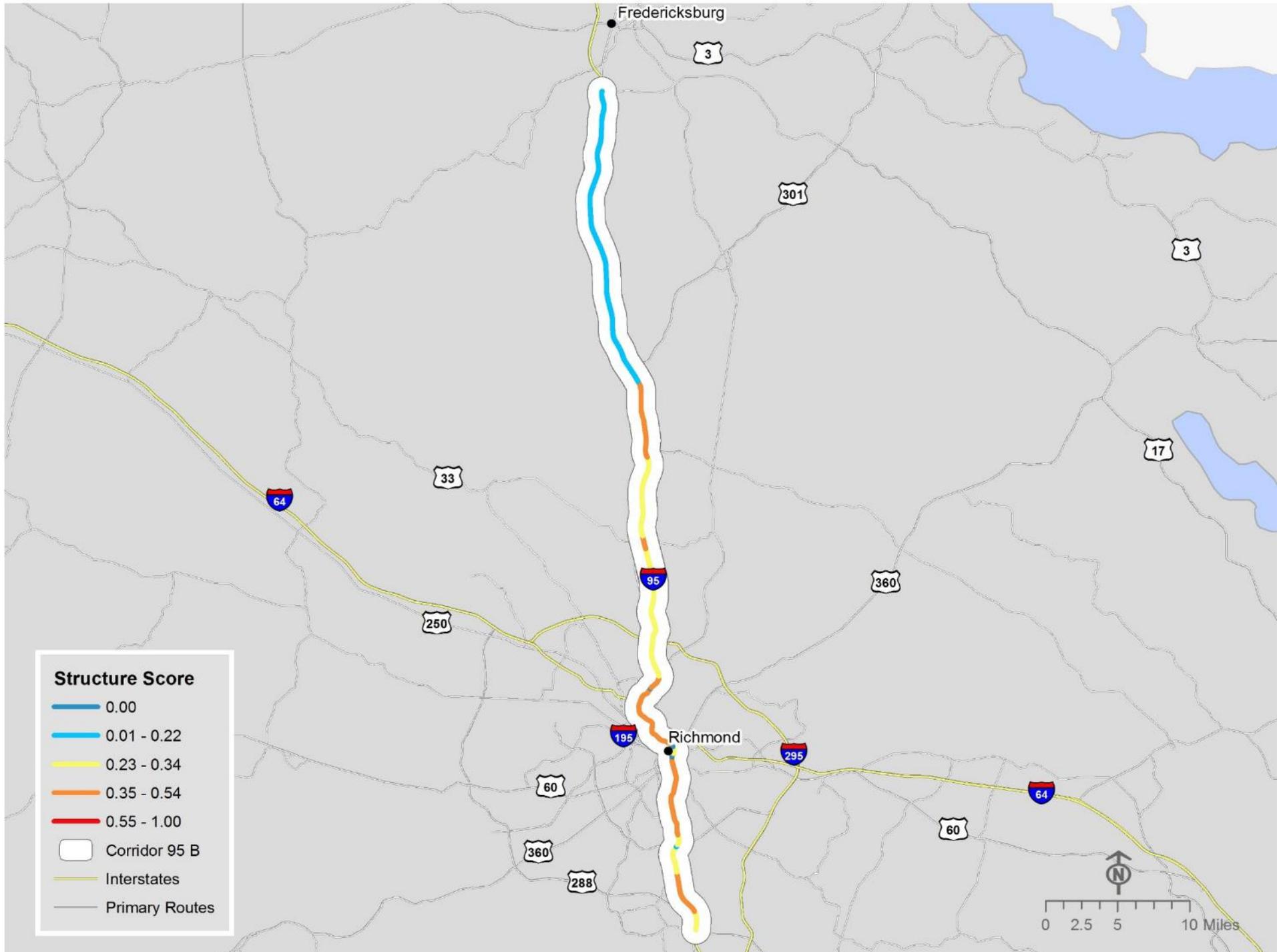












Composite Score Major Corridor Segments

0.00 - 0.77

0.78 - 1.22

1.23 - 1.64

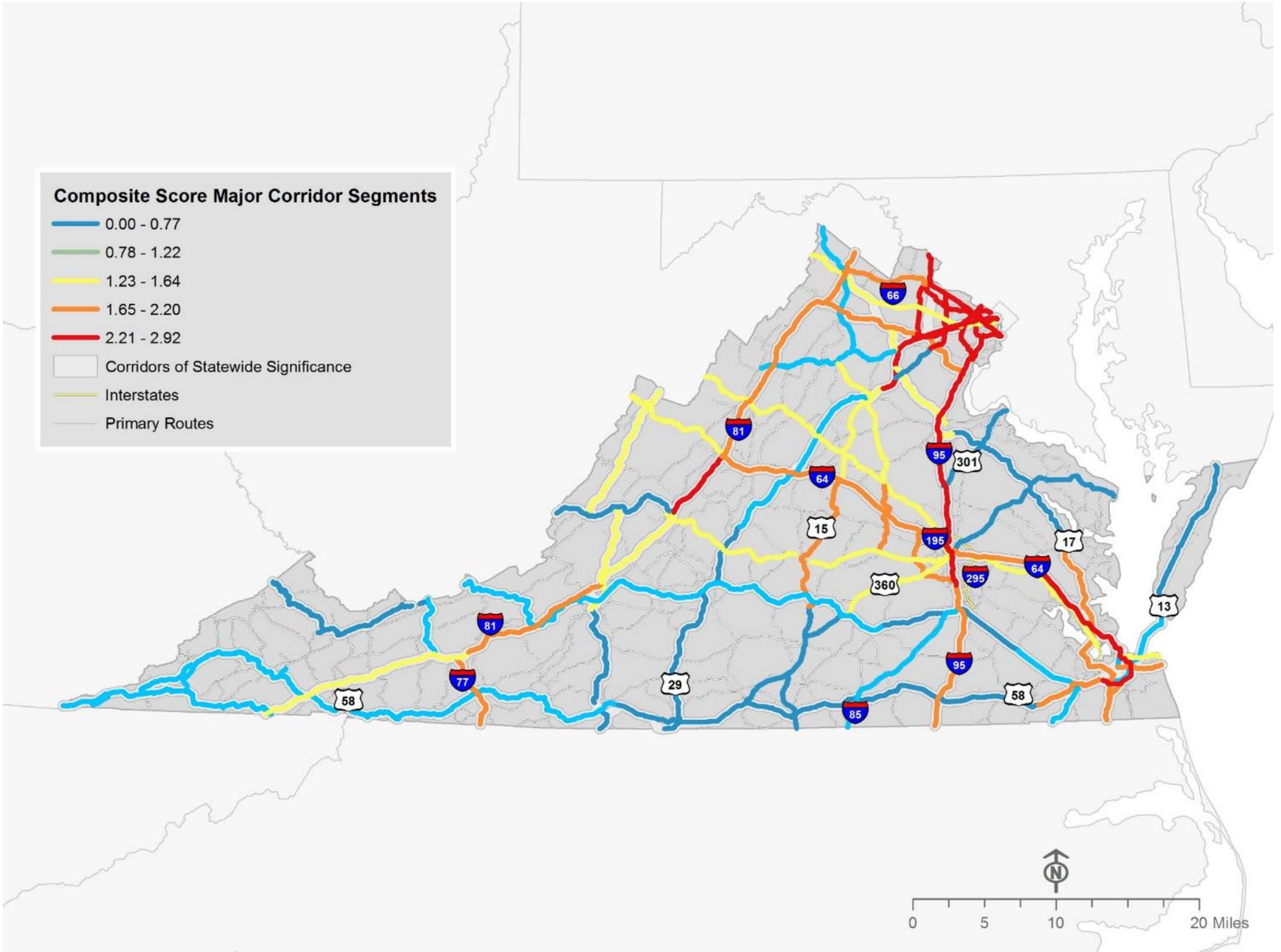
1.65 - 2.20

2.21 - 2.92

Corridors of Statewide Significance

Interstates

Primary Routes



NEXT STEPS

Selecting Corridors

- Plan to assess about 25 corridors
 - Assess issues and determine problems at a high level
 - Assess potential cost effective solutions

Next Steps

- Corridors nominated will be reviewed and culled to about 25.
- Each selected corridor will be analyzed in more detail and existing and future issues identified.
 - Plan to coordinate with VTrans Needs and Recommendations process during this phase.

Applying Cost-Effective Solutions

Asking key questions:

What are the **key contributors** to the deficiencies?

Safety issues

Bottlenecks

Capacity constraints

Ramp design

Deficient pavement

Poor Access Management

Are there **existing recommendations** that **efficiently address or alleviate** the need?

STARS II

MPO and District Recommendations

What other **cost-effective solutions** can help address or alleviate the need? **To what extent do they help** (example: *ITS potential to reduce congestion by 10%*)?

Lane use management

Operational Awareness

Connected vehicle infrastructure

Integrated Corridor Management (ICM)

Design improvements

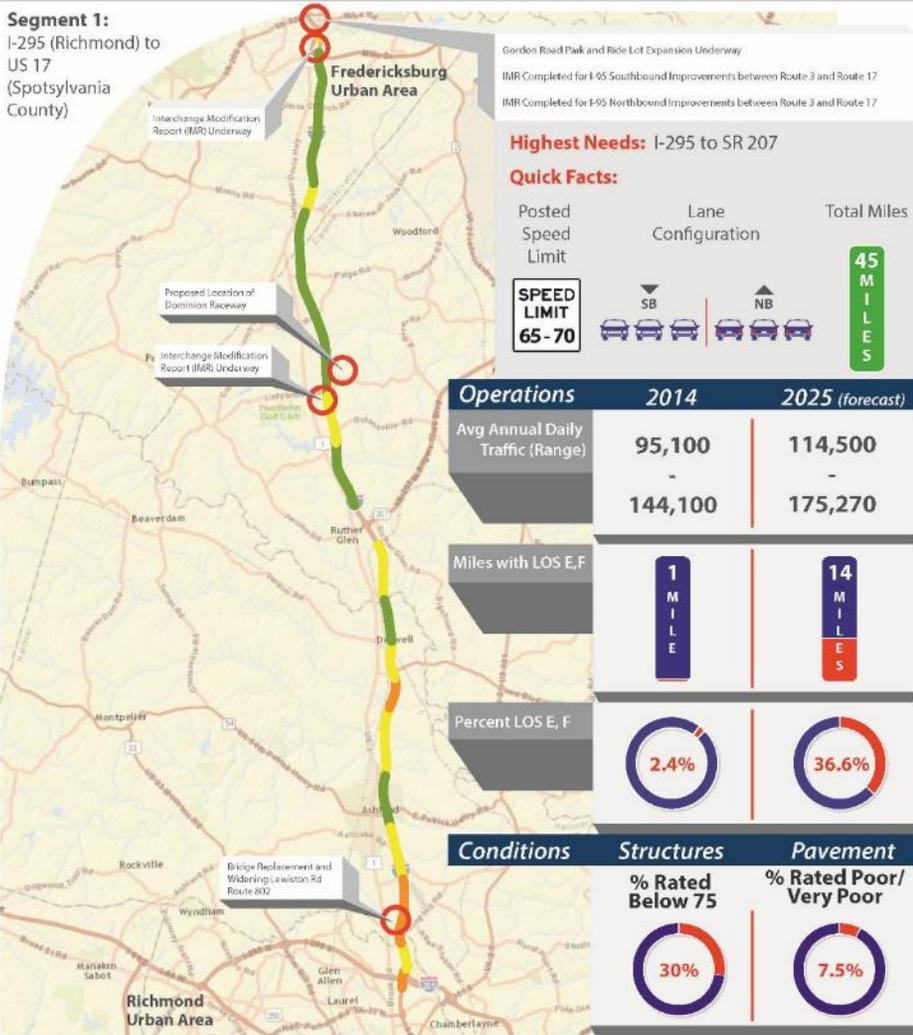
Multi-modal infrastructure

Access Management

Washington to North Carolina Corridor (I-95): Composite Score



Segment 1:
I-295 (Richmond) to
US 17
(Spotsylvania
County)



Washington to North Carolina Corridor (I-95)



Segment 1:
I-295 (Richmond) to
US 17 (Spotsylvania County)

Highest Needs:
I-295 to SR 207

Quick Facts:

