



DURHAM • CHAPEL HILL • CARRBORO

DCHC

METROPOLITAN PLANNING ORGANIZATION

PLANNING TOMORROW'S TRANSPORTATION

Congestion Management Process (CMP)

— Mitigation Strategies and Bicycle Level of Traffic Stress (LTS)

Yanping Zhang

April.5th, 2024

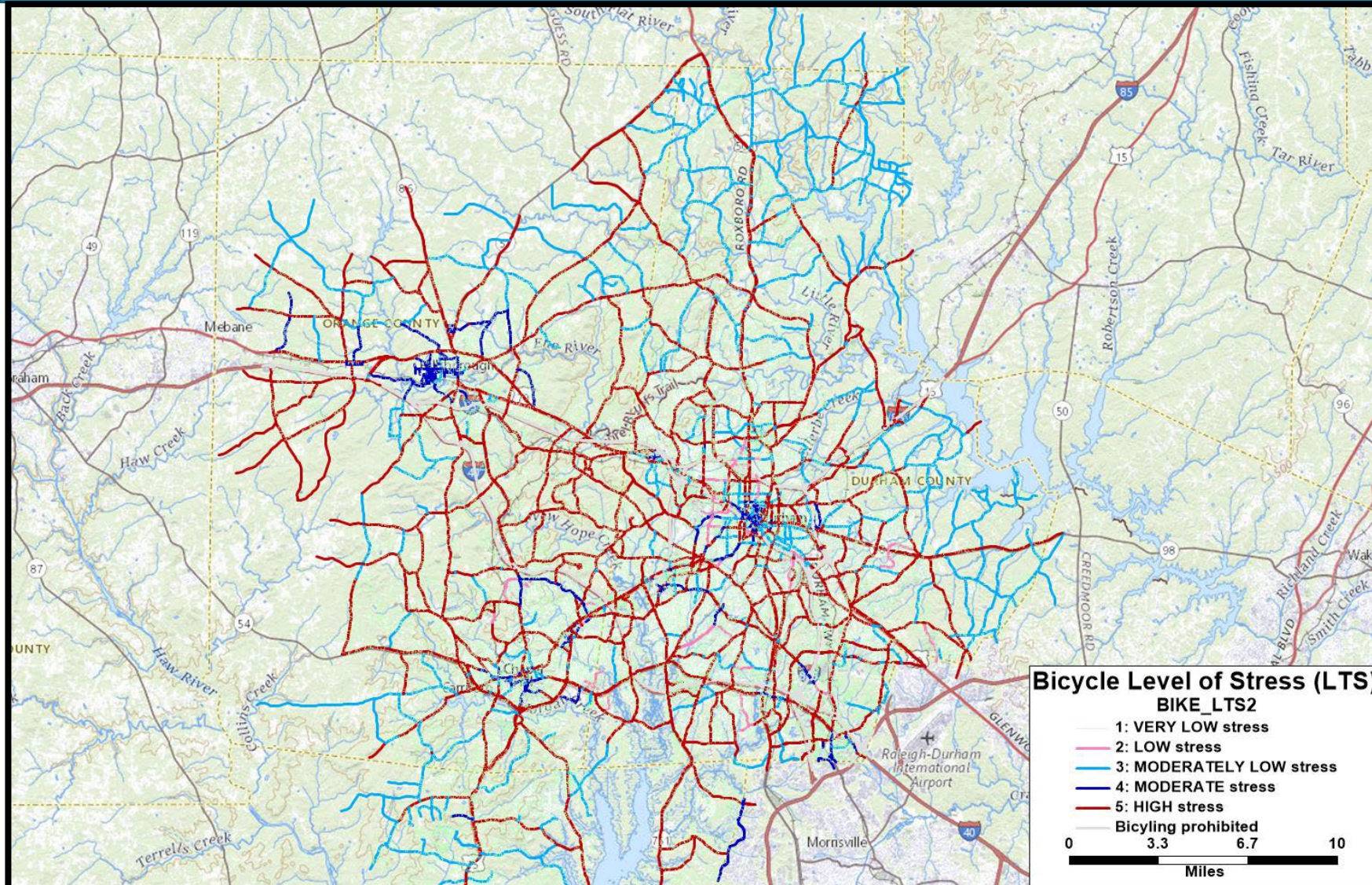
CMP/MRC Status & Schedule

- 3rd CMP/MRC Workshop
Time & Date: 1-3pm, April 30th, 2004
Location: Jordan Lake Room, CPRC
- Preliminary Recommendations of Mitigation Strategies
- Preliminary Estimation of Bicycle Level of Traffic Stress (LTS)
(Sent for review and comments)
- Chapters 4 and 5 of the draft report
(Sent for review and Comments)
- Review and comment Period: April 9-19.
- Final Report will be submitted to TC and Board for the adoption in May 2024

Bicycle Level of Traffic Stress (LTS)

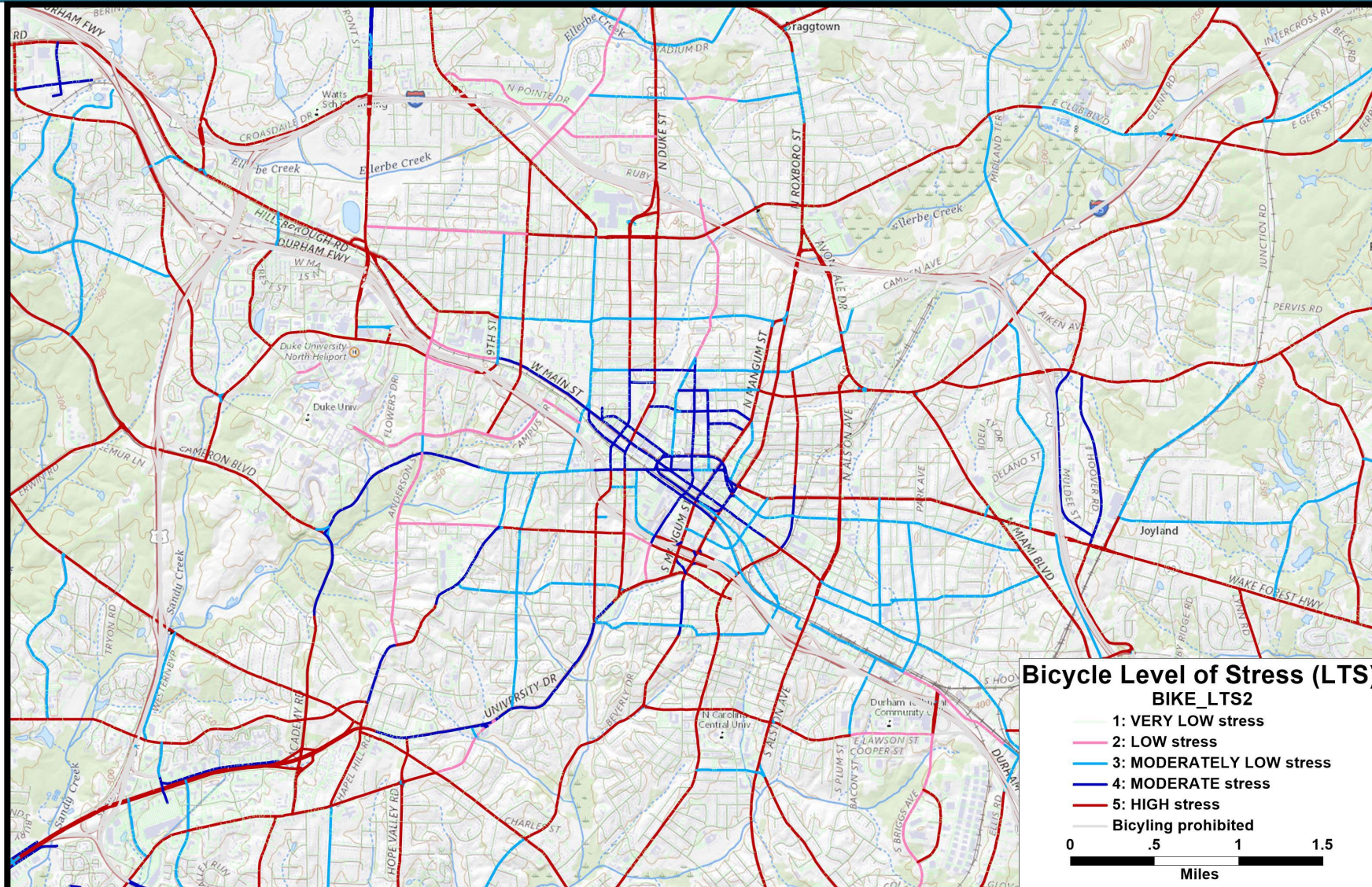
- Originally developed by the Meneta Transportation Institute in 2012
 - Bike LTS framework is based on a hierarchy of roadway characteristics, including:
 - 1) Traffic speed and volume,
 - 2) Presence and type of bicycle facility,
 - 3) Roadway cross- section, and 4) Land use context
 - FDOT's Bike LTS method suited for planning applications
 - Professional judgment where data were not available, such as
 - 1) Width of the bicycle lane,
 - 2) On-street parking, separation from the travel lanes
 - Preliminary results and requires review by planners from local jurisdictions
- Link to the Online Map [\(https://arcg.is/0CyjS0\)](https://arcg.is/0CyjS0)

Preliminary LTS Results – MPO area



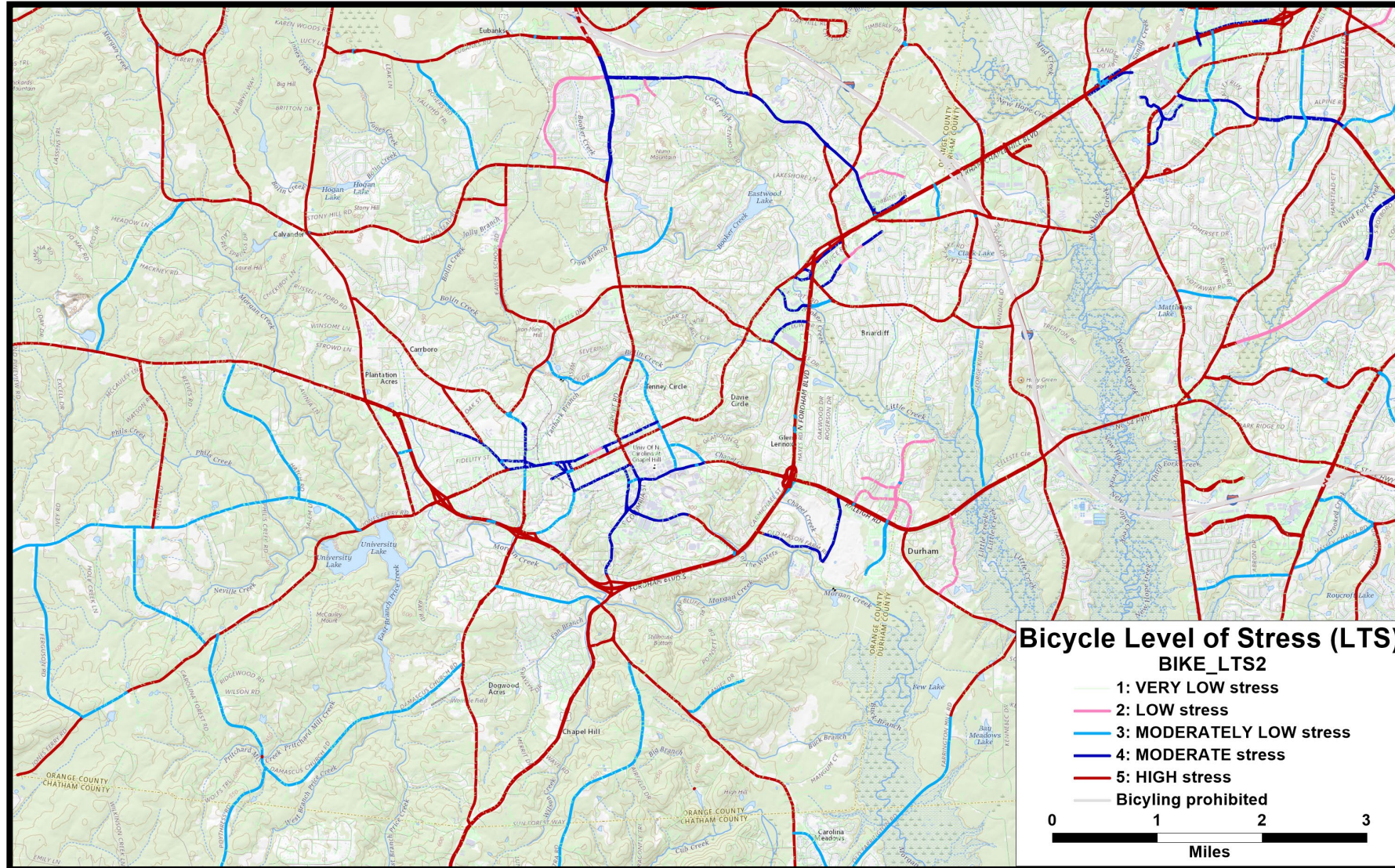
- 5- point scale:
 - ❖ 1 - Very Low Stress; reflecting that the facility is more inviting to more types of bicyclists including most children
 - ❖ 2 - Low Stress; reflecting that the facility is suited for most adults as it has marked bicycle lane
 - ❖ 3 - Moderately Low Stress; reflecting that the facility is suited for many adults
 - ❖ 4 - Moderate Stress; reflecting that the facility is suited for some adults
 - ❖ 5 - High Stress; reflecting that the facility is suited only for experienced bicyclists
 - ❖ 99 - Bicycle Access Prohibited

Preliminary LTS Results – Downtown Durham



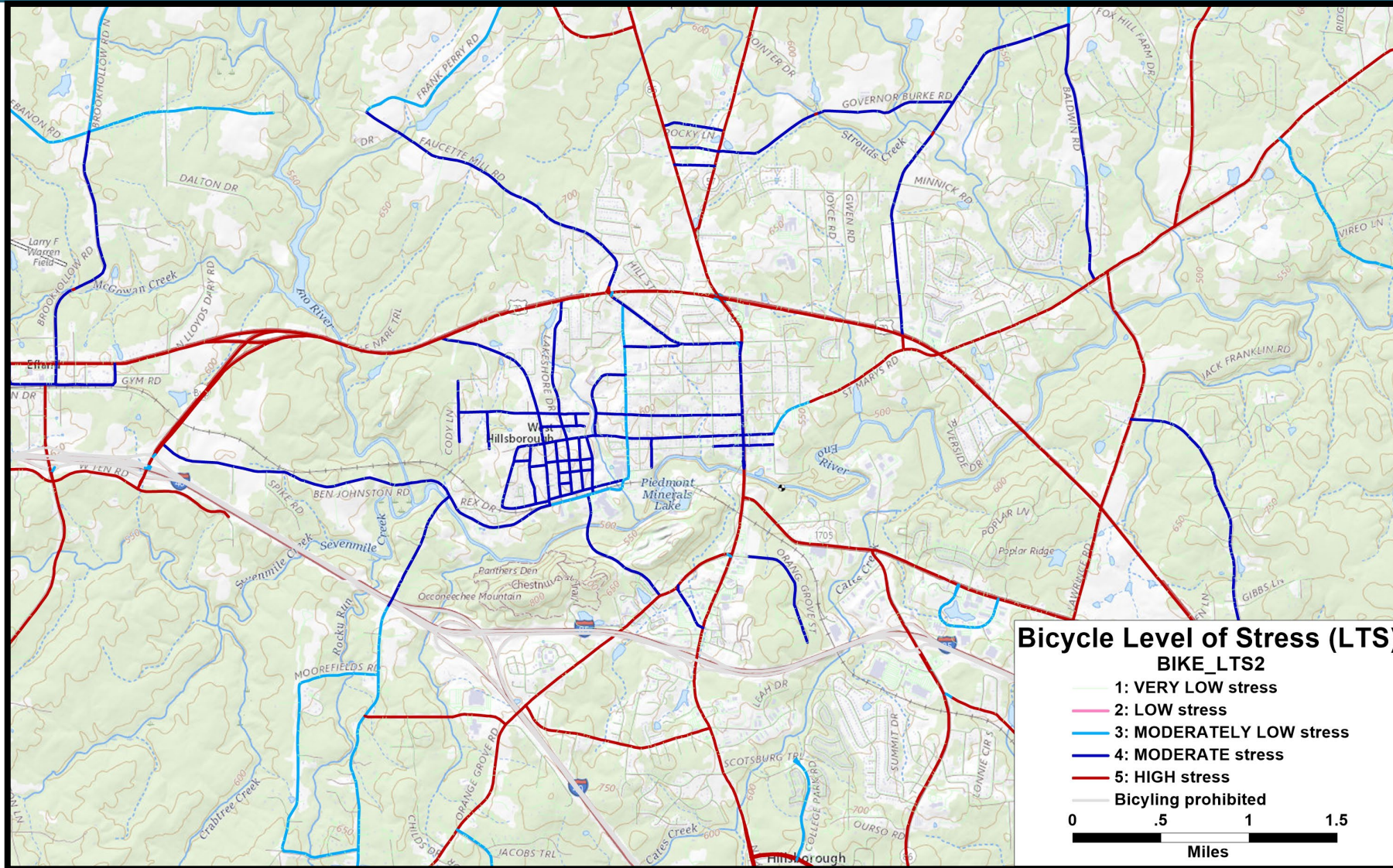
- ❖ 1 - Very Low Stress; reflecting that the facility is more inviting to more types of bicyclists including most children
- ❖ 2 - Low Stress; reflecting that the facility is suited for most adults as it has marked bicycle lane
- ❖ 3 - Moderately Low Stress; reflecting that the facility is suited for many adults
- ❖ 4 - Moderate Stress; reflecting that the facility is suited for some adults
- ❖ 5 - High Stress; reflecting that the facility is suited only for experienced bicyclists
- ❖ 99 - Bicycle Access Prohibited

Preliminary LTS Results – Chapel Hill & Carrboro

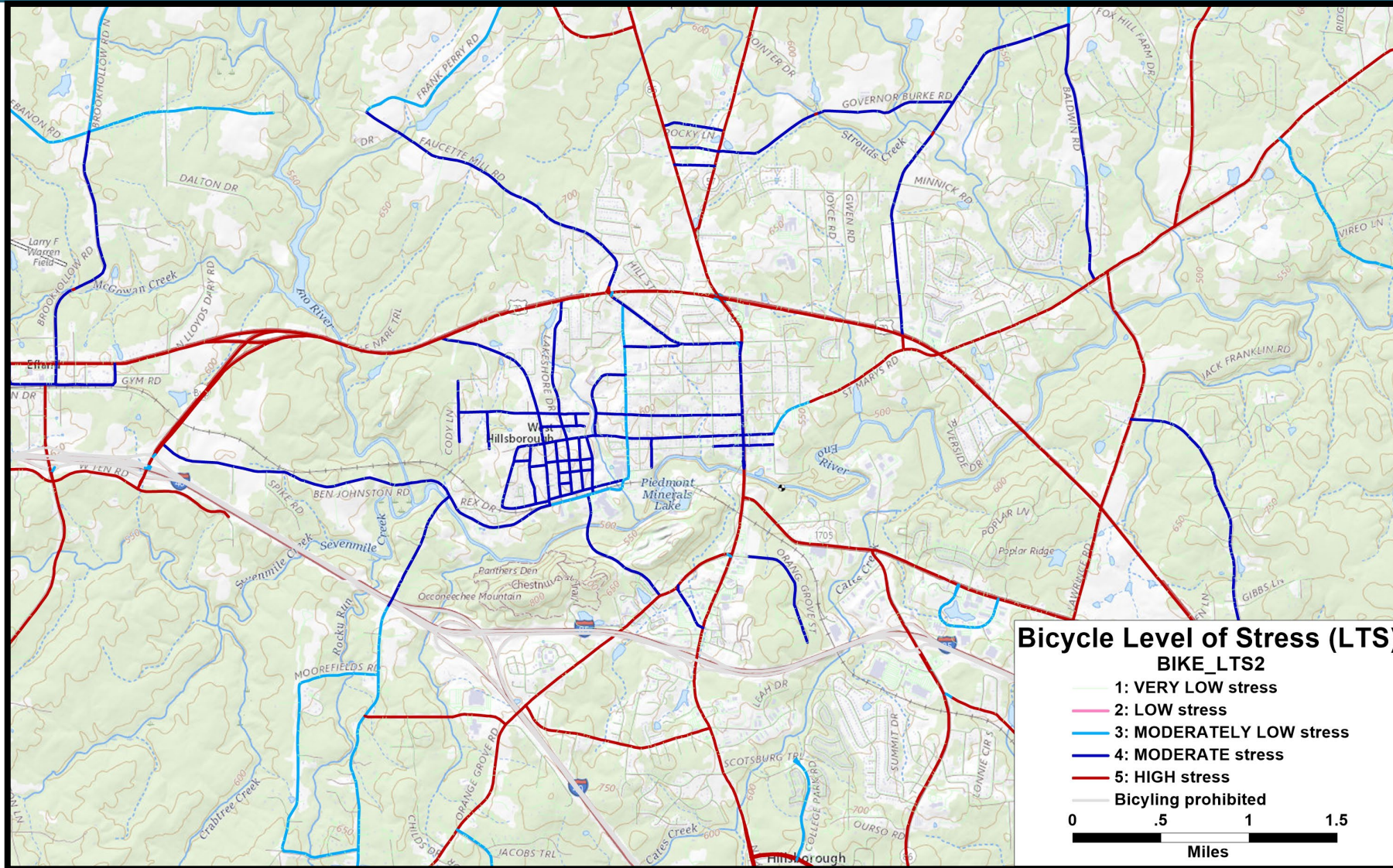


- ❖ 1 - Very Low Stress; reflecting that the facility is more inviting to more types of bicyclists including most children
- ❖ 2 - Low Stress; reflecting that the facility is suited for most adults as it has marked bicycle lane
- ❖ 3 - Moderately Low Stress; reflecting that the facility is suited for many adults
- ❖ 4 - Moderate Stress; reflecting that the facility is suited for some adults
- ❖ 5 - High Stress; reflecting that the facility is suited only for experienced bicyclists
- ❖ 99 - Bicycle Access Prohibited

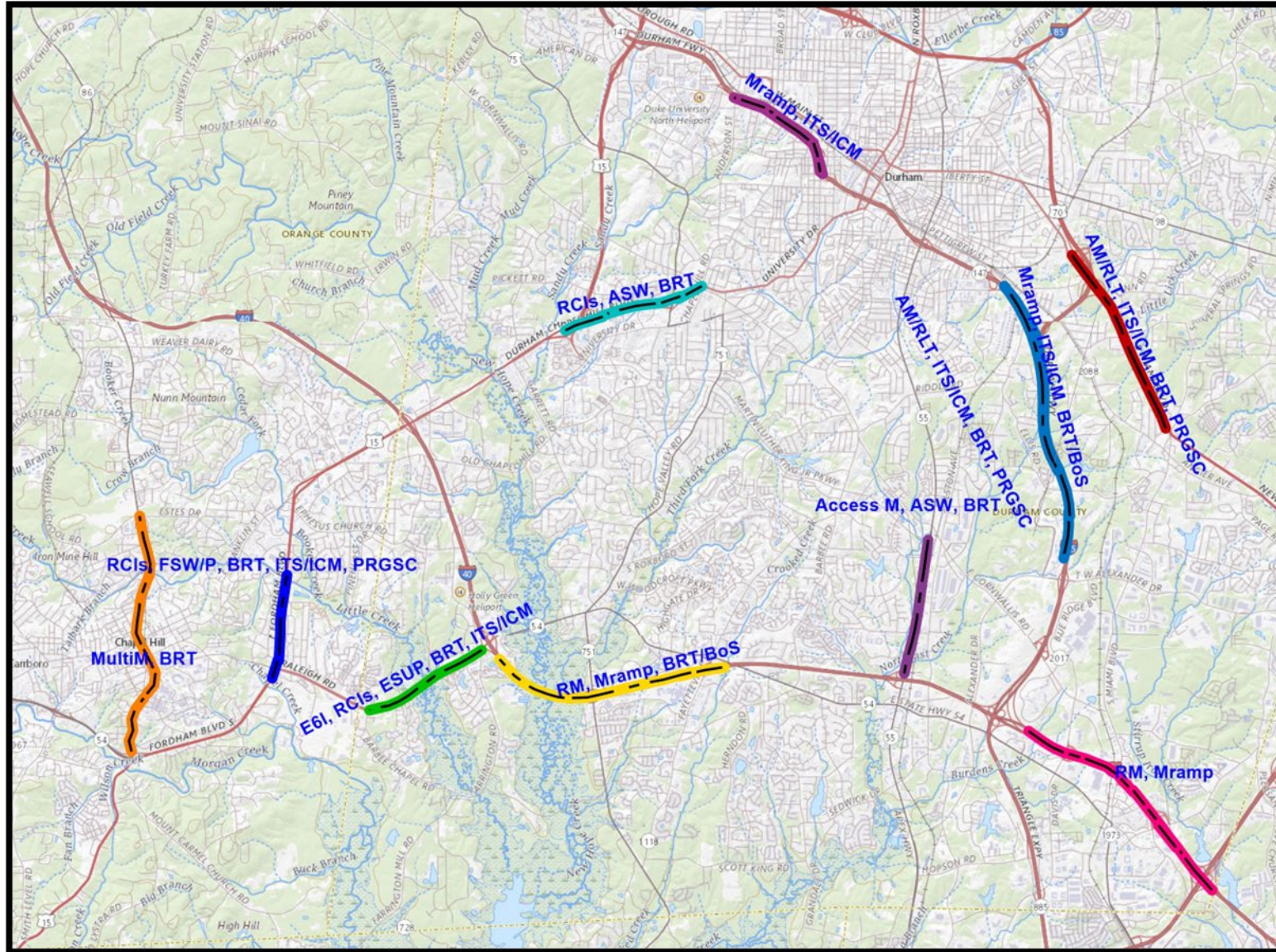
Preliminary LTS Results – Hillsborough



Preliminary LTS Results – Hillsborough

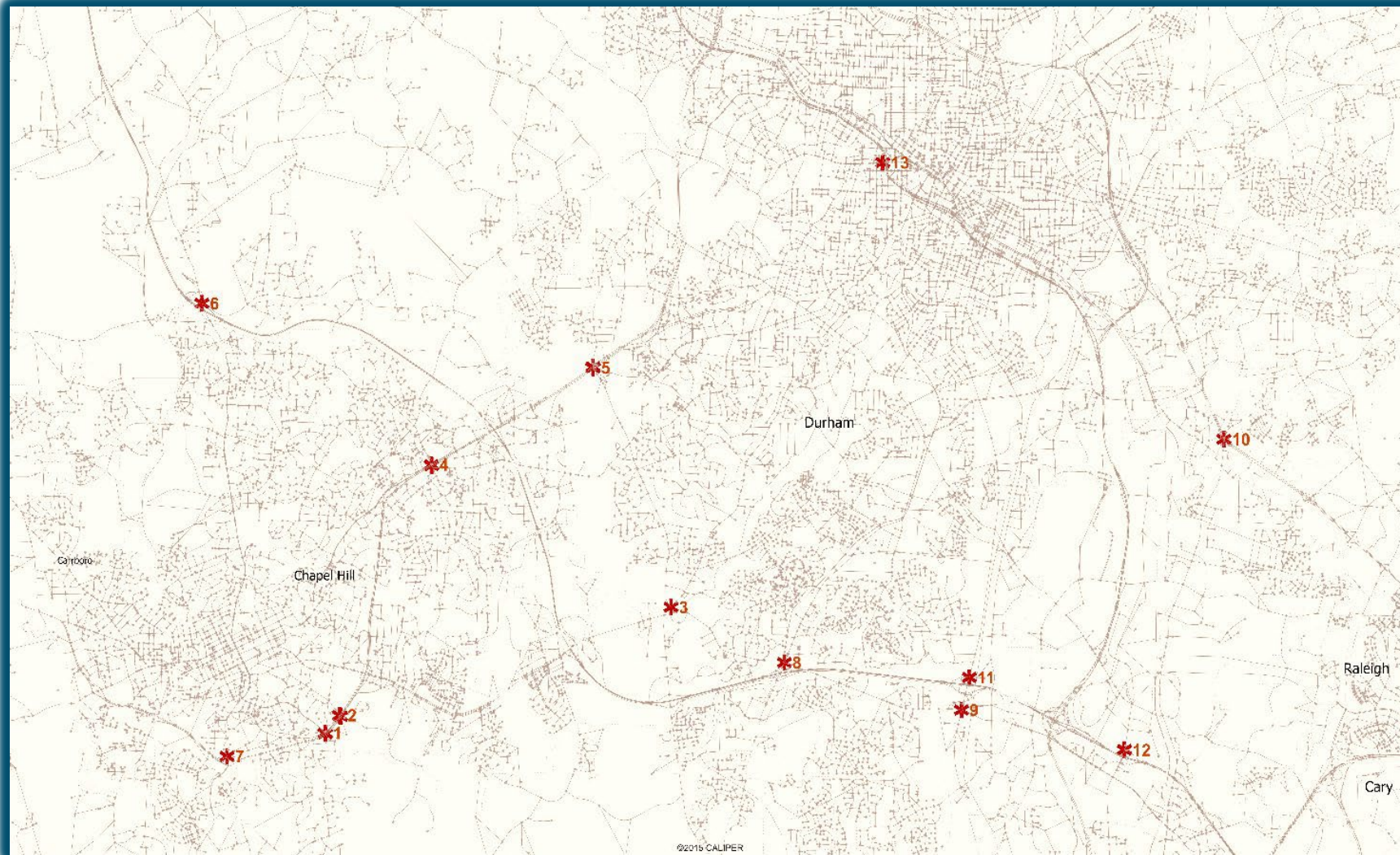


Preliminary Recommendations of Mitigation Strategies



BRR	Meaning
RM	Ramp Metering
Mramp	Modernize Ramp
BRT	Bus Rapid Transip
BoS/BOSS	Bus on Shoulder
RCIs	Add Restricted Crossing Intersections
ITS/ICM	Intelligence Transportation System / Intergrated Corridor Management
AM/RLT	Acess Management/ Restricted Left Turning
PRGSC	Improve Parallel road/grid street connection
ASW	Add Sidewalk
E6L	Extend to 6 Lanes or Redesign as a superstreet
ESUP	Extend shared use path.
FSW/P	Fill in Sidewalks/ Paths

Deficient Intersections & Improvement Recommendations



Preliminary recommendations –
Table 5.4: Intersections
Improvements in the
Draft Report (Page 5-
16)

Thank You!

Yanping.zhang@dchcmpo.org