DURHAM · CHAPEL HILL · CARRBORO

DCHC

METROPOLITAN PLANNING ORGANIZATION

PLANNING TOMORROW'S TRANSPORTATION

Congestion Management Process (CMP) – Bicycle Level of Traffic Stress (LTS)

Yanping Zhang

April.2nd, 2024

Bicycle Level of Traffic Stress (LTS)

DURHAM · CHAPEL HILL · CARRBORO
DCHC
METROPOLITAN PLANNING ORGANIZATION
PLANNING TOMORROW'S TRANSPORTATION

- Originally developed by the Meneta Transportation Institute in 2012
- Identifying streets that are low-stress for bicyclists
- 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

Bicycle Level of Traffic Stress (LTS) – Methodology

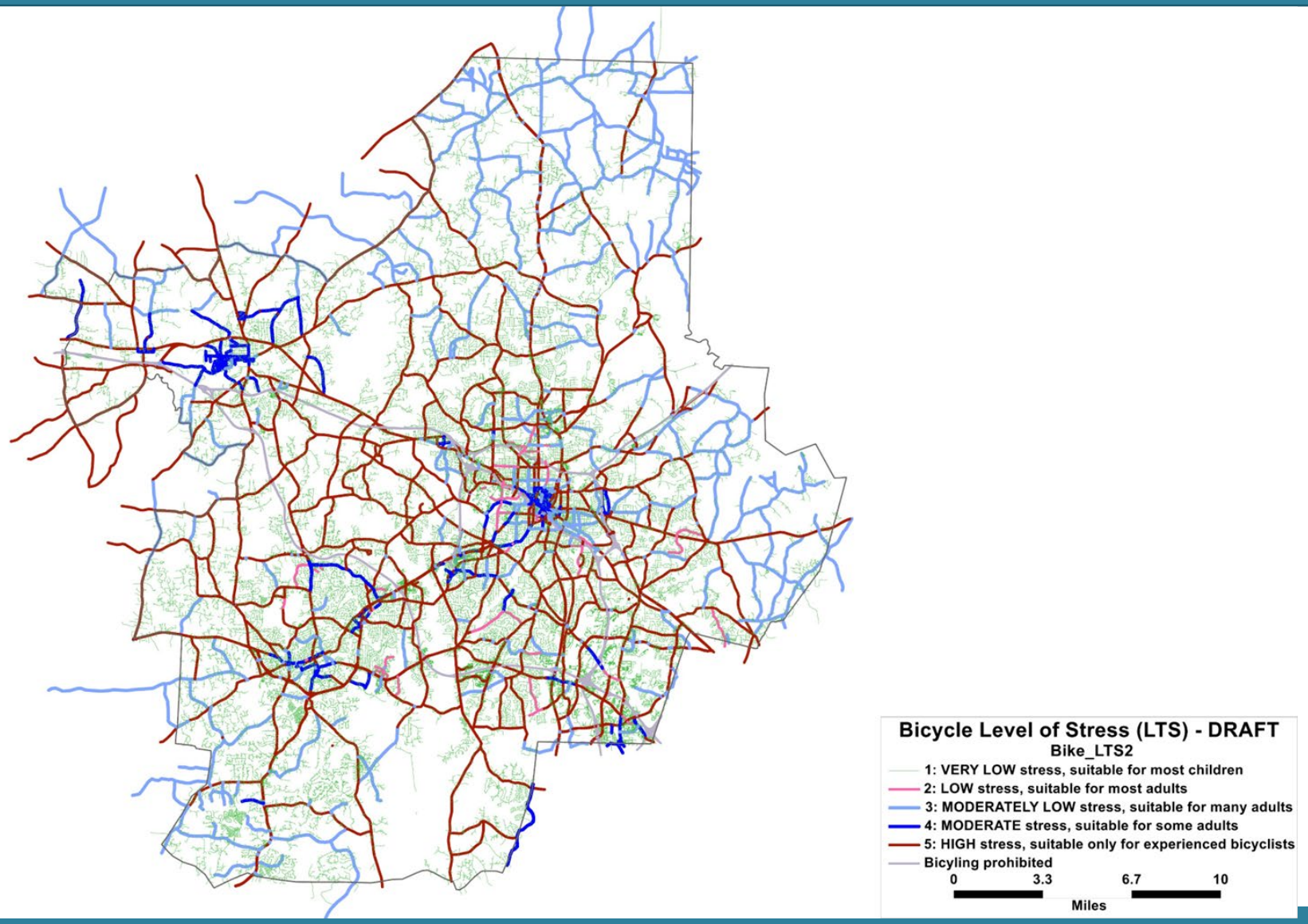
DURHAM · CHAPEL HILL · CARRBORO
DCHC
METROPOLITAN PLANNING ORGANIZATION
PLANNING TOMORROW'S TRANSPORTATION

- 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
- Quality of the roadway network is assessed on a 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

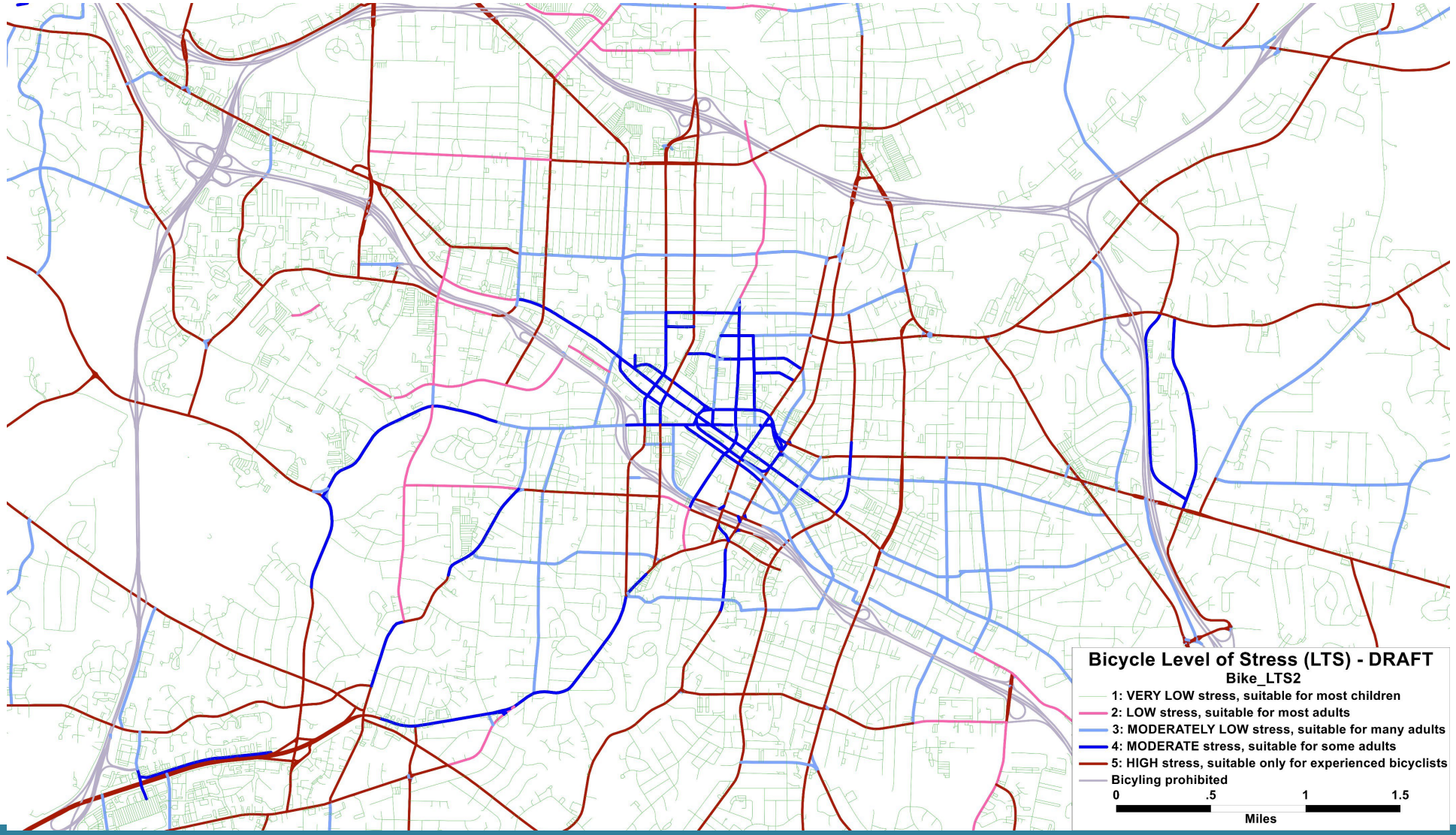
Preliminary LTS Results – MPO area

DURHAM · CHAPEL HILL · CARRBORO
DCHC
METROPOLITAN PLANNING ORGANIZATION
PLANNING TOMORROW'S TRANSPORTATION



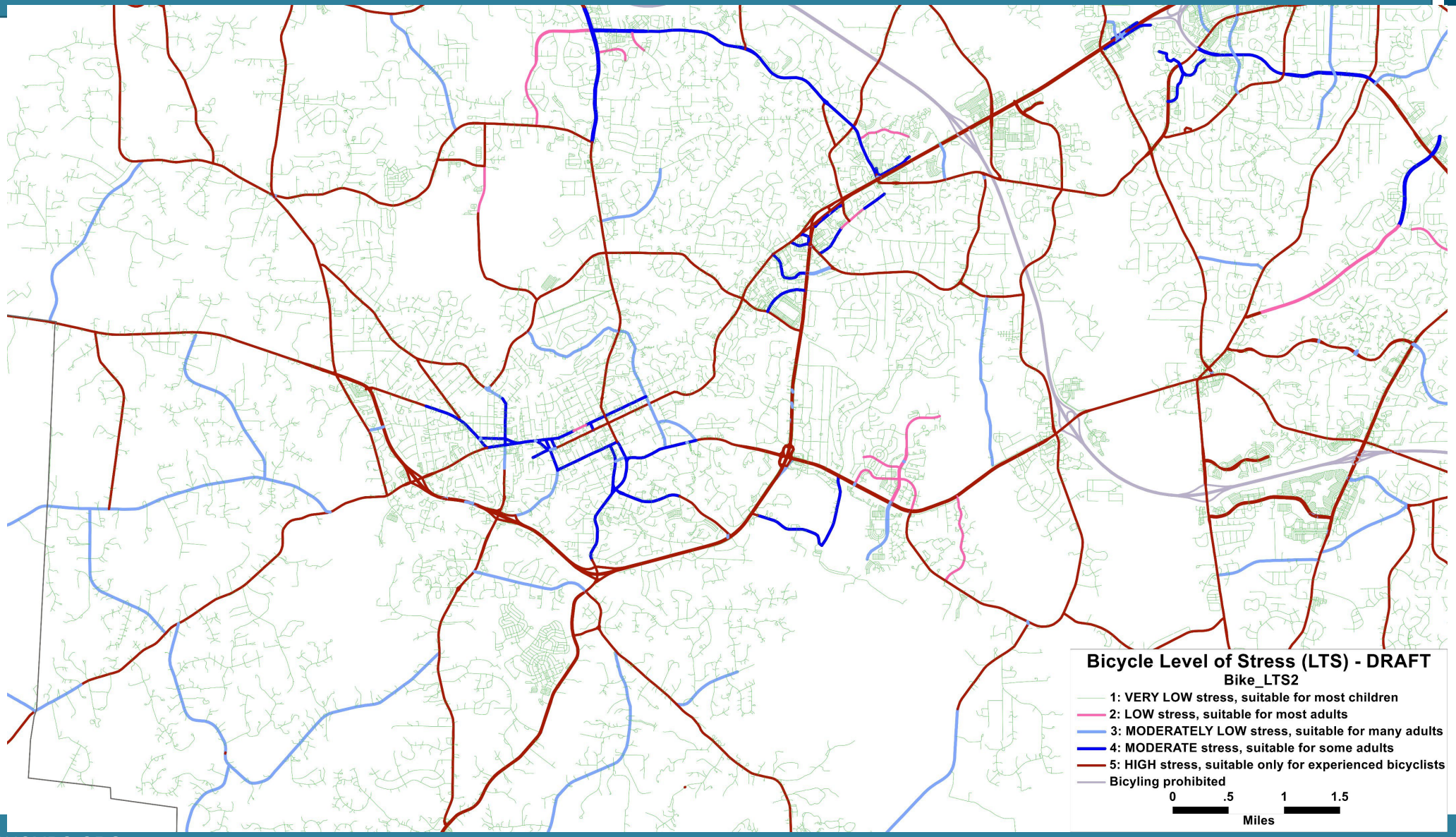
Preliminary LTS Results – Downtown Durham

DURHAM · CHAPEL HILL · CARRBORO
DCHC
METROPOLITAN PLANNING ORGANIZATION
PLANNING TOMORROW'S TRANSPORTATION



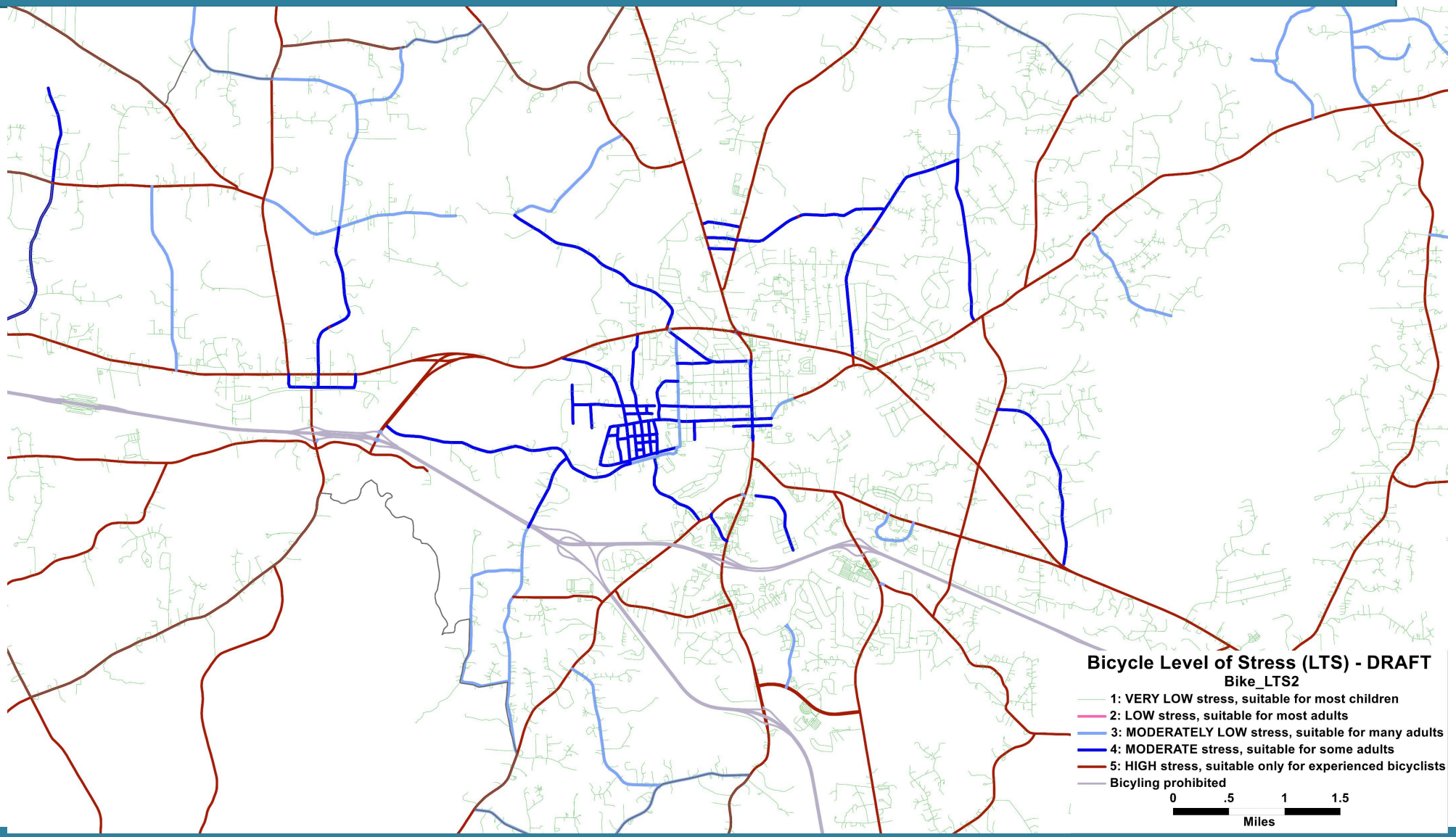
Preliminary LTS Results – Chapel Hill & Carrboro

DURHAM · CHAPEL HILL · CARRBORO
DCHC
METROPOLITAN PLANNING ORGANIZATION
PLANNING TOMORROW'S TRANSPORTATION



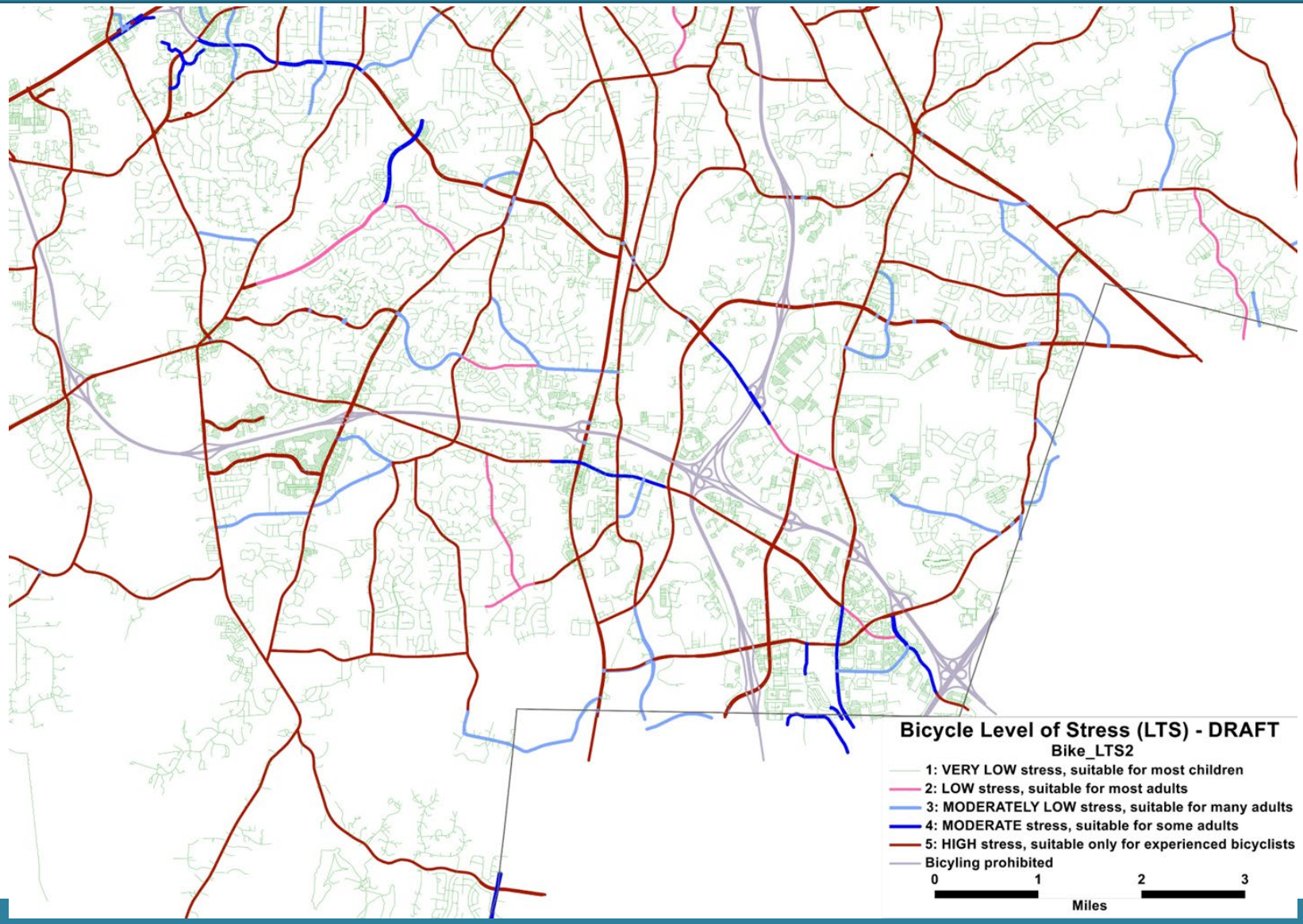
Preliminary LTS Results – Hillsborough

DURHAM · CHAPEL HILL · CARRBORO
DCHC
METROPOLITAN PLANNING ORGANIZATION
PLANNING TOMORROW'S TRANSPORTATION



Preliminary LTS Results – South Point & RTP

DURHAM · CHAPEL HILL · CARRBORO
DCHC
METROPOLITAN PLANNING ORGANIZATION
PLANNING TOMORROW'S TRANSPORTATION



Questions & Comments?

Yanping.zhang@dchcmpo.org