



Greensboro MPO Bicycle, Pedestrian and Greenways Master Plan Update

NCAMPO Conference, Greensboro, NC

May 12, 2016

Presentation Structure

Introduction to the Plan

Process of Developing the Plan:

- Review the 2006 plan recommendations and accomplishments
- Technical review and coordination with internal staff
- Public involvement through meetings, BiPed Committee, etc.

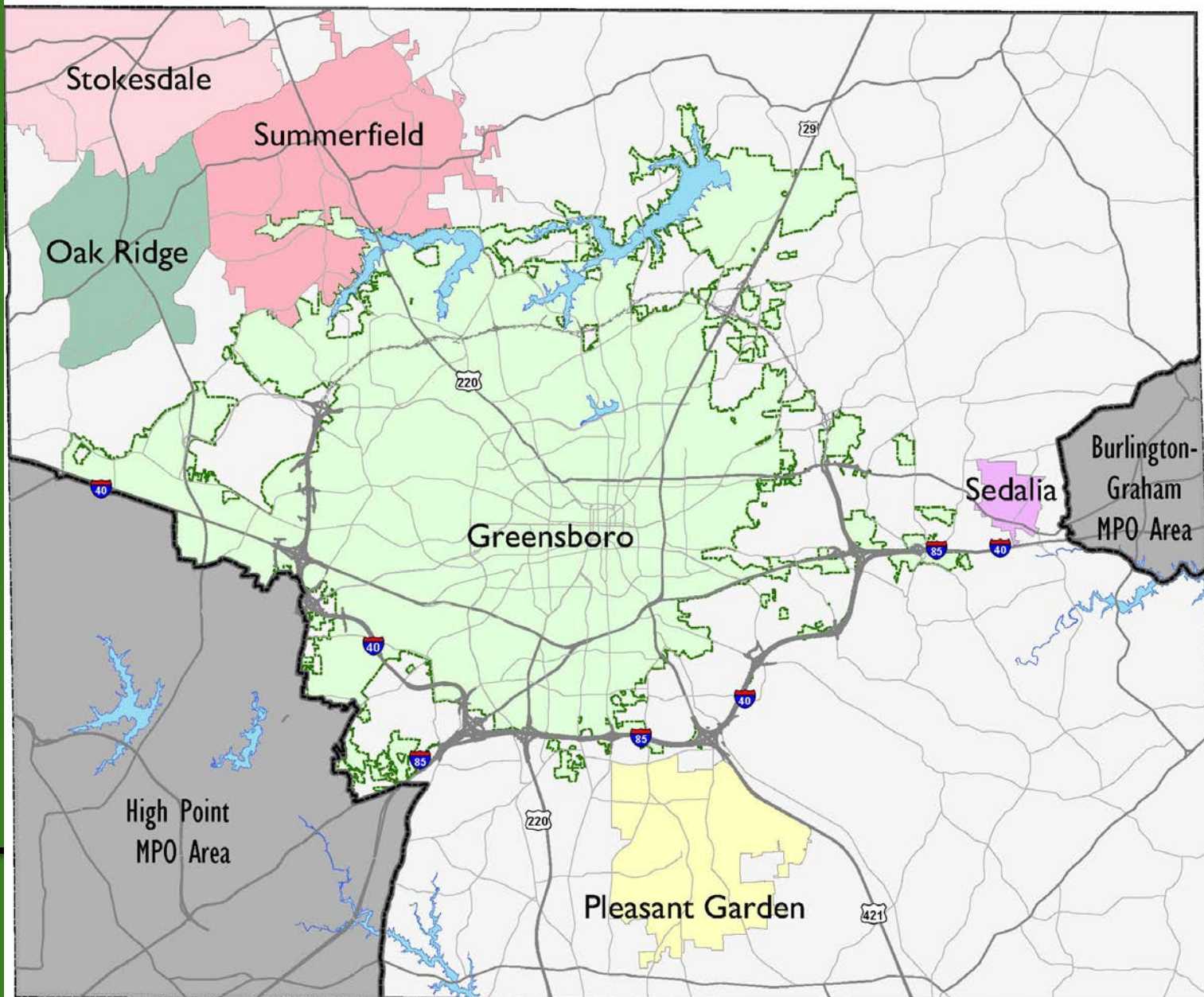
Innovative Methodology:

- GIS modeling for pedestrian & greenway infrastructure to determine priorities
- Quantitative and qualitative factors

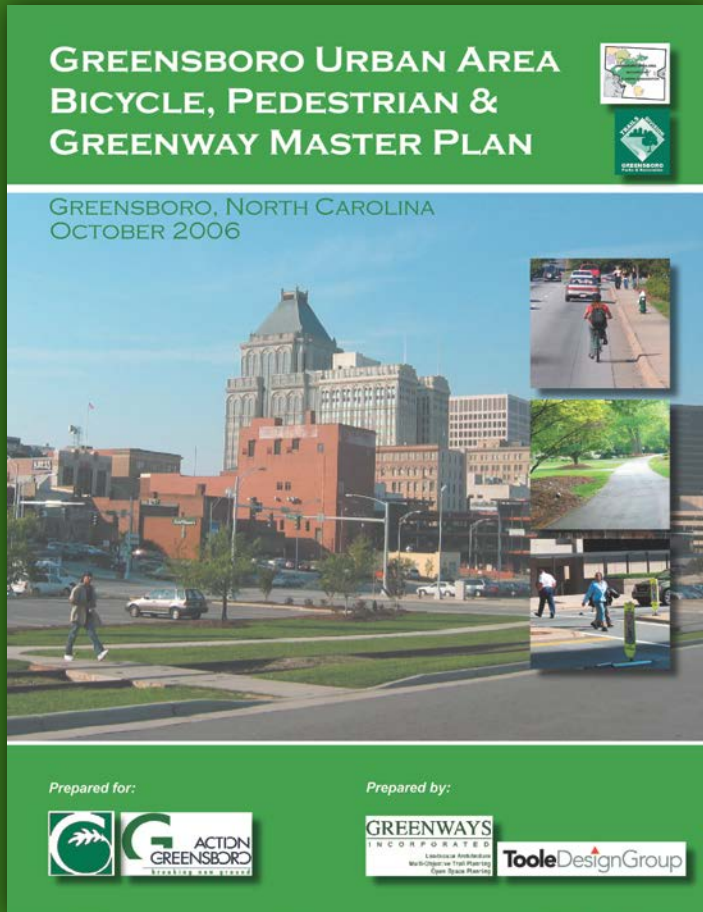
Implementation Strategy:

- Goals for sidewalks, bike lanes, and greenways
- Analysis supports funding for key projects
- Supporting policies and programs

Greensboro MPO



BiPed Background



Goals and Objectives of BiPed

Connectivity

Health and Wellness

Safety

Alternative Transportation

Enhance the Environment

Economic Development

Growth Management

BiPed Accomplishments

BiPed SCORECARD

RESOURCES COMMITTED

\$134 2008 Greensboro
Transportation
Bond
MILLION

\$9 Independent
sidewalk
construction
from bond
MILLION

\$20 Federal funding
leveraged for
sidewalk and
greenways as of
2015
MILLION

All road projects include
sidewalks on both sides

PROGRESS MADE SINCE 2006

Sidewalk Construction



Bicycle Lanes



Other On-Street Bicycle Facilities



Paved Greenways



Unpaved Trails



Sidewalks – outside
City of Greensboro:
36.3 miles



2015 Bicycle, Pedestrian, Trails & Greenways Plan Update

November 2015



BiPed Plan Highlights

Main Components of the plan:

- Reviews improvements since 2006
- Inventories existing facilities
- Identifies improvement needs & priorities
- Guides future innovations in infrastructure, safety, programs, and policies



Structure of the plan:

- Introductory chapter
- Three modal chapters
- Each chapter has similar organization



Development Process

Technical Staff Review & Coordination:

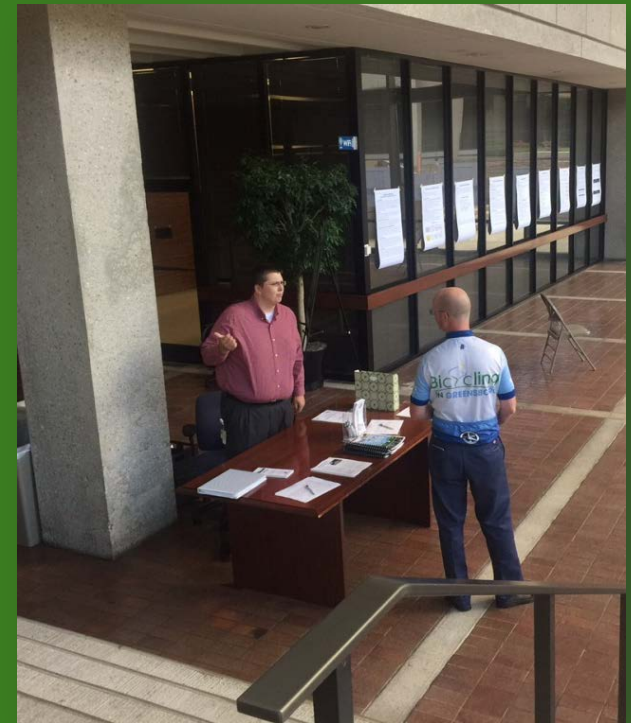
- Started in 2013; plan completed in house by MPO staff in cooperation with member agencies
- Reworked bicycle, pedestrian, greenway, and trail project recommendations
- BiPed Update Advisory Committee for agency & public input



Development Process

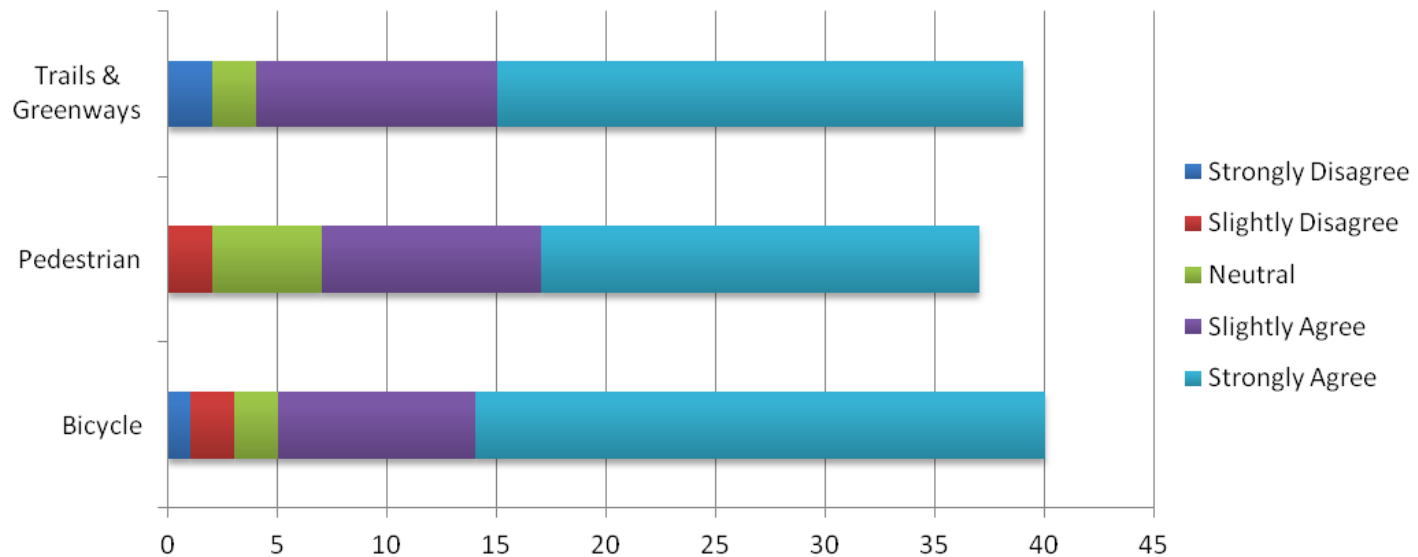
Public Involvement:

- Included surveys, BiPed Update Advisory Committee, public meetings, and public review period
- Comments gathered through online survey & distributed through partner organizations
- 50+ comments on the plan



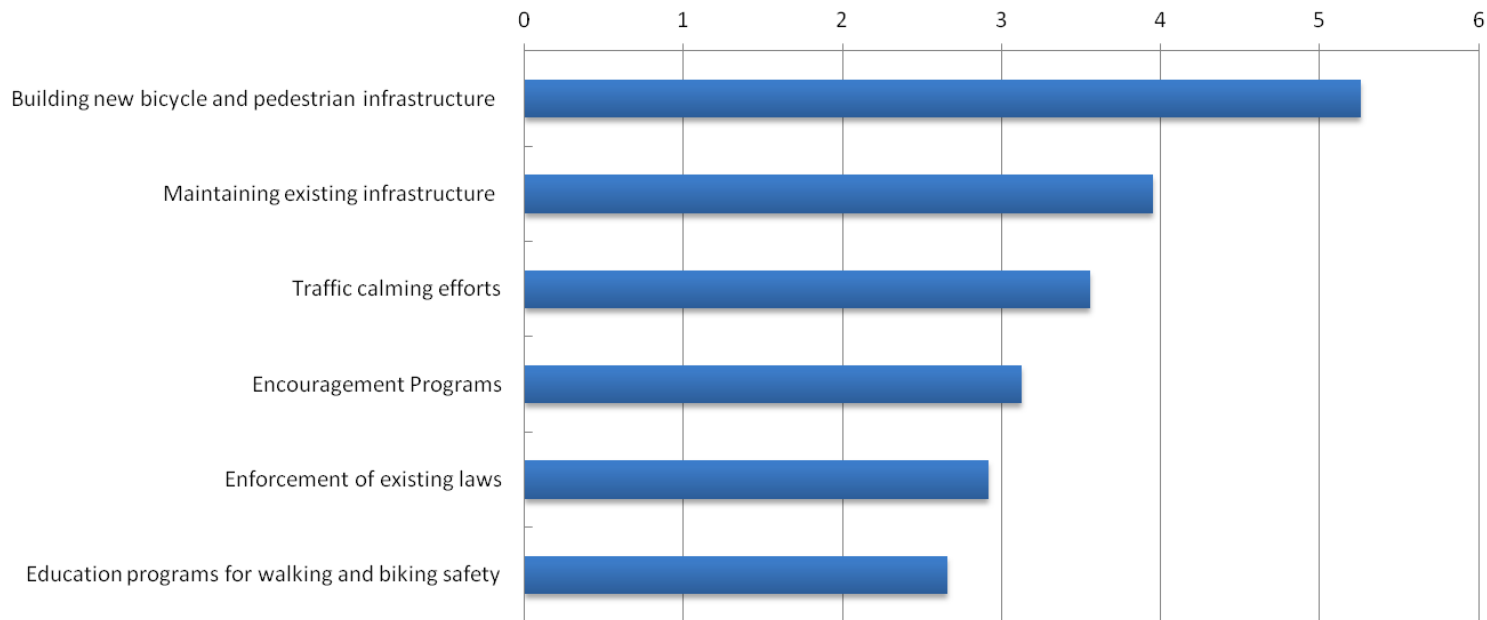
Results from Public Comments

How well do you agree with the recommendations in the Draft 2015 BiPed Plan Update?



Results from Public Comments

Most Important Strategies for Improving Bicycle and Pedestrian Safety



Innovative Methodology for Prioritizing and Recommendations



CHAPTER 2 Bicycle

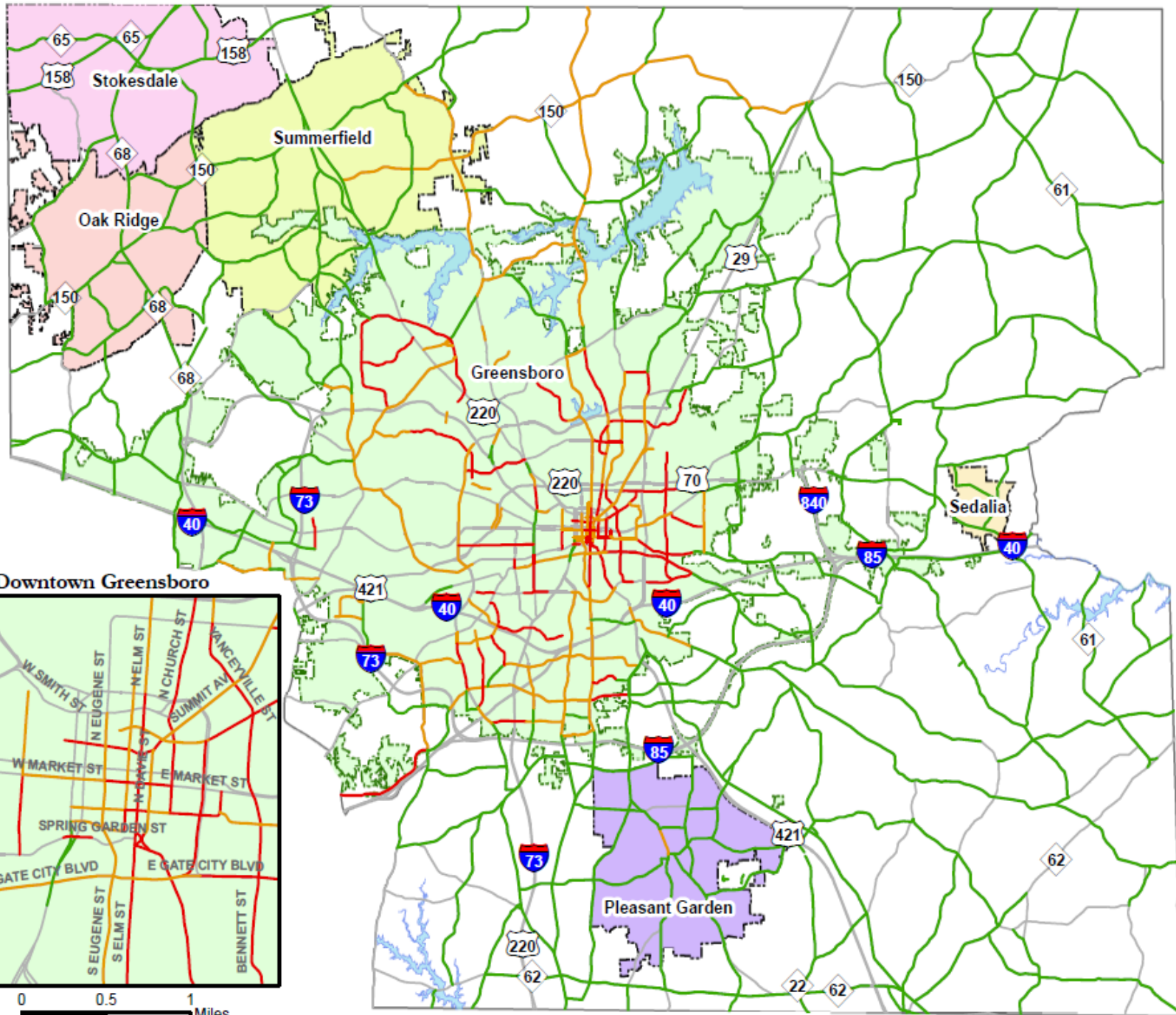
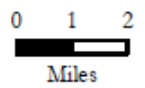
Criteria for recommendations:

- 2006 BiPed Plan
- The Bicycle Safety Analysis
- BLOS
- BPAC and public inputs
- Major roads with existing overcapacity and additional width
- LRTP
- NACTO Urban Bikeway Design Guide
- BiPed Plan adopted by MPO Towns
- Connectivity
- Discussion with GDOT staff

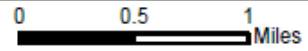


Map 2-18
**BICYCLE
FACILITY
RECOMMEND-
ATIONS
BY
PHASING
IN MPO AREA**

- Legend
- Recommendation
- Short Term
 - Middle Term
 - Long Term
- Major Street
- Lakes



Downtown Greensboro

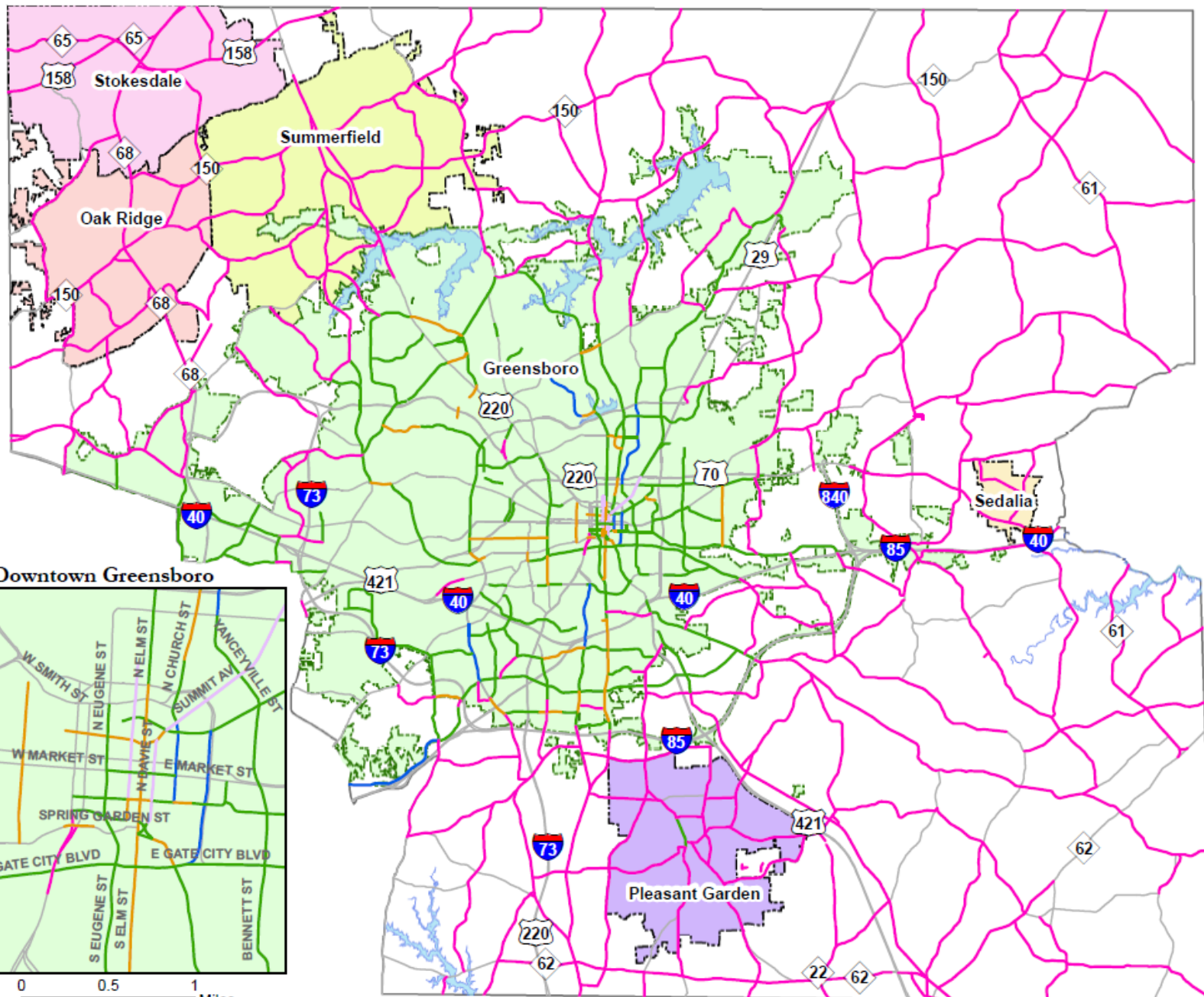
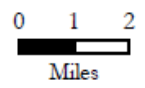


Map 2-17
**BICYCLE
FACILITY
RECOMMENDATIONS
BY
FACILITY
TYPE
IN
GREENSBORO
MPO AREA**

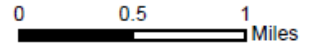
Legend

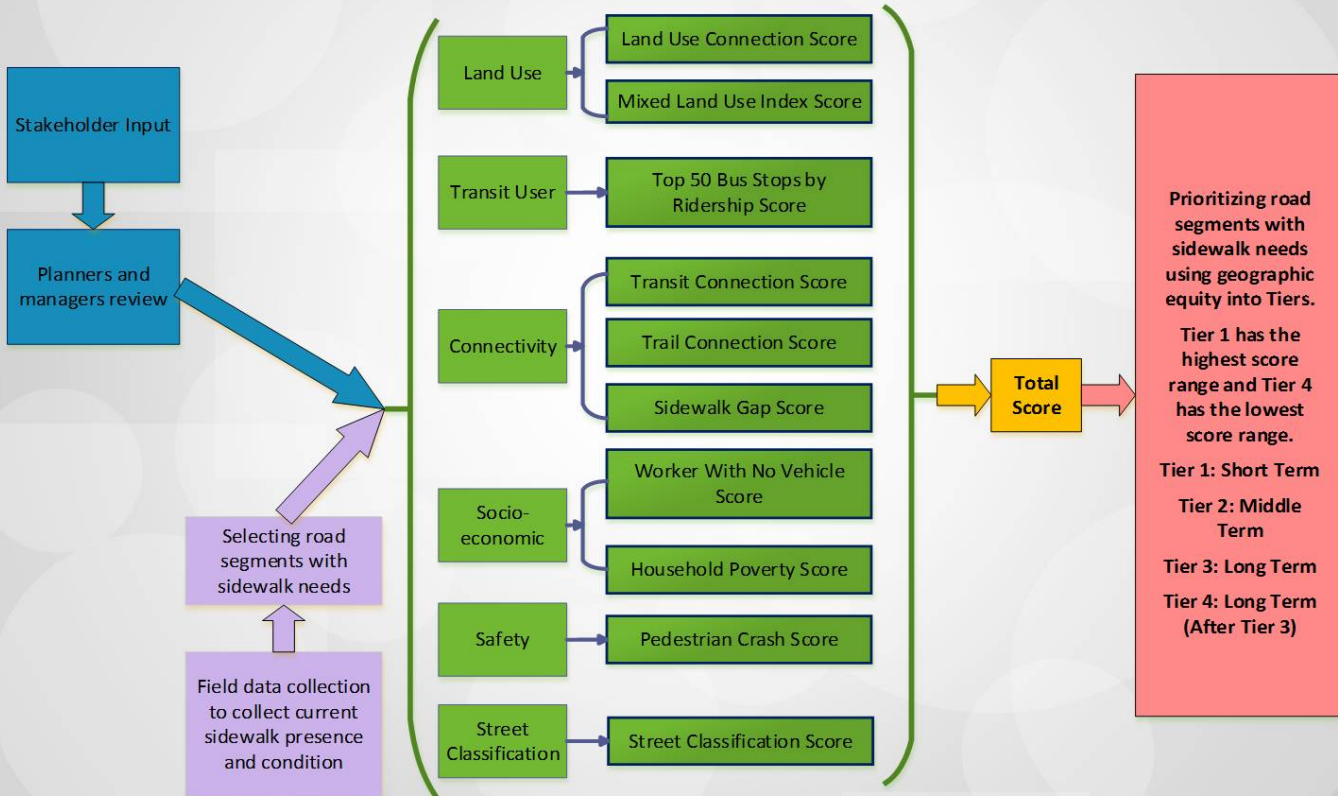
- Recommendation
- Bicycle Lane
 - Protected Lane
 - Sharrows
 - Shoulders
 - Future Study Pending
- Major Street

Lakes



Downtown Greensboro





Map 3-5A

SIDEWALK PRIORITIZATION - CITY OF GREENSBORO

Legend

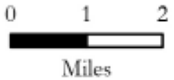
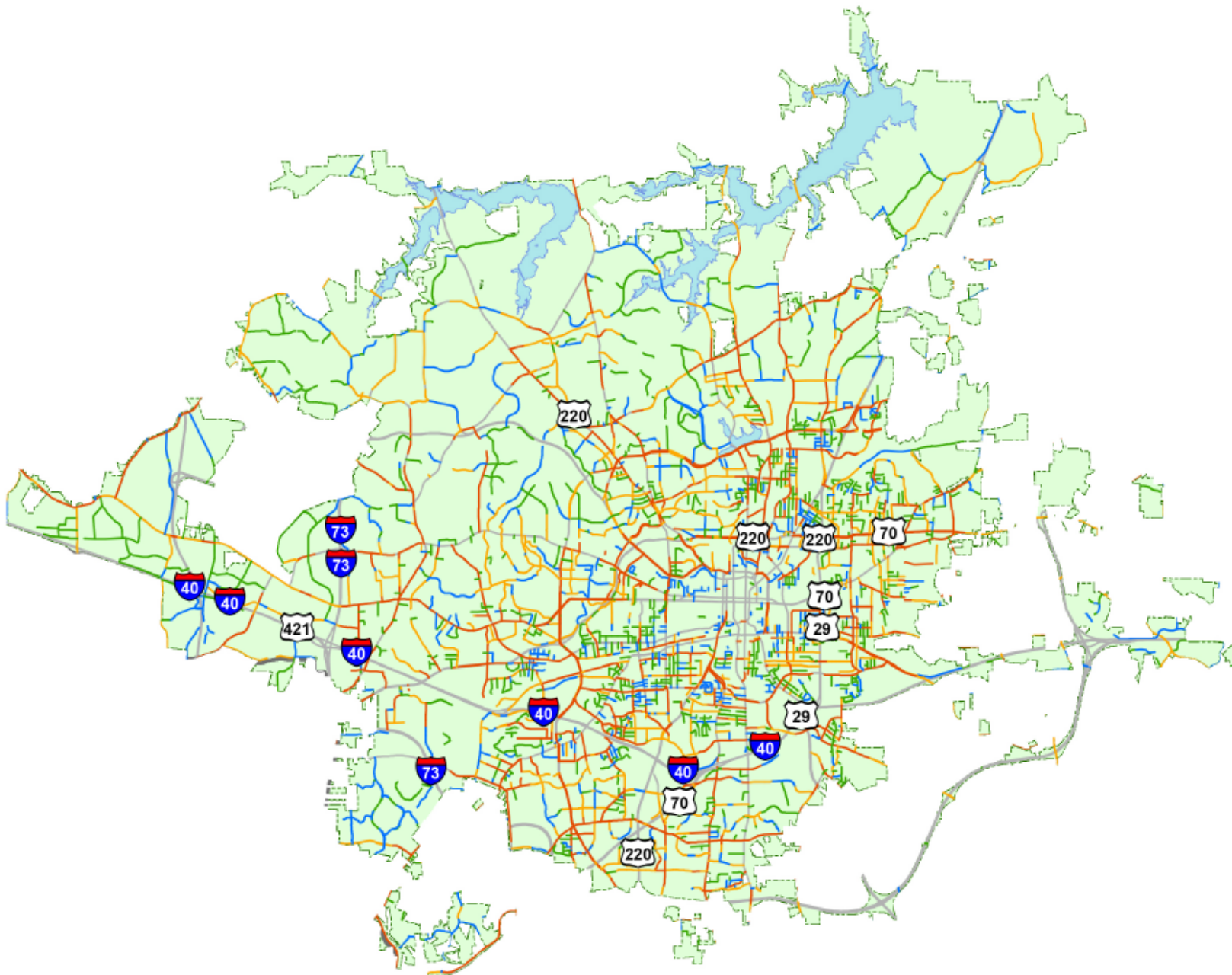
Sidewalk Priority Tiers

- 1 (Short Term)
- 2
- 3
- 4 (Long Term)

Major Street

Lakes

City of Greensboro



Point-based Methodology

Land Use Connectivity

Transportation System Connectivity

Safety & Mobility



Total Score



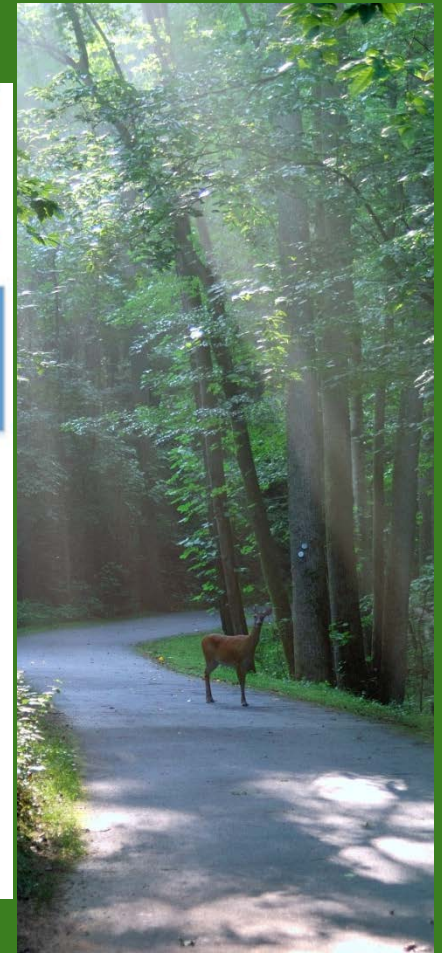
Geographic Equity

Local Input

Geographic Equity



Trail & Greenway Prioritization Map



Map 4-2
**GREENWAY
& TRAIL
PRIORITIES**

Legend

Greenway

- Tier 1
- Tier 2
- Tier 3
- Tier 4

Trail

- ⋯ Tier 3
- ⋯ Tier 4

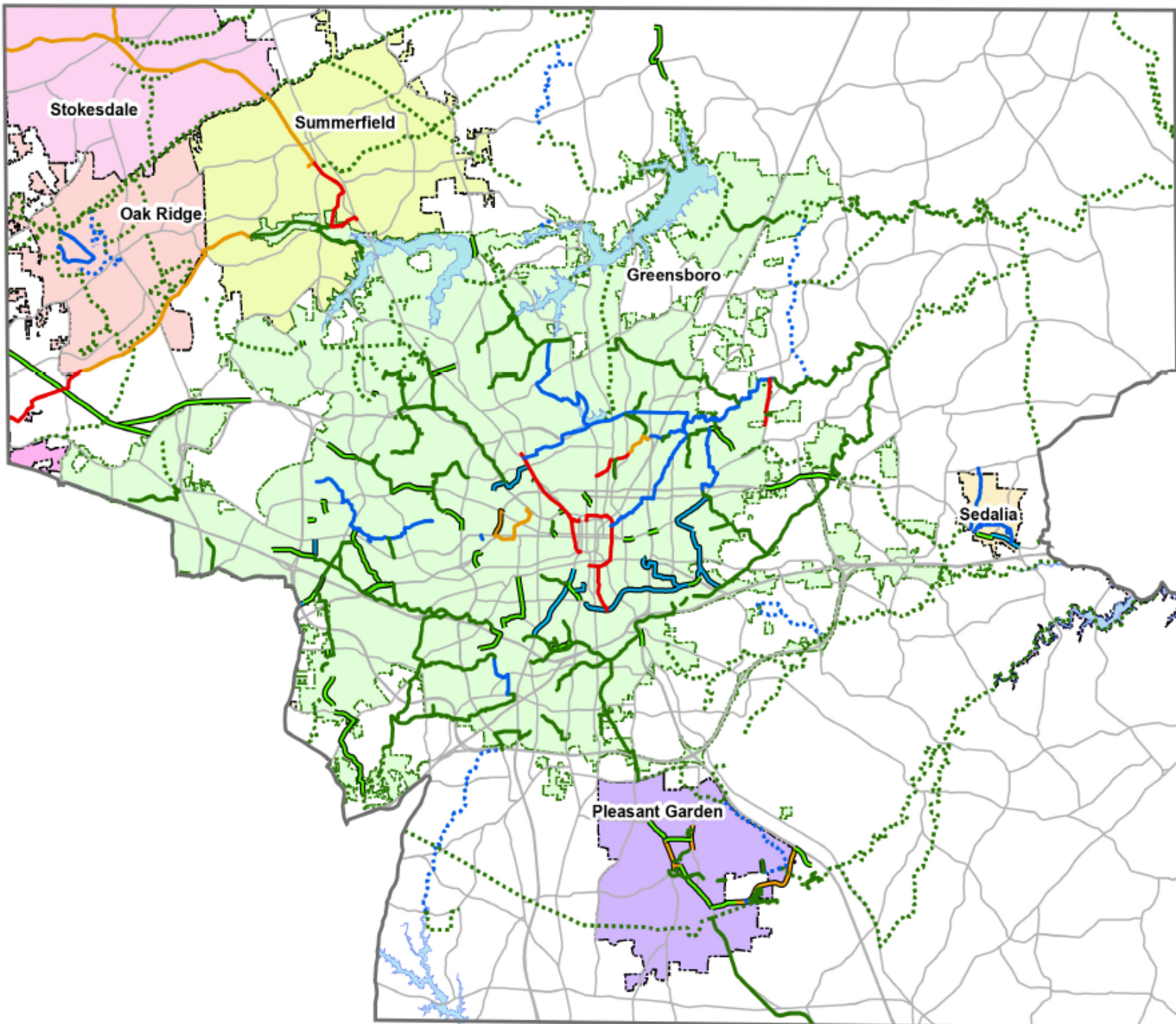
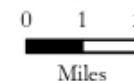
Other (*)

- Tier 2
- Tier 3
- Tier 4

Other (): Connector
& Sidepath*

Tier 1: Short Term

Tier 4: Long Term



Implementation Strategy

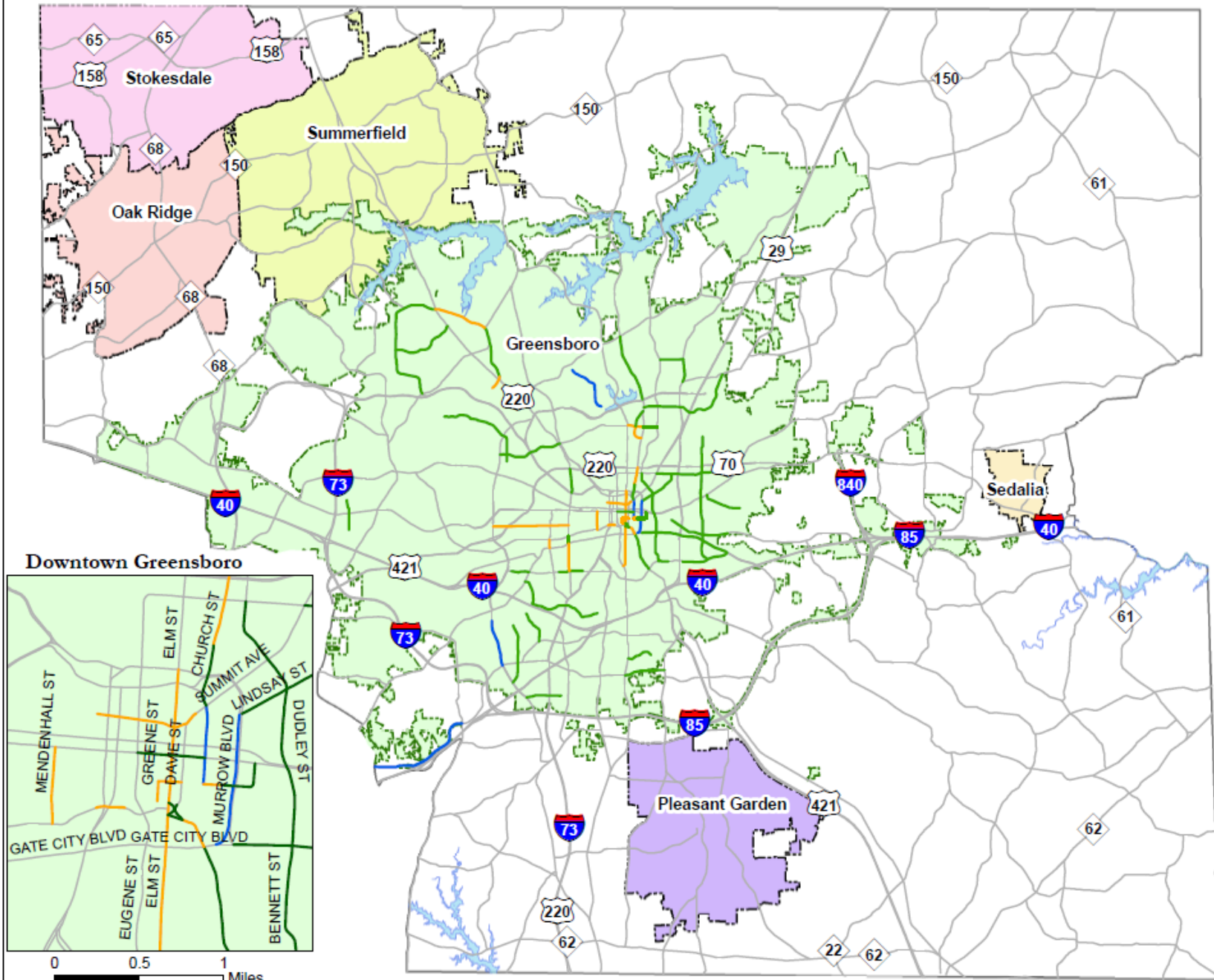


CHAPTER
2 Bicycle

New facilities proposed in 2015 BiPed Plan Update – Short term (5 years)

	Bicycle Lanes	Protected Bicycle Lanes	Sharrows	Bicycle Parking Locations
Centerline miles	42.5	6.3	9.2	100 racks
Bike-lane miles	84.3	12.6	18.4	

Map 2-10
**SHORT
TERM
BICYCLE
RECOMMENDATIONS**



Legend

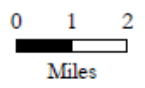
Recommendation

- Protected Lane (*)
- Bicycle Lane
- Sharrows
- Major Street

Lakes



(*): Further design will decide if facility type is buffered bike lane or protected bike lane





CHAPTER
3 Pedestrian

Sidewalk Projects and Status Since 2006
(City of Greensboro only, by governmental agencies;
data updated in November 2014)

Status	Length (miles)
Complete	45.68
Under Construction / Contract Payment	6.74
Design Complete	10.05
Under Design / Working	54.19
On Contract	5.89
TOTAL	122.55

Map 3-7

SIDEWALK
PROJECTS
IMPLEMENTATION
-
CITY OF
GREENSBORO

Legend

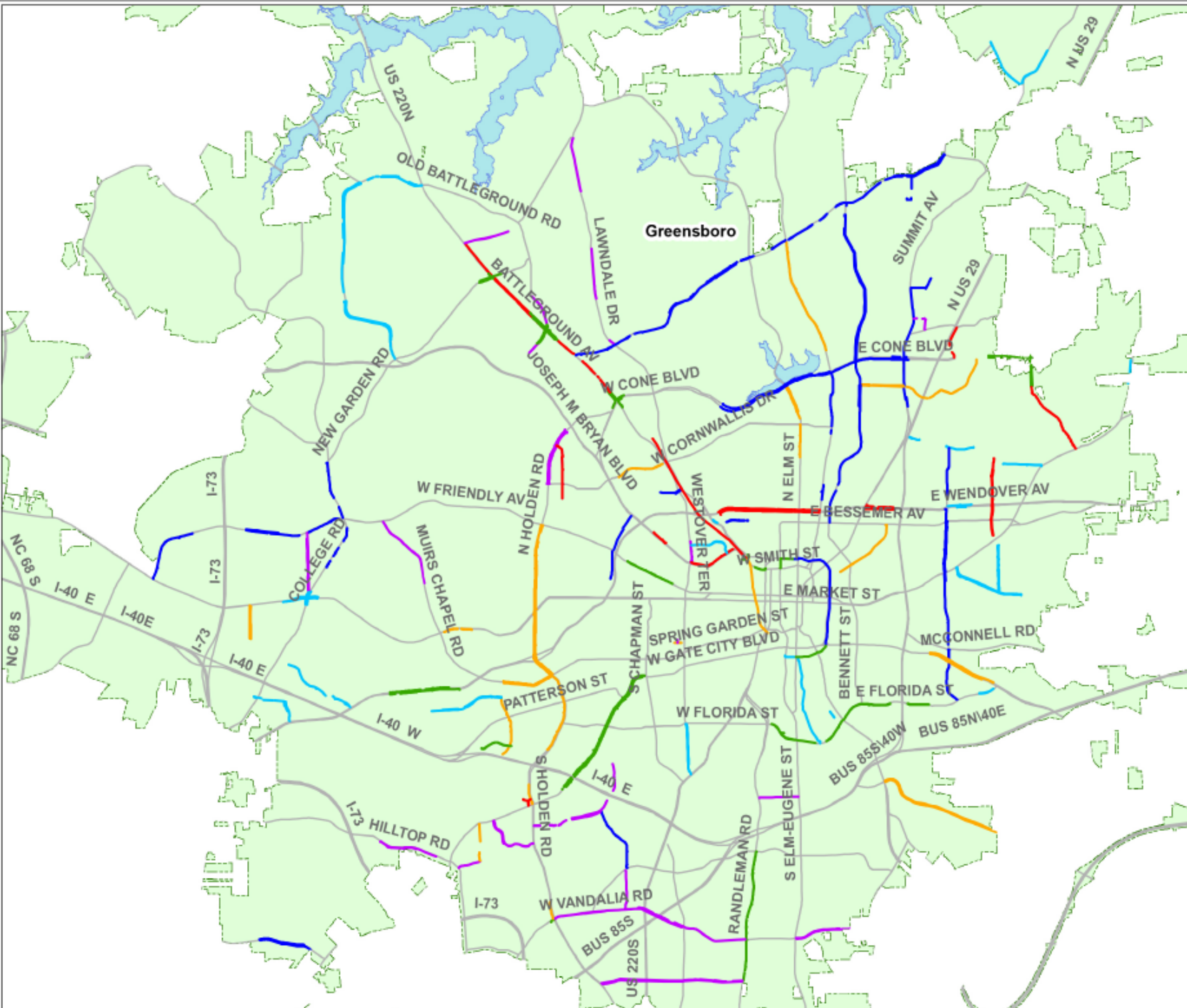
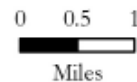
Sidewalk Projects

- 2015
- 2016
- 2017
- 2018
- 2019
- 2020

Major Street

Lakes

City of Greensboro





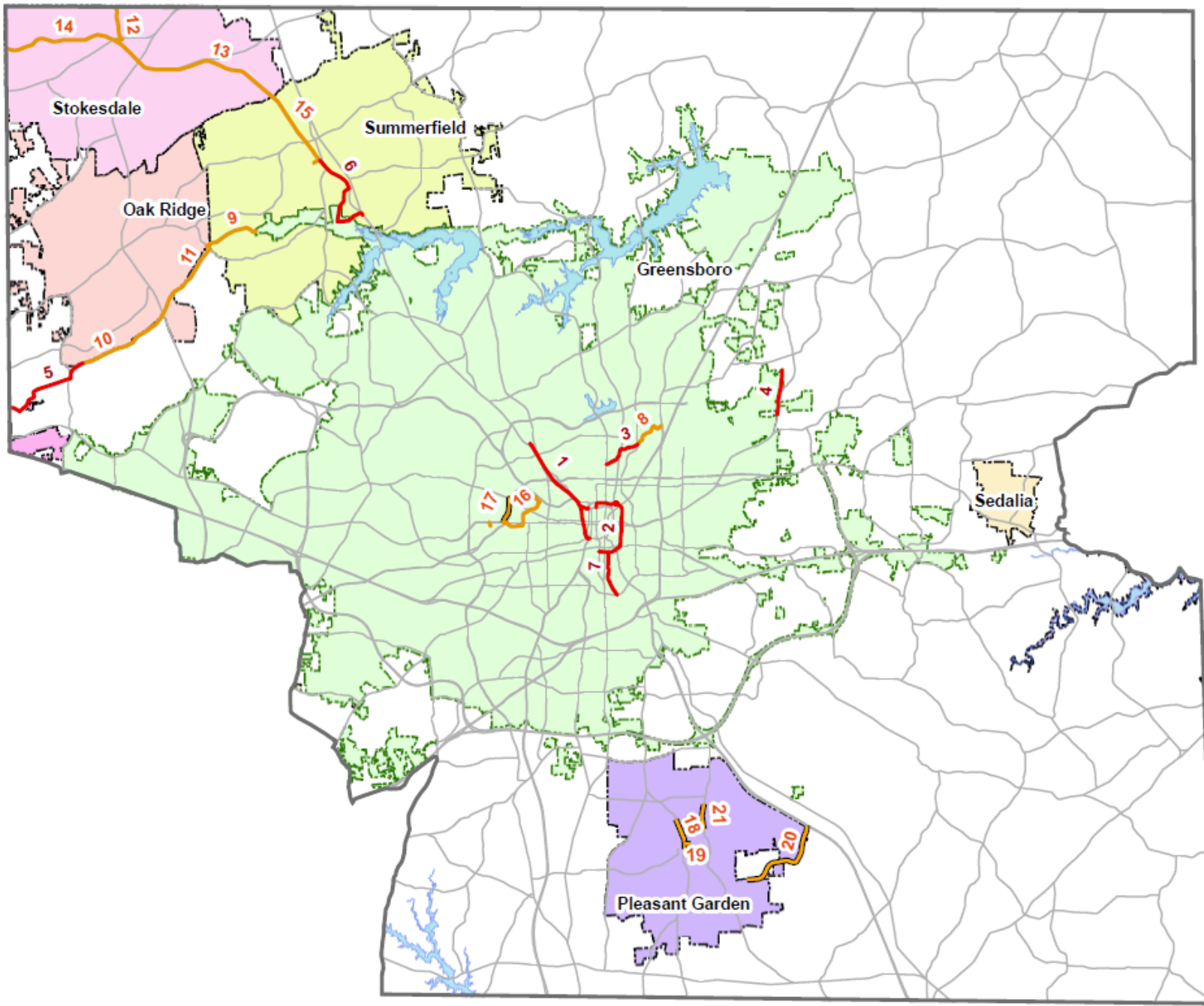
CHAPTER

4 Trails and Greenways

Recommended Greenway and Trail Facilities Inside and Outside the City of Greensboro

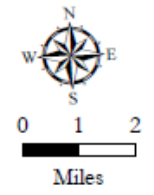
Tier	Inside (miles)	Outside (miles)	Total (miles)	% Inside	% Outside
1	8.4	5.0	13.35	63%	37%
2	3.1	19.7	22.81	14%	86%
3	35.1	36.2	71.38	49%	51%
4	143.3	210.3	353.59	41%	59%
Total	189.9	271.2	461.14	41%	59%

Map 4-8
**GREENWAY
& TRAIL
TOP
PRIORITIES**



- Legend**
- Greenway
 - Tier 1
 - Tier 2
 - Other (*)
 - Tier 2

Other (*): Connector
& Sidepath



Implementation Funding Sources

Local funds:

- \$9 million sidewalk construction bonds from 2008
- Draft 2016-2017 city budget has \$3.5 million additional for resurfacing (more than doubling current budget)
- Potential \$100+ million 2016 transportation bond

Regional/MPO Federal Sources:

- STP-DA, CMAQ, TAP
- \$20 million leveraged from local matching funds

State Prioritization Process:

- Supplements local funding sources
- Bike/ped projects six out of top ten ranked Division 7 projects: sidewalks & greenway projects

Thank You

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