



# Chapter 4: Bicycle Network

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*Bicycle Facility Types*

*Bicycle Network Maps*

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## OVERVIEW

For the purposes of this Plan, the bicycle network refers to on-road and within roadway right-of-way recommendations. Of course, the greenway network (described in Chapter 3) is an important component of a comprehensive bicycle network. The bicycle network types include cycle tracks, buffered bicycle lanes, bicycle lanes, sharrows, paved shoulders, and bicycle boulevards. This chapter describes the bicyclist types and bike facility types, includes bike network maps, and features project cutsheets with maps, photo renderings, and cost estimates.

## BICYCLIST TYPES

It is important to consider bicyclists of all skill levels when creating a city-wide bikeway network. Bicyclist skill and comfort level greatly influences expected speeds and behavior, both in separated bikeways and on shared roadways. Bicycle infrastructure should accommodate as many user types as possible, with decisions for separate or parallel facilities based on providing a comfortable experience for the greatest number of people. A framework for understanding the characteristics, attitudes, and infrastructure preferences of different bicyclists in the US population as a whole is illustrated on the following page.



*A bicyclist on Center Street in front of City Hall.*

## HIGHLY EXPERIENCED (APPROXIMATELY 1% OF POPULATION)

Characterized by bicyclists that will typically ride anywhere regardless of roadway conditions or weather. These bicyclists can ride faster than other user types, prefer direct routes and will typically choose roadway connections -- even if shared with vehicles -- over separate bicycle facilities such as shared use paths.



## ENTHUSED AND CONFIDENT (~ 5-10% OF POPULATION)

This user group encompasses bicyclists who are fairly comfortable riding on all types of bikeways but usually choose low traffic streets or multi-use paths when available. These bicyclists may deviate from a more direct route in favor of a preferred facility type. This group includes all kinds of bicyclists such as commuters, recreationalists, racers and utilitarian bicyclists.



## INTERESTED BUT CONCERNED (~ 60% OF POPULATION)

This user type comprises the bulk of the cycling population and represents bicyclists who typically only ride a bicycle on low traffic streets or multi-use trails under favorable weather conditions. These bicyclists perceive significant barriers to their increased use of cycling, specifically traffic and other safety issues. These people may become "Enthusied & Confident" with encouragement, education and experience.



## NO WAY, NO HOW (~ 30% OF POPULATION)

Persons in this category are not bicyclists, and perceive severe safety issues with riding in traffic. Some people in this group may eventually become more regular cyclists with time and education. A significant portion of these people will not ride a bicycle under any circumstances.



Source: *Four Types of Cyclists*. (2009). Roger Geller, City of Portland Bureau of Transportation. Supported by data collected nationally since 2005.



## METHODOLOGY FOR BICYCLE NETWORK DESIGN

The recommended bicycle network was designed in mind for all types of bicyclists described on the previous page, with a special focus on the “Interested but Concerned” population that makes up the majority of Goldsboro area residents. The network was developed based on Steering Committee input, public input, NCDOT Division input, recommendations from previous studies, existing conditions analysis (including the Live/Work/Play model and LTS analysis), noted destinations, presence of existing local and regional greenway projects, and field analyses.



### The Hub + Spokes Model

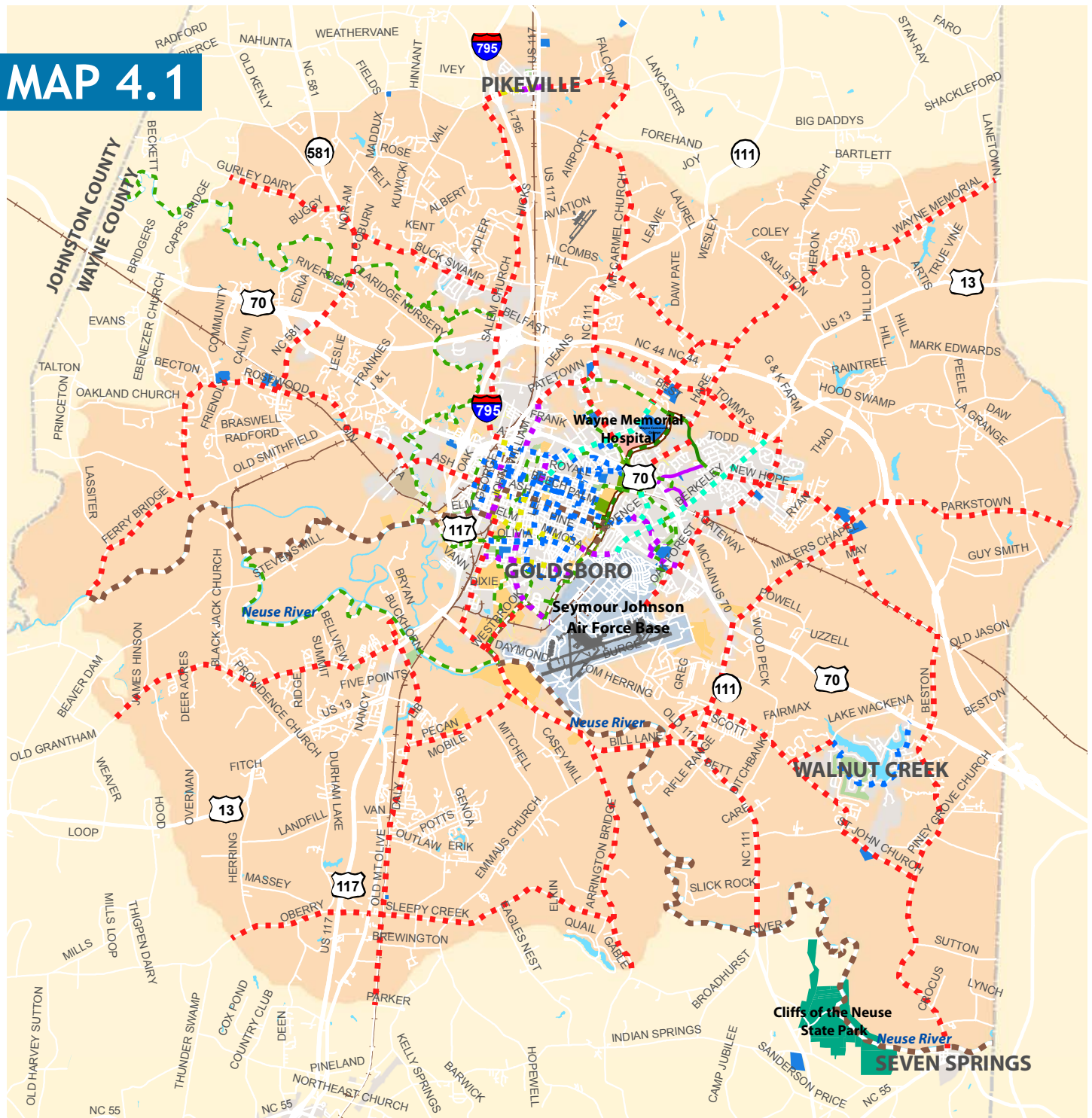
The image at left shows some of the key components for the overall bicycle, pedestrian and trail network based on a model of hubs (destinations) and spokes (walking and bicycling corridors).

The image below *conceptually* shows how this model of hubs and spokes could be applied in Goldsboro, NC, with a network of complete streets (in grey) and greenways (in green) connecting key destinations throughout the city. **Keep in mind the map below only conceptually shows these linkages. See maps on the following pages for actual bicycle network recommendations.**





# MAP 4.1



## Recommended Bike Facilities - MPO



### Legend

#### Recommended Bicycle Facilities

- Bike Lane
- Bike Boulevard
- Paved Shoulder
- Shared Lane Marking (Sharrow)
- Wide Outside Lane
- Shared-Use Path

#### Existing Infrastructure

- Existing Bike Lane
- Existing Shared-Use Path
- Funded Shared-Use Path
- Roadway
- Railroad

#### Lands of Interest

- City Greenway Lands
- Park
- State Park
- Schools
- Hospital
- Other Destinations
- City Easements
- Other City/County Property

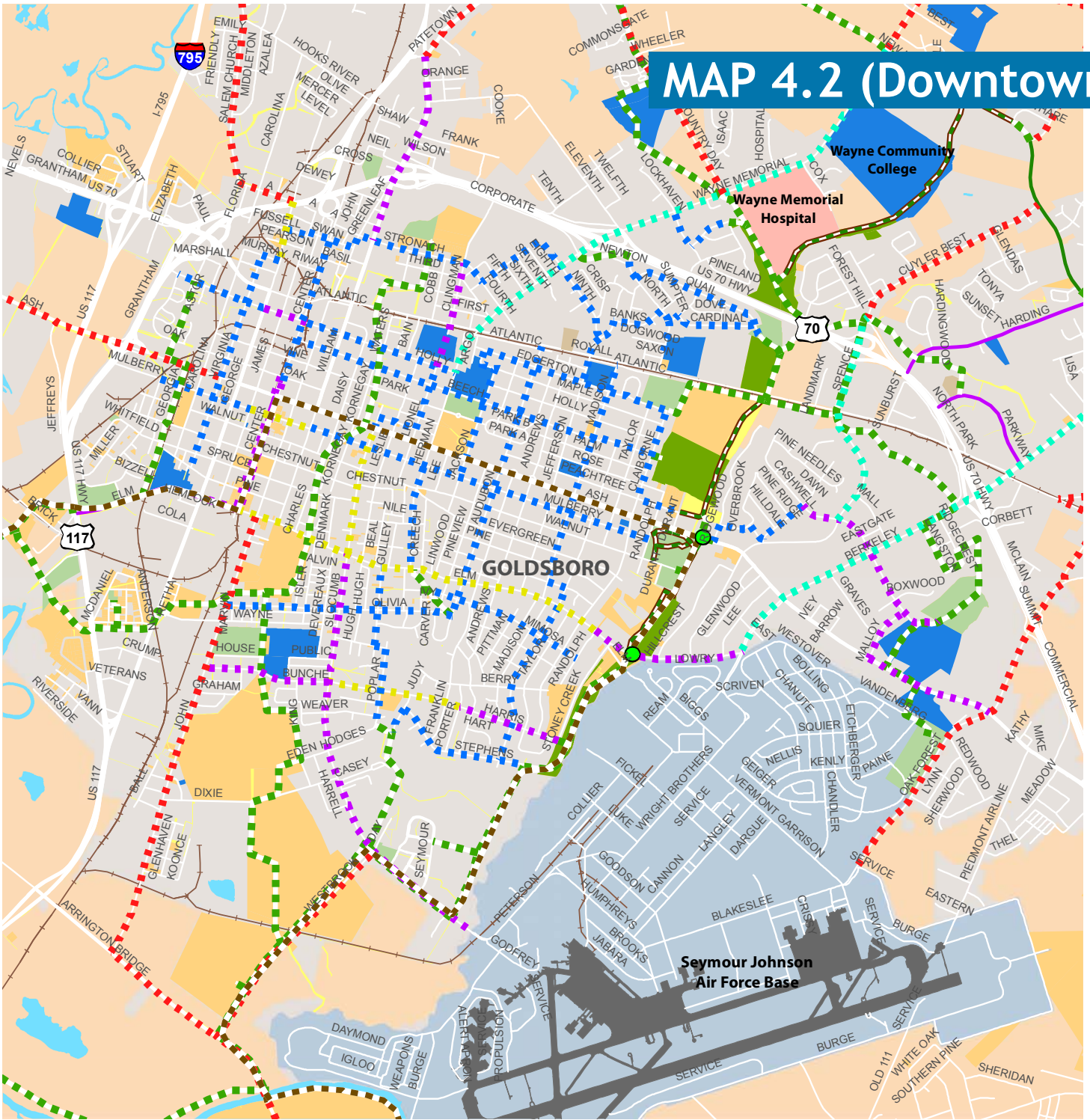
#### Additional Context

- Proposed Mountains-to-Sea Trail Alignment
- Water Bodies
- Seymour Johnson Air Force Base
- City Limits
- MPO Limits
- Wayne County Border





# MAP 4.2 (Downtown)



## Recommended Bike Facilities - Downtown



### Legend

#### Recommended Bicycle Facilities

- HAWK Signal
- Bike Lane
- Bike Boulevard
- Paved Shoulder
- Shared Lane Marking (Sharrow)
- Wide Outside Lane
- Shared-Use Path

#### Existing Infrastructure

- Existing Bike Lane
- Existing Shared-Use Path
- Funded Shared-Use Path
- Roadway
- Railroad

#### Lands of Interest

- City Greenway Lands
- Park
- Schools
- Hospital
- Other Destinations
- City Easements
- Other City/County Property

#### Additional Context

- Proposed Mountains-to-Sea Trail Alignment
- Water Features
- Seymour Johnson AFB
- City Limits
- MPO Limits



## BIKE FACILITY TYPES

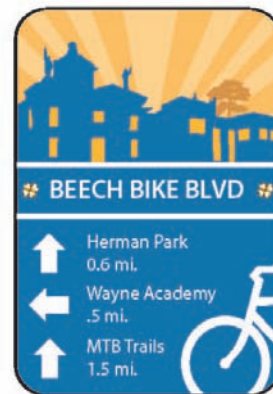
### BICYCLE BOULEVARD (NEIGHBORHOOD GREENWAY)

Bicycle boulevards are streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority. Bicycle Boulevards use signs, pavement markings and speed and volume management measures to discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets. The Level-of-Traffic Stress (LTS) analysis performed in Chapter 2 identifies candidate roadways for bike boulevards.



*Bike boulevard in Portland, Oregon. See Appendix A, page A-27 for bike boulevard design guidelines.*

*Concept of bike boulevard signage for Goldsboro*

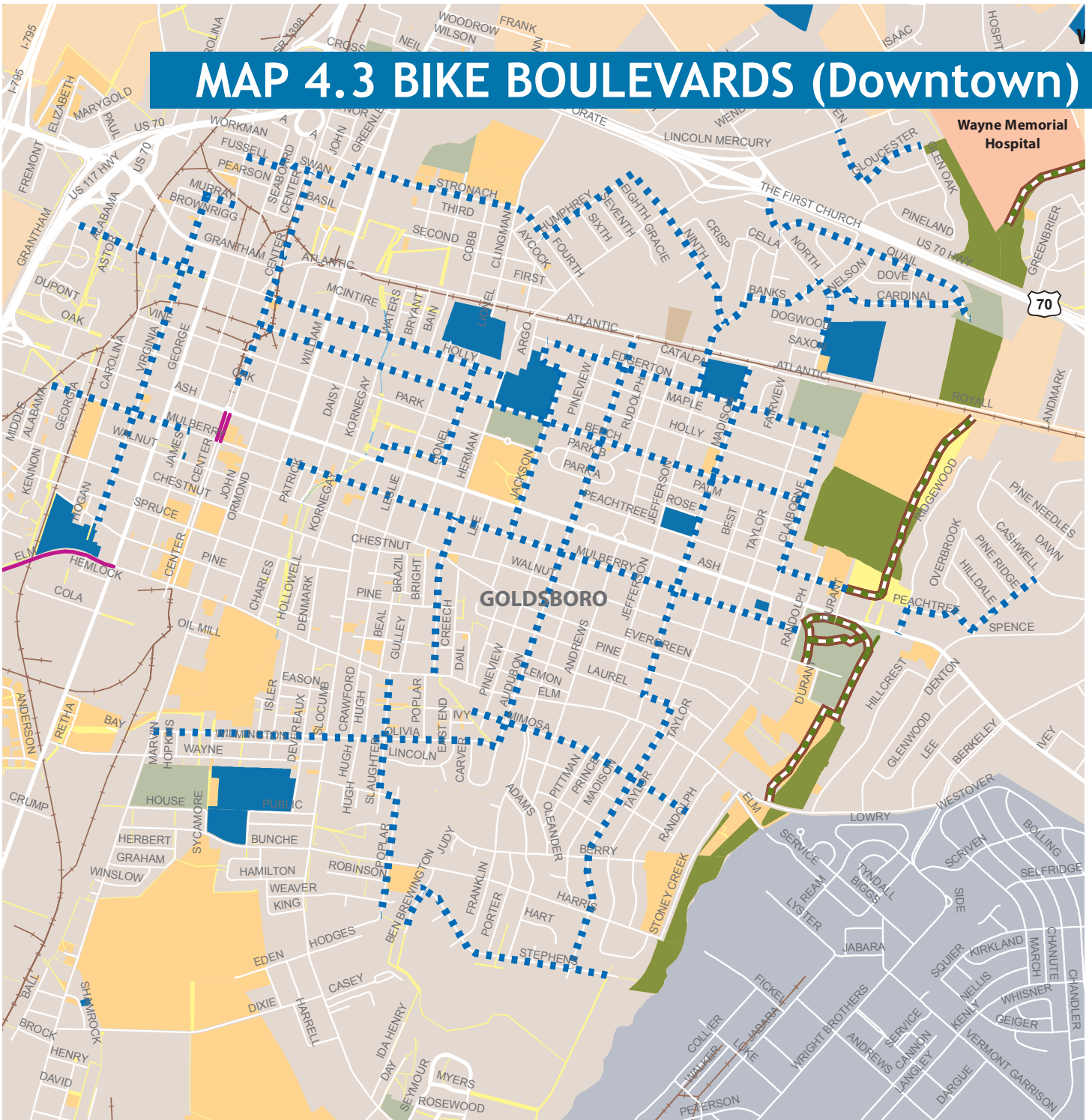


### Recommended Bike Boulevards (25.4 miles)

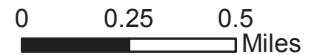
- » Beech Street (from Center Street to Claiborne Street)
- » Mulberry Street (from Downtown to Stoney Creek Park)
- » Madison Street/South Best Street (from Royall Avenue to Stephens St)
- » Olivia Lane/Mimosa Street (from John Street to Stoney Creek Greenway)
- » Holly St. (from Alabama Avenue to Herman Street) (Bike lane on portion)
- » Aububon Street (from Royall Avenue to Olivia Lane)
- » Edgerton Street (from Maple Street to Claiborne Street)
- » Virginia Street (from Pine Street to Murray Street)
- » Slaughter Street /Poplar Street (from Elm Street to Weaver Drive)
- » Ben Brewington Court/Stephens St (from Brewington to Stoney Creek Grwy)
- » Jackson Street/Maple Street (from Mulberry Street to Edgerton Street)
- » Lionel Street/Simmons Street (from Holly Street to Ash Street)
- » Swan/Stronach/Humphrey/Ninth/Jefferson/Banks/Cardinal/Quail
- » Lockhaven Drive/Gloucester Road (from Wayne Memorial to Rec. Grwy)
- » Center Street (Oak Street to Swan Street)
- » Claiborne Street (Edgerton Street to Peachtree Street)

### Comparison of Use in Portland, Oregon

- » Bicycle Boulevard: 3,000 bicycles/day (average)
- » Arterial with Bicycle Lane: 450 bicycles/day (average)



### Recommended Bike Boulevards - Downtown



**Legend**

**Recommended Bicycle Facilities**

- Bike Boulevard

**Existing Infrastructure**

- Existing Bike Lane
- Existing Shared-Use Path
- Funded Shared-Use Path
- Roadway
- Railroad

**Lands of Interest**

- City Greenway Lands
- Park
- Schools
- Hospital
- Other Destinations
- City Easements
- Other City/County Property

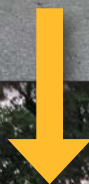
**Additional Context**

- Seymour Johnson AFB
- City Limits
- MPO Limits





## GOLDSBORO PHOTO VISUALIZATION: BEECH AND JACKSON BICYCLE BOULEVARD



*A mini-circle at Beech and Jackson is one example of a bike boulevard treatment that serves to calm traffic. In addition, high visibility marked crosswalks would improve the intersection for pedestrians as well. A raised crosswalk between the front of Goldsboro High School and Herman Park is another bike boulevard treatment.*





## GOLDSBORO PHOTO VISUALIZATION: OLIVIA BICYCLE BOULEVARD



*A significant number of bicyclists and pedestrians can be found along Olivia Lane. In addition, there was a cluster of bicycle and pedestrian crashes along this long, straight street. Bike boulevard treatments like chicanes and landscaping shown above will help to calm traffic, making the road safer for all users.*

## BICYCLE LANES

A bicycle lane is defined as a portion of the roadway that has been designated by striping, signage, and pavement markings for the preferential or exclusive use of bicyclists. Buffered bike lanes are conventional bicycle lanes paired with a designated buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane. The buffer allows for a safer and more comfortable ride for more types of bicyclists.



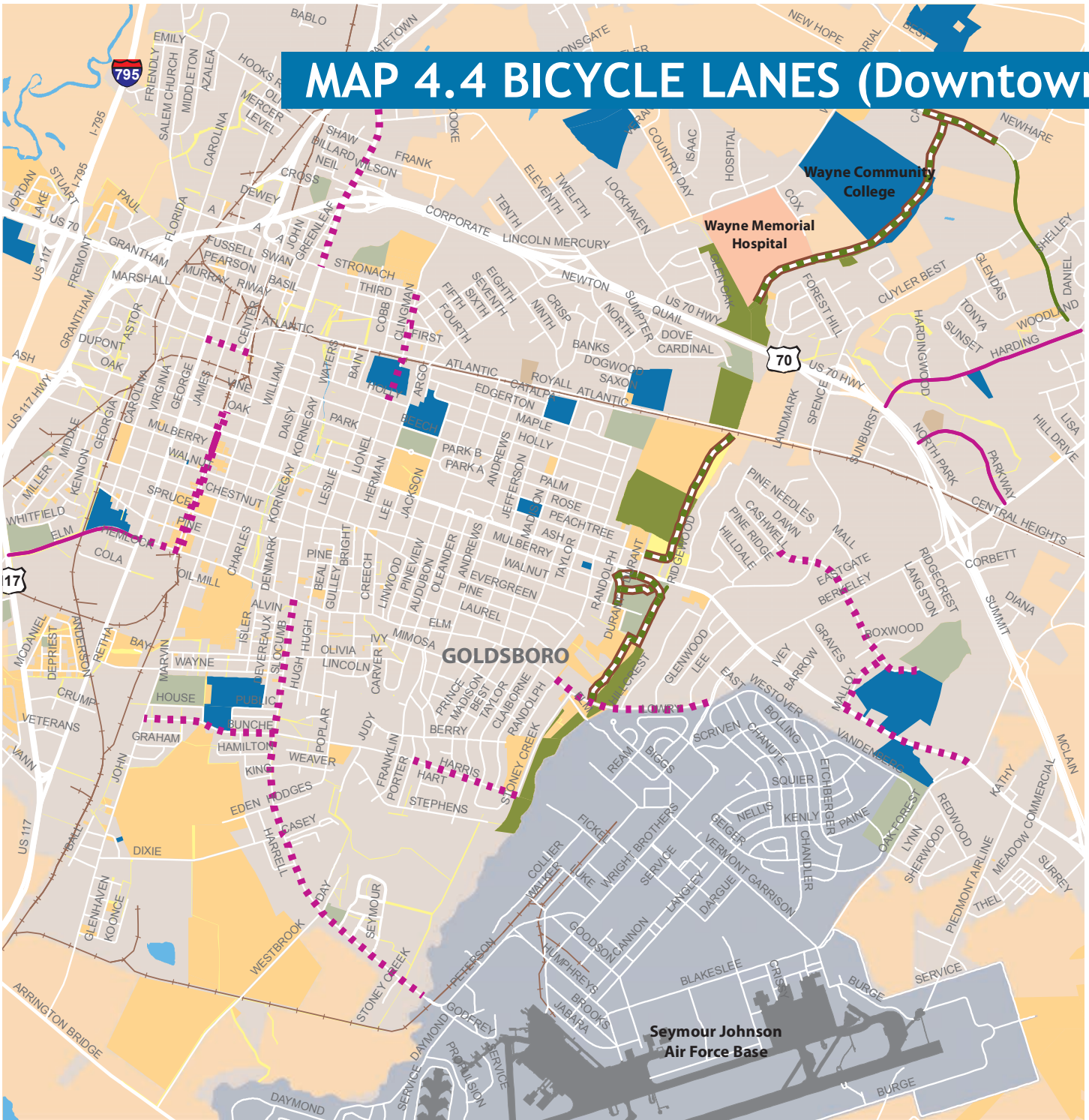
*Bike lane on Harding Drive in Goldsboro. See Appendix A, page A-30 for bike lane design guidelines.*

### **Recommended Bicycle Lanes (11.4 miles-Goldsboro)**

- » Elm Street (with resurfacing)
- » Harris Street sections (restripe)
- » Slocumb Street (with resurfacing; consider bike lane one side and sharrow other side from Elm to Ash)
- » Center Street sections (Downtown streetscape and stripe)
- » Cashwell Drive
- » Clingman/Lionel (stripe)
- » Holly Street sections (stripe)
- » Malloy Street
- » Big Daddy's Road
- » William Street
- » Consideration: Ash Street (with road diet; Complete Street retrofit study needed)

### **Bicycle Lane Safety**

- » 36% crash reduction factor (FHWA) when adding bike lanes to a roadway
- » Road Diet: When modified from four travel lanes to two travel lanes with a two-way left-turn lane, roadways have experienced a 29 percent reduction in all roadway crashes ([http://safety.fhwa.dot.gov/provencountermeasures/fhwa\\_sa\\_12\\_013.htm](http://safety.fhwa.dot.gov/provencountermeasures/fhwa_sa_12_013.htm)).



# MAP 4.4 BICYCLE LANES (Downtown)

## Recommended Bike Lanes - Downtown



### Legend

Recommended Bicycle Facilities

■ Bike Lane

Existing Infrastructure

- Existing Bike Lane
- Existing Shared-Use Path
- Funded Shared-Use Path
- Roadway
- Railroad

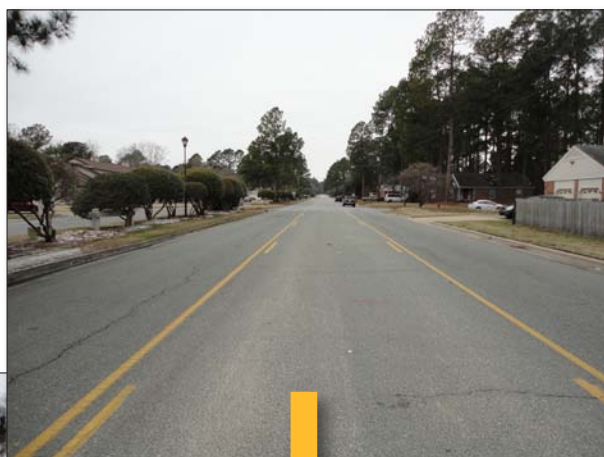
Lands of Interest

- City Greenway Lands
- Park
- Schools
- Hospital
- Other Destinations
- City Easements
- Other City/County Property

Additional Context

- Seymour Johnson AFB
- City Limits
- MPO Limits





## GOLDSBORO PHOTO VISUALIZATION: HARRIS BIKE LANES



*Harris Street, near Claiborne Street. With adequate roadway width, bicycle lanes can be added through a simple restriping that includes a narrowing of travel lanes and the center turn lane. The addition of a center median island, with turn lane pockets, would take it a step further to calm and beautify the corridor.*



## GOLDSBORO PHOTO VISUALIZATION: BUNCHE BIKE LANES AT DILLARD MIDDLE SCHOOL



*Bunche Street is a wide two-lane road running east-west between Slobumb and John. Bike lanes can be added here in front of Dillard Middle School by simply adding paint. The bike lane also provides a buffer between the sidewalk and the road.*

## CYCLE TRACKS

A cycle track is an exclusive bicycle facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. Cycle tracks can be one-way (on each side of the road) or two-way (on one side of the road).



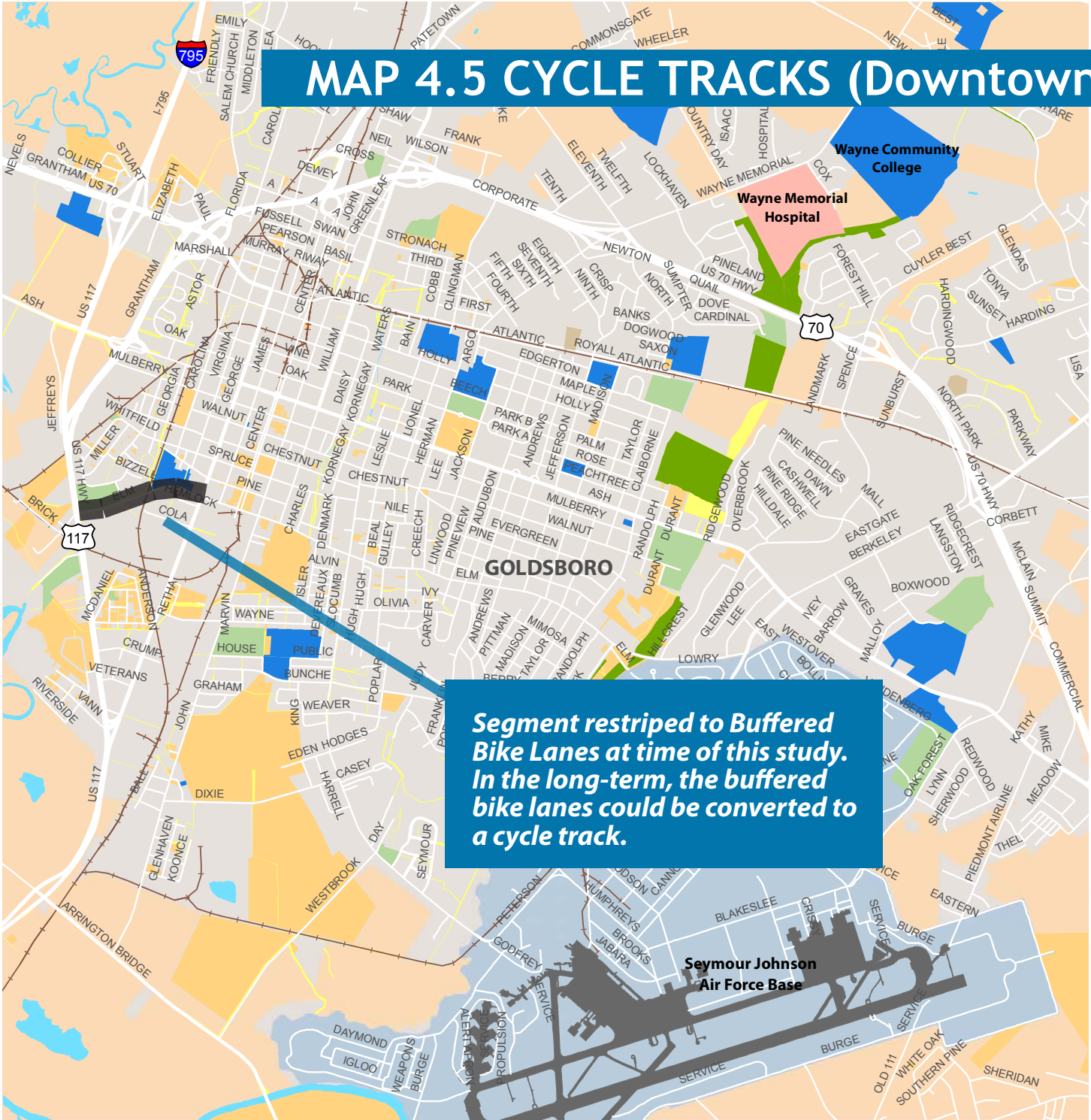
*Example of a cycle track. See Appendix A, page A-33 for cycle track design guidelines.*

### **Recommended Cycle Track (0 miles)**

- » Long Term Consideration: Elm Street (from US 117 to George) was restriped for buffered bike lanes during this project; In long term, could consider conversion to cycle track.

### **Cycle Track Facts**

- » Pre-2011, there were 80 cycle tracks in the United States; In July 2014, this number is approaching 150.
- » 84 percent of NYC bike share riders feel safest when riding in a physically separated bike lane. Transportation Alternatives, 2013
- » After buffered green lanes were installed on Philadelphia's Spruce and Pine streets, bike traffic increased 95% and the number of bicyclists riding on the sidewalks decreased by up to 75%. Bicycle Coalition of Greater Philadelphia, 2010



# MAP 4.5 CYCLE TRACKS (Downtown)

**Segment restriped to Buffered Bike Lanes at time of this study. In the long-term, the buffered bike lanes could be converted to a cycle track.**

Overview Map - Downtown



Long-term consideration to convert buffered bike lanes to cycle track

**Legend**

- City Greenway Lands
- Park
- State Park
- Schools
- Hospital
- Other Destinations
- City Easements
- Other City/County Property

Existing Infrastructure

- Roadway
- Railroad

Additional Context

- Water Features
- Seymour Johnson Air Force Base
- City Limits
- MPO Limits
- Wayne County Border



## SHARROWS

Shared lane markings (also known as “sharrows”) have become more popular as a pavement marking treatment to help align cyclists properly within more complex, urban landscapes that may feature on-street parking, a variety of lane widths, and other factors.



*Sharrows in Raleigh, NC. See Appendix A, page A-26 for sharrows design guidelines.*

### **Recommended Sharrows (1.2 miles - Goldsboro)**

- » Mulberry Street (James Street to William Street)
- » Harris Street (Slocumb Street to Porter Street)
- » George Street (Murray Street to A Street)
- » Elm Street (Center Street to Randolph Street)
- » Slocumb Street (Elm Street to Ash Street)

### **Sharrows Study**

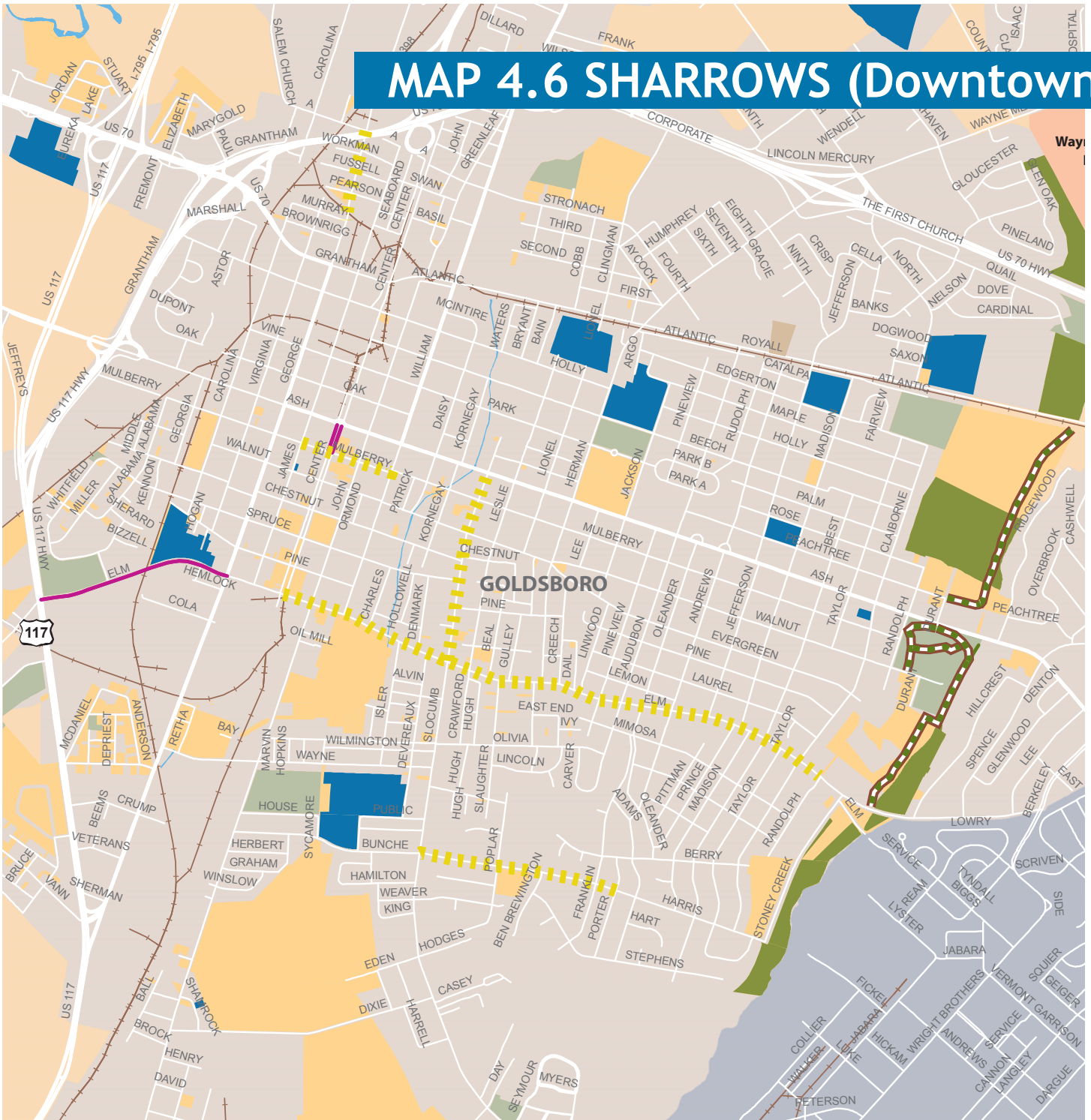
In a 2010 FHWA study, sharrows were shown to have a benefit in Chapel Hill, NC, Seattle, WA, and Cambridge, MA. Sharrows decreased sidewalk riding, increased proper positioning in roadway for bicyclists, and increased operating space for bicyclists. Sharrows may also increase safety by providing a visual cue to motorists. Sharrows are particularly beneficial along roadways with on-street parking. Sharrows help to position the bicyclists outside the open car door zone (which is the most common cause of bicycle crashes) .

<https://www.fhwa.dot.gov/publications/research/safety/pedbike/10041/10041.pdf>

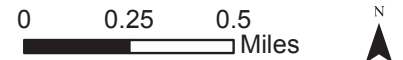




# MAP 4.6 SHARROWS (Downtown)



## Recommended Sharrows - Downtown



### Legend

#### Recommended Bicycle Facilities

Shared Lane Marking (Sharrow)

#### Existing Infrastructure

Existing Bike Lane

Roadway

Railroad

#### Lands of Interest

Park

Schools

Other City/County Property

#### Additional Context

Water Features

Seymour Johnson AFB

City Limits

MPO Limits



## PAVED SHOULDERS

In many rural areas, 4-6-foot-wide paved shoulders are a typical treatment for accommodating bicyclists. Paved shoulders allow bicyclists to travel on a paved surface adjacent to through traffic, if desired. The list below includes paved shoulder recommendations in Goldsboro and Wayne County.



*Paved Shoulder in Durham, NC. See Appendix A, page A-29 for paved shoulder design guidelines.*

### Recommended Paved Shoulders (132 miles - MPO)

- » Patetown Road
- » Hare Road
- » Tommys Road
- » Salem Church Road
- » Ash Road (west of Downtown)
- » Old Smithfield Road
- » Old Mt Olive Road
- » Arrington Bridge Road
- » Oak Forest Drive
- » NC 111
- » New Hope Road
- » Agave Road
- » Cuyler Best Road
- » Central Heights Rd.
- » Westbrook Road
- » Wayne Memorial Dr.
- » Oberry Road
- » Dollard Town Road
- » Spring Bank Road
- » Rosewood Road
- » Ferry Bridge Road
- » Pikeville-Princeton Road
- » Gurley Dairy Road
- » Buck Swamp Road
- » NC 581
- » Stoney Creek Ch. Ro.
- » Big Daddy's Road
- » Airport Road
- » Mt. Carmel Ch. Rd
- » Parkstown Road
- » Bill Lane Blvd
- » Sleepy Creek Road
- » Old Grantham Road
- » Peacan Road
- » John Street
- » Bryan Blvd
- » Country Day Road

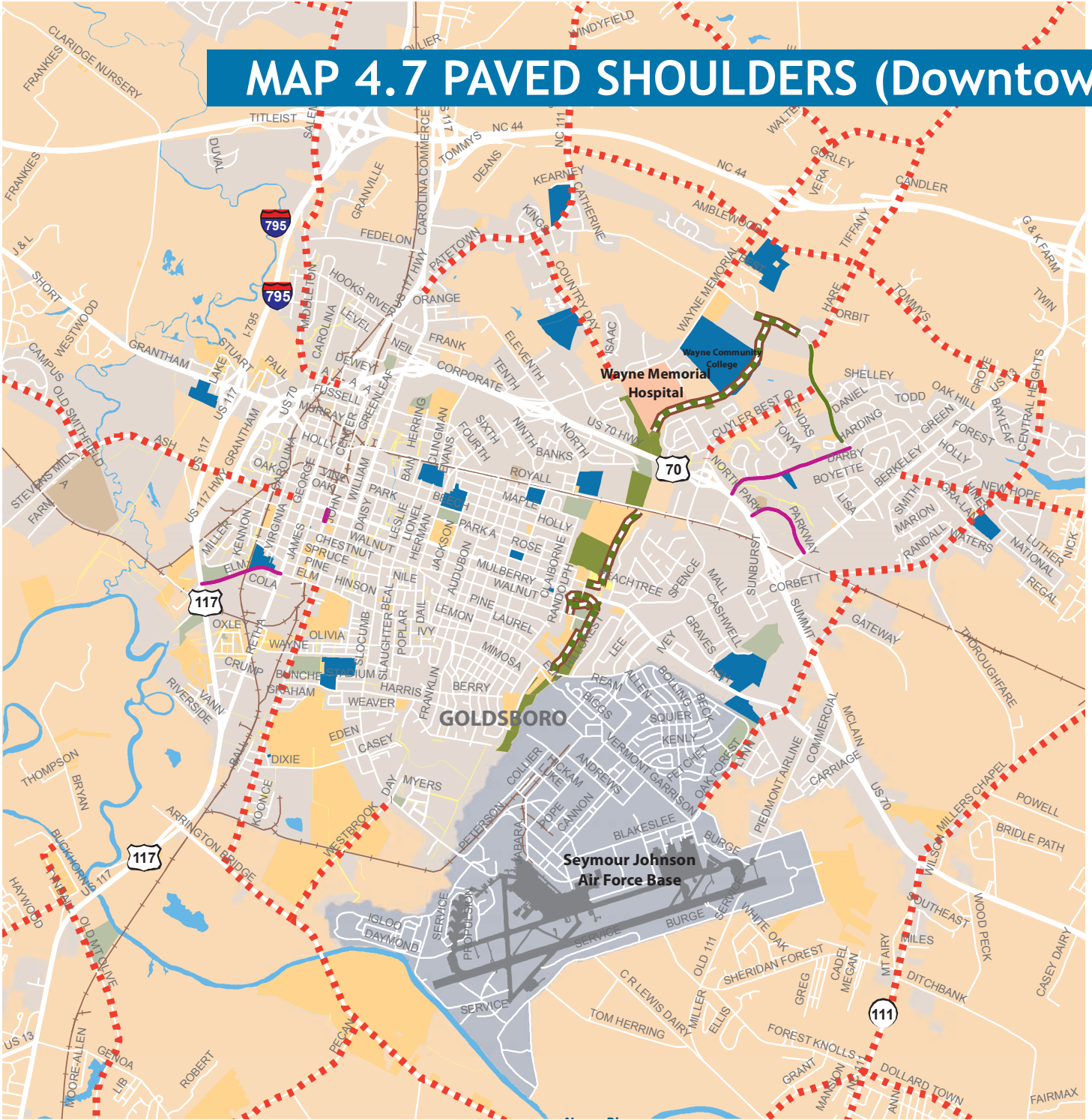
### Paved Shoulder Safety Benefits

According to the 2008 FHWA Desktop Reference for Crash Reduction Factors, paved shoulders also provide a benefit to pedestrians. Providing a paved shoulder of at least four feet to avoid walking in the roadway resulted in a 71% crash reduction factor.

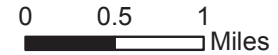
See the "22 reasons for paved shoulder" - <http://www.bicyclinglife.com/EffectiveAdvocacy/22reasons.htm>



# MAP 4.7 PAVED SHOULDERS (Downtown)



## Recommended Paved Shoulders - Downtown



### Legend

#### Recommended Bicycle Facilities

- Paved Shoulder

#### Existing Infrastructure

- Existing Bike Lane
- Existing Shared-Use Path
- Funded Shared-Use Path
- Roadway
- Railroad

#### Lands of Interest

- City Greenway Lands
- Park
- Schools
- Hospital
- Other Destinations
- City Easements
- Other City/County Property

#### Additional Context

- Water Features
- Seymour Johnson AFB
- City Limits
- MPO Limits



## WIDE OUTSIDE LANES

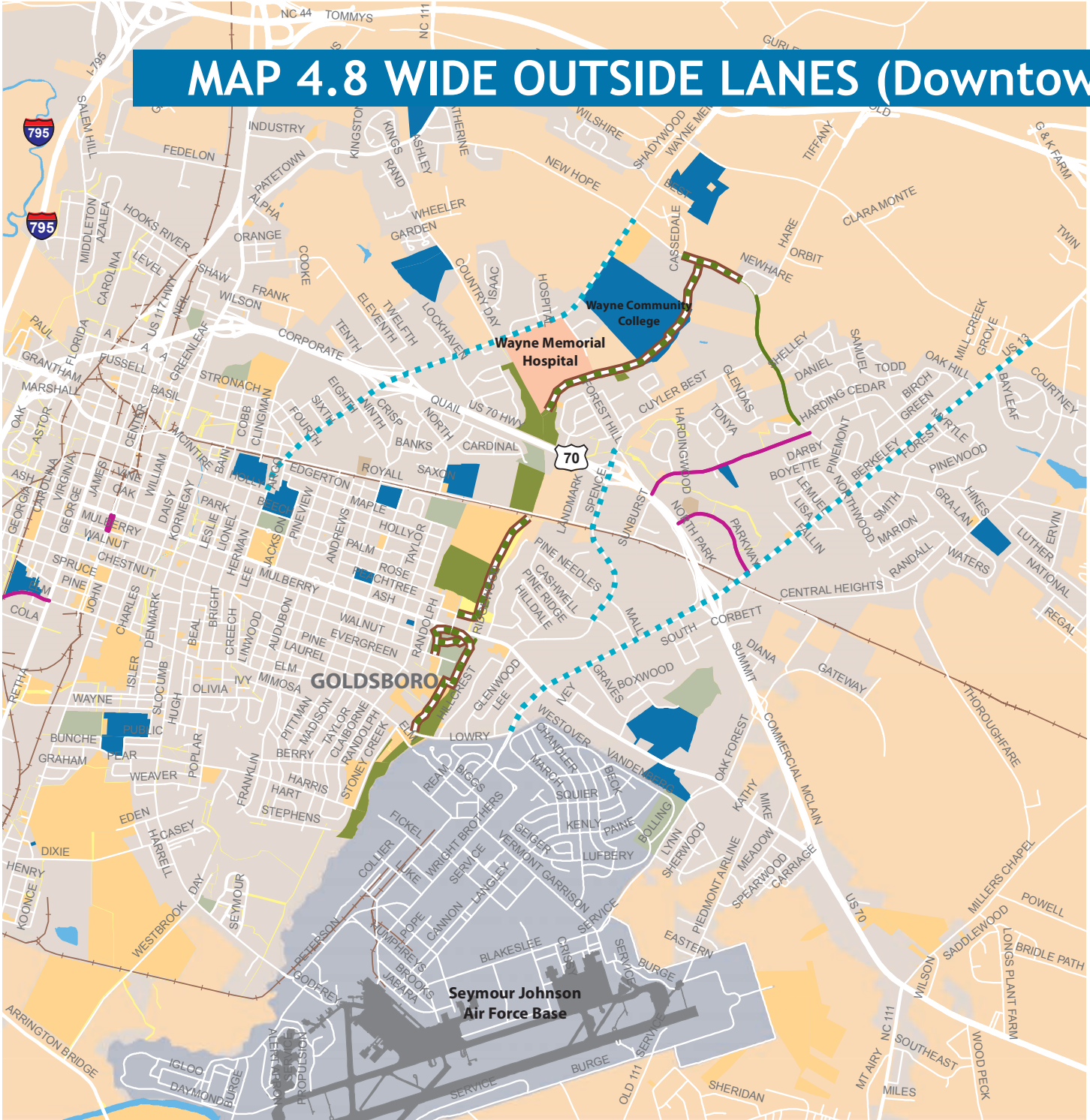
Wide outside lanes are the least favorable bicycle facility type for the majority of bicyclists and do not substitute for a more formally separated facility such as those mentioned previously in this chapter. These are recommended typically along busier roadways where bike lanes are not feasible and ridership other than “Highly Experienced” Bicyclists is not expected. They are meant to provide extra space for bicyclists allowing for motor vehicles to pass in the same lane. These can be implemented most easily with a scheduled roadway resurfacing project. Typically, wide outside lanes are 14 feet wide. When the speed limit is 35mph or below, sharrow markings can be considered as well.



*Wide lane in Durham, NC. Appendix A: Design Guidelines does not feature a section on Wide Outside Lanes.*

### ***Recommended Wide Outside Lanes (7.4 miles in Goldsboro)***

- » Berkeley Boulevard (from Elm Street to Tommy’s Road)
- » Spence Street (from Cashwell Drive to US 70)
- » Wayne Memorial Drive (Holly Street to New Hope Road)



# MAP 4.8 WIDE OUTSIDE LANES (Downtown)

Recommended Wide Outside Lanes - Downtown



**Legend**

Recommended Bicycle Facilities

- Wide Outside Lane

Existing Infrastructure

- Existing Bike Lane
- Existing Shared-Use Path
- Funded Shared-Use Path
- Roadway
- Railroad

Lands of Interest

- City Greenway Lands
- Park
- Schools
- Hospital
- Other Destinations
- City Easements
- Other City/County Property

Additional Context

- Seymour Johnson AFB
- City Limits
- MPO Limits



## PIKEVILLE BICYCLE RECOMMENDATIONS

The Town of Pikeville is compact, allowing for reasonable bicycle and pedestrian travel to destinations such as the Downtown and Dees Memorial Park. Residential roadways are generally calm allowing for bicycle travel (although some traffic calming could be considered). Main Street offers opportunities for a bike lane/sharrow combination leading into town. Outside the town limits, paved shoulders are the preferred bicycle facility treatment.



*Main Street, near Fort Street is wide enough to stripe bicycle lanes today. With ~34 feet of pavement, 5' bike lanes could be striped leaving adequate room for motor vehicles.*

### **Recommended Facilities**

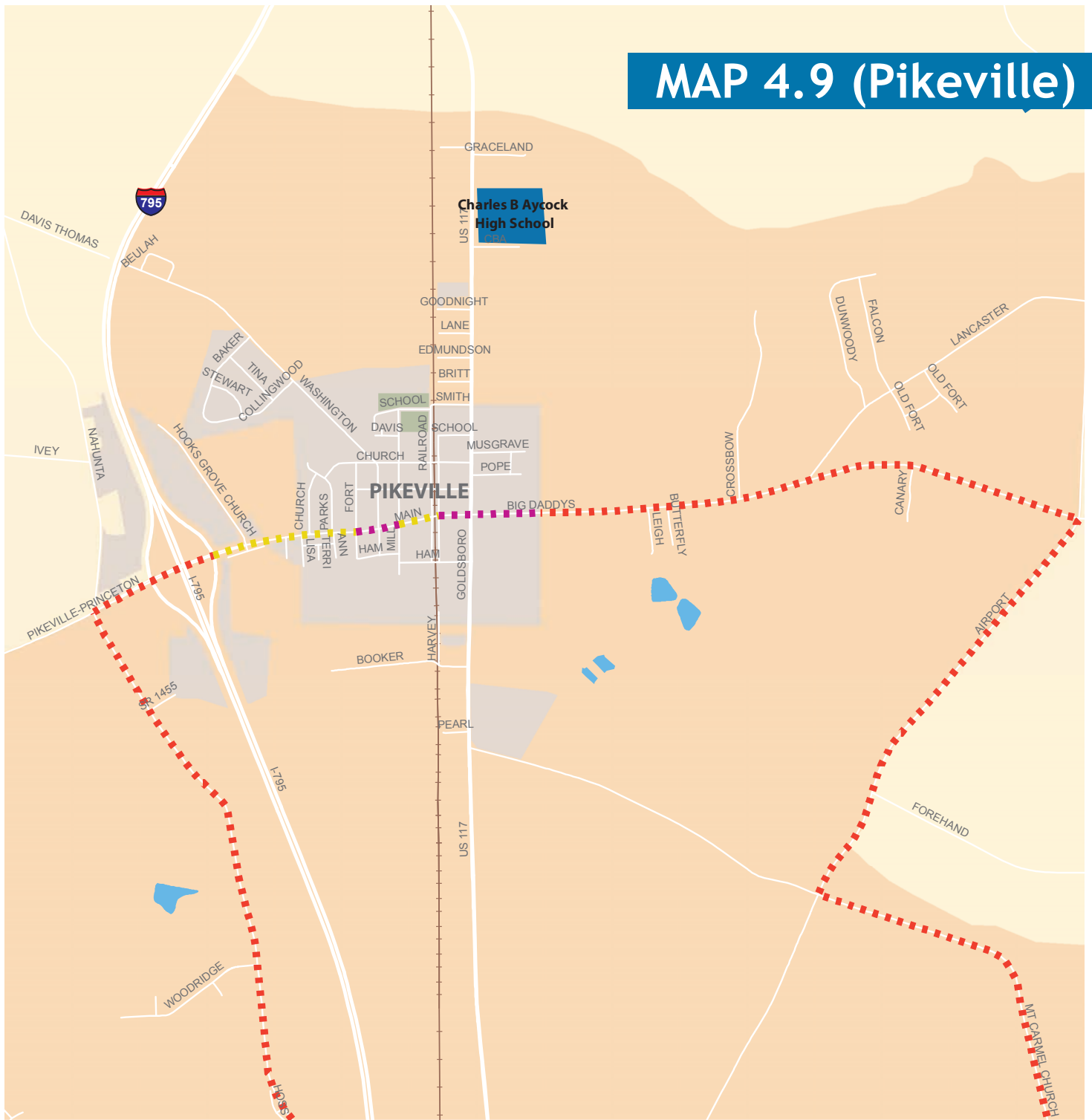
- » Main Street (Bike Lane/Sharrow) from I-795 to eastern town limit
- » Big Daddys (Paved Shoulder) from eastern town limit to Airport)
- » Airport (Paved Shoulder) from Big Daddys to Mt Carmel Church)
- » Pikeville-Princeton (Paved Shoulder) from I-795 to Nahunta)

### **Paved Shoulder Safety Benefits**

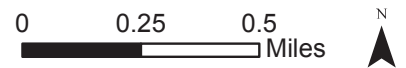
According to the 2008 FHWA Desktop Reference for Crash Reduction Factors, paved shoulders also provide a benefit to pedestrians. Providing a paved shoulder of at least four feet to avoid walking in the roadway resulted in a 71% crash reduction factor.



# MAP 4.9 (Pikeville)



## Recommended Bike Facilities - Pikeville



### Legend

Recommended Bicycle Facilities	Existing Infrastructure	Lands of Interest	Additional Context
Bike Lane	Roadway	Park	Water Features
Paved Shoulder	Railroad	Schools	City Limits
Shared Lane Marking (Sharrow)			MPO Limits



## WALNUT CREEK BICYCLE RECOMMENDATIONS

Walnut Creek and the surrounding area is an ideal community for recreational bicycling. While separated from most destinations and land uses, the area is scenic featuring roadways with relatively low traffic volumes. Rural roadways leading to and away from Walnut Creek would benefit from paved shoulders. The main roadways through Walnut Creek would benefit from the basic bike boulevard treatments of signage but could also be enhanced with landscaping, chicanes, and mini-circles.



*Lake Wackena Road is a pleasant rural roadway for recreational bicycling. Bicyclists would benefit from the addition of paved shoulder.*

### **Recommended Facilities: Bike Boulevards/Signed Routes**

- » Lakeshore Drive/Mill Road (from Lake Wackena Road to Walnut Creek Dr.)
- » Walnut Creek Drive (from Mill Road to US 70)

### **Recommended Facilities: Paved Shoulders**

- » Lake Wackena Road (from Dollard Town Road to Lakeshore Drive)
- » Dollard Town Road (from Lake Wackena Road to St John Church Road)
- » St John Church Road (from Dollard Town Road to Piney Grove Ch. Road)
- » Piney Grove Church Road (from Seven Springs Town Limit to Beston Rd.)
- » Beston Road (from Piney Grove Church Road to New Hope Road)

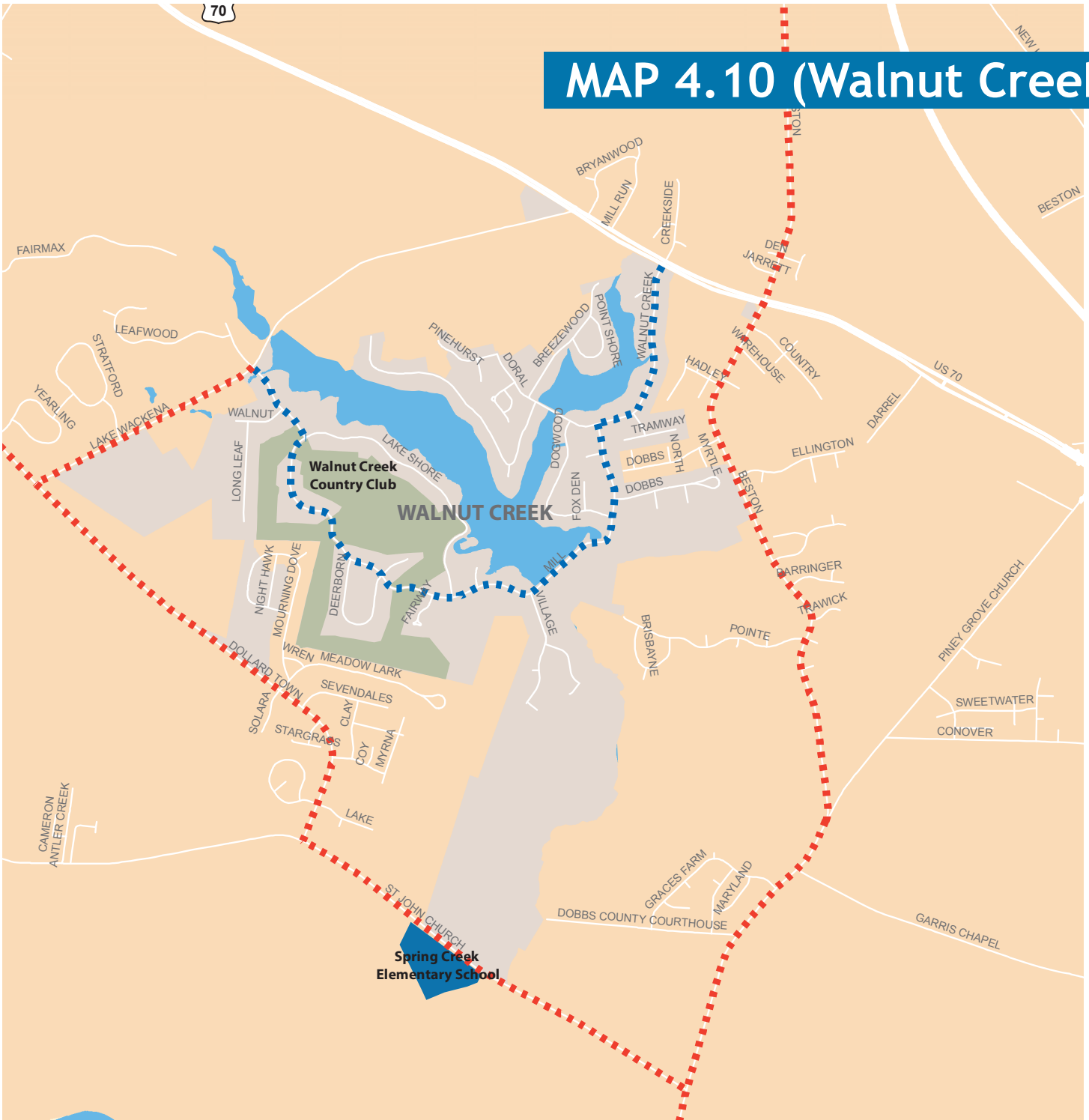
### **Paved Shoulder Safety Benefits**

According to the 2008 FHWA Desktop Reference for Crash Reduction Factors, paved shoulders also provide a benefit to pedestrians. Providing a paved shoulder of at least four feet to avoid walking in the roadway resulted in a 71% crash reduction factor.

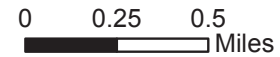




# MAP 4.10 (Walnut Creek)



## Recommended Bike Facilities - Walnut Creek



### Legend

#### Recommended Bicycle Facilities

- Bike Boulevard
- Paved Shoulder

#### Existing Infrastructure

- Roadway
- Railroad

#### Lands of Interest

- Park
- Schools

#### Additional Context

- Water Features
- City Limits
- MPO Limits





## BICYCLE NETWORK BY SEGMENT

Roadway	From	To	Facility Type*	Implementation Method	Length (Feet)
Holly St	Railroad	Herman St	BB	Marking, Signage, Traffic Calming	3,946
Beech St	Center St	Claiborne St	BB	Marking, Signage, Traffic Calming	9,483
Mulberry St	William St	Randolph St	BB	Marking, Signage, Traffic Calming	8,973
Audubon Ave	Olivia Lane	Atlantic Ave	BB	Marking, Signage, Traffic Calming	7,172
Holly St	Oak St	George St	BB	Marking, Signage, Traffic Calming	2,340
Holly St	George St	Railroad	BL	Restriping	1,143
Olivia Lane	John St	Audubon Ave	BB	Marking, Signage, Traffic Calming	5,700
Madison Ave	Laurel St	Atlantic Ave	BB	Marking, Signage, Traffic Calming	6,237
Best St	Stephens St	Laurel St	BB	Marking, Signage, Traffic Calming	4,791
Harris St	Porter St	Stoney Creek Pkwy	BL	Reallocate	2,643
Harris St	Slocumb St	Porter St	SLM	Marking	3,355
Harris St	John St	Slocumb St	BL	Reallocate	3,182
Slocumb St	Seymour Johnson Air Force Base	Elm St	BL	Roadway widening	10,962
Slocumb St	Elm St	Ash St	SLM	Marking	3,234
Lionel St	Simmons St	Holly St	BB	Marking, Signage, Traffic Calming	1,662
Clingman St	Holly St	Stronach Ave	BL	Restriping	2,704
Center St	Spruce St	Mulberry St	BL	Reallocate	1,510
Center St	Spruce St	Mulberry St	BL	Reallocate	1,511
Center St	Elm St	Spruce St	BL	Restriping	1,014
Center St	Elm St	Spruce St	BL	Restriping	1,014
Patetown Rd	William St	New Hope Rd	PS	Roadway widening	6,185
New Hope Rd	Berkeley Blvd	Millers Chapel Rd	PS	Roadway widening	15,386
Ash St	Malloy St	Oak Forest Rd	BL	Roadway widening	3,370
Oak Forest Dr	Central Heights Rd	Seymour Johnson AFB	PS	Roadway widening	12,155
Central Heights Rd	Oak Forest Dr	Tommy's Rd	PS	Roadway widening	12,785
Mill Rd	Lake Shore Dr	Walnut Creek Dr	BB	Marking, Signage, Traffic Calming	10,988
Walnut Creek Dr	Mill Rd	US Highway 70	BB	Marking, Signage, Traffic Calming	3,680
Lakeshore Dr	Lake Wackena Rd	Mill Rd	BB	Marking, Signage, Traffic Calming	1,721
Lake Wackena Rd	Dollard Town Rd	Lake Shore Dr	PS	Roadway widening	4,740
Dollard Town Rd	Lake Wackena Rd	St. John Church Rd	PS	Roadway widening	9,592
St. John Church Rd	Dollard Town Rd	Piney Grove Ch Rd	PS	Roadway widening	8,823
Piney Grove Ch Rd	Beston Rd	Seven Springs Limits	PS	Roadway widening	25,818
Main St	Interstate 795	Fort St	SLM	Marking	2,179
Main St	Fort St	Mill St	BL	Restriping	657
Main St	Mill St	Northeast Railroad St	SLM	Marking	609
Main St	Northeast Railroad St	Goldsboro St	BL	Restriping	479
Cuyler Best Rd	North Park Dr	New Hope Rd	PS	Roadway widening	5,270
Center St	Ash St	Oak St	BL	Restriping	481

\*BB = Bike Boulevard, BL = Bike Lane, PS = Paved Shoulders, SLM = Shared Lane Markings, WOL = Wide Outside Lanes



## BICYCLE NETWORK BY SEGMENT (CONTINUED)

Roadway	From	To	Facility Type*	Implementation Method	Length (Feet)
Center St	Ash St	Oak St	BL	Restriping	479
Center St	Oak St	Holly St	BB	Marking, Signage, Traffic Calming	1,581
Cardinal Dr	Nelson Dr	Quail Dr	BB	Marking, Signage, Traffic Calming	2,375
Nelson Dr	North Dr	Cardinal Dr	BB	Marking, Signage, Traffic Calming	288
North Dr	Banks Ave	Nelson Dr	BB	Marking, Signage, Traffic Calming	319
Banks Ave	Jefferson Ave	North Dr	BB	Marking, Signage, Traffic Calming	1,344
Jefferson Ave	Ninth St	Banks Ave	BB	Marking, Signage, Traffic Calming	575
Ninth St	Humphrey St	Jefferson Ave	BB	Marking, Signage, Traffic Calming	2,945
Humphrey St	Fourth St	Ninth St	BB	Marking, Signage, Traffic Calming	1,802
Stronach Ave	Greenleaf St	Humphrey St	BB	Marking, Signage, Traffic Calming	3,418
Greenleaf St	Swan St	Freeman St	BB	Marking, Signage, Traffic Calming	339
Swan St	James St	Greenleaf St	BB	Marking, Signage, Traffic Calming	1,202
Fussell St	George St	James St	BB	Marking, Signage, Traffic Calming	655
North Dr	Saxon St	Nelson Dr	BB	Marking, Signage, Traffic Calming	962
Hillcrest Dr	Peachtree St	Cashwell Dr	BB	Marking, Signage, Traffic Calming	1,334
Peachtree St	Ridgewood Dr	Hillcrest Dr	BB	Marking, Signage, Traffic Calming	1,294
Cashwell Dr	Berkeley Blvd	Berkeley Memorial Park	BL	Restriping	2,655
Cashwell Dr	Hillcrest Dr	Berkeley Blvd	BL	Reallocate	2,285
Malloy St	Ash St	Cashwell Dr	BL	Reallocate	1,519
Ridgewood Dr	Ash St	Peachtree St	BB	Marking, Signage, Traffic Calming	447
Beston Rd	New Hope Rd	Piney Grove Ch Rd	PS	Roadway widening	20,541
New Hope Rd	Millers Chapel Rd	Beston Rd	PS	Roadway widening	13,425
Big Daddy's Rd	Goldsboro St	Town Limits	BL	Reallocate, roadway widening	1,047
Tommy's Rd	NC Highway 111	Central Heights Rd	PS	Roadway widening	21,543
Ash St/NC 581	Old Smithfield Rd	Virginia St	PS	Roadway widening	8,953
Oberry Rd	MPO Limits	US Highway 117 Alt	PS	Roadway widening	14,443
Dollard Town Rd	NC Highway 111	Lake Wackena Rd	PS	Roadway widening	10,047
Spring Bank Rd	Bill Lane Blvd	NC Highway 111	PS	Roadway widening	6,319
Arrington Bridge Rd	Bill Lane Blvd	Sleepy Creek Rd	PS	Roadway widening	18,594
Arrington Bridge Rd	Westbrook Rd	Bill Lane Blvd	PS	Roadway widening	15,004
Old Mount Olive Rd	MPO Limits	Old Grantham Rd	PS	Roadway widening	37,965
Rosewood Rd	Old Smithfield Rd	Ash St	PS	Roadway widening	36,796
Old Smithfield Rd	Ferry Bridge Rd	Rosewood Rd	PS	Roadway widening	1,556
Ferry Bridge Rd	Old Smithfield Rd	MPO Limits	PS	Roadway widening	14,481
Salem Church Rd	George St	Pikeville-Princeton Rd	PS	Roadway widening	36,956
Pikeville-Princeton Rd	Nahunta Rd	Interstate 795	PS	Roadway widening	1,987
Gurley Dairy Rd	Capps Bridge Rd	NC Highway 581	PS	Roadway widening	11,940
Buck Swamp Rd	NC Highway 581	Salem Church Rd	PS	Roadway widening	16,901

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## BICYCLE NETWORK BY SEGMENT (CONTINUED)

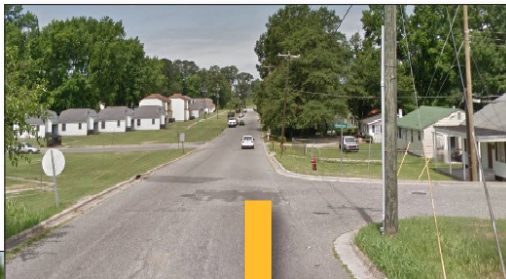
Roadway	From	To	Facility Type*	Implementation Method	Length (Feet)
NC 581	Gurley Dairy Rd	Buck Swamp Rd	PS	Roadway widening	2,765
Wayne Memorial Dr	New Hope Rd	Lanetown Rd	PS	Roadway widening	43,107
Hare Rd	New Hope Rd	Wayne Memorial Dr	PS	Roadway widening	9,316
Stoney Creek Church Rd	NC Highway 111	Wayne Memorial Dr	PS	Roadway widening	11,635
Big Daddy's Rd	Pikeville Limits	Airport Rd	PS	Roadway widening	8,282
Airport Rd	Big Daddy's Rd	Mount Carmel Ch Rd	PS	Roadway widening	6,937
Mount Carmel Ch Rd	Airport Rd	NC Highway 111	PS	Roadway widening	14,589
NC Highway 111	Mount Carmel Church Rd	New Hope Rd	PS	Roadway widening	12,754
Parkstown Rd	New Hope Rd	MPO Limits	PS	Roadway widening	24,275
Mimosa St	Pineview Ave	Randolph St	BB	Marking, Signage, Traffic Calming	3,976
Elm St	Center St	Randolph St	SLM	Marking	9,643
Elm St	Randolph St	Berkeley Blvd	BL	Reallocate	3,954
Mulberry St	Alabama Ave	James St	BB	Marking, Signage, Traffic Calming	2,398
Mulberry St	James St	William St	SLM	Marking	1,635
Berkeley Blvd	Elm St	Tommy's Rd	WOL	Restriping	19,506
NC Highway 581	Rosewood Rd	Buck Swamp Rd	PS	Roadway widening	18,784
Bill Lane Blvd	Arrington Bridge Rd	NC Highway 111	PS	Roadway widening	10,944
NC Highway 111	MPO Limits	New Hope Rd	PS	Roadway widening	48,471
Spence St	Cashwell Dr	US Highway 70	WOL	Restriping	5,642
Wayne Memorial Dr	Holly St	New Hope Rd	WOL	Restriping	14,136
Elm St	George St	Center St	BL	Reallocate	997
Sleepy Creek Rd	US Highway 117 Alt	MPO Limits	PS	Roadway widening	31,673
Old Grantham Rd	MPO Limits	Old Mount Olive Hwy	PS	Roadway widening	32,128
Pecan Rd	Old Mount Olive Hwy	Arrington Bridge Rd	PS	Roadway widening	12,426
William St	Patetown Rd	Stronach Ave	BL	Reallocate	4,934
George St	Murray St	A St	SLM	Marking	1,538
Center St	Holly St	Swan St	BB	Marking, Signage, Traffic Calming	2,159
Virginia St	Pine St	Murray St	BB	Marking, Signage, Traffic Calming	5,656
Jackson St	Mulberry St	Maple St	BB	Marking, Signage, Traffic Calming	3,595
Herman St	Elm St	Mulberry St	BB	Marking, Signage, Traffic Calming	2,654
Slaughter St	Newsome St	Elm St	BB	Marking, Signage, Traffic Calming	1,984
Stephens St	Ben Brewington Ct	End of Road	BB	Marking, Signage, Traffic Calming	3,577
Jefferson Ave	Edgerton St	Ninth St	BB	Marking, Signage, Traffic Calming	1,248
Edgerton St	Maple St	Claiborne St	BB	Marking, Signage, Traffic Calming	4,892
Claiborne St	Edgerton St	Peachtree St	BB	Marking, Signage, Traffic Calming	2,357
John St	Arrington Bridge Rd	Elm St	PS	Roadway widening	11,593
Arrington Bridge Rd	John St	Westbrook Rd	PS	Roadway widening	3,467

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## BICYCLE NETWORK BY SEGMENT (CONTINUED)

Roadway	From	To	Facility Type*	Implementation Method	Length (Feet)
Bryan Blvd	Old Grantham Rd	Neuse River	PS	Roadway widening	2,736
Quail Dr	North Dr	Cardinal Dr	BB	Marking, Signage, Traffic Calming	3,400
Gloucester Rd	Lockhaven Dr	Glen Oak Dr	BB	Marking, Signage, Traffic Calming	1,153
Westbrook Rd	Arrington Bridge Rd	Slocumb St	PS	Roadway widening	6,166
Slocumb St	Ash St	Simmons St	BB	Marking, Signage, Traffic Calming	315
Simmons St	Slocumb St	Lionel St	BB	Marking, Signage, Traffic Calming	985
Murray St	Virginia St	George St	BB	Marking, Signage, Traffic Calming	505
Poplar St	Newsome St	Weaver Dr	BB	Marking, Signage, Traffic Calming	1,950
Newsome St	Slaughter St	Poplar St	BB	Marking, Signage, Traffic Calming	309
Ben Brewington Ct	Stephens St	End of Road	BB	Marking, Signage, Traffic Calming	677
Peachtree St	Claiborne St	Durant St	BB	Marking, Signage, Traffic Calming	1,130
North Dr	The First Church Rd	Quail Dr	BB	Marking, Signage, Traffic Calming	615
Lockhaven Dr	Wayne Memorial Dr	Gloucester Rd	BB	Marking, Signage, Traffic Calming	982

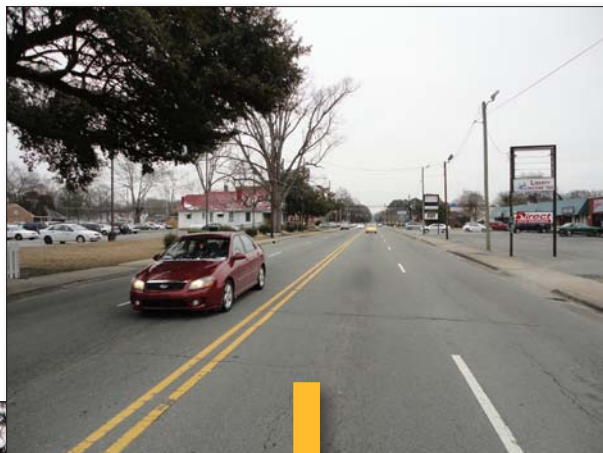


### GOLDSBORO PHOTO VISUALIZATION: HOLLY STREET BIKE BOULEVARD



*Holly Street is one of the recommended bike boulevards. Traffic calming treatments like street trees and speed humps will make this roadway safer for bicyclists and pedestrians.*

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## GOLDSBORO PHOTO VISUALIZATION: ASH COMPLETE STREET RETROFIT



Ash Street (Business 70) near Leslie Street. The recommendation to complete a “road diet” or “Complete Street retrofit” is a visionary one. To accomplish this would require further study. Ash Street is an important gateway into Goldsboro with tremendous potential for economic development. A transformation of this road would make it more attractive and safe for motorists, pedestrians, and bicyclists traveling along and across Ash Street. Improvements would include a median island, street trees, consolidation of driveway entrances (reduction of conflict points), a sidewalk buffer, and bicycle lanes.