# **APPENDIX A:**

Economic and Community Benefits

## **Economic and Community Benefits**

Active transportation provides numerous benefits for communities, residents, and visitors while also supporting economic vitality. Marion County is especially known for its extensive trail system, equestrian activities, and tourism. This section highlights the economic, health, and safety impacts of nonmotorized transportation, including walking, biking, equestrian riding, and transit. The findings are based on a combination of local data as well as statewide and national research.

## 1. Economic Impacts

## 1.1. Property Values and Affordability

Walkability and access to active transportation facilities can raise property values and improve affordability for households. Studies consistently show that more walkable neighborhoods are associated with higher home values and stronger economic stability. Research in Miami-Dade County, Florida, found walkability increased home values by as much as \$40,000 (8.7%) in some areas, though results varied depending on neighborhood context<sup>1</sup>.

Trails have significant positive impact on nearby property values. The Silver Comet Trail in Georgia showed a 4% to 7% increase in home values within a quarter-mile of the trail<sup>2</sup>, and studies in Ohio and Michigan found similar positive results<sup>3</sup>. In Texas, homes near trails or greenbelts saw value increases of up to 5%<sup>4</sup>. These findings are especially relevant for Marion County, where extensive greenways and trails are central to community identity.

Bicycle facilities also add measurable value. Multiple studies found that homes within a half-mile of new bicycle lanes or paths sold for high prices. One analysis determined that each quarter-mile closer to a bike path added about \$686 in value for single-family homes, with

<sup>&</sup>lt;sup>1</sup> L. A Merlin et al., "A Comparison of the Impacts of Alternative Walkability Measures on House Values," May 1, 2023.

<sup>&</sup>lt;sup>2</sup> Georgia Department of Transportation, "Silver Comet Trail Economic Impact Analysis and Planning Study," July 2013, https://headwaterseconomics.org/wp-content/uploads/Trail Study 142-GA-Silver-Comet-Econ-Impact.pdf.

<sup>&</sup>lt;sup>3</sup> Parent and Vom Hofe, "Understanding the Impact of Trails on Residential Property Values in the Presence of Spatial Dependence."

<sup>&</sup>lt;sup>4</sup> Paul Kelly et al., "Systematic Review and Meta-Analysis of Reduction in All-Cause Mortality from Walking and Cycling and Shape of Dose Response Relationship," The International Journal of Behavioral Nutrition and Physical Activity 11 (October 24, 2014): 132, https://doi.org/10.1186/s12966-014-0132-x.

increases of up to \$4,000 when multiple facilities were nearby<sup>5</sup>. These impacts reinforce the economic value of investing in safe and accessible bicycle infrastructure.

## 1.2. Biking and Trail Events

Marion County hosts numerous biking events each year that bring in thousands of participants and visitors. In 2023, nine major biking events drew approximately 8,455 participants, generating more than \$123,000 in registration revenue. The "Gone Riding" series accounted for a large share, with around 2,200 participants and \$93,000 in ticket sales.

Weekly community rides and smaller trail runs further enhance the county's trail culture, though attendance is not always tracked. In 2023, Marion County Parks and Recreation reported more than 3 million visits, a figure that includes but is not limited to trail-related activity<sup>6</sup>. Collectively, biking, trail events, and park use generate over \$150,000 annually in direct event registration revenue.

Overall, these activities illustrate how bike lanes and trails not only support recreation but also contribute to local economic activity, tourism, and community identity.

## 1.3. Tourism and Equestrian Events

Tourism is a cornerstone of Marion County's economy, driven by its natural assets, recreational opportunities, and world-class equestrian culture. Between April 2023 and March 2024, the county welcomed 1.4 million visitors, generating \$1.057 billion in spending<sup>7</sup> and \$6.6 million in tax revenue. This is equivalent to savings of about \$466 per resident<sup>8</sup>.

Equestrian activity is central to this success. Known as the "Horse Capital of the World," Marion County has the highest concentration of horses in the U.S., representing 35% of Florida's horse population<sup>9</sup>. The equine industry contributes \$4.3 billion annually, supports 28,500 jobs, and occupies roughly 20% of county land area<sup>10</sup>. Prestigious events such as the FEI competitions, Horse Shows in the Sun, and Live

<sup>&</sup>lt;sup>5</sup> Jenny H. Liu and Wei Shi, "Impact of Bike Facilities on Residential Property Prices," *Transportation Research Record* 2662, no. 1 (January 1, 2017): 50–58, https://doi.org/10.3141/2662-06.

<sup>&</sup>lt;sup>6</sup> Marion County Parks & Recreation, "Annual Report 2023," 2023, https://www.marionfl.org/home/showdocument?id=25752.

<sup>&</sup>lt;sup>7</sup> Downs & St. Germain Research, "Economic Impact Study April 2023 – March 2024."

<sup>&</sup>lt;sup>8</sup> Downs & St. Germain Research.

<sup>&</sup>lt;sup>9</sup> Marion County Parks & Recreation, "Horse Capital of the World® | Marion County, FL," accessed March 13, 2025, https://www.marionfl.org/our-county/horse-capital-of-the-world.

<sup>&</sup>lt;sup>10</sup> Florida Thoroughbred Breeders' and Owners' Association, "Horse Capital of the World® Economics Podcast," 2024, https://www.ftboa.com/horse-capital-of-the-world.

Oak International draw more than 92,500 participants and spectators each year<sup>11</sup>, reinforcing the county's international reputation and fueling tourism-related spending on lodging, dining, and hospitality services.

State parks and trails also contribute significantly, as summarized in **Table 1**. Rainbow Springs, Silver Springs, and the Cross Florida Greenway generated more than \$531 million in statewide economic impact in 2024 and supported 7,400 jobs<sup>12</sup>. Marion County's extensive network of parks, natural springs, and greenways enhances its appeal as a destination for visitors seeking outdoor recreation and contributes directly to the local economy.

**Table 1: Economic Impact of State Parks and Trails** 

Park	Visitation	Economic Impact	Local Jobs Supported
Rainbow Springs State Park <sup>13</sup>	382,506	\$46,761,431	655
Marjorie Harris Carr Cross Florida Greenway <sup>14</sup>	3,448,479	\$415,197,096	5,813
Silver Springs State Park	570,833	\$69,870,772	978
Total	4,401,818	\$531,829,299	7,446

<sup>&</sup>lt;sup>11</sup> Ocala Marion, "Ocala/Marion County Celebrates Travel and Tourism Week," May 22, 2024, https://www.ftboa.com/ocala-marion-county-celebrates-travel-and-tourism-week.

<sup>&</sup>lt;sup>12</sup> Florida Department of Environmental Protection, "OUTDOOR RECREATION & TRAILS CONNECTING THE DOTS BETWEEN TRAILS & TOURISM," December 8, 2023, https://floridadep.gov/sites/default/files/FINALEconomic%20Flyer\_Dec\_8\_2023.pdf.

<sup>&</sup>lt;sup>13</sup> Florida State Parks, "Rainbow Springs State PArk 2024 Impact," 2024, https://floridastateparksfoundation.org/wp-content/uploads/2025/02/Rainbow-Springs-State-Park.pdf.

<sup>&</sup>lt;sup>14</sup> Florida State Parks, "Marjorie Harris Carr Cross Florida Greenway," 2024, https://floridastateparksfoundation.org/wp-content/uploads/2025/02/Marjorie-Harris-Carr-Cross-Florida-Greenway.pdf.

## 1.4. Employment

Employment data collected from consumer database Data Axle shows that 24 businesses related to biking, trails, equipment, and supplies employ approximately 245 people, with a combined sales volume of approximately \$87.3 million in 2024. This number does not include businesses or employment that are adjacent to these business areas, nor does it include related jobs that may arise from interactions with these businesses. Across Florida, every \$1 million spent on trails creates 17 jobs.

## 1.5. Spending by Mode

To gather public feedback regarding participation in active transportation, community needs, and improvements, the TPO conducted an online survey and comment map from September 18, 2024, to February 28, 2025. A summary of spending can be seen in **Figure 1** and **Figure 2**.

Spending on walking and hiking is generally modest, with a high percentage of participants spending \$0 or under \$50 on park or access fees. The highest costs are more often associated with clothing/shoes and supplies/food, while equipment remains a relatively small expense.

Biking shows higher overall spending, especially on repair/maintenance and events, where many participants spend several hundred dollars per year. Clothing, equipment, and supplies also draw steady investment, while park and access fees remain a minor cost for most participants.

Figure 1: Yearly Spending on Walking and Hiking

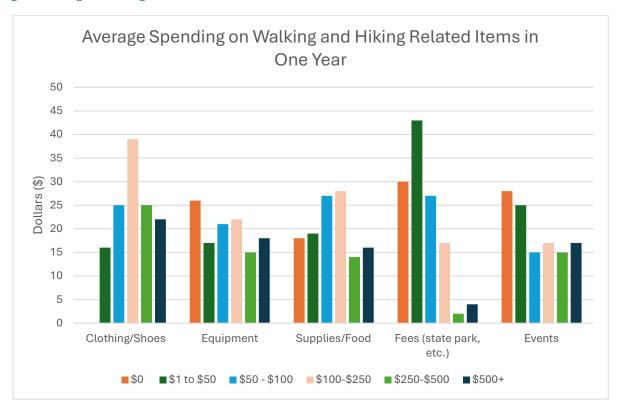
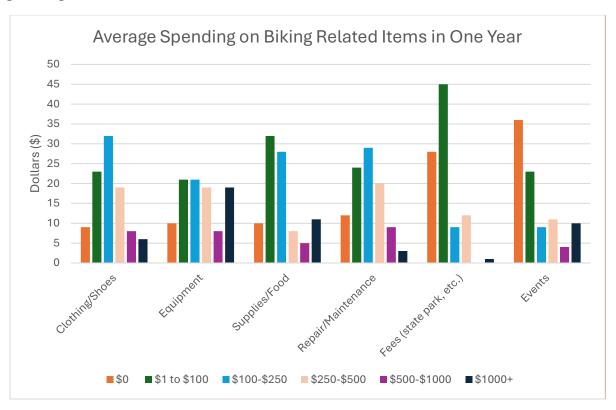


Figure 2: Yearly Spending on Biking



## 2. Health Impacts

By engaging in nonmotorized transportation, people can increase their physical activity. Increased physical activity helps to improve overall health and well-being. This section explores the health benefits, including reducing mortality and reduced healthcare costs, that result from increased active transportation.

## 2.1. Mortality Reduction

Mortality rates measure the number of deaths within a population, and research shows that active transportation promotes physical activity, strengthens social connections, and supports mental health, contributing to longer life expectancy. Communities with tree-lined

streets, green spaces, and trails are associated with lower overall death rates, as well as reduced risks of respiratory problems, strokes, ADHD in teens, and even infant mortality<sup>15</sup>.

Several studies highlight the direct impact of walking and biking on longevity. One study found that walking about 3 hours and 45 minutes per week or biking nearly 2 hours per week lowered the risk of death by 10% to11%, with the greatest benefits observed for those who were previously less active 16. Another study showed that people who biked to work had a 24% lower risk of all-cause mortality and a 25% lower risk cancer-releated mortality during the study period compared to non-cyclists. Active commuters also experienced a 30% reduced risk of developing diabetes 17.

Together, these findings underscore the significant role that walking and biking play in improving long-term health outcomes and reducing premature mortality.

#### 2.2. Health Care Cost Reduction

Physical inactivity places a significant burden on the U.S. health care system <sup>18</sup>, costing an estimated \$117 billion annually. Obesity, which affects approximately 40% of adults, adds another \$173 billion in costs while increasing the risk of serious conditions such as heart disease and diabetes <sup>19</sup>.

Investments in active transportation, such as trails, bike lanes, and sidewalks, can help reduce these costs by making it easier for people to incorporate physical activity into their daily lives. Research shows that every \$1 spent on trails generates approximately \$3 in direct

<sup>&</sup>lt;sup>15</sup> Owen Douglas, Mick Lennon, and Mark Scott, "Green Space Benefits for Health and Well-Being: A Life-Course Approach for Urban Planning, Design and Management," *Cities* 66 (June 1, 2017): 53–62, https://doi.org/10.1016/j.cities.2017.03.011.

<sup>&</sup>lt;sup>16</sup> Kelly et al., "Systematic Review and Meta-Analysis of Reduction in All-Cause Mortality from Walking and Cycling and Shape of Dose Response Relationship."

<sup>&</sup>lt;sup>17</sup> Monica Dinu et al., "Active Commuting and Multiple Health Outcomes: A Systematic Review and Meta-Analysis," *Sports Medicine (Auckland, N.Z.)* 49, no. 3 (March 2019): 437–52, https://doi.org/10.1007/s40279-018-1023-0.

<sup>&</sup>lt;sup>18</sup> CDC, "Active People, Healthy Nation<sup>SM</sup> At a Glance," Active People, Healthy Nation, July 3, 2024, https://www.cdc.gov/active-people-healthy-nation/php/at-a-glance/index.html.

<sup>&</sup>lt;sup>19</sup> CDC, "About Obesity," Obesity, December 20, 2024, https://www.cdc.gov/obesity/php/about/index.html.

medical savings<sup>20</sup>, while sidewalk improvements return nearly \$1.90 in health benefits for every \$1 invested. More active people also spend less time in the hospital and file fewer costly medical claims<sup>21</sup>.

Overall, promoting active transportation fosters healthier communities while delivering significant savings to the health care system.

## 3. Safety Impacts

## 3.1. Bicycle Facilities

Investing in well-designed bicycle lanes can improve roadway safety for all users. A 13-year study of Midwestern cities found that separated bicycle lanes reduced deaths by 44% and serious injuries by  $50\%^{22}$ . Even low-cost upgrades, such as adding flexible barriers, reduced crashes by more than half<sup>23</sup>. On busy roads, bicycle lanes reduced crashes by 30% on two-lane roads and 49% on four-lane roads<sup>24</sup>. Importantly, bicycle facilities also improve conditions for pedestrians by creating greater separation from traffic, shortening crossing distances, and reducing pedestrian injury by  $35\%^{25}$ . Altogether, bicycle lanes, especially separated ones, enhance safety for not only bicyclists but for all roadway users.

#### 3.2. Pedestrian Facilities

Incorporating specific features into pedestrian facilities improves safety and comfort for users. Studies show that improved street lighting can reduce pedestrian crashes by 42%, while high-visibility crosswalks lower crashes by 40%<sup>26</sup>. Additional treatments such as tree-lined

<sup>&</sup>lt;sup>20</sup> Guijing Wang et al., "A Cost-Benefit Analysis of Physical Activity Using Bike/Pedestrian Trails," *Health Promotion Practice* 6, no. 2 (April 2005): 174–79, https://doi.org/10.1177/1524839903260687.

<sup>&</sup>lt;sup>21</sup> U. S. DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE, *ECONOMIC IMPACTS OF PROTECTING RIVERS, TRAILS, AND GREENWAY CORRIDORS*, 4th ed., 1998.

<sup>&</sup>lt;sup>22</sup> Wesley E. Marshall and Nicholas N. Ferenchak, "Why Cities with High Bicycling Rates Are Safer for All Road Users," *Journal of Transport & Health* 13 (June 1, 2019): 100539, https://doi.org/10.1016/j.jth.2019.03.004.

<sup>&</sup>lt;sup>23</sup> FHWA, "Developing Crash Modification Factors for Separated Bicycle Lanes," Technical Brief, 2023, https://highways.dot.gov/sites/fhwa.dot.gov/files/FHWA-HRT-23-025.pdf.

<sup>&</sup>lt;sup>24</sup> FHWA, "Developing Crash Modification Factors for Bicycle-Lane Additions While Reducing Lane and Shoulder Widths," 2021, https://www.fhwa.dot.gov/publications/research/safety/21012/21012.pdf?\_gl=1\*hc94xt\*\_ga\*ODUzNDk0MTg5LjE3MTg4ODkyODk.\*\_ga\_VW1SFWJKBB \*MTc0MzE2NTgzNS44My4xLjE3NDMxNjcyODIuMC4wLjA.

<sup>&</sup>lt;sup>25</sup> New York City DOT, "Measuring the Street: New Metrics for 21st Century Streets," 2012, https://www.nyc.gov/html/dot/downloads/pdf/2012-10-measuring-the-street.pdf.

<sup>&</sup>lt;sup>26</sup> FHWA, "Crosswalk Visibility Enhancements," 2018.

streets for shade and space <sup>27,28</sup>, pedestrian refuge islands (56% crash reduction) <sup>29</sup>, and sidewalks (up to 89% reduction) <sup>30</sup> all contribute to safer walking environments. Rectangular rapid flashing beacons (RRFBs) at crosswalks can increase driver yielding by 98% compared to crosswalks without RRFBs<sup>31</sup>. Collectively, these strategies demonstrate that a layered approach to pedestrian facilities can greatly reduce risk of crashes and improve the pedestrian experience

<sup>27</sup> Manman Zhu, N. N. Sze, and Sharon Newnam, "Effect of Urban Street Trees on Pedestrian Safety: A Micro-Level Pedestrian Casualty Model Using Multivariate Bayesian Spatial Approach," *Accident Analysis & Prevention* 176 (October 1, 2022): 106818, https://doi.org/10.1016/j.aap.2022.106818.

<sup>&</sup>lt;sup>28</sup> Theodore S. Eisenman, Alicia F. Coleman, and Gregory LaBombard, "Street Trees for Bicyclists, Pedestrians, and Vehicle Drivers: A Systematic Multimodal Review," *Urban Science* 5, no. 3 (September 2021): 56, https://doi.org/10.3390/urbansci5030056; Douglas, Lennon, and Scott, "Green Space Benefits for Health and Well-Being."

<sup>&</sup>lt;sup>29</sup> FHWA, "Proven Safety Countermeasures," n.d., https://highways.dot.gov/safety/proven-safety-countermeasures.

<sup>&</sup>lt;sup>30</sup> FHWA.

<sup>31</sup> FHWA.

# **APPENDIX B:**

Partner and Community Engagement

#### **Active Transportation Plan Stakeholder Committee**

A Stakeholder Committee was assembled to provide input and guide the development of the Active Transportation Plan. The Stakeholder Committee was comprised of a diverse group of professionals and stakeholders across Marion County. Committee members included:

Horse Farms Forever, Busy Shires City of Belleview Public Works, Bob Titterington City of Dunnellon, Chad Ward City of Ocala Growth Management, Jeff Shrum, Endira Madraveren, Aubrey Hale City of Ocala Engineering, Noel Cooper City of Ocala SunTran, Ji Li, Tom Duncan Florida Department of Environmental Protection, Kelly Conley Kittelson and Associates, Leyi Zhang, Jennifer Musselman Marion County Growth Services, Ken Odom, Chuck Varadin Marion County Office of County Engineer, Steven Cohoon, Doug Hinton Marion County School District, Casey Griffith Marion County Tourism Development, Loretta Shaffer Naventure, Corian Yandel Ocala Marion TPO, Rob Balmes, Sara Brown Ocala Metro Chamber and Economic Partnership, Tamara Fleischhaker Santos Bike Shop, Chris Fernandez U.S. Department of Agriculture Forest Service, Carrie Sekerak

A total of four Stakeholder meetings were held and covered topics such as existing conditions, data collection, technical work reviews, project needs and gap evaluation, and project list development. Stakeholder meetings were on August 26, 2024, December 4, 2024, May 29, 2025 and August 1, 2025.

## **Community Workshops**

While there were opportunities to engage with the TPO throughout the development of the Active Transportation Plan at committee and board meetings, two specific events provided direct opportunities for in-person engagement. These events were the Navigating the Future 2050 Long Range Transportation Plan (LRTP) Community Workshop held on September 18, 2024, and a second Community Workshop held on February 25, 2025. Both workshops provided the public opportunities to learn about the Plan, share feedback on issues and project needs, and participate in the ongoing public survey and comment map. Additionally, the draft Active Transportation Plan and project maps were featured at a joint 2050 LRTP-Active Transportation Plan Open House on September 30, 2025.

## **Online Survey and Comment Map Summary**

The TPO conducted an online survey and comment map from September 18, 2024 to February 28, 2025. The purpose of the survey was to gather input from the public regarding participation in active transportation, community needs and improvements. The survey results will be used to supplement the technical analysis and priority project strategies, in addition to gaining an understanding of various perspectives in the community.

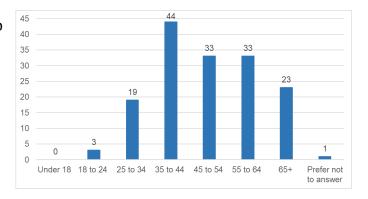
A total of 158 participants completed the online public survey located on the Active Transportation project page. In some cases, participants did not provide a response to a question. The following report summarizes the results of the survey. Following the survey instrument format, a breakdown of results are provided by mode of active transportation, including walking/hiking, biking and horseback riding. A total of 67 additional comments were provided by participants and are included in this summary report. The Survey Instrument is also attached to the report.

## 1. What is your age?

A total of 156 responses were received. The largest participating age group is 35 to 44 years old. The two other largest age groups are 45 to 54 and 55 to 64.

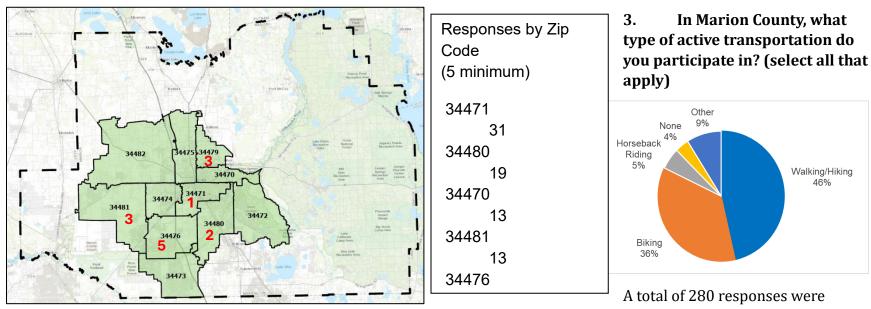
0 (0%) Under 18 years old 3 (2%) 18 to 24 years old 19 (12%) 25 to 34 years old 44 (28%) 35 to 44 years old 33 (21%) 45 to 54 years old 33 (21%) 55 to 64 years old 23 (15%) 65+ years old

1 (1%) Prefer not to answer



## 2. Please provide your home zip code.

The map displays zip codes with at least five survey participants. The top five zip codes with participation include: 34471 (31), 34480 (19), 34470 (13), 34481 (13) and 34476 (12).



received. The majority of participants reported Walking/Hiking and Biking as an active transportation activity.

130 (46%) Walking/Hiking

100 (35%) Biking

15 (5%) Horseback Riding

25 (9%) Other

10 (4%) None

Other: Running/Jogging (11); Kayaking (2); Skating; Bus, Bus Transit

## 4. What are the top 2 most important land uses to connect to a safe active transportation network?

A total of 328 responses were received. The top two selections were Recreational Facilities (25%) and Shopping/Groceries (16%). Both selections combined account for 41% of the total responses.

44 (13%) Work

41 (13%) Schools/Colleges

52 (16%) Shopping Centers/Grocery Stores

18 (6%) Medical Centers

9 (3%) Bus Transit facilities

81 (25%) Recreational facilities (trails and parks)

32 (10%) Downtown

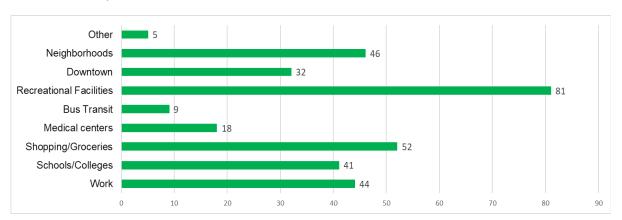
46 (14%) Neighborhoods

5 (2%) Other

Other: Sidewalks; Neighborhoods; Bike Lanes/Sidewalks

5. On a scale of 1 to 10, how much does active transportation contribute to your quality of life, health and well-being?

Based on type of active transportation activity selected, participants were asked to provide a response



between 1 (lowest) and 10 (highest). The following summarizes the average from all responses for the three major activities in the survey.

## Walking/Hiking (145 responses)

8.4

Biking (118 responses)

7.7

**Horseback Riding (32 responses)** 

6.4

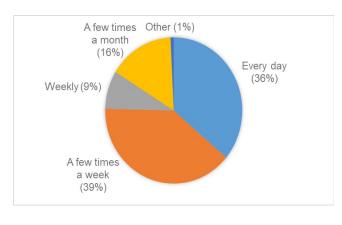
## **Walking/Hiking Responses**

This section summarizes responses from participants that selected walking/hiking as a form of active transportation.

## 1. How often do you walk or hike?

A total of 130 responses were received. The top two selections were A Few Times a Week (39%) and Every Day (36%)

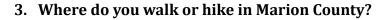
- 47 (36%) Every day
- 51 (39%) A few times a week
- 11 (9%) Weekly
- 20 (16%) A few times a month
- 1 (1%) Other



#### 2. Why do you walk or hike in Marion County?

A total of 282 responses were received. The top two selections were Exercise (43%) and Recreation (32%)

- 121 (43%) Exercise
- 90 (32%) Recreation
- 47 (17%) Social Activity
- 6 (2%) Commute to work/school
- 17 (6%) Shopping
- 1 (0%) Other



A total of 251 responses were received. The top two selections were Recreational Facilities (41%) and Neighborhoods (37%)

16 (6%) Work

3 (1%) School/College

1 (<1%) Medical Centers

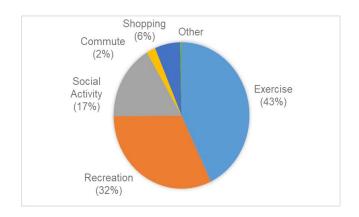
25 (10%) Shopping/Grocery

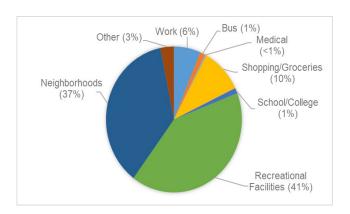
3 (1%) Bus Transit

103 (41%) Recreational Facilities (trails, parks)

92 (37%) Neighborhoods

8 (3%) Other





Other: Trails; Ocala National Forest or Baseline trails; Library; Wal-Mart; College of Central Florida; Neighborhood; Home/property; Around town

## 4. What improvements would encourage you to walk or hike more often? (Please select your top 3)

A total of 446 responses were received. The top three selections were Adding more sidewalks or closing gaps (18%), Expanding/adding trails (16%) and Better Lighting (14%).

61 (14%) Better Lighting

37(8%) Better landscaping/more shade

36 (8%) Slower car speeds

45 (10%) More destinations within walking distance

81 (18%) Adding more sidewalks or close gaps

48 (11%) Wider/improved sidewalks

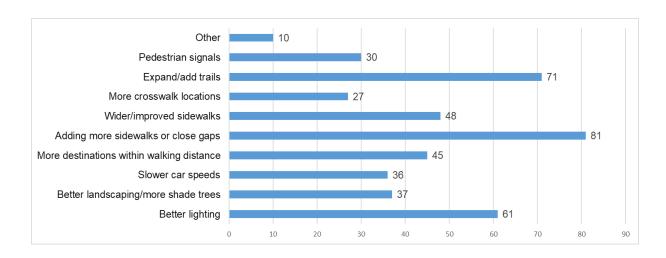
27 (6%) More crosswalk locations

71 (16%) Expand/Add trails

30 (7%) Pedestrian signals

10 (2%) Other

Other: Underpass tunnel on 80th from Stone Creek to Calesa; Add sidewalks around Santos Trailhead; Pedestrian walkway over Silver Springs downtown; More bus routes; More bathrooms; More water fountains; Less speeding on SW 7th and 35th; Florida is too hot to walk other than exercise; Respect for nature; Eliminate trash; Do not make bike lanes part of roadway projects; Drivers are preoccupied; Bike lanes connecting trails to schools and neighborhoods



## 5. How much do you spend on Walking or Hiking items in one year?

Participants were asked to provide annual estimated expenditures in support of their walking or hiking active mode of transportation for five related areas. The following summarizes each expenditure tier with the two most frequent response highlighted in bold. For all five expenditures combined, the most frequent range selected is \$100 to \$250.

## **Clothing/Shoes** (127 responses) \$0:0 \$1-\$50: 16 (13%) \$50-\$100: 25 (20%) \$100-\$250: 39 (31%) \$250-\$500: 25 (20%) \$500+: 22 (17%) **Equipment** (119 responses) \$0: 26 (22%) \$1-\$50: 17 (14%) **\$50-\$100: 21 (18%)** \$100-\$250: 22 (18%) \$250-\$500: 15 (13%) \$500+: 18 (15%) **Supplies/Food** (122 responses) \$0: 18 (15%) \$1-\$50: 19 (16%) **\$50-\$100: 27 (22%)** \$100-\$250: 28 (23%) \$250-\$500: 14 (11%) \$500+: 16 (13%) **Fees** (state park, etc) (123 responses) \$0:30 (24%)

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$1-$50: 43 (35%)

$50-$100: 27 (22%)

$100-$250: 17 (14%)

$250-$500: 2 (2%)

$500+: 4 (3%)

Events (117 responses)

$0: 28 (24%)

$1-$50: 25 (21%)

$50-$100: 15 (13%)

$100-$250: 17 (15%)

$500+: 17 (15%)
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## **Biking Responses**

This section summarizes responses from participants for questions specific to biking as an active form of transportation.

## 1. What type of bicycle do you mostly use?

A total of 100 responses were received.

93 (93%) Pedal Bicycle 7 (7%) Electric Bicycle

## 2. How often do you Bike?

A total of 99 responses were received. The top two selections were A Few Times a Week (33%) and A Few Times a Month (29%).

20 (20%) Every day

33 (33%) A few times a week

15 (15%) Weekly

28 (29%) A few times a month

3 (3%) Other

Other: Rarely do not feel safe; Few times a year; Few times a month

## 3. Why do you bike in Marion County?

A total of 224 responses were received. The top two selections were Exercise (41%) and Recreation (35%).

92 (41%) Exercise

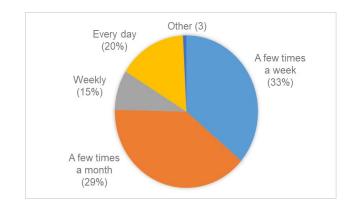
78 (35%) Recreation

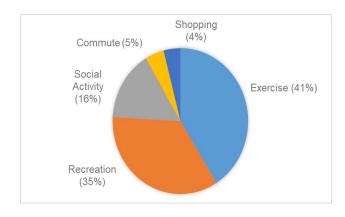
35 (16%) Social Activity

10 (5%) Commute to work/school

9 (4%) Shopping

0 (0%) Other

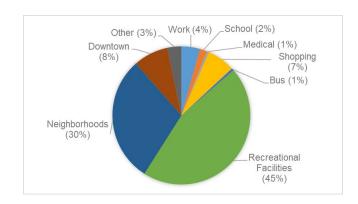




## 4. Where do you bike?

A total of 183 responses were received. The top two selections were Recreational Facilities (45%) and Neighborhoods (30%).

- 8 (4%) Work
- 3 (2%) School/College
- 1 (1%) Medical Centers
- 12 (7%) Shopping/Grocery
- 1 (1%) Bus Transit
- 83 (45%) Recreational Facilities
- 54 (30%) Neighborhoods
- 15 (8%) Downtown
- 6 (3%) Other



Other: Throughout the county; In county but challenging with poor shoulders/pavement conditions

## 5. What improvements would encourage you bike more often? (Please select your top 3)

A total of 376 responses were received. The top three selections were More protected bike lanes (17%), Expand/Add trails (15%), Adding more sidewalks/shared use paths (12%) and More on-street bike lanes (12%).

- 23 (6%) Better Lighting
- 11 (3%) Better landscaping/more shade
- 31 (8%) Slower car speeds
- 31 (8%) More destinations within biking distance
- 47 (13%) Adding more sidewalks/shared use paths
- 43 (11%) More on-street bike lanes
- 65 (17%) More protected bike lanes (separated from traffic)
- 15 (4%) Better signage
- 22 (6%) Bike racks/parking
- 10 (3%) Pedestrian signals

56 (15%) Expand/Add trails 16 (4%) Public restrooms 6 (2%) Other

Other: Stiffer penalties for drivers hitting cyclists; Resurfacing/better maintain roads and shoulders; Multi-use paths; More access to the Cross Fl Greenway from neighborhoods; Cleaner bike lanes; Better pavement on major roadways

## 6. How much do you spend on Bicyclerelated items in one year?

Participants were asked to provide annual estimated expenditures in support of their biking active mode of transportation for five related areas. The following summarizes each expenditure tier with the two most frequent responses in bold. For all six expenditures combined, the most frequent range selected is \$1 to \$100.

**Clothing/Shoes** (97 responses)

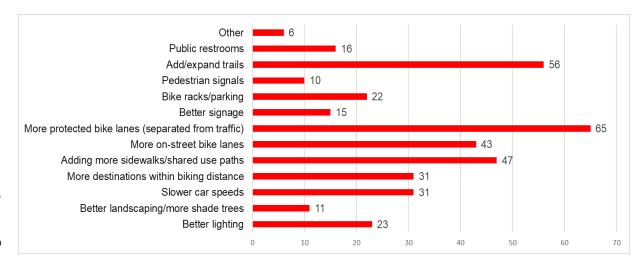
\$0:9 (9%)

\$1-\$100: 23 (24%) \$100-\$250: 32 (33%)

\$250-\$500: 19 (20%)

\$500-\$1,000:8 (8%)

\$1,000+: 6 (6%)



## **Equipment** (98 responses)

\$0: 10 (10%)

\$1-\$100: 21 (21%)

\$100-\$250: 21 (21%)

\$250-\$500: 19 (19%)

\$500-\$1,000:8 (8%)

\$1,000+: 19 (19%)

## **Supplies/Food** (94 responses)

\$0: 10 (11%)

\$1-\$100: 32 (34%)

\$100-\$250: 28 (30%)

\$250-\$500:8 (9%)

\$500-\$1,000: 5 (5%)

\$1,000+: 11 (12%)

## **Repair/Maintenance** (97 responses)

\$0: 12 (12%)

\$1-\$100: 24 (25%)

\$100-\$250: 29 (30%)

\$250-\$500: 20 (21%)

\$500-\$1,000:9 (9%)

\$1,000+: 3 (3%)

## **Fees** (state park, etc) (95 responses)

\$0: 28 (29%)

\$1-\$100: 45 (47%)

\$100-\$250:9 (9%)

\$250-\$500: 12 (13%)

\$500-\$1,000: 0 (0%)

\$1,000+: 1 (1%)

Events (93 responses)

\$0: 36 (39%)

\$1-\$100: 23 (25%)

\$100-\$250: 9 (10%)

\$250-\$500: 11 (12%)

\$500-\$1,000: 4 (4%)

\$1,000+: 10 (11%)

#### **Equestrian Responses**

This section summarizes responses from participants for questions specific to equestrian/horseback riding as an active form of transportation.

## 1. How often do you horseback ride in Marion County?

A total of 15 responses were received. Every day was the highest selection.

8 (53%) Everyday

3 (20%) A few times a week

3 (20%) Weekly

1 (7%) A few times a month

0 (0%) Other

## 2. Why do you horseback ride in Marion County?

A total of 30 responses were received. The most frequent response was recreation (43%).

6 (20%) Exercise

13 (43%) Recreation

7 (23%) Social activity

0 (0%) Commute to work/school

0 (0%) Shopping

4 (13%) Other

Other: Emotional therapy; Sport/training; Enjoyment; Competition

## 3. Where do you horseback ride?

A total of 20 responses were received. The most frequent response was trails.

2 (10%) Shoulder of road

12 (60%) Trails 6 (30%) Other

Other: Farms

## 4. What would encourage you to horseback ride more often? (Please select your top 3)

A total of 51 responses were received. The top three selections were: Better access to trails (18%), More separated horse trails (16%) and Improved amenities for horses (16%). However, the improvement suggestions were all closely ranked.

8 (16%) More separated horse trails

9 (18%) Better access to trails

7 (14%) Safe horse crossings

7 (14%) Affordable horse rentals

3 (6%) Better trailer parking at trailheads

8 (16%) Improved amenities for horses

5 (10%) Shelter/shade

2 (4%) Better signage

2 (4%) Other

## 5. How much do you spend on horseback-related items in one year?

Participants were asked to provide annual estimated expenditures in support of horseback riding for five related areas. The following summarizes each expenditure tier and corresponding responses. For all five expenditures combined, the most frequent range selected is \$1 to \$250.

## **Clothing/Shoes** (13 responses)

\$0:1 (8%)

\$100-\$250: 2 (15%) \$250-\$500: 1 (8%) \$500-\$1,000: 1 (8%)

```
$1,000-$2,500: 4 (31%)
```

\$2,500+: 4 (31%)

## **Equipment** (13 responses)

\$0: 2 (15%)

\$100-\$250: 3 (23%)

\$250-\$500: 1 (8%)

\$500-\$1,000: 2 (15%)

\$1,000-\$2,500: 1 (8%)

\$2,500+: 4 (31%)

## **Supplies/Food** (14 responses)

\$0:2 (14%)

\$100-\$250: 1 (7%)

\$250-\$500: 1 (7%)

\$500-\$1,000: 1 (7%)

\$1,000-\$2,500: 2 (14%)

\$2,500+: 7 (50%)

## **Transportation** (13 responses)

\$0:3 (23%)

\$100-\$250: 6 (46%)

\$250-\$500:0 (0%)

\$500-\$1,000: 2 (15%)

\$1,000-\$2,500: 1 (8%)

\$2,500+: 1 (8%)

## **Fees** (state park, etc) (13 responses)

\$0:3 (23%)

\$1-\$100: 6 (46%)

\$100-\$250:0 (0%)

\$250-\$500: 2 (15%)

\$500-\$1,000:1 (8%)

\$1,000+: 1 (8%)

## **Events** (12 responses)

\$0:3 (25%)

\$1-\$100: 4 (33%)

\$100-\$250:0 (0%)

\$250-\$500: 1 (8%)

\$500-\$1,000:0 (0%)

\$1,000+: 4 (33%)

## Do you have any additional comments to share?

A total of 67 additional comments were shared by the participants. The comments are organized by topic areas for ease of review.

## Facility Needs and Connections (20)

- Would love to see more paved bike/pedestrian trails
- With cost of vehicles, biking will be more important in future
- Not enough handicap spaces
- A paved trail on the greenway needs to be completed to Dunnellon.
- There needs to be bike lanes on all roadways that lead to the Santos Trailhead.
- Please make bike lanes mandatory for any new or improved roads. There is also a need for camera coverage to help catch the drivers who will hit the riders/walkers.
- Please invest in a comprehensive trail network
- Please help make ocala more active and accessible for all by giving us safe through ways, sidewalks and more wonderful trails!
- Please complete the trail from Dunellon to Hwy 200 with an ability to cross Hwy 200 safely.
- Please add more ways to get around Ocala and Marion county safely by bike.
- Please put a route to the WEC, thank you
- My husband and I live on the Ne side of Silver Springs. We love that we can walk or bike downtown and enjoy everything it has to offer. However, it is not easy crossing Silver Springs. A pedestrian crosswalk over the road would make life so much easier!
- More sidewalks in summerfield area please!
- More protected bike lanes
- It would be nice to have several hubs to start from. These could also serve for bikers/hikers to meet one another. Water fountains along the trails may help although most hikers/bikers carry their own. Trails should also accommodate the handicapped. Parking. Facilities should be available near hubs. THANK YOU.
- I worked in the trauma ICU and saw a lot of patients hit by cars on 200, 40, and busy roads. I live in Fore Ranch and would love to walk to the mall or movies but 200 is so busy I am afraid to cross it even with the crosswalk. Could there

be pedestrian bridges built? Our community is growing SO fast. Can we slow down the amount of farms getting sold of for huge apartment complexes? Our roads aren't ready for this many people let alone safe for people to walk or bike along. I used to ride bikes on the road and saw too many friends get hit by car drivers. There needs to be more options of transport for the elderly who are on a fixed income and do not drive.

- I want to see Santos trailhead connect to downtown Ocala and Belleview as well as the Greenway without having to bike ride along fast roads without sidewalks or bike paths. It's so hard to ride my bike on a soft shoulder and the cars zipping by makes it feel too dangerous.
- Forest service recently disked (plowed?) fire access around the greenway. There was walking, biking access at the southern end of 65th street in the Liberty Triangle region allowing access without reliance on motor vehicles that is now impossible. Why not allow access here and maintian the fire break at the same time. I contacted the Forest Service and they consider this use as illegal. That could be changed and assist the neighborhood with access
- Biking in particular is vital to ensure low-income individuals are able to get to work. Many people can not afford a car or registration and maintenance of a car. Biking needs to be made safe for those individuals through (ideally protected) bike lanes. I also bike for recreation on the local trails and connecting the west end of the Santos Trail to the Withlacoochee Trail would be a huge improvement to our trail system. Also adding a trail that extends into downtown Ocala would promote tourism from long-distance trail cyclists coming from the southern trails that connect to the Withlacoochee already.
- Any kind of lane on the side of the road would be better than none.

## Safety/Access/Lighting (18)

• There are virtually no sidewalks in my neighborhood (north of the social security office on rt 40). There is heavy traffic in the area. 11th ave NE is a major thoroughfare with a lot of pedestrian traffic and no sidewalks. It is a miracle no one has been killed. I see people jump onto lawns to avoid vehicles. Vehicles speed between stop signs. Vehicles do not stop at 4 way stop signs. How's about some enforcement. The same holds true for the neighborhoods on the other side of rt 40. Lots of traffic, lots of people walking and no sidewalks. Pedestrian cross walks need to have flashing lights. 2 new pedestrian cross walks were installed by the police station on 301. No flashing lights were installed. How stupid is that. There is so much traffic there. Anybody would be crazy to use those crosswalks. Drivers are not going to see pedestrians trying to cross. Please add flashing lights. At least give pedestrians a chance to cross safely.

- The hardest part of biking in Ocala is the cars. I don't feel safe biking with my kids outside of trails. More awareness to drivers is needed, because they are not used to driving with bikes sharing the roads. I am used to Gainesville where there are a lot of pedestrians and biking is a normal mode of transportation.
- The greenway is amazing. Our sidewalks are OK, but cars travel so fast and drive reckless, so urban walking is terrifying.
- The downtown roadways/crossings are SO DANGEROUS! Cars do not stop at stop signs especially between Harry's and Cantina. I have almost been hit twice while in the crosswalk. Let's improve the safety of our citizens.
- The bike lanes on local roads are not safe with distracted drivers of all types including drugs, alcohol, PHONES, and unlicensed drivers of all ages. Expand sidewalks for bikes and walkers for more safety.
- The biggest issue in Ocala that prevents me from doing said activities is the drivers so many people run red lights and if I'm in a cross walk they don't care they still go for it
- We need more places that are safe and well lighted at night
- More lighting, pedestrian and bike traffic is a huge fatality situation now and for people who love to walk or bike and have the option to choose won't because it's unsafe. Major intersections with crosswalks don't have lights or appropriate signage. A speed study was done on SE 30th avenue for example due to it being a major cut from maricamp to fort king. Study showed over 89% of cars speeding but said they couldn't do anything once it was complete & said Opd needs to do more traffic. Well we are a local law enforcement family and that didn't sit well. I couldn't believe how bad the results from the study were. We've considered petitions to attempt to simply get stop signs or even speed humps. Average speeds are 40-55 in a 30mph resd street. According to the study a car passes on average 30 seconds apart at those speeds. Kids from buses and bike riders genuinely risk their life just walking or riding where they need to. It's disappointing this city is so far behind. Been here 40 years.
- In addition the above, I often see school aged children who walk to school and there are no/limited sidewalks and poor lighting. All areas up to schools and areas around schools should all have sidewalks accessible and pedestrian crossing.
- I would like to be able to commute more on my bike but fear of getting hit keeps me in my truck.
- I used to cycle through town. Even the so-called bike lanes are unsafe now. Distracted and impatient drivers make it untenable. Plus the bike lanes are rarely swept of the debris that inevitably collects at the sides of a road. There are a lot of people who ride even bc they can't afford a car. We need to do better
- I think we missed the mark on this survey. We are geared toward parks and shopping etc, but often these areas are only used because sidewalks and lighting don't exist in the citizen's own neighborhood. We also failed to address school children walking to and from school/bus stop; how is that prioritized below "shopping?" Watch your neighborhoods

- when you drive through them and pay attention to all the people walking, biking, and jogging. Do they have sidewalks, any marked crosswalks, lighting, bike lanes, signals, etc? Do they have cars passing them? Do they look safe?
- I have noticed the increment of noisy cars e.i hot rod engine, also speeding cars, loud music etc. It's turning into a hard place to live.
- I commute often to work and ride many bike paths/parks in the Ocala/marion county area. The biggest hazard to our health are drivers driving too fast or too close to us and the road debris taking up 1/2 to 3/4 of every bike lane in the Ocala area. We have to ride very close to the line separating cars and cyclists on the road and we often are nearly hit because the debris we have to avoid in the bike lanes or edge of roads that don't have bike lanes. Baseline road has largest bike lanes but literally has 3/4 of lane full of debris on baseline south of Maricamp. We hit debris, we can flat a tire and crash Or we ride on edge of bike lane and we can easily get hit by a car. Bike lanes have not been cleaned across the city/county. I ride 9K miles a year at this point in ocala and it's sad how the county/city seems to not care about its cyclists.
- Existing roads need resurfacing and maintained. Potholes and rough patch jobs are rampant and not safe for the high psi tire pressures on bicycles. We depend on the quieter back roads for our safety!
- Existing bike lanes filled with debris causing frequent tire damage
- Bike lanes are very good and important, but the bike lanes in Marion County are so dirty! So much garbage and debris that it's dangerous to ride in them.
- Auto technologies have made need for safer walking/biking more important than ever!

## Events (1)

• More bike events related to biking would be nice, the only thing I know about it the Fat Tire Festival. No road bike events.

## **Specific Roadway Locations (8)**

- The Santos Trailhead has become a cycling destination and needs more accessibility by putting in a bike lane on 80th. Also, a tunnel under U.S. 301 would help the trail to so many people.
- When 80th becomes four lanes in 2026 or 2027, a multimodal underpass needs to be constructed at 63rd Street Road. It is very dangerous to cross. Construction will also reduce traffic load since people will be able to use golf carts to attend events and new retail at Calesa.

- SW 38th Street. From 20th to Sam's club is extremely dangerous. Adding apartments with hundreds of more speeding cars is beyond worrying. Sidewalks and bike lanes are desperately needed. The Sam's club intersection needs to be dealt with. There is space for an additional driveway behind the store.
- In SW Ocala, there are 2 great multimodal paths separated by the traffic light intersection of SW 80th Ave. and SW 63rd Street Road. This is the light connecting Stone Creek to Calesa. Does you know who I could contact to see if a connection is part of the plan in Marion County? Two great paths separated by a nasty intersection with curbs.
- I would love to commute via bike or running, but it is definitely not safe. Especially in certain corridors such as Baseline Rd between 92nd/441, 441, and Maricamp on the county maintained portion.
- Create off road bike/walking path along SR 200 and 484 to Santos trail. Approx 1/4 mile Paved path required. Will improve access and safety
- Create better access to Santos trail from SR 200
- NE 36th Ave is in dire need of paved bicycle path from NE 14th St to NE 49th St. NE 35th Street from NE 36th Ave to Baseline Road in Silver Springs also needs paved bicycle path.

#### **Community Facilities (6)**

- Would really benefit from a waterpark or zoo for kids with mascot characters
- We need a good outdoor track for kids/ Not having a public track is sad. Brick city is good but needs improvement!
- Our parks only offer scenery and nothing to do or to promote activity. All we have is a million springs and trees. We need more social activities and equipment for out door use. Frisbee park? Dog parks? Soccer, baseball, sports parks. We all can't afford the WEC center and that's all you worry about. I get nothing for my taxes.
- As a senior, I am extremely active. I power walk minimally 5 mornings every week. I am a member of Marion County Parks and Rec hiking and Kayaking clubs meeting monthly. I physically work out in Tuscawilla Park daily along with others, effectively turning our Park into a gym by using Park benches, children's play ground equipment and stairs. There is a huge emphasis on children's playgrounds in our parks, but adult workout stations are grossly overlooked.
- Active recreation centers are great for the community. Thank you for looking into ways to improve and add them. Sites
  like the Cross Florida Greenway are wonderful and I hope to see more areas to walk and bike safely added.
- Should have a large park with a body exercise weights on the SW side of Ocala

#### General (14)

• This was a confusing questionnaire.

- Thank you for asking how you can improve bike safety and promote a healthy lifestyle.
- Stop paving horse country.
- Stop building houses. You're worried about transportation? You are ruining the roads because of all of the building. Worry about that first. YOU ARE RUINING OUR COUNTRY CITY OCALA!
- Something DESPERATELY needs to be done with the roads BEFORE we even consider parks!!!
- Please reduce traffic
- Add more bus services
- Ocala needs a passenger train rail system to connect passengers from Major cities. It's critical and much needed when we need to fly using Orlando or Tampa International Airports... Amtrak would be a great option.
- Marion county's public transit is HORRIBLE and the lack of sidewalks to even walk around my own neighborhood is HORRIBLE and all the added construction of new homes have made it even worse and over crowded streets
- I would definitely be spending and going more if we had public transportation on a better timely schedule.
- Consider improving these conditions for the Marion county diaspora community who have left home and enjoy the qualities of sound infrastructure and urban planning. If you do small investments now, then it will be amenable for outta state Ocalans to want to visit and extend their stays. Just sayin.
- Citizens organized trash pickups on the parks, trailheads, along side of the roads and trails.
- Beyond this the over development is destroying Marion county The traffic. The lack of left turn lanes The traffic especially on 200 and at 60th. The poor quality builders are detrimental to our safety. This state has become extremely buyer beware. Be very beware
- Belleview and Ocala could be a huge bike mecca promoting B&Bs, hotels, restaurants, etc if we had more bike lanes connecting to the paved and dirt trails. Connect neighborhoods and restaurants to the trails.

# **Active Transportation Plan Comment Map Summary**

The following summarizes comments received from the online comment map. A total of 29 comments were shared by members of the public. Comments were organized by Pedestrian, Cyclist, Equestrian and Other. The comment map was open the public from September 18, 2024 to February 28, 2025.



# <u> Pedestrian</u> (17)

- 62nd Place, Ocala Park Estates: Paved sidewalk needed for busy neighborhood. Children walking or waiting for bus in the grass.
- SW 20th Street: Sidewalk needed from CF to under I-75. Currently, pedestrians walk on grass and side of road from 38th to College.
- SR 200: Need better crosswalk at Paddock Mall crossing to CF.
- SR 200 at 27th Avenue: Difficult intersection to cross, scary for walkers. Needs improvements.
- SW 5th Street, east of SW 20th Avenue: Review this area of city. Sidewalks missing or in bad shape.
- Downtown to Mid-Town: Need better crosswalks for pedestrians between Midtown areas with new hotel and Downtown Square.
- NW 22nd Street, between MLK and US 301/Pine Avenue: Sidewalks needed. A lot of walkers on the street traveling to Howard Academy.
- NW 35th Street, between W. Anthony Road and US 301/Pine: Sidewalks needed.
- NE 28th Street, between NE Jacksonville Road and NE 14th Avenue: Need lighting and sidewalks. Children walking to school and pedestrians along road and in dark.
- NE 35th Street at NE 18th Terrace area: Need sidewalks on 35th including in county limits. Death trap to commute with pedestrians in the roadway or bicycles popping in and out of nowhere, poor lighting.
- NE 25th Avenue (7), between NE 34th Place and NE 28th Street: Sidewalks needed, curves of road are dangerous, two churches with pedestrian activity and speeding vehicles.

#### Cyclist (7)

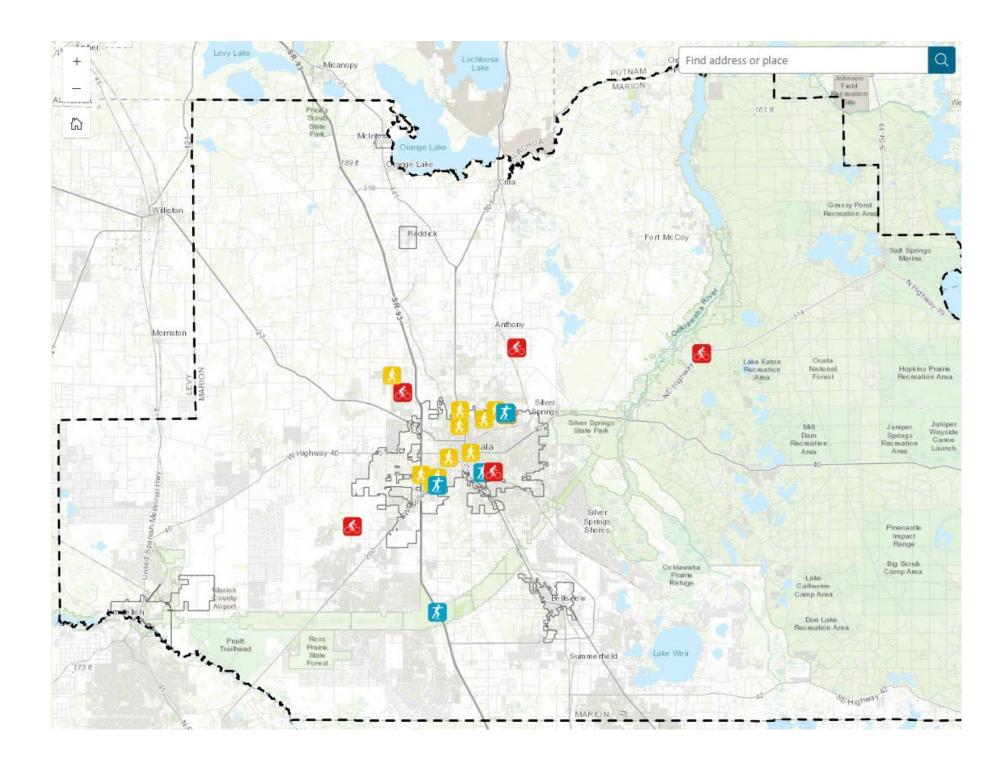


- SW 80th and SW 63rd Avenue: Multimodal underpass needed from Stone Creek to Calesa.
- Ocala Park Estates/NW 49th: Ocala Park Estates at 49th Street, using new interchange and access via 35th Street.

- Highway 314: Bike Path needed from SR 40 to Salt Springs.
- SE 18th Street/SE 18th Avenue: Bike comment.
- NE 25th Avenue (2), between NE 34th Place and NE 28th Street: curves of road are dangerous, two churches, no bicycle access.
- NE 36th Avenue area. Bike comment.

# **7** Other (5)

- Landbridge over I-75 (Cross Fl Greenway): Safety improvements. Cyclists travel too fast with people and horses walking. Tight crossing.
- SW 27 Avenue at Easy Street: Dark, poor lighting at intersection.
- Florida Northern Trail: Convert existing rail line to trail in City of Ocala.
- NE 25th Avenue (2), between NE 34th Place and NE 28th Street: curves of road are dangerous, two churches, no bicycle access, no sidewalks. Fast driving.



# **APPENDIX C:**

Existing Conditions

# **Existing Conditions**

# 1. County Overview

The Ocala Marion TPO covers all of Marion County, including the Cities of Belleview, Dunnellon, and Ocala. Marion County is the 5th largest county in Florida, covering 1,663 square miles with only 4.7% covered by water. The population in 2024 was 419,510. There are over 2,000 acres of parks and more than 40 natural springs. Marion County is also home to the Ocala National Forest and has part of the Cross Florida Greenway. These natural and recreational assets highlight both the demand and opportunity for a safe and well-connected active transportation system. By linking neighborhoods, parks, and regional destinations, the ATP supports the County's goals of improving safety, expanding access, and enhancing quality of life. Investments in trails, sidewalks, and bicycle facilities not only provide connections to these community resources but also align with the ATP's broader vision of creating a healthier, more connected, and economically vibrant county.

The data used in this section comes from the US Census Bureau's American Community Survey 5-Year Estimate Data for 2023. The data is broken down into census tracts within Marion County.

# 1.1 Population Density

The 2024 county population of 419,510 is projected to reach 526,500 by 2050¹. Using data from the US Census Bureau's American Community Survey 5-Year Estimate Data for 2023, population density across Marion County was calculated to highlight concentrations of residents and provide insight into where active transportation investments may have the greatest impact. **Figure 1** shows the population density by census tracts in Marion County. The highest density areas are shown in the darker red colors, with the lowest density areas shown in the lighter tan colors.

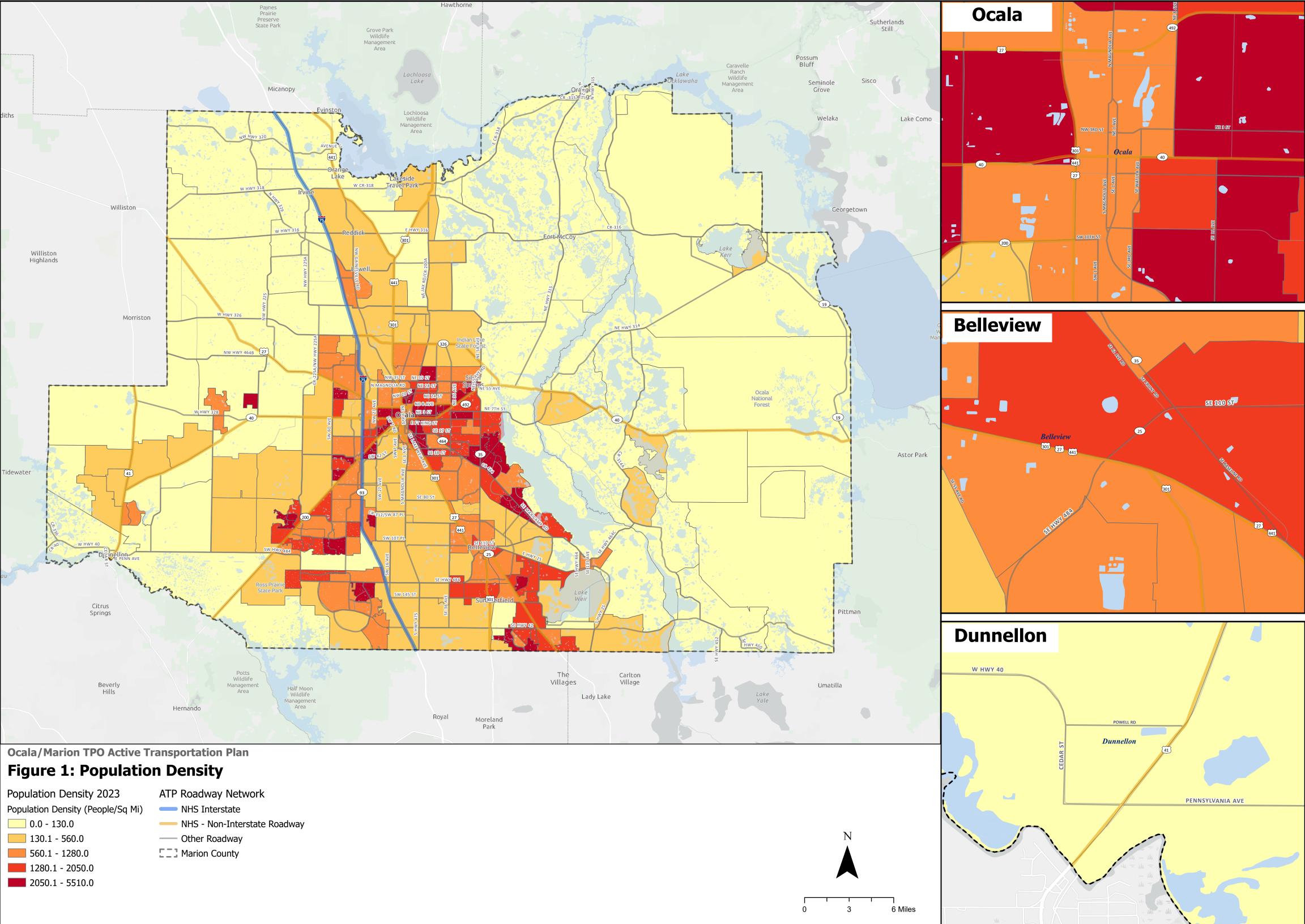
The highest concentrations of population are found in and around the City of Ocala, particularly near the downtown district. Other notable high-density corridors include the SR 464 corridor southeast of Ocala, the SR 27 corridor northeast of Ocala, and

1 BEBR medium forecast

the SR 200 corridor southwest of the city. These areas reflect the urban and suburban growth centers, where demand for walking, biking, and transit connections is greatest.

In contrast, the lower-density areas form a horseshoe around Ocala, encompassing large portions of rural Marion County. These include areas in eastern Marion County bordering the Ocala National Forest, the US 27 corridor northwest toward Williston, and the lands northeast of Ocala near the Silver Springs Forest Conservation Area. Much of this area is characterized by agricultural land, equestrian properties, and preserved green space, with population densities of fewer than 130 people per square mile.

This distribution highlights the diverse contexts across Marion County. Urban neighborhoods benefit from enhanced pedestrian and bicycle facilities to support short trips and transit access, while suburban and rural communities benefit from trail systems, equestrian facilities, and safe connections to schools, parks, and regional activity centers



### 1.2 Car Ownership

The number of vehicles available to a household offers valuable insights into transportation needs and accessibility. Households without access to a car are often more dependent on walking, biking, and public transit to meet daily travel needs. Figure 2 illustrates the proportion of households in Marion County with no vehicles.

#### Households with No Vehicle Access

Census tracts with the highest share of zero-vehicle households, ranging from 15% to 32%, are concentrated in Fairfield and in parts of West Ocala, particularly in the area bordered by SW 27th Avenue, N Pine Avenue, SW 10th Street, and SR 40. These communities reflect higher levels of economic vulnerability, where limited access to private vehicles increases reliance on affordable and accessible alternatives such as sidewalks, bike lanes, and transit services. Additional areas where 4% to 9% of households lack vehicle access include Citra, Dunnellon, Rainbow Park, and Woods and Lakes. These smaller clusters highlight the presence of mobility challenges in both urban and rural contexts.

#### 1.3 Commute Mode

Commute mode identifies the method people use to travel to their place of employment. While the majority of Marion County residents drive alone to work, a small but important share rely on walking, biking, or public transit. These active and shared modes provide insight into where there may be greater needs for pedestrian, bicycle, and transit facilities. **Figure 3**, **Figure 4**, and **Figure 5** illustrate the distribution of these commuting patterns across the county.

#### 1.3.1 Walk to Work

The highest percentages of pedestrian commuters, ranging from 3% to 9%, are concentrated in areas such as Dunnellon, Chatmire, Rainbow Springs, and surrounding communities. Smaller concentrations are also present in Romeo, McIntosh, Orange Lake, and east of Williston, as well as in parts of West Ocala, including the Northwest Historic District and the North Magnolia Business District. These are areas with more compact development or historic cores where walking is a feasible option.

Moderate levels of walking, between 0.8% and 3%, are observed in Historic Downtown Ocala, the area near North Lake, and smaller communities such as Weirsdale, Fairfield, Flemington, **and** Emathla. This distribution reflects areas where destinations are close, which may support short walking trips.

#### 1.3.2 Bicycle to Work

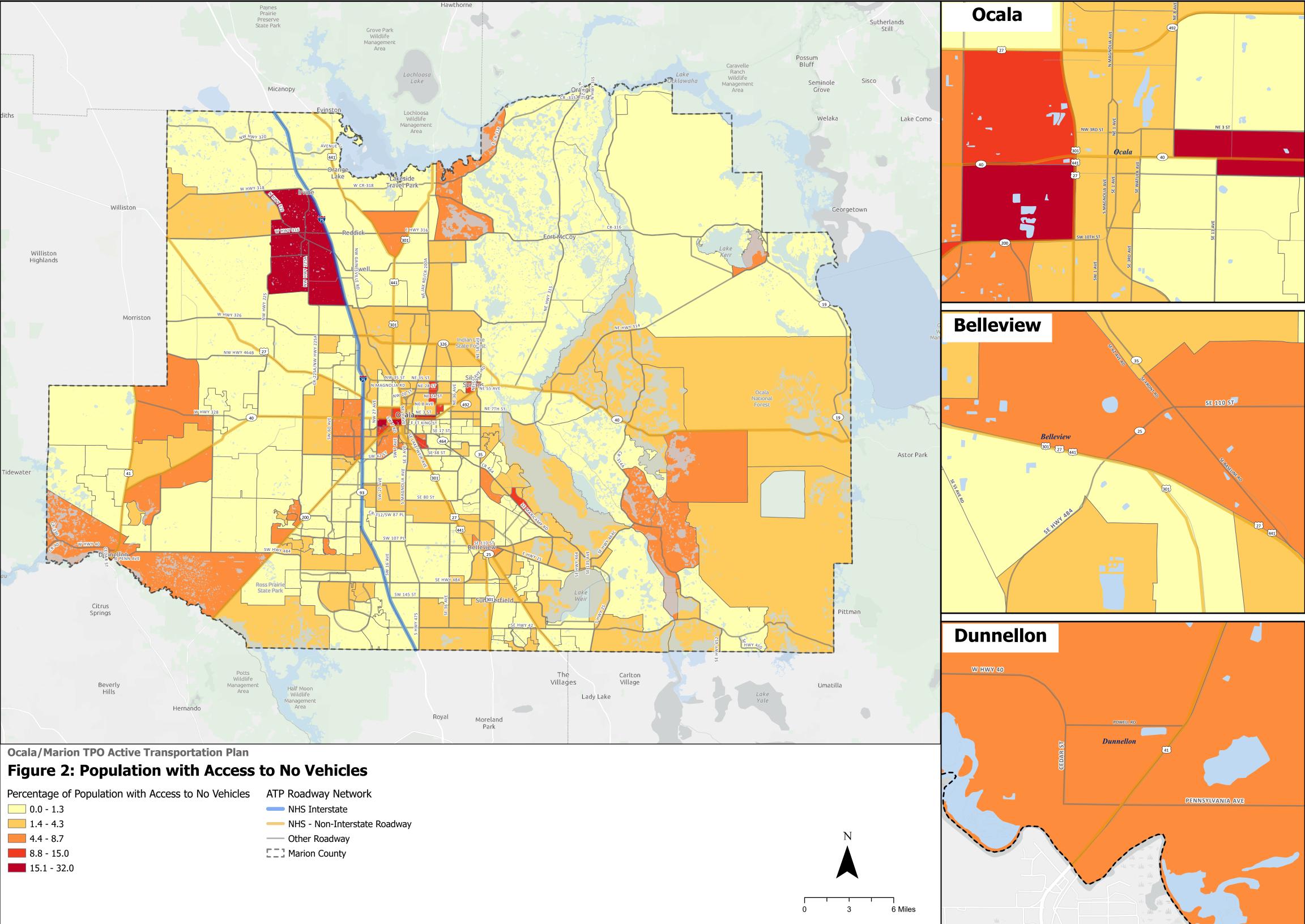
Although bicycle commuting remains a small share overall, there are notable concentrations. The highest rates, between **3**% and 9%, occur in Citra, Ocklawaha, and northeast Ocala. These communities may have demographic or geographic characteristics that make biking a practical option, particularly for short-distance commutes.

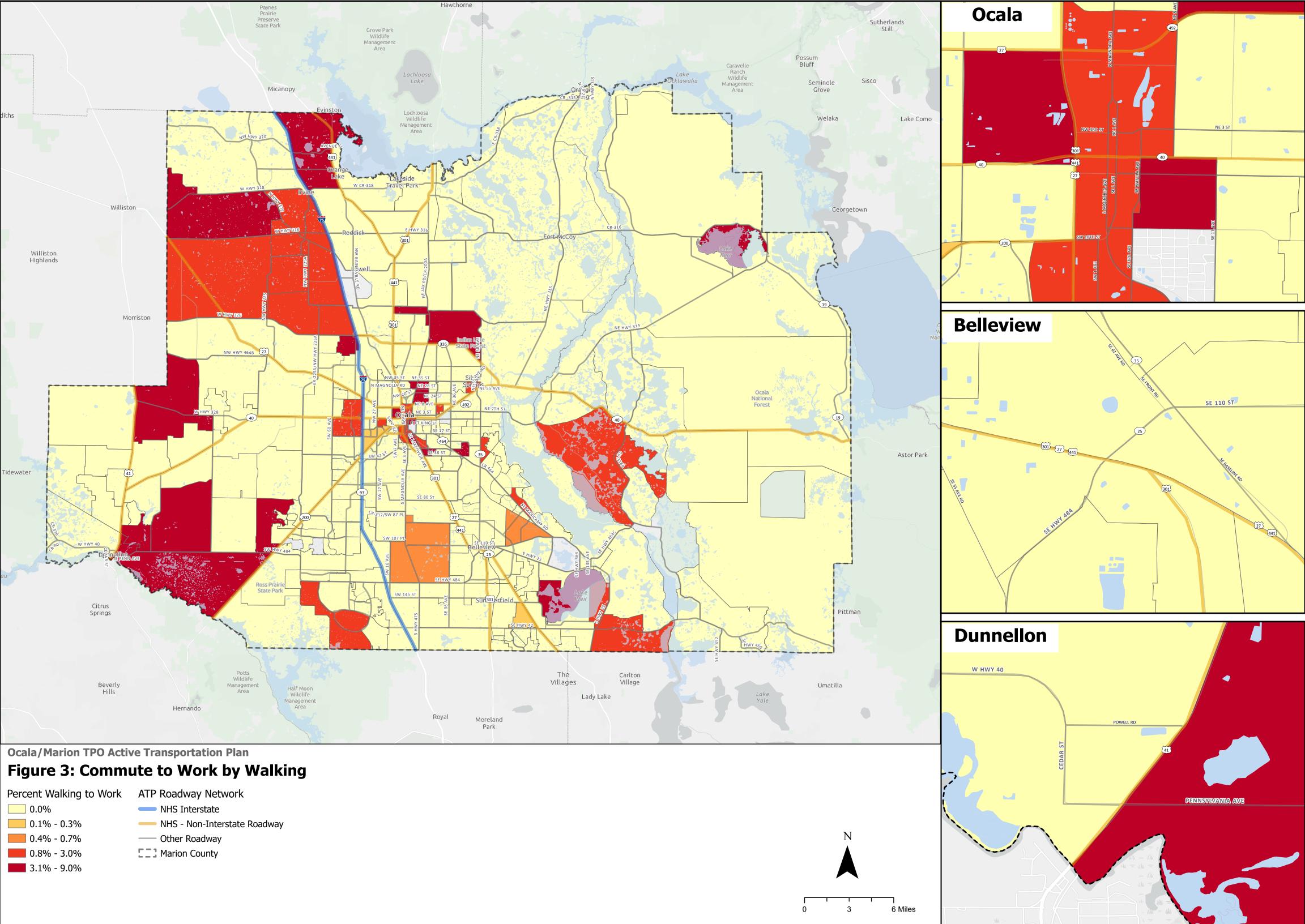
Moderate bicycle commuting, ranging from 0.8% to 3%, is found in Kendrick, West Ocala (between NW 60th Avenue and NW 80th Avenue), the area south of Ocala between SE 59th Street and SE 95th Street, and east of the Marion County Airport. These locations could benefit from targeted bicycle facilities to support and grow an existing base of bicycle commuters.

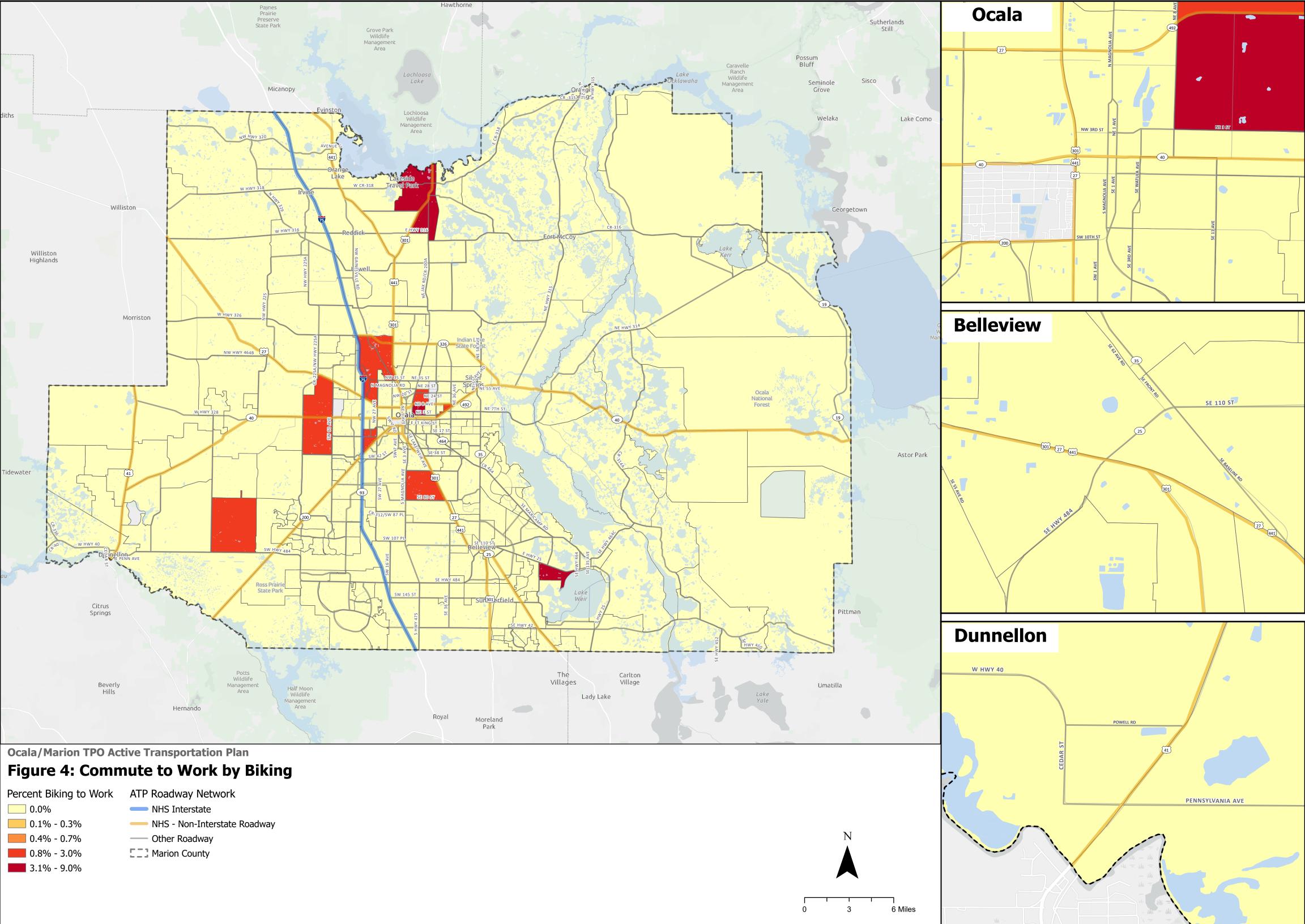
#### 1.3.3 Transit to Work

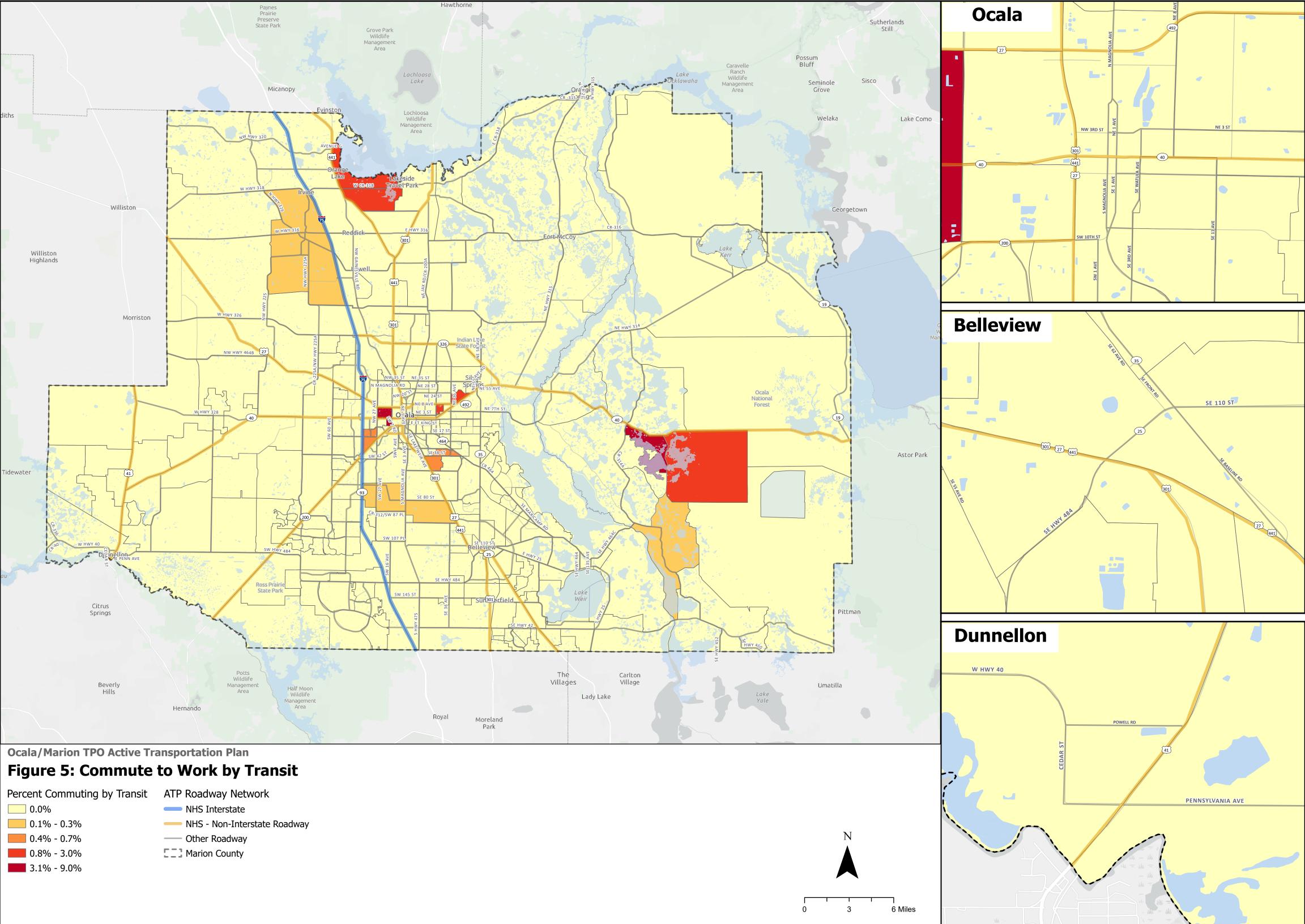
Transit commuting is limited across Marion County but plays a meaningful role in certain areas. The highest percentages, 3% to 9%, are found in West Ocala, west of SW 16th Avenue. This corresponds with areas that have relatively higher density and better access to existing transit routes.

Moderate levels of transit commuting, between 0.8% and 3%, are seen east of Woods and Lakes, **in** northeast Ocala, and around Orange Lake. These patterns highlight where residents are already relying on transit and where enhanced service or supportive pedestrian/bicycle access could improve connectivity.









# 2 Existing and Planned Facilities

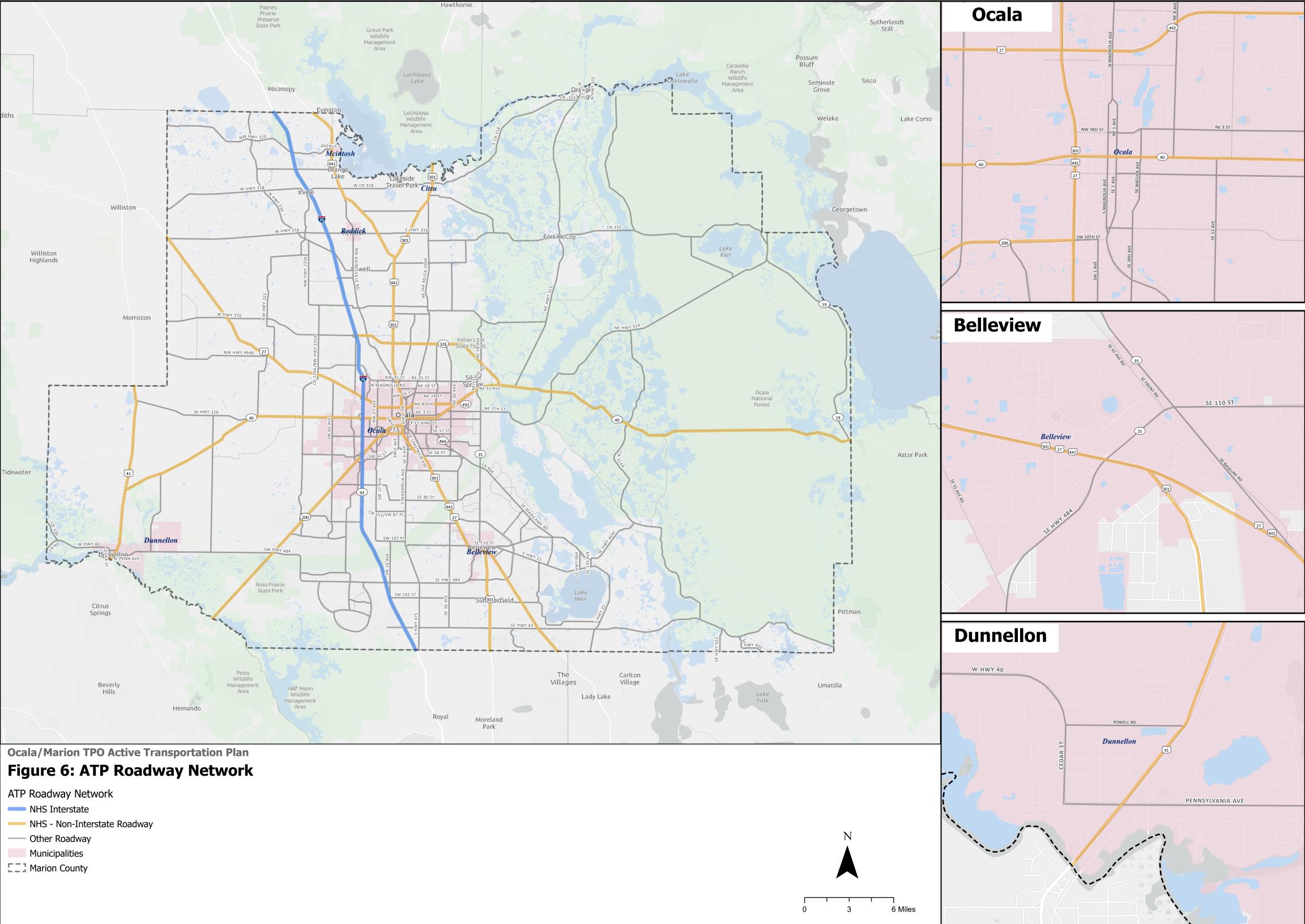
# 2.1 Roadway Characteristics

The roadway network selected for the ATP is based on the Congestion Management Plan (CMP) Roadway Network. The CMP is a federally required, data-driven process in large metro areas that evaluates and guides strategies to manage transportation congestion. The network consists of all existing functionally classified roadways and roads with construction funded through 2028. This is known as an existing-plus-committed network. **Table 1** and **Figure 6** display the distribution of roadway types on the National Highway System in Marion County.

Additional roadway data such as posted speed, number of lanes, and annual average daily traffic (AADT) were obtained from the Florida Department of Transportation (FDOT) Roadway Characteristic Inventory (RCI).

**Table 1: ATP Roadway Network** 

Roadway Type	Miles of Roadway			
NHS – Interstate	38.2 miles			
NHS – Non-Interstate	175.8 miles			
Other CMP Network Roadways	724.6 miles			
Total	938.6 miles			



#### 2.1.1 Speed Limits

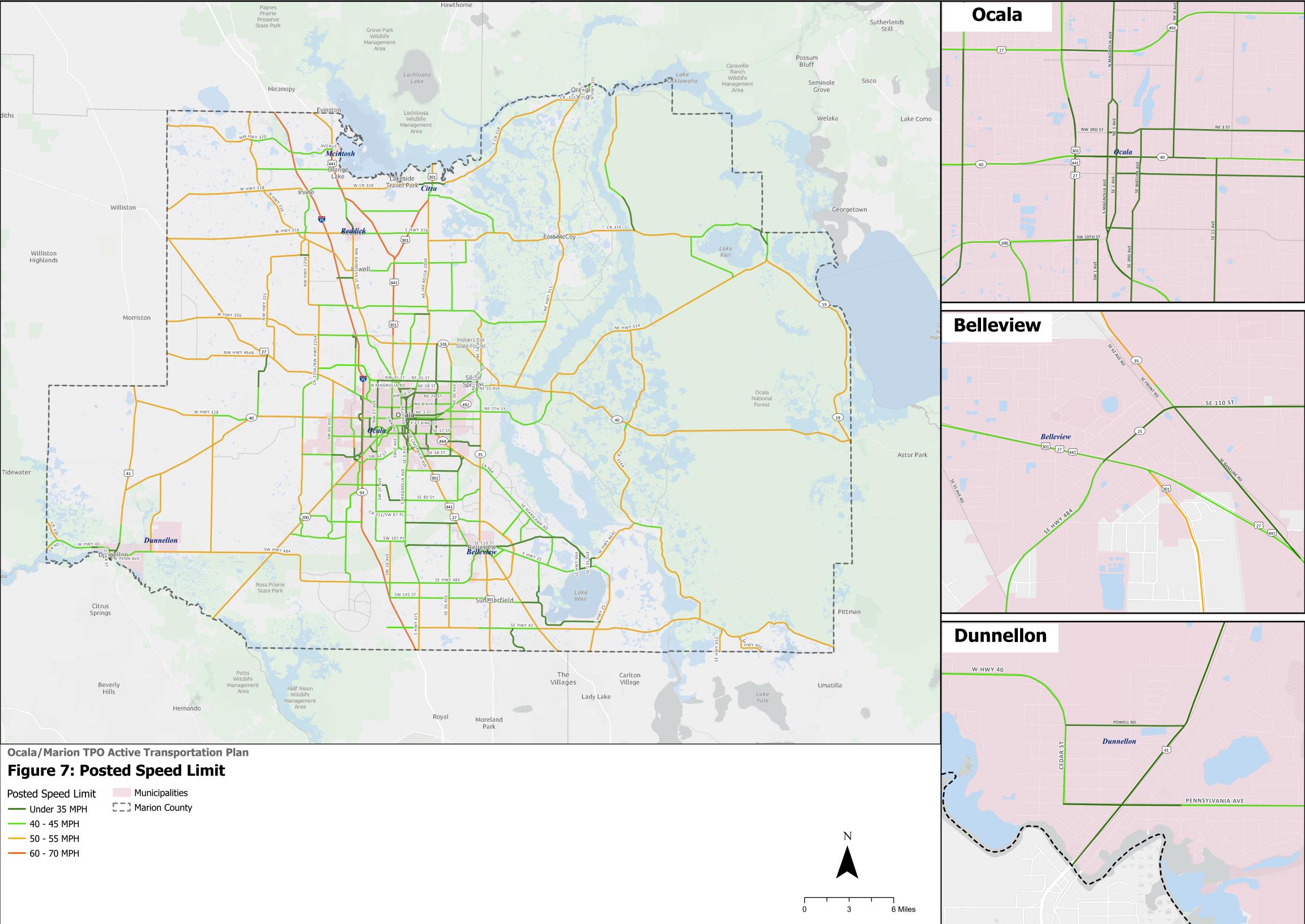
The ATP roadway network (existing and committed major road network) is characterized by relatively high travel speeds, which can have important implications for the safety and comfort of people walking, biking, or using other active modes. As shown in **Table 2** and **Figure 7**, more than half of the study roadway network consists of roadways with posted speed limits of 50 mph or greater, representing approximately 54% of the total system.

These higher-speed roadways are generally found along major arterials and state roads that serve regional travel demands and connect Marion County to surrounding jurisdictions. While these corridors are essential for moving vehicles efficiently, they can present significant barriers for pedestrians and bicyclists due to limited crossing opportunities, wider travel lanes, and increased crash severity at higher speeds.

Understanding the distribution of posted speed limits across the ATP network is a key step in prioritizing active transportation projects. Areas with higher speeds may require additional investments, such as multiuse trails, buffered bike lanes, pedestrian crossings, or traffic calming measures to support safe and convenient mobility options for all users.

**Table 2: Posted Speed Limit Distribution** 

Posted Speed Limit	Miles of Roadway			
Under 35 mph	111.2 miles			
40-45 mph	318.7 miles			
50-55 mph	452.1 miles			
Above 60 mph	56.6 miles			
Total	938.6 miles			



#### 2.1.2 AADT & Number of Lanes

2023 traffic volumes were collected from 360 traffic count locations across Marion County, providing a comprehensive picture of roadway use and demand. The highest AADT volumes are observed along the county's major corridors, including I-75, SR 200, and US Highway 441. These corridors serve as critical north-south and east-west connections, carrying both local and regional travel demands. Traffic volumes on I-75, for example, reflect its role as a vital freight and passenger corridor in Florida's interstate system, while SR 200 and US 441 serve as primary commercial and commuter routes for the Ocala urbanized area.

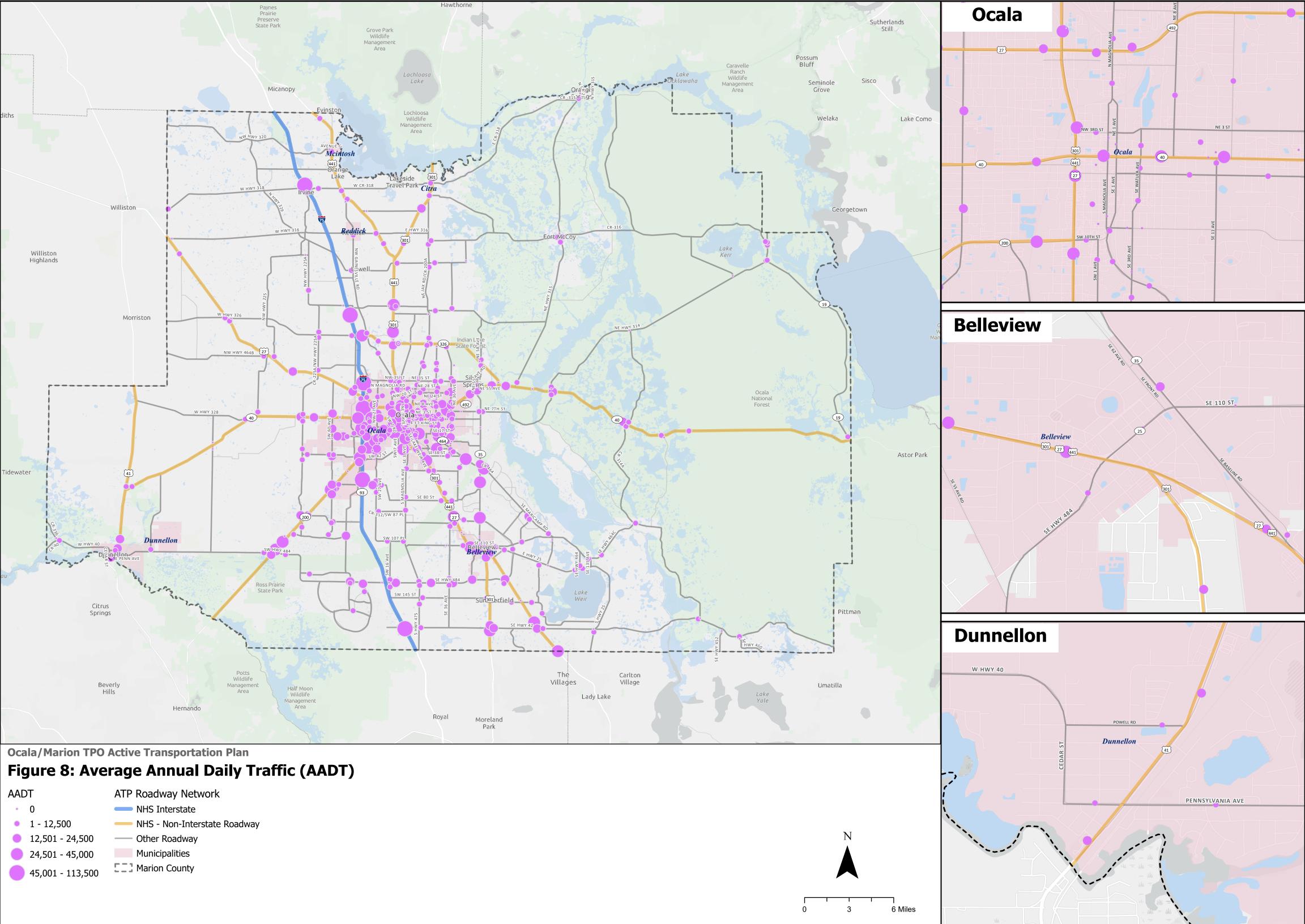
**Figure 8** displays the distribution of AADT across the Marion County roadway network. Beyond these highways, moderate AADT levels are distributed across other arterial corridors, such as US 301, SR 40, and SR 464, which link urban and rural communities. Lower-volume facilities, generally under 12,500 vehicles per day, are found along collectors and local roadways serving small towns, agricultural areas, and natural resource lands. Understanding these patterns helps highlight where roadway demand is concentrated and where potential conflicts with active transportation users are most likely.

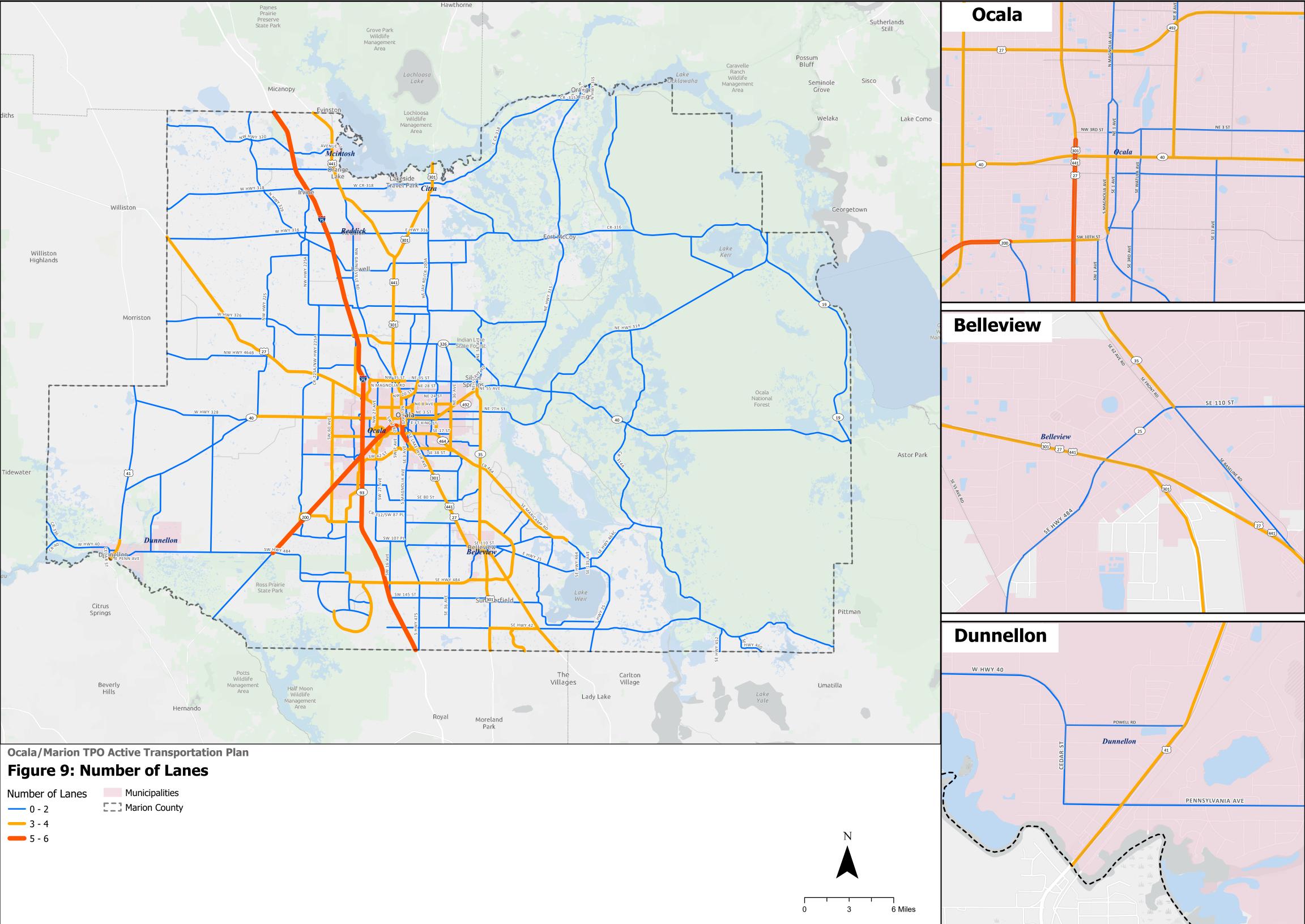
As shown in **Table 4** and **Figure 9**, the physical design of the roadway system is dominated by two-lane roadways, which make up 72% of the total network. These facilities are common in rural and suburban areas, where development is more dispersed and traffic volumes are lower. Approximately 21% of the roadway mileage consists of four-lane facilities, many of which are key arterial routes through and around Ocala that accommodate higher volumes of regional and commuter traffic.

A smaller but significant portion of the network (52 miles) is six lanes wide, consisting primarily of I-75 and a portion of SR 200.

**Table 3: Number of Lanes Distribution** 

Number of Lanes	Miles of Roadway			
Unknown	9.4 miles			
2 lanes	679.5 miles			
4 lanes	197.7 miles			
6 lanes	52.0 miles			
Total	938.6 miles			





# 2.2 Existing and Committed Walk and Bicycle Networks

An analysis of the existing plus committed (programmed projects) sidewalk, bicycle and trail facilities was conducted for the development of the Active Transportation Plan. Existing facilities, as reflected in the following maps, provide an understanding of the coverage and types of active transportation in Marion County.

#### 2.2.1 Pedestrian Facilities

As shown in Figure 10, Marion County's existing sidewalk network is concentrated within its urban centers, with the most consistent and connected facilities located in the **City of Ocala**. Within Ocala's downtown and adjacent neighborhoods, sidewalks are generally well-connected and often present on both sides of major corridors. These areas form the county's most walkable environment, supporting both residential neighborhoods and commercial districts.

Outside of the City of Ocala, sidewalks are distributed more sporadically but remain notable in several communities. Marion Oaks and the City of Dunnellon have relatively well-connected sidewalk systems compared to surrounding areas. Sidewalk coverage in Dunnellon extends along primary streets near the downtown area, while in Marion Oaks, sidewalks are integrated within residential subdivisions, enhancing local connectivity.

In the City of Belleview, sidewalks are primarily concentrated along main thoroughfares near the center of the community. Facilities are present along US 301/441 (SE Abshier Boulevard), CR 25 (SE Hames Road), SE Robinson Road, and SE 92nd Loop, providing important connections to civic and commercial destinations. However, coverage quickly drops off beyond these core streets.

Elsewhere in the county, sidewalks appear intermittently along major corridors and near newer subdivisions, particularly in areas southeast of Ocala near SR 464. While some neighborhoods include sidewalk segments, these facilities are not continuous along the highway itself. Rural areas across Marion County generally lack sidewalk coverage, which limits safe pedestrian mobility outside of urbanized or suburbanized zones.

In addition to the existing sidewalks and shared use path, construction of new sidewalks and shared use paths are committed on SR 25/500/US 441 from SE 102nd Place to SR 200/SW 10th Street, Marion Oaks Manor, SW 9th Avenue, SW 38th Street, Belleview to Greenway Trail and SW 49th Street. Section 4.2.4 Planned Bicycle and Pedestrian Improvements provides more information on the committed segments that are included in the Transportation Improvement Program (TIP).

#### 2.2.2 Bicycle Facilities

As shown in **Figure 11**, on-street bicycle facilities in Marion County are relatively sparse compared to the sidewalk network. The strongest presence of existing facilities is concentrated within and around the Ocala downtown area, where marked lanes and designated routes provide some degree of connectivity. Notable corridors include CR 255A (SW 60th Avenue), CR 475C, SE 58th Avenue, and SR 27 (SE 10th Street). However, bicycle facilities remain limited outside of Ocala, with most communities across the county lacking designated facilities. This patchwork underscores the need for a more cohesive bicycle network to support safe and continuous travel for bicyclists throughout Marion County.

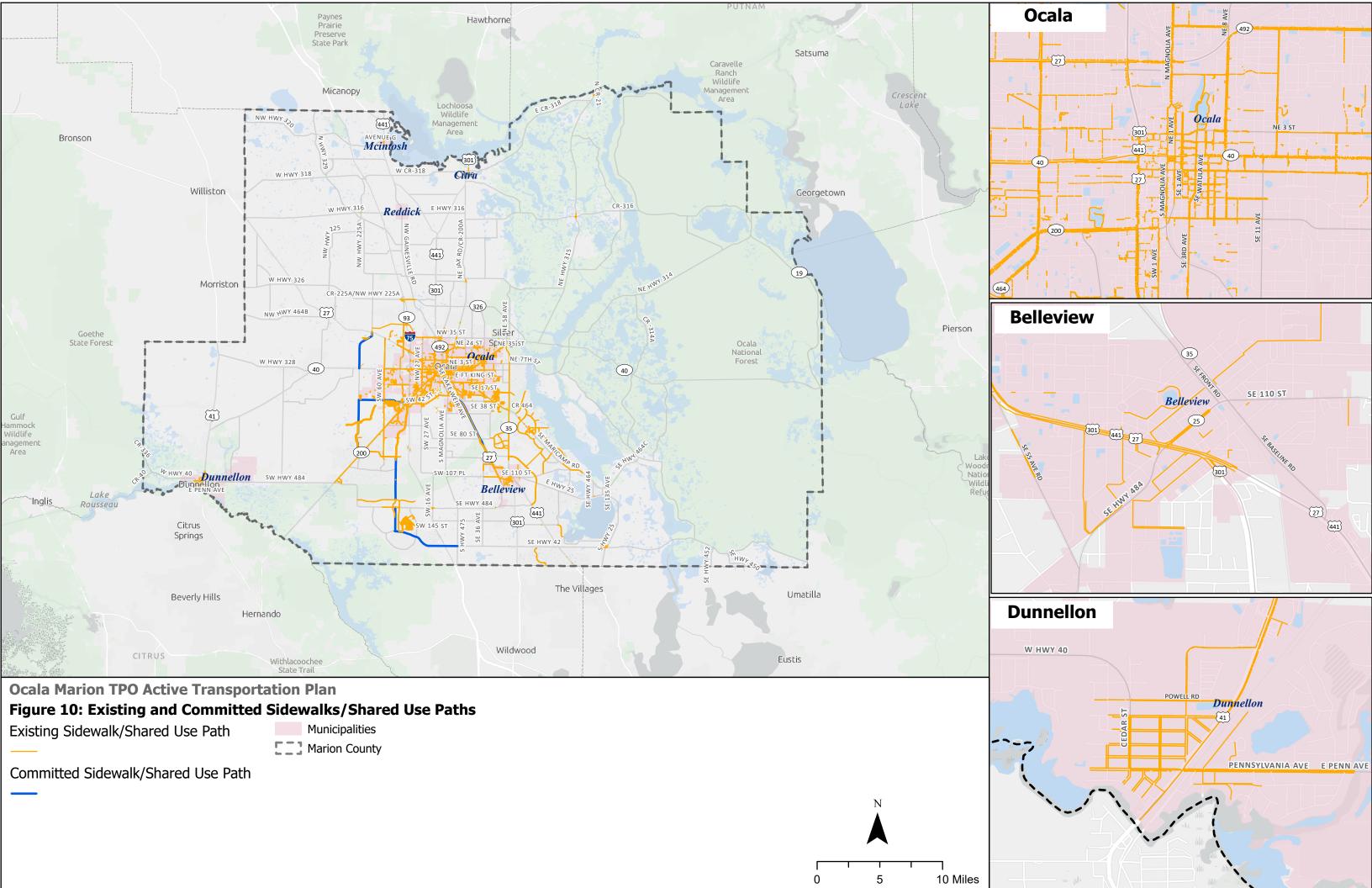
In addition to the existing bike lanes, construction of new bike lanes is committed on SR 25/500/U.S. 441 from SE 102nd Place to SR 200/SW 10th Street, NE 35th Street and SW 49th Avenue. More details on the committed segments can be found in Section 4.2.4 Planned Bicycle and Pedestrian Improvements.

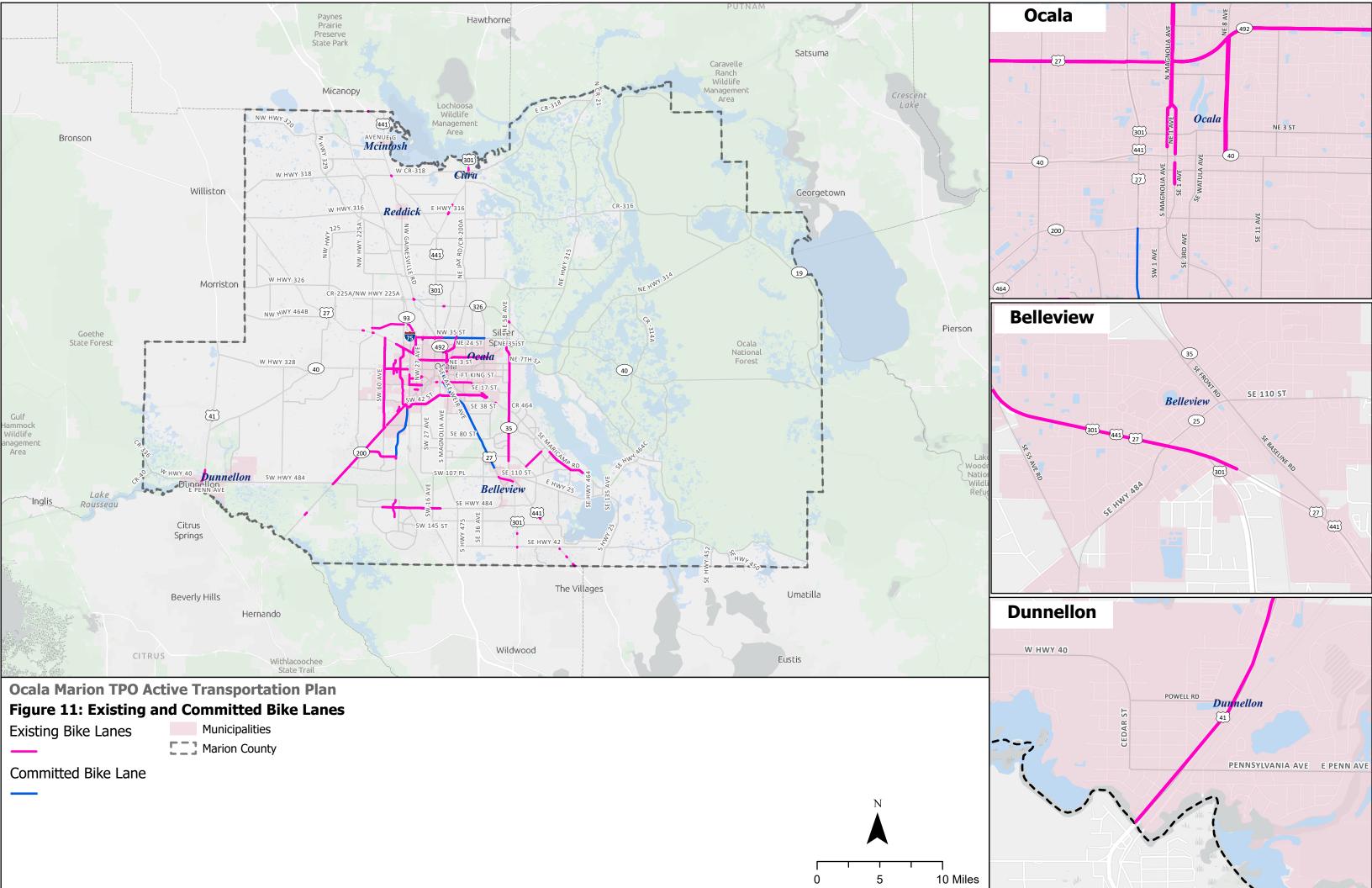
#### 2.2.3 Trails

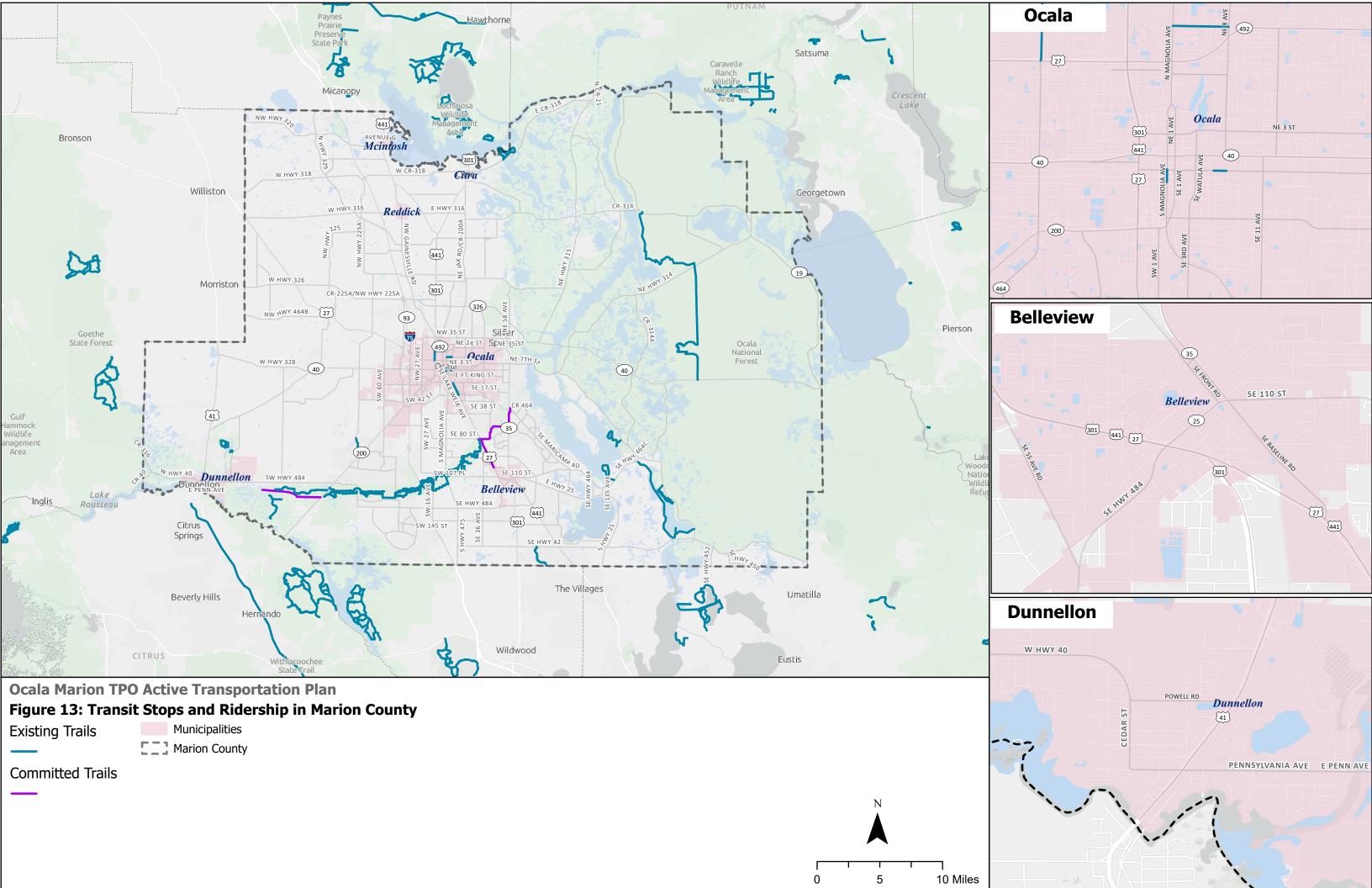
**Figure 12** shows the existing trails in Marion County. Within the City of Ocala, existing shared use paths are found along NW MLK Jr. Avenue north of US 27, NE 14th Street in the North Magnolia area, E Fort King Street, and N Magnolia Avenue, as well as CR 464A between SE 31st Street and SE 17th Street. These segments offer localized connectivity but remain relatively short and discontinuous.

At the regional scale, Marion County benefits from the SUNTrail network, which is a key statewide initiative to expand Florida's interconnected trail system. Within the county, the SUNTrail corridor enters from the west near Dunnellon, travels south of Ocala, and extends eastward along SR 40 toward the county boundary before turning north along Hog Valley Road. Portions of this network are already in place, while others remain in the planning or funding stages. The most notable completed segment is the Cross Florida Greenway Paved Trail, extending between SR 200 and east of CR 484, which offers a high-quality facility for both recreational users and nonmotorized commuters.

New trails were committed to be constructed on The Cross Florida Greenway. More details on the committed segments can be found in Section 4.2.4 Planned Bicycle and Pedestrian Improvements.







#### 2.3 Existing Transit System & Transit Ridership

Marion County is served by SunTran, the fixed-route public transportation system operating in the City of Ocala and unincorporated Marion County. SunTran operates seven routes and maintains 360 bus stops, providing mobility options for residents, workers, and visitors. Between October 2023 and September 2024, SunTran recorded a total of 238,664 passenger trips, reflecting its importance as a transportation resource for the community.

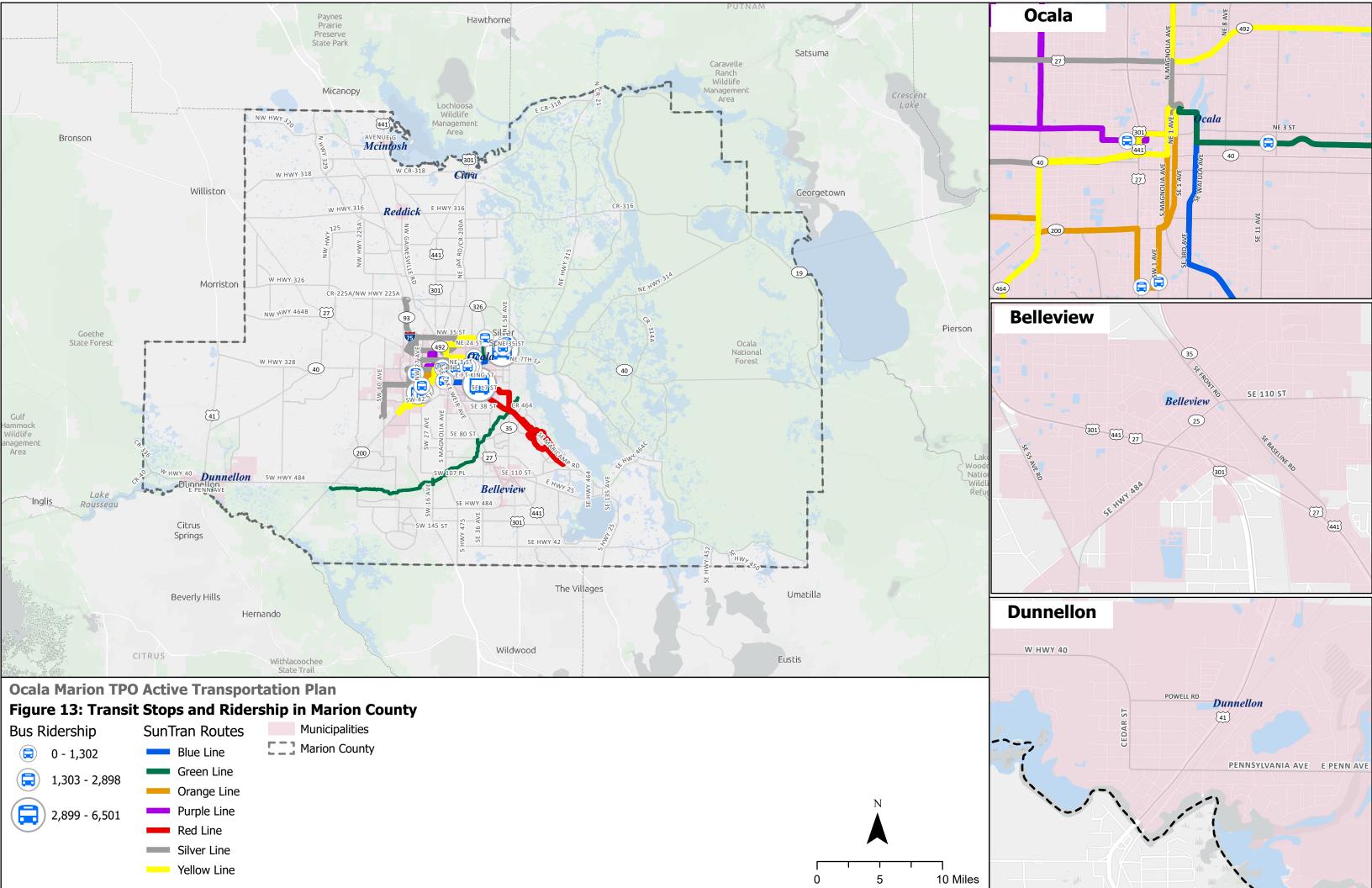
As shown in **Figure 13**, ridership levels vary across the system, with higher concentrations of use along central corridors and within the downtown core. The **Downtown Ocala Transfer Station** serves as the system's most active hub, facilitating connections between routes and attracting the highest ridership. Other high-demand stops include Walmart Silver Springs and the Florida Department of Health, which together demonstrate how major employers, health services, and retail destinations shape transit travel patterns.

**Table 5** provides data for the top 19 bus stops, where ridership ranges from over 6,500 boardings at the busiest locations to fewer than 1,000 at lower-volume stops. This distribution indicates that while transit service is geographically dispersed, demand is strongly clustered around key employment centers, shopping destinations, and civic services.

**Table 4: Top 19 Bus Stop Ridership** 

Stop Name	Total Ridership		
Downtown Transfer Station	39,982		
Wal-Mart Silver Springs	6,501		
Florida Department of Health	6,271		
SW 27th Ave & SW 19th Ave Rd N	2,898		
Paddock Mall	1,846		
NE 14th St & NE 28th Ave W	1,302		
NW 2nd St & Interfaith East	1,257		
W Silver Springs Blvd & SW 33rd Ave	1,143		
Marion County Public Library	1,133		
NE 36th Ave & NE 35th St W	1,073		
NE 55th Ave & NE 30th St	1,070		
SW 27th Ave & Zaxbys S	1,002		
SW 27th Ave & SW 20th St N	959		
NE 2nd St & NE 11th Ave W	948		

SW 15th Pl & SW 1st Ave	945
NE 3rd St & NE 25th Ave W	941
SR 40 & NE 52nd Ct E	933
NE 3rd St & NE 22nd Ave W	921
SW 16th St & S Pine Ave W	914



# 2.4 Planned Bicycle and Pedestrian Improvements

The Ocala Marion TPO's FY 2025–FY 2029 Transportation Improvement Program (TIP) includes three major bicycle and pedestrian projects, each intended to strengthen the county's nonmotorized transportation network and improve regional connectivity. These projects are strategically located to connect residential neighborhoods, commercial corridors, and regional trail systems.

- 1. **Cross Florida Greenway (Baseline Road to Santos Paved Trail)** Funded for construction in FY 2026, this project will close a key gap in the regional trail network by connecting residential areas to the Santos Trailhead, one of the state's premier off-road biking destinations.
- 2. **Pruitt Trail (SR 200 to Pruitt Trailhead Multi-Use Trail)** Also funded for FY 2026, this project will create a paved trail from Pruitt Trailhead across
- 3. SR 200, serving both recreational users and commuters in a high-growth area of southwest Marion County.
- 4. **SR 25/500/US 441 (SE 102nd Place to SR 200/SW 10th Street)** Scheduled for construction in FY 2027, this project will add a bicycle lane and sidewalk, improving multimodal access and safety on one of the county's most heavily traveled corridors.

#### **Additional Planned Improvements**

In addition to the TIP-funded projects, Marion County and its municipalities have identified several locally planned bicycle and pedestrian improvements that complement the regional system:

- **NW/SW 44th Avenue** Install bicycle lanes to improve north-south connectivity west of Ocala.
- Emerald Road Extension Add new sidewalks and bicycle lanes serving neighborhoods east of Ocala.
- **Belleview to Greenway Trail** Construct a shared use path linking the City of Belleview with the Cross Florida Greenway, providing a regional recreation and commuting option.
- **SW 49th Street** Construct sidewalks and a shared use path to serve residential areas and enhance east-west connectivity.
- **CR 484/Pennsylvania Avenue** Construction of two new crosswalks, bridge pedestrian barriers on the Rainbow River bridge and shared use path connection to Blue Run Park in Dunnellon

# 3 Safety

Safety is a high priority in Marion County due to the significant number of crashes occurring on its roadway network. Between 2019 and 2023, there were 44,938 reported crashes in the county. These crashes resulted in 491 fatalities, of which 18% involved pedestrians and 3% involved bicyclists. Additionally, there were 1,857 serious injuries during this period, with pedestrians accounting for 5% and bicyclists for 2.7% of those injuries. These statistics highlight the vulnerability of nonmotorized travelers and underscore the importance of improving walking and bicycling facilities. Table 6 shows the five-year statistics of fatal and serious injury crashes in Marion County.

Table 5: Five-Year Pedestrian and Bicycle Fatalities and Serious Injuries

	2019-2023	2019	2020	2021	2022	2023
# of Pedestrian Fatalities	90	20	22	18	17	13
# of Pedestrian Serious Injuries	100	24	16	16	16	28
# of Bicycle Fatalities	15	1	2	3	5	4
# of Bicycle Serious Injuries	51	8	12	8	14	9

As shown in **Figure 14** and **Figure 15**, fatal and serious injury bicycle crashes are heavily concentrated in and around the City of Ocala, particularly along major roadways such as SR 200, SR 40, and US 301. A smaller cluster is also visible near Summerfield along US 27, where higher traffic volumes and limited bicycle facilities create conflict points. Fatal pedestrian crashes, on the other hand, are more widespread across the county compared to bicycle crashes. In addition to the overlap along Ocala's core corridors and highways, higher concentrations of pedestrian crashes are observed in the City of Belleview and Summerfield, particularly along US 27. Other critical hotspots include SR 464 near Silver Springs Shores, US 41 north of Dunnellon, and Highway 318 west of Irvine.

These crash patterns reveal the need for targeted safety interventions in both urbanized areas with higher activity and rural corridors where roadway speeds are greater and facilities for vulnerable users are limited.

#### 4 Land Use

### 4.1 Existing Land Use

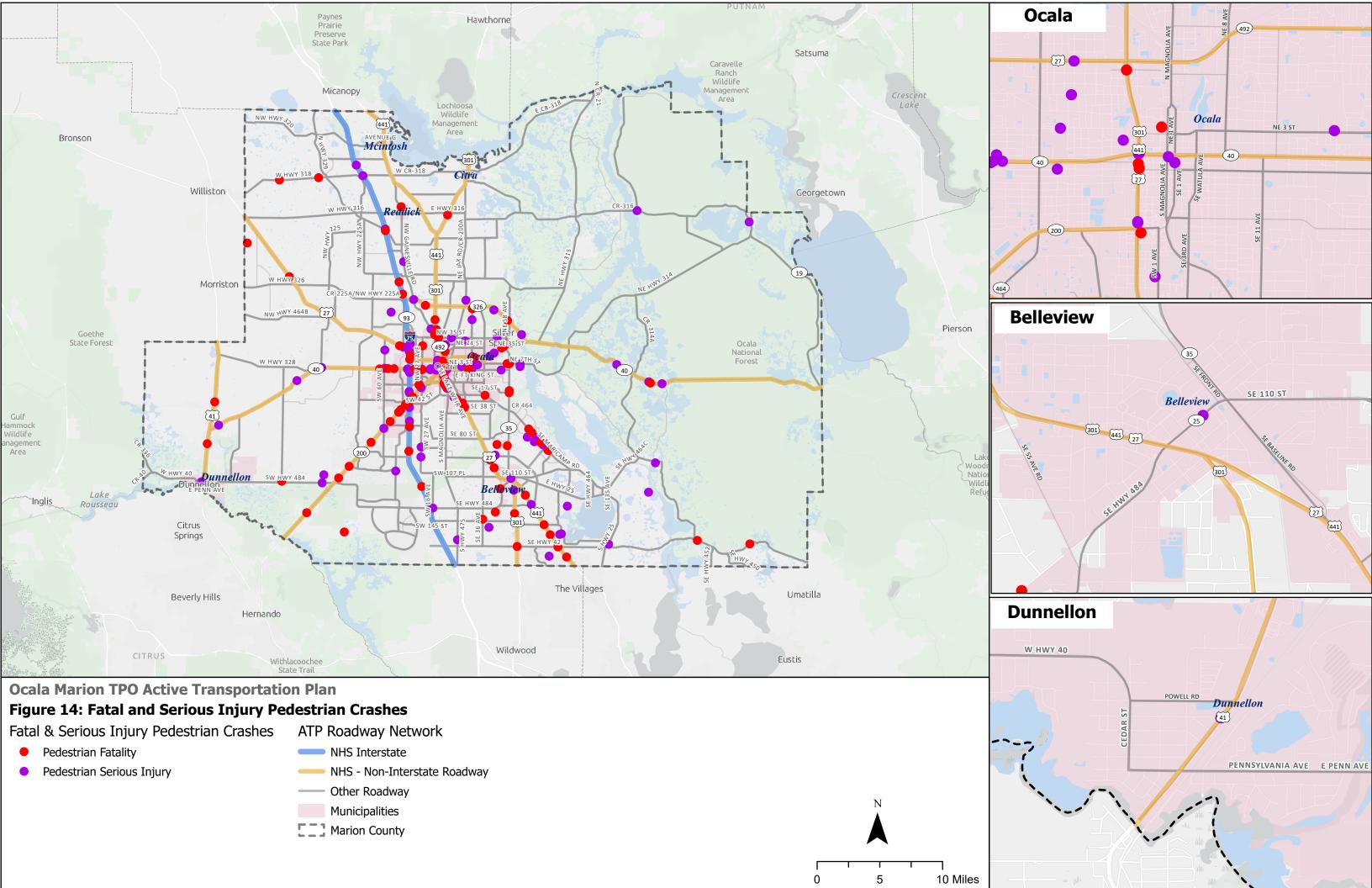
As illustrated in Figure 16, the existing land use in Marion County is primarily rural. Large portions of the eastern county are designated for natural preservation, particularly surrounding the Ocala National Forest and other conservation lands. Lowand medium-density residential uses cluster closer to the City of Ocala, reflecting suburban development patterns. Commercial activity is concentrated along major roadways, including SR 200, SR 40, and US 301, where access and visibility to higher traffic volumes drive commercial demand. Industrial and employment-related land uses are more limited but strategically located near major transportation corridors.

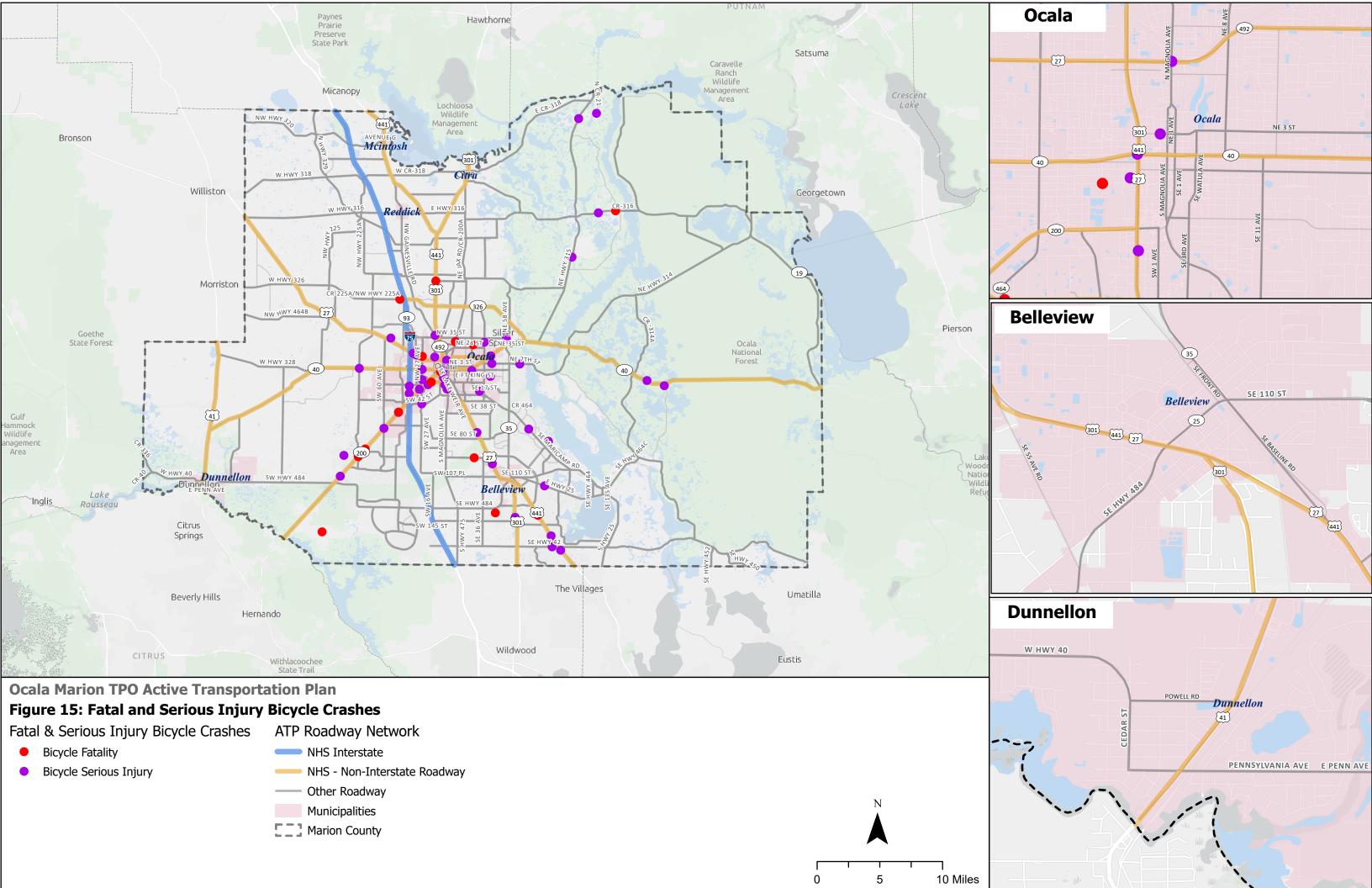
Additionally, areas southwest and southeast of Ocala, as well as the area north of Dunnellon, are identified as Developments of Regional Impact (DRI), reflecting planned growth nodes that will influence future transportation and land use coordination. These development areas, combined with the rural character of most of the county, underscore the challenge of balancing growth pressures with preservation of the county's natural and agricultural lands

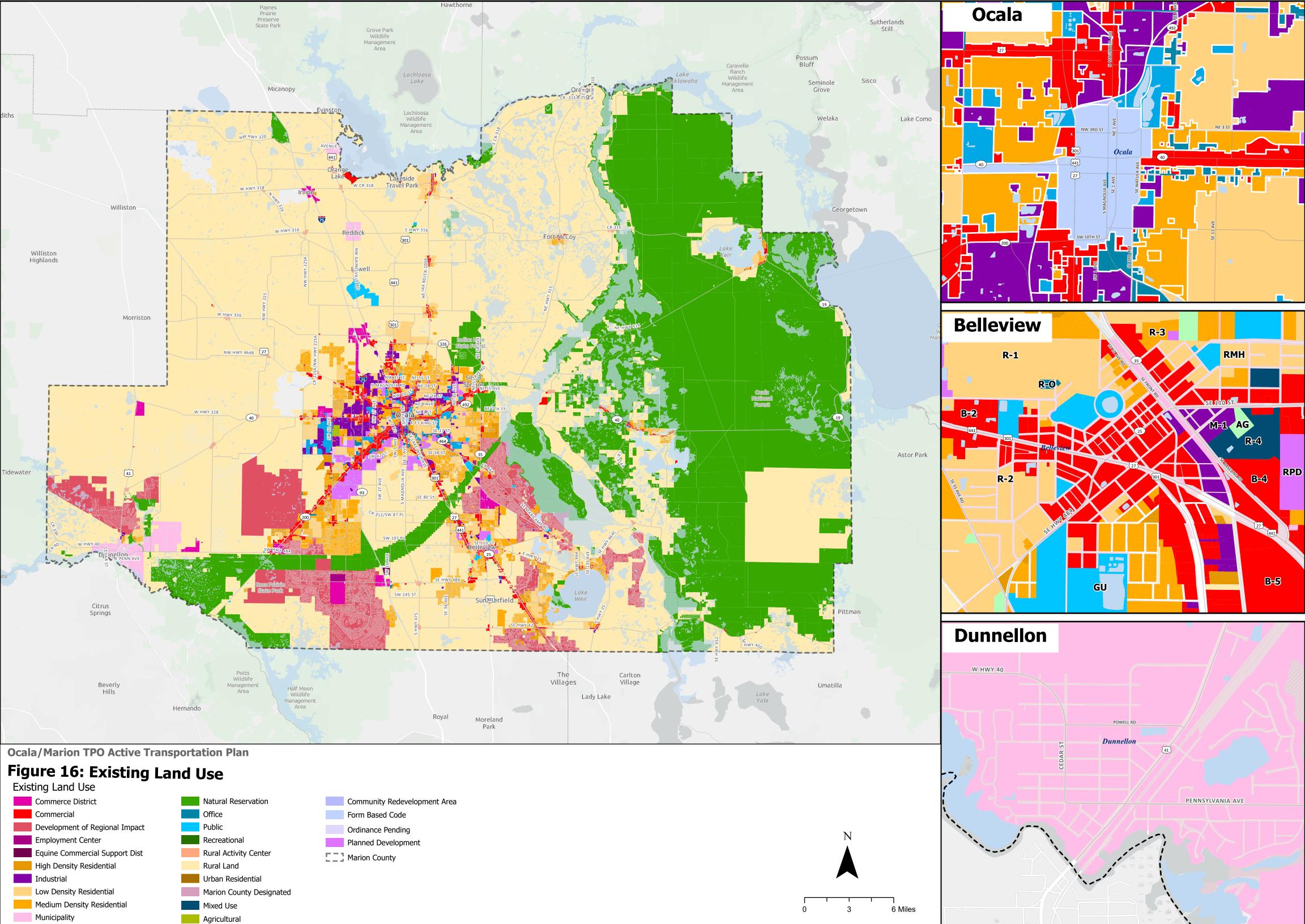
#### 4.2 Future Land Use

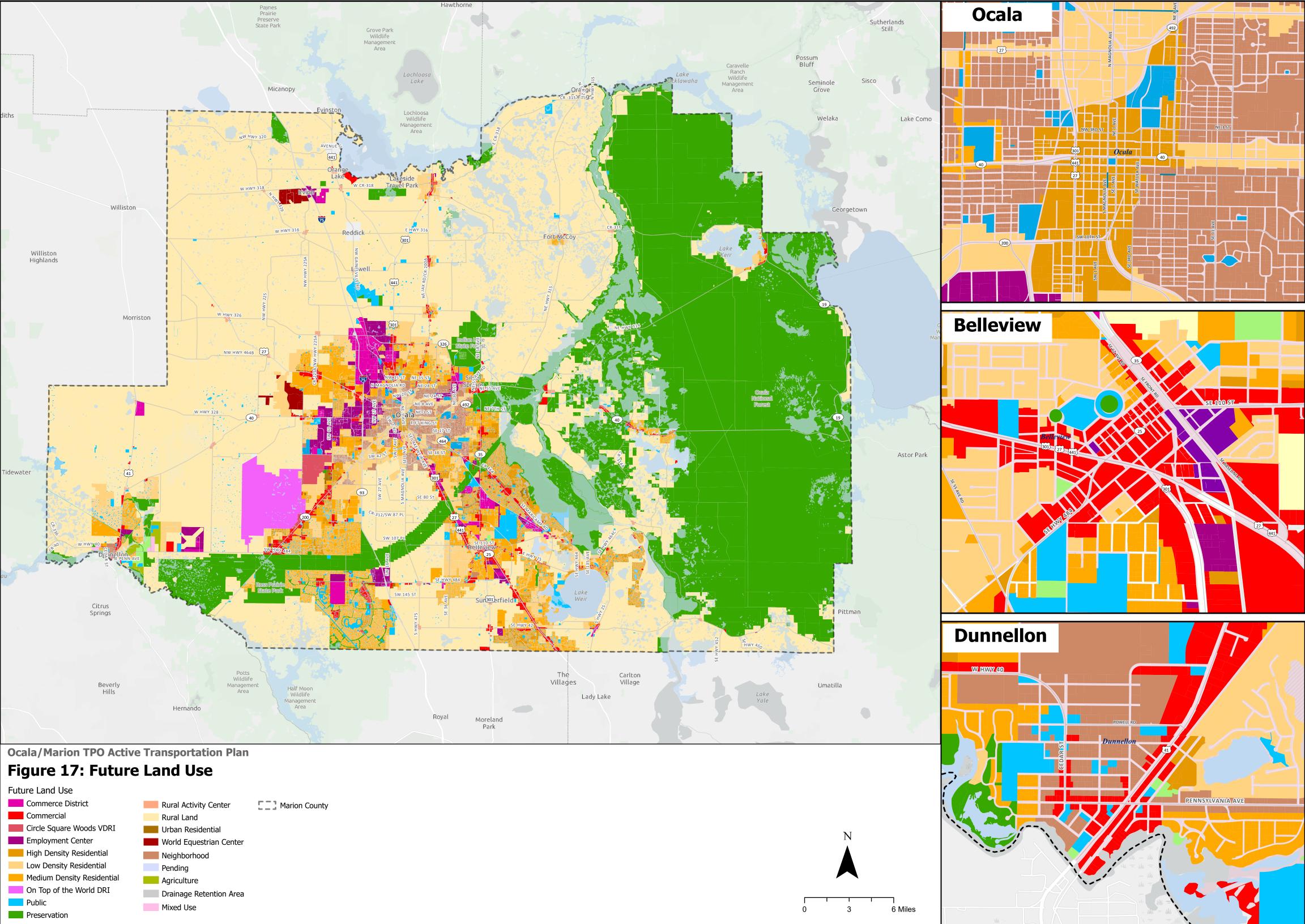
Marion County's future land use, depicted in Figure 17, maintains the broad rural framework but reflects significant shifts in urban form around Ocala and nearby municipalities. Rural land will continue to dominate most of the county, but notable expansions of higher-density residential development are anticipated in and around the City of Ocala. These include concentrated pockets of high-density and urban residential land uses, providing opportunities to support multimodal connectivity and more efficient transportation options.

Employment centers and commercial districts are also expected to expand north of Ocala, particularly near SR 93 and CR 25A, supporting regional job growth and reinforcing Ocala's role as the economic hub of Marion County. Similarly, planned activity in areas such as On Top of the World and the World Equestrian Center reflect large-scale developments with both residential and commercial components. These shifts suggest increasing demand for multimodal facilities, particularly along corridors linking new residential areas with employment and commercial districts.



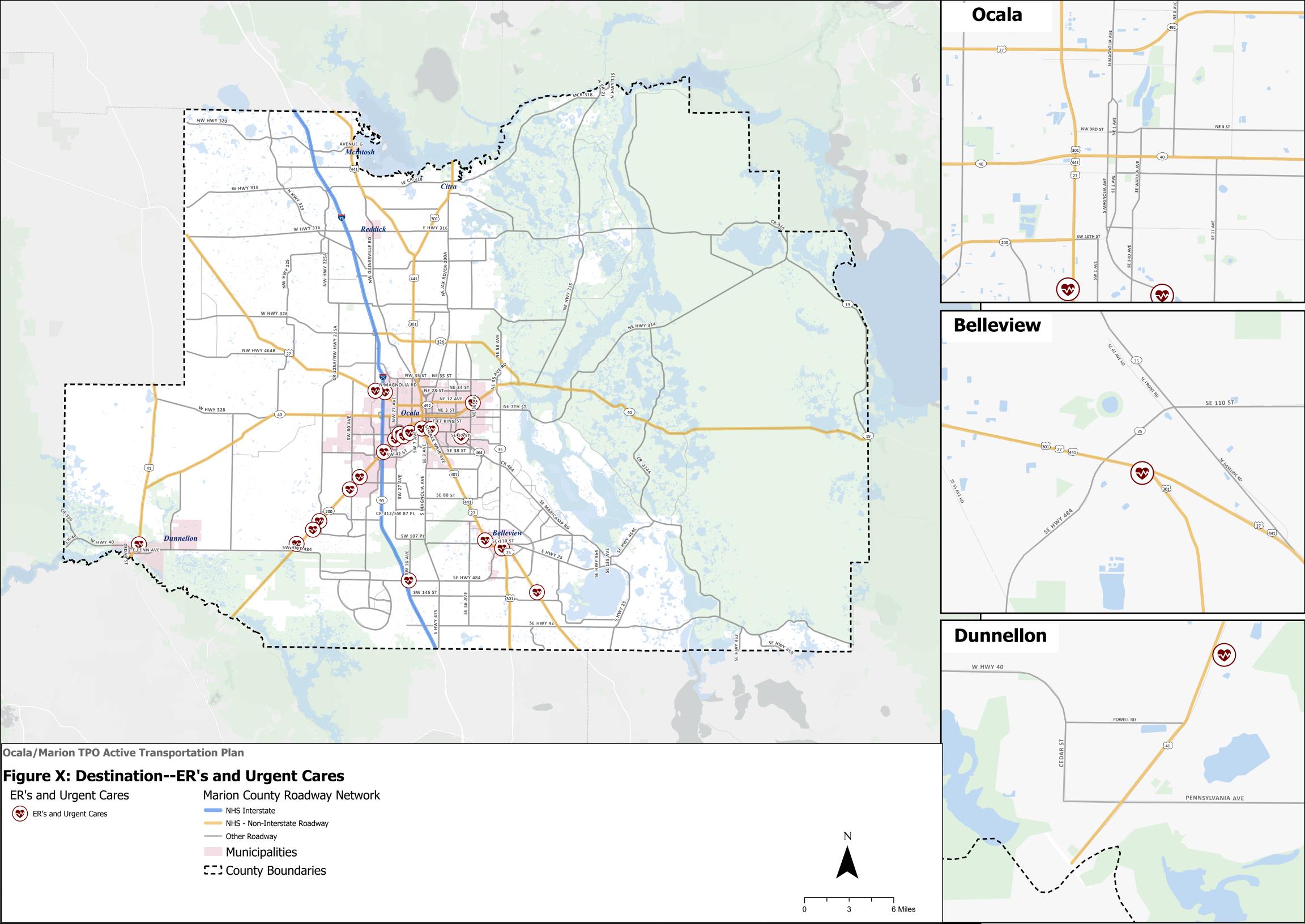


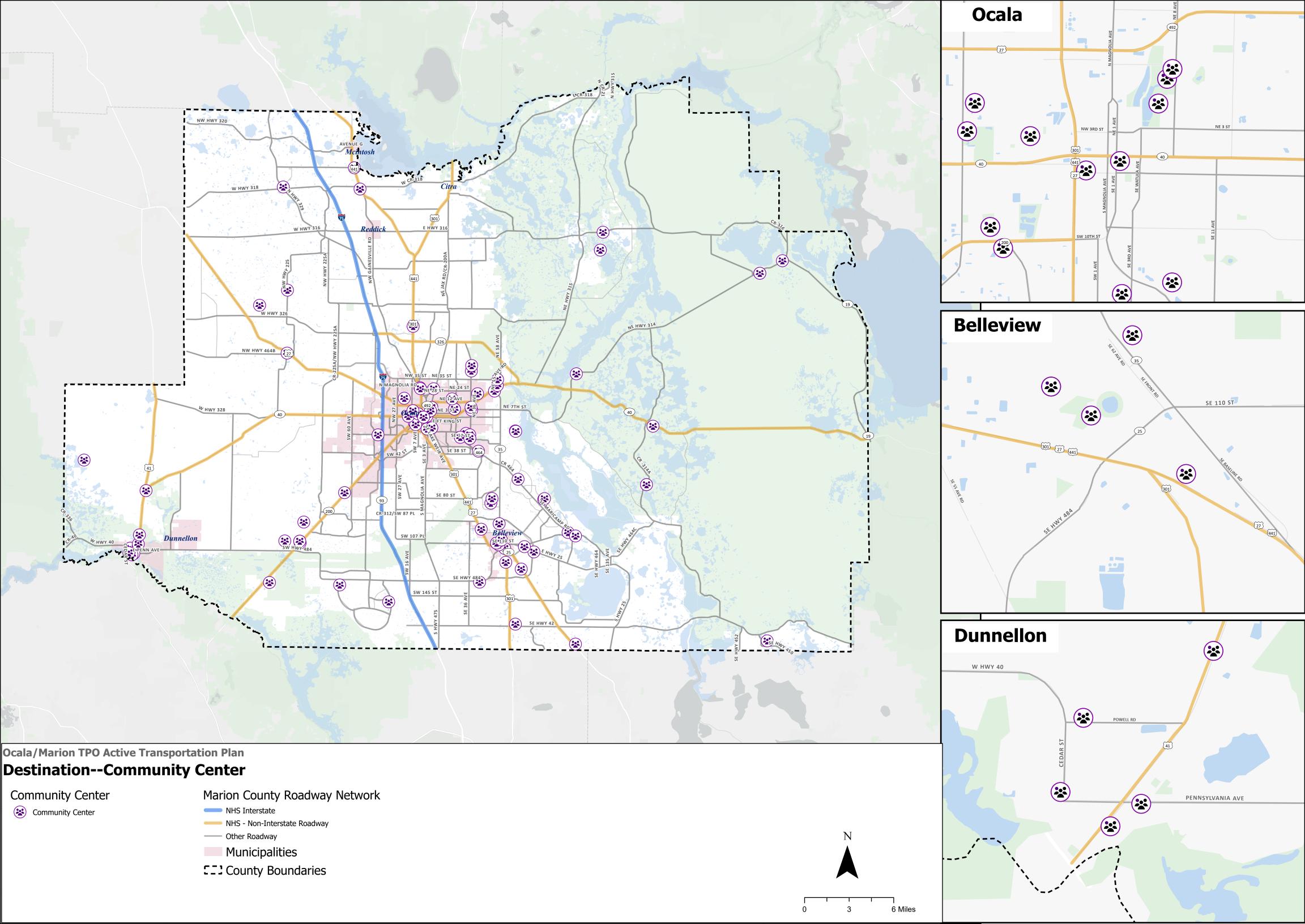


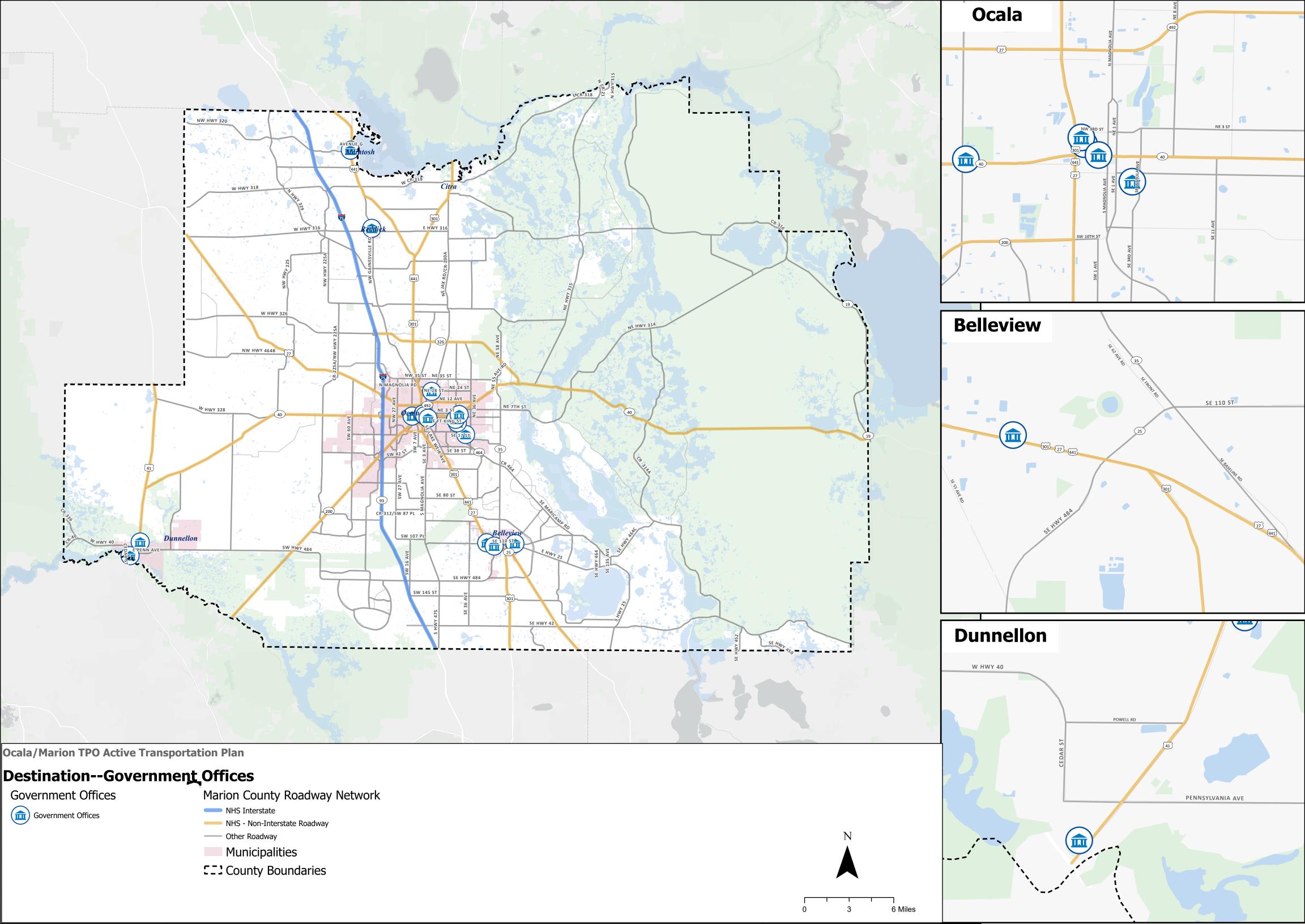


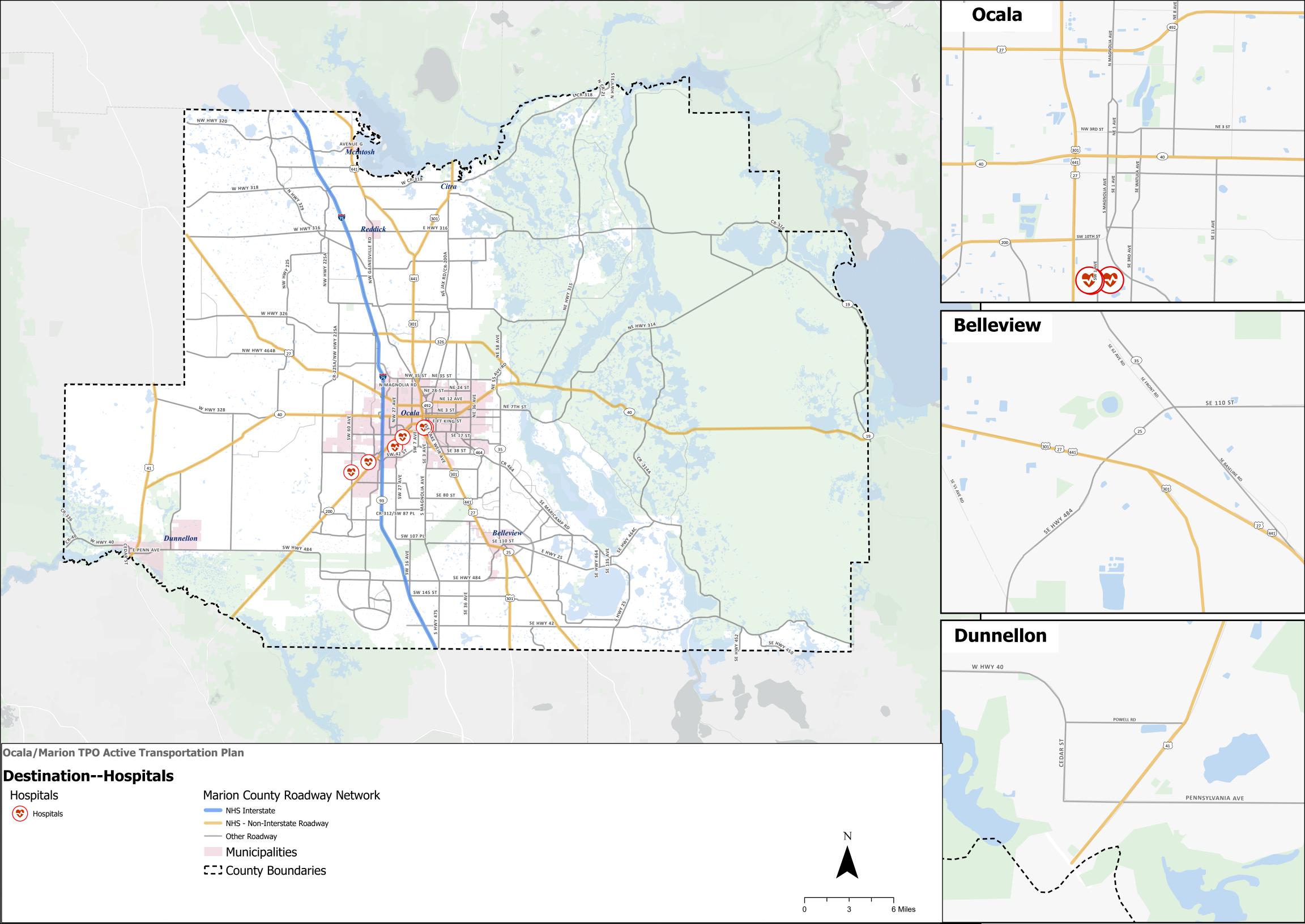
# **APPENDIX D:**

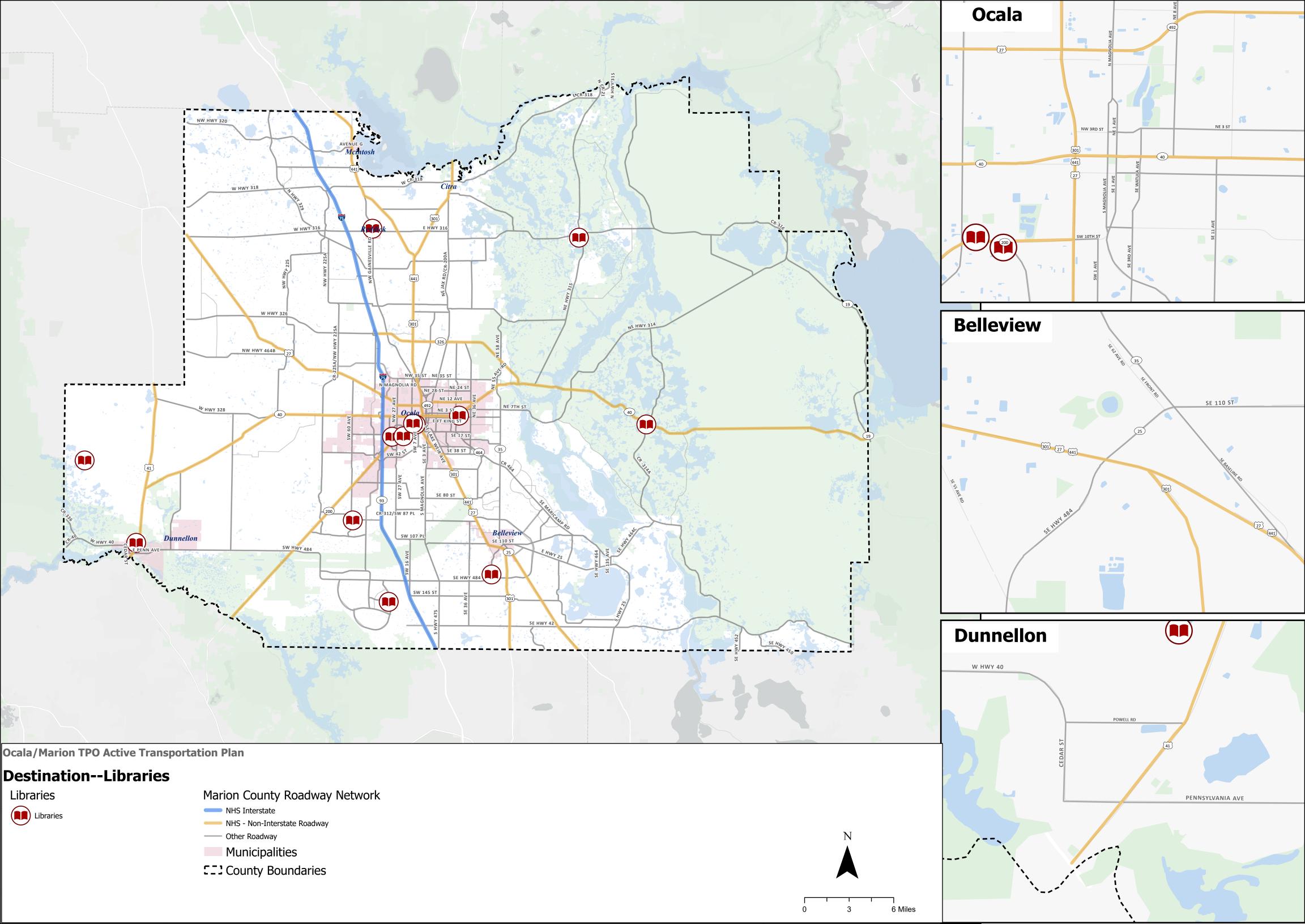
**Key Destination Locations** 

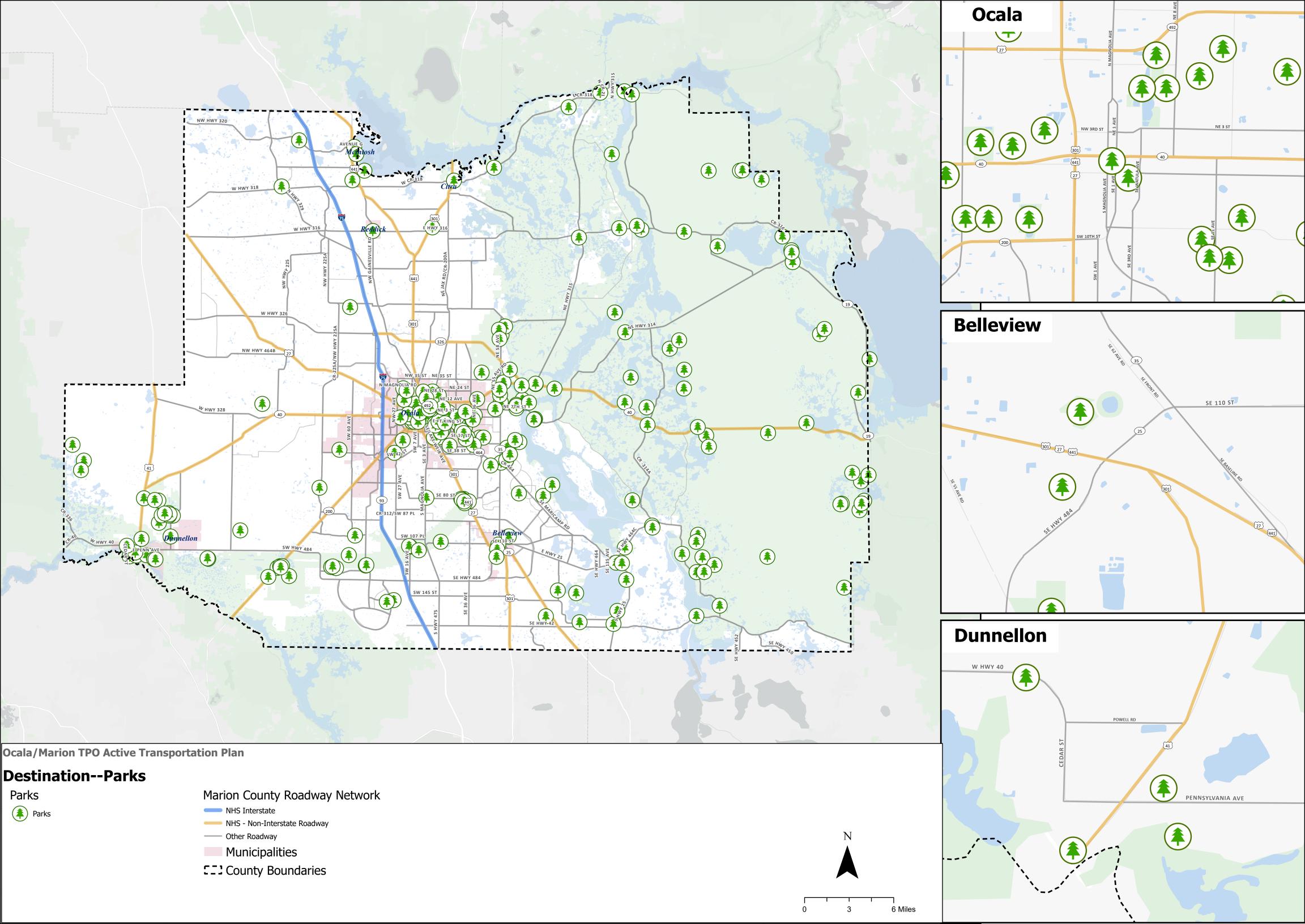


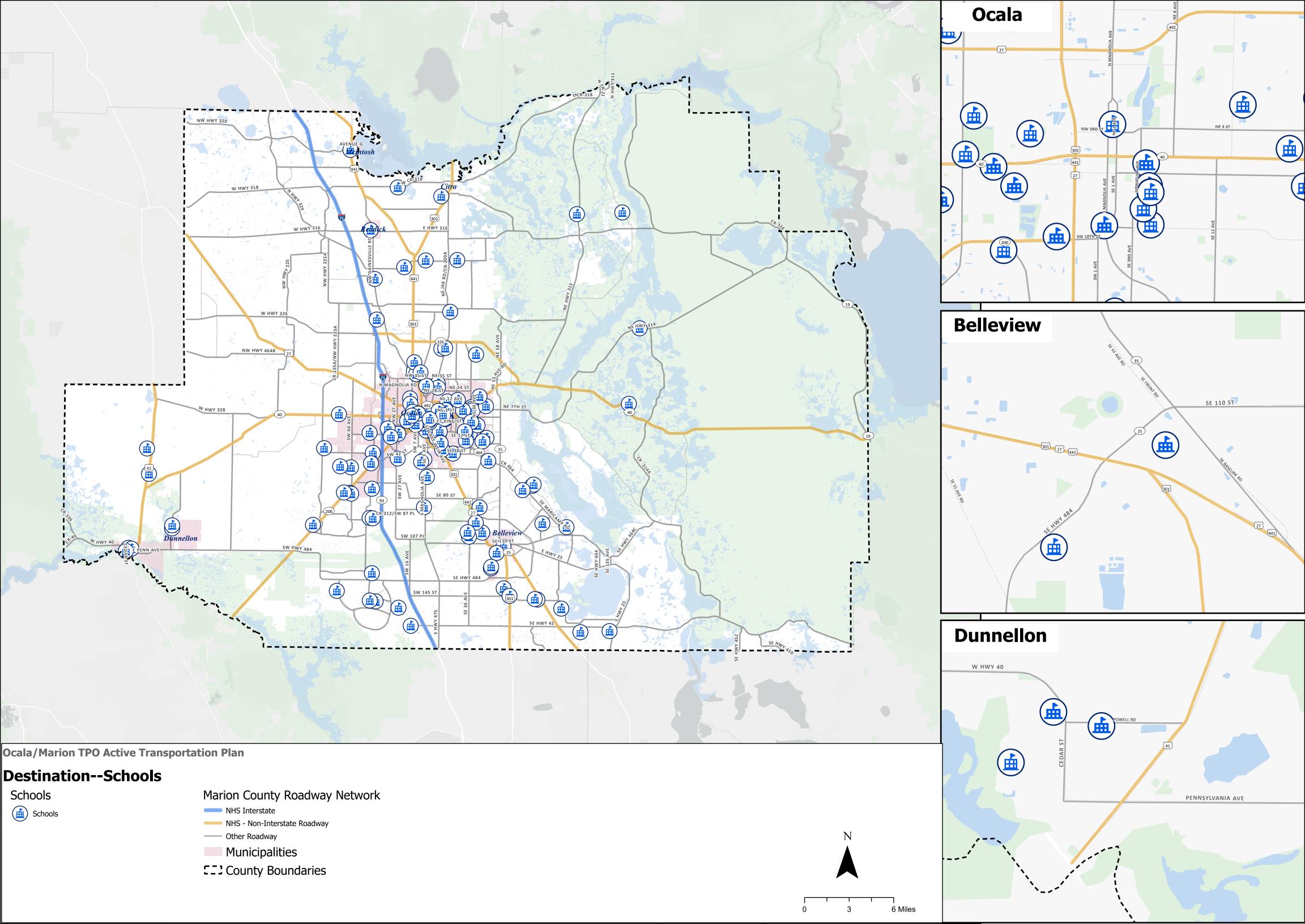


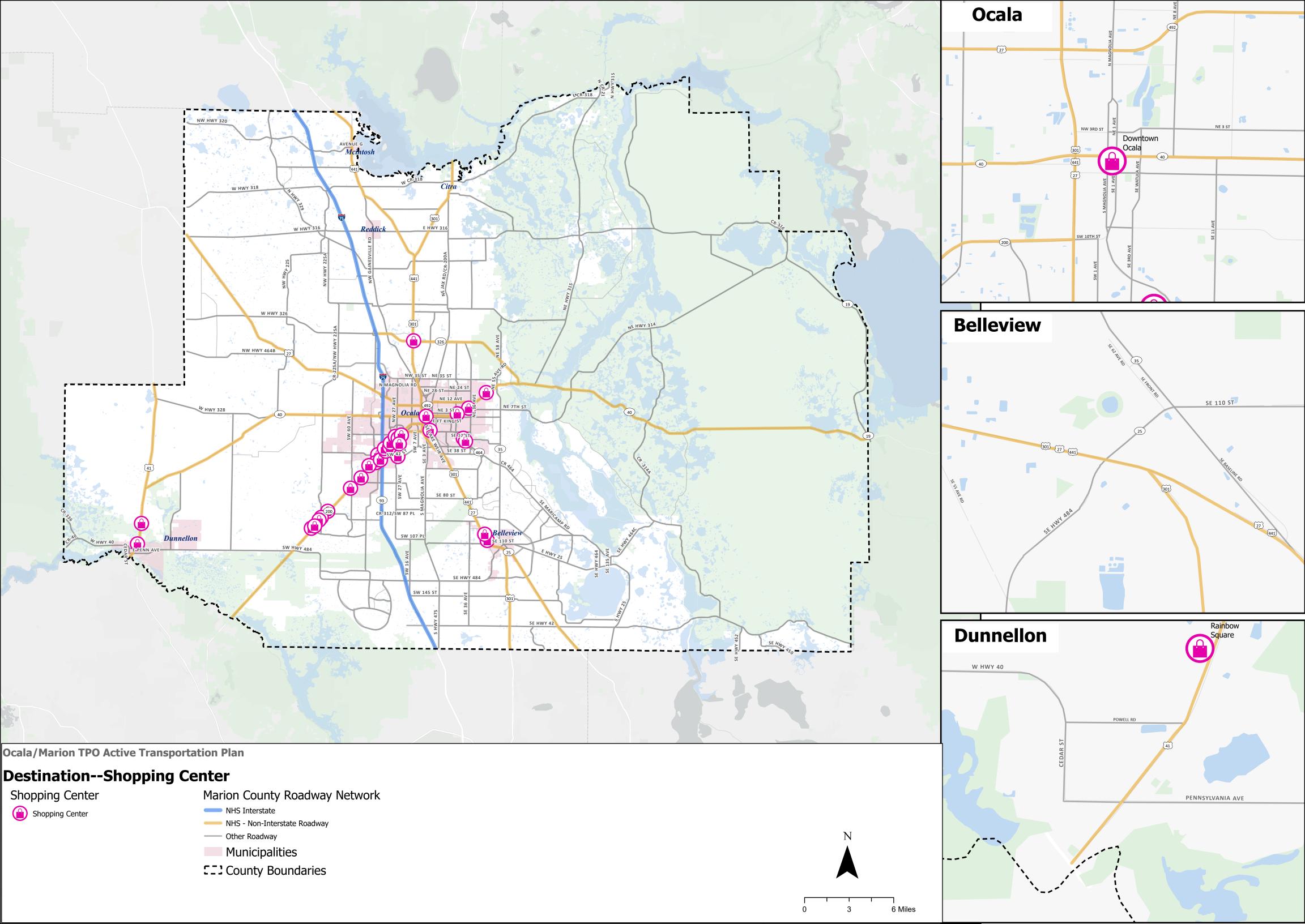


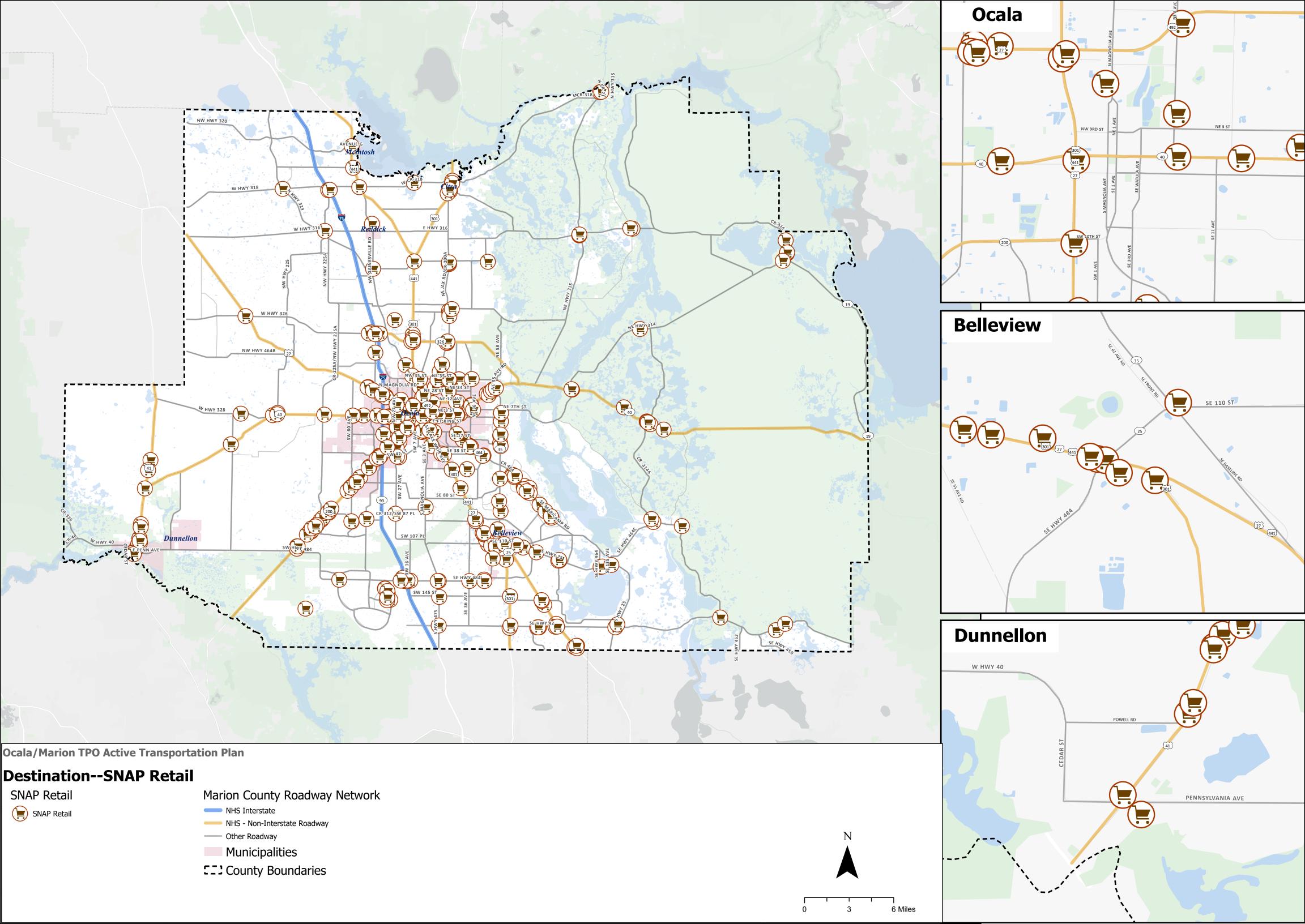


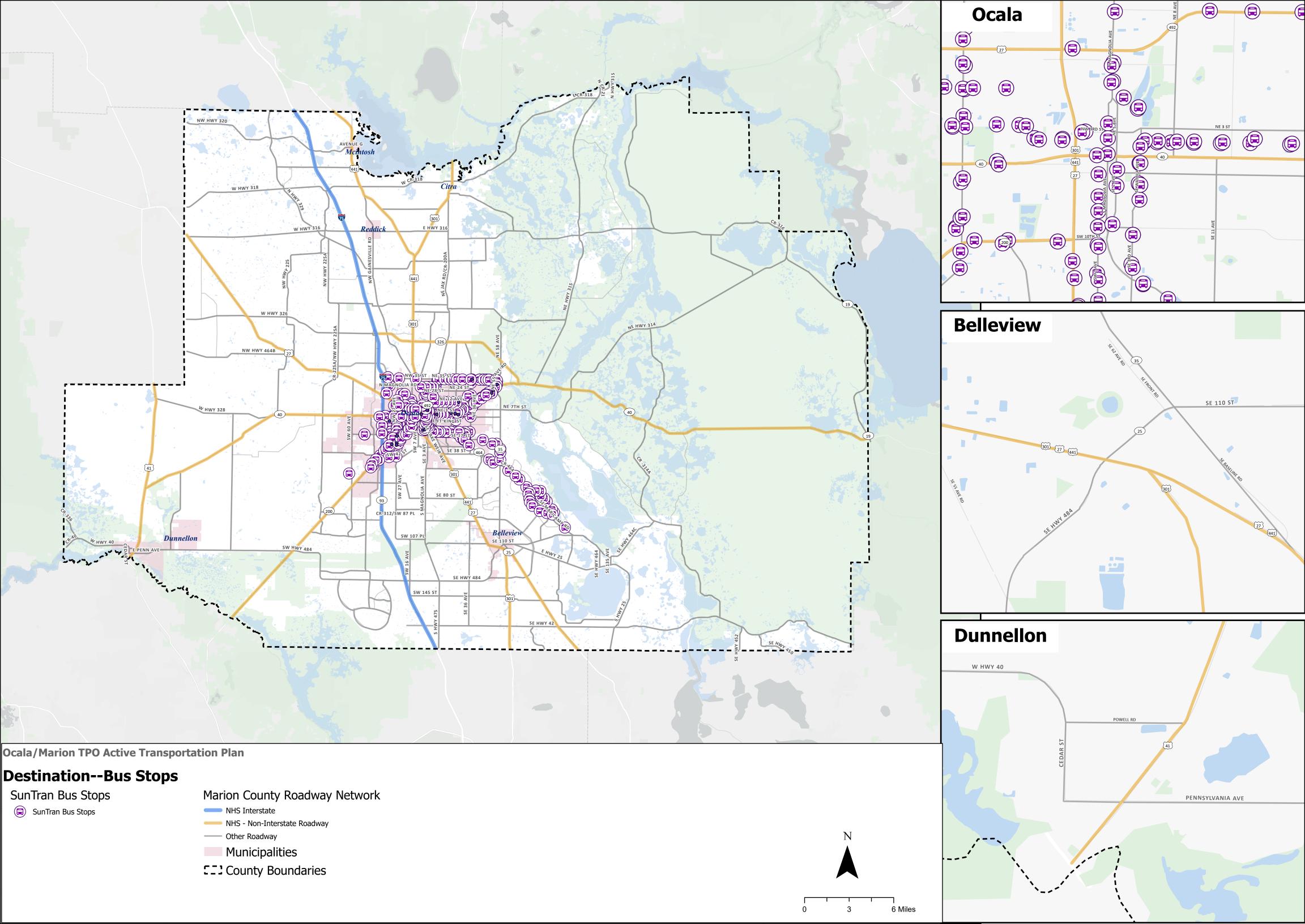


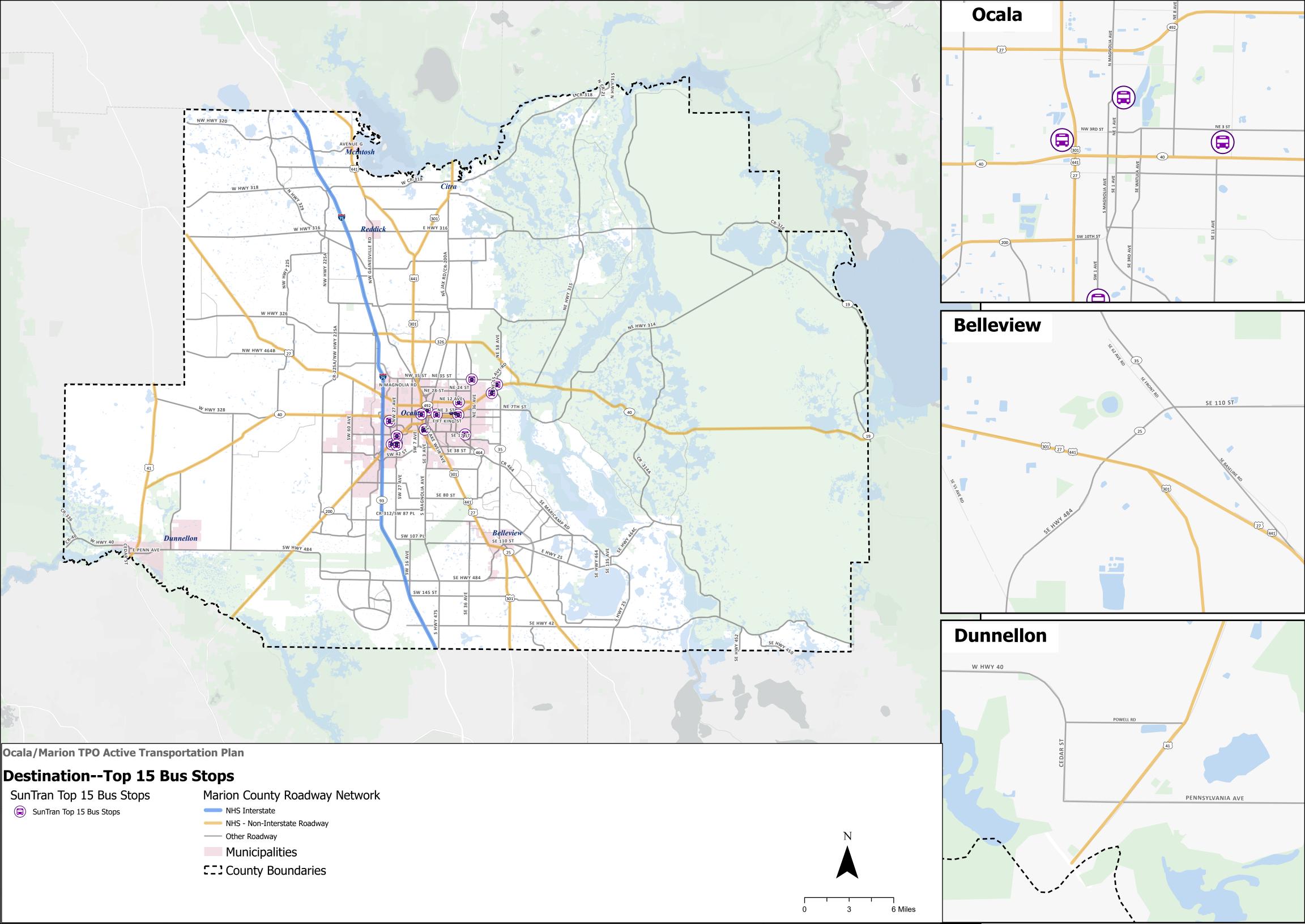






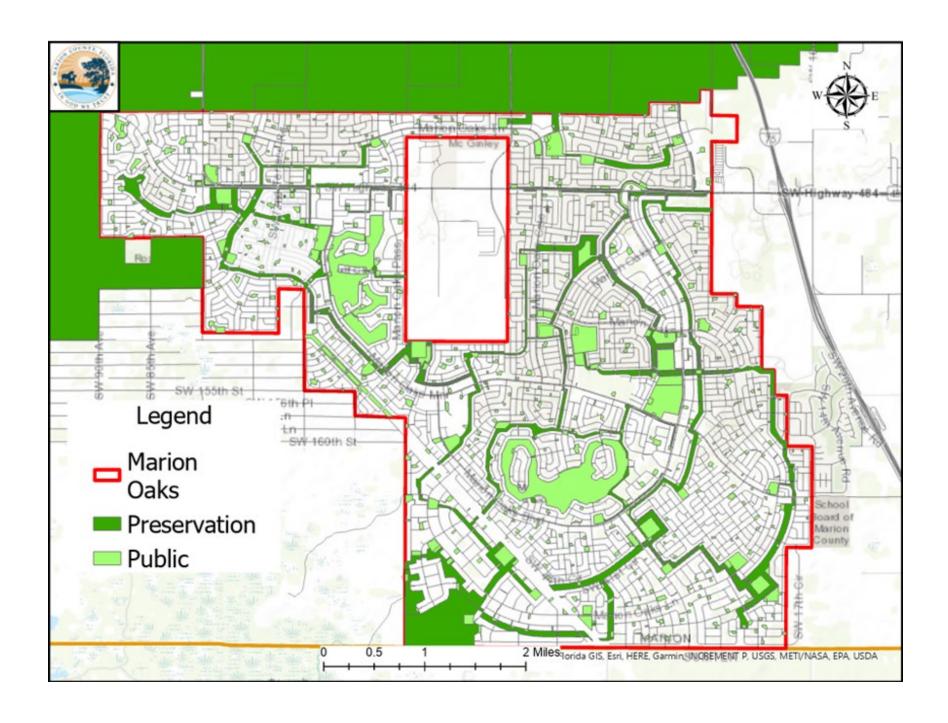


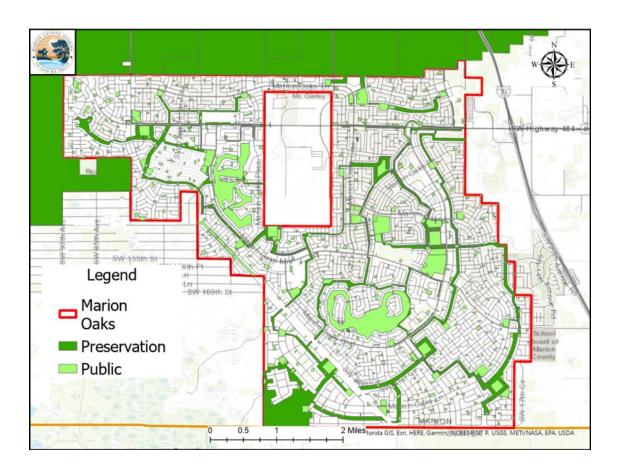




# **APPENDIX E:**

Marion Oaks Trail Plan





# **APPENDIX F:**

Active Transportation Strategies

# **Active Transportation Strategies**

The following section introduces a toolbox of treatments that can be applied to improve safety, comfort, and connectivity for all road users in Marion County. These tools are intended to provide planners, engineers, and community partners with practical strategies to address specific needs identified through the ATP. Treatments are not intended to function in isolation; rather, they are most effective when combined with and tailored to the surrounding context.

By incorporating bicycle, pedestrian, and speed management treatments, the toolbox supports the TPO's broader goals of creating safer, more accessible, and more comfortable travel options for people of all ages and abilities. These treatments complement the street typologies described earlier (Section 3: Existing Conditions) and help establish priorities for multimodal facilities across the network.

# **Types of Treatments**

## **Bicycle Treatments**

Bicycle treatments provide dedicated or shared spaces that improve comfort and safety for cyclists. These include on-street facilities, intersections designed for bicyclists, and off-street shared use paths. Together, they expand network connectivity, improve visibility, and attract more users to active transportation.

### **Pedestrian Treatments**

Pedestrian treatments focus on improving the walking environment through sidewalks, crossings, and supportive amenities. These treatments enhance comfort, shorten crossing distances, increase visibility, and improve accessibility for vulnerable users, ensuring that pedestrians feel safe and connected across the network.

### **Speed Management Treatments**

Speed management treatments are designed to influence driver behavior, reduce vehicle speeds, and create safer conditions for all users. These include roadway design strategies and traffic calming tools that lower crash risk and improve comfort for people biking and walking.

## How to Use This Toolbox

This toolbox includes two main parts:

- **Treatment Summary Table (Table 12)** Highlights cost, implementation timeline, and applicable roadway characteristics for each treatment to support project scoping.
- **Treatment Details** Provides expanded descriptions, benefits, constraints, and key design considerations for each treatment, with references to supporting design guidance.

**Table 1: Treatment Summary Table** 

Туре	Treatment	Cost Estimate	Timeline	Applicable Roadway Characteristics		
				Speed & Volume	Street Context	Land Use
Bicycle Treatments	Shared lane marking	\$1,000 each	Short-medium term	Low speed, low volume (less than 35 mph)	Local	Residential, commercial
	Bicycle lane	\$2600,000 per mile	Long term	Low speed (typically 30 mph or less)	Local, collectors	Residential, commercial
	Buffered bicycle lane	\$2600,000 per mile	Long term	Low speed, low volume	Local, collectors, minor arterials	Residential, commercial
	Separated bicycle lane	\$2900,000 per mile	Long term	Design speed<=45 mph	Any, if separation can be maintained and conflict points are minimal	Any
	Bicycle Box/two- stage left-turn queue box	\$20,000 each	Short term	Any	Local, collectors (preferred 4 or fewer lanes)	Any
	Shared use path	\$681,822.62 per mile	Long term	Any	Any	Any
	Protected/dedicated intersection	\$25,000 each	Long term	Mid to higher speed roads and in urban areas	Any	Residential, commercial
	Advisory shoulder	\$2800,000 per mile	Medium term	Low speed	Local	Residential

Туре	Treatment	Cost Estimate	Timeline	Applicable Roadway Characteristics		
				Speed & Volume	Street Context	Land Use
	Paved shoulder	\$2800,000 per mile	Long term	Any, usually on higher-speed roads, however for speeds greater than 45 mph, separation for a bike lane is highly recommended	Any	Any
	Wayfinding signs for trails	\$1,000 each	Short-medium term	Any	Any	Any
Pedestrian Treatments	Sidewalk	\$349,251.29 per mile	Long term	Any	Any	Residential, commercial, institutional
	High-visibility crosswalks	\$3,000 each	Short-medium term	Any, usually locations where pedestrians frequently cross a road	Any	Any
	Rectangular Rapid Flashing Beacon (RRFB)	\$65,000 each	Short-medium term	Low speed, low volume	Local, collectors	Residential, commercial
	Pedestrian Hybrid Beacon (PHB)	\$230,000 each	Medium term	Medium to high speed	Local, collectors, arterials	Residential, commercial

Туре	Treatment	Cost Estimate	Timeline	Applicable Roadway Characteristics		
				Speed & Volume	Street Context	Land Use
	Raised crosswalk	\$45,000 each	Medium term	Low speed, low volume	Local, collectors	Residential, commercial
	Median refuge	\$240,000 each	Medium term	Moderate to high posted speed (≥ 35 mph), where pedestrians must cross two or more lanes at one time	Collectors, arterials, roads with 3 or more travel lanes	Commercial
Speed Management Treatments	Traffic diverter	\$5,000 ~ 20,000 peach	Short term	Low speed, low volume	Local	Residential
	Neighborhood traffic circle	\$20,000 ~ \$40,000 each	Medium term	Low speed, low volume	Local	Residential
	Speed hump/table	\$45,000 each	Short term	Lower speed (typically 35 mph or less), Low volume	Local ,collectors	Residential, commercial
	Centerline hardening	\$300,000 per mile	Short term	Any	Local, collectors	Residential, commercial
	Choker/pinch point	\$5,000 ~ 10,000 each	Medium term	Low speed, low volume	Local, collectors	Residential, commercial
	Raised intersection	\$86,000 each	Medium term	Low speed (typically 25 mph or less)	Local	Residential, commercial

# 10.1 Bicycle Treatments

### **Shared Lane Marking**



Shared laned marking in Tampa, FL

### Description

Shared lane markings indicate a shared space for FDOT Design Manual (FDM) Section 223.3 bicycles and vehicles, guiding bicyclists to use the full lane and discouraging unsafe passing.

### **Typical Application**

- Posted speed ≤ 35 mph
- Residential or commercial local roads

### **Design Considerations**

- Should be centered in the lane
- · Best used where bike lanes are not feasible and vehicles speeds are low

#### **Benefits**

- · Raises driver awareness of bicyclists
- Guides bicyclists to safe lane positioning

#### **Constraints**

- · Limited effectiveness on higherspeed (>45 mph) roads
- May feel uncomfortable for less experienced riders

#### Resources

### **Bicycle Lane**



Bicycle lane in Ocala, FL

### Description

Exclusive one-way space on the roadway designated for bicyclists, traveling in the same direction as traffic.

### Typical Application

- Design speeds ≤ 45 mph (ideal  $\leq 30 \text{ mph}$ )
- Local roads and collectors with relatively low traffic volumes and speeds

### **Design Considerations**

- Include single white longitudinal pavement marking and bicycle lane symbol
- Option for green paint at conflict points with vehicles
- Additional buffer and/or separation desirable at speeds > 30 mph

#### **Benefits**

- Provides predictable, dedicated space for bicyclists
- Supports everyday bicycle travel in residential and commercial areas

#### **Constraints**

- Less comfortable on higher-speed or multilane roads
- No physical separation from traffic encroachment

#### Resources

FDOT Design Manual (FDM) Section 223.2.1 NACTO Urban Bikeway Design Guide

### **Buffered Bicycle Lane**



Buffered bicycle lane in Ocala, FL

### Description

Bicycle lanes separated from adjacent vehicle **Resources** lanes by a painted buffer.

### Typical Application

- Posted speeds≤ 35 mph
- Local roads, collectors, and minor arterials
- Moderate traffic volumes where extra space is desired

### **Design Considerations**

- · Buffer should be marked clearly with paint or striping
- Buffer width can vary by roadway conditions

#### **Benefits**

- · Provides additional comfort and safety compared to standard bike lanes
- Creates more separation from vehicles

#### **Constraints**

- · Limited physical protection
- · Requires adequate roadway width

FHWA Bikeway Selection Guide NACTO Urban Bikeway Design Guide AASHTO Guide for the Development of Bicycle Facilities

### **Separated Bicycle Lane**



Separated bicycle lane in St. Petersburg, FL

#### Description

One- or two-way bike lanes physically separated from motor vehicle traffic with curbs, barriers, or on-street parking.

### Typical Application

- Roads with design speeds ≤ 45 mph
- Best where driveway conflicts are minimal and intersections can maintain separation

#### **Design Considerations**

Types of separation:

- On 35 mph or less roads: tubular markers, curbs, islands, or parking separation
- On 40–45 mph roads: traffic separators or rigid barriers recommended

#### **Benefits**

• Increases comfort and safety for all roadway users

#### **Constraints**

- Higher cost and more complex to retrofit
- Requires careful intersection design

#### Resources

FHWA Separated Bike Lane Planning & Design Guide NACTO Urban Bikeway Design Guide

### Bicycle Box/Two-Stage Left-Turn Queue Box



Two-stage left-turn queue box in Miami, FL

### Description

A designated space at intersections that allows bicyclists to wait ahead of vehicles, improving visibility and making left turns easier.

### **Typical Application**

- Signalized intersections on local roads and collectors (≤ 4 lanes)
- Areas with frequent left-turn bicycle movements

### **Design Considerations**

- Buffer should be marked clearly with paint or striping
- Buffer width can vary by roadway conditions

#### Resources

FDM Section 223.2.1.5 FHWA Interim Approval IA-20

#### **Benefits**

- Improves bicyclist visibility at intersections
- Reduces conflicts between bicycles and vehicles turning left

#### **Constraints**

- Requires sufficient intersection space
- Dependent on proper driver compliance with markings

#### **Shared Use Path**



Shared use path in Ocala, FL

#### **Description**

A paved travel area for both bicyclists and pedestrians, physically separated from motor vehicle traffic by open space or a barrier.

### Typical Application

- Especially useful on high-speed and high-volume roadways
- Effective as connectors between communities in less dense areas

### **Design Considerations**

- Must be wide enough to safely accommodate both bikes and pedestrians
- Requires clear signage and pavement markings to reduce conflicts

#### **Benefits**

- Comfortable facility for all ages and abilities
- Reduces conflicts with motor vehicles
- Supports high-demand corridors for walking and biking

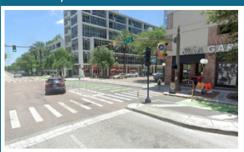
#### Constraints

• Requires significant right-of-way

#### Resources

FDM Chapter 224 FHWA Shared Use Path Publication

### **Protected/Dedicated Intersection**



Protected Intersection in St. Petersburg, FL

#### **Description**

An intersection design that provides dedicated paths and physical separation for bicyclists through the intersection.

### **Typical Application**

- Mid- to higher-speed roads
- Crossings of collectors or arterials
- Signalized intersections.

### **Design Considerations**

- Curb radii should be designed to reduce vehicle turning speeds to ≤ 15 mph
- Requires clear signage to prioritize bicyclists at crossings

NACTO Urban Bikeway Design Guide

NCHRP Research Report 926

• Option for green paint at bicycle/vehicle conflict points

### **Benefits**

- Improves visibility of bicyclists
- Reduces conflict points with vehicles
- Provides safer, more intuitive intersection navigation

#### **Constraints**

- Higher design complexity and cost
- Requires adequate right-of-way

### Advisory Shoulder



Advisory shoulder in Bloomington, IN

#### **Description**

A narrow central travel lane for two-way vehicle travel and dashed one-way bike lanes on each side of the street. Motor vehicles operate in yield conditions and use the advisory bike lane to pass oncoming vehicles when the bike lane is clear.

### **Typical Application**

Resources

- Local roads with design speeds < 25 mph and ADT ≤ 3,000
- Residential roads where standard bike lanes are not possible

### **Design Considerations**

- Requires FHWA MUTCD Section 1A.10 "Request to Experiment" approval
- Pavement color or markings can improve visibility

#### **Benefits**

- Expands bicycle network coverage on constrained roads
- Low-cost option to provide space for cyclists

#### **Constraints**

- Higher design complexity and cost
- Requires adequate right-of-way

#### Resources

FHWA Small Town and Rural Multimodal Networks

#### **Paved Shoulder**



Paved shoulder on E Silver Springs Boulevard

### **Description**

A roadway shoulder (minimum 4-footwide) that accommodates bicyclists, pedestrians, and emergency use.

### **Typical Application**

- Roads with moderate to high volumes or truck traffic
- Rural highways

### **Design Considerations**

- Contrasting pavement is recommended to highlight bicycle use
- Markings may designate shoulder as a bike lane (requires ≥ 5-8 ft width)

#### **Benefits**

- Provides safer space for bicyclists on high-volume roads
- Increases comfort for pedestrians where sidewalks are not present

#### **Constraints**

- Does not provide full protection from traffic
- Effectiveness depends on maintenance and driver compliance

#### Resources

FDM Section 223.2.2

### **Wayfinding Signs for Trails**



Wayfinding sign at Orlando Urban Trail

#### **Description**

Clear signage and markers that guide people along designated bicycle routes and trails, ensuring easy navigation and decisionmaking at intersections.

### **Typical Application**

- Along trails and bicycle networks
- Where multiple bike routes converge or diverge

### **Design Considerations**

- Consistent branding and symbols aid wayfinding
- Should be placed at decision points and regular intervals

#### **Benefits**

- Improves rider confidence and network usability
- Helps attract less-experienced riders by reducing navigation barriers

#### **Constraints**

- Requires consistent maintenance
- Effectiveness depends on clarity and visibility of signage

#### Resources

Manual on Uniform Traffic Control Devices (MUTCD) Section 2D

### 10.2 Pedestrian Treatments

#### Sidewalk



Sidewalks on E Fort King Street in Downtown Ocala, FL

### Description

Continuous, paved walkways separated from the roadway, designed for pedestrian travel.

### **Typical Application**

 Urban arterials, collectors, and most rural arterials where pedestrian activity is likely

### **Design Considerations**

- Should include buffers or curb separation from traffic
- In higher-speed contexts, place sidewalks near the right-of-way line
- Must meet ADA accessibility standards

#### **Benefits**

- Provides separated, dedicated pedestrian space
- Supports walkable communities and multimodal access

#### **Constraints**

- Requires right-of-way and investment in maintenance
- Effectiveness depends on network connectivity

#### Resources

FDOT Design Manual (FDM) Section 222

AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities

### **High-Visibility Crosswalk**



High-visibility crosswalk on E Fort King Street in Downtown Ocala, FL

#### Description

Crosswalks using bold striping to improve driver awareness and highlight pedestrian right-of-way. Typically use two stripes defining the width of a crosswalk with perpendicular ladder markings along its length.

### **Typical Application**

- At midblock and uncontrolled marked crossings
- Residential, commercial, and school zones

### **Design Considerations**

- Often used in conjunction with PHBs or RRFBs
- Avoid transverse line markings alone

#### **Benefits**

- Increases visibility of pedestrians
- Reduces pedestrian crash risk

#### **Constraints**

- Requires regular maintenance
- Less effective without complementary treatments

#### Resources

**MUTCD Section 3B** 

FHWA Crosswalk Visibility Enhancements Tech Sheet

PBIC An Overview and Recommendations of High-Visibility Crosswalk Marking Styles

### **Rectangular Rapid Flashing Beacon (RRFB)**



RRFB in Orlando, FL

### Description

Pedestrian-activated flashing yellow beacons to alert drivers at crosswalks.

### **Typical Application**

- Posted speed of 35 mph and lower
- Marked crosswalks with special emphasis pavement markings
- 4 through lanes or less regardless of median presence, or 5 lanes with a median refuge island

### **Design Considerations**

- Requires push button or passive activation
- Best paired with high-visibility crosswalk markings

#### **Benefits**

- Increases driver yielding rates when compared to crosswalk markings alone
- Enhances pedestrian visibility at crossings

#### **Constraints**

- Must be activated by users
- Compliance lower than at full signals

#### Resources

FDOT Traffic Engineering Manual (TEM) Chapter 5 FHWA RRFB Fact Sheet

### **Pedestrian Hybrid Beacon (PHB)**



PHB in Orlando, FL

### **Description**

Pedestrian-activated traffic control device that stops vehicles to allow safe midblock crossing.

### **Typical Application**

- Roads with higher speeds/volumes and insufficient gaps in traffic
- Locations where a full signal is not warranted

### **Design Considerations**

- Requires MUTCD Section 4F compliance
- Should be paired with lighting

#### **Benefits**

- Provides protected crossing opportunities
- Increases safety on high-conflict corridors

### **Constraints**

- May restrict nearby parking
- Requires driver familiarity for effectiveness

#### Resources

FDOT Traffic Engineering Manual (TEM) Chapter 5 MUTCD Chapter 4I

#### Raised Crosswalk



Raised crosswalk in Ocala, FL

### **Description**

Crosswalks elevated to sidewalk height, slowing vehicles and improving visibility.

### **Typical Application**

- Posted speed of 35 mph or lower
- Local or collector roads, driveways, or midblock crossings

### **Design Considerations**

- Must include drainage considerations
- Detectable warnings required for ADA compliance

### **Benefits**

- Improves driver yielding
- Reduces vehicle speeds at crossings
- Improves accessibility for people with mobility impairments

#### **Constraints**

- May slow emergency and transit vehicles
- Requires higher construction cost

#### Resources

FDM Section 202.3.8 & Design Standard D520-030 FHWA Raised Crosswalk Tech Sheet MUTCD Chapter 3B

### **Median Refuge**



Median refuge in Ocala, FL

### **Description**

Protected space in the center of the roadway that allows pedestrians and cyclists to cross one direction of travel at a time.

### **Typical Application**

 Moderate to high posted speed (≥ 35 mph), where pedestrians must cross two or more lanes at one time

### **Design Considerations**

- Must be ADA-accessible
- Islands can also serve as speed management devices

### **Benefits**

- Reduces pedestrian exposure time
- Improves crossing comfort and safety

#### **Constraints**

- Requires adequate roadway width
- May limit vehicle turns onto side streets and driveways

#### Resources

FDM Section 202.3.8, FDOT Design Standard D520-030 NACTO Urban Street Design Guide

# 10.3 Speed Management Treatments

### **Traffic Diverter**



Traffic diverter in Ocala, FL

### Description

A full or partial street closure for vehicles while still allowing pedestrian and bicycle passage, often using

### **Typical Application**

- Low-speed, low-volume areas prioritizing walking and biking
- Local, residential, or commercial streets with cut-through traffic

### **Design Considerations**

- Provide clear access for emergency vehicles
- Can be combined with landscape for visual quality

#### **Benefits**

- Reduces cut-through and speeding traffic
- Creates safer environments for walking and biking

#### **Constraints**

- May increase travel distance for drivers
- Requires community support to avoid resistance

#### Resources

NACTO Urban Street Design Guide FHWA Traffic Calming ePrimer Section 3.4

### **Neighborhood Traffic Circle**



Neighborhood traffic circle in Orlando, FL

### **Description**

A small, circular intersection designed to calm traffic in low-volume residential neighborhoods.

### **Typical Application**

- Roads with posted speed ≤ 25 mph
- Local neighborhood streets with higher multimodal activity

### **Design Considerations**

- Center island may be landscaped
- Designed for low-speed yield control

### Benefits

- Slows vehicle speeds
- Can add aesthetic improvements to neighborhoods

#### **Constraints**

- May require removal of some onstreet parking
- Less effective on higher-volume roadways

#### Resources

FHWA Traffic Calming ePrimer Section 3.7

### Speed Hump/Table



Speed humps in Ocala, FL

### **Description**

Raised roadway elements providing vertical deflection to reduce vehicle speeds. Tables are longer, offering gentler transitions.

### **Typical Application**

- Appropriate on streets with low speeds (25–35 mph)
- Often installed at key pedestrian crossings such as school zones, trail crossings, and neighborhood centers.

### **Design Considerations**

- Should be spaced consistently (300–500 ft) for effectiveness
- Must coordinate with emergency services and transit agencies

### **Benefits**

- Can reduce vehicle speeds
- Proven to reduce crashes and improve pedestrian safety

#### **Constraints**

- May slow emergency response times
- May increase noise from braking and acceleration

#### Resources

FHWA Traffic Calming ePrimer Section 3.10 &3.12 FDM Section 202.3.8, FDOT Design Standard D520-030

### **Hardened Centerline**



Hardened Centerline in Seattle, WA

### Description

Raised elements (curbs, bollards, or flexible delineators) installed along the centerline at intersections to slow turning vehicle speeds.

### **Typical Application**

- Any intersection where turning speeds are high
- Commercial and residential areas

### **Design Considerations**

- Can use flexible delineators where truck movements require larger radii
- Ensure drainage is not obstructed

### **Benefits**

- May require adjustment for bus/ truck routes
- Needs regular maintenance of flexible elements

#### **Constraints**

- May restrict nearby parking
- Requires driver familiarity for effectiveness

### Resources

FDM Section 210.3.3

### **Choker/Pinch Point**



Pinch point in Orlando, FL

### **Description**

Curb extensions that narrow the roadway, reducing pedestrian crossing distances and calming traffic.

### Typical Application

- Appropriate on streets with moderate speeds (25–35 mph)
- Often installed at key pedestrian crossings such as school zones, trail crossings, and neighborhood centers.

### **Design Considerations**

- Should be spaced consistently (300–500 ft) for effectiveness
- Must coordinate with emergency services and transit agencies

#### **Benefits**

- Reduces cut-through and speeding traffic
- Creates safer environments for walking and biking

#### **Constraints**

- May increase travel distance for drivers
- Requires community support to avoid resistance

#### Resources

FHWA Traffic Calming ePrimer Section 3.10 &3.12 FDM Section 202.3.8, FDOT Design Standard D520-030

### **Raised Intersection**



Raised intersection in Fort Lauderdale, FL

### **Description**

Intersection design where the roadway is elevated to sidewalk grade, creating a level pedestrian crossing and reducing speeds.

### Typical Application

- Lower speed, 2-3 lane roads
- Local roads or collectors
- · Shared use path crossing
- Residential, commercial, or institutional land uses

### **Design Considerations**

- Requires coordination with transit and emergency services
- Must include ADA-compliant curb ramps and detectable warnings
- Drainage should be considered

#### **Benefits**

- Slows vehicle speeds at intersections
- Improves visibility and safety for pedestrians

#### **Constraints**

- Higher construction costs
- May impact drainage and large vehicle turning
- May require emergency vehiclesto slow down.

#### Resources

FDM Section 202.3.8, FDOT Design Standard D520-030 NACTO Urban Street Design Guide

# **APPENDIX G:**

**Funding Sources** 

# **Funding Sources**

Funding for the implementation of active transportation projects may be derived from a variety of sources, including federal and state grants, local contributions, and private-public investments. The pursuit of funding for a project may involve multiple sources to ensure flexibility and timely implementation. Projects can be planned and developed as stand-alone improvements or in conjunction with a new roadway, roadway extension, resurfacing, or widening. This section summarizes key funding sources for active transportation projects.

### **Federal**

Federal grants offer the primary sources of funding available to local governments in Marion County for active transportation projects. Federal funding is contingent upon the current authorization of infrastructure legislation and the allocation of funding available to programs in support of active transportation projects.

**Transportation Alternatives (TA)**: A federal cost (80/20) reimbursement grant program through FDOT. The State of Florida utilizes toll credits to serve as the local match. The local government must be Local Agency Program (LAP) certified to administer TA funding. In Ocala/Marion County, as a non-TMA area, the local government works with the TPO annually through the List of Priority Projects (LOPP) process to submit an FDOT project application, and specific TA application. FDOT District 5 determines eligibility and feasibility of the project for funding and programming into the Five-Year Work Program.

**Surface Transportation Block Grant (STBG)**: Flexible funding that may be used to preserve and improve the condition of the Federal-aid highway system, including roadways, bridges, pedestrian and bicycle infrastructure, and transit projects. The local government works with the TPO annually through the LOPP process to submit an FDOT project application. FDOT District 5 determines eligibility and feasibility of the project for funding and programming into the Five-Year Work Program.

**Safe Routes to School (SRTS)**: A statewide program, funded through FDOT and coordinated with each district. Federal funding is available through an application process. The Districts typically conduct a call for projects with a detailed schedule.

Local governments and schools are eligible for funding and must apply to FDOT. Projects include facilities that support walking and biking, as well as education/encouragement programs for school children, parents, and the community.

**Recreational Trails Program (RTP):** A federal grant program funded and administered through the Florida Department of Environmental Protection (FDEP). Local governments are eligible applicants and must apply to FDEP. Eligible projects include recreational trail facilities, trailheads, trail amenities, and others in support of both nonmotorized and motorized uses. A local match is required for an application.

**Safety Program**: A statewide program, funded through FDOT and coordinated through each district. The National Highway Traffic Safety Administration (NHTSA) apportions funding to FDOT each year. Local governments are eligible to pursue funding for projects that improve traffic safety on roadways, which may include facilities or amenities in support of active transportation. Local governments must apply to FDOT when a call for project applications is scheduled.

**Federal Discretionary Funding**: Competitive grant programs tied directly to the current federal transportation authorization.

**National Grant Programs**: Organizations across the nation provide opportunities for competitive grant funding of trail projects. Local governments may pursue grants for trails that support multiple user types and facilities, such as multiuse, shared use, and rail trails. The Rails to Trails Conservancy Trail Grants program is an example.

### State

The primary source of state funding available to local governments for active transportation projects is the Florida Shared-Use Non-motorized (SUN) Trail Program, administered by FDOT. This source of funding is available for developing the designated SUN Trail network as identified in the Florida Greenways and Trails System (FGTS) Plan. In Marion County, this includes existing facilities and gaps of the Cross Florida Greenway and connecting trails, which may be viewed on the <u>FDOT website</u>. Local governments must apply to FDOT when a call for project applications is scheduled.

### Local

Local governments have various options to invest funding in active transportation projects. Local sources may include general funds, sales tax revenue, bond measures, impact fees, and mobility fees, among others. These funds may be used to match and leverage federal and state grant opportunities. Local funds may also be used in coordination with FDOT. For example, local governments can use its funding and coordinate with FDOT to incorporate bicycle/pedestrian amenities or other related features into state roadway projects, such as enhanced crosswalks, sidewalks, pedestrian-scale lighting, and bus stops/shelters. For local projects, funding may be programmed to add elements to a project that support active transportation and "complete streets", enhancing safety and access for all users.

### **Private Investment**

An additional investment option for active transportation projects is private sources. These funds may be received through donations or gifts, a foundation, or more extensive, including the formal development of a private-public partnership. Private funds may help supplement or support phases or aspects of a project, which may not be fully covered by grant or local government funding. Private involvement may also include land contributions or easements to help support and ensure project implementation.