



Prepared by



Indian Trail Transportation Master Plan

Project Advisory Committee Meeting #1

January 29, 2024



Agenda

- 1** Welcome & Introductions
- 2** Project Schedule
- 3** Study Area
- 4** Draft Vision Statement
- 5** Literature Review
- 6** Existing Conditions
- 7** Stakeholder Interviews
- 8** Deficiency Identification
- 9** Next Steps





Project Advisory Committee

Name	Organization
Todd Huntsinger	Indian Trail Engineering Department
Magdalene Ngan	Indian Trail Engineering Department
Brandi Deese	Indian Trail Planning Department
Andrew Mullis	Union County Sheriff Office
Bjorn Hansen	Union County Planning Department
Paul Benson	CRTPO
Theo Gitea	NCDOT Division 10



Project Advisory Committee

Roles and Responsibilities

- 1** Provide guidance and direction on the development of the plan
- 2** Help identify deficiencies and associated improvements
- 3** Participate in Project Advisory Committee meetings
- 4** Assist with public outreach

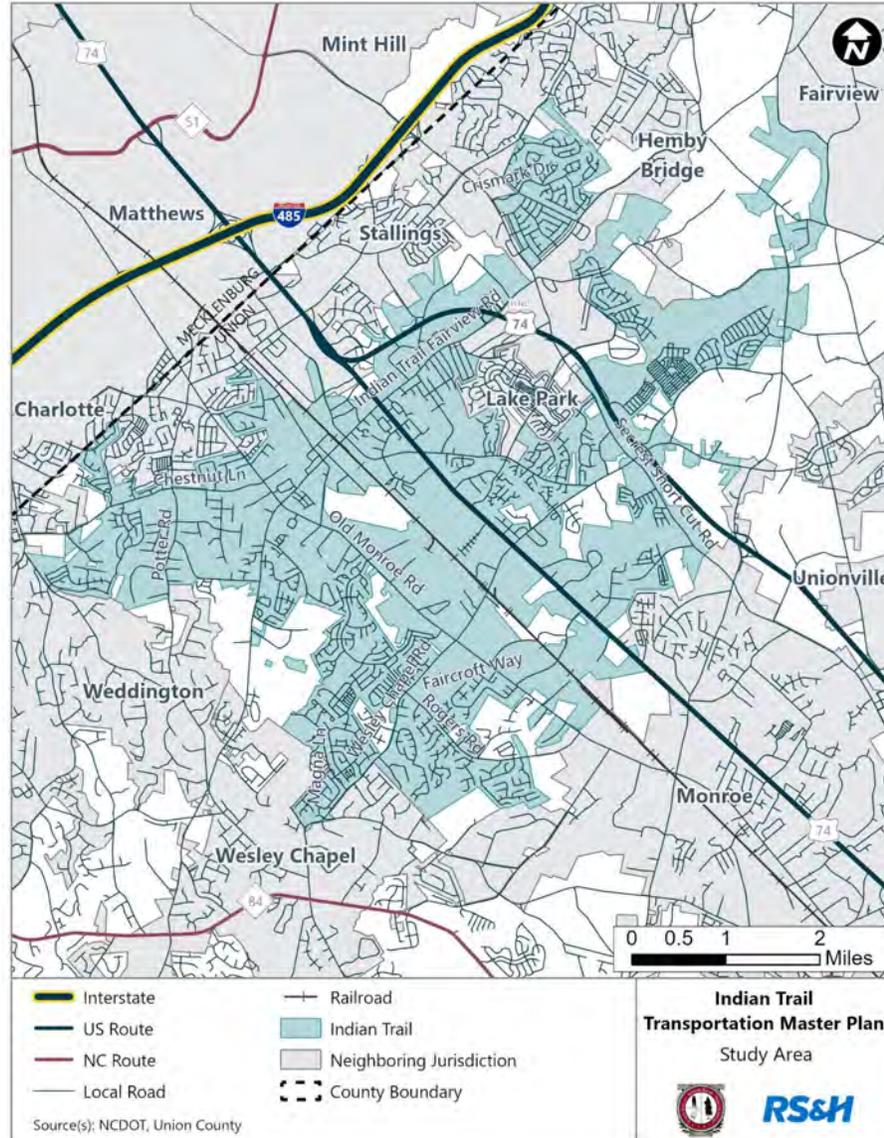


Project Schedule

Project Tasks	2023	2024									
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Project Advisory Committee Meeting											
Existing Conditions & Needs Assessment	[Blue bar]										
Public Outreach				R1					R2		
Identification of Corridors & Potential Improvements				[Blue bar]							
Screening & Prioritization						[Blue bar]					
Conceptual Alignments & Cost Estimates								[Blue bar]			
Funding & Implementation										[Blue bar]	
Prepare Document									[Blue bar]		
Council Presentations											
Legend	Notice to Proceed	Draft Plan	R1 Round 1								
	Status Update/Info	Final Plan Adoption	R2 Round 2								



Study Area



- Town Limits
- Will consider development activity and transportation projects in neighboring jurisdictions adjacent to town limits
- Approximately 22 sq mi



Draft Vision Statement



The Indian Trail Transportation Master Plan (TMP) identifies transportation issues and deficiencies, integrates land use and transportation strategies, and shapes investment decisions to produce transportation improvements that connect people and places, safely and efficiently move goods and people, and expand travel choices.



The TMP aligns with two Town Council priorities set forth in the Town's strategic plan.

- **Connecting People and Places**
- **Ensuring a Safe Community**

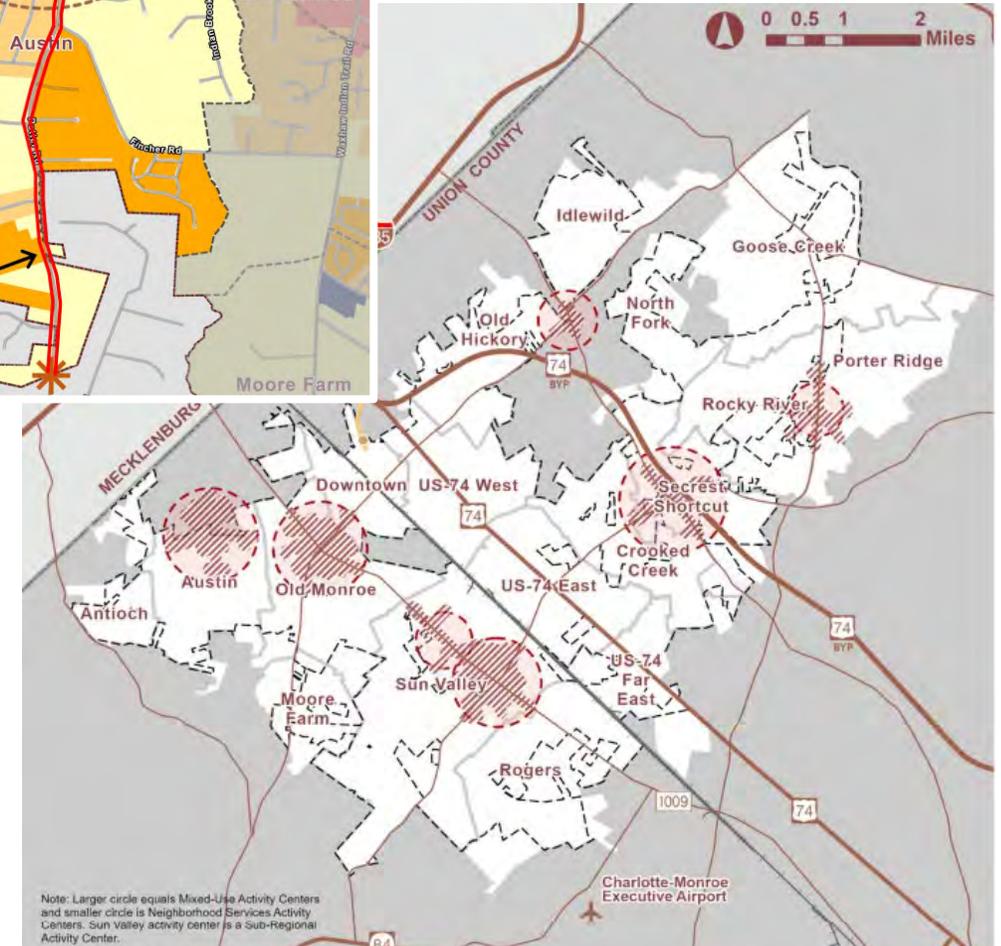
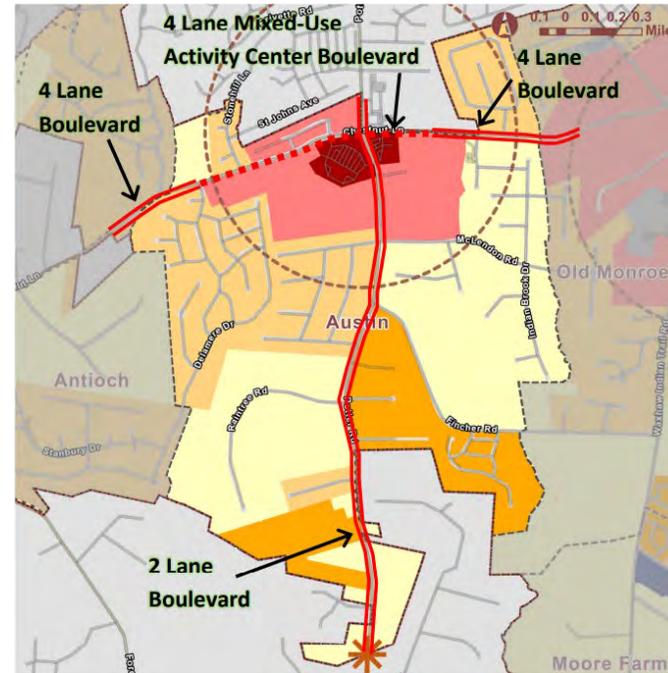


Literature Review

1

Comprehensive Town Plan (2022)

- Identifies activity centers
- Village plans that include transportation recommendations
- Identifies loop (Chestnut Parkway/Stinson-Hartis Road/Younts Road/Matthews- Indian Trail Road)
- Documents recently completed projects
 - New facilities - Monroe Expy (2018), Chestnut Pkwy, Indian Trail Rd
 - Wesley Chapel-Stouts rail crossing
 - RCI intersection conversion – US 74/Indian Trail Rd, Unionville-Indian Trail Rd, Faith Church Rd/Wesley Chapel Stouts Rd/Sardis Church Rd, US 74/Chestnut Pkwy





Literature Review

2

Comprehensive Ped Plan (2024)

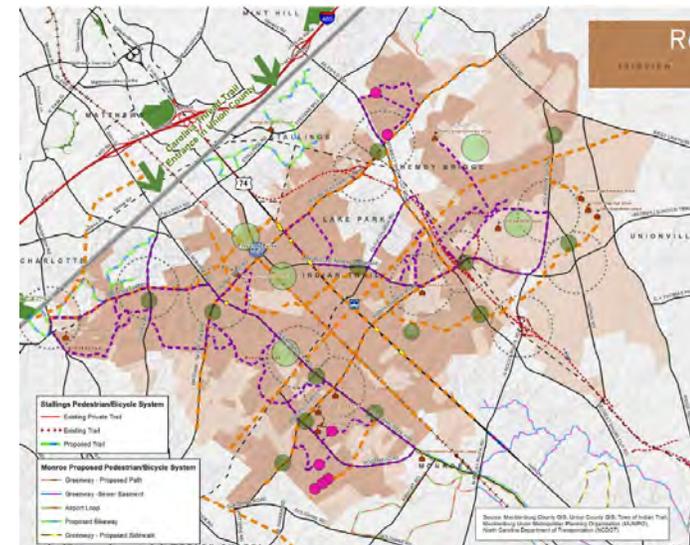
- Documents existing and planned sidewalks, greenways/trails, and sidepaths
- Analyzes bike/ped crash and safety data
- Recommends and prioritizes intersection and midblock projects, grade separations, sidewalks, greenway/trails, and sidepaths
- Concept designs for six (6) priority projects



3

Bicycle Master Plan (2010)

- Existing facilities limited to MUP on portion of US 74
- Planned facilities
 - 19 neighborhood loops – 45 miles
 - 12 town-wide connectors – 55 miles
 - 7 neighborhood connectors (connections between subdivisions)



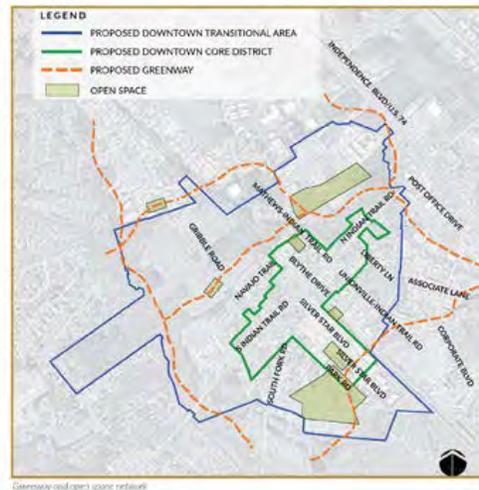
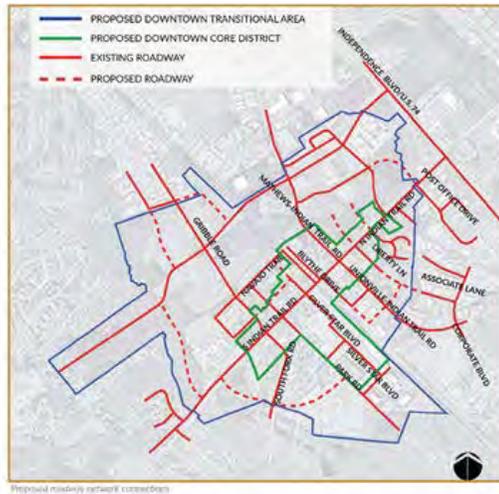


Literature Review

4

Downtown Master Plan (2023)

- Proposes new roadway extensions and connections
- Proposes greenways



5

Secret Short Cut SAP (2018)

- Identifies land uses and infrastructure most appropriate for the area surrounding the Monroe Expy interchange at Unionville-Indian Trail Rd
- A final land use plan was developed by taking ideas from three alternatives:
 - Low density
 - Mixed use
 - Employment
- Goals 6, 7, and 8 include transportation-related strategies and tactics

Goal 8: Provide an integrated, well-connected adequate capacity roadway system throughout the study area.

Strategies 8.2-8.4 include widening Secret Short Cut Rd, Unionville-Indian Trail Rd, and Rocky River Rd.



Literature Review

6

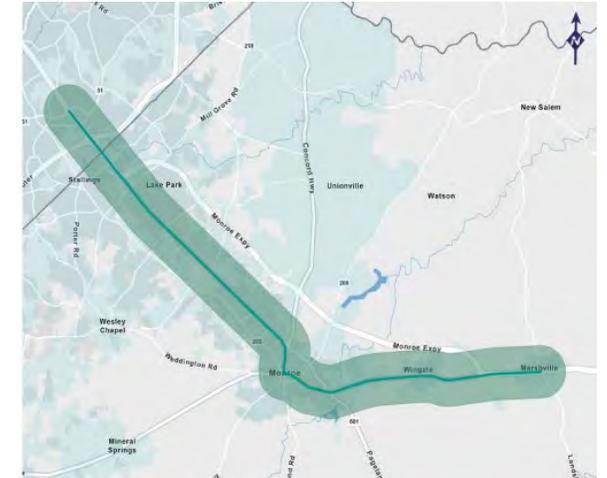
Parks and Greenway Master Plan (2010)

- Dated
- Parks and Recreation Strategic Master Plan Update completed in 2021, but greenway discussion is focused on greenways within parks
- Refer to Comprehensive Ped Plan and Downtown Master Plan for recommended greenway facilities

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CONNECT Beyond (2021)

- Recommends additional planning study of two High-Capacity Transit (HCT) corridors - C and M
 - C: along US 74 / W Roosevelt Blvd from Indian Trail to Marshville
 - M: along the Monroe Expy/ US 74 bypass between Stallings and Marshville
 - Speed vs access





Literature Review

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CATS 2030 Transit Corridor System Plan/LYNX Silver Line Study (2023)

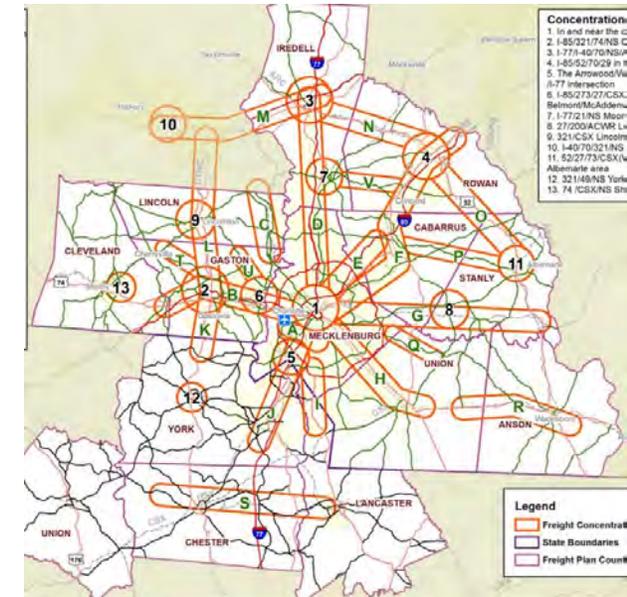
- Silver Line LPA is 29 miles from Belmont (Gaston County) to Indian Trail (Union County)
- Currently Indian Trail portion is a subsequent phase (not included in Phase A or B)
- Three alignment options being considered:
 - 1A: Independence Blvd to Chestnut Pkwy
 - 1B: Independence Blvd to Matthews-Indian Trail Rd
 - 2: Matthews-Indian Trail Rd
- Proposed station at Matthews-Indian Trail Rd and Chestnut Pkwy



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Regional Freight Mobility Plan (2016)

- US 74/CSX from Charlotte to Monroe is a designated freight corridor (H)
- Recommendation to conduct an evaluation to address congestion and safety (T1)



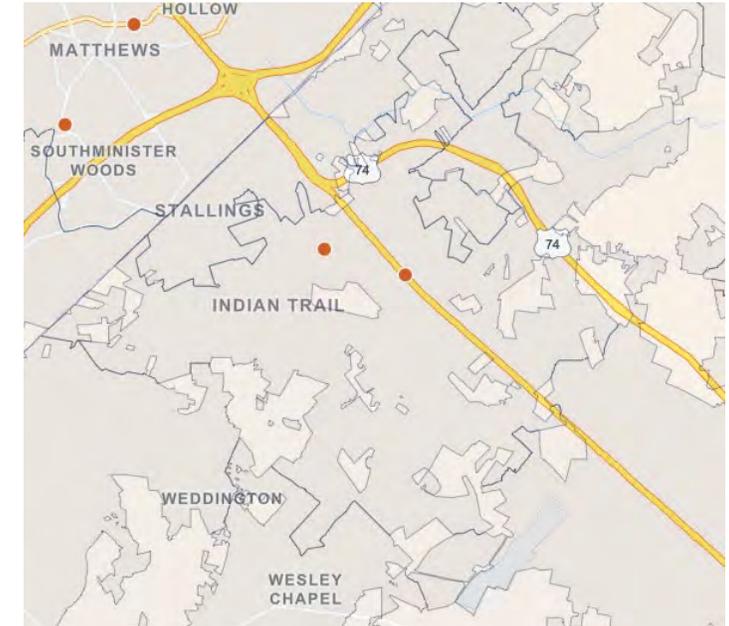
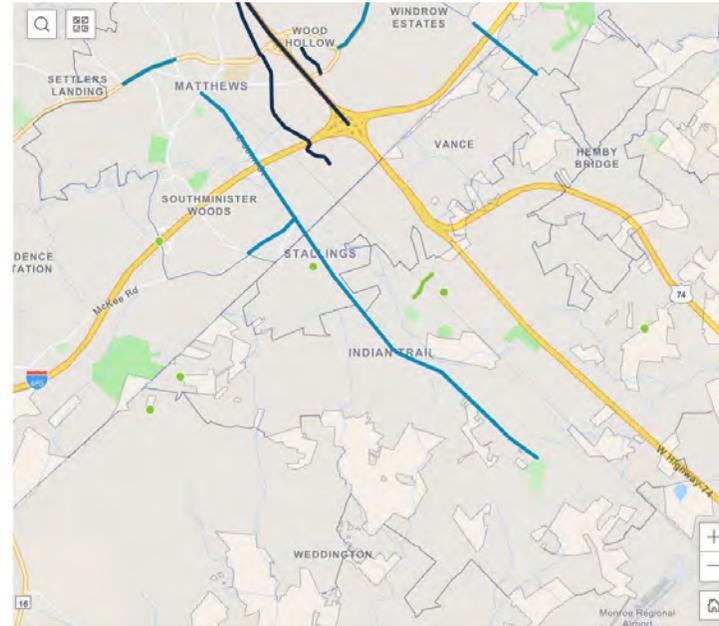


Literature Review

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CRTPO 2050 MTP (2022)

- Five roadway projects
 - U-5808 – Chestnut Ln Connector
 - U-6250 – Intersection improvements at Indian Trail Rd N at Matthews-Indian Trail Rd
 - U-5987 – Intersection improvements at Unionville-Indian Trail Rd at Sardis Church Rd
 - U-4714 – E John St/ Old Monroe Widening
 - P-5744 – CSX SF Line/Wesley Chapel Stouts Rd Grade Separation
- Two active transportation projects
 - EB-5931- North Indian Trail Rd Complete Street
 - EB-5723 - MUP on Indian Trail Fairview Rd to Unionville-Indian Trail Rd and Unionville-Indian Trail Rd to Oakwood Ln





Literature Review

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CRTPO CTP HWY

- “Needs Improvement”
 - US 74
 - Chestnut Ln
 - Waxhaw Indian Trail Rd/S Indian Trail Rd/Indian Trail Fairview Rd
 - Old Monroe Rd/Old Charlotte Hwy
 - Wesley Chapel Stouts Rd/Sardis Church Rd
 - Matthews Indian Trail Rd/Unionville Indian Trail Rd
 - Secrest Short Cut Rd
 - N Rocky River Rd
- “Recommended” Streets
 - Chestnut Ln Ext
 - Brandon Oaks Pkwy Ext
 - Faith Church Rd Ext
 - Hayes Rd Realignment
 - Indian Trail – Fairview Rd Realignment



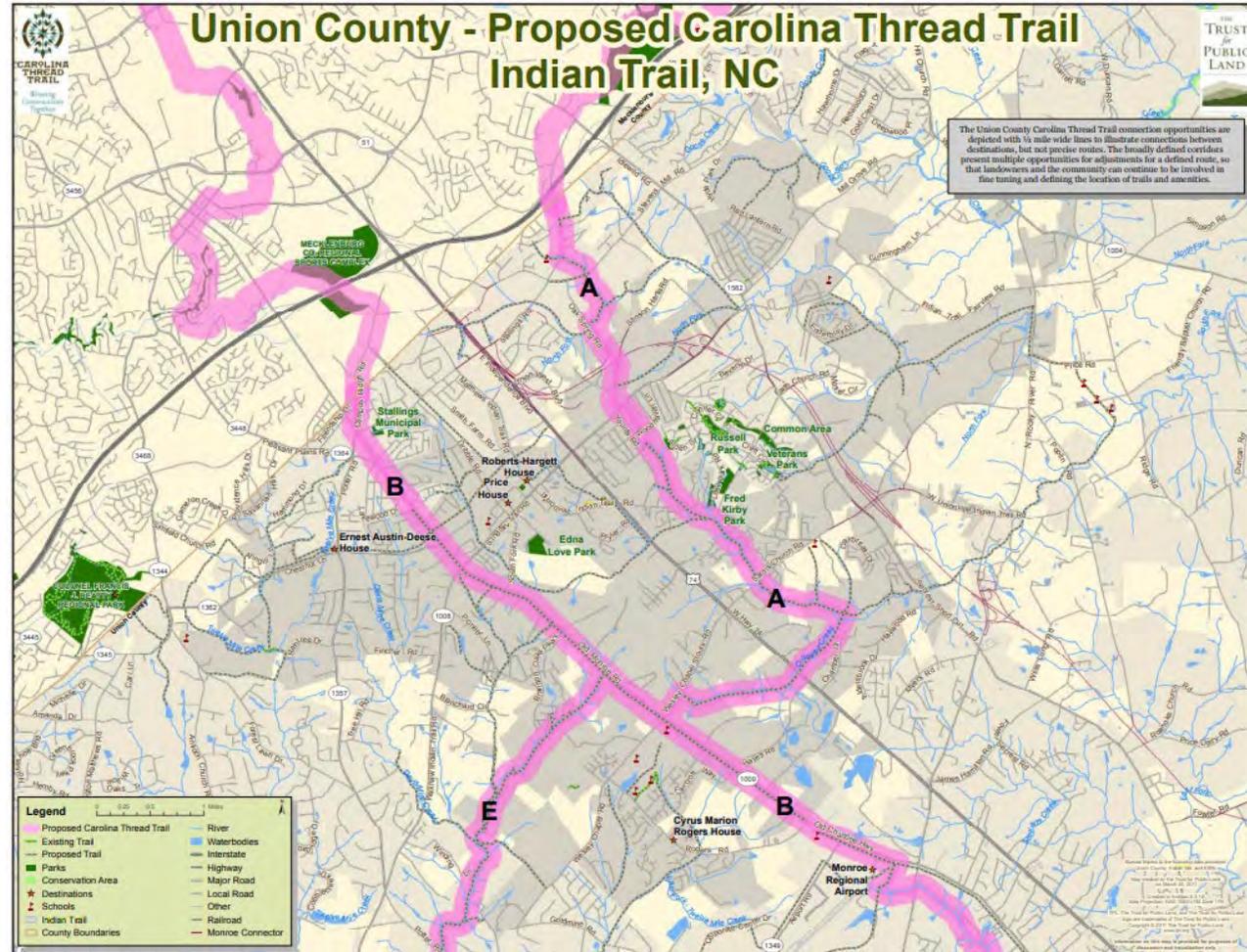


Literature Review

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Carolina Thread Trail Master Plan

- Union County has an adopted master plan
- Routes A, B, E in Indian Trail
 - A: New trail from Oak Springs Rd to the proposed trail along Crooked Creek. Go south, picking up Wesley Chapel Stouts Rd until the segment ends at the connection with Route B.
 - B: Proposed trail along Old Monroe Rd/Old Charlotte Hwy
 - E: Proposed trail north along Price Mill Creek, ending at Route B.





Literature Review

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Union County Comp Plan (2021)

- Actively planning and implementing improvements to the transportation system
 - Critical intersection program to prioritize transportation investments
 - CIA 1 (2016) identified 15 intersections for improvements; designs and cost estimates
 - CIA 2 (2019) identified a second group of 15 intersections; designs and cost estimates for 11; 9 funded
 - CIA 3 (2023) identified 15 additional intersections for improvements

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2024-2033 NCDOT STIP (Jan 2024)

- U-5808
- U-5987
- U-4714B
- P-5744





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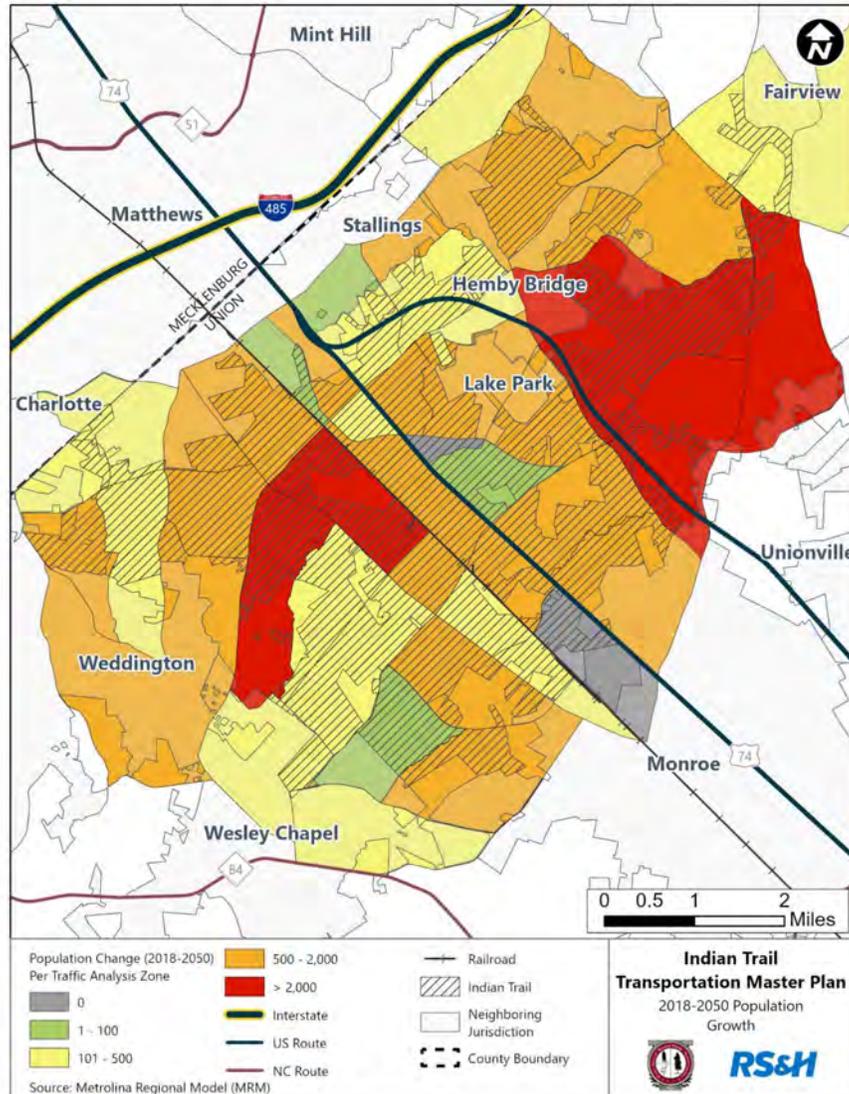
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Existing Conditions

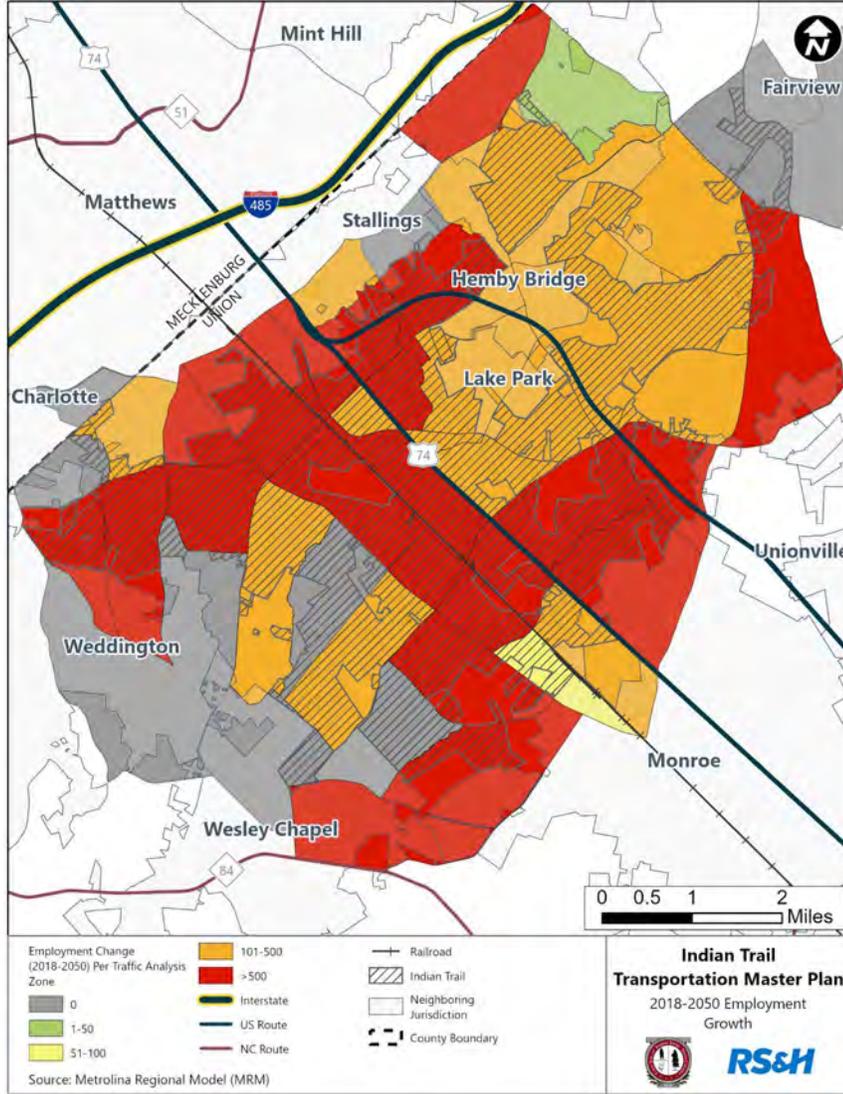


2018-2050 Population & Employment Growth

Population



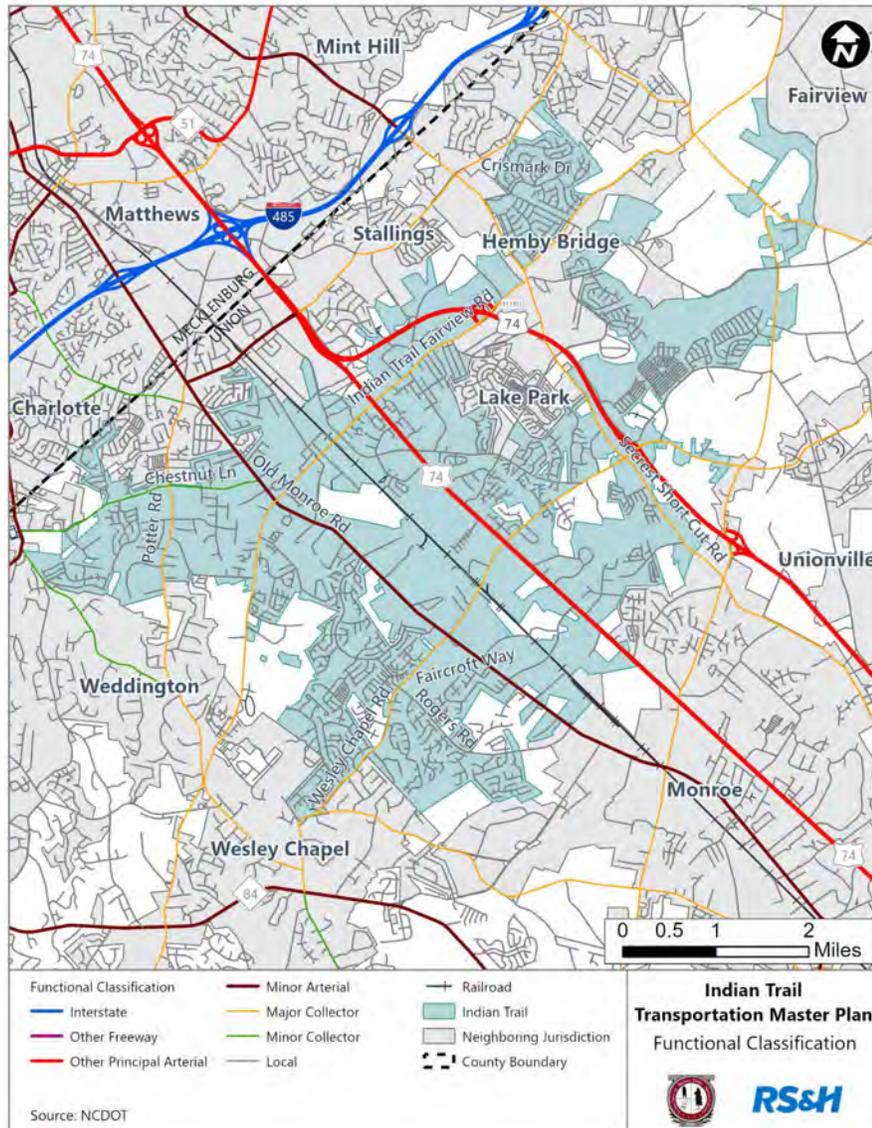
Employment



- The TAZs anticipated to experience the most population growth are located
 - Between Secret Shortcut Rd and N Rocky River Rd
 - Just east of Indian Trail Road S/ Waxhaw Indian Trail Rd
- The TAZs anticipated to experience the most employment growth are located
 - Between Old Monroe Rd and US 74
 - East of Sardis Church Rd
 - South of Chestnut Ln
 - Surrounding the Charlotte-Monroe Executive Airport



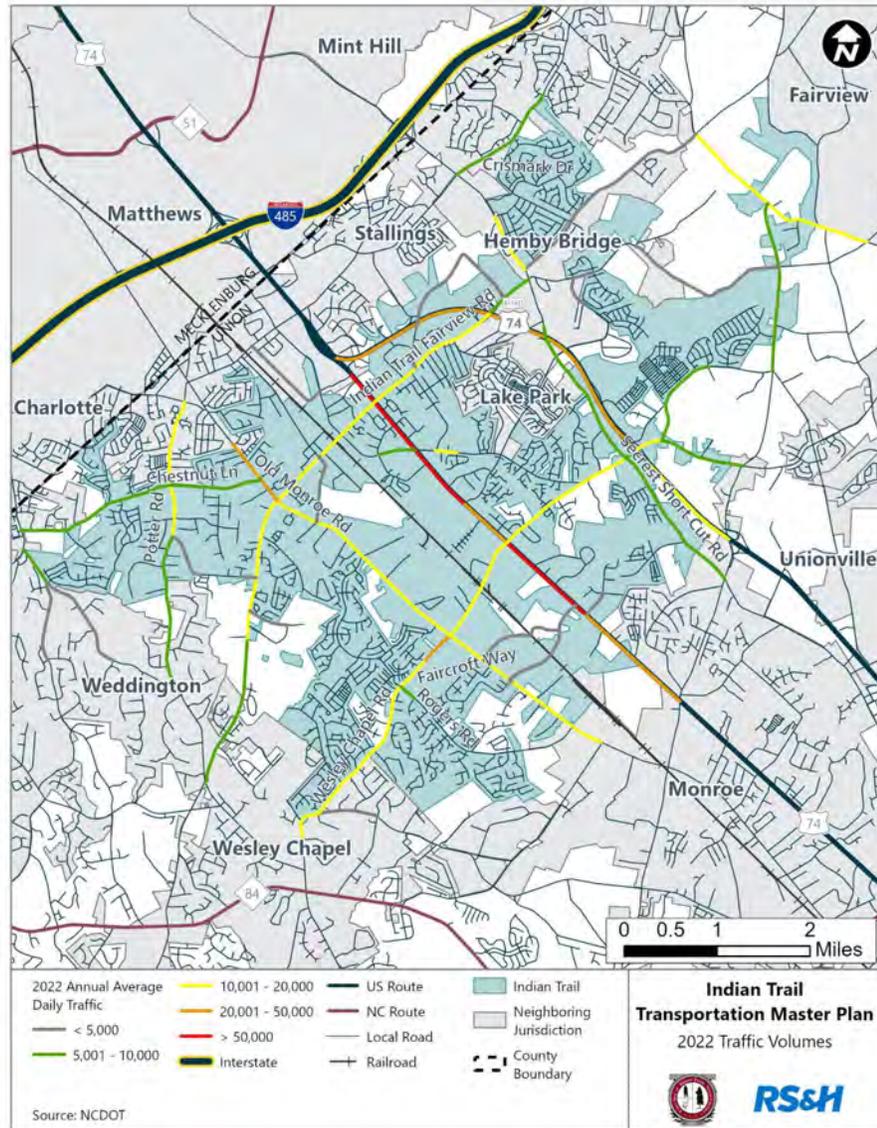
Functional Classification



- **Other Principal Arterials:** US 74, US 74 Bypass
- **Minor Arterials:** Old Monroe Rd/Old Charlotte Hwy
- **Major Collectors:** Indian Trail Rd/Indian Trail Fairview Rd/Waxhaw Indian Trail Rd, Wesley Chapel Stouts Rd, Sardis Church Rd, Secrest Short Cut Rd, N Rocky River Rd
- **Minor Collectors:** Chestnut Ln



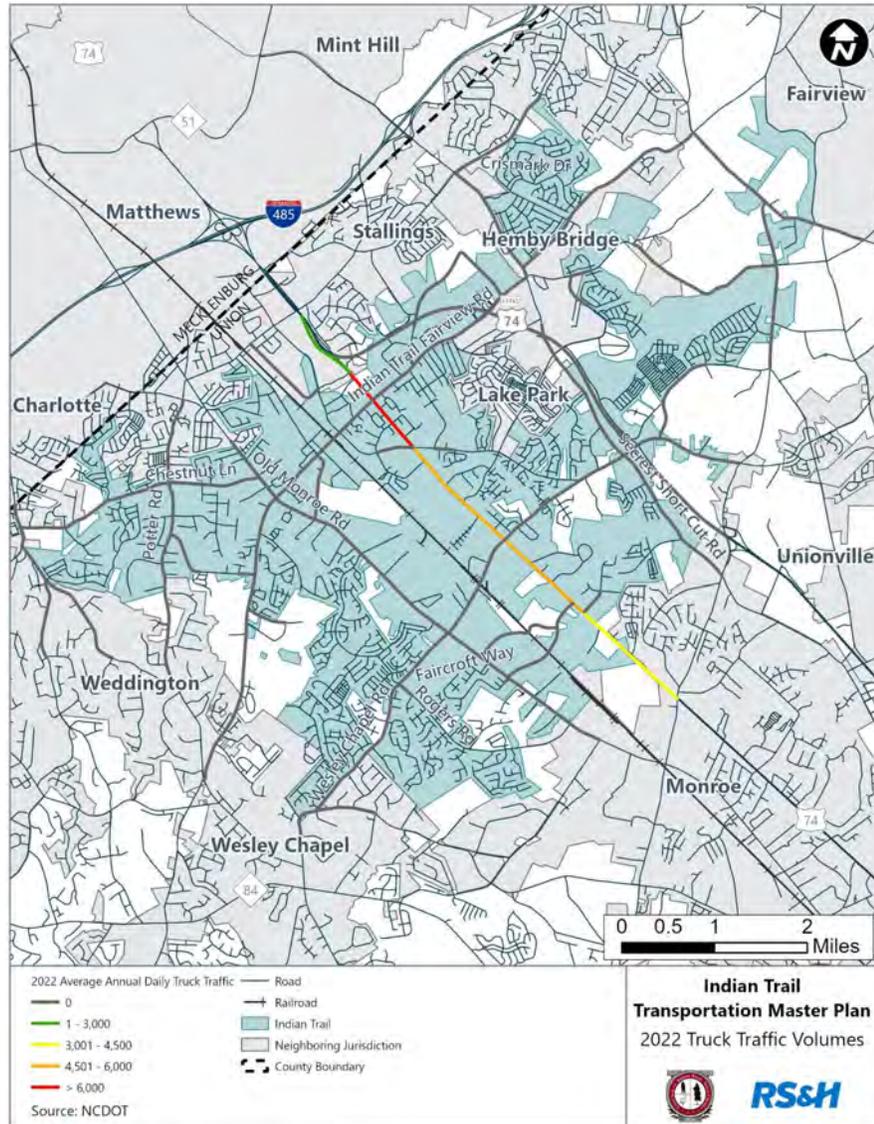
2022 Annual Average Daily Traffic (AADT)



- US 74: 37,500 to 62,500 vpd
- Old Monroe Rd/Old Charlotte Hwy: 14,000 to 20,500 vpd
- US 74 bypass: 19,000 to 20,500 vpd
- Wesley Chapel Stouts Rd: 18,000 vpd
- Waxhaw Indian Trail Rd/Indian Trail Rd: 6,500 to 16,000 vpd
- Indian Trail Fairview Rd: 10,000 to 13,500 vpd
- Secrest Short Cut Rd: 8,500 to 9,500 vpd



2022 Annual Average Daily Truck Traffic (AADTT)



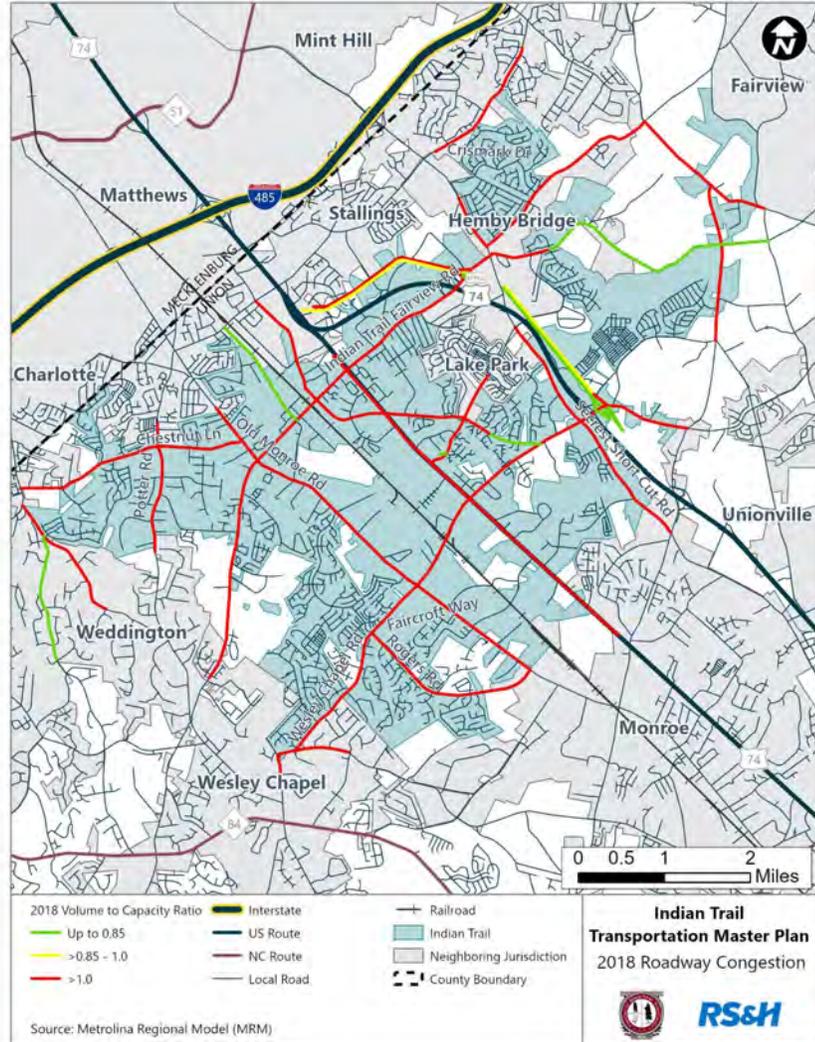
- Highest truck traffic volumes are on the portion of US 74 between Indian Trail Rd and Smith Farm Rd (6,520 vpd)

Year	AADTT
2015	3,820 to 5,900
2016	3,760 to 5,890
2017	3,990 to 5,670
2018	3,990 to 5,670
2019	3,670 to 6,570
2020	3,680 to 6,800
2021	3,770 to 6,080
2022	3,880 to 6,520

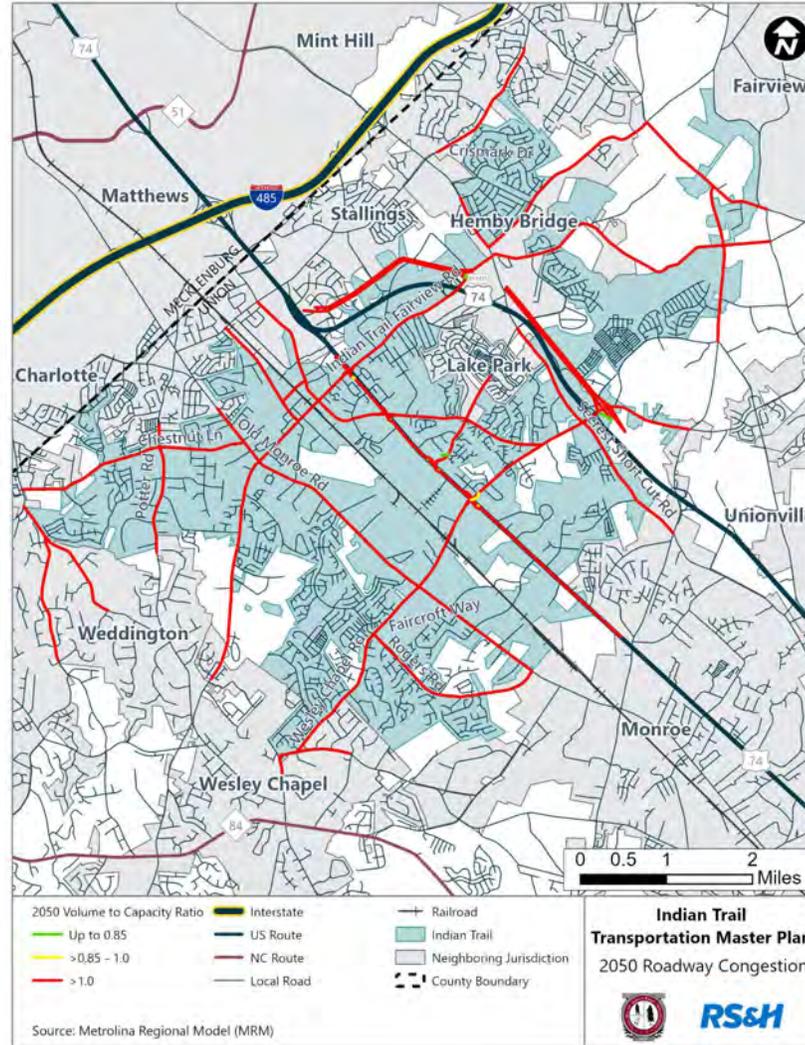


Roadway Congestion

2018



2050

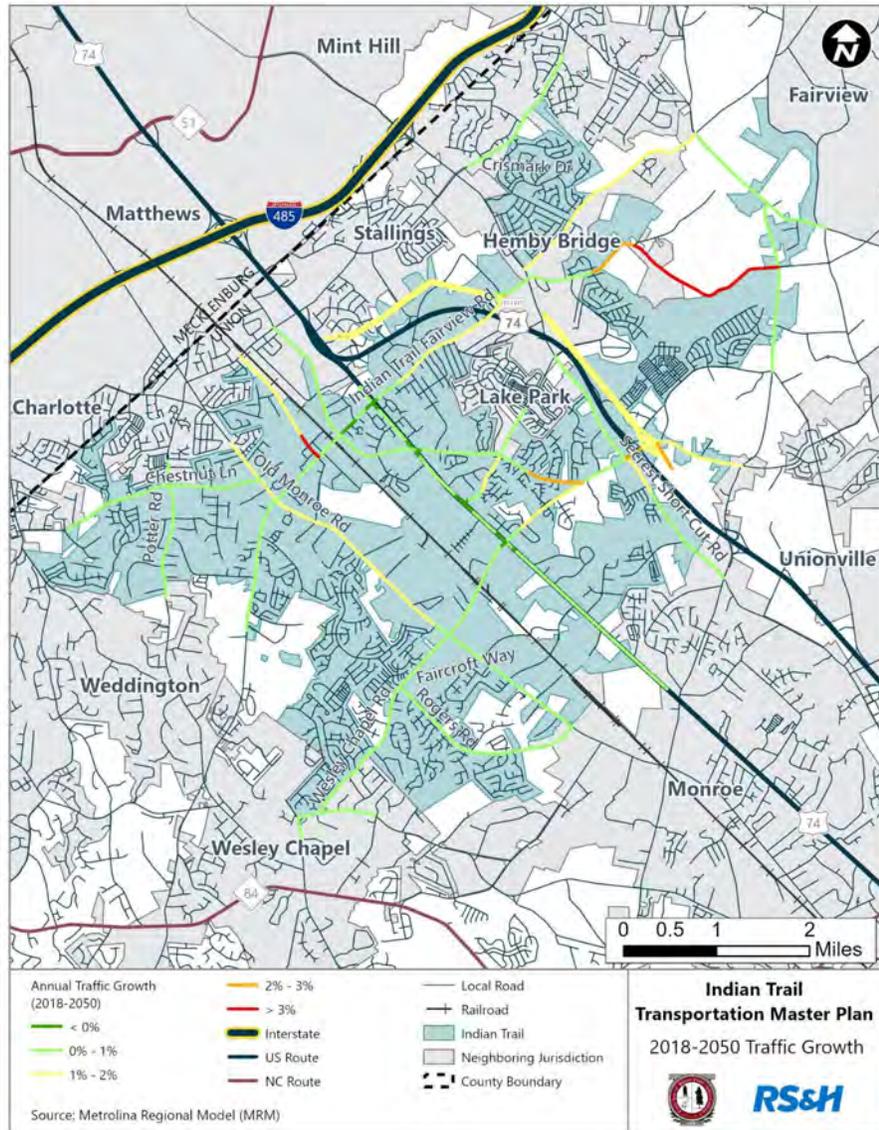


- Heavily congested roads in 2018 include:
 - US 74
 - Old Monroe Rd/Old Charlotte Hwy
 - Chestnut Ln
 - Portions of Potter Rd
 - Waxhaw Indian Trail Rd/Indian Trail Rd
 - Portions of Indian Trail Fairview Rd
 - Wesley Chapel Rd
 - Sardis Church Rd
 - Rogers Rd
 - Secret Short Cut Rd
 - Portions of Rocky River Rd

- Additional heavily congested roads in 2050 include:
 - Additional portions of Indian Trail Fairview Rd
 - US 74 Bypass
 - Gribble Rd



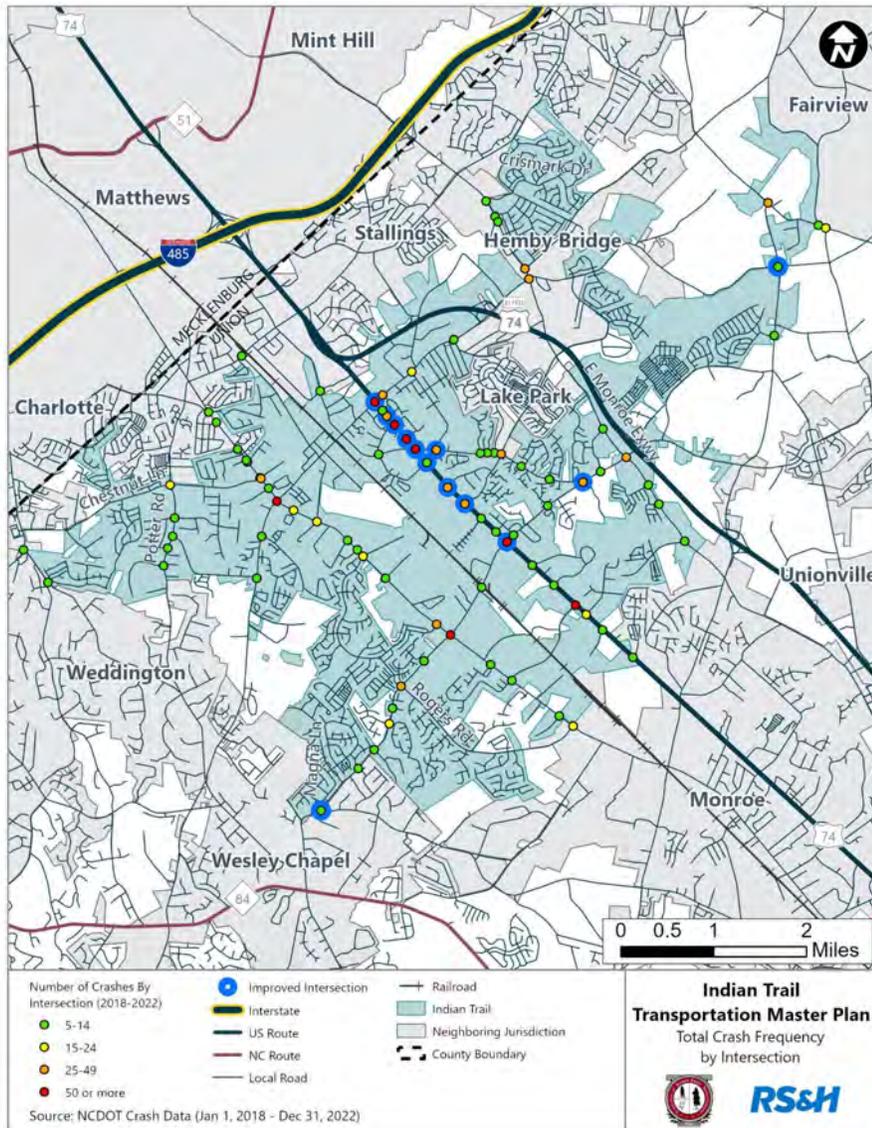
Annual Traffic Growth (2018-2050)



- More substantial increases in traffic anticipated on portions of Indian Trail Fairview Rd, Unionville-Indian Trail Rd W, and Gribble Rd



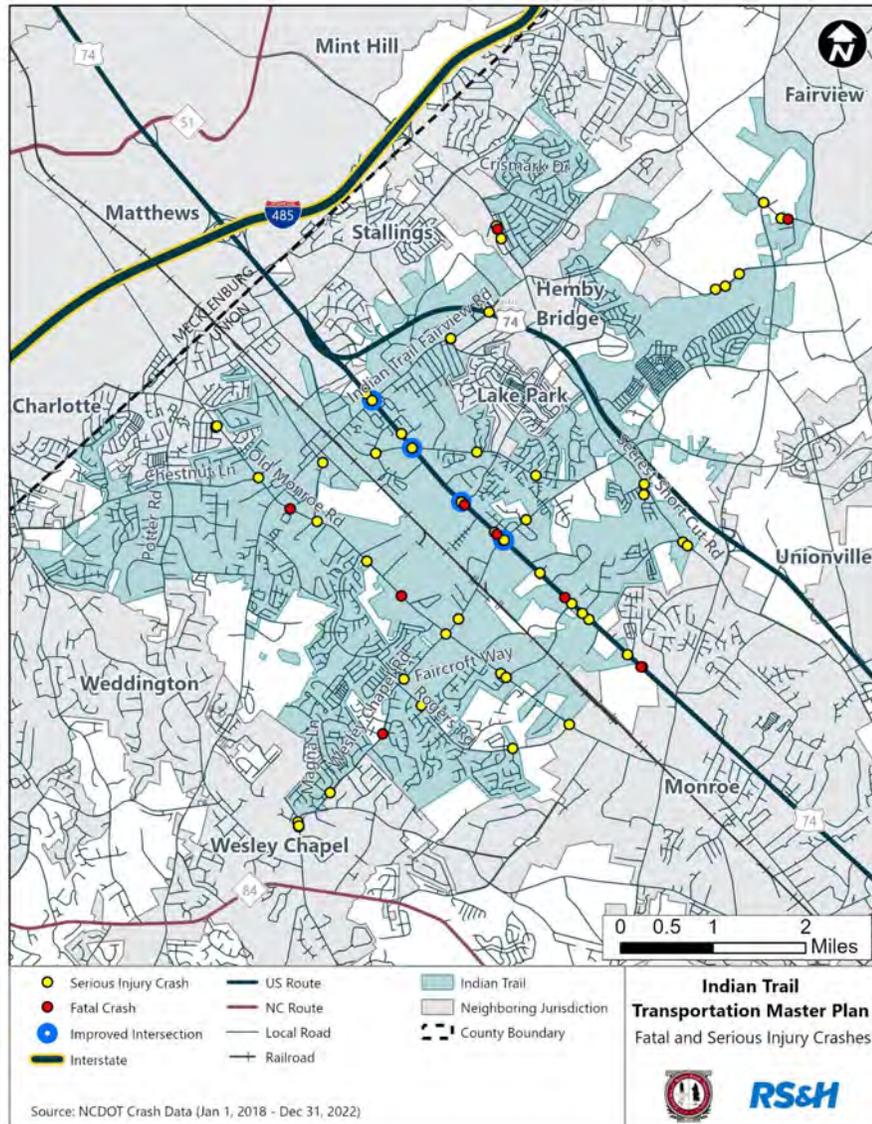
Total Crash Frequency By Intersection



- Several intersections have been recently improved, including many of the top crash intersection locations on US 74
- Unimproved intersections with 50 crashes or more include:
 - Old Monroe Rd/Old Charlotte Hwy/Wesley Chapel Rd/Wesley Chapel Stouts Rd (140)
 - Old Monroe Rd/Waxhaw Indian Trail Rd/S Indian Trail Rd (77)
 - US 74/Hayes Rd (70)
- Unimproved intersections with 25 - 50 crashes include:
 - Rogers Rd/Wesley Chapel Rd (40)
 - Secret Short Cut Rd/W Unionville Indian Trail Rd (39)
 - Old Monroe Rd/Chestnut Ln (39)
 - Indian Trail Fairview Rd/Idlewild Rd (39)
 - Old Monroe Rd/Mustang Dr (38)
 - Mill Grove Rd/Idlewild Rd (30)
 - Faith Church Rd Ext/Faith Church Rd/W Unionville Indian Trail Rd (27)
 - Indian Trail Fairview Rd/Peace Dr (25)



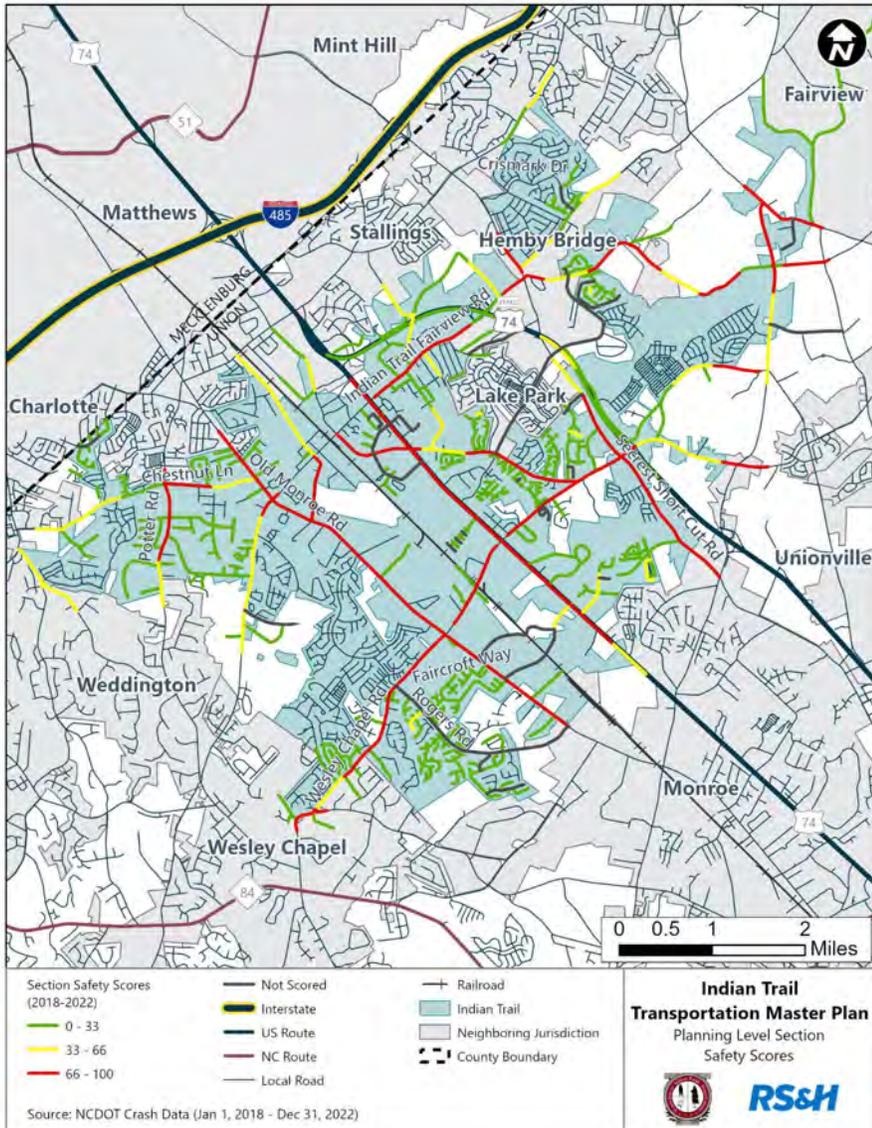
Fatal and Serious Injury Crashes



- 60 Fatal and Serious Injury Crashes Over 5-Year Period (9 Fatal)
- Fatal Crashes
 - 4 on US 74
 - 2 on Old Monroe Rd
 - 1 on Wesley Chapel Rd, Idlewild Rd, W Lawyers Rd
- Multiple Serious Injuries Crashes
 - US 74
 - Old Monroe Rd/Old Charlotte Hwy
 - Wesley Chapel Stouts Rd
 - Unionville Indian Trail Rd
 - Secret Short Cut Rd
 - Rogers Rd
 - Indian Trail Fairview Rd
 - Idlewild Rd
 - W Lawyers Rd
 - Sardis Church Rd



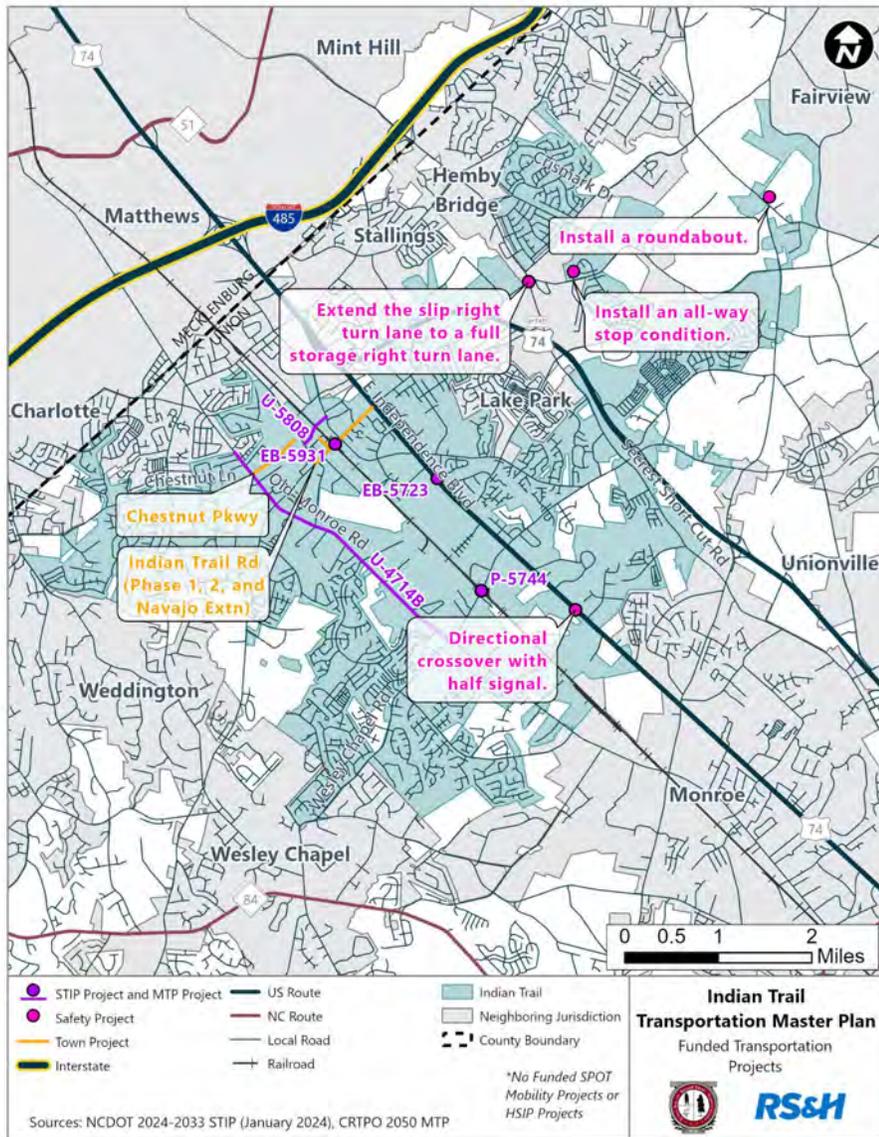
Planning Level Section Safety Scores



- Based on three components:
 - Class Density Ratio
 - Severity Index
 - Critical Crash Rate Ratio
- Grouped by half mile roadway segments
- The higher the score, the poorer the highway safety performance



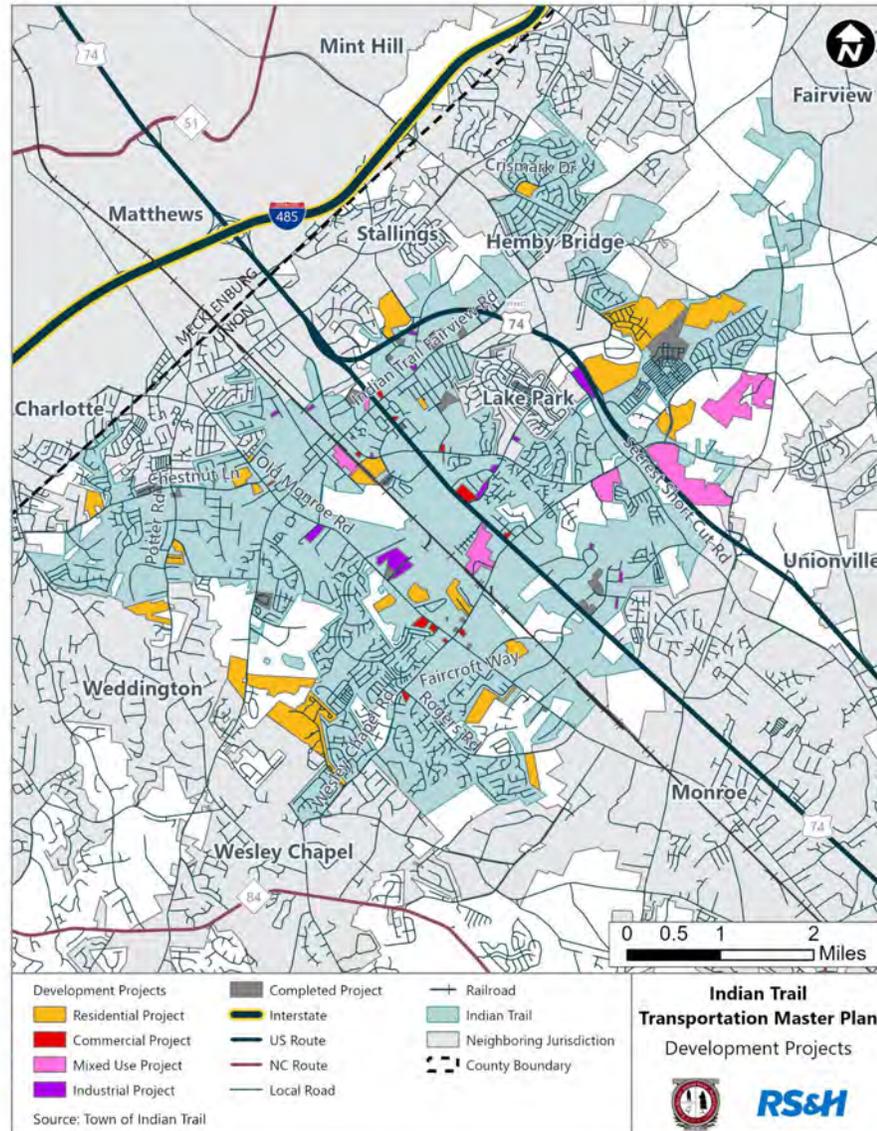
Funded Transportation Projects



- Three (3) roadway projects in the STIP:
 - One new roadway
 - One widening project
 - One grade separation
- Two (2) active transportation projects in the STIP
 - Complete street
 - Multi-use path
- Four (4) active safety projects
 - Directional crossover with half signal at US 74/Hayes Rd
 - Extend the slip right turn lane to full storage right turn lane at Indian Trail Fairview Rd and Idlewild/Secret Short Cut Rd (Hemby Bridge)
 - Install an all-way stop condition at Faith Church Rd/Indian Fairview Rd
 - Install roundabout at Lawyers Rd/Rocky River Rd
- Four (4) active Town projects
 - Indian Trail Rd (Phase 1, 2, and Navajo Extn)
 - Chestnut Pkwy
 - Shady Bluff Rd
 - Hwy 74 MUP/Southfork Greenway



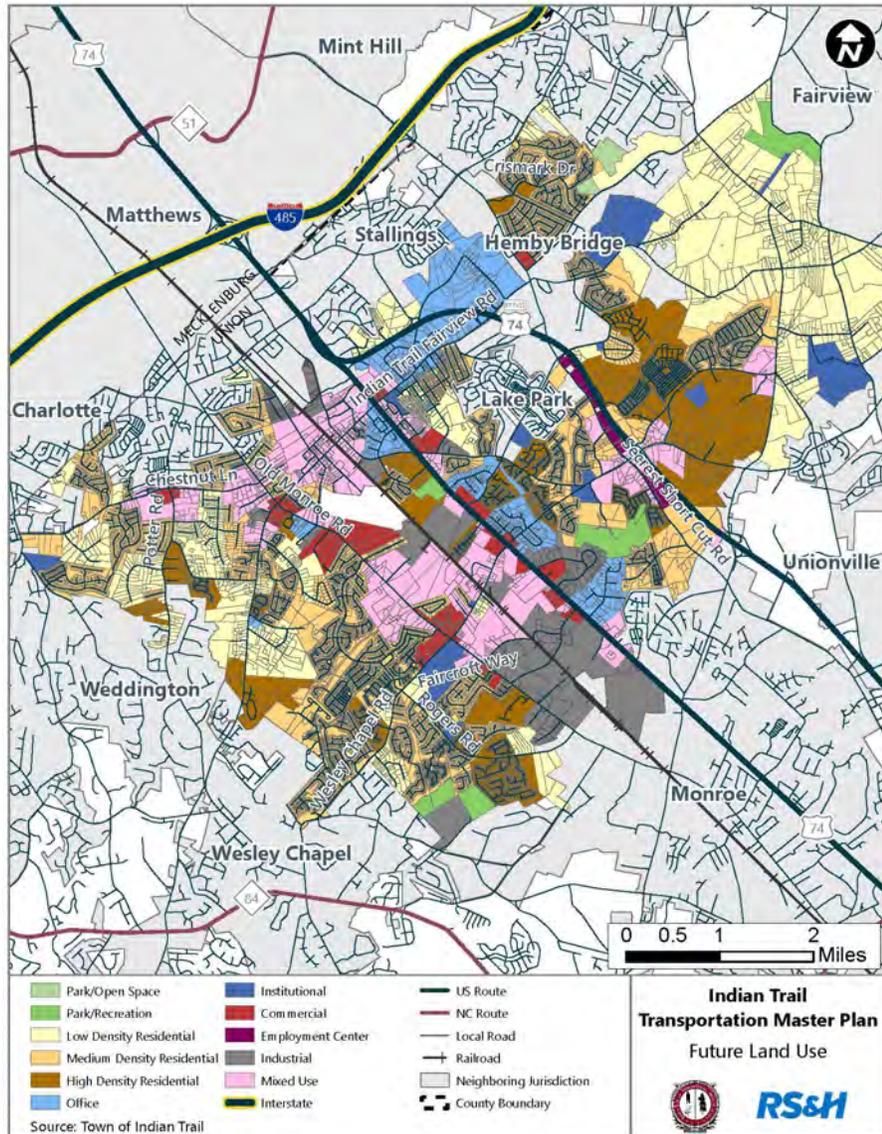
Development Status



- Mixed Use
 - ~393 acres approved or under construction
- Industrial
 - ~ 75 acres approved or under construction
 - ~ 3 acres under review
- Commercial
 - ~25 acres approved, under construction, or in progress
- Residential
 - 23 residential developments under construction
- Completed
 - Mix of development types completed in last two years



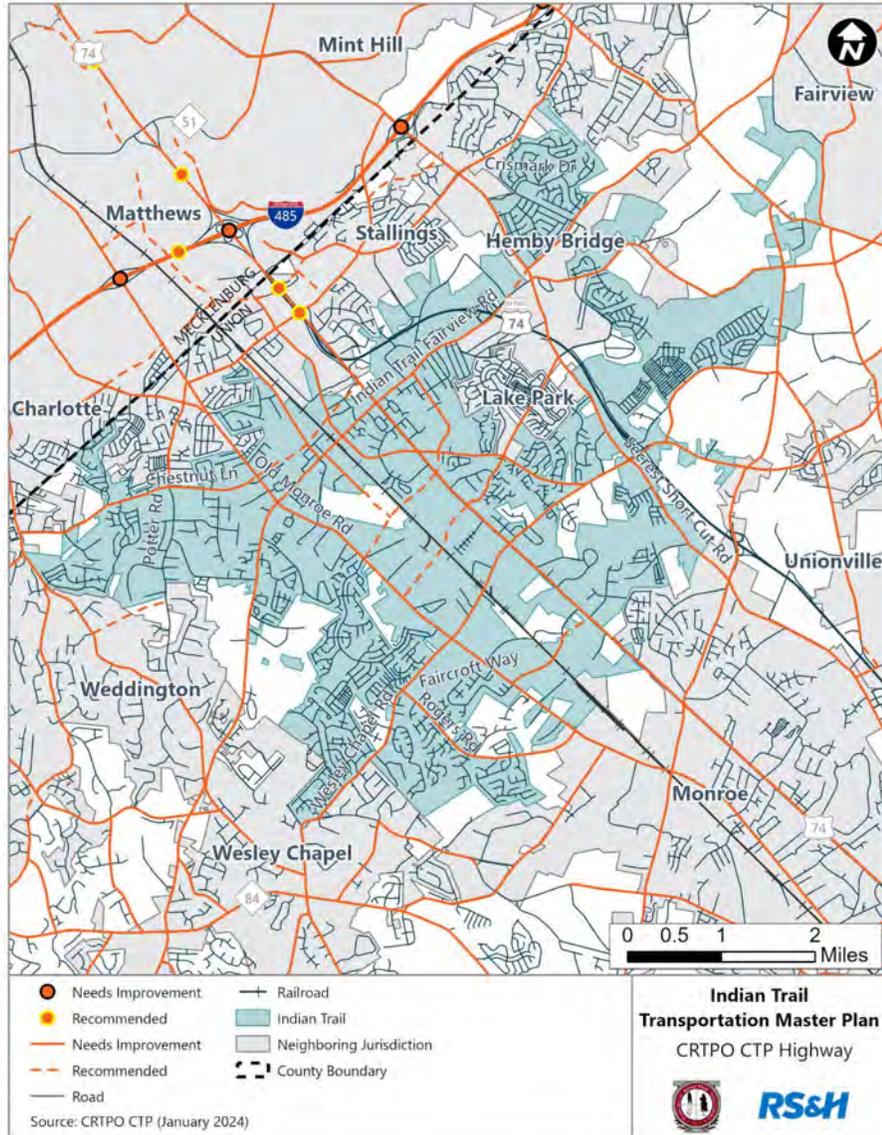
Future Land Use



- Mixed use and industrial concentrated between Old Monroe Rd/Old Charlotte Hwy and US 74
- Employment center concentrated around US 74 Byp
- Commercial concentrated along US 74, Monroe Rd, and the Wesley Chapel Rd/Wesley Chapel Stouts Rd/Old Monroe Rd intersection
- Residential concentrated west of Old Monroe Rd/Old Charlotte Hwy and east of the US 74 Byp



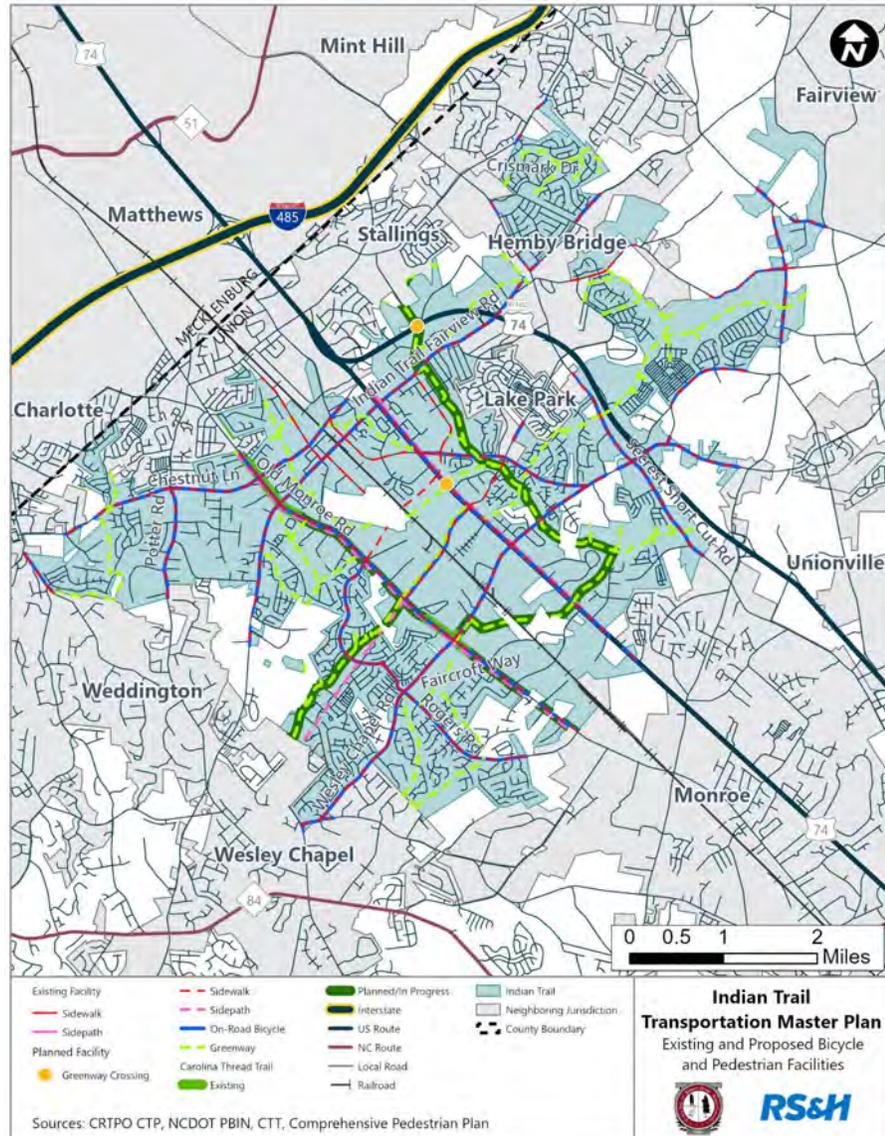
CRTPO CTP Projects



- US 74, minor arterials, major collectors, and minor collector all classified as needs improvement
- A handful of north/south connectors are recommended, mostly across railroad



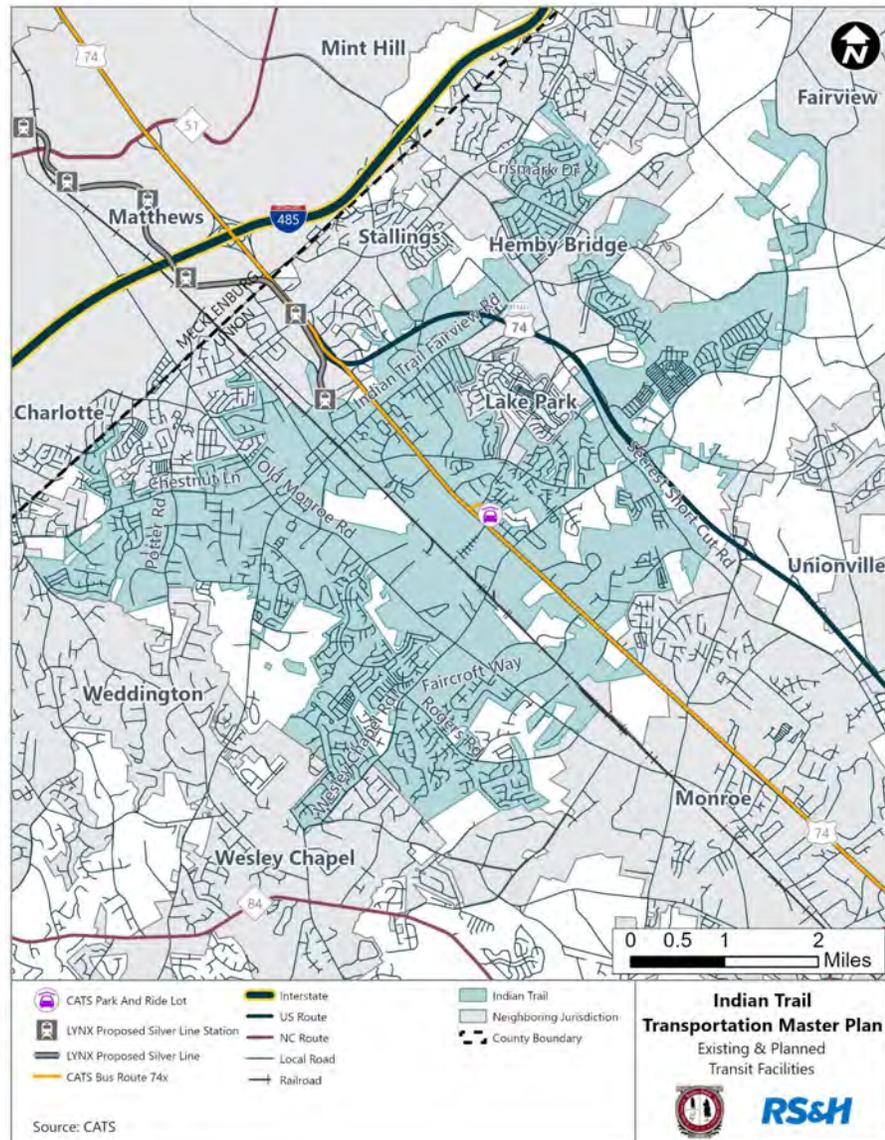
Existing & Proposed Bicycle and Pedestrian Facilities



- Existing Facilities
 - Sidewalks are largely concentrated within newer residential neighborhoods
 - No on-road bicycle facilities
 - Sidepath on a portion of US 74
 - Carolina Thread Trail on portions of Old Monroe Rd/Old Charlotte Hwy
- Proposed Facilities
 - Carolina Thread Trail routes and greenway crossings
 - Sidewalks along collectors and arterials including Chestnut Ln, Waxhaw Indian Trail Rd/Indian Trail Rd S, Fincher Rd, Younts Rd, Faith Church Rd, a portion of Secret Short Cut Rd, and a portion of Unionville-Indian Trail Rd W
 - Sidepaths along US 74, Old Monroe Rd/Old Charlotte Hwy, Wesley Chapel Rd/Wesley Chapel Stouts Rd, Rogers Rd, Sardis Church Rd, Unionville-Indian Trail Rd W, and portions of Secret Short Cut Rd



Existing & Proposed Transit Facilities



- Existing
 - Park And Ride at Union Towne Center
 - Express bus service to Uptown Charlotte on 74x
- Proposed
 - CATS LYNX Silver Line
 - CATS LYNX Silver Line Station
 - CONNECT Beyond High-Capacity Transit (HCT) Corridors (further studies will choose between US 74 and US 74 Byp)



ITEM

7

Stakeholder Interviews



Stakeholder Interviews

- Scoped to Conduct Up to Five (5) Interviews
 - Town Would Like PAC Input into Interviewee Selection
 - Will Conduct in February
- Possible Options
 - Elected Officials
 - Developer(s)
 - Union County Public Schools
 - Business leaders
 - Chambers of Commerce
 - Realtor's Association
 - Monroe Union County EDC
 - Parks and Recreation Department
 - CATS



ITEM

8

Deficiency Identification



Deficiency Identification

- Create List of Candidate Intersections
 - Review Existing Conditions Maps
 - Other Locations Based on Personal Experience or Observation
- Consider Intersections
 - In identified activity centers
 - With 25 crashes or more in 5-yr period, and unimproved
 - With a fatal or serious injury crash (and design could have been factor)
 - That are priority in the Comp Ped Plan
 - On “needs improvement” roadways in the CTP



ITEM

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Next Steps



Next Steps

- Stakeholder Interviews
- Finalize Candidate Locations
- Screen Candidate Locations
 - Finalize List of Locations for More Detailed Study (around 10)
 - Select Locations for Design Concepts and Cost Estimates (up to 3)
- Public Engagement

Thank you!

