



# Union County 2023 Critical Intersection Analysis

Adopted September 18, 2023

Developed by Union County Planning Department

# Table of Contents

Executive Summary.....	3
Existing Conditions.....	5
Plan Development Process.....	8
Stakeholders Committee.....	7
Public Outreach.....	9
Evaluation Process.....	16
Recommended Intersections.....	20
Adoption Process.....	23
Implementation.....	23
Conclusion.....	25



# List of Figures

Graph 1: Metroquest Question “Where Do You Live?” ..... 12

Graph 2: Metroquest Question “How Old Are You?” ..... 12

Graph 3: Metroquest Question “What Ethnic Group Do You Most Identify With?”. 13

Graph 4: Metroquest Question “What Kind of Issues are at the Intersection?” ..... 16

Map 1: May 2023 Map of Funded Intersections..... 6

Map 2: 2019 Critical Intersection Locations ..... 7

Map 3: Feedback on Existing Intersections ..... 14

Map 4: Input on New Intersections..... 15

Map 5: 2023 Candidate Intersections..... 17

Map 6: 2023 Critical Intersections..... 21

Table 1: Plan Schedule..... 8

Table 2: Stakeholder Committee Members..... 8

Table 3: Ranking Process ..... 18

Table 4: Candidate Intersections ..... 19

Table 5: 2023 Critical Intersection List ..... 22

Image 1: Metroquest Welcome..... 11



## Executive Summary

Union County is an attractive place to live, work, and play. Its proximity to Charlotte combined with its rural small town character has resulted in traffic and other growth pressures that have stressed the road network. The NCDOT, along with the county and municipalities, have reacted to this growth with mixed success. Some roads have been widened or built, but others are years away from construction.

Road widenings or other larger improvements needed today can take a decade or more to become reality, and Union County's congestion is not as widespread in comparison to delays seen in parts of Mecklenburg County. This is important because transportation projects compete for funding at regional or statewide levels. A strategy of focusing on large corridor improvements means Union County and its municipalities may miss opportunities for targeted intersection improvements while waiting for these larger widening projects. In the meantime, growth continues, and motorists must travel on increasingly unsafe and congested roads. These critical intersection projects help deliver benefits that may otherwise never occur through a corridor improvement.

Intersections can be considered the choke points of the transportation network, and improvements can offer significant benefits for a limited investment. This rationale has driven NCDOT and local strategies for several years, with many improved intersections throughout Union County. Funding agencies prioritize projects that are the result of analysis and planning, so having an adopted plan and concurrent project list will help project applications. This critical intersection analysis will serve as that document for Union County, as it works with its partners in improving the transportation network throughout the county.

A total of 40 intersections were identified by the stakeholders and public. These intersections were then evaluated for feasibility of necessary improvements, crash frequency and severity, traffic volumes, multi-modal considerations, and growth rates. The result was a score for the intersections that represents a holistic assessment of need.

Implementing improvements at the 15 locations identified later in this document will take several years of commitment and decisions about designs and costs. This work will ensure thought out applications are submitted, and local funding is approved to help meet match requirements. Each community with a recommended intersection within its boundaries should allocate funding each fiscal year to allow them to quickly respond to project solicitations from the Charlotte Regional Transportation Planning Organization (CRTPO) and the NCDOT. These intersections are often the focal points for development pressure, and the plans for these intersections should be incorporated into adjacent site plans as appropriate.

The NCDOT does have a spot safety program, which is focused on safety issues and a benefit to cost ratio of reducing crash impacts compared to cost for those reductions. One intersection, Unionville Brief and Unionville-Indian Trail was included in that list due to public input and identified safety issues, despite a lack of congestion or traffic volumes. The remaining projects would be appropriate for one or more funding sources.



Union County presented the process and results to the governing boards for affected municipalities in July through September 2023. Each of the eight impacted municipalities endorsed the process, as well as the report and its recommendations. This report was subsequently approved by the Union County Board of Commissioners on September 18, 2023.



## Existing Conditions

Union County continues to be a rapidly developing county, with growth pressures in the areas adjacent to Mecklenburg County as well as surrounding Monroe. The road network in this area is characterized by two-lane farm-to-market roads. The growth of the past 20+ years has resulted in several funded widening projects, but these total less than 20 miles of multi-lane improvements over the next decade. These widenings include:

- NC 16 from Rea Road south to the Waxhaw Parkway
- Rea Road Extension and NC 84 from NC 16 to Waxhaw-Indian Trail Road
- Monroe Road from I-485 to Wesley-Chapel Stouts

There are other funded widenings and corridor improvements on US 601 between US 74 and the Monroe Expressway and US 74 near the Monroe Mall. These projects will help mobility and safety in the immediate areas, but large parts of the county will continue to experience excessive delay and safety concerns at specific locations.

Due to development and traffic volumes on two-lane farm-to-market roads, congestion and safety issues have been frequent motivations to improve the transportation system, mainly at intersections. A lack of turning lanes, adequate sight distances, and appropriate intersection angles have resulted in unsafe and congested situations, with frequent calls by the community to address these issues. These concerns are justified, and the NCDOT, Union County, and multiple municipalities have responded by aggressively applying for funding grants through the Charlotte Regional Transportation Planning Organization (CRTPO) and the NCDOT for safety and congestion funds. Multiple intersections have been upgraded in the past five years, and over two dozen more intersections are scheduled for improvements in the next five years. At least a half-dozen high priority intersections, such as NC 16 and New Town Road, will be upgraded due to corridor widenings. Despite these improvements, many intersections remain unimproved, resulting in excessive congestion and safety issues for the travelling public.

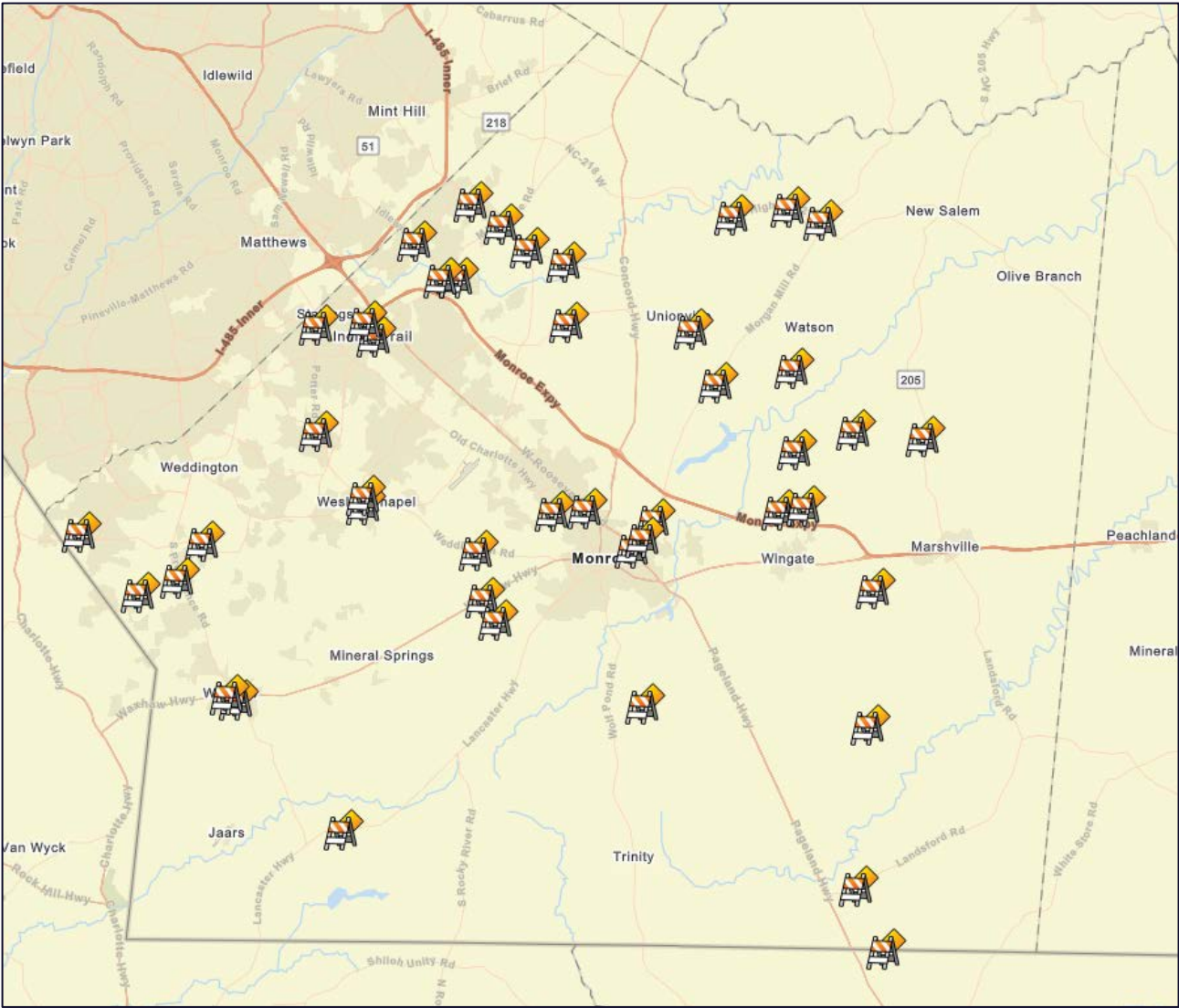
The 2016 and 2019 Critical Intersection Analyses remain useful documents for the municipalities and Union County as they identify funding opportunities to address the remaining intersections. The unfunded intersections are shown later in this report. This 2016 document established a process and list of projects to collectively focus efforts across the county. The 2019 document continued those efforts, and the 2023 report expands this program by identifying larger intersections for improvements.

Union County and several municipalities have continued to allocate local funds to help pay for local match for NCDOT or CRTPO-funded projects. The NCDOT, Union County, and numerous municipalities continue to successfully partner to receive funds for intersection projects. These commitments have increased the benefit/cost ratios for projects, and demonstrated local commitment to addressing issues. Through this 2023 process, Union County intends to support and encourage these partnerships.



After two decades of tremendous growth, Union County has multiple corridors, and dozens of intersections, in need of upgrades. The goals of this process were to identify broadly supported intersections to focus efforts for funding, as well as to raise awareness of existing funded projects. The public outreach phase included a map (Map 1) of known funded intersection projects at the start of this study and was included in materials for the month-long input period. Three of these intersections were added after receiving funding just two months before the comment period, and three separate ones were under construction during the same period, underscoring the dynamic nature of project planning and implementation in Union County.

Map 1: May 2023 Map of Funded Intersections



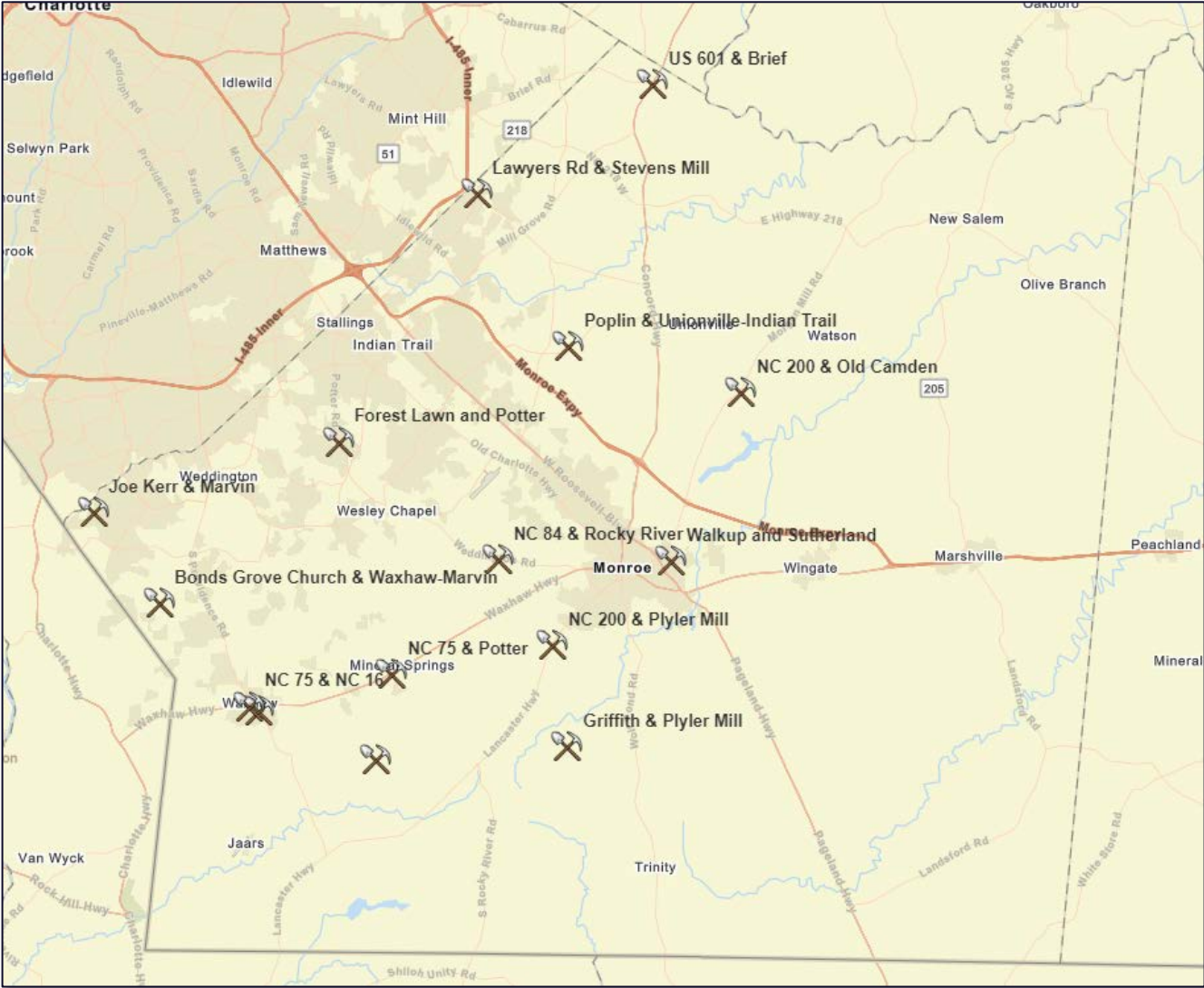
The map on the following page (map 2) shows the 15 intersections identified in the 2019 Critical Intersection Analysis. Nine of the 15 locations have since been funded for improvements. The five remaining locations are still considered supported candidate projects and will be submitted for consideration in coordination with the NCDOT and any affected municipalities. Together these two maps show the status of committed and





previously identified intersection projects in Union County. The NCDOT is under no obligation to limit their candidate project list to those created by local governments, although it recognizes projects are often more competitive for funding when they have the support of local governments and come from an adopted plan, such as this document.

Map 2: 2019 Critical Intersection Locations





## Plan Development Process

This plan was developed over the course of nine months starting in January 2023. The Union County Planning Department served as the lead organization to guide its development. The tasks and schedule are below.

**Table 1: Plan Schedule**

Task	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
Kickoff and Process Confirmation									
Project Identification by Stakeholders									
Develop Ranking Process									
Data Collection									
Public Outreach									
Prioritization									
Municipal and County Presentations									
Adoption									

## Stakeholders Committee

The work involved in identifying, analyzing, prioritizing, and endorsing a list of critical intersections was performed by a combination of county, municipal, and NCDOT staff. The group met monthly for a total of eight times. These members provided feedback on proposed intersections, evaluation criteria, outreach strategies, and document review. Their input throughout the process was invaluable and resulted in a better product.

**Table 2: Stakeholder Committee Members**

Member	Representing
Bjorn Hansen	Union County
Megan Hinkle	Union County
Matthew Rea	Union County
Sarah McAllister	Monroe
Frank Deese	Marshville
Brad Sellers	Wingate
Vagn Hansen	Wesley Chapel
Justin Russell	Stallings
Todd Huntsinger	Indian Trail
Vicky Brooks	Mineral Springs
Karen Dewey	Weddington
Sonya Gaddy	Unionville
James Kelly	Waxhaw
Hunter Nestor	Marvin



Kendall Clanton	CRTPO
Lee Snuggs	RRRPO
Amelia Helms	NCDOT
Zach Gardner	NCDOT
Theo Ghitea	NCDOT

## Public Outreach

The public was offered the opportunity to provide input and comments at two points in the process: intersection identification and policy input phase, and at the adoption phase. Union County made use of social media to raise awareness of the analysis, and on-line engagement tools to both educate and solicit input from the public. Union County used a Metroquest account, made available from CRTPO, to solicit candidate intersections, as well as show where more than three dozen intersections are located and already funded for improvement. The County used an ESRI GIS Online StoryMap slideshow presentation to present all evaluated and selected intersections as an outreach tool in addition to the final report.

The County did not hold any in-person input events, instead relying on virtual outreach. County staff did present at board meetings for Fairview, Hemby Bridge, Indian Trail, Stallings, Wesley Chapel, and to the Western Union Municipal Alliance (WUMA).

The primary tool for collecting citizen input was a Metroquest online and interactive engagement site (<https://demo.metroquestsurvey.com/md10d>). Metroquest is a public outreach company that helps organizations collect input through short, interactive on-line surveys. Union County has access to this service through CRTPO, which helped reduce cost for public outreach. Union County issued a press release in early April to start the input period. This press release was likewise posted on social media accounts for the County, and post cards were distributed to area businesses and government offices. Multiple municipalities, as well as CRTPO, shared this information on their web sites and social media accounts. A total of 2,889 people took the survey over the 30 days it was open from April 6 through May 5, 2023, demonstrating the effective nature of the outreach process. This input provided a wealth of policy and site specific information about transportation planning and intersection issues.

A list of the questions from the site and statistics for answers provided are below and on the following pages.

1. Where should we focus improvements? The respondents were nearly split, with 52 percent wanting the technical scores to dictate, while 48 percent felt projects should be selected from throughout the County.



2. What types of crashes should we try to reduce? Seventy-two percent said, “both the number of crashes and the most severe crashes are important to reduce.”
3. What is the most important issue we should address? The respondents were split between congestion and safety, with both being the most important issue when asked individually. Virtually no one said neither issue is important.
4. How important are truck traffic and truck corridors? Only 13 percent felt that truck traffic was unimportant to consider in intersection prioritization, while only 18 percent felt intersections on these corridors should be prioritized. The remaining 70 percent felt accommodating truck traffic was important, but should not be the most important criteria.
5. Should we prioritize multi-modal traffic? Respondents felt similarly to bicycle and pedestrian considerations for prioritizing an intersection. Approximately one-third felt it was unimportant to consider, while 13 percent felt such considerations alone were sufficient to prioritize as a future project. A little more than half (53 percent) felt they should be included as part of a holistic assessment of the intersection.

The composition of the people who participated in the survey represented a wide range of ages and location within the County, with all 14 municipalities represented and half of the municipalities with 99 or more responses. Although there were responses from throughout the County, respondents did skew female, older, whiter and more urbanized than the County as a whole.



Image 1: Metroquest Welcome Screen

1 **Tell us what is important to you** ⓘ >>

Learn a bit about this program before you begin.

**Welcome**

**Union County is updating its list of intersections to focus improvements.**

We appreciate you taking a moment to complete this informative survey to share your thoughts on intersection improvements across the County. Your input is important and will influence what locations we prioritize.

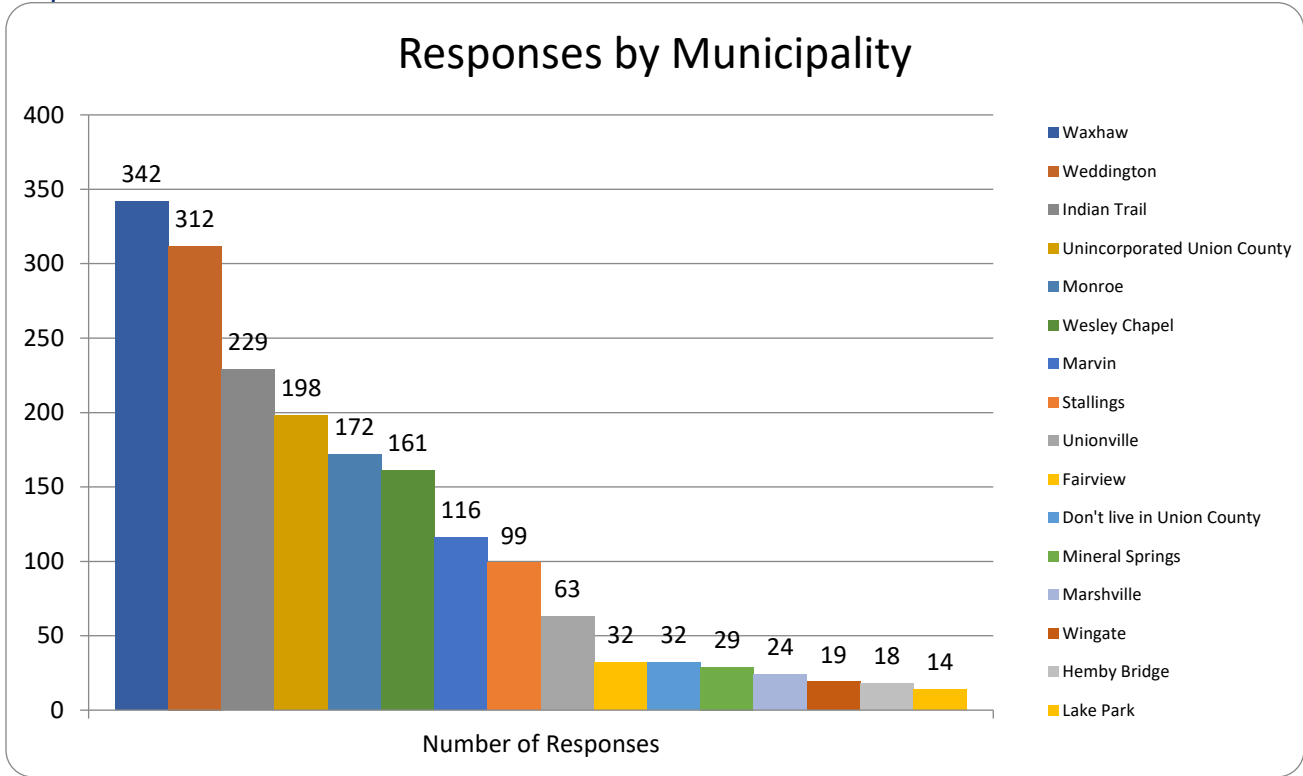
→ Next

The first Critical Intersection Analysis report was completed in 2016. The second report was completed in 2019. A total of 30 intersections were identified in those reports. Over 2/3 have been funded since that time.

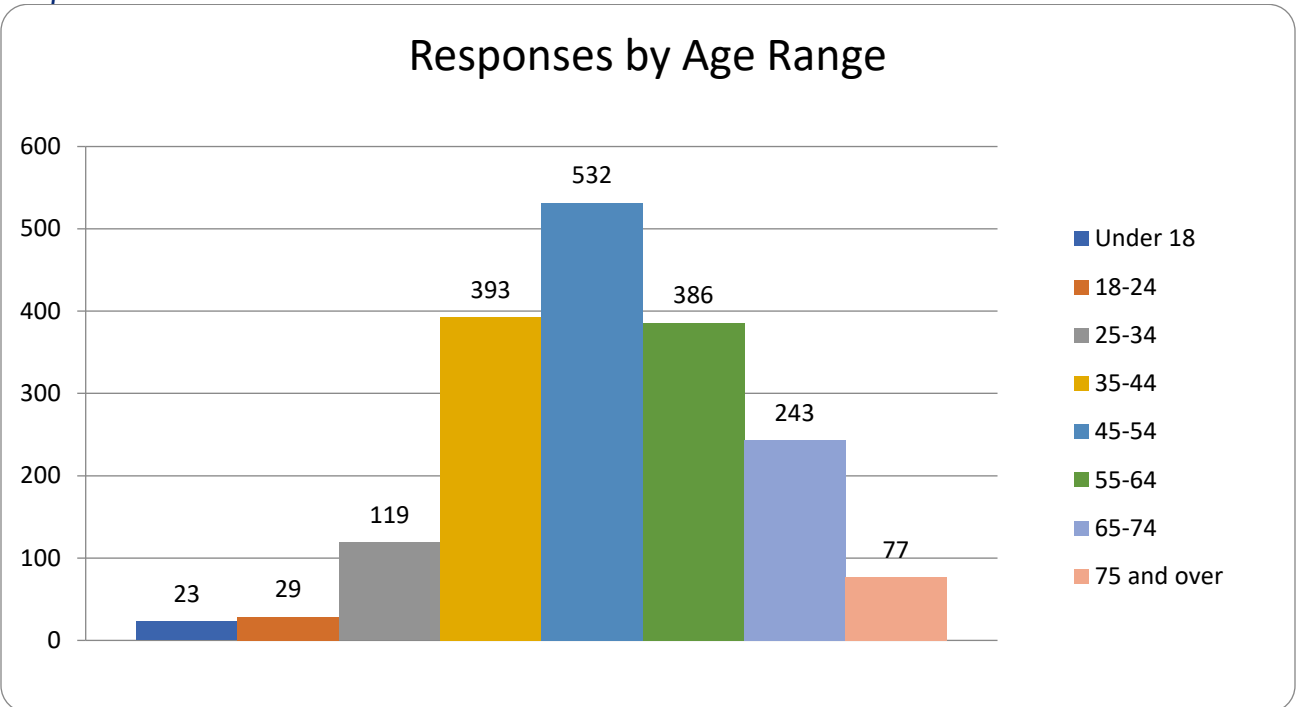
**UNIONCOUNTY**  
north carolina



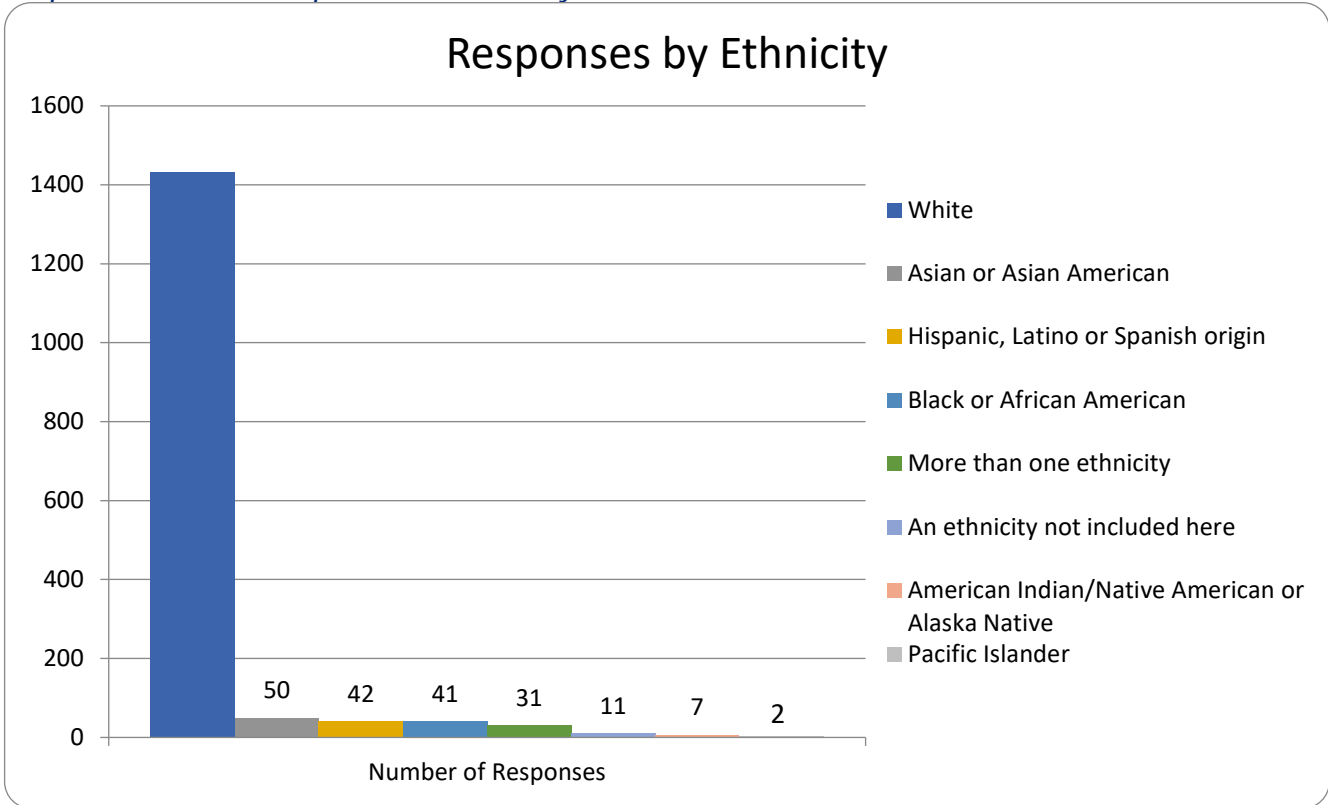
Graph 1: Where Do You Live?



Graph 2: How Old Are You?



Graph 3: What Ethnic Group Do You Most Identify With?

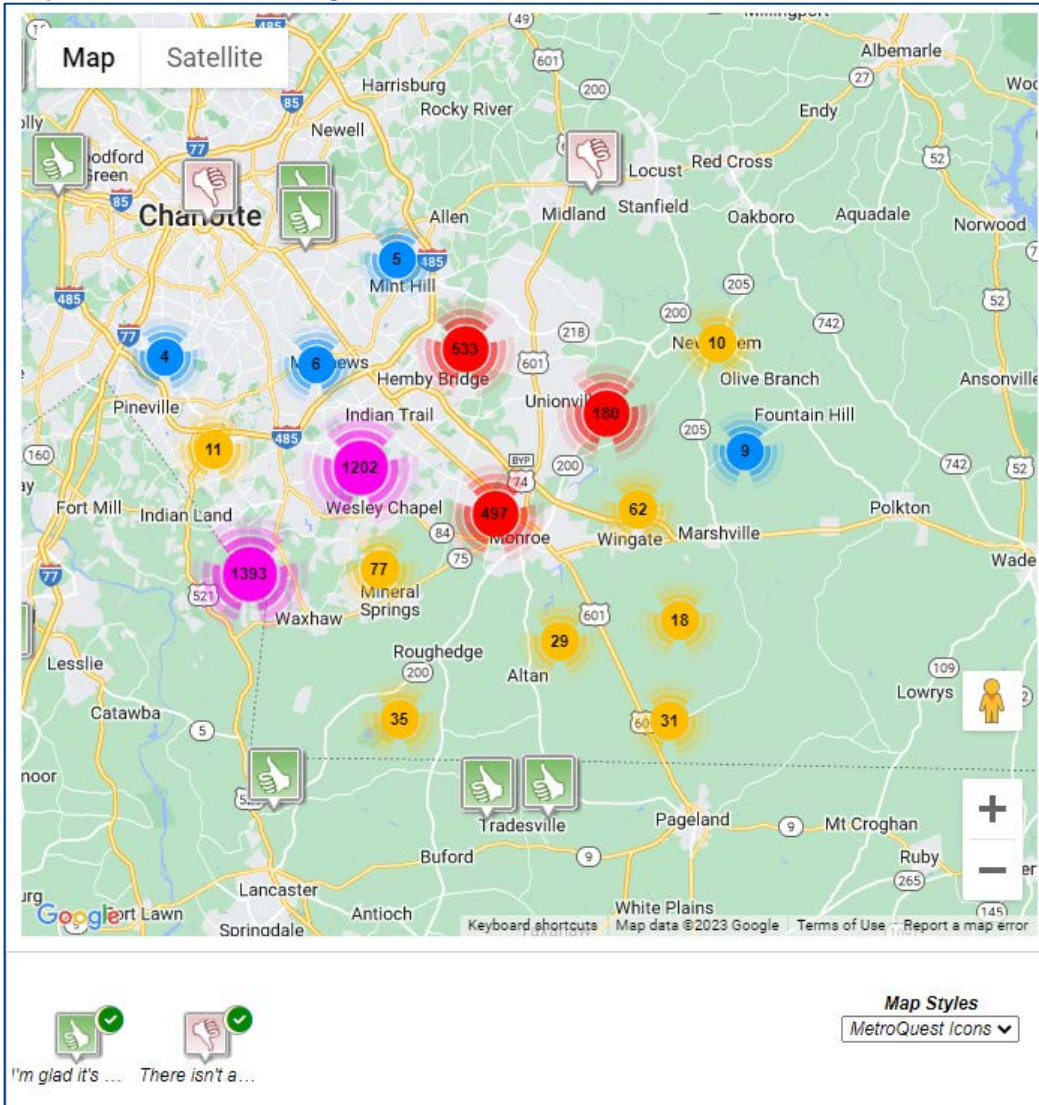


As shown by the distribution in the preceding charts, a range of constituencies were represented in this survey, although the geographic distribution of responses skewed towards the western part of the county. This may be due to the high percentage of residents who live in neighborhoods with homeowner associations, which can help disseminate word of outreach efforts such as this one.

The comments and input on specific intersections were captured through two maps embedded within the Metroquest survey. Nearly 10,000 specific points of information were gathered between them. The County created a ESRI GIS Online Dashboard to present the results (<https://tinyurl.com/2p98ayuz>). The intention of the two maps was to solicit feedback and raise awareness of the existing projects, shown as construction barriers, and to separate those comments from ones for new locations. There was broad support (87 percent) for the already funded projects, and several additional intersections identified as part of the input process on additional candidate locations.



Map 3: Feedback on Existing Intersections

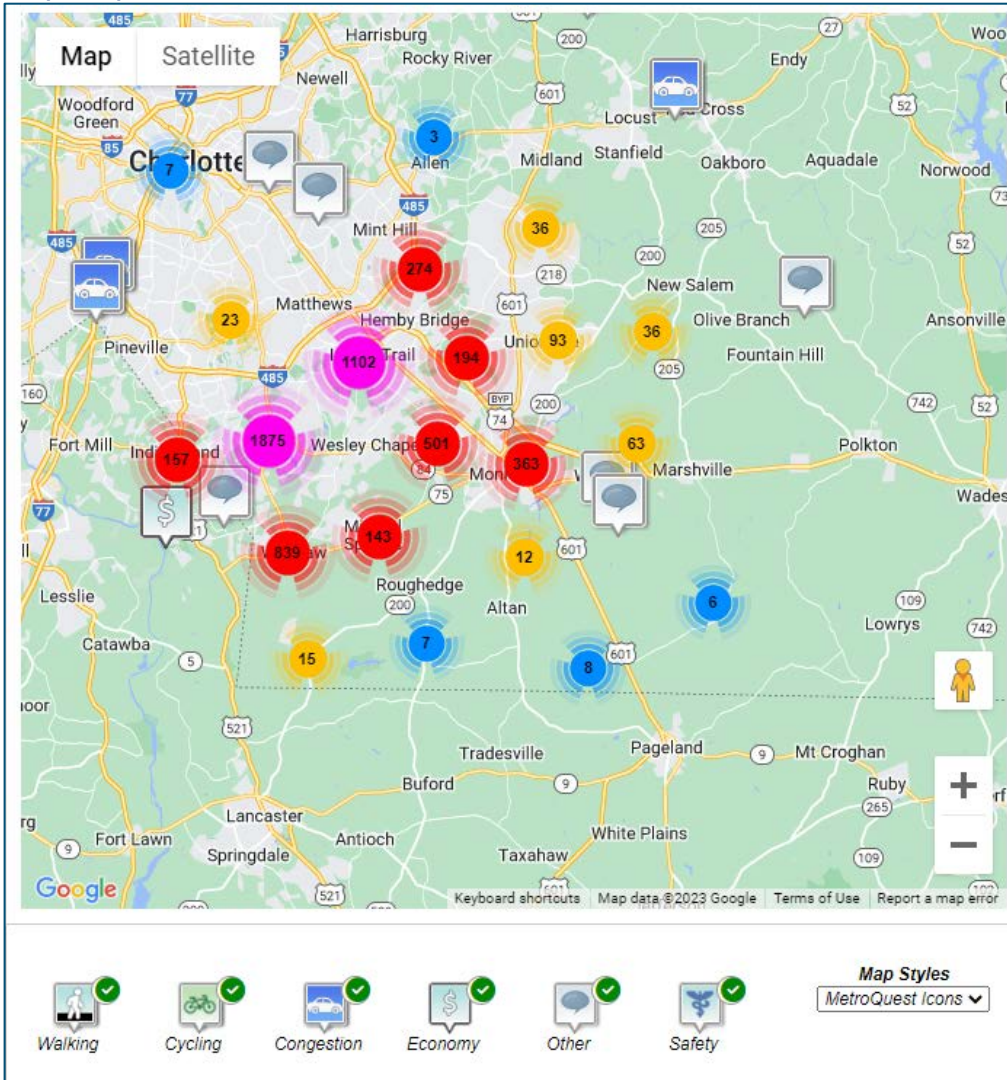


Map 4, shown on the next page, asked participants to provide feedback on proposed new intersections, as well as suggest additional intersections. The proposed new intersections are shown as red stars. Combined, these two maps provided a wealth of information about locations of needed intersections, as well as feedback on why the intersections were needed. Very few of the comments were submitted saying an intersection was not needed, although that did occur.

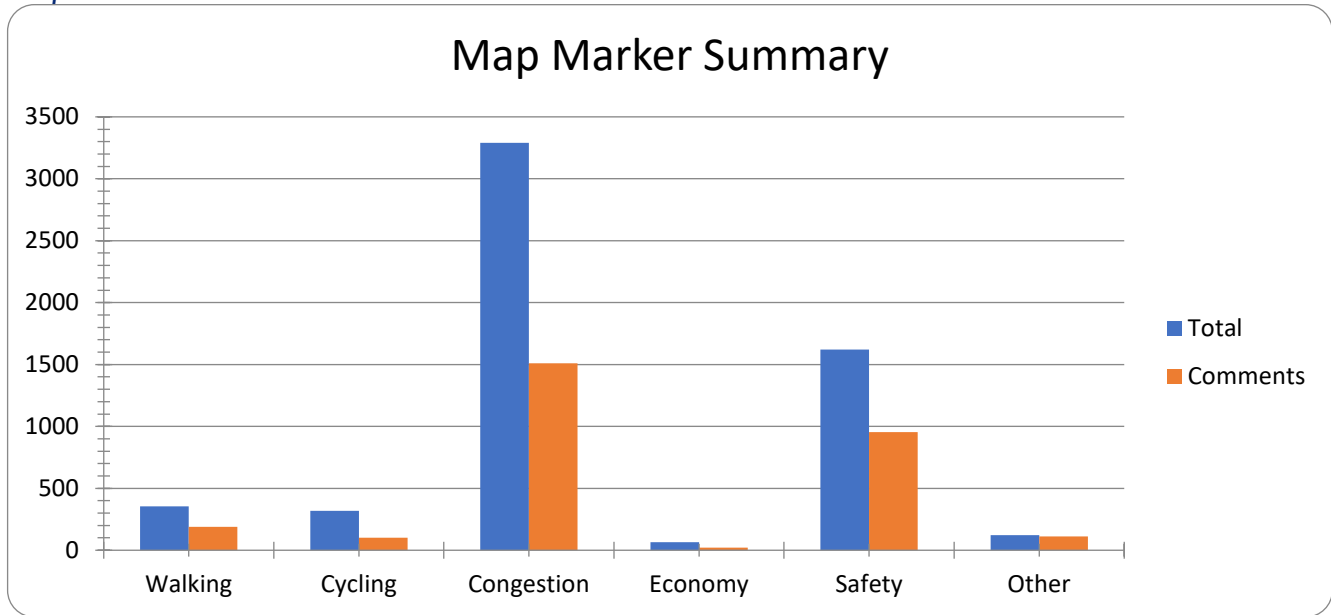




Map 4: Input on New Intersections



Graph 4: What Kind of Issues are at the Intersection?



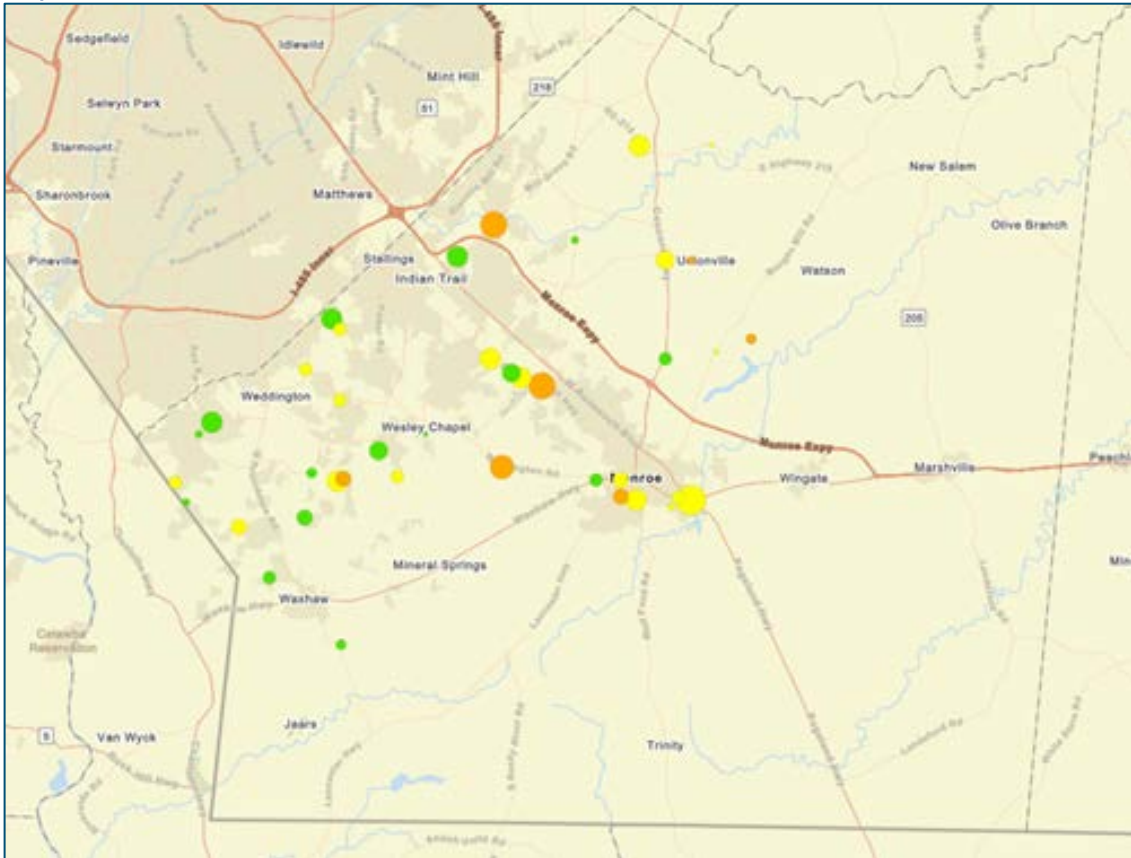
As shown by the results in these charts and maps, the participants in the survey gave many useful and practical pieces of information to help the stakeholders in evaluating intersections, as well as identifying new ones. Congestion-related locations were submitted twice as frequently as locations submitted for safety-related concerns.

## Evaluation Process

The stakeholder committee strove to identify intersections where improvement projects would be feasible, competitive, and effective. Each of the intersections were on the NCDOT system, so any recommended improvement would require their concurrence. In addition to support, for much of the county, the NCDOT would be the only available agency to implement the projects. Based on these realities, the stakeholder committee reviewed the intersection safety and existing design to select the final list of 15 intersections that have a high chance of becoming feasible and competitive projects for funding to address identified deficiencies.



Map 5: 2023 Candidate Intersections



The above map, also available at <https://arcg.is/1aXqbm0>, represents the results of intersection evaluation process, with the size of the dot reflecting score and the color indicating crash frequency, which is based on the scoring process on the following page. Based on stakeholder evaluation, 15 locations were selected for inclusion in the final list.



The intersections were evaluated based on the scoring table shown below.

**Table 3: Ranking Process**

Scoring (Maximum Score of 115)						
Intersection Evaluation Variables	0 points	5 points	10 points	15 points	20 points	25 points
Five Year Crashes / Daily Traffic	Less than one crash per 1,000 AADT	1 - 2 crash per 1,000 AADT	2 - 4 crash per 1,000 AADT	4+ crash per 1,000 AADT		
Total Daily Traffic Volume	0 - 5K	5K - 10K	10K - 15K	15K - 20K	20K - 25K	25K+
Growth Pressure (both traffic growth and anticipated adjacent development)	Low	Medium	High			
Serious or Fatal Crashes in five years	0	1	2+			
Total Crashes in five years	Less than 5	5 to 10	11 to 20	21 to 30	more than 30	
Truck Traffic	Low (SR routes)	Moderate (NC routes)	Significant (US routes)			
Congestion	Low (no backups for turning movements)	Moderate (backups for peak hour turning movements but otherwise free flowing)	Significant (backups occur throughout day)			
Multi-Modal Improvements	No identified bicycle/pedestrian need or network gaps to connect/improve	Identified bicycle/pedestrian need or network gaps that would be closed by improving this intersection				
Constructability	Three or more utility or built environment issues that will add complexity and cost	One or two utility or built environment issues that will add complexity and cost	No readily apparent utility or built environment issues that will add complexity and cost			

The variables and assigned weights reflected community input. When asked what were the two most important variables to consider when identifying and prioritizing intersections, safety was the most frequently mentioned attribute, with congestion second. Economic development, bicycle and pedestrians, and aesthetics were each seldom mentioned as the most important criteria. The focus on safety was broadly shared throughout the county, and is consistent with [NCDOT analysis](#) showing Union County as having one of the highest crash rates in North Carolina.



**Table 4: 2023 Candidate Intersection List**

<b>Candidate Intersection</b>	<b>Score</b>	<b>Details</b>
US 74 and US 601 (near Hilltop)	70	Submit for CRTPO 2055 MTP
Mill Grove and Idlewild/Indian Trail Fairview and Secrest Short Cut	65	Submit as STI highway project
Rocky River and Old Charlotte Highway	65	Submit as STI rail project
Willoughby and NC 84	60	
Stinson-Hartis/Younts/Indian Trail Fairview Road	55	Already improved, plus buildings complicate project
New Town and Cuthbertson	55	
NC 218 and Indian Trail Fairview	55	
Sunset and Hayne	55	Already improved
Antioch Church and Weddington-Matthews	55	Already improved
Airport and Old Charlotte Highway	55	Already improved
Rea Road and Marvin School	55	
Old Charlotte Highway and Hayes/Faircroft	55	
Billy Howey and Waxhaw-Indian Trail	50	
US 601 and Unionville-Indian Trail	50	Already improved
Rogers and Old Charlotte Highway	50	Already improved
Lester Davis and New Town	45	
Bragg and Lancaster Avenue	45	
Johnson and Franklin	45	
Waxhaw Marvin and Gray Byrum	45	Waxhaw ok with not recommending
Cuthbertson and Lawson/Brough Hall	45	
Stacy Howie and Waxhaw Marvin	40	
Pine Oak and Waxhaw Marvin	40	Waxhaw ok with not recommending
Beulah Church and Weddington Matthews	40	Already improved
Beulah Church and Twelve Mile Creek	40	Not on Federal Aid System
Franklin and Sunset	40	Already improved
Billy Howey and New Town	40	All way stop effective for now
Weddington Road and Waxhaw Highway	40	Monroe doesn't want included due to ROW concerns
US 601 and Sikes Mill	40	
Antioch Church and Forest Lawn	40	Already Improved
Twelve Mile and New Town	35	
Old Waxhaw Monroe and South Providence	35	
Morgan Mill and New Salem	35	
Sunset and Medlin	30	
Henry Nesbit and Waxhaw Marvin	30	
Joe Kerr and Marvin School	30	
Rocky River and Price	30	
Unionville Brief and Unionville Indian Trail	30	Committee is including based on Unionville input



Old Camden and New Salem	25	Had all-way stop recently installed
Chambwood and Potter	25	
NC 218 and Unionville Brief	25	

## Recommended Intersections

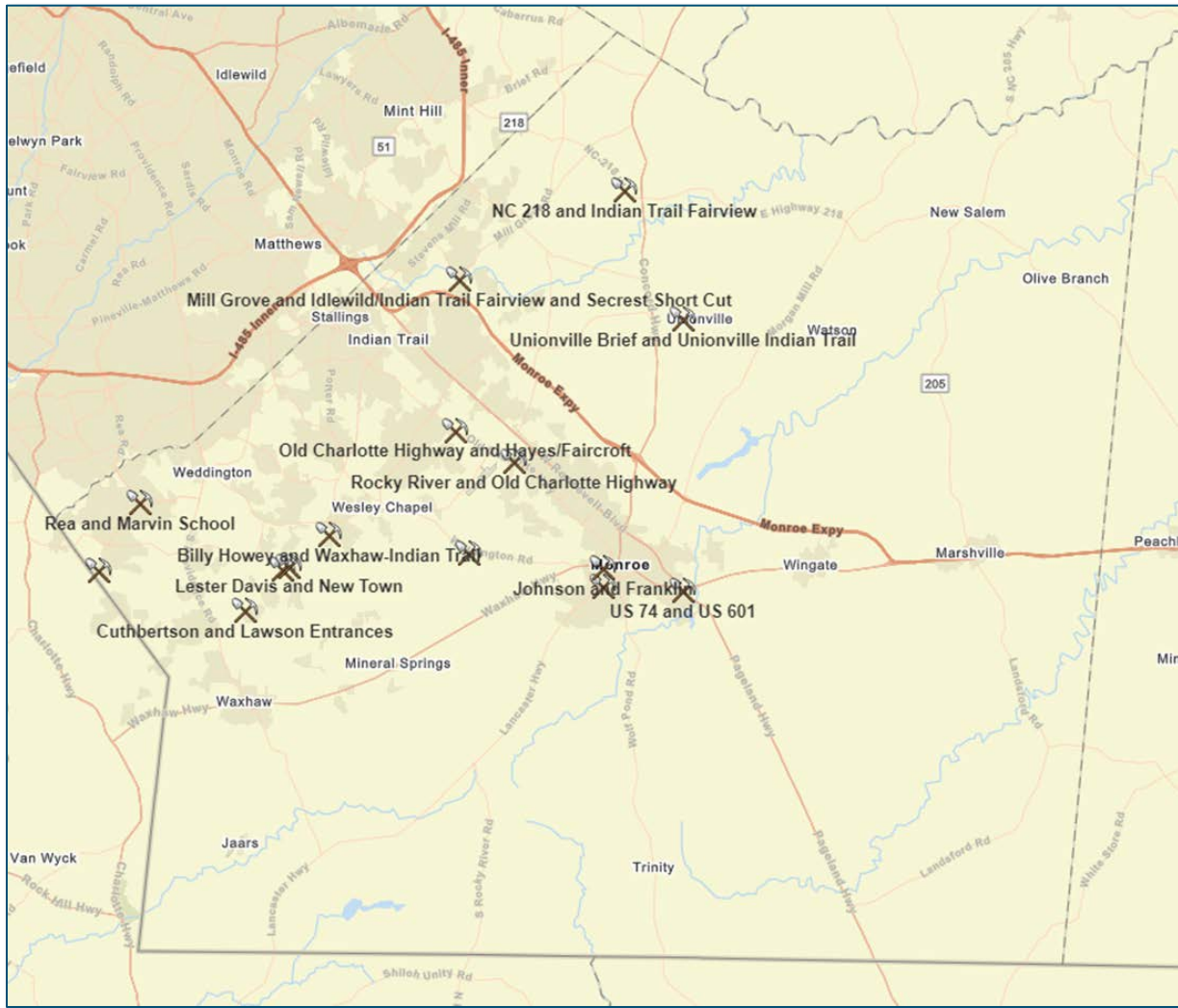
The stakeholder committee identified the following 15 intersections at their August 2023 meeting. These intersections were identified based on a combination of technical need, feasibility, and local support. Some intersections, such as Stinson-Hartis/Younts/Indian Trail Fairview in Indian Trail or Sunset and Hayne in Monroe, scored well in the process, but were not included in the recommended list because the needed improvement was a wholesale corridor widening, which would be beyond the scope of this set of recommendations.

While the projects shown in the map are largely recommended based on scores because of this process, this list should not be interpreted as a rank order of need or priority. There are multiple funding sources available through CRTPO and the NCDOT, and each emphasizes different aspects of the issues with an intersection. Some candidate projects are only eligible for safety funds through the NCDOT, while others would be competitive for congestion-focused programs through CRTPO. Most would be appropriate projects to consider through several programs.





Map 6: 2023 Critical Intersections



The critical intersections from this process are listed below with some background information about traffic, safety, and municipal impacts.





**Table 5: 2023 Critical Intersection List**

<b>Intersection</b>	<b>Municipality</b>	<b>Traffic Growth</b>	<b>Safety (Total Crashes over Last Five Years)</b>
US 74 and US 601	Monroe	Moderate	More than 50 crashes
Rocky River and Old Charlotte Highway	Monroe	Moderate	More than 60 crashes
Mill Grove and Idlewild/Indian Trail-Fairview and Secrest Short Cut (Two Intersections)	Hemby Bridge and Indian Trail	Moderate	More than 70 crashes
New Town and Cuthbertson	Wesley Chapel	High	More than 30 crashes
Rea Road and Marvin School	None	High	11 to 20 crashes
Willoughby and NC 84	None	High	21 to 30 crashes
Old Charlotte Highway and Hayes/Faircroft (Two Intersections)	Indian Trail	High	21 to 30 crashes
NC 218 and Indian Trail-Fairview	Fairview	Moderate	21 to 30 crashes
Billy Howey and Waxhaw-Indian Trail	Wesley Chapel	High	11 to 20 crashes
Johnson and Franklin	Monroe	Moderate	21 to 30 crashes
Lester Davis and New Town	Wesley Chapel	High	21 to 30 crashes
Cuthbertson and Lawson/Brough Hall (Four Intersections)	Waxhaw	High	11 to 20 crashes
Bragg and Lancaster Ave	Monroe	Low	11 to 20 crashes
Stacy Howie and Waxhaw-Marvin	Marvin	High	11 to 20 crashes
Unionville-Indian Trail and Unionville-Brief/CJ Thomas	Unionville	Low	Up to 10 crashes



## Adoption Process

This overall analysis involved significant coordination and outreach with the public, municipalities, and the NCDOT. The Stakeholders Committee recommended this plan and list of intersections at its August 4, 2023, meeting. The process and recommendations were presented to the eight affected municipalities in August and September, with the opportunity for public feedback at each meeting. Each community endorsed the plan recommendations. The Union County Board of Commissioners then unanimously adopted the plan at its September 18, 2023, meeting.

## Implementation

The goal of this work is to improve the road network in Union County for the traveling public. Addressing identified issues at these locations will require money to plan, design, and construct needed improvements. Fortunately, there are multiple funding programs available. As identified issues coming from an adopted plan, any of these intersections could be immediately submitted for funding through the NCDOT or CRTPO, but they would likely not score well. While this process has identified these 15 locations as critical intersections, it has not identified the appropriate solution, or the benefits and costs of the solution. This information is critical to allow them to be appropriately vetted through the evaluation processes used by CRTPO and the NCDOT. The next step for many of these locations is to develop conceptual designs and cost estimates. Armed with that information, local governments and the NCDOT can then apply for funding and work to implement the projects.

***Develop Designs and Cost Estimates:*** The CRTPO regularly funds planning projects to help study transportation issues. They issue an annual call for projects to fund both construction and planning projects. The next call for projects will be in late 2023. Union County, ideally in coordination with the affected municipalities, is encouraged to submit eligible intersections for a grant to conduct traffic engineering analysis and develop cost estimates. The benefit of this process will be that the county, affected municipalities, and NCDOT will each have a design and cost estimate to jointly use for funding applications.

***Commit Local Government Funds to Projects:*** All available funding sources (CMAQ, STBG-DA, spot safety, high hazard, high impact) consider local contributions in the scoring of the projects. The rationale is that increased local funding signals a commitment to the project, as well as allows the funding agency to “grow the pot” of available funding. Multiple municipalities, as well as the County itself, have successfully partnered with the NCDOT to acquire funding for specific projects. A recent example is a partnership between the NCDOT, Village of Marvin, CRTPO, and Union County to fund a roundabout at Waxhaw-Marvin and Bonds Grove Church Roads. This trend of increased local match is only expected to increase, and communities with intersections on this list should set aside funds to allow them to quickly respond to grant applications and partnering opportunities.



**Apply for Funding:** With the exception of a handful of municipalities, only the NCDOT has the capacity to implement intersection projects from this study. It is therefore incumbent upon all affected municipalities and Union County to regularly consult with the NCDOT Division 10 staff on upcoming grant applications and opportunities for partnership. This requires regular participation in CRTPO meetings, as well as discussion at countywide planners and CRTPO members quarterly meetings. These forums facilitate coordination and information sharing for Union County, its municipalities, and the NCDOT and should be used to advance such efforts.

**Integrate Mitigations from Proposed Developments into Funded Intersection Projects:** Union County is a rapidly developing community, with larger developments frequently proposed. These developments are often required to address congestion and safety issues created by their development. While not required to mitigate or improve preexisting network deficiencies, coordinating any required or requested improvements into existing funded intersection projects can result in more streamlined project delivery and even additional network improvements. For example, several years ago, Union County partnered with a rezoning applicant for approximately \$380,000 in funds to apply for an intersection project at NC 84 and Potter Road, which later received funding for a roundabout based on this local match.



## Conclusion

Union County has one of the highest crash rates in North Carolina and continues to be one of the fastest-growing counties in the state. Based on NCDOT and CRTPO project selection processes, as well as public feedback, safety and congestion continue to remain a priority when identifying and prioritizing intersections. The residents have spoken and affirm the need to address these issues and to encourage local leaders to fund and implement projects in rapidly growing areas.

This critical intersection analysis process evaluated 40 intersections throughout Union County. Stakeholders from throughout the county evaluated the data, community input, and feasibility to identify 15 intersections for future design and funding efforts. These intersections are found in eight municipalities, creating multiple opportunities for partnerships. All these intersections are on the Federal Aid System, making them eligible for construction funding through CRTPO and NCDOT. The 2023 Critical Intersection Analysis takes advantage of recent flexibility in CRTPO's Metropolitan Transportation Plan (MTP) project solicitation, so the larger intersection projects, such as US 74 and US 601 on the east side of Monroe, should be submitted for consideration in that process. Smaller intersection projects remain appropriate to include in any future CRTPO planning grants to develop designs and cost estimates to use for future funding applications.

Beyond the technical aspects of an updated intersection list coming out of this process, the benefit of robust public outreach is the community input and awareness raised of existing projects. Over 83 percent of all comments for funded intersection improvements were positive. Residents were happy to learn about upcoming projects and shared many of the same concerns that motivated the NCDOT, municipalities, and Union County to propose and fund the projects.

The public, NCDOT, County, and municipalities are each better served when they agree about priorities and means to address issues of common concern. Any follow-on study to design intersections, as well as applications to fund intersection improvements, should be shared with the community. Their input has been helpful in identifying and evaluating intersections, and any appropriate decision point in the process to delivering improvements should likewise solicit their input and share recommendations.

Union County thanks the municipalities and the NCDOT for their participation in this process. Union County likewise thanks the nearly 2,900 Union County residents who gave their input on transportation planning.



