Western Piedmont Council of Governments

Greater Hickory Metropolitan Planning Organization

Technical Coordinating Committee (TCC)

Wednesday, July 24, 2024, 1:00 PM
WPCOG Offices—1880 2nd Ave NW

wpcog.org/metropolitan-planning-org

Agenda Item	Presenter	Attachment	Action
Call to Order /Introductions	Randy Williams		
Minutes of June 26, 2024 Meeting	Randy Williams	Attachment I	Approve Minutes
Transportation Improvement Program Revisions for Approval	Averi Ritchie	Attachment II	Adopt by Resolution
Transportation Improvement Program Revisions for Release	Averi Ritchie	Attachment III	Release for Public Comment
Prioritization - Regional Tier Scores / Local Input Point Assignment	Averi Ritchie	Attachment IV	Approve Regional Local Input Points
Priorities of Existing Committed Projects	Averi Ritchie	Attachment V	Release for Public Comment
Congestion Management Process Report	Daniel Odom	Attachment VI	Release for Public Comment
Congestion Management Overview	Michael Reese, Congestion Management Regional Engineer	Attachment VII	Discussion Item
Safety Performance Targets for 2024	Averi Ritchie	Attachment VIII	Release for Public Comment
NCDOT Updates			
Division 11	Sean Sizemore		
Division 12	Anil Panicker		
Division 13	Hannah Cook		
Transportation Planning Division	Reuben Crummy		
Integrated Mobility Division	Bryan Lopez		
Reminders	Averi Ritchie		
Public Comment / Announcements	Randy Williams		
Adjournment Next Meeting: August 28 , 2024	Randy Williams		

GREATER HICKORY
METROPOLITAN PLANNING ORGANIZATION (MPO)
1880 2nd Avenue NW, PO Box 9026
Hickory, NC 28603

MINUTES
GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION (GHMPO)
METROPOLITAN TECHNICAL COORDINATING COMMITTEE (TCC)
Wednesday, June 26th, 2024 @ 1:00
PM In-person meeting and via Zoom

Present			Absent		
First Name	**Last Name**	**Representing**	**First Name**	**Last Name**	**Representing**
Randy	Williams	City of Newton	Rick	Justice	Town of Rhodhiss
Logan	Shook	Town of Hildebran	Bill	Carroll	Town of Drexel
Bonnie	Caudle	Town of Gamewell	Blake	Wright	Town of Maiden
Alan	Glines	Burke County	Brian	Burgess	Alexander / Taylorsville
Hannah	Williams	City of Lenoir	Bradley	Kirkley	Burke County
Caroline	Kone	City of Hickory	Randy	Feirabend	Town of Cajah's Mtn
Daniel	Cobb	Town of Granite Falls	Chris	Timberlake	Catawba County
Wendy	Smith	City of Morganton			
Erik	Schlicting	City of Conover			
Jon	Greer	Town of Hudson			
Laurie	LoCicero	Catawba County			
Karen	Dickerson	City of Hickory			
Bryce	Carter	City of Claremont			
John	Marshall	City of Hickory			
Jon	Hogan	City of Lenior			
Dustin	Milsaps	Town of Catawba & Sawmills			
Bryce	Carter	City of Claremont			
Greg	Wilson	Town of Granite Falls			
Wilson	Elliott	City of Hickory			
Shelly	Stevens	Caldwell County			
Amy	Bucknam	Alexander County			
Patrick	Reach	Alexander County			

WPCOG, FHWA, & Guests	NCDOT Staff
Alison Adams – WPCOG	Dean Ledbetter – Division 11 & 12
Averi Ritchie – WPCOG	Kenny Heavner – Division 11
Daniel Odom – WPCOG	Sean Sizemore – Division 11
Duncan Cavanaugh – WPCOG	Alexius Farris – NCDOT IMD
Casey Fulbright – WPCOG	Travis Jordan – Division 12
Loretta Barren – FHWA	Anil Panicker – Division 12
Kaylan Kelly Greenway Public Tranportation	Steve Cannon – Division 13
Amanda Safrit – Greenway Public Transportation	Hannah Smith – Division 13
Alexis Douglas – WPCOG	Stephen Sparks – Division 13
	Reuben Crummy – NCDOT TPD
	Brian Murphy – NCDOT Traffic Safety Unit
	Grayson Molinari - NC

Call to Order and Introductions: Chair Williams called the meeting to order at 1:02 PM and welcomed all present. Introductions were conducted, followed by the Introduction of online viewers.

Approval of Remote Participation: Online attendees were Bonnie Caudle, Hannah Williams, Grayson Molinari, Reuben Crummy, Hannah Smith and Steve Cannon. Chair Williams canvassed the committee for any objections to online participants. Hearing none, online participation was approved by consensus.

Action Items:

I. **Approval of Minutes:** Chair Williams called for a motion to approve the TCC Minutes from May 29th, 2024. Upon a motion from Mr. Schlicting and a second from Mr.Greer, the Committee unanimously voted to approve the minutes from May 29th, 2024.

II. **Transportation Improvement Program Revisions for Approval:** Ms. Ritchie presented Transportation Improvement Program (TIP) revisions for approval. The revisions included several delays and the cancellation of a pedestrian signals project in the City of Hickory. Upon a motion by Mr. Marshall and a second by Mrs. Kone, the revisions were approved.

III. **Transportation Improvement Program Revisions for Release:** Ms. Ritchie presented TIP revisions for release. These revisions included a cancellation of a pedestrian signals project and several delays within the region.

IV. **Introduction to the Transportation integrity explorer:** Mr. Webb and Ms. Christensen presented a draft version of the new Transpiration integrity explorer website. The website aims to highlight the impact of transportation projects on communities of concern. The website includes interactive maps and data analysis tools. Mrs. Smith inquired if the tool takes into account overlapping groups that fall into multiple demographics.

V. **Prioritization – Statewide & Regional Tier Scores/ Local Input Point Assignment:** Ms. Ritchie presented the revised STIP Prioritization process statewide scores. Ms. Ritchie noted that the region had several projects that scored competitively. However, no new projects for the region were funded at the statewide level. Ms. Ritchie then presented the scores for the Regional Tier projects. Ms. Ritchie then described the scoring process and the criteria used to rank each project. Ms. Ritchie then provided a summary of the local input point assignments to the top scoring projects. There was in-depth discussion amongst the board and staff members about the STIP process and funding issues which are causing projects to be delayed further than anticipated. Ms. Ritchie stated that the transportation team would be meeting with municipalities to discuss projects that are being affected by the funding issues.

I. **Locally Administered Project Program Applications:** Mr. Odom presented the accepted LAPP projects that were received for the spring 2024 call for projects. This cohort of applications included two supplemental requests from the City of Hickory, two new projects from the Town of Valdese, and a new project from Burke County. Mr. Odom presented an updated funding and development plan for the projects. These updates include increased funding for several of the projects and the reduction of funding for Lovelady sidewalk phase 2, which will still be eligible for preliminary engineering. Mr. Odom then provided a summary of the programs anticipated budget which is contingent on possible project cancellations. Upon a Motion made by Mr. Schlicting and seconded by Mr. Greer, the revisions to the LAPP program were approved. Upon a Motion made by Mr. Schlicting and seconded by Mr. Greer, the revisions to the STIP were approved.

II. **City of Morganton Resolution of Support to Change Route Classification:** Ms. Ritchie presented information on a resolution to change multiple routes designations inside the city of Morganton. The routes including US 70 B, US 64 B, NC 18 & NC 181 will be reclassified from primary routes to secondary routes. These adjustments are being made to increase

safety and assist with freight associated traffic. These changed were approved by the City of Morganton on June 17th. Upon a Motion made by Mr. Glines and seconded by Mr. Greer, the resolution of support to change route classifications in the City of Morganton was approved.

NCDOT Update –

- **Division 11:** Mr. Sizemore provided project updates within the packet for Division 11.
- **Division 12:** Mr. Panicker provided project updates in the agenda packet for Division 12.
- **Division 13:** Ms. Smith provided project updates in the agenda packet for Division 13.
- **NCDOT-TPD:** No updates.
- **NCDOT-IMD:** No updates.
- **FHWA:** No updates.

Reminders: Ms. Ritchie stated that the transportation team will be meeting with local municipalities regarding impacted projects due to STIP revisions.

Public Comment/Announcements: None

Adjournment: Chairman Williams adjourned the meeting at 1:55 p.m. The next meeting will be Wednesday, July 24th, 2024

Respectfully Submitted,

_____ _____

Randy Williams, MPO/TCC Chair Averi Ritchie, TCC Secretary

REQUEST FOR BOARD ACTION
GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION
TCC/TAC

MEETING DATE: July 24, 2024

SUBJECT: Transportation Improvement Program Revisions for Approval

PRESENTER: Averi Ritchie, Transportation Planning Manager

ATTACHMENTS: Transportation Improvement Program Revisions for Approval

SUMMARY OF REQUEST:

State Transportation Improvement Program (STIP) revisions include modifications and amendments to regional and statewide transportation projects. STIP revisions are released for public comment and approved following a 30 day public comment period by TAC. All approved revisions are submitted for Board of Transportation approval. Modifications and revisions often include funding and fiscal year changes. Revisions are released monthly by NCDOT.

BOARD ACTION REQUESTED: Recommend for approval.

Suggested Motion: *Motion to approve*

REVISIONS TO THE 2024-2033 STIP

HIGHWAY PROGRAM

GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION

STIP MODIFICATIONS

BL-0002	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	US 321A (MAIN STREET)/ HUDSON, CONSTRUCT PEDESTRIAN CROSSING IMPROVEMENTS FROM SR 1952 (CEDAR VALLEY ROAD) TO SR 1156 (LEGION ROAD).	ENGINEERING	FY 2024 -	$64,000	(BGDA)
CALDWELL				FY 2024 -	$16,000	(L(M))
PROJ.CATEGORY			RIGHT-OF-WAY	FY 2025 -	$19,000	(BGDA)
DIVISION				FY 2025 -	$5,000	(L(M))
		TO ALLOW ADDITIONAL TIME FOR PLANNING AND DESIGN, DELAY RIGHT-OF-WAY AQUISITION FROM FY 24 TO FY 25 AND CONSTRUCTION FROM FY 24 TO FY 25.	CONSTRUCTION	FY 2025 -	$4,000	(TAANY)
				FY 2025 -	$1,000	(L(M))
				FY 2026 -	$348,000	(TAANY)
				FY 2026 -	$87,000	(L(M))
					$544,000	
RX-2012C	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	CENTER STREET, NSR CROSSING 729571M IN HICKORY. CONSTRUCT SAFETY IMPROVEMENTS.	CONSTRUCTION	FY 2025 -	$267,000	(RR)
CATAWBA				FY 2026 -	$225,000	(RR)
PROJ.CATEGORY		***TO ALLOW ADDITIONAL TIME FOR PLANNING AND DESIGN, DELAY CONSTRUCTION FROM FY 24 TO FY 25.***			$492,000	
DIVISION						
TP-5106	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	WESTERN PIEDMONT COUNCIL OF GOVERNMENTS, PLANNING ASSISTANCE - 5303	ADMINISTRATIVE	FY 2024 -	$8,000	(S)
ALEXANDER				FY 2024 -	$8,000	(L)
BURKE		***MODIFY FUNDING IN FY 25 AT THE REQUEST OF THE MPO.***		FY 2024 -	$60,000	(5303)
CALDWELL				FY 2025 -	$9,000	(S)
CATAWBA				FY 2025 -	$9,000	(L)
PROJ.CATEGORY				FY 2025 -	$67,000	(5303)
PUBLIC TRANS					$161,000	

*** INDICATES FEDERAL AMENDMENT**

GREATER HICKORY
METROPOLITAN PLANNING ORGANIZATION (MPO)
1880 2nd Avenue NW, PO Box 9026
Hickory, NC 28603

RESOLUTION ADOPTING MODIFICATIONS TO THE TRANSPORTATION IMPROVEMENT PROGRAM (TIP) FY 2024-2033

A motion was made by_____ and seconded by _____ for the adoption of the following resolution, and upon being put to a vote was duly adopted.

WHEREAS, the following modifications have been proposed for FY 2024-2033 Transportation Improvement Program (TIP):

See page 1 of this Attachment

WHEREAS, the MPO certifies that these TIP modifications are consistent with the intent of the adopted 2050 Metropolitan Transportation Plan (MTP);

NOW THEREFORE be it resolved, by the Greater Hickory MPO Transportation Advisory Committee (TAC) that the TIP FYs 2024-2033 be modified as listed above on this, the 24th day of July, 2024.

_____
Bruce Eckard
Greater Hickory MPO TAC Chair

_____
Averi Ritchie
Greater Hickory MPO TAC Secretary

REQUEST FOR BOARD ACTION
GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION
TCC/TAC

MEETING DATE: July 24, 2024

SUBJECT: Transportation Improvement Program Revisions for Release

PRESENTER: Averi Ritchie, Transportation Planning Manager

ATTACHMENTS: Transportation Improvement Program Revisions for Release

SUMMARY OF REQUEST:

State Transportation Improvement Program (STIP) revisions include modifications and amendments to regional and statewide transportation projects. STIP revisions are released for public comment and approved following a 30 day public comment period by TAC. All approved revisions are submitted for Board of Transportation approval. Modifications and revisions often include funding and fiscal year changes. Revisions are released monthly by NCDOT.

BOARD ACTION REQUESTED: Release for public comment.

Suggested Motion: *Approval to release for public comment*

REVISIONS TO THE 2024-2033 STIP

HIGHWAY PROGRAM

STATEWIDE PROJECT

STIP ADDITIONS

* M-0426DIV STATEWIDE **PROJ.CATEGORY** DIVISION	- STATEWIDE PROJECT	VARIOUS, STATEWIDE TRAINING, EDUCATION, AND WORKFORCE DEVELOPMENT. ***ADD PROJECT AT THE REQUEST OF THE DIVISION OF PLANNING AND PROGRAMMING.***	ENGINEERING	FY 2024 - FY 2025 - FY 2026 - FY 2027 - FY 2028 - FY 2029 - FY 2030 - FY 2031 - FY 2032 - FY 2033 - AFTER FY 2033 -	$90,000 $90,000 $90,000 $90,000 $90,000 $90,000 $90,000 $90,000 $90,000 $90,000 $180,000	(NHP) (NHP) (NHP) (NHP) (NHP) (NHP) (NHP) (NHP) (NHP) (NHP) (NHP)
					$1,080,000	
* M-0426REG STATEWIDE **PROJ.CATEGORY** REGIONAL	- STATEWIDE PROJECT	VARIOUS, STATEWIDE TRAINING, EDUCATION, AND WORKFORCE DEVELOPMENT. ***ADD PROJECT AT THE REQUEST OF THE DIVISION OF PLANNING AND PROGRAMMING.***	ENGINEERING	FY 2024 - FY 2025 - FY 2026 - FY 2027 - FY 2028 - FY 2029 - FY 2030 - FY 2031 - FY 2032 - FY 2033 - AFTER FY 2033 -	$90,000 $90,000 $90,000 $90,000 $90,000 $90,000 $90,000 $90,000 $90,000 $90,000 $180,000	(NHP) (NHP) (NHP) (NHP) (NHP) (NHP) (NHP) (NHP) (NHP) (NHP) (NHP)
					$1,080,000	

*** INDICATES FEDERAL AMENDMENT**

REVISIONS TO THE 2024-2033 STIP

HIGHWAY PROGRAM

STATEWIDE PROJECT

STIP ADDITIONS

* M-0426SW STATEWIDE **PROJ.CATEGORY** STATEWIDE	- STATEWIDE PROJECT	VARIOUS, STATEWIDE TRAINING, EDUCATION, AND WORKFORCE DEVELOPMENT. ***ADD PROJECT AT THE REQUEST OF THE DIVISION OF PLANNING AND PROGRAMMING.***	ENGINEERING	FY 2024 - FY 2025 - FY 2026 - FY 2027 - FY 2028 - FY 2029 - FY 2030 - FY 2031 - FY 2032 - FY 2033 - AFTER FY 2033 -	$120,000 $120,000 $120,000 $120,000 $120,000 $120,000 $120,000 $120,000 $120,000 $120,000 $240,000	(NHP) (NHP) (NHP) (NHP) (NHP) (NHP) (NHP) (NHP) (NHP) (NHP) (NHP)
					$1,440,000	
* M-0460 STATEWIDE **PROJ.CATEGORY** EXEMPT	- STATEWIDE PROJECT	VARIOUS, NATIONAL SUMMER TRANSPORTATION INSTITUTE (NSTI). ***ADD PROJECT AT THE REQUEST OF THE DIVISION OF PLANNING AND PROGRAMMING.***	ENGINEERING	FY 2024 - FY 2025 - FY 2026 - FY 2027 - FY 2028 - FY 2029 - FY 2030 - FY 2031 - FY 2032 - FY 2033 - AFTER FY 2033 -	$200,000 $200,000 $200,000 $200,000 $200,000 $200,000 $200,000 $200,000 $200,000 $200,000 $400,000	(O) (O) (O) (O) (O) (O) (O) (O) (O) (O) (O)
					$2,400,000	

*** INDICATES FEDERAL AMENDMENT**

REVISIONS TO THE 2024-2033 STIP

HIGHWAY PROGRAM

STATEWIDE PROJECT

STIP ADDITIONS

* M-0478 STATEWIDE **PROJ.CATEGORY** EXEMPT	- STATEWIDE PROJECT	VARIOUS, ON-THE-JOB TRAINING PROGRAM. ***ADD PROJECT AT THE REQUEST OF THE DIVISION OF PLANNING AND PROGRAMMING.***	ENGINEERING	FY 2024 - FY 2025 - FY 2026 - FY 2027 - FY 2028 - FY 2029 - FY 2030 - FY 2031 - FY 2032 - FY 2033 - AFTER FY 2033 -	$500,000 $500,000 $500,000 $500,000 $500,000 $500,000 $500,000 $500,000 $500,000 $500,000 $1,000,000 $6,000,000	(O) (O) (O) (O) (O) (O) (O) (O) (O) (O) (O)
* M-0480 STATEWIDE **PROJ.CATEGORY** EXEMPT	- STATEWIDE PROJECT	VARIOUS, DISADVANTAGED BUSINESS ENTERPRISE (DBE) TRAINING AND SUPPORTIVE SERVICES. ***ADD PROJECT AT THE REQUEST OF THE DIVISION OF PLANNING AND PROGRAMMING.***	ENGINEERING	FY 2024 - FY 2025 - FY 2026 - FY 2027 - FY 2028 - FY 2029 - FY 2030 - FY 2031 - FY 2032 - FY 2033 - AFTER FY 2033 -	$300,000 $300,000 $300,000 $300,000 $300,000 $300,000 $300,000 $300,000 $300,000 $300,000 $600,000 $3,600,000	(O) (O) (O) (O) (O) (O) (O) (O) (O) (O) (O)

*** INDICATES FEDERAL AMENDMENT**

REVISIONS TO THE 2024-2033 STIP

HIGHWAY PROGRAM

GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION

STIP ADDITIONS

* BL-0141	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	NC 126, BENFIELD'S LANDING BURKE ROAD TO EASTSIDE BURKE AVENUE IN NEBO. CONSTRUCT SIDEWALK.	ENGINEERING	FY 2025 -	$80,000	(STBG)
BURKE				FY 2025 -	$20,000	(L(M))
PROJ.CATEGORY			RIGHT-OF-WAY	FY 2026 -	$160,000	(STBG)
DIVISION		***ADD PROJECT AT THE REQUEST OF THE MPO.***		FY 2026 -	$40,000	(L(M))
			CONSTRUCTION	FY 2027 -	$1,000,000	(STBG)
				FY 2027 -	$250,000	(L(M))
					$1,550,000	
TG-0023	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	WESTERN PIEDMONT REGIONAL TRANSIT AUTHORITY, PURCHASE REPLACEMENT BUSES.	CAPITAL	FY 2025 -	$155,000	(L)
ALEXANDER				FY 2025 -	$650,000	(5309)
BURKE		***ADD PROJECT AT THE REQUEST OF THE MPO.***			$805,000	
CALDWELL						
CATAWBA						
PROJ.CATEGORY						
PUBLIC TRANS						

STIP MODIFICATIONS

* BL-0140A	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	LOVELADY ROAD, LAUREL STREET TO CRESCENT STREET IN VALDESE. CONSTRUCT SIDEWALK.	ENGINEERING	FY 2025 -	$120,000	(STBG)
BURKE				FY 2025 -	$30,000	(L(M))
PROJ.CATEGORY			CONSTRUCTION	FY 2027 -	$1,025,000	(STBG)
DIVISION		***ADD PROJECT AT THE REQUEST OF THE MPO.***		FY 2027 -	$256,000	(L(M))
					$1,431,000	

*** INDICATES FEDERAL AMENDMENT**

REVISIONS TO THE 2024-2033 STIP

HIGHWAY PROGRAM

GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION

STIP MODIFICATIONS

* HB-0057 CALDWELL **PROJ.CATEGORY** EXEMPT	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	SR 1356, REPLACE BRIDGE 130185 OVER JOHNS RIVER. ***TO ALLOW ADDITIONAL TIME FOR PLANNING AND DESIGN, DELAY RIGHT-OF-WAY AND UTILITIES FROM FY 23 TO FY 24 AND CONSTRUCTION FROM FY 24 TO FY 25. THIS ACTION ADDS RIGHT-OF-WAY TO THE FEDERALLY APPROVED 2024-2033 STIP. DP REPRESENTS RAISE GRANT FUNDS.***	RIGHT-OF-WAY UTILITIES CONSTRUCTION	FY 2024 - FY 2024 - FY 2024 - FY 2024 - FY 2025 - FY 2025 - FY 2026 -	$13,000 $53,000 $12,000 $47,000 $162,000 $6,000 $641,000 $934,000	(DP) (HFB) (DP) (HFB) (DP) (HFB) (HFB)
* HB-0058 CALDWELL **PROJ.CATEGORY** EXEMPT	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	SR 1356, REPLACE BRIDGE 130186 OVER JOHNS RIVER. ***TO ALLOW ADDITIONAL TIME FOR PLANNING AND DESIGN, DELAY RIGHT-OF-WAY AND UTILITIES FROM FY 23 TO FY 24 AND CONSTRUCTION FROM FY 24 TO FY 25. THIS ACTION ADDS RIGHT-OF-WAY TO THE FEDERALLY APPROVED 2024-2033 STIP. DP REPRESENTS RAISE GRANT FUNDS.***	RIGHT-OF-WAY UTILITIES CONSTRUCTION	FY 2024 - FY 2024 - FY 2024 - FY 2024 - FY 2025 - FY 2025 - FY 2026 -	$13,000 $53,000 $12,000 $47,000 $162,000 $6,000 $641,000 $934,000	(DP) (HFB) (DP) (HFB) (DP) (HFB) (HFB)
* HB-0059 CALDWELL **PROJ.CATEGORY** EXEMPT	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	SR 1356, REPLACE BRIDGE 130275 OVER JOHNS RIVER. ***TO ALLOW ADDITIONAL TIME FOR PLANNING AND DESIGN, DELAY RIGHT-OF-WAY AND UTILITIES FROM FY 23 TO FY 24 AND CONSTRUCTION FROM FY 24 TO FY 25. THIS ACTION ADDS RIGHT-OF-WAY TO THE FEDERALLY APPROVED 2024-2033 STIP. DP REPRESENTS RAISE GRANT FUNDS.***	RIGHT-OF-WAY UTILITIES CONSTRUCTION	FY 2024 - FY 2024 - FY 2024 - FY 2024 - FY 2025 - FY 2025 - FY 2026 -	$13,000 $53,000 $12,000 $47,000 $162,000 $6,000 $641,000 $934,000	(DP) (HFB) (DP) (HFB) (DP) (HFB) (HFB)
* HB-0060 CALDWELL **PROJ.CATEGORY** EXEMPT	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	SR 1356, REPLACE BRIDGE 130317 OVER JOHNS RIVER. ***TO ALLOW ADDITIONAL TIME FOR PLANNING AND DESIGN, DELAY RIGHT-OF-WAY AND UTILITIES FROM FY 23 TO FY 24 AND CONSTRUCTION FROM FY 24 TO FY 25. THIS ACTION ADDS RIGHT-OF-WAY TO THE FEDERALLY APPROVED 2024-2033 STIP. DP REPRESENTS RAISE GRANT FUNDS.***	RIGHT-OF-WAY UTILITIES CONSTRUCTION	FY 2024 - FY 2024 - FY 2024 - FY 2024 - FY 2025 - FY 2025 - FY 2026 -	$17,000 $69,000 $15,000 $61,000 $210,000 $8,000 $834,000 $1,214,000	(DP) (HFB) (DP) (HFB) (DP) (HFB) (HFB)

*** INDICATES FEDERAL AMENDMENT**

REVISIONS TO THE 2024-2033 STIP

HIGHWAY PROGRAM

GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION

STIP MODIFICATIONS

* HS-2413E BURKE **PROJ.CATEGORY** REGIONAL	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	US 70, INSTALL RUMBLESTRIPES AND 6" LONG LIFE PAVEMENT MARKINGS. ***ADD PROJECT BREAK AT THE REQUEST OF THE TRANSPORTATION MOBILITY AND SAFETY DIVISION***	CONSTRUCTION	FY 2025 -	$270,000 $270,000	(HSIP)
* HS-2413H BURKE **PROJ.CATEGORY** REGIONAL	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	VARIOUS, PRIMARY AND SECONDARY ROUTES IN DIVISION 13. INSTALL HORIZONTAL ALIGNMENT WARNING SIGNS. ***ADD PROJECT BREAK AT THE REQUEST OF THE TRANSPORTATION MOBILITY AND SAFETY DIVISION***	CONSTRUCTION	FY 2025 -	$438,000 $438,000	(HSIP)
TA-6707 ALEXANDER BURKE CALDWELL CATAWBA **PROJ.CATEGORY** PUBLIC TRANS	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	WESTERN PIEDMONT REGIONAL TRANSPORTATION, WESTERN PIEDMONT REGIONAL TRANSIT AUTHORITY. ***MODIFY FUNDING IN FY 26 AT THE REQUEST OF THE MPO.***	PLANNING CAPITAL	FY 2024 - FY 2024 - FY 2025 - FY 2025 - FY 2026 - FY 2026 - FY 2024 - FY 2024 - FY 2025 - FY 2025 -	$84,000 $336,000 $84,000 $336,000 $84,000 $336,000 $84,000 $336,000 $84,000 $336,000 $2,100,000	(L) (5307) (L) (5307) (L) (5307) (L) (5307) (L) (5307)

*** INDICATES FEDERAL AMENDMENT**

REVISIONS TO THE 2024-2033 STIP

HIGHWAY PROGRAM

GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION

STIP MODIFICATIONS

TG-6800 ALEXANDER BURKE CALDWELL CATAWBA **PROJ.CATEGORY** PUBLIC TRANS	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	WESTERN PIEDMONT REGIONAL TRANSIT AUTHORITY, ROUTINE CAPITAL - BUS STOP SHELTERS, BENCHES, SHOP EQUIPMENT, SPARE PARTS, ENGINES, FAREBOX, SERVICE VEHICLES, COMPUTER HARDWARE AND SOFTWARE, AVL SOFTWARE, ETC. ***MODIFY FUNDING IN FY 26 AT THE REQUEST OF THE MPO.***	CAPITAL	FY 2024 - FY 2024 - FY 2025 - FY 2025 - FY 2026 - FY 2026 -	$96,000 $384,000 $96,000 $384,000 $96,000 $384,000 $1,440,000	(L) (5307) (L) (5307) (L) (5307)
TG-6801 ALEXANDER BURKE CALDWELL CATAWBA **PROJ.CATEGORY** PUBLIC TRANS	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	WESTERN PIEDMONT REGIONAL TRANSIT AUTHORITY, OPERATING ASSISTANCE - ADA PARATRANSIT. ***MODIFY FUNDING IN FY 24, FY 25, AND FY 26 AT THE REQUEST OF THE MPO.***	PLANNING OPERATIONS	FY 2024 - FY 2024 - FY 2025 - FY 2025 - FY 2026 - FY 2026 - FY 2024 - FY 2024 - FY 2025 - FY 2025 -	$50,000 $200,000 $50,000 $200,000 $50,000 $200,000 $50,000 $200,000 $50,000 $200,000 $1,250,000	(L) (5307) (L) (5307) (L) (5307) (L) (5307) (L) (5307)
TQ-9039 ALEXANDER BURKE CALDWELL CATAWBA **PROJ.CATEGORY** PUBLIC TRANS	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	WESTERN PIEDMONT REGIONAL TRANSIT AUTHORITY, CAPITAL PURCHASE OF SERVICE. ***MODIFY FUNDING IN FY 25, AT THE REQUEST OF THE MPO.***	CAPITAL	FY 2025 - FY 2025 -	$75,000 $300,000 $375,000	(L) (5310)

*** INDICATES FEDERAL AMENDMENT**

REVISIONS TO THE 2024-2033 STIP

HIGHWAY PROGRAM

GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION

STIP MODIFICATIONS

U-4700CA CALDWELL **PROJ.CATEGORY** REGIONAL	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	US 321, SR 1160 (MOUNT HERMAN ROAD). UPGRADE INTERSECTION TO REDUCED CONFLICT INTERSECTION - WITHIN THE LIMITS OF U-4700 C. ***TO ALLOW ADDITIONAL TIME FOR UTILITY RELOCATION, DELAY CONSTRUCTION FROM FY 24 TO FY 25.***	CONSTRUCTION	FY 2025 - FY 2026 - FY 2027 - FY 2028 - $7,200,000	$72,000 $3,657,000 $2,781,000 $690,000	(NHP) (NHP) (NHP) (NHP)
U-4700CB CALDWELL **PROJ.CATEGORY** STATEWIDE	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	US 321, SR 1809/1952 (PINE MOUNTAIN ROAD). UPGRADE INTERSECTION TO REDUCED CONFLICT INTERSECTION - WITHIN THE LIMITS OF U-4700 C. ***TO ALLOW ADDITIONAL TIME FOR UTILITY RELOCATION, DELAY CONSTRUCTION FROM FY 24 TO FY 25.***	CONSTRUCTION	FY 2025 - FY 2026 - FY 2027 - FY 2028 - $11,998,000	$120,000 $5,467,000 $4,602,000 $1,809,000	(NHP) (NHP) (NHP) (NHP)
U-4700CC CALDWELL **PROJ.CATEGORY** STATEWIDE	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	US 321, SR 1108 (MISSION ROAD). UPGRADE INTERSECTION TO REDUCED CONFLICT INTERSECTION - WITHIN THE LIMITS OF U-4700 C. ***TO ALLOW ADDITIONAL TIME FOR UTILITY RELOCATION, DELAY CONSTRUCTION FROM FY 24 TO FY 25.***	CONSTRUCTION	FY 2025 - FY 2026 - FY 2027 - FY 2028 - $8,300,000	$83,000 $4,050,000 $3,217,000 $950,000	(NHP) (NHP) (NHP) (NHP)

STIP DELETIONS

* B-5542 CATAWBA **PROJ.CATEGORY** DIVISION	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	CLAREMOUNT, PRESERVATION OF BUNKER HILL COVERED BRIDGE. ***REMOVE PROJECT. FEDERAL FUNDS NO LONGER AVAILABLE.***	CONSTRUCTION	FY 2024 - $296,000	$296,000	(O)

*** INDICATES FEDERAL AMENDMENT**

REVISIONS TO THE 2024-2033 STIP

HIGHWAY PROGRAM

GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION

STIP MODIFICATIONS

BL-0067 CATAWBA **PROJ.CATEGORY** DIVISION	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	AVIATION WALK CONNECTOR, CLEMENT BOULEVARD TO 17TH STREET NW. EXTEND MULTI-USE PATH. ***TO ALLOW ADDITIONAL TIME FOR PLANNING AND DESIGN, DELAY RIGHT-OF-WAY FROM FY 24 TO FY 25.***	RIGHT-OF-WAY CONSTRUCTION	FY 2025 - FY 2025 - FY 2025 - FY 2025 -	$40,000 $10,000 $2,120,000 $530,000 $2,700,000	(BGDA) (L) (BGDA) (L)
* HL-0002 CATAWBA **PROJ.CATEGORY** EXEMPT	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	US 70, SR 1358 (4TH STREET DRIVE SW) INTERSECTION IN HICKORY. CONSTRUCT INTERSECTION IMPROVEMENTS. ***TO REFLECT THE LATEST DELIVERY SCHEDULE, DELAY CONSTRUCTION FROM FY 23 TO FY 24. THIS ACTION ADDS CONSTRUCTION TO THE FEDERALLY APPROVED 2024-2033 STIP.***	CONSTRUCTION	FY 2024 - FY 2024 - FY 2024 -	$320,000 $400,000 $180,000 $900,000	(BGANY) (BGDA) (L(M))
* R-2307B CATAWBA IREDELL **PROJ.CATEGORY** REGIONAL	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION - CHARLOTTE REGIONAL TRANSPORTATION PLANNING ORGANIZATION	NC 150, SR 1840 (GREENWOOD ROAD) IN CATAWBA COUNTY TO WEST OF SR 1303/SR 1180 (PERTH ROAD/DOOLIE ROAD) IN IREDELL COUNTY. WIDEN TO 4-LANES. SR 1383/SR 1180 TO US 21 IN IREDELL COUNTY. WIDEN TO 6-LANES. ***COST INCREASE EXCEEDING $2 MILLION AND 25% THRESHOLDS.***	CONSTRUCTION	FY 2025 - FY 2025 - FY 2026 - FY 2026 - FY 2027 - FY 2027 - FY 2028 - FY 2028 - FY 2029 - FY 2029 -	$49,469,000 $213,000 $58,888,000 $253,000 $51,806,000 $219,000 $40,033,000 $169,000 $35,305,000 $145,000 $236,500,000	(NHP) (T(M)) (NHP) (T(M)) (NHP) (T(M)) (NHP) (T(M)) (NHP) (T(M))

*** INDICATES FEDERAL AMENDMENT**

REVISIONS TO THE 2024-2033 STIP

HIGHWAY PROGRAM

GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION

STIP MODIFICATIONS

* U-6157	- GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION	SR 1130 (CAJAH MOUNTAIN ROAD), SR 1001 (CONNELLY SPRINGS ROAD) TO US 321A. MODERNIZE ROADWAY.	RIGHT-OF-WAY	FY 2025 -	$3,467,000	(BGANY)
CALDWELL				FY 2026 -	$3,782,000	(BGANY)
PROJ.CATEGORY				FY 2027 -	$3,151,000	(BGANY)
DIVISION				FY 2028 -	$1,300,000	(BGANY)
				FY 2029 -	$1,300,000	(BGANY)
			UTILITIES	FY 2024 -	$5,100,000	(BGANY)
				FY 2025 -	$5,100,000	(BGANY)
			CONSTRUCTION	FY 2027 -	$239,000	(BGANY)
				FY 2028 -	$9,616,000	(BGANY)
				FY 2029 -	$7,505,000	(BGANY)
				FY 2030 -	$5,054,000	(BGANY)
				FY 2031 -	$1,486,000	(BGANY)
					$47,100,000	

COST INCREASE EXCEEDING $2 MILLION AND 25% THRESHOLDS.

*** INDICATES FEDERAL AMENDMENT**

REQUEST FOR BOARD ACTION
GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION
TCC/TAC

MEETING DATE: July 24, 2024

SUBJECT: Prioritization Statewide Tier Scores & Regional Tier Local Input Point Assignment

PRESENTER: Averi Ritchie, Transportation Planning Manager

ATTACHMENTS: Prioritization Statewide Tier Scores & Regional Tier Local Input Point Assignment

SUMMARY OF REQUEST:

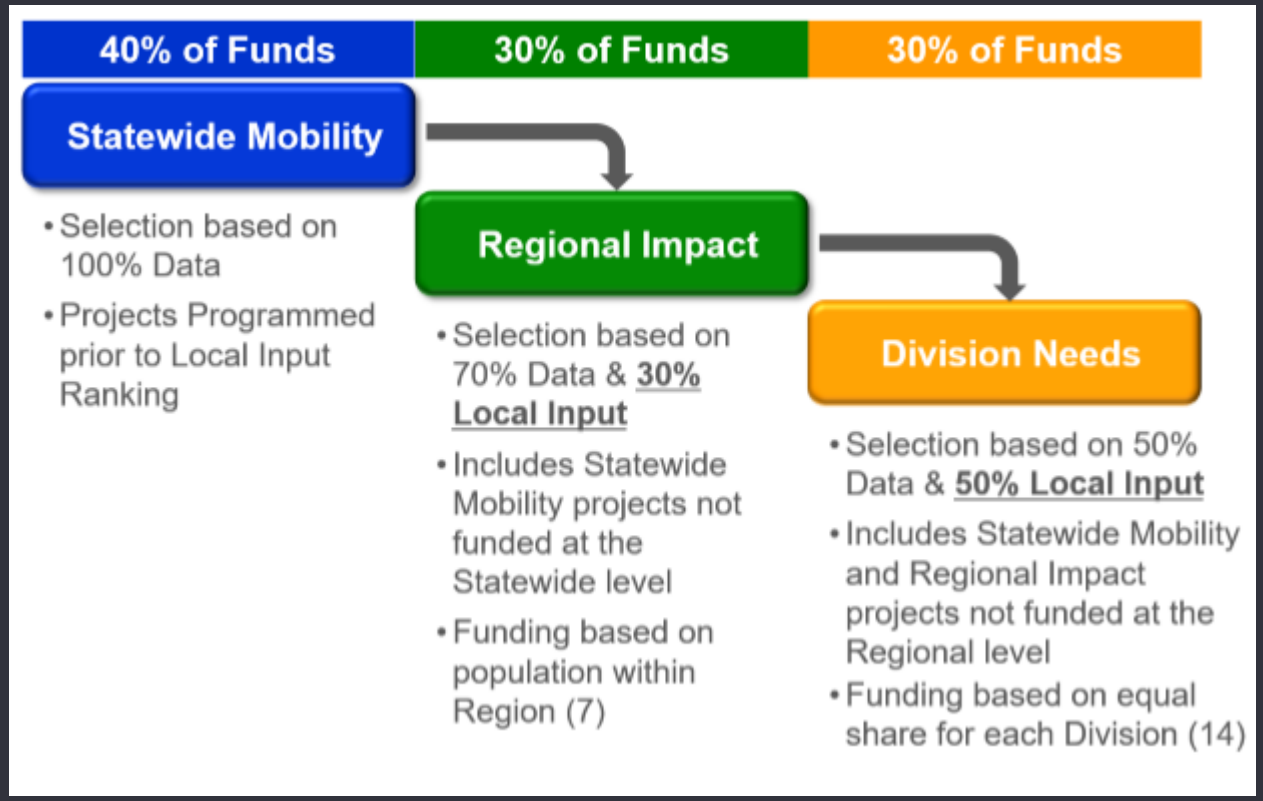
Every two years MPOs across the state submit transportation projects to compete for funding and inclusion in the State Transportation Improvement Program. All modes of transportation are eligible for funding. 2024-2025 is a work-intensive year for collecting data for Prioritization 7.0, assigning local input points, and confirming transportation project submittals with NCDOT for the region. Staff are currently meeting with NCDOT to ensure that all submitted projects meet the goals and needs of the region. NCDOT and staff are reviewing project data. Data scores for interstate projects and segments of US 321 were released in May. Data input points cannot be assigned for statewide tier projects. TCC and TAC are encouraged to review scores for each statewide tier project within the WPCOG and Greater Hickory MPO planning region. Scores were released for public input at the May TAC meeting.

Regional tier scores received from NCDOT were scored in GHMPO's local methodology for local input point assignment. In addition to NCDOT's data, mobility and economic development are also scored. Preliminary scores are included in the following attachment.

BOARD ACTION REQUESTED: Approve local input point assignment for regional tier scores.

Suggested Motion: *Motion to approve local input point assignment for regional tier scores.*

GHMPO Local Input



Local input split 50/50 between GHMPO and NCDOT Divisions 11, 12, 13; GHMPO scores thus 15% of Regional Impact and 25% of Division Needs projects.

Criteria & Weights

Tables 2A and 2B: Regional Impact Tier Highway Projects

Regional Impact highway projects consist of US and NC Routes as well as any Statewide Mobility projects that are not funded in that tier. Certain project types are intended to primarily address mobility issues while other project types primarily intended to modernize roadways, improving safety and comfort. Regional Impact highway mobility projects will be evaluated by the criteria and scoring as detailed in Table 2A. Regional Impact highway modernization projects will be evaluated by the criteria and scoring as detailed in Table 2B.

Table 2A: Regional Impact Highway Mobility Projects (Max Total Score: 100 points)

Criteria and Maximum Points	0 points	5 points	10 points	15 points	20 points
Existing Congestion (20 max)	Volume-to-Capacity Ratio less than 0.50		Volume-to-Capacity Ratio from 0.51 to 0.79		Volume-to-Capacity Ration greater than or equal to .8
Travel Time Savings (10 max)	TTS in the lowest two quartiles	TTS in the second highest quartile	TTS in the highest quartile		
Quantitative Safety Score (20 max)	Safety Score in the lowest two quartiles		Safety Score in the second highest quartile		Safety Score in the highest quartile
Freight Volume (10 max)	Fewer than 750 trucks per day	Between 751 and 1,000 trucks per day	More than 1,000 trucks per day		
Benefit/Cost Ratio (20 max)	Benefit/Cost Ratio in the lowest two quartiles		Benefit/Cost Ratio in the second highest quartile		Benefit Cost Ratio in the highest quartile
Multimodal Accommodations (10 max)	Project does not include bicycle, pedestrian, or transit facilities	Project includes bicycle, pedestrian, or transit facilities	Project includes bicycle, pedestrian, or transit facilities and intersects block group with Transportation Disadvantage Index of 7 or higher		
Supports Economic Development (10 max)		Intersects TAZ that includes 250 to 499 employees	Intersects TAZ that includes 500 or more employees		

Table 2B: Regional Impact Highway Modernization Projects (Max Total Score: 100 points)						
Criteria and Maximum Points	**0 points**	**5 points**	**10 points**	**15 points**	**20 points**	**25 points**
Existing Congestion (5 max)		Volume-to-Capacity Ratio greater than or equal to 0.30				
Quantitative Safety Score (25 max)	Safety Score less than 30		Safety Score from 30 to 50	Safety Score from 50.01 to 65	Safety Score from 65.01 to 80	Safety Score greater than 80
Lane Width (15 max)	Meets current DOT standards	Within 1 foot of DOT standards		2 feet or more from DOT standards		
Paved Shoulder Width (15 max)	Meets current DOT standards	Within 1 foot of DOT standards		2 feet or more from DOT standards		
Benefit/Cost Ratio (20 max)	Benefit/Cost Ratio in the lowest two quartiles		Benefit/Cost Ratio in the second highest quartile		Benefit Cost Ratio in the highest quartile	
Multimodal Accommodations (10 max)	Project does not include bicycle, pedestrian, or transit facilities	Project includes bicycle, pedestrian, or transit facilities	Project includes bicycle, pedestrian, or transit facilities and intersects block group with a with Transportation Disadvantage Index of 7 or higher			
Supports Economic Development (10 max)		Intersects TAZ that includes 250 to 499 employees	Intersects TAZ that includes 500 or more employees			

Tables 3A and 3B: Division Needs Tier Highway Projects

Division Needs highway projects consist of secondary roads and local roads as well as any Statewide Mobility and Regional Impact projects that are not funded in those tiers. Division Needs highway mobility projects will be evaluated by the criteria and scoring as detailed in Table 3A. Division Needs highway modernization projects will be evaluated by the criteria and scoring as detailed in Table 3B.

Table 3A: Division Level Highway Mobility Projects (Max Total Score: 100 points)

Criteria and Maximum Points	0 points	5 points	10 points	15 points	20 points
Existing Congestion (20 max)	Volume-to-Capacity Ratio less than or equal to 0.4		Volume-to-Capacity Ratio between 0.41 and 0.70		Volume-to-Capacity Ratio greater than or equal to 0.71
Travel Time Savings (10 max)	TTS in the lowest two quartiles	TTS in the second highest quartile	TTS in the highest quartile		
Quantitative Safety Score (20 max)	Safety Score in the lowest two quartiles		Safety Score in the second highest quartile		Safety Score in the highest quartile
Benefit/Cost Ratio (20 max)	Benefit/Cost Ratio in the lowest two quartiles		Benefit/Cost Ratio in the second highest quartile		Benefit Cost Ratio in the highest quartile
Freight (10 max)	Truck percentage less than or equal to 4	Truck percentage between 4.01 and 5.99	Truck percentage greater than or equal to 6		
Multimodal Accommodations (10 max)	Project does not include bicycle, pedestrian, or transit facilities	Project includes bicycle, pedestrian, or transit facilities	Project includes bicycle, pedestrian, or transit facilities and intersects block group with Transportation Disadvantage Index of 7 or higher		
Supports Economic Development (10 max)		Intersects TAZ that includes 100 to 250 employees	Intersects TAZ that includes 250 or more employees		

Table 3B: Division Impact Highway Modernization Projects (Max Total Score: 100 points)						
Criteria and Maximum Points	**0 points**	**5 points**	**10 points**	**15 points**	**20 points**	**25 points**
Quantitative Safety Score (25 max)	Safety Score less than 30		Safety Score from 30 to 50	Safety Score from 50.01 to 65	Safety Score from 65.01 to 80	Safety Score greater than 80
Freight (10 max)	Truck percentage less than or equal to 4	Truck percentage between 4.01 and 5.99	Truck percentage greater than or equal to 6			
Lane Width (15 max)	Meets current DOT standards	Within 1 foot of DOT standards		2 feet or more from DOT standards		
Paved Shoulder Width (15 max)	Meets current DOT standards	Within 1 foot of DOT standards		2 feet or more from DOT standards		
Benefit/Cost Ratio (20 max)	Benefit/Cost Ratio in the lowest two quartiles		Benefit/Cost Ratio in the second highest quartile		Benefit Cost Ratio in the highest quartile	
Multimodal Accommodations (10 max)	Project does not include bicycle, pedestrian, or transit facilities	Project includes bicycle, pedestrian, or transit facilities	Project includes bicycle, pedestrian, or transit facilities and intersects block group with Transportation Disadvantage Index of 7 or higher			
Supports Economic Development (5 max)		Intersects any TAZ that includes 100 or more employees				

Table 4 - Bike and Pedestrian Projects

Each project will be scored on the 115-point scale initially. The GHMPO will run a cost benefit analysis to determine total points/total project cost = cost effectiveness. The GHMPO will then assign 15 points to the project with the highest cost effectiveness index, and the rest of the projects will receive their cost effectiveness points in proportion to the highest projects cost effectiveness index.

This will produce a total raw score out of 130 total possible points. At that point, the raw scores will be scaled back down to a 100-point scale for comparison.

Table 4 Bike and Pedestrian Project (Maximum 130 points)

Criteria and Maximum Points	0 points	5 points	10 points	15 points	Notes:
Crash Exposure (15 max)	All other projects.	AADT ≤ 2,000 (separated facility - multi- use path, cycle tracks, planning strip sidewalks)	AADT = 2,001 ≤ 4,999 (separated facility - multi-use path, cycle tracks, planning strip sidewalks)	AADT > 5,000 (separated facility - multi-use path, cycle tracks, planning strip sidewalks)	Based on traffic volume along the current bike/ped route
		AADT = 5,000 ≤ 10,000 (non separated facility)	AADT = 2,001 ≤ 4,999 (non separated facility)	AADT ≤ 2,000 (non separated facility)	
Dedicated ROW Availability (10 points)	No	Some ROW available	Majority of ROW available		Proof of dedicated ROW and plan for acquiring remaining ROW
Feasibility Score (10 points)		Design by engineer			Project can select one for 5 points or both for a max of 10 points
		Cost estimate by engineer			
Supports community goals and initiatives (10 max)		Project is in an adopted Plan	Project has letters of support, survey interest, community walk audit, NCDOT support etc.		For a maximum of 10 points, 2 or more criteria must be met
Safety Benefit (15 max)	No crash data.	Addresses proposed project location with documented bicycle or pedestrian crash data (based on 10 year data).	Addresses project location with 3+ crashes or crash causing Fatal/Serious Injury	Addresses project location with 3+ crashes and a crash causing fatal/serious injury	NCDOT Bicycle and Pedestrian Crash Data
Closing A Gap (15 Max)	All other projects	Closing an internal gap and creating a total facility length less than 1 mile.	Closing an internal gap and creating a total facility length 1-2 miles.	Closing an internal gap and creating a total facility length greater than 2 miles.	
Connects to homes & School (10 max)	All other projects.	Connects residential development to a K 12 school, community college, or university	Connects 2 or more residential developments to a K-12 school, community college, or university OR connects a residential development to 2 or more K-12 schools, community colleges, or universities.		

Economic Development & Points of Interest (10 max)	All other projects.		Project connects to 5 or more points of interest. I.e. connects to a retirement community, central business district, shopping center, park, hospital, or employment Location		
Supports Transportation Integrity (20 Max)	All other projects.	Serves a census block group with a Transportation Disadvantaged Index Score of 11-13. (5 points)	Serves a census block group with a Transportation Disadvantaged Index Score of 14-16. (10 points)	Serves a census block group with a Transportation Disadvantaged Index score of 17-19. 20 points awarded if a census block group with a TDI score of 20+ is served (20 pts)	NCDOT TDI Index. Composite score includes mobility groups and EJ/T6. GHMPO Regional TDI Index data will be the first source. If Regional Index is unavailable, statewide index will be used.
Cost Effectiveness (15 Max)	All other projects.			Projects submitted within each call for projects will be scored for cost effectiveness competitively. Cost effectiveness formula**: Total Points/Total Cost x 50,000**. Result is points achieved by the project per $50,000 in funding. Highest scoring project receives 15 points. Each project ranking below that project will receive points based on the percentage of cost effectiveness achieved by the project compared to the highest scoring project.	

Table 5: Division Level Aviation Projects

All eligible aviation projects will be evaluated by the criteria and scoring as detailed in the following table:

Division Level Aviation Projects (Max Total Score: 100 points)					
Criteria and Maximum Points	**0 points**	**10 points**	**15 points**	**20 points**	**25 points**
Benefit/Cost (25 max)	Benefit/Cost Ratio in the lowest two quartiles		Benefit/Cost Ratio in the second highest quartile		Benefit Cost Ratio in the highest quartile
NCDOA Project Rating (10 max)	NCDOA Project Rating in the lowest two quartiles	NCDOA Project Rating in the highest two quartiles			
Constructability Index (25 max)	Constructability in the lowest two quartiles		Constructability in the second highest quartile		Constructability in the highest quartile
Supports Economic Development (25 max)	Project does not create capacity for additional aircraft or passengers/pilots and does not create employment				Creates additional capacity for aircraft or passengers/pilots; and/or creates employment
Modernization/Upfit to Comply with ADA, OSHA, and other Federal Standards (15 max)	Project area already complies with federal standards or N/A		Project is necessary to retrofit existing structures for current federal standards		

Public Transit and Rail Projects – No public transit or rail projects for the GHMPO area have been submitted for P7.0.

Total Score and Project Ranking Approach

Each project will be scored using the appropriate criteria measures above. Higher scoring projects are the higher priority to receive points. Each project can receive a maximum of 100 points.

Point Assignment Process

The Greater Hickory MPO receives 1,800 points to allocate to projects for local prioritization in the Regional Impact Tier and 1,800 points to allocate in the Division Needs Tier. The MPO will assign maximum points (100 points) to the top 18 projects in the Regional and Division levels based on the ranking created through the processes described in this document. The GHMPO will assign a proportional number of points to any project that is also partially located in another transportation planning organization's study area based on the percent of mileage within the GHMPO's study area. The remaining points shall be assigned to a new project added at the end of the applicable tier's priority list.

Deviation from Process: The TAC are free to deviate from the preliminary point assignment when making the final point assignments to compensate for situations where the methodology does not accurately reflect their priorities and to ensure appropriate projects at the relevant category. Any variation in point assignments from the preliminary point assignments must have justifications documented in the meeting minutes and posted on the GHMPO's website.

- Tie Breakers: Priority shall be given to low-cost projects in the event of a tie for projects at the bottom of the regional and division priority lists for point assignment by the GHMPO.
- Project Continuity: For projects split in phases, the GHMPO will give consideration to assigning points to phases in the order of project ranking. This will only apply to project phases whose scores are within 10 points of each other according to the adopted GHMPO's ranking process.

- Transferring Points to Projects outside MPO: The MPO TAC may elect to assign points to projects outside the MPO Study Area. In these instances, the points being transferred shall be removed from the lowest-scoring project within the affected tier.
- Public Input: The MPO TAC will review all public input received through the public comment process and may elect to modify the scoring prior to approval based on comments received.

Multimodal Breakdown

The GHMPO will reserve at least 200 points or 2 project slots for bicycle and pedestrian projects. At least 100 points or 1 project slot will be reserved for aviation projects. 1,500 points or 15 project slots will be reserved for highway projects. As per the "Deviation from Process" clause mentioned above, TAC are free to deviate from the multimodal breakdown when making the final point assignments to compensate for situations where the methodology does not accurately reflect their priorities.

Local Input Point Flexing Policy

The GHMPO has the option to apply the Local Input Point Flexing Policy. This means that up to 500 Local Input Points can be transferred from one category to the other. If the organization chooses to flex Local Input Points, GHMPO will provide written documentation to the SPOT Office prior to assigning Regional Impact Local Input Points.

Materials Shared

This process is intended to be open and transparent. As such, all meetings of the GHMPO's Technical Coordinating Committee (TCC) and GHMPO Transportation Advisory Committee (TAC) are open to the public and public participation will be solicited in accordance with the GHMPO's adopted Public Participation Plan.

After the points are assigned, the scoring matrix and point assignments will be available on the GHMPO website (http://www.wpcog.org), as well as the GHMPO office (1880 2nd Avenue NW, Hickory 28601). Relevant meetings and agenda items will also be shared via GHMPO's Facebook and Twitter pages.

Regional Impact Tier: The MPO staff will present the recommended local points assignments for Regional Impact Tier projects, based on the ranking process described in this document, to the TCC and TAC as mentioned in the "Key Dates in Prioritization 7.0 and Public Outreach Process" chart above. The MPO will then be asked to release these scores for a 15-day public comment period. The results of the public comment period will be presented to the TCC and TAC at the following MPO meeting. At that time, the TAC will be asked to approve a project list and final points assignment. The project list and points assignment will be available on the MPO website.

Division Needs Tier: The MPO staff will present the recommended local points assignments for

Division Needs Tier projects, based on the ranking process described in this document, to the TCC and TAC as mentioned in the “Key Dates in Prioritization 7.0 and Public Outreach Process” chart above. The MPO will then be asked to release these scores for a 15-day public comment period. The results of the public comment period will be presented to the TCC and TAC at the following MPO meeting. At that time the TAC will be asked to approve a project list and final points assignment. The project list and points assignment will be available on the MPO website.

Top Scoring Regional Projects (Local Methodology)

SPOT ID	Local Score	DOT Score	County	Project Description	Local Input Points Assigned
H190207	Local: 70	DOT: 48.76	Caldwell	(State Wide Mobility) US 321 Alternate (South Main Street)/Riverbend Drive	100
H191141	Local:70	DOT: 45.02	Catawba	Regional Hickory Citywide Signal System Upgrade Signal Equipment	100
H170566	Local: 70	DOT: 41.477	Burke	Regional US 64 (Burkemont Avenue) @ US 70 (W Fleming Drive) Improve Intersection	100
H150309	Local: 60	DOT: 44.84	Catawba	Statewide mobility US 321(Exit 123) to SR 1476 - Fiargrove Church Road (Exit 128)	100
H190692	Local: 60	DOT: 41.77	Catawba	Regional US 70 (Main Street) @ SR 1715 (Oxford Street) Improve Intersection	100
H170910	Local: 60	DOT: 41.51	Catawba	Statewide Mobility SR 1476 (Fairgrove Church Road) - Exit 128 to NC 16 (Thornburg Drive) Exit 132 Widen Roadway to six lanes	100
H231614	Local: 60	DOT: 38.86	Burke	Regional US 70 (West Fleming Drive) Coal Chute Road Improve Intersection	100
H172232	Local: 60	DOT: 38.67	Burke/Catawba	Statewide Mobility SR 1761 - Exit 116 to US 321 Exit 123 Widen Exisiting Roadway	100
H090090	Local: 60	DOT: 27.49	Alexander	H090090 Regional NC 16 (Catawba River) to (US 64) Modernize Roadway	100
H190804	Local: 55	DOT: 40.71	Caldwell	Regional US 64, NC 18 (Wilkesboro Boulevard) Linkside Court to US 64, NC 90 (Taylorsivlle Road) Access Managment	100
H191849	Local:55	DOT: 35.99	Catawba	Regional NC 16 Upgrade Roadway	100
H090042	Local: 50	DOT: 35.09	Burke	Statewide Mobility US 64 (Burkemont Road- Exit 103) Improve Interchange	63
H090474-C	Local: 50	DOT: 39.71	Caldwell	Statewide Mobility US 321 SR 1108(Mission Road) to SR 1933 (Southwest Blvd)	100
R230042	N/A	DOT: 41.81	McDowell, Burke, Catawba, Buncombe, Iredell, Rowan	Upgrade rail infrastructure to support new intercity passenger service from Salisbury to Asheville on the AS Line. Project includes necessary infrastructure, stations, and passenger equipment to begin service with three roundtrips per day. This project would also include a maintenance facility at one endpoint. This project is contingent upon the awarding of an 80/20 federal grant and if the grant is not awarded, then the project is void.	37

Top Scoring Regional Projects (DOT Methodology)

SPOT ID	Local Score	DOT Score	County	Project Description	Cost to NCDOT
H190207	70	48.757	Caldwell	(State Wide Mobility) US 321 Alternate (South Main Street)/Riverbend Drive	$30,500,000.00
H191141	70	45.017	Catawba	Regional Hickory Citywide Signal System Upgrade Signal Equipment	$16,200,000.00
H150309	60	44.838	Catawba	Statewide mobility US 321(Exit 123) to SR 1476 - Fiargrove Church Road (Exit 128)	$83,600,000.00
H190692	60	41.774	Catawba	Regional US 70 (Main Street) @ SR 1715 (Oxford Street) Improve Intersection	$5,900,000.00
H170910	60	41.51	Catawba	Statewide Mobility SR 1476 (Fairgrove Church Road) - Exit 128 to NC 16 (Thornburg Drive) Exit 132 Widen Roadway to six lanes	$46,400,000.00
H170566	70	41.477	Burke	Regional US 64 (Burkemont Avenue) @ US 70 (W Fleming Drive) Improve Intersection	$3,100,000.00
H190804	55	40.708	Caldwell	Regional US 64, NC 18 (Wilkesboro Boulevard) Linkside Court to US 64, NC 90 (Taylorsivlle Road) Access Managment	$25,000,000.00
H111253	45	40.025	Burke	Widen NC 181 from Spainhour Rd to Bost Rd	$28,800,000.00
H090474-C	50	39.711	Caldwell	Statewide Mobility US 321 SR 1108(Mission Road) to SR 1933 (Southwest Blvd)	$163,100,000.00
H150286	30	39.254	Burke	H150286 Statewide Mobility I 40 SR 1744 (Mineral Springs Mountain Rd.),SR 1744 (Eldred St. SE) - Exit 112	$11,400,000.00
H141130	40	38.909	Burke	H141130 Statewide Mobility I 40 SR 1142 (Jamestown Road) - Exit 100 Upgrade Interchange	$23,600,000.00
H231614	60	38.858	Burke	Regional US 70 (West Fleming Drive) Coal Chute Road Improve Intersection	$2,400,000.00
H172232	60	38.632	Burke/Catawba	Statewide Mobility SR 1761 - Exit 116 to US 321 Exit 123 Widen Exisiting Roadway	$139,000,000.00
H141920	40	38.442	Burke	H141920 Statewide Mobility SR 1712 (Drexel Road) - Exit 107 Improve Intersection	$27,600,000.00
H190895	50	38.188	Catawba	H190895 Statewide Mobility SR 1476(Fairgrove Church Road) Construct roundabouts at both ramp terminals	$80,900,000.00
H191465	30	36.216	Caldwell	H191465 Regional NC 90 & US 64 Widen Roadwy to two 12 -foot lanes and paved shoulders	$25,800,000.00
H191849	55	35.987	Catawba	Regional NC 16 Upgrade Roadway	$87,400,000.00
H090042	50	35.09	Burke	Statewide Mobility US 64 (Burkemont Road- Exit 103) Improve Interchange	$58,800,000.00
H191600	30	33.887	Caldwell	H191600 Regional US 64, NC 18 (Morganton Blvd) SR 1956(Pinehurst Acres) to SR 1143 (Rocky Road) Widen Existing Roadway	$31,000,000.00
H090041	30	33.657	Burke	H090041 Statewide Mobility SR 1734 (Carolina Street SE/SR 1826 - Exit 111) Improve Interchange	$44,400,000.00
H090474-B	50	33.617	Caldwell	Statewide Mobility US 321 Alternate (South Main Street) SR 1108 (Mission Road)	$245,500,000.00
H191773	40	33.293	Burke	H191773 Regional US 70 (Carbon City Rd) SR1150 (Reep Drive) to SR 1142 (Jamestown Road) Upgrade Roadway	$9,400,000.00
H230986		32.999	Burke	H230986 I40 Exit 96 Kathy Rd Construct interchange improvements - remove substandard 2-way ramp condition.	$34,300,000.00
H231622		31.924	Burke	H231622 Regional US 70 B (E Meeting St), US 70 B (E Union St) Improve Multiple Intersections along Corridor	$4,004,000.00

H170895	40	31.599	Catawba	H170895 Regional NC 127 (2nd Street NE) 8th Avenue NE to ST 1327 (30th Avenue NW) Access Managment	$70,800,000.00
H150287	25	31.24	Burke	H150287 Statewide Mobility SR1761 (Old Highway NC 10) - Exit 116 Upgrade interchange and remove two way traffic	$36,500,000.00
H230985		29.606	Burke	H230985 I40 Exit 113 Construct interchange improvements - remove substandard 2-way ramp condition.	$34,300,000.00
H150285	30	27.866	Burke	H150285 Statewide Moblity SR 114 (Causby Rd) - Exit 98	$10,900,000.00
H111251	45	27.77	Burke	H111251 Regional NC 126 (Watermill Rd) to (Fish Hatchery Road) Modernize Roadway	$55,400,00.00
H090090	60	27.49	Alexander	H090090 Regional NC 16 (Catawba River) to (US 64) Modernize Roadway	$109,200,000.00
H230983		26.599	Burke	983 US 70 N Center St Construct intersection improvements to include southbound turn lanes on the bridge. Provide appropriate turning radius for t	$4,100,000.00
H231772		26	Caldwell	H231772 US 321, SR 1107 (Falls Avenue) Upgrade interchange to tight diamond configuration.	$112,000,000.00
H190458	40	24.717	Catawba	H190458 Regional NC 10 US 321 to NC 16 (Sigmon Dairy Rd) Widen Existing Roadway and Construct Part on New Location	$169,500,000.00
H184299	25	24.542	Catawba	4299 Regional US 70 SR 1188, SR 1361 (13th St SW) to SR 1007 (Lenoir Rhyne Blvd), SR 1164 (8th St Drive SE) Upgrade Arterial to Signalized RCI Cor	$93,800,000.00
H171000	55	24.04	Burke	H171000 Regional NC 126 (Independence Blvd) to (Watermill Road) Modernize Roadway	$26,400,44.00

REQUEST FOR BOARD ACTION
GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION
TCC & TAC

MEETING DATE: July 24, 2024

SUBJECT: Priorities of Existing Committed Transportation Projects Presentation

PRESENTER: Averi Ritchie, Transportation Planning Manager

ATTACHMENTS: 1. List of Potentially Affected Projects

SUMMARY OF REQUEST:
On June 25th, the NCDOT STIP Unit staff (the unit charged with the financial programming of projects) reached out to the Greater Hickory Metropolitan Planning Organization (GHMPO) requesting feedback on the scheduling of committed (funded) projects with let dates after 2026 for the FY 2026-2035 State Transportation Improvement Plan (STIP). Due to currently programmed projects exceeding available NCDOT funding, NCDOT must adjust project schedules. Currently committed projects in the WPCOG/GHMPO region may become unfunded, forcing them to re-compete in future rounds of prioritization.

The NCDOT STIP Management office asked the GHMPO to rank currently committed projects in accordance with local priority, needs, project schedules, and project completeness. However, the GHMPO and the respective NCDOT divisions, division 11, 12, and 13, must be in agreement on project rankings, or the project ranking defaults to seniority of the projects – meaning the oldest projects will be ranked highest, without regard for data scores. Once the MPO provides this ranked list, NCDOT staff will consider MPO preference, but project schedules, and ultimately whether they remain funded or not, will be determined at the discretion of NCDOT STIP Unit staff to meet the financial needs of NCDOT.

GHMPO staff reached out to impacted municipalities and counties with projects on the list to discuss and receive input on the ranking of these projects. Project rankings are due to the STIP management office by August 30, 2024. This presentation conveys municipal, county, and division staff input. This is currently a draft list that will be opened for a 30 day public comment period. The GHMPO will provide this ranked list, if approved by the GHMPO boards, to the STIP management office, who will then either maintain or delay project dates at their discretion.

BOARD ACTION REQUESTED: Discussion item only**. No action is required.**

Suggested Motion: *None.*

Western Piedmont
Council of Governments

Creative Regional Solutions Since 1968

Reprioritization of Funded Projects

Reprioritization Background

- NCDOT STIP Unit staff requests feedback on the scheduling of committed (funded) projects with let dates after 2026
- Not enough funding to keep current project schedules
- Committed projects in the region may become unfunded, forcing them to re-compete in future rounds of prioritization
- NCDOT STIP Management office asked the GHMPO to rank currently committed projects
- Division 11, 12, and 13, must be in agreement on project rankings, or the project ranking defaults to seniority of the projects
- Due by August 30, 2024

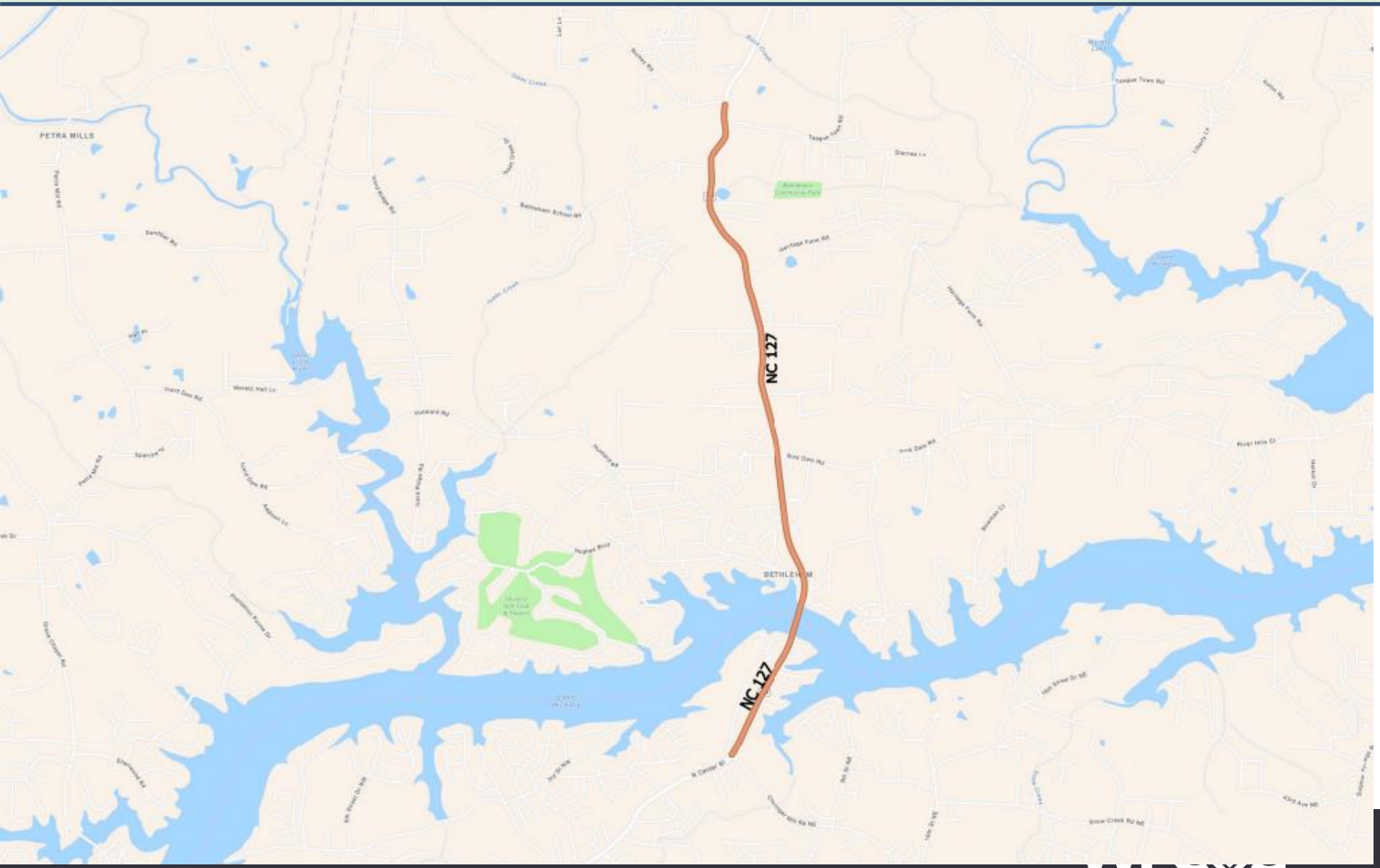
Outreach

- GHMPO staff reached out to all local governments with impacted projects
- GHMPO meetings include
  - Catawba County
  - City of Hickory
  - City of Morganton
  - Town of Hildebran
  - Alexander County
  - Town of Granite Falls
  - Town of Cajah's Mountain
  - Town of Sawmills
  - Caldwell County
  - Division 11
  - Division 12
  - Division 13

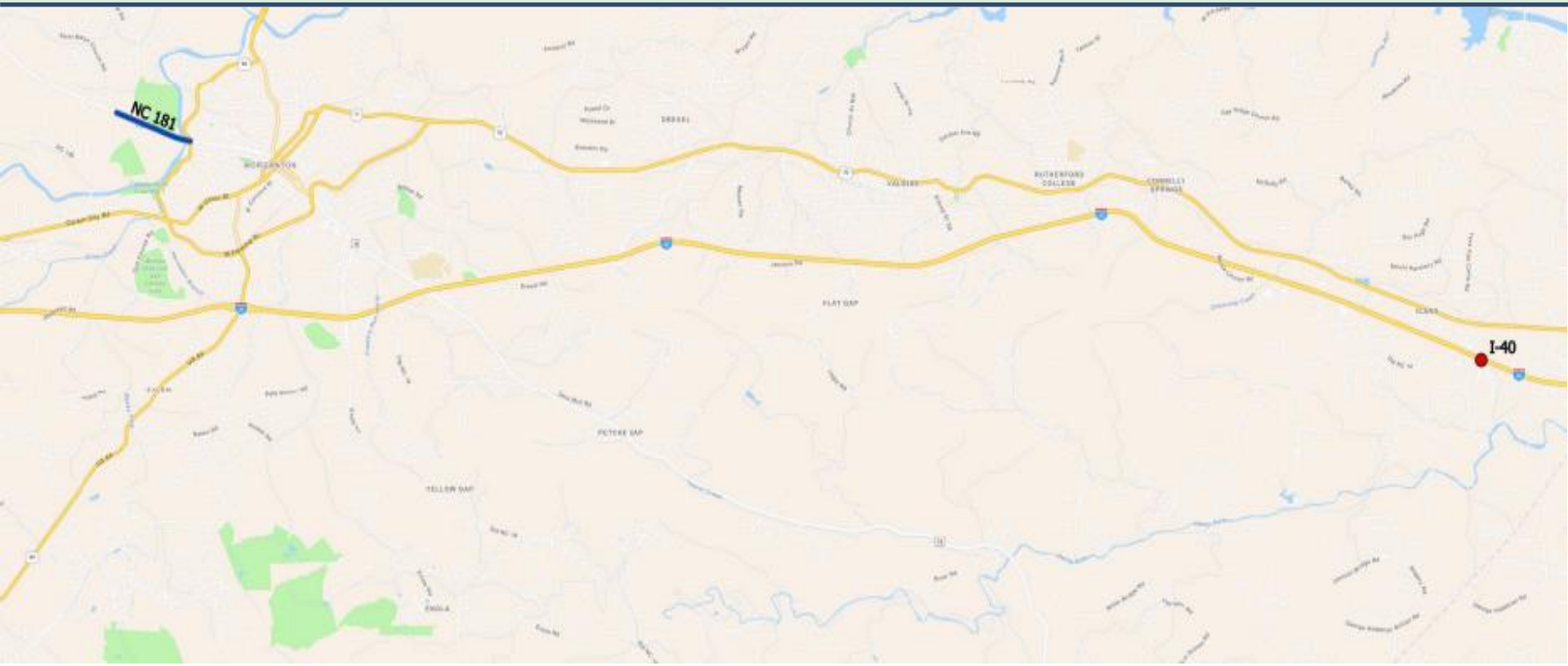
FUNDED PROJECTS TO BE REPRIORITIZED

COUNTY	DIVSION	ROUTE	DESCRIPTION	PRIORITIZATION SCORE	TOTAL COST	DESIGN START DATE	ROW START DATE	CONST START DATE
Catawba/ Lincoln	12 (Region F)	NC 150	Relocated NC 16 TO East of Greenwood Road. Widen to 4-lanes with a bypass of the Terrell Historic District.	80.65	$225,961,000	2027	2027	2030
Burke	13 (Region G)	NC 181	ST. Mary's Church Road to Morganton ETJ. Widen Roadway.	50.48	$10,799,000		2027	2029
Catawba	12	HKY Regional Airport	Land Acquisition and Obstruction Removal	67.95	$600,000		2032	
Catawba	12	NC 127	Huffman Farm Road) to Zion Church Road	77.43	$53,199,000	2025	2025	2028
Alexander/ Catawba	12	NC 127	Cloninger Mill Road to Richey Road. Upgrade two lanes and provide multi-lane curb and gutter	76.56	$98,700,000	2025	2025	2026
Catawba	12	McDonald PKWY	Springs Road to NC 127. Widen to multi-lanes	75.46	$134,201,000	2025	2025	2028
Catawba	12	SR 1124 (33rd ST SW)	33rd ST SW and 34th ST NW. Realign Intersection.	74.78	$4,900,000	2027	2027	2029
Catawba	12	Startown Road	US 70 to NC 10. Widen to multi-lane.	73.03	$138,801,000	2028	2028	2031
Caldwell	11	US 321 Alt	Pinewood Road to Duke Street. Upgrade Roadway.	78.95	$25,599,000	2024	2024	2027
Caldwell	11	SR 1001 (Connelly Springs Road)	Catawba River to Southwest Boulevard.	71.33	$78,501,000	2028	2028	2031
Caldwell	11	Cajah's Mountain Road	Connelly Springs Road to US 321A. Modernize Roadway.	76.71	$47,100,000	2024	2024	2027
Caldwell	11	US 321	Dudley Shoals Road Grade Separation. Construct Ramp onto US 321 Southbound.	72.96	$4,999,000	2025	2025	2027
Burke	13	I-40	Exit 118 – Old NC 10. Construct Interchange Improvements.	68.95	$13,200,000	2025	2025	2026

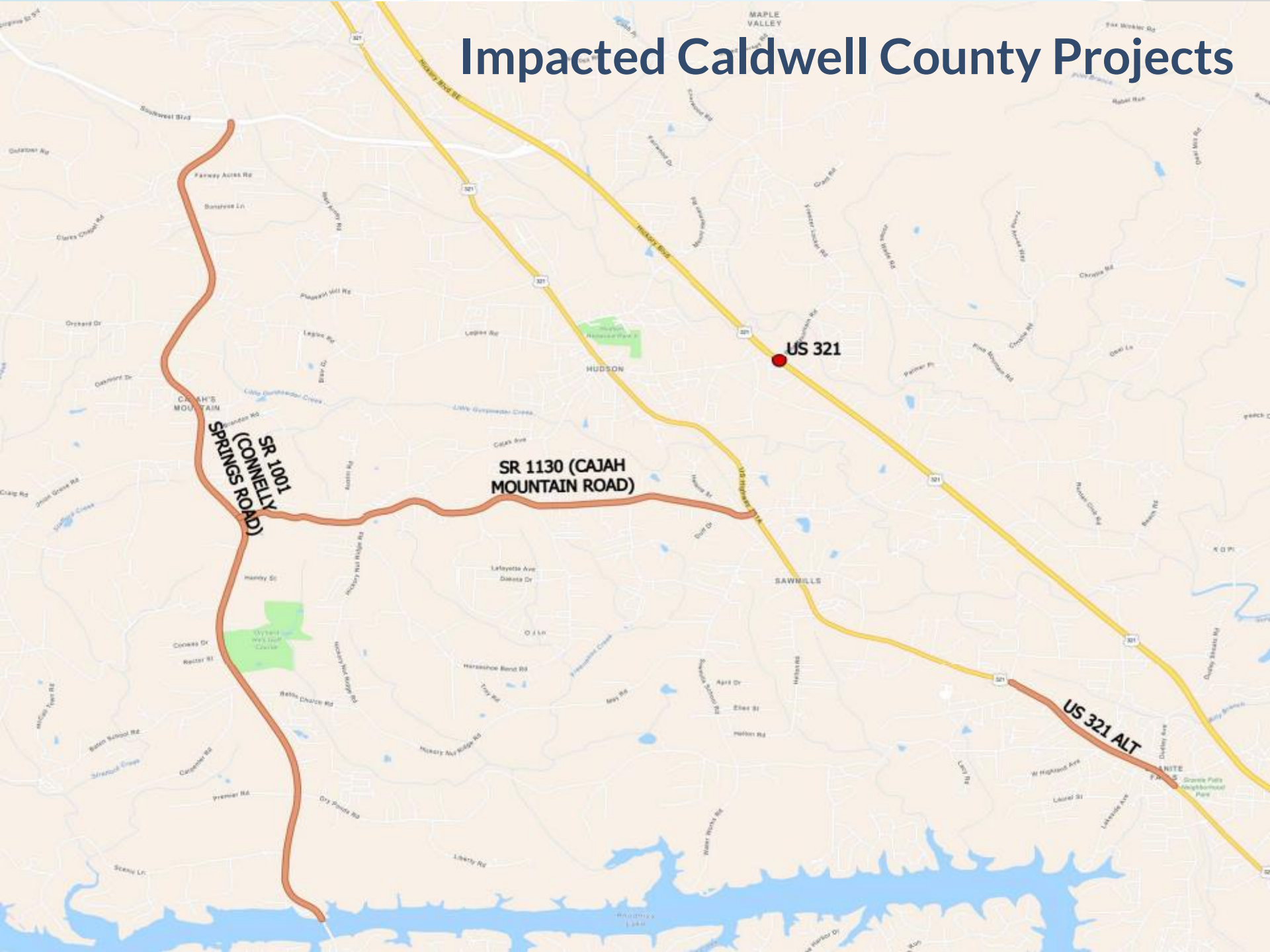
Impacted Alexander County Projects



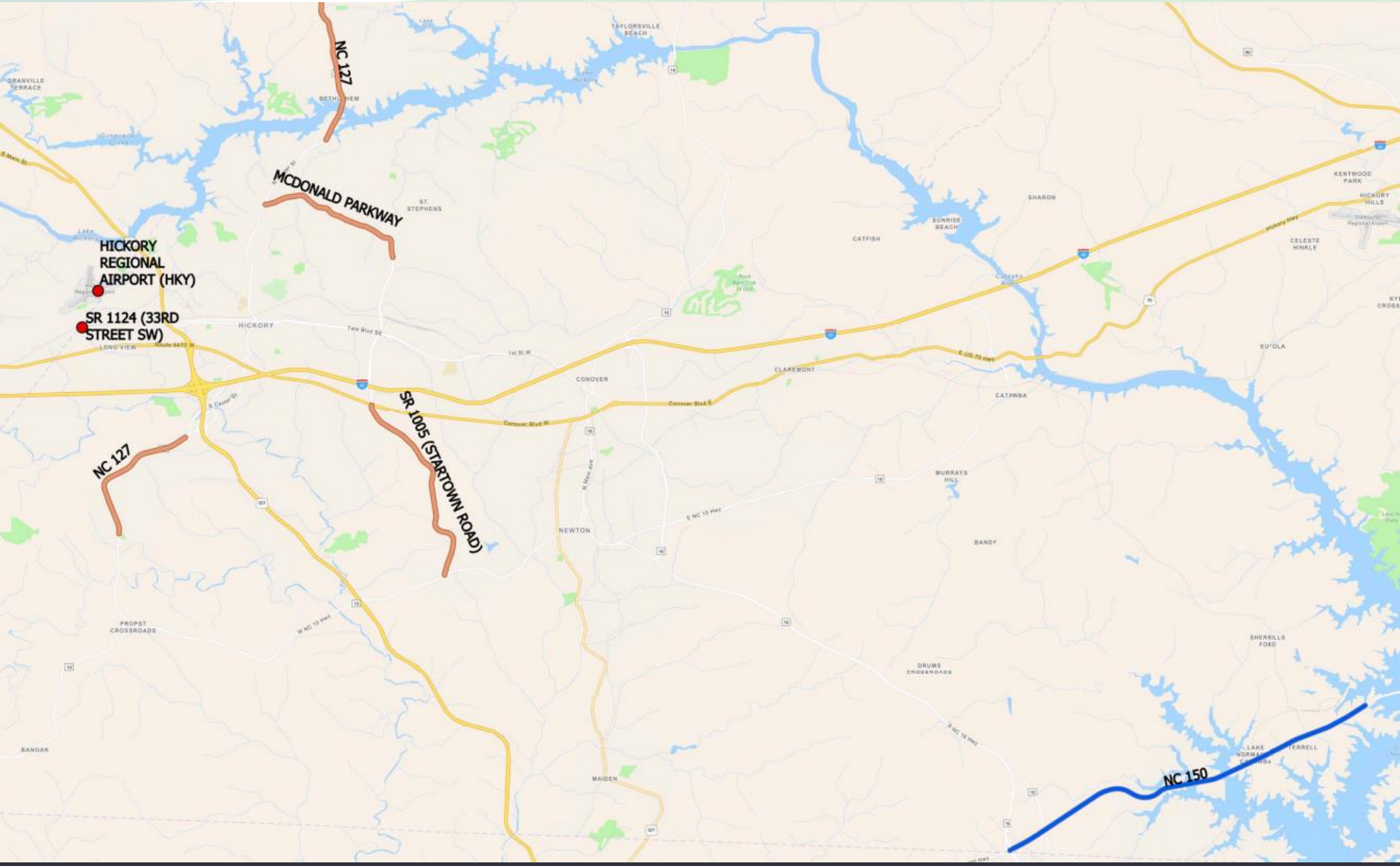
Impacted Burke County Projects



Impacted Caldwell County Projects



Impacted Catawba County Projects



Ranked Region F Projects

SENIORITY RANK	*PRIORITIZATION CYCLE COMMITTED*	*PRIORITIZATION CYCLE SCORE*	*ROUTE*	*DESCRIPTION*	*COUNTY*	*TOTAL REMAINING STI COST*	*ROW START FISCAL YEAR*	*UTIL START FISCAL YEAR*	*CON START FISCAL YEAR*
1	P5.0	80.65	NC 150	RELOCATED NC 16 (STIP PROJECT R-2206) TO EAST OF SR 1840 (GREENWOOD ROAD). WIDEN TO 4-LANES WITH A BYPASS OF THE TERRELL HISTORIC DISTRICT.	CATAWBA, LINCOLN	$ 225,961,000	2027	2027	2030

Ranked Region G Projects

SENIORITY RANK	*PRIORITIZATION CYCLE COMMITTED*	*PRIORITIZATION CYCLE SCORE*	*ROUTE*	*DESCRIPTION*	*COUNTY(S)*	*TOTAL REMAINING STI COST*	*ROW START FISCAL YEAR*	*UTIL START FISCAL YEAR*	*CON START FISCAL YEAR*
1	P3.0	50.48	NC 181	SR 1414 (ST MARY'S CHURCH ROAD) TO MORGANTON ETJ. WIDEN EXISTING ROADWAY.	BURKE	$ 10,799,000	2027		2029

Ranked Division 11 Projects

SENIORITY RANK	*PRIORITIZATION CYCLE COMMITTED*	*PRIORITIZATION CYCLE SCORE*	*ROUTE*	*DESCRIPTION*	*COUNTY*	*TOTAL REMAINING STI COST*	*ROW START FISCAL YEAR*	*UTIL START FISCAL YEAR*	*CON START FISCAL YEAR*
1	P4.0	78.95	US 321 ALT	SR 1109 (PINEWOOD ROAD) TO SR 1106 (DUKE STREET). UPGRADE ROADWAY.	CALDWELL	$ 25,599,000	2024	2024	2027
2	P4.0	71.33	SR 1001 (CONNELLY SPRINGS ROAD)	CATAWBA RIVER TO SR 1933 (SOUTH-WEST BOULEVARD)	CALDWELL	$ 78,501,000	2028	2028	2031
3	P5.0	76.71	SR 1130 (CAJAH MOUNTAIN ROAD)	SR 1001 (CONNELLY SPRINGS ROAD) TO US 321A. MODERNIZE ROADWAY.	CALDWELL	$ 47,100,000	2024	2024	2027
4	P5.0	72.96	US 321	SR 1002 (DUDLEY SHOALS ROAD) GRADE SEPARATION. CONSTRUCT RAMP ONTO US 321 SOUTHBOUND.	CALDWELL	$ 4,999,000	2025	2025	2027

Ranked Division 12 Projects

SENIORITY RANK	*REVISED RANK*	*PRIORITIZATION CYCLE COMMITTED*	*PRIORITIZATION CYCLE SCORE*	*ROUTE*	*DESCRIPTION*	*COUNTY*	*TOTAL REMAINING STI COST*	*ROW START FISCAL YEAR*	*UTIL START FISCAL YEAR*	*CON START FISCAL YEAR*
4	1	P4.0	75.46	MCDONALD PARKWAY	SR 1453 (SPRINGS ROAD) TO NC 127. WIDEN TO MULTI-LANES.	CATAWBA	$ 134,201,000	2025	2025	2028
2	2	P4.0	77.43	NC 127	SR 1132 (HUFFMAN FARM ROAD) TO SR 1008 (ZION CHURCH ROAD).	CATAWBA	$ 53,199,000	2025	2025	2028
3	3	P4.0	76.56	NC 127	SR 1400 (CLONINGER MILL ROAD) TO SR 1156 (RICHEY ROAD). UPGRADE TWO LANES AND PROVIDE SOME MULTI-LANE CURB AND GUTTER.	ALEXANDER, CATAWBA	$ 98,700,000	2025	2025	2026
6	4	P4.0	73.03	SR 1005 (STARTOWN ROAD)	US 70 TO NC 10. WIDEN TO MULTI-LANES.	CATAWBA	$ 138,801,000	2028	2028	2031
5	5	P4.0	74.78	SR 1124 (33RD STREET SW)	SR 1124 (33RD STREET SW) AND (34TH STREET NW). REALIGN INTERSECTION.	CATAWBA	$ 4,900,000	2027	2027	2029
1	6	P3.0	67.95	HICKORY REGIONAL AIRPORT (HKY)	LAND ACQUISITION AND OBSTRUCTION REMOVAL.	CATAWBA	$ 600,000	2032		

Ranked Division 13 Projects

SENIORITY RANK	*PRIORITIZATION CYCLE COMMITTED*	*PRIORITIZATION CYCLE SCORE*	*ROUTE*	*DESCRIPTION*	*COUNTY*	*TOTAL REMAINING STI COST*	*ROW START FISCAL YEAR*	*UTIL START FISCAL YEAR*	*CON START FISCAL YEAR*
1	P4.0	68.95	I-40	EXIT 118 - SR 1761 (OLD NC 10). CONTRUCT INTERCHANGE IMPROVEMENTS.	BURKE	$ 13,200,000	2025	2025	2026

Western Piedmont
Council of Governments

Creative Regional Solutions Since 1968

Questions?

Averi Ritchie, Transportation Manager

WPCOG / GHMPO
828-322-9191

REQUEST FOR BOARD ACTION
GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION
TCC/TAC

MEETING DATE: July 24, 2024

SUBJECT: 2024 Congestion Management Process Report

PRESENTER: Daniel Odom, Transportation Projects Coordinator

ATTACHMENTS: 2024 Congestion Management Report

SUMMARY OF REQUEST:
The Congestion Management Process (CMP) is a systematic approach to congestion management, *required in metropolitan transportation planning by federal code*. Through a federally prescribed process, the region's Congestion Management Process manages new and existing transportation systems for relieving congestion and maximizing the safety and mobility of people and goods. The tool used to evaluate the implementation of the Congestion Management Process is the Congestion Management Report. The Congestion Management Report is conducted biannually and assesses the quantitative performance of the transportation system in two manners: 1) A regional system level analysis of existing congestion data and predictive trends 2) A segment level analysis of roadway performance and potential solutions to operational deficiencies.

This Congestion Management Report will be the first completed by the Greater Hickory Metropolitan Planning Organization and will thus set the standard against which future Congestion Management Reports will be assessed. The Greater Hickory Metropolitan Area has experienced high degrees of variability in commuting patterns and congestion outcomes in the last several years. The COVID-19 pandemic rapidly and significantly changed the commuting patterns expected in the Greater Hickory Metropolitan Area. As a result, this report will address the following primary objectives: **1) Assess and compare regional pre and post pandemic congestion.** 2) **Discuss changes in regional commuting patterns and their influence on system performance. 3 Assess System Performance at the roadway segment level.**

BOARD ACTION REQUESTED: Release for public comment.

Suggested Motion: *Approval by consensus to release for public comment.*

Greater Hickory Metropolitan Planning Organization

2024 Congestion Management Report

Western Piedmont Council of Governments

Creative Regional Solutions Since 1968

July 2024

Introduction

The Congestion Management Process (CMP) is a systematic approach to congestion management, required in metropolitan transportation planning by federal code. Through a federally prescribed process, the Congestion Management Process in the region manages new and existing transportation systems for relieving congestion and maximizing the safety and mobility of people and goods. The tool used to evaluate the implementation of the Congestion Management Process is the Congestion Management Report. The Congestion Management Report is conducted biannually and assesses the quantitative performance of the transportation system in two manners: 1) A regional system level analysis of existing congestion data and predictive trends 2) A segment level analysis of roadway performance and potential solutions to operational deficiencies.

This Congestion Management Report will be the first completed by the Greater Hickory Metropolitan Planning Organization and will thus set the standard against which future Congestion Management Reports will be assessed. The Greater Hickory Metropolitan Area has experienced high degrees of variability in commuting patterns and congestion outcomes in the last several years. The COVID-19 pandemic rapidly and significantly changed the commuting patterns expected in the Greater Hickory Metropolitan Area. As a result, this report will address the following primary objectives:

1. **Assess and compare regional pre and post pandemic delay.** Total Regional delay significantly decreased during the COVID-19 pandemic. While Vehicle Miles Traveled (VMT) have returned to pre-pandemic levels, delay continues to remain below pre-pandemic level.
2. **Discuss changes in regional commuting patterns and their influence on system performance.** Commuting patterns play a significant role in the determination and prediction of peak hour delay. COVID-19 significantly changed the workplace, and as a result commuting patterns. Cross-County and Extra-Regional commuting patterns continue to trend upwards.
3. **Assess System Performance at Segment Level.** A primary objective of the Congestion Management Process is the identification and implementation of segment level solutions. This report will analyze roadway segment performance and identify potential solutions.

The Pandemic and Delay

COVID-19 significantly altered the way people work – and ultimately, the way people commute. 2019 total regional delay data, the primary congestion performance measure at the regional system level, represents the final reporting period prior to the pandemic; the most accurate depiction of the delay prior to COVID. In 2019, the Greater Hickory Region experience roughly 3.82 million hours of total delay. 2020 total regional delay data represents the immediate impact of COVID-19 on system demand and delay – a 45% decrease in total delay. While commuting patterns may have shifted in 2020, this significant decrease in delay is likely attributed to reduced travel during the peak of COVID-19. 2021 resulted in an increase in total delay when compared to 2020. However, 2022 data reflects that total regional delay has not recovered to pre-pandemic levels despite VMT (Vehicle Miles Traveled) recovery and the lifting of the majority of restrictions. Since the COVID-19 pandemic, the Greater Hickory Region has experienced 2.32M hours of delay per year on average – a 39.5% decrease in delay when compared to 2019. **Reduced delay despite recovering VMT and a normalizing post-COVID-19 environment suggest that COVID-19 produced significant changes to travel patterns.**

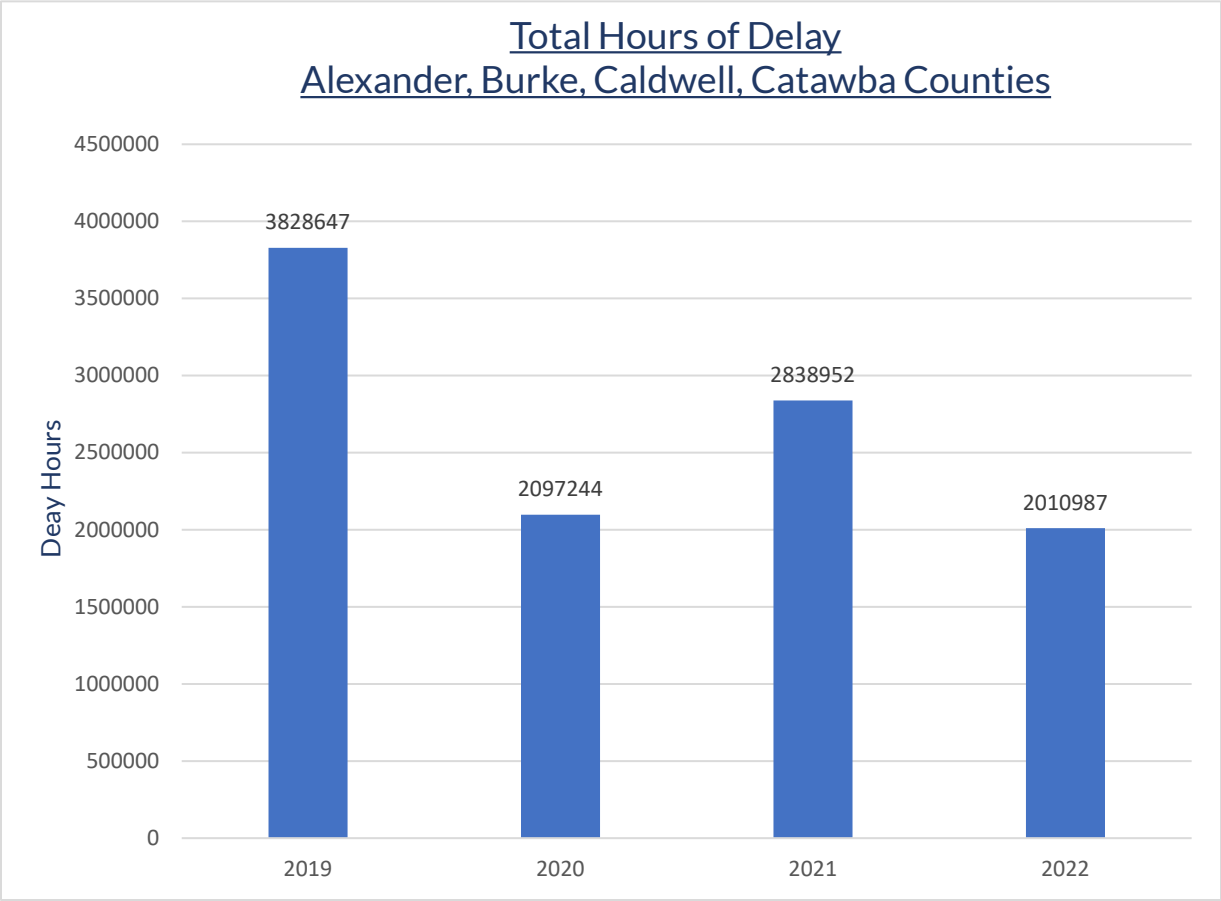


Figure 1 Source: RITIS Probe Data Analytics Suite

How the Pandemic Impacted Commuting Patterns

The COVID-19 pandemic had a profound effect on commuting patterns and congestion, through the effect it has had on how, where, and when American's work. COVID-19 forced the workforce out of the office and into their homes. Companies responded to the pandemic with work-from-home policies, forcing the workforce to adapt and produce from their homes. These changes resulted in acute decreases in commuting and as a result, congestion (2020). As the spread of COVID-19 became more and more controlled, many companies began to return to normal office operations. This return to work as normal was met with considerable resistance, and played a role in the "Great Resignation" of 2021, with many looking to retain their work from home availability. To remain competitive, many workplaces have maintained telework and flexible work schedule policies in place post COVID-19. There are two distinct commuting pattern impacts caused by post COVID-19 continued work-from-home and flexible work schedules: **1) Telework and flex schedules reduce peak hour travel, as fewer workers commute daily to the office. 2) Telework and flexible work redistributes trips to non-peak hours.** Employees working from home or on a flex schedule exhibit higher levels of trip diversity and leisure trips. Regionally, working from home continues to grow. In 2019, an estimated 3.3% of employed Hickory MSA residents worked predominantly from home. In 2022, an estimated 5.4% of employed Hickory MSA residents worked from home.

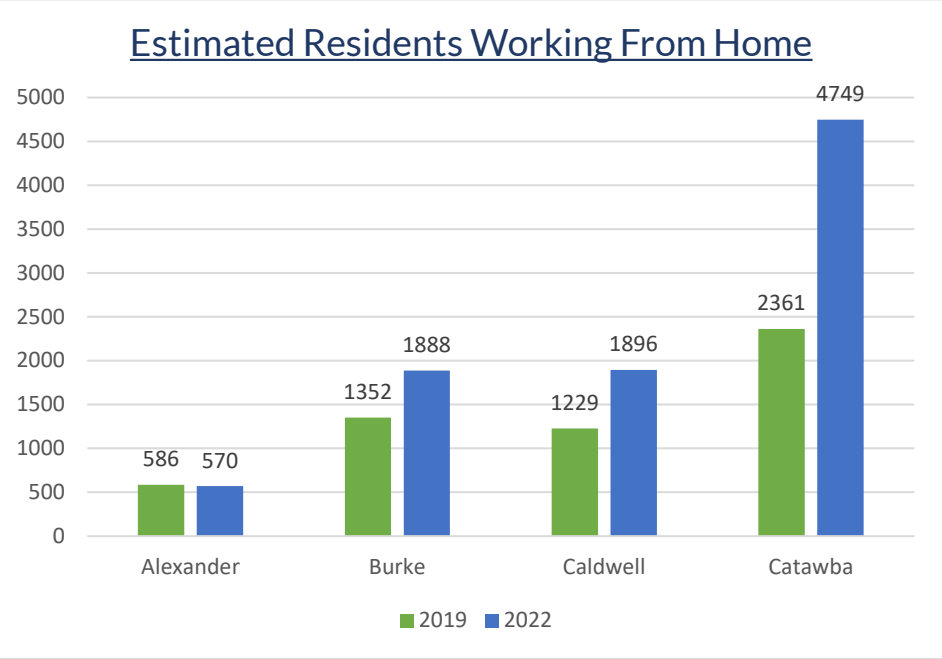


Figure 2 Source: US Census Bureau American Community Survey

Regionally, working from home continues to grow. In 2019, an estimated 3.3% of employed Hickory MSA residents worked predominantly from home. In 2022, an estimated 5.4% of employed Hickory MSA residents worked from home. COVID-19 also had impacts on alternative modes of transportation. **From 2019 to 2022, the number of Hickory MSA residents commuting via Public Transportation decreased 21.5% (353-277).**

The Future of Working from Home and Commuting Patterns

Remote work in the Greater Hickory Metropolitan Area surged by 167% from 2010-2022. This increase aligns not only with the impact of COVID-19 but also with the entrance of Generation Y and Generation Z into the workforce. These generations, attracted to technology in the workplace and the work-life balance stemming from flexible hours and remote work, have played an influential role in remote work trends. While projecting work-from-home trends may suggest a potential slowing in the next decade as Generation W and Generation X continue to lead the workforce, a shift could be anticipated in the 2040 and 2050 horizons. Planners must recognize the potential for virtual workplace expansion as Millennials and Generation Z assume leadership roles. The workplace changes resulting from generational shift may be exacerbated by technologic advancement. It is likely that future telework technologies will far outperform current virtual workplace technology, further supporting the virtual workplace. GHMPO planners should consider this commuting pattern potential in the transportation planning process.

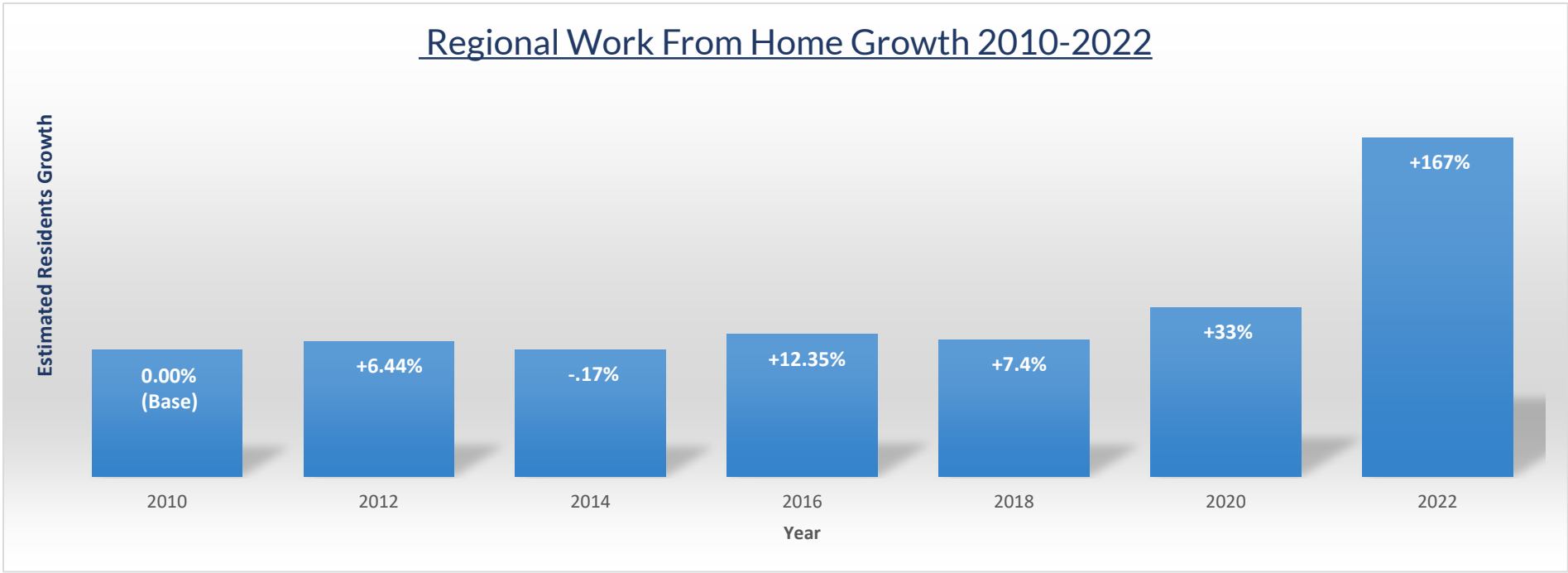


Figure 3 Source: US Census Bureau, American Community Survey

Cross-County Commuting Patterns

The Hickory MSA and Greater Hickory Region, as a whole, continue to see increase in cross-county and extra-regional commuting. Data for this section on commuting is sourced through the Longitudinal Employer Household Dynamics data set provided by the US Census Bureau. It is important to note, especially in reference to extra-regional commuting, that these data reflect general employee and employer locations, but do not necessarily imply daily commuting to that location. In this aspect, the virtual workplace continues to contribute to changes in commuting trends.

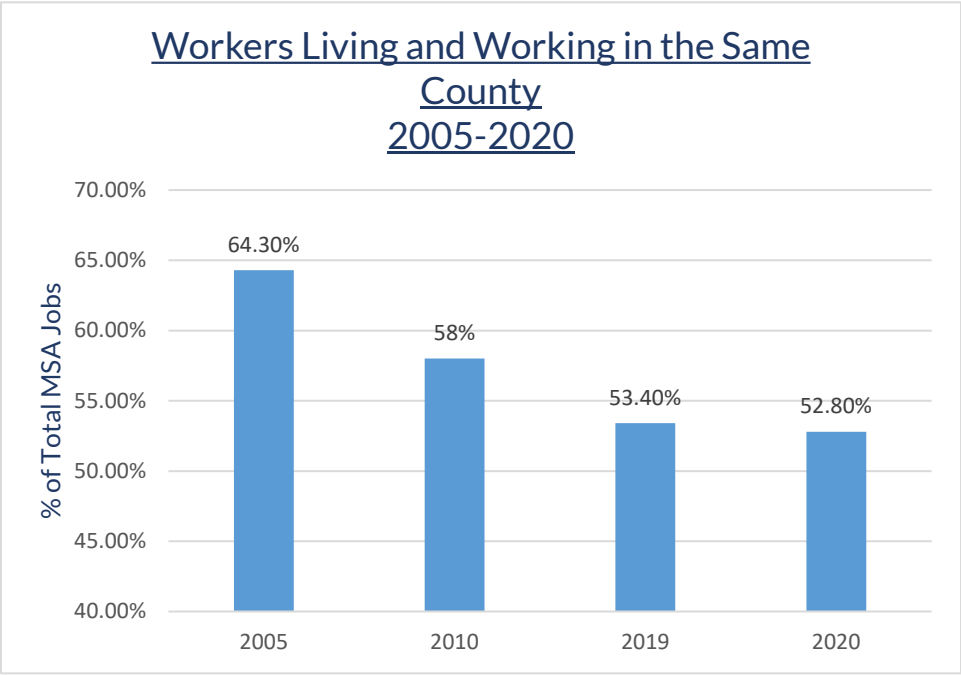


Figure 4 Source: US Census Bureau, LEHD Data

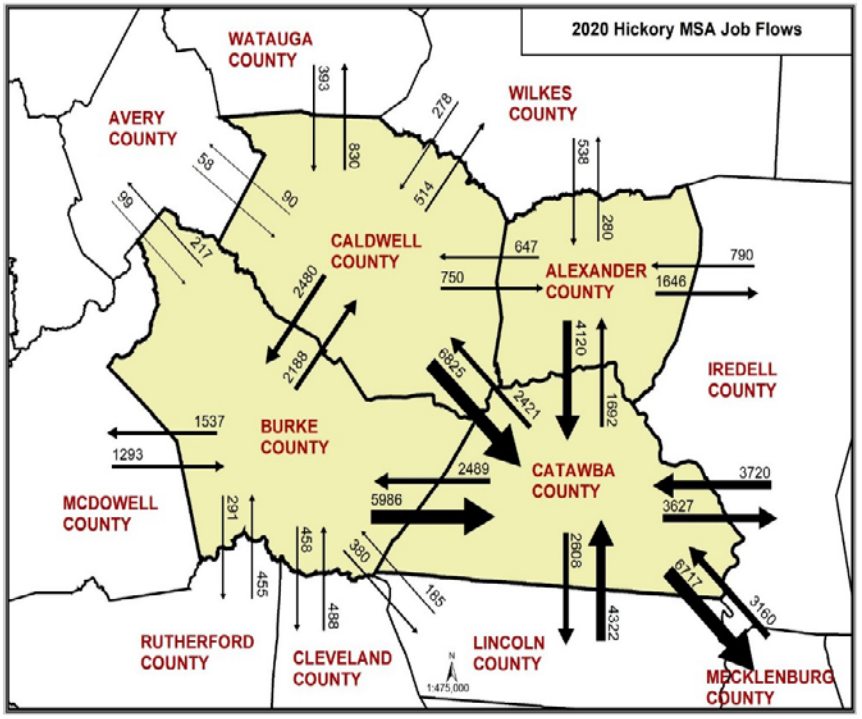


Figure 5 Source: US Census Bureau, LEHD Data

In reference to congestion and demand forecasting, increasing cross-county and extra-regional commuting patterns suggest increased demand potential for interstate and arterial commutes. **If current trends continue, the region will become increasingly reliant on the level of service that can be provided by I-40, US-321, NC-16, and US-64.**

Assessing Causes of Delay

Causes of delay have decreased proportionately to the reduction in overall delay observed during and post-pandemic. In the Greater Hickory Metropolitan Area, Congestion caused by traffic signals till contributes more delay time than any other singular cause. Many of the segment level analyses in Appendix B include the optimization of signal timing as a recommended interim improvement. Notably, recurrent congestion (congestion caused by predictable high demand) decreased significantly from 2019-2022. The size in reduction compared the reduction in signal delay supports that additional behavioral change, as well as reduced demand, contribute to the reduction.

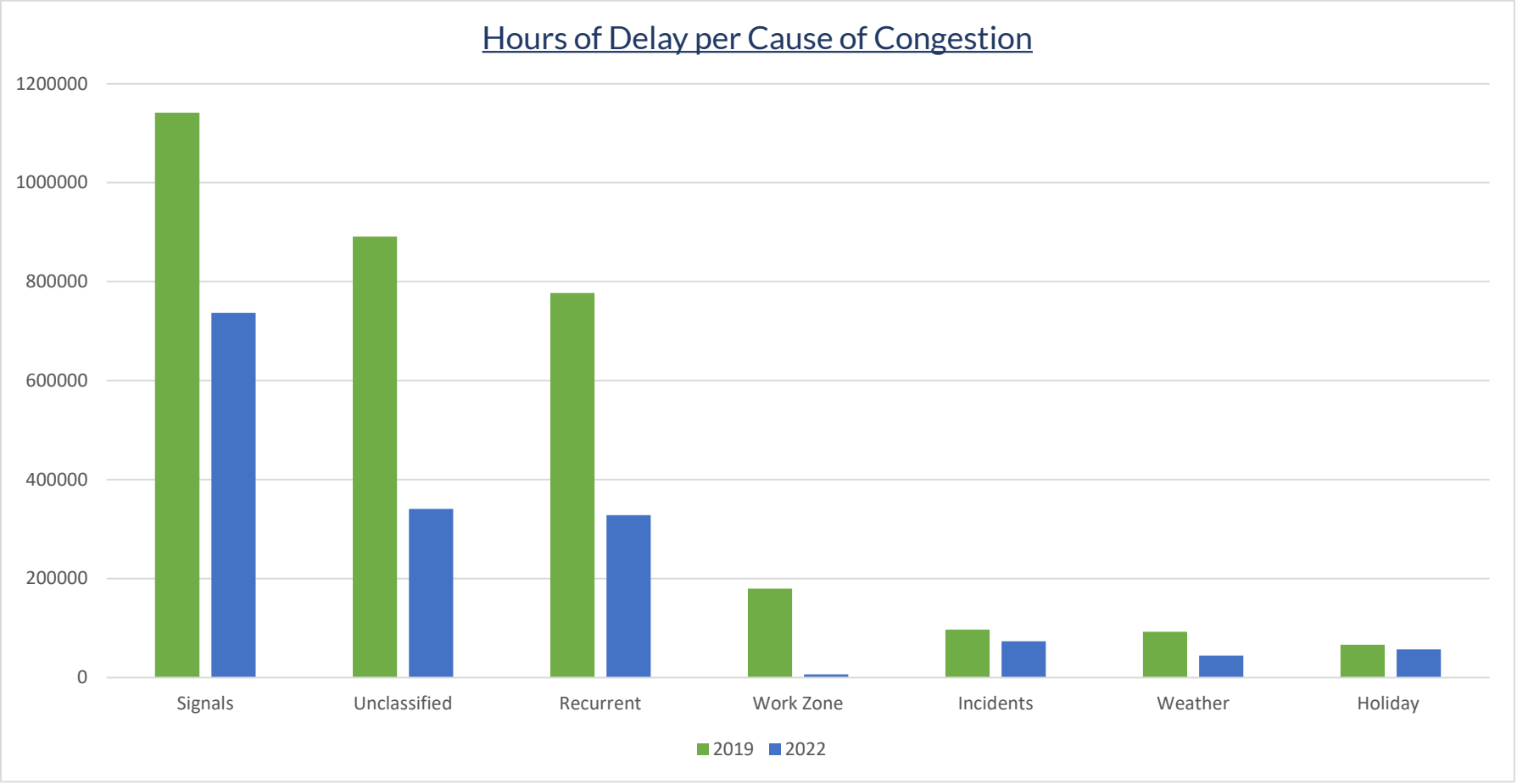


Figure 6 Source: RITIS Probe Data Analytics Suite

Assessing Congestion at the Segment Level

The ultimate goal of Congestion Management is the reduction of system wide congestion. The transportation systems overall performance is a composition of the performance of over 950 individual road segments across Alexander, Burke, Caldwell, and Catawba counties. **Delay is not distributed proportionately across all road segments, and the purpose of the Congestion Management Process and report is to implement a data-driven method to identify, monitor, and improve the performance of segments that create regionally significant amounts of delay.** To identify and monitor poor performing segments of roadway, the Congestion Management Report uses measures that assess both recurring and non-recurring congestion. **Recurring congestion** is the result of system demand exceeding system capacity. Simply, too many vehicles for the roadway. **Non-recurring congestion** on the other hand, is congestion directly caused by a singular event. Common causes of non-recurring congestion include vehicle accidents, vehicle breakdowns, inclement weather, and other special events. To assess recurring congestion, Planning Time Index and Travel Time Index are used. To measure non-recurring congestion, Severity Index and Number of Accidents are used, as vehicle accidents represent a large portion of non-recurring congestion events.

Planning Time Index is a measure of system reliability. Planning time represents the total time a traveler should pan to ensure on-time arrival. The 95th percentile travel time is used for the calculation, meaning that if a traveler allows the appropriate buffer time, they will arrive on-time in 95% of the trips. For example, a PTI of 1.60 means that for a trip that takes 15 minutes in light traffic, 24 total minutes should be allowed for the trip.
Travel Time Index represents actual travel time as a percentage of the ideal (free flow) travel time. The index is the ratio of the travel time during the peak period to the time required to make the same trip at free flow speeds. A TTI of 1.3, for example, indicates a 20-minute free-flow trip requires 26 minutes during the peak period.
Severity Index represents the severity of accidents at a specific intersection. Severity index is equal to equivalent property damage only (EPDO) divided by the number of crashes. EPDO uses assigned values to quantify the severity of injuries sustained in car crashes.
Number of Accidents simply represents the number of accidents over a prescribed reporting period at an individual intersection or segment area. Using this data, MPO staff can rank intersections across the region based upon the number of accidents across a set reporting period.
Bottleneck Ranking is used to account for delay volume within each segment. Bottlenecks In the region are measured by Total delay, or the total amount of vehicle delay caused by a segment throughout the year.

Regional Segment Ranking

Based on the weighting for Planning Time Index, Travel Time Index, Accident Severity Index, Number of Accidents, and Bottleneck Ranking, established by the Congestion Management Process (CMP), the Greater Hickory Metropolitan Planning Organization has analyzed and scored each road segment identified in the CMP network of study. The 10 highest scoring segments and their respective methodology scores are below. For the complete list, see the scoring Appendix A.

Road Segment	Score / 50
1. MCDONALD PARKWAY S @ I-40	33
2. NC 18 N @ Bush Drive / I-40	29
3. US 64 W @ I-40	29
4. US 70 W @ US-70 / E Union Street	27
5. US 321 N/S @ Mission Road / Lower Cedar Valley Road	26
6. US 70W @ US 70-BR/E Union Street	25
7. US 321 S @ US 64/NC 90/NC 18	25
8. US 321 @ Mount Herman Road	25
9. NC 16 @ US 64 (Taylorsville)	22
10. NC 18S @ Bush Drive / I-40	22

Identifying Segment Level Solutions

The identification of poor performing road segments through recurring and non-recurring congestion data allows planners and engineers to analyze and target the shortcomings of identified road segments with actionable solutions. During the development of this Congestion Management Report, GHMPO and NCDOT Congestion Management Unit staff worked together to produce solutions and strategies that could produce submittals to the Strategic Prioritization Process, LAPP, and other competitive infrastructure improvement funding opportunities. Full descriptions for each road segment can be found in Appendix B.

Road Segment	STIP Project Funded	STIP Project Carryover or New Submittal	MTP/CTP Project	Improvements under study or recommended by NCDOT
MCDONALD PKWY S @ I-40				X
I-40W @ US-321`(Exit 123)		X	X	X
I-40 @ Oxford School (Exit 138)			X	X
I-40 W@ 125 (LR BLVD)	X		X	
I-40 @ 126 (McDonald)		X	X	
NC 16 @ NC-16 BUS		X	X	X
NC 16 @ US-64		X	X	
US 321 @ 2nd Ave	X		X	
I-40W @ Jamestown Road/Exit 100		X	X	X
I-40E @ Carolina Street / Exit 111		X	X	
US-70W @ US-70-BR/E Union Street				X
US-70E @ Drexel Rd/S Main Street				X
I-40E @ Old NC 10/Exit 118	X		X	
US-70W @ US-70/E Union Street				X
US-321S @ US-64/NC-90/NC-18			X	
NC-18N @ Bush Drive/I-40				X
I-40W @ Center St/Exit 119	X		X	
US-64W @ I-40 (Morganton)	X		X	X
US-70BR-W @ Huff man St/Center St				X

Road Segment	STIP Project Funded	STIP Project Carryover or New Submittal	MTP/CTP Project	Improvements under study or recommended by NCDOT
US-321N @ US-64/NC-90/NC-18			X	
NC-18S @ Bush Drive / I-40				X
I-40W @ N Oxford Street/Exit 135			X	
I-40E @ US-70A/Exit 130		X	X	
I-40W @ Mineral Springs Mountain Road/Exit 112		X	X	
I-40W @ Malcolm BLVD/Exit 113		X	X	
US-321 @ Maizel Rd/New Farm Road		X		
South Center Street @ US-70			X	X
NC-127 @ 2nd Ave	X		X	
US-321 @ Mount Herman Road	X		X	
US 321 @ Mission Road / Lower Cedar Valley Road	X		X	

This report the 30 most significantly congested road segments within the Greater Hickory Planning Area. Of the 30 identified segments, 8 (26%) are addressed in currently funded STIP projects. 10 (33%) of identified segments are addressed in a project currently competing for funding in prioritization. 18 (54.5%) of the identified segments are in the STIP Process. 22 (73%) of the identified segments are addressed within an adopted MTP or CTP Project Proposal. Additionally, of the 30 identified road segments, 10 (33%) are either under current review by the Congestion Management Unit, or have interim improvement recommendations, identified jointly by NCDOT and GHMPO, documented within this report. **All 30 identified segments have identified potential solutions documented within this report.**

Addressing Congestion in a 3C Manner: Key Takeaways and Goals

The 2024 CMP Report provides a performance benchmark for both regional system and roadway segment level performance. Subsequent CMP Reports should maintain regional performance measure continuity, which will allow the region to continuously assess the transportation systems performance. GHMPO staff should also ensure that segment level performance data is maintained, and roadway improvements at identified segments are documented. This data will allow the region to assess both the success of the individual improvement, and the avenues in which improvements can be implemented.

The CMP Reports segment level analysis suggests a clear link between the congestion management process and the MTP/CTP and Prioritization process, as evidenced by nearly 80% of congested roadway segments being identified in the STIP or MTP/CTP. GHMPO Staff should continue to Implement CMP recommendations in the Transportation Planning Process, including the incorporation of project proposals for the 7 roadway segments not addressed by documented project proposals in the next MTP/CTP update.

While many roadway segments are addressed in documented project recommendations, many of these projects are capital intensive. GHMPO Staff should continue to work with NCDOT to identify opportunities to implement cost effective interim improvements, and explore funding sources to implement the segment specific interim improvement strategies identified within this report, which include signage improvements, signal timing optimization, interim signalization, and interim access management.

Regional Commuting Pattern Trends will continue to reflect increased interstate and arterial demand. GHMPO Staff should frequently monitor congestion data along commuting corridors: I-40, US-321, NC-150, NC-16, and US-64. GHMPO staff should continue to monitor the competitiveness of documented MTP/CTP/Prioritization projects designed to increase capacity and prioritize throughput within these corridors As these corridors develop, the GHMPO should continue to explore and incorporate proposals that prioritize travel-time savings and travel-time reliability.

While less likely to influence regional delay totals, residential development in regional Growth Areas present opportunities for increased demand in new locations. As trip-generators like housing developments emerge, GHMPO should work with regional planning partners to identify potential collector road and intersection deficiencies.

Appendix A: Complete Segment Scoring

Table 1 Source: NCDOT TEAAS, Jan-Dec 2022. PDA Suite Jan-Dec 2022.

Road Segment	Score / 50
1. MCDONALD PARKWAY S @ I-40	33
2. NC 18 N @ Bush Drive / I-40	29
3. US 64 @ I-40	29
4. US 70 W @ US-70 / E Union Street	27
5. US 321 N/S @ Mission Road / Lower Cedar Valley Road	26
6. US 70 @ US 70-BR/E Union Street	25
7. US 321 S @ US 64/NC 90/NC 18	25
8. US 321 N/S @ Mount Herman Road	25
9. NC 16 @ US 64 (Taylorsville)	22
10. NC 18S @ Bush Drive / I-40	22
11.NC 16 @ NC 16 Business (Conover)	21
12.US-70 BR-W @ Huffman Street Center Street	21
13.I-40 @ US 321	20
14.US-70E @ Drexel Road / S Main Street	20
15.US 321 N @ US 64 / NC 90 / NC 18	19
16.I-40 @ Exit 124 (LR BLVD)	18
17.NC 127 @ 2nd Avenue NW	15
18.US 321 @ 2nd Avenue NW	13
19.I-40 @ Jamestown Road / Exit 100	13
20.I-40 @ Carolina Street / Exit 111	13
21.I-40 @ Old NC 10 / Exit 118	9
22. I-40 @ Center Street / Exit 119	9
23.US 321 @ Maizel Road / New Farm Road	9

24.I-40 @ Oxford	7
25.I-40 @ Exit 126	6
26.I-40 @ N Oxford Street/ Exit 135	6
27.I-40 @ US-70A / Exit 130	6
28.I-40 @ Mineral Springs Mountain Road / Exit 112	6
29.I-40 @ Malcolm BLVD Exit 113	6
30.South Center Street @ US 70	6

Table 2 Source: NCDOT TEAAS, Jan-Dec 2022. PDA Suite Jan-Dec 2022.

Appendix B: Segment Level Discussion and Recommendations

Alexander County Segment Level Analysis

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
NC 16 @ US 64	Not Ranked	2.3	1.5	18	2.23

- **Delay Analysis**: This interchange in Taylorsville presents delay data which suggests possible congestion along NC-16 throughout the interchange. It is likely that this delay is a result of premature slowing of vehicles as they enter the "downtown" area of Taylorsville. The interchange design is sound.
- **Recommendations:** Minor improvements could include speed-limit modifications through the segment area, primarily through the extension of the 35 MPH zone. Signal timing is likely to be sound, but could be addressed if delay continues.
- **Documented Project Proposals:** Former STIP project and current submittal U-6151 proposes the modernization of NC-16 from US-64 to the Catawba River. While this project may have minimal improvements to performance of the interchange, it does present an opportunity for more thorough analysis of the interchange.

Burke County Segment Level Analysis

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
I-40W @ Jamestown Road (Exit 100)	8	1	1	N/A	N/A

- **Delay Analysis:** Congestion presented at I-40 Exit 100 is due in large part to antiquated interchange design and ramp length, including local road access to the I-40 West on-ramp, creating ramp congestion during peak hour traffic.
- **Recommendations:** Interchange redesign is necessary to completely address causes of delay. NCDOT's Congestion Management unit will continue to monitor this area for potential interim improvements.
- **Documented Project Proposals:** STIP Project I-5874 was identified to redesign the interchange and construct a new interchange to NCDOT Standards. Design alternates include a possible roundabout interchange, with roundabouts servicing traffic at each leg of the interchange, and a partial cloverleaf alternate. I-5874 is currently funded for Preliminary Engineering only, and is currently competing in Prioritization 7.0. 2050 CTP Project BURK-HS-09-CTP also proposes the widening of I-40 from 4 to 6 lanes, which would require interchange improvements and reduce delay.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
I-40E @ Carolina Street (Exit 111)	6	1.1	1	N/A	N/A

- **Delay Analysis:** Congestion presented at I-40 Exit 111 can be attributed to the level of conflict created by an outdated interchange design. The east-bound on ramp, in combination with Carolina Street and Abees Grove Church Road, creates an awkward interchange experience. The westbound off-ramp is shortened due to its intersection with Abees Grove Church Road, creating an increased potential for on-ramp queueing and delay on I-40. The east bound on/off ramp system is also awkward, with very short ramp lengths.
- **Recommendations:** This area continue to be analyzed for a potential modernization project to implement interim improvements, as a modernization submittal may be more cost-effective, and more competitive, than I-5008.
- **Documented Project Proposals:** This segment is a candidate for redesign, with STIP project I-5008. However, this project is funded for Preliminary Engineering only, and is currently competing in Prioritization 7.0. 2050 CTP Project BURK-HS-09-CTP also proposes the widening of I-40 from 4 to 6 lanes, which would require interchange improvements and reduce delay.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
I-40W @ Mineral Springs Mountain Road (Exit 112)	Not Ranked	1.1	1	6	1

- **Delay Analysis:** Congestion presented at I-40 Exit 112 is marginally supported by congestion data, with a cumulative congestion score of 6 out of a possible 50 points. This congestion may be caused in part by the local access road on the I-40 ramp, and overall interchange design.
- **Recommendations:** This interchange is a candidate for redesign. MPO and NCDOT staff should continue to monitor the competitiveness of this project as a STIP submittal.
- **Documented Project Proposals:** STIP Project I-5975 is identified as a potential solution, but is currently competing in Prioritization. 2050 CTP Project BURK-HS-09-CTP also proposes the widening of I-40 from 4 to 6 lanes, which would require interchange improvements and reduce delay.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
I-40W @ Malcolm Boulevard (Exit 113)	Not Ranked	1	1	N/A	N/A

- **Delay Analysis:** Congestion presented at exit 113 is marginally supported by congestion data. Overall, this interchange appears to be in good condition, with the exception of the two-way ramp condition.
- **Recommendations:** Removal of the two-way ramp access, and potential redesign should address potential for excessive delay.
- **Documented Project Proposals:** NCDOT Division 13 has submitted a project to compete in Prioritization which addresses the two-way ramp. The GHMPO should consider including this project in the next Metropolitan Transportation Plan Update. 2050 CTP Project BURK-HS-09-CTP also proposes the widening of I-40 from 4 to 6 lanes, which would require interchange improvements and reduce delay.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
US-70W @ US-70 BR/East Union	4	2	1.4	13	N/A

- **Delay Analysis:** Multiple segments within this intersection area are well supported by Congestion Data, with two segments scoring 27 and 25 out 50 points. This congestion is largely due to high volumes of traffic accessing Morganton through the intersection, and possibly high-levels of non-recurring congestion due to minor accidents.
- **Recommendations:** It is recommended that signal timing be analyzed for possible improvements. Long-term solutions will require a large redesign of the intersection, possibly including a bypass of the intersection.
- **Documented Project Proposals:** This intersection is not currently addressed in a STIP project submittal, or MTP/CTP Proposal. GHMPO Staff should consider the inclusion of long-term proposals, including a possible intersection redesign in the MTP, or a potential bypass system in the CTP.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
US-70E @ Drexel Road/South Main Street	11	2	1	7	3.11

- **Delay Analysis:** Congestion throughout this intersection area is due in large part to poor access management. Several businesses have unrestricted access to the intersecting roadways, creating multiple conflict points and decreasing operation efficiency, as well as increasing the conflict experienced by drivers utilizing this area of roadway. The unrestricted access is likely to result in traffic slowing and queueing, and increased accident volumes.
- **Recommendations:** There is an access management/control project currently on hold through NCDOT Congestion Management, which would limit access and decrease potential conflict. Other interim improvements include curb bollards, and cautionary signaling. Longer-term improvements include a possible mini-roundabout. This project also highlights the necessity for intentional land use planning and design, and the consideration of transportation impacts incurred through development.
- **Documented Project Proposals:** This intersection is not currently addressed in a STIP Project Submittal or MTP/CTP Proposal. While NCDOT Congestion Management has initiated a project to address the intersection, GHMPO staff should identify the potential for other interim improvements and opportunities to fund said improvements. GHMPO Staff should also consider the inclusion of an MTP/CTP proposal to address the project area in accordance with NCDOT design recommendations.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
I-40 @ Old NC 10 (Exit 116)	19	1.1	1	13	3.85

- **Delay Analysis:** Congestion at this interchange is marginally supported by congestion data. Operationally, the congestion could be caused by the short ramp lengths and potential queuing at peak hours, and the two-way ramp conditions.
- **Recommendations:** This interchange is a candidate for redesign. However, a complete redesign is capital intensive. GHMPO Staff should explore submittal alternatives.
- **Documented Project Proposals:** STIP project I-5971 (also identified in the 2050 MTP) was identified as a long term solution to the antiquated interchange design, but is currently only funded for Preliminary Engineering and is currently competing in Prioritization 7.0. 2050 CTP Project BURK-HS-09-CTP also proposes the widening of I-40 from 4 to 6 lanes, which would require interchange improvements and reduce delay.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
NC 18 N/S @ Bush Drive/I-40	10/12	2.1/2.1	1.5/1/4	23	1.23

- **Delay Analysis:** Congestion at this interchange is strongly supported by congestion data. This segment area was recently improved. However, congestion data supports the need for continued monitoring and improvement.
- **Recommendations:** Recommended improvements include possible improvements at the fourth leg of the interchange, including a complete redirect of traffic at the fourth leg. Long term, this segment area may need a redesign to better accommodate increasing volume. GHMPO Staff should continue to monitor this segment area and work with NCDOT Congestion Management to formulate potential interim solutions.
- **Documented Project Proposals:** This segment area is not currently addressed in a STIP Project Submittal or MTP/CTP Proposal. GHMPO staff should work with NCDOT to formulate an agreed upon interim improvement to be submitted for Prioritization, and included in the MTP.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
US-64 @ I-40 (Exit 103)	7	2.1	1.7	18	1.41

- **Delay Analysis:** Congestion data at this segment area support the occurrence of very high levels of congestion. Businesses have largely unrestricted access to the US-64 corridor in this area, creating multiple conflict points and decreasing operation efficiency, as well as increasing the conflict experienced by drivers utilizing this area of roadway. The unrestricted access is likely to result in traffic slowing and queueing, and increased accident volumes.

- **Recommendations:** The interchange improvements currently submitted in Prioritization may resolve delay issues in proximity to the interchange. However, it is likely that this area of the US-64 corridor may continue to present congestion data due to a lack of access management and conflict experienced by drivers. GHMPO and Land-Use planning staff should consider potential land-use policy to improve connectivity among businesses within the corridor, and prevent further access management issues.
- **Documented Project Proposals:** STIP Project I-5009 (identified in the MTP/CTP) is currently competing in prioritization. 2050 CTP Project BURK-HS-09-CTP also proposes the widening of I-40 from 4 to 6 lanes, which would require interchange improvements and reduce delay.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
US-70 BR @ Huffman St/Center Street	18	3	1.4	N/A	N/A

- **Delay Analysis:** Congestion at this segment area is due in large part to the awkward intersection of the roadways, which create a false-5 point intersection with the WB Couplet of US-70 BR.
- **Recommendations:** Short-term improvement may be made at this intersection through increased signage. Long-term, this intersection could be a candidate for a roundabout or other total redesign project.
- **Documented Project Proposals:** This segment area is not currently addressed in a STIP Project Submittal or MTP/CTP Proposal. GHMPO Staff should continue to work with NCDOT staff to identify an agreed upon solution for inclusion in the MTP/CTP and submittal for prioritization.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
I-40W @ Center Street (Exit 119)	20	1	1	7	3.11

- **Delay Analysis:** Congestion at this segment is marginally supported by data. Congestion could be influenced by freight mobility shortcomings. Overall, this interchange meets NCDOT standards and is in good condition.
- **Recommendations:** This segment area is addressed by a bridge replacement project. GHMPO Staff should continue to monitor this interchanges congestion data following the completion of the bridge replacement project.
- **Documented Project Proposals:** This segment area is addressed by a bridge replacement project. GHMPO staff should continue to monitor this interchange, and if necessary, consider potential proposals for inclusion in the MTP/CTP. 2050 CTP Project BURK-HS-09-CTP also proposes the widening of I-40 from 4 to 6 lanes, which would require interchange improvements and reduce delay.

Caldwell County Segment Level Analysis

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
US 321 N/S @ US-64/NC-90/NC18	16/13	1.9/2	1.5	6	2.23

- **Delay Analysis:** The US 321 corridor carries considerable volumes of traffic throughout the Greater Hickory Region. US-64/NC 90/NC 18 carries considerable traffic through Caldwell County and the Lenoir area. Congestion at this segment area is due to the volume of traffic negotiating a signalized intersection. While actual experienced delay for individual trips may not be excessive, the volume of traffic contributes to this segments bottleneck ranking and total delay.
- **Recommendations:** Long term solutions are complicated due to the land use implications of potential solutions. Any long term solutions, which would most likely include interchange construction or bypass, must consider the prioritization of US 321 traffic, the economic impact of alternating traffic flows on the City of Lenoir, and the land use implications of potential interchange designs. Regional partners will be essential to the design process, and the decision making process regarding the classification/characterization of US 321. As the US-321 corridor develops with Reduced Conflict Intersections and increased throughput, the severity of the bottleneck at this intersection will increase.
- **Documented Project Proposals:** This segment area is addressed by CALD-HD-24-CTP, Southeast Boulevard, in the 2050 Comprehensive Transportation Plan. This proposal suggests the construction of a loop bypass of US-321 from the existing Southwest Boulevard to NC-18 via Alfred Hartley Road and new location. GHMPO staff should collaborate with NCDOT and regional planning partners to assess the feasibility of this proposal, and consider the inclusion of alternates in the MTP/CTP. Ultimately, the need for an agreed upon project submittal for Prioritization will continue to increase if commuting trends and current project plans continue.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
US-321 @ Maizel Farm Road/New Farm Road	17	1.4	1.1	10	2.48

- **Delay Analysis:** Congestion in this segment area is strongly supported by data and is reflective of the volumes of traffic negotiating a signalized intersection. While actual experienced delay for individual trips may not be excessive, the volume of traffic contributes to this segments bottleneck ranking and total delay.
- **Recommendations:** Long term solutions for this project will require this intersection to be upgraded to an interchange or grade separated intersection.
- **Documented Project Proposals:** This segment area is addressed by a STIP Project Submittal currently competing in Prioritization 7.0, which proposes an upgrade to an interchange.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
US-321 @ Mount Herman Road	2	1.3	1.1	5.79	47

- **Delay Analysis:** Congestion at this segment area is strongly supported by congestion data. This segments recurring congestion is comparable in both severity and cause to other intersections along the US-321 corridor in Caldwell County. Notably, this segment area may experience high levels of non-recurring congestion – due to high accident volume and severity.
- **Recommendations:** Given the need for both safety and free-flow improvements, this segment area will benefit from the construction of a reduced conflict intersection.
- **Documented Project Proposals:** This segment area is addressed by a funded STIP Project, U-4700CA will construct a reduced conflict intersection with construction programmed for 2024. This proposal was also identified in the 2050 MTP.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
US-321 @ Mission Road	5	1.3	1.1	29	13.75

- **Delay Analysis:** Congestion in this segment area is similar to congestion presented at US-321 @ Mount Herman Road. This segments recurring congestion is comparable in both severity and cause to other intersections along the US-321 corridor in Caldwell County. To a lesser extent than US-321 @ Mount Herman Road, this segment area may experience high levels of non-recurring congestion – due to high accident volume and severity.
- **Recommendations:** Given the need for both safety and free-flow improvements, this segment area will benefit from the construction of a reduced conflict intersection.
- **Documented Project Proposals:** This segment area is addressed by a funded STIP Project, U-4700CC will construct a reduced conflict intersection with construction programmed for 2024. This proposal was also identified in the 2050 MTP.

Catawba County Segment Level Analysis

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
McDonald PKWY S @ I-40	1	4.3	2.6	9	3.47

- **Delay Analysis:** Congestion at this segment area is strongly supported by congestion data. Delay on McDonald Parkway is likely the result of suboptimal signal timing. However, addition queuing could be caused by a lack of signal capacity.
- **Recommendations:** This segment area would likely benefit from signal timing optimization and ramp improvement. NCDOT Congestion Management is currently reviewing ramp capacity on the interchange.
- **Documented Project Proposals:** This segment area is currently addressed in an MTP/CTP project and STIP Project Submittal currently competing in Prioritization. I-5991A proposes the widening of I-40 from 4 to 6 lanes. This project, if funded, would present an opportunity for interchange improvements like ramp improvement. However, I-5991A is capital intensive. GHMPO staff should collaborate with NCDOT to produce an interchange specific interim solution for inclusion in the MTP/CTP and Prioritization.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
I-40W @ US-321 (Exit 123)	3	2	1.1	10	3.96

- **Delay Analysis:** Congestion at this segment area is strongly supported by data during peak hours. Accident severity index suggests that non-recurring congestion may also be an issue at this interchange.
- **Recommendations:** NCDOT Congestion Management currently has a safety project to reduce accident frequency on interchange ramps in queue.
- **Documented Project Proposals:** This segment area is currently addressed by two MTP/CTP Projects and STIP Submittals. Exit 123 serves as a terminus for both projects (STIP Project I-5991A, MTP Project MULT-HS-03). Both submittals propose widening I-40 from 4 to 6 lanes. This project presents an opportunity for interchange improvements and improved free-flow on I-40.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
I-40 @ Oxford School Road (Exit 138)	25	1.1	1	8	1.92

- **Delay Analysis:** Congestion at this segment area is likely caused by the number of conflict points within the interchange. However, congestion data suggests that existing congestion may not be excessive enough to necessitate a total interchange redesign at this time.

- **Recommendations:** In the interim, this interchange could benefit from additional signage to improve flow. This interchange may be a candidate for improvement through a bridge replacement. GHMPO Staff and NCDOT Congestion Management should collaborate to establish proposed improvements which could be synergized within a Bridge replacement project. Long term solutions may dual roundabouts at interchange terminals.
- **Documented Project Proposals:** This segment area is currently addressed by an MTP project (MULT-HS-04) which proposes the widening of I-40 from 4 to 6 lanes from Exit 132 to the Iredell County line. GHMPO staff should consider the inclusion of an interchange specific project in the next update on the MTP/CTP.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
I-40 @ LR Boulevard (Exit 125)	23	2.5	1.2	24	3.16

- **Delay Analysis:** Congestion at this segment area is largely due to interchange deficiencies created by conflict at on and off ramps and suboptimal lane continuity on Lenoir-Rhyne Boulevard.
- **Recommendations:** Queuing and congestion can be reduced at this interchange through the construction of a loop on ramp, turning-movement restrictions, and increased lane continuity.
- **Documented Project Proposals:** This segment area is addressed by a funded STIP project identified in the MTP/CTP, I-5716. Construction is currently programmed for 2026.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
I-40 @ McDonald Parkway (Exit 126)	NR	1.5	1	9	3.47

- **Delay Analysis:** Congestion at this segment area is strongly supported by congestion data. Delay on McDonald Parkway is likely the result of suboptimal signal timing. However, addition queuing could be caused by a lack of signal capacity.
- **Recommendations:** This segment area would likely benefit from signal timing optimization and ramp improvement. NCDOT Congestion Management is currently reviewing ramp capacity on the interchange.
- **Documented Project Proposals:** This segment area is currently addressed in an MTP/CTP project and STIP Project Submittal currently competing in Prioritization. I-5991A proposes the widening of I-40 from 4 to 6 lanes. This project, if funded, would present an opportunity for interchange improvements like ramp improvement. However, I-5991A is capital intensive. GHMPO staff should collaborate with NCDOT to produce an interchange specific interim solution for inclusion in the MTP/CTP and Prioritization.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
NC-16 @ NC-16 Business/ Thornburg	22	2.2	1.6	8	>1

- **Delay Analysis:** Congestion in this segment area is largely contributed to the awkward proximity of the Exit 132 interchange and the intersection of Thornburg and NC 16. AM peak hour queuing is common in the Thornburg LHTL accessing the I-40W on ramp. PM peak hour queuing is common on the I-40E off-ramp. While accident volumes are relatively low, there is a Highway Safety Improvement Program Study currently under review, which suggests that non-recurring congestion may also be a frequent cause of delay.
- **Recommendations:** Interim improvements at this segment area could include additional signage to direct traffic flow at conflict points, and signal timing review to limit queuing in the Thornburg LHTL accessing the I-40W ramp. To address PM peak hour queuing on the I-40E off-ramp, NCDOT Congestion Management is currently reviewing the demand for dual left-turn lanes. Span-wire signs could direct LHT movement into the left lane, and RHT movements into the right lane, decreasing queue in the RHTL, which currently allows both LHT and RHT movements. Long term, GHMPO should work with NCDOT to identify specific interchange improvements that can be submitted as standalone projects, or incorporated into the designs of the projects listed below.
- **Documented Project Proposals:** This segment area is currently addressed by three MTP/CTP Projects and two STIP submittals. CATA-HR-08, currently competing in Prioritization, modernizes NC-16 from Thornburg to the Catawba River. This project presents an opportunity for improvement at the intersection of NC-16 and Thornburg. I-5991B, also competing currently, proposes the widening of I-40 from Exit 128 to Exit 132. Finally, CTP Project MULT-HS-04 proposes the widening of I-40 from Exit 132 to the Iredell County Line. Each of these projects present an opportunity for further analysis of potential improvements at this segment area.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
US-321 @ 2nd Avenue NW	9	1.3	1.1	13	2.14

- **Delay Analysis:** Congestion at this segment area is consistent with congestion observed along the US-321 corridor from Hickory to Lenoir – a simple function of traffic volume and facility/signal capacity.
- **Recommendations:** Delay at this intersection will be remedied through the construction of a Reduced Conflict Intersection.
- **Documented Project Proposals:** This segment area is addressed by funded STIP Project U-4700A, which widens US-321 to 6 lanes and redesigns intersections from North of US 70 in Hickory to US-321A. Construction is currently programmed for 2026.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
I-40 @ N Oxford Street (Exit 135)	NR	1	1	8	1.92

- **Delay Analysis:** Congestion at this segment appears to predominantly occur on the interchange ramps at peak hour. North Oxford Street and I-40 do not present significant delay data. These data characteristics suggest that traffic flow on and off of ramps may be delayed by peak hour traffic on North Oxford Street, as all terminals currently are not signalized.
- **Recommendations:** This segment area could be addressed through a bridge replacement project. Signalization at this intersection may be unnecessary due to overall low volumes and delay being limited to peak hours. However, roundabouts at each terminal could reduce ramp delay. GHMPO Staff should collaborate with NCDOT Congestion Management to document a proposal to potentially be included within a bridge replacement project, and consider including the proposal in the MTP/CTP.
- **Documented Project Proposals:** This segment area is addressed by two CTP projects. CATA-HD-16 proposes the widening of North Oxford Street, the primary North-South corridor for Claremont and the only access to I-40, from I-40 to US-70. MULT-HS-04 proposes the widening of I-40 from 4 to 6 lanes from Exit 132 to the Iredell County Line. GHMPO staff should consider expanding CATA-HD-16 to include specific interchange improvements.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
I-40 @ US-70A (Exit 130)	NR	1.1	1	5	2.48

- **Delay Analysis:** Congestion at this segment area is largely contributed to false capacity on 1st ST SW. Both off ramps access 1st ST W as a four-lane roadway. However, the additional lanes terminate in close proximity to the interchange, causing unexpected merging movements and potential for queueing and conflict.
- **Recommendations:** Improvements in this segment area should predominantly take place in the form of improved lane continuity on 1st ST W.
- **Documented Project Proposals:** This segment area is currently addressed by 1 MTP/CTP Project and STIP Project Submittal. I-5991B, currently competing in prioritization, proposes the widening of I-40 from 4 to 6 lanes from Exit 128 to Exit 132. This interchange would likely require upgrade to accommodate additional through capacity on I-40. GHMPO staff should develop a standalone proposal to address 1st ST W continuity.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
South Center Street @ US-70	NR	1	1	10	2.48

- **Delay Analysis:** Congestion at this segment area is likely attributed to signal delay at US-70. However, this is a proposed HSIP location, which suggests there may be safety concerns and incidents causing non-recurring delay.

- **Recommendations:** GHMPO Staff should monitor potential HSIP outcomes and consider incorporating HSIP findings and project potential into the MTP/CTP.
- **Documented Project Proposals:** This segment area is currently addressed by CATA-HD-35, identified in the 2050 CTP, which proposes upgrading Center Street from US-70 to 8th Avenue Drive SE. GHMPO Staff should incorporate potential intersection improvements into this proposal.

Segment Title	Bottleneck Ranking	Peak Planning Time Index	Peak Travel Time Index	Number of Accidents	Accident Severity Index
NC 127 @ 2nd Ave SE	NR	1.9	1.4	41	2.26

- **Delay Analysis:** Congestion at this segment area is likely attributed to the need for dedicated turning lanes to allow for optimal throughput and mobility. Accident volume is notable, and suggests that total delay may be considerably compounded by non-recurring congestion.
- **Recommendations:** The construction of turn lanes should address congestion at this segment area.
- **Documented Project Proposals:** This segment area is addressed by funded STIP Project U-5777, which constructs turn lanes from 1st Avenue SE to 2nd Ave SE. Construction is programmed for 2025.

Appendix C: Regional System Performance Data

Regional Measure	2019	2022
Total Delay (Hours)	3,828,647	2,010,987
Percentage of Employed MSA Residents Teleworking	3.3%	5.4%
Number of Employed MSA Residents Utilizing Public Transit for Commute to Work	353	277
Percentage of Identified Segments Addressed in Funded STIP Projects		26%
Percentage of Identified Segments Addressed in Prioritization Submittal		33%
Percentage of Identified Segments Addressed in MTP/CTP Proposal		73%
Average Peak PTI of Top 30 Segments		1.73
Average Peak TTI of Top 30 Segments		1.25

REQUEST FOR BOARD ACTION
GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION
TCC/TAC

MEETING DATE: July 24, 2024

SUBJECT: Congestion Management Overview

PRESENTER: Michael Reese, NCDOT Congestion Management Regional Engineer, Western Region

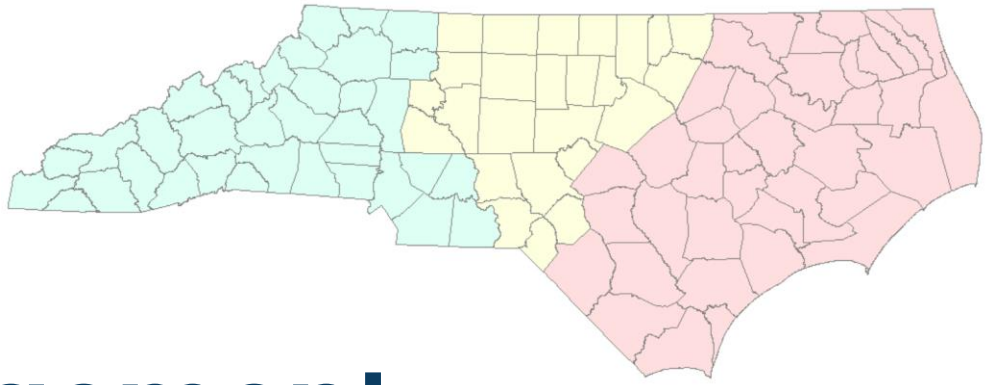
ATTACHMENTS: None

SUMMARY OF REQUEST:
Michael Reese is the Congestion Management Regional Engineer for NCDOT Divisions 10-14. The primary objective of the Congestion Management Unit is the application of cost-effective traffic engineering based operational and safety improvement strategies which mitigate the impacts of traffic congestion, improve system efficiency, enhance traveler safety, and improve economic vitality. Mr. Reese's presentation will cover the role of the Congestion Management Unit, the Importance of Safety in Congestion Management, and ways local governments can impact Congestion Management outcomes.

BOARD ACTION REQUESTED: No Action Required, this item is for informational purposes only.

Suggested Motion: *None*

NORTH CAROLINA
Department of Transportation



NCDOT Congestion Management Processes and Innovative Intersections

Michael P. Reese, PE, CPM
NCDOT Congestion Management Section
Transportation Mobility and Safety Division

Western Piedmont Council of Governments TCC Meeting – Hickory, NC
July 24, 2024

Connecting people, products and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina

OUR MISSION

Connecting people, products and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina

OUR VISION

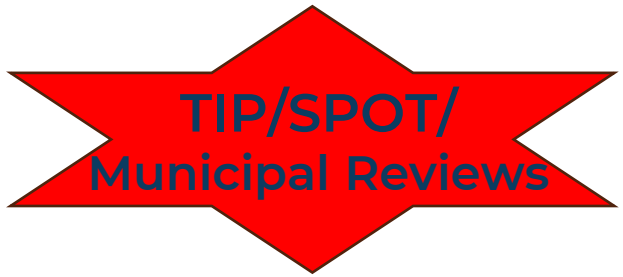
A global leader in providing
innovative transportation solutions

Congestion Management Section

Traffic Management Unit / Transportation Mobility and Safety Division

Mission Statement

Statewide application of cost-effective traffic engineering based **operational and safety improvement strategies** which mitigate the impacts of traffic congestion, improve system efficiency, enhance traveler safety, and improve economic vitality.



- **NCDOT Capacity Analysis Processes and Policy**
- Reduced Conflict Intersections
- SPOT Prioritization and Capacity Analysis

NCDOT Capacity Analysis Documents

North Carolina General Statutes

§ 136-18. Powers of Department of Transportation.

The said Department of Transportation is vested with the following powers:

(1) The authority and general supervision over all matters relating to the construction, maintenance, and design of State transportation projects, letting of contracts therefor, and the selection of materials to be used in the construction of State transportation projects under the authority of this Chapter.

(2) Related to right-of-way:

a. To take over and assume exclusive control for the benefit of the State of any existing county or township roads.

b. To locate and acquire rights-of-way for any new roads that may be necessary for a State highway system.

c. Subject to the provisions of G.S. 136-19.5(a) and (b), to use existing rights-of-way, or locate and acquire such additional rights-of-way, as may be necessary for the present or future relocation or initial location, above or below ground, of:

1. Telephone, telegraph, distributed antenna systems (DAS), broadband communications, electric and other lines, as well as gas, water, sewerage, oil and other pipelines, to be operated by public utilities as defined in G.S. 62-3(23) and which are regulated under Chapter 62 of the General Statutes, or by municipalities, counties, any entity created by one or more political subdivisions for the purpose of supplying any such utility services, electric membership corporations, telephone membership corporations, or any combination thereof; and

2. Nonutility owned or operated communications or data transmission infrastructure.

The Department retains full power to widen, relocate, change or alter the grade or location thereof, or alter the location or configuration of such lines or systems above or below ground. No agreement for use of Department right-of-way under this sub-subdivision shall abrogate the Department's ownership and control of the right-of-way. The Department is authorized to adopt policies and rules necessary to implement the provisions

d. To change or relocate any existing roads that the Department of Transportation may now own or may acquire.

e. To acquire by gift, purchase, or otherwise, any road or highway, or tract of land or other property whatsoever that may b system and adjacent utility rights-of-way.

f. Provided, all changes or alterations authorized by this subdivision shall be subject to the provisions of G.S. 136-54 to 136-o2, t applicable.

g. Provided, that nothing in this Chapter shall be construed to authorize or permit the Department of Transportation to allow township, city or town, or to any board of commissioners or governing body thereof, for any existing road or part of any road he county, township, city or town, unless a contract has already been entered into with the Department of Transportation.

(3) To provide for such road materials as may be necessary to carry on the work of the Department of Transportation, either by gift, purch that when any person, firm or corporation owning a deposit of sand, gravel or other material, necessary, for the construction of the sy herein, has entered into a contract to furnish the Department of Transportation any of such material, at a price to be fixed by sai thereafter the Department of Transportation shall have the right to condemn the necessary right-of-way under the provisions of Article deposit with any part of the system of State highways or public carrier, provided that easements to material deposits, condemned unde public road and the condemned easement shall be returned to the owner as soon as the deposits are exhausted or abandoned by the Depa

(4) To enforce by mandamus or other proper legal remedies all legal rights or causes of action of the Department of Transportation with oth persons.

(5) To make rules, regulations and ordinances for the use of, and to police traffic on, the State highways, and to prevent their abuse by ind corporations, by trucks, tractors, trailers or other heavy or destructive vehicles or machinery, or by any other means whatsoever, and enforcement of same; and the violation of any of the rules, regulations or ordinances so prescribed by the Department of Transpo misdemeanor: Provided, no rules, regulations or ordinances shall be made that will conflict with any statute now in force or any or towns, except the Department of Transportation may regulate parking upon any street which forms a link in the State highway system, State highway funds.

(6) To establish a traffic census to secure information about the relative use, cost, value, importance, and necessity of roads forming a p

NCDOT Capacity Analysis Guidelines - Standards

NCDOT Capacity Analysis Guidelines

Standards

NCDOT Congestion Management Section

This document provides standard values to ensure consistent traffic analysis. **It is an expectation that all analysis documents shall adhere to the Guidelines, and deviation from these standards requires explanation, justification, and approval by key NCDOT and local stakeholders before analysis document submittal, otherwise the analysis document may not be accepted.** By reviewing reports, plans, and submittals, the North Carolina Department of Transportation (NCDOT) in no way relieves the analyst of possible claims or additional work resulting from errors or omissions.

Submittal Requirements

TIA	
(incl. Growth)	Figure
Approved Development Traffic Figures	Traffic Adjustments and Reroutes)
Background (Future No-Build) Traffic Figure	
Unadjusted Trip Generation Table	

- Approval of C/A break changes comes from the Right-of-Way Disposal and C/A Committee
- Approval of new or modified median crossovers
- New a
- Intercha
- for fede

Trip Gener

- Use *IT HANDE*

NCDOT Driveway Manual Policy

In other words, use the defaults or explain and justify in the TIA with prior approval

NCDOT Capacity Analysis Guidelines – Best Practices *UPDATE EXPECTED Later in 2024*

NCDOT Capacity Analysis Guidelines

DRAFT *Best Practices*

NCDOT Congestion Management Section

This document provides best practices that should be followed for capacity analysis submittals to NCDOT. Standard values for capacity analysis are provided in a separate document.

Best Practices for Traffic Impact Analyses Submitted to NCDOT

It is suggested that the intersections in the proposed study area should be included if the site trips make up 10 percent or more of the volumes of out of the total trips for any approach/movement.

Unless the same parking area is intended to be used, for retail developments, trip generation for individual outparcels should be calculated separately from the remainder of the development.

If the area has been experiencing high growth in recent years, likely due to multiple developments in this vicinity. Approved or planned development traffic in this area should be included in background traffic, and this growth factor should also be applied on top of specific approved or al authorities for approval of background growth.

in the Trip Generation tables. The Driveway Manual requires daily odal splits, pass-by trips, and internal capture rates.

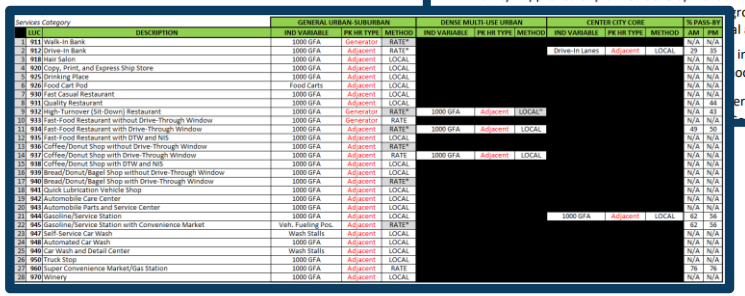
eration, proper justifications should be provided in the TIA. Local

NCDOT 2016 TransModeler Guidelines

NCDOT CONGESTION MANAGEMENT SIMULATION GUIDELINES - TRANSMODELER

This document provides standards to ensure consistent traffic analysis done by/for the North Carolina Department of Transportation (NCDOT) Congestion Management Section using TransModeler traffic simulation software. The utilization of advanced traffic simulation software requires an understanding of traffic engineering principles and the ability to make sound engineering judgments. In certain circumstances, deviation (within certain parameters defined in these guidelines) from these guidelines will, may, or will not be allowed. Within this document, the term ***shall*** defines parameters that cannot be modified without prior approval from the NCDOT Congestion Management Section. Additionally, the term ***should*** is utilized where any deviation from these guidelines or any default parameter requires justification and documentation. The term ***may*** represents conditions that are at the discretion of the analyst. The information and guidance included in these Guidelines is neither all inclusive, nor should they be considered to be completely rigid. The intent of these Guidelines is to provide reasonable bounds for developing simulation studies in a consistent manner, but remain flexible enough to handle unique situations when warranted, properly justified and fully documented. The goal of utilizing advanced simulation is to provide the most realistic analysis possible. It is the responsibility of the analyst preparing the models to develop them in a manner that is technically sound. The flexibility allowed in these Guidelines should be utilized, when needed, to meet this goal. Strict adherence to the Guidelines shall not be used as an explanation as to why something was, or was not, done during the development of an analysis. By reviewing reports, plans, and submittals, the NCDOT in no way relieves the analyst of possible claims or additional work resulting from errors or omissions.

NCDOT Rate vs. Eqn. Spreadsheet *Trip Gen V. 11*

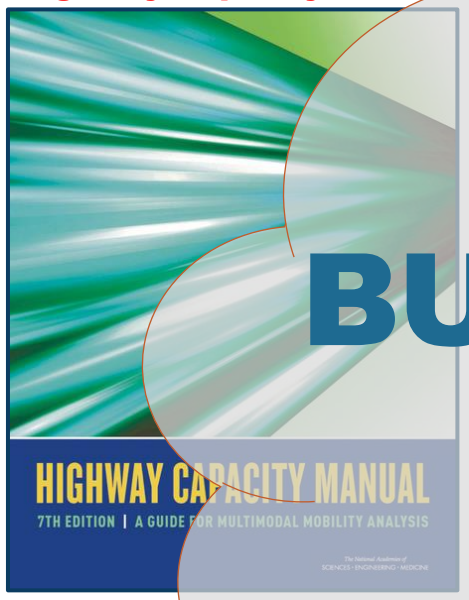


Services Category		GENERAL URBAN-SUBURBAN			DENSE MULTI-USE URBAN			CENTER CITY CORE			% PASS-BY	
TSC	DESCRIPTION	IND VARIABLE	PK HR TYPE	METHOD	IND VARIABLE	PK HR TYPE	METHOD	IND VARIABLE	PK HR TYPE	METHOD	AM	PM
911	Walk-In Bank	1000 GFA	Generator	RATE*							N/A	N/A
912	Drive-In Bank	1000 GFA	Adjacent	RATE*				Drive-In Lanes	Adjacent	LOCAL	29	35
918	Hair Salon	1000 GFA	Adjacent	LOCAL							N/A	N/A
920	Copy, Print, and Express Ship Store	1000 GFA	Adjacent	LOCAL							N/A	N/A
925	Drinking Place	1000 GFA	Adjacent	LOCAL							N/A	N/A
926	Food Cart Pod	Food Carts	Adjacent	LOCAL							N/A	N/A
930	Fast Casual Restaurant	1000 GFA	Adjacent	LOCAL							N/A	N/A
931	Quality Restaurant	1000 GFA	Adjacent	LOCAL							N/A	44
932	High-Turnover (Sit-Down) Restaurant	1000 GFA	Generator	RATE*	1000 GFA	Adjacent	LOCAL*				N/A	43
933	Fast-Food Restaurant without Drive-Through Window	1000 GFA	Generator	RATE							N/A	N/A
934	Fast-Food Restaurant with Drive-Through Window	1000 GFA	Adjacent	RATE*	1000 GFA	Adjacent	LOCAL				49	50
935	Fast-Food Restaurant with DTW and NIS	1000 GFA	Adjacent	LOCAL							N/A	N/A
936	Coffee/Donut Shop without Drive-Through Window	1000 GFA	Adjacent	RATE*							N/A	N/A
937	Coffee/Donut Shop with Drive-Through Window	1000 GFA	Adjacent	RATE	1000 GFA	Adjacent	LOCAL				N/A	N/A
938	Coffee/Donut Shop with DTW and NIS	1000 GFA	Adjacent	LOCAL							N/A	N/A
939	Bread/Donut/Bagel Shop without Drive-Through Window	1000 GFA	Adjacent	LOCAL							N/A	N/A
940	Bread/Donut/Bagel Shop with Drive-Through Window	1000 GFA	Adjacent	RATE*							N/A	N/A
941	Quick Lubrication Vehicle Shop	1000 GFA	Adjacent	LOCAL							N/A	N/A
942	Automobile Care Center	1000 GFA	Adjacent	LOCAL							N/A	N/A
943	Automobile Parts and Service Center	1000 GFA	Adjacent	LOCAL							N/A	N/A
944	Gasoline/Service Station	1000 GFA	Adjacent	LOCAL				1000 GFA	Adjacent	LOCAL	62	56
945	Gasoline/Service Station with Convenience Market	Veh. Fueling Pos.	Adjacent	RATE*							62	56
947	Self-Service Car Wash	Wash Stalls	Adjacent	LOCAL							N/A	N/A
948	Automated Car Wash	1000 GFA	Adjacent	LOCAL							N/A	N/A
949	Car Wash and Detail Center	Wash Stalls	Adjacent	LOCAL							N/A	N/A
950	Truck Stop	1000 GFA	Adjacent	LOCAL							N/A	N/A
960	Super Convenience Market/Gas Station	1000 GFA	Adjacent	RATE							76	76
970	Winery	1000 GFA	Adjacent	LOCAL							N/A	N/A

http://connect.ncdot.gov/resources/safety/pages/congestion-management.aspx

Current CMS Capacity Analysis Tool Versions

Highway Capacity Manual



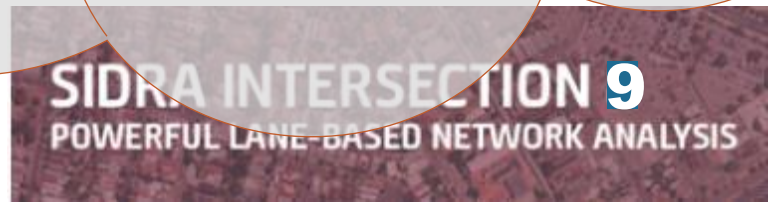
CAP-X / CAP-X NC

Synchro plus SimTraffic

BUT WHAT ABOUT SAFETY??

TransModeler

Highway Capacity Software



SIDRA

- CAP-X et al. for planning-level analysis
- HCS, HCM, Synchro, SIDRA tools for mid-level capacity analysis
- TransModeler, SimTraffic for more detailed simulation

http://connect.ncdot.gov/resources/safety/pages/congestion-management.aspx

Safest Feasible Intersection Design

(SaFID) for All Crashes based on CMFs

				Minor street						
			Number through lanes:	2				4		6 or 8
Major street			Low AADT:	0	5,000	7,500	10,000	10,000	25,000 and above	Any
Number through lanes	Low AADT	High AADT	High AADT:	5,000	7,500	10,000	15,000	25,000		
2	0	7,500		**All-way stop**	**All-way stop**	n/a	n/a	n/a	n/a	n/a
	7,500	15,000		**One-lane roundabout**	**One-lane roundabout**	**One-lane roundabout**	**One-lane roundabout***	n/a	n/a	n/a
4	10,000	15,000		**Unsignalized RCI**	**Unsignalized RCI**	**Unsignalized RCI**	**Signalized RCI**	**Signalized RCI**	n/a	n/a
	15,000	20,000		**Unsignalized RCI**	**Unsignalized RCI**	**Signalized RCI**	**Signalized RCI**	**Signalized RCI**	n/a	n/a
	20,000	25,000		**Unsignalized RCI**	**Signalized RCI**	**Signalized RCI**	**Signalized RCI**	**Signalized RCI**	n/a	n/a
	25,000 and above			**Unsignalized RCI**	**Signalized RCI**	**Signalized RCI**	**Signalized RCI**	**Signalized RCI**	**Median u-turn**	n/a
6 or 8	Any			**Unsignalized RCI**	**Signalized RCI**	**Signalized RCI**	**Signalized RCI**	**Signalized RCI**	**Median u-turn**	**Median u-turn**

* One-lane roundabouts are generally feasible if the combined AADT is less than 25,000. If a one-lane roundabout is infeasible a signal is the safest feasible design.

http://connect.ncdot.gov/resources/safety/pages/congestion-management.aspx

Pedestrian Optimum Feasible Intersection Design

(POFID) for All Crashes based on CMFs

				Minor street						
			Number through lanes:	2				4		6 or 8
Major street			Low AADT:	0	5,000	7,500	10,000	10,000	25,000 and above	Any
Number through lanes	Low AADT	High AADT	High AADT:	5,000	7,500	10,000	15,000	25,000		
2	0	7,500		1) AWSC	2) AWSC	n/a	n/a	n/a	n/a	n/a
	7,500	15,000		3) Roundabout	4) Roundabout	5) Roundabout	6) Roundabout or signal	n/a	n/a	n/a
4	10,000	15,000		7) TWSC or signal	8) Bowtie or MUT	9) Bowtie or MUT	10) Bowtie or MUT	11) Bowtie or MUT	n/a	n/a
	15,000	20,000		12 TWSC or signal	13) Bowtie or MUT	14) Bowtie or MUT	15) Bowtie or MUT	16) Bowtie or MUT	n/a	n/a
	20,000	25,000		17) TWSC or signal	18) Bowtie or MUT	19) Bowtie or MUT	20) Bowtie or MUT	21) Bowtie or MUT	n/a	n/a
	25,000 and above			22) TWSC or signal	23) Bowtie or MUT	24) Bowtie or MUT	25) Bowtie or MUT	26) Bowtie or MUT	27) MUT	n/a
6 or 8	Any			28) TWSC or signal	29) Bowtie or MUT	30) Bowtie or MUT	31) Bowtie or MUT	32) Bowtie or MUT	33) MUT	34) MUT

http://connect.ncdot.gov/resources/safety/pages/congestion-management.aspx

Bicycle Optimum Feasible Intersection Design

(BOFID) for All Crashes based on CMFs

				Minor street						
			Number through lanes:	2				4		6 or 8
Major street			Low AADT:	0	5,000	7,500	10,000	10,000	25,000 and above	Any
Number through lanes	Low AADT	High AADT	High AADT:	5,000	7,500	10,000	15,000	25,000		
2	0	7,500		1) AWSC	2) AWSC	n/a	n/a	n/a	n/a	n/a
	7,500	15,000		3) Roundabout	4) Roundabout	5) Roundabout	6) Roundabout or signal	n/a	n/a	n/a
4	10,000	15,000		7) Unsignalized RCI or TWSC	8) Bowtie or MUT	9) Bowtie or MUT	10) Bowtie or MUT	11) Signalized RCI	n/a	n/a
	15,000	20,000		12) Unsignalized RCI or TWSC	13) Bowtie or MUT	14) Bowtie or MUT	15) Bowtie or MUT	16) Signalized RCI	n/a	n/a
	20,000	25,000		17) Unsignalized RCI or TWSC	18) Bowtie or MUT	19) Bowtie or MUT	20) Bowtie or MUT	21) Signalized RCI	n/a	n/a
	25,000 and above			22) Unsignalized RCI or TWSC	23) Bowtie or MUT	24) Bowtie or MUT	25) Bowtie or MUT	26) Signalized RCI	27) MUT	n/a
6 or 8	Any			28) Unsignalized RCI or TWSC	29) Signalized RCI	30) Signalized RCI	31) Signalized RCI	32) Signalized RCI	33) MUT	34) MUT

http://connect.ncdot.gov/resources/safety/pages/congestion-management.aspx

Guidance on Intersection Selection

From Selecting Optimum Intersection or Interchange Alternatives – J. E. Hummer, PhD, PE – January 2024

https://connect.ncdot.gov/resources/safety/Teppl/TEPPL%20All%20Documents%20Library/C62_Guidance.pdf

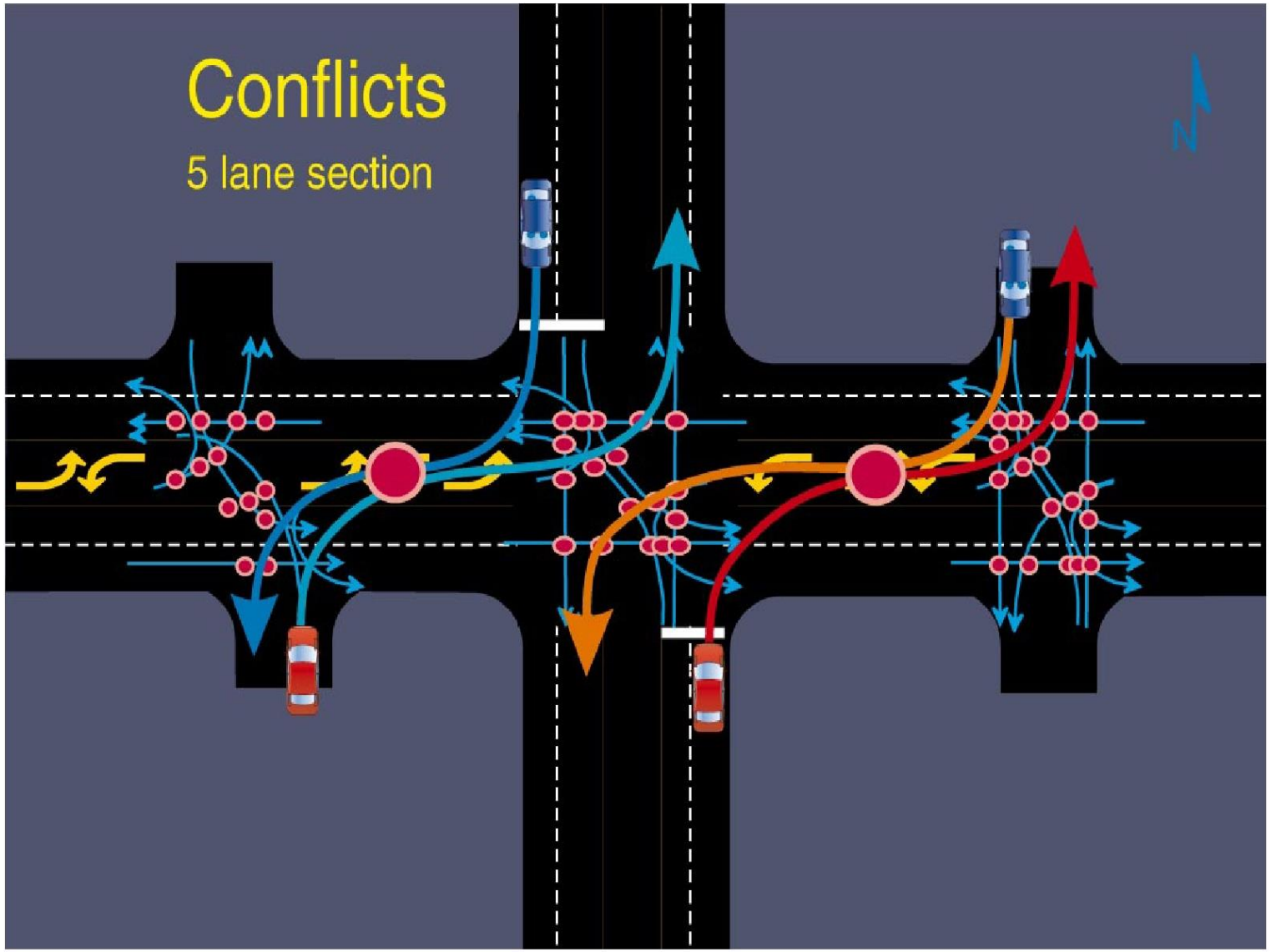
Changing from…	Changing to…	All crashes		Injury crashes	
		Average CMF	References	Average CMF	References
Two-way stop control	All-way stop control	0.32	5	0.28	5 and 6
	All-movement signal	0.81	7-11	0.74	9-12
	One-lane roundabout	0.51	13-16	0.16	13
	Mini-roundabout	0.83	17	0.41	17
	Unsignalized RCI(RCUT)	0.60	18 and 19	0.42	18 and 19
	Right-in-right-out (RIRO)	0.55	20	0.20	20
All-movement signal	One-lane roundabout	0.74	21	0.45	21
	Two-lane roundabout	0.89	15 and 21	0.54	21 and 22
	Signalized RCI (RCUT)	0.85	23	0.78	23
	Median u-turn (MUT)	0.63	24	0.77	24
	Partial CFI	0.88	25 and 26	0.86	26

Page 11, Table 2 (References are located in the document)

CMF (Crash Modification Factors) are factors to compare the expected number of crashes

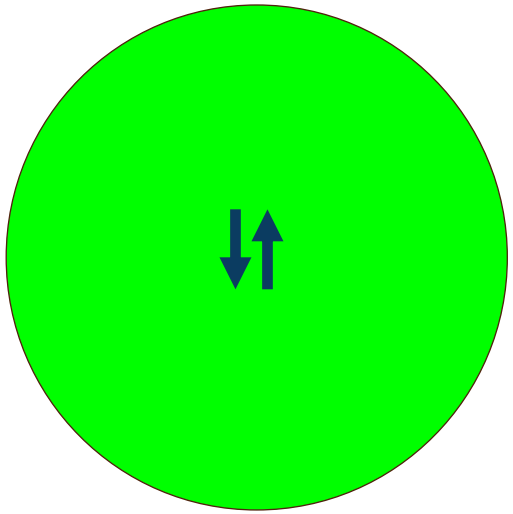
- NCDOT Capacity Analysis Processes and Policy
- **Reduced Conflict Intersections**
- SPOT Prioritization and Capacity Analysis

All-Movement Intersections and Safety

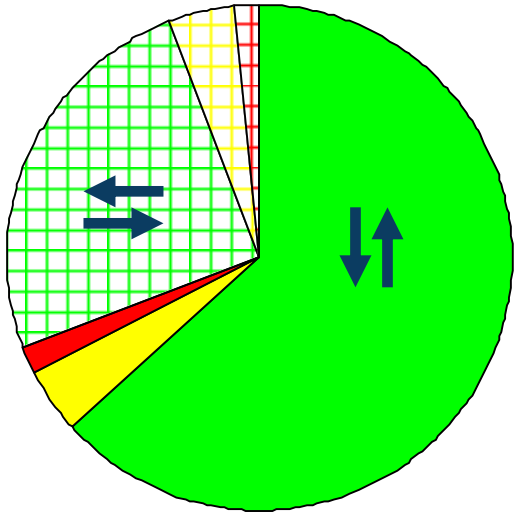


All-Movement Signalized Intersections and Capacity

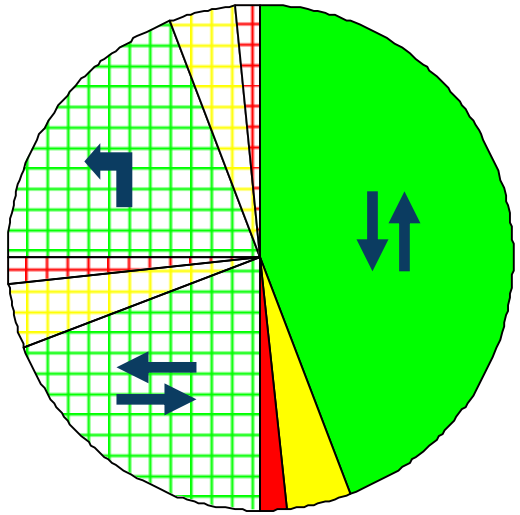
No Signal (all “green”)



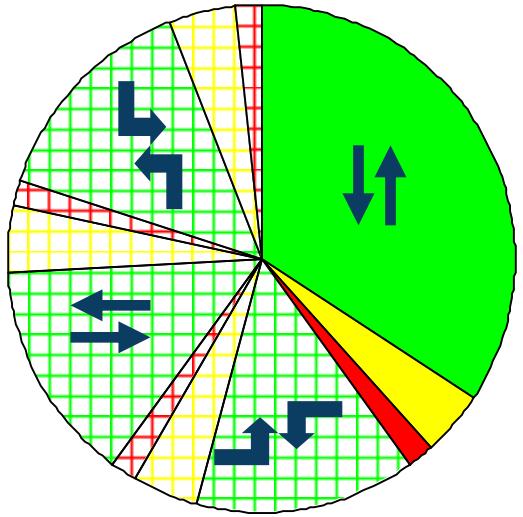
Signal Timing - Two Phase



Signal Timing - Three Phase



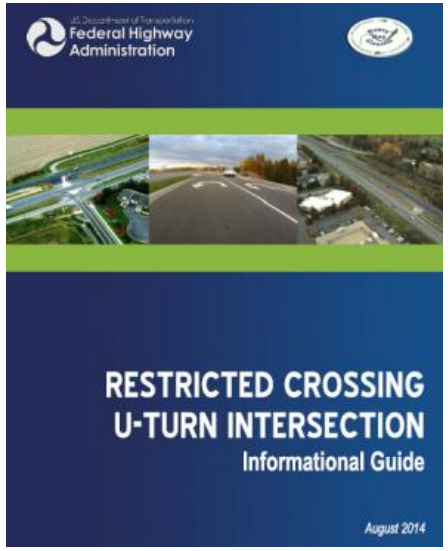
Signal Timing - Eight Phase



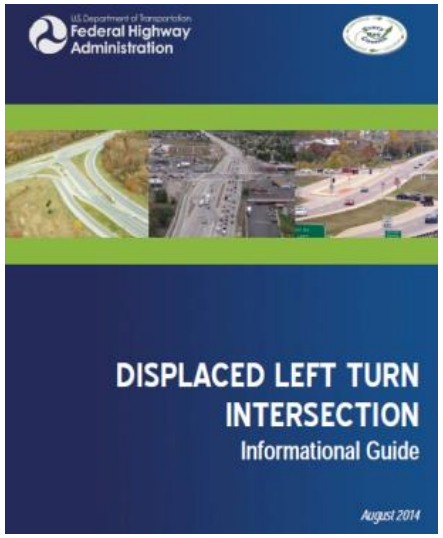
As signal phases increase, main street thru Green Time decreases and intersection delays increase.

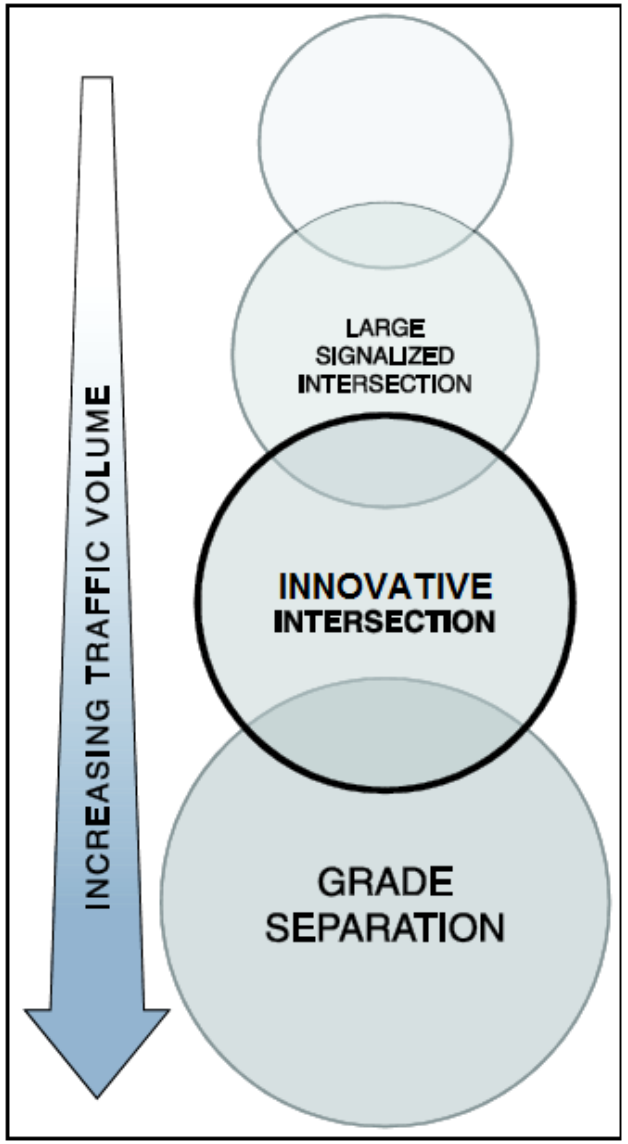
FHWA Everyday Counts Guidance

RCUT (RCI)

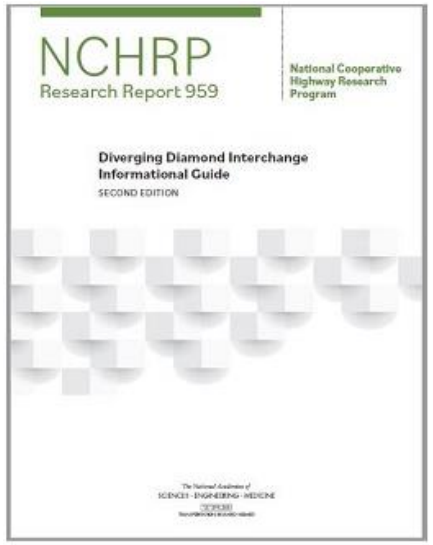


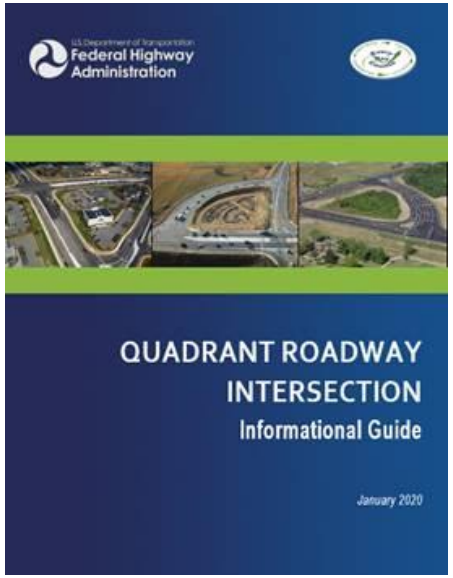
DLT (CFI)



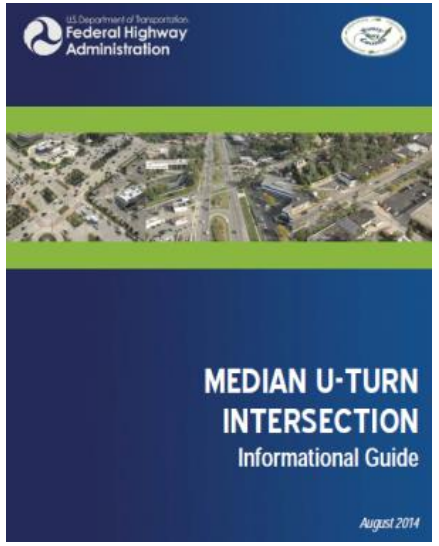


DDI





QRI

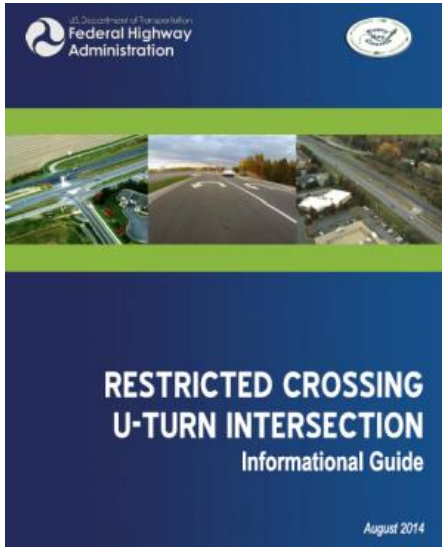


MUT

https://safety.fhwa.dot.gov/intersection/alter_design/

Reduced Conflict Intersection

A type of intersection in which minor through and/or left-turn movements are redirected to improve safety and mobility of a complex divided highway intersection.



https://www.ncdot.gov/initiatives-policies/Transportation/safety-mobility/reduced-conflict-intersections/

Most Common Reduced Conflict Intersections

PRO

- Accommodates all movements from major streets
- All simple signals
- Often reduces peak hour travel times for all movements
- Good for bikes and peds
- Good for progression
- Improved safety
- Drivers only must be concerned with one direction of traffic at a time

CON

- Some drivers can dislike because they want to directly go straight or make a left from minor street
- Increase travel distance for minor movements

Most Common Reduced Conflict Intersections

https://www.ncdot.gov/initiatives-policies/Transportation/safety-mobility/reduced-conflict-intersections/

Reduced Conflict Intersection (e.g. Superstreet or RCUT) Economic Effects

- New June 2022 NC economic study effort completed by UNC-Wilmington. The results were that **RCIs are neutral or good for retail businesses and neutral or good for residential property values**, but not so good for industrial sites if U-turns are used.

https://connect.ncdot.gov/projects/research/RNAProjDocs/RP2020-47%20Final%20Report.pdf

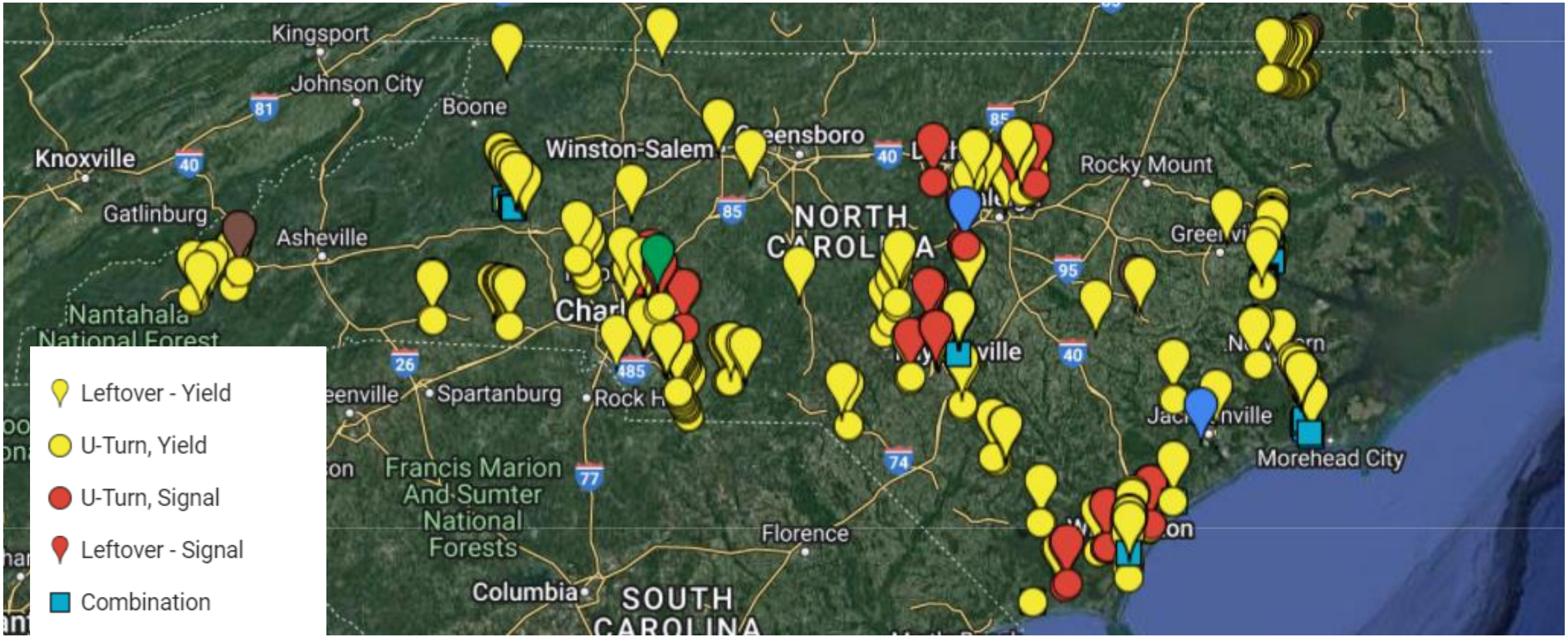
All-Movement Complex Signal vs. RCI

As a pedestrian or bike, which is easier to cross at rush hour?

Thru-Cut / All-Movement without Side Street Thrus

https://www.ncdot.gov/initiatives-policies/Transportation/safety-mobility/thru-cut-intersections/

NC Inventory of Reduced Conflict Intersections

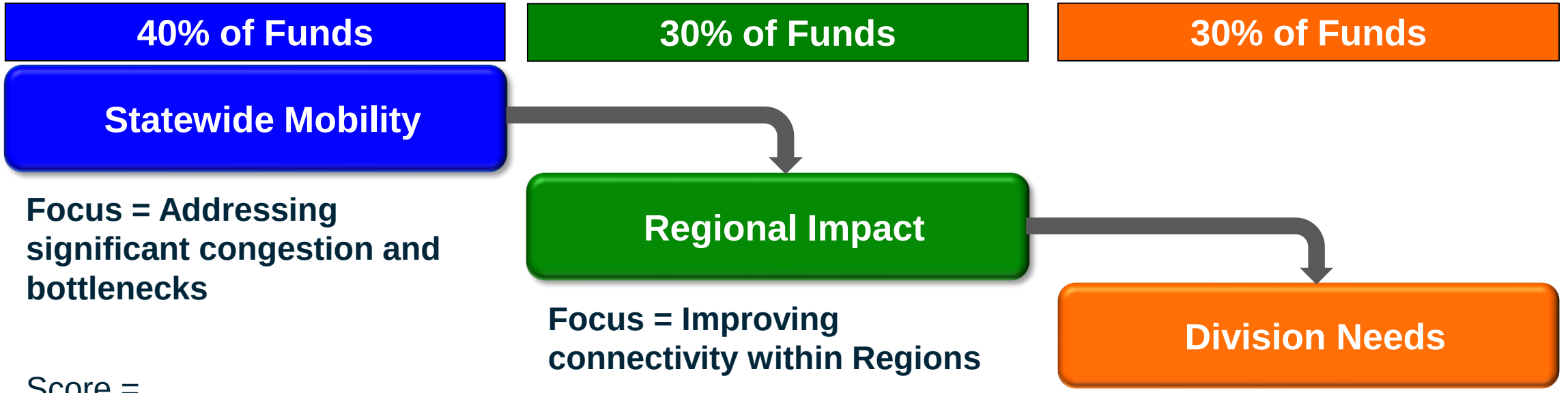


~400 Reduced Conflict Intersections in NC Inventory in 2024

https://drive.google.com/open?id=1kcIACcHwRplHq5fGWo_LObCY8_s&usp=sharing

- NCDOT Capacity Analysis Processes and Policy
- Reduced Conflict Intersections
- **SPOT Prioritization and Capacity Analysis**

How STI Works



Focus = Addressing significant congestion and bottlenecks

Score =

100% Quantitative Data

Focus = Improving connectivity within Regions

Score = 70% Quantitative Data + 30% Local Input

Funding based on population within each Region (7)

Focus = Addressing local needs

Score = 50% Quantitative Data + 50% Local Input

Funding based on equal share for each Division (14)

P7 Highway - Mobility

Criteria	Measure Description	Statewide Mobility (100%)	Regional Impact (70%)	Division Needs (50%)
Congestion	[Volume] and [Volume/Capacity]	30%	20%	15%
Benefit/Cost	[10-year Travel Time Savings benefit] + [10-year Safety Benefit] / [Cost to NCDOT]	25%	20%	15%
Safety	SEG: Crash Density, Crash Severity, Crash Rate, Safety Benefits INT: Crash Frequency, Crash Severity, Safety Benefits	10%	10%	10%
Freight	[Truck Volumes] and [Truck Percentage]	25%	10%	5%
Economic Competitiveness	TREDIS Model Output: [% Change in Long-Term Jobs] and [% Change in County Economy over 10 years]	10%	-	-
Accessibility / Connectivity	[Measurement of county economic distress indicators] and [degree the project upgrades mobility of the roadway]	-	10%	5%

Project Types: Widening, Intersection/Interchange Improvements, Access Management, and other capacity additions

Highway – Congestion

Funding Category	Mobility Default Weights	Modernization Defaults
Statewide Mobility	30%	10%
Regional Impact	20%	5%
Division Needs	15%	-

Purpose – Measure existing level of mobility along roadways by indicating congested locations and bottlenecks

Statewide Mobility 60% - Existing Volume/Capacity Ratio
40% - Existing Volume

Regional Impact 80% - Existing Volume/Capacity Ratio
20% - Existing Volume

Division Needs 100% - Existing Volume/Capacity Ratio

Peak ADT will be used as the Existing Volume

Highway – Benefit-Cost

Funding Category	Mobility Default Weights	Modernization Defaults
Statewide Mobility	25%	-
Regional Impact	20%	-
Division Needs	15%	-

Purpose – measure the expected <u>benefits</u> of the project over a 10 year period against the estimated project cost to NCDOT

$$\left[\frac{\text{(Travel Time Savings over 10 years in \$ + Safety Benefits over 10 years in \$)}}{\text{Project Cost to NCDOT at time of submittal}}\right] + \left[\left[\frac{\text{Other Funds}}{\text{Total Project Cost}}\right] \times 100\right]$$

*Cost can be lowered and score increased if other funds **<u>(non-federal or non-state funds)</u** are designated towards the projects*

- *Includes Toll Revenue minus financing costs*

Upcoming Site Development and Highway Access Classes:

https://connect.ncdot.gov/resources/safety/Congestion%20Mngmt%20and%20Signing/Flyer.pdf

- Newton, NC: Introduction September 26, 2024; Practitioner October 16-17, 2024
- Raleigh, NC: Introduction November 19, 2024
- Kernersville, NC: Introduction and Practitioner February 2025

Contact Us

Mike Reese, PE, CPM

NCDOT Congestion Management Section

mikereese@ncdot.gov

919 814 5000

https://connect.ncdot.gov/resources/safety/Pages/Congestion-Management.aspx

@NCDOT NCDOT NCDOTcommunications

@NCDOT ncdotcom ncdot_comm

REQUEST FOR BOARD ACTION
GREATER HICKORY METROPOLITAN PLANNING ORGANIZATION
TCC/TAC

MEETING DATE: July 24, 2024

SUBJECT: 2024 Transit Safety Performance Targets

PRESENTER: Averi Ritchie, Transportation Planning Manager

ATTACHMENTS: 2024 Transit Safety Performance Targets & Resolution (for next month)

SUMMARY OF REQUEST:

The Federal Transit Administration (FTA) published the Public Transportation Agency Safety Plan (PTASP) Final Rule on July 19, 2018, requiring certain providers of public transportation systems that receive federal funds under FTA's Urbanized Area Formula Grants to develop and adopt a PTSAP that includes Safety Performance Targets for transit-related facilities, injuries, safety events, and system reliability (state of good repair). The Federal Highway Administration (FHWA) and the FTA issued a joint final rule on planning (Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning), under which MPOs must establish Safety Performance Targets 180 days after the transit agency established their Safety Performance Targets. The Western Piedmont Regional Transit Authority (WPRTA) operating in the MPO's planning area has developed information and transit safety targets toward compliance with the PTASP regulation and provided their targets to the MPO on July 24, 2024.

BOARD ACTION REQUESTED: Recommend to release for public comment.

Suggested Motion: *Consensus to release for public comment.*

Greater Hickory MPO Transit Safety Performance Targets

Safety Performance Targets – Calendar Year 2023

Specify performance targets based on the safety performance measures established under the National Public Transportation Safety Plan – National Transit Database

Mode of Transit Service	Fatalities	Fatalities (per 100k VRM)	Injuries	Injuries (per 100k VRM)	Safety Events	Safety Events (per 100k VRM)	System Reliability (number of miles between major failures)
Motor Bus Fixed Route Bus	0	0	2	0.72	1	0.36	12,615
Demand Response	0	0	0	0	1	0.19	31,609

Safety Performance Targets – Calendar Year 2024

Specify performance targets based on the safety performance measures established under the National Public Transportation Safety Plan – National Transit Database

Mode of Transit Service	Fatalities	Fatalities (per 100k VRM)	Injuries	Injuries (per 100k VRM)	Safety Events	Safety Events (per 100k VRM)	System Reliability (number of miles between major failures)
Motor Bus Fixed Route Bus	0	0	1	0.39	1	0.39	14,090
Demand Response	0	0	3	0.53	3	0.53	33,036

Western Piedmont
Council of Governments
Transportation Planning

1880 Second Avenue NW | Hickory, NC 28601
PO Box 9026 | Hickory, NC 28603
828.322.9191 | Fax: 828.322.5991 | www.wpcog.org

RESOLUTION ESTABLISHING TRANSIT SAFETY PERFROMANCE TARGETS FOR THE PUBLIC TRANSPORTATION AGENCY SAFETY PLAN

A motion was made by _____ and seconded by _____ for the adoption of the following resolution, and upon being put to a vote was duly adopted.

WHEREAS, the Greater Hickory Metropolitan Planning Organization has been designated by the Governor as the Metropolitan Planning Organization (MPO) responsible, together with the State, for the comprehensive, continuing, and cooperative transportation planning process for the MPO's planning area;

WHEREAS, the Moving Ahead for Progress Act (MAP-21) and the Fixing America's Surface Transportation Action (FAST Act) requires States, public transportation providers, and MPOs to transition to a performance-based planning and programming process for the MPO's planning area;

WHEREAS, the Federal Transit Administration (FTA) published the Public Transportation Agency Safety Plan (PTASP) Final Rule on July 19, 2018, requiring certain providers of public transportation systems that receive federal funds under FTA's Urbanized Area Formula Grants to develop and adopt a PTSAP that includes Safety Performance Targets for transit-related facilities, injuries, safety events, and system reliability (state of good repair);

WHEREAS, the Federal Highway Administration (FHWA) and the FTA issued a joint final rule on planning (Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning), under which MPOs must establish Safety Performance Targets 180 days after the transit agency established their Safety Performance Targets;

WHEREAS, the Western Piedmont Regional Transit Authority (WPRTA) operating in the MPO's planning area has developed information and transit safety targets toward compliance with the PTASP regulation and provided their targets to the MPO on August 28, 2024;

NOW THEREFORE be it resolved on this 28th of August, that the Greater Hickory Metropolitan Transportation Advisory Committee supports the Western Piedmont Regional Transit Authority safety targets and agrees to plan and program projects that contribute toward the accomplishment of the transit provider targets as follows on the next page:

Greater Hickory MPO
Transportation Update
July 2024

Division 11 Projects Under Development – Caldwell Co.

TIP	ROUTE	DESCRIPTION	ROW YEAR	CONST YEAR	TOTAL PROJECT COST	Status	Final Assigned Manager	Funding: S/F
BL-0002	US 321A (MAIN STREET)	US 321A (MAIN STREET), CONSTRUCT PEDESTRIAN CROSSING IMPROVEMENTS FROM SR 1952 (CEDAR VALLEY ROAD) TO SR 1156 (LEGION ROAD).	2025	2025	$464,000	Planning	Division	F
BL-0065	NS	Lenoir Greenway, Harper Avenue to Morganton Boulevard. Extend multi-use path.	2025	2026	$2,449,000	Planning	LAP	F
BP11-R008	SR 1545 (COTTRELL HILL ROAD)	Replace Bridge 130011 on SR 1545 over Zachs Fork Creek in Caldwell County	2025	2026	$900,000	Planning	Division	S
BP11-R025	SR 1927 (OLD MORGANTON ROAD)	Replace Bridge 130332 on SR 1927 over Abington Creek in Caldwell County	2025	2026	$1,450,000	Planning	Division	S
BP11-R035	SR 1519 (HOLLYWOOD RIDGE ROAD)	Replace Bridge 130169 on SR 1519 over Warrior Creek in Caldwell County	2026	2027	$950,000	Planning	Division	S
BP11-R040	SR 1719 (CEDAR VALLEY CHURCH ROAD)	Replace Bridge 130048 on SR 1719 over Upper Little River in Caldwell County	2025	2026	$850,000	Planning	Division	S
BP11-R041	SR 1703 (LAXTON ROAD)	Replace Bridge 130271 on SR 1703 over UT Kings Creek in Caldwell County	2026	2027	$950,000	Planning	Division	S
BP11-R042	SR 1328 (BROWN MOUNTAIN BEACH ROAD)	Replace Bridge 130322 on SR 1328 over Este Mill Creek in Caldwell County	2026	2027	$950,000	Planning	Division	S
BP11-R048	SR 1571	Replace Bridge 130342 on SR 1571 over Kings Creek in Caldwell County	2026	2027		Planning	Division	S
HB-0056	SR 1514	SR 1514, REPLACE BRIDGE 130 OVER YADKIN RIVER.	2026	2027	$934,000	Planning	Division	F
HB-0057	SR 1356	SR 1356, REPLACE BRIDGE 185 OVER JOHNS RIVER.	2024	2025	$934,000	Planning	Division	F
HB-0058	SR 1356	SR 1356, REPLACE BRIDGE 186 OVER JOHNS RIVER.	2024	2025	$875,000	Planning	Division	F
HB-0059	SR 1356	SR 1356, REPLACE BRIDGE 275 OVER JOHNS RIVER.	2024	2025	$934,000	Planning	Division	F

Greater Hickory MPO
Transportation Update
July 2024

HB-0060	SR 1356	SR 1356, REPLACE BRIDGE 317 OVER JOHNS RIVER.	2024	2025	$1,214,000	Planning	Division	F
HB-0061	SR 1574	SR 1574, REPLACE BRIDGE 349 OVER JONES CREEK.	2026	2027	$748,000	Planning	Division	F
HF-0003	SR 1328 (BROWN MOUNTAIN BEACH ROAD)	SR 1328 (BROWN MOUNTAIN BEACH ROAD) WIDEN ROADWAY TO 20 FEET IN FIVE LOCATIONS ALONG WILSON CREEK.	2024	2025	$1,510,000	Planning	Division-Slaughter	F
R-3430B	SR 1001 (CONNELLY SPRINGS ROAD)	SR 1001 (CONNELLY SPRINGS ROAD), BURKE COUNTY CONSTRUCT NEWPARALLEL BRIDGE OVER CATAWBA RIVER.	2022	2026	$24,150,000	Planning	Central	S
R-3430C	SR 1001 (CONNELLY SPRINGS ROAD)	SR 1001 (CONNELLY SPRINGS ROAD) FROM CATAWBA RIVER TO SR 1933 (SOUTH-WEST BOULEVARD). MODERNIZE ROADWAY TO INCLUDE BICYCLE AND PEDESTRIAN ACCOMMODATIONS.	2028	2031	$78,508,000	Planning	Central	S
U-4700B	US 321	FROM US 321A TO SR 1108 (MISSION ROAD)	2040	2040	$154,000,000	Planning	Central	F
U-4700C	US 321	US 321 FROM SR 1108 (MISSION ROAD) TO SR 1933 (SOUTHWEST BLVD). WIDEN TO SIX LANES.	2040	2040	$24,000,000	Planning	Central	F
U-4700CA	US 321	SR 1160 (MOUNT HERMAN ROAD). UPGRADE INTERSECTION TO SUPERSTREET DESIGN. - WITHIN THE LIMITS OF U-4700 C.	2019	2024	$7,620,000	In R/W	Division	F
U-4700CB	US 321	AT SR 1809/1952 (PINE MOUNTAIN ROAD). UPGRADE INTERSECTION TO SUPERSTREET DESIGN.	2019	2024	$12,500,000	In R/W	Division	F
U-4700CC	US 321	AT SR 1108 (MISSION ROAD). UPGRADE INTERSECTION TO SUPERSTREET DESIGN	2019	2024	$8,850,000	In R/W	Division	F
U-6034	US 321 ALT	DUKE STREET TO PINEWOODS ROAD	2024	2027	$25,600,000	R/W soon	Division	S
U-6157	SR 1130 (CAJAH MOUNTAIN ROAD)	SR 1130 (CAJAH MOUNTAIN ROAD) FROM SR 1001 (CONNELLY SPRINGS ROAD) TO US 321A	2024	2027	$47,101,000	R/W soon	Division	F
U-6161	US 321	US 321 FROM SR 1002 (DUDLEY SHOALS ROAD) GRADE SEPARATION. CONSTRUCT RAMP ONTO US 321 SOUTHBOUND.	2025	2027	$5,000,000	Planning	Division	F

Greater Hickory MPO
Transportation Update
July 2024

Division 11 Projects Under Construction

Contract Number	County	TIP#	Route	Location Description	Contract Amount	Contractor	Construction Progress %	Completion Date
DK00259	CALDWELL	R-5775	US 321	IMPROVE INTERSECTION AT US 321 (HICKORY BLVD) AND SR 1109 (PINEWOOD ROAD EXT)	$1,682,361.75	TRI-COUNTY PAVING INC	93 %	8/24
DK00367	CALDWELL	U-6033	US 64	US 64 (NC 18) AND SR 1142 (CALLICO ROAD) INTERSECTION IMPROVEMENTS	$3,574,459.72	TRI-COUNTY PAVING INC	84 %	4/25
DK00390	CALDWELL	U-6035	SR 1002 (DUDLEY SHOALS ROAD)	CONSTRUCT ROUNDABOUT AT GRACE CHAPEL/CAMPGROUND/PEACH ORCHARD ROAD)	$2,132,554.69	Smith-Rowe	37 %	5/25
C204844	CCALDWELL	U-6036	SR 1109 (PINEWOOD ROAD)	FROM US 321 TO SR-1252 (BERT HUFFMAN ROAD)	$11,480,140.98	JAMES R VANNOY & SONS CONSTRUCTION COMPANY INC	0 %	3/27

July 2024 Progress Report for Division 12 Projects in GHMPO

Active Construction Projects

Contract/ TIP #	County	Route	Project Description	Status	% Complete
C204804	Catawba, Iredell	I-40 from East of SR 1007 (1st St. West) to East of NC 115	Resurfacing for 0.861 miles.	Underway.	57%
C204848	Catawba	1 Section of US 70, 1 Section of NC 10 and 16 Sections of Secondary Roads.	Resurfacing for 31.17 miles.	Underway.	50%
DL00319	Alexander, Catawba	Various Secondary Roads	Resurfacing for 8.29 miles.	Underway.	6%
DL00322	Catawba, Cleveland, Gaston, Iredell	NC 10, NC 18, NC 150, NC 275	Install Rumble Strips for 31 miles	Underway.	63%
DL00311	Catawba, Lincoln	Various Secondary Roads	Resurfacing for 28.05 miles.	Underway.	59%

Active Projects Under Development

Contract/ TIP #	County	Route	Project Description	Status	% Complete
U-4700 A	Catawba	US 321	Widen to six lanes from north of US 70 in Hickory to US 321A. Length 3.2 miles.	Right-of-Way acquisition underway. Work on multiple disciplines also underway. The projected schedule for Construction let is August of 2026.	NA

Contract/ TIP #	County	Route	Project Description	Status	% Complete
U-5777	Catawba	NC 127	Add turn lanes from 1st Ave SE to 2nd Ave SE.	Right of Way acquisition in progress. Redesigned to shorten turn lane to reduce impacts to adjacent properties and reduced vertical profile to facilitate constructability. Let date scheduled for December of 2024.	NA
U-6041	Alexander	US 64 at SR 1124 (Church Rd)	Add left turn lanes on westbound US 64/ NC 90.	The projected schedule for Right of Way and Construction is in FY 2024 and FY 2025 respectively. Engineering work is ongoing.	NA
R-3603A	Alexander	NC 127	Widen to multi-lanes from SR 1400 (Cloninger Mill Rd) in Catawba County to SR 1156 (Richey Rd) in Alexander County.	The projected schedule for Right of Way and Construction is in FY 2024 and FY 2026 respectively. Design work in progress.	NA
U-2530A	Catawba	NC 127	Widen to multi-lanes from SR 1132 (Huffman Road) to SR 1008 (Zion Church Road).	The projected schedule for Right of Way and Construction is in FY 2025 and FY 2027 respectively. Engineering work is ongoing. Public meeting held on March 21, 2024.	NA
R-2307A	Catawba, Lincoln	NC 150	Relocated NC 16 to East of SR 1840 (Greenwood Rd). Widen to 4 lanes.	The projected schedule for Right of Way and Construction is in FY 2027 and FY 2030 respectively. Preliminary survey underway.	NA
B-5847	Catawba	SR 1709 (Rock Barn Road)	Replace Bridge 170173 over I-40.	The projected schedule for Right of Way, Utility relocation and Construction is in FY 2023 FY 2024 and FY 2030 respectively. Right of Way acquisition is ongoing. Public Meeting held on July 12, 2022 in Conover. The project proposes roundabout at the ramp terminals and also considering a multiuse path and sidewalks over I-40.	NA

Division 13, GHMPO Project Development Update, July 2024

Project ID	Project Manager Name	County	Description	R/W Acq. Begins	Let Date	Funding Program Description
I-5008	VACANT	BURKE	I-40 AT SR 1734/SR 1826 (EXIT 111) (COMB W/I-5875)	Non-Committed / Reprioritized	Non-Committed / Reprioritized	HIGHWAY - STI (PRIORITIZATION)
I-5009	MICHAEL G. CLARK	BURKE	I-40 AND US 64 (BURKEMONT ROAD)	Non-Committed / Reprioritized	Non-Committed / Reprioritized	HIGHWAY - STI (PRIORITIZATION)
I-5874	VACANT	BURKE	I-40 AT SR 1142 (JAMESTOWN ROAD) - EXIT 100 UPGRADE INTERCHANGE	Non-Committed / Reprioritized	Non-Committed / Reprioritized	HIGHWAY - STI (PRIORITIZATION)
I-5875	VACANT	BURKE	I-40 AT SR 1712 (DREXEL ROAD). UPGRADE INTERCHANGE. (COMB W/I-5008)	Non-Committed / Reprioritized	Non-Committed / Reprioritized	HIGHWAY - STI (PRIORITIZATION)
I-5975	CLAUDIA W. LEE	BURKE	I-40 AT EXIT 112 AND SR 1744(MINERAL SPRINGS MOUNTAIN ROAD)/ SR 1744 (ELDRED STREET SE)	Not Funded / Reprioritized	Not Funded / Reprioritized	HIGHWAY - STI (PRIORITIZATION)
I-6058	BRENDAN MERITHEW	BURKE	I-40 AT SR 1744 (CAUSBY ROAD)	Not Funded / Reprioritized	Not Funded / Reprioritized	HIGHWAY - STI (PRIORITIZATION)
R-3430A	ELISE F. BIELEN	BURKE	SR 1001 (MALCOLM BOULEVARD) FROM US 70 TO CATAWBA RIVER. MODERNIZE ROADWAY TO INCLUDE BICYCLE AND PEDESTRIAN ACCOMMODATIONS.	Not Funded / Reprioritized	Not Funded / Reprioritized	HIGHWAY - STI (PRIORITIZATION)
U-5978	VACANT	BURKE	NC 181 FROM SR 1440 TO SR 1419. WIDEN TO 3 LANES.	Not Funded / Reprioritized	Not Funded / Reprioritized	HIGHWAY - STI (PRIORITIZATION)
U-6123	BRENDAN MERITHEW	BURKE	US 64 (BURKEMONT AVENUE) BURKE COUNTY AT US 70 (W. FLEMING DRIVE) INTERSECTION. IMPROVE INTERSECTION.	Not Funded / Reprioritized	Not Funded / Reprioritized	HIGHWAY - STI (PRIORITIZATION)
U-6164	BRENDAN MERITHEW	BURKE	NC 126 FROM SR 1250 (WATERMILL ROAD) TO SR 1254 (FISH HATCHERY ROAD). MODERNIZE ROADWAY.	Not Funded / Reprioritized	Not Funded / Reprioritized	HIGHWAY - STI (PRIORITIZATION)
I-5971	VACANT	BURKE	I-40 FROM SR 1761 (OLD HIGHWAY NC10)-EXIT 116 UPGRADE INTERCHANGE AND REMOVE TWO-WAY TAFFIC	Non-Committed / Reprioritized	Non-Committed / Reprioritized	HIGHWAY - STI (PRIORITIZATION)
BR-0130	VERROL J. MCLEARY	BURKE	Replace Bridges 110114 and 110120 on I40 over Silver Creek.	4/17/2026	1/15/2030	HIGHWAY FUND BRIDGE / BRIDGE PROGRAM
U-5836	BRENDAN MERITHEW	BURKE	NC 181 FROM SR 1414 (ST. MARY'S CHURCH ROAD) TO MORGANTON ETJ WIDEN EXISTING ROADWAY	10/12/2026	6/19/2029	HIGHWAY - STI (PRIORITIZATION)
I-5891B	BRENDAN MERITHEW	BURKE	I-40 FROM MILE MARKER 105 TO MILE MARKER 112 PAVEMENT REHABILITATION AND BRIDGE REHABILITATION		3/20/2029	HIGHWAY - INTERSTATE MAINTENANCE
RX-2013C	NANCY HORNE	BURKE	HIGHWAY-RAILWAY GRADE CROSSING SIGNALS AND GATES ON HOGAN STREET AT NORFOLK SOUTHERN RAILWAY CROSSING 729506G IN MORGANTON,BURKE COUNTY,NC		6/2/2026	
I-5990	MICHAEL G. CLARK	BURKE	I-40 AT EXIT 118 - SR 1761 (OLD NC 10). CONSTRUCT INTERCHANGE IMPROVEMENTS.	12/11/2024	12/16/2025	HIGHWAY - STI (PRIORITIZATION)
BL-0001	BRENDAN MERITHEW	BURKE	MAIN AVENUE EAST CONSTRUCT PEDESTRIAN IMPROVEMENTS FROM 2NDSTREET SE TO US 70.	7/31/2025	12/3/2025	BIKE & PED - LOCALLY SELECTED
EB-5978	BRENDAN MERITHEW	BURKE	COLLEGE STREET MULTIMODAL CONNECTOR TRAIL FROM NORTH GREEN STREET TO US 70 IN MORGANTON	9/27/2024	9/26/2025	BIKE & PED - STI (PRIORITIZATION)
R-3430B	ELISE F. BIELEN	BURKE	SR 1001 (CONNELLY SPRINGS ROAD), BURKE COUNTY CONSTRUCT NEWPARALLEL BRIDGE OVER CATAWBA RIVER.	3/22/2022	7/15/2025	HIGHWAY FUND BRIDGE / BRIDGE PROGRAM
HS-2013R	BRENDAN MERITHEW	BURKE	VARIOUS PRIMARY AND SECONDARY TWO LANE ROADWAYS. INSTALL LONG LIFE PAVEMENT MARKINGS.		9/18/2024	HIGHWAY - SAFETY
HA-0001	BRENDAN MERITHEW	BURKE	NEW ROUTE, CONSTRUCT ACCESS ROAD INTO BURKE COUNTY INDUSTRIAL PARK.		9/4/2024	HIGHWAY - APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM

NCDOT Division 13 - Construction Progress Report - July 2024

Contract Number	County	TIP#	Route	Location Description	Completion Date	Completion Percent
C204406	Buncombe, Burke, McDowell, Mitchell	B-6011, B-6013, B-6014, B-6016	SR-1106, SR-1430, SR-1781, SR-2027	1 BRIDGE IN BUNCOMBE COUNTY, 1 BRIDGE IN BURKE COUNTY, 1 BRIDGE IN MCDOWELL COUNTY, AND 1 BRIDGE IN MITCHELL COUNTY.	10/22/2024	68.90%
C204716	Burke	B-5869	US-64	BRIDGE #99 OVER NORFOLK SOUTHERN RAILROAD ON US-64/US-70 IN MORGANTON.	1/11/2028	28.84%
DM00408	Burke	R-5793JA	NC-18, NC-181, US-64, US-70	VARIOUS	8/30/2024	93.36%
DM00414	Burke		SR-1001	OVER I-40 ON SR-1001 (RUTHERFORD COLLEGE RD/MALCOMB BLVD)	9/5/2025	22.23%
DM00441	Burke		-	VARIOUS SECONDARY ROUTES	9/12/2025	0.00%
DM00442	Burke, Rutherford		SR-Multi	VARIOUS SECONDARY ROUTES	11/21/2025	0.00%
DM00449	Burke	R-5967	SR-1625	SR-1625 (9TH AVE DR NW)	10/30/2026	3.32%

NCDOT Contact: Travis J. Henley (828) 803-6120