



DCHC MPO WILDLIFE CROSSINGS PLAN

David Miller, DCHC MPO

Madeline Galliano, DCHC MPO

DCHC MPO Technical Committee

September 10, 2024

Presentation Overview

1 – Purpose and Background

2 – Wildlife Crossing Planning Process

3 – Project Recommendations Summary

4 – Public Engagement and Anticipated Timeline

5 – Discussion and Questions

1 – Purpose and Background

2 – Wildlife Crossing Planning Process

3 – Project Recommendations Summary

4 – Public Engagement and Anticipated Timeline

5 – Discussion and Questions

Wildlife Crossings Plan Purpose

MPO-led study and planning effort with participation by and contributions from a multidisciplinary team of stakeholders to develop a plan that:

- Improves roadway safety by eliminating wildlife-vehicle crashes (WVCs),
- Restores and improves wildlife habitat and connectivity, and
- Identifies new and strengthens existing partnerships and collaboration between transportation agencies and conservation groups

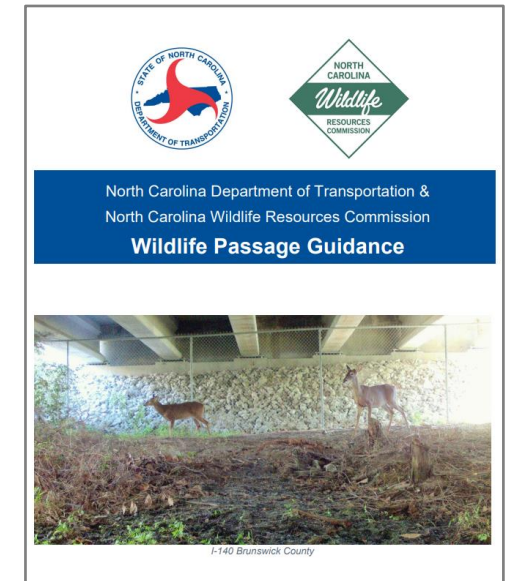


<https://sandhillssentinel.com/cooler-temperatures-mean-deer-vehicle-collisions/>

Reported Wildlife-Vehicle Crashes (WVCs) in NC



- North Carolina had over **20,000 reported WVCs, including four fatalities in 2022.**
- The estimated comprehensive crash costs for all of North Carolina's 2022 WVCs is **\$486,000,000** (based on NCDOT's 2022 Standardized Crash Cost Estimate).
- Carcass removal data from other states has documented actual WVC occurrences **more than five times greater (in Utah study)** and **nine times greater (in Virginia study)** than their reported WVC data developed by law enforcement agencies shows.
- Based on these findings, a conservative correction factor to reported WVCs suggests **there are closer to 100,000 WVCs occurring annually in NC** than what NCDOT and law enforcement data shows.



Source: North Carolina Department of Transportation & North Carolina Wildlife Resources Commission. (2024). *Wildlife Passage Guidance*.
https://connect.ncdot.gov/resources/Environmental/EPU/Policy/Documents/NCWRC-NCDOT_Wildlife_Passage_Guidance.pdf

Reported WVCs in MPO Area (2020-2022)

Counties in the DCHC MPO Planning Area	NCDOT North Carolina Animal Related Crashes: 2020-2022 County Rankings and Crash Data ¹					NCDOT 2023 Standardized Crash Cost Estimates for North Carolina ²
	County Ranking (Crashes)*	Total Crashes	Total Fatalities	Total Injury Crashes	Total Non-injury Crashes	Comprehensive Crash Cost Estimates
Chatham	21 / 100	936	0	31	905	\$28,456,000
Orange	30 / 100	801	0	48	753	\$25,755,000
Durham	35 / 100	638	0	38	600	\$20,470,000
TOTAL		2,375	0	117	2,258	\$74,681,000

* Ranking from 1-100; 1 indicating the county with the highest number of animal-vehicle crashes, and 100 indicating the least number of animal-vehicle crashes.

Source 1: North Carolina Department of Transportation. (June 23, 2023). North Carolina Animal Related Crashes: 2020-2022 County Rankings and Crash Data.
<https://www.ncdot.gov/initiatives-policies/safety/driving-safety/Documents/animal-crash-report.pdf>

Source 2: North Carolina Department of Transportation. (2024). 2023 standardized crash cost estimates for North Carolina. NCDOT.

1 – Purpose and Background

2 – Wildlife Crossing Planning Process

3 – Project Recommendations Summary

4 – Public Engagement and Anticipated Timeline

5 – Discussion and Questions

Project Organization and Coordination

Triangle Connectivity Collaborative Transportation Workgroup

Consists of key individuals with experience in wildlife crossings from the fields of transportation planning, engineering, open spaces, wildlife biology, GIS analysis, public administration, environmental science, and environmental law.

Core Technical Team

Consists of 17 stakeholders from DCHC MPO's member governments, its NCDOT highway divisions, and environmental and conservation agencies and institutions. Provided guidance and feedback during the planning process at bimonthly meetings.

General Public

The public is invited to review the draft DCHC MPO Wildlife Crossings Plan and provide feedback during the public engagement period held in October 2024. Public engagement will take place in a variety of formats and locations throughout the MPO's planning area.

Project Timeline: January to November 2024



Tasks	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.
Task 1: Project Management and Coordination											
Task 2: Research, Data Analysis, Site Identification											
Task 3: Site Assessments, Development of Project Recommendations and Alternatives											
Task 4: Public Engagement Planning, Implementation, and Analysis											
Task 5: Plan Development											

Kickoff Meeting



Bimonthly CTT Meeting



TC & Board Presentation



Public Engagement Presentations & Events



Final Plan



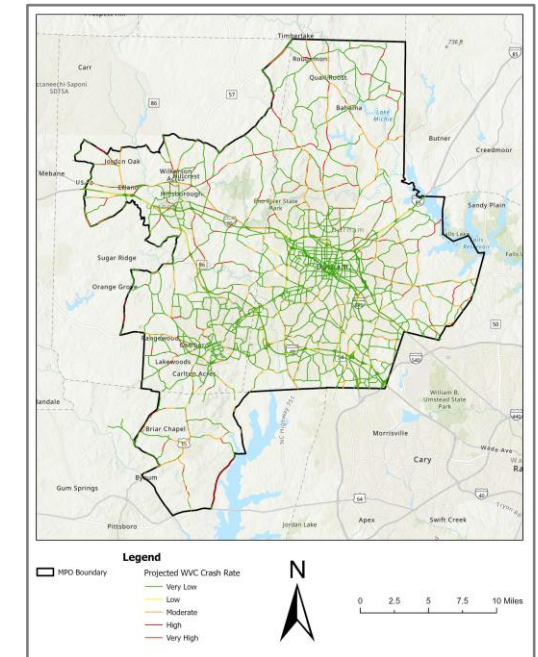
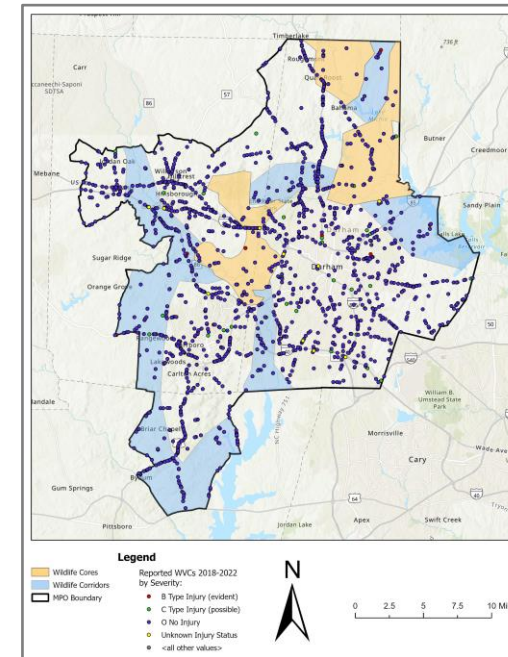
Review of Existing Plans and Reports (Section 2.1.1)

Included but was not limited to:

- [Wildlife Passage Guidance](#), 2024 (NCDOT, NCWRC)
- [Prioritizing Wildlife Road Crossings in North Carolina To Reconnect Wildlife Habitat and Improve Road Safety](#), 2022 (Wildlands Network)
- [North Carolina Animal Related Crashes: 2020 – 2022 County Rankings and Crash Data Report](#), 2023 (NCDOT)
- [Wildlife Crossing Structure Handbook, Design and Evaluation in North America](#), 2011 (FHWA)
- [Wildlife-Vehicle Collision Reduction Study: Report to Congress](#), 2008 (FHWA)

GIS Analysis (Section 2.1.2)

Datasets included: Reported and projected wildlife-vehicle crash data, wildlife habitat and movement, natural and protected lands, existing project alignment, current and projected traffic counts.



Data Analysis and Site Identification

Site Assessments (Section 2.2)

Site assessment form developed by Triangle Connectivity Collaborative Transportation Workgroup and North Carolina Wildlife Resources Commission.

Site assessment form criteria includes:

- Identification of structure type (bridge, culvert, etc.)
- Photographs
- Width and vertical clearance of structure
- Visible daylight through the structure
- Waterways / flooding potential
- Evidence of wildlife (tracks, roadkill)
- Existing wildlife crossing solutions (dry paths, fencing, raised platforms, etc.)
- Existing barriers for wildlife passage (riprap, water, vegetation, etc.)
- Wildlife crossing recommendations



US 70 culvert over Stony Creek in Orange County



US 15-501 bridge over New Hope Creek in Durham County

Existing Conditions

NC 54 culvert over Morgan Creek in Orange County

14 reported WVCs (2018-2022, NCDOT)



Guess Road bridge over Eno River in Durham County

34 reported WVCs (2018-2022, NCDOT)



US 15-501 bridge over Pokeberry Creek in Chatham County

20 reported WVCs (2018-2022, NCDOT)



Existing Wildlife Crossing Projects in MPO Area

US 15-501 Bridge over New Hope Creek in Durham County (Section 2.3.3)

- Completed in 2007, this project included:
 - Lengthening the bridge span by approximately 160 feet, and
 - Enhancing wildlife connectivity by constructing a wildlife passage bench under the bridge, and on both sides of New Hope Creek.
- Evidence from camera trap data has shown that the new bridge has increased passage under US 15-501 for a variety of wildlife species.



Existing Wildlife Crossing Projects in MPO Area

US 70 Bridge over the Eno River in Orange County (Section 2.3.3)

- Completed in 2023, this project included:
 - Lengthening the bridge span to 265 feet (27 feet longer than the original structure), and
 - Enhancing wildlife connectivity through strategic placement of riprap to allow for the development of a wildlife passage bench under the bridge, and on both sides of the Eno River.



1 – Purpose and Background

2 – Wildlife Crossing Planning Process

3 – Project Recommendations Summary

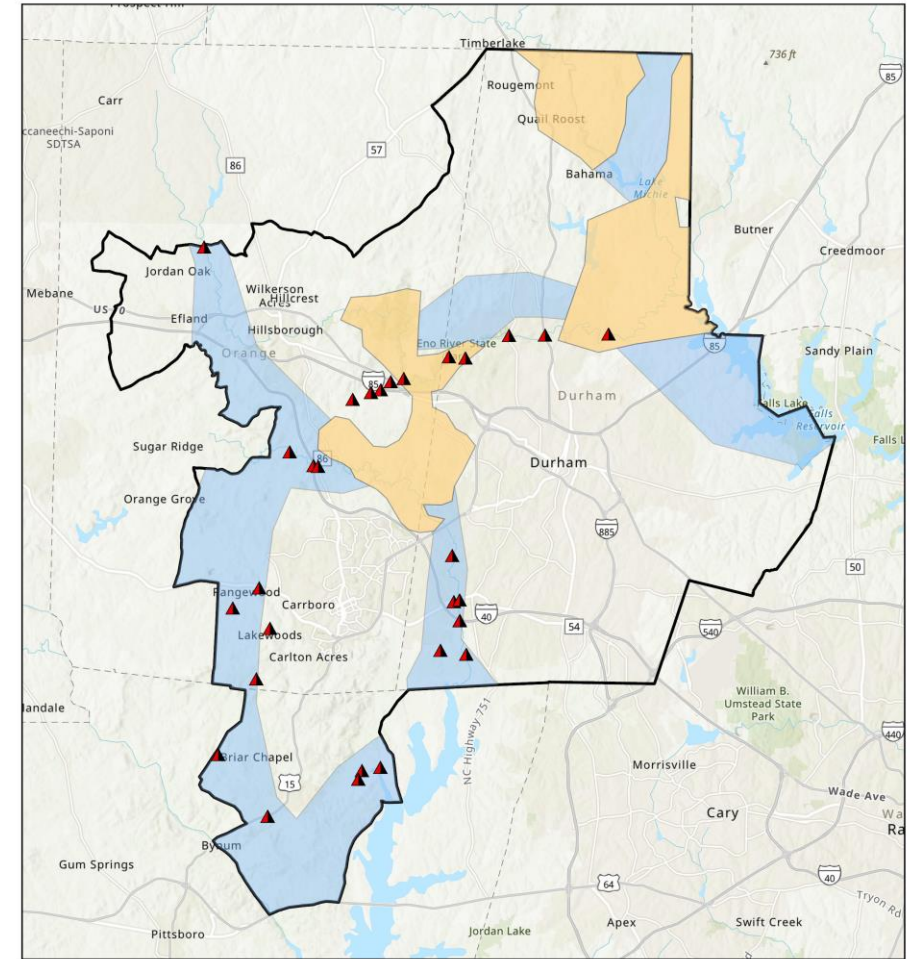
4 – Public Engagement and Anticipated Timeline

5 – Discussion and Questions

Project Recommendations Summary

Twenty-eight (28) wildlife crossing projects located throughout the DCHC MPO planning area are being recommended:

- **Chatham County** - Five (5) project recommendations
- **Durham County** - Ten (10) project recommendations
 - Two (2) of which reside in the City of Durham
- **Orange County** - Thirteen (13) project recommendations



Legend

- Wildlife Corridors
- Wildlife Cores
- MPO Boundary
- Project Sites

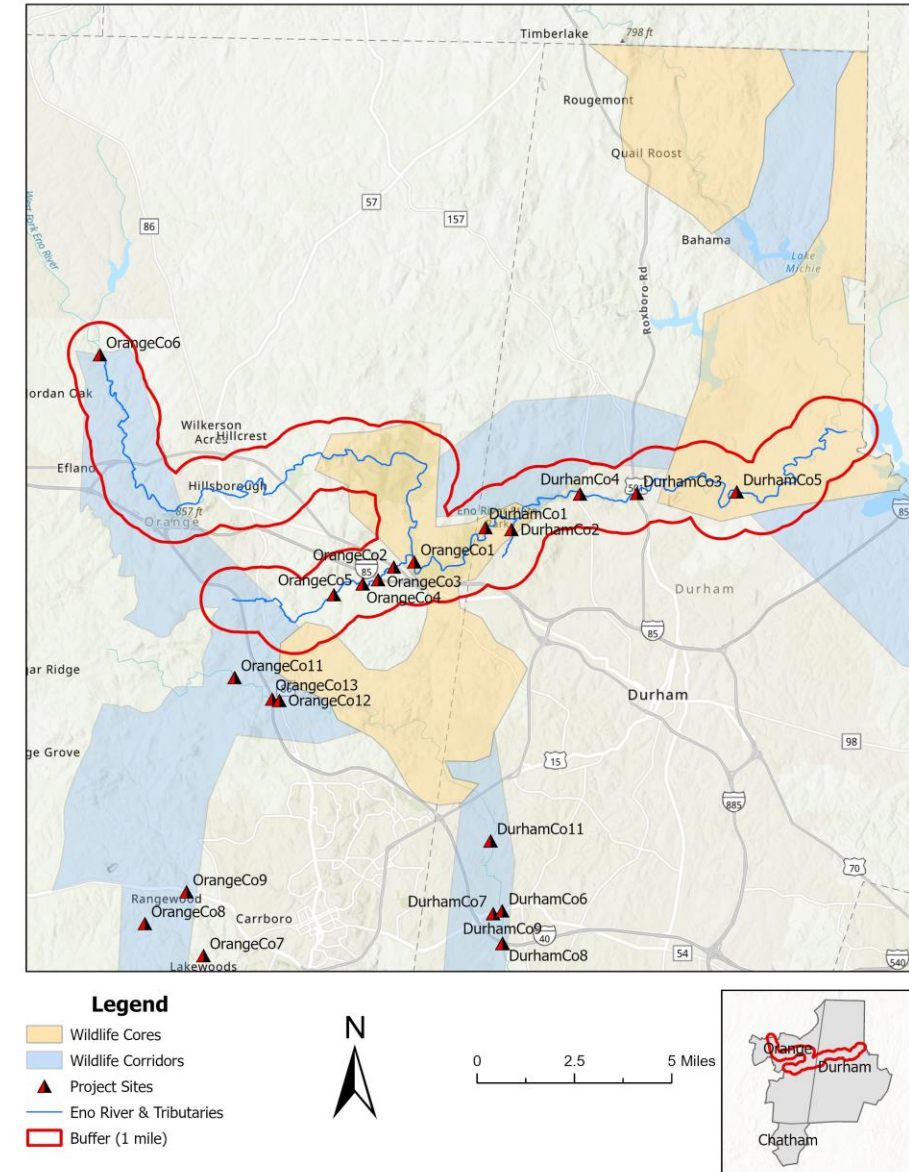


0 2.5 5 7.5 10 Miles

Project Recommendations Summary

Eno River Corridor network of projects:

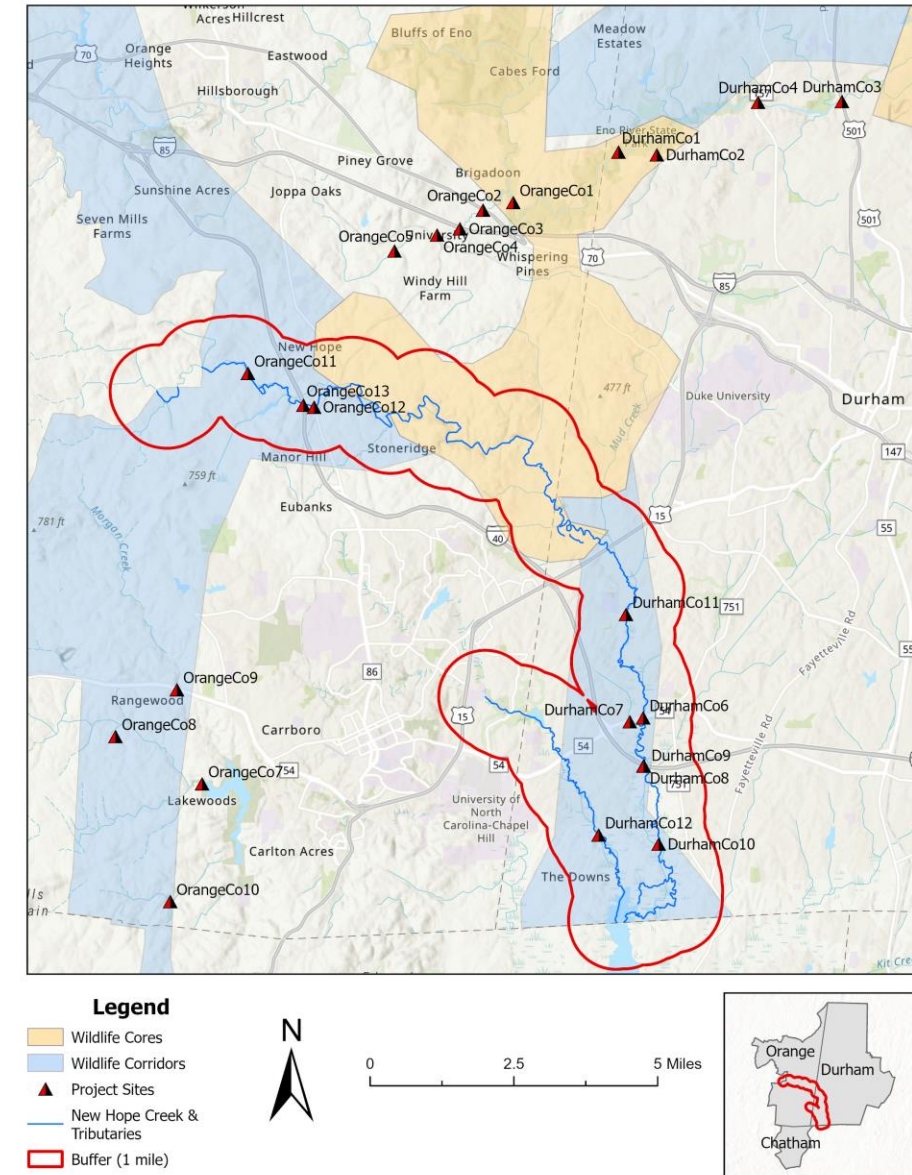
- Eleven (11) project recommendations and sites have been grouped to form the Eno River Corridor.
- These projects span both Durham and Orange counties.
- Projects grouped together to create and extend wildlife connectivity and improve roadway safety.



Project Recommendations Summary

New Hope Creek Corridor network of projects:

- Eight (8) project recommendations and sites have been grouped to form the New Hope Creek Corridor.
- These projects span both Durham and Orange counties.
- Projects grouped together to create and extend wildlife connectivity and improve roadway safety.



Examples of countermeasure recommendations and scenarios in the draft plan include:

- **Riprap remediation** to remove obstacles
- Developing **wildlife benches** to provide continuous dry passage under structures
- **Vegetation management** to remove obstacles
- Install **fencing to guide wildlife** under or through a crossings, while keeping them off the road
- During bridge replacements, ensure **bridge lengthening** is considered to maintain dry passage on both sides of the waterway during high-water levels, and ensure the **bridge heightening** is considered to allow for large wildlife passage.

1 – Purpose and Background

2 – Wildlife Crossing Planning Process

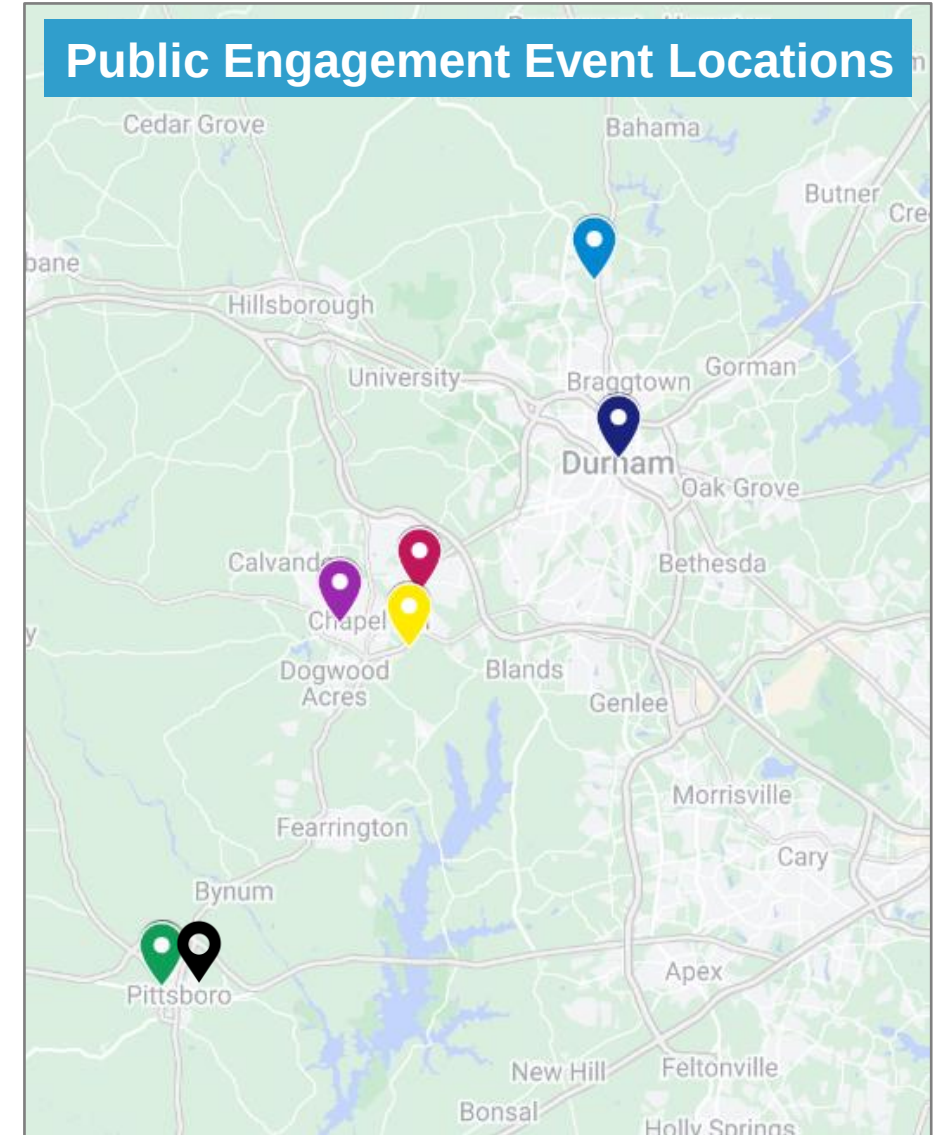
3 – Project Recommendations Summary

4 – Public Engagement and Anticipated Timeline

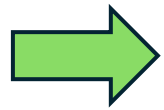
5 – Discussion and Questions

Public Engagement Schedule (October 1 – 21)

- Seven (7) public engagement events held throughout the MPO's planning area (virtual, in-person, and hybrid formats)
- MetroQuest survey (English and Spanish)
- Targeted social media campaign
- Email announcement to MPO's Constant Contact list
- Project website update
 - List of public engagement events
 - Survey link
 - Draft plan
 - Web map of project sites



Remaining Anticipated Timeline



ACTION	DATE
CTT reviewed the draft plan	August 28
TC recommends the Board release the draft plan for public comment	September 10
Board releases the draft plan for public comment	September 30
21-day public comment period and public engagement events	October 1 - 21
MPO reviews and incorporates public comment into the draft plan	October 22 - 25
CTT reviews public comments and the updated draft plan	October 25
TC recommends the Board adopt the plan	November 5
Board adopts the plan	November 19
MPO begins incorporating project recommendations into CTP update	December

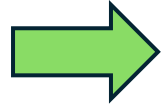
1 – Purpose and Background

2 – Wildlife Crossing Planning Process

3 – Project Recommendations Summary

4 – Public Engagement and Anticipated Timeline

5 – Discussion and Questions



Technical Committee Action (9/10): Technical Committee recommends the Board release the draft plan for a 21-day public comment period

Board Action (9/30): Board releases the draft plan for a 21-day public comment period

Discussion and Questions

Project Contacts:

- David Miller, Transportation Planner, DCHC MPO
david.miller@dchcmpo.org
- Madeline Galliano, Transportation Planner, DCHC MPO
madeline.galliano@dchcmpo.org

Project Webpage:

- www.dchcmpo.org/what-we-do/programs-plans/special-studies/wildlife-crossing-planning-study