

*US 1 (CAPITAL BOULEVARD)
FREEWAY UPGRADE
CONCURRENCE POINT 2A
STIP PROJECT U-5307*

June 2021
Wake County, NC

RS&H

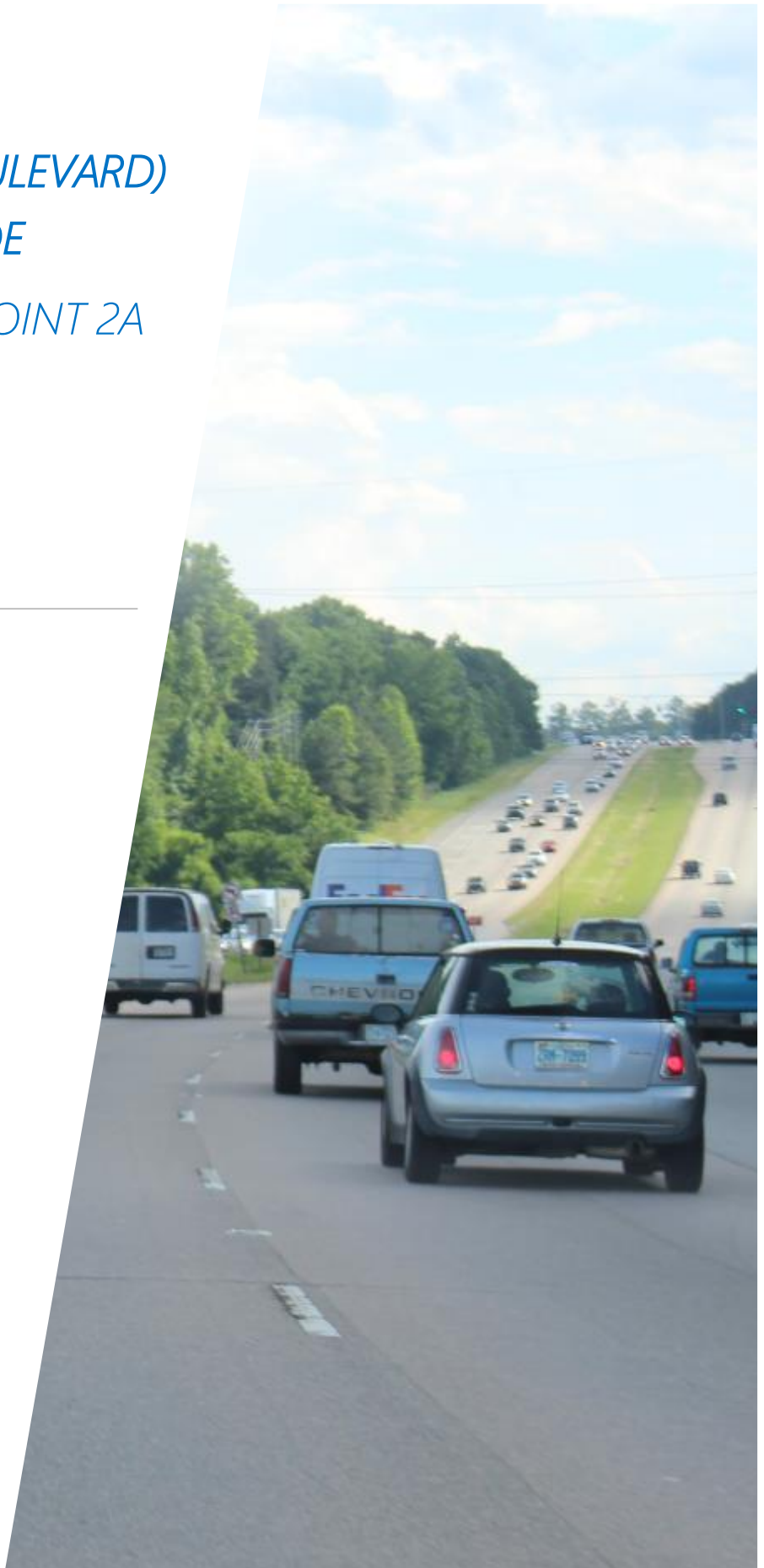




Table of Contents

1.0	Introduction	1
1.1	Project Description	1
1.2	Merger Process History (Concurrence Point 1).....	2
1.3	Merger Process History (Concurrence Point 2).....	2
1.4	Merger Process History (Concurrence Point 2 – Revised).....	3
2.0	Public Involvement.....	4
3.0	Existing Environmental Conditions	5
3.1	Human Environment Resources	5
3.2	Natural Environment Resources	5
4.0	Bridging and Alignment Review.....	5
4.1	Site 1.....	7
	Existing Conditions	7
	Recommendations	7
	Potential Impacts	7
	Other Options Considered	7
4.2	Site 2.....	8
	Existing Conditions	8
	Recommendations	8
	Potential Impacts	8
	Other Options Considered	8
4.3	Site 3.....	9
	Existing Conditions	9
	Recommendations	9
	Potential Impacts	9
	Other Options Considered	9
4.4	Site 4.....	10
	Existing Conditions	10
	Recommendations	10
	Potential Impacts	10
	Other Options Considered	10
4.5	Site 5.....	11



Existing Conditions	11
Recommendations	11
Potential Impacts	11
Other Options Considered	11
4.6 Site 6	12
Existing Conditions	12
Recommendations	12
Potential Impacts	12
Other Options Considered	12
4.7 Site 7	13
Existing Conditions	13
Recommendations	13
Potential Impacts	13
Other Options Considered	13
4.8 Site 8	14
Existing Conditions	14
Recommendations	14
Potential Impacts	14
Other Options Considered	15
4.9 Site 9	16
Existing Conditions	16
Recommendations	16
Potential Impacts	16
Other Options Considered	17
4.10 Site 10	18
Existing Conditions	18
Recommendations	18
Potential Impacts	18
Other Options Considered	18
4.11 Site 11	19
4.12 Site 12	20
Existing Conditions	20
Recommendations	20



Potential Impacts	20
Other Options Considered	20
4.13 Other Crossings.....	21
4.14 Summary of Potential Impacts.....	22
5.0 Project Schedule	23

Tables

Table 1: Summary of Recommendations

Table 2: Summary of Impacts

Figures

Figure 1: Vicinity Map

Figure 2: Environmental Features

Figure 3: Existing and Recommended Structures



1.0 INTRODUCTION

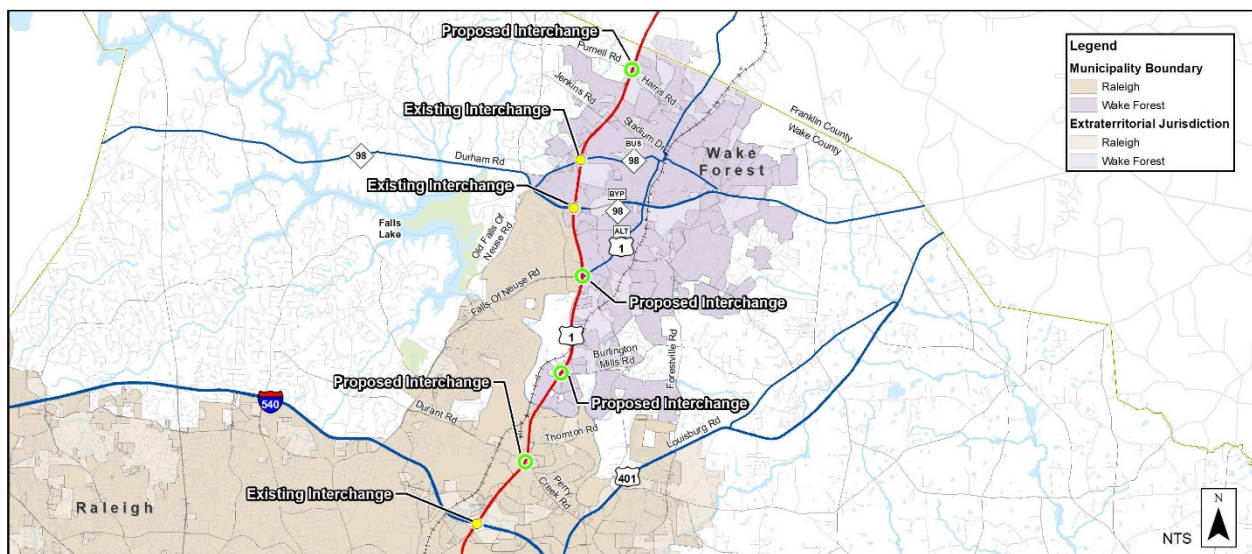
The North Carolina Department of Transportation (NCDOT) proposes to improve US 1 (Capital Boulevard) to a controlled-access facility from I-540 to SR 1909 (Purnell Road) / SR 1931 (Harris Road) in Wake County. This project is included in NCDOT's current *State Transportation Improvement Program (STIP)* as Project U-5307 (Sections A through D), shown in **Figure 1**. In accordance with the National Environmental Policy Act (NEPA) / Section 404 Merger Process, NCDOT reached consensus on Concurrence Point 1 in June 2018, Concurrence Point 2 in November 2018, and revised Concurrence Point 2 in April 2021. The project was placed on suspension from August 30, 2019 to January 6, 2020 and again from May 8, 2020 to December 1, 2020. The current project schedule dates are listed in Section 5.0.

NCDOT is seeking consensus from the Merger Project Team for Concurrence Point 2A – Bridging Decisions and Alignment Review. Concurrence Point 2A consists of identifying bridge locations and approximate lengths as well as a review of the preliminary alignment for each bridge.

This report includes a description of the project and summaries of the Purpose and Need, Study Area, and Detailed Study Alternatives Carried Forward previously concurred upon by the NEPA / 404 Merger Team members (Merger Team).

1.1 Project Description

NCDOT proposes removing signals from the mainline of US 1 to create a roadway with full control of access and new interchanges at Durant Road / Perry Creek Road, Burlington Mills Road, Falls of Neuse Road / US 1A (Main Street), and Purnell Road / Harris Road. Service roads will be provided for connectivity. NCDOT also proposes the addition of a flyover carrying US 1 southbound traffic onto I-540 eastbound and the addition of a third westbound lane on I-540 (between the Triangle Town Boulevard interchange and the US 1 southbound on-ramp at I-540). Minor modifications to the existing interchanges at NC 98 Bypass, NC 98 Business (Durham Road), and I-540, and a grade separation (bridge) at Jenkins Road / Stadium Drive as part of this project. Existing and proposed interchange locations are shown below.





1.2 Merger Process History (Concurrence Point 1)

On June 14, 2018, the Merger Team met to discuss the Purpose and Need and Study Area for the referenced project – Concurrence Point 1 (CP 1). During the meeting, existing conditions, the project study area, the project’s need, and the project’s purpose were presented. After the presentation and discussions, the 404 Merger Team reached a consensus and signed the formal CP 1 Agreement. Under this agreement, the purpose and need of the project were defined as follows:

Need of Proposed Action

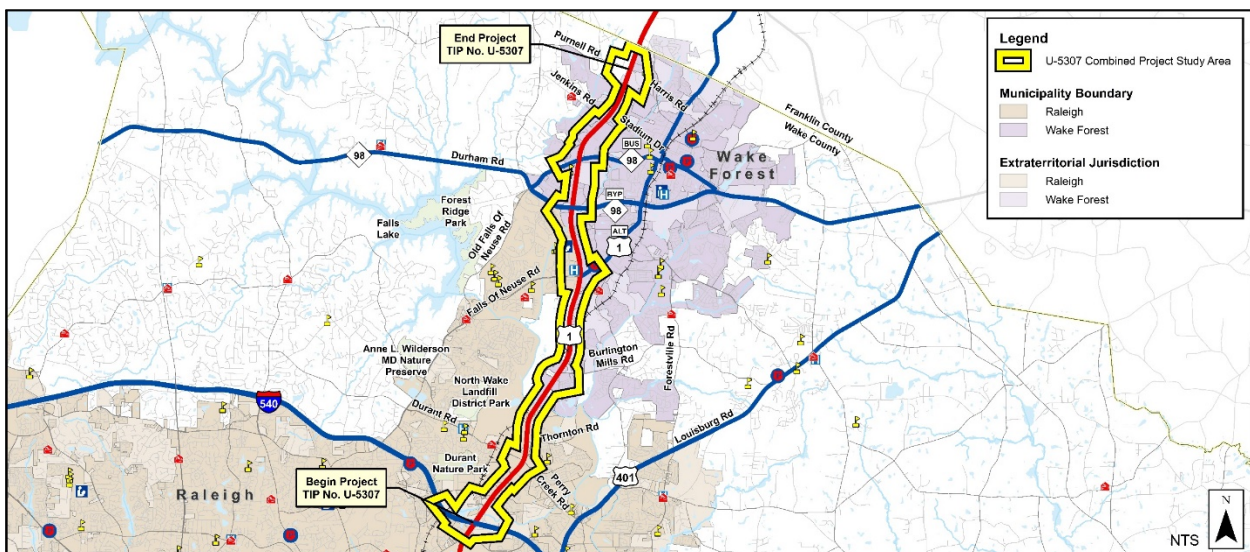
- Traffic congestion and trip time unreliability

Purpose for Proposed Action

- Improve traffic congestion and travel times
- Maintain regional mobility and local connectivity

Study Area Defined

- The study area agreed upon at the CP 1 meeting extends along US 1 from I-540 to Purnell Road / Harris Road in Wake County, as shown below.



1.3 Merger Process History (Concurrence Point 2)

On November 14, 2018, the Merger Team met to discuss Detailed Study Alternatives Carried Forward for the referenced project – Concurrence Point 2 (CP 2). During the meeting, public comments from the October 2018 public meetings, proposed build alternatives, and stream and wetland impacts were presented. Following the presentation and discussions, the Merger Team reached a consensus and signed the formal CP 2 Agreement. Under this agreement, the following alternatives along US 1 were carried forward:

- I-540
 - Flyover carrying US 1 southbound to directly connect with I-540 eastbound (without loop)
- Durant Road / Perry Creek Road

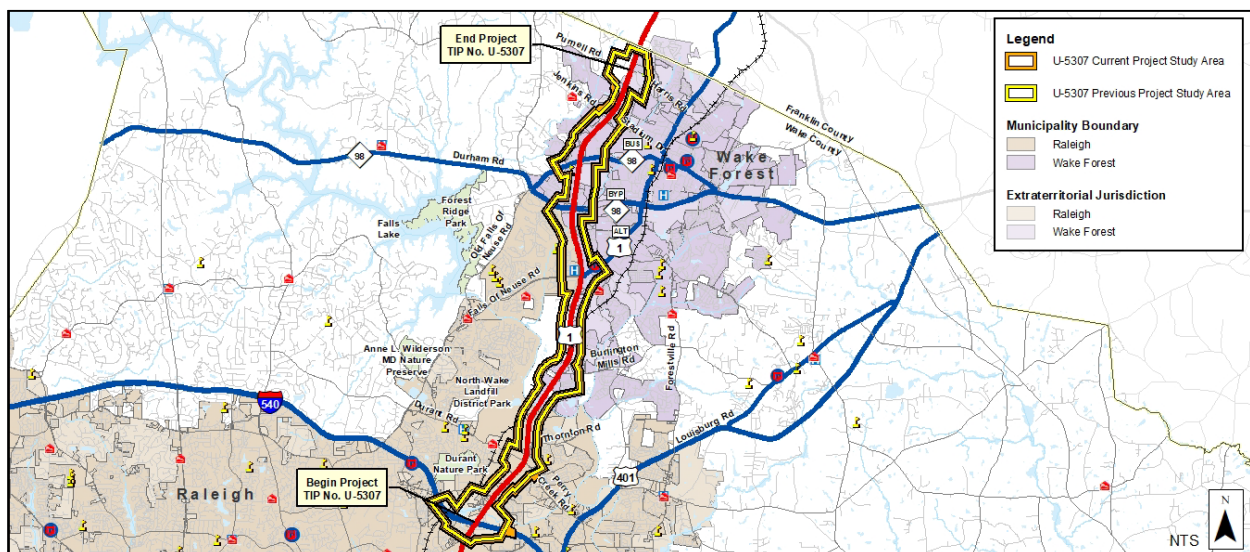


- Diverging Diamond Interchange (US 1 over Perry Creek Road / Durant Road)
- Diamond Interchange (US 1 over Perry Creek Road / Durant Road)
- Burlington Mills Road
 - Diamond (US 1 under Burlington Mills Road)
 - Diverging Diamond Interchange (DDI) (US 1 under Burlington Mills Road)
- Falls of Neuse Road / US 1A (Main Street)
 - Diverging Diamond Interchange (US 1 over Falls of Neuse Road / US 1A)
- NC 98 Bypass
 - Ramp Modifications at the gores, keeping the existing lane configurations for the Single Point Urban Interchange (SPUI) the same
- NC 98 Business (Durham Road)
 - Addition of a loop in the northeast quadrant and relocation of adjacent on-ramp
- Jenkins Road / Stadium Drive
 - Grade Separation (US 1 under Jenkins Road / Stadium Drive)
- Purnell Road / Harris Road
 - Partial Cloverleaf (US 1 under Purnell Road / Harris Road)

1.4 Merger Process History (Concurrence Point 2 – Revised)

In February 2020, the project team and key agency team members determined that an update to the CP 2 agreement would be necessary. The CP 2 revisions include five minor study area modifications, due to adding the preliminary service road designs for connectivity, as well as revising the interchange type to carry forward at two previously agreed upon locations (US 1 at Durant Road / Perry Creek Road and US 1 at Burlington Mills Road).

On March 11, 2021, the Merger Team was sent a packet via email detailing the proposed revisions to the original CP 2 agreement. After corresponding with the agencies, the Merger Team reached a consensus and signed the formal revised CP 2 Agreement on April 15, 2021. Under this agreement, the revised study was defined and the following alternatives along US 1 were carried forward as follows:



US 1 Mainline (No change from CP 2 signed in 2019)



- Conversion to a controlled-access highway; best fit alignment for centerline with consideration for maintenance of traffic during construction

Service Roads/Connecting Streets (*No change from CP 2 signed in 2019*)

- Service roads and connecting streets are under study to maintain regional mobility and local connectivity. The Project Team is considering a combination of existing streets and new location roads.

Proposed Interchanges

New Interchange	Approved at CP 2 (2019)	Proposed / Revised CP 2
US 1 / Durant / Perry Creek Rd (US 1 over)	Option A: DDI Option B: Diamond Interchange	Option A: Minimized DDI
US 1 / Burlington Mills Rd (US 1 under)	Option A: DDI Option B: Diamond Interchange	Option B: Diamond Interchange Option C: Skewed Partial Cloverleaf Interchange
US 1 / Falls of Neuse / US 1A (US 1 over)	DDI	DDI (no change)
US 1 / Purnell / Harris Rd (US 1 under)	Partial Cloverleaf	Partial Cloverleaf (no change)

Existing Interchange Modifications (*No change from CP 2 signed in 2019*)

- I-540
 - o Studying a flyover carrying southbound US 1 traffic to eastbound I-540
- NC 98 Bypass (Existing single-point urban interchange)
 - o Studying potential ramp improvements
- NC 98 Business (Existing diamond interchange)
 - o Studying potential ramp and loop additions

Grade Separation at Stadium Drive / Jenkins Road (*No change from CP 2 signed in 2019*)

- An interchange is not proposed at this location at this time, but the Project Team is working with stakeholders not to preclude possible future improvements by others.

I-540 Westbound Lane Addition (*No change from CP 2 signed in 2019*)

- Between Triangle Town Boulevard Interchange and the US 1 southbound on-ramp at I-540

2.0 PUBLIC INVOLVEMENT

No additional public involvement has been held since October 2018, which was summarized in the CP 2 packet (November 2018). Upcoming public involvement is planned for late summer / early fall 2021 (see Section 5.0 for the project schedule).



3.0 EXISTING ENVIRONMENTAL CONDITIONS

Human and natural environmental features in and around the project study area are shown on the Environmental Features Map (**Figure 2**).

3.1 Human Environment Resources

The project area consists of residential and commercial development as well as industrial complexes. The corridor is lined with resources including schools, churches, and several medical offices and wellness centers. In addition, three properties along US 1 are listed on the National Register of Historic Places: the Powell House, Purefoy-Dunn Plantation (House), and Wakefields (also known as Home Acres). Though not named as such on the State Historic Preservation's website, Wakefields is also known as The Sutherland. Additionally, the Raleigh and Gaston Rail Corridor (CSX railroad) is also listed as eligible for listing on the National Register.

3.2 Natural Environment Resources

According to the Natural Resources Technical Report Update (NRTR) dated March 2021, there are 95 jurisdictional streams and 109 jurisdictional wetlands within the study area. The study area consists of four different NC Surface Water classifications. Class C Waters, Class B Waters, Water Supply IV (WS-IV), and Nutrient Sensitive Waters (NSW). There are no High-Quality Waters (HQW) and no waters identified on the North Carolina 2018 Final 303(d) list of impaired waters.

4.0 BRIDGING AND ALIGNMENT REVIEW

A Hydraulic Planning Report (HPR), completed in June 2021 for the proposed project, identified 11 major drainage structures, all of which are within the Neuse River Basin. Six of the 11 drainage structures identified are existing structures while five are recommended structures. Additionally, the project corridor spans the CSX railroad, where two additional existing structures are located. The existing and recommended structure locations are shown on **Figure 3**. A narrative of each structure and its existing condition, preliminary recommendation(s), and potential impacts are included in this section. A summary of the recommendations is included on page 6 in **Table 1**.

Update to the distributed CP 2A packet:

NCDOT has decided to eliminate the driveway connection to 7900 Capital Boulevard. As a result, this eliminates the need to construct the Site 11 culvert and will avoid stream impacts in this location. NCDOT will acquire this property.

NCDOT has decided to replace the existing bridges carrying US 1 over NC 98 Business (Durham Road). There are no natural environmental resources associated with these bridges. This location is not included in this packet.



Table 1 – Summary of Recommendations

SITE	ROUTE	STREAM NAME	DRAINAGE AREA (sq. mi.)	EXISTING STRUCTURE	PRELIMINARY RECOMMENDED STRUCTURE*
1	I-540	Unnamed Tributary	0.23	72" RCP	Retain existing 72" RCP
2	I-540	Unnamed Tributary	1.27	2 @ 8' x 6' RCBC	Retain existing 2 @ 8' x 6' RCBC and add a supplemental 72" pipe
3	SR 2013 (Gresham Lake Rd)	Perry Creek	5.33	N/A	300' bridge
4	US 1	Perry Creek	3.74	3 @ 8' x 8' RCBC	Retain and extend existing RCBC and add a supplemental 84" pipe
5	US 1	Unnamed Tributary near Neuse	3.14	2 @ 8' x 8' RCBC	Retain and extend existing RCBC and add a supplemental 84" pipe
6	N/A	Unnamed Tributary near Neuse	3.49	N/A	3 @ 10' x 10' RCBC
7	N/A	Unnamed Tributary	0.1	N/A	1 @ 6' x 7' RCBC
8	US 1	Neuse River	792	Dual Bridges over Neuse River on US 1	3 280' bridges
9	N/A	Unnamed Tributary	0.21	N/A	1 @ 7' x 8' RCBC
10	US 1	Richland Creek	10.4	4 - 10' x 11' RCBC	Retain and extend box existing RCBC.
11**	N/A	Unnamed Tributary near Neuse	3.15	N/A	3 @ 9' x 8' RCBC
CSX	US 1	N/A	N/A	Dual Bridges over CSX on US 1	300' bridge

***Note that the current recommendations are based on planning preliminary designs and will require further evaluation with more precise survey data during the final design phase.**

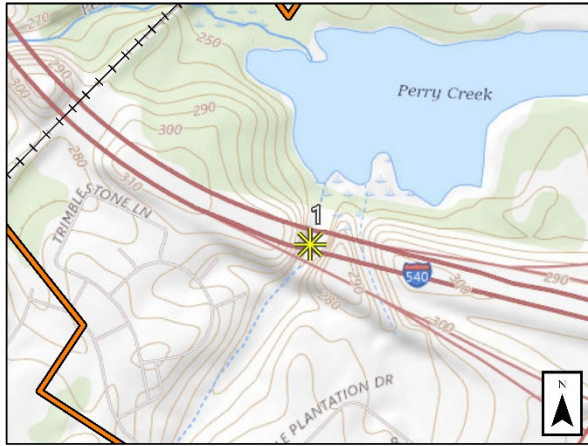
****Site 11 was eliminated per NCDOT decision on 7/16/2021**



4.1 Site 1

Existing Conditions

Site 1 is an existing 72" reinforced concrete pipe (RCP) located under I-540 that conveys flow from an unnamed tributary to Gresham Lake.



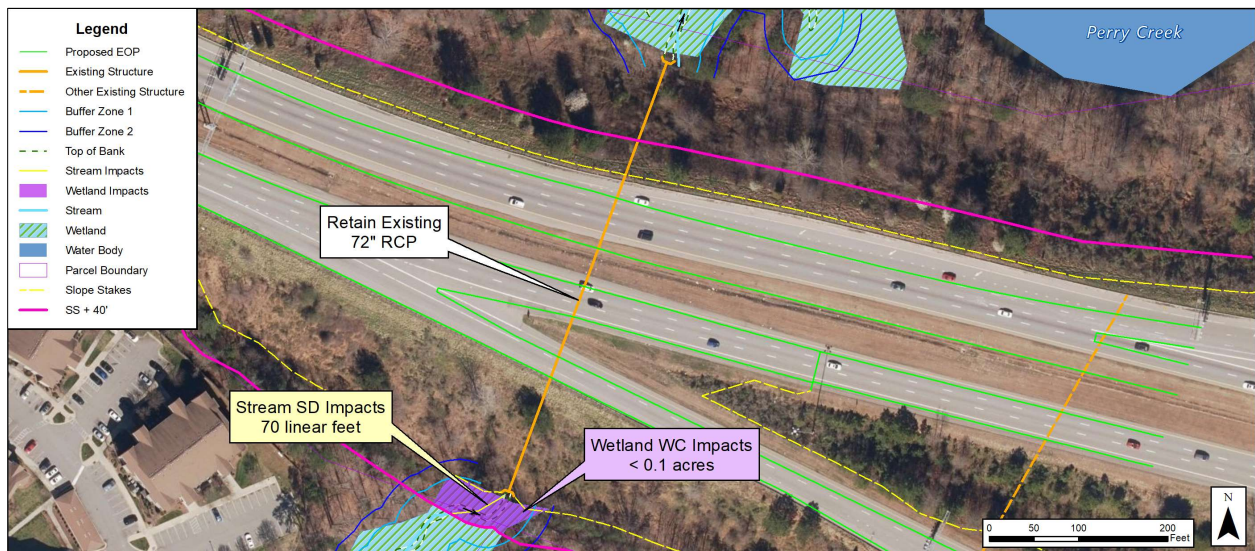
HPR Site 1: 72" RCP Inlet

Recommendations

NCDOT recommends retaining the existing 72" RCP with no modifications or extensions upstream or downstream, as shown below. Approximately three joints of pipe will need to be replaced during the project due to cracking along the flow line, as reported on the NCDOT NBIS Pipe Condition Application.

Potential Impacts

Impacts to Wetland WC and Stream SD may occur due to clearing and grubbing outside of the slope stakes, but no impacts are anticipated due to the recommended minor rehabilitation within the existing slope stakes.



Other Options Considered

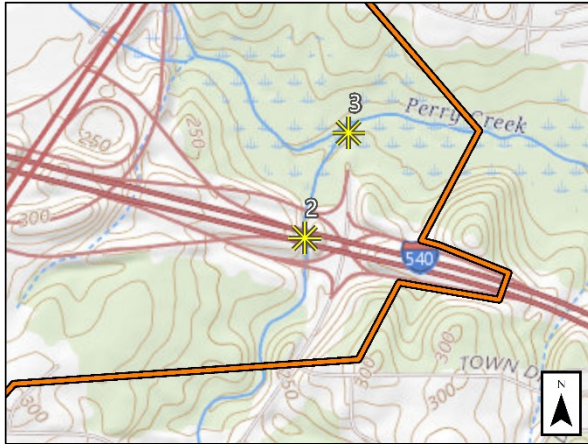
No other options were considered at this location.



4.2 Site 2

Existing Conditions

Site 2 is an existing two-barrel reinforced concrete box culvert (RCBC) at 8' wide and 6' height located under I-540 that conveys flow from an unnamed tributary to Perry Creek.



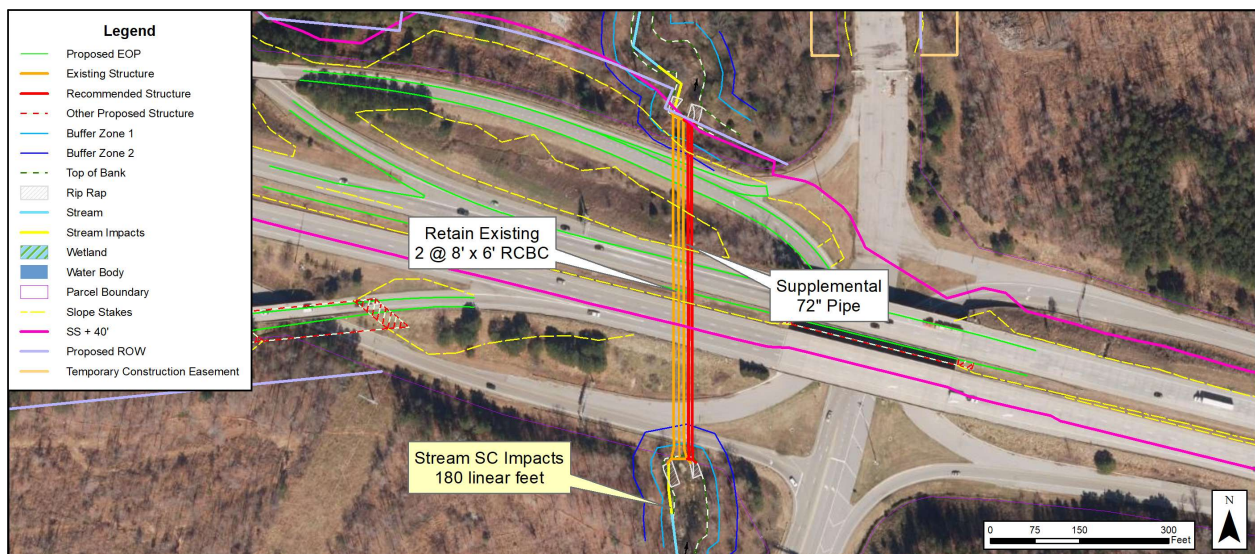
HPR Site 2: 2 @ 8' x 6' RCBC Inlet

Recommendations

NCDOT recommends retaining the existing RCBC, extending headwalls both upstream and downstream, adding bank stabilization, and installing a supplemental 72" pipe by trenchless installation, shown below. The pipe will be benched 1' above the low flow channel. While the existing box culvert will continue to convey the low flow channel, and the 72" welded steel pipe will perform as the overflow pipe for this site.

Potential Impacts

It is anticipated that approximately 180 linear feet of Stream SC will be impacted. It is not anticipated that there will be any wetland impacts.



Other Options Considered

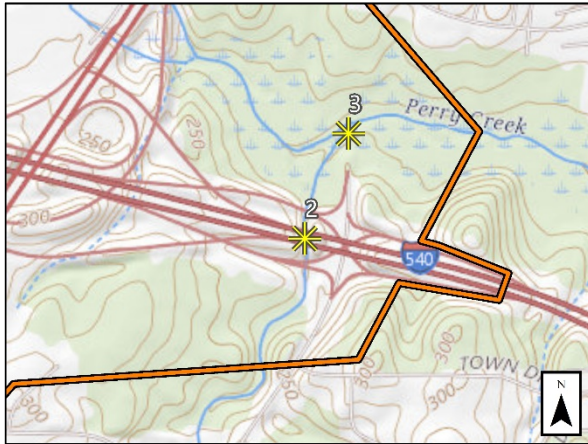
Consideration may be given to supplemental dual 48" welded steel pipes instead of a single 72" pipe if there are construction concerns associated with boring the larger pipe.



4.3 Site 3

Existing Conditions

Site 3 will convey flow from Perry Creek under the recommended Gresham Lake Road extension to Triangle Town Boulevard.



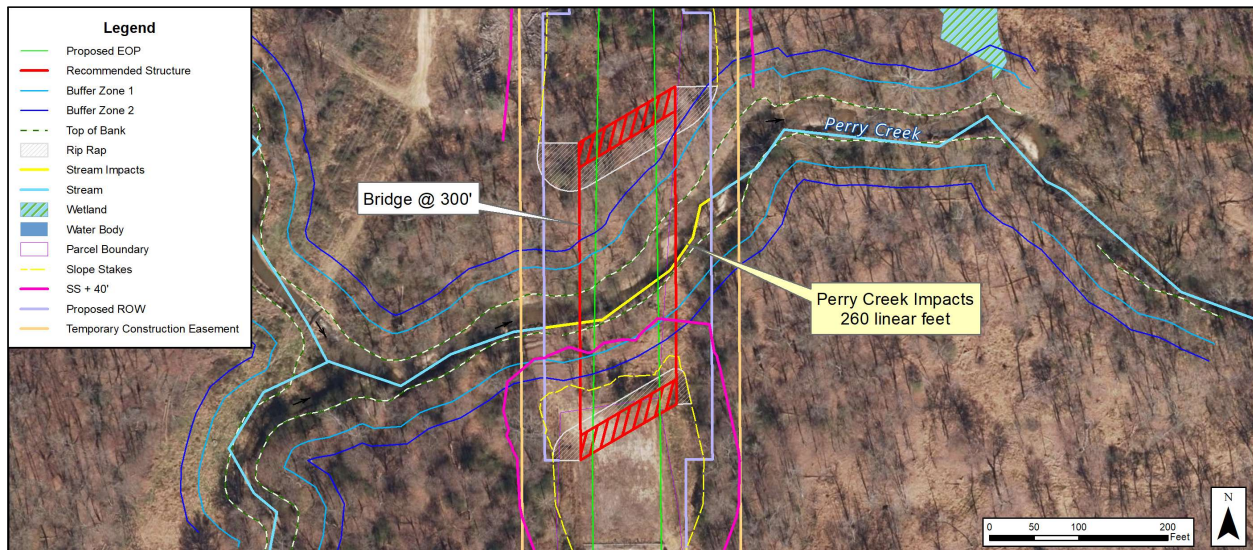
HPR Site 3: Looking Upstream from recommended bridge crossing site

Recommendations

The construction of Site 3 is contingent upon further discussions with the City of Raleigh but is currently a proposed crossing. NCDOT recommends a 300' concrete girder bridge and bank stabilization to satisfy FEMA floodplain requirements for new structures as well as accommodating for grade differences in this location.

Potential Impacts

It is anticipated that there will be approximately 260 linear feet of stream impacts to Perry Creek. Wetland impacts are not anticipated.



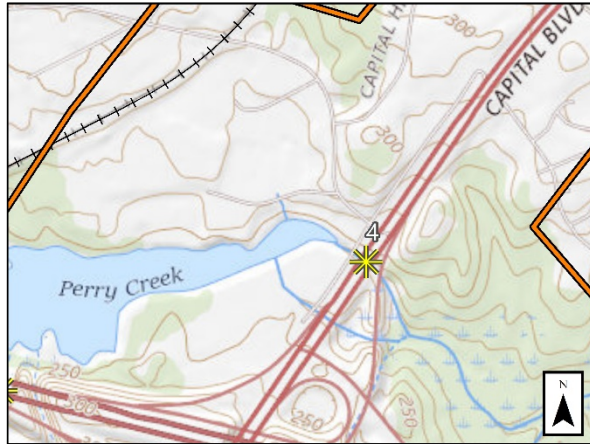
Other Options Considered

No other options were considered in this location due to FEMA compliance requirements.

4.4 Site 4

Existing Conditions

Site 4 is an existing three-barrel RCBC at 8' wide and 8' height located under US 1 that conveys flow from Perry Creek.



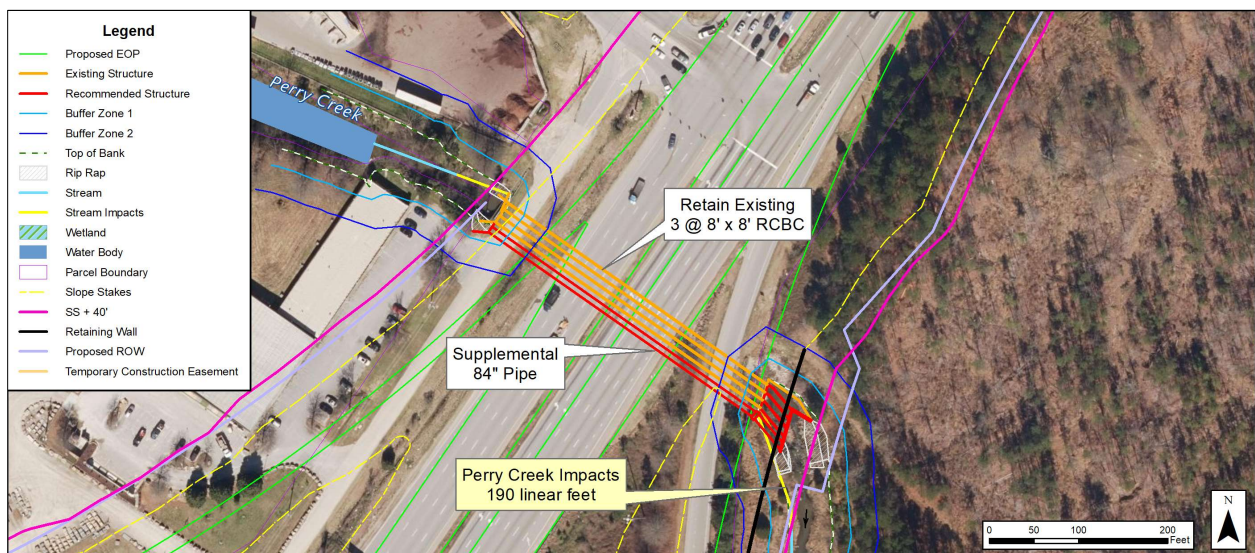
HPR Site 4: 3 @ 8' x 8' RCBC inlet

Recommendations

NCDOT recommends retaining the existing RCBC, extending the box culvert approximately 40' downstream, adding bank stabilization, and installing a supplemental 84" pipe by trenchless installation, shown below. The pipe will be benched 1' above the low flow channel. The existing box culvert will continue to convey the low flow channel and the 84" pipe will perform as the overflow pipe.

Potential Impacts

It is anticipated that there will be approximately 190 linear feet of stream impacts to Perry Creek. Wetland impacts are not anticipated.



Other Options Considered

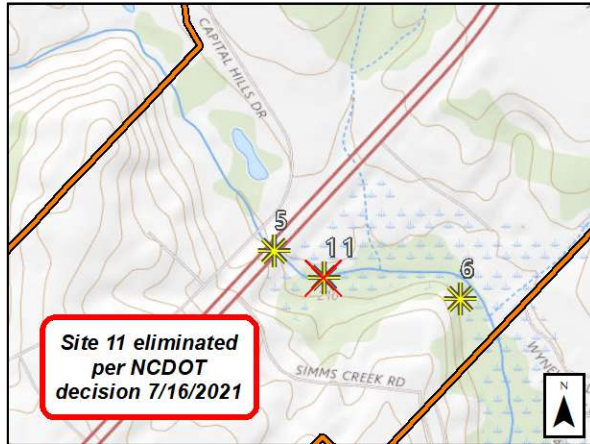
No other options were considered; the existing culvert is structurally adequate.



4.5 Site 5

Existing Conditions

Site 5 is an existing two-barrel RCBC at 8' wide and 8' height located under US 1 that conveys flow from an unnamed tributary near the Neuse River.



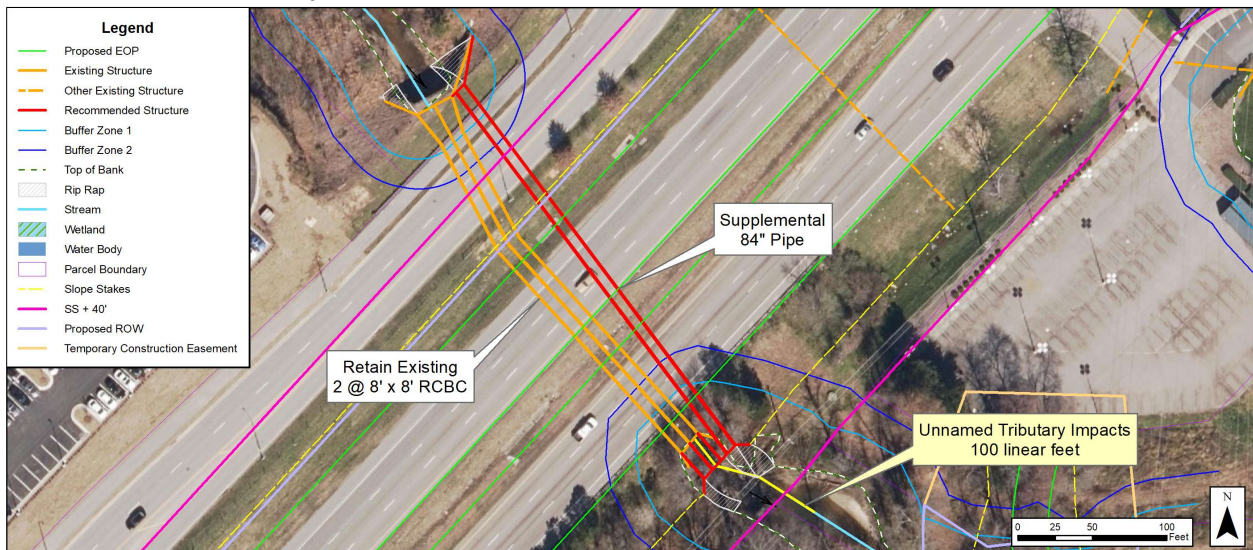
HPR Site 5: 2 @ 8' x 8' RCBC inlet

Recommendations

NCDOT recommends retaining and extending the existing box culvert approximately 30' downstream, adding bank stabilization, and installing a supplemental 84" pipe by trenchless installation, shown below. The supplemental pipe will be benched 1' above the low flow channel. The existing box culvert will continue to convey the low flow channel and the 84" pipe will perform as the overflow pipe. Since Site 11 will not be built, a standard floodplain bench will be installed at Site 5.

Potential Impacts

It is anticipated that there will be approximately 100 linear feet of stream impacts to an unnamed tributary near the Neuse River. Wetland impacts are not anticipated.



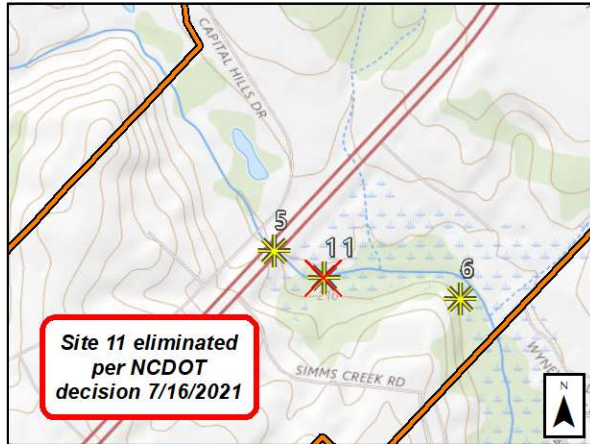
Other Options Considered

Consideration may be given to supplemental dual 54" welded steel pipes if there are construction concerns associated with boring the larger pipe.

4.6 Site 6

Existing Conditions

Site 6 will convey flow from an unnamed tributary near the Neuse River under the proposed new access road (-Y10-).



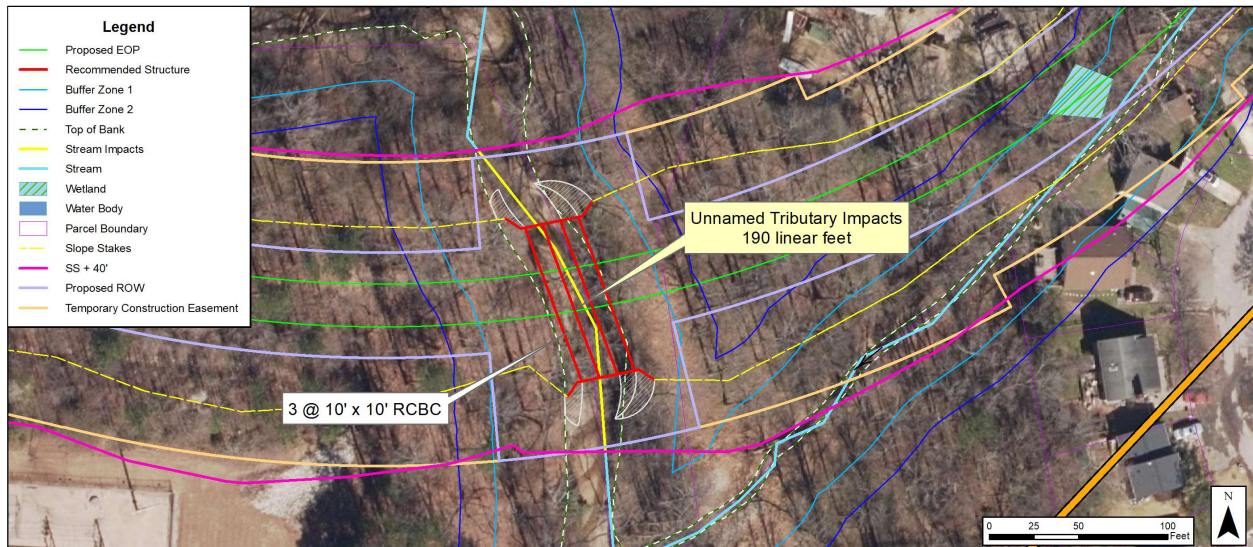
HPR Site 6: Recommended 3 @ 10' x 10' RCBC

Recommendations

NCDOT recommends a three-barrel RCBC with three barrels at 10' wide and 10' height as well as bank stabilization, shown below. Two of the recommended barrels will convey the low flow channel, and the third barrel will act as the overflow.

Potential Impacts

It is anticipated that there will be approximately 190 linear feet of stream impacts to an unnamed tributary near the Neuse River. Wetland impacts are not anticipated. Coordination will be needed with Duke Energy regarding the nearby power substation.



Other Options Considered

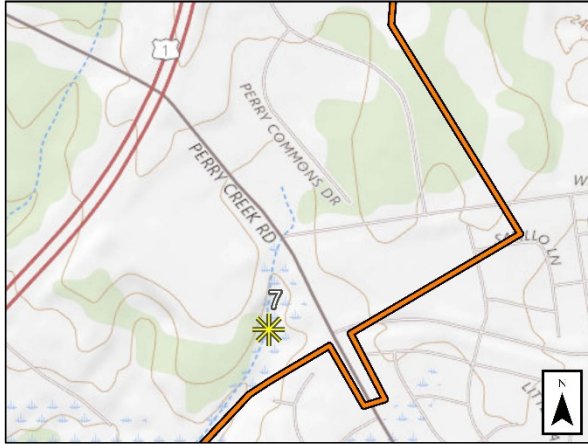
A bridge is not recommended in this location because the low beam will require excavation of the bank or raising the roadway profile, which will result in additional impacts. RS&H is working on quantifying impacts and costs associated with a bridge.



4.7 Site 7

Existing Conditions

Site 7 will convey flow from an unnamed tributary near Perry Creek under the proposed new access road (-Y10-).



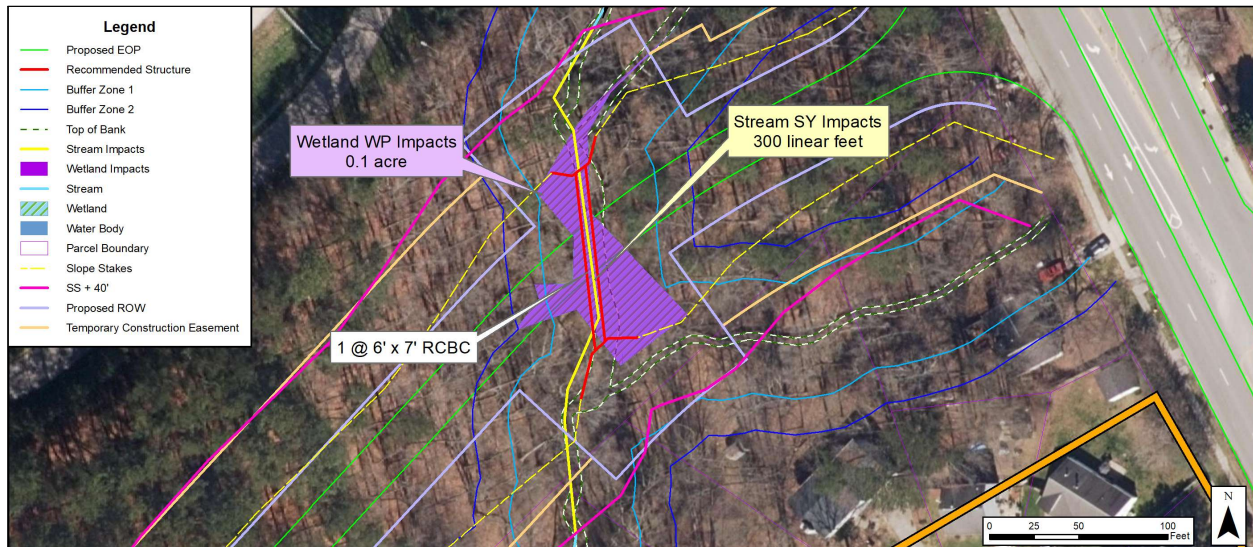
HPR Site 7: Approximate area of recommended crossing

Recommendations

NCDOT recommends a single-barrel RCBC at 6' wide and 7' height, shown below. NCWRC requested notched sills to maintain the normal channel flow width, which was reanalyzed and still meets the headwater requirements in the design year. The existing channel flow width is variable and will be reevaluated once culvert layout is decided.

Potential Impacts

It is anticipated that there will be approximately 300 linear feet of stream impacts to Stream SY and approximately 0.1 acre of wetland impacts to Wetland WP.



Other Options Considered

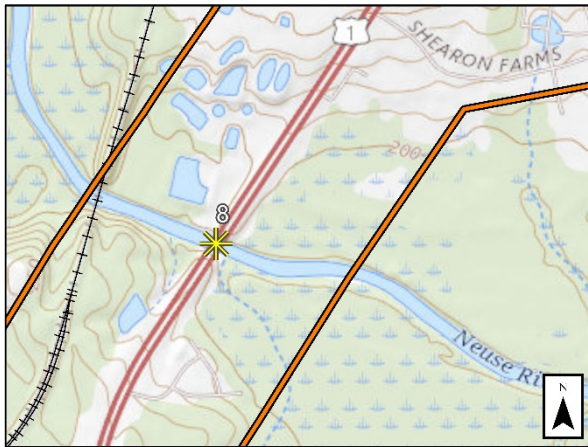
No other options were considered in this location.



4.8 Site 8

Existing Conditions

Site 8 are existing dual bridges at 250' in length along US 1 that crosses the Neuse River.



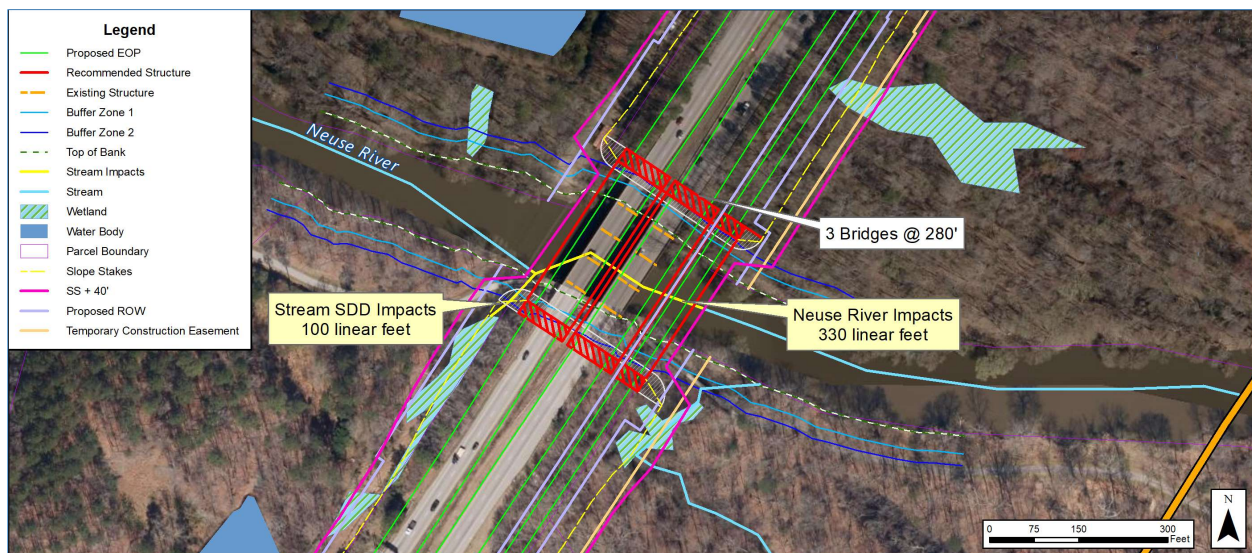
HPR Site 8: Neuse River Bridge Crossing

Recommendations

NCDOT recommends two bridges at 280 feet each to carry the southbound and northbound US 1 lanes over the Neuse River. If the access road on the east side of US 1 is constructed across the Neuse River, a third bridge is also recommended at 280 feet (shown below).

Potential Impacts

It is anticipated that there will be approximately 100 linear feet of stream impacts to Stream SDD and 330 linear feet of stream impacts to the Neuse River. Wetland impacts are not anticipated. Impacts to Wetland WGG and WR, located just south of the recommended crossing are considered impacts due to roadway improvements. Additionally, the presence of cliff swallow nests and bat guano were observed. It is suggested that the NCDOT Biological Surveys Group assess the bridge beforehand to minimize impacts to existing wildlife.





Other Options Considered

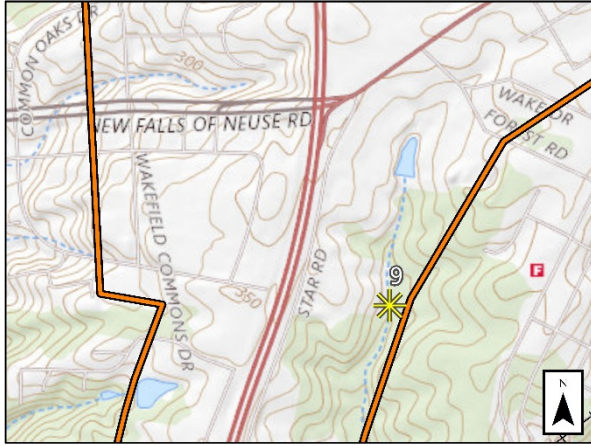
NCWRC requested approximately 100-foot total setback on the south side of the Neuse River to provide separation from the existing greenway for wildlife crossing under the bridges. RS&H is in progress evaluating cost differences between the recommended structure and a lengthened structure.



4.9 Site 9

Existing Conditions

Site 9 will convey flow from an unnamed tributary to Smith Creek under the proposed Star Road (-Y18A-) extension.



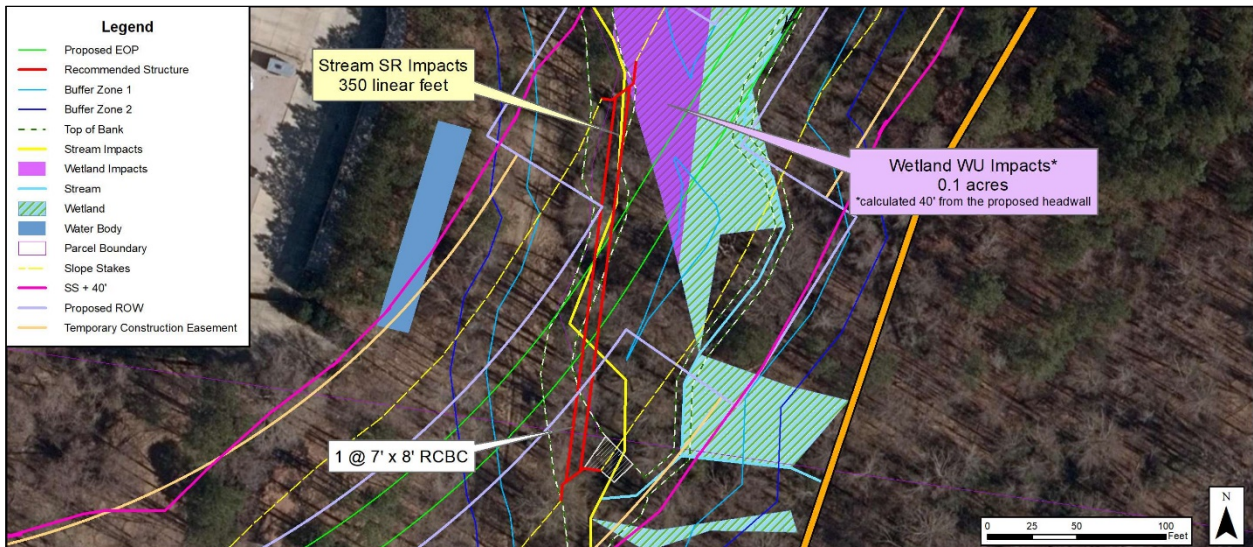
HPR Site 9: Recommended future crossing site

Recommendations

NCDOT recommends a single-barrel RCBC at 7' wide and 8' height and bank stabilization, shown below. NCWRC raised concern over the long length of the recommended culvert at 350 feet, but a bridge is not recommended due to the RCBC conveying flow adequately for this small drainage area.

Potential Impacts

It is anticipated that there will be approximately 350 linear feet of stream impacts to Stream SR and approximately 0.1 acre of wetland impacts to Wetland WU.





Other Options Considered

A bridge is not recommended at this location due to the potential for additional impacts. Stream SQ, Stream ST, and Wetland WK occur in this vicinity. RS&H is working on quantifying impacts and costs associated with a bridge.

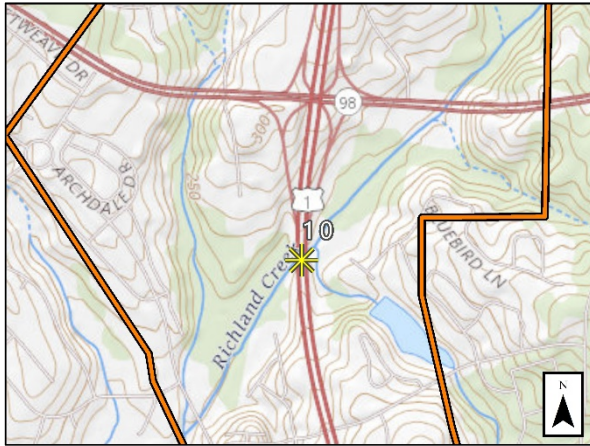
Additionally, shifting the roadway alignment to the west, away from the wetland confluence, would impact the retention pond related to the A-1 Storage building. Shifting the alignment to the east would impact more of Wetland WU. RS&H Roadway Design staff used a maximum radius for the curb and gutter roadway at .04. A tighter radius would require a design exception from NCDOT, and a flatter radius would impact Wetland WU.



4.10 Site 10

Existing Conditions

Site 10 is an existing four barrel RCBC at 10' wide and 11' height located under US 1 that conveys flow from Richland Creek.



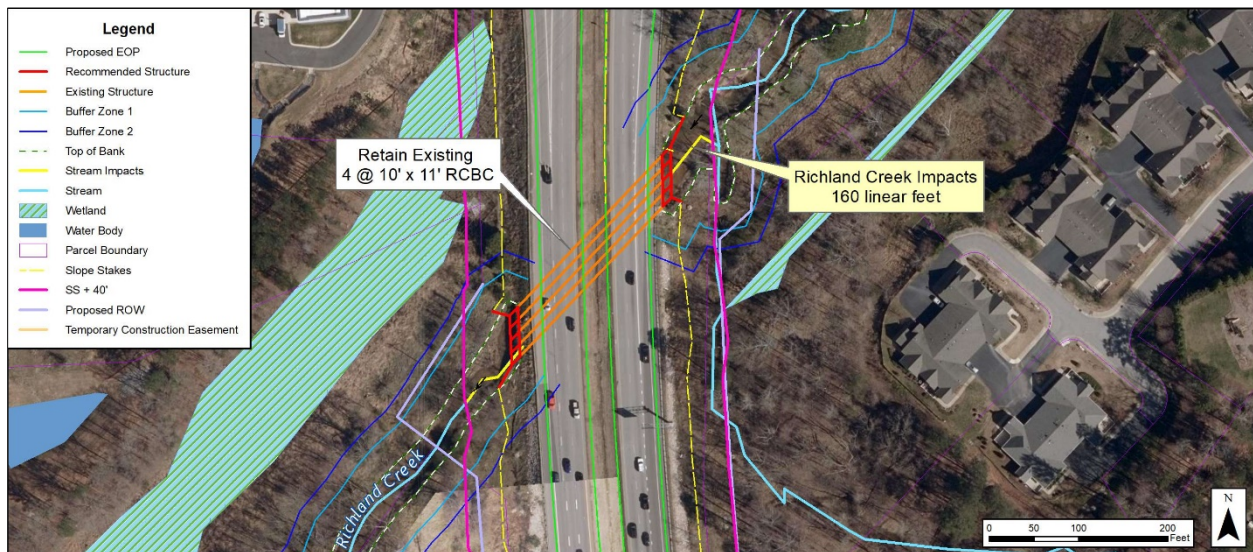
HPR Site 10: 4 - 10' x 11' RCBC outlet

Recommendations

NCDOT recommends extending the existing RCBC as well as the two 72" reinforced concrete overflow pipes approximately 10' upstream and 10' downstream, shown below.

Potential Impacts

It is anticipated that there will be approximately 160 linear feet of stream impacts to Richland Creek. Wetland impacts are not anticipated.



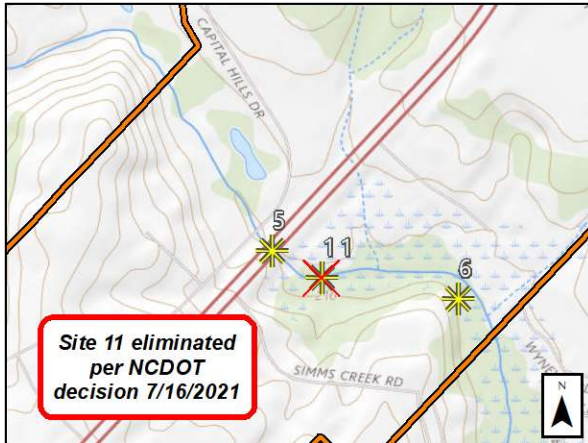
Other Options Considered

No other options were considered in this location.



4.11 Site 11

On 7/16/2021, during a meeting with NCDOT Division 5, it was decided that NCDOT would pursue acquisition of this property. The proposed service road and recommended culvert at Site 11 will not be needed as part of this project. Site 11 was planned to convey flow from an unnamed tributary near the Neuse River under the proposed new access road (-Y10F-).



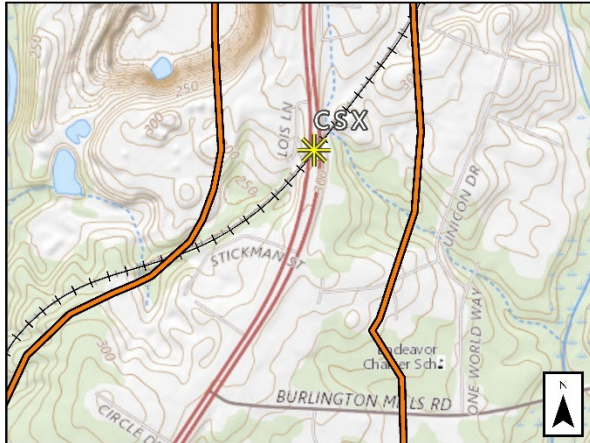
HPR Site 11 – studied, but no longer recommended



4.12 Site 12

Existing Conditions

Site 12 are existing dual bridges, one which carries northbound US 1 traffic over the Raleigh and Gaston Rail Corridor (CSX Rail Line) at 39.7' width and 209' length and the other which carries southbound US 1 traffic over the CSX Rail Line at 43' width and 223.1' length.



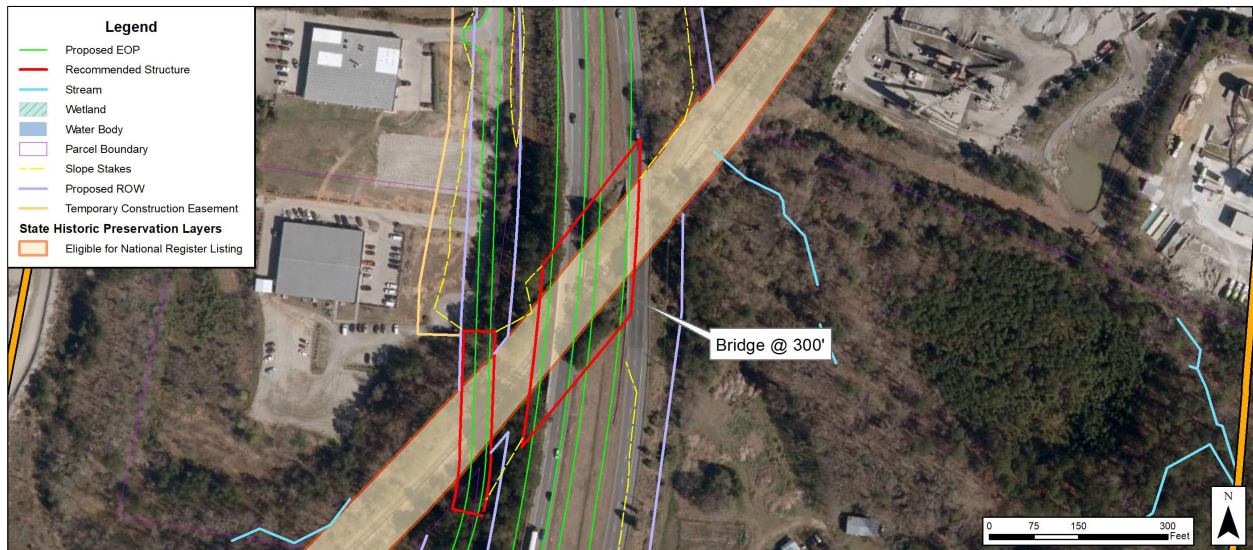
CSX Bridges: Northbound US 1 over the CSX Rail Line

Recommendations

NCDOT recommends one bridge at 155' width and 300' length with a minimum vertical clearance of 24.25' to accommodate for the future rail traffic. Bridge pier placement has not been determined. Note that the structure at this site will require further evaluation with special consideration to the historic rail corridor included in the construction bid documents as it is listed as eligible for the National Register.

Potential Impacts

There are no anticipated stream or wetland impacts.



Other Options Considered

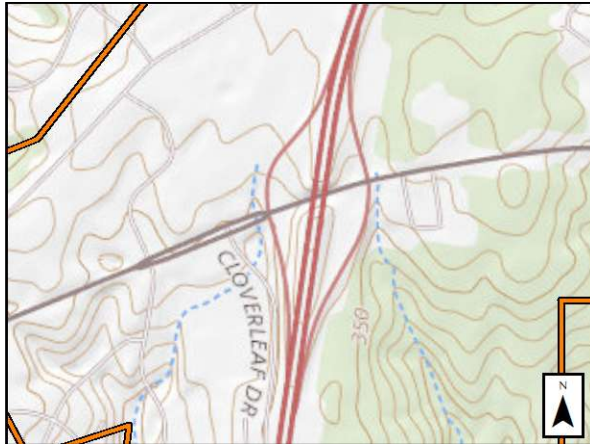
No other options were considered in this location.



4.13 Other Crossings

New crossings of US 1 will be constructed as a part of the roadway design at Durant Road / Perry Creek Road, Burlington Mills Road, Falls of Neuse Road / US 1A (Main Street), Jenkins Road / Stadium Drive and Purnell Road / Harris Road.

NCDOT decided on 7/23/2021 to replace and lengthen the bridges on US 1 over NC 98 Business instead of widening, as shown in the concurred upon preliminary plans. There are no resources in this location to be impacted. Traffic will be maintained on-site during construction.



NC 98 Business Bridges: Northbound US 1 over NC 98 Business (Durham Road)



4.14 Summary of Potential Impacts

The anticipated permits for this project include a Section 404 Individual Permit as well as a Section 401 Water Quality Certification due to the potential impacts to jurisdictional features in the project corridor. Coordination with FEMA is anticipated for certain sites. See **Table 2** for a summary of potential impacts to wetlands and streams.

Table 2 – Summary of Potential Impacts

SITE	WETLAND IMPACTS (acre)	STREAM IMPACTS (linear feet)	NOTES
1	0	0	While slopestakes + 40' would encroach into Wetland WC, this culvert is recommended to be retained with minor rehabilitation inside slopestakes. No impacts are anticipated to Wetland WC or the stream.
2	0	180	Stream SC
3	0	260	Perry Creek
4	0	190	Perry Creek
5	0	100	Unnamed Tributary near the Neuse River
6	0	190	Unnamed Tributary near the Neuse River
7	0.1	300	Wetland WP; Stream SY
8	0	330 (Neuse River) 100 (Stream SDD)	Neuse River; Stream SDD
9	0.1	350	Wetland WU, Stream SR (Unnamed Tributary to Smith Creek). Impacts to Wetland WU are calculated 40' from the recommended headwall.
10	0	160	Richland Creek
44	0	240	Unnamed Tributary near the Neuse River
12	0	0	
TOTAL	0.2	2,160	



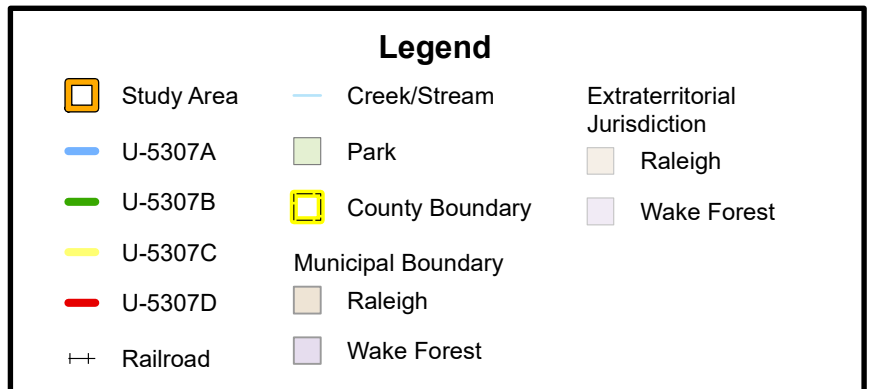
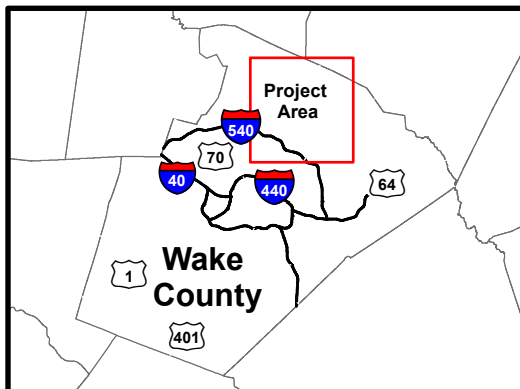
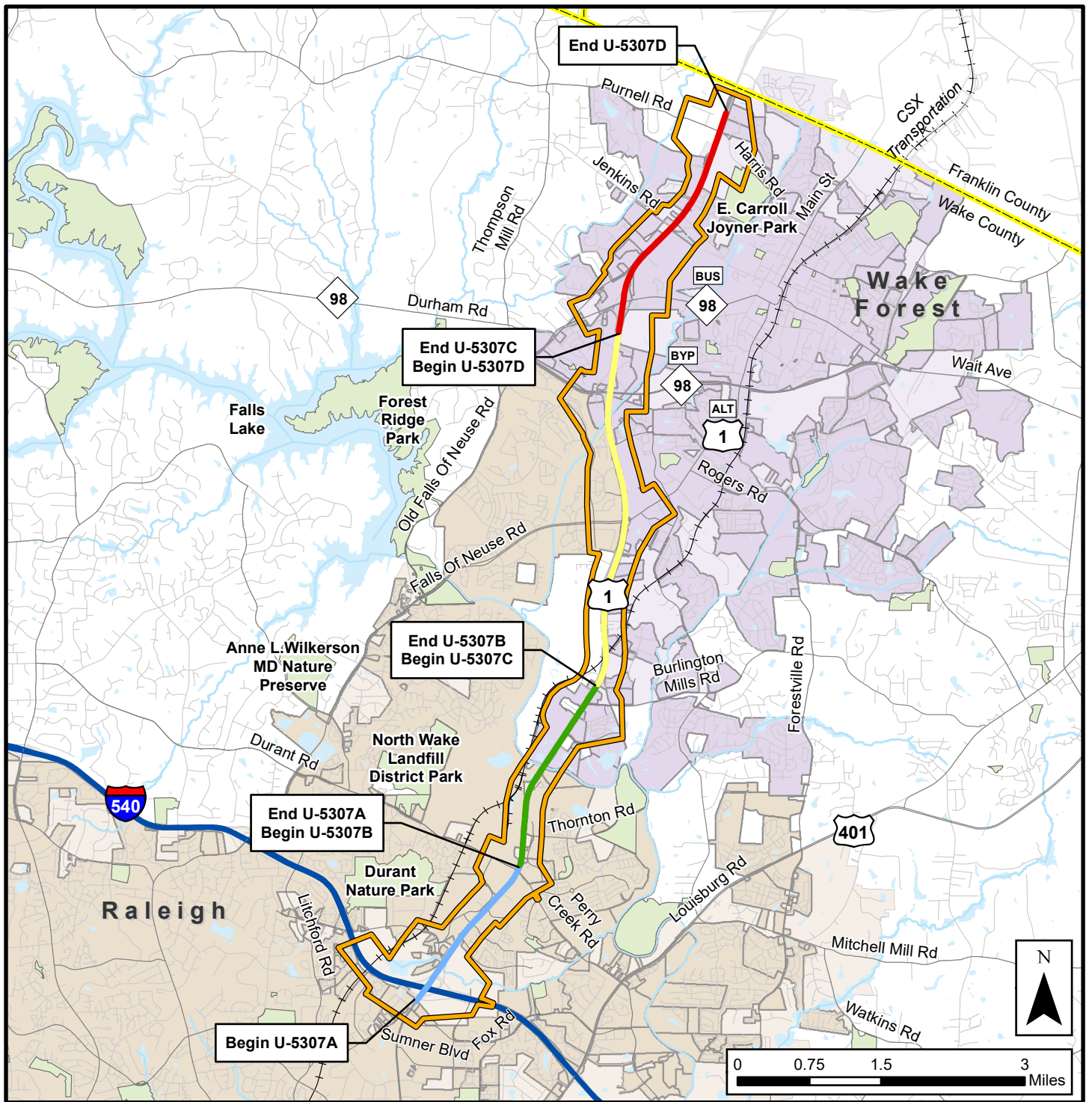
5.0 PROJECT SCHEDULE

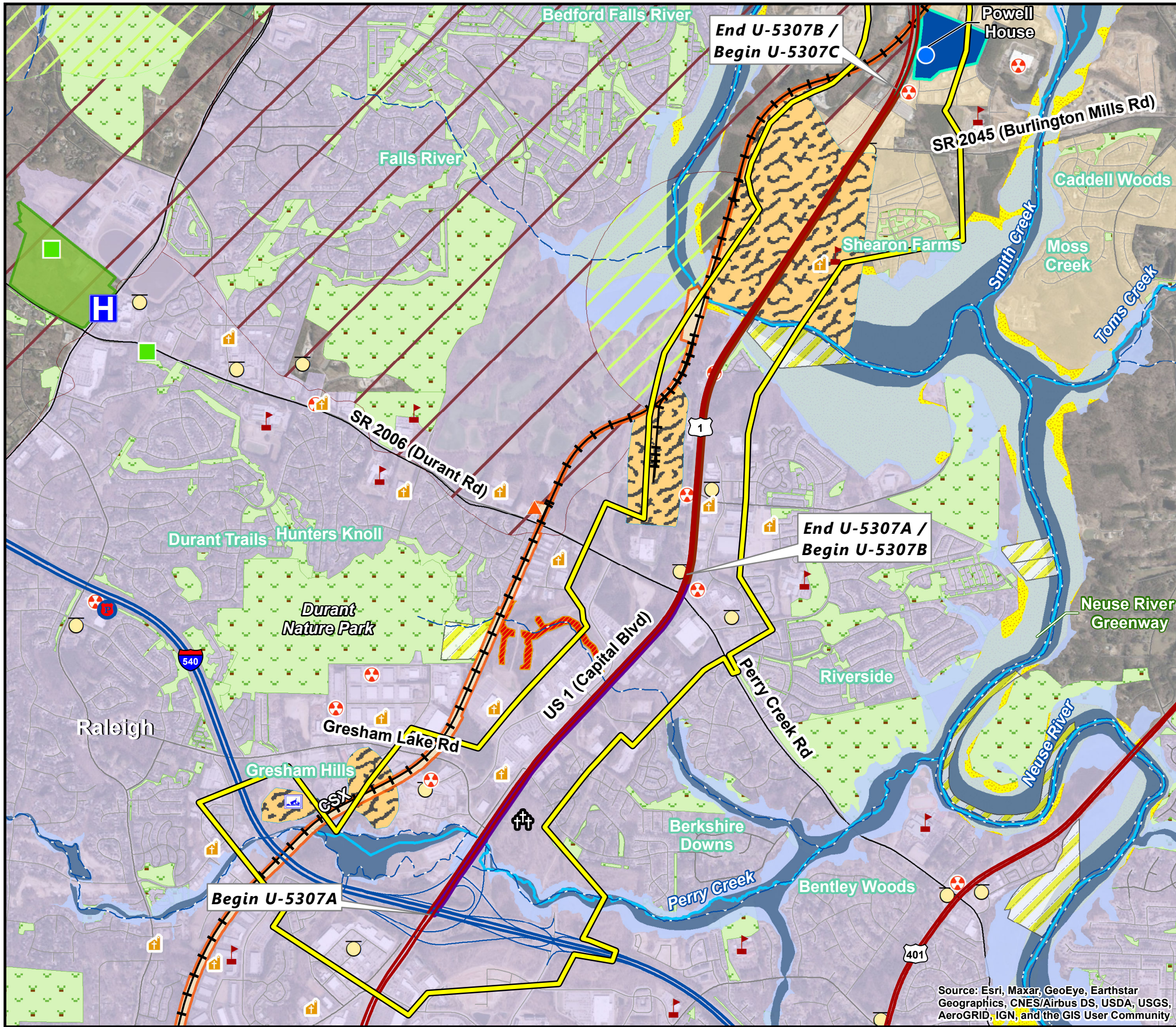
The current project preconstruction schedule is as follows and is subject to change:

- May 2021 – NCDOT approval of preliminary roadway designs
- July 2021 – Concurrence Point 2A Meeting
- September 2021 – Public Meetings
- December 2021 – Concurrence Points 3+4A Meeting
- February 2022 – Categorical Exclusion and Interchange Access Report Approval

The *NCDOT 2020-2029 Current STIP* (April 2021) includes the following funding by segment:

- U-5307A:
 - Right-of-way, utilities, and construction in Fiscal Year (FY) 2025 (Design-Build)
- U-5307B and C:
 - Right-of-way and utilities: FY 2025
 - Construction beginning in FY 2027
- U-5307D:
 - Right-of-way and utilities: FY 2029
 - Construction: Unfunded/Future Years





Legend

U-5307 Project Study Area	Creek / Stream
City of Raleigh	Impaired Stream 303d
Town of Wake Forest	Floodway
Railroad	100 Yr Floodplain
Cemetery	NCHPO Points
Church	National Register Listing
School	Study List Potentially Eligible for NR
Hospital	Determined Eligible for NR
Police Station	NCHPO Boundaries
Landfill	National Register Boundary
Hazardous Waste Site	Eligible for National Register Listing
Underground Storage Tank	State Study List
Park	
Hazardous Disposal Site	
Conservation Easement	
Significant Natural Heritage Area	
Mitigation Site	
Critical Water Supply Watershed	
Protected Water Supply Watershed	

0 2,000 4,000 Feet

N

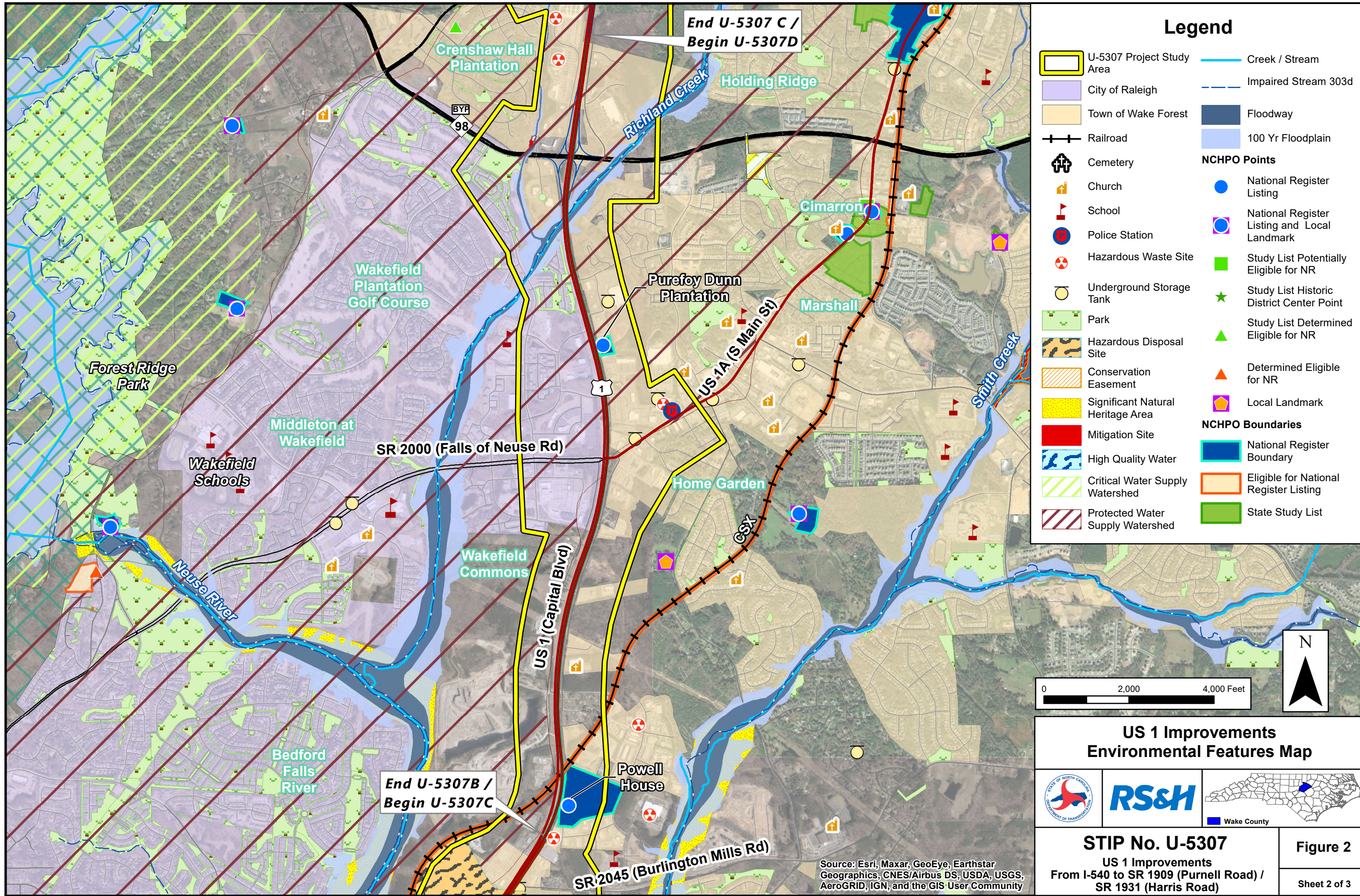
US 1 Improvements Environmental Features Map

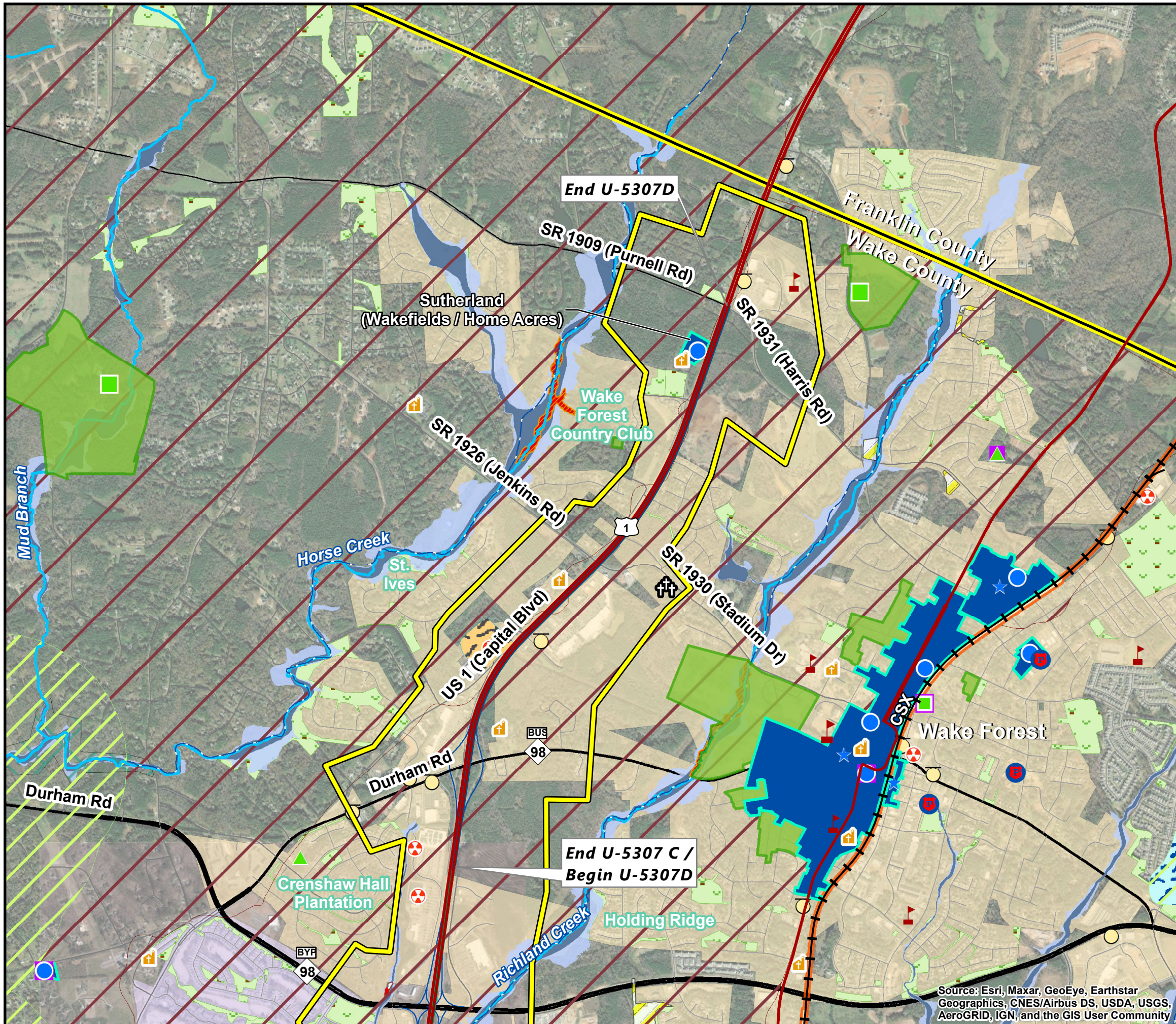
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Wake County

STIP No. U-5307
US 1 Improvements
From I-540 to SR 1909 (Purnell Road) / SR 1931 (Harris Road)

Figure 2
Sheet 1 of 3





Legend

U-5307 Project Study Area	Creek / Stream
City of Raleigh	Impaired Stream 303d
Town of Wake Forest	Floodway
Railroad	100 Yr Floodplain
Cemetery	NCHPO Points
Church	National Register Listing
School	National Register Listing and Local Landmark
Police Station	National Register Historic District Center Point
Hazardous Waste Site	Study List Potentially Eligible for NR
Underground Storage Tank	Study List and Local Landmark
Park	Study List Determined Eligible for NR
Hazardous Disposal Site	Study List Determined Eligible and Local Landmark
Conservation Easement	NCHPO Boundaries
Mitigation Site	National Register Boundary
High Quality Water	Eligible for National Register Listing
Critical Water Supply Watershed	State Study List
Protected Water Supply Watershed	

US 1 Improvements Environmental Features Map

Wake County

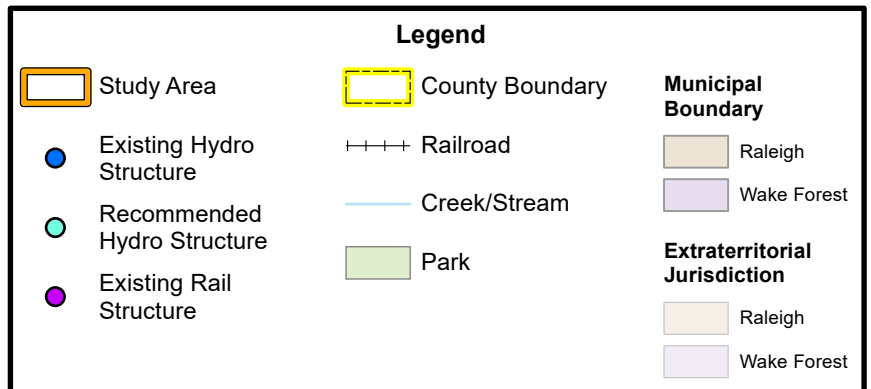
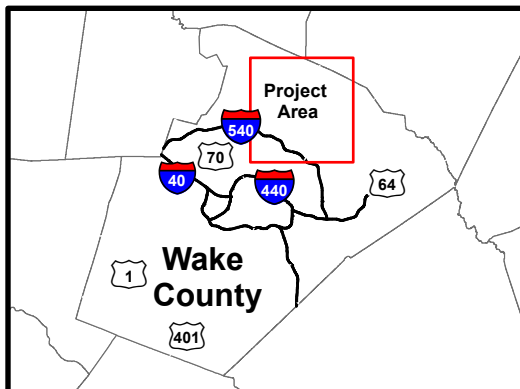
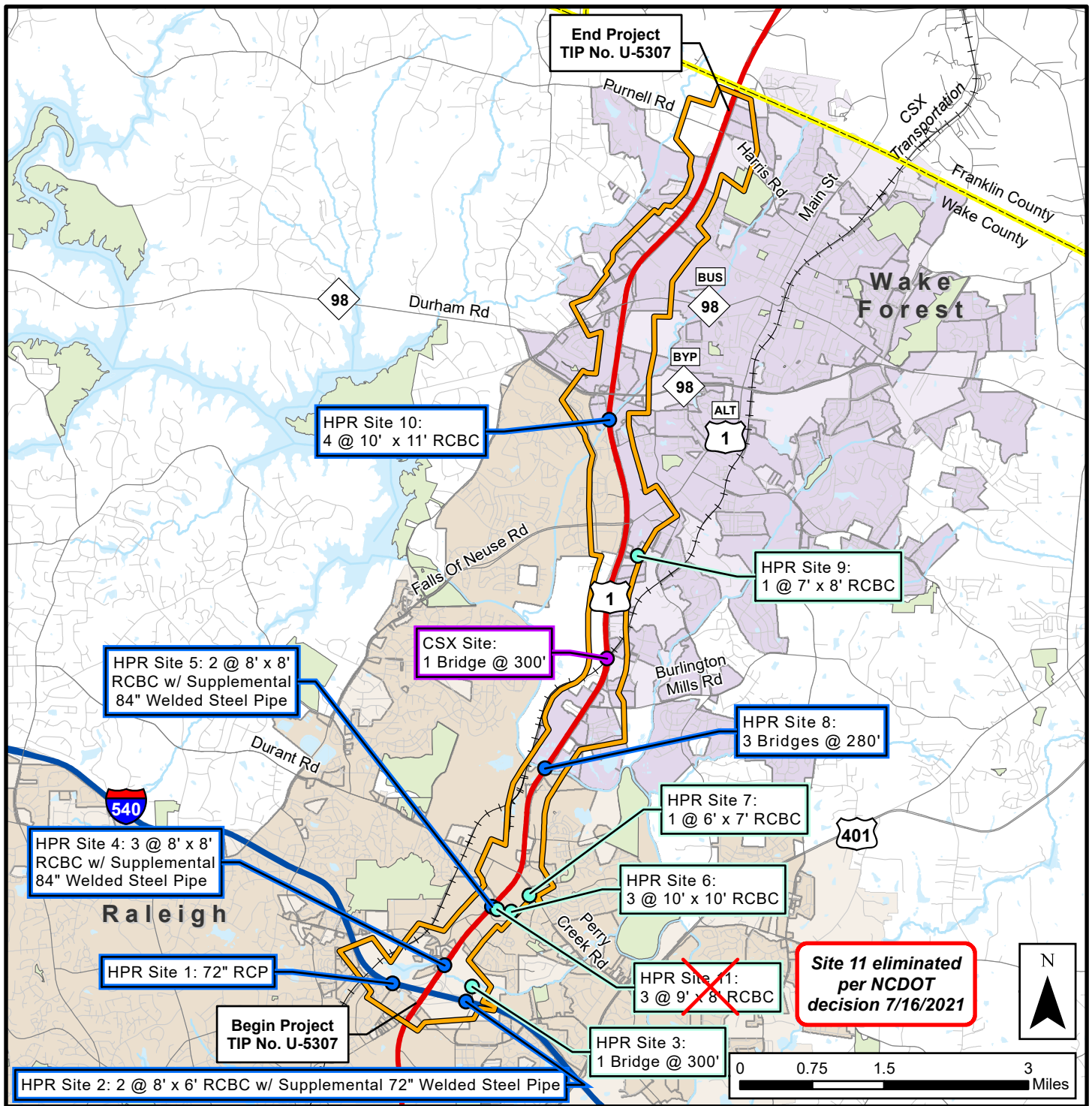
STIP No. U-5307

US 1 Improvements
From I-540 to SR 1909 (Purnell Road) /
SR 1931 (Harris Road)

Figure 2

Sheet 3 of 3

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community





8521 Six Forks Road
Suite 400
Raleigh, NC 27615
919-926-4100

rsandh.com

