

Type III Categorical Exclusion Action Classification Form

STIP Project No.	I-5701
WBS Element	50119.1.1
Federal Project No.	NHPP-040-4(156)298

A. Project Description:

The North Carolina Department of Transportation (NCDOT) is proposing to add lanes on I-40 from the I-440/US 1/US 64 interchange to Lake Wheeler Road (SR 1375) in the City of Raleigh and the Town of Cary within Wake County. The project location is shown in **Figure 1 (Vicinity Map)**. The surrounding environmental features and preliminary design are shown on **Figure 2(a-i)**.

The project will convert the existing auxiliary lanes to create one new through lane in each direction between the interchanges at I-440/US-1/US-64 and Gorman Street and between the interchanges at Gorman Street and Lake Wheeler Road. New auxiliary lanes between the interchanges also will be added to replace the auxiliary lanes that have been converted to through lanes. The result will be four through lanes in each direction from the I-440/US-1/US-64 interchange to Lake Wheeler Road, plus one auxiliary lane in each direction between the interchanges. The widening will occur within the existing right-of-way.

This project is included in CAMPO's 2050 Metropolitan Transportation Plan (MTP). It is included in NCDOT's 2020-2029 *State Transportation Improvement Program (STIP)*, approved by FHWA, and in NCDOT's 2024-2033 STIP adopted by the NCDOT Board of Transportation on June 13, 2023. The Design-Build Let date is January 19, 2027; NCDOT intends to combine I-5701 with the adjacent I-5703 project (to rebuild the existing interchange at I-40/I-440/US 1/US 64) into one Design-Build Let.

Based on NCDOT cost estimates completed in May 2023, the I-5701 project is anticipated to cost approximately \$95 million (construction - \$91.6 million and utility relocations - \$3.3 million).

B. Description of Need and Purpose:

Wake County is one of the state's fastest growing counties and continues to be ranked as one of the best places to live and work, attracting many new residents and businesses to the area (Wake County website: www.wakegov.com/about-wake-county, accessed 1/10/23). Wake County currently has 1.13 million residents (July 2020) and is expected to grow approximately 67 percent by 2050, to 1.89 million people (NC Office of State Budget and Management website: www.osbm.nc.gov/factsfigures/population-demographics/state-demographer/countystate-population-projections, accessed 1/10/23).

Interstate 40 is a major east-west interstate highway and a high-volume corridor in North Carolina and in Wake County; serving local, commuter, and long-distance travel. It is anticipated that without any improvement, I-40 within the study area will not have enough capacity to serve the expected traffic demand through the design year 2045 (*I-40: Capacity Operations Analysis Technical Memorandum*, Atkins, December 2019).

Existing annual average daily traffic volumes on I-40 in the project study area were approximately 133,000 vehicles per day (vpd) in 2018. By 2045, traffic volumes are projected to increase 38-68% on I-40 to approximately 214,000-219,000 vpd (*Traffic Forecast STIP No. I-5701*, AECOM, September 2018). Projected traffic volume increases over the next 20-25 years will cause worsening congestion.

Based on an analysis of year 2045 no-build conditions (*I-40: Capacity Operations Analysis Technical Memorandum*, Atkins, December 2019), all eastbound I-40 freeway segments through the project study area would operate at LOS E or F in the morning and evening peak periods. Most westbound

I-40 segments through the project study area also would operate at LOS E or F in the morning and evening peak periods, except for east of Lake Wheeler Road which would be at LOS D in the morning and evening peak periods and the segment between the Lake Wheeler Road ramps which would be at LOS D in the morning peak period.

The purpose of the proposed improvements is to substantially improve traffic operations in the study corridor in both directions of travel and minimize anticipated level of service failures in the design year.

C. Categorical Exclusion Action Classification:

Type III

D. Proposed Improvements:

N/A

E. Special Project Information:

Alternatives Analysis

Alternatives evaluated for the project include a No Build Alternative and two build alternatives. The No Build Alternative does not meet the purpose and need of the project due to forecasted congestion and lack of capacity, as described above. The two build alternatives are:

- **Alternative 1** - This alternative would create one new through lane in each direction by connecting the existing auxiliary lanes located between the interchanges at I-440/US-1/US-64 and Gorman Street and between the interchanges at Gorman Street and Lake Wheeler Road. The result will be four through lanes in each direction from I-440/US-1/US-64 to Lake Wheeler Road with no auxiliary lanes.
- **Alternative 2 (Preferred)**– This alternative would create one new through lane in each direction by connecting the existing auxiliary lanes located between the interchanges at Gorman Street and Lake Wheeler Road. Additionally, new auxiliary lanes will be added to replace the auxiliary lanes that have been converted to through lanes. The result will be four through lanes in each direction from the I-440/ US 1/US 64 interchange to Lake Wheeler Road, plus one auxiliary lane in each direction between the interchanges.

In comparing the Level of Service (LOS) of freeway segments, merges, and diverges for both alternatives, the auxiliary lanes are needed to provide an adequate LOS for most analyzed elements. As shown in **Table 1**, the freeway segments, merges, and diverges along I-40 would have overall better LOS with Alternative 2 with the addition of the auxiliary lanes, providing better operations and more capacity for through traffic and traffic exiting/entering I-40. Alternative 1 would not meet the purpose and need for the project due to the number of failing LOS elements compared to Alternative 2. On November 17, 2022, the CAMPO board voted unanimously to amend the MTP to be consistent with the Preferred Alternative.

Table 1. Year 2045 Level of Service Comparison – Build Alternatives

I-40 Segment	Alternative 1				Alternative 2 (Preferred) (adds new auxiliary lanes)			
	AM		PM		AM		PM	
	density	LOS	density	LOS	density	LOS	density	LOS
Eastbound I-40								
Between Jones Franklin Rd and Gorman St off-ramp (Freeway)	*	F	*	F	33.3	D	36.7	E
Gorman St off ramp (diverge)	*	F	*	F	24.4	C	26.4	D
Between Gorman St off ramp and on ramp (freeway)	42.9	E	41.6	E	42.9	E	41.6	E
Gorman St on ramp (merge)	*	F	*	F	25.1	C	23.7	C
Gorman St on ramp to Lake Wheeler Rd off ramp (freeway)	*	F	*	F	34.4	D	32.4	D
Lake Wheeler Rd off ramp (diverge)	*	F	*	F	24.9	C	23.7	C
East of Lake Wheeler Rd off ramp to 4-lane transition (freeway)	44.1	E	43.4	E	44.1	E	43.4	E
East of 4-lane transition (freeway)	24.5	C	25.6	C	24.5	C	25.6	C
Lake Wheeler Rd on ramp (merge)	33.7	D	35.1	E	33.7	D	35.1	E
Westbound I-40								
East of Lake Wheeler Rd (freeway)	32.9	D	32.0	D	32.9	D	32.0	D
Lake Wheeler Rd off ramp (diverge)	24.7	D	23.8	C	24.7	D	23.8	C
Between Lake Wheeler Rd ramps (freeway)	35.8	E	38.8	E	35.8	E	38.8	E
Lake Wheeler Rd on ramp (merge)	36.8	C	*	F	20.5	B	22.8	C
Between Lake Wheeler Rd and Gorman St (freeway)	39.7	E	*	F	27.7	D	31.2	D
Gorman St off ramp (diverge)	34.3	D	*	F	21.3	C	24.0	D
Between Gorman St off ramp and on ramp (freeway)	33.2	D	31.1	D	33.2	D	31.1	D
Gorman St on ramp (merge)	*	F	36.0	C	24.1	C	20.4	C
West of Gorman St (freeway)	*	F	26.7	D	31.4	D	26.7	D

Sources: Alternative 1 – NCDOT (8/31/22) Alternative 2 - (I-40: Capacity Operations Analysis Technical Memorandum, Atkins, December 2019)

Density reported in passenger cars/mile/lane. LOS = Level of Service

* = density > 45

Public and Stakeholder Coordination

Stakeholder Coordination

NCDOT has continuously worked with the City of Raleigh, the Town of Cary, Wake County, and other governmental agencies throughout the planning process.

Scoping

In April of 2017, an Internal/External Scoping Meeting was held to assist with the development of the project and potential impacts. This overview kick-off meeting was attended by FHWA, United States

Environmental Protection Agency (USEPA), CAMPO, North Carolina Department of Environmental Quality (NCDEQ), North Carolina Wildlife Resources Commission (NCWRC), and various NCDOT departments.

In June of 2018, NCDOT hosted an Internal/External Scoping meeting to discuss aligning the schedules of Projects I-5701 and I-5703.

A formal Start of Study and Scoping Packet (with letter) were sent by NCDOT to local, state, and federal agencies on August 29, 2018. These agencies included the USEPA, US Fish and Wildlife Service (USFWS), US Army Corps of Engineers (USACE), North Carolina State Clearinghouse (for various state regulatory agencies), CAMPO, Wake County, City of Raleigh, and Town of Cary.

Project Website

Two project related public websites were developed for the project and are currently active.

The first website (www.ncdot.gov/projects/40-440-us-1-interchange/) provides project information for both the I-5703 project and I-5701 project, including contact information for the Project Managers. Currently, this website provides a summary of the May 9, 2019 public meeting and also allows people to contact NCDOT with questions or comments.

The second website (<https://publicinput.com/40-440-us1-interchange>) was created to gather feedback on the project. The PublicInput.Com website included a survey on both projects (I-5701 and I-5703) and allowed the public to provide detailed comments.

Public Meetings

Two public meeting open houses have been held for this project. The first was on May 9, 2019, and the second on March 14, 2023.

The first public meeting open house was held on May 9, 2019, from 4:00 pm to 7:00 pm at the Hilton Garden Inn (131 Columbus Avenue, Cary). This meeting is documented in *Public Meeting #1 – May 9, 2019 Summary* (Atkins, June 2019). The public meeting presented the conceptual plans to add additional lanes to I-40. This meeting also presented information on the adjacent project (I-5703 - Reconstruct the existing interchange of I-40 with I-440/US-1/US-64).

NCDOT hosted a Local Officials Briefing prior to the May 2019 public meeting from 2:30 pm to 3:30 pm. Officials from CAMPO, City of Raleigh Fire Department, City of Raleigh Department of Transportation, and Town of Cary attended the meeting.

A total of 113 members of the public signed in at the first public meeting. During the 30-day comment period, the public could also read about the project and provide comments via a website. During the 30-day comment period, twelve comment forms were received at the public meeting and 96 individuals participated in the PublicInput.Com survey on the website for a total of 108 responders. The questions on the comment form from the public meeting were the same as the survey questions listed on the PublicInput.Com Website. Forty-five (45) percent of the responses were “Very Supportive” of the project and 33% were “Somewhat Supportive”. Comments included a desire for noise abatement and to know the results of the traffic noise analysis. Information about traffic noise was provided during the second public meeting in 2023. Comments did not raise new concerns or provide additional issues that the project team was not already aware of and analyzing.

A second public meeting was held on March 14, 2023, from 4:00 pm to 7:00 pm at the Hope Community Church (821 Buck Jones Road, Raleigh). This meeting presented the Preferred Alternatives for the I-5701 and I-5703 projects. A total of 108 comment submittals were received for both projects, with 34 comments submitted specifically for Project I-5701. There was no substantial opposition to the project. Some issues mentioned in the comments included a desire for more public transit, concern about induced traffic and concern about traffic noise. None of the comments required changes in the project. The public meeting comment/responses are documented in *I-5701/I-5703 Public Comment Summary and Responses – July 20, 2023* (Atkins, July 2023).

Water Resources

Water Quality

The entire project study area is within the Neuse River Basin. Walnut Creek is the only named stream in the project study area. Walnut Creek is on the North Carolina 2022 Final 303(d) list of impaired waters as impaired due to fish tissue polychlorinated biphenyls advisory.

Construction of the project will require erosion and sedimentation control plans that follow Design Standards in Sensitive Watershed and Neuse River Riparian Buffer Rules.

Streams, Wetlands and Ponds

A *Natural Resources Technical Report: Addition of Lanes to I-40 from I-40/I-440/US 1/US 64 Interchange to Lake Wheeler Road* (Atkins, December 2021) was prepared to evaluate the potential impacts to the natural environment. The report identified a total of 35 streams and 21 wetlands within the project study area. No surface water ponds are located within the project study area. The US Army Corps of Engineers (USACE) and NC Division of Water Resources (NCDWR) agreed on the jurisdictional determinations via emails received in November 2021.

Impacts to streams, wetlands, ponds, and riparian buffers are documented in *Memo to File – Impacts to Waters of the US and Neuse River Buffers from the I-5701 Preferred Alternative* (Atkins, October 18, 2021). Approximately 1,290 linear feet of streams and 0.31 acres of wetlands are anticipated to be impacted by the project. Impacts were calculated using the preliminary design estimated construction limits (slope stakes). A buffer of 25-feet was added to the slope stakes in accordance with NCDOT procedures for calculating impacts to jurisdictional resources at the preliminary planning-level design stage.

Neuse River Riparian Buffer Rules

The project is located within the Neuse River Basin and subject to those rules and regulations. NCDOT will coordinate with the North Carolina Department of Environmental Quality (NCDEQ) Division of Water Resources (NCDWR) on compliance with implementation of the buffer rules. Approximately 159,897 square feet (86,384 square feet for Zone 1 and 73,513 square feet for Zone 2) of riparian buffer impacts are anticipated from the project. NCDOT will attempt to avoid and minimize impacts to streams and wetlands to the greatest extent practicable during project design and take the buffer rules into consideration. The riparian buffer values represent a preliminary calculation of buffer impacts, and no attempt has been made to document regulatory exemptions based on existing land use. Additional refinements to these values will be determined during the permitting phase of this project.

Federally Protected Species

Protected species are addressed in the project's *Natural Resources Technical Report: STIP I-5701* (Atkins, December 2021) and the *I-5701/I-5703 Aquatic Species Survey Report* (Three Oaks Engineering, June 2020). Protected species are plants and animals afforded protections under the federal Endangered Species Act and the Bald and Golden Eagle Protection Act.

When the Natural Resources Technical Report (NRTR) and Aquatic Species Survey Report were prepared, information about species listings was only available at the county level. Since then, the US Fish and Wildlife Service implemented their IPaC system (Information for Planning and Consultation). This system provides species information for requester-provided geographic areas, such as project study areas.

An IPaC report was run on January 6, 2023, for the Project I-5701 NRTR study area and the species list changed from what was reported in the NRTR and Aquatic Species Survey Report. The following species discussed in the NRTR and Aquatic Species Survey Report but no longer appear on the January 6, 2023, IPaC report for the project study area include: Cape Fear Shiner, Tar River

spiny mussel, yellow lance, and Northern long-eared bat. The status of one species changed: Atlantic pigtoe changed from Proposed Threatened to listed as Threatened.

The US Fish and Wildlife Service has issued a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. Although this programmatic covers Divisions 1-8, The USFWS only considers NLEBs to be known or potentially found in 30 counties within Divisions 1-8. NCDOT, FHWA, and USACE have agreed to two conservation measures which will avoid/minimize mortality of NLEBs. These conservation measures only apply to the 30 current known/potential counties shown on Figure 2 of the PBO at this time. The programmatic determination for NLEB for the NCDOT program is “May Affect, Likely to Adversely Affect”. The PBO will ensure compliance with Section 7 of the Endangered Species Act for ten years (effective through December 31, 2030) for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Wake County, where I-5701 is located.

There is one species for the study area that is newly proposed for listing as Endangered that was not included in the NRTR, the tricolored bat (*Perimyotis subflavus* – PESU).

The current species listed for the project study area and their listing statuses are presented in **Table 2**, along with the Biological Conclusions, where appropriate, for project impacts to these species.

Table 2: ESA Federally Protected Species Listed for Wake County

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Picoides borealis</i>	Red-cockaded woodpecker	E	No	NE
<i>Fusconaia masoni</i>	Atlantic pigtoe	T	Yes	MANLAA
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	E	Yes	MANLAA
<i>Rhus michauxii</i>	Michaux’s sumac	E	Yes	NE
<i>Perimyotis subflavus</i>	Tricolored bat	Proposed Endangered	TBD	Not Required
<i>Necturus lewisi</i>	Neuse River waterdog	T	Yes	MANLAA
<i>Noturus furiosus</i>	Carolina madtom	E	Yes	MANLAA
<i>Danaus plexippus</i>	Monarch butterfly	Candidate	N/A	Not Required

Note: T=Threatened; E=Endangered; NE=No Effect; MANLAA=May Affect, Not Likely to Adversely Affect, TBD=To Be Determined, See text on Tricolored Bat below for additional detail.

On September 14, 2022, the USFWS announced a proposal to list the tricolored bat (*Perimyotis subflavus* - PESU) as Endangered under the Endangered Species Act. Given the proposal to list this bat as Federally Endangered, NCDOT and its federal partners, FHWA and USACE are initiating a conference programmatic consultation to address impacts to this species. USFWS has not provided an official effective listing date, but it is anticipated to occur in the second half of 2023. Upon listing, USFWS is expected to provide habitat descriptions and an area of influence/distribution range for PESU. When this information is provided, it will help to inform NCDOT’s determinations on habitat that could be impacted by NCDOT actions.

A desktop-GIS assessment of the project study area, as well as the area within a 1.0-mile radius of the project limits, was performed on August 21, 2019 using color aerials dated February 2017 from NCOneMap. Areas of likely bald eagle habitat were field evaluated on May 13, 2021 for nests and species sightings, with neither being observed. Additionally, a review of the NHP database (2021) within 1.0 mile of the project study area revealed one bald eagle occurrence (2011/2012) within the

headwaters of Lake Raleigh/Walnut Creek. This eagle occurrence is approximately 4,000 feet from the project study area. Due to the lack of habitat and minimal impact anticipated for this project (road widening with tree clearing along existing road where eagle nests are unlikely and not observed), it has been determined that this project will not affect this species.

Cultural Resources

There are no properties listed on the National Register of Historic Places or on the Study List within the project's Area of Potential Effects (APE). There are properties over fifty years of age. These properties were evaluated and none were determined eligible for listing on the NRHP (*Historic Architecture and Landscapes No Historic Properties Present Form*, NCDOT, November 3, 2023).

There are no existing archaeological sites in the project study area on or eligible for the National Register of Historic Places and the area is unlikely to contain significant, intact, and preserved archaeological deposits (*No Archaeological Survey Required Form for I-5701*, NCDOT, September 24, 2018).

Community Studies

A *Community Impact Assessment* (Atkins, July 2019) was prepared for the project as well as a *CIA Update Memo* (Atkins, June 2023). Potential impacts identified in the reports include:

- Project improvements will consist of connecting auxiliary lanes that were paved as part of Project Fortify and construction of new auxiliary lanes. Construction traffic delays are expected to be minor and a low negative temporary impact to agricultural transport, businesses, and economic resources.
- A local EMS official noted that the project could result in a "high" negative temporary impact to emergency response times during construction.
- The local school transportation official noted that "high" negative temporary impacts could occur to school transportation from degraded traffic conditions during construction.
- Construction traffic delays are expected to be minor and a low negative temporary impact to community resources located outside of the DCIA, adjacent to the project corridor.
- The community has expressed concern over the recurring effect of constant construction that has been on-going along the I-40 corridor in this area over the last few years. Construction associated with Project I-5701 is not expected to be as disruptive as Project Fortify. This would be a low negative temporary impact.
- While low-income populations are present within the DCIA, no notably adverse community impacts are anticipated with this project; thus, impacts to low-income populations do not appear to be disproportionately high and adverse. Benefits and burdens resulting from the project are anticipated to be equitably distributed throughout the community. No disparate impacts are anticipated under Title VI related statutes. Adding additional lanes to I-40 will increase the capacity of the interstate, benefiting the overall community.

A Work Zone Traffic Control Plan will be developed for the project that will minimize traffic disruptions and impacts along I-40 during construction. A project commitment is included to coordinate with Wake County Public School System, transit agencies, and emergency response providers regarding detour routes and associated route changes that may be necessary during construction.

Traffic Noise

The source of this traffic noise information is the *Traffic Noise Report: Addition of Lanes to I-40 from I-40/I-440/US 1/US 64 Interchange to Lake Wheeler Road* (Atkins, July 2021).

Traffic Noise Impacts

The maximum number of receptors for the preferred alternative predicted to become impacted by future traffic noise is shown on **Table 3**. The table includes those receptors expected to experience traffic noise impacts by either approaching or exceeding the FHWA Noise Abatement Criteria or by a substantial increase in exterior noise levels as defined in the NCDOT Traffic Noise Policy.

Table 3: Predicted Traffic Noise Impacts by Preferred Alternative *

Residential (NAC B)	Place of Worship/Schools, Parks, etc. (NAC C & D)	Businesses (NAC E)	Total
541	11 ¹	0	552

*Per TNM 2.5 and in accordance with 23 CFR Part 772

¹Category C uses are an office park picnic area, Dillard Drive HS/MS recreational fields, Walnut Creek Greenway in Lake Johnson Park, dog park at Remington Place Apartments, the pool at The U Apartments, Orchard Hollow Apartment's playground, and Lonnie Poole Golf Course.

Traffic Noise Abatement Measures

Measures for reducing or eliminating the traffic noise impacts, including noise barriers, were considered for all impacted receptors. Noise barriers include two basic types: earthen berms and noise walls. These structures act to diffract, absorb, and reflect highway traffic noise.

Noise Barriers

A noise barrier evaluation was conducted for this project utilizing the Traffic Noise Model (TNM 2.5) software developed by the FHWA. **Table 4** below summarizes the results of the evaluation.

Table 4: Preliminary Noise Barrier Evaluation Results

NSA	Noise Barrier Location	Approx. Length / Height ¹ (ft)	Approx. Square Footage	Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely") for Construction ²
2	NW2 - Along EB side of I-40 west of Jones Franklin Rd	1,596 / 17	26,519	86	308 / 1,500	Yes
3	Existing wall along shoulder of WB I-40 east of Jones Franklin Rd	767	234 sq. ft. added	50	211 / 1,500	Yes
	NW3 - Extension of existing wall along WB I-40	1,031 / 10	10,307			

NSA	Noise Barrier Location	Approx. Length / Height ¹ (ft)	Approx. Square Footage	Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely") for Construction ²
	east of Jones Franklin Rd					
4	NW4-1 & NW4-2 - Along EB side of I-40 between Jones Franklin Rd and Olive Rd	3,655 / 18	67,238	94	710 / 1,500	Yes
5	NW5a - Along WB I-40 west of Avent Ferry Rd at Remington Pl Apts.	1,132 / 21	23,815	24	992 / 1,500	Yes
	NW5ab - Along WB I-40 west of Avent Ferry Rd for Apts. and Lake Johnson Greenway	2,836 / 16	45,170	26	1,737 / 1,500	No ³
6	NW6 - Along EB I-40 between Avent Ferry Rd and Lake Dam Rd	2,778 / 18	50,257	186	270 / 1,500	Yes
7	NW7 - Along the WB I-40 on-ramp from Gorman St	814 / 23	18,811	29	649 / 1,500	Yes
9	NW9 - Along the I-40 WB off-ramp to Gorman St, between Trailwood Dr and Gorman St	1,500 / 14	20,910	39	518 / 1,500	Yes
10	NW10ab - Along cut slope for I-40 EB off ramp to Lake Wheeler Rd	5,673 / 14	77,841	276	281 / 1,500	Yes
	NW10b - Adjacent to I-40 EB off-ramp to Lake Wheeler Rd	1,397 / 13	17,522	13	1,348 / 1,500	Yes

¹Average wall height. Actual wall height at any given location may be higher or lower.

²The likelihood of a barrier's construction is preliminary and subject to change, pending completion of final design and the public involvement process.

³Barrier is not reasonable due to the quantity per benefited receptor exceeding the allowable quantity per benefited receptor.

A traffic noise evaluation was performed that identified nine (9) noise barriers that preliminarily meet feasibility and reasonableness criteria found in the NCDOT Traffic Noise Policy. A more detailed analysis will be completed during project final design. Noise barriers preliminarily found to be feasible and reasonable during the preliminary noise analysis may not be found to be feasible and reasonable during the final design noise analysis due to changes in proposed project alignment and other design considerations, surrounding land use development, or utility conflicts, among other factors. Conversely, noise barriers that preliminarily were not considered feasible and reasonable may meet the established criteria and be recommended for construction. This evaluation was conducted in accordance with the highway traffic noise requirements of Title 23 CFR Part 772.

In accordance with NCDOT Traffic Noise Policy, the Federal/State governments are not responsible for providing noise abatement measures for new development for which building permits are issued after the Date of Public Knowledge. The Date of Public Knowledge of the proposed highway project will be the approval date of the Categorical Exclusion (CE). NCDOT strongly advocates the planning, design and construction of noise-compatible development and encourages its practice among planners, building officials, developers, and others.

Air Quality

The project is in Wake County, which is within the Raleigh-Durham-Chapel Hill nonattainment area for the prior 1997 ozone National Ambient Air Quality Standard (NAAQS) as defined by the EPA. This area was designated nonattainment for the 1997 8-hour ozone standard effective June 15, 2004. However, due to improved monitoring data, this area was redesignated maintenance on December 26, 2007. EPA approved a SIP revision for the removal of Federal low-Reid vapor pressure requirement effective on February 3, 2014. The Raleigh-Durham-Chapel Hill area was attainment for the 2008 ozone NAAQS resulting in the 1997 ozone NAAQS being revoked on April 6, 2015. On February 16, 2018, the United States Court of Appeals for the District of Columbia Circuit in *South Coast Air Quality Mgmt. District v. EPA* (“South Coast II,” 882 F.3d 1138) held that transportation conformity determinations must be made in areas that were either nonattainment or maintenance for the 1997 ozone NAAQS and attainment for the 2008 ozone NAAQS when the 1997 ozone NAAQS was revoked. Transportation conformity for plans and TIPs for the 1997 Ozone NAAQS can be demonstrated without a regional emissions analysis pursuant to 40 CFR 93.109(c). The Capital Area Metropolitan Planning Organization 2050 Metropolitan Transportation Plan (MTP) and the FY 2024-2027 Transportation Improvement Program (TIP) conform to the intent of the SIP. The USDOT made a conformity determination on the MTP on 09/28/2023 and the TIP on 09/28/2023. The current conformity determination is consistent with the final conformity rule found in 40 CFR Parts 51 and 93. There are no significant changes in the project’s design concept or scope, as used in the conformity analyses.

F. Project Impact Criteria Checklist:

F3. Type III Actions			
<p>Proposed improvement(s) that fit Type III Actions (NCDOT-FHWA CE Programmatic Agreement, Appendix C) answer questions below.</p> <ul style="list-style-type: none"> • <i>NCDOT will certify the Categorical Exclusion for FHWA approval.</i> • <i>If any questions are marked "Yes" then additional information will be required for those questions in Section G.</i> 			
		Yes	No
1	Does the project involve potential effects to Threatened or Endangered species listed by the US Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGEPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Does the project generate substantial controversy or public opposition, for any reason, following appropriate public involvement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Does the project cause disproportionately high and adverse impacts relative to low-income and/or minority populations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	Does the project involve substantial residential or commercial displacements or right of way acquisition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	Does the project include a determination under Section 4(f)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	Is a project-level analysis for direct, indirect, or cumulative effects required based on the NCDOT community studies screening tool?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	Does the project impact anadromous fish spawning waters?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9	Does the project impact waters classified as Outstanding Resource Waters (ORW), High Quality Waters (HQW), Water Supply Watershed Critical Areas, 303(d)-listed impaired water bodies, buffer rules, or submerged aquatic vegetation (SAV)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10	Does the project impact Waters of the United States in any of the designated mountain trout streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11	Does the project require a US Army Corps of Engineers (USACE) Individual Section 404 Permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	Does the project include Section 106 of the National Historic Preservation Act (NHPA) effects determination other than a No Effect, including archaeological remains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14	Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15	Does the project require work encroaching and adversely affecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

16	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Areas of Environmental Concern (AEC)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Type III Actions (continued)</u>		Yes	No
17	Does the project require a US Coast Guard (USCG) permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River present within the project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
19	Does the project involve Coastal Barrier Resource Act (CBRA) resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
20	Does the project impact federal lands (e.g. US Forest Service (USFS), US Fish and Wildlife Service (USFWS), etc.) or Tribal (Trust) Lands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
21	Does the project involve any changes in access control or the modification or construction of an interchange on an interstate?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23	Will maintenance of traffic cause substantial disruption?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24	Is the project inconsistent with the STIP, and where applicable, the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25	Does the project require the acquisition of lands under the protection of Section 6(f) of the Land and Water Conservation Act, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, TVA, Tribal Lands, or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26	Does the project involve Federal Emergency Management Act (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
27	Is the project considered a Type I under the NCDOT's Noise Policy?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
28	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
29	Is the project in an Air Quality non-attainment or maintenance area for a National Ambient Air Quality Standard (NAAQS)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
30	Are there other issues that arose during the project development process that affected the project decision?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

G. Additional Documentation as Required from Section F (ONLY for questions marked 'Yes'):

Question 1. Does the project involve potential effects to Threatened or Endangered species listed by the US Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS)?

Biological determinations of May Affect/Not Likely to Adversely Affect have been determined for four aquatic species: Atlantic pigtoe, dwarf wedgmussel, Neuse River waterdog, and Carolina madtom. Aquatic surveys will need to be updated and any Section 7 consultation with the USFWS completed prior to the design-build let for the project.

The US Fish and Wildlife Service has issued a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. Although this programmatic covers Divisions 1-8, The USFWS only considers NLEBs to be known or potentially found in 30 counties within Divisions 1-8. NCDOT, FHWA, and USACE have agreed to two conservation measures which will avoid/minimize mortality of NLEBs. These conservation measures only apply to the 30 current known/potential counties shown on Figure 2 of the PBO at this time. The programmatic determination for NLEB for the NCDOT program is "May Affect, Likely to Adversely Affect". The PBO will ensure compliance with Section 7 of the Endangered Species Act for ten years (effective through December 31, 2030) for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Wake County, where I-5703 is located.

On September 14, 2022, the U.S. Fish and Wildlife Service announced a proposal to list the tricolored bat (*Perimyotis subflavus* - PESU) as endangered under the Endangered Species Act. Given the proposal to list PESU as Federally Endangered, NCDOT and its federal partners, FHWA and USACE are initiating a conference programmatic consultation to address impacts to this species. USFWS has not provided an official effective listing date, but it is anticipated to occur in the second half of 2023. Upon listing, USFWS is expected to provide habitat descriptions and an area of influence/distribution range for PESU. When this information is provided, it will help to inform NCDOT's determinations on habitat that could be impacted by NCDOT actions.

Question 9. Does the project impact waters classified as Outstanding Resource Waters (ORW), High Quality Waters (HQW), Water Supply Watershed Critical Areas, 303(d)-listed impaired water bodies, buffer rules, or submerged aquatic vegetation (SAV)?

All surface waters within the project area are located within the Neuse River Basin and subject to Neuse River Buffer Rules. As currently proposed, project impacts are anticipated to the regulated buffer surrounding the impacted streams. A Buffer Authorization will be required from the North Carolina Department of Environmental Quality Division of Water Resources prior to construction.

Walnut Creek is the only named stream in the project study area. Walnut Creek is on the North Carolina 2022 Final 303(d) list of impaired waters as impaired due to fish tissue polychlorinated biphenyls advisory.

Construction of the project will require erosion and sedimentation control plans that follow Design Standards in Sensitive Watershed and Neuse River Riparian Buffer Rules.

Question 27. Is the project considered a Type I under the NCDOT's Noise Policy?

The project proposes to add auxiliary and through lanes (23 CFR 772.5), therefore it is considered a Type I project under NCDOT's Noise Policy. As described in **Section E** of this document, a Traffic Noise Report was prepared for the project in July 2021 and eight noise barriers were determined likely.

Question 29. Is the project in an Air Quality non-attainment or maintenance area for a National Ambient Air Quality Standard (NAAQS)?

The project is in Wake County, which is within the Raleigh-Durham-Chapel Hill nonattainment area for the prior 1997 ozone National Ambient Air Quality Standard (NAAQS) as defined by the EPA. This area was designated nonattainment for the 1997 8-hour ozone standard effective June 15, 2004. However, due to

improved monitoring data, this area was redesignated maintenance on December 26, 2007. EPA approved a SIP revision for the removal of Federal low-Reid vapor pressure requirement effective on February 3, 2014. The Raleigh-Durham-Chapel Hill area was attainment for the 2008 ozone NAAQS resulting in the 1997 ozone NAAQS being revoked on April 6, 2015. On February 16, 2018, the United States Court of Appeals for the District of Columbia Circuit in *South Coast Air Quality Mgmt. District v. EPA* (“South Coast II,” 882 F.3d 1138) held that transportation conformity determinations must be made in areas that were either nonattainment or maintenance for the 1997 ozone NAAQS and attainment for the 2008 ozone NAAQS when the 1997 ozone NAAQS was revoked. Transportation conformity for plans and TIPs for the 1997 Ozone NAAQS can be demonstrated without a regional emissions analysis pursuant to 40 CFR 93.109(c). The Capital Area Metropolitan Planning Organization 2050 Metropolitan Transportation Plan (MTP) and the FY 2024-2027 Transportation Improvement Program (TIP) conform to the intent of the SIP. The USDOT made a conformity determination on the MTP on 09/28/2023 and the TIP on 09/28/2023. The current conformity determination is consistent with the final conformity rule found in 40 CFR Parts 51 and 93. There are no significant changes in the project’s design concept or scope, as used in the conformity analyses.

H. **Project Commitments:**

NCDOT PROJECT COMMITMENTS

STIP Project No. **I-5701**

Addition of Lanes to I-40 from I-40/I-440/US 1/US 64 Interchange to Lake Wheeler
Road

Wake County

Federal Aid Project No. NHPP-040-4(156)298

WBS Element 50119.1.1

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

NCDOT - Coordination during construction

NCDOT will coordinate with the Wake County Public School System, transit agencies, and emergency response providers. NCDOT will coordinate with these service providers regarding detour routes and associated route changes that may be necessary during construction.

EAU – BioSurveys - Threatened and Endangered species surveys and coordination

Prior to the design-build let for the project, update threatened and endangered species surveys as needed and complete Section 7 coordination with the United States Fish and Wildlife Service (USFWS) on Biological Conclusions for all threatened and endangered species.

I. Categorical Exclusion Approval:

STIP Project No. I-5701
WBS Element 50119.1.1
Federal Project No. NHPP-040-4(156)298

Prepared By:

01/17/2024

Date

DocuSigned by:

81A31880F0B5423...

Jill Gurak, PE, AICP – Project Manager
Atkins North America


Prepared For:

Allison White – NCDOT Project Management Unit

Reviewed By:

01/18/2024

Date

DocuSigned by:

CA084B4A6412432...

John Jamison, Unit Head
NCDOT Environmental Policy Unit

Approved

Certified

- If classified as Type III Categorical Exclusion.

01/17/2024

Date

DocuSigned by:

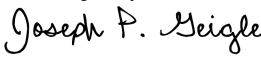
727011EC17FE494

Allison White, Senior Project Manager
NCDOT – Project Management Unit

FHWA Approved: For Projects Certified by NCDOT (above), FHWA signature required.

01/19/2024

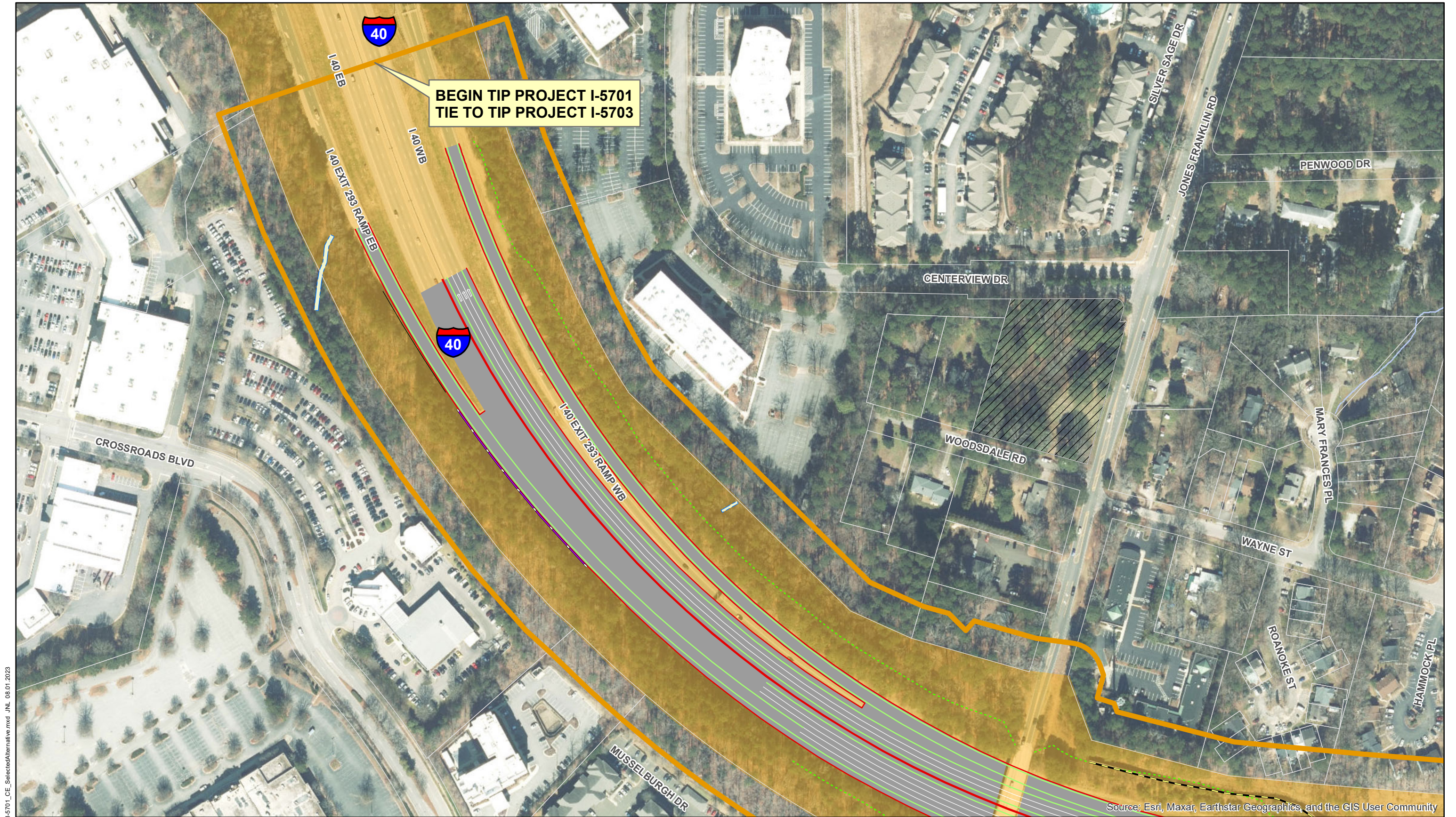
Date

DocuSigned by:

6AEDC65DA9E14C7...

for Yolonda K. Jordan, Division Administrator
Federal Highway Administration

Note: Prior to ROW or Construction authorization, a consultation may be required (please see Section VII of the NCDOT-FHWA CE Programmatic Agreement for more details).

**BEGIN TIP PROJECT I-5701
TIE TO TIP PROJECT I-5703**



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

I-5701_CE_SelectedAlternative.mxd_JNL_08.01.2023

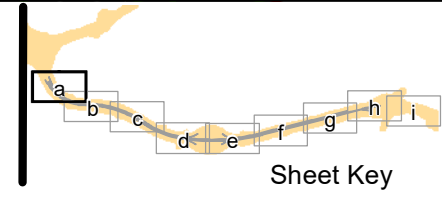
STIP PROJECT NO. I-5701
Wake County,
North Carolina

0 100 200
Feet

Source: ESRI, NCDOT, Wake County, NCOneMap, City of Raleigh.
Aerial Photo: ESRI World Imagery
Updated June 2023

LEGEND

- | | | | | |
|---------------------------|-------------------------|---------------------|---------------------|-----------------------|
| — Proposed Paved Shoulder | ▭ Project Study Area | ▭ Parks/Open Space | ▭ Surveyed Streams | ▭ Floodway |
| — Proposed Edge of Travel | ▭ Existing Right of Way | — Trail (Greenways) | ▭ Surveyed Wetlands | ▭ 100 Year Floodplain |
| — Proposed Guardrail | ▭ State Owned Land | — Cut Slope | — Other Streams | — Existing Noise Wall |
| — Proposed Lane Lines | ▭ Proposed Pavement | — Fill Slope | — 303(d) Streams | ▭ Vacant Land |
| — Proposed Jersey Barrier | ▭ Parcel Boundary | — Transition Line | ▭ Lakes | |



**PREFERRED ALTERNATIVE
PRELIMINARY DESIGNS
(SUBJECT TO CHANGE)**

FIGURE 2a



I-5701_CE_SelectedAlternative.mxd_JNL_08.01.2023

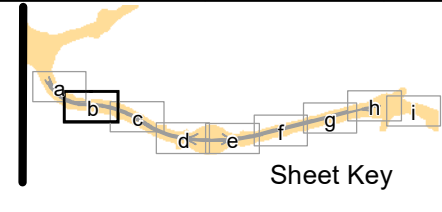
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

STIP PROJECT NO. I-5701
Wake County,
North Carolina

0 100 200
 Feet

Source: ESRI, NCDOT, Wake County, NCOneMap, City of Raleigh.
 Aerial Photo: ESRI World Imagery Updated June 2023

LEGEND	
— Proposed Paved Shoulder	— Project Study Area
— Proposed Edge of Travel	— Existing Right of Way
— Proposed Guardrail	— State Owned Land
— Proposed Lane Lines	— Proposed Pavement
— Proposed Jersey Barrier	— Parcel Boundary
— Parks/Open Space	— Trail (Greenways)
— Cut Slope	— Fill Slope
— Transition Line	— Surveyed Streams
— Surveyed Wetlands	— Other Streams
— 303(d) Streams	— Lakes
— Floodway	— 100 Year Floodplain
— Existing Noise Wall	— Vacant Land



PREFERRED ALTERNATIVE
PRELIMINARY DESIGNS
(SUBJECT TO CHANGE)

FIGURE 2b



I-5701_CE_SelectedAlternative.mxd_JNL_08.01.2023

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

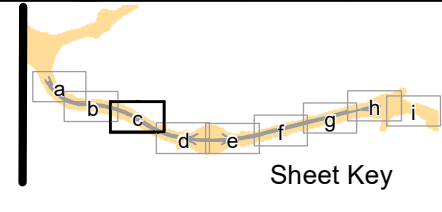
STIP PROJECT NO. I-5701
Wake County,
North Carolina

0 100 200
Feet

Source: ESRI, NCDOT, Wake County, NCOneMap, City of Raleigh.
 Aerial Photo: ESRI World Imagery Updated June 2023

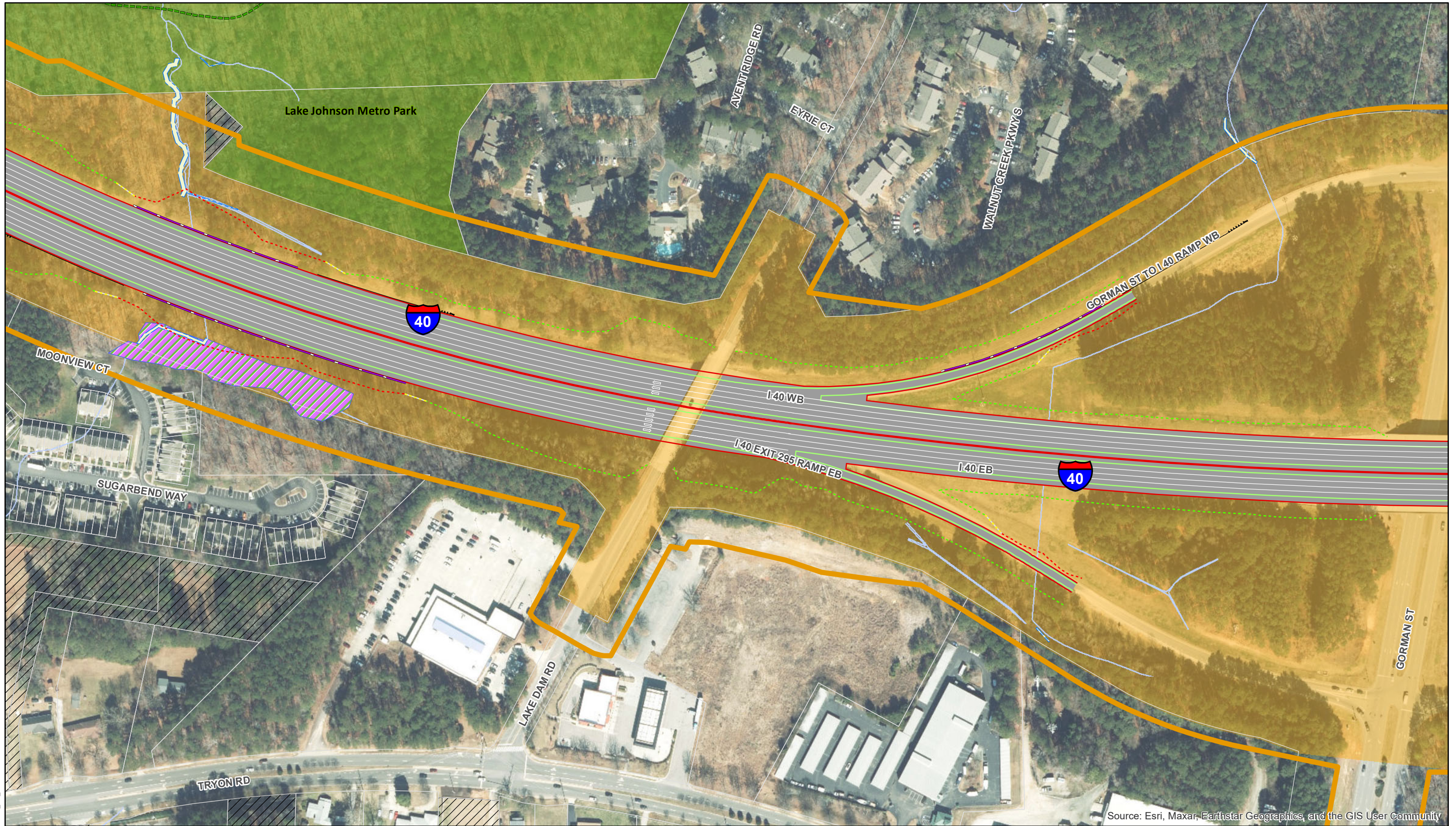
LEGEND

- Proposed Paved Shoulder
- Proposed Edge of Travel
- Proposed Guardrail
- Proposed Lane Lines
- Proposed Jersey Barrier
- Project Study Area
- Existing Right of Way
- State Owned Land
- Proposed Pavement
- Parcel Boundary
- Parks/Open Space
- - - Trail (Greenways)
- · - · - Cut Slope
- · - · - Fill Slope
- · - · - Transition Line
- Surveyed Streams
- Surveyed Wetlands
- Other Streams
- 303(d) Streams
- Lakes
- Floodway
- 100 Year Floodplain
- Existing Noise Wall
- Vacant Land



**PREFERRED ALTERNATIVE
 PRELIMINARY DESIGNS
 (SUBJECT TO CHANGE)**

FIGURE 2c



I-5701_CE_SelectedAlternative.mxd_JNL_08.01.2023

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

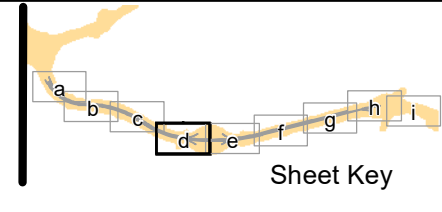
STIP PROJECT NO. I-5701
Wake County,
North Carolina

0 100 200
Feet

Source: ESRI, NCDOT, Wake County, NCOneMap, City of Raleigh.
 Aerial Photo: ESRI World Imagery Updated June 2023

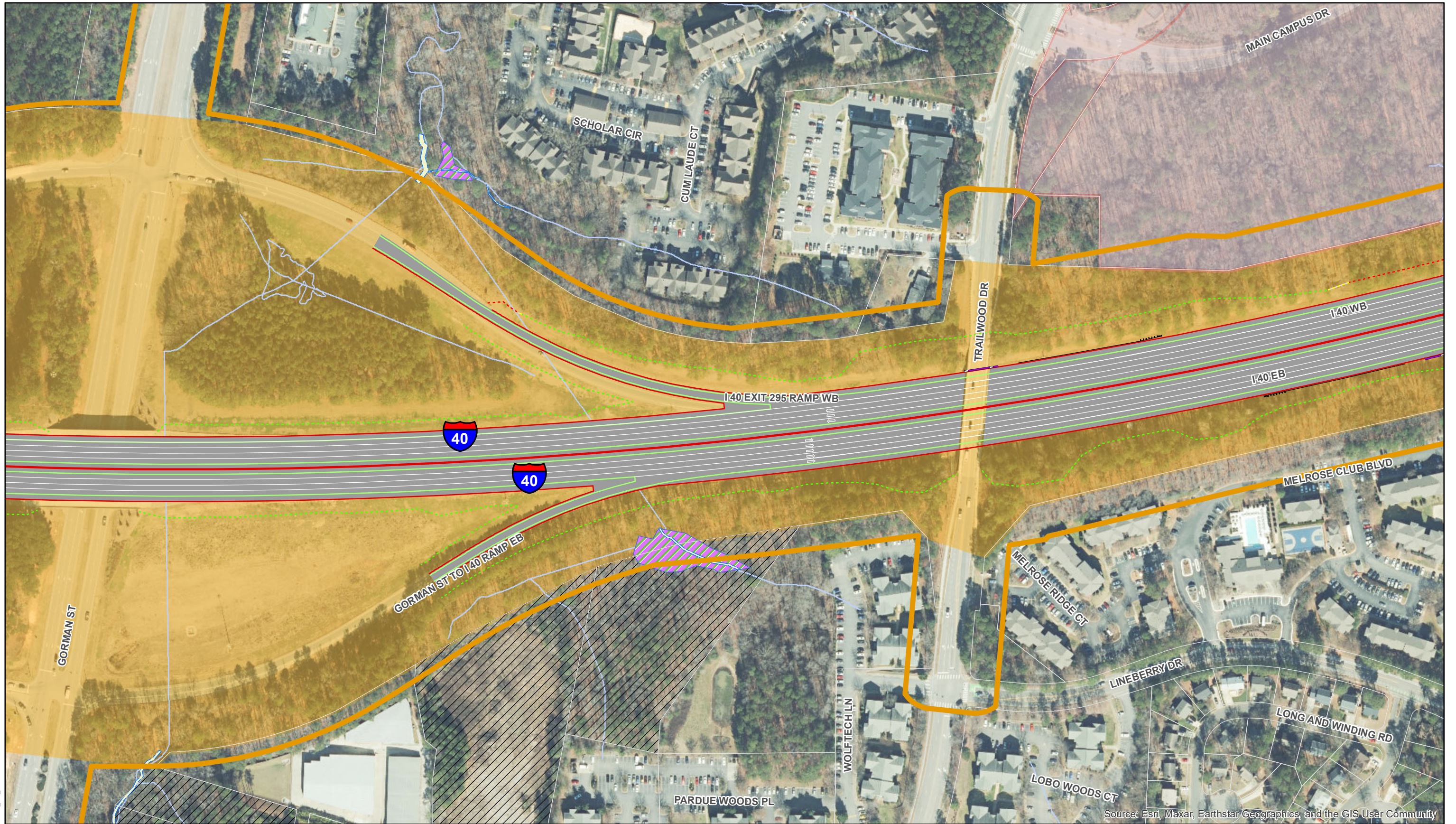
LEGEND

- | | | | | |
|---------------------------|-------------------------|---------------------|---------------------|-----------------------|
| — Proposed Paved Shoulder | ▭ Project Study Area | ▭ Parks/Open Space | ▭ Surveyed Streams | ▭ Floodway |
| — Proposed Edge of Travel | ▭ Existing Right of Way | — Trail (Greenways) | ▭ Surveyed Wetlands | ▭ 100 Year Floodplain |
| — Proposed Guardrail | ▭ State Owned Land | — Cut Slope | — Other Streams | ▭ Existing Noise Wall |
| ▭ Proposed Lane Lines | ▭ Proposed Pavement | — Fill Slope | ▭ 303(d) Streams | ▭ Vacant Land |
| — Proposed Jersey Barrier | ▭ Parcel Boundary | — Transition Line | ▭ Lakes | |



**PREFERRED ALTERNATIVE
 PRELIMINARY DESIGNS
 (SUBJECT TO CHANGE)**

FIGURE 2d



I-5701_CE_SelectedAlternative.mxd_JNL_08.01.2023

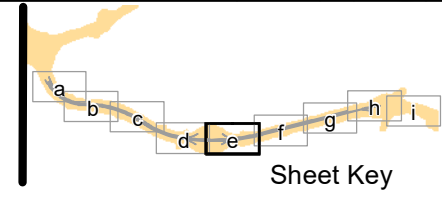
STIP PROJECT NO. I-5701
Wake County,
North Carolina

0 100 200
 Feet

Source: ESRI, NCDOT, Wake County, NOneMap, City of Raleigh.
 Aerial Photo: ESRI World Imagery Updated June 2023

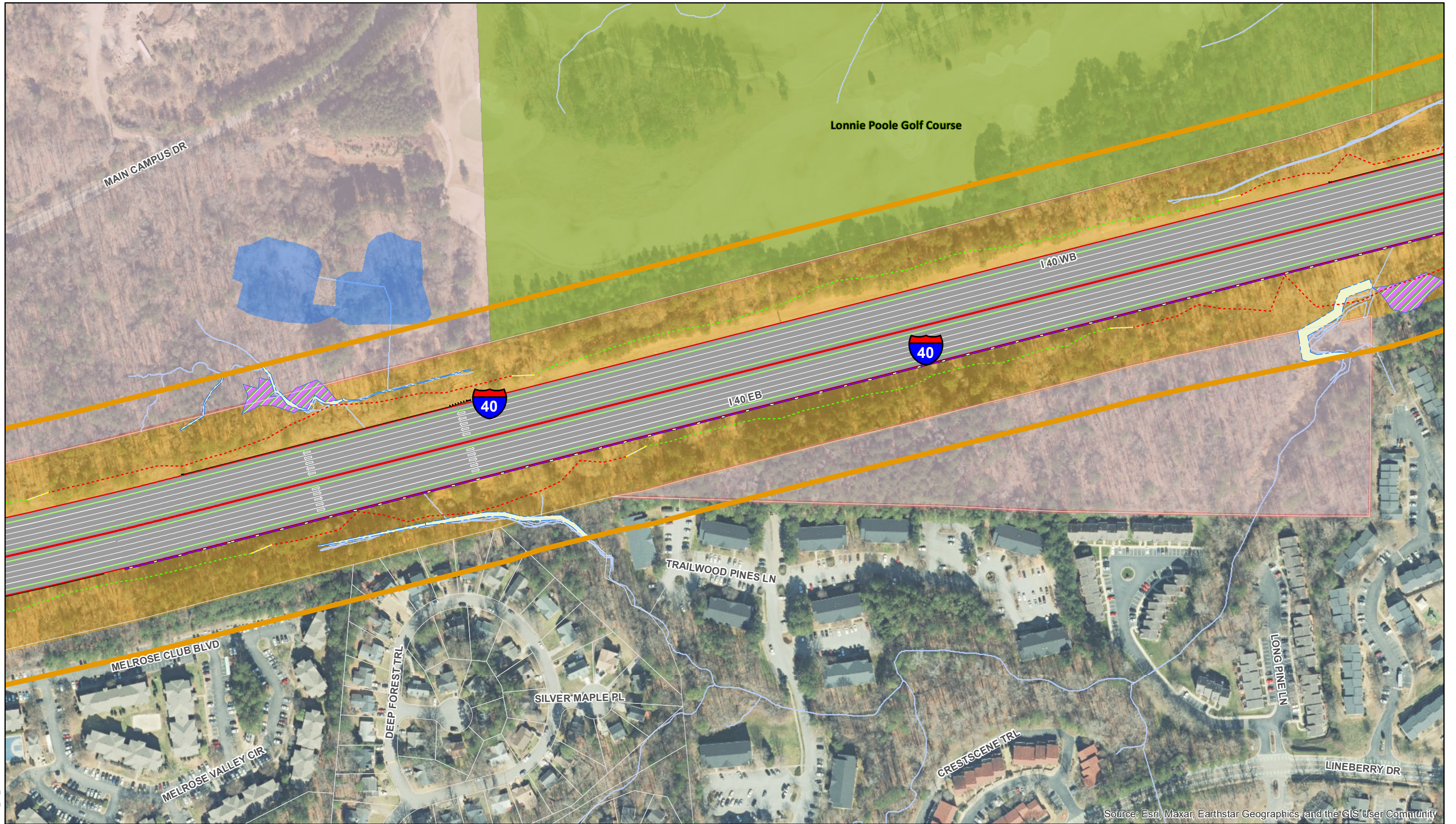
LEGEND

- | | | | | |
|---------------------------|-------------------------|---------------------|---------------------|-----------------------|
| — Proposed Paved Shoulder | ▭ Project Study Area | ▭ Parks/Open Space | ▭ Surveyed Streams | ▭ Floodway |
| — Proposed Edge of Travel | ▭ Existing Right of Way | — Trail (Greenways) | ▭ Surveyed Wetlands | ▭ 100 Year Floodplain |
| — Proposed Guardrail | ▭ State Owned Land | — Cut Slope | — Other Streams | — Existing Noise Wall |
| ▭ Proposed Lane Lines | ▭ Proposed Pavement | — Fill Slope | — 303(d) Streams | ▭ Vacant Land |
| — Proposed Jersey Barrier | ▭ Parcel Boundary | — Transition Line | ▭ Lakes | |



PREFERRED ALTERNATIVE
PRELIMINARY DESIGNS
(SUBJECT TO CHANGE)

FIGURE 2e



I-5701_CE_SelectedAlternative.mxd_JNL_08.01.2023

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

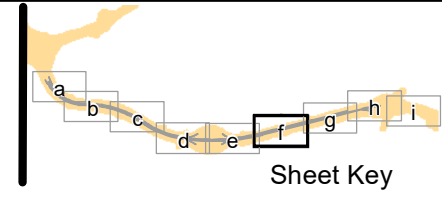
STIP PROJECT NO. I-5701
Wake County,
North Carolina

0 100 200
 Feet

Source: ESRI, NCDOT, Wake County, NCOneMap, City of Raleigh.
 Aerial Photo: ESRI World Imagery Updated June 2023

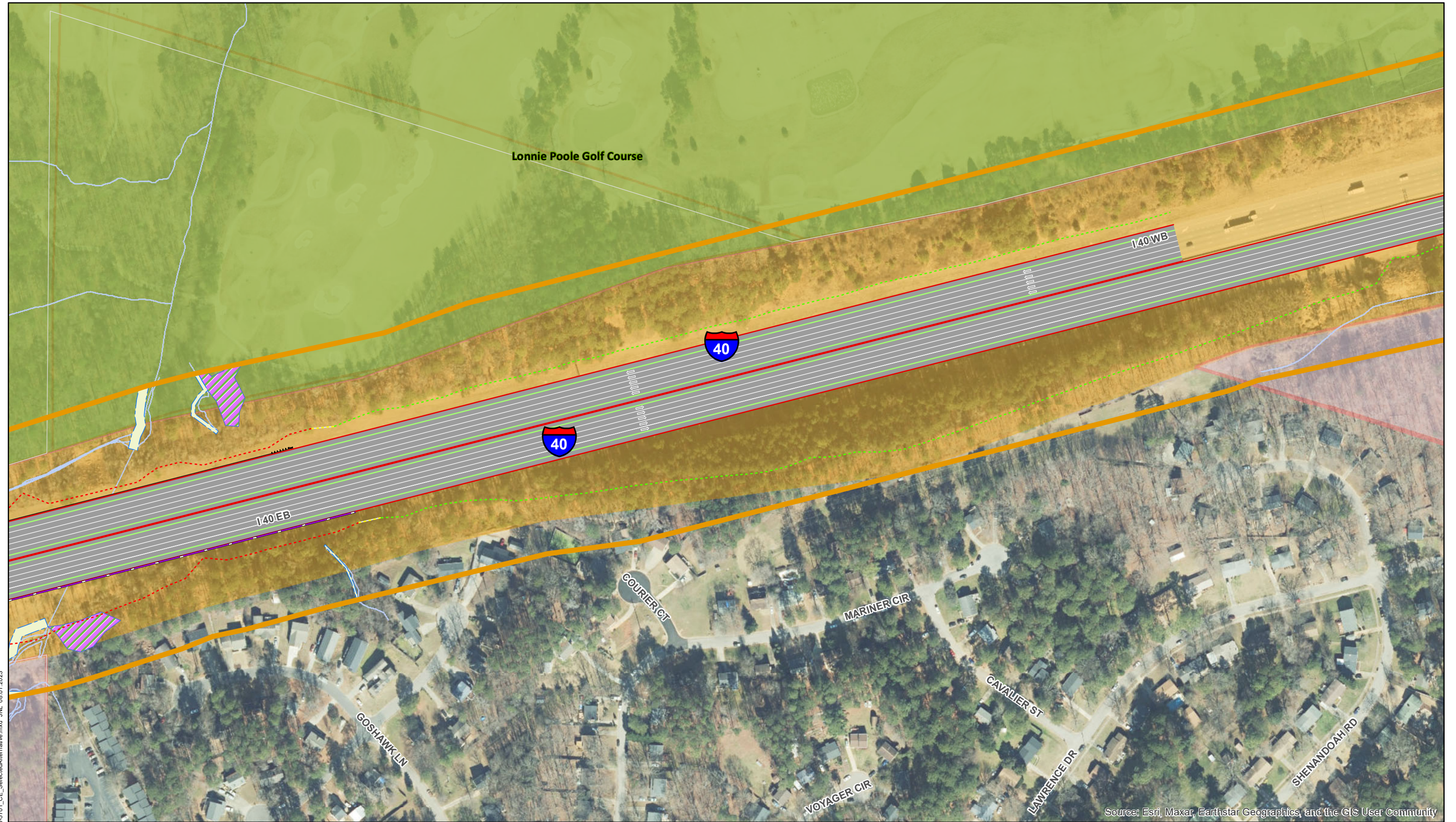
LEGEND

- | | | | | |
|---------------------------|-------------------------|---------------------|---------------------|-----------------------|
| — Proposed Paved Shoulder | ▭ Project Study Area | ▭ Parks/Open Space | ▭ Surveyed Streams | ▭ Floodway |
| — Proposed Edge of Travel | ▭ Existing Right of Way | — Trail (Greenways) | ▭ Surveyed Wetlands | ▭ 100 Year Floodplain |
| — Proposed Guardrail | ▭ State Owned Land | — Cut Slope | — Other Streams | ▭ Existing Noise Wall |
| ▭ Proposed Lane Lines | ▭ Proposed Pavement | — Fill Slope | ▭ 303(d) Streams | ▭ Vacant Land |
| — Proposed Jersey Barrier | ▭ Parcel Boundary | — Transition Line | ▭ Lakes | |



PREFERRED ALTERNATIVE
PRELIMINARY DESIGNS
(SUBJECT TO CHANGE)

FIGURE 2 f



I-5701_CE_SelectedAlternative.mxd_JNL_08.01.2023

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

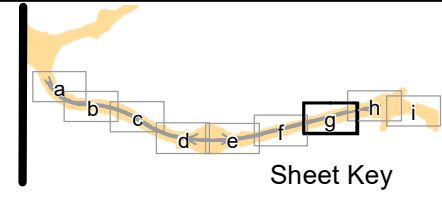
STIP PROJECT NO. I-5701
Wake County,
North Carolina

0 100 200
 Feet

Source: ESRI, NCDOT, Wake County, NCOneMap, City of Raleigh.
 Aerial Photo: ESRI World Imagery Updated June 2023

LEGEND

- Proposed Paved Shoulder
- Proposed Edge of Travel
- Proposed Guardrail
- Proposed Lane Lines
- Proposed Jersey Barrier
- ▭ Project Study Area
- ▭ Existing Right of Way
- ▭ State Owned Land
- ▭ Proposed Pavement
- ▭ Parcel Boundary
- ▭ Parks/Open Space
- ▭ Trail (Greenways)
- ▭ Cut Slope
- ▭ Fill Slope
- ▭ Transition Line
- ▭ Surveyed Streams
- ▭ Surveyed Wetlands
- ▭ Other Streams
- ▭ 303(d) Streams
- ▭ Lakes
- ▭ Floodway
- ▭ 100 Year Floodplain
- ▭ Existing Noise Wall
- ▭ Vacant Land



PREFERRED ALTERNATIVE
PRELIMINARY DESIGNS
(SUBJECT TO CHANGE)

FIGURE 2g



I-5701_CE_SelectedAlternative.mxd_JNL_08.01.2023

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

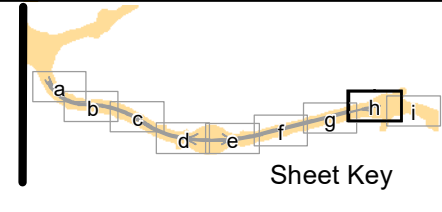
STIP PROJECT NO. I-5701
Wake County,
North Carolina

0 100 200
 Feet

Source: ESRI, NCDOT, Wake County, NCOneMap, City of Raleigh.
 Aerial Photo: ESRI World Imagery
 Updated June 2023

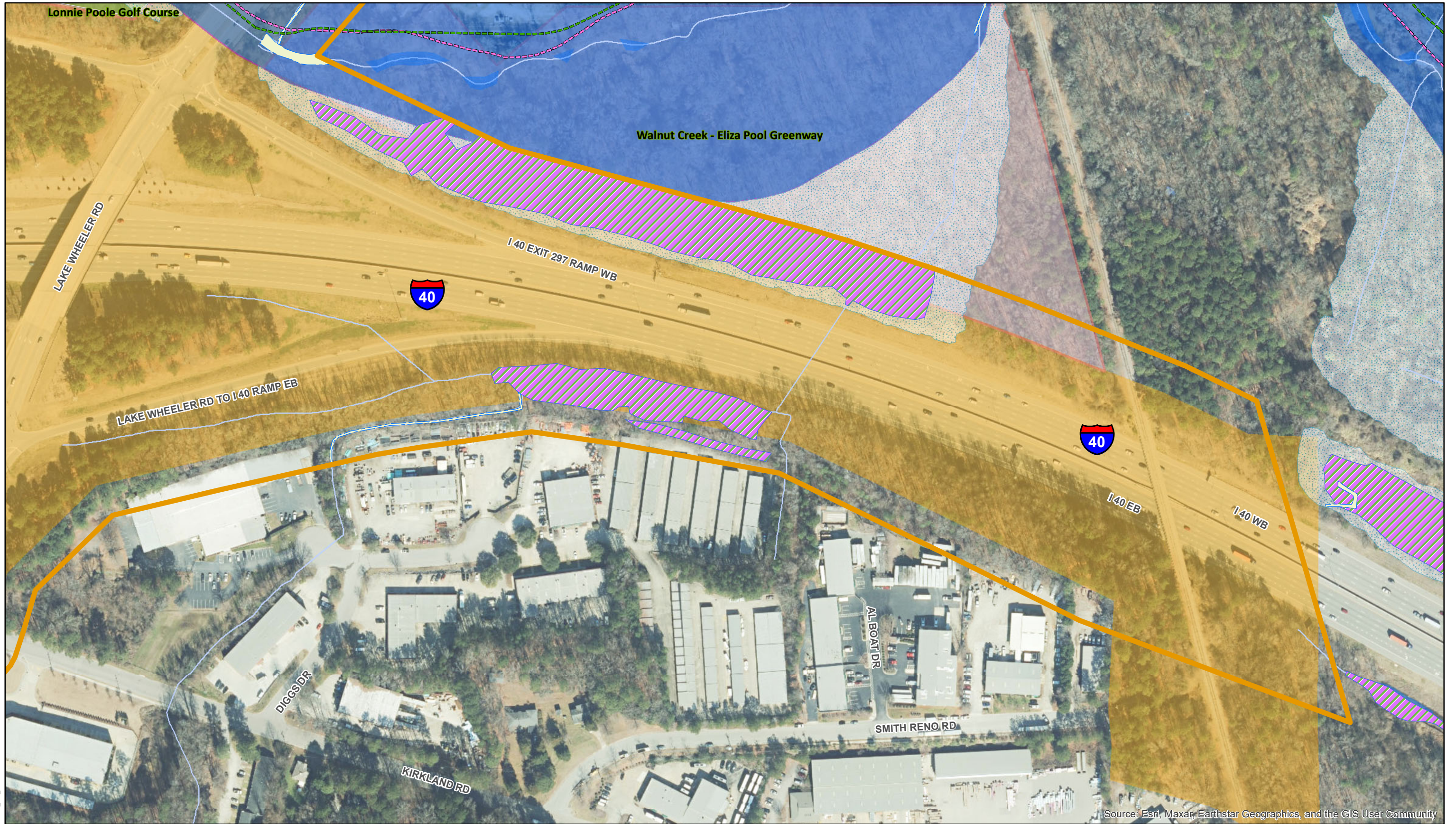
LEGEND

- | | | | | |
|---------------------------|-------------------------|---------------------|---------------------|-----------------------|
| — Proposed Paved Shoulder | ▭ Project Study Area | ▭ Parks/Open Space | ▭ Surveyed Streams | ▭ Floodway |
| — Proposed Edge of Travel | ▭ Existing Right of Way | — Trail (Greenways) | ▭ Surveyed Wetlands | ▭ 100 Year Floodplain |
| — Proposed Guardrail | ▭ State Owned Land | — Cut Slope | — Other Streams | — Existing Noise Wall |
| ▭ Proposed Lane Lines | ▭ Proposed Pavement | — Fill Slope | ▭ 303(d) Streams | ▭ Vacant Land |
| — Proposed Jersey Barrier | ▭ Parcel Boundary | — Transition Line | ▭ Lakes | |



**PREFERRED ALTERNATIVE
 PRELIMINARY DESIGNS
 (SUBJECT TO CHANGE)**

FIGURE 2h



I-5701_CE_SelectedAlternative.mxd_JNL_08.01.2023

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

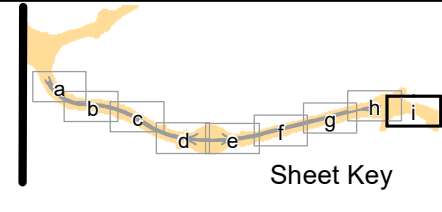
STIP PROJECT NO. I-5701
Wake County,
North Carolina

0 100 200
 Feet

Source: ESRI, NCDOT, Wake County, NCOneMap, City of Raleigh.
 Aerial Photo: ESRI World Imagery Updated June 2023

LEGEND

- Proposed Paved Shoulder
- Proposed Edge of Travel
- Proposed Guardrail
- Proposed Lane Lines
- Proposed Jersey Barrier
- Project Study Area
- Existing Right of Way
- State Owned Land
- Proposed Pavement
- Parcel Boundary
- Parks/Open Space
- Trail (Greenways)
- Cut Slope
- Fill Slope
- Transition Line
- Surveyed Streams
- Surveyed Wetlands
- Other Streams
- 303(d) Streams
- Lakes
- Floodway
- 100 Year Floodplain
- Existing Noise Wall
- Vacant Land



PREFERRED ALTERNATIVE
PRELIMINARY DESIGNS
(SUBJECT TO CHANGE)

FIGURE 2 i