

**Johnston County
Bridge Nos. 118 & 119 on I-95
Over CSXT Railroad
W.B.S. No. 40160.1.1
STIP Project B-4937**

**Administrative Action
State Environmental Assessment /
Finding of No Significant Impact**

**Submitted Pursuant to the North Carolina Environmental Policy Act,
(N.C. G.S. 113A 1-13)**

**North Carolina Department of Transportation
Division of Highways**

The following person may be contacted for additional information regarding this proposal and statement:

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**Documentation Prepared by:
Stantec Consulting Services Inc.**

8/30/2017

Date of Approval

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8/30/2017

Date of Approval

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Joseph Miller, PE
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Central Project Delivery, NCDOT

PROJECT COMMITMENTS

REPLACEMENT OF BRIDGE NUMBERS 118 & 119 on I-95

OVER CSXT RAILROAD

JOHNSTON COUNTY

STIP Project B-4937

WBS No. 40160.1.1

Right of Way Unit/Location and Surveys Unit

The project will impact the Geodetic Marker '*Junction*' (PID # EX4194). NCDOT will coordinate with the N.C. Geodetic Survey prior to construction. The impacted geodetic marker will be relocated prior to construction.

NCDOT will investigate the presence of unmarked graves in the Oliver Family Cemetery prior to initiating construction as per the North Carolina Cemetery Act (North Carolina General Assembly § 65-46 – 65-73).

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I. DESCRIPTION OF PROPOSED ACTION

The proposed project involves the replacement of Bridge Numbers 118 and 119 carrying I-95 over the CSX Transportation rail line in Johnston County. The project extends approximately 0.5 mile along I-95.

Bridge Numbers 118 and 119 will be replaced with a single bridge providing sufficient width to accommodate a future eight-lane section on I-95 and sufficient length to accommodate three future railroad tracks under the bridge.



Bridge Nos. 118 and 119

The proposed project is included in the 2016-2025 State Transportation Improvement Program (STIP) as B-4937. Right of way acquisition and construction for the project are proposed for state fiscal years 2019 and 2021, respectively, in the draft 2017-2027 STIP.

This combined State Environmental Assessment/Finding of No Significant Impact (SEA/FONSI) was prepared in accordance with the North Carolina State Environmental Policy Act (SEPA) of 1971, as amended.

Bridge Nos. 118 and 119 will be replaced at their existing locations with a single structure using staged construction. The project also includes the reconstruction and widening of the north and south roadway approaches, which will be utilized as temporary onsite detours. The replacement bridge will be a three-span, 160-foot long structure providing a minimum 162-foot roadway width. The replacement structure and the approach roadways will be constructed to match the proposed ultimate build typical section for I-95, which consists of an eight-lane freeway, with a 30-foot wide median with a concrete barrier and four-foot offsets. The replacement structure will also include accommodations for a northbound off-ramp and a southbound on-ramp. In the interim (until I-95 is widened), the replacement structure and approach roadways will be striped to include two 12-foot lanes with 12-foot wide offsets in each direction, a northbound off-ramp, and a southbound on-ramp, separated by a 30-foot median with a concrete barrier. The project location is shown in Exhibit 1.

II. PURPOSE AND NEED FOR THE PROPOSED PROJECT

The purpose of the proposed project is to replace two deficient bridges.

Bridge No. 118 has a sufficiency rating of 63.26 out of a possible 100, and Bridge No. 119 has a sufficiency rating of 53.21 out of a possible 100. Both bridges are considered functionally obsolete due to a deck geometry appraisal rating of 3 out of 9.

The bridges were originally constructed in 1956 and both were reconstructed in 1987. The wearing surfaces of both bridges are experiencing traverse cracking and settlement at the expansion joints. Hairline map and traverse cracking is evident along the bottom of the concrete decks of both bridges. The concrete rails have scaling with exposed aggregate and surface popouts on the faces. The longitudinal beams of both structures are experiencing section loss in the webs and

rust throughout. Rust and section loss has been noted on the steel bridge piles as well. Also, the concrete pile encasements are also experiencing spalling.

The superstructure and substructure of Bridge Nos. 118 and 119 have concrete and steel elements that are sixty-one years old. Components of both the concrete and steel superstructure and substructure have experienced an increasing degree of deterioration that can no longer be addressed by maintenance activities. Replacement of these deficient bridges will result in safer traffic operations.

III. EXISTING CONDITIONS



Bridge Nos. 118 & 119, looking south

The project is located along I-95 between the SR 2399 (Princeton – Kenly Road) and US 301 interchanges within the town limits of Kenly in Johnston County (see Exhibit 1). The bridges cross over the currently single-tracked CSX Transportation (CSXT) A-Line, approximately 0.3 mile south of the I-95/US 301 interchange. Development in the project study area is primarily concentrated around the US 301 interchange.

I-95 is classified as an interstate in the Statewide Functional Classification System and is a National Highway System Route.

Along the north and southbound approaches, I-95 is a four-lane roadway, with two 12-foot lanes in each direction separated by a 22-foot grassed median. Four-foot paved inside shoulders and ten-foot paved outside shoulders are provided on both sides of the roadway. The bridges provide approximately 21.8 feet of vertical clearance above the CSXT railroad.

Bridge Nos. 118 and 119 are both five-span structures that consist of a reinforced concrete deck with an asphalt wearing surface on steel I-beams. The end bents consist of reinforced concrete pile caps on H-piles. The interior bents consist of reinforced concrete caps on steel H-piles incased in concrete footers. The overall length of the structures is 210 feet with a maximum span length of 60 feet. The clear roadway width on the structures is 28 feet. There is no posted weight limit on either bridge. No utilities are attached to the existing structures.

In 2015, I-95 carried approximately 30,400 vehicles per day (vpd) within the study area. The traffic volumes along I-95 are expected to increase to 49,900 vpd by the year 2040. Approximately 11% and 20% of the traffic consists of dual-axle trucks and truck-tractor-semi-trailers, respectively. The posted speed limit along I-95 within the project area is 65 miles per hour. No Johnston County school buses cross the bridges during their morning and afternoon routes.

Bridge Nos. 118 and 119 cross over the CSXT A-Line at railroad mile post 152.0. The once dual-tracked railroad mainline is currently single-tracked and carries approximately 25 freight and ten passenger trains daily.

Seven accidents were reported in the vicinity of Bridge Nos. 118 and 119 during the five-year period between March 1, 2010 and February 28, 2015. Six of the seven accidents involved vehicles

impacting fixed objects along I-95. Also, five of the seven accidents occurred during night time hours.

Bicyclists and pedestrians are prohibited along I-95 as it is a fully-controlled access highway. Neither permanent nor temporary bicycle or pedestrian accommodations are required for this project.

IV. ALTERNATIVES CONSIDERED

No-Build Alternative – The “do-nothing” alternative will eventually necessitate closure of Bridge Nos. 118 and 119. Combined, they carried approximately 30,400 vpd in 2015 and are projected to carry approximately 49,900 vpd in the design year (2040). Closure of the bridges is not acceptable due to the traffic service provided by I-95.

Improve Existing Alternative - Rehabilitation of Bridge Nos. 118 and 119 is not practical due to their age and deteriorated condition.

Offsite Detour Alternative –

Utilizing an offsite detour is not feasible as there are no adequate detour routes available. The nearest detour route would utilize the two-lane SR 2399 (Truck Stop Road) and US 301. These two routes would not be able to accommodate the existing traffic volume utilizing I-95, resulting in unacceptable delays. The offsite detour route would result in



Bridge No. 118 Bent 2

a significant increase in travel time for motorists, introduce a substantial amount of traffic on roadways currently not designed to accommodate the additional volume of traffic, and significantly increase vehicular/train accident potential as the detour would require vehicles to cross the CSXT railroad at-grade.

Onsite Detour Alternatives 1, 2, and 3 – Multiple onsite detour alternatives were developed and analyzed to ensure maintenance of traffic along I-95 while the replacement structures were being constructed. Alternatives 1, 2, and 3 all would replace Bridge Nos. 118 and 119 at their existing location while traffic is maintained on temporary onsite detours utilizing the outside portions of the permanent replacement structure. Alternatives 1 and 3 would maintain a 65-mile per hour (mph) design speed for the onsite detour. Alternative 2 would maintain a 55-mph design speed for the detour.

Alternative 3 was dropped to avoid pavement wedging on the mainline due to the detour super-elevations creating ditches between the mainline and the detours. Alternative 2 was dropped due to the required posted speed reduction along an interstate.

V. PROPOSED IMPROVEMENTS FOR THE RECOMMENDED ALTERNATIVE

Bridge Nos. 118 and 119 will be replaced on their existing alignments while traffic is maintained on temporary onsite detours utilizing the outside portions of the replacement structure. The "Recommended" alternative avoids wedging on the mainline and maintains the 1,500-foot curve radius with a modified superelevation in order to maintain the 65-mph design speed. The Recommended Alternative design was based on the Alternative 1 alignment with a modification in superelevation. The proposed improvements can be viewed in Exhibit 2 and typical sections are shown in Exhibits 3A and 3B.

The replacement bridge will be a three-span, 160-foot long structure providing a minimum 162-foot clear roadway width. In the interim, the replacement structure will be striped to include two 12-foot lanes with 12-foot wide offsets in each direction separated by a 30-foot median with a concrete barrier. The 162-foot clear roadway width accommodates the future full-build out scenario of I-95 that consists of an eight-lane median divided facility with accommodations for a northbound off-ramp and a southbound on-ramp. The main span will be 80 feet long, providing adequate horizontal clearance to accommodate three railroad tracks with 15-foot track centers. The main span length also allows 25 feet of separation between the proposed outside tracks and the bridge piers, eliminating the need for the piers to incorporate crash walls.

The improvements to the approach roadway will extend approximately 1,670 feet from the south end of the new bridge and 890 feet from the north end of the new bridge. Within the project limits, I-95 will be widened to include two 12-foot lanes, a 12-foot full-depth outside shoulder and a six-foot inside shoulder in each direction. The northbound and southbound lanes will be separated by a 30-foot wide paved median with a concrete barrier. The roadway grade of the new structure will be raised to provide 23.5 feet of vertical clearance over the railroad tracks. The roadway will be designed as an Interstate with a 70 mile per hour design speed.

The replacement structure will be built using staged construction and onsite detours. The first stage will construct two 36-foot wide, permanent concrete bridges providing a 28-foot wide travelway for the north and southbound detours along the outside of the existing bridges. The northbound and southbound detour approach roadways will be constructed of asphalt with a design speed of 65-mph. Stage 2 consists of demolishing the existing bridges and constructing a 98-foot wide structure in between the bridges constructed to accommodate the detours. Once the replacement structure is completed, the bridge will be restriped to accommodate two through lanes in each direction with 12-foot offsets. The portion of the bridge used for the temporary detours will be blocked off from use utilizing concrete barriers.

The project will also reconstruct approximately 2,700 feet of SR 2390 (Johnston Parkway), which runs parallel to the southbound lanes providing access to the Oliver Cemetery just south of the railroad. The project will also reconstruct a small portion of SR 2385 (Piney Grove Church Road), just east of the northbound lanes in the southeast quadrant of the project area.

VI. ESTIMATED COSTS

The estimated costs, based on 2017 prices, are as follows:

Table 1. Cost Estimates

	Preferred Alternative
Total Construction	\$17,800,000
Right-of-way	1,075,000
Utilities	\$120,000,
Wetland/Stream Mitigation	\$94,000
Total Project Cost	\$19,089,000

VII. ENVIRONMENTAL EFFECTS OF PROPOSED ACTION

This section details the existing environment and direct, indirect, and cumulative impacts of the proposed project.

Prior to the preparation of this document, resource information pertaining to the project site was gathered and reviewed. Field work was conducted on April 8 and June 24, 2015 for the *Natural Resources Technical Report (NRTR)*.

A. Natural Resources

(1) Wetlands – Three jurisdictional wetlands were identified within the project study area, all classified as Riparian Headwater Forest (Table 2). Jurisdictional wetlands can also be viewed in Exhibit 4.

Table 2. Jurisdictional wetlands in the project study area

Map ID	Wetland Classification	Hydrologic Classification	NCDWQ Wetland Rating	Acres in Project Study Area	Wetland Impacts
WA	Headwater Forest	Riparian	20	0.02	0.02 ac
WB	Headwater Forest	Riparian	18	0.29	0.23 ac
WC	Headwater Forest	Riparian	11	0.02	0.02 ac
Total				0.33	0.27

The Preferred Alternative would impact approximately 0.27 acres of jurisdictional wetlands.

(2) Water Resources – The project area falls within the Neuse River Basin and is therefore protected under the provisions of the Neuse River Buffer Rules administered by the North Carolina Division of Water Resources (NCDWR). Mill Creek passes through the southern section of the project study area (see Exhibit 4). Mill Creek flows through a culvert under I-95 and its buffer zone extends along both banks to the east and west of I-95 within the study area. Mill Creek is designated Class C and NSW (Nutrient Sensitive Waters) by the North Carolina Division of Water Resources.



Mill Creek, facing I-95

Class C uses include secondary recreation, fishing, wildlife, fish, and aquatic life propagation and survival, and agriculture.

Waterbodies within the Neuse River Basin are assigned the supplemental classification of NSW. NSWs have limitations on nutrient input and are included in the Neuse River Basin NSW Management Strategy. The project site does not drain to any NCDWR-listed outstanding resource waters (ORWs), high-quality waters (HQWs), or Section 303(d) streams (NCDWQ, 2008a) (NCDWQ, 2008b). The project includes the creation of impervious area, which generally adversely affects water quality. This effect will be minimized, however, by the proposed project's adherence to the Neuse River stormwater management and riparian buffer rules. The project will result in approximately 240 linear feet of impacts to Mill Creek. The project will result in 13,370 square feet of impacts to Zone 1 and 8,980 square feet of impacts to Zone 2 of riparian buffers.

Construction of the proposed project would not require any cuts that could alter the hydrostatic pressure of confined aquifers and no effects on groundwater supplies would be created by the proposed project.

(3) Biotic Resources – Terrestrial communities are classified using “NC WAM User Manual, Version 4.1” and “Classification of the Natural Communities of North Carolina, Third Approximation”. Three terrestrial communities were identified in the study area: maintained/disturbed, pine plantation, and headwater forest (see Exhibit 4).

Table 3. Terrestrial Communities

Community	Acres in Project Study Area	Impacts
Maintained/Disturbed	19.0	16.6
Pine Plantation	2.6	1.8
Headwater Forest (Disturbed)	0.4	0.3

Wildlife populations within the study area occupy both natural and disturbed habitats that support a diversity of wildlife species. Species observed in the study area are indicated with an asterisk (*).

Mammals that commonly occupy forest and stream corridors as found within the study area include eastern cottontail, raccoon, Virginia opossum, red fox, eastern gray squirrel*, and white-tailed deer. Birds that commonly use forest and forest edge habitats include the American crow*, northern cardinal*, red shouldered hawk*, song sparrow, blue jay, Carolina chickadee, and tufted titmouse. Birds that may use the open habitat within the study area include American kestrel, eastern bluebird, eastern meadowlark, and turkey vulture*. Reptile and amphibian species that may use terrestrial communities located in the study area include the corn snake, black rat snake, southern copperhead, American toad, spring peeper*, garter snake, eastern box turtle, eastern fence lizard*, and five-lined skink. As right-of-way acquisition will be minimal, no impacts to wildlife populations are anticipated.

Five species from the NCDOT Invasive Exotic Plant List for North Carolina were found to occur in the study area. The species identified were Chinese privet (Threat), multiflora rose (Threat), Japanese stiltgrass (Threat), Japanese honeysuckle (Moderate Threat) and Callery pear (Watch List). NCDOT will manage invasive plant species as appropriate.

(4) Aquatic Communities – Aquatic communities in the study area consist of one perennial coastal plain stream. Perennial streams in the study area could support golden shiner, blue-spotted sunfish, yellow bullhead, bull chub, warmouth, white shiner, eastern mosquitofish, tessellated darter, largemouth bass, eastern mudminnow, flier, pirate perch, redbreast sunfish, bluegill, creek chubsucker, and American pickerel.

(5) Federally Protected Species – As of April 6, 2017, the United States Fish and Wildlife Service (USFWS) lists four federally protected species for Johnston County, all of which are classified as endangered. A summary of these species, habitat presence in the project study area, and the current biological conclusion is located in Table 4 below.

Table 4. Federally protected species listed for Johnston County

Scientific Name	Common Name	Federal Status	Habitat Present in Project Study Area	Biological Conclusion
<i>Picoides borealis</i>	Red-cockaded woodpecker	E	No	No Effect
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	E	Yes	No Effect
<i>Elliptio steinstansana</i>	Tar River spiny mussel	E	Yes	No Effect
<i>Rhus michauxii</i>	Michaux's sumac	E	Yes	No Effect

E – Endangered

Mill Creek, located within the study area, has potential habitat for both the dwarf wedgemussel and Tar River spiny mussel. A review of NC Natural Heritage Program (NCNHP) GIS data files (August 31, 2015) indicated no known dwarf wedgemussel or Tar River spiny mussel occurrences within one mile of the study area.

A habitat assessment was conducted by NCDOT on September 1, 2015. No dwarf wedgemussels, Tar River spiny mussels, or mollusks of any kind were found during the survey. Due to the size of the stream and the fact that neither species was found during the survey, it has been determined that the project will have no effect on either the dwarf wedgemussel or the Tar River spiny mussel.

Suitable habitat for Michaux's sumac is present in the study area along roadside shoulders and utility easements. A habitat survey conducted on May 12, 2017 did not identify any Michaux's sumac. A review of NCNHP GIS data files indicates no known occurrences within one mile of the study area. It is expected the project will have no effect on Michaux's sumac.

The US Fish and Wildlife Service has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration, the US Army Corps of Engineers 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. The programmatic determination for NLEB for the NCDOT program is "May Affect, Likely to Adversely Affect". The PBO provides incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Johnston County.

Bald Eagle and Golden Eagle Protection Act

The bald eagle was declared recovered, and removed (de-listed) from the USFWS Federal List of Threatened and Endangered Species effective August 8, 2007. The bald eagle remains federally protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Species Act. A desktop-GIS assessment of the project study area, as well as the area within a 1.13-mile radius (one mile plus 660 feet) of the project limits, was performed on April 30, 2015 using 2014 color aerials. No water bodies large enough and sufficiently open to be considered potential feeding sources were identified. Since there was no foraging habitat within the review area, a survey of the project study area and the area within 660 feet of the project limits was not conducted. Additionally, a review of the NCNHP database, updated July 2015, revealed no known occurrences of this species within one mile of the project study area.

B. Community Impacts and Land Use

The project study area is located just west of the town of Kenly, in Johnston County. Bridge Nos. 118 and 119 are located immediately south of the I-95/US 301 interchange (exit 107) and approximately 0.75 mile north of the I-95/SR 2399 (Princeton-Kenly Road) interchange.

A newsletter will be sent to residents in the vicinity of the project area upon finalization of this document. The newsletter will include general project information, a description of the recommended alternative, and a map of the recommended alternative.

(1) Land Use –The project area is rural in nature, with development concentrated around the I-95/US 301 and I-95/SR 2399 interchanges. A commercial area that includes a shopping center, restaurants, a retail store, and car lot is in the northeast quadrant of the study area. A cemetery and light manufacturing facility are in the southwest quadrant of the study area. The northwest and southeast quadrants are relatively undeveloped, consisting of forested areas and farmland. The area is currently zoned as Freeway Interchange, Industrial Performance, and Residential Agricultural. The activities associated with the proposed bridge replacements are compatible with the area's zoning designation. The project would not induce land use changes.



Oliver Family Cemetery

The Oliver family cemetery is located adjacent to the bridges, on the west side of I-95 just south of the railroad tracks (see Exhibit 4). An unpaved extension of SR 2390 (Johnston Parkway) provides access to the cemetery. The project will make minor alignment shifts to SR 2390. The project will impact 0.06 acres of the cemetery. There are no tombstones located in the portion of the cemetery impacted by the project. NCDOT will investigate the presence of unmarked graves prior to initiating construction.

(2) Title VI Evaluation– While minority populations are present in the project area, the percentage of minorities in the project area is lower than the County average. No notable adverse community impacts are anticipated with this project; thus, there are no disproportionately high or adverse impacts to minority populations. Benefits and burdens resulting from the project are anticipated to be equitably distributed throughout the community. No relocations are expected with implementation of the project.

The North Carolina Department of Transportation adheres to Title VI of the Civil Rights Act, which provides that no person in the United States shall, on the grounds of race, color or national origin, be excluded in participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

(3) Neighborhoods and Communities - No homes are located near I-95 in the project area. The project will not result in impacts to neighborhoods or communities.

(4) Relocations - Right-of-way acquisition will be minimal as the existing right-of-way width along I-95 is approximately 260 feet. No relocations are anticipated for the project.

C. Historic and Cultural Resources

The NCDOT Human Environment Section, under the provisions of a Programmatic Agreement with FHWA, NCDOT, HPO, OSA and the Advisory Council on Historic Preservation (effective July 1, 2009), reviewed the proposed project and determined no historic structures are located in the project area and the project will have no impacts to archaeological resources. No surveys for historic architectural or archaeological resources are required (see forms dated March 31, 2015 and August 7, 2017 in Appendix A).

D. Public Lands and Scenic, Recreational, and State Natural Areas

There are no formally designated parklands, scenic or recreational areas, or state natural areas on or adjacent to the project site.

E. Air Quality

This project is an air quality neutral project in accordance with 40 CFR 93.126. It is not required to be included in the regional emissions analysis (if applicable) and project level CO or PM2.5 analyses are not required. This project will not result in any meaningful changes in traffic volumes,

vehicle mix, location of the existing facility, or any other factor that would cause an increase in emissions impacts relative to the no-build alternative. This project will generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special mobile source air toxic (MSAT) concerns. Consequently, this project is exempt from analysis for MSATs. Any burning of vegetation will be performed in accordance with applicable local laws and regulations of the North Carolina State Implementation Plan (SIP) for air quality compliance with 15 NCAC 2D.0520.

F. Noise Levels

Noise levels may increase during project construction; however, these impacts are not expected to be substantial considering the relatively short-term nature of construction noise and the limitation of construction to daytime hours. The transmission loss characteristics of nearby natural elements and man-made structures are believed to be sufficient to moderate the effects of intrusive construction noise.

This project has been determined to be a Type III Noise Project and therefore, no traffic noise analysis is required.

G. Floodplains

The proposed project is not located in a flood hazard zone.

H. Hazardous Material Sites/Underground Storage Tanks

The proposed project will not affect any hazardous materials sites or underground storage tanks.

I. Utilities

The project will require construction beyond the limits of the current roadway and fill slopes. The project will require the relocation of three single-phase distribution poles and eight three-phase distribution poles. The project will also result in impacts to 400 linear feet of 8-inch PVC water line and 500 linear feet of 12-inch ductile iron pipe sewer line.

J. Indirect and Cumulative Impacts

The replacement bridge will not permanently alter traffic capacity or travel patterns, reduce travel time, affect access to, or exposure of adjacent parcels, or create new transportation or land use nodes. Due to the absence of transportation impact causing activities this project will neither influence nearby land uses nor stimulate growth. Therefore, no indirect and cumulative effects are anticipated.

K. Farmland

North Carolina Executive Order Number 96 requires all state agencies to consider the impact of land acquisition and construction projects on prime farmland soils, as designated by the U.S. Natural Resources Conservation Service (NRCS).

It is anticipated the proposed project will require acquisition of right-of-way from 4.8 acres of land designated as prime farmland.

L. Geodetic Markers

The project will result in impacts to the Geodetic Marker 'Junction' (PID # EX4194). The marker is located on the northwest bank of the approach fill to Bridge 119, approximately 0.1 mile north of the bridge. NCDOT will coordinate with the N.C. Geodetic Survey prior to construction. The impacted geodetic marker will be relocated prior to construction.

M. Summary of Environmental Impacts

Table 5 below summarizes impacts anticipated for the Preferred Alternative. Impacts were based on the preliminary design slope stakes with an additional 25-foot buffer.

Table 5. Environmental Impact Matrix

Environmental Features		Recommended Alternative
Prime Farmlands (acres)		4.8
Jurisdictional Resources	Wetlands (acres)	0.27
	Streams (linear feet)	240
	Zone 1 Riparian Buffers (square feet)	13,370
	Zone 2 Riparian Buffers (square feet)	8,980
Terrestrial Communities	Maintained/Disturbed (acres)	16.6
	Pine Plantation (acres)	1.8
	Headwater Forest – Disturbed (acres)	0.3
	Total	18.7
Federally-Protected Species		No Effect
Relocations	Residential	0
	Business/non-profit	0
	Total Relocations	0
Minority Populations - Disproportionate Impacts		No
Historic or Archaeological Resources		None
100-Year Floodplains (acres)		0
Hazardous Material Sites		No

VIII. STATE AND FEDERAL PERMITS REQUIRED

The proposed project will require an Erosion and Sediment Control Plan (15A NCAC 2H .1000) subject to review and approval by the NC Department of Environmental Quality.

The project site is also subject to the stormwater rules of the Neuse River Basin Nutrient Sensitive Waters Management Strategy (15A NCAC 2B).

It is anticipated a U.S. Army Corps of Engineers (USACE) Nationwide Permit (NWP) 14 will be needed. The USACE holds the final discretion as to what permit will be required to authorize project construction. If a Section 404 permit is required then a Section 401 Water Quality Certification (WQC) from the NCDWR will be needed. Since the project is located in the Neuse River Basin, a riparian buffer authorization may be required.

Other federal, state, or local permits, approvals, or authorizations may also be required.

IX. COORDINATION AND AGENCY COMMENTS

NCDOT has sought input from the following agencies as a part of the project development: U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, NC Department of Environmental Quality, U.S. Fish & Wildlife Service, N.C Wildlife Resource Commission, N.C. Division of Parks & Recreation, North Carolina State Historic Preservation Office.

X. BASIS FOR FINDING OF NO SIGNIFICANT IMPACT

Based upon a study of the proposed project documented in this assessment and upon comments received from federal, state, and local agencies, it is the finding of the NCDOT that this project will not have significant adverse impacts upon the human or natural environment. The project, as proposed, is consistent with local, regional, and statewide planning efforts and would not disrupt the communities adjacent to it. Per this evaluation, a Finding of No Significant Impact is applicable to this project. Therefore, a state environmental impact statement will not be required.

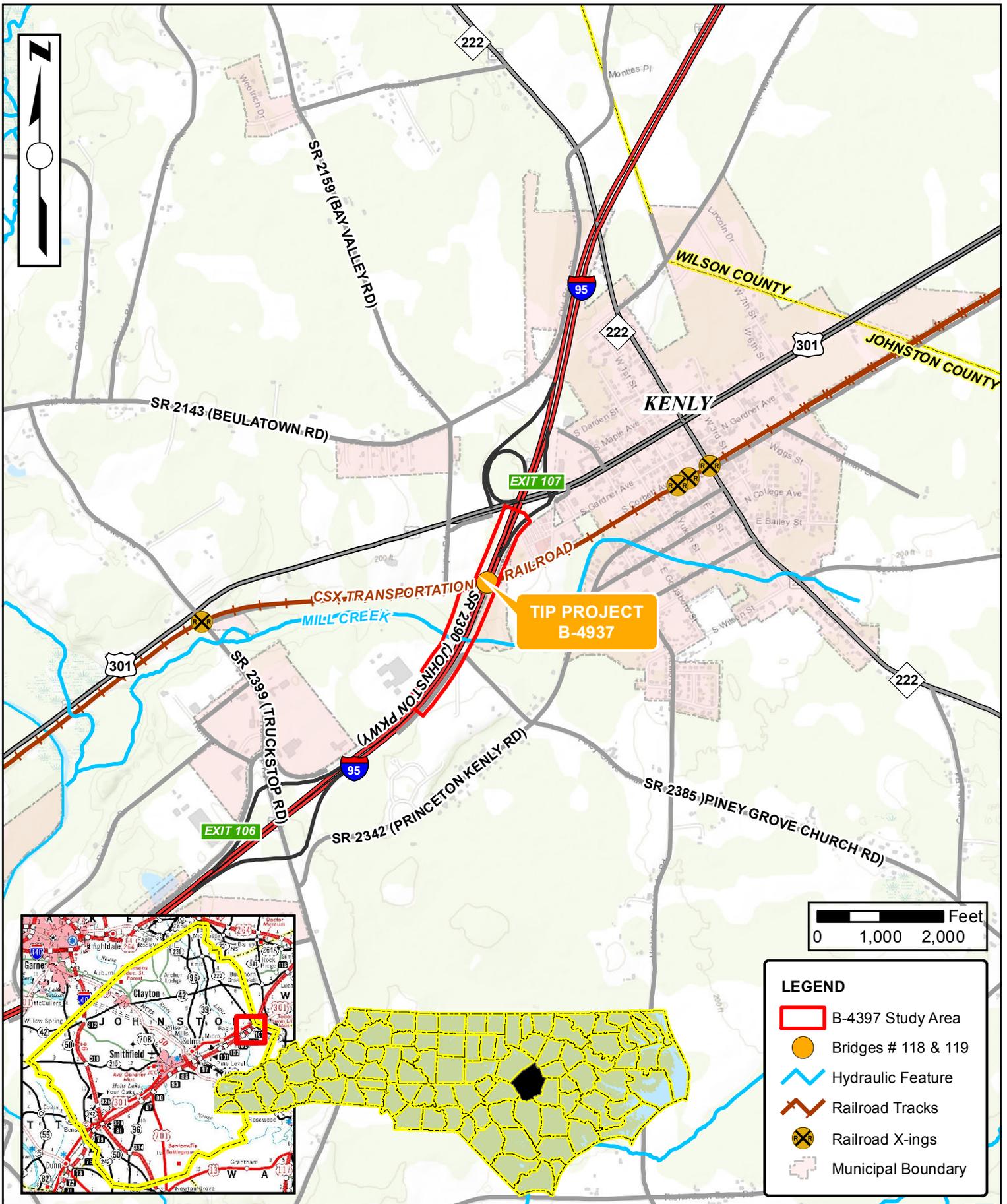
The following person may be contacted for additional information regarding this proposal and statement:

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XI. REFERENCES

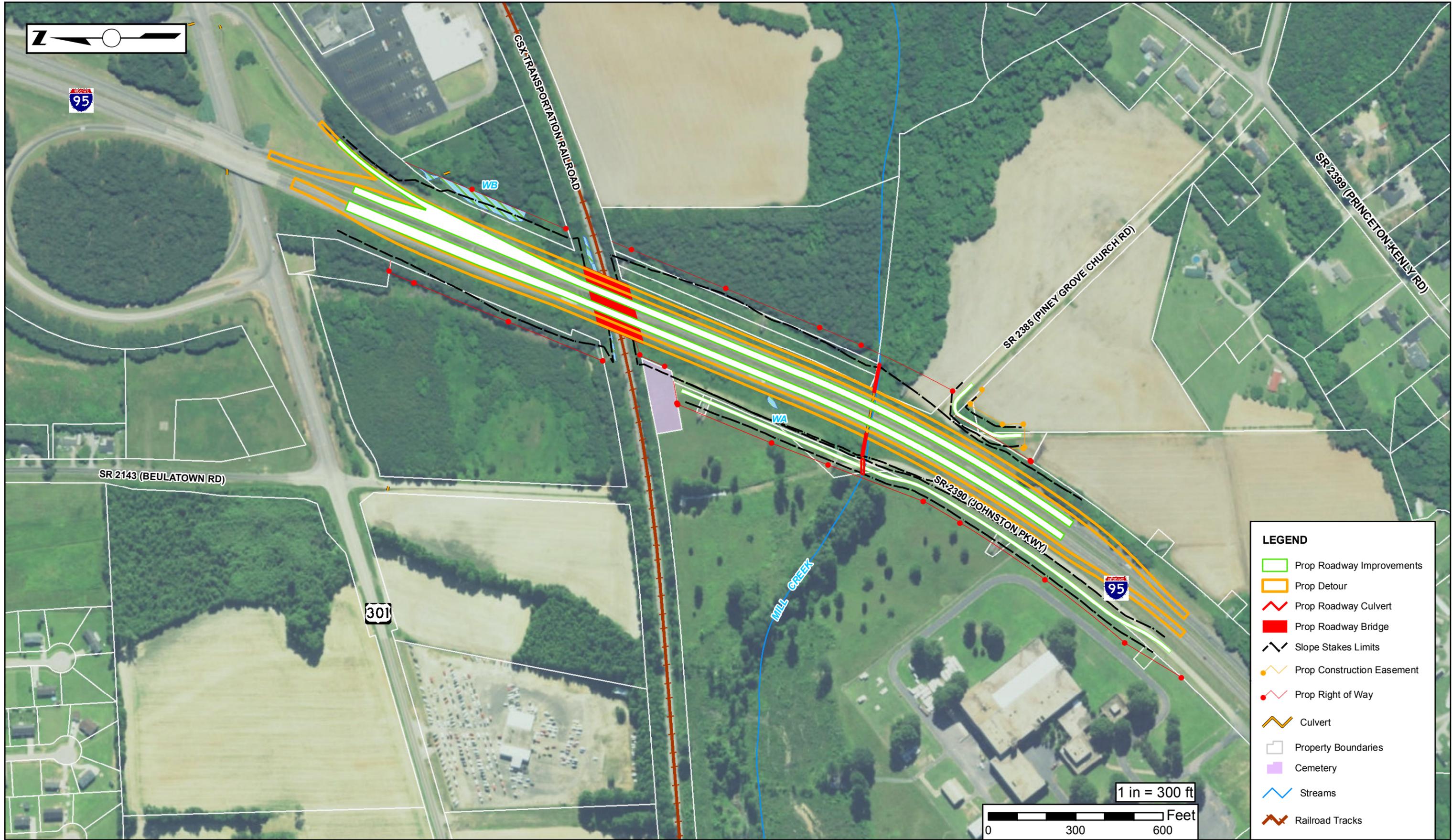
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EXHIBITS



**REPLACE BRIDGE NOS. 118 & 119 ON I-95
 OVER THE CSXT RAILROAD
 TIP PROJECT B-4937
 JOHNSTON COUNTY**

**Exhibit 1
 Vicinity Map**

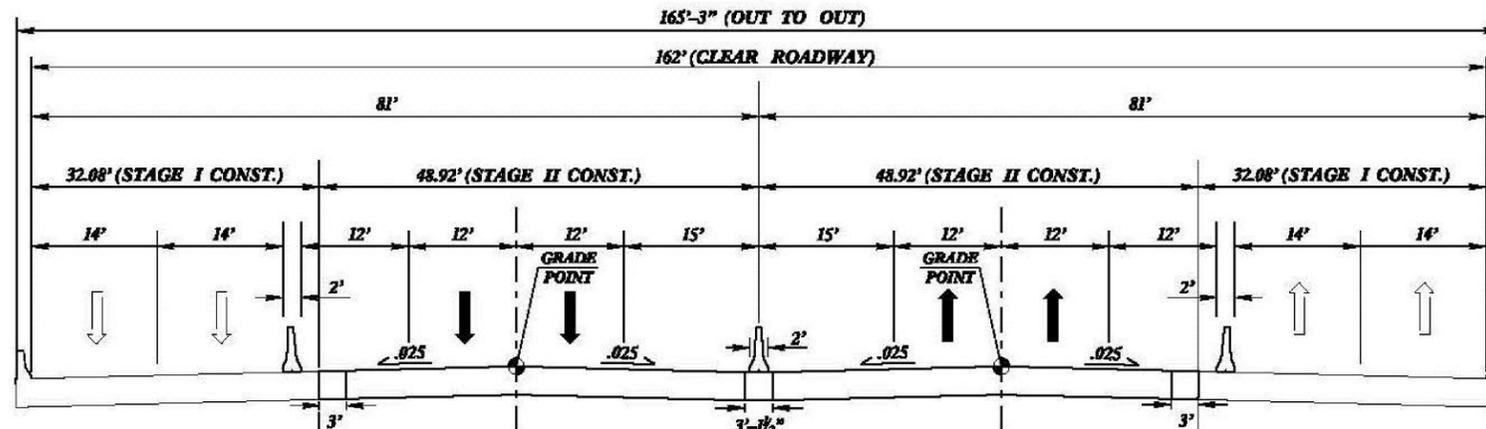


REPLACE BRIDGE NOS. 118 & 119 ON I-95
 OVER THE CSXT RAILROAD
 TIP PROJECT B-4937
 JOHNSTON COUNTY

Exhibit 2
Proposed Improvements

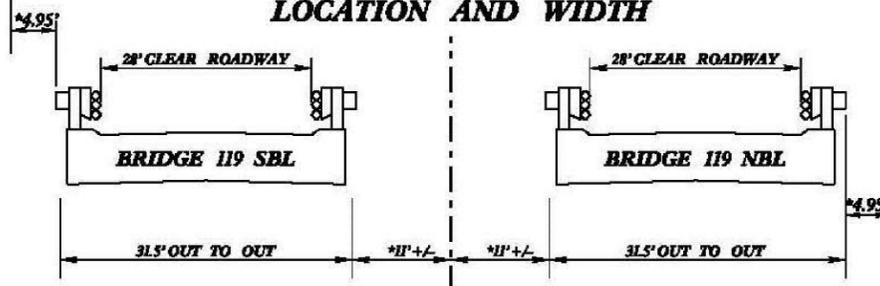
-L- STRUCTURE
-L- I-95 OVER CSX RAILROAD

CL -L-



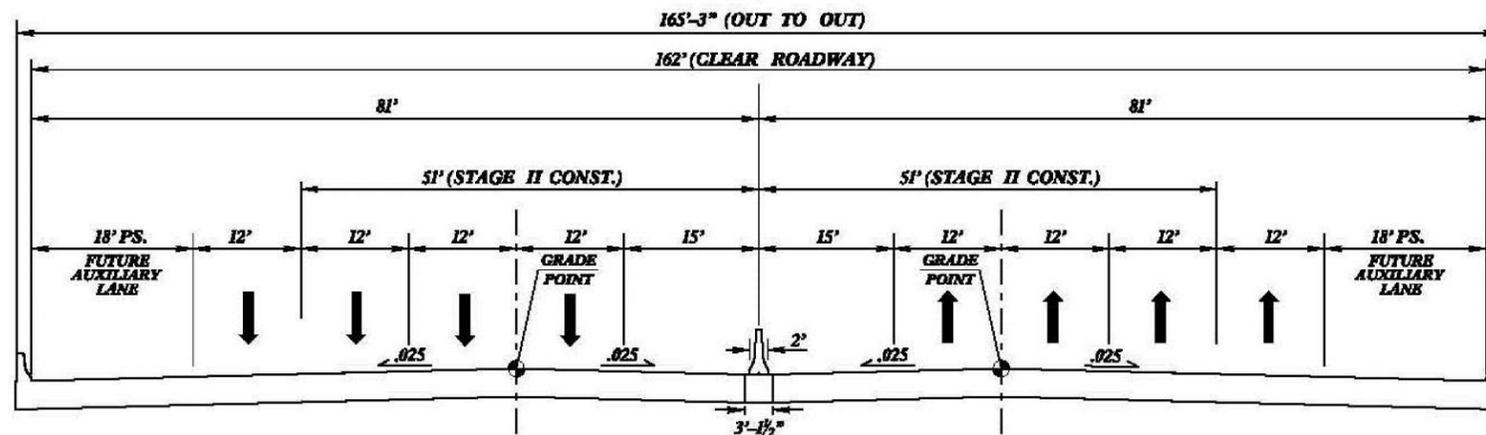
* PROPOSED STRUCTURE WILL BE STAGE CONSTRUCTED

**EXISTING BRIDGE
 LOCATION AND WIDTH**



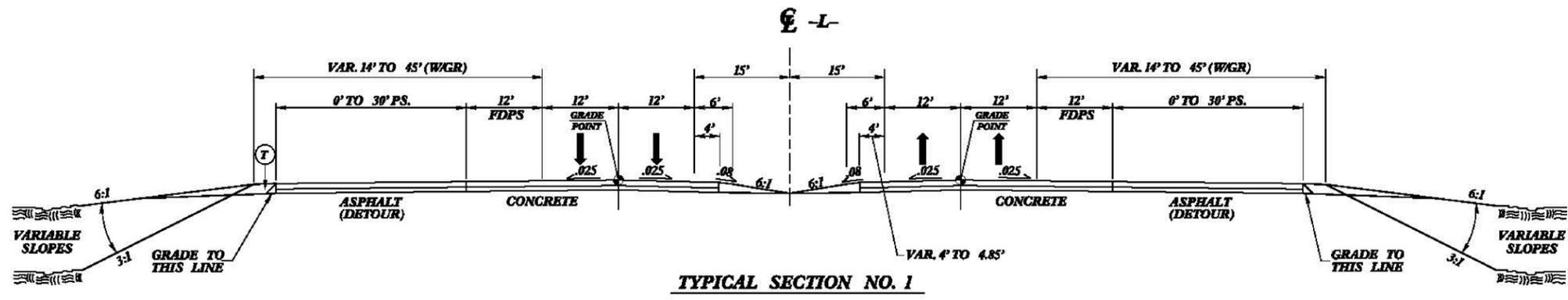
* EXISTING BRIDGE OFFSETS TO BE VERIFIED
 WITH FINAL SURVEYS

CL -L- (FUTURE)

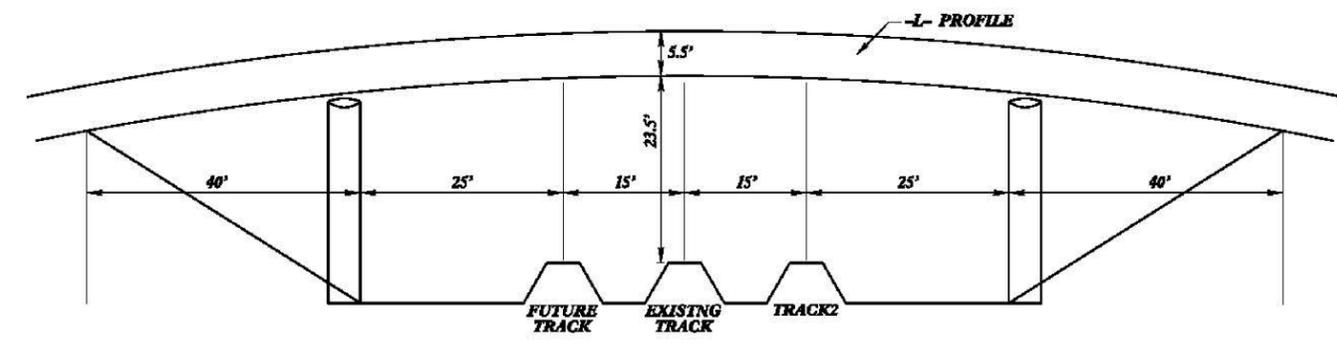


Replace Bridge Nos. 118 & 119 on I-95
 Over the CSXT Railroad
 STIP Project No. B-4937
 Johnston County

Exhibit 3A
 Structural Typical Section

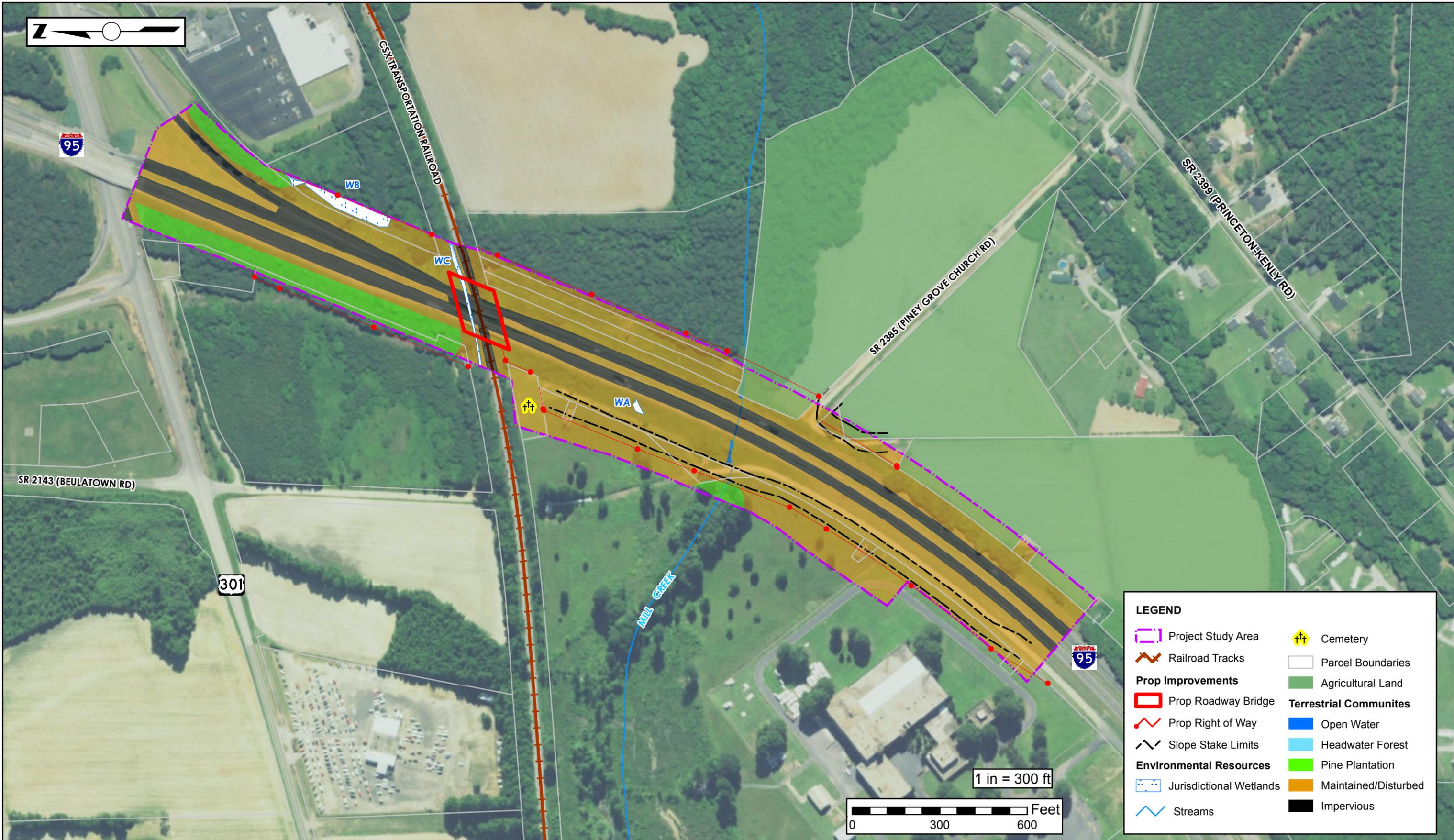


**TYPICAL SECTION
RAILROAD UNDER BRIDGE**



Replace Bridge Nos. 118 & 119 on I-95
Over the CSXT Railroad
STIP Project No. B-4937
Johnston County

Exhibit 3B
Roadway Typical Section / Railroad
Under Bridge



LEGEND

Project Study Area	Cemetery
Railroad Tracks	Parcel Boundaries
Prop Improvements	Agricultural Land
Prop Roadway Bridge	Terrestrial Communities
Prop Right of Way	Open Water
Slope Stake Limits	Headwater Forest
Environmental Resources	Pine Plantation
Jurisdictional Wetlands	Maintained/Disturbed
Streams	Impervious

Replace Bridge Nos. 118 & 119 on I-95
 Over the CSXT Railroad
 STIP Project No. B-4937
 Johnston County

Exhibit 4 Environmental Features



APPENDIX A

15-03-0068



HISTORIC ARCHITECTURE AND LANDSCAPES NO SURVEY REQUIRED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	B-4937	County:	Johnston
WBS No.:	40160.1.1	Document Type:	PCE
Fed. Aid No:		Funding:	<input checked="" type="checkbox"/> State <input type="checkbox"/> Federal
Federal Permit(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Permit Type(s):	unknown
<u>Project Description:</u> Replace Bridge Nos. 118 & 119 on I-95 over CSX Railroad.			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:

Review of HPO quad maps, relevant background reports, historic designations roster, and indexes was undertaken on March 31, 2015. Based on this review there are no NR, DE, LL, SL, or SS in the project area. There are no structures greater than 50 years of age in the Area of Potential Effect (APE) of this project. No survey is required.

Why the available information provides a reliable basis for reasonably predicting that there are no unidentified significant historic architectural or landscape resources in the project area:

Using HPO GIS website and Johnston County ArcGIS website provides reliable information regarding the structures in the APE. These combined utilities are considered valid for the purposes of determining the likelihood of historic resources being present.

SUPPORT DOCUMENTATION

Map(s) Previous Survey Info. Photos Correspondence Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

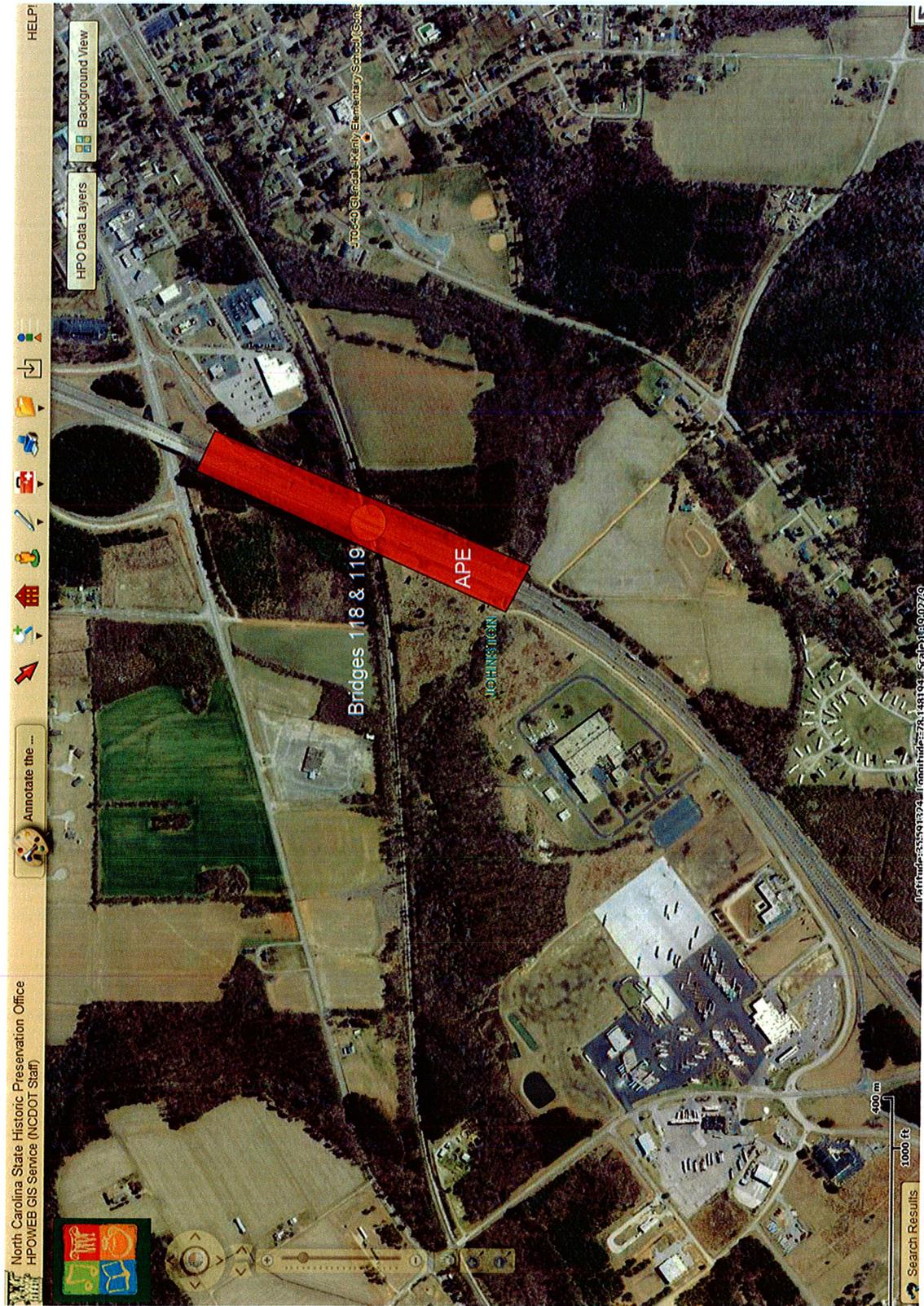
Historic Architecture and Landscapes -- NO SURVEY REQUIRED

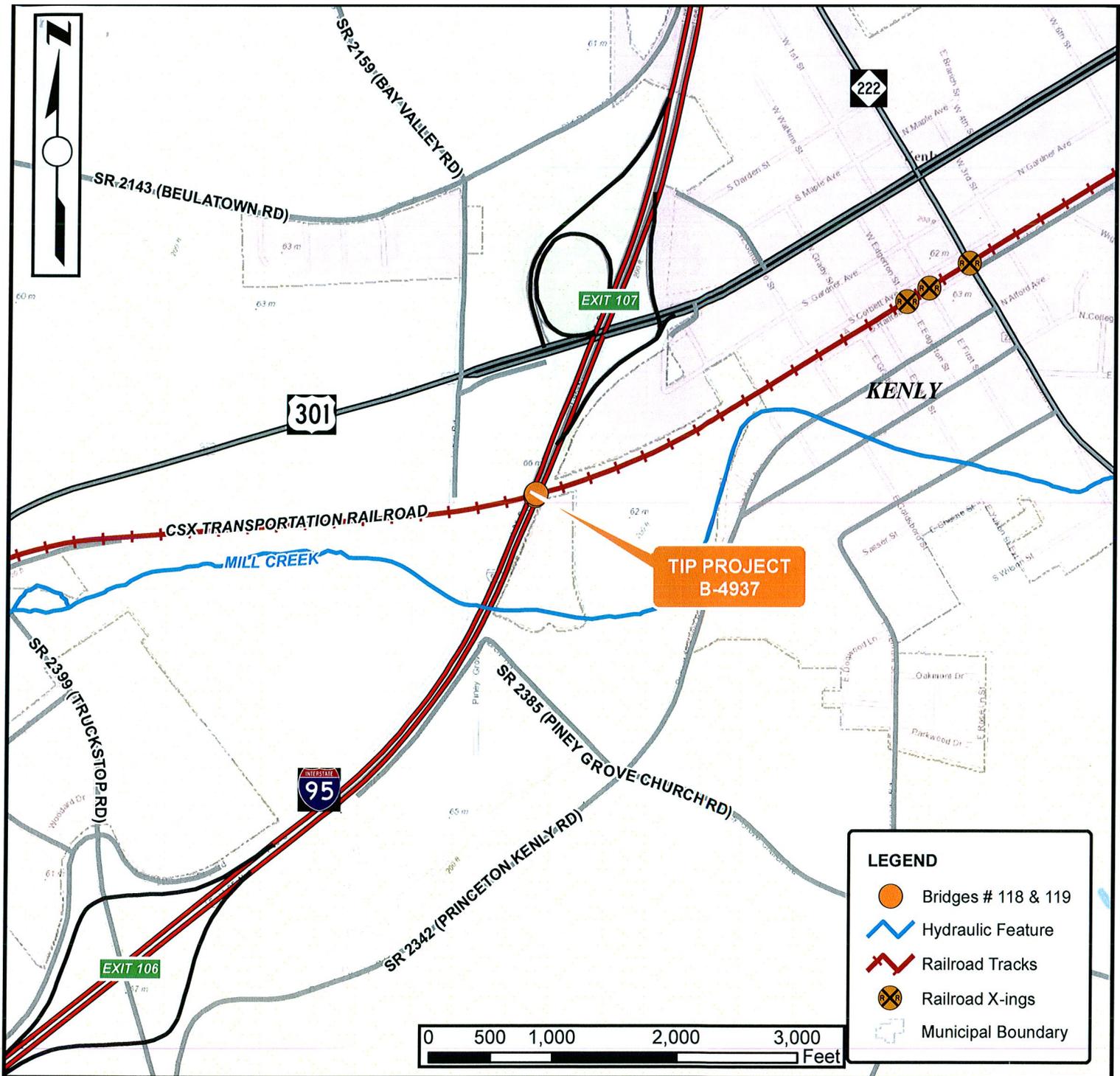
Shelby Reep

NCDOT Architectural Historian

Mar. 31, 2015

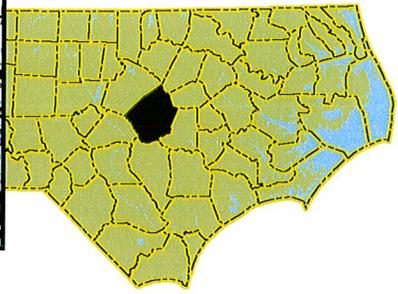
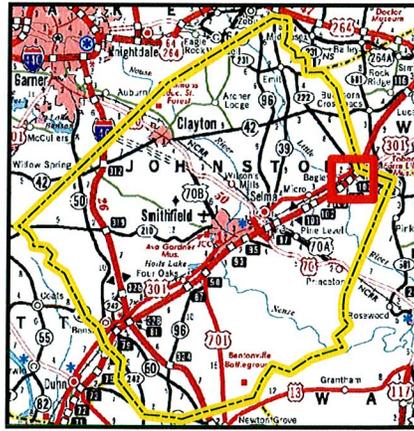
Date





LEGEND

-  Bridges # 118 & 119
-  Hydraulic Feature
-  Railroad Tracks
-  Railroad X-ings
-  Municipal Boundary

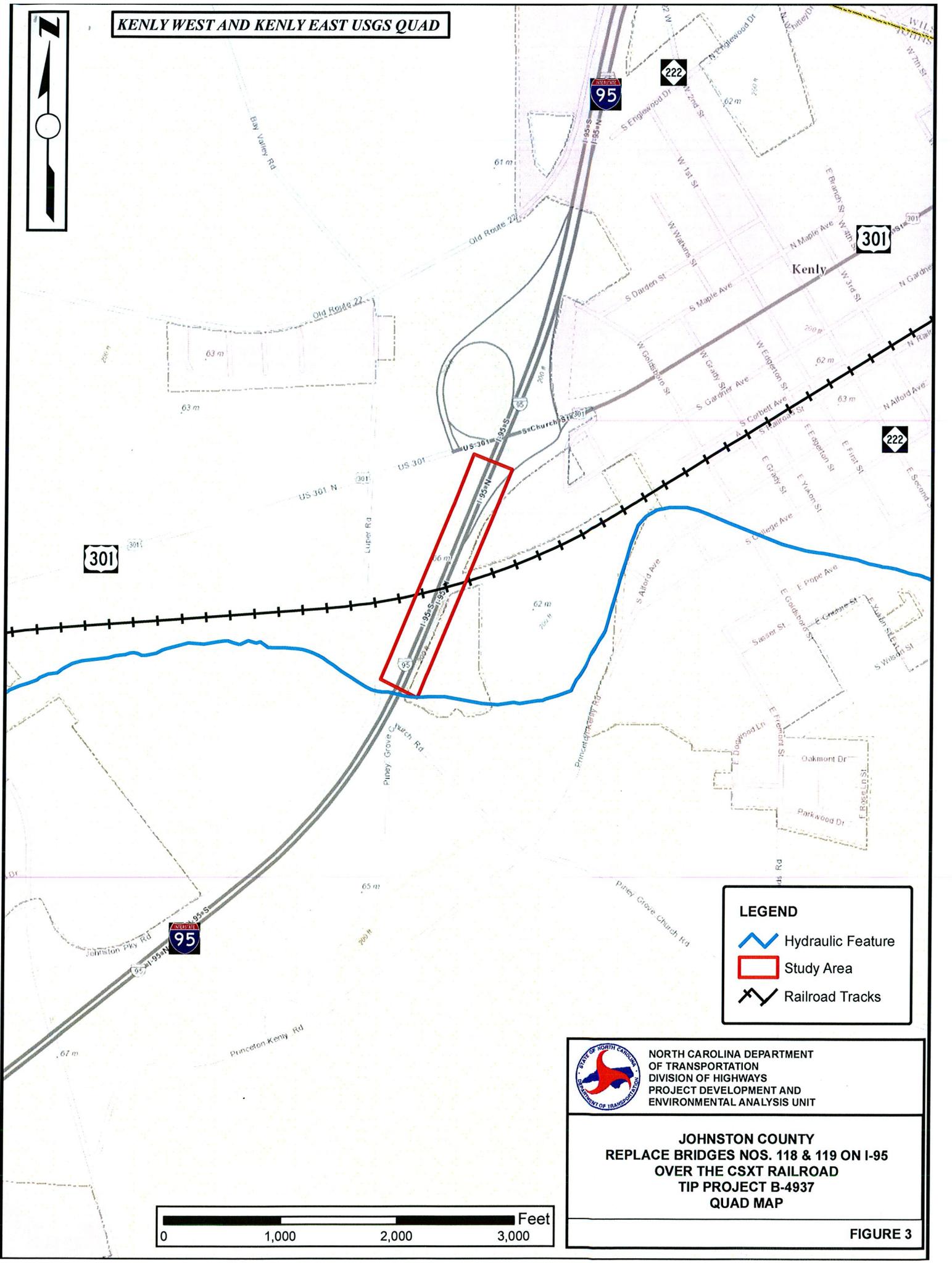
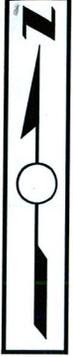


 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS UNIT

**JOHNSTON COUNTY
 REPLACE BRIDGES NOS. 118 & 119 ON I-95
 OVER THE CSXT RAILROAD
 TIP PROJECT B-4937
 VICINITY MAP**

FIGURE 1

KENLY WEST AND KENLY EAST USGS QUAD



LEGEND

- Hydraulic Feature
- Study Area
- Railroad Tracks



NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS UNIT

**JOHNSTON COUNTY
REPLACE BRIDGES NOS. 118 & 119 ON I-95
OVER THE CSXT RAILROAD
TIP PROJECT B-4937
QUAD MAP**

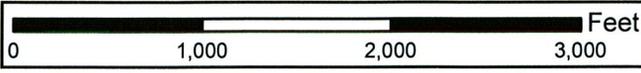


FIGURE 3



INTERSTATE 95

W. JONES ST

301

SR 2143 (BEULATOWN RD)

370 FEET

2000 FEET

MILL CREEK

PINEY GROVE RD

KENLY RD

CSXT TRANSPORTATION RAILROAD

LEGEND

-  Stream
-  Study Area



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS UNIT

JOHNSTON COUNTY
REPLACE BRIDGES NOS. 118 & 119 ON I-95
OVER THE CSXT RAILROAD
TIP PROJECT B-4937
STUDY AREA MAP

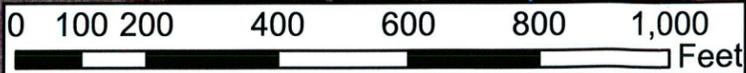


FIGURE 2



NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.



PROJECT INFORMATION

Project No: **B-4937** County: **Johnston**
 WBS No: **40160.1.1** Document: **SEA / FONSI**
 F.A. No: Funding: State Federal

Federal Permit Required? Yes No Permit Type: **tbd**

Project Description: NCDOT proposes the replacement of Bridges Nos. 118 and 119 on I-95 over the CSX railroad in Johnston County. The project is an improvement to an existing interstate highway, overlapping the current transportation facility and is about 3600 feet (0.7 miles) long with a varying width up to about 450 feet. The bridges will be replaced with a single bridge to accommodate future I-95 widening and upgraded railroad facilities. Approaches and ramps are included in the project. On-site detours will be placed adjacent to the new bridges. An access road to access the southwestern quadrant field and cemetery will be shifted to accommodate new fill for the bridge and detours. This is a state funded project, however, federal permits are expected from the USACE. Therefore, this is a federal undertaking and Section 106 of the National Historic Preservation Act applies for archaeological review.

NCDOT staff and consultants provided useful information regarding the project, including the nature and scale of the undertaking. Conceptual preliminary design was available for this review, providing details to establish an appropriately sized archaeological Area of Potential Effects (APE). Most of the APE is considered massively altered by the 1950s construction of I-95 and the associated staging or borrow areas.

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions:

USGS mapping (Kenly West) and aerial photography was studied (see Figures 1 and 2). Interstate 95 is just west of the town of Kenly with the project area being south of the I-95 intersection with US 301. The surroundings are rural with flat, generally open terrain dotted with occasional industries. The CSX railroad passes roughly west-east under the bridges to be replaced. The APE can be described as following the elevated I-95 corridor with limited new impacts at the margin of the associated fill.

Virtual drive-by was available on both Google and Bing maps. Typical highway construction is evident, including the elevated travel lanes and built up bridges over the railroad tracks. Trees have grown along the ROW and railroad easements. There are open field and wooded lots. Some utility easements can be observed.

The NC Office of State Archaeology was visited for background research of previous archaeological studies and to check known archaeological site data, including location and site forms. A small number of sites are recorded to the west some distance (31Jt102, 31Jt230) and an apparent utility along the rail line and NC 301 were reviewed for archaeology including passing through or adjacent to the APE. The portion of I-95 north of the current undertaking beyond US 301 (ER 04-2453 / TIP I-3318) was marked as having also been reviewed.

Two cemeteries are shown on USGS mapping in the nearby vicinity and are included in the GIS-based cemetery data maintained by NCDOT archaeologist, Paul J. Mohler. One cemetery is located towards the northern limits of the project area outside of the APE across from and south of the US 301 loop for I-95

and should not be affected. The other, referenced in project files as the Oliver Family Cemetery, is just south of the railway tracks and is adjacent to the bridges to be replaced. Here, the unpaved SR 2390 (Johnston Parkway Extension) provides access to the field and cemetery. Preliminary designs would shift the small road westward to accommodate fill needed for the new highway bridge and detours. This road and new ROW would stop at the larger parcel which contains the Oliver Family Cemetery within it. Some fill, described as 0.06 acres, would be placed east of the cemetery to widen the already existing I-95 embankment launching the southbound I-95 bridge over the railroad. This falls within an existing water or sewage utility easement and should not directly affect the cemetery (Figure 5).

A series of historic maps (including plat maps available on from the Johnston County government website) and mid-twentieth century aerial photography was researched, gathered and some of it brought into GIS applications. This established the late 1940s (1949) conditions prior to the I-95 highway, the construction phase in the 1950s (4-6-1957), and the changes that resulted in the 1960s (9-9-1965, and 5-1-1969) as the highway began its full use. The aerial negatives and contact sheets available from NCDOT Photogrammetry included some images that focused on the interchanges in the immediate vicinity with excellent detail, with one inch equaling 250 feet. Since these were high quality imaging, the scans allowed magnification. One 1969 aerial shows vehicles driving over I-95 and also depicts the aftermath of the massive earthmoving project (Figure 3). Soil turn around roads, slope lines and piles of discarded tires are clearly visible near the Oliver cemetery southwest of the railroad crossing. Individual grave markers and footstones are easily distinguishable in addition to an earlier fence that surrounded the actual cemetery within the larger parcel. Overlaying this image with recent satellite imagery, changes have occurred to the cemetery that include the apparent removal of the original fence and an expansion southward of later interments. The cemetery is about thirty feet west of proposed slopestakes that follow an existing water or sewage utility easement through the property, and will be avoided according to current proposed plans.

The earlier 1957 (Figure 4) and 1965 aerials show that large portions of the landscape adjacent to the I-95 ROW were apparently used for staging or borrow, and some show erosion of the ground surface or fill. This reinforces that the APE has been modified as part of the major construction project. This establishes that most of the project APE, including expanded ROW and easements, has very disturbed soils and, therefore, it is unlikely that any undiscovered archaeological resources eligible for listing on the National Register of Historic Places would be present or affected. The project should be considered compliant with Section 106. No archaeological survey is recommended for this undertaking as currently proposed.

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

The scale and nature of the project involves in-place improvements to an existing interstate highway. While some construction will exceed the existing ROW limits, historic aerial photography demonstrates those areas to have been affected and disturbed during the original construction of the highway. Potential for intact, significant archaeological resources are low. No archaeological survey is recommended. If future designs for this undertaking expand the fill limits of the slopestakes near the Oliver Family cemetery, additional investigations and documentation may be required. This federally permitted undertaking should be considered compliant with Section 106.

SUPPORT DOCUMENTATION

See attached: Map(s) Previous Survey Info Photos Correspondence
 Photocopy of County Survey Notes Other: **excerpts of aerial photography**

FINDING BY NCDOT ARCHAEOLOGIST

NO ARCHAEOLOGY SURVEY REQUIRED


 NCDOT ARCHAEOLOGIST

8/07/2017

Date

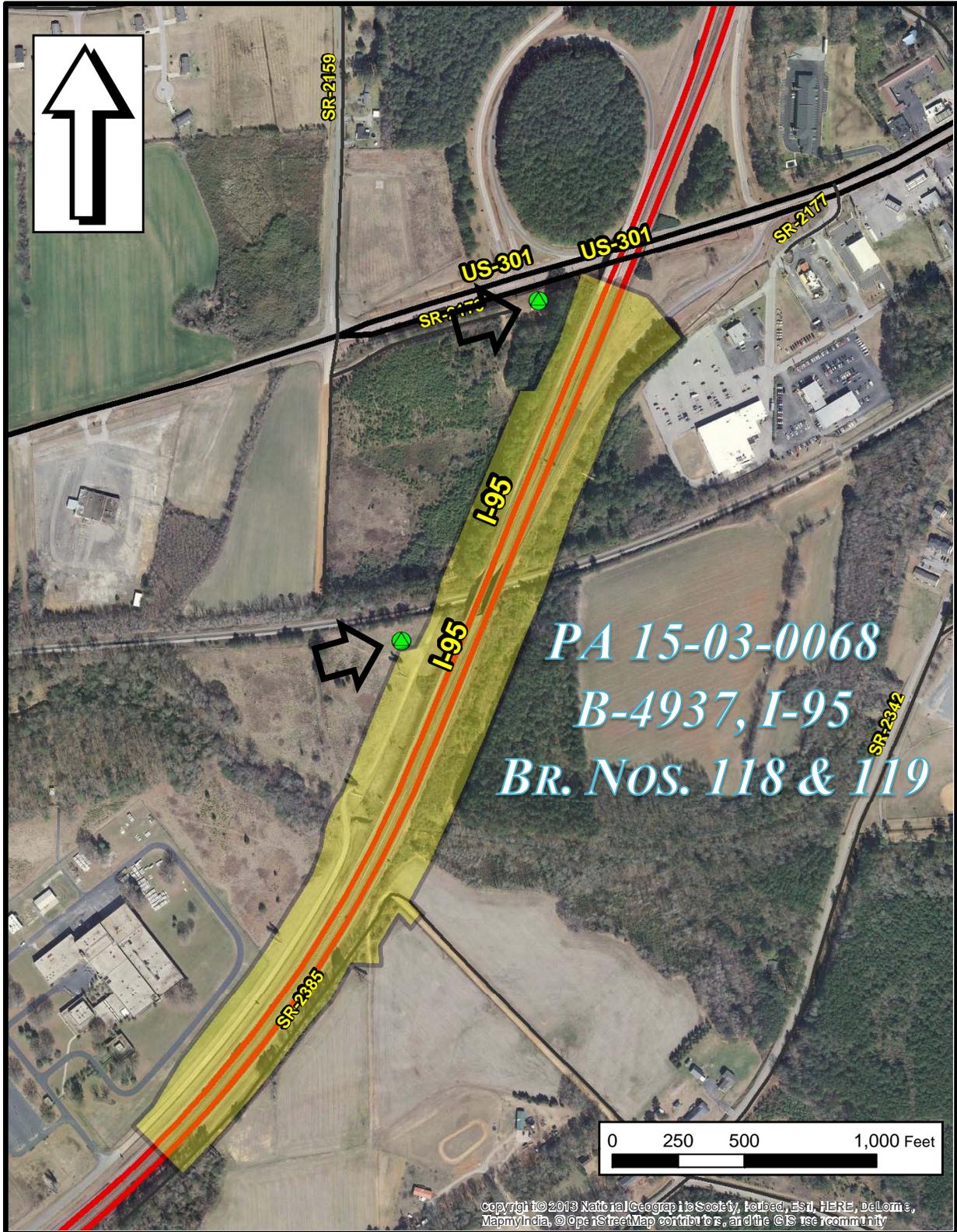


Figure 2. Aerial map of TIP # B-4937. The approximate APE is shown in yellow based on recent ROW, slopestake limits and easements. The majority of the APE was modified during the construction of the modern highway facility. Two cemeteries, indicated with by green circles west of the APE and arrows, are nearby, but will not be affected.



Figure 3. Excerpt of 1969 NCDOT aerial photography showing Br. No. 118 & 119 and the fenced boundaries of the Oliver Family Cemetery at that time (arrow). Note debris, push piles and other ground disturbances are still visible.

"No ARCHAEOLOGY SURVEY REQUIRED" form for the Amended Minor Transportation Projects as Qualified in the 2015 Programmatic Agreement.

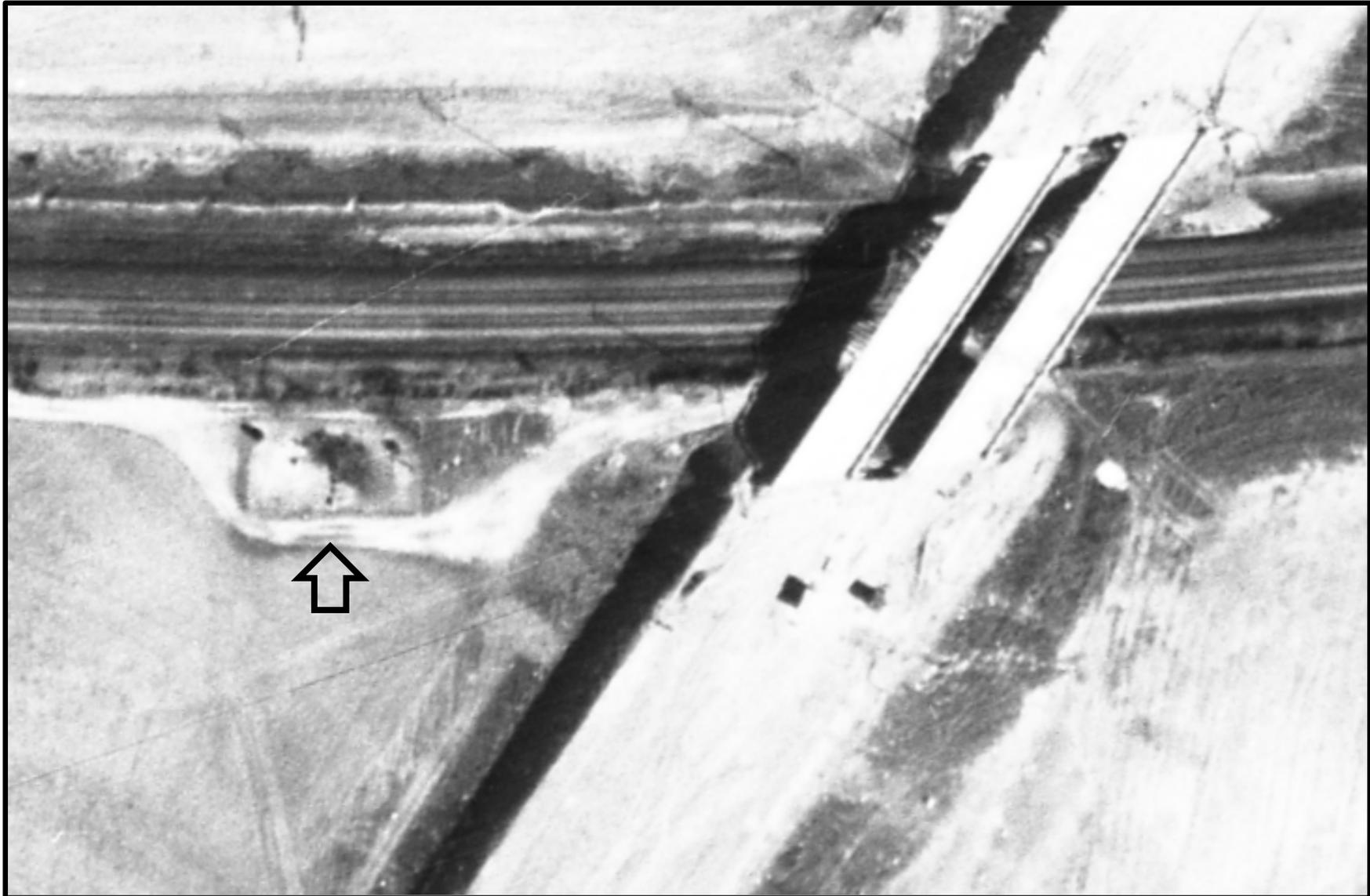


Figure 4. Excerpt of 1957 NCDOT aerial photography showing Br. No. 118 & 119 still under construction, and the fenced boundaries of the Oliver Family Cemetery at that time (arrow).

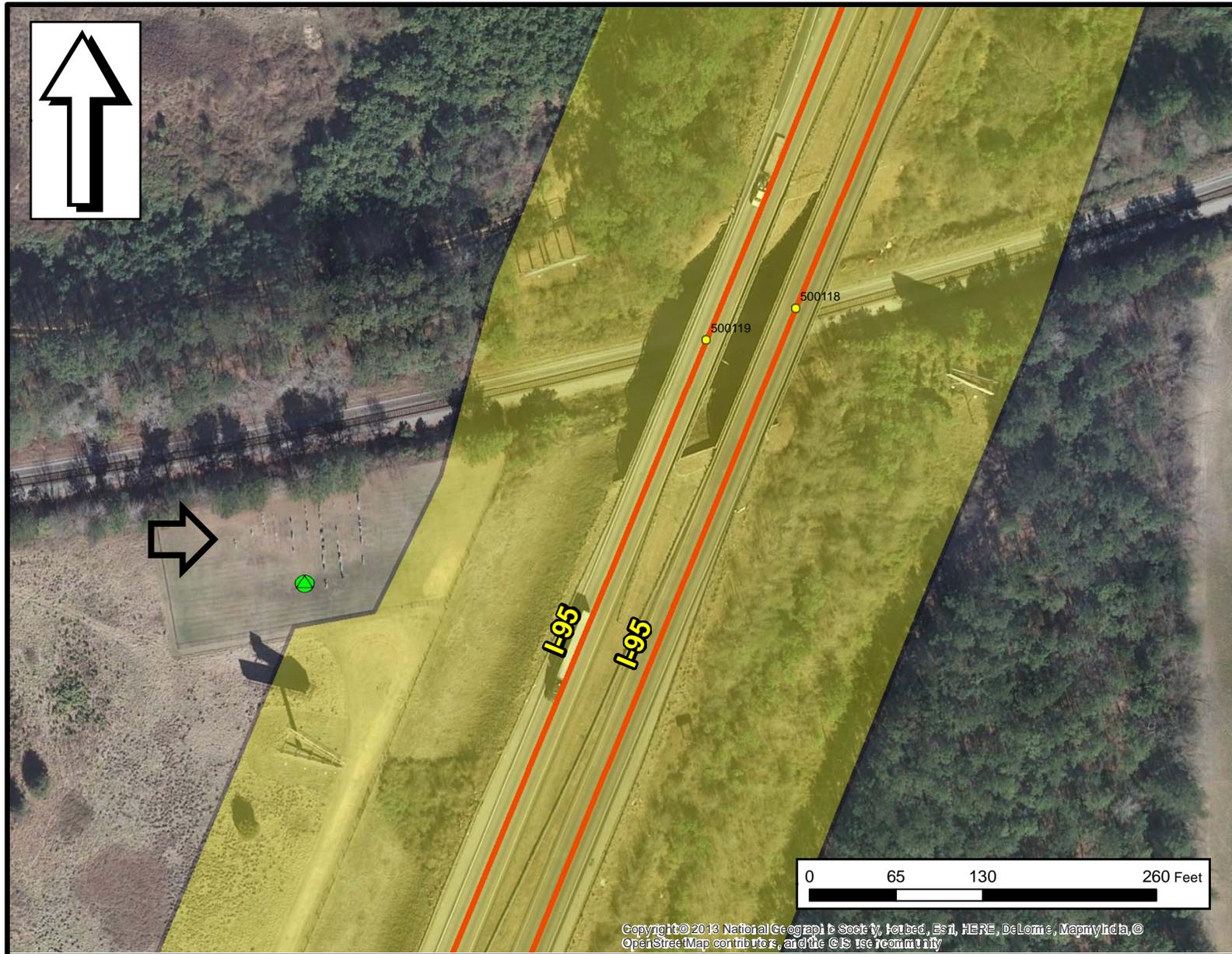


Figure 5. Excerpt of modern aerial photography with the approximate APE depicted in yellow. Note that the Oliver Family Cemetery, which has expanded southward in the past 50 years, will be avoided.

"No ARCHAEOLOGY SURVEY REQUIRED" form for the Amended Minor Transportation Projects as Qualified in the 2015 Programmatic Agreement.