Ecology Resource Survey
And
Assessment of Effects Report

Project Number: NH000-0056-01(061)
P.I. Number 751580
SR 400/US 19 @ CR 145/Northridge Road
Fulton County

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Executive Summary

Georgia Department of Transportation (GDOT) Project PI Number 751580, NH000-0056-01(061) is located in Sandy Springs, Georgia in Fulton County. The proposed project will make improvements to the State Route (SR) 400 and Northridge Road interchange, including: widening the northbound and southbound entrance and exit ramps, widening the existing Northbridge Road bridge over SR 400, widening Northridge Road, Dunwoody Place and Roberts Drive. The total project length is approximately 0.40 miles and the total project area is 9.1 acres. Since this project is not using federal funding, this document has been prepared for compliance with the Georgia Environmental Policy Act.

During the October 2011 field survey, no Buffered State or Federal Waters were identified within the project area. Therefore, the project will not impact any State or Federal Waters or State-mandated stream buffers. The project would not impact migratory birds, bats, migratory bird habitat, or essential fish habitat. The proposed project would have "no effect" on the bald eagle (*Haliaeetus leucocephalus*).

The project area is located within the existing maintained right-of-way (ROW) and is comprised of a maintained plant community and a mixed pine/hardwood forest. This community does not provide suitable habitat for protected species. No critical habitat for federally protected species has been designated in Fulton County, so there will be no impact to designated critical habitat. The project is located within one mile of the Chattahoochee River, a 2010 303(d) listed river, however the river is not within the project area and will not be impacted. There are no streams within the project area that will need consideration for fish passage design. Special Provision 107.23G will be required for migratory birds for the proposed widening of the Northbridge Road bridge over SR 400.

Ecology Resource and Assessment of Effects Overview Tables
PI 751580, Fulton County

Stream, Wetland & Open Water Impacts		
Resource	Length of Impact (ft)	Area of Impact (acres)
Perennial Stream	N/A	N/A
Intermittent Stream	N/A	N/A
Ephemeral Channel	N/A	N/A
TOTAL	N/A	N/A
Wetland	N/A	N/A
Open Water	N/A	N/A
TOTAL	N/A	N/A

Mitigation	
Credits Required:	N/A
To Be Purchased By:	N/A
Date of Request/Purchase:	N/A
Credits Purchased:	N/A
Permit	
USACE Permit Type:	N/A
Date of Application:	N/A
Date of Receipt/Expiration:	N/A

Protected Species Coordination				
Species	Federal Rank	State Rank	Habitat Present (Y/N)	Biological Determination
Bald eagle	N/L	T	N	No Effect
Bachman's sparrow	N/L	R	N	No Effect
Henslow's sparrow	N/L	R	N	No Effect
Chattahoochee crayfish	N/L	T	N	No Effect
Bluestripe shiner	N/L	R	N	No Effect
Delicate spike	N/L	E	N	No Effect
Cherokee darter	T	T	N	No Effect
Peregrine falcon	N/L	R	N	No Effect
Shinyrayed pocketbook	E	E	N	No Effect
Gulf moccasinshell	E	E	N	No Effect
Highscale shiner	N/L	R	N	No Effect
Pink ladyslipper	N/L	U	N	No Effect
Yellow ladyslipper	N/L	R	N	No Effect
Mountain witch-alder	N/L	SC	N	No Effect
Sweet pinesap	N/L	T	N	No Effect
Indian olive	N/L	R	N	No Effect
Dwarf sumac	E	E	N	No Effect
Bay star-vine	N/L	T	N	No Effect
Georgia aster	FC	T	N	No Effect
Barren strawberry	N/L	R	N	No Effect
Key: E= Endangered; T= Threatened; FC= Federal Candidate Species; N/L= No Listing; PS=Partial Status; R= Rare; SC=Special Concern; U=Unusual				

Protected Species Surveys					
Species	Survey Season	Survey Date	Individuals Found	Biological Determination	Special Provisions 107.23G
N/A	N/A	N/A	N/A	N/A	N/A

Present Within Study Corridor
Invasive Plant Species: Y
Migratory Bird Habitat: Y
Essential Fish Habitat: N
Critical Habitat: N

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DNR Occurrence Letter
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NCDWQ Stream Form
Special Provision 107.23G

I. Project Location

Georgia Department of Transportation (GDOT) Project (project) PI Number 751580, NH000-0056-01(061) is located in the City of Sandy Springs, Georgia in Fulton County. The project is located at the interchange of State Route (SR) 400 and Northridge Road. The midpoint is located at 33.982°N and 84.342°W, which is in the Upper Chattahoochee Watershed (HUC 03130001).

II. Need and Purpose

The proposed project is part of a constructive effort by the GDOT and the State Road and Tollway Authority (SRTA) to improve transportation along SR 400. The purpose of the project is to provide roadway improvements to the existing bridge over SR 400, improve traffic signals, pedestrian amenities, and widen the adjacent approach roads. During peak hours, the traffic conditions across the bridge are poor due to narrow lane widths across the bridge, confusion with lane assignments, insufficient storage capacity at turn lanes, and heavy traffic volumes at conflict points. Accident data indicates a high rate of accidents along the bridge.

III. Project Description

The project includes approximately 0.4 miles of widening along Northridge Road. Widening improvements would include better signage for the northbound exit ramp from GA 400 and additional through lanes on Northridge Road to accommodate improved traffic flow. The proposed project would widen the northbound and southbound entrance and exit ramps, the existing Northbridge Road bridge over SR 400, Northridge Road, Dunwoody Place and Roberts Drive. The project would terminate at the existing five lane section of Northridge Road just west of Dunwoody Place, which would provide a consistent five lane section along Northridge Road.

The Northridge Road existing typical section consists of two 9.5-foot travel lanes in each direction with one 10-foot turn lane, curb and gutter, and a 5-foot sidewalk. The posted speed on the bridge is 35 miles per hour, and the minimum radius for the curve is 1500 feet. The width of the right-of-way (ROW) varies; it is 60 feet on the east side of SR 400, and 100 feet on the west side of SR 400. The existing bridge is a four-span, concrete deck and steel plate girder on concrete bent structure. The bridge is 289 feet long and 61 feet wide with a sidewalk on south side of the bridge. The sufficiency rating of the structure is 54.5 percent.

IV. Survey Methodology

Kimley-Horn & Associates, Inc. (KHA) is designing the proposed project. After reviewing the concept report and discussing the project with designers, the project limits were imported into Geographic Information Systems (GIS). The ecology survey limits were established by adding a 100-foot wide corridor. Preparatory research was completed per the current GDOT ecology scope of work. Preparatory research included tasks such as the review of aerial photography and mapping, Fulton County protected species list, and sending a protected species known occurrence request to the Georgia Department of Natural Resources (GDNR).

On October 5, 2011, KHA Ecologist Eric Martin, PWS performed a pedestrian survey of the survey limits. No precipitation had occurred at this site within the previous 72 hours. A pedestrian survey of the survey limits was completed in approximately four hours.

V. Habitats and Land Use Areas

The project area is located along the existing SR 400 northbound and southbound entrance and exit ramps; along Northridge Road, Dunwoody Road, Roberts Drive, Somerset Court, and the intersections of those respective roads. These areas are commercially developed. During the field survey, maintained

plant communities and a mixed pine/hardwood community were observed. This community does not provide habitat for protected species. A general description of these communities follows below.

Maintained Plant Communities
The maintained plant community is located within the ROW, and between on/off ramps and Northridge Road at its intersections with Roberts Drive and Dunwoody Place (see Habitat Map, Section XII). This community was observed in approximately 3 acres of the project area and is deemed to be of low-quality, due to the areas being artificially maintained, the presence of ornamental and invasive species, and the likelihood of herbicide application. Species in this community include tall fescue (*Festuca arundinaceae*), Bermuda grass (*Cynodon dactylon*), dogfennel (*Eupatorium capillifolium*), and hairy crabgrass (*Digitaria sanguinalis*). This community does not provide potential habitat for protected species such as the Georgia aster (*Symphyotrichum georgianum*) because of the significant urbanization and vegetation maintenance.

Mixed Pine/ Hardwood Communities
This community was observed in one area that is approximately 0.88 acre of the project area. This area is isolated by development. Extensive grading on SR 400 and around Northridge Road at its intersections with Dunwoody Place, and Roberts Drive has left no suitable habitat for the Georgia aster. Dominant canopy vegetation is approximately 25 to 40-years old. Dominant canopy species found include loblolly pine (*Pinus taeda*), sweetgum (*Liquidambar styraciflua*), northern red oak (*Quercus rubra*), tulip poplar (*Liriodendron tulipifera*), shortleaf pine (*Pinus echinata*), and red maple (*Acer rubrum*). In addition to some of the invasive species listed in Section VI, common sub-canopy species found include black cherry (*Prunus serotina*), smooth sumac (*Rhus glabra*), winged elm (*Ulmus alata*), blackberry (*Rubus* argutus), trumpet creeper (*Campsis radicans*), poison ivy (*Toxicodendron radicans*), and muscadine (*Vitis rotundifolia*).

VI. Invasive Plant Species Identification and Control Methods

In compliance with Executive Order 13112, a survey was conducted for invasive species that could spread during construction. The invasive species for which the survey was conducted have been identified by the GDOT as having the highest priority due to environmental and economic impacts caused by those species. Both the selected species and the management practices specified will be re-evaluated and revised as appropriate as more information is obtained.

Invasive species were isolated individuals less than 1,000 square feet in coverage and were not large enough for mapping in the Early Detection & Distribution Mapping System (EDDmapS) online database. The invasive species identified within the project area include princesstree (*Paulownia tomentosa*), Chinese privet (*Ligustrum sinense*), sericea lespedeza (*Lespedeza cuneata*), mimosa (*Mimosa diplotricha*), Japanese honeysuckle (*Lonicera japonica*), Russian olive (*Elaeagnus angustifolia*), and autumn olive (*Elaeagnus umbellata*). The Department will take measures during project construction to prevent or minimize the spread of these species as appropriate for the time of the year. These measures will include removal and disposal of vegetative parts in the soil that may reproduce by root raking prior to moving the soil, burning on site any such parts and aboveground parts that bear fruit, controlling or eradicating infestations prior to construction, and cleaning of vehicles and other equipment prior to leaving the infested site. The measures used will be those which are appropriate for the particular species and the specific site conditions which exist on the project, as described in Georgia Standard Specifications Section 201, *Clearing and Grubbing of Right-Of-Way.*

VII. Protected Species Habitat Assessment

Information on federally threatened, endangered, candidate, rare and unusual plants and animals in Fulton County was requested from the GDNR Nongame Conservation Section (NCS). The United States Fish and Wildlife Service (USFWS) Fulton County species list (see Appendix) was reviewed.

a. Federally Protected Species

In compliance with Section 7 of the Endangered Species Act (ESA), GDOT identifies the presence of threatened and endangered species and their habitat as well as designated critical habitat when evaluating project impacts.

The federally listed species known to occur in Fulton County include the Cherokee darter (*Etheostoma scotti*), gulf moccasinshell (*Medionidus penicillatus*), shinyrayed pocketbook (*Hamiota subangulata*), and dwarf sumac (*Rhus michauxii*). The NCS response letter (see Appendix) federally listed species includes a historic occurrence of the shinyrayed pocketbook and dwarf sumac a within a three-mile radius of the proposed project area. During the October 2011 field survey, no suitable habitat was observed for federally listed species known to occur in Fulton County. A federally Protected Species Summary Table is included in Section XIII.

Cherokee darter (*Etheostoma scotti*)

The Cherokee darter has a small cylindrical percid with a relatively blunt snout and a subterminal mouth. Its body is white to pale yellow, and adults usually have eight dark blotches on each side, which increase in size when breeding. The dorsum usually has eight dark saddles. The Cherokee darter is 5 centimeters long on average.

The Cherokee darter is endemic to the Etowah River system in Georgia. Currently, this federally listed threatened fish species is known to inhabit approximately 20 small tributary systems associated with the Etowah River. Populations of Cherokee darters exhibit a fragmented pattern of disjunctive populations, above and below the Allatoona Reservoir. The proposed project does not occur within the Etowah River drainage and there are no intermittent or perennial streams within the survey limits. Therefore, the proposed project would have "no effect" on the Cherokee darter or its suitable habitat.

Gulf moccasinshell (*Medionidus penicillatus*)

The Gulf moccasinshell is a federally listed endangered species. The rhomboidal or elongate-elliptical shell of this small mussel reaches a length of 2.2 inches. The mostly smooth, fairly inflated shell is yellowish to greenish brown with narrow, interrupted green rays. The nacre is smoky purple or greenish and slightly iridescent. Known populations are found in areas with sand and gravel substrates in sections of medium-sized creeks to large rivers with slow to moderate currents.

The gulf moccasinshell is endemic to the Apalachicola River basin of Alabama, Georgia, and Florida. It typically occupies small streams to large rivers with moderate flow and sandy substrates. This species has also been found in gravel and cobble substrates. Since there are no intermittent or perennial streams within the survey limits, the proposed project would have "no effect" to the gulf moccasinshell or suitable habitat.

Shinyrayed pocketbook (*Hamiota subangulata*)

This federally listed endangered species has a subelliptical shell profile with a maximum length of approximately 3.375 inches. The umbo of the shinyrayed pocketbook is positioned anteriorly in the middle of the valves and is elevated above the hingeline. The posterior ridge is prominent dorsally but broadly rounded posterioventrally and the ventral margin is broadly rounded and terminates near the midline of the shell. The periostracum is glossy and yellow to dark brown, often with prominent dark rays radiating from the umbo to the margin of the shell.

This species typically occupies medium sized streams to large rivers in sandy to muddy substrates with slight to moderate current. This species is restricted to the Apalachicola and Ochlockonee river systems in Georgia, Florida, and Alabama. According to the NCS response letter (see Appendix), there is one

historic occurrence approximately 1.5 miles N of the project area. Since there are no intermittent or perennial streams within the survey limits, the proposed project would have "no effect" to the shinyrayed pocketbook or suitable habitat.

Dwarf sumac (*Rhus michauxii*)
This federally listed endangered, colonial shrub has erect stems 1-3 feet tall, with young shoots showing a reddish tinge. Its leaves are deciduous, alternate, and compound with 9-13 leaflets on a reddish leaf stalk. Leaflets are 1.5-3.5 inches long, oval to oblong, sharply toothed, and mostly opposite. Flowers are in a dense, tightly branched cluster at the top of the stem, and have 4-5 tiny, greenish-yellow petals. All parts of this plant are densely hairy.

This species is primarily found in dry, open, rocky, or sandy woodlands over mafic bedrock and is often on ridges and river bluffs. It can be found in Georgia, North Carolina, and Virginia. The mafic bedrock often has high levels of calcium, magnesium, or iron. According to the NCS response letter (see Appendix), there is one occurrence approximately 2.5 miles NW of the project area. All habitats within the project have been disturbed by the construction and maintenance of the interchange ramps, bridge, adjacent roads, and development. Within the project area, forested areas are comprised of naturally recruited vegetation and invasive species. The project area does not provide suitable protected species habitat. Since there is no suitable habitat in the survey area, the proposed project would have "no effect" to the dwarf sumac.

b. Federal Candidate and State Protected Species
Georgia's Wildflower Preservation Act of 1973 provides for the designation of and protection of plant species that are rare, unusual, or in danger of extinction. The Georgia Endangered Wildlife Act is similar to the federal ESA. It prohibits the capture, killing, or selling of protected species and protects the habitat of these species on public lands. A Protected Species Summary Table is included in Section XIII. Since this document has been prepared for compliance with the Georgia Environmental Policy Act, all state protected species and habitats have been discussed below.

The federal candidate and state listed species that occur in Fulton County are Bachman's sparrow (*Aimophila aestivalis*), Henslow's sparrow (*Ammodramus henslowii*), Chattahoochee crayfish (*Cambarus howardi*), bluestripe shiner (*Cyprinella callitaenia*), delicate spike (*Elliptio arctata*), bald eagle (*Haliaeetus leucocephalus*), peregrine falcon (*Falco peregrinus*), highscale shiner (*Notropis hypsilepis*), pink ladyslipper (*Cypripedium acaule*), yellow ladyslipper (*Cypripedium parviflorum*), mountain witch-alder (*Fothergilla major*), sweet pinesap (*Monotropsis odorata*), Georgia aster, Indian olive (*Nestronia umbellula*), bay star-vine (*Schisandra glabra*), and barren strawberry (*Waldsteinia lobata*). The NCS response letter (see Appendix) state listed species includes historic occurrences of the Chattahoochee crayfish, bluestripe shiner, and delicate spike. The NCS response letter (see Appendix) state listed species includes occurrences of the pink ladyslipper, highscale shiner, and bay star-vine within a three-mile radius of the proposed project area.

Bachman's sparrow (*Aimophila aestivalis*)
This listed rare species is about 6 inches in length with a long rounded tail. Adult birds have alternating reddish-brown and gray vertical stripes running down the back from the nape of the neck to the top of the rump. A reddish-brown cap is found on the top of the head and this reddish-brown stripe runs from the back of the eye to the nape. The cheek, throat, and upper breast are buff to grayish. The lower breast and abdomen are lighter buff to whitish. Wing and tail feathers are reddish-brown. Legs are yellow to brownish-gray in color. The bill is grayish to dull grayish-brown.

This species inhabits mature open pinewoods, regenerating clear-cuts (both pine and hardwoods), utility rights-of-way, and old pastures with a dense ground cover of grasses (particularly wiregrass, bluestem or broomsedge) and forbs, or palmetto scrub. This sparrow is often associated with open, mature pine forests where red-cockaded woodpeckers are found, since this habitat often provides the thick grassy ground cover this sparrow prefers. It is found throughout much of the southeastern United States. Since there is no suitable habitat in the survey area, the proposed project would have "no effect" to the Bachman's sparrow.

Henslow's sparrow (*Ammodramus henslowii*)
This state listed rare species has an olive green head with a distinct white eye-ring, chestnut brown back, and whitish throat, breast and abdomen. There is a yellowish supra-loral spot and two broad black stripes that run on top of the head. These stripes are solid from the base of the bill to the back of the head then turn to streaking from the back of the head down to the nape. Feathers on the back are chestnut with black centers and a contrasting white fringe on the edge. The tail feathers are chestnut to brown in color and the tops are very pointed. Plumage is similar between males and females and does not vary substantially between the breeding and non-breeding seasons.

Breeding habitats for this species include tallgrass prairie, lowland prairie, marshes, meadows and weedy pastures in the western part of its range. On the eastern part of its range it inhabits coastal marshes, swamps, dry fields, low wet meadows, weedy hayfields and pastures, and clear-cut pocosins. Generally, sites are characterized by tall, dense grasses and forbs, a well-developed litter layer, standing dead vegetation, and little or no woody vegetation. It can be found throughout much of the central and eastern Midwest, along the northern fringe of the Southeast, and in much of New York, Pennsylvania, and southwestern Ontario. Since there is no suitable habitat in the survey area, the proposed project would have "no effect" to the Henslow's sparrow.

Chattahoochee crayfish (*Cambarus howardi*)
The Chattahoochee Crayfish is a state listed threatened species that is approximately 4 cm long. The Chattahoochee Crayfish is distinguished by the lavender-brown to forest green carapace with red markings on the dorsal surface. Its preferred habitat is riffles with moderate to strong current. The diet consists of aquatic vegetation, aquatic invertebrates, and small fish.

This species is endemic to the Chattahoochee River system. According to the NCS response letter (see Appendix), there is one historic occurrence approximately 1 mile E of the project area. Since there are no intermittent or perennial streams within the survey limits, the proposed project would have "no effect" to the Chattahoochee crayfish or suitable habitat.

Bluestripe shiner (*Cyprinella callitaenia*)
The bluestripe shiner is a state listed threatened species that is approximately 3.5 inches in length and is a dusky olive color with silver sides. The head of the bluestripe shiner is long and rounded with a snout which projects slightly over its subterminal mouth.

Bluestripe shiners inhabit mainstream reaches of rivers and large streams in riffles and runs with cobble, rubble, or sand substrate and are most often collected in areas with swift current velocities. It has also been found in the lower reaches of several small impounded tributaries to the Chattahoochee River, where the backwater of the reservoir mimics large stream habitat. This species is endemic to the Apalachicola River drainage, occurring in the mainstem Apalachicola, Chattahoochee and Flint Rivers and major tributaries. According to the NCS response letter (see Appendix), there is one historic occurrence approximately 1.5 miles N of the project area. Since there are no intermittent or perennial streams within the survey limits, the proposed project would have "no effect" to the bluestripe shiner or suitable habitat

Delicate spike (*Elliptio arctata*)
The delicate spike is a state endangered species. Typically the shell is compressed to moderately inflated and elliptical or elongate in shape. Maximum length is approximately 3.5 inches. The anterior margin is broadly rounded, while the posterior margin is typically rounded to biangulate.

Known populations are found in areas with gravel or sand shoals in medium to large rivers. Occasionally they are found in sand-bottomed runs with slow, steady current. Usually they are found adjacent to, or underneath, large boulders or limestone bedrock in center channel and rarely found in slack water or silt. Within Georgia, the delicate spike historically occurred in the Mobile and Apalachicola River basins, above and below the fall line. Recently, however, only three live specimens have been collected despite extensive sampling in the Conasauga, Coosawattee, and Oostanaula rivers. According to the NCS response letter (see Appendix), there is one historic occurrence approximately 2.5 miles SW of the project area. Since there are no intermittent or perennial streams within the survey limits, the proposed project would have "no effect" to the delicate spike or suitable habitat.

Peregrine falcon (*Falco Peregrinus*)
This state listed rare raptor is 38-53 cm in length with long, pointed wings and a wingspan of up to 112 cm. The tail is long and narrow with alternating light and dark lateral banding. Adult birds are slate gray on the back and have a light breast and abdomen with dark horizontal markings. The cap and nape are black, and a black mustache extends below the eye forming a distinctive dark helmet. Females are noticeably larger than males. Immature birds are browner and heavily marked with vertical streaking on the breast.

Nest sites are normally located on inaccessible cliff ledges where the young are safe from predators. In recent decades peregrines have adapted to new habitats provided by cities, and many pairs now nest on city buildings, bridges and smokestacks and forage in surrounding urban areas for pigeons and other birds. There are two sites in Atlanta where they nest on buildings. Since there is no suitable habitat in the survey area, the proposed project would have "no effect" to the peregrine falcon.

Highscale shiner (*Notropis hypsilepis*)
The highscale shiner is a state threatened species. It is a slender, compressed minnow that is approximately 2.5 inches in length. This minnow is characterized by large eyes set up high on the head, a small subterminal mouth, and a blunt snout. Its dorsum is pale yellow, with the uppermost scales darkly outlined. Another distinct characteristic is the wedge shaped caudal spot that is separated from the lateral stripe. Their diet consists of aquatic and terrestrial insects captured from stream drift. They spawn in late spring/early summer. Highscale shiners are found in tributary streams, near confluences with larger rivers. They inhabit runs and pools over sand and bedrock substrates.

Highscale shiners occur in the Chattahoochee and Flint River systems of Georgia and Alabama, from the headwaters of these systems to just below the Fall Line. They are found in tributary streams, near confluences with larger rivers. They inhabit runs and pools over sand and bedrock substrates. According to the NCS response letter (see Appendix), there are two occurrences approximately 1.5 miles N and 2.5 miles N of the project area. Since there are no intermittent or perennial streams within the survey limits, the proposed project would have "no effect" to the highscale shiner or suitable habitat.

Pink ladyslipper (*Cypripedium acaule*)
This state listed unusual herb has two large basal leaves and a single flower stalk topped with a showy pink flower. Leaves are 3.5-12 inches long and 1-6 inches wide. They are green and hairy on the upper surface, gray on the lower surface, and have bluntly pointed tips and raised parallel veins. Flower stalks can be up to 2 feet tall. The flower is up to 2.875 inches long with a showy, pink, pouch- or slipper-

shaped lip petal and two narrow, twisted, reddish-brown or green petals that spread outwards. A large green sepal curves over the top of the flower.

Pink ladyslippers are found in upland pine and mixed pine/hardwood forests with acidic soils. In the mountains they are found near the edges of rhododendron thickets and mountain bogs. They are found throughout eastern North America, the upper Midwest, and adjacent Candian provinces. According to the NCS response letter (see Appendix), there is one occurrence approximately 1.5 miles N of the project area. All habitats within the project have been disturbed by the construction and maintenance of the interchange ramps, bridge, adjacent roads, and development. Within the project area, forested areas are comprised of naturally recruited vegetation and invasive species. The project area does not provide suitable protected species habitat. Since there is no suitable habitat in the survey area, the proposed project would have "no effect" to the pink ladyslipper.

Yellow ladyslipper (*Cypripedium parviflorum*)
This state listed rare herb is 3-28 inches tall, with 3-5 leaves evenly spaced along an erect, hairy stem. Leaves are up to 8 inches long and 4 inches wide, broadly oval with pointed tips and clasping leaf bases, hairy, strongly ribbed, and alternate. Each plant has 1-2 flowers at the top of the stem. Flowers are fragrant, with an erect green bract and a yellow pouch-like lip petal (slipper) up to 2 inches long and 1.375 inch wide. There are 2 sepals, one curved over the top of the flower and another curved behind the slipper; sepals and petals are green with maroon spots or solid maroon.

Yellow ladyslippers are found in rich, cove hardwood forests. It occurs throughout North America and is rare or unusual in all of the range. All habitats within the project have been disturbed by the construction and maintenance of the interchange ramps, bridge, adjacent roads, and development. Within the project area, forested areas are comprised of naturally recruited vegetation and invasive species. The project area does not provide suitable protected species habitat. Since there is no suitable habitat in the survey area, the proposed project would have "no effect" to the yellow ladyslipper.

Mountain witch-alder (*Fothergilla major*)
This state listed species of special concern is a densely branched shrub that typically grows to 6 feet. Leaves are 1-5.376 inches long and 1.875-5 inches wide. Leaves are leathery, with blunt teeth on the upper portion of the leaf margin. White flowers with many showy, white stamens and no petals are held in dense "bottlebrush" spikes at the tips of twigs. Lower surfaces of leaves, twigs, buds, and flowers are covered with star-shaped hairs.

Mountain witch-alder is found in mixed pine/hardwood forests on dry, rocky (sandstone or granite) slopes and bluffs, often with Virginia pine, scarlet oak, and black oak. They are found in Georgia, South Carolina, North Carolina, Alabama, Tennessee, and Arkansas. Occasionally they are found in moist forests with tulip poplar, silverbell, and cucumber trees along rocky stream banks. It prefers acidic soils. All habitats within the project have been disturbed by the construction and maintenance of the interchange ramps, bridge, adjacent roads, and development. Within the project area, forested areas are comprised of naturally recruited vegetation and invasive species. The project area does not provide suitable protected species habitat. Since there is no suitable habitat in the survey area, the proposed project would have "no effect" to the mountain witch-alder.

Sweet pinesap (*Monotropsis odorata*)
This state threatened perennial herb lacks chlorophyll and is parasitic on underground fungi associated with the roots of trees. This herb is 1 to 3 inches tall and is fleshy, smooth, and hairless. Its triangular leaves are tan, papery, and scale-like. The sweet pinesap occurs usually in clusters and is found in shades of red, purple, pink, or brown. The plant flowers between February and April and the clusters of bell-

shaped, flowers are extremely sweet-fragrant and nodding at the top of the stem. The flowers are recognizable by their purple petals with white tips which are united for almost half their length, and 5 tan, separate, papery sepals which are nearly as long as the petals.

The sweet pinesap occurs in mixed pine/hardwood or chestnut oak-dominated forests with dry, acidic soil. It is often found with mountain laurel, rhododendron, and blueberry. The sweet pinesap is found in Georgia, Alabama, South Carolina, North Carolina, Tennessee, Virginia, West Virginia, Kentucky, Maryland, and Delaware. All habitats within the project have been disturbed by the construction and maintenance of the interchange ramps, bridge, adjacent roads, and development. Within the project area, forested areas are comprised of naturally recruited vegetation and invasive species. The project area does not provide suitable protected species habitat. Since there is no suitable habitat in the survey area, the proposed project would have "no effect" to the sweet pinesap.

Georgia aster (*Symphyotrichum georgianum*)
The Georgia aster is a federal candidate species. This species is a perennial, colonial herb that typically grows approximately 8 to 35 inches in height. Flower heads have bright purple ray flowers, reddish disk flowers, and purple-tipped stamens that produce white pollen. The flowers appear in early October to November.

This species is primarily found in dry habitats with light being the primary controlling factor that needs to be available. Most remaining populations survive adjacent to roads, along woodland borders, in dry rocky woods, within maintained utility ROW, and other openings where current land management mimics natural disturbance regimes. It can be found in Georgia, Alabama, South Carolina, and North Carolina. All habitats within the project have been disturbed by the construction and maintenance of the interchange ramps, bridge, adjacent roads, and development. Within the project area, forested areas are comprised of naturally recruited vegetation and invasive species. The project area does not provide suitable protected species habitat and therefore would have "no effect" on the Georgia aster.

Indian olive (*Nestronia umbellula*)
The Indian olive is a state listed rare species. It is a semi parasitic shrub that forms dense colonies 2-4 feet tall. Stems and branches are smooth, and dark purplish-brown; winter buds are dark brown, pointing outward, and often at right angles to the stem. The leaves are 1-2.5 inches long, opposite, deciduous, and oval to lance-shaped. The upper surface is dark yellow-green, and lower surface is pale green.

This species inhabits dry, open, upland woods with mixed pine/hardwood canopy. Most colonies have either male or female flowers only, which limits reproduction to root-sprouting. The Indian olive is found in Georgia, Alabama, Mississippi, South Carolina, North Carolina, Tennessee, Kentucky, and Virginia. All habitats within the project have been disturbed by the construction and maintenance of the interchange ramps, bridge, adjacent roads, and development. Within the project area, forested areas are comprised of naturally recruited vegetation and invasive species. The project area does not provide suitable protected species habitat. Since there is no suitable habitat in the survey area, the proposed project would have "no effect" to the Indian olive.

Bay star-vine (*Schisandra glabra*)
This state listed threatened woody vine twines up trees and forms low thickets on the ground. Its bark is gray and dumpy on older vines. Leaves are 0.75-5 inches long and 0.375-3 inches wide, oval-shaped, with tapering leaf bases, pointed tips, and widely spaced teeth along the margins. Leaves are spicy when crushed. Flowers have 9-12 rounded, red and green tepals; female flowers have 6-12 pistils, male flowers have stamens embedded in a small, flattened disk.

The bay star-vine prefers moist, deciduous hardwood forests often with beech. It usually occurs on lower slopes, stream terraces and floodplains. It can be found Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Kentucky, Tennessee, South Carolina, North Carolina, and the Sierra Madre of Mexico. There are approximately 50 known populations in Georgia. According to the NCS response letter (see Appendix), there are occurrences approximately 2.5 miles E, 2.5 miles SW, 3.0 miles E, 1.5 miles N, 1.5 miles NE, and 2.0 miles N of the project area. All habitats within the project have been disturbed by the construction and maintenance of the interchange ramps, bridge, adjacent roads, and development. Within the project area, forested areas are comprised of naturally recruited vegetation and invasive species. The project area does not provide suitable protected species habitat. Since there is no suitable habitat in the survey area, the proposed project would have "no effect" to the bay star-vine.

Barren strawberry (*Waldsteinia lobata*)
The barren strawberry is state listed as rare. It is a perennial herb that spreads by underground stems and runners which form small patches of plants; there are no aboveground stems. Leaves are in rosettes; leaf blades are up to 3 inches long, divided into 3-5 rounded lobes, but not cut completely to the base of the leaf. The leaves are hairy on both surfaces, and margins are coarsely and unevenly toothed. Leaf-stalks are hairy and 3-6 inches in length. Flower clusters are branched, on erect stalks, with the flower less than .5 inch wide. There are five yellow petals and 5 green sepals that alternate with and are often longer than the petals. Flowers have many showy, yellow stamens.

The barren strawberry inhabits stream terraces, floodplain forests, and rocky, lower slopes with oak-hickory-pine forest. It is often found with mountain laurel. It can be found in the following states: Georgia, Alabama, North Carolina, and South Carolina. All habitats within the project have been disturbed by the construction and maintenance of the interchange ramps, bridge, adjacent roads, and development. Within the project area, forested areas are comprised of naturally recruited vegetation and invasive species. The project area does not provide suitable protected species habitat. Since there is no suitable habitat in the survey area, the proposed project would have "no effect" to the barren strawberry.

c. Bald and Golden Eagles
The Bald and Golden Eagle Protection Act of 1940 provides for the protection of the bald eagle and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession and commerce of such birds.

There are no bald eagle nests located within one mile of the proposed project. The project area contains no suitable foraging or nesting habitat for the bald eagle and the project would not result in "take", as defined under the Bald and Golden Eagle Protection Act. Therefore, the proposed project would have "no effect" on the bald eagle.

d. Migratory Birds
The Migratory Bird Treaty Act (MBTA) and the Executive Order on the Responsibility of Federal Agencies to Protect Migratory Birds (EO 13186), requires the protection of migratory birds and their habitats.

In implementing requirements under the Migratory Bird Treaty Act, the GDOT identifies foraging, nesting or edge habitat and what affect, if any, the proposed project would have on that habitat. In addition, GDOT surveys under bridges and within large culverts that would require reconstruction or removal as part of a proposed project. If birds, such as the barn swallow (*Hirundo rustica*), are observed nesting under a bridge or within a culvert, demolition or reconstruction of that structure will be scheduled to avoid the breeding season of migratory birds, which begins April 1st and extends through August 31st.

Suitable nesting habitat was observed underneath the bridge where Northridge Road crosses over SR 400. No nests or evidence of nests were observed during the survey conducted after the breeding season (October 2011). The proposed project does not provide suitable foraging or edge habitat. There are no culverts or large pipes that could provide nesting habitat. The project would not be expected to impact edge species. The proposed project would have no effect on neotropical/migratory bird populations. Due to the presence of suitable habitat, Special Provision 107.23G will be needed since the bridge is identified as suitable nesting habitat.

e. Bats

The project area includes the Northridge Road bridge over SR 400, but does not include any culverts. No suitable habitat for bat roosts or evidence of bat roosts were observed.

f. Critical Habitat

Critical habitat, as defined under the Endangered Species Act (ESA), identifies specific geographic areas that include physical and biological features essential to the conservation of a federal listed species. No critical habitat for federally protected species has been designated in Fulton County.

g. Essential Fish Habitat

In compliance with the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), GDOT must identify unavoidable adverse impacts to Essential Fish Habitat (EFH).

EFH is described by Congress as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" (Magnuson-Stevens Act Provisions; Essential Fish Habitat [16 U.S.C. 1802(10)]). In Georgia, EFH has been defined in Camden, Glynn, McIntosh, Liberty, Bryan, and Chatham Counties. The project area is not located within any of these coastal counties of Georgia and, therefore, the project would have no effect on essential fish habitat.

VIII. Federal and State Water and State-mandated Buffer Assessment

Jurisdictional Waters of the U.S. are defined by 33 CFR Part 328.3(b) and are protected by Section 404 of the Clean Water Act (33 USC 1344). State Waters are defined by the Official Code of Georgia 12-7-1 and protected by the Georgia Erosion and Sedimentation Control Act of 1975. In compliance with the National Pollutants Discharge System (NPDES) permit under Section 402 of the Clean Water Act, any encroachment within the designated 25-foot or 50-foot buffer of a state water will be described and the need for a variance will be indicated.

The project area is located in the Upper Chattahoochee Watershed (HUC 03130001), which has been designated as a priority watershed by the Environmental Protection Agency (EPA). During the August 15, 2011 field survey, no Buffered State or Federal Waters were identified within the project area.

Non-buffered State Water 1

Non-buffered State Water 1 is located to the west side of the SR 400 southbound entrance ramp, within the maintained ROW, and along the entrance ramp shoulder's toe of slope. The channel is approximately 1 to 2 feet wide and 1 foot deep. The substrate is predominantly clay with no observed flowing water or pooled water. This channel does not have an ordinary high water mark and hydric soils were not observed within the channel bed. This channel receives storm water runoff from a small maintained area located on the south side of Northridge Road. Non-buffered State Water 1 is a non-buffered drainage ditch because it does not have wrested vegetation by normal stream flow, indicators of groundwater-induced base flow, or hydric soils. During the field survey, a North Carolina Stream Identification Form was completed and Non-buffered State Water 1 scored a total of 5.5 points (see Appendix). Most of the form's geomorphology, hydrology, and biology indicators were absent in Non-buffered State Water 1. This ditch

does not have an ordinary high water mark. Non-buffered State Water 1 is neither a trout stream nor a 2010 303(d)-listed channel. Non-buffered State Water 1 is outside of the project area and would not be impacted by the proposed project.

IX. Avoidance and Minimization of Impacts

Environmental harm would be minimized by standard sedimentation and erosion and hydrological control measures. These include the following:

1. Preservation of roadside vegetation beyond the limits of construction where possible;
2. Early re-vegetation of disturbed areas so as to minimize soil erosion;
3. The use of slope drains, detention/retention structures, surface, subsurface and cross drains, designed as appropriate or needed, so that discharge would occur in locations and in such a manner that surface and subsurface water quality would not be affected (the outlets may require aprons, bank protection, silt basins and energy dissipaters);
4. Inclusion of construction features for the control of predicted erosion and water pollution in the plans, specifications and contract pay items (Georgia Standard Specifications - Sections 161 through 171 and 700 through 715 identify the pollution control measures which may be used);
5. The dumping of chemicals, fuels, lubricants, bitumens, raw sewage, other harmful waste into or alongside of streams or impoundments, or into natural or man-made channels leading thereto, would be prohibited;
6. Compliance with terms of the National Pollutant Discharge Elimination System (NPDES) permit for construction activities to include preparation and submittal of project Notice of Intent (NOI) and Notice of Termination (NOT). The NPDES permit also requires preparation and implementation of an Erosion, Sedimentation, and Pollution Control Plan and a Comprehensive Monitoring Program. Best management practices outlined in the Erosion, Sedimentation, and Pollution Control Plan must be consistent with, and no less stringent than, practices set forth in the *Manual for Erosion and Sedimentation Control in Georgia.*

Since the proposed project will have no ecological impacts, additional minimization measures are not applicable.

X. Indirect and Cumulative Effects

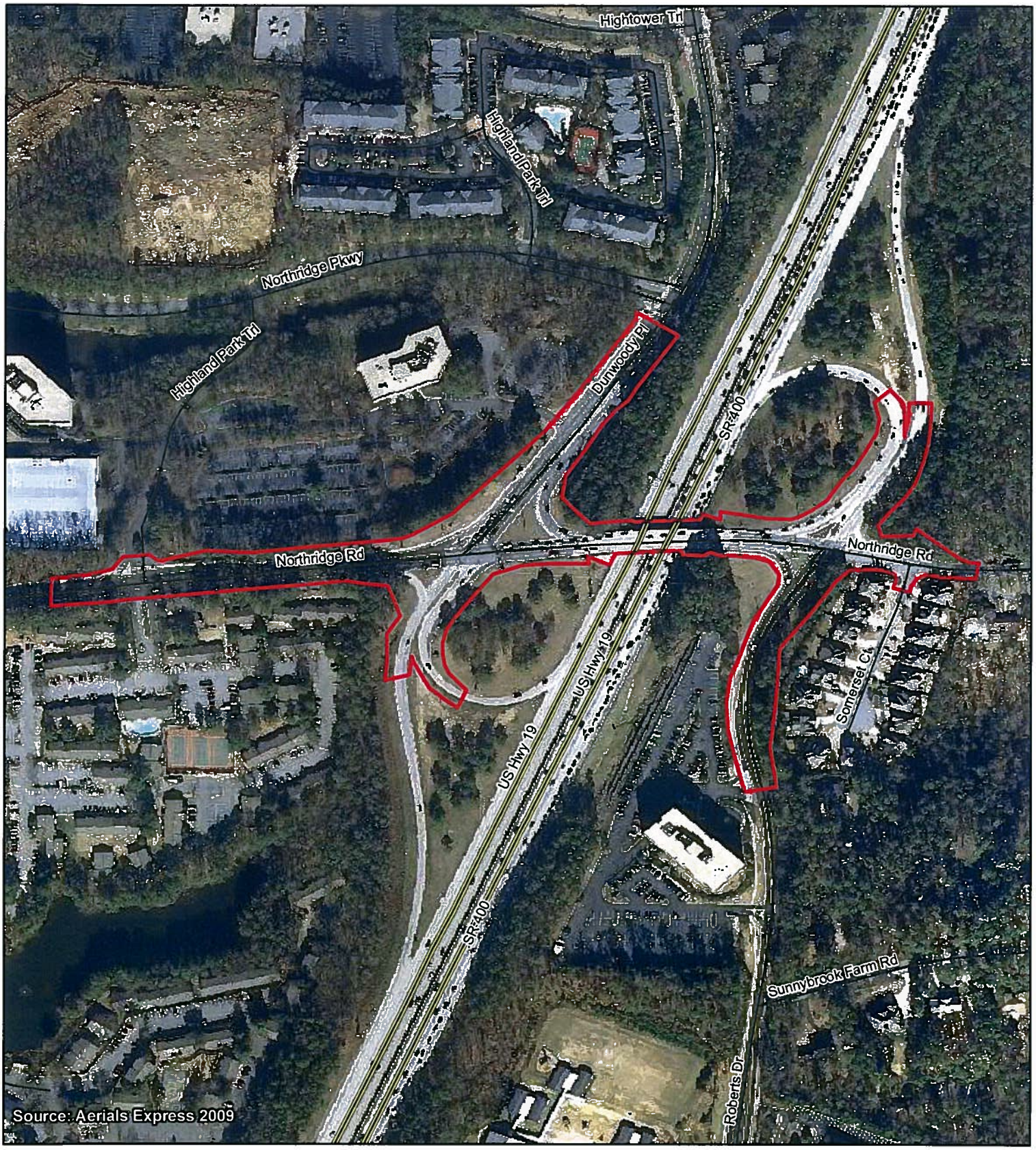
The proposed project would not have any indirect or cumulative effects to ecological resources.

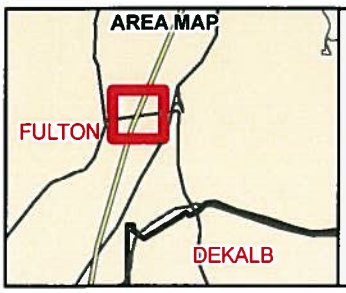
XI. Permit and Mitigation

No impacts to jurisdictional Waters of the U.S. or state waters and associated buffers would occur as a result of the proposed project. No mitigation will be required for the proposed project.

XII. Figures

The Survey Area Maps, Habitat Map, State and Federal Water Map, and Soil Map are included on the following pages.





LEGEND

Roadways

Survey Area

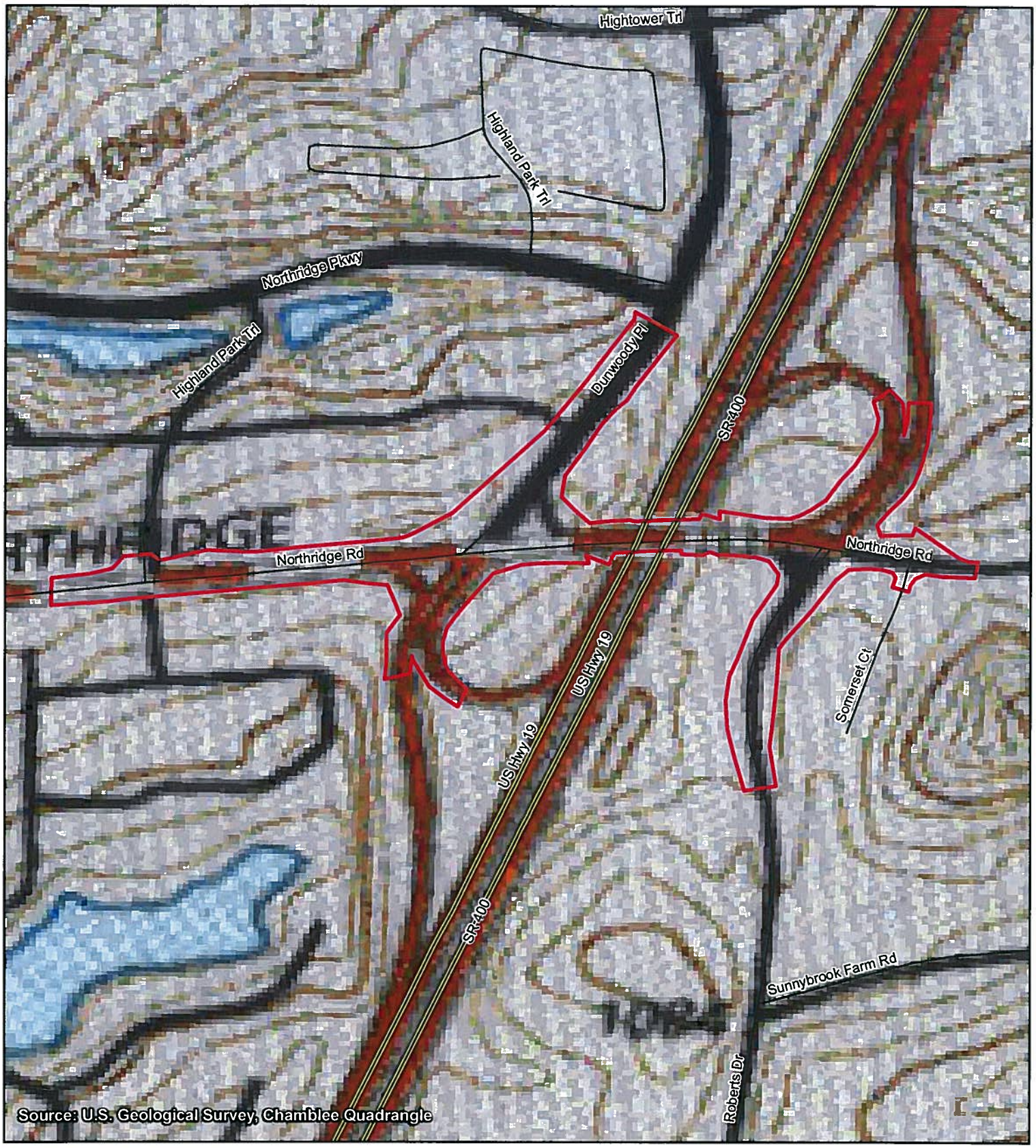
1:4,100

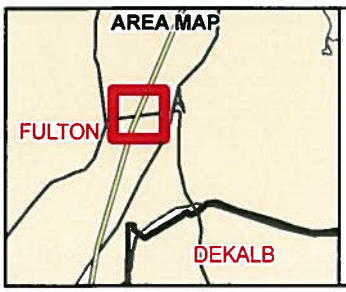
0 80 160 Feet

Figure 1: Survey Area Map

P.I. No. 751580
Fulton County, Georgia

State Route 400 at Northridge Road - Interchange and Ramp Improvements





LEGEND

Roadways

Survey Area

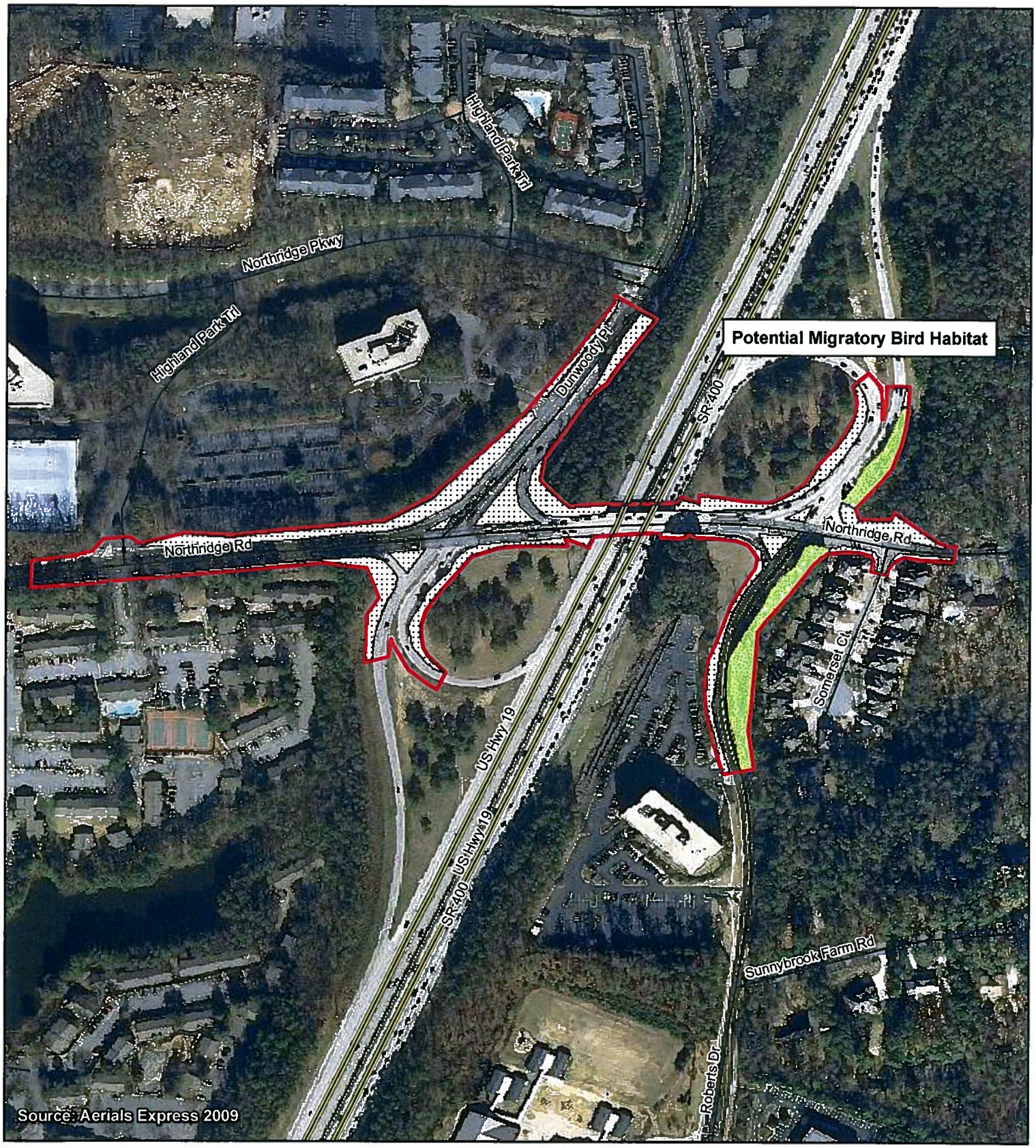
1:4,100

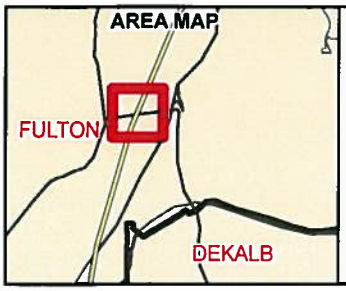
0 80 160 Feet

Figure 2: Survey Area Map

P.I. No. 751580
Fulton County, Georgia

State Route 400 at Northridge Road - Interchange and Ramp Improvements





LEGEND

- Roadways
- Survey Area
- MaintainedHabitat
- Mixed Pine/Hardwood Habitat

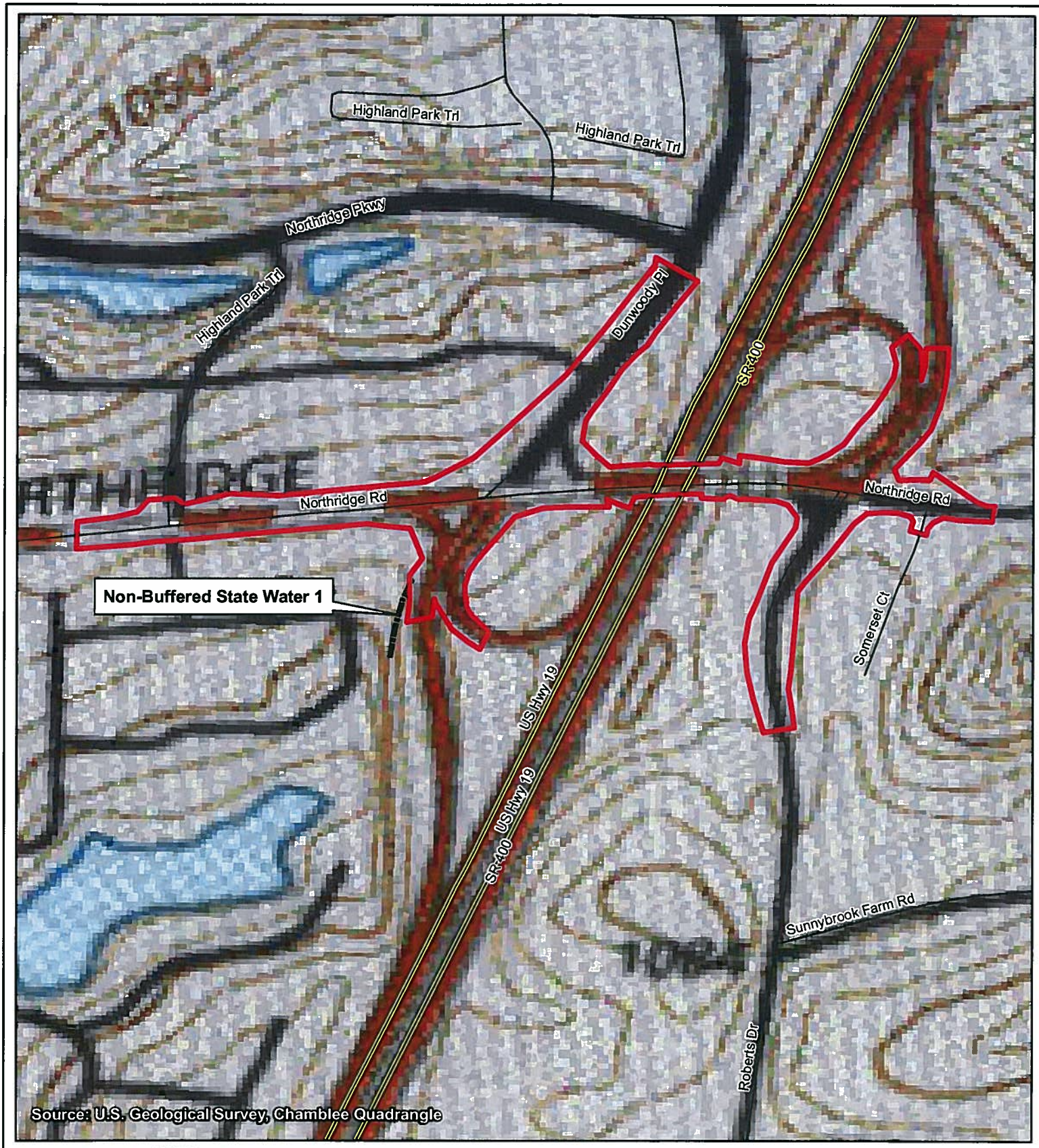
1:4,100

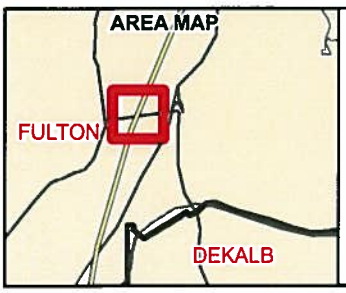
0 70 140 Feet

Figure 3: Habitat Map

P.I. No. 751580
Fulton County, Georgia

State Route 400 at Northridge Road - Interchange and Ramp Improvements





LEGEND

- Roadways
- ProjectArea
- Non-Buffered State Water

1:4,100

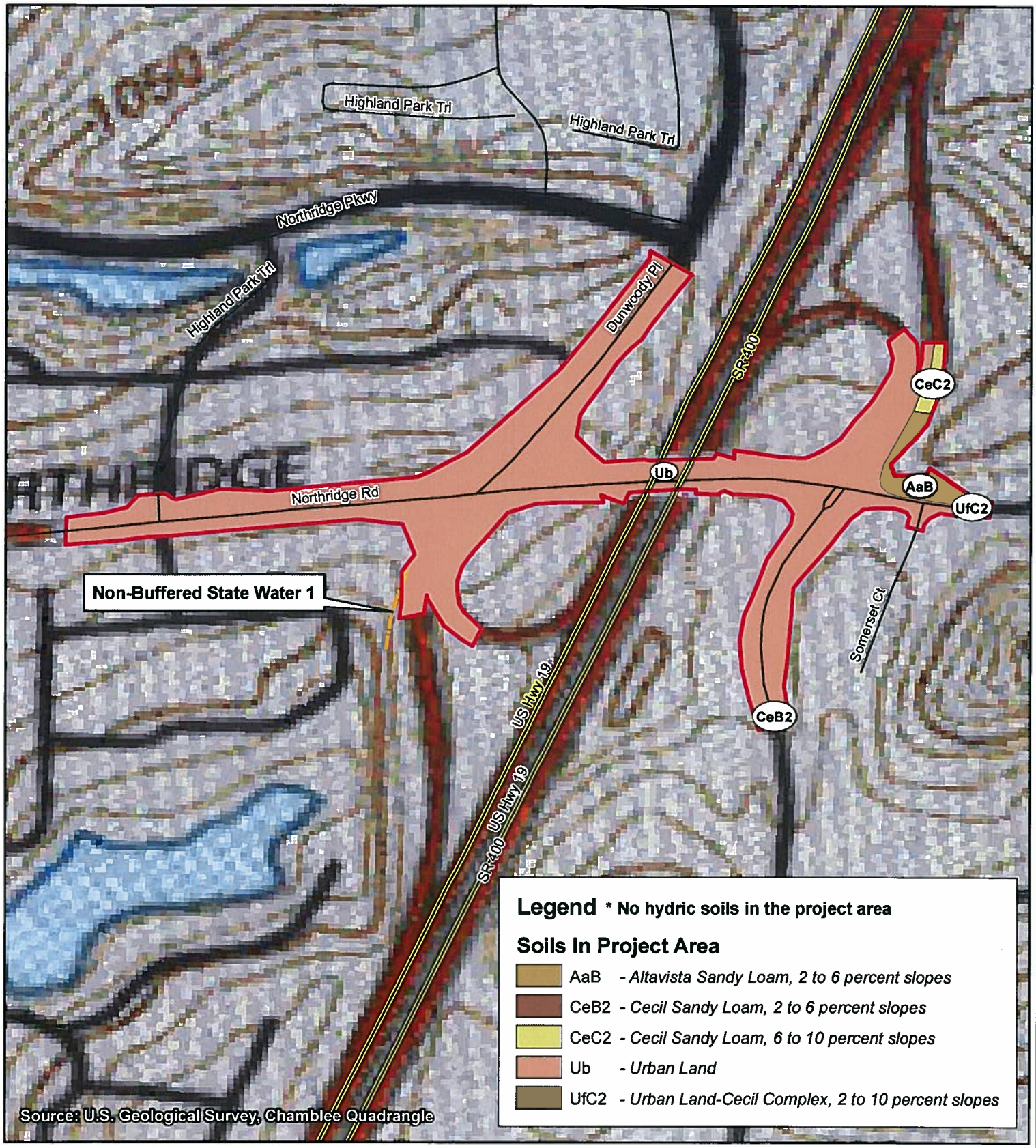
0 80 160 Feet

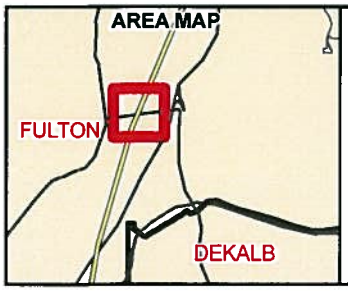
Figure 4: State and Federal Waters Map

P.I. No. 751580
Fulton County, Georgia

State Route 400 at Northridge Road - Interchange and Ramp Improvements

N





LEGEND

Survey Area

Roadways

Non-Buffered State Water

1:4,100

0 250 500 Feet

Figure 5: Soils Map

P.I. No. 751580
Fulton County, Georgia

State Route 400 at Northridge Road - Interchange and Ramp Improvements

N

XIII. Tables

Table 1

Federally and State Listed Species in Fulton County

Common Name	Scientific Name	Federal Status	State Status	Habitat	Survey Season	Habitat Available (Yes/No)	Species Impact Expected
				Faunal Species			
Cherokee darter [1,2]	*Etheostoma scotti*	T	T	Shallow water in small to medium warm water creeks with predominantly rocky bottoms. Usually found in sections with reduced current, typically runs above and below riffles and at ecotones of riffles and backwaters.	May-September	No	No Effect
Bald eagle [2]	*Haliaeetus leucocephalus*	N/L	T	Breeding habitat includes areas close to coastal areas, bays, rivers, lakes, or other bodies of water that reflect the general availability of primary food sources. Roosts in conifers or other sheltered sites in winter but has been known to perch in larger, more accessible deciduous trees as well.	January & March	No	No Effect
Gulf moccasinshell [1]	*Medionidus penicillatus*	E	E	Medium streams to large rivers with slight to moderate current over sand and gravel substrates; may be associated with muddy sand substrates around tree roots.	May-September	No	No Effect
Shinyrayed pocketbook [1,2]	*Hamiota subangulata*	E	E	Inhabits clean sand or silty sand substrates in areas of slow to moderate current in medium-sized creeks and rivers.	May-September	No	No Effect
Bachman's sparrow [1]	*Aimophila aestivalis*	N/L	R	Found in mature pine stands adjacent to grassy fields. Dense forests and intensively grazed pastures are not suitable habitats.	Early Morning March-June	No	No Effect
Henslow's sparrow [1]	*Ammodramus henslowii*	N/L	R	Inhabits tall grass prairie, lowland prairie, marshes, and weedy pastures in the western part of its range. On the eastern part, it inhabits coastal marshes, swamps, dry fields, wet meadows, weedy hayfields, & clear-cut pocosins.	April-October	No	No Effect

Key: E= Endangered; T= Threatened; FC= Federal Candidate Species; N/L = No Listing; PS = Partial Status; R=Rare; U=Unusual

Source: 1. Georgia Department of Natural Resources, Nongame Conservation Section (updated July 2010)
2. http://www.fws.gov/r4gafo/endangered/counties_Fulton.html (updated May 2004)

Table 1

Federally and State Listed Species in Fulton County

Common Name	Scientific Name	Federal Status	State Status	Habitat	Survey Season	Habitat Available (Yes/No)	Species Impact Expected
Chattahoochee crayfish [1,2]	*Cambarus howardi*	N/L	T	Found in the riffle areas of streams, often under rocks. Streams are usually moderate to swiftly flowing, and have a rocky or rubble substrate. Endemic to the Chattahoochee River system.	May-September	No	No Effect
Bluestripe shiner [1,2]	*Cyprinella callitaenia*	N/L	R	Inhabits large streams of the Apalachicola River system in riffles and runs with a rubble or sand substrate.	May-September	No	No Effect
Delicate spike[2]	*Elliptio arctata*	N/L	E	Mussel that occurs in slow to moderately flowing rivers. Usually found along the shoreline, attached or underneath rocks, or within the river substrate.	May-September	No	No Effect
Highscale shiner [2]	*Notropis hypsilepis*	N/L	R	Found in tributary streams of the Chattahoochee and Flint Rivers. They inhabit runs and pools over sand and bedrock substrates.	May-September	No	No Effect
Peregrine falcon [1,2]	*Falco peregrines*	N/L	R	Historically roosted on high, inaccessible cliff ledges, but will also roost on tall buildings that mimic cliffs. They roost in Atlanta and can travel 83 km (50 mi) in a single day foraging for food.	March-May	No	No Effect
Floral Species							
Dwarf sumac [1,2]	*Rhus michauxii*	E	E	Dry, open, rocky, or sandy woodlands over mafic bedrock and is often on ridges and river bluffs.	June-August	No	No Effect
Georgia aster [1,2]	*Symphyotrichum georgianum*	FC	T	Adjacent to roads, along woodland borders, in dry rocky woods, and within utility ROW and other openings where current land management mimics natural disturbance regimes.	late September-mid-November	No	No Effect
Pink ladyslipper [1,2]	*Cypripedium acaule*	N/L	U	Found in upland pine and mixed pine-hardwood forests with acidic soils. In the mountains they are found near the edges of rhododendron thickets and mountain bogs.	April-June	No	No Effect

Key: E= Endangered; T= Threatened; FC= Federal Candidate Species; N/L = No Listing; PS = Partial Status; R=Rare; U=Unusual

Source: 1. Georgia Department of Natural Resources, Nongame Conservation Section (updated July 2010)
2. http://www.fws.gov/r4gafo/endangered/counties_Fulton.html (updated May 2004)

Table 1

Federally and State Listed Species in Fulton County

Common Name	Scientific Name	Federal Status	State Status	Habitat	Survey Season	Habitat Available (Yes/No)	Species Impact Expected
Yellow ladyslipper [1,2]	*Cypripedium parviflorum*	N/L	R	Occurs in rich, cover hardwood forests. Most sites are in Chattahoochee National Forest.	April-June	No	No Effect
Mountain witch alder [1,2]	*Fogthergilla gardenia*	N/L	SC	Sunny, wet edges of shrub swamps, Atlantic white cedar forests, Carolina bays, pitcherplant bogs, and shrubby edges of wet flatwoods.	February-May	No	No Effect
Sweet pinesap [1,2]	*Monotropsis odorata*	N/L	T	Mixed pine-hardwood or chestnut oak-dominated forests with dry, acidic soil.	February-April; May-June	No	No Effect
Bay star-vine [1,2]	*Schisandra glabra*	N/L	T	Moist, deciduous hardwood forests, often with beech, usually on low slopes, stream terraces and floodplains.	July-August	No	No Effect
Barren strawberry [1,2]	*Waldsteinia lobatta*	N/L	R	Stream terraces, floodplain forests, and rocky lower slopes with oak-hickory-pine forest; often with mountain laurel.	June-July	No	No Effect
Indian olive[2]	*Nestronia umbellula*	N/L	R	Inhabits dry, open, upland woods with mixed hardwood-pine canopy. Most colonies have either male or female flowers only, which limits reproduction to root-sprouting.	April-May; July	No	No Effect

Key: E= Endangered; T= Threatened; FC= Federal Candidate Species; N/L = No Listing; PS = Partial Status; R=Rare; U=Unusual

Source: 1. Georgia Department of Natural Resources, Nongame Conservation Section (updated July 2010)
2. http://www.fws.gov/r4gafo/endangered/counties_Fulton.html (updated May 2004)

XIV. Photographs

Project beginning, facing east

Project end, facing east

Maintained Right of Way, facing east

Mixed Pine/Hardwood community

PI 751580
Project Number NH000-0056-01(061)
Fulton County

Ecology Resource Survey
And
Assessment of Effects Report

Appendix

DNR Occurrence Letter
USFWS County Species List
NCDWQ Stream Form
Special Provision 107.23G

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
WILDLIFE RESOURCES DIVISION

MARK WILLIAMS
COMMISSIONER

DAN FORSTER
DIRECTOR

October 11, 2011

Taylor Young
Kimley-Horn and Associates, Inc.
2 Sun Court
Suite 220
Norcross, GA 30092

Subject: Known occurrences of natural communities, plants and animals of highest priority conservation status on or near Sr 400 at Northridge Road - Interchange and Ramp Improvements, Fulton County, Georgia

Dear Mr. Young:

This is in response to your request of September 12, 2011. According to our records, within a three-mile radius of the project site there are the following Natural Heritage Database occurrences:

GA *Cambarus howardi* (Chattahoochee Crayfish) [HISTORIC?] in the Chattahoochee River
GA *Cyprinella callitaenia* (Bluestripe Shiner) [HISTORIC] approx. 1.5 mi. N of site in Big Creek
GA *Cypripedium acaule* (Pink Ladyslipper) approx. 1.5 mi. N of site
GA *Elliptio arctata* (Delicate Spike) [HISTORIC] approx. 2.5 mi. SW of site in the Chattahoochee River
US *Hamiota subangulata* (Shinyrayed Pocketbook) [HISTORIC] approx. 1.5 mi. NE of site in the Chattahoochee River
GA *Notropis hypsilepis* (Highscale Shiner) approx. 1.5 mi. N of site in Big Creek
GA *Notropis hypsilepis* (Highscale Shiner) approx. 2.5 mi. N of site in Big Creek
Panax quinquefolius (American Ginseng) approx. 1.5 mi. NE of site
Quadrula infucata (Sculptured Pigtoe) [HISTORIC] approx. 1.5 mi. N of site in the Chattahoochee River
Quadrula infucata (Sculptured Pigtoe) [HISTORIC] approx. 2.5 mi. SW of site in the Chattahoochee River
US *Rhus michauxii* (Dwarf Sumac) approx. 2.5 mi. NW of site
GA *Schisandra glabra* (Bay Star-vine) approx. 2.5 mi. E of site
GA *Schisandra glabra* (Bay Star-vine) approx. 2.5 mi. SW of site
GA *Schisandra glabra* (Bay Star-vine) approx. 3.0 mi. E of site
GA *Schisandra glabra* (Bay Star-vine) approx. 1.5 mi. N of site
GA *Schisandra glabra* (Bay Star-vine) approx. 1.5 mi. NE of site

NONGAME CONSERVATION SECTION
2065 U.S. HIGHWAY 278 S.E. | SOCIAL CIRCLE, GEORGIA 30025-4743
770.918.6411 | FAX 706.557.3033 | WWW.GEORGIAWILDLIFE.COM

GA *Schisandra glabra* (Bay Star-vine) approx. 2.0 mi. N of site
Big Trees Nature Preserve [GA DNR] approx. 1.5 mi. SW of site
CHATTAHOOCHEE RIVER NATIONAL RECREATION AREA [NATIONAL PARK SERVICE] approx. 1.0 mi. NE of site
Chattahoochee River Greenway [GA DNR] approx. 1.5 mi. NE of site
Morgan Falls Bat Cave approx. 3.0 mi. SW of site

* Entries above proceeded by "US" indicates species with federal status (Protected, Candidate or Partial Status). Species that are federally protected in Georgia are also state protected; "GA" indicates Georgia protected species.

Recommendations:

We have no records of high priority species or habitats within the project area. However, two federally listed species, *Hamiota subangulata* (Shinyrayed Pocketbook) [HISTORIC] and *Rhus michauxii* (Dwarf Sumac) are within three miles of the proposed project. Section 9 of the Endangered Species Act states that taking or harming of a listed species is prohibited. We recommend all requestors with projects located near federally protected species consult with the United States Fish and Wildlife Service. For southeast Georgia, please contact Strant Colwell (912-265-9336, ext.30 or Strant_Colwell@fws.gov). In southwest Georgia, please contact John Doresky (706-544-6999 or John_Doresky@fws.gov). In north Georgia, please contact Robin Goodloe (706-613-9493, ext.221 or Robin_Goodloe@fws.gov).

We recommend that stringent erosion control practices be used during construction activities and that vegetation is re-established on disturbed areas as quickly as possible. Silt fences and other erosion control devices should be inspected and maintained until soil is stabilized by vegetation. Please use natural vegetation and grading techniques (e.g. vegetated swales, turn-offs, vegetated buffer strips) that will ensure that the road or ROW does not serve as a conduit for storm water or pollutants into the water during or after construction. These measures will help protect water quality in the vicinity of the project as well as in downstream areas.

NEW - Data Available on the Nongame Conservation Section Website - NEW

NEW Georgia protected plant and animal profiles are available on our website. Originating with the State Wildlife Action Plan, a strategy guiding conservation in Georgia, the accounts cover basics like descriptions and life history, as well as threats, management recommendations and conservation status. Visit http://www.georgiawildlife.com/node/2223?cat=6.

By visiting the Nongame Conservation Section Website you can view the highest priority species and natural community information by Quarter Quad, County and HUC8 Watershed. To access this information, please visit our GA Rare Species and Natural Community Information page at: http://www.georgiawildlife.com/conservation/species-of-concern?cat=conservation

An ESRI shape file of our highest priority species and natural community data by quarter quad and county is also available. It can be downloaded from: http://georgiawildlife.com/sites/default/files/uploads/wildlife/nongame/zip/gnhpds.zip

Disclaimer:

Please keep in mind the limitations of our database. The data collected by the Nongame Conservation Section comes from a variety of sources, including museum and herbarium records, literature, and reports from individuals and organizations, as well as field surveys by our staff biologists. In most cases the information is not the result of a recent on-site survey by our staff. Many areas of Georgia have never been surveyed thoroughly. Therefore, the Nongame Conservation Section can only occasionally provide definitive information on the presence or absence of rare species on a given site. Our files are updated constantly as new information is received. **Thus, information provided by our program represents the existing data in our files at the time of the request and should not be considered a final statement on the species or area under consideration.**

If you know of populations of highest priority species that are not in our database, please fill out the appropriate data collection form and send it to our office. Forms can be obtained through our web site (http://www.georgiawildlife.com/node/1376) or by contacting our office. If I can be of further assistance, please let me know.

Sincerely,

Katrina Morris
Environmental Review Coordinator

Listed Species in Fulton County (updated May 2004)				
Species	Federal Status	State Status	Habitat	Threats
Bird				
Bald eagle *Haliaeetus leucocephalus*	T	E	Inland waterways and estuarine areas in Georgia.	Major factor in initial decline was lowered reproductive success following use of DDT. Current threats include habitat destruction, disturbance at the nest, illegal shooting, electrocution, impact injuries, and lead poisoning.
Invertebrate				
Gulf moccasinshell mussel *Medionidus pencillatus*	E	E	Medium streams to large rivers with slight to moderate current over sand and gravel substrates; may be associated with muddy sand substrates around tree roots	Habitat modification, sedimentation, and water quality degradation
Shiny-rayed pocketbook mussel *Hamiota subangulata*	E	E	Medium creeks to the mainstems of rivers with slow to moderate currents over sandy substrates and associated with rock or clay	Habitat modification, sedimentation, and water quality degradation
Fish				
Bluestripe shiner *Cyprinella callitaenia*	No Federal Status	T	Brownwater streams	
Cherokee darter *Etheostoma scotti*	T	T	Shallow water (0.1-0.5 m) in small to medium warm water creeks (1-15 m wide) with predominantly rocky bottoms. Usually found in sections with reduced current, typically runs above and below riffles and at ecotones of riffles and backwaters.	Habitat loss due to dam and reservoir construction, habitat degradation, and poor water quality
Highscale shiner *Notropis hypsilepis*	No Federal Status	T	Blackwater and brownwater streams	
Plant				
Bay star-vine *Schisandra*	No Federal Status	T	Twining on subcanopy and understory trees/shrubs in rich alluvial woods	

glabra				
Piedmont barren strawberry *Waldsteinia lobata*	No Federal Status	T	Rocky acedic woods along streams with mountain laurel; rarely in drier upland oak-hickory-pine woods	

North Carolina Division of Water Quality - Stream Identification Form, Version 4.11

Date:	10/05/11	Project/Site:	Northridge/SR400	Latitude:	
Evaluator:	EM	County:	Fulton	Longitude:	
Total Points:	**5.5**	Stream Determination (circle one)		Other	Non-buffered State
Stream is at least intermittent if ≥ 19 or perennial if ≥ 30		**Ephemeral** Intermittent Perennial		e.g. Quad Name:	Water 1

A. Geomorphology Subtotal = 2.5	Absent	Weak	Moderate	Strong	Score
1[a]. Continuity of channel bed and bank	0	1	2	3	1
2. Sinuosity of channel along thalweg	0	1	2	3	0
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3	0
4. Particle size of stream substrate	0	1	2	3	0
5. Active/relic floodplain	0	1	2	3	0
6. Depositional bars or benches	0	1	2	3	0
7. Recent alluvial deposits	0	1	2	3	0
8. Headcuts	0	1	2	3	1
9. Grade control	0	0.5	1	1.5	0.5
10. Natural valley	0	0.5	1	1.5	0
11. Second or greater order channel	No = 0		Yes = 3		0

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology Subtotal = 1					
12. Presence of Baseflow	0	1	2	3	0
13. Iron oxidizing bacteria	0	1	2	3	0
14. Leaf litter	1.5	1	0.5	0	0.5
15. Sediment on plants or debris	0	0.5	1	1.5	0
16. Organic debris lines or piles	0	0.5	1	1.5	0.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3		0

C. Biology Subtotal = 2					
18. Fibrous roots in streambed	3	2	1	0	1
19. Rooted upland plants in streambed	3	2	1	0	1
20. Macrobenthos (note diversity and abundance)	0	1	2	3	0
21. Aquatic Mollusks	0	1	2	3	0
22. Fish	0	0.5	1	1.5	0
23. Crayfish	0	0.5	1	1.5	0
24. Amphibians	0	0.5	1	1.5	0
25. Algae	0	0.5	1	1.5	0
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5; Other = 0				0

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Date: December 22, 2011

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

SPECIAL PROVISION

PROJECT: NH000-0056-01(061)
FULTON COUNTY, PI#S 751580
Section 107 – Legal Regulations and Responsibility to the Public

Add the following to Subsection 107.23:

G. Protection of Federally Protected Environmentally Sensitive Species

The following conditions are intended as a minimum to protect these species and their habitat during any activities that are in close proximity to the known or potential location(s) of these species.

1. The Contractor shall advise all project personnel employed to work on this project about the potential presence and appearance of Eastern phoebes (*Sayornis phoebe*), cliff swallows (*Petrochelidon pyrrhonota*) or barn swallows (*Hirundo rustica*), and that there are civil and criminal penalties for harming, harassing, or killing these species, which are protected under the Migratory Bird Treaty Act of 1918. Pictures and habitat information will be provided to the Contractor at the preconstruction conference.

2. Except for those structures where appropriate exclusionary barriers have been installed as described below (see Item #3) and successfully prevent the nesting of migratory bird species within the structures, all culvert extension, demolition or removal activities at the following listed structures shall take place outside of the period from April 1st through August 31st:

   - the Northridge Road bridge over SR 400, located at Station 216 + 04

3. Exclusionary devices that are proposed by the contractor may be installed prior to March 1st, or after August 31st. The following requirements must be met in order for exclusionary devices to be considered appropriate:

   a. Prior to the installation of any exclusionary devices, the project ecologist must be notified by phone at (404) 631-1447 or (404) 631-1100, or by email at dchamblin@dot.ga.gov of the decision to install exclusionary devices and the date of installation.

   b. Project personnel shall be alert to the possibility of migratory bird nesting activity taking place earlier than is typically known to occur, or previously unnoticed nesting migratory birds that have become trapped within the structure subsequent to exclusionary device installation. If, at any time immediately prior to, during or after exclusionary device installation, such occurrences are observed, all construction/demolition/removal activity on the structure(s) must immediately cease and be postponed until after August 31st, the exclusionary devices shall be immediately removed, and the project ecologist shall be immediately notified as described above. Only if nests are not found or existing nests are unoccupied is the installation of exclusionary devices permissible.

   c. If the exclusionary device fails to prevent nesting of protected migratory birds in the existing structure, the device shall be immediately removed and all construction/demolition/removal activities associated with the structure must be postponed until after August 31st when the nesting season is complete.

4. In the event any incident occurs that causes harm to Eastern phoebes, cliff swallows or barn swallows, the Contractor shall report the incident immediately to the Project Engineer who in turn shall notify the GDOT Office of Environmental Services at 404-631-1100. In the event of possible harm to Eastern phoebes, cliff swallows or barn swallows, all activity shall cease pending consultation by the Department with the U. S. Fish and Wildlife Service and the lead Federal Agency.

5. Following project completion, a report summarizing any incidents with Eastern phoebes, barn swallows or cliff swallows shall be submitted by the Contractor to the Project Engineer, who in turn shall submit the report to the Georgia Department of Transportation, Office of Environmental Services, 600 W. Peachtree St., 16th Floor, Atlanta, GA 30308.

6. All costs pertaining to any requirement contained herein shall be included in the overall bid submitted unless such requirement is designated as a separate Pay Item in the Proposal.