Georgia Department of Transportation
Technical Provisions

I-285 & SR 400 Reconstruction Project

Attachment 4-1a

0000784 Approved EA/FONSI

0000784 Approved EA/FONSI

Link to Approved EA/FONSI

http://gdotteams.dot.ga.gov/offices/IPD/I285-SR400/Shared%20Documents/Forms/AllItems.aspx?RootFolder=%2Foffices%2FIPD%2FI285%2DSR400%2FShared%20Documents%2F00%5FRFP%2F00%5FRFP%20%20Addendum%202%2F02%5FTechnical%20Provisions%2FVolume%202%20Attachments%2FAttach%204%2D1a&FolderCTID=0x012000655A96C926B740459EFBDE55F5D7424F&View={A737B7B1-F4F6-4CE6-9EF9-97622542CF6B}

Project NHS00-0000-00(784)
Fulton and DeKalb Counties, P.I. No. 0000784

ENVIRONMENTAL ASSESSMENT
AND
FINDING OF NO SIGNIFICANT IMPACT

I-285/SR 400 INTERCHANGE RECONSTRUCTION

May 2015

U.S. Department of Transportation
Federal Highway Administration
and
Georgia Department of Transportation

ENVIRONMENTAL COMMITMENTS TABLE
PI#: 0000784, Counties: Fulton and DeKalb

Date Updated: 5/14/2015 | Stage: FEA/FONSI Approval
Transmittal Date for Plans Reviewed by OES (if applicable): NA

Review
If no commitments, NEPA may approve for all.

The GDOT project manager (PM) asserts that these commitments are feasible.
GDOT PM: Mario Clowers, P.E.
Signature/Date: 5/15/15

The engineer of record (EOR) asserts that plans incorporate or will incorporate commitments if applicable.
EOR Shamir Poudel, P.E.
Signature/Date 5/15/15

Air/Noise: SS 4/10/15 *Arch:* SW 3/24/15
Eco: SM 4/14/15 *Hist:* MW 3/24/15
NEPA: CBN 5/15/15

A. Resources to be Delineated on the Plans and/or Listed in the Environmental Resource Impact Table (ERIT)

Resource Name		Permitted Construction Activity	Refer to	Name and Date of Report or Transmittal	Correctly Shown?	
					Plan Sheet	ERIT
A-1	Intermittent Stream (IS) 1	Not impacted	C-2	October 2014 Ecology Assessment of Effects (AOE) and April 2015 Ecology Addendum	No	No
A-2	IS 1 Buffer	No buffer encroachment	C-2	"	"	"
A-3	Perennial Stream (PS) 2	Not impacted	C-2	"	"	"
A-4	PS 2 Buffer	No buffer encroachment	C-2	"	"	"
A-5	IS 3	Not impacted	C-2	"	"	"
A-6	IS 3 Buffer	No buffer encroachment	C-2	"	"	"
A-7	Wetland (WL) 4	Not impacted	C-2	"	"	"
A-8	PS 5	Not impacted	C-2	"	"	"
A-9	PS 5 Buffer	No buffer encroachment	C-2	"	"	"
A-10	PS 6	Not impacted	C-2	"	"	"
A-11	PS 6 Buffer	No buffer encroachment	C-2	"	"	"
A-12	Open Water (OW) 7	Not impacted	C-2	"	"	"
A-13	OW 7 Buffer	No buffer encroachment	C-2	"	"	"
A-14	PS 7a	26 linear feet (lf) (0.003 acre) permanent impact	C-1, D-2, D-3	April 2015 Ecology Addendum	"	"
A-15	PS 7a Buffer	Anticipated buffer impact exempted	B-3 or B-4, C-1	"	"	"
A-16	IS 8	35 lf (0.003 acre) permanent impact	C-1, D-2, D-3	October 2014 Ecology AOE and April 2015 Ecology Addendum	"	"
A-17	IS 8 Buffer	Anticipated buffer impact exempted	B-3 or B-4, C-1	"	"	"
A-18	PS 9	254 lf (0.05 acre) permanent impact	C-1, D-2, D-3	"	"	"
A-19	PS 9 Buffer	Anticipated buffer impact exempted	B-3 or B-4, C-1	"	"	"
A-20	PS 10	Not impacted	C-2	"	"	"
A-21	PS 10 Buffer	No buffer encroachment	C-2	"	"	"
A-22	PS 11 (Sandy Springs Creek)	Not impacted	C-2	"	"	"
A-23	PS 11 Buffer	No buffer encroachment	C-2	"	"	"

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A-24	PS 12	315 lf (0.17 acre) permanent impact	C-1, D-2, D-3	"	"	"
A-25	PS 12 Buffer	Anticipated buffer impact exempted	B-3 or B-4, C-1	"	"	"
A-26	PS 13 (Long Island Creek)	94 lf (0.04 acre) permanent impact	C-1, D-2, D-3, E-5, E-6	"	"	"
A-27	PS 13 Buffer	Anticipated buffer impact exempted	B-3 or B-4, C-1	"	"	"
A-28	WL 14	Not impacted	C-2	"	"	"
A-29	PS 15	Not impacted	C-2	"	"	"
A-30	PS 15 Buffer	Anticipated buffer impact exempted	B-3 or B-4, C-1	"	"	"
A-31	WL 16	Not impacted	C-2	"	"	"
A-32	PS 17	Not impacted	C-2	"	"	"
A-33	PS 17 Buffer	No buffer encroachment	C-2	"	"	"
A-34	IS 17a	243 lf (0.06 acre) permanent impact	C-1, D-2, D-3	"	"	"
A-35	IS 17a Buffer	Anticipated buffer impact exempted	B-3 or B-4, C-1	"	"	"
A-36	OW 17b	Not impacted	C-2	"	"	"
A-37	IS 17c	66 lf (0.01 acre) permanent impact	C-1, D-2, D-3	"	"	"
A-38	PS 18	488 lf (0.17 acre) permanent impact	C-1, D-2, D-3	"	"	"
A-39	Ephemeral Channel (EC)/IS 19	330 lf (0.11 acre) (intermittent only) permanent impact	C-1, D-2, D-3	"	"	"
A-40	EC/IS 19 Buffer	Anticipated buffer impact exempted	B-3 or B-4, C-1	"	"	"
A-41	PS 20	Not impacted	C-2	"	"	"
A-42	PS 20 Buffer	No buffer encroachment	C-2	"	"	"
A-43	IS/PS 20a	1,335 lf (0.39 acre) (469 lf, 0.09acre intermittent; 866 lf, 0.30 acre perennial) permanent impacts	C-1, D-2, D-3	"	"	"
A-44	IS/PS 20a Buffer	Anticipated buffer impact exempted	B-3 or B-4, C-1	"	"	"
A-45	OW 21	Not impacted	C-2	"	"	"
A-46	OW 21 Buffer	No buffer encroachment	C-2	"	"	"
A-47	OW 22	0.25 acre permanent impact	C-1, D-2, D-4	"	"	"
A-48	OW 22 Buffer	Buffer variance required	B-3 or B-4, C-1, D-5	"	"	"
A-49	OW 23	Not impacted	C-2	"	"	"
A-50	OW 23 Buffer	No buffer encroachment	C-2	"	"	"
A-51	OW 24	Not impacted	C-2	"	"	"
A-52	OW 24 Buffer	No buffer encroachment	C-2	"	"	"
A-53	PS 25 (Perimeter Creek)	Not impacted	C-2E-5, E-6	"	"	"
A-54	PS 25 Buffer	No buffer encroachment	C-2	"	"	"
A-55	IS 26	142 lf (0.03 acre) permanent impacts	C-1, D-2, D-3	"	"	"
A-56	IS 26 Buffer	Anticipated buffer impact exempted	B-3 or B-4, C-1	"	"	"
A-57	OW 27	0.05 acre permanent impact	C-1, D-2, D-4	"	"	"
A-58	OW 27 Buffer	Buffer variance required	B-3 or B-4, C-1, D-5	"	"	"
A-59	IS 28	680 lf (0.20 acre) permanent impact	C-1, D-2, D-3	"	"	"
A-60	IS 28 Buffer	Anticipated buffer impact exempted	B-3 or B-4, C-1	"	"	"

A-61	PS 28a	1,551 lf (0.40 acre) permanent impact	C-1, D-2, D-3	April 2015 Ecology Addendum	"	"
A-62	PS 28a Buffer	Buffer variance required	B-3 or B-4, C-1, D-5	"	"	"
A-63	EC/IS 28b	Not impacted	C-2	"	"	"
A-64	EC/IS 28b Buffer	No buffer encroachment	C-2	"	"	"
A-65	PS 29	801 lf (0.30 acre) permanent impact	C-1, D-2, D-3, E-14	October 2014 Ecology AOE and April 2015 Ecology Addendum	"	"
A-66	PS 29 Buffer	Buffer variance required	B-3 or B-4, C-1, D-5	"	"	"
A-67	IS 29a	59 lf (0.01 acre) permanent impact	C-1, D-2, D-3	April 2015 Ecology Addendum	"	"
A-68	IS 29a Buffer	Anticipated buffer impact exempted	B-3 or B-4, C-1	"	"	"
A-69	IS 29b	7 lf (0.001 acre) permanent impact	C-1, D-2, D-3	"	"	"
A-70	IS 29b Buffer	Anticipated buffer impact exempted	B-3 or B-4, C-1	"	"	"
A-71	PS 30 (North Fork Nancy Creek)	61 lf (0.04 acre) permanent impact	C-1, D-2, D-3, E-5, E-6, E-15	October 2014 Ecology AOE and April 2015 Ecology Addendum	"	"
A-72	PS 30 Buffer	Anticipated buffer impact exempted	B-3 or B-4, C-1	"	"	"
A-73	WL 30a	Not impacted	C-2	April 2015 Ecology Addendum	"	"
A-74	EC 30b	Not impacted	C-2	"	"	"
A-75	EC 30b Buffer	No buffer encroachment	C-2	"	"	"
A-76	IS/PS 30c	Not impacted	C-2			
A-77	IS/PS 30c Buffer	No buffer encroachment	C-2			
A-78	PS 31	Not impacted	C-2	October 2014 Ecology AOE and April 2015 Ecology Addendum	"	"
A-797	PS 31 Buffer	No buffer encroachment	C-2	"	"	"
A-80	IS 31a	Not impacted	C-2	April 2015 Ecology Addendum	"	"
A-81	IS 31a Buffer	No buffer encroachment	C-2	"	"	"
A-82	Allen Park	Not impacted	C-2	Environmental Assessment (EA)	"	"

A-83	Fair Oaks Manor Historic District	Not impacted	C-2	October 2014 Historic Resources AOE and March 2015 Historic Resources Addendum	"	"
A-84	Garrison House	Not impacted	C-2	"	"	"
A-85	Coldstream Subdivision Historic District	Not impacted	C-2	"	"	"
A-86	Hamilton House	Not impacted	C-2	"	"	"
A-87	Allen House	Not impacted	C-2	"	"	"
A-88	Hardin House	Not impacted	C-2	"	"	"
A-89	Lake Island Estates Historic District	Not impacted	C-2	"	"	"
A-90	Comora House	Not impacted	C-2	"	"	"
A-91	Boone House	Approximately 0.14 acre of ROW required along the northeast corner of the boundary for the extension of an existing culvert	C-1	"	"	"
A-92	Marchman Estates Historic District	Not impacted	C-2	"	"	"
A-93	Copeland Road Historic District	Approximately 0.14 acre of ROW required from along the northern edge of the property in the Mosaic Apartments complex for extension of an existing box culvert and reconstruction of its associated head wall. Approximately 2-3 nearby parking spaces in the vicinity of the culvert would be temporarily impacted during construction. An additional approximately 0.06 acre of ROW and 0.07 acre of permanent easement required from along a wooded slope behind two apartment buildings in the Mosaic Apartments complex for staging and clearing activities associated with construction of a retaining wall at the property's northeast corner.	C-1	"	"	"
A-94	Sandy Springs Apartments	Approximately 0.25 acre of underground easement required for construction and maintenance of a concrete retaining wall. No disturbance would occur on the surface of the property, but parking would be temporarily prohibited in the area of the easement during construction of the retaining wall and temporary construction fencing would be installed around the easement area on the parking lot.	C-1	"	"	"
A-95	Mountain Creek Road Historic District	Approximately 0.04 acre of ROW required for the extension of a box culvert and reconstruction of its head wall in the vicinity of a nearby creek. Approximately 0.06 acre of permanent easement required in the southeast corner of the property for staging and clearing activities associated with construction of a proposed retaining wall.	C-1	"	"	"

A-96	Glenridge Forest-Hammond Hills Historic District	Approximately 0.06 acre of ROW required for the extension of a box culvert and reconstruction of its head wall in the area of Long Island Creek, along with the construction of a retaining wall and associated paved ditch. Approximately 0.36 acre of permanent easement required from along most of the southern edge of the property for construction and maintenance of the proposed retaining wall.	C-1	"	"	"
A-97	Sherrell-Colton Drive Historic District	Approximately 0.14 acre of ROW and approximately 0.13 acre of permanent easement required along the northern edge of the property for construction of a bridge, retaining wall, and paved ditch.	C-1	"	"	"
A-98	Shanks House	Not impacted	C-2	"	"	"
A-99	Clementstone Estates Historic District	Not impacted	C-2	"	"	"
A-100	Oak Forest Hills Historic District	Approximately 0.03 acre of ROW required for the extension of an existing box culvert and reconstruction of its associated head wall. Approximately 0.04 acre of permanent easement required for staging and clearing activities for construction of a retaining wall along the south side of I-285 within existing I-285 ROW.	C-1	"	"	"
A-101	Georgetown Subdivision Historic District	Not impacted	C-2	"	"	"
A-102	Murphey Candler Park	Not impacted	C-2	"	"	"
A-103	Gainsborough Historic District	Not impacted	C-2	"	"	"
A-104	C.T. Spruill Cemetery	Not impacted	C-2	EA	"	"
A-105	Wildlife and Habitat	Construction at the I-285 bridges over Long Island Drive, Lake Forest Drive, Glenridge Drive, and Peachtree Dunwoody Road; the Perimeter Creek, North Fork Nancy Creek, and PS30 culverts under I-285; and PS18 culvert under SR 400, such that harm to migratory birds is avoided.	B-1	October 2014 Ecology AOE and April 2015 Ecology Addendum	"	"
A-106	Parcel 16 (Hazardous Waste Site)	Any contaminated soil excavated during construction activities at this parcel must be disposed of at a permitted lined municipal solid waste landfill.	E-7, C-11	EA; Revised Results of Hazardous Waste Investigation dated 02/04/15 and Addendum dated 04/03/15	"	"
A-107	Parcel 17 (Hazardous Waste Site)	Any contaminated soil excavated during construction activities at this parcel must be disposed of at a permitted lined municipal solid waste landfill.	E-7, C-11	"	"	"
A-108	Parcel 18 (Hazardous Waste Site)	Any contaminated soil excavated during construction activities at this parcel must be disposed of at a permitted lined municipal solid waste landfill.	E-7, C-11	"	"	"

A-109	Parcel 19 (Hazardous Waste Site)	Any contaminated soil excavated during construction activities at this parcel must be disposed of at a permitted lined municipal solid waste landfill.	E-7, C-11	"	"	"
A-110	Parcel 69 (Hazardous Waste Site)	Any contaminated soil excavated during construction activities at this parcel must be disposed of at a permitted lined municipal solid waste landfill.	E-7; C-11	"	"	"
A-111	Parcel 74 (Hazardous Waste Site)	Any contaminated soil excavated during construction activities at this parcel must be disposed of at a permitted lined municipal solid waste landfill.	E-7, C-11	"	"	"

B. Special Provisions (Attach all special provisions with transmittal letters to the commitments table, if available)

Special Provision		*Purpose*	*Est. Cost*	*SP's Latest Date*
B-1	107.23G	For the protection of migratory birds and listed species.	Negligible	10/07/14
B-2	150.11	To establish lane closure types, locations, and schedule	Negligible	To be added once developed
B-3	700	For planting, seeding, fertilizing, sodding, and mulching disturbed areas within the right-of-way limits and easement areas	Negligible	01/18/13
B-4	702	For planting vines, shrubs, and plants; treating regenerated areas; and environmental mitigation planting for riparian buffers and tidal marsh areas	Negligible	05/10/11

C. ERIT Comments and Design Features (Description: For ERIT Comments, provide exact wording for the comments section of the ERIT)

ERIT Comment or Design Feature		*Description*	*Est. Cost*	*Correctly Shown?*
C-1	ERIT Comment	The contractor will ensure that no construction-related activities or access occur beyond the Orange Barrier Fencing protecting this resource. See Section A for applicable resources.	Negligible	No
C-2	ERIT Comment	The contractor shall ensure that no construction-related activities (such as the use of easements, staging, construction, vehicular use, borrow or waste activities, sediment basins, and trailer placement), other than those shown on the approved plans, occur within the boundary of this resource. See Section A for applicable resources.	Negligible	No
C-3	Design Feature	For noise abatement: Include a noise barrier along the north side of I-285 between the Mount Vernon Highway overpass and approximately Lake Forrest Drive (See Commitment E-2 for required noise abatement public outreach)	$1,757,560	No
C-4	Design Feature	For noise abatement: Include a noise barrier along the south side of I-285 approximately between Long Island Drive (tying to the existing barrier at this location) and Roswell Road (See Commitment E-2 for required noise abatement public outreach)	$1,586,480	No
C-5	Design Feature	For noise abatement: Include a noise barrier along the north side of I-285 from Roswell Road to approximately Glenridge Drive (See Commitment E-2 for required noise abatement public outreach)	$1,703,860	No

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C-6	Design Feature	For noise abatement: Include noise barriers (two barriers) along the south side of I-285 approximately between Roswell Road and Glenridge Drive (See Commitment E-2 for required noise abatement public outreach)	$642,520 + $546,620	No
C-7	Design Feature	For noise abatement: Include a noise barrier along the west side of SR 400, north of I-285, from Hammond Drive southward for approximately 1,125 feet (See Commitment E-2 for required noise abatement public outreach)	$620,340	No
C-8	Design Feature	For noise abatement: Include an approximately 607-foot noise barrier along the north side of I-285 along the proposed new Ashford Dunwoody Road off-ramp (See Commitment E-2 for required noise abatement public outreach)	$342,640	No
C-9	Design Feature	For noise abatement: Include a noise barrier along the south side of I-285 from approximately 800 feet east of Ashford Dunwoody Road eastward for approximately 3,486 feet(See Commitment E-2 for required noise abatement public outreach)	$1,302,360	No
C-10	Design Feature	Include modification of the existing noise barrier located along the southern side of I-285 between Mount Vernon Highway and Long Island Drive by replacing the easternmost approximately 200 feet of the barrier to increase the height of this portion of the barrier by 2 feet to provide additional noise abatement. (See Commitment E-2 for required noise abatement public outreach)	$49,000	No
C-11	ERIT Comment	Any contaminated soil excavated during construction activities at Parcels 16, 17, 18, 19, 69, and 74* must be disposed of at a permitted lined municipal solid waste landfill.	Un-determined	No

D. Necessary Permits, Buffer Variances and Mitigation Credits

Permit, Variance, etc.		*Add'l Info (permit expiration date, number of credits needed, etc…)*	*Est. Cost*	*Acquired?*
D-1	Notice of Intent (NOI) for Nonpoint Discharge Elimination System (NPDES)	The Design-Build Contractor will submit an NOI to the NPDES General Permit to the Georgia Environmental Protection Division (EPD) following award of the contract but prior to construction activities.	Negligible	Will be acquired following letting
D-2	Section 404 Individual Permit	The Georgia DOT and Design-Build Contractor will apply for a Section 404 Individual Permit from the U.S. Army Corps of Engineers (USACE). This permit shall be obtained prior to any construction activities impacting waters of the U.S.	Negligible	No
D-3	Stream Mitigation Credits	Impacts to streams will be mitigated through the purchase of compensatory mitigation credits from a USACE-approved commercial mitigation bank servicing HUC 03130001. It is estimated that 19,879 stream mitigation credits will be needed.	$755,402 (estimated at $38 per stream credit)	No
D-4	Wetland Mitigation Credits	Impacts to open waters will be mitigated through the purchase of compensatory mitigation credits from a USACE-approved commercial mitigation bank servicing HUC 03130001. It is estimated that 1.7 wetland mitigation credits will be needed.	$58,650 (estimated at $34,000 per wetland credit)	No
D-5	Buffer Variance	An encroachment on the 25-foot buffer of OW22, OW27, PS28a, and PS29 would require a buffer variance under Criterion 2(h) and would require mitigation. Buffer variances for buffer encroachments shall be acquired from the Georgia EPD prior to initiating construction activities within non-exempt buffers.	Negligible	No
D-6	Buffer Mitigation Credits	It is anticipated that buffer mitigation credits will be needed. The number of credits needed will be defined during the final design phase.	To be determined (TBD)	No

E. Other Commitments or Requirements (Status: Pre- and Post – Complete or Incomplete; During – Signature Req'd)

Pre-, During, or Post		*Commitment*	*Responsible party*	*Est. Cost*	*Status*
E-1	Pre-construction	Georgia DOT would require the Design-Build Contractor to coordinate with the Springmont School (formerly the First Montessori School of Atlanta) on any necessary timing restrictions for construction within 500 feet of the school to ensure minimal impacts to special events at the school (such as standardized testing periods, outdoor events, and celebratory events) during project construction.	Office of Innovative Delivery (OID) and Design-Build Contractor	Negligible	Incomplete
E-2	Pre-construction	Prior to the Georgia DOT's final decision on the placement of any noise abatement, Georgia DOT will conduct outreach with the affected individuals after final design to determine community support for abatement. Due the nature of the Design-Build process, determination of when Final Design has been met will be agreed upon by the Design-Build Contractor and the Georgia DOT Project Manager. All NEPA decisions are the responsibility of Georgia DOT and/or FHWA, and will not be made by the Design-Build Contractor. See Section C for potential noise abatement locations.	OID and Design-Build Contractor	Negligible	Incomplete
E-3	Pre-construction	The Georgia DOT and Design-Build Contractor would work with stakeholders, such as Perimeter Community Improvement Districts (PCIDs), the City of Sandy Springs, and other major stakeholders, during project development to incorporate locally preferred aesthetic features, where feasible. The exact nature of any aesthetic enhancements, including types and locations, would need to be approved through various Georgia DOT offices (such as the Offices of Design and Maintenance), as well as the Federal Highway Administration (FHWA). The Georgia DOT would enter into an agreement with the applicable local government to bear the cost of these additions as appropriate.	OID and Design-Build Contractor	Negligible	Ongoing
E-4	Pre-construction	The Georgia DOT will coordinate any proposed changes in travel patterns or access resulting from the proposed project with local police, fire, and other emergency service agencies prior to project construction.	OID and Design-Build Contractor	Negligible	Ongoing
E-5	Pre-construction	The Design-Build Contractor will prepare final hydrologic and hydraulic analysis using the most current information available. Should the proposed improvements result in any increase to the base flood elevations, floodway elevations, or floodway widths at Perimeter Creek, Long Island Creek, or North Fork Nancy Creek, Federal Emergency Management Agency (FEMA) coordination and Community (Fulton and/or DeKalb County and cities) coordination shall be conducted by the Georgia DOT, as well as submittal of a Conditional Letter of Map Revision prior to construction and Letter of Map Revision after construction to FEMA. A "no rise" certification will be required for Perimeter Creek.	Office of Environmental Services (OES), OID, and Design-Build Contractor	Negligible	Incomplete
E-6	Pre-construction	The Design-Build Contractor will design the project to reduce impacts to 100-year floodplains, where feasible.	OES, OID, and Design-Build Contractor	TBD	Incomplete

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E-7	Pre-construction	Prior to right-of-way acquisition at the Northside Hospital (Parcels 16 and 17) and Southern Company (Parcels 69 and 74) properties, subsurface testing would be conducted at these sites to determine if any contaminants are leaking into the soil. If contaminants are found, avoidance alternates may be considered or applicable laws and regulations concerning the removal of toxic or hazardous material will be followed. The removal will be coordinated with Georgia EPD.	OMAT	Negligible	Complete (Revised Results of Hazardous Waste Investigation dated 02/04/15 and Addendum dated 04/03/15)
E-8	Pre-construction and During Construction	The placement of advance roadway signage will avoid any waters of the U.S.	OES, OID and Design-Build Contractor	Negligible	Incomplete
E-9	Pre-construction and During Construction	The Design-Build Contractor will develop a public information and notification plan during project design and prior to initiating construction activities to provide project information, updates, and construction information to area businesses, residents, the PCIDs, and emergency services. The Contractor will maintain this plan throughout the project design and construction processes.	OID and Design-Build Contractor	Negligible	Incomplete
E-10	Pre-construction and During Construction	Public outreach will be conducted regarding any potential detours greater than five days that may be necessary during construction. Written documentation of coordination with the local government, emergency medical services (EMS), and school boards will be obtained for any road closure.	OID and Design-Build Contractor	Negligible	Incomplete
E-11	Pre-construction and During Construction	The Georgia DOT would stipulate in contract documents associated with the Design-Build process that structures constructed as part of the I-285/SR 400 Interchange Reconstruction project will not preclude the potential for future passage by a 12-foot shared-use path facility connecting the southeast quadrant of the I-285/SR 400 Interchange to the northeast quadrant, within the footprint and proposed right-of-way of the I-285/SR 400 Interchange Reconstruction project. Prior to project construction, the Georgia DOT shall conduct environmental studies under the National Environmental Policy Act (NEPA) to analyze the impacts of construction of such a shared-use path as part of the I-285/SR 400 Interchange Reconstruction project.	OID and Design-Build Contractor	TBD	Incomplete
E-12	Pre-construction and During Construction	Georgia DOT will investigate options to add special identifiers or markers to the new barrier-separated collector-distributor (CD) lanes and ramps to aid in accurately locating and responding to incidents occurring in those lanes. The results of this investigation will be communicated to the emergency services working group that will be formed, and will be part of the pre-incident training that will be conducted with that group.	OID	TBD	Incomplete
E-13	During Construction	The Georgia DOT would require the Design-Build Contractor to restrict construction-related lane closures occurring in the Perimeter Mall area during peak holiday shopping periods (such as weekend days from Thanksgiving Day through January 2nd, Black Friday, and Christmas Eve).	OID and Design-Build Contractor	Negligible	Incomplete
E-14	During Construction	When and where possible, lane closures will be limited to off-peak traffic periods or on weekends.	OID and Design-Build Contractor	Negligible	Incomplete

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E-15	During Construction	The Design-Build Contractor will monitor the turbidity of Streams 29 and 30 (North Fork Nancy Creek) during the duration of construction.	OID and Design-Build Contractor	Negligible	Incomplete
~~E-16~~	~~During Construction~~	~~The Design-Build Contractor shall comply with all state and local sound control and noise level rules, regulations, and ordinances. Variances, special permits, or approval may be required if construction occurs during nighttime hours and/or on Sundays. Any necessary variances to noise ordinances will be obtained prior to construction in a given area.~~	~~OID and Design-Build Contractor~~	~~Negligible~~	Determined not to be applicable at 12/16/14 meeting with local governments. Georgia DOT may proceed with nighttime work.
E-17	During Construction	The Design-Build Contractor would analyze the feasibility/infeasibility of constructing post-construction water quality control measures based on the project's final design in accordance with the Municipal Separate Storm Sewer System (MS4) Permit (No. GAR041000). The Design-Build Contractor would construct any post-construction water control measures determined to be feasible per the requirements of the MS4 Permit.	OID and Design-Build Contractor	Un-determined	Incomplete
E-18	During Construction	The Design-Build Contractor shall provide local emergency services (including Northside, St. Joseph's, and Children's Healthcare of Atlanta hospitals) a minimum of two weeks advance notice for lane/shoulder closures and/or traffic stage changes planned to be in effect longer than 24 hours and a minimum of 24 hours advance notice for lane/shoulder closures that are planned to be in effect less than 24 hours.	OID and Design-Build Contractor	Negligible	Incomplete

Total Estimated Cost	$9,365,432

If Project is Complete or Under Construction, Area or Construction Engineer affirms that all Special Provisions, Plan Notes and During Construction Commitments were or are being adhered to during the project's construction.

Please Print Name and Title: _____ *Signature*: _____ Date: _____ *Please provide an explanation if unable to sign.*

Estimated Costs are for planning purpose only, in current dollars as of date updated.

October 7, 2014

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL PROVISION

PROJECT: NHS00-0000-00(784), FULTON AND DEKALB COUNTIES, P.I. # 0000784
Section 107 – Legal Regulations and Responsibility to the Public

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Add the following to Subsection 107.23:

G. Protection of Federally Protected 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 location(s) of these species.

1. The Contractor shall advise all Project personnel employed on this Project about the potential presence and appearance of the federally protected barn swallow (*Hirundo rustica*), cliff swallow (*Petrochelidon pyrrhonota*), and eastern phoebe (*Sayornis phoebe*). All personnel shall be advised that there are civil and criminal penalties for harassing, harming, pursuing, hunting, shooting, wounding, killing, capturing, or collecting these species in knowing violation of the Migratory Bird Treaty Act of 1918. The law protects adults, fledglings, nestlings, eggs, and active nests. Pictures and habitat information are attached and shall be posted in a conspicuous location in the Project field office until such time that Project construction has been completed and time charges have stopped.

2. The demolition of existing bridge(s) shall take place outside of the breeding and nesting season of phoebes and swallows, which begins April 1 and extends through August 31, unless exclusionary barriers are put in place to prevent birds from nesting. The extension/removal of existing culverts at Long Island Drive, I-285 over Lake Forest Drive, I-285 at Glenridge Drive, I-285 at Peachtree Dunwoody Road, I-285 over Perimeter Creek (PS25), I-285 over North Fork Nancy Creek (PS30), and SR 400 over PS18 shall take place outside of the breeding and nesting season of phoebes and swallows, which begins April 1 and extends through August 31, unless exclusionary barriers are put in place to prevent birds from nesting. For bridges, exclusionary barriers may be netting made of plastic, canvas or other materials proposed by the Contractor and approved by the Project Engineer prior to installation. For box culverts, exclusionary barriers may be overlapping strips of flexible plastic (also called "PVC Strip Doors" or "Strip Curtains") or an alternate material proposed by the Contractor and approved by the Project Engineer prior to installation. Exclusionary barriers must be installed on the bridge(s) and/or box culvert(s) prior to March 1 or after August 31, but in no time in between this period. Exclusionary barriers are not a guaranteed method of preventing migratory birds from nesting beneath bridges and work schedules shall take into account the possibility that barriers will not be successful. If exclusionary barriers are to be used, these steps shall be followed:

    a. The Project ecologist shall be notified by phone (404) 631-1100 of the decision to install exclusionary barriers and the date of the proposed installation prior to the installation of any exclusionary devices.

    b. The structure(s) shall be checked for nests prior to the placement of exclusionary barriers. If nests are present, they shall be inspected to ensure that eggs or birds are not present. If the nests are found to be occupied, construction activities associated with the bridge shall be postponed until after August 31 when the breeding season is complete.

c. For any box culvert(s) being replaced, exclusionary barriers shall be installed on both the inlet and outlet openings. For any box culvert(s) being extended, exclusionary barriers shall be placed on the opening(s) (inlet and/or outlet) where work is taking place. For bridge(s) being removed, barriers shall be installed along the full length of the bridge(s). In all cases, barriers shall be installed prior to March 1 and left in place until August 31 or until the culvert removal, culvert extension, or bridge demolition is complete. If the exclusionary netting fails to prevent nesting (i.e., birds are able to bypass barriers and build nests), construction activities associated with the bridge shall be postponed until after August 31.

d. During construction activities, exclusionary barriers shall be inspected daily for holes or other defects that impair its ability to exclude migratory birds from nesting beneath the bridge. Any holes or defects shall be repaired immediately.

e. Entanglement and/or entrapment of barn swallows, cliff swallows, and eastern phoebes in exclusionary netting constitutes harm to migratory birds. In the event that entanglement and/or entrapment of migratory birds in the netting occurs, the Contractor shall report the incident immediately to the Project Engineer who in turn will notify the State Environmental Administrator, Georgia Department of Transportation, Office of Environmental Services at (404) 631-1101.

3. In the event any incident occurs that causes harm or injury to the barn swallow, cliff swallow, and eastern phoebe along the Project corridor, the Contractor shall report the incident immediately to the Project Engineer who in turn will notify the State Environmental Administrator, Georgia Department of Transportation, Office of Environmental Services at (404) 631-1101. All activity shall cease pending consultation by the Department with the U. S. Fish and Wildlife Service and the lead Federal Agency.

4. The Contractor shall keep a log detailing any incidents that cause harm or injury to barn swallows, cliff swallows, and eastern phoebes in or adjacent to the Project until such time that project construction has been completed and time charges have stopped. Following Project completion, the log and a report summarizing any incidents that caused harm or injury to these species shall be submitted by the Contractor to the Project Engineer and the State Environmental Administrator, Georgia Department of Transportation, Office of Environmental Services, 600 West Peachtree Street NW, Atlanta, Georgia 30308. GDOT in turn will provide copies of the report to the U.S. Fish and Wildlife Service, the Georgia Department of Natural Resources Wildlife Resources Division, and the lead Federal Agency.

5. 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.

Date: November 1, 2002
Revised: April 27, 2004
Revised: October 31, 2005
Revised: October 23, 2008
Revised: December 14, 2010
Revised: April 15,2011
Revised July 26, 2012
First Use Date: January 18, 2013

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL PROVISION

Section 700—Grassing

Delete Section 700 and substitute the following:

700.1 General Description

This work includes preparing the ground, furnishing, planting, seeding, fertilizing, sodding, and mulching disturbed areas within the Right-of-Way limits and easement areas adjacent to the right-of-way as shown on the Plans except as designated by the Engineer to remain natural.

700.1.01 Definitions

General Provisions 101 through 150.

700.1.02 Related References

A. Standard Specifications

Section 160—Reclamation of Material Pits and Waste Areas

Section 163—Miscellaneous Erosion Control Items

Section 718—Wood Fiber

Section 822—Emulsified Asphalt

Section 882—Lime

Section 890—Seed and Sod

Section 891—Fertilizers

Section 893—Miscellaneous Planting Materials

Section 895—Polyacrylamide

B. Referenced Documents

QPL 33

QPL 84

700.1.03 Submittals

Submit manufacturer's product expiration date along with written instructions to ensure proper application, safety, storage, and handling of Polyacrylamide products used in The Work.

700.2 Materials

Use materials that meet the requirements of the following Specifications:

Material	Section
Wood Fiber Mulch	718.2
Agricultural Lime	882.2.01
Seed	890.2.01
Sod	890.2.02
Fertilizer	891.2.01
Plant Topsoil	893.2.01
Mulch	893.2.02
Inoculants	893.2.04
Tackifiers	QPL 33
Anionic Polyacrylamide	QPL 84 & Section 895

A. Seeds

Whenever seeds are specified by their common names, use the strains indicated by their botanical names.

B. Water

Obtain the water for grassing from an approved source. Use water free of harmful chemicals, acids, alkalies, and other substances that may harm plant growth or emit odors. Do not use salt or brackish water.

C. Agricultural Lime

Agricultural lime rates will be based on a laboratory soil test report. The Contractor is responsible for ensuring the tests are performed by an approved laboratory. Provide a copy of test results to the Engineer. Refer to Section 882 Lime and GSP 18 of the Sampling and Testing Inspection manual for additional information on rates, use, handling and sampling procedures.

D. Fertilizer Mixed Grade

Fertilizer analysis and rates will be based on a laboratory soil test report. The Contractor is responsible for ensuring the tests are performed by an approved laboratory. Provide a copy of test results to the Engineer. Refer to Section 891 Fertilizer and GSP 18 of the Sampling and Testing Inspection manual for additional information on rates, use, handling and sampling procedures.

E. Mulch

Use straw or hay mulch according to Subsection 700.3.05.G.

Use wood fiber mulch in hydroseeding according to Subsection 700.3.05.F.1.

700.2.01 Delivery, Storage, and Handling

General Provisions 101 through 150.

700.3 Construction Requirements

700.3.01 Personnel

General Provisions 101 through 150.

700.3.02 Equipment

Use grassing equipment able to produce the required results.

Never allow the grading (height of cut) to exceed the grassing equipment's operating range.

A. Mulch Material Equipment

Use mulching equipment that uniformly cuts the specified materials into the soil to the required control depth.

B. Hydroseeding Equipment

For hydroseeding equipment, see Subsection 700.3.05.F.

700.3.03 Preparation

General Provisions 101 through 150.

700.3.04 Fabrication

General Provisions 101 through 150.

700.3.05 Construction

Follow the planting zones, planting dates, types of seed, seed mixtures, and application rates described throughout this Section. The Engineer has the authority to alter the planting dates as set forth by a period of 2 weeks. This 2-week period may be applied to either the beginning of the specified planting and/or to the end of the end of the specified planting season.

In general:

- Obtain the Engineer's approval before changing the ground cover type.
- Do not use annual rye grass seeds with permanent grassing.
- Follow the planting zones indicated on the Georgia State Planting Zone Map, below.
- Sod may be installed throughout the year, weather permitting.
- For permanent grassing, apply the combined amounts of all seeds for each time period within each planting zone and roadway location listed in the Seeding Table, below. Do not exceed the amounts of specified seed.

Planting Zone Map

NON-NATIVE GRASS SEEDING TABLE 1

(Temporary and Permanent Seed Types for Shoulders, Medians and Slopes 3:1 or Flatter)

Common Name	Botanical Name	Class/Type	Rate/Acre	Planting Zone	Planting Dates
Common Bermuda Grass (Hulled)	*Cynodon dactylon*	Required Permanent Grass	10 (11)	1	April 16 – August 31
Common Bermuda Grass (Unhulled)			10 (11)		
Common Bermuda Grass (Hulled)	*Cynodon dactylon*	Required Permanent Grass	10 (11)	2,3,4	April 1 – October 15
Common Bermuda Grass (Unhulled)			10 (11)		
Bahaia Grass	*Paspalum motatum*		10 (11)		
Rye Grass, Millet, Cereal Grass (Oats)	*Lolium penne spsp. Multiflorum, Echinochloa cursgalli, Avena sativa*	Temporary Grass	50 (56)	1	September 1- April 15
Rye Grass, Millet, Cereal Grass (Oats)	*Lolium penne spsp. Multiflorum, Echinochloa cursgalli, Avena sativa*	Temporary Grass	50 (56)	2,3,4	October 16- March 31

NON-NATIVE SEEDING TABLE 2

(Temporary and Permanent Seed Types

for back slopes, fill slopes and areas which will not be subject

to frequent mowing, slopes steeper than 3:1)

Common Name	Botanical Name	Class/Type	Rate/Acre	Planting Zone	Planting Dates
Interstate Lespedeza	*Lespedeza sericea*	Permanent Grass	50(56)	1,2	March 1 – August 31
Weeping Lovegrass	*Eragrostis curvula*	Temporary Grass	10(11)		
Interstate Lespedeza	*Lespedeza sericea*	Permanent Grass	75(84)	1,2	September 1- February 28
Tall Fescue	*Festuca arundinacea*	Temporary Grass	50(56)		
Interstate Lespedeza	*Lespedeza sericea*	Permanent Grass	50(56)	3,4	April 1 – October 31
Weeping Love Grass	*Eragrostis curvula*	Temporary Grass	10(11)		
Interstate Lespedeza	*Lespedeza sericea*	Permanent Grass	50(56)	3,4	November 1 – March 31
Weeping Love Grass	*Eragrostis curvula*	Temporary Grass	10(11)		

NATIVE GRASS SEEDING TABLE 3

For Non-mowable Slopes or Areas Designated as Permanent Native Grass Plots.

Plant native seed mixes on back slopes, fill slopes and areas which will not be subject to frequent mowing (slopes steeper than 3:1).

Common Name	Botanical Name	Class/Type	Rate/Acre	Planting Zone	Planting Dates
Canada Wild Rye	*Elymus canadensis*	Cool Season	Minimum 2 (2)	1,2,3,4	October 31 - March 31
Virginia Wild Rye	*Elymus virginicus*	Cool Season	Minimum 2 (2)	1,2,3,4	October 31 - March 31
Bottle-brush Grass	*Hystrix patula*	Cool Season	Minimum 2 (2)	1,2,3,4	October 31 - March 31
Little Bluestem	*Schizachyrium scoparium* (*Andropogon scoparius*)	Warm Season	Minimum 2 (2)	1,2,3,4	March31- August 31
Indiangrass	*Sorghastrum nutans*	Warm Season	Minimum 2 (2)	1,2,3,4	March 31- August 31
Eastern Gama Grass	*Tripsacum dactyloides*	Warm Season	Minimum 2 (2)	1,2,3,41,2,3,4	March 31- August 31
Rice Cut Grass	*Leersia oryzoides*	Warm Season	Minimum 2 (2)	1,2,3,4	March 31- August 31
Deertongue	*Panicum clandestinum*	Warm Season	Minimum 2 (2)	1,2,3,4	March 31- August 31
Switchgrass	*Panicum virgatum*	Warm Season	Minimum 2 (2)	1,2,3,4	March 31- August 31
Woolgrass	*Scirpus cyperinus*	Cool Season	Minimum 2 (2)	1,2,3,4	October 31 - March 31
River Oats	*Chasmanthium latifolium*	Cool Season	Minimum 2 (2)	1,2,3,4	October 31 - March 31
Purple Top	Tridens flavus	Warm Season	Minimum 2 (2)	1,2,3,4	March 31- August 31

See plan sheets/plant lists for detailed native restoration and riparian mitigation seed mix combinations to be applied at a minimum rate total of 10 (11) lbs per acre (kg/hectare) for each combined mix. If the mix is not provided in the plan sheets, use a minimum of 3 species based on planting dates shown above.

HERBACEOUS PLANT SEEDING TABLE 4

(Approved for Riparian Mitigation or for Seed Mixes

on Slopes Steeper than 3:1-Requiring Permanent Planting)

Common name	Botanical name	Class/type	Rate/Acre	Planting Zone	Planting Dates
Joe Pye Weed	*Eupatorium fistulosum*	Herbaceous Pe	Minimum 2 (2)	1,2,3,4	September 1 – May 1
Ironweed	*Vernonia novaboracensis*	Herbaceous Perennial	Up to 10(11)	1,2,3,4	March 1 - August 31,
White snakeroot	*Ageratina altissima* (*Eupat rugosum)*	Herbaceous Perennial	Up to 10(11)	1,2,3,4	September 1 – May 1
Swamp milkweed	*Asclepias incarnata*	Herbaceous Perennial	Up to 10(11)	1,2,3,4	March 1 - August 31,
Frost aster	*Aster pilosus* (*Symphyotric*	Herbaceous Perennial	Up to 10(11)	1,2,3,4	September 1 – May 1
Partridge pea	*Chamaecrista fasciculata* (*fasciculata*)	Herbaceous Perennial	Up to 10(11)	1,2,3,4	March 1 - August 31,
Lance-leaf coreopsis	*Coreopsis lanceolata*	Herbaceous Perennial	Up to 10(11)	1,2,3,4	September 1 – May 1
Tall coreopsis	*Coreopteris tripteris*	Herbaceous Perennial	Up to 10(11)	1,2,3,4	September 1 – May 1
Boneset	*Eupatorium perfoliatum*	Herbaceous Perennial	Up to 10(11)	1,2,3,4	September 1 – May 1
Sneezeweed	*Helenium autumnale*	Herbaceous Perennial	Up to 10(11)	1,2,3,4	September 1 – May 1
Swamp sunflower	*Helianthus angustifolius*	Herbaceous Perennial	Up to 10(11)	1,2,3,4	March 1 - August 31,
Fringed loosestrife	*Lysimachia ciliata*	Herbaceous Perennial	Up to 10(11)	1,2,3,4	September 1 – May 1
Wild bergamot	*Monarda fistulosa*	Herbaceous Perennial	Up to 10(11)	1,2,3,4	September 1 – May 1
Mountain mint	*Pycnanthemum tenuifolium*	Herbaceous Perennial	Up to 10(11)	1,2,3,4	September 1 – May 1
Black-eyed susan	*Rudbeckia hirta*	Herbaceous Perennial	Up to 10(11)	1,2,3,4	September 1 – May 1
Goldenrod	*Solidago nemoralis*	Herbaceous Perennial	Up to 10(11)	1,2,3,4	September 1 – May 1
Butterfly Weed	*Aesclepias tuberose*	Herbaceous Perennial	Up to 10(11)	1,2,3,4	March 1 - August 31,

For native restoration and riparian mitigation seed mix combinations, use Table 4 for approved native herbaceous seed types in combination with Table 3 of native grass seeds. Native restoration and riparian seed mixes should incorporate a mix of 60% native grass types (see Table 3) and 40% native herbaceous types (see Table 4) applied at a minimum rate total of 10 (11) lbs per acre (kg/hectare) for each combined mix.

TABLE 5: TEMPORARY GRASS - SPECIES, SEEDING RATES AND PLANTING DATES

Species	Rates per 1000 sq. ft.	Rates per Acre	Planting Date By Zone		
			1 & 2	2	3 & 4
Rye (Grain)	3.9 lbs	168 lbs	8/1 - 11/30	8/15 - 12/1	9/1 - 2/28
Ryegrass	0.9 lbs	40 lbs	8/1 - 11/30	9/1 - 12/15	9/15 - 1/1
Rye & Annual Lespedeza	0.6 lbs 0.6 lbs	28 lbs 24 lbs	3/1 - 4/1	2/1 - 3/1	2/1 - 3/1
Weeping Lovegrass	0.1 lbs	4 lbs	3/15 - 6/15	3/15 - 7/15	3/15 - 7/15
Sudangrass	1.0 lbs	60 lbs	4/1 - 8/31	4/1 - 8/31	3/15 - 8/1
Browntop Millet	1.1 lbs	50 lbs	4/1 - 6/30	4/1 - 7/15	4/1 - 7/15
Wheat	3.9 lbs	168 lbs	9/1 - 12/31	9/1 - 12/31	9/15 - 1/31

When stage construction or other conditions prevent completing a roadway section continuously, apply temporary grassing to control erosion. Temporary grassing is used to stabilize disturbed areas for more than sixty (60) calendar days. Temporary grass may be applied any time of the year, utilizing the appropriate seed species and application rate as shown in the chart above. Apply mulch to areas planted in temporary grass at the rate of ¾ inch to 1.5 inches. Do not place slope mats on areas planted in temporary grass.

A. Ground Preparation

Prepare the ground by plowing under any temporary grass areas and preparing the soil as follows:

1. Slopes 3:1 or Flatter

   On slopes 3:1 or flatter, plow shoulders and embankment slopes to between 4 in and 6 in (100 mm and 150 mm) deep.

   Plow front and back slopes in cuts to no less than 6 in (150 mm) deep. After plowing, thoroughly disk the area until pulverized to the plowed depth.

2. Slopes Steeper Than 3:1

   Serrate slopes steeper than 3:1 according to Plan details when required.

   On embankment slopes and cut slopes not requiring serration (sufficient as determined by the Engineer), prepare the ground to develop an adequate seed bed using any of the following methods as directed by the Engineer:

   - Plow to a depth whatever depth is practicable.
   - Use a spiked chain.
   - Walk with a cleated track dozer.
   - Scarify.

   Disking cut slopes and fill slopes is not required.

3. All Slopes

   a. Obstructions

      Remove boulders, stumps, large roots, large clods, and other objects that interfere with grassing or may slide into the ditch.

   b. Topsoil

      Spread topsoil stockpiled during grading evenly over cut and fill slopes after preparing the ground.

      Push topsoil from the top over serrated slopes. Do not operate equipment on the face of completed serrated cuts.

4. Native Restoration Areas, Riparian Areas, Stream Restoration Areas, and Wetland and Stream Mitigation Areas.

   For Permanent Grassing in native restoration areas, multitrophic native planting areas, riparian areas, stream restoration areas, and wetland and stream mitigation areas, provide the minimum ground preparation necessary to provide seed to soil contact. Riparian areas may also be seeded using the no-till method. The no-till method is defined by planting permanent grass seeds using a drill-type seeder over existing vegetation without plowing or tilling soil. Ensure that existing vegetation is less than 3 inches in height (this may be achieved by mowing or using a mechanical string trimmer).

B. Grassing Adjacent to Existing Lawns

When grassing areas adjacent to residential or commercial lawns, the Engineer shall change the plant material to match the type of grass growing on the adjacent lawn. The Contract Unit Price will not be modified for this substitution.

C. Temporary Grassing

Apply temporary grassing according to Subsection 163.3.05.F. Determine lime requirements by a laboratory soil test. Refer to seeding Table 5 for species, amounts of seed and planting dates.

In March or April of the year following planting and as soon as the weather is suitable, replace all areas of temporary grass with permanent grass by plowing or overseeding using the no-till method. If the no-till method is used, ensure that temporary grass is less than 3 inches in height (this may be achieved by mowing). Additional mulch will be required only if the temporary grass does not provide adequate mulch to meet the requirements of Subsection 700.3.05.G, "Mulching".

Temporary grass, when required, will be paid for according to Section 163.

Projects that consist of asphalt resurfacing with shoulder reconstruction and/or shoulder widening: Type II Wood Fiber Blanket is used to stabilize disturbed areas, no till seeding will be used when permanent grassing is applied and the areas will not be re-disturbed.

D. Applying Agricultural Lime and Fertilizer Mixed Grade

Apply and mix lime and fertilizer as follows:

1. Agricultural Lime

   Uniformly spread agricultural lime on the ground at the approximate rate determined by the laboratory soil test.

   a. Agricultural Lime may be used as filler material in mixed grade fertilizer in lieu of inert material. The use of agricultural lime as filler material is to be shown on the fertilizer bag or invoice from the supplier. Do not deduct any amount of fertilizer when lime is used as filler.

2. Fertilizer Mixed Grade

   Uniformly spread the fertilizer selected according to Subsection 700.2.D over the ground or by use of hydroseeding.

   For bid purposes base estimated quantities on an initial application of 400 lb/acre of 19-19-19.

3. Mixing

   Before proceeding, uniformly work the lime and fertilizer into the top 4 in (100 mm) of soil using harrows, rotary tillers, or other equipment acceptable to the Engineer.

   On cut slopes steeper than 3:1, other than serrated slopes, reduce the mixing depth to the maximum practical depth as determined by the Engineer.

   Omit mixing on serrated slopes.

4. Native Restoration Areas, Multitropic Native Planting Areas, Riparian Areas, Stream Restoration Areas, and Wetland and Stream Mitigation Areas

   Omit the application of lime and fetilizer within riparian areas.

E. Seeding

Prepare seed and sow as follows:

1. Inoculation of Seed

   Inoculate each kind of leguminous seed separately with the appropriate commercial culture according to the manufacturer's instructions for the culture.

   When hydroseeding, double the inoculation rate.

Protect inoculated seed from the sun and plant it the same day it is inoculated.

2. Sowing

   Weather permitting, sow seed within 24 hours after preparing the seed bed and applying the fertilizer and lime.

   Sow seed uniformly at the rates specified in the seeding tables. Use approved mechanical seed drills, rotary hand seeders, hydroseeding equipment, or other equipment to uniformly apply the seed. Do not distribute by hand.

   To distribute the seeds evenly sow seed types separately, except for similarly sized and weighted seeds. They may be mixed and sown together.

   Do not sow during windy weather, when the prepared surface is crusted, or when the ground is frozen, wet, or otherwise non-tillable.

3. Overseeding

   Temporary grass areas that were prepared in accordance with Subsection 700.3.05.A, may be overseeded using the no-till method. The no-till method is defined by planting permanent grass seeds using a drill-type seeder over existing temporary grass without plowing or tilling soil and in accordance with Subsection 700.3.05.C.

4. Riparian Seed Mix shall be used when specified in the Plans. A mix of at least three (3) species from Seeding Table 3 (Native Grasses) and at least two (2) species from Seeding Table 4 (Approved Riparian Mitigation - Herbaceous Plants). The seed, shall be applied as Permanent Grassing within those areas designated on the Plans. The kinds of seed, shall be used according to the appropriate Planting Dates given in the tables.

F. Hydroseeding

Hydroseeding may be used on any grassing area. Under this method, spread the seed, fertilizer, and wood fiber mulch in the form of a slurry. Seeds of all sizes may be mixed together. Apply hydroseeding as follows:

1. Use wood fiber mulch as a metering agent and seed bed regardless of which mulching method is chosen. Apply wood fiber mulch at approximately 500 lbs/acre (560 kg/ha).
2. Prepare the ground for hydroseeding as for conventional seeding in Subsection 700.3.05.A.
3. Use specially designed equipment to mix and apply the slurry uniformly over the entire seeding area.
4. Agitate the slurry mixture during application.
5. Discharge slurry within one hour after being combined in the hydroseeder. Do not hydroseed when winds prevent an even application.
6. Closely follow the equipment manufacturer's directions unless the Engineer modifies the application methods.
7. Mulch the entire hydroseeded area according to Subsection 700.3.05.F.1, above, and Subsection 700.3.05.G, below.

   Native Restoration Areas, Multitropic Native Planting Areas, Riparian Areas, Stream Restoration Areas, and Wetland and Stream Mitigation Areas may be hydroseeded. When hydroseeding in these areas only use water, seed and wood fiber mulch.

G. Mulching

Except as noted in Subsection 700.3.05.B and Subsection 700.3.05.C, apply mulch immediately after seeding areas as follows:

Areas with permanent grass seed and covered with slope mats or blankets will not require mulch.

Evenly apply straw or hay mulch between 3/4 in and 1-1/2 in (20 mm and 40 mm) deep, according to the texture and moisture content of the mulch material.

Mulch shall allow sunlight to penetrate and air to circulate as well as shade the ground, reduce erosion, and conserve soil moisture. If the type of mulch is not specified on the Plans or in the Proposal, use any of the following as specified.

1. Mulch with Tackifier

   Apply mulch with tackifier regardless of whether using ground or hydroseeding equipment for seeding.

   a. Mulch uniformly applied manually or with special blower equipment designed for the purpose. When using a blower, thoroughly loosen baled material before feeding it into the machine so that it is broken up.
   b. After distributing the mulch initially, redistribute it to bare or inadequately covered areas in clumps dense enough to prevent new grass from emerging (if required).

      Do not apply mulch on windy days.

c. Apply enough tackifier to the mulch to hold it in place. Immediately replace mulch that blows away.

If distributing the mulch by hand, immediately apply the tackifier uniformly over the mulched areas.

- Tackifier: Use a tackifier listed in the Laboratory Qualified Products Manual and apply at the manufacturer's recommended rates.

2. Walked-in-Mulch

Apply walked-in-mulch on slopes ranging in steepness from 5:1 to 2:1 and treat as follows:

a. Immediately walk it into the soil with a cleated track dozer. Make dozer passes vertically up and down the slope.

b. Where walked-in-mulch is used, do not roll or cover the seeds as specified in Subsection 700.3.05.E.3.

3. Apply only wheat straw mulch on Riparian Areas, Stream Restoration Areas, and Wetland and Stream Mitigation Areas after they have been seeded. The wheat straw mulch is to be applied with a maximum thickness of 1 inch.

H. Sod

Furnish and install sod in all areas shown on the Plans or designated by the Engineer.

1. Kinds of Sod

Use only Common Bermudagrass (Cyndon dactylon) or one of the following Bermudagrass varieties:

Tifway 419

Tifway II

Tift 94

Tifton 10

Midlawn

Midiron

GN-1

Vamont

No dwarf Bermuda types shall be used. Sod shall be nursery-grown and be accompanied with a Georgia Department of Agriculture Live Plant License Certificate or Stamp. Sod shall consist of live, dense, well-rooted material free of weeds and insects as described by the Georgia Live Plant Act.

2. Type And Size Of Sod:

Furnish either big roll or block sod. Ensure that big roll sod is a minimum of 21 inches wide by 52 feet long. Minimum dimensions for block sod are 12 inches wide by 22 inches long. Ensure all sod consists of a uniform soil thickness of not less than 1 inch.

3. Ground Preparation

Excavate the ground deep enough and prepare it according to Subsection 700.3.05.A to allow placing of sod. Spread soil, meeting the requirements of Subsection 893.2.01, on prepared area to a depth of 4 inches.

4. Application of Lime and Fertilizer

Apply lime and fertilizer according to Subsection 700.3.05.D within 24 hours prior to installing sod.

5 Weather Limitation

Do not place sod on frozen ground or where snow may hinder establishment.

6. Install Sod

Install Sod as follows:

- Place sod by hand or by mechanical means so that joints are tightly abutted with no overlaps or gaps. Use soil to fill cracks between sod pieces, but do not smother the grass.
- Stake sod placed in ditches or slopes steeper than 2:1 or any other areas where sod slipping can occur.
- Use wood stakes that are at least 8 in (200 mm) in length and not more than 1 in (25 mm) wide.
- Drive the stakes flush with the top of the sod. Use a minimum of 8 stakes per square yard (meter) to hold sod in place.
- Once sod is placed and staked as necessary, tamp or roll it using adequate equipment to provide good contact with soil.

- Use caution to prevent tearing or displacement of sod during this process. Leave the finished surface of sodded areas smooth and uniform.

7. Watering Sod

   After the sod has been placed and rolled or tamped, water it to promote satisfactory growth. Additional watering will be needed in the absence of rainfall and during the hot dry summer months. Water may be applied by Hydro Seeder, Water Truck or by other means approved by the Engineer.

8. Dormant Sod

   Dormant Bermuda grass sod can be installed. However, assume responsibility for all sod through establishment and until final acceptance.

9. Establishment

   Sod will be inspected by the Engineer at the end of the first spring after installation and at the time of Final Inspection. Replace any sod that is not live and growing. Any cost for replacing any unacceptable sod will be at the Contractor's expense.

I. Application of Nitrogen

Apply nitrogen at approximately 50 lbs/acre (56 kg/ha) when specified by the Engineer after plants have grown to 2 inches (50 mm) in height.

One application is mandatory and must be applied before Final Acceptance.

Apply nitrogen with mechanical hand spreaders or other approved spreaders capable of uniformly covering the grassed areas. Do not apply nitrogen on windy days or when foilage is damp.

Do not apply nitrogen between October 15 and March 15 except in Zone 4.

1. Native Restoration Areas, Multitropic Native Planting Areas, Riparian Areas, Stream Restoration Areas, and Wetland and Stream Mitigation Areas

   Do not apply nitrogen to these areas.

J. Application of Polyacrylamide (PAM)

1. Prepare soil according to project Plans and Specifications prior to applying PAM.
2. Apply PAM according to manufacturer's recommendations and the requirements listed herein.
3. Apply Polyacrylamide (PAM) to all areas that receive permanent grassing.
4. Apply PAM (powder) before grassing or PAM (emulsion) to the hydroseeding operation.
5. Use only anionic PAM.
6. Ensure that the application method provides uniform coverage to the target and avoids drift to non-target areas including waters of the state.
7. Achieve > 80% reduction in soil loss as measured by a rainfall simulator test performed by a certified laboratory (1 hour storm duration, 3 inches (75 mm) rainfall per hour).
8. Ensure uniform coverage to the target area and minimize drift to non-target areas. Apply anionic PAM to all cut and fill slopes, permanently grassed or temporarily grassed, either prior to grassing or in conjunction with hydroseeding operations. Mulch will not be eliminated.
9. Use application rates in accordance with manufacturer's instructions.
10. Do not exceed 200 lbs/acre/year (224 kg/ha/year).
11. Do not include polyacrylamide when planting in Riparian Areas, Stream Restoration Areas, and Wetland and Stream Mitigation Areas

700.3.06 Quality Acceptance

The Engineer may require replanting of an area that shows unsatisfactory growth for any reason at any time.

Except as otherwise specified or permitted by the Engineer, prepare replanting areas according to the Specifications as if they were the initial planting areas. Use a soil test or the Engineer's guidance to determine the fertilizer type and application rate, then furnish and apply the fertilizer.

700.3.07 Contractor Warranty and Maintenance

A. Plant Establishment

Before Final Acceptance, provide plant establishment of the specified vegetation as follows:

1. Plant Establishment

   Preserve, protect, water, reseed or replant, and perform other work as necessary to keep the grassed areas in satisfactory condition.

2. Watering

   Water the areas during this period as necessary to promote maximum growth.

3. Mowing

   Mow seeded areas of medians, shoulders, and front slopes at least every 6 months. Avoid damaging desirable vegetation.

   In addition, mow as necessary to prevent tall grass from obstructing signs, delineation, traffic movements, sight distance, or otherwise becoming a hazard to motorists.

   Do not mow lespedezas or tall fescue until after the plants have gone to seed.

4. Do not mow riparian areas, stream restoration areas, or wetland and stream mitigation areas after planting.

B. Additional Fertilizer Mixed Grade

Apply fertilizer based on the initial soil test report at half the recommended rate each spring after initial plant establishment. For bid purposes apply 200 lbs/acre of 19-19-19. Continue annual applications until Final Acceptance. This additional fertilizer will be measured and paid for at the Contract Unit Price for fertilizer mixed grade.

Do not apply additional fertilizer to Native Restoration Areas, Multitropic Native Planting Areas, Riparian Areas, Stream Restoration Areas, and Wetland and Stream Mitigation Areas.

C. Growth and Coverage

Provide satisfactory growth and coverage, ensuring that vegetation growth is satisfactory with no bare spots larger than1 ft^2 (0.1 m^2). Bare spots shall comprise no more than 1 percent of any given area. An exception is given for seed not expected to have germinated and shown growth at that time.

D. Permissible Modifications

When all Items of the work are ready for Final Acceptance except for newly planted repaired areas or other areas with insufficient grass, the Contractor may fill the eroded areas or treat bare areas with sod obtained, placed, and handled according to Subsection 700.3.05.H.

Carefully maintain the line and grade established for shoulders, front slopes, medians, and other critical areas.

Sod as described above will not be paid for separately, but will be an acceptable substitute for the satisfactory growth and coverage required under this Specification. These areas treated with sod are measured for payment under the Item for which the sod is substituted.

700.4 Measurement

A. Permanent Grassing

Permanent Grassing will be measured for payment by the acre (hectare).

B. Mulches

Straw or hay mulch applied to permanent grassing areas will be measured by the ton (megagram). Wood fiber mulch furnished by the Contractor for permanent grassing is not measured for separate payment.

C. Quantity of Sod

Sod is measured for payment by the number of square yards (meters) , surface measure, completed and accepted.

D. Water

Water furnished and applied to promote a satisfactory growth is not measured for payment.

E. Quantity of Lime and Fertilizer Mixed Grade

Lime and fertilizer are measured by the ton (megagram). Lime used as a filler in fertilizer is measured by the ton (megagram).

F. Quantity of Nitrogen Used for Permanent Grassing

Nitrogen is measured in pounds (kilograms) based on the weight of fertilizer used and its nitrogen content.

G. Replanting and Plant Establishments

No measurement for payment is made for any materials or work required under Subsection 700.3.06 and Subsection 700.3.07.

H. Temporary Grass

Temporary grass is measured for payment by the acre (hectare) according to Section 163.

I. Seeded Native Restoration Areas, Multitropic Native Planting Areas, Riparian Areas, Stream Restoration Areas, and Wetland and Stream Mitigation Areas

Seeded Native Restoration Areas, Multitropic Native Planting Areas, Riparian areas, Stream Restoration area, and Wetland and Stream Mitigation areas will be measured by the acre (hectare), and included under the pay item "Native Restoration and Riparian Seeding".

700.4.01 Limits

General Provisions 101 through 150.

700.5 Payment

As grassing and planting progress, the Contractor will receive full measurement and payment on regular monthly estimates provided the work complies with the Specifications.

A. Permanent Grassing

Permanent grassing will be paid for at the Contract Price per acre (hectare), complete and in place. Payment is full compensation for preparing the ground, seeding, wood fiber mulch, polyacrylamide, and providing plant establishment, soil tests and other incidentals.

B. Straw or Hay Mulch

Straw or hay mulch required for Permanent Grassing will be paid for according to Section 163.

C. Fertilizer Mixed Grade

Fertilizer mixed grade will be paid for at the Contract Price per ton (megagram). Payment is full compensation for furnishing and applying the material.

D. Lime

Lime will be paid for at the Contract Price per ton (megagram). Lime used as filler in fertilizer will be paid for per ton (megagram). Payment is full compensation for furnishing and applying the material.

E. Nitrogen

Nitrogen will be paid for at the Contract Price per pound (kilogram) of nitrogen content. Payment is full compensation for furnishing and applying the material.

F. Sod

Sod will be paid by the square yard (meter) in accordance with the following schedule of payments. Payment is full compensation for ground preparation, including addition of topsoil, furnishing and installing live sod, and for Plant Establishment.

1. 70% of the Contract Price per square yard will be paid at the satisfactory completion of the installation.

2. 20% of the Contract Price will be paid upon satisfactory review of sod which is healthy, weed free and viable at the inspection made at the end of the first spring after installation...
3. 10% of the contract price will be paid upon satisfactory review of sod that is healthy, weed free and viable at the Final Acceptance.

G. Temporary Grass

Temporary Grass will be paid for under Section 163.

H. Seeded Native Restoration Areas, Multitropic Native Planting Areas, Riparian Areas, Stream Restoration Areas, and Wetland and Stream Mitigation Areas

Seeded Native Restoration Areas, Multitropic Native Planting Areas, Riparian areas, Stream Restoration area, and Wetland and Stream Mitigation areas will be paid for at the Contract Price per acre (hectare), complete and in place. Payment is full compensation for preparing the ground, seeding, and providing plant establishment and other incidentals and included under the pay item "Native Restoration and Riparian Seeding".

Payment will be made under:

Item No. 700	Permanent grassing	Per acre (hectare)
Item No. 700	Agricultural lime	Per ton (megagram)
Item No. 700	Fertilizer mixed grade	Per ton (megagram)
Item No. 700	Fertilizer nitrogen content	Per pound (kilogram)
Item No. 700	Sod	Per square yard (meter)
Item No. 700	Native Restoration and Riparian Seeding	Per acre (hectare)

700.5.01 Adjustments

General Provisions 101 through 150.

Revised: May 10, 2011

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
SPECIAL PROVISION

Section 702—Vine, Shrub, and Tree Planting

Delete Section 702 and substitute the following:

702.1 General Description

This Work includes furnishing and planting vines, shrubs, trees and plants, treating regenerated areas, and environmental mitigation planting for riparian buffers and tidal marsh areas.

702.1.01 Definitions

General Provisions 101 through 150.

702.1.02 Related References

A. Standard Specifications

Section 108—Prosecution and Progress

Section 214—Mitigation Site Construction

Section 700—Grassing

Section 882—Lime

Section 891—Fertilizers

Section 893—Miscellaneous Planting Materials

B. Referenced Documents

Standardized Plant Names

ANSI A300 Part 1 Pruning Standards

ANSI Z60.1 American Standards for Nursery Stock

702.1.03 Submittals

A. Certificates of Inspection

Submit certificates of inspection with the invoice for each shipment of plants as required by law for transportation.

File certificates with the Engineer before the material is accepted. Plants may be rejected at the site regardless of Federal or State government inspections at the place of growth.

B. Substitutions

When both primary and alternate plants are specified, use the alternate only after providing written proof that the primary plants specified are not available. In this case a Supplemental Agreement is not required to use the alternate plants.

When a primary or an alternate plant cannot be furnished, provide the Engineer written proof that neither is available. A Supplemental Agreement is required for substitute plants in this case.

Use approved substitute plants, as designated by the Engineer, equal in value to specified plants. Request substitutions at least thirty (30) days before the end of the planting season in the area.

702.2 Materials

Ensure that materials meet the requirements of the following Specifications:

Material	Section
Water	700.2.B
Agricultural Lime	882.2.01
Fertilizers	891.2.01
Plant Topsoil	893.2.01
Landscape Mulch	893.2.02
Vines, Shrubs, Trees, and Miscellaneous Plants	893.2.03
Tree Paint	893.2.06
Prepared Plant Topsoil	893.2.07
Stakes	893.2.08
Organic Soil Additives	893.2.09

A. Plant Specifications

Furnish plants according to the plant name and Specifications included on the plan sheets..

1. Plant Names

   Ensure that the botanical and common names of plants specified conform with the most current edition of Standardized Plant Names, as adopted by the American Joint Committee on Horticultural Nomenclature.

2. Plants should be clearly labeled at the nursery. Labels should remain on the plants until inspected by the engineer.

3. Grades

   Ensure that plants meet the grade requirements of the most current American Nursery and Landscape Association ANSI Z60.1 and any other requirements.

   Caliper used for establishing plant grades or trunk sizes is measured according to the American Nursery and Landscape Association ANSI Z60.1. Plant trees with straight stems and symmetrical branches according to their natural growth. Trees with broken or damaged terminal or main stems will be rejected. There shall be a single dominant leader to the top of the all large canopy shade trees. There can be a double leader in the top 10% of the tree height.

   Trees should be rooting into the root ball so that soil or media remains intact and trunk and root ball move as one when lifted, but not root bound. The trunk should bend when gently pushed and should not be loose so it pivots at or below the soil line.

   There shall be no roots greater than 1/10 diameter of the trunk circling more than one-third the way around in the top half of the root ball. Roots larger than this may be cut provided they are smaller than one-third the trunk diameter.

   The leaf-bearing crown should be full and uniform. Leaves should show no evidence of chlorosis, necrosis, disease or insect infestation.

4. Bare root seedlings

Use nursery-grown bare root seedlings which are a minimum of three (3) feet (1 meter) in height above the ground with a 1/4 inch (6.35mm) caliper, and a minimum primary root length of five inches (5) unless specified differently on the plan drawings.

Use approved substitute plants, as designated by the Engineer, equal in value to specified plants. Request substitutions at least 30 calendar days before the end of the planting season in the area.

B. Nursery Plants

Unless otherwise specified, use plants stock-grown in a licensed nursery under intensive care and cultivation for at least one year. The largest branches of shade trees should be spaced at least 6 inches apart. The branch system shall be normally developed and free of disease, injurious insects, disfiguring knots, sun-scald, injuries, bark abrasions, dead or dry wood, broken terminal growth, or other disfigurements. Stems should show no evidence of die-back. Ensure that proper certificates of inspection and a complete list of the nursery growers accompany nursery grown plants. See Subsection 893.2.03.

C. Approval and Selection of Materials and Work

Select materials and execute operations required under the Specifications and drawings with the approval of the Engineer. Remove rejected materials from the site promptly.

702.2.01 Delivery, Storage, and Handling

A. Bare-Rooted Plants

Protect bare root plants from drying out until planted. Uncovered roots without moisture-loss gel coating shall be exposed to air no longer than 15 minutes.

B. Balled and Burlapped Plants (B&B)

1. Burlap shall be a natural biodegradable material. Do not use synthetic burlap.
2. Replace plants rejected because of broken or loose balls, or balls of less diameter than that specified.
3. Protect the roots of balled and burlapped plants from moisture loss, unless they are planted immediately after they are delivered.
4. Plants shall be harvested with the ball of earth in which they are growing intact.

C. Container-Grown Plants

Keep container-grown plants moist but well drained until planted. Handle plants by the container or soil ball and not by the top growth.

D. Heeled-in Plants

Properly maintain heeled-in plants until they are planted. Do not allow plants to remain heeled-in over the summer or for over 30 days without the Engineer's consent.

E. Injury Prevention

Injured plants will be rejected. Protect tops of shrubs and trees while in transit to prevent windburn.

F. Live Willow Stake Material

Live stakes shall be moistened, capable of rooting, without injury and stripped of all stems and leaves with a minimum of scarring. The stakes shall be from 5 to 8 feet (1.5m to 2.4m) in length with a basal end of 0.5 to 1.5 inches (1.27cm to 3.8cm) in diameter. The top ends shall be blunt and cut square and the butt ends angled.

702.3 Construction Requirements

702.3.01 Personnel

General Provisions 101 through 150.

702.3.02 Equipment

General Provisions 101 through 150.

702.3.03 Preparation

A. Inspect Plant Material Before Digging

The Engineer will inspect trees or plants from the bidder's source for acceptability and conformity to specification requirements for approval by the Engineer. When rejecting the trees or plants, the Engineer reserves the right to pursue and examine other sources of plants to find acceptable specimens. This change will not constitute an increase in cost to the State.

B. Clear and Grub

Clear and grub the planting area before planting or beginning to prepare the plant bed, unless noted differently on the plans. See Section 201.

C. Prepare Plant Bed

Prepare for planting as follows:

1. Planting Limits

   Stake planting limits according to Plan details and the Engineer. Have the Engineer approve the method of plant identification before planting.

   For median plantings, keep any woody plant a minimum of 3 feet (1m) from the edge of the plant bed to avoid vegetative growth into the roadway.

   For stream buffers identified as "Stream Buffer", on plans, the plant species shall be planted in a random, intermixed manner throughout the entire planting area. At the edges of the planting zone, keep new plants a minimum of 8 feet (2.4m) from existing trees or permanent structures.

2. Applications of Soil Additives
   a. Apply fertilizer and lime to the plant bed according to the soil test report.
   b. Spread an organic soil additive, (See Subsection 893.2.09), evenly throughout the designated area to at least 2 in (50 mm) deep. Thoroughly dig it into the soil to at least 6 in (150 mm) deep using a rotary hoe type tiller or other equipment that evenly mixes the soil, lime, fertilizer, and organic soil additive.
   c. Till the area until the surface is smooth and free of weeds, roots, rocks, and other debris, to the satisfaction of the Engineer.
   d. If the planting area lies within a stream buffer, wetland, or marsh the addition of fertilizer or lime is prohibited..

702.3.04 Fabrication

General Provisions 101 through 150.

702.3.05 Construction

A. Seasonal Limitations for Planting

For geographic seasonal limitations, refer to the Planting Zones Map found in Subsection 700.3.05. Plant in Zones 1 and 2 between October 15 and March 15. Plant in Zones 3 and 4 between November 1 and January 1.

B. Planting Operations

Plant using the method called for on the details and plan sheets. Before beginning planting of each area, have available the necessary materials including prepared plant topsoil (see Subsection 893.2.07), water, stakes, and mulch. Plants shall be installed as straight/upright as possible. Any plants found to be leaning or broken will not be accepted or paid for by the engineer.

When seasonal limitations and weather conditions permit, continuously water, mulch, guy, provide tree guards, and stake as indicated on the plans and details until completing the last operation.

After completing planting, provide a method for retaining water adjacent to the plant according to the details shown on the Plans or as directed by the Engineer.

Protect marsh restoration areas from vehicles and machinery. Typical protective barriers are not to be used in tidal areas. Stakes that remain secure and are taller than the highest tide, flagged with highly visible flagging tape, are required to mark the area to be protected and off-limits for vehicles and machinery.

1. Planting By the Pit Method
    a. Placing Bare-Rooted Plants

        Plant bare-rooted plants delivered to the pit area. Protect roots from drying out until placing them in the pit.

        1. Center plants in pits and spread roots as they originally grew.
        2. Cover and prepare the topsoil according to details shown on the Plans.

    b. Placing Balled and Burlapped Plants

        Immediately plant these plants after they are delivered to the pit site.

        1. The pit diameter shall be a minimum of 3 times the diameter of the rootball. Center the ball in the prepared pit, leaving the top of the ball 1 in (25 mm) above the top of the ground for settlement.
        2. Cut away and remove the top 1/3 of burlap from the rootball. Cut all ropes and twine, pull the nails, and drop the remaining burlap to the bottom of the hole. Cut away and remove all wire from the root ball.
        3. Partially fill the pit with prepared plant topsoil and compact the soil enough to hold the ball firmly. Add mycorrhizal innoculant to plant topsoil if specified in plans.

    c. Placing Container-Grown Plants

        When the container is delivered to the pit site, split the container from top to bottom and carefully remove the plant.

        1. The pit diameter shall be a minimum of 3 times the diameter of the rootball. Spread into the hole any major roots growing around the container or prune them to remove any circular growth.
        2. Place the ball in the center of the prepared pit, leaving the top of the ball 1 in (25 mm) above the top of the ground for settlement.
        3. Partially fill the pit with prepared plant topsoil and compact the soil enough to hold the ball firmly. Add mycorrhizal innoculant to plant topsoil if specified in plans.

    d. Completing Pit Plantings

        After placing pit plantings, water plants thoroughly the same day regardless of weather or soil moisture conditions.

        1. After the water has soaked in, add prepared plant topsoil and compact firmly up to 2 in (50mm) below the adjacent ground.
        2. Stop compacting when the compacted prepared topsoil is 2 in (50 mm) below the adjacent ground.
        3. Fill the remainder of each pit with loose, prepared plant topsoil according to the details shown on the Plans.
        4. Prepare the loose topsoil to retain water adjacent to the plant according to the Plans or as directed by the Engineer.

    e. Live Stake Plantings

        1. Plant live willow stakes at four (4) ft (1.2m) intervals or as indicated on the drawings with the buds facing upward.
        2. Eighty (80) percent of the stake shall be installed below ground, leaving twenty (20) percent extending above ground.

3. Stakes shall be placed deep enough to reach the water table during the dry season at an angle perpendicular to the slope.
4. Pack soil firmly around the hole after installation.
5. Install live willow (*Salix spp.)* stakes only in the dormant season, according to the planting details and landscape plan notes.
6. Replace any live stakes that split during installation.

2. Planting using a Dibble, Hoedad, or Reinforced Planting Shovel for Bare Root Seedlings.

   Planting shall only be done when there is adequate moisture in the ground and when the ground is not frozen.

   Provide proper root positioning and contact with the soil, and eliminate all air pockets around roots. Roots of seedlings shall not be pinched or bent in a sideways or upturned direction.

   Each tree shall be inserted into the hole such that the root collar of the tree will be at ground level after backfilling is complete. Allowance for burying the root collar below ground level shall not exceed one-half inch in depth. In no case shall planting result in the root collar remaining above ground level. The soil back-filled around the root system shall be compacted sufficiently to support the sapling. Mow or use a string trimmer to a height of 1 in (25 mm) in the area designated for restoration.

   Grass the area designated for restoration with a riparian seed mix and apply wheat straw mulch to the area before planting seedlings.

   Plant within 48 hours after mowing or string trimming the site.

3. Restoration and enhancement of tidal marsh areas are subject to possible wave energy, requiring the use of a plant anchor for each plant. See planting plan sheets and details for plant anchor and anchoring descriptions.

C. Landscape Mulching

1. For Pit Plantings

   Follow these requirements when mulching for pit plantings:

   a. Where the distance between plants is 8 ft (2.4 m) or less, spread mulch throughout and 3 ft (900 mm) beyond the outermost plants. Where plants are more than 8 ft (2.4 m) apart, apply mulch in a circular fashion around each plant, forming a ring 5 ft (1.5 m) in the outside diameter.

      If plant pits are greater than 5 ft (1.5 m) in diameter, ensure that the mulch extends out to cover the berm as shown in the planting details on the Plans.

   b. Apply mulch within 3 days of planting at least 4 in (100 mm) in depth to obtain a compacted depth of at least 3 in (75 mm).

      Compaction occurs naturally. Check compaction at least two months after spreading and exposing the mulch to the elements.

      If the compacted depth is less than 3 in (75 mm), apply additional mulch to deficient areas within 1 month following notification.

   c. Apply mulch to a uniform depth and remove lumps for a neat appearance. Tuck mulch neatly against all paving edges, drainage structures, and where planting beds meet grassed areas.

   d. Leave a 1 in (25 mm) to 2 in (50 mm) ring of non-mulched area directly around all tree trunks.

   e. Do not mulch with Cypress Mulch.

2. For Plantings using a Dibble, Hoedad, or Reinforced Shovel

   Apply landscape mulch according to Subsection 702.3.05.C.1 with the following exceptions:

   a. Apply mulch before planting.

   b. Use only wheat straw mulch in restoration areas.

c. Ensure that the mulch coverage is open enough to allow seed germination to take place and dense enough to conserve moisture in the seed bed.

3. For Stream Buffer Restoration Planting Areas wheat straw shall be the only types of mulch used.

4. Do not use mulch in a tidal marsh area.

D. Wrapping

Do not wrap the trucks of tree unless specified in the plans. When wrapping is specified, tightly wrap the trunks of deciduous trees over 1.25 in (32 mm) in caliper. Wrap in strip burlap or waterproof crepe tree wrapping paper or other approved materials.

1. Begin wrapping at the ground and extend spirally up and beyond the first rosette of branches with an overlap of one half the width of the wrapping material.
2. Tie the wrapping material securely with binder twine spaced every 12 in (300 mm) for the full length of the wrapping. Wrap immediately after planting.

E. Staking and Guying

1. Do not use staking and guying unless specified in the plans or details.
2. Perimeter Staking

   Place perimeter stakes 2 in x 2 in x 36 in (50 mm x 50 mm x 900 mm). Stake the perimeter of indicated regenerated areas within specified planting dates according to the Plans or as directed by the Engineer. Keep staking for tidal marsh areas secured with supports taller than the highest tide with highly visible flagging tape to mark the area as off-limits for vehicles and machinery.
3. Vine, Shrub, and Miscellaneous Plant Staking

   Use stakes to identify isolated vines, shrubs, and miscellaneous plants outside of solid mulched beds according to Plan details.
4. Tree Staking and Guying

   Stake trees using a system that will prevent trees from leaning or tilting and keep the root ball stable until the roots become anchored. The system should allow the top some movement and flexibility without damaging the tree.

F. Pruning

1. Prune plants on the site before planting and after initial inspection by the Engineer as needed for the health of the plant. Never prune severely to get plants to meet Specifications.

   a. Follow ANSI A300 Part 1 standards and use approved tools designed for pruning.

      Lopping, topping, or shearing trees or shrubs is not permitted.

   b. Prune back damaged, scarred, frayed, split, and skinned branches, limbs, and roots to live wood nearest to the next sound, outside lateral bud, branch, limb, or root.

   c. Leave the terminal leaders or buds in trees intact.

   d. Prune roots, when necessary, as directed by the Engineer.

   e. Prune Crape Myrtles to maintain natural form only. Severely cutting back or stump pruning crape myrtles is not permitted. Remove sucker growth from Crape Myrtles.

   f. Damaged, scarred, frayed, split and skinned branches, limbs and roots shall be pruned back to live wood nearest to the next viable outside lateral bud, branch, limb or root.

G. Watering

1. Apply water in a manner to prevent erosion. Water plants deeply and thoroughly at the time of planting. Water after applying fertilizer called for in Subsection 702.3.05.H and as necessary to maintain enough moisture to promote plant growth. Use water reservoir bags if specified in plans or details.

   a. Apply enough water to wet the soil to a depth slightly below the roots. Direct the water to the ground around the plant, not the tops.

b. Do not allow plant foliage to dry out or plants to defoliate from lack of water. Remove plants in such condition from the site immediately. Apply supplemental watering to maintain vigorous growth and to keep plants moist and as directed by the Engineer.

c. Apply water once per week throughout the planting season in which the plants are installed. Follow Subsection 702.3.07.B and 702.3.07.C for shrub and tree watering requirements throughout the life of the project.

H. Spring Application of Fertilizer

1. Method and Rate of Application

Follow these requirements when applying fertilizer in the spring:

a. Trees

Apply a slow-release fertilizer according to soil test results. Assume 8-12-12 with a rate of 1 cup (0.25 L) per caliper inch of tree for bidding purposes.

b. Shrubs and vines

Fertilize shrubs according to soil test results with a slow release fertilizer by spreading fertilizer around the base of the plant and working it into the soil by hand. Assume 6-12-12 with a rate of 0.5 cup (0.12 L) per foot of shrub height for bidding purposes.

Bed Areas

Spread fertilizer on bed areas (defined by method of planting in Subsection 702.3.05.B), over the mulch according to soil test results. Assume 3 lbs/100ft2 of 6-12-12 for bidding purposes. Thoroughly water in the plants.

c. Stream Buffer Areas

The addition of fertilizer or lime is prohibited within the stream buffer planting area.

d. Tidal March Areas

The addition of fertilizer or lime is prohibited within marsh areas.

2. Time of Spring Fertilizer Application

Apply fertilizer in the spring in Zones 1 and 2 (with reference to the Planting Zones specified in Subsection 702.3.05.A) between April 1 and April 15. Apply between March 15 and April 1 for Zones 3 and 4.

For late plantings, do not apply fertilizer less than 30 days after the plantings.

3. Additional Fertilizer

Approximately one month after the spring fertilizer is applied; the Engineer will inspect planted areas and determine if an additional application of fertilizer is needed for any plant or group of plants.

If the Engineer determines additional fertilizer is required, apply fertilizer according to soil test results between June 15 and July 15th.

I. Tree Guards for Stream Buffer Saplings

Each planted bare root, sapling-sized plant shall be fitted with a tree guard to protect the saplings from wildlife browsing. The tree guards shall be at least 36 inches tall, with appropriately sized wooden stakes or bamboo to securely support the tree guard [i.e., a 4-foot (1.2 meter) stake for a 36 inch (914.4 mm) guard]. Mesh tube-type tree guards are required. Vexar tubes, or equivalent, are to be used. All tree guards shall be removed from the saplings at final inspection.

J. Restoration and Cleanup

Restore areas where existing grass has been damaged or scarred during planting operations at no expense to the Department. Restore the disturbed areas to their original conditions as directed by the Engineer. Clean up debris, spoil piles, and containers and leave the Project area clean.

Clean up and remove all debris, spoil piles, containers, water reservoirs, trash, etc. and leave the project area in an acceptable condition. Inspect all installed erosion control devices weekly and clean out or repair as required. Remove all erosion control devices at final acceptance unless otherwise instructed by the Engineer.

702.3.06 Quality Acceptance

Preserve the plants in a healthy growing condition and keep plants moist, particularly during drought conditions (no rain for any two week period). The acceptability of the plant material planted and maintained as specified will be determined at the end of an establishment period.

The plant establishment period is the period from the last planting specified in Subsection 702.3.05.B until the following October 1. Plant all plants in one planting season unless otherwise approved by Engineer.

A. First Establishment Period

At the end of the first planting season, the first establishment period begins. The Department will make the first semi-final inspection 30 days before the end of the first establishment period. Replace dead, dying, diseased, unsatisfactory, and missing plants, by January 20 of the next (second) planting season. For stream buffer areas, all replacement plants shall be tagged with 18 inch (457.2 mm) lengths of brightly-colored survey tape. Tree guards shall be placed around all replacement saplings. All costs for replanting, tagging and tree guards for replacement trees shall be included in the contract price bid for the original planting.

B. Second Establishment Period

At the end of the second planting season, the second plant establishment period begins. The Department will make the second semi-final inspection 30 days before the end of the second establishment period. Again, replace dead, dying, diseased, unsatisfactory, and missing plants, by January 20 of the next (third) planting season. For stream buffer areas, all replacement plants shall be tagged with 18 inch (457.2 mm) lengths of brightly-colored survey tape. Tree guards shall be placed around all replacement saplings. All costs for replanting, tagging and tree guards for replacement trees shall be included in the contract price bid for the original planting.

C. Final Inspection

The Department will make the final inspection of the plants during May, following any needed replacements during the previous planting season. Assume responsibility for the plants until the Final Acceptance of the Project or a portion of the Project.

702.3.07 Contractor Warranty and Maintenance

Project maintenance includes, but is not limited to, watering, cultivating, weeding, pruning, repairing, adjusting guys and stakes, and performing other work as ordered by the Engineer until final acceptance.

Promptly remove from the Project area dead plants or those that no longer conform to the requirements of Subsection 702.2.A.2.

Mow the entire right-of-way within the limits of the Project up to a maximum of four times per calendar year. Do not mow riparian mitigation sites.

A. Leaning Trees

Straighten leaning trees as directed by the Engineer. Follow Staking and Guying requirements for replacements or repairs as per Subsection 702.3.05.E.

B. Shrub Maintenance

1. Pruning

   Prune dead or diseased limbs to provide for plant health and appearance as directed by the Engineer.

2. Landscape Mulching

   Continuously maintain shrub and tree beds with a clean, freshly mulched appearance using the mulch originally specified. See Subsection 702.3.05.C. Do not mulch shrub and tree beds within riparian mitigation sites.

   a. Apply a 2 in (50 mm) loose layer of specified mulch (top-dressing) on top of all areas, including tree pits, initially mulched, at the following times:

      1. In August, during the first plant establishment period.
      2. In April, during the second plant establishment period.
      3. In August, during the second plant establishment period.
      4. In April, prior to the final inspection.

3. Applying Fertilizer

   See Subsection 702.3.05.H.

4. Applying Pesticides

   a. Inspect all planted or seeded vegetation for insects, grubs, mites, diseases, etc., once every two weeks. Apply insecticides, fungicides, and herbicides according to the manufacturer's recommendations to effectively control or eradicate the problem.

   b. Perform all pesticide applications under the direct supervision of a trained licensed commercial pesticide operator whose license includes subcategory 27 – Right of Way Pest Control. Carry the pesticide license/certification on the work site during applications. Carry all labeling associated with the chemical being applied at the work site.

   c. Submit all product information data sheets and EPA approval numbers on all pesticides proposed to be used prior to application for approval.

   d. Notify the Engineer a minimum of 48 hours prior to any and all pesticide applications.

   e. Add a blue dye to all spray applications unless approved otherwise by the Engineer.

   f. Monitor the weather and spray under proper weather conditions. Spraying shall not occur when the weather is greater than 10 miles per hour.

   g. Wear the proper safety attire. Wear long sleeve shirts, long pants, gloves, and safety glasses. Wear or use any additional protective safety attire or gear as recommended by the product's manufacturer.

   h. Repair any damage that is a result of mishandling or misuse of materials, at no expense to the Department, to the satisfaction of the Engineer.

   i. For stream buffer and marsh restoration areas, pesticides are not to be used unless approved by the Department Ecology Manager.

5. Edging

   a. Edge all shrub pits, shrub beds, and tree pits once a month throughout the life of the project such that the vee-cut edging detail specified on the plans is maintained. Prevent grass and weeds from growing over or into the shrub beds and tree pits.

   b. Use equipment specifically designed for edging. Line trimming equipment shall not be used.

6. Watering

   a. Check all planted material once a week throughout the contract for dryness by removing the mulch from their base and "sampling the soil" approximately 4 in (100mm) deep. Water if the soil is not moist.

   b. Water all planted material if a drought (no rain for two weeks) occurs. Provide the water required to meet the watering requirements.

   c. Water each plant thoroughly until the ground is saturated to a depth slightly below the root ball. Apply water in a manner to prevent erosion.

7. Weed Control

   Perform weed control throughout the project, a minimum of once every two weeks, in all areas within the project limits to maintain tree pits, shrub beds, sidewalks, curb and gutter, walkways, ditch paving, concrete medians, and other pavement weed free. Meet the following conditions:

a. Perform weed control to prevent weeds from becoming established, setting seed, or from becoming visible in the planting beds.

b. Completely remove all undesirable plants (weeds) by hand pulling. Removal of weeds may be accomplished using herbicides if approved by the Engineer. However, the use of herbicides is prohibited in stream buffer areas unless approved by the Department Ecology Manager.

c. Apply an approved pre-emergent herbicide twice each year, once in the spring and once in the fall, throughout the contract. The use of pre-emergent herbicides is prohibited in stream buffer areas. Apply pre-emergent to all shrub beds and tree pits. Notify the Engineer 48 hours prior to spraying. Use a blue dye in all applications unless approved otherwise by the Engineer.

d. Eradicate all invasive exotic pest plants found within the project limits throughout the life of the project, including stream buffer and marsh areas. Volunteer, non-invasive plant material within stream buffer restoration areas is acceptable.

e. Dispose off site on a daily basis all weed, exotic plants, clippings, litter, and debris generated.

8. Policing

   Remove debris such as paper, broken limbs, bottles, cans, etc., a minimum of the first and third week of each month from all areas within the project limits while maintaining the site.

9. Mitigation Areas

   Pruning, mulching, edging, and applying spring fertilizer are not required within stream buffer and regenerated forest areas.

C. Tree Maintenance

1. Watering

   See Subsection 702.3.07.B.6

2. Landscape Mulch

   See Subsection 702.3.07.B.2

3. Fertilizer

   See Subsection 702.3.05.H.

4. Abnormal Conditions

   Periodically (once every two weeks) observe trees and shrubs for abnormal conditions such as insects, borers, web worms, red spiders, etc., and immediately treat.

5. Sucker Growth

   Remove sucker growth once a month. Sucker growth is the shoots that sprout out around the base of the tree trunk.

6. Pruning and Deadwood

   Remove deadwood at least two times a year. Prune dead branches. Paint cuts, and wounds or scars with tree paint only when specified in the plans. Do not top Crape Mrytles. See Subsection 702.3.05.F.

7. Pesticide Control

Apply pesticides as necessary to control harmful insects and diseases. Follow the manufacturer's instructions. See Subsection 702.3.07.B.4. NOTE: Use chemicals according to Federal, State and county directives on environmental control that carry an EPA approval number.

8. Weed Control

   See Subsection 702.3.07.B

9. Staking and Guying

Remove all support guy wires, strapping and stakes from plants which have gone through one complete growing season.

702.4 Measurement

A. Plants

Plants of the name and size specified are measured for payment according to the number planted that are still living and viable and in an acceptable condition at the time of Final Acceptance. A viable plant must have a minimum of 75 percent of the leaf-bearing crown with healthy foliage.

B. Fertilizer

Spring application fertilizer applied to planted and regenerated areas will be the actual number of pounds (kilograms) placed and accepted. Fertilizer, lime, and plant topsoil used in prepared plant topsoil or plant bed preparation are not measured for separate payment. For stream buffer and marsh areas, the addition of fertilizer or lime is prohibited.

C. Perimeter Stakes

Perimeter stakes is not measured for payment unless such item is shown as a separate Pay Item in the Proposal.

D. Clearing and Grubbing

Clearing and grubbing is not measured for payment unless the Item is shown as a separate Pay Item in the Proposal.

E. Landscape Mulch

The quantity of landscape mulch and top-dressing measured for payment will be the actual number of square yards (meters) completed as specified and accepted. The presence of weeds or other growth, or foreign material, will be cause for rejection.

702.4.01 Limits

General Provisions 101 through 150.

702.5 Payment

A. Plants

Plants measured for payment will be paid for as follows:

1. After planting satisfactorily, the Department will pay 50 percent of the Contract Unit Price bid per each on the next estimate.
2. Until Final Acceptance, perform all required maintenance according to Subsection 702.3.07 when necessary or as ordered by the Engineer.

   If the Contractor fails to properly maintain the landscaping, daily charges shall be assessed against any money due or that may become due the Contractor in accordance with the schedule of deductions shown in Subsection 108.08, but not less than $150 per calendar day, and will continue until project maintenance is approved by the Engineer.

   The charges are in addition to those specified for delay or failure in completing the Work within the specified time.
3. After the first semi-final inspection, the Department will pay 15 percent of the Contract Unit Price bid per each of the live, viable plants.
4. After the second semi-final inspection, the Department will pay 15 percent of the Contract Unit Price bid per each of the live, viable plants.
5. At Final Acceptance, the Department will pay the remaining 20 percent less the Full Contract Unit Price bid per each plant not accepted.

Payments are full compensation for furnishing, planting, replanting as required, pruning, staking, guying, soil conditioning, and preparing plant beds, including applying additives, digging plant pits, preparing plant topsoil and mulch, disposing of waste material, and maintaining the plants during the plant-establishment period.

B. Fertilizer

All grades of fertilizer applied in the spring, measured as specified above, are paid for at the Contract Price per pound (kilogram) or per ton (megagram), whichever is indicated in the Proposal. Payment is full compensation for furnishing and applying and for watering regenerated areas.

For stream buffer and marsh restoration areas, the addition of fertilizer or lime is prohibited.

C. Perimeter Stakes

Perimeter stakes will not be measured for payment. The cost will be included in the overall contract price.

D. Landscape Mulch

Landscape mulch measured for payment will be paid for as follows:

1. After mulching satisfactorily, the Department will pay 40% of the Contract Unit Price bid per square yard (meter).
2. After satisfactorily completing mulch (topdressing) in August of the first plant establishment period, the Department will pay 15% of the Contract Unit Price bid per square yard (meter).
3. After satisfactorily completing mulch (topdressing) in April of the second plant establishment period, the Department will pay 15% of the Contract Unit Price bid per square yard (meter).
4. After satisfactorily completing mulch (topdressing) in August of the second plant establishment period, the Department will pay 15% of the Contract Unit Price bid per square yard (meter).
5. After satisfactorily completing mulch (topdressing) in April of the final planting season, (a month before the Final Inspection), the Department will pay 15% of the Contract Unit Price bid per square yard (meter). Such payment shall be full compensation for furnishing, installing, topdressing, and maintaining mulch as required.
6. Do not mulch marsh restoration areas.
7. Do not apply additional applications of mulch after the initial application in stream buffer restoration areas.

Payment will be made under:

Item No. 702	Plant Name and Size	Per each
Item No. 702	Fertilizer, Spring Application	Per ton (megagram)
Item No. 702	Landscape Mulch	Per square yard (meter)
Item No. 702	Spring Application Fertilizer	Per pound (kilogram)
Item No. 702	Live Willow Cuttings and Planting	Per each
Item No. 702	Perimeter Stakes	Per each
Item No. 700	Agricultural Lime	Per ton (megagram)

702.5.01 Adjustments

General Provisions 101 through 150.

NHS00-0000-00(784)

Fulton and DeKalb Counties

P.I. No. 0000784

The proposed project consists of operational improvements along Interstate 285 (I-285) and State Route (SR) 400 in the vicinity of the I-285/SR 400 interchange, including construction of barrier-separated collector-distributor (CD) lanes along I-285 and SR 400, reconstruction of existing ramps, and construction of new flyover bridges, as well as reconstruction and widening of existing bridges in the interchange area. Along I-285, the proposed project would begin west of Roswell Road in Fulton County and end east of Ashford Dunwoody Road in DeKalb County, for a distance of approximately 4.3 miles on I-285. Along SR 400, the proposed project would begin just south of the Glenridge Connector and extend north to the Hammond Drive interchange area, all in Fulton County, where it would tie into an adjacent, separate project (Georgia DOT P.I. No. 721850). The total length of the proposed improvements along SR 400 is approximately 1.2 miles.

ENVIRONMENTAL ASSESSMENT

U.S. DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

GEORGIA DEPARTMENT OF TRANSPORTATION

SUBMITTED PURSUANT TO 42 USC 4321 et seq.

12/12/14
NEPA DATE

12/16/14
Hiral Patel, P.E. DATE
State Environmental Administrator

APPROVAL FOR ADVANCEMENT TO AVAILABILITY/PUBLIC HEARING PHASE

12-16-14
DATE

FOR: RODNEY N. BARRY, P.E.
DIVISION ADMINISTRATOR
FEDERAL HIGHWAY ADMINISTRATION

****

05/15/15
NEPA DATE

5-18-15
Hiral Patel, P.E. DATE
State Environmental Administrator

APPROVAL OF ENVIRONMENTAL ASSESSMENT

5-19-15
DATE

FOR: RODNEY N. BARRY, P.E.
DIVISION ADMINISTRATOR
FEDERAL HIGHWAY ADMINISTRATION

FEDERAL HIGHWAY ADMINISTRATION

FINDING OF NO SIGNIFICANT IMPACT

FOR

GEORGIA PROJECT NHS00-0000-00(784)
Fulton and DeKalb Counties
P.I. Number 0000784

The Proposed I-285 at SR 400 Interchange Reconstruction

An Environmental Assessment of the referenced project has been prepared by the Georgia Department of Transportation (DOT) in consultation with the Federal Highway Administration. The document was made available for public inspection as announced in a public notice, and comments were invited from all interested parties. Subsequent to the availability of the Draft Environmental Assessment and the comment period, a Final Environmental Assessment was prepared and has been furnished to the Federal Highway Administration by the Georgia DOT with the recommendation for a "Finding of No Significant Impact."

The Federal Highway Administration, after reviewing the Environmental Assessment, finds that the project will have no significant impact on the human environment.

The Finding of No Significant Impact is based on the Environmental Assessment, which has been evaluated by FHWA and determined to adequately and accurately discuss the environmental issues and effects of the proposed project. The Environmental Assessment also provides sufficient evidence and analysis for determining that an environmental impact statement is not required. The Federal Highway Administration takes full responsibility for the accuracy, scope and content of the attached Environmental Assessment.

5-19-15
DATE

Jennifer L. Green
FOR: MR. RODNEY N. BARRY, P.E.
DIVISION ADMINISTRATOR
FEDERAL HIGHWAY ADMINISTRATION

CERTIFICATE OF COMPLIANCE

PI#(s): 0000784, Fulton and DeKalb Counties,

NHS00-0000-00(784)

I hereby certify that the Georgia Department of Transportation has considered the social, economic and environmental effects of the project and has fulfilled the requirements of 23 USC 128 relating to public hearing requirements.

Georgia Department of Transportation

By: Neal Patel Inn

Title: State Environmental Administrator

Date: 5-18-15

EXECUTIVE SUMMARY

Project NHS00-0000-00(784), Fulton and DeKalb Counties, P.I. No. 0000784, the Interstate 285 (I-285)/State Route (SR) 400 Interchange Reconstruction project, would provide operational improvements along I-285 and SR 400 at and leading up to the I-285/SR 400 interchange. The proposed improvements would include construction of barrier-separated collector-distributor (CD) lanes along I-285 and SR 400, reconstruction of existing ramps, and construction of new flyover bridges, as well as reconstruction and widening of existing bridges in the interchange area. Along I-285, the project would begin approximately one mile west of Roswell Road in Fulton County and end approximately three-fourths of a mile east of Ashford Dunwoody Road, for a distance of approximately 4.3 miles. Along SR 400, the proposed project would begin just south of the Glenridge Connector and extend north to the Hammond Drive interchange area, where it would tie into an adjacent project (Georgia DOT P.I. No. 721850, the SR 400 CD Lanes Project). The total length of the proposed improvements along SR 400 is approximately 1.2 miles.

The proposed project aims to:

- Reduce the substantial amount of vehicular weaving (vehicular conflicts caused by travelers trying to move across one or more lanes of traffic) that occurs along I-285 in the vicinity of the I-285/SR 400 interchange due to the closely spaced interchanges in this area (Roswell Road, Glenridge Drive, SR 400, Peachtree Dunwoody Road, and Ashford Dunwoody Road). This weaving currently results in congestion and safety concerns in this area.
- Improve ramp capacity at the I-285/SR 400 interchange. The existing ramp capacity is insufficient to accommodate traffic demand, and leads to long queues approaching the interchange, which contributes to the congestion and safety concerns in this area.
- Improve geometric deficiencies in the existing configuration of the I-285/SR 400 interchange.

In compliance with the National Environmental Policy Act (NEPA), the Georgia Department of Transportation (DOT) conducted a preliminary assessment of the social, cultural, natural and physical effects anticipated as a result of the proposed project. These effects, based on conceptual design, are summarized in Table ES-1.

Table ES-1. Overview of the Environmental Effects of the Proposed Project

Resource Area	Preliminary Effects from the Proposed Project
SOCIAL ENVIRONMENT	
Land Use Changes	Small amount of private land converted to road surface and right-of-way (ROW)/easements.
Community Cohesion	Short-term, adverse construction effects. No separation of neighborhoods from each other or from community facilities. Limited changes in access.
Relocations	One office building and one parking deck would be relocated. No residential relocations anticipated.

Table ES-1. Overview of the Environmental Effects of the Proposed Project

Resource Area	Preliminary Effects from the Proposed Project
Churches and Institutions	A small amount of ROW acquisition from one institution. Limited changes in access in the area of the Northside/St. Joseph's/Children's Healthcare of Atlanta hospital complexes, but no disruptions in operations would occur.
Environmental Justice	No disproportionate adverse impacts.
Economics	Short-term, adverse impacts during construction. Long-term, beneficial impacts expected from improved access and travel times.
Parklands/Recreation Areas/ Wildlife Refuges	No ROW acquisition from any parks. Small visual changes adjacent to Allen Park.
CULTURAL ENVIRONMENT	
Historic Resources	No effect on 12 National Register of Historic Places (NRHP) eligible resources. No Adverse Effect on 8 NRHP eligible resources (due to ROW and/or easement acquisition/physical disturbance within NRHP boundary, and in one case, due to cumulative effects).
Archaeological Resources	No effects (no archaeological resources within the project area).
Historic Markers	No effects (no historic markers within the project area).
Section 4(f) Applicability	De minimis determination for impacts to the Boone House, Copeland Road Historic District, Sandy Springs Apartments, Mountain Creek Historic District, Glenridge Forest-Hammond Hills Historic District, Sherrell-Colton Drive Historic District, and Oak Forest Hills Historic District.
NATURAL ENVIRONMENT	
Water Quality	Project would directly impact one 303(d) listed stream (Long Island Creek). Adverse impacts on water quality would be reduced with the use of best management practices (BMPs) and proper road drainage design.
Waters of the United States	44 waters of the United States in project area. Project would permanently impact approximately 0.30 acre of open water, 0.0 acres of wetlands, and 6,487 linear feet (2.0 acres) of streams. Temporary impacts not yet known. Individual Section 404 Permit anticipated, with the purchase of 1.7 wetland mitigation credits and 19,879 stream mitigation credits. Fish and Wildlife Coordination Act (FWCA) coordination required for impacts to 7 resources.
Floodplains	Floodplain encroachment in two areas. No-rise certification expected. Community coordination expected.
Farmland	No effects (no farmland within the project area).
Protected Species	No effect on federal and state listed species. No special provisions required.
Wildlife and Habitat	Migratory bird special provision (SP 107.23g) required.
Invasive Species	11 invasive species in project area. Standard measures to minimize the propagation of invasive species would be implemented.
Essential Fish Habitat	No effects (no essential fish habitat within the project area).
PHYSICAL ENVIRONMENT	
Noise	206 receivers (representing 1,471 receptors) impacted by Build conditions; 8 new noise barriers and modifications to one existing barrier are being considered.

Table ES-1. Overview of the Environmental Effects of the Proposed Project

Resource Area	Preliminary Effects from the Proposed Project
Air	In attainment for federal and state air quality standards.
Climate Change	The project could result in a small increase in global carbon dioxide emissions in the design year.
Energy/Mineral Resources	No mining operations or mineral reserves present. The project would have no measurable impact on energy demands in the region.
Construction/Utilities	Construction would create unavoidable inconveniences and potentially delays for motorists. Utilities present and likely to require relocation.
Underground Storage Tanks (USTs)/Hazardous Waste Sites	14 sites/facilities within a mile of the project; two sites required subsurface testing due to proposed ROW limits. Groundwater monitoring wells were observed in the vicinity of three gas stations in the project; no impacts to these wells are anticipated based on current project conceptual design.

Public Involvement and Agency Coordination

Three public information open houses (PIOHs) were held, one on August 19, 2014 (between 11 a.m. and 1 p.m.) and two on August 21, 2014 (between 11 a.m. and 1 p.m. and between 5 p.m. and 7 p.m.). Stakeholder meetings with surrounding and affected jurisdictions (City of Sandy Springs, City of Dunwoody, City of Brookhaven, and Perimeter Community Improvement Districts) were also held. Additionally, the project was represented at the November 18, 2014 PIOH for the adjacent SR 400 CD Lanes project (P.I. No. 721850). Upon approval of the Draft Environmental Assessment, a public hearing open house (PHOH) was held on February 5, 2015.

Early in the project development phase, letters were sent to local government and planning agencies, as well as state and federal government agencies, to solicit comments regarding the proposed action. Additionally, because an Individual Permit under Section 404 is anticipated for the project, the Georgia DOT held a Practical Alternatives Review (PAR) meeting in August 2014 with the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, and Georgia Environmental Protection Division to obtain agency input on the project and the alternatives.

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I. PROJECT NEED AND PURPOSE

A. Introduction

The Georgia Department of Transportation (DOT) proposes to reconstruct the Interstate 285 (I-285)/State Route (SR) 400 interchange in Fulton and DeKalb counties, Georgia. Along I-285, the proposed project would begin approximately one mile west of Roswell Road in Fulton County and end approximately three-fourths of a mile east of Ashford Dunwoody Road in DeKalb County, for a distance of approximately 4.3 miles on I-285. Along SR 400, the proposed project would begin just south of the Glenridge Connector and extend north to the Hammond Drive interchange area, all within Fulton County, where it would tie into an adjacent, separate project (Georgia DOT PI No. 721850). The total length of the proposed improvements along SR 400 is approximately 1.2 miles (see Figure 2).

Three primary problems currently exist at the I-285/SR 400 interchange:

1) Substantial weaving due to the closely spaced interchanges along I-285 (Roswell Road, Glenridge Drive, SR 400, Peachtree Dunwoody Road, and Ashford Dunwoody Road) leading up to the I-285/SR 400 interchange, which results in congestion and safety concerns;
2) Lack of adequate ramp capacity at the I-285/SR 400 interchange, which results in long queues approaching the interchange, and associated congestion and safety concerns; and
3) Interchange geometry deficiencies.

What is Vehicular Weaving?

Vehicular weaving refers to the conflicts caused by travelers trying to move across one or more lanes (merging).

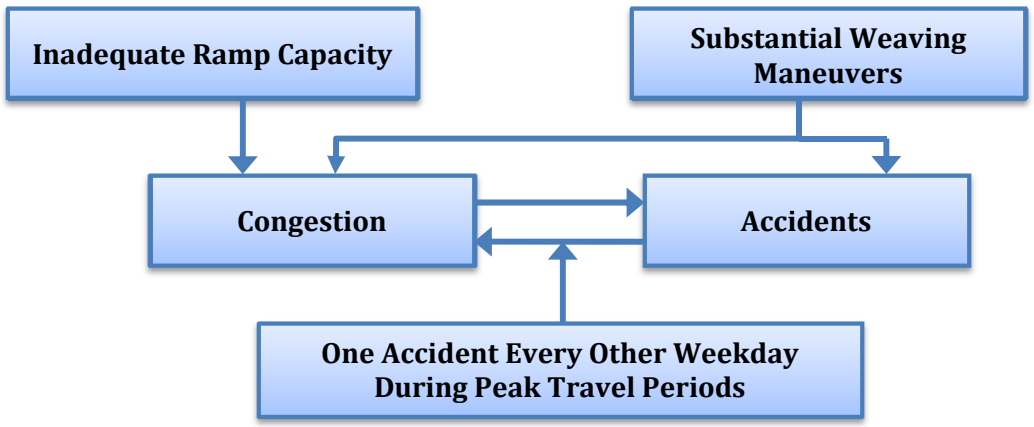


Figure 1. Summary of Existing Problems at the I-285/SR 400 Interchange

Accidents that occur as a result of the substantial weaving, inadequate interchange ramp capacity, and the resulting congestion in the corridor cause even more congestion, which further increases accident potential, serving as a feedback loop, as shown in Figure 1. These problems are discussed in detail below under *Deficiencies in the System*. The purpose of the proposed project is to address these

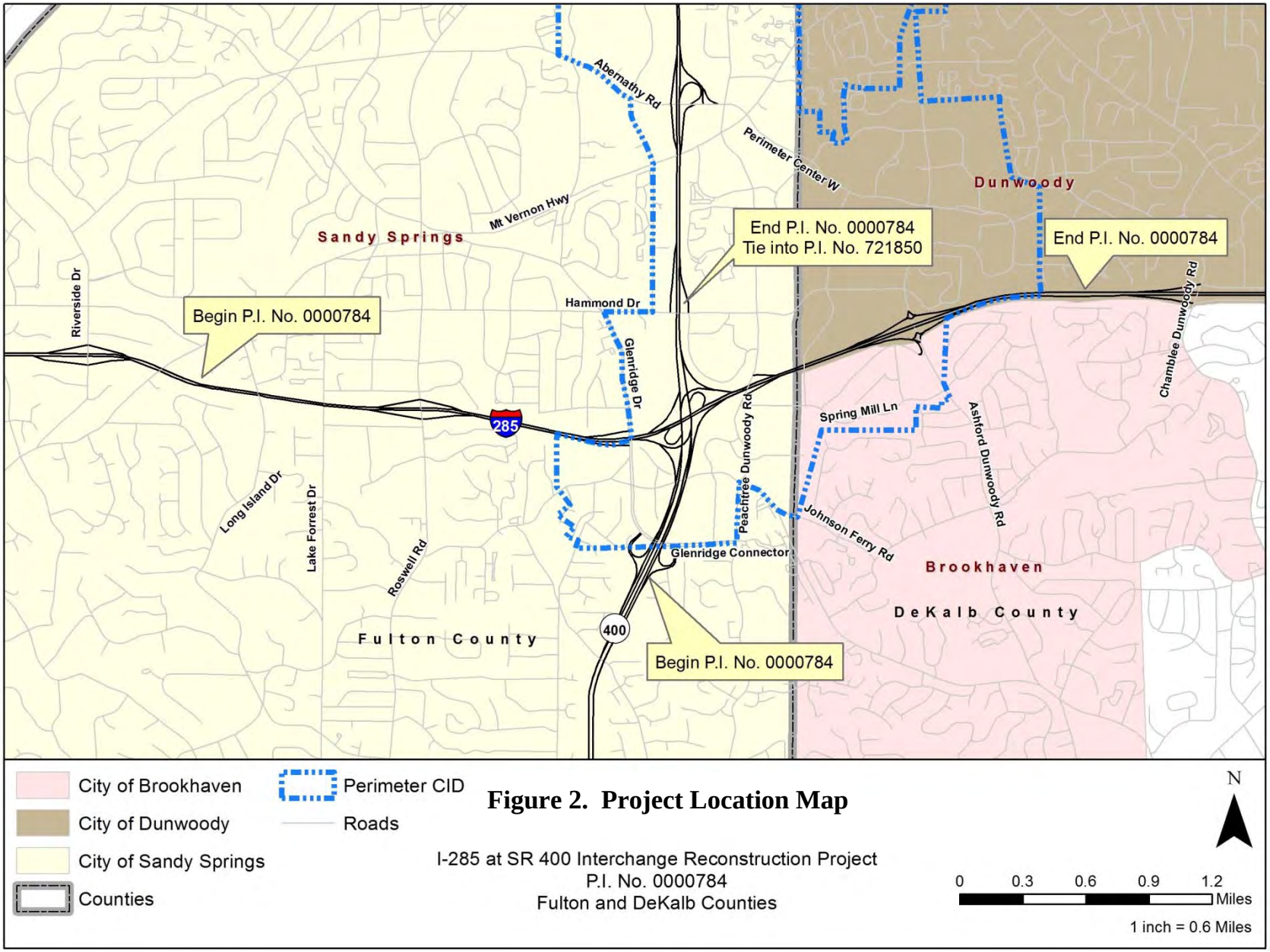


Figure 2. Project Location Map

I-285 at SR 400 Interchange Reconstruction Project
P.I. No. 0000784
Fulton and DeKalb Counties

deficiencies by separating weaving traffic from through traffic on I-285 through the construction of a collector-distributor (CD) system and braided (grade-separated) ramps, by adding ramp capacity between SR 400 and I-285, and by improving roadway geometry at the interchange.

There are also core capacity deficiencies (where the traffic demand exceeds the available space on the highway mainline) along the I-285 (both directions) and SR 400 North mainlines in the vicinity of the interchange, and extending well beyond the I-285/SR 400 interchange area. These core highway capacity deficiencies also affect operations in the area of the I-285/SR 400 interchange. However, the proposed project does not aim to address these core capacity deficiencies.

What is a Collector-Distributor (CD) Lane?

A CD lane is a parallel, controlled-access roadway that separates through traffic from local traffic that is entering and exiting the freeway or interstate system. CD lanes are typically used to reduce vehicle conflicts associated with weaving.

What is a Braided Ramp?

A braided, or grade-separated, ramp is a ramp configuration where an entrance ramp passes over an exit ramp, or vice-versa.

B. Planning Basis for the Action

The Atlanta Regional Commission (ARC) adopted the PLAN 2040 Regional Transportation Plan (RTP) for the 18-county Atlanta metropolitan area in July 2011. The plan addresses current and expected travel demands on the region's transportation system through the year 2040. The RTP is the direct result of a comprehensive, cooperative, and continuous process conducted by ARC, local governments, and Georgia DOT in cooperation with the Federal Highway Administration (FHWA) and the Federal Transit Administration. PLAN 2040 recommends reconstructing the I-285/SR 400 interchange, and the project is programmed in the fiscal year (FY) 2014–2019 Transportation Improvement Program (TIP) under TIP No. AR-957. A recent TIP Amendment (#1), which was adopted by ARC on August 27, 2014 and received a conformity determination by the U.S. DOT on September 29, 2014, moved the project's programmed years for right-of-way (ROW) authorization and construction funding to begin in FY 2015 (ROW) and 2016 (Construction).

Initially, reconstruction of the I-285/SR 400 interchange was included as a component of a larger-scale improvement (referred to as **revive**285 *top end*) being developed to improve mobility across the entire "top end" of I-285 (between I-75 in Cobb County and I-85 in DeKalb County). However, in an effort to accelerate the most critical of the needs in this corridor, rebuilding the I-285/SR 400 interchange, the Georgia DOT is proposing to advance the interchange reconstruction as a stand-alone project ahead of the **revive**285 *top end* proposal.

C. Deficiencies in the System

Congestion at the I-285/SR 400 interchange has been a long-standing issue for the Metro Atlanta region and the entire State. The interchange is located at the nexus of two vital freeways and a Metropolitan Atlanta Rapid Transit Authority (MARTA) heavy rail line in Metro Atlanta. This interchange serves one of the region's largest employment areas at Perimeter Center and facilitates the movement of people and goods throughout the region. The Perimeter Center Community Improvement Districts (PCIDs) encompass an area in Fulton and DeKalb counties (overlapping the I-285/SR 400 interchange) that includes approximately 5,000 companies (including several Fortune 500 companies like UPS, Newell

Rubbermaid, and First Data Corporation) that employ over 123,000 employees who commute into the region daily. The PCIDs area has approximately 33 million square feet of office space (of which over 80 percent is occupied), nearly 100,000 residents within a three-mile radius from the center of the PCIDs, and includes the medical complex of Northside Hospital, St. Joseph's Hospital, and Children's Healthcare of Atlanta—Scottish Rite and the retail area including and surrounding Perimeter Mall (the state's second largest mall). Additionally, the I-285/SR 400 interchange serves commuters throughout the Atlanta metro area; I-285 provides access from I-20, I-75, and I-85, and SR 400 provides access from downtown Atlanta through North Fulton County and areas further north.

What is a Community Improvement District (CID)?

A CID is a self-taxing district, established by the appropriate local government but usually managed by a private board, which generates revenue to implement a variety of projects and programs.

Description of the Existing Roadway

The I-285/SR 400 interchange is a system-to-system interchange. In the vicinity of the interchange, the roadway section of I-285 consists of five, 11- to 12-foot-wide through lanes in each direction. The eastbound and westbound lanes are barrier-separated, with 6.75-foot inside shoulders on each side. Outside shoulders are generally 12-foot-wide and paved, but are narrower in the vicinity of overpasses. An additional 12-foot auxiliary lane exists along each direction of I-285 between Roswell Road and SR 400, as well as between SR 400 and Ashford Dunwoody Road. The current posted speed along I-285 in the project area is variable from 35 miles per hour (mph) to 65 mph. Existing ROW along I-285 within the project area varies from approximately 300 feet to approximately 350 feet, expanding to approximately 600 feet at the interchanges.

System-to-System Interchange: An interchange providing access between one freeway and another freeway.

Service Interchange: An interchange providing access between a non-freeway local roadway (e.g., arterial, collector, or local road) and a freeway.

The roadway section of SR 400 at the I-285 interchange consists of three, 12-foot through lanes in each direction; beyond the interchange, the SR 400 roadway section consists of four, 12-foot through lanes in each direction. Existing SR 400 in this area includes variable 4- to 12-foot-wide inside shoulders with a 2-foot, 6-inch concrete median barrier wall and variable 10- to 12-foot-wide outside shoulders. CD lanes currently exist along SR 400 beginning south of the Glenridge Connector, continuing north to the I-285 interchange. The current posted speed limit along SR 400 in the vicinity of the I-285 interchange is 55 mph; along the CD lanes, the posted speed limit varies from 45 to 55 mph. Existing ROW along SR 400 within the project area is approximately 300 feet, expanding to approximately 480 feet at the Glenridge Connector.

The existing ramps at the I-285/SR 400 interchange vary in type and geometry. Existing ramps vary from a single, 16-foot-wide lane to two, 12-foot-wide lanes with 6-foot-wide (1 foot paved) inside shoulders and 8-foot-wide (4 feet paved) outside shoulders. Eastbound-to-northbound and westbound-to-southbound movements are served by direct connection ramps designed for 35 mph and 40 mph, respectively. Both of these ramps enter the SR 400 mainline from the left. The westbound-to-southbound ramp creates a new lane on SR 400 heading south; the eastbound-to-northbound ramp does not create a new lane and requires traffic to merge onto the SR 400 northbound mainline from the left.

Both southbound-to-eastbound and northbound-to-westbound movements are served by single-lane, low-speed loop ramps.

The existing ramps at the service interchanges within the project area (e.g., Roswell Road, Glenridge Drive, Peachtree Dunwoody Road, Ashford Dunwoody Road, and the Glenridge Connector) vary from one, 16-foot-wide lane to two, 12-foot-wide lanes. Shoulder widths and types on the ramps at each service interchange vary considerably. Ramps at the Roswell Road interchange have approximately four-foot inside shoulders and 3- to 8-foot outside shoulders. Ramps at the Glenridge Drive interchange have inside shoulders that vary from approximately 6 feet (with one foot paved) to 8 feet, 6 inches (with 2-foot, 6-inch curb and gutter), and outside shoulders that are approximately 8 feet wide (4 feet paved). Ramps at the Peachtree Dunwoody Road interchange have approximately 4-foot-wide inside shoulders and 1-foot outside shoulders (with a concrete v-gutter). Ramps at the Ashford Dunwoody Road interchange have approximately 6-foot-wide (4 feet paved) inside shoulders and 12-foot-wide (10 feet paved) outside shoulders.

Traffic Volumes

Traffic volumes along I-285 and SR 400 for existing conditions (2014), open year (2019), and design year (2039) were developed based on traffic volume data collected for the **revive**285 *top end* project (Georgia DOT P.I. No. 0001758) and the adjacent SR 400 CD Lanes Project (Georgia DOT P.I. No. 721850). Traffic counts were collected between November 2011 and January 2012 for **revive**285 *top end* and between March 2013 and May 2013 for the SR 400 CD Lanes Project. In order to account for the traffic effects of the November 2013 removal of the tolls along SR 400 south of I-285, additional traffic counts were collected in April and May 2014 in the project area, and were compared to the volumes collected previously to determine the changes in travel patterns as a result of the elimination of the toll. The difference in traffic volumes before and after toll removal was expressed as toll adjustment factors. These factors were then applied to counts collected in 2012 and 2013 to adjust for the effect of the removal of the toll. Based on these data, the existing (2014) bi-directional average daily traffic (ADT) along I-285 within the project limits ranges between 206,480 and 253,540 vehicles per day (vpd), with approximately 9.1 percent daily truck traffic.

Design Year: The design year is a 20-year or more assessment of the traffic operations within a study area. The results of this traffic operations analysis are generally used for design purposes as it provides a sustainable period of traffic operations.

In order to forecast future-year traffic volumes, ARC's Plan 2040 regional travel demand model was used to estimate the average annual growth rate within the study area. The regional travel demand model factors in the overall regional impacts of other planned and programmed projects, as well as land use forecasts, on the study area to assess the growth rates. Based on this model, it is estimated that the general-purpose and CD lanes along I-285, the section of SR 400 north of I-285, and the section of SR 400 south of I-285 would experience annual growth rates of 1 percent, 0.9 percent, and 0.7 percent, respectively, under the No-Build conditions. There would be a slight increase in these growth rates to 1.1 percent (I-285), 1.0 percent (SR 400 north), and 0.75 percent (SR 400 south) under the Build conditions due to the latent demand (additional demand) generated as a result of proposed operational improvements. The proposed CD improvements along I-285 and SR 400 would help renew the available freeway capacity and improve traveling conditions to attract motorists as a more viable route for commuting. In addition, because any future (separate) managed-lane projects in the I-285 and SR 400 corridors

(described below) would serve additional volumes than those on the mainline, traffic on these separate managed lanes would also grow at a rate of approximately 1.0 percent, making the overall corridor growth rate close to 2.0 percent. The existing traffic volumes were increased at the estimated annual growth rates listed above for No-Build and Build conditions for the open and design years. The resulting ADT and morning and afternoon peak hour volumes for the project area are summarized in Table 1 in Appendix C.

It should be noted that open year traffic volumes and analysis under both No-Build and Build conditions assume that the adjacent SR 400 CD Lanes Project (Georgia DOT P.I. No. 721850) has been constructed and is open to traffic. This is because the SR 400 CD Lanes Project has an approved environmental document, ROW acquisition is currently on-going, and it is anticipated to be let to construction in 2015. Should the Build Alternative be selected for the I-285/SR 400 Interchange Reconstruction project, both of these projects would be let to construction at the same time. In addition, design year (2039) traffic volumes and analysis under both No-Build and Build conditions assume that all other projects in the vicinity that are programmed in the PLAN 2040 RTP are constructed and open to traffic according to their programmed years in the RTP. [Even though the design year of the proposed project is 2039, all projects programmed in the RTP through year 2040 were assumed to be open to traffic by this design year. Since projects programmed for 2040 are considered long-range projects, the actual implementation years for these projects are not available; therefore, the traffic analysis methodology assumes they will all be implemented by 2039.] These other projects include programmed CD lanes, interchange improvements, and managed lanes along I-285 under the **revive**285 *top end* project (which are variably programmed for construction in the long range in years 2024, 2030, and 2040) and programmed managed lanes along SR 400 (under Georgia DOT P.I. No. 0001757), which are programmed for construction in the long-range years 2031-2040. Therefore, design year No-Build and Build condition traffic volumes include volumes on the highway mainlines, managed lanes, and other programmed CD lanes. It was determined that the programmed managed lanes would carry approximately 20 percent[1] of the total traffic volumes, and the highway mainlines and associated CD lanes would carry the remaining 80 percent of the traffic volumes. The Build condition traffic volumes also include volumes along the CD lanes proposed under the current I-285/SR 400 interchange reconstruction project.

Based on these data, in the No-Build condition, open year (2019) bi-directional ADT along I-285 within the project limits is projected to range between 217,120 vpd and 266,580 vpd, while design year (2039) ADT is anticipated to range between 330,760 vpd and 388,380 vpd. Under Build conditions, open year (2019) bi-directional ADT along I-285 within the project limits is projected to range between 218,120 vpd and 267,820 vpd, while design year (2039) ADT is anticipated to range between 341,000 vpd and 400,380 vpd.

As stated above, three primary problems currently exist at the I-285/SR 400 interchange. These three problems are described in detail in the following sections.

[1] The proportion of managed-lane system demand along the I-285 and SR 400 corridors was calculated by using the volumes from ARC's regional planning model, PLAN 2040. It should be noted that the maximum managed-lane flow rate along the I-285 and SR 400 corridors in the design year (2039) was limited to 1,650 vehicles per hour per lane, which is the equivalent flow rate to maintain a level of service (LOS) C (or a reliable travel time) along the interstate system at 65 mph.

1. Vehicular Weaving

Existing interchanges along I-285 in the vicinity of the SR 400 interchange are closely spaced. There are currently nine access points (entrances and exits) along I-285 in each direction within an approximately 3-mile area. On average, there is a merge or diverge point along I-285 every 0.35 miles within the project corridor (or, approximately 3 access points per mile). The Roswell Road interchange to the west and Ashford Dunwoody Road interchange to the east, both of which are full-access interchanges, are located approximately 1.3 miles from the I-285/SR 400 interchange. The Glenridge Drive and Peachtree Dunwoody Road interchanges, which are partial-access interchanges with ramps facing away from the I-285/SR 400 interchange, are located approximately 0.3 miles away from the I-285/SR 400 interchange. The high number of access points, and their close proximity, result in a substantial amount of vehicular weaving leading up to the I-285/SR 400 interchange. This weaving results in congestion and safety concerns in this area. These congestion and safety concerns, which are described further below, are compounded by the lack of adequate ramp capacity at the interchange, as well as existing geometric deficiencies.

Full-Access Interchange: An interchange that provides access from any direction of any road in the junction to any direction of any other road in the junction.

Partial-Access Interchange: An interchange that has one or more missing ramps, preventing access to at least one direction of one road in the junction from the other road in the junction.

The proposed project would reduce the number of access points within the project area to seven in both the eastbound and westbound directions of I-285. This would increase the average distance to 0.56 miles between access points (or, 1.77 access points per mile). In addition, weaving traffic volumes would be reduced with the construction of four braided (grade-separated) ramps in the vicinity of the Roswell Road, SR 400, and Ashford Dunwoody Road interchanges.

2. Lack of Adequate Ramp Capacity at the I-285/ SR 400 Interchange

All existing ramps at the interchange consist of only a single lane. As discussed above, the I-285/SR 400 interchange ramps do not currently have adequate capacity to accommodate the traffic demand on the ramps. The resulting bottleneck causes back-ups onto the I-285 and SR 400 mainlines in the vicinity, which leads to congestion (and associated slower speeds and delays) and increased accident potential.

A volume-to-capacity (V/C) analysis was conducted to evaluate the adequacy of the ramp capacity under current (2014) conditions and future open year (2019) and design year (2039) No-Build conditions, as well as how the proposed improvements would increase ramp capacity at the interchange (open year and design year Build conditions). The results of this analysis are summarized in Table 2. Bold-faced values indicate ramps that are over capacity.

A **Volume to Capacity (V/C) ratio** of 1 means that a facility is at capacity. V/C values over 1 indicate that a facility is over capacity, while values less than 1 indicate that a facility is under capacity. Based on the Transportation Research Board's *Highway Capacity Manual*, a V/C ratio of 0.85 or less is desired for highways; however, it is not always possible to achieve this desired ratio in an urban area due to high traffic demand.

Table 2. I-285 at SR 400 Interchange Ramp Capacity Summary[1]

Movement/ Ramp	V/C Ratio									
	2014 (Existing)		2019 No-Build		2019 Build		2039 No-Build		2039 Build	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
I-285 EB to SR 400 NB	**1.45**	0.98	**1.53**	**1.04**	0.77	0.52	**1.86**	**1.25**	0.96	0.65
I-285 EB to SR 400 SB	0.38	0.31	0.39	0.32	0.40	0.32	0.44	0.37	0.46	0.38
I-285 WB to SR 400 NB	**1.45**	**1.14**	0.76	0.60	0.76	0.60	0.92	0.73	0.95	0.75
I-285 WB to SR 400 SB	0.83	0.52	0.88	0.54	0.88	0.55	**1.06**	0.66	**1.10**[2]	0.68
SR 400 NB to I-285 EB	0.58	0.58	0.61	0.61	0.62	0.62	0.70	0.72	0.73	0.74
SR 400 NB to I-285 WB	0.29	0.38	0.31	0.40	0.31	0.41	0.37	0.49	0.38	0.51
SR 400 SB to I-285 EB	**1.13**	**1.23**	**1.19**	**1.29**	0.59	0.65	**1.43**	**1.56**	0.74	0.81
SR 400 SB to I-285 WB	**1.35**	**1.22**	**1.43**	**1.28**	0.71	0.64	**1.72**	**1.55**	0.89	0.80

Legend: EB = Eastbound; NB = Northbound; WB = Westbound; SB = Southbound

[1] Ramp capacity was analyzed for the morning peak hour (7 a.m. to 8 a.m.) and afternoon peak hour (3:45 p.m. to 4:45 p.m.) with the highest traffic flow.

[2] The I-285 westbound to SR 400 southbound ramp is projected to reach capacity in Year 2032, and would have a traffic demand just above capacity in the design year (under Build and No-Build conditions). Providing a two-lane ramp for this movement would result in a much better V/C ratio of 0.55; however, this additional lane on the ramp would require an additional lane on the new flyover bridge as well as the SR 400 southbound mainline. Extensive reconstruction of the existing SR 400 southbound lanes and the existing SR 400 southbound CD lanes would be required to accommodate this additional lane. As currently proposed, this section of the SR 400 mainline and CD system only requires a minor addition to provide a three-lane mainline and CD system in this area. An additional lane on the flyover bridge and reconstruction of the CD system is not considered to be cost effective, given that the ramp is only slightly over capacity in the design year.

As shown in the table, the movements between I-285 (east and west of the interchange) and SR 400 north of the interchange have the highest demands. The inadequate ramp capacity for these movements is evident from high V/C ratios (1.13 to 1.45 in the morning peak hour and 0.98 to 1.23 in the evening peak hour) under existing (2014) conditions, which results in a major bottleneck in this area during morning and afternoon peak hours. Under the No-Build condition, these high V/C ratios would continue to increase through the open year 2019 (when they would range from 1.19 to 1.53 in the morning peak hour and 1.04 to 1.29 in the evening peak hour) and the design year 2039 (when they would range from 1.43 to 1.86 in the morning peak hour and 1.25 to 1.56 in the evening peak hour), with the exception of I-285 westbound to SR 400 northbound ramp, which would improve. The reason the V/C ratio would improve

for the I-285 westbound to SR 400 northbound ramp under No-Build conditions is due to the construction of the adjacent SR 400 CD Lanes Project (Georgia DOT P.I. No. 721850).

The proposed interchange improvements would increase ramp capacity for critical movements at the interchange, as indicated by V/C ratios of less than 1.0 for the most critical movements in the design year Build conditions. The proposed increases in ramp capacity would help to minimize the bottleneck that would otherwise exist without any ramp capacity improvements, and would provide capacity to serve the current and future demand for these interstate-to-interstate movements.

3. Interchange Geometry Deficiencies

In addition to insufficient ramp capacity, there are some geometric deficiencies in the current configuration of the I-285/SR 400 interchange. The I-285 eastbound to SR 400 northbound and I-285 westbound to SR 400 southbound ramps merge with the SR 400 mainline (through lanes) from the left side. Ramps that join from the left cause operational and safety concerns, since the left lane of a highway is typically utilized by faster-traveling vehicles. In addition, traffic entering from the left side does not meet a driver's expectation, since new traffic typically joins a highway via ramps from the right side. The existing I-285 westbound to SR 400 southbound ramp creates a new lane on SR 400 heading south, thus eliminating the need for the entering ramp traffic to merge with the SR 400 southbound through traffic right away. However, the I-285 eastbound to SR 400 northbound ramp does not create a new lane on SR 400; therefore, entering ramp traffic is required to merge onto the SR 400 northbound mainline immediately.

In addition to the left-side merges, the existing SR 400 southbound to I-285 eastbound ramp consists of a single-lane, loop ramp. This low-speed ramp configuration is inadequate for this high-volume movement.

These existing interchange geometry deficiencies contribute to the congestion on the interstate mainlines leading up to the I-285/SR 400 interchange, as well as to safety concerns at and approaching the interchange. The proposed interchange reconstruction project would improve these geometric deficiencies. The two left-side SR 400 entrance ramps from I-285 would be improved to conventional right-side entrance ramps:

- The I-285 eastbound to SR 400 northbound single-lane ramp would be reconstructed as a two-lane ramp and would access SR 400 northbound via a new CD system, merging onto SR 400 from the right side north of Abernathy Road.
- The I-285 westbound to SR 400 southbound ramp would be reconstructed to join existing SR 400 from the right. A slip lane would be provided to the SR 400 southbound CD system to provide access to the Glenridge Connector.

In addition, the SR 400 southbound to I-285 eastbound loop ramp would be reconstructed as a two-lane, flyover ramp with higher design speed to better serve the traffic demand on that ramp.

Resultant Congestion in the Project Corridor

Congestion in the project corridor was evaluated by conducting a level of service (LOS)/capacity analysis for the project corridor (which evaluates whether there is a sufficient number of lanes on the roadway), and by reviewing corridor travel times/travel speeds (which evaluates operations along a roadway). The results of the LOS analysis are presented first, followed by the results of the travel time/travel speed analysis. It should be noted that a five-hour peak period was analyzed in both the morning (6 a.m. to 11 a.m.) and afternoon (2:45 p.m. to 7:45 p.m.) for the project corridor. This is because, during field observations of existing conditions within the project area, it was noted that I-285 and SR 400 currently experience congestion for three to four hours during the morning and afternoon/evening peak periods. Therefore, a five-hour peak period was analyzed to capture and measure the maximum extent of congestion in the project area.

The Transportation Research Board's *Highway Capacity Manual* (HCM) (2010) generally describes **level of service (LOS)** in terms of factors such as speed, travel time, freedom to maneuver, traffic interruptions, driver comfort and convenience, and safety. LOS is represented by a ranking letter from "A" to "F," with "A" representing the best operating conditions (free-flow conditions) and "F" representing the worst operating conditions (traffic breakdown conditions, with stop-and-go traffic flow, substantially reduced speeds, and difficulty maneuvering).

According to the HCM (2010), LOSs for basic freeway segments by density (measured in passenger cars per mile per lane [pcpmpl]) are as follows:

- LOS A = ≤11 pcpmpl
- LOS B = >11-18 pcpmpl
- LOS C = >18-26 pcpmpl
- LOS D = >26-35 pcpmpl
- LOS E = >35-45 pcpmpl
- LOS F = >45 pcpmpl

[Note: The traffic analysis (LOS/capacity analysis, travel speeds, and travel time data) presented in the Draft Environmental Assessment (EA) used the Highway Capacity Software (HCS 2010) Facilities program. HCS Facilities provides a high-level, road capacity-based traffic analysis of isolated locations along a corridor over a one-hour period of congestion in both the morning and evening peak traffic periods. It does not capture the effects of downstream congestion or driver behavior on traffic operations within the specific project corridor. More detailed traffic analysis for the project using VISSIM 2010 software was developed as part of the project's Interchange Modification Report (IMR), and is presented in this Final EA. The VISSIM model is able to factor in the dynamic nature of traffic (including driver behavior and queuing) and has the capability of taking into account the downstream congestion resulting from outside a project area. For example, the effect of the downstream congestion associated with both the I-285/I-75 and I-285/I-85 interchanges on the traffic operations within the project area was not evident based on the HCS Facilities analysis, but is captured in the VISSIM analysis. In addition, VISSIM assesses multiple hours of congestion in each peak period (morning and evening), allowing for an evaluation of how parameters such as travel times vary across the duration of congestion. Therefore, VISSIM-based analysis is more reflective of field conditions.

It should also be noted that the traffic modeling results for the open year (2019) No-Build condition afternoon peak period are slightly different than what is reported in this Final EA and in this project's IMR due to a change in an east-end constraint near Chamblee Dunwoody Road that occurred after approval of the IMR. This change is discussed in detail in the "Technical Memorandum Documenting

Changes in Performance Metrics due to VISSIM Model Adjustments" developed for the adjacent SR 400 CD Lanes Project, which is available in Appendix H. This change would have the effect of slightly improving traffic operations in the No-Build 2019 afternoon peak period, primarily in the eastbound direction heading towards Chamblee-Dunwoody Road, and slightly reducing the magnitude of the proposed project's beneficial effects in 2019 afternoon period. This change is applicable only to the 2019 afternoon peak scenario, and does not affect design year 2039 results.]

LOS/Capacity Analysis

An LOS/capacity analysis is the primary method for evaluating the quality of service of highway and street facilities. LOS is a qualitative measure used to describe the operating conditions of a roadway. In order to show the anticipated LOSs along each project-area segment of I-285 and SR 400 over the five hours analyzed for each peak period (morning and afternoon/evening), density-based LOS "heat maps" were created for each corridor for each model year (existing year [2014], open year [2019], and design year [2039]), for Build and No-Build conditions. These heat maps are provided in Appendix C. Heat maps provide spatial mapping of density-based LOSs along each segment of each freeway corridor in 15-minute increments over each five-hour peak period. Heat maps can be used to provide several key pieces of information to compare the operational performance of a transportation corridor:

- Location and time of congestion, including where and when congestion begins and when it ends;
- Duration of the mainline peak period at the most congested location (maximum number of congested hours); and
- Measure of total corridor-level congestion (percentage change in the total congestion along a roadway [mainline and CD system] within the project limits under the Build Alternative compared to the No-Build Alternative).

Total congestion is a corridor-level parameter that measures the total number of roadway segments along a direction of freeway (e.g., I-285 eastbound, SR 400 northbound, etc.) operating at a failing LOS (LOS F) across all five hours of the peak period analyzed. This parameter includes congestion on both the mainline and the CD system along a freeway corridor.

The **duration of the peak period at the most congested location** is a location-specific parameter that measures the total duration of congestion (failing LOS) within the freeway segment that experiences the worst peak period congestion. This parameter varies by direction of travel, peak period, model year (i.e., existing, open, and design years), and by alternative (Build vs. No-Build). In other words, the most congested location for a particular model year under the Build Alternative may differ from that under the No-Build Alternative.

The following sections summarize the findings of the LOS analysis and heat maps (available in Appendix C) by model year. References to "heavy congestion" in these sections refer to freeway segments operating at LOS F. The locations along each directional corridor that were determined to be the "most congested locations" for the peak hour duration calculation are also indicated on each map in Appendix C.

Existing Conditions (2014): Maps 1 through 4 in Appendix C depict the existing year (2014) peak period LOS for each direction of I-285 and SR 400 within the project limits.

Morning Peak Period: In the morning peak period, the weaving along I-285 leading up to the I-285/ SR 400 interchange area causes severe congestion along I-285 in both directions (see Maps 1 and 2). Along I-285 eastbound, this is due to vehicles from Roswell Road trying to enter I-285 in the same area as other vehicles are trying to exit I-285 onto Glenridge Drive and SR 400, compounded by a lack of ramp capacity along the I-285 eastbound to SR 400 northbound ramp. This bottleneck triggers a "ripple effect," resulting in very high traffic density and failing LOS (LOS F) west of Roswell Road to Riverside Drive and beyond (see Map 1). This congestion lasts for approximately 4.25 hours along I-285 eastbound in the morning. Along I-285 westbound, vehicles from Ashford Dunwoody Road enter I-285 in the same area as other vehicles that are trying to exit I-285 onto Peachtree Dunwoody Road and SR 400. The duration of the congested period along I-285 westbound in the morning in this area is approximately 3.5 hours (see Map 2). The LOS along I-285 in both directions improves to LOS D or better once past the I-285/SR 400 interchange area.

SR 400 southbound is also heavily congested in the morning peak period up to the I-285 interchange (see Map 3), primarily due to weaving between Abernathy Road, Hammond Drive, and I-285, as well as lack of capacity on the I-285 on-ramps from SR 400 southbound. The duration of the morning peak period in this area is approximately 3.5 hours. SR 400 northbound, however, primarily operates at LOS D or better in the morning peak period (see Map 4).

Afternoon Peak Period: In the afternoon peak period, I-285 is heavily congested up to and beyond the SR 400 interchange in both directions (see Maps 1 and 2), but the duration and reasons for this congestion vary by location. West of the interchange area, I-285 eastbound currently experiences heavy congestion of approximately 2.75 hours in the afternoon due to the weaving between Roswell Road, Glenridge Drive, and SR 400, as well as due to capacity constraints on SR 400 north of I-285 (see Map 1). There is also heavy congestion on I-285 eastbound to the east of the SR 400 interchange. This congestion lasts for nearly 1.5 hours, and is due to the weaving between Peachtree Dunwoody Road, Ashford Dunwoody Road, and SR 400. Congestion continues eastward outside the project limits as a result of east end constraints (i.e., lack of capacity at the I-285/I-85 interchange and along I-85 north) outside the project area.

Weaving also affects operations along I-285 westbound in the afternoon peak period (see Map 2), and this is compounded by inadequate ramp capacity at the I-285/SR 400 interchange and west end constraints outside the project area (i.e., lack of capacity at the I-75/I-285 interchange and along I-75 north of I-285, and to a lesser extent, lack of capacity at the I-285/I-20 interchange and along I-285 west/south of the project area), as well as SR 400 northbound operations. I-285 westbound within the project limits currently experiences approximately 2 hours of heavy congestion in the afternoon peak period.

Inadequate ramp capacity at the I-285/SR 400 interchange impacts traffic operations along SR 400 in the afternoon, as well (see Maps 3 and 4). The resulting congestion on SR 400 is compounded by numerous factors. In the northbound direction, congestion is compounded by weaving between I-285, Hammond Drive, and Abernathy Road, constraints at the Northridge Drive interchange outside the project area to the north, and the left-side merge of the ramp from I-285 eastbound to SR 400 northbound (see Map 4). The duration of the afternoon peak period along SR 400 northbound is approximately 4.5 hours, which occurs at the Northridge Drive interchange. In the southbound direction, congestion is also compounded by the weaving in the vicinity of the I-285 and other nearby interchanges, but is also affected by the traffic back-up resulting from the west end constraints (which backs up from the SR 400 southbound to I-285

westbound ramp) and south end constraints (i.e., capacity constraints along SR 400 southbound and at the SR 400/Lenox Road interchange) outside the project area. The duration of heavy congestion in the afternoon peak period along SR 400 southbound is approximately 3.0 hours (see Map 3).

Open Year (2019): Maps 5 through 12 in Appendix C depict the open year (2019) peak period LOS for each direction of I-285 and SR 400 within the project limits under the Build and No-Build Alternatives. This section is broken down by directional corridor for ease in comparing the project alternatives.

I-285 Eastbound (Maps 5 and 6): In both the morning and afternoon peak periods, the I-285 eastbound corridor would show noticeable improvements in operations approaching the I-285/SR 400 interchange under the Build Alternative due to the elimination in weaving in this area. Operations in this area would be further benefited by the increased I-285 eastbound to SR 400 northbound ramp capacity and the elimination of the left-side merge of this ramp onto SR 400. In the afternoon, it should be noted that east end constraints (i.e., lack of capacity at the I-285/I-85 interchange and along I-85 north) still adversely affect operations along I-285 east of the SR 400 interchange; however, the effects of the east end constraints would be experienced less under the Build Alternative than under the No-Build Alternative due to the elimination of weaving in this area under the Build Alternative. Under the Build Alternative, the duration of the peak period at the most congested location along I-285 eastbound in the project area in 2019 would be reduced by approximately 1 hour in the morning (see Map 5) and by 1.25 hours in the afternoon (see Map 6) compared to the No-Build Alternative. Total congestion along I-285 eastbound within the project limits would be reduced by approximately 66 percent in the morning and approximately 54 percent in the afternoon under the Build Alternative (compared to the No-Build Alternative).

I-285 Westbound (Maps 7 and 8): Similar improvements to operations along I-285 westbound in the morning would occur from eliminating the weaving approaching the I-285/SR 400 interchange and increasing ramp capacity at the interchange (see Map 7). While the duration of the peak period at the most congested location along I-285 westbound in the morning would be the same (4.75 hours) under the Build Alternative compared to the No-Build Alternative, and total I-285 westbound project corridor congestion would be reduced by approximately 34 percent. In the afternoon peak period, I-285 westbound is anticipated to experience more congestion within the project limits as a result of the Build Alternative compared to the No-Build Alternative due to the combined effected of increased throughput (i.e., 13 percent more vehicles would make it through the SR 400 southbound to I-285 westbound movement under the Build Alternative according to the project's traffic study) and the west end constraints (i.e., lack of capacity at the I-75/I-285 interchange and along I-75 north of I-285, and lack of capacity at the I-285/I-20 interchange and along I-285 west/south of the project area) (see Map 8). The increased throughput through the interchange would cause traffic to back up as a result of the west end constraints sooner than it would without the proposed improvements. Further improvements to reduce this effect are limited by the lack of ROW in this area, existing residential development, and the presence of National Register of Historic Places (NRHP)-eligible historic resources along the corridor. Overall, while the duration of the peak period at the most congested location along I-285 westbound in the afternoon in this area would be the same (3.25 hours) as the No-Build Alternative (see Map 8), and total congestion along I-285 westbound within the project limits would be increased by approximately 56 percent. However, it should be noted that the duration of congestion along I-285 westbound between Chamblee Dunwoody Road and Ashford Dunwoody Road in the afternoon would be reduced by 30 minutes.

SR 400 Northbound (Maps 9 and 10): The proposed project would improve operations along SR 400 northbound in both the 2019 morning and afternoon peak periods. Under the No-Build Alternative, the weaving along I-285 eastbound between Peachtree Dunwoody Road and Ashford Dunwoody Road, compounded in the afternoon by the east end constraints outside of the project area (i.e., lack of capacity at the I-285/I-85 interchange and along I-85 north), , cause traffic to back up onto the existing SR 400 northbound CD lanes (in the vicinity of the Glenridge Connector), and then onto the SR 400 northbound mainline. Under Build conditions, this happens at a much slower rate due to the elimination of the weaving between Peachtree Dunwoody and Ashford Dunwoody Road. While the SR 400 mainline would experience congestion under both the Build and No-Build Alternatives, the duration of the peak period would be 1.25 hours minutes shorter under the Build Alternative than under the No-Build Alternative in both the morning and afternoon (see Maps 9 and 10, respectively). In addition, the total SR 400 northbound project corridor congestion within the project limits would be reduced by 94 percent in the morning and by 91 percent in the afternoon compared to the No-Build Alternative.

SR 400 Southbound (Maps 11 and 12): In the southbound direction, the proposed project would increase the receiving capacity of the SR 400 CD Lanes (constructed as part of Georgia DOT P.I. No. 721850), improving operations along the southbound CD lanes to I-285 westbound, and in turn, improving operations on the southbound SR 400 mainline (see Maps 11 and 12). As a result, the proposed project would eliminate heavy congestion on the SR 400 southbound CD lanes the 2019 morning peak period (see Map 11), and reduce heavy congestion in this area in the afternoon from 4 hours under the No-Build Alternative to 1.25 hours under the Build Alternative (see Map 12). In addition, the increased receiving capacity would increase the combined throughput along SR 400 in the southbound direction through the I-285/SR 400 interchange by 15 percent in the morning and 11 percent in the afternoon compared to No-Build conditions. This increased throughput would cause traffic to build up faster at the south end of the project, where there are downstream constraints outside the project area (i.e., capacity constraints along SR 400 southbound and at the SR 400/ Lenox Road interchange). However, the duration of the peak period at the most congested SR 400 southbound mainline location would be reduced by 30 minutes in the morning and by 45 minutes in the afternoon in 2019 (see Maps 11 and 12). Total SR 400 southbound corridor congestion within the project limits would be also reduced in both peak periods (by approximately 33 percent in the morning and by approximately 29 percent in the afternoon) under the Build Alternative (compared to the No-Build Alternative).

Design Year (2039): Maps 13 through 20 in Appendix C depict the design year (2039) peak period LOS for each direction of I-285 and SR 400 within the project limits under the Build and No-Build Alternatives. This section is also broken down by directional corridor for ease in comparing the project alternatives.

I-285 Eastbound (Maps 13 and 14): As in the open year, I-285 eastbound would continue to experience improvements in operations approaching the I-285/SR 400 interchange in the morning and afternoon in the design year (2039) due to the elimination in weaving in this area, increases in ramp capacity, and improvements to geometry at the interchange as part of the proposed project. However, in the morning peak period, the proposed eastbound CD lanes would experience congestion as a result of constraints on SR 400 southbound and at the Glenridge Drive/Johnson Ferry Road intersection (see Map 13). As congestion is cleared from I-285 under the Build Alternative, more vehicles would be able to reach these constrained locations, which would cause traffic to back up onto the CD lanes (as evidenced by failing LOS on the heat map in Appendix C). In addition, in the 2039 afternoon peak period, the effect of the

east end constraints on I-285 eastbound operations would be greater than in the open year, in part due to increased throughput along I-285 as a result of the proposed interchange improvements (25 percent increased throughput for all eastbound movements through the interchange, combined). Overall, the Build Alternative would reduce the duration of the peak period at the most congested mainline location along I-285 eastbound within the project limits by 15 minutes in the morning (see Map 13) and by 3 hours in the afternoon (see Map 14) in the design year (2039). Total congestion along I-285 eastbound would be reduced by 42 percent in the morning and by 50 percent in the afternoon under the Build Alternative compared to the No-Build Alternative.

I-285 Westbound (Maps 15 and 16): Similar improvements to operations along I-285 westbound in the morning in the design year (2039) would occur as a result of eliminating the weaving approaching the I-285/ SR 400 interchange and increasing interchange ramp capacity as part of the proposed project (see Map 15). However, the proposed I-285 westbound CD lanes would experience congestion in the 2039 morning peak period due to the back-up from the I-285 westbound-to-SR 400 southbound movement. Under the No-Build Alternative, this movement would enter SR 400 southbound (which would be two lanes) from the left, forming a new southbound lane that would accommodate these vehicles. Therefore, these vehicles would experience no weave or merge to the SR 400 southbound mainline under the No-Build Alternative. Under the Build Alternative, vehicles traveling from I-285 westbound to SR 400 southbound would have to merge from the right onto the proposed three southbound SR 400 lanes (forming a conventional merging junction); there is no added lane along SR 400 southbound in the Build condition to capture these vehicles. This proposed change in geometry, coupled with increased throughput (16 percent more vehicles) on the SR 400 southbound mainline, would result in congestion (LOS F) on the proposed westbound CD system under the Build Alternative. Overall, the duration of the peak period at the most congested mainline location along I-285 westbound in the morning in 2039 would be the same under the Build Alternative (4.5 hours) as the No-Build Alternative (see Map 15). However, there would not a notable difference in the amount of total congestion along I-285 westbound in the morning between the Build and No-Build Alternatives.

In the design year (2039) afternoon peak period, I-285 westbound would be severely impacted by the west end constraints outside the project area under both the Build and No-Build Alternatives (see Map 16). Although the Build Alternative would alleviate some of the congestion by eliminating the weaving along I-285 westbound in the project area, the west end constraints would still cause traffic back-ups throughout the westbound CD lanes on the west side of the SR 400 interchange. Overall, the duration of the peak period at the most congested mainline location along I-285 westbound in the afternoon within the project limits would be reduced by 45 minutes compared to the No-Build Alternative (see Map 16), and total congestion along I-285 westbound within the project limits would be reduced by approximately 13 percent under the Build Alternative.

SR 400 Northbound (Maps 17 and 18): In the design year (2039) morning peak hour, there would be no appreciable difference in operations along SR 400 northbound within the project limits between the Build and No-Build Alternatives (see Map 17). The majority of SR 400 northbound within the project limits would operate at LOS D or better under both alternatives, with the exception of the segment between I-285 and Abernathy Road, which would operate primarily at LOS E under the No-Build Alternative (compared to LOS D or better under the Build Alternative). However, at the south end of the project limits (in the vicinity of the SR 400/Lenox Road interchange), the Build Alternative would operate slightly worse in the morning than the No-Build Alternative. This is due to increased traffic on SR 400

under the Build Alternative due to latent demand. As a result of this increased traffic, the duration of the morning peak period at the most congested SR 400 northbound mainline location (in the vicinity of the Lenox Road interchange) would increase by 15 minutes under the Build Alternative (compared to the No-Build Alternative, see Map 17), and the total congestion along SR 400 northbound in the 2039 morning peak period would increase by 8 percent under the Build Alternative. In the afternoon, the proposed project would benefit operations along SR 400 northbound, resulting in a one-hour reduction in the duration of the peak period at the most congested location (see Map 18), and an 8 percent reduction in total congestion along SR 400 northbound within the project limits compared to the No-Build Alternative. This is due to the elimination of the weaving between Peachtree Dunwoody and Ashford Dunwoody Road under the Build Alternative.

SR 400 Southbound (Maps 19 and 20): In the southbound direction, the proposed project would completely eliminate the congestion on the SR 400 CD Lanes (constructed as part of Georgia DOT P.I. No. 721850) that is expected in the 2039 morning peak period under the No-Build Alternative by increasing the receiving capacity of these lanes at Hammond Drive and eliminating the weaving along I-285 westbound (see Map 19). This indicates that the improvements would allow traffic to keep moving from the SR 400 CD lanes to I-285. The SR 400 southbound mainline corridor, however, would operate mostly at LOS F under both the Build and No-Build Alternatives in the 2039 morning peak hour. This is due to the end constraints both along I-285 and at the south end. The duration of the mainline morning peak period would be approximately 4.75 hours under both the Build and No-Build Alternatives (see Map 19); however, there would be an 18 percent reduction in total congestion along SR 400 southbound in the morning peak period under the Build Alternative.

In the afternoon peak period, the SR 400 southbound congestion would be compounded by traffic build-up from the west end constraints outside the project area, which would back up on the SR 400 southbound CD lanes and spill back to the SR 400 mainline under the No-Build Alternative (see Map 20). While the Build Alternative would help to alleviate this congestion, some congestion would still be present in the 2039 afternoon peak period (i.e., the duration of congestion [LOS F] on the SR 400 southbound CD lanes and on the SR 400 mainline north of the CD lanes would be reduced from 5 or more hours under the No-Build Alternative to approximately 3.75 hours under the Build Alternative). In addition, the reduction in congestion under the Build Alternative would increase throughput along SR 400 southbound (9 percent more vehicles for all southbound movements through the interchange, combined), causing congestion to build up along SR 400 southbound between the Glenridge Connector and Lenox Road. Overall, the Build Alternative would reduce the total amount of congestion along SR 400 southbound within the project limits by 16 percent compared to the No-Build Alternative in the afternoon in 2039. In addition, the Build Alternative would reduce the duration of the afternoon peak period at the most congested mainline location by 1.25 hours compared to the No-Build Alternative (see Map 20).

Summary: Overall, the proposed project would reduce congestion along I-285 and SR 400 within the project area, and would reduce the duration of the peak morning and afternoon peak periods for the most congested locations along each project corridor compared to the No-Build Alternative. Table 3 presents a summary of the anticipated total change in peak period corridor-level congestion by project area corridor under the Build Alternative compared to the No-Build Alternative for the open (2019) and design (2039) years. Freeway congestion is defined as a freeway section operating at LOS F.

Table 3. Summary of the Anticipated Change in Total Freeway Peak Period Congestion under the Build Alternative by Year[1]

Analysis Year	I-285				SR 400			
	Eastbound		Westbound		Northbound		Southbound	
	AM	PM	AM	PM	AM	PM	AM	PM
Open Year (2019)	-66%	-54%	-34%	56%	-94%	-91%	-33%	-29%
Design Year (2039)	-42%	-50%	0%	-13%	8%	-8%	-18%	-16%

Legend:
= Reduction in Peak Period Congestion under the Build Alternative
= No Meaningful Change (<5%) in Congestion under the Build Alternative[2]
= Increase in Peak Period Congestion under the Build Alternative

[1] Total freeway peak period congestion is a measure of the total length of the freeway corridor (by direction) that operates at a failing LOS (LOS F) during the peak period.
[2] Minor changes (+/- 5%) in total freeway congestion may occur due to randomness within the VISSIM model. Therefore, such minor changes are not considered meaningful.

Table 4 summarizes the anticipated duration of the peak period at the most congested mainline location by project area corridor under the Build Alternative compared to the No-Build Alternative for the open (2019) and design (2039) years. [Note: This parameter is a location-specific parameter (i.e., representing a specific location or segment along the directional corridor), and is not a corridor-level measure. Each "most congested mainline location" varies by direction of travel, peak period, model year, and by alternative. For example, the most congested mainline location along I-285 eastbound in the 2019 morning peak hour may not be the same location as the most congested mainline location along I-285 eastbound in the 2019 afternoon peak hour. The "most congested mainline location" for each directional corridor for each peak period and model year is shown on each corresponding heat map included in Appendix C.] As shown in Table 4, of the 16 scenarios analyzed for the Build Alternative (corridor, direction, and morning vs. afternoon/evening peak period), 11 scenarios are expected to have the duration of the peak period at the most congested location reduced when compared to the No-Build Alternative. In the one scenario where the duration of the peak period at the most congested location is expected to be greater under the Build Alternative (when compared to the No-Build Alternative), the increase in peak period duration would be in the range of only 15 minutes .

Table 4. Summary of the Anticipated Duration of the Peak Period (in Hours) at the Most Congested Mainline Location by Alternative by Year[1]

Alternative/Analysis Year	I-285				SR 400			
	Eastbound		Westbound		Northbound		Southbound	
	AM	PM	AM	PM	AM	PM	AM	PM
No-Build 2019	5.00*	3.00	4.75*	3.25	2.00	1.75	5.00*	3.25*
Build 2019	4.00	1.75	4.75*	3.25	0.75	0.50	4.50*	2.50
Increase/Decrease in Peak Period in 2019	-1 hour	-1.25 hours	No Change	No Change	-1.25 hours	-1.25 hours	-30 minutes	-45 minutes

Table 4. Summary of the Anticipated Duration of the Peak Period (in Hours) at the Most Congested Mainline Location by Alternative by Year[1]

Alternative/Analysis Year	I-285				SR 400			
	Eastbound		Westbound		Northbound		Southbound	
	AM	PM	AM	PM	AM	PM	AM	PM
No-Build 2039	4.75*	5.00*	4.50*	4.25*	3.25	2.25*	4.75*	5.00*
Build 2039	4.50*	2.00	4.50*	3.05*	3.50	1.25	4.75*	3.75*
Increase/Decrease in Peak Period in 2039	-15 minutes	-3 hours	No Change	-45 minutes	+15 minutes	-1 hour	No Change	-1.25 hours

Legend:

= Reduction in the duration of the peak period at the most congested location under the Build Alternative

= No change in the duration of the peak period at the most congested location under the Build Alternative

= Increase in the duration of the peak period at the most congested location under the Build Alternative

[1] The duration of the peak period at the most congested location measures the total duration of failing LOS (LOS F) at the analyzed location.

* The peak period starts/ends beyond the analyzed five-hour period. The actual duration of peak period could be higher than the values shown.

Congestion—Existing and Projected Future Travel Times

Another way to demonstrate the congestion in the project area resulting from the weaving areas approaching the I-285/SR 400 interchange and the lack of interchange ramp capacity is to review travel times for the movements at the interchange. Existing year (2014) and future year (2019 and 2039) Build and No-Build condition travel times were analyzed for four points of origin and destination within the project's area of influence: Riverside Drive (A) and Chamblee Dunwoody Road (B) along I-285 and Northridge Road (C) and Lenox Road (D) along SR 400. Northridge Road was chosen as the northern origin/destination point instead of Hammond Drive because Northridge Road is the first interchange along SR 400 after the tie-in of the entire CD system (the CD system proposed under the current project as well as the CD system into which it ties along SR 400, to be constructed as part of Georgia DOT P.I. No. 721850). A five-hour peak period for both the morning (6 a.m. to 11 a.m.) and afternoon/evening (2:45 p.m. to 7:45 p.m.) was examined for all years. The travel times presented below are based on the average travel time during the most congested peak hours of the peak period. During a five-hour peak period, typically the last four hours are the most congested, and therefore, the travel times presented are based on the analysis of the last four hours of the morning and afternoon peak periods (7 a.m. to 11 a.m. and 3:45 p.m. to 7:45 p.m., respectively). Since the first hour of congestion typically experiences the least amount of congestion, travel time results pertaining to the first hour of the five-hour peak period were excluded to avoid skewing the results.

Existing Conditions (2014): Existing peak period travel times and average speeds for each of the 12 analyzed origin and destination points in the vicinity of the I-285/SR 400 interchange are presented in Table 5.

Table 5. Existing (2014) Travel Times and Average Speeds during Morning and Afternoon Peak Periods by Interchange Movement

From	To	Interchange Movement	Distance (miles)	Average Travel Time (min)		Average Speed (mph)	
				AM	PM	AM	PM
A Riverside Drive	C Northridge Road	I-285 eastbound to SR 400 northbound	7.9	12.9	28.9	37	16
	B Chamblee Dunwoody Road	I-285 eastbound through movement	4.9	7.6	10.2	39	29
	D Lenox Road	I-285 eastbound to SR 400 southbound	6.4	11.7	26.6	33	14
B Chamblee Dunwoody Road	D Lenox Road	I-285 westbound to SR 400 southbound	6.8	9.6	22.1	43	18
	A Riverside Drive	I-285 westbound through movement	5.4	6.8	16.8	48	19
	C Northridge Road	I-285 westbound to SR 400 northbound	7.6	10.0	24.8	46	18
C Northridge Road	B Chamblee Dunwoody Road	SR 400 southbound to I-285 eastbound	6.8	11.2	9.0	36	45
	D Lenox Road	SR 400 southbound through movement	8.6	15.8	15.8	33	33
	A Riverside Drive	SR 400 southbound to I-285 westbound	7.3	10.8	15.5	41	28
D Lenox Road	A Riverside Drive	SR 400 northbound to I-285 westbound	7.0	7.4	19.0	57	22
	C Northridge Road	SR 400 northbound through movement	9.1	9.2	21.2	59	26
	B Chamblee Dunwoody Road	SR 400 northbound to I-285 eastbound	6.1	6.6	9.1	55	40

Longer travel times and slower speeds are being experienced in the vicinity of the I-285/SR 400 interchange due to: insufficient interchange ramp capacity between I-285 and SR 400, the impact of weaving conditions along I-285 and SR 400 approaching the interchange, and as a result of end constraints outside of the project corridor (e.g., lack of capacity at the I-285/I-75, I-285/I-85, and I-285/ I-20 (west side) interchanges, and along I-75 and I-85 north of I-285). The duration and intensity of congestion currently experienced during the afternoon/evening peak hours are much higher than in the morning peak hour.

As shown in Table 5, the average travel times during the morning peak period along I-285 eastbound (from Riverside Drive) to the analyzed destination points range from 7.6 to 12.9 minutes, at an average speed of approximately 36 mph. In the afternoon peak period, travel times increase drastically and it takes close to 29 minutes for vehicles to reach their destinations along SR 400.

The I-285 westbound direction (movements from Chamblee Dunwoody Road) operates with travel times in the range of 6.8 to 10 minutes during the morning peak period, with an average speed of 45 mph.

However, during the afternoon peak period, travel times increase to 16.8 to 24.8 minutes, with an average speed of 19 mph.

SR 400 northbound (from Lenox Road) currently operates at optimum travel speeds (free-flow/at or above the posted speed limit) and times (6.6 to 9.2 minutes) in the morning peak period. In the afternoon peak period, however, travel times increase drastically along SR 400 northbound (to 9.1 to 21.2 minutes), particularly for the SR 400 northbound through-movement (though the I-285/SR 400 interchange).

SR 400 southbound (from Northridge Road) experiences travel times in the range of 10.8 to 15.8 minutes in the morning peak period, with an average speed of 37 mph. In the afternoon peak period, travel times increase and are close to 16 mph for the two worst movements.

One important note about the travel time data presented above is that, per standard protocol, it was analyzed during peak periods when no accidents were occurring on the corridor. However, as discussed in the next section, accidents are frequent within the project corridor during peak travel periods (occurring approximately every other weekday during peak periods). When accidents occur, congestion worsens, leading to higher travel times and slower speeds than is reflected in Table 5 above.

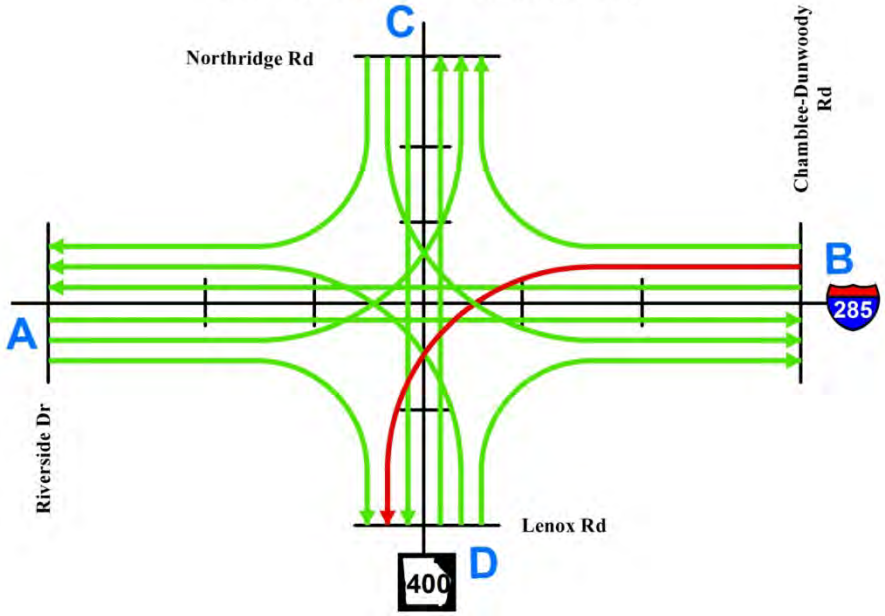
Open Year (2019): Exhibit 1 presents the anticipated peak period travel times for the 12 primary I-285/ SR 400 interchange movements (origin/destination combinations) in the open year (2019) under Build and No-Build conditions.

Morning Peak Period: The proposed project would improve travel times (e.g., reduce travel times by approximately 6 to 44 percent compared to the No-Build Alternative) for 11 of the 12 primary interchange movements in the 2019 morning peak period (as indicated by green coloring in Exhibit 1). According to the traffic analysis conducted for the project's IMR, the vehicles using these 11 movements account for approximately 96 percent of the total traffic between the four analyzed origin and destination points. Therefore, approximately 96 percent of the vehicles using the interchange between the four analyzed origin and destination points would experience improvements in travel times in the morning peak period in 2019.

Vehicles traveling along I-285 eastbound (from point A/Riverside Drive) would experience noticeable improvements in travel times (in the range of 29 to 40 percent compared to the No-Build Alternative) due to the reduction in weaving that would otherwise exist under the No-Build Alternative between Roswell Road, Glenridge Drive, and SR 400, as well as improvements to the I-285 eastbound to SR 400 northbound ramp capacity. Vehicles traveling along SR 400 southbound (from point C/Northridge Road) would also experience noticeable travel time improvements (in the range of 9 to 44 percent compared to the No-Build Alternative). This is due to the added receiving capacity on the SR 400 southbound CD lanes, as well as the added ramp capacity on the SR 400 southbound to I-285 east- and westbound ramps, under the Build Alternative.

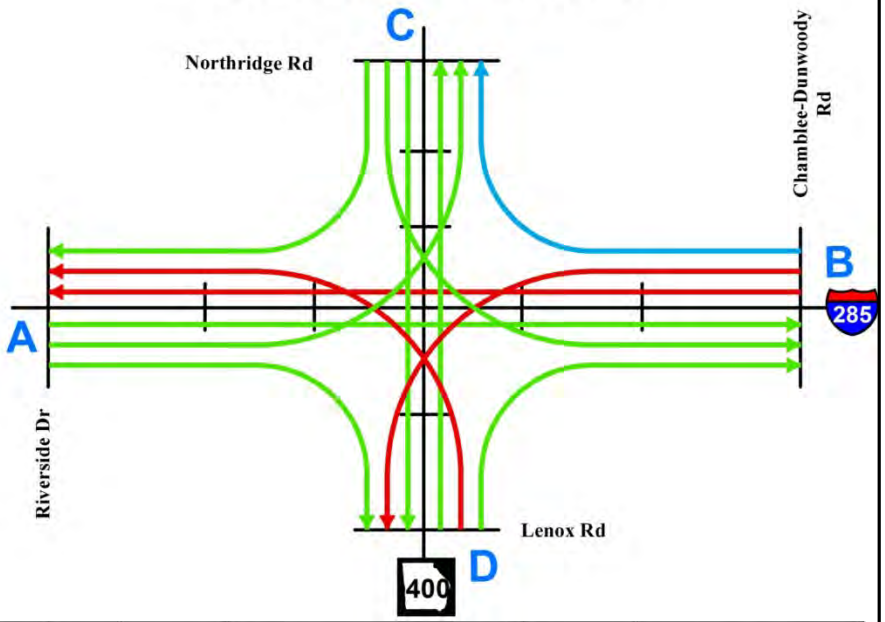
Travel times for vehicles traveling along SR 400 northbound (from point D/Lenox Road) would experience improved travel times in the range of approximately 12 to 43 percent in the 2019 morning peak period due to reductions in weaving along I-285 east of the SR 400 interchange (which would otherwise back up the existing SR 400 northbound CD lanes approaching the I-285 interchange and spill back onto the mainline).

AM: No-Build vs. Build (2019)



From	To	Distance (mi)	Average Travel Time (min) - AM		Difference (min)	Reduction (-%) OR Increase (+%)
			No-Build	Build		
A	C	7.9	12.8	9	-3.8	-29.7%
	B	4.9	8.1	4.9	-3.2	-39.5%
	D	6.4	12.6	8.9	-3.7	-29.4%
B	D	6.8	12.9	16.9	4	31.0%
	A	5.4	8.2	7.3	-0.9	-11.0%
	C	7.6	11.9	11.2	-0.7	-5.9%
C	B	6.8	13.4	7.5	-5.9	-44.0%
	D	8.6	16.2	14.7	-1.5	-9.3%
	A	7.3	12.4	8.2	-4.2	-33.9%
D	A	7	9.3	8.2	-1.1	-11.8%
	C	9.1	10.7	9	-1.7	-15.9%
	B	6.1	11.9	6.8	-5.1	-42.9%
Weighted Average*			**11.5**	**9.2**	**-2.3**	**-20.0%**

PM: No-Build vs. Build (2019)



From	To	Distance (mi)	Average Travel Time (min) - PM		Difference (min)	Reduction (-%) OR Increase (+%)
			No-Build	Build		
A	C	7.9	20.8	8.3	-12.5	-60.1%
	B	4.9	19.2	8.6	-10.6	-55.2%
	D	6.4	23.2	12.5	-10.7	-46.1%
B	D	6.8	12.3	15.6	3.3	26.8%
	A	5.4	10.6	14.1	3.5	33.0%
	C	7.6	11.1	10.9	-0.2	-1.8%
C	B	6.8	42.4	26.5	-15.9	-37.5%
	D	8.6	32.5	20.1	-12.4	-38.2%
	A	7.3	37.3	26.8	-10.5	-28.2%
D	A	7	16.7	20.7	4	24.0%
	C	9.1	16.5	9.1	-7.4	-44.8%
	B	6.1	32	18.2	-13.8	-43.1%
Weighted Average*			**21.1**	**14.6**	**-6.5**	**-30.8%**

Note: The weighted average travel time for the I-285/SR 400 interchange has been calculated by factoring in the traffic volumes served by each of the movements above.

N

Not to scale

Legend (Build Travel Time)

Less than No-Build | Within 5% Range | Greater than No-Build

Exhibit 1. Projected Average Peak Period Travel Times in 2019 under the Build and No-Build Alternatives

While vehicles traveling along I-285 westbound (from point B/Chamblee Dunwoody Road) through the I-285/SR 400 interchange (to point A/Riverside Drive) and to SR 400 northbound (to point C/Northridge Road) would experience improved travel times in the 2019 morning peak period under the Build Alternative due to improved ramp capacity and reduced weaving along the I-285 mainline, vehicles traveling along I-285 westbound to SR 400 southbound (from point B/Chamblee Dunwoody Road to point D/Lenox Road) are expected to experience increased travel times (approximately 34 percent greater than No-Build Alternative travel times) in the 2019 morning peak period, as indicated by red coloring in Exhibit 1. However, according to the traffic study conducted for the project's IMR, the vehicles utilizing this movement comprise only approximately 4 percent of the total traffic utilizing the interchange between the four analyzed origin and destination points. The reasons the I-285 westbound to SR 400 southbound movement would experience increased travel times are due to proposed geometric changes to the interchange under the Build Alternative, as well as increased throughput. Under the Build Alternative, vehicles traveling from I-285 westbound to SR 400 southbound would have to merge from the right onto the proposed three southbound SR 400 lanes (forming a conventional merging junction). There is no added lane along SR 400 southbound under the Build Alternative to capture these vehicles. In addition, there is increased throughput (13 percent more vehicles) along SR 400 in this area as a result of the third southbound lane under the Build Alternative. On the contrary, under the No-Build Alternative, vehicles traveling from I-285 westbound to SR 400 southbound would enter SR 400 (which would have only two lanes) from the left, but would add a southbound lane to accommodate them (making SR 400 southbound three lanes at this juncture). These vehicles would experience no weave or merge to the SR 400 southbound mainline.

Afternoon Peak Period: The proposed project would improve travel times (e.g., reduce travel times by approximately 28 to 60 percent compared to the No-Build Alternative) for 8 of the 12 primary interchange movements in the 2019 afternoon peak period (as indicated by green coloring in Exhibit 1). According to the traffic analysis conducted for the project's IMR, the vehicles using these 8 movements account for approximately 69 percent of the total traffic between the four analyzed origin and destination points. In other words, approximately 69 percent of the vehicles using the interchange between the four analyzed origin and destination points would experience noticeable improvements in travel times in the afternoon peak period in 2019.

As with the 2019 morning peak period, vehicles traveling along I-285 eastbound (from point A/Riverside Drive) would experience improvements in travel times (in the range of approximately 46 to 60 percent better than No-Build Alternative travel times) due to the reduction in weaving between Roswell Road, Glenridge Drive, and SR 400 through the construction of the CD system and braided ramps, as well as increases in ramp capacity at the I-285/SR 400 interchange, under the Build Alternative. Vehicles traveling along SR 400 southbound (from point C/Northridge Drive) to I-285 eastbound (point B/Chamblee Dunwoody Road) and westbound (point A/Riverside Drive) would also experience noticeable travel time improvements (by approximately 38 and 28 percent, respectively, compared to the No-Build Alternative) due to the added ramp capacity provided for these movements under the Build Alternative, and in the case of I-285 eastbound, due to the elimination of weaving between Peachtree Dunwoody Road and Ashford Dunwoody Road.

Noticeable improvements (approximately 38 to 45 percent reduction in travel times compared to the No-Build Alternative) for the SR 400 northbound and southbound through (mainline) movements (between points C/Northridge Drive and D/Lenox Road) are also expected as a result of the project in the 2019

afternoon peak period. In the northbound direction, the east end constraints outside of the project area (i.e., lack of capacity at the I-285/I-85 interchange and along I-85 north), compounded by the weaving along I-285 eastbound between Peachtree Dunwoody Road and Ashford Dunwoody Road under the No-Build Alternative, cause traffic to back up into the existing SR 400 northbound CD lanes (in the vicinity of the Glenridge Connector), and then onto the SR 400 northbound mainline. However, under the Build Alternative, this happens at a much slower rate due to the elimination of the weaving between Peachtree Dunwoody and Ashford Dunwoody Road through the construction of the proposed CD system and braided ramps. In the southbound direction, the three-lane SR 400 southbound CD system (constructed under Georgia DOT P.I. No. 721850) would drop a lane at Hammond Drive under the No-Build Alternative, causing traffic to back up along the CD system and onto the SR 400 southbound mainline. Under the Build Alternative, however, there would be no lane drop at Hammond Drive, and the southbound traffic back up along the CD system would occur at a slower rate and the SR 400 southbound mainline would not be affected to the same extent.

Finally, the SR 400 northbound to I-285 eastbound movement (from point D/Lenox Road to point B/Chamblee Dunwoody Road) is expected to experience travel time improvements of approximately 43 percent in the 2019 afternoon peak period compared to the No-Build Alternative as a result of the elimination of weaving between Peachtree Dunwoody Road and Ashford Dunwoody Road through the construction of the proposed CD system and braided ramps.

Under the Build Alternative, three movements (I-285 westbound through movement [from point B/Chamblee Dunwoody Road to point A/Riverside Drive], SR 400 northbound to I-285 westbound [from point D/Lenox Road to point A/Riverside Drive], and I-285 westbound to SR 400 southbound [from point B/Chamblee Dunwoody Road to point D/Lenox Road]) are expected to experience increases in travel times (approximately 24 to 33 percent greater than No-Build Alternative travel times) in the 2019 afternoon peak period, as indicated by red coloring in Exhibit 1. However, according to the traffic study conducted for the project's IMR, the vehicles utilizing these three movements comprise only approximately 25 percent of the total traffic utilizing the interchange between the four analyzed origin and destination points. All three of these movements experience increases in travel times due to the impact of the west end constraints outside the project area (i.e., lack of capacity at the I-75/I-285 interchange and along I-75 north of I-285, and lack of capacity at the I-285/I-20 interchange and along I-285 west/south of the project area). According to the traffic study conducted for the project's IMR, the SR 400 southbound to I-285 westbound movement (from point C/Northridge Road to point A/Riverside Drive] serves approximately 13.3 percent more vehicles (increased throughput) under the Build Alternative, which causes traffic from the west end constraints to build up sooner than under the No-Build Alternative. As a result, the I-285 westbound CD system would experience more delay under the Build Alternative, and the resultant traffic back-up would continue along the proposed westbound CD system all the way to the I-285 westbound mainline. The I-285 westbound to SR 400 southbound movement (from point B/Chamblee Dunwoody Road to point D/Lenox Road) is also affected by south end constraints (i.e., capacity constraints along SR 400 southbound and at the SR 400/Lenox Road interchange) in the afternoon peak period, which further increases travel times for this movement.

Travel times for one other interchange movement (I-285 westbound to SR 400 northbound, or from point B/Chamblee Dunwoody Road to point C/Northridge Road) would be marginally improved (a 1.8 percent improvement over the No-Build Alternative travel times) by the project in the 2019 afternoon peak period, as indicated by blue coloring in Exhibit 1.

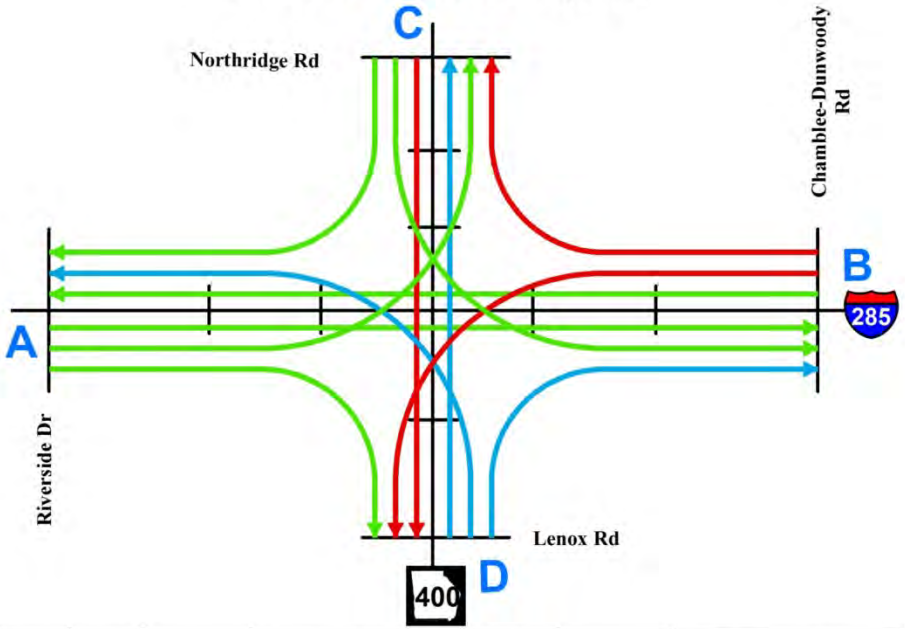
Design Year (2039): Exhibit 2 presents the anticipated peak period travel times for the 12 primary I-285/ SR 400 interchange movements (origin/destination combinations) in the design year (2039) under Build and No-Build conditions.

Morning Peak Period: The proposed project would improve travel times (e.g., reduce travel times by approximately 23 to 47 percent compared to the No-Build Alternative) for 6 of the 12 primary interchange movements in the design year (2039) morning peak period (as indicated by green coloring in Exhibit 2). According to the traffic analysis conducted for the project's IMR, the vehicles using these 6 movements account for approximately 57 percent of the total traffic between the four analyzed origin and destination points. Therefore, approximately 57 percent of the vehicles using the interchange between the four analyzed origin and destination points would experience noticeable improvements in travel times in the 2039 morning peak period. Vehicles traveling along I-285 eastbound (from point A/Riverside Drive) would experience improvements in travel times (in the range of 37 to 47 percent compared to the No-Build Alternative) due to the elimination of the weaving between Roswell Road, Glenridge Drive, and SR 400 (through the construction of the proposed CD system and braided ramps) and improvements to ramp capacity at the I-285/SR 400 interchange. Vehicles traveling along SR 400 southbound (from point C/Northridge Road) to I-285 eastbound (point B/Chamblee Dunwoody Road) and westbound (point A/Riverside Drive) would also experience travel time improvements (37 and 31 percent, respectively) due to the added ramp capacity provided for these movements under the Build Alternative. The I-285 westbound mainline through movement (between point B/Chamblee Dunwoody Road and point A/ Riverside Drive) would also be greatly improved (by 23 percent compared to the No-Build Alternative) due to the elimination of the weaving between Ashford Dunwoody Road and SR 400.

Travel times for three other movements (as indicated by blue coloring in Exhibit 2) would be marginally affected (within 5 percent of the No-Build Alternative travel times) by the project in the 2039 morning peak period.

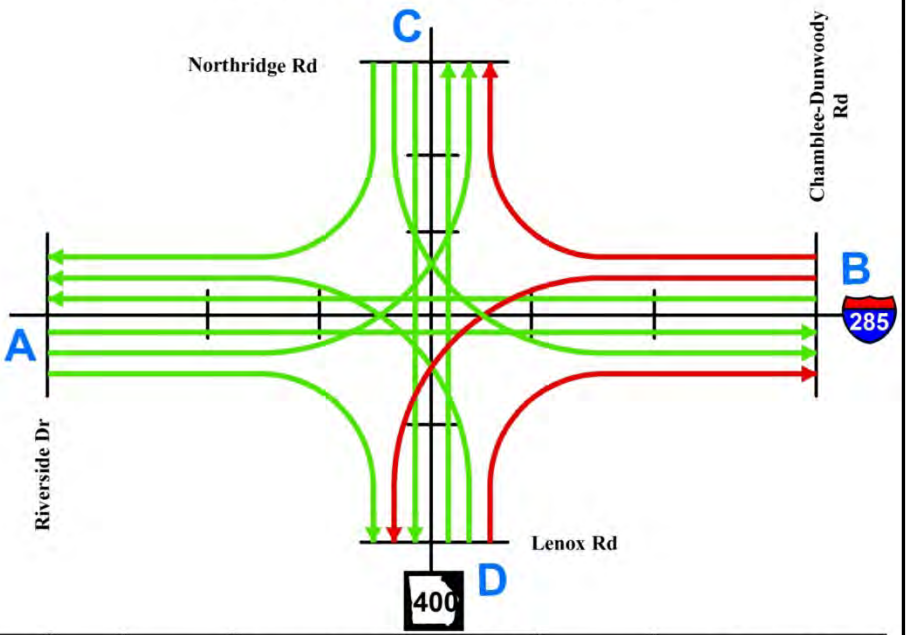
Three movements (I-285 westbound to SR 400 southbound [from point B/Chamblee Dunwoody Road to point D/Lenox Road], SR 400 southbound through movement [from point C/Northridge Road to point D/Lenox Road], and I-285 westbound to SR 400 northbound [from point B/Chamblee Dunwoody Road to point C/Northridge Road]) are expected to experience increases in travel times (approximately 59, 13, and 9 percent, respectively, greater than No-Build Alternative travel times) in the 2039 morning peak period, as indicated by red coloring in Exhibit 2. However, according to the traffic study conducted for the project's IMR, the vehicles utilizing these two movements comprise only approximately 27 percent of the total traffic utilizing the interchange between the four analyzed origin and destination points. The reason the I-285 westbound to SR 400 southbound movement (from point B/Chamblee Dunwoody Road to point D/Lenox Road) would experience increased travel times is due to proposed geometric changes to the interchange under the Build Alternative, as discussed above for the 2019 morning peak period. These proposed geometric changes also affect the SR 400 southbound (mainline) through movement in the 2039 morning peak period, as well as the I-285 westbound to SR 400 northbound movement (due to back-ups along the I-285 westbound CD lanes to SR 400 (e.g., vehicles wishing to go northbound on SR 400 are restricted by the back-ups from vehicles wishing to go southbound on SR 400). Travel times for these three movements are further affected by increases in throughput in both the northbound and southbound directions resulting from the proposed project. In addition, these movements are further restricted by the

AM: No-Build vs. Build (2039)



From	To	Distance (mi)	Average Travel Time (min) - AM		Difference (min)	Reduction (-%) OR Increase (+%)
			No-Build	Build		
A	C	7.9	16	10	-6	-37.5%
	B	4.9	9.6	5.1	-4.5	-46.9%
	D	6.4	16.7	10.6	-6.1	-36.5%
B	D	6.8	19.7	31.4	11.7	59.4%
	A	5.4	12	9.3	-2.7	-22.5%
	C	7.6	15.8	17.2	1.4	8.9%
C	B	6.8	22.4	14.2	-8.2	-36.6%
	D	8.6	23.8	26.9	3.1	13.0%
	A	7.3	21.5	14.8	-6.7	-31.2%
D	A	7	7.9	8.2	0.3	3.8%
	C	9.1	9.2	9.1	-0.1	-1.1%
	B	6.1	6.6	6.9	0.3	4.5%
Weighted Average*			15.0	13.2	-1.8	-12.0%

PM: No-Build vs. Build (2039)



From	To	Distance (mi)	Average Travel Time (min) - PM		Difference (min)	Reduction (-%) OR Increase (+%)
			No-Build	Build		
A	C	7.9	18	8.7	-9.3	-51.7%
	B	4.9	12.9	11	-1.9	-14.7%
	D	6.4	18.1	13.6	-4.5	-24.9%
B	D	6.8	17.5	27.7	10.2	58.3%
	A	5.4	24.6	21.5	-3.1	-12.6%
	C	7.6	16.9	25.3	8.4	49.7%
C	B	6.8	76.6	36.7	-39.9	-52.1%
	D	8.6	56.5	25.7	-30.8	-54.5%
	A	7.3	82	40.1	-41.9	-51.1%
D	A	7	30.6	27.2	-3.4	-11.1%
	C	9.1	10.9	10.3	-0.6	-5.5%
	B	6.1	14.5	17.7	3.2	22.1%
Weighted Average*			25.2	20.1	-5.1	-20.2%

Note: The weighted average travel time for the I-285/SR 400 interchange has been calculated by factoring in the traffic volumes served by each of the movements above.

N

Not to scale

Legend (Build Travel Time)

Less than No-Build | Within 5% Range | Greater than No-Build

Exhibit 2. Projected Average Peak Period Travel Times in 2039 under the Build and No-Build Alternatives

south end constraints (i.e., capacity constraints along SR 400 southbound and at the SR 400/Lenox Road interchange) outside the project area.

Afternoon Peak Period: The proposed project would improve travel times (e.g., reduce travel times by approximately 6 to 54 percent compared to the No-Build Alternative) for 9 of the 12 primary interchange movements in the afternoon peak period in the design year (2039), as indicated by green coloring in Exhibit 2. According to the traffic analysis conducted for the project's IMR, the vehicles using these 9 movements account for approximately 87 percent of the total traffic between the four analyzed origin and destination points. In other words, approximately 87 percent of the vehicles using the interchange between the four analyzed origin and destination points would experience noticeable improvements in travel times in the 2039 afternoon peak period.

Vehicles traveling along I-285 eastbound (from point A/Riverside Drive), along SR 400 southbound (from point C/Northridge Road) to I-285 eastbound (to point B/Chamblee Dunwoody Road) and I-285 westbound (to point A/Riverside Drive), and along the SR 400 northbound and southbound mainlines (movements through the interchange, between points C/Northridge Road and D/Lenox Road) would all experience noticeable improvements in travel times (in the range of 6 to 54 percent better compared to the No-Build Alternative), for the same reasons described above for the 2019 afternoon peak period. Two additional movements (I-285 westbound through movement [between point B/Chamblee Dunwoody Road and point A/Riverside Drive] and the SR 400 northbound to I-285 westbound movement [from point D/Lenox Road to point A/Riverside Drive) would also experience improvements in travel times in the 2039 afternoon peak period under the Build Alternative (approximately 13 and 11 percent, respectively, better than No-Build Alternative travel times). This is because the proposed improvements to the I-285/SR 400 interchange under the Build Alternative result in a reduction in the duration of congestion along I-285 westbound during the peak afternoon period (refer to Map 16 in Appendix C). Under the No-Build Alternative, I-285 westbound is expected to experience severe congestion (LOS F) for the entire five-hour peak afternoon period. This congestion stems from the west end constraints outside the project corridor (i.e., capacity constraints along I-285 west/south and I-75 north, as well as at the I-285/I-20 and I-285/ I-75 interchanges). Under the Build Alternative, severe congestion is still anticipated as a result of these west end constraints; however, the proposed improvements would reduce the duration of this congestion. Therefore, overall, improved average travel times are anticipated over the five-hour peak afternoon period along I-285 westbound.

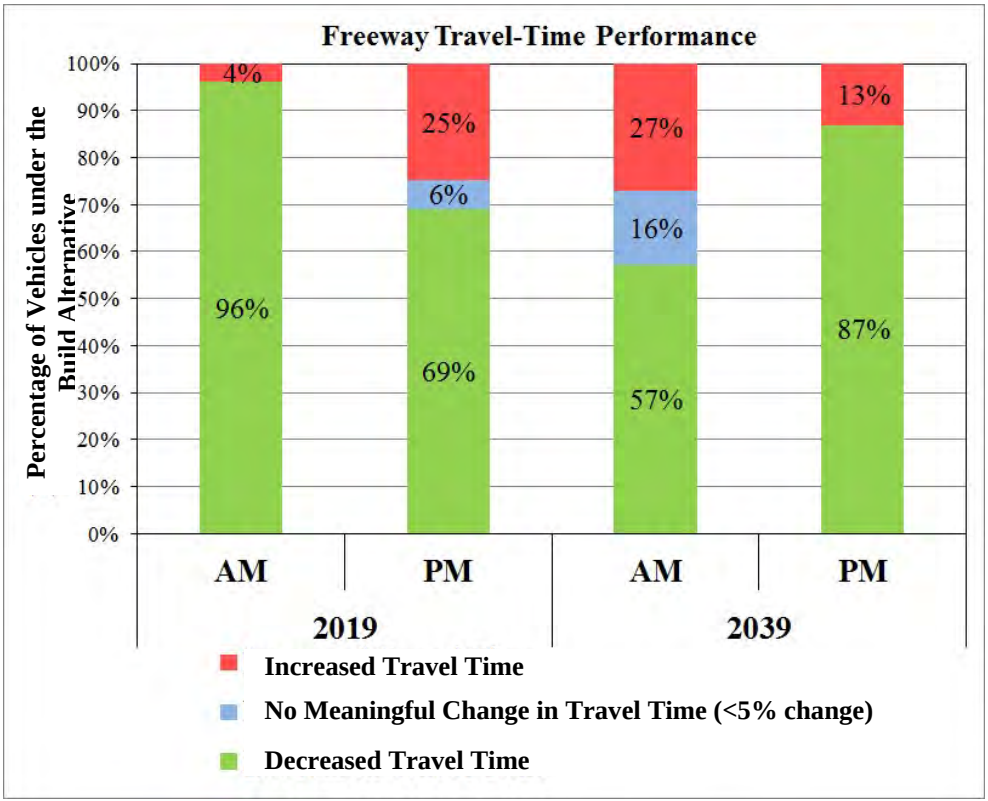
Three movements (I-285 westbound [from point B/Chamblee Dunwoody Road] to both SR 400 northbound [to point C/Northridge Road] and SR 400 southbound [to point D/Lenox Road] and SR 400 northbound to I-285 eastbound [from point D/Lenox Road to point B/Chamblee Dunwoody Road]) are expected to experience increases in travel times (approximately 50, 58, and 22 percent, respectively, greater than No-Build Alternative travel times) in the 2039 afternoon peak period, as indicated by red coloring in Exhibit 2. However, according to the traffic study conducted for the project's IMR, the vehicles utilizing these two movements comprise only approximately 13 percent of the total traffic utilizing the interchange between the four analyzed origin and destination points. The reasons the I-285 westbound to SR 400 northbound and southbound movements experience increased travel times are because of the proposed geometric changes to the I-285/SR 400 interchange described under the 2039 morning peak period above, and because of the west end constraints outside the project area. These west end constraints affect travel times under both the No-Build and Build Alternatives. Under the No-Build Alternative, the west end constraints would severely impact the SR 400 southbound and SR 400

northbound mainline movements by blocking the ramps from SR 400 to I-285 westbound, coupled with the existing weaving problems along I-285 westbound. As a result, vehicles traveling along I-285 westbound with destinations along SR 400 (northbound or southbound) would encounter fewer vehicles along the SR 400 mainline under the No-Build Alternative, and would experience a free-flow condition with reduced travel times. On the contrary, under the Build Alternative, the proposed CD system is able to reduce the impact of the west end constraints on the SR 400 mainline (northbound and southbound) by providing additional storage capacity for vehicles entering I-285 westbound from SR 400 and by eliminating the weaving along I-285 westbound in the area of SR 400, Glenridge Drive, and Roswell Road. Therefore, the SR 400 mainline would not be blocked under the Build Alternative, and vehicles traveling from I-285 westbound to SR 400 northbound and southbound would have to interact with these vehicles on SR 400 (increasing travel times). This, coupled with increased throughput along I-285 westbound as a result of the proposed project, would lead to increased travel times under the Build Alternative for these two movements. Additionally, the west end constraints would back up the Roswell Road CD system, which would spill back onto the I-285 westbound mainline, interfering with westbound traffic trying to enter the CD system to SR 400, further adding to increased travel times. Travel times are even further increased for the SR 400 southbound direction due to the capacity constraints along SR 400 and at the Lenox Road interchange south of the project area (also called south end constraints).

The SR 400 northbound to I-285 eastbound movement (from point D/Lenox Road to point B/Chamblee Dunwoody Road) experiences an increase in travel time in the 2039 afternoon peak period under the Build Alternative due to a combination of increased throughput through the interchange (both along SR 400 and I-285 eastbound) and east end constraints at the I-285/I-85 interchange and along I-85 north outside the project area. The increased throughput resulting from the proposed improvements (25 percent increased throughput for all eastbound movements through the interchange, combined) causes traffic to build up quicker at the east end of the project area, resulting in increased travel times.

Summary: Overall, many more vehicles are expected to experience noticeable reductions in travel times within the project area in both the open (2019) and design (2039) years under the Build Alternative compared to the No-Build Alternative, and these travel time savings would be experienced by more vehicles in the afternoon peak period than the morning peak period. Exhibit 3 presents a summary of the percentage of vehicles that would experience noticeable travel time reductions (shown in green in the chart) versus those that would experience increases in travel times (shown in red in the chart) or only marginal changes (shown in blue in the chart). These calculations consider only the vehicles served between the four origin and destination points under the Build Alternative.

Exhibit 3. Percentage of Vehicles Experiencing Changes in Travel Times under the Build Alternative Compared to the No-Build Alternative



Resultant Roadway Safety Concerns

Vehicular weaving, and the congestion resulting both from this weaving and from the lack of ramp capacity at the I-285/SR 400 interchange, result in safety concerns within the project area. Safety analysis parameters, such as total crash rates, fatality rates, and injury rates, were developed for the study corridor. A comparison was made of the rates along I-285 between Riverside Drive and Chamblee Dunwoody Road with the corresponding statewide averages to assess the need to improve the traffic safety along this corridor. The historical crash data along this corridor for years 2005 through 2008 was obtained from Georgia DOT for similar road types. [Note: More recent crash data was obtained from the Georgia DOT for years 2011 through 2013. However, upon analyzing that data, it was determined that much of the data was missing or contained incomplete spatial information regarding crash locations[2]. Therefore, older data with more accurate location information was used for this analysis.] The results of crash rates are summarized in Table 6. The results show that the crash and non-fatal injury rates along I-285 eastbound and westbound within the project area (approximately Roswell Road to Ashford Dunwoody Road) are often above the statewide rates for a similar facility (as indicated by blue coloring in the table), and then

[2] Through 2008, crash locations were spatially reported based on the nearest milepost along a corridor. In 2009, the method of reporting spatial information on crashes changed to a coordinate system. While this system should provide more accurate location information, upon examination of the crash data for the project vicinity for years 2011-2013, it was observed that much of the data either lacked spatial information or contained questionable coordinates.

drop off west and east of these interchanges. The freeway weaving sections of I-285 eastbound between Roswell Road and SR 400 and I-285 westbound between Ashford Dunwoody Road and SR 400 have experienced the highest crash rates within the study area.

Table 6. Comparison of Crash Rates on I-285 within the Project Corridor with Statewide Averages

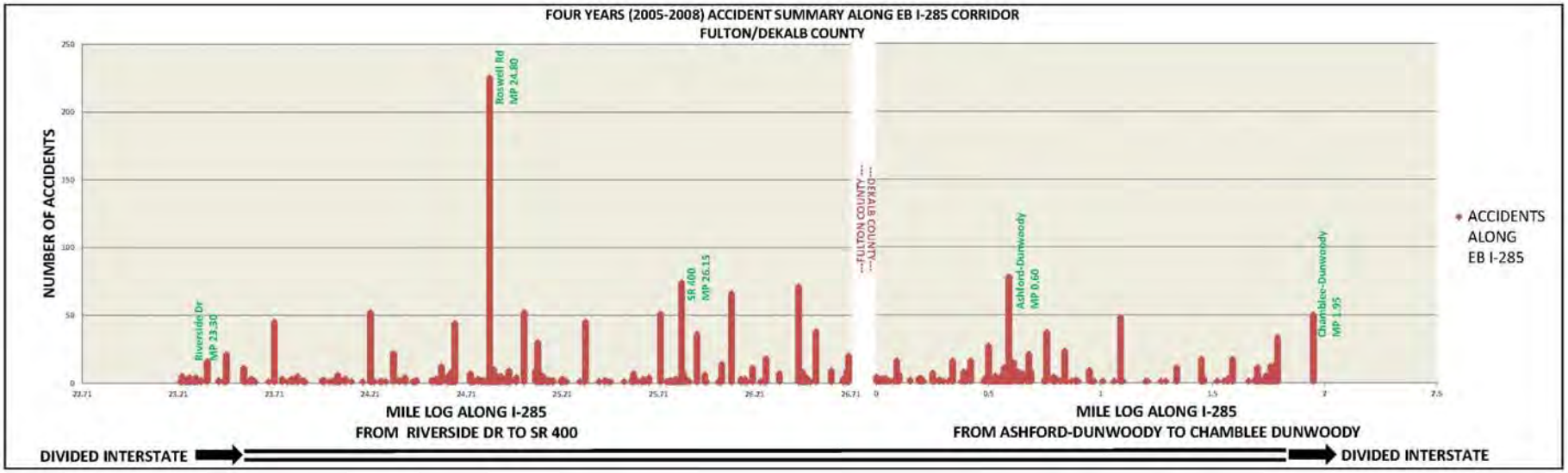
I-285 Segment	Crash Severity	Statewide Average Crash Rate (per 100 MVMT)	Average Crash Rate (per 100 MVMT)	
			I-285 Eastbound	I-285 Westbound
Riverside Drive to Roswell Road	All Crashes	195	248	138
	Fatal Crashes	1	1	0
	Injury Crashes	45	90	41
Roswell Road to SR 400	All Crashes	195	263	214
	Fatal Crashes	1	0	3
	Injury Crashes	45	76	58
SR 400 to Ashford Dunwoody Road	All Crashes	195	226	235
	Fatal Crashes	1	0	0
	Injury Crashes	45	70	68
Ashford Dunwoody Road to Chamblee Dunwoody Road	All Crashes	195	165	159
	Fatal Crashes	1	0	0
	Injury Crashes	45	47	55

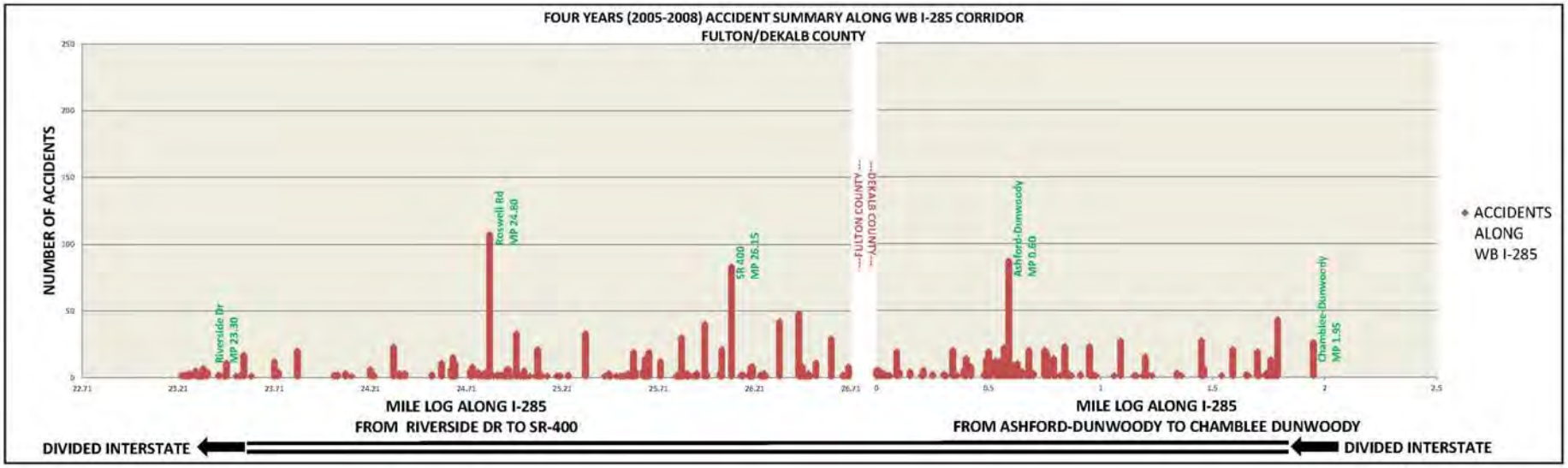
MVMT = Million vehicle miles traveled

Notes: The crash rates shown are the average annual crash rates between 2005 and 2008. Shaded cells indicate rates higher than the statewide average.

The effect of vehicular weaving on accident frequency is further illustrated in Figure 3. As shown in the figure, the majority of accidents in the study area occur at or approaching the study area interchanges (where vehicles are entering or exiting the freeway), or in the weaving sections east and west of SR 400.

Figure 3. Crash Frequency Along I-285 Eastbound (top) and Westbound (bottom) within the Project Limits





Crash frequencies for years 2005 through 2008 were evaluated to determine how many crashes occur during peak travel periods. The results are shown in Table 7. The results indicate that there is at least one crash every other day along I-285 within the study corridor during the morning and afternoon peak travel periods. These crashes further worsen congestion in the interchange area during peak periods, which further heightens accident potential in the corridor, serving as a feedback loop.

Table 7. Frequency of Crashes within the Project Corridor During Peak Travel Periods (2005-2008)

Year	Total Crashes	Weekday (Monday through Friday) AM Peak (7:00 a.m. – 10:00 a.m.) Total Days with Crashes	Weekday (Monday through Friday) PM Peak (3:30 a.m. – 6:30 a.m.) Total Days with Crashes	Total AM and PM Peak Crashes
2005	911	120	141	261
2006	1,019	143	153	296
2007	878	116	143	259
2008	758	131	148	279
Average	892	128	146	274
Total	3,566	510	585	1,095
	Frequency of Weekdays with Crashes during AM Peak Period: 0.49 (Every other weekday)		**Frequency of Weekdays with Crashes during PM Peak Period: 0.56 (Every other weekday)**	

Crash types were also analyzed for I-285 between Riverside Drive and Chamblee Dunwoody Road for years 2005 through 2008 (see Figures 4 and 5).

Figure 4. I-285 Eastbound Crash Type Summary (2005-2008 Average)

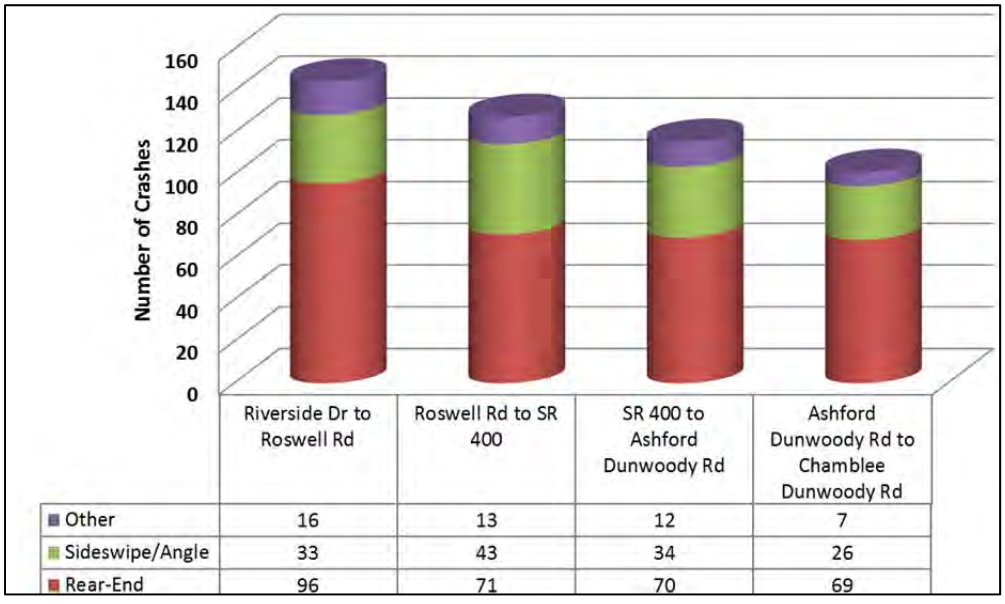
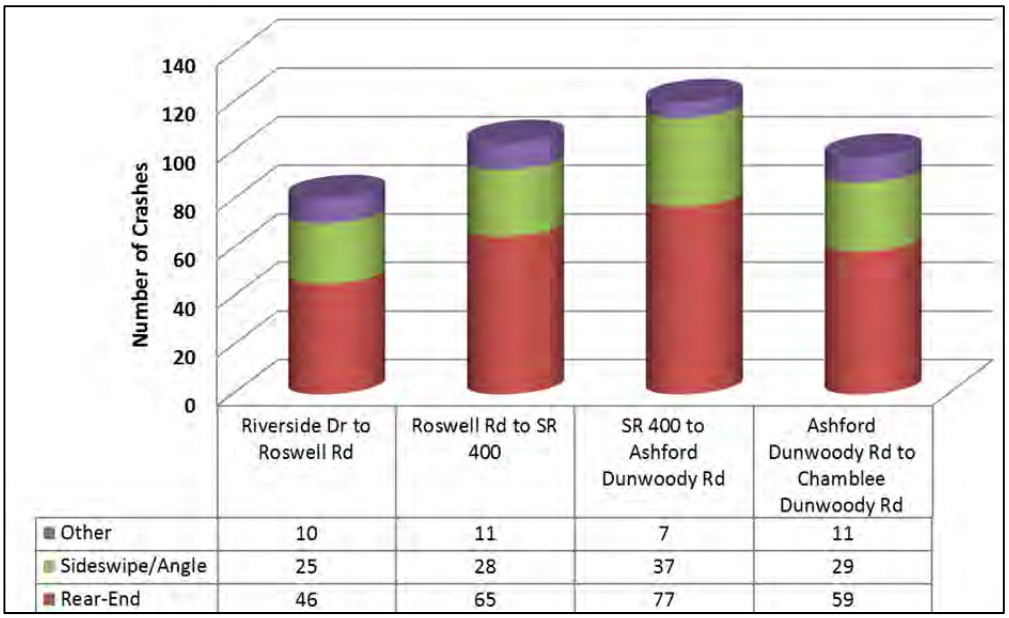


Figure 5. I-285 Westbound Crash Type Summary (2005-2008 Average)



	Riverside Dr to Roswell Rd	Roswell Rd to SR 400	SR 400 to Ashford Dunwoody Rd	Ashford Dunwoody Rd to Chamblee Dunwoody Rd
Other	10	11	7	11
Sideswipe/Angle	25	28	37	29
Rear-End	46	65	77	59

Rear-end and sideswipe crashes accounted for approximately 63 percent and 28 percent of the total crashes, respectively, along I-285 eastbound during that period. A similar trend was observed along I-285 westbound with approximately 61 percent and 29 percent of the total crashes being rear-end and sideswipe crashes, respectively. Rear-end crashes are typically indicative of frequent stop-and-go conditions, while sideswipe crashes are related to crashes that occur during lane changes at weave/merge/diverge points. The higher incidence of rear-end crashes along I-285 eastbound and westbound in this area is primarily due to the congestion caused due to inadequate interchange ramp capacity at the I-285/SR 400 interchange. The highest sideswipe crashes are concentrated at the weaving sections of I-285 eastbound between Roswell Road and SR 400 and I-285 westbound between Ashford Dunwoody Road and SR 400. Weaving maneuvers are prevalent and have become increasingly problematic along these sections of I-285 due to the close proximity of interchanges between Roswell Road and Ashford Dunwoody Road.

The proposed construction of a CD system within the project area would provide an adjacent roadway for weaving (merging) to occur at lower speeds, while separating exiting vehicles from the I-285 mainline, allowing for the safe and efficient passage of through traffic on the mainline. The separation of the CD and I-285 mainline traffic should provide a reduction in accident potential, since the number of weaving areas would be reduced on the main roadway. The proposed improvements would reduce the number of access points/weaving areas along this stretch of I-285 from nine locations to six.

D. Logical Termini

Logical termini are defined as rational end points for a transportation improvement and rational end points for a review of the environmental impacts. The most common termini are points of major traffic generation, especially intersecting roadways. To ensure meaningful evaluation of alternatives and to avoid commitments to transportation improvements before they are fully evaluated, the action evaluated shall (1) connect logical termini and be of sufficient length to address environmental matters on a broad

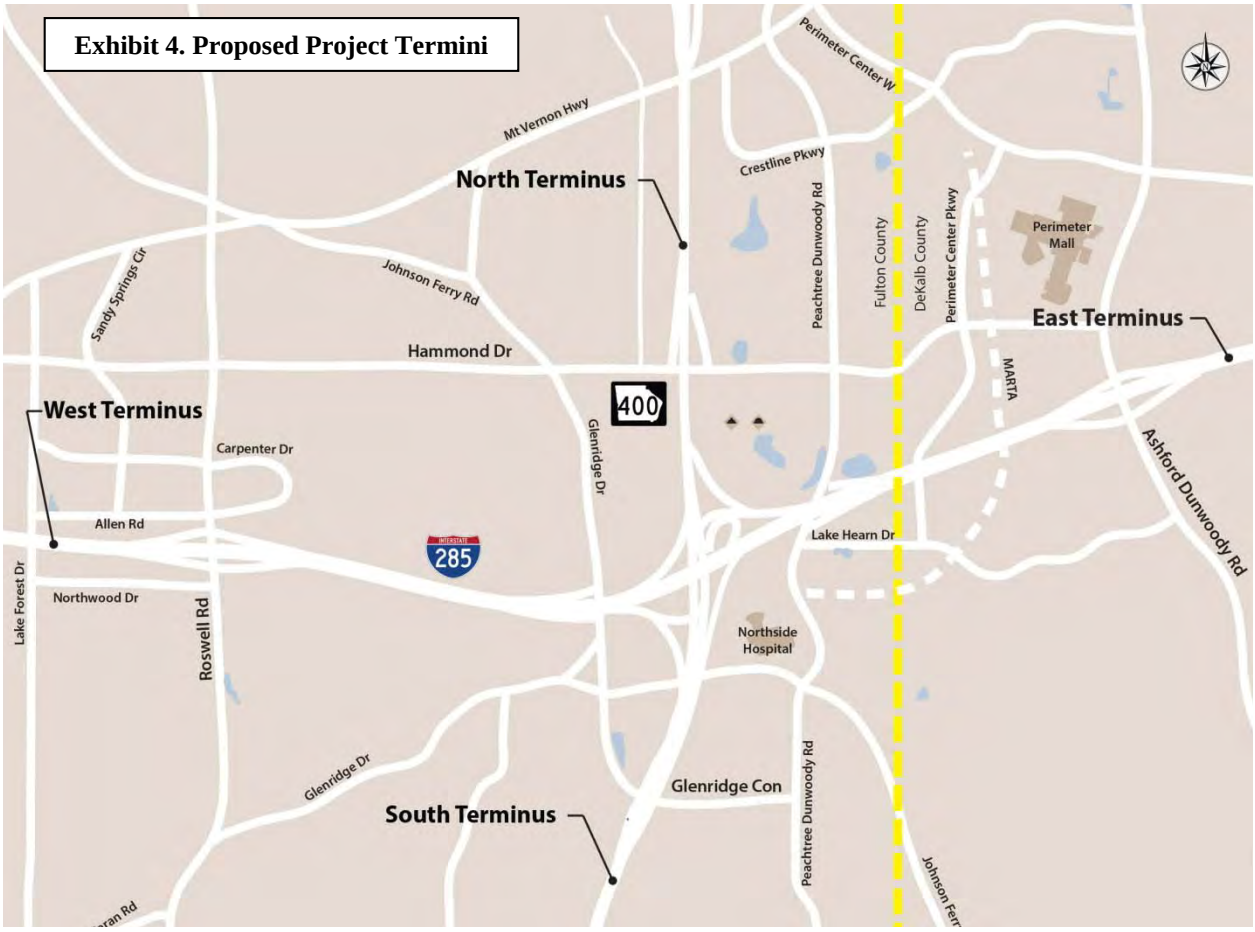
scope; (2) have independent utility or independent significance (i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made); and (3) not restrict consideration of alternatives for other reasonably foreseeable transportation improvements. These three prongs are addressed below.

1. Connect Logical Termini and be of Sufficient Length to Address Environmental Matters on a Broad Scope

The purpose of the proposed project is to improve operations and safety at and leading up to the I-285/ SR 400 interchange. In order to address logical termini and meet the need and purpose of the proposed project, the following termini were selected, and are shown in Exhibit 4:

- Just west of the I-285/Roswell Road interchange to the west;
- Just east of the I-285/Ashford Dunwoody Road interchange to the east;
- The SR 400/Glenridge Connector interchange to the south; and
- The SR 400 Hammond Drive interchange to the north.

Exhibit 4. Proposed Project Termini



Substantial weaving conditions currently exist due to a large number of access points approaching the interchange in each direction along I-285, which not only causes congestion, but also poses safety

concerns. One purpose of the proposed project is to reduce weaving along I-285. The western terminus just west of the I-285/Roswell Road interchange was selected as the terminus for the proposed improvement because there are five existing weaving points along I-285 in each direction between Roswell Road and SR 400 (in an approximately 1.6-mile area). These include:

Eastbound Direction	Westbound Direction
• I-285 exit ramp to Roswell Road,	• SR 400 southbound entrance ramp onto I-285 westbound
• I-285 eastbound entrance ramp from Roswell Road,	• SR 400 northbound entrance ramp onto I-285 westbound
• I-285 exit ramp to the Glenridge Connector,	• I-285 entrance ramp from Glenridge Drive
• I-285 exit ramp to SR 400 northbound, and	• I-285 exit ramp to Roswell Road, and
• I-285 exit ramp to SR 400 southbound	• I-285 westbound entrance ramp from Roswell Road

On average, the existing spacing between access points in this area is 0.33 mile (or, an average of 2.99 access points per mile). West of the Roswell Road interchange (between Riverside Drive and I-75), the average interchange spacing on I-285 increases to 0.72 mile (eastbound direction) to 0.86 mile (westbound direction) between interchanges, or, an average of 1.40 access points per mile in the eastbound direction and 1.16 access points per mile in the westbound direction. Therefore, the proposed western terminus just west of the I-285/Roswell Road interchange is a logical terminus for the proposed improvements.

Similarly, the eastern terminus just east of the I-285/Ashford Dunwoody Road interchange was selected as the terminus for the proposed improvement because there are five existing weaving points along I-285 in each direction between SR 400 and Ashford Dunwoody Road (in an approximately 1.6-mile area). These include:

Eastbound Direction	Westbound Direction
• SR 400 northbound entrance ramp onto I-285 eastbound,	• I-285 exit ramp to Ashford Dunwoody Road
• SR 400 southbound entrance ramp onto I-285 eastbound,	• I-285 westbound entrance ramp from Ashford Dunwoody Road
• Peachtree Dunwoody Road entrance ramp onto I-285 eastbound,	• I-285 exit ramp to Peachtree Dunwoody Road
• I-285 exit ramp to Ashford Dunwoody Road, and	• I-285 exit ramp to SR 400 northbound, and
• I-285 eastbound entrance ramp from Ashford Dunwoody Road	• I-285 exit ramp to SR 400 southbound

On average, the existing spacing between access points in this area is 0.36 mile (or, an average of 2.78 access points per mile). East of the Ashford Dunwoody Road interchange (between Chamblee Dunwoody Road and I-85), interchange spacing on I-285 increases to 0.54 mile (eastbound direction) to 0.61 mile (westbound direction) between interchanges or, an average of 1.86 access points per mile in the eastbound direction and 1.63 access points per mile in the westbound direction. Additionally, approximately 24 percent and 13 percent of the total traffic along I-285 exits at Ashford Dunwoody Road during the morning and afternoon peak hours, respectively, indicating a major volume drop-off at this interchange. Therefore, the proposed eastern terminus just east of the I-285/Ashford Dunwoody Road interchange is a logical terminus for the proposed improvements.

The southern terminus at the SR 400/Glenridge Connector interchange was selected because there is an existing CD system between I-285 and the Glenridge Connector into which the proposed project ties. There are no major existing weaving concerns along SR 400 between I-285 and the Glenridge Connector; however, the proposed project does address a minor weaving issue of I-285 westbound traffic entering SR 400 southbound to exit at the Glenridge Connector. The SR 400/Glenridge Connector interchange is the first full-access interchange south of the I-285/SR 400 interchange, which allows for the analysis of the effects of the proposed operational improvements on the first full downstream interchange. Therefore, the proposed southern terminus at the SR 400/Glenridge Connector interchange is logical.

The northern terminus at the SR 400/Hammond Drive interchange is a logical northern terminus because there is a committed project to construct CD lanes along SR 400 north of Hammond Drive (Georgia DOT P.I. No. 721850), into which the proposed project ties. As discussed under Other Projects in the Vicinity below, because this CD lanes project has an approved environmental document and has undergone partial right-of-way (ROW) acquisition and construction, this project is considered to be a committed project and is an existing condition in the design and operation of the proposed I-285/SR 400 interchange reconstruction project.

2. Have Independent Utility or Independent Significance

In order to evaluate the effects of the proposed project on traffic operations at and beyond the project's termini and to evaluate to what extent implementing the proposed project would or would not create the need for improvements outside the project corridor, the anticipated LOS and vehicle densities were assessed at the project's termini under Build conditions and compared to No-Build conditions. Only the direction of travel in which the project would increase throughput is examined, since the increased throughput would have the potential to exacerbate congestion at the project's endpoints. The results of this analysis are shown in Table 8 and discussed below by terminus. Note: The LOSs and vehicular densities presented in Table 8 represent average values over the entire 5-hour peak morning (6 a.m. to 11 a.m.) and afternoon (2:45 p.m. to 7:45 p.m.) periods.

Table 8. Open Year (2019) and Design Year (2039) Capacity Analysis Summary (Average Peak Period LOS and Density in volume per mile per lane) Beyond the Proposed Project Termini

Roadway Segments	Open Year (2019) LOS (Density)				Design Year (2039) LOS (Density)			
	No-Build		Build		No-Build		Build	
	AM	PM	AM	PM	AM	PM	AM	PM
Western Terminus (I-285 Westbound)								
I-285 between Roswell Road and Riverside Drive	C (22.64)	F (51.62)	C (24.19)	F (57.90[1])	C (21.64)	F (84.34)	C (21.06)	F (69.76)
Eastern Terminus (I-285 Eastbound)								
I-285 between Ashford Dunwoody Road and Chamblee Dunwoody Road	C (17.95)	F (69.02)	C (19.61)	F (54.44)	C (22.26)	F (57.57)	C (20.90)	F (58.02)
Southern Terminus (SR 400 Southbound)								
SR 400 between Glenridge Connector and Lenox Road	C (40.41)	F (61.49)	E (44.16[2])	F (52.12)	F (48.40)	C (28.45)	F (47.03)	F (57.93[2])
Northern Terminus (SR 400 Northbound)								
SR 400 at Hammond Drive	C (22.05)	B (16.91)	B (16.45)	B (14.29)	E (38.97)	D (33.03)	C (18.02)	B (16.12)
CD System at Hammond Drive	A (9.28)	A (7.48)	B (18.00)	B (14.33)	B (10.37)	A (9.18)	C (18.83)	C (15.78)

Note: Green shaded cells indicate where vehicle density under Build conditions is less than under No-Build conditions. Blue shaded cells indicate where vehicle densities under Build and No-Build conditions are not noticeably different. Orange shaded cells indicate where vehicle density under Build conditions is greater than under No-Build conditions.

[1] The anticipated Build Alternative vehicle density is slightly greater than the No-Build Alternative vehicle density because of increased throughput along I-285 in the westbound direction. In the 2019 afternoon five-hour peak period, the segment of I-285 westbound between Roswell Road and Riverside Drive is anticipated to serve approximately 2,540 more vehicles (or 7 percent more) under the Build Alternative compared to the No-Build Alternative.

[2] The anticipated Build Alternative vehicle densities are greater than the No-Build Alternative vehicle densities because of increased throughput along SR 400 in the southbound direction. In the 2019 morning five-hour peak period, the segment of SR 400 southbound between the Glenridge Connector and Lenox Road is anticipated to serve approximately 4,000 more vehicles (or 15 percent more) under the Build Alternative compared to the No-Build Alternative. In the 2039 afternoon five-hour peak period, this segment of SR 400 is anticipated to serve approximately 1,540 more vehicles (or 9 percent more) under the Build Alternative compared to the No-Build Alternative.

Western Terminus

[Note: Open year (2019) and design year (2039) conditions at the project's western terminus are different. In the open year (2019), the proposed two-lane westbound CD system would merge with I-285 westbound and transition back to the existing five-lane section along I-285 west of Roswell Road. However, there is a programmed auxiliary lane project between Roswell Road and Riverside Drive (a separate future project, Georgia DOT P.I. No. 713230), which is expected to be in place by year 2030. Therefore, the design year (2039) No-Build and Build conditions assume this other programmed project

is in place. Under Build conditions, the Roswell Road on-ramp to I-285 westbound would tie into this future auxiliary lane.]

The proposed improvements are not expected to worsen conditions at the project's western terminus in the morning peak period in either the open year (2019) or design year (2039). This area is expected to operate at an acceptable LOS (LOS C) in the morning peak period in both years (see Table 8).

In the afternoon peak period, I-285 at the western project terminus is anticipated to operate at a failing LOS (LOS F) in both the open (2019) and design (2039) years with or without the proposed improvements. This is due to the lack of capacity downstream (further west of the western terminus) at the I-285/I-75 interchange and along I-75 north of I-285, as well as the lack of capacity at the I-20/I-285 interchange and along I-285 westbound/southbound (referred to as the I-285 west wall congestion). In other words, existing congestion on I-285 beyond the project limits would adversely affect LOS at the western project terminus in the open and design years, and this congestion would occur even under the No-Build Alternative. However, in the open year (2019), the proposed project would somewhat worsen vehicular density in the afternoon peak period at the western terminus compared to the No-Build Alternative (57.90 vehicles per mile per lane, compared to 51.62 vehicles per mile per lane). This is due to increased vehicular throughput along I-285 westbound as a result of the proposed project (more vehicles reaching this location [latent demand] and at a faster rate than under the No-Build Alternative). It is anticipated that I-285 westbound between Roswell Road and Riverside Drive would serve approximately 2,540 (or 7 percent) more vehicles in the afternoon peak period under the Build Alternative compared to the No-Build Alternative. Although the proposed project would slightly increase vehicular density at the project's western terminus in the open year, the proposed project as a whole offers substantial benefits in terms of enhanced safety, improved travel times, increased throughput, and reduced peak period congestion in the I-285/SR 400 interchange area. In addition, by the design year (2039), vehicular density at the project's western terminus would be greatly reduced in the afternoon peak period under the Build Alternative compared to the No-Build Alternative (69.76 vehicles per mile per lane, compared to 84.34 vehicles per mile per lane). This is because the proposed CD system provides a metering effect along I-285 westbound by regulating I-285 traffic upstream (east) of the western terminus. In other words, the congestion that would occur between traffic entering I-285 at the Ashford Dunwoody Road on-ramp and traffic exiting I-285 to Roswell Road via the proposed CD system would block the I-285 westbound mainline, limiting (or, metering) westbound traffic through the I-285/SR 400 interchange. This regulation in traffic helps to absorb the impact of the west end constraints (i.e., constraints at the I-285/I-75 and I-285/I-20 interchanges, and along the interstate mainlines) during the last two hours of the five-hour afternoon peak period, resulting in improved operations at the western terminus. It should be noted that, even though traffic is "metered" under the Build Alternative towards the last two hours of the afternoon peak period, the overall throughput under the Build Alternative for the entire five-hour peak period remains higher than under the No-Build Alternative.

Eastern Terminus

The proposed improvements are not expected to worsen conditions at the project's eastern terminus in the morning peak period in either the open year (2019) or design year (2039). This area is expected to operate at an acceptable LOS (LOS C) in the morning peak period in both years (see Table 8).

As with I-285 westbound, I-285 at the eastern project terminus is anticipated to operate at a failing LOS (LOS F) in the afternoon peak period in both the open (2019) and design (2039) years with or without the proposed improvements. This is due to the lack of capacity downstream at the I-285/I-85 interchange and along I-85 north of I-285. In other words, existing congestion on I-285 east and southeast of the project limits would adversely affect LOS at the eastern project terminus in the open and design years, and this congestion would occur even under the No-Build Alternative. The proposed project would not noticeably worsen this condition in either the open (2019) or design (2039) years, as reflected by the average peak period vehicular densities in this area shown in Table 8. On the contrary, the proposed improvements would decrease vehicular density at the project's eastern terminus in the open year.

Southern Terminus (on SR 400)

As shown in Table 8, the proposed project would worsen the LOS at the proposed southern terminus in the 2019 morning peak period from an LOS C (under No-Build conditions) to LOS E, with a corresponding increase in vehicular density. This is due to the increase in vehicle throughput [latent demand] through the I-285/SR 400 interchange resulting from the proposed improvements. In the 2019 morning five-hour peak period, the segment of SR 400 southbound between the Glenridge Connector and Lenox Road is anticipated to serve approximately 4,000 more vehicles (or 15 percent more) under the Build Alternative compared to the No-Build Alternative. Although the proposed project would slightly increase vehicular density at the project's southern terminus in the morning peak period in the open year, the proposed project as a whole offers substantial benefits in terms of enhanced safety, improved travel times, increased throughput, and reduced peak period congestion in the I-285/SR 400 interchange area.

In the 2019 afternoon peak period, conditions at the proposed southern terminus would be affected by capacity constraints outside of the project corridor on the SR 400 mainline and at the SR 400/Lenox Road interchange further south. The effects of these constraints are reflected in the failing LOS (FOS F) along SR 400 southbound at this terminus under both the Build and No-Build Alternatives. The proposed project would not worsen this condition; on the contrary, the proposed project would reduce vehicle density on SR 400 southbound in the afternoon peak period compared to the No-Build Alternative (see Table 8).

By 2039, the effects of the south end constraints outside of the project corridor (i.e., SR 400 mainline capacity constraints and the constraints at the Lenox Road interchange) would affect operations during both morning and afternoon peak periods under the Build and No-Build conditions. However, the effects of these constraints are not apparent in the afternoon No-Build condition (represented by LOS C in Table 8) because of an upstream bottleneck, which prevents traffic from reaching this point on the SR 400 southbound mainline. Under No-Build conditions, the SR 400 southbound-to-I-285 eastbound ramp backs up onto the SR 400 southbound mainline (as a result of east end constraints at the I-285/I-85 interchange and along I-85 north) and creates a bottleneck, which "meters" traffic on SR 400 southbound through the I-285/SR 400 interchange. As a result, relatively few cars reach the southern terminus at any given time, and the resulting operations in this area are LOS C. The proposed improvements under the Build Alternative would increase the capacity of this ramp, thereby minimizing this upstream bottleneck and allowing more cars to reach the southern terminus in the afternoon peak period. In the 2039 afternoon five-hour peak period, this segment of SR 400 is anticipated to serve approximately 1,540 more vehicles (or 9 percent more) under the Build Alternative compared to the No-Build Alternative. The resulting LOS in this area would degrade to an LOS F under the Build Alternative. In order for this area

to operate at a better level of service than LOS F, SR 400 south of the proposed southern terminus would need to be widened, and the SR 400/Lenox Road interchange would need to be improved. These actions are outside the scope of the current proposed project.

In the 2039 morning peak period, the proposed project is anticipated to somewhat reduce vehicular density on SR 400 southbound at the project's proposed southern terminus. Therefore, the project would not worsen conditions at this terminus in the morning peak period.

Northern Terminus (on SR 400)

As shown in Table 8, the proposed improvements would not cause the LOS along SR 400 northbound at the proposed northern terminus to deteriorate over No-Build conditions. On the contrary, the LOS and vehicular densities along SR 400 northbound would improve with the proposed project in both the open (2019) and design (2039) years, in both the morning and afternoon peak periods.

The average peak period LOS on the SR 400 North CD lanes (constructed under Georgia DOT P.I. No. 721850) would be reduced from LOS A under the No-Build Alternative to LOS B in the open year (2019) under the Build Alternative. Likewise, the average peak period LOS on the SR 400 North CD lanes would be reduced from LOS B or better under the No-Build Alternative to LOS C in the design year (2039) under the Build Alternative. The reason for this reduction is that, under the No-Build Alternative, the SR 400 CD lanes would only carry traffic from the I-285 westbound to SR 400 northbound movement; traffic from the I-285 eastbound to SR 400 northbound movement would still merge with the SR 400 northbound mainline. Under the Build Alternative, both I-285 westbound and eastbound traffic accessing SR 400 northbound would be carried by the SR 400 CD system from Hammond Drive northward. The associated increase in traffic volumes would reduce the LOS in this section of the CD system to LOS C by the design year, which is still considered an acceptable LOS.

Summary

The proposed improvements would not provide additional general-use capacity to resolve all forecasted congestion along the I-285 corridor within the project limits. Rather, the project would help to ease congestion and improve safety in the vicinity of the I-285/SR 400 interchange resulting from existing insufficient interchange ramp capacity, geometric deficiencies, and substantial weaving at the interchange approaches. Construction of the proposed project would not cause a need for additional improvements to mainline I-285 or SR 400 outside the project area that would not otherwise be needed. As previously stated, there is already a core capacity deficiency along both the I-285 and SR 400 North mainlines, which the proposed project does not aim to address. The proposed project would increase vehicle throughput through the project area and decrease traffic congestion approaching the project area. While the Build Alternative traffic volumes are anticipated to be approximately three percent higher than the No-Build Alternative traffic volumes, this is due to latent demand. In addition, construction of the proposed project would not preclude the construction of other projects programmed in the area (discussed below).

While the proposed project would benefit from coordination with other planned projects in the region, it does not depend on other transportation improvements in the area to provide independent significance.

The proposed project would not require other projects to meet its need and purpose of improving traffic operations and safety at the I-285/SR 400 interchange.

3. Not Restrict Consideration of Alternatives for Other Transportation Improvements

Other Projects in the Vicinity

There are several other programmed projects that are listed in the ARC's FY 2014-2019 TIP as occurring in the proposed project area. These are:

- Georgia DOT P.I. No. 721850 (ARC number FN-AR-100A), SR 400 CD Lanes from the Vicinity of Hammond Drive and Abernathy Road to North of Spalding Drive. This project has an approved Environmental Assessment (EA) and over half of the required right-of-way (ROW) for this project has already been purchased by the Georgia DOT. In addition, a portion of this project—the half-diamond interchange at Hammond Drive and SR 400—has completed construction. This project is currently undergoing an Environmental Re-evaluation and concept validation for the proposed CD lanes along SR 400 and interchange reconstruction at Abernathy Road/SR 400.

- Georgia DOT P.I. No. 0001758 (ARC number AR-ML-200), I-285 North Managed Lanes and CD Lane Improvements from I-75 North to I-85 North (also known as **revive**285 *top end*). This project is in concept development and an Environmental Impact Statement (EIS) is underway. The project is in the long-range program (FY 2020-2030).

- Georgia DOT P.I. No. 0003534 (ARC number AR-409A), I-285 North Corridor High Capacity Rail Service Protective Right-of-Way Acquisition from Cumberland/Galleria Area to Perimeter Center (part of **revive**285 *top end*). This project is in the long-range program (FY 2031-2040).

- Georgia DOT P.I. No. 713230 (ARC number FN-AR-185), I-285 North Auxiliary Lane in Westbound Direction from US 19 (Roswell Road) to Riverside Drive (Includes Bridge Replacement and Ramp Intersection Improvements) (part of **revive**285 *top end*). This project is in the long-range program (FY 2020-2030).

- Georgia DOT P.I. No. 0013251 (ARC number AR-410A), I-285 North Corridor High Capacity Rail Service Protective Right-of-Way Acquisition from Perimeter Center to Doraville (part of **revive**285 *top end*). This project is in the long-range program (FY 2031-2040).

- Georgia DOT P.I. No. 0013255 (ARC number DK-401), I-285 North CD Lanes from Ashford Dunwoody Road to SR 141/Peachtree Industrial Boulevard (part of **revive**285 *top end*). This project is in the long-range program (FY 2020-2030).

- Georgia DOT P.I. No. 714000 (ARC number DK-400), I-285 North Ashford Dunwoody Road Bridge Replacement and Interchange Improvements (part of **revive**285 *top end*). This project is in the long-range program (FY 2031-2040).

- Georgia DOT P.I. No. 0000247 (ARC number FN-AR-203), I-285 North at SR 9 (Roswell Road) Interchange Improvements (part of **revive**285 *top end*). This project is in the long-range program (FY 2020-2030).

- Georgia DOT P.I. No. 0001757/0008445 (ARC number AR-ML-300), SR 400 Managed Lanes from I-285 North to SR 20. This project is in concept development and is in the long-range program (FY 2031-2040).

- Georgia DOT P.I. No. 0010925 (ARC number AR-118-2015), I-285 Ramps at CR 209/Riverside Drive. This project is part of the Georgia DOT Surface Transportation Program Safety Program and is currently scheduled to be open to traffic in 2016.

The proposed project would tie into the SR 400 CD Lanes project (P.I. No. 721850) to the north, and the design of these two projects is being closely coordinated. Because this CD lanes project has an approved environmental document and has undergone partial ROW acquisition and construction, this project is considered to be a committed project and is an existing condition in the design and operation of the proposed I-285/SR 400 interchange reconstruction project. If the proposed I-285/SR 400 interchange reconstruction were not constructed, it is assumed that the SR 400 CD Lanes project would still be constructed, and is part of the No-Build condition.

The proposed I-285/SR 400 Interchange Reconstruction project would not restrict the consideration of alternatives for the larger programmed projects along I-285 and SR 400 within the vicinity of the I-285/SR 400 interchange (Georgia DOT P.I. Nos. 0001758, 0003534, and 0001757/0008445). The conceptual design for the proposed project is being conducted in coordination with the conceptual design for the larger managed-lane project along I-285 (P.I. No. 0001758) so as to minimize the potential for structural conflicts between the two projects. In addition, the proposed project is not dependent on the implementation of these other larger projects to operate.

Also, it should be noted that the proposed project's current design preserves the recent improvements made to the I-285/Roswell Road interchange (bridge widening; Georgia DOT P.I. Nos. 0009159 and 0009160, Fulton County) and I-285/Ashford Dunwoody Road interchange (Diverging Diamond Interchange reconstruction, Georgia DOT P.I. No. 0009725, DeKalb County).

II. DESCRIPTION OF ALTERNATIVES

A. Introduction

The proposed project alignment was developed by the Georgia DOT, which, as a standard procedure, includes environmental parameters as a part of the location investigation prior to laying out a proposed alignment. Basic data for the corridor is gathered and studied. Data for this project included, at a minimum, aerial photography, topographic maps, traffic (existing and projected), previous studies, wetland inventory maps, soil survey maps, floodplain maps, and Georgia Department of Natural Resources (DNR) historic resource survey maps.

Wetland and hydric soil boundaries, floodplains, parks and recreational facilities, known or suspected historical and archaeological sites, existing right-of-way (ROW), possible underground storage tanks (USTs)/landfill/hazardous waste sites, and areas of possible endangered species habitat were delineated on the aerial photography prior to laying out an alignment. Also identified on the aerial photography are other "controls," such as churches, cemeteries, schools, hospitals, and any other noise-sensitive areas. Only at this point was the proposed alignment developed with every attempt being made to avoid sensitive ecological, historical, and archaeological areas. In the event that avoidance was not possible, every attempt was made to minimize harm to such resources. The proposed alignment, once laid out on aerial photography, was then field checked and additional refinements were made to further minimize harm to both the natural and built environment.

Discussed below are the two alternatives for the proposed I-285/SR 400 Interchange Reconstruction project: the Build Alternative and the No-Build Alternative.

B. The Selected Alternative

The Georgia Department of Transportation (DOT) proposes to reconstruct the Interstate 285 (I-285)/State Route (SR) 400 interchange. The proposed improvements would include construction of barrier-separated collector-distributor (CD) lanes along I-285 and SR 400, reconstruction of existing ramps, and construction of new flyover bridges, as well as reconstruction and widening of existing bridges in the vicinity of the interchange. Along I-285, the proposed project would begin approximately one mile to the west of Roswell Road in Fulton County and end approximately three-fourths of a mile to the east of Ashford Dunwoody Road in DeKalb County, for a total distance of approximately 4.3 miles. Along SR 400, the proposed project would begin just south of the Glenridge Connector and extend north to the Hammond Drive interchange, all within Fulton County, where it would tie into a separate project (Georgia DOT P.I. No. 721850, the SR 400 CD Lanes Project). The total length of the proposed improvements along SR 400 is approximately 1.2 miles (see Figure 2).

A new barrier-separated CD system would be constructed along the south side of I-285 in the eastbound direction, which would serve as the eastbound exit for motorists traveling from I-285 to Glenridge Drive and SR 400 north and south (see Exhibit 5). This eastbound CD system would begin with a new two-lane exit ramp off I-285, just to the west of the Roswell Road Bridge. After passing beneath the Roswell Road Bridge, the two-lane CD system would also pass under the reconstructed Roswell Road eastbound on-ramp to I-285. A one-lane slip ramp from the Roswell Road I-285 on-ramp would connect to the proposed new eastbound CD system, providing access from Roswell Road to SR 400 and Glenridge

Drive. The resulting three-lane CD system would continue east to Glenridge Drive, where one lane would exit to Glenridge Drive. The remaining two CD lanes would pass over Glenridge Drive, and then would split to have two lanes exit to northbound SR 400 and one lane exit to southbound SR 400.

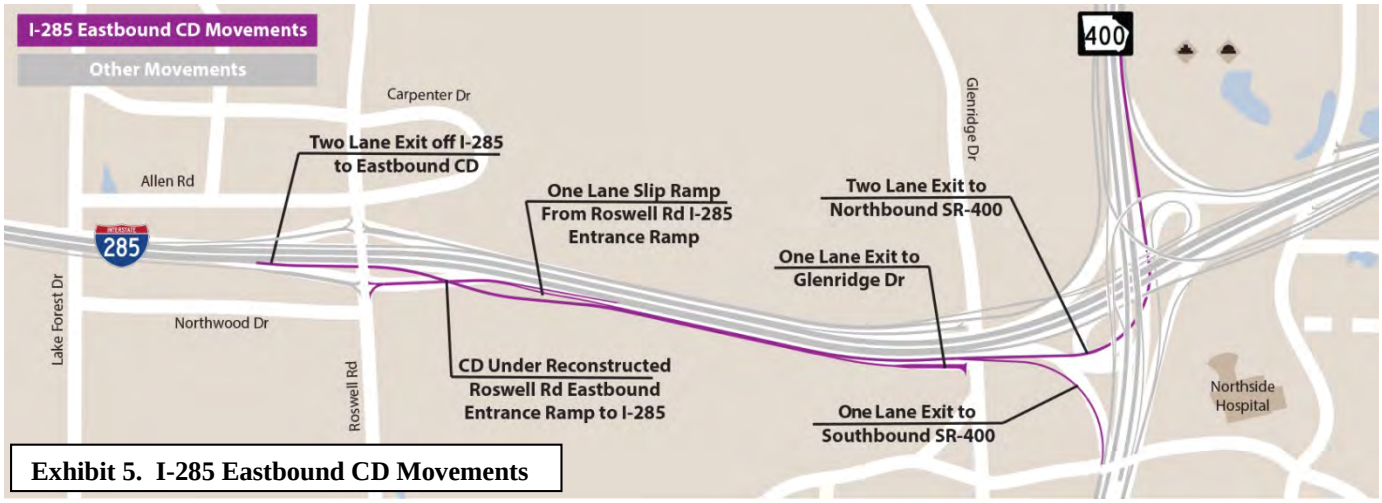


Exhibit 5. I-285 Eastbound CD Movements

An additional eastbound CD system that begins in the vicinity of SR 400 would serve as the I-285 eastbound exit for Ashford Dunwoody Road and I-285 eastbound entrance for SR 400 (see Exhibit 6). This portion of the CD system would begin just west of SR 400, where a new two-lane ramp would exit off I-285 towards Ashford Dunwoody Road, and would pass under the reconstructed SR 400 mainline lanes. After passing under SR 400, this new eastbound CD system would be joined by ramps carrying traffic from the northbound and southbound SR 400 CD system headed to I-285 eastbound. At this point, the proposed I-285 eastbound CD system would have three lanes. After these three lanes pass under Perimeter Center Parkway, they would split, with one lane serving as an exit for motorists traveling to Ashford Dunwoody Road, and the remaining two CD lanes continuing to the east, passing under the existing Ashford Dunwoody Road Bridge and joining the I-285 mainline. An existing one-lane entrance ramp, providing access from Ashford Dunwoody Road to eastbound I-285, would be relocated further east from its existing location to allow for the construction of the I-285 eastbound CD lanes.

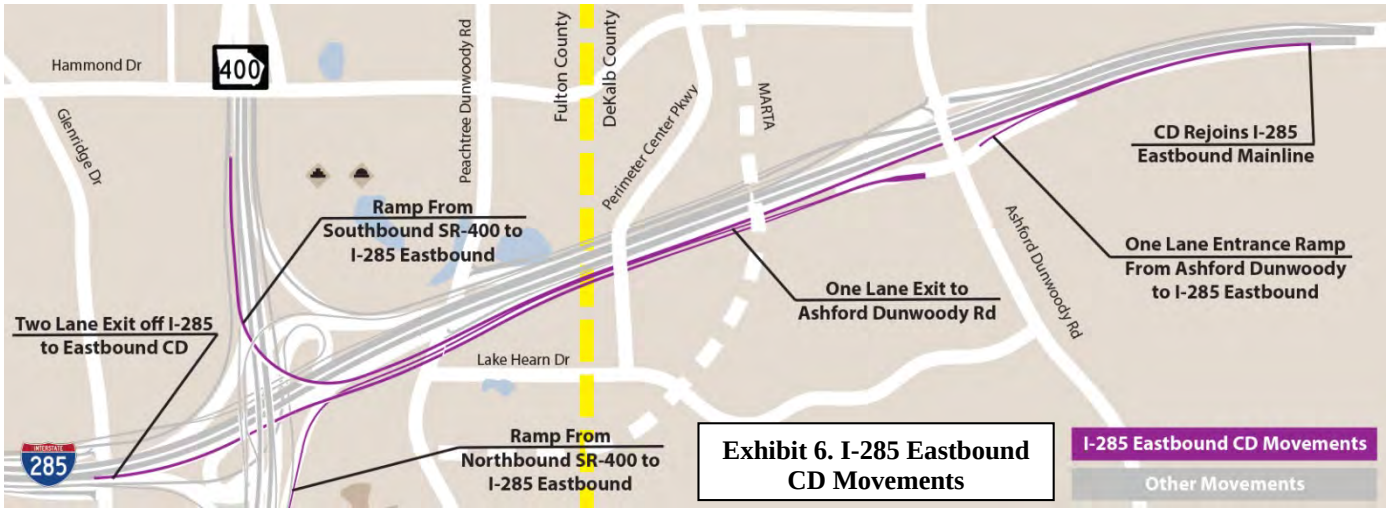


Exhibit 6. I-285 Eastbound CD Movements

A new barrier-separated CD system would also be constructed along the north side of I-285 in the westbound direction, which would serve as the westbound exit for motorists traveling from I-285 to Peachtree Dunwoody Road and SR 400 (see Exhibit 7). This westbound CD system would begin with a new two-lane exit just east of the Ashford Dunwoody Road Bridge. The two-lane CD system would continue west, passing under the existing Ashford Dunwoody Road Bridge and a reconstructed I-285 westbound entrance ramp from Ashford Dunwoody Road. In this area, an exit ramp for motorists traveling to Peachtree Dunwoody Road would be provided from the new CD system. The two-lane CD system would then continue west, passing under the Perimeter Center Parkway Bridge, where a new two-lane exit ramp would provide access to northbound SR 400 and a new single-lane flyover ramp would provide access to southbound SR 400.

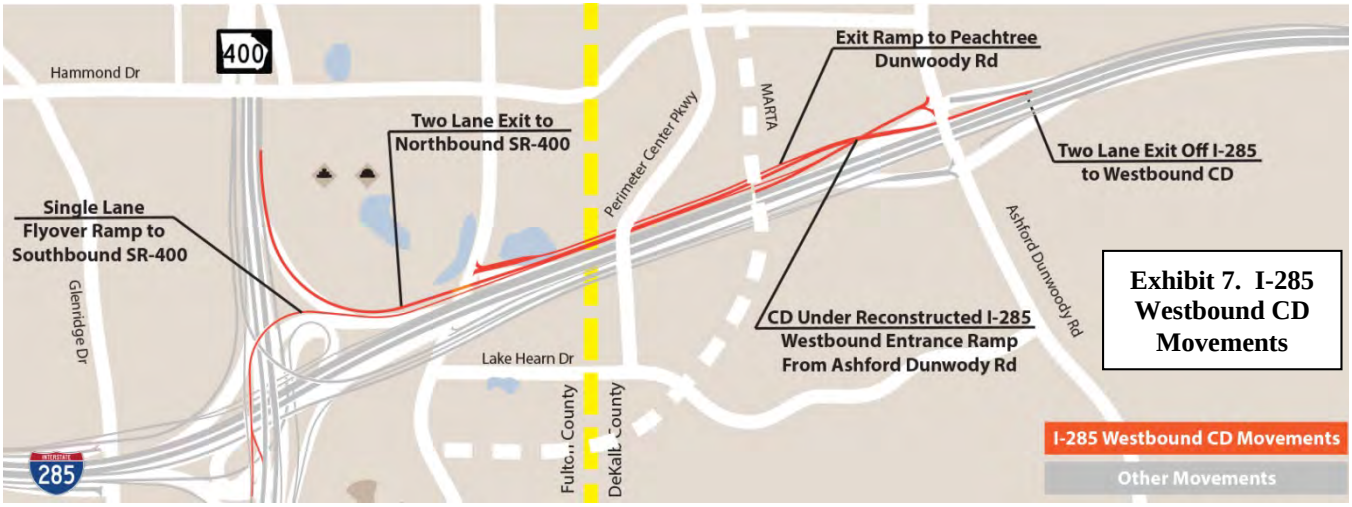
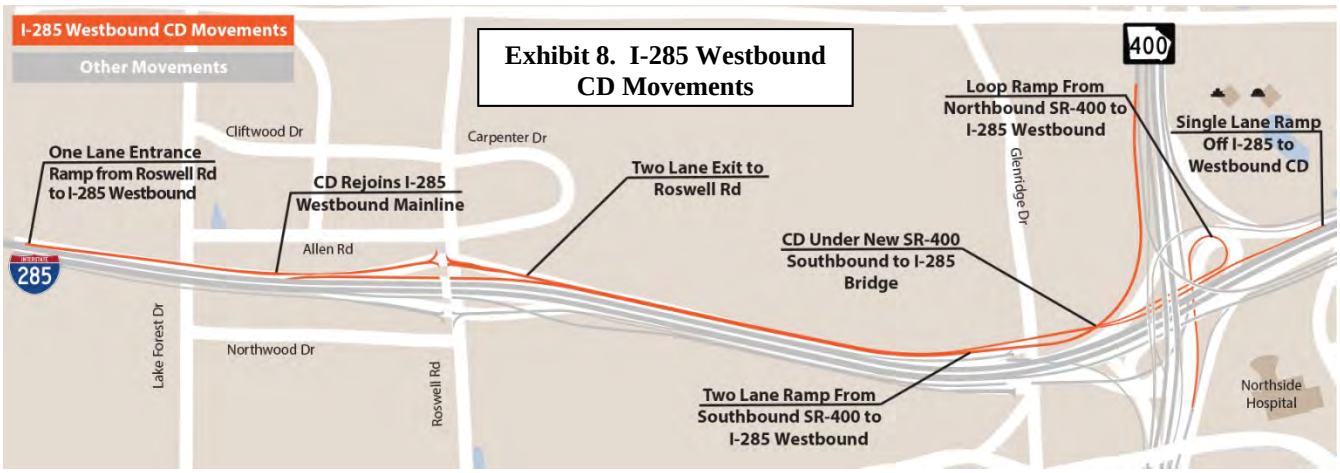


Exhibit 7. I-285 Westbound CD Movements

An additional westbound CD system would serve as the I-285 westbound exit for Roswell Road and the I-285 westbound entrance for SR 400 (see Exhibit 8). This portion of the westbound CD system would begin just east of SR 400, where a single-lane ramp would exit off I-285 towards Roswell Road, and would pass under the reconstructed SR 400 mainline lanes. After passing under SR 400, a loop ramp carrying traffic from northbound SR 400 to westbound I-285 would merge with this new exit ramp. The resulting single-lane westbound CD system would continue west and pass under a new bridge carrying traffic from SR 400 southbound to I-285 westbound, where it would join the two-lane exit ramp from southbound SR 400. At this point, the proposed I-285 westbound CD system would have three lanes. The three-lane CD system would continue west, then would split, with two lanes exiting to Roswell Road and two lanes continuing westward, passing under the existing Roswell Road Bridge before rejoining the I-285 mainline. An existing one-lane entrance ramp providing access from Roswell Road to westbound I-285 would be relocated further west from its existing location to allow for the construction of the I-285 westbound CD lanes.



A number of improvements would also be made to the existing CD system along the SR 400 corridor in the vicinity of the I-285/SR 400 interchange. The existing northbound SR 400 CD lanes south of the I-285/SR 400 interchange would be widened to three lanes, and would serve as the SR 400 northbound exits to I-285, Roswell Road, and Ashford Dunwoody Road (see Exhibit 9). North of the I-285/SR 400 interchange, four new northbound CD lanes would be formed from the I-285 eastbound (two lanes) and westbound (two lanes) exit ramps to SR 400 northbound, and would to tie into the proposed separate SR 400 CD Lanes project at Hammond Drive (Georgia DOT P.I. No. 721850). In the southbound direction, the new SR 400 CD system proposed under the adjacent Georgia DOT P.I. No. 721850 to carry SR 400 southbound traffic to I-285 eastbound and westbound would be extended south beginning around Hammond Drive and would tie to ramps heading towards I-285 eastbound and westbound. These lanes would also serve as the southbound exit from SR 400 to Ashford Dunwoody Road and Roswell Road.

Exhibit 9. SR 400 Northbound and Southbound CD Movements

Figure 6 shows an overview of the project, which is color-coded by directional movement.

Figure 6

Project Location and Overview
P.I. 0000784

The proposed CD systems along I-285 would be constructed by assigning one or two existing outside mainline lanes (which currently serve as exits to, or auxiliary lanes between, the service interchanges within the project limits) to the CD system, and constructing one or two additional CD lanes for lane balancing between the interchanges within the project limits. There would continue to be four I-285 mainline lanes through the I-285/SR 400 interchange area after project construction. However, it may appear to some motorists that there are fewer I-285 mainline (through) lanes along I-285 within the project limits since the existing auxiliary lanes would be reassigned to the proposed CD system.

Lane balancing refers to the proper arrangement of lanes at ramp terminals to maintain orderly and effective discharge or entrance of traffic. At exit terminals, the sum of the number of lanes after the diverge (on the highway and the ramp) is one more than the total number of lanes on the highway just before the diverge. At entrance terminals, the sum of the number of lanes before the merge (on the highway and the ramp) is one more than, or equal to, the total number of lanes on the highway after the merge.

What is a Directional Ramp?

A directional ramp always tends toward the desired direction of travel, whereas a non-directional ramp goes in a direction opposite to the desired direction of travel. Many loop ramps are non-directional.

As described above, new ramps connecting the new CD systems along I-285 and SR 400 would be constructed to replace each existing movement within the I-285/SR 400 interchange. All of the new ramps would be directional ramps (i.e., not loops) with the exception of the ramp from SR 400 northbound to I-285 westbound, which would be a reconstructed loop ramp to replace the existing loop ramp that serves this movement. Fly-over ramps would be constructed for the SR 400 southbound to I-285 eastbound movement and for the I-285 westbound to SR 400 southbound movement.

The project would also include rehabilitation of existing I-285 bridges within the project area. Concrete decks would be removed and replaced at the I-285 bridges over Lake Forest Drive, Glenridge Drive, the SR 400 exiting northbound lanes, and Peachtree Dunwoody Road.

Additional right-of-way (ROW) would be required for the proposed project. Along the eastbound I-285 corridor, the following would be required:

- A strip of ROW approximately 50 feet in width would be required between Long Island Drive and Lake Forest Drive.
- An additional strip of ROW varying from approximately 10 feet to 20 feet in width would be required between Roswell Road and Glenridge Drive.
- A strip of ROW varying from approximately 40 feet to 80 feet in width would be required between the I-285/SR 400 interchange and Ashford Dunwoody Road.

Along the westbound I-285 corridor, the following ROW would be required:

- A strip of ROW varying from approximately 10 feet to 100 feet in width would be required in the vicinity of the Ashford Dunwoody westbound I-285 entrance ramp.

- An additional strip of ROW varying from approximately 50 feet to 70 feet in width would be required between Perimeter Center Parkway and Peachtree Dunwoody Road.

Within the vicinity of the I-285/SR 400 interchange, a strip of ROW (approximately 40 feet in width) would be required in some areas along the ramps. To reduce the amount of required ROW, various types of retaining walls and concrete barriers would be constructed as needed throughout the project corridor. In addition to ROW, easements of varying widths would be required throughout the corridor.

New roadway signs along I-285 and SR 400 would be added or existing road signs would be modified or removed beginning approximately two miles from the proposed exit ramp and CD system construction limits. All new signs would be constructed within the existing ROW of I-285 or SR 400. Approximate sign locations have been identified. However, the location of these signs would be finalized by the Design-Build Contractor during the final design phase. The proposed project also provides for the construction of noise barriers/walls along I-285 and SR 400 within the project limits to reduce noise levels at impacted receptors.

The proposed typical sections along the project corridor are described below by segment. The typical sections described are representative of the sections that would be encountered along the majority of the proposed project. However, design exceptions for shoulder widths would be necessary where the project ties to the existing lanes and when passing under bridges that are being retained that do not afford enough width to accommodate sufficient travel lanes and full width shoulders. Selected typical sections are provided in Figure 7. Along I-285, the recently improved Roswell Road interchange and the Ashford Dunwoody Road Diverging Diamond Interchange (DDI) would be retained.

Proposed Typical Sections

I-285 Eastbound

- Mainline: 10-foot paved inside shoulder with median barrier, four or five 12-foot general-purpose lanes, 12-foot paved outside shoulder
- Concrete barrier separating mainline and CD lanes
- CD System: 4-foot paved inside shoulder, two or three 12-foot CD lanes, 10-foot paved outside shoulder
- On- and Off-Ramps: 4-foot inside shoulder, one 16-foot lane or two 12-foot lanes, 10-foot outside shoulder

I-285 Westbound

- Mainline: 10-foot paved inside shoulder with median barrier; four, five, or six 12-foot general-purpose lanes; 12-foot paved outside shoulder
- Concrete barrier separating mainline and CD lanes

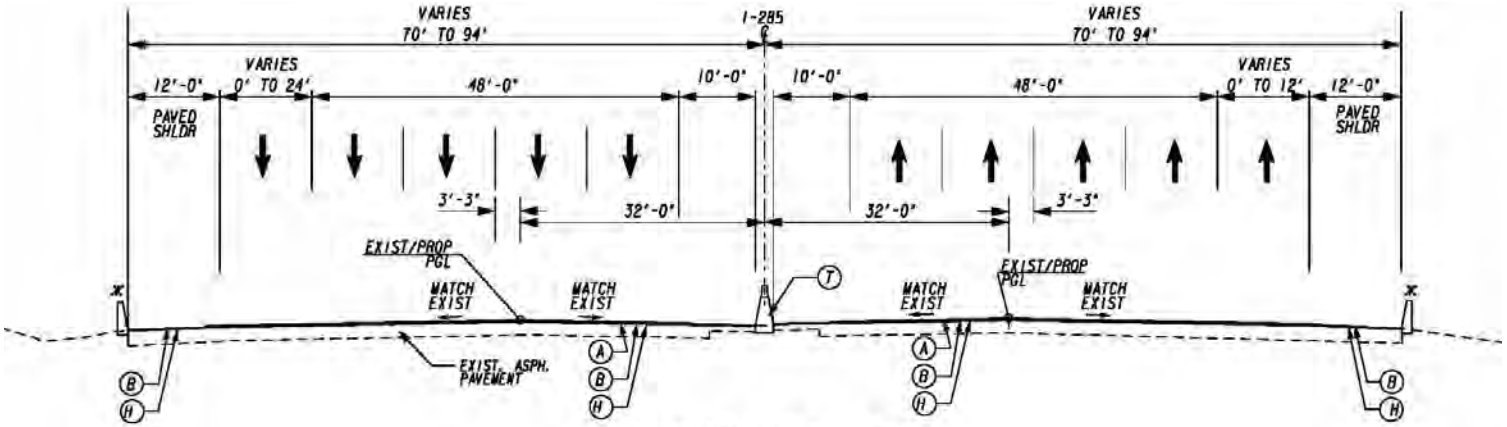
Roadway Typical Section: Typical sections describe the physical shape and relationship of the various roadway elements that are present at or proposed for a normal interval along a highway.

Mainline: The portion of the highway carrying the main flow of traffic; generally, traffic passing straight through the junction or interchange.

General-Purpose Lanes: Lanes with no constraints on use.

Median: Portion of a road separating opposite directions of traffic.

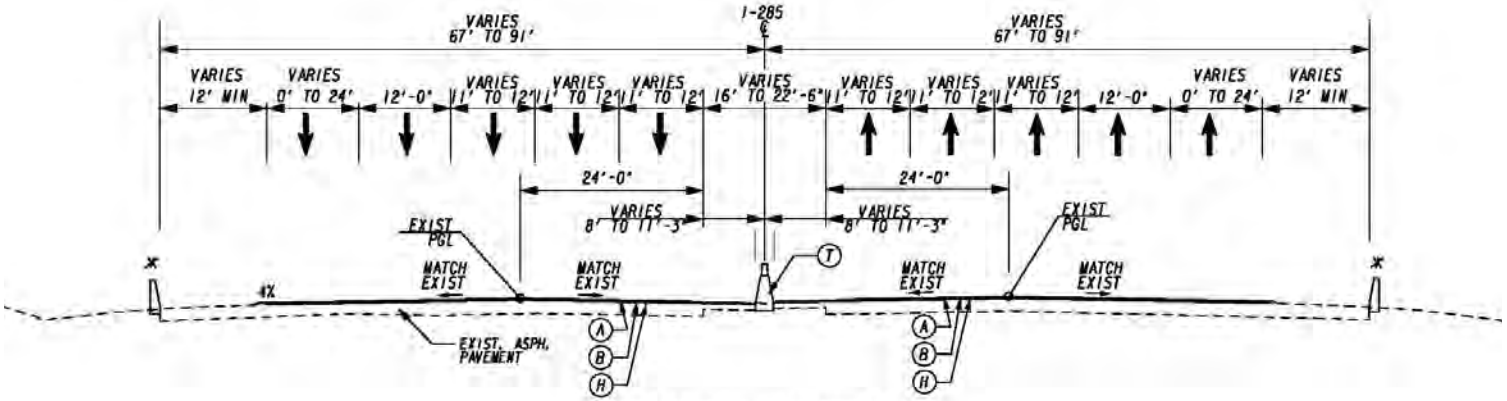
Median Barrier: Barrier system used in a median that is designed to be impacted on either side.



TYPICAL SECTION 1

I-285

STA. 920+41.79 TO STA. 1040+16.07



TYPICAL SECTION 2

I-285

STA. 857+36.26 TO STA. 920+41.79

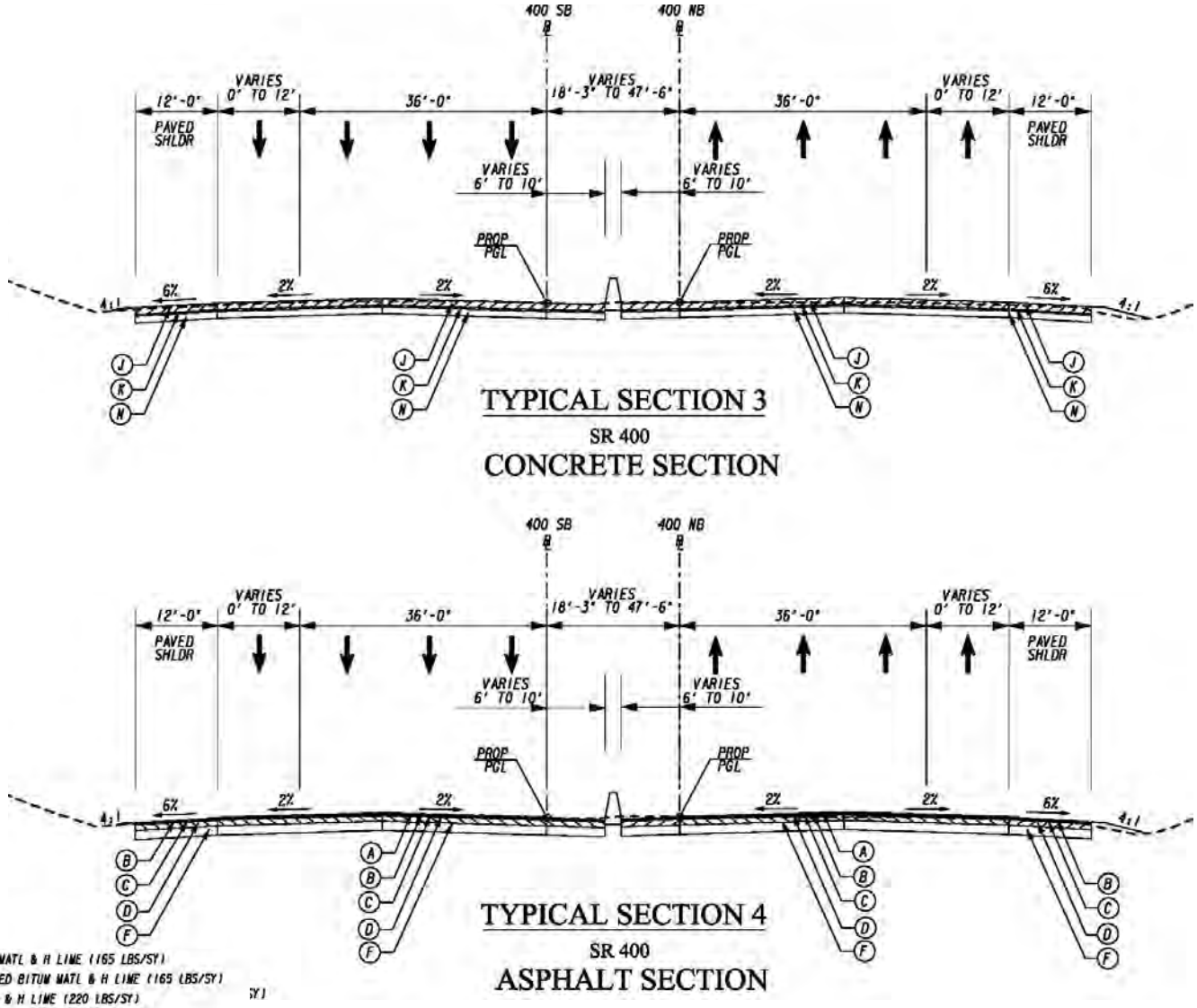
STA. 1040+16.07 TO STA. 1082+26.51

Figure 7a. Proposed Typical Section Diagrams

REQUIRED PAVEMENT

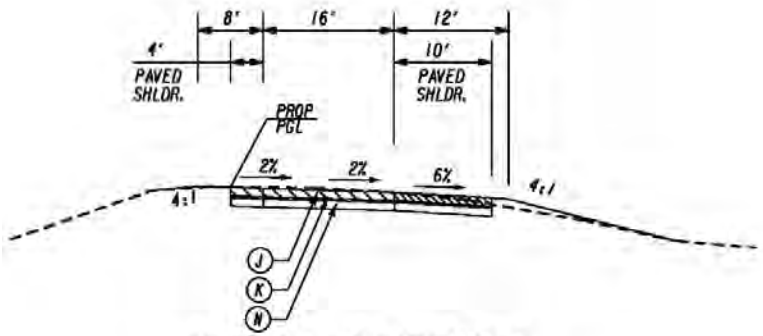
(A) ASPH CONC 12.5 MM PEM, GP 2 ONLY, INCL POLYMER-MODIFIED BITUM MATL & H LIME (165 LBS/SY)
(B) RECYCLED ASPH CONC 12.5 MM SMA, GP 2 ONLY, INCL POLYMER-MODIFIED BITUM MATL & H LIME (165 LBS/SY)
(C) RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (220 LBS/SY)
(D) RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (1100 LBS/SY)
(E) RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (1320 LBS/SY)
(F) GR AGGR BASE CRS, 16 INCH, INCL MATL
(G) RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME (220 LBS/SY)
(H) MILL ASPH CONC PVMT, VARIABLE DEPTH

Figure 7b. Proposed Typical Section Diagrams

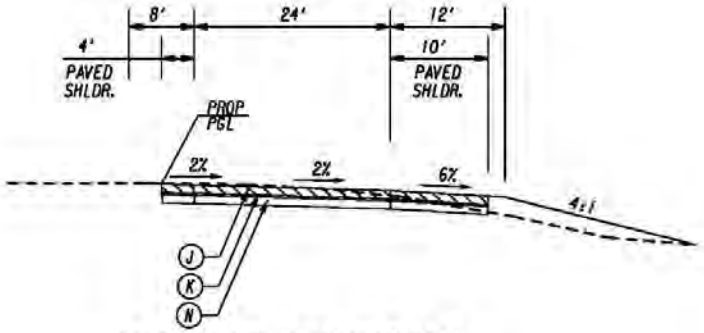


Required Pavement:

Ⓐ ASPH CONC 12.5 MM PEM, GP 2 ONLY, INCL POLYMER-MODIFIED BITUM MATL & H LIME (165 LBS/SY)
Ⓑ RECYCLED ASPH CONC 12.5 MM SMA, GP 2 ONLY, INCL POLYMER-MODIFIED BITUM MATL & H LIME (165 LBS/SY)
Ⓒ RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (220 LBS/SY)
Ⓓ RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (1100 LBS/SY)
Ⓔ RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (1320 LBS/SY)
Ⓕ GR AGGR BASE CRS, 15 INCH, INCL MATL
Ⓖ RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME 1220 LBS/SY)
Ⓗ MILL ASPH CONC PVMT, VARIABLE DEPTH
Ⓘ MICRO-MILL ASPH CONC PVMT, 1 1/4 IN DEPTH
Ⓙ PORTLAND CEMENT CONCRETE (PCC), 10 INCH,
Ⓚ RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (330 LBS/SY)
Ⓝ GR AGGR BASE CRS, 12 INCH, INCL MATL
Ⓣ EXIST CONCRETE MEDIAN BARRIER WITH GLARE SCREEN



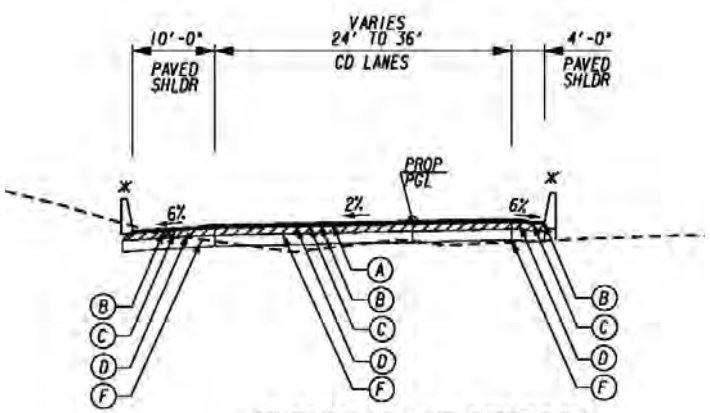
TYPICAL SECTION 5
1 LANE CONCRETE RAMPS
ENTRANCE OR EXIT



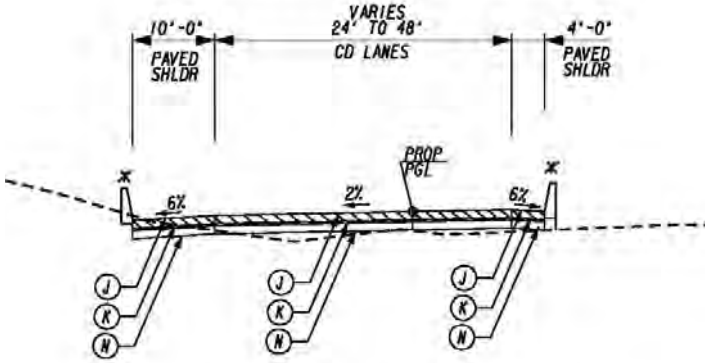
TYPICAL SECTION 6
2 LANE CONCRETE RAMPS
ENTRANCE OR EXIT

REQUIRED PAVEMENT

- (A) ASPH CONC 12.5 MM PEM, GP 2 ONLY, INCL POLYMER-MODIFIED BITUM MATL & H LIME (165 LBS/SY)
- (B) RECYCLED ASPH CONC 12.5 MM SMA, GP 2 ONLY, INCL POLYMER-MODIFIED BITUM MATL & H LIME (165 LBS/SY)
- (C) RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (220 LBS/SY)
- (D) RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (1100 LBS/SY)
- (E) RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (1320 LBS/SY)
- (F) GR AGGR BASE CRS, 16 INCH, INCL MATL
- (G) RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME (220 LBS/SY)
- (H) MILL ASPH CONC PVMT, VARIABLE DEPTH
- (J) MICRO-MILL ASPH CONC PVMT, 1 1/4 IN DEPTH
- (J) PORTLAND CEMENT CONCRETE (PCC), 10 INCH.
- (K) RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (330 LBS/SY)
- (N) GR AGGR BASE CRS, 12 INCH, INCL MATL
- (T) EXIST CONCRETE MEDIAN BARRIER WITH GLARE SCREEN



TYPICAL SECTION 7
ASPHALT
CONNECTOR/DISTRIBUTOR



TYPICAL SECTION 8
CONCRETE
CONNECTOR/DISTRIBUTOR

Figure 7c. Proposed Typical Section Diagrams

- CD System: 4-foot paved inside shoulder, two or three 12-foot CD lanes, 10-foot paved outside shoulder
- On- and Off-Ramps: 4-foot inside shoulder, one 16-foot lane or two 12-foot lanes, 10-foot outside shoulder

SR 400 Northbound from Glenridge Connector to I-285 Interchange

- Mainline: 10-foot paved inside shoulder barrier-separated from MARTA facilities, three 12-foot general-purpose lanes, 12-foot paved outside shoulder
- Concrete barrier separating mainline and CD lanes
- CD System: 4-foot paved inside shoulder, two 12-foot CD lanes, 10-foot paved outside shoulder

SR 400 Northbound from I-285 Interchange to Hammond Drive

- Mainline: 6-foot paved inside shoulder with median barrier, four 12-foot general-purpose lanes, 12-foot paved outside shoulder
- Concrete barrier separating mainline and CD lanes
- CD System: 4-foot paved inside shoulder, four 12-foot CD lanes, 10-foot paved outside shoulder

SR 400 Southbound from Hammond Drive to I-285 Interchange

- Mainline: 6-foot paved inside shoulder with median barrier, three 12-foot general-purpose lanes, 12-foot paved outside shoulder
- Concrete barrier separating mainline and CD lanes
- CD System: 4-foot paved inside shoulder, three 12-foot CD lanes, 10-foot paved outside shoulder

SR 400 Southbound from I-285 Interchange to Glenridge Connector

- Mainline: 10-foot paved inside shoulder barrier-separated from MARTA facilities, three 12-foot general-purpose lanes, 12-foot paved outside shoulder
- Concrete barrier separating mainline and CD lanes
- CD System: 4-foot paved inside shoulder, three 12-foot CD lanes, 10-foot paved outside shoulder

Project Financing

The Georgia DOT anticipates using a Public Private Partnership (P3) to construct the proposed I-285/ SR 400 Interchange Reconstruction project, in conjunction with the adjacent SR 400 CD Lanes Project (P.I. No. 721850) to the north. The USDOT's Federal Highway Administration (FHWA) defines a P3 as: *"…contractual agreements formed between a public agency and a private sector entity that allows for greater private sector participation in the delivery and financing of transportation projects."* There are a

variety of P3 approaches, and Design-Build-Finance (DBF) is the P3 model being pursued for the I-285/ SR 400 Interchange Reconstruction.

Under a DBF arrangement, the Georgia DOT would award a contract to a private firm (or consortium of firms) for the design, construction, and partial (or full) financing of the project. DBF merges the improved delivery aspects of Design-Build (having one firm responsible for both the design and construction of a project, and thus focused on maximizing efficiencies in both phases of the project) with financing flexibility. As currently envisioned, with the I-285/SR 400 interchange reconstruction, the Georgia DOT would make payments to the private firm on a fixed payment schedule, to be finalized as part of contract negotiations. During the project's active construction time period, the contractor would receive partial payment; the remainder of the payments would be deferred until after project construction is completed. After construction is complete, the Georgia DOT would continue to make payments to the contractor on a fixed, negotiated schedule, until all expenses have been paid. Spreading the construction payments over a longer period of time would allow the Georgia DOT to better mirror the anticipated cash-flow of both federal and state gas tax revenues.

Capital Cost Estimate

The FHWA, Georgia DOT, and their consultants conducted a workshop to review the capital cost estimate for the I-285/SR 400 Interchange Reconstruction and SR 400 CD Lanes projects on March 9-12, 2015. The workshop is a standard mandatory review by FHWA for projects with projected costs over $500 million and that meet certain other FHWA criteria. The objective of the review was to verify the accuracy and reasonableness of the current project total cost estimate and schedule and to develop a probability range for the total project cost based on a "snapshot" of the project's current stage of development. The cost estimate review (CER) yielded a risk-based probabilistic capital cost estimate in year of expenditure (YOE) dollars.

Based on the CER workshop, the risk analysis resulted in the 70 percent total YOE project costs for the combined I-285/SR 400 Interchange Reconstruction and SR 400 CD Lanes projects as $864.6 million. This means that based on the state of the project and risk factors at the time of the workshop, there is a 70 percent probability that the total combined project cost would be less than or equal to $864.6 million. Of this cost, $616.5 million is for the I-285/SR 400 Interchange Reconstruction project alone. These costs include costs of preliminary and final engineering, Design-Build Contractor costs, utility relocations, ROW, construction (including traffic control), agency costs, environmental mitigation, and other professional services. These costs do not, however, include financing costs.

C. The No-Build Alternative

The No-Build or "Do Nothing" Alternative was considered and assumed that the I-285/SR 400 interchange would not be reconstructed. No displacements or environmental impacts would occur under the No-Build Alternative; however, this alternative would not fulfill the purpose and need of this project because it would not reduce vehicular conflicts and associated congestion in the vicinity of the interchange, and would not increase ramp capacity or improve geometric deficiencies at the interchange.

D. Alternatives No Longer Under Consideration

Alternatives to the location and alignment of the proposed improvements to I-285 and SR 400 are limited due to the existing road and bridge infrastructure for I-285 and SR 400, tie-in locations along these roadways, existing development, and environmental resources along the project corridor. During the concept development, an alternative that was considered utilized standard Georgia DOT design typical sections with rural shoulders, including tie-ins with the existing ground using 4:1 slopes and no side barriers or walls. This alternative is no longer under consideration due to much greater environmental impacts (i.e., impacts on waters of the U.S., historic resources, and communities), as well as greater ROW impacts (displacements and required land).

Additional alternative technical concepts for the proposed project will be developed by the Design-Build Contractor after the Design-Build-Finance contract is procured. Any changes to the project will undergo an environmental re-evaluation before they are implemented.

III. ENVIRONMENTAL CONSEQUENCES

The Council of Environmental Quality's (CEQ's) Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA) (40 Code of Federal Regulations [CFR] §1500-1508) require that not only direct impacts, but also indirect and cumulative impacts (ICI), be evaluated. Direct, indirect, and cumulative impacts are defined as follows:

> **Direct impacts** are caused by, and coincide in time and geographic place as, the action.
>
> **Indirect impacts** are caused by the action and are later in time, but are still reasonably foreseeable. Indirect effects include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on social, cultural, natural, and physical environmental resources.
>
> **Cumulative impacts** are the impacts on the environment which result from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Regional and local planning organizations and other development and resource protection agencies were contacted early in the project development process to solicit concerns regarding the proposed project. Response letters received during this early coordination are provided in Appendix A. Early in the project development process, the Georgia DOT also met with representatives of surrounding jurisdictions and stakeholders to determine any environmental or other concerns they had regarding the project, identify environmentally sensitive resources within their jurisdictional areas, and identify reasonably foreseeable future developments in the vicinity of the project corridor. These meetings are discussed in Section IV, *Coordination and Comments*. Meeting minutes from these meetings are included in Appendix A.

As shown in Figure 1, the western portion of the project corridor, from the start of the project to the Fulton County line, is located within the City of Sandy Springs. The eastern portion of the project corridor in DeKalb County is located both within the City of Dunwoody (north side of I-285) and the City of Brookhaven (south side of I-285). The Perimeter Community Improvement Districts (PCIDs; see text box) overlays the area around Perimeter Mall and the I-285/SR 400 interchange.

Community Improvement District (CID) – A self-taxing district, established by the appropriate local government but usually managed by a private board, which generates revenue to implement a variety of projects and programs.

Because the project corridor spans three municipalities and a CID, a workshop was held with senior planners from each of the municipalities to assist in defining the geographic region of influence for land use change and ICI analysis, determining the potential for ICI to land use that could result from the proposed project (both alone and in conjunction with the adjacent SR 400 CD Lanes Project, Georgia DOT P.I. No 721850), and in identifying any other reasonably foreseeable developments in the project vicinity. This workshop was held on August 12, 2014, at the PCIDs offices, and included the following professionals, in addition to Georgia DOT staff and representatives:

- Steve Foote, Director of Community Development, City of Dunwoody
- Michael Smith, Director of Public Works, City of Dunwoody
- Kristen Wescott, Transportation Planning, Public Works Division, City of Sandy Springs
- Richard Meehan, Director of Public Works, City of Brookhaven
- Yvonne Williams, President & Chief Executive Officer, PCIDs
- Jennifer Harper, Program Manager, PCIDs

Prior to the meeting, an informational sheet describing indirect and cumulative impacts and the goals of the meeting, including the project development scenarios to be discussed, was distributed to the meeting attendees. This information sheet is provided in Appendix A.

Input from the ICI workshop was used to evaluate the potential for growth-inducing effects of the proposed project, to validate the future land use projections of local jurisdictional comprehensive plans, and to discuss current and projected market conditions. The potential for growth-inducing effects and induced changes in land use, population density, or growth rate was also evaluated based on:

- A comparison of regional and local jurisdiction existing and future land use maps,
- A review of local and regional comprehensive land use plans,
- A review of the project's effects on development potential,
- Changes in travel patterns and accessibility resulting from the proposed project (alone and in conjunction with other programmed projects),
- Existing development trends and patterns within and around the corridor,
- Constraints on future development, and
- The amount of vacant or developable land.

The project's potential to influence land use changes and growth both in terms of development potential/likelihood and timing of development was evaluated. Based on the results of this analysis, anticipated effects on other resources, including natural and cultural resources, from project-influenced or induced development were assessed to evaluate the proposed project's indirect effects.

To conduct the cumulative impacts analysis, other past, present, and reasonably foreseeable future actions or activities were identified that have resulted in or have the potential to result in impacts to resources affected (directly or indirectly) by the proposed project alternatives. Other past, present, and future actions or activities include other development projects occurring in the vicinity of the corridor, such as developments of regional impact (DRIs); actions taken by other agencies or organizations to improve natural or cultural resource conditions or protection, such as establishment of greenspace and development of stormwater protection plans; ongoing and proposed future transportation projects around the corridor that are part of regional planning efforts, including projects listed under "Other Projects in the Vicinity" in Section I.D.3. above and area transit services; past, existing, or future development and travel patterns, including projections outlined in local comprehensive plans; and so on. Reasonably foreseeable future actions and activities for the cumulative impacts analysis were identified through review of

regional and local jurisdiction land use/development and transportation plans, discussions with the ICI workshop members and local area planners, and coordination with applicable agencies. It should be noted that cumulative impacts may be additive or synergistic (i.e., act together to produce a whole that is greater than the sum of the individual contributions), and the project's contribution to cumulative effects may range from minimal to substantial.

Geographic and Temporal Regions of Influence for Land Use Changes for ICI Analysis

As discussed above, the geographic region of influence for land use changes for ICI analysis was developed based on input from the ICI workshop held in August 2014. A geographical boundary for indirect land use effects was developed for the proposed I-285/SR 400 Interchange Reconstruction project alone, and an extended boundary was developed to include the cumulative effect of the proposed project in conjunction with the separate, adjacent SR 400 CD Lanes Project (Georgia DOT P.I. No. 721850) due to the facts that the proposed projects join at a common terminus and are anticipated to be constructed at the same time. The boundaries were established based on the types of existing and projected future land uses in the areas, consideration of areas of known development or redevelopment pressure, previous or ongoing initiatives in the area affecting land uses or land use planning, anticipated changes in travel patterns, and ICI workshop member expertise in the area. The boundaries are shown in Figure 8.

As shown in Figure 8, the geographic boundary for indirect effects on land use for the I-285/SR 400 Interchange Reconstruction project alone extends to Riverside Drive to the west, Mount Vernon Highway to the north, Chamblee Dunwoody Road to the east, and south to include the neighborhoods in the Nancy Creek/Murphey Candler Park area, west to the Glenridge Connector and the Glenridge Drive/Roswell Road intersection. The northern boundary was defined as Mount Vernon Highway due to the loss of the westbound local connection on I-285 between Glenridge Drive and Roswell Road as a result of the proposed project. Hammond Drive and Mount Vernon Highway provide the only east-west connectivity in this area north of I-285. Although there would be a similar loss of local east-west connectivity on I-285 between Peachtree Dunwoody Road and Ashford Dunwoody Road east of the SR 400 interchange, the City of Dunwoody and City of Brookhaven transportation planners felt that the resulting changes in travel patterns would be accommodated by the existing parallel routes close to I-285 (Lake Hearn Drive/Perimeter Summit Parkway and Hammond Drive, with both Peachtree Dunwoody Road and Perimeter Center Parkway providing north-south access across I-285); therefore, the boundary for indirect impacts would be nearer to the I-285 corridor in this area.

The geographic boundary for cumulative impacts on land use takes into account the proposed I-285/SR 400 Interchange Reconstruction project in conjunction with the adjacent SR 400 CD Lanes Project (Georgia DOT P.I. No. 721850) and extends north along the Chattahoochee River to Pitts Road and east to encompass residential neighborhoods off Roberts Drive in Dunwoody (see Figure 8). It was noted by the ICI workshop members that the SR 400 CD Lanes Project is not expected to cumulatively affect land use changes south of I-285.

It should also be noted that there are several other recently completed, planned, and programmed, large-scale transportation projects in the region that would further extend the geographic boundary for cumulative impacts to include a much larger portion of the Atlanta metropolitan area. These include projects within the I-285 corridor between Atlanta Road and I-85, the I-75 north corridor, the I-85 north corridor, and the SR 400 corridor. These other transportation projects include the Northwest Corridor

Figure 8

Indirect and Cumulative Impacts Region of Influence for Land Use Changes

managed-lane project along I-75 and I-575, the **revive**285 *top end* managed-lane and operational improvements project along I-285, the I-85 high-occupancy vehicle (HOV) lane to high-occupancy toll (HOT) lane conversion project, the I-85 north managed-lane extension project, the SR 400 managed-lane project, and the MARTA expansion along SR 400.

The temporal area of influence for cumulative effects in regard to land use changes extends from the 1950s, when planning and construction for I-285 began, through the design year (2039) of the proposed I-285/SR 400 Interchange Reconstruction project and the planning horizon for the PLAN 2040 Regional Transportation Plan (RTP), which is year 2040. This temporal area of influence also includes the planning durations of the local jurisdictions' comprehensive plans, most of which extend through 2027 or 2030.

The geographic and temporal areas of influence for land use changes also apply to the resources within the natural, cultural, and physical environments, since these environments have been and would continue to be affected by changes in land use. Exceptions to these areas of influence include indirect and cumulative impacts on economics and air quality, which have the potential to be regional in nature. ICI analyses have not been included for the following resource areas, as these areas is not meaningful in the context of the ICI definition: Relocations; Invasive Species; Underground Storage Tanks (USTs)/Hazardous Materials/Waste, and Utilities.

A. Effects on the Social Environment

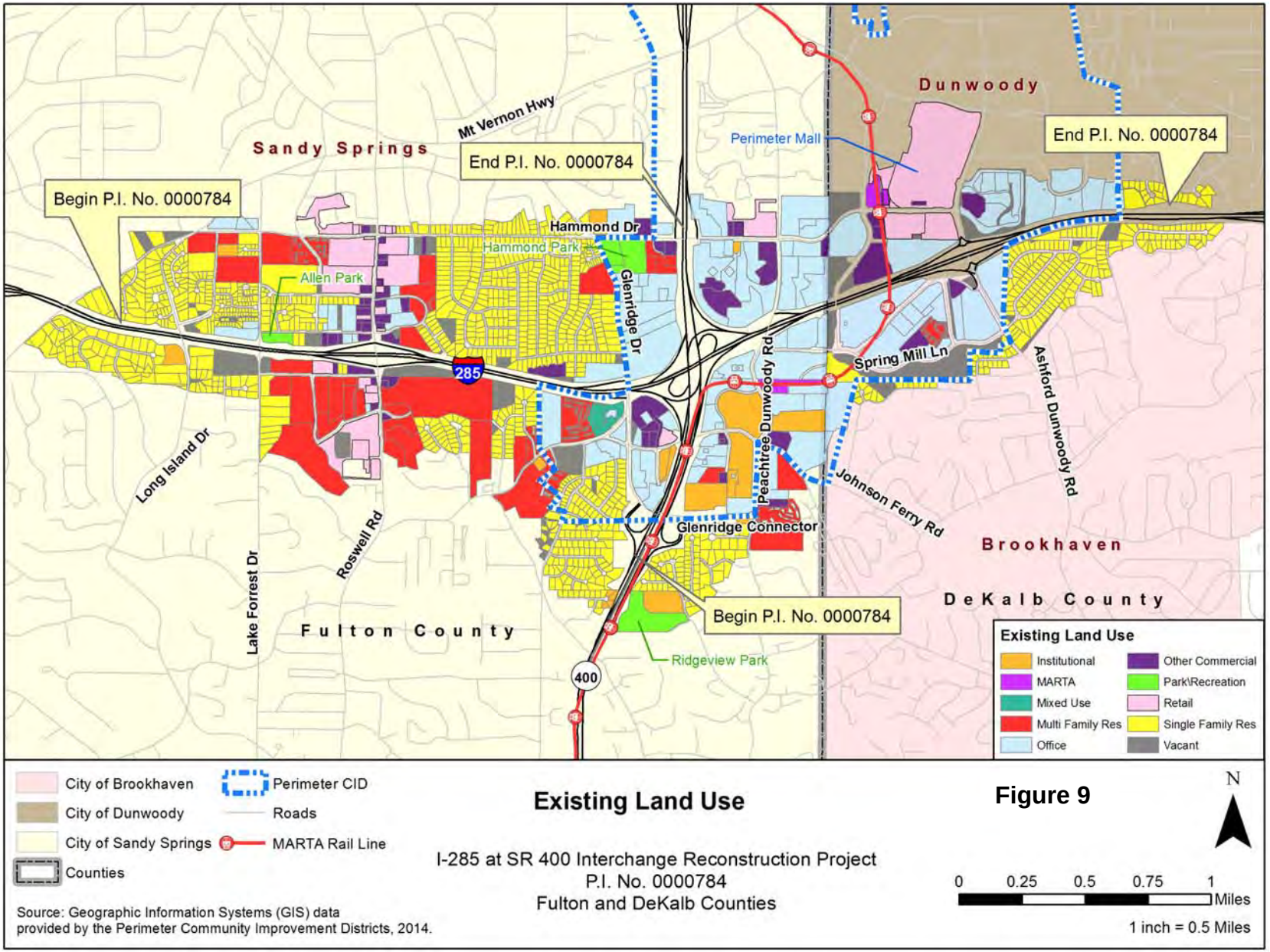
1. Land Use Changes

Existing Land Uses

Existing land use in the vicinity of the project corridor is shown on Figure 9. As shown in the figure, single-family residential land use occurs on both sides of I-285 from the western project terminus to just east of Lake Forrest Drive, on the north side of I-285 east of Roswell Road to the PCIDs western boundary, on the south side of I-285 east of the Ashford Dunwoody Road interchange, and on both sides of SR 400 south of the Glenridge Connector. Multi-family residential use (i.e., apartments, condominiums, and high-density townhomes) is interspersed throughout the project area, with the greatest amount of this use occurring on the south side of I-285 surrounding Roswell Road, where numerous apartment complexes are located.

Commercial uses (including retail, restaurants, hotels, and service-related commercial uses) tend to cluster around interchanges and major intersections in the project area, with the greatest concentrations around the I-285/Roswell Road interchange and Roswell Road corridor north and south of I-285, as well as north of the Ashford Dunwoody Road interchange in the Perimeter Center area, where the Perimeter Mall and surrounding retail stores are located. Commercial uses that line Roswell Road are comprised of local businesses and strip retail.

Office buildings, including large-scale office parks, are predominant around all four quadrants of the I-285/SR 400 interchange and in the Perimeter Center area. This includes the numerous medical office buildings surrounding the Northside/St. Joseph's/Children's Healthcare of Atlanta--Scottish Rite hospital complex in the southeast quadrant of the I-285/SR 400 interchange. These institutions are served by the MARTA Medical Center Station. The northeast quadrant of the I-285/SR 400 interchange includes the



Existing Land Use

I-285 at SR 400 Interchange Reconstruction Project
P.I. No. 0000784
Fulton and DeKalb Counties

Figure 9

Concourse at Landmark Center office park (including the King and Queen office towers) and the Palisades office park.

Future Land Uses

Future land uses according to the City of Sandy Springs, City of Dunwoody, and City of Brookhaven Comprehensive Plans are shown in Figure 10.

What is a Character Area?

Character areas are geographic planning sub-areas within a community that have unique or special characteristics to be preserved or enhanced; have the potential to evolve into a unique area; or require special attention due to unique development issues such as rapid change of development patterns. Character areas lay out a vision and specific goals for an area to help define appropriate future land uses in that area.

City of Sandy Springs: The Sandy Springs Comprehensive Plan (2007) defined visionary character areas within the city to provide the basis for developing their Future Land Use Map (FLUM). According to a planner from the City of Sandy Springs, the City strictly regulates development in accordance with the FLUM and the land uses permitted on the map. In the vicinity of the proposed project, all four quadrants of the I-285/Roswell Road interchange and the Roswell Road corridor itself are within the Downtown Redevelopment Character Area, where redevelopment is encouraged to provide more compact, pedestrian-friendly, mixed uses (mainly commercial). This area is designated a "Living Working" area on the FLUM; "Living Working" areas are considered activity centers where the community can live, work, shop, play, and meet. Higher development densities with less focus on walkability are anticipated immediately adjacent to the I-285/Roswell Road interchange, which is why this area is designated as a "Regional Living Working" area on the FLUM (compared to the rest of the Roswell Road corridor's designation as a "Community Living Working" area on the FLUM).

The Downtown Redevelopment Character Area is flanked to the northwest and southeast by Urban Residential Character Area, and primarily consists of higher-density residential development (apartment complexes and some townhomes). In this area, redevelopment is encouraged for more outdated complexes, primarily to improve neighborhood conditions and integrate neighborhood-serving retail and service uses, but redevelopment is not anticipated for the majority of the area.

The western side of the I-285/SR 400 interchange (north and south of I-285 between Glenridge Drive and SR 400) is within the Employment Character Area. The vision for this area is primarily offices with limited commercial integrated into office buildings, oriented towards highway interchanges. Redevelopment is noted to be unlikely in this character area in the Comprehensive Plan; however, the Lakeside Redevelopment DRI is located in the northeast quadrant of the I-285/SR 400 interchange in this area, which conflicts with this direction. On the FLUM, the area immediately adjacent to the I-285/SR 400 interchange is designated as a "Regional Living Working" area, and quickly transitions to a "Community Living Working" area west to Glenridge Drive.

The eastern side of the I-285/SR 400 interchange (north and south of I-285) is within the Regional Transit-Oriented Activity Center Character Area. The vision for this area includes predominantly high-intensity, mid- and high-rise offices, with mixed uses strongly encouraged. In this area, some redevelopment and retrofitting is envisioned, with a high level of connectivity among uses. On the FLUM, this area is designated as a "Regional Living Working" area.

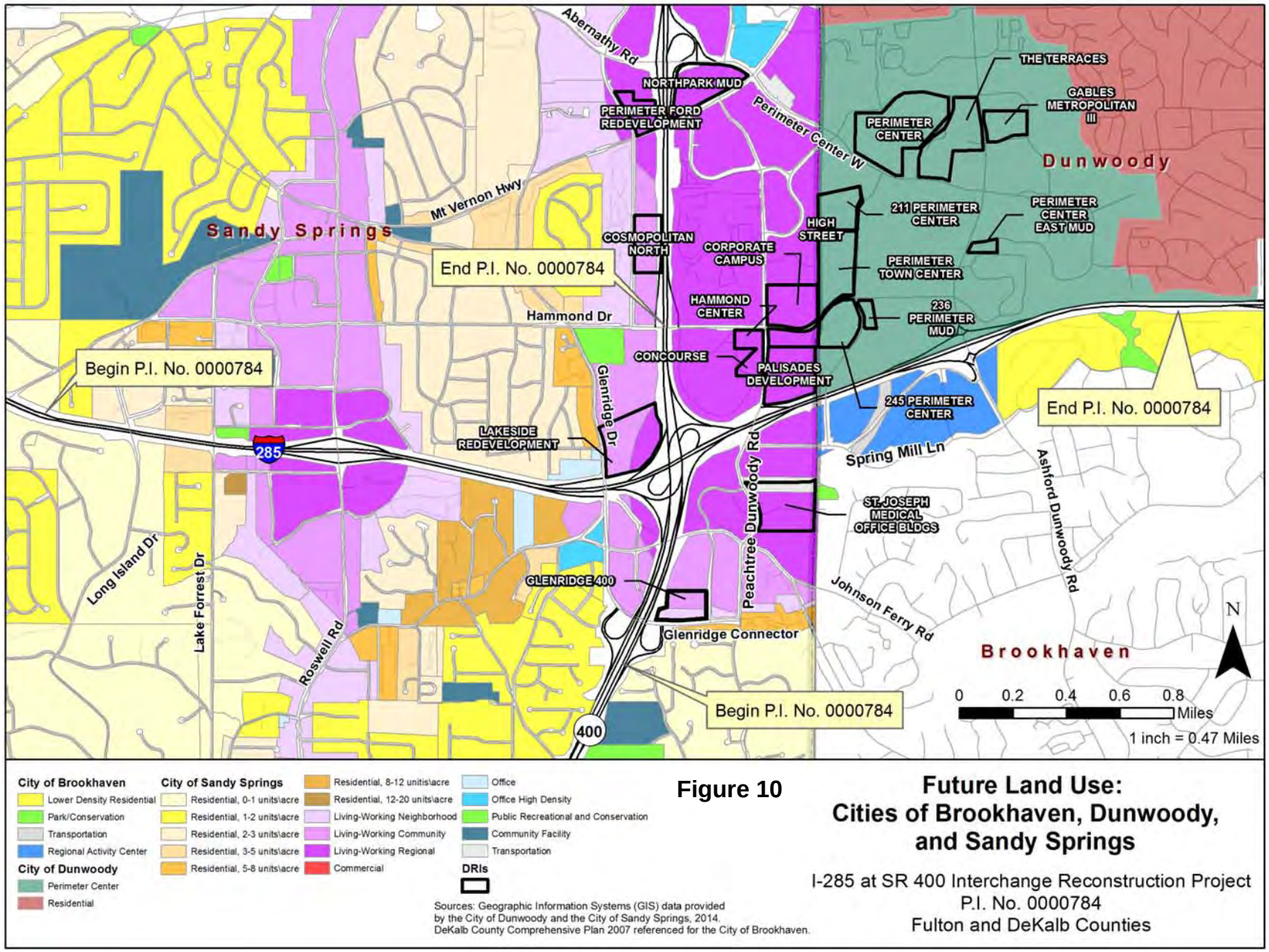


Figure 10

Future Land Use:
Cities of Brookhaven, Dunwoody, and Sandy Springs

I-285 at SR 400 Interchange Reconstruction Project
P.I. No. 0000784
Fulton and DeKalb Counties

All single-family residential areas are noted to be Protected Neighborhoods in the Comprehensive Plan, where redevelopment is not anticipated and no uses other than single-family residential and supporting institutional and recreational uses will be permitted. This development direction was confirmed by a planner from the City of Sandy Springs during a project-related meeting. These areas are to be protected from encroachment of incompatible land uses (including commercial, office, and multi-family uses), and infill development limited to densities consistent with the surrounding neighborhood.

City of Dunwoody: According to the City of Dunwoody's Comprehensive Plan (2010), the entire project corridor within the City of Dunwoody limits is within the Perimeter Center future development character area. In this area, the city works in partnership with the PCIDs to create a "livable" regional center with first-class office, retail, and high-end restaurants in a multi-modal environment. In this area, development or redevelopment of sites closer to the downtown area/urban core is encouraged to minimize conversion of undeveloped land at the periphery. Within this area, Ashford Dunwoody Road is considered a major gateway into the City of Dunwoody. In addition, the Comprehensive Plan encourages the preservation of existing residential neighborhoods, development of structured parking and conversion of existing surface parking areas to other land uses and the development of mixed-use areas.

The entire project area within Dunwoody is also located within the PCIDs Livable Centers Initiative (LCI) study area. The LCI study area is further divided into future land use development sub-areas. The sub-areas within the vicinity of the proposed project include the Transit Village sub-area (defined by a half-mile radius around existing MARTA stations, where the area is envisioned to develop as an urban district promoting a mix of residential, commercial, and institutional uses) and the High-Density Mixed-Use sub-area (which is envisioned to continue commercial development).

City of Brookhaven: The City of Brookhaven is virtually 100 percent developed and does not feature substantial amounts of vacant land available for development. As a result, land use changes within the planning horizon are expected to result largely from the redevelopment of commercial/office and residential land uses. Two major development trends occurring in the City include a move towards mixed-use pedestrian-friendly development and residential infill redevelopment within older neighborhoods. Redevelopment of aging commercial/office uses may also be on the horizon. No priority redevelopment parcels are located in the vicinity of the project corridor according to the Comprehensive Plan (2014).

According to the Comprehensive Plan, the portion of Brookhaven adjacent to I-285, from the Fulton-DeKalb County line to just east of Ashford Dunwoody Road, is in the Perimeter Center Character Area. The vision for this area is for it to remain in high-intensity land uses, with additional development in the form of mixed-use and multi-family residential and neighborhood commercial/retail development. Ashford Dunwoody Road, just south of its interchange with I-285, is noted in the Comprehensive Plan to be in need of gateway features, such as signage, public art, architecture, fountains, and landscaping, to mark an entrance into the City of Brookhaven.

The single-family residential area abutting I-285 east of Perimeter Center is in the Lakes District Character Area. The vision for this area is to maintain and preserve the single-family neighborhoods and limit inconsistent residential infill development.

Developments of Regional Impact (DRIs). Large-scale developments likely to have an impact beyond the local governments' jurisdictions are known as developments of regional impact (DRIs) and are reviewed by ARC based on criteria established by the Georgia Department of Community Affairs. DRIs submitted and reviewed by the ARC since 2000 in the immediate vicinity of the I-285/SR 400 Interchange Reconstruction project vicinity are identified on Figure 10 and described in Table 9. All but three (St. Joseph's Medical Office Buildings, Gables Metropolitan III, and the Terraces) of the planned DRIs within the vicinity of the project area are focused on mixed-use developments (MUDs) that are expected to improve the balance between the number of jobs and amount of housing, provide transportation choices, and foster walkable communities. Due to the downturn in the economy in 2008, most of these projects were postponed; however, according to local land use planners, development within several of these DRIs has recently re-initiated, and a number of the DRIs have submitted for changes in development intensity and mix of land uses, with a recent increase in multi-family residential uses. DRIs are important to the analysis of indirect and cumulative effects on land use (to which the proposed project may contribute), and are discussed further in the Indirect and Cumulative Impacts sections below.

Table 9. DRIs Within the Vicinity of the Project Corridor

Name (Reference Number)	Details	County	Status (updated 2014)
Corporate Campus Expansion (DRI 740)	Proposed redevelopment of an existing approximately 20-acre office park located at the northeast corner of Peachtree-Dunwoody Road and Hammond Drive. The site contains approximately 293,000 square feet (sf) of medical office in single-story and low rise buildings. The proposed addition is 400,000 sf of medical office, 70,000 sf of retail and restaurant uses, and 400 condominiums. There are five existing driveways along Peachtree-Dunwoody Road and Hammond Drive. The development also proposes a roadway along the eastern boundary of the site that will intersect with Hammond Drive.	Fulton	Residential buildings are almost complete. Two mixed-use medical buildings have been added to the site: a 3-story, 70,000 sf with retail and a 7-level office and parking complex with retail space and a daycare center.
Perimeter Ford Redevelopment (DRI 477)	Proposed 9.56-acre development located on the north side of Mount Vernon Road, between SR 400 and Barfield Road. It consists of 347,500 sf of office and 22,500 sf of retail space, a parking deck with 1,330 parking spaces along SR 400, and 130 townhomes.	Fulton	Townhomes are complete. Office, retail, and parking decks are not built.
Cosmopolitan North (DRI 881)	The existing office development that includes approximately 138,000 sf of office space will be replaced with 109,200 sf of office space, 280 residential units, and 27,300 sf of ancillary retail space on approximately 11.4 acres. Access is proposed along Barfield Road. Although there are three existing access points to the site, development will require that these be relocated.	Fulton	Project is complete.
Concourse III, IV, and VIII (DRI 833)	An approximately 11.28-acre proposed development consisting of 650 residential condominiums and 70,000 sf of retail space. Located at the Peachtree Dunwoody Road/Hammond Drive intersection, the development is part of the larger Concourse office development. Access will be at three existing access points: one along Hammond Drive and two along Peachtree Dunwoody Road.	Fulton	Originally scheduled for completion in 2012. No work performed to date.
Palisades (DRI 1152)	The proposed development will include 200 residential high rise condominiums, 10 live/work units, a 200-room hotel, 524,000 sf of office space, and 50,000 sf of retail space. There are four existing office buildings, surface parking, and parking decks on the site. The	Fulton	Originally scheduled for completion in 2011. No work performed to date. Palisades was revised in

Table 9. DRIs Within the Vicinity of the Project Corridor

Name (Reference Number)	Details	County	Status (updated 2014)
	existing office buildings and parking decks will remain; however, the proposed development will be located in the surface parking areas on the northern part of the property. Access will be provided at two existing locations along Peachtree-Dunwoody Road.		December 2013 to remove all proposed office space (524,000 sf) and add 435 residential units (435,000 sf).
Hammond Center (DRI 1854)	An approximately 7.22-acre redevelopment to include 20,000 sf of restaurant space, 20,000 sf of office space, 50,000 sf of retail space, and 395 apartments along the east side of Peachtree-Dunwoody Road and the south side of Hammond Drive. Currently, there is a 120-room hotel, 90,000 sf of medical office, and restaurant space on the site. The medical office and restaurant space will be demolished.	Fulton	Hammond Center is almost complete. The residential building is up and almost finished. The outparcels are just starting construction.
Lakeside Redevelopment (DRI 1503)	This proposed redevelopment on approximately 26.03 acres located just north of I-285 and west of SR 400 consists of 700,000 sf of office space, 8,000 sf of restaurant space, 520 residential units, and 42,000 sf of commercial space. There is 410,000 sf of existing office space on the site, some of which will be demolished.	Fulton	Originally scheduled for completion in 2011. No work completed to date.
St. Joseph's Medical Office Buildings (DRI N/A)	This development consisted of 630,000 sf of medical office space on the existing MARTA and St. Joseph's Hospital property on Peachtree Dunwoody Road south of I-285.	Fulton	Project is complete.
Glenridge 400 (DRI N/A)	Development of about 770,000 sf of office space and a 225-room hotel on the north side of the Glenridge Connector east of SR 400.	Fulton	No work completed to date.
Perimeter Town Center (DRI 285)	This development includes 650 multi-family dwelling units, 1,500,000 sf office space, 99,482 sf retail space, and 50,518 sf restaurant space. The site includes 22.7 acres of land located on the western side of Perimeter Center Parkway and the northern side of Hammond Drive.	DeKalb	Two large office towers with surrounding surface parking lots were constructed. The other uses have not been completed.
211 Perimeter Center (DRI 366)	An approximately 13.4-acre development on the west side of Perimeter Center Parkway north of Hammond Drive to include 438 multi-family units, a 370,000-sf office building, a 200-room hotel, garage expansion from 833 to 3,087 parking spaces, a 235,000 sf office building, and 6-story parking garage.	DeKalb	Combined with Perimeter Town Center (DRI 285) to form High Street (DRI 1423), with an expected build-out of 2017.
Gables Metropolitan III (DRI 617)	Consists of a 417-unit apartment complex located along Ashford Dunwoody Road, Perimeter Center North, and Meadow Lane. There are access points on Perimeter Center North and on Meadow Lane.	DeKalb	Project is complete.
High Street (DRI 1423)	An approximately 34.84-acre development to include 1,500 apartments, 1,500 condominiums, 325,000 sf of retail space, a 400-room hotel, 75,000 sf of restaurant space, and a net increase of 138,556 sf of office space. The existing 261,444-sf of office space will be demolished. The site will include seven driveways: three existing and one proposed along Perimeter Center Parkway and three proposed along Hammond Drive.	DeKalb	Expected build-out: 2017. No work completed to date.

Table 9. DRIs Within the Vicinity of the Project Corridor

Name (Reference Number)	Details	County	Status (updated 2014)
Terraces (DRI 1495)	An approximately 24.41-acre development to include the addition of 400 high-rise condominiums and 22,600 sf of restaurant space to an existing 1.02 million sf of office space. Development will use eight existing driveways along Perimeter Center Place, Perimeter Center West, and Ashford Dunwoody Road.	DeKalb	Originally scheduled for completion in 2011. No work performed to date.
245 Perimeter Center (DRI 1520)	An approximately 13.04-acre development with 900 residential units, 350,000 sf of office space, 30,000 sf of retail space, 6,000 sf of restaurant space, and a 150-room hotel. There is an existing 237,000-sf office building on the site that will remain.	DeKalb	Now part of the State Farm campus. The future of this development is unknown.
Perimeter Center East (DRI 1533)	An approximately 2.8-acre development to include 330 residential units, a 240-room hotel, 75,000-sf fitness center, and 8,000 sf of restaurant space. Site access currently exists along Perimeter Center East.	DeKalb	Originally scheduled for completion in 2010. No work performed to date.
236 Perimeter (DRI 1582)	An approximately 3.88-acre development to include 600,000 sf of office space, 24,000 sf of retail space, and a 200-room hotel. Proposed access is at the intersection of Hammond Drive and Perimeter Center Parkway SE. Two existing restaurants on the site will be removed.	DeKalb	This DRI is now part of the State Farm campus. Earthwork and demolition has begun and building construction will begin soon. Expected completion in 2015.
100 Northpark (DRI 2334)	Proposed 14.3-acre development includes 1,500,000 sf of office, 150,000 sf of retail, 500 residential units, and 250 hotel rooms. The site is bordered by Abernathy Road, Peachtree Dunwoody Road, Mount Vernon Road, and SR 400.	Fulton	No work completed to date. It is scheduled for completion in 2017.

Direct Effects

Rough calculations based on conceptual plans indicate that approximately 19.41 acres of additional ROW and approximately 8.05 acres of easement would be required for the entire project. Table 10 provides a breakdown of required ROW and easement by land use type. The majority of ROW acquisition on single-family residential properties would be from the far backyards of the homes lining the I-285 corridor.

Table 10. Required ROW and Easements by Land Use Type

Land Use Type	Required ROW (acres)	Required Easement (acres)
Single-family Residential	0.28	0.48
Commercial	0.51	0.20
Multi-family Residential	0.59	0.53
Office	15.43	6.46
Institutional	1.35	0.08
Vacant/Undeveloped	1.25	0.30
TOTAL	19.41	8.05

To minimize the amount of required ROW and to reduce environmental impacts, bridges and various types of retaining walls would be constructed as needed along I-285 and SR 400 throughout the project limits. Several types of retaining walls would be constructed, and may include cantilever walls, gravity walls, L-walls, soil nail, tie-back, and mechanically stabilized earth (MSE) walls. Depending on ROW restrictions, pier walls and other types of small-footprint type walls may be constructed. The exact types and locations of walls will be determined during more detailed engineering in the Design-Build process by the Design-Build Contractor. Walls are currently proposed (based on conceptual design) along the entire project corridor except in the following locations:

- South side of I-285 between Long Island Drive and Lake Forrest Drive;
- East side of SR 400 beginning at Hammond Drive and extending south for approximately 650 feet; and
- East side of SR 400 from the beginning of the project north to the Johnson Ferry Road overpass.

Overall, the proposed project would convert a small amount of private land to road surface, drainage features, and road ROW for the proposed improvements.

Indirect Impacts

According to the local area planners during the ICI workshop held on August 11, 2014, the proposed project is not expected to change land uses in the area because it would not create any new access to I-285 or eliminate any existing access to the interstate. However, the proposed project would support the increases in development/redevelopment density and intensity and increases in property values that are currently being seen in the area. These effects would likely be limited to the area along the I-285 corridor between Mount Vernon Drive to the north and Glenridge Drive/Glenridge Connector to the south (see Figure 8), which includes the Perimeter Mall area.

According to the PCIDs, there is a development momentum occurring within the Perimeter Center area, which started with the construction of the Hammond Drive half-diamond interchange, and continued with the opening of the Ashford Dunwoody Road Diverging Diamond Interchange (DDI). This momentum is increasing with the re-initiation of the area's DRIs. The PCIDs and local planners anticipate that the proposed I-285/SR 400 Interchange Reconstruction project would continue and add to this momentum. The proposed project could accelerate development/redevelopment that is occurring in the area and could promote the completion of planned DRIs in the vicinity; however, the increase in area development is occurring even without the proposed interchange reconstruction project.

In general, development/redevelopment would be limited to areas that are not currently in single-family residential use. None of the affected municipalities foresees rezoning in single-family residential areas, as these are protected areas.

PCIDs noted there are several vacant parcels within the PCIDs boundary, and there is a desire by employers to locate to the Perimeter Center area. However, overall, redevelopment is much more likely than new development as a result of the project. This is due to the overall limited availability of undeveloped land within the immediate vicinity of the project corridor, and the large amount of developed

land with the potential to be reconfigured and/or reused (e.g., large surface parking lots and aging apartment, housing, or office complexes). According to the PCIDs, anything that would lead to an increase in access, a reduction in congestion, or an increase in proximity to other transportation modes would make this area even more attractive to employers. Since the proposed project would reduce congestion and improve traffic flow in and around the area, it would make the area more attractive to businesses, thereby increasing market demand in the Perimeter Center area. In addition, implementation of the proposed project could persuade developers to continue and complete work at existing DRI sites due to both the enhanced mobility provided by the project and the encouragement provided by such a large transportation investment.

In the area around Roswell Road, redevelopment potential exists where there are several older apartment complexes on the south side of I-285, and low-density commercial use on the north side of I-285. These areas would be expected to redevelop into higher-density, mixed-use developments characteristic of a regional activity center and consistent with the Sandy Springs FLUM. In the Perimeter Center area, there is considerable redevelopment potential in areas of existing surface parking lots and older office buildings, as well as the potential for "town center-like" development and residential development.

The proposed project would not have noticeable indirect effects on development potential in the Brookhaven area outside the PCIDs boundary, as this area is entirely in single-family residential use. In addition, the large vacant parcel along the south side of Perimeter Center Parkway is not anticipated to be developed, as this land is in a protective conservation easement.

Any future developments within the project area would require permits from the respective county or municipality in which the development would be located, and in some cases, changes to existing area zoning designations. Land development in the project area is guided by each municipality's comprehensive plan, as well as local zoning and land development ordinances and regulations. The comprehensive planning process considers the beneficial and adverse effects of land development and sets forth development patterns that are conducive to the goals of the affected community. Through zoning regulations, the level of development in a given area can be controlled and open/green space can be protected from further development.

Overall, developed lands may redevelop more intensely with implementation of the proposed project. Since there is already an increase in development intensity and market demand happening in the area, effects on land use are anticipated to be less indirect and more cumulative in nature.

Cumulative Impacts

At the time of the initial construction of I-285 (1960s) and the I-285/SR 400 interchange (which opened in 1971), the surrounding area within Fulton and DeKalb counties was primarily rural farmland with a few scattered residences. No commercial businesses existed along the corridor. Commercial businesses began developing along the I-285 corridor as soon as the interchanges along I-285 opened to traffic. This initial construction of I-285, along with the first widenings, had a substantial impact on land uses within the project area, stimulating a complete transformation of the project corridor from undeveloped, rural land into a densely developed, urban area. Construction of I-285 also led to many people moving outside the City of Atlanta into houses on larger lots outside of the new Perimeter highway.

Over the past five decades, population and development (residential, commercial, and industrial) have substantially increased within Fulton and DeKalb counties. Undeveloped areas along I-285 and SR 400 in the area of the I-285/SR 400 interchange have nearly completely disappeared, and new development is leveling off. However, redevelopment is occurring, and is projected to continue occurring in the area. Continued growth in the area is evidenced by the planned and ongoing DRIs in or near the project area (described in Table 9 above), recent redevelopment of the Prado Shopping Center southwest of the Roswell Road/I-285 interchange, the development of a new ice skating/hockey rink in the southwest quadrant of the Roswell Road/I-285 interchange (which recently began construction), recent townhome development along Glenridge Drive, planned new townhome developments in Sandy Springs along Allen Road and Johnson Ferry Road, ongoing construction of the new State Farm corporate offices on Hammond Drive, ongoing construction of the new Cox Enterprises corporate office on Peachtree Dunwoody Road, implementation of Sandy Springs' City Center Master Plan, and others. There is also an approximately 76-acre property (the Glenridge Hall site) on Abernathy Road, west of SR 400, for sale that will likely be developed once sold. It consists of an approximately 47-acre site on the north side of Abernathy Road and an approximately 39-acre site on the south side of the road, which is currently zoned residential (but other than the Glenridge Hall mansion, is undeveloped). Given its location in the middle of a major commercial district and near the headquarters of the United Parcel Service (UPS) and Newell Rubbermaid, some news articles have speculated this area will undergo a massive rezoning to become a corporate campus (on the north side) and mixed-use development (particularly on the south side).

Several other transportation projects are planned in the vicinity of the proposed project (as described in Section I.D.3, under "Other Projects in the Vicinity"), and include some transit, managed-lane, and operational improvements. In addition to these, MARTA has a planned project (in the scoping phase) to extend a high capacity rail line along SR 400 north from the Perimeter area to Windward Parkway. The larger, programmed, managed-lane projects (including managed lanes along I-285's top end and along SR 400 North), as well as the planned MARTA extension, have the potential to stimulate land use changes and induce development within and well outside the proposed project area (and more on a regional level) through added roadway capacity, increased mobility, increased number of users (increased throughput), and potentially new access (if new managed-lane access points are created).

The proposed I-285/SR 400 Interchange Reconstruction project would contribute to cumulative impacts on land use and development. As described above, the improved traffic flow and reduced congestion from the proposed project is anticipated to further increase development/redevelopment potential and development intensity in the area immediately surrounding the I-285 corridor within the project limits, as well as within a portion of the PCIDs' area. In conjunction with the adjacent SR 400 CD Lanes project, these effects would be expanded geographically to extend north throughout the entire PCIDs' boundary and some points west into Sandy Springs. This includes several currently vacant/undeveloped parcels (including the Glenridge Hall site noted above). The combined effect of the I-285/SR400 Interchange Reconstruction project and the adjacent SR 400 CD Lanes Project would be even further heightened development potential and intensity, as well as potentially accelerated timing of development. As noted above, according to the PCIDs, the Perimeter Center area is experiencing a development momentum, which is increasing with the re-initiation of the area's DRIs. This is also occurring in Sandy Springs, with the implementation of the City Center Master Plan. According to a planner with City of Sandy Springs, the City is already seeing an increase in development activity as a result of changes made under the Master Plan. The PCIDs and local planners anticipate that the proposed I-285/SR 400 Interchange

Reconstruction project, in conjunction with the SR 400 CD Lanes Project, would add to and accelerate this momentum.

These effects would be further compounded by other planned and programmed transportation projects in the area that would add capacity, improve traffic flow, and increase transportation modal choices, such as the I-285 and SR 400 managed-lane projects, additional CD lane construction and operational improvements along I-285 (part of the **revive**285 *top end* project), and the planned MARTA expansion along SR 400 North. However, some of these other projects (including managed-lane construction and transit expansion) are programmed much further into the future (2030-2040); therefore, the cumulative effects of these projects would be felt much further into the future.

Overall, the combined implementation of the proposed project along with the other planned/programmed transportation projects adjacent to the corridor and the completion of planned area DRIs are expected to change development patterns in the vicinity of the project corridor (outside of single-family residential areas) into denser, higher-intensity uses, encouraging "town center" and "community center" type developments throughout the area. Substantially greater development pressure in the Perimeter Center area would be expected, particularly if transit were to expand in this area. The same types of land uses that are currently present (e.g., residential, commercial, institutional, etc.) would continue to be present, but the layout and configuration of developments are anticipated to be different than present developments. However, the changes are anticipated to be consistent with land development goals and visions for the area.

In summary, cumulative impacts on land use and development would occur from implementation of the proposed project in conjunction with other land development and transportation projects in the area. However, given the largely built-out, urban nature of the project area from past development activities, and the fact that other planned projects are anticipated to occur regardless of whether the I-285/SR 400 interchange is reconstructed, the proposed project's contribution to cumulative land use effects is not anticipated to be substantial.

2. Community Cohesion/Community Impacts

Construction activities would have short-term (lasting the duration of construction in a given area), adverse effects on surrounding communities. Construction effects on communities are discussed in Section D.5, *Construction/Utilities*, of this document.

The proposed project would be designed to minimize impacts to residents. Based on conceptual design, no residential relocations would occur as a result of the proposed project. Some small reductions in property size would occur as a result of the proposed project. These impacts would occur along the back sides of the affected properties that abut I-285. Property owners would be compensated for all ROW acquisitions in accordance with the Uniform Relocation Assistance and Real Estate Property Acquisition Policies Act of 1970 and Real Property Acquisition Policies Act of 1970, as amended, and the Georgia Relocation Assistance and Land Acquisition Policy Act.

The proposed project consists of operational improvements along an established transportation corridor and a system interchange. The project would not construct a new roadway through established neighborhoods. The proposed improvements, including any widening, would be located within and

adjacent to the existing interstate ROW, preventing the division of existing communities. None of the proposed improvements would introduce any barriers that would permanently split communities. The proposed project would neither result in the separation of residences from community facilities, nor the separation of neighborhoods from each other.

No major changes in access or meaningful increases in travel distances to any community facilities or activity centers (such as Perimeter Mall) are anticipated as a result of the proposed project. Limited changes in local access along I-285 would occur between Peachtree Dunwoody Road and Ashford Dunwoody Road. As a result of the proposed project, vehicles would no longer be able to use I-285 to get access between these two roads, and would need to use side streets/surface streets to make these trips. There are sufficient existing roads that provide parallel routes to I-285 in close proximity to the interstate (including Lake Hearn Drive/Perimeter Summit Parkway on the south side of I-285 and Hammond Drive on the north side of I-285) and several routes providing north-south access across I-285 (including Peachtree Dunwoody Road, Perimeter Center Parkway, and Ashford Dunwoody Road) that would easily accommodate these local trips. This change in local travel patterns in this area would affect visitor and emergency vehicle access to the hospital complexes (Northside/Emory St. Joseph's/Children's Healthcare of Atlanta) in the southeastern quadrant of the I-285/SR 400 interchange. Local east-west trips between these roads would have to use the surrounding parallel routes (Hammond Drive and Lake Hearn Drive/Perimeter Summit Parkway) for access to and from the hospital complexes. According to PCIDs and the City of Dunwoody, emergency vehicles currently tend to avoid the I-285/SR 400 interchange area, particularly during peak traffic periods. Therefore, this change in access is not anticipated to have an adverse impact on visitors to or emergency vehicles accessing these facilities. The existing access to I-285 from Peachtree Dunwoody Road (where these facilities are located) would be retained.

There would also be a change of access between Glenridge Drive and Roswell Road in the westbound direction as a result of the project. Westbound local trip movements between these roads would no longer be able to use I-285. These trips would need to either use Hammond Drive (which parallels I-285 to the north) or Glenridge Drive (which roughly parallels I-285 to the south) for westbound access between Glenridge Drive and Roswell Road. Traffic studies conducted for the proposed project indicate that there is not a large number of vehicles making this westbound local trip movement (approximately 70 vehicles per hour), so travel conditions are not anticipated to be worsened. In the eastbound direction, Roswell Road traffic could still access Glenridge Drive through the use of the proposed CD lanes along I-285.

Georgia DOT has begun coordinating with the hospitals in the southeast quadrant of the I-285/SR 400 interchange regarding changes in travel patterns and roadway access resulting from the project. Georgia DOT held an initial meeting with Northside Hospital on November 17, 2014 to introduce the proposed design to hospital representatives. During this meeting, hospital representatives expressed concerns over potential lane closures during construction of the project, as well as potential impacts to their operations due to access restrictions between service roads (Peachtree Dunwoody Road, Ashford Dunwoody Road, Glenridge Drive, and Roswell Road) via I-285. As a result of their construction-related concerns, the Georgia DOT would require the Design-Build Contractor to provide local emergency services (including Northside, St. Joseph's, and Children's Healthcare of Atlanta hospitals) a minimum of two weeks advance notice for lane/shoulder closures and/or traffic stage changes planned to be in effect longer than 24 hours, and a minimum of 24 hours advance notice for lane/shoulder closures that are planned to be in effect less than 24 hours. Additional meetings were held with Northside Hospital and Children's Healthcare of Atlanta in March 2015 and with Emory St. Joseph's Hospital in April 2015 to further

discuss the proposed project, access changes, and potential construction-related impacts. Minutes from the meetings held to date are provided in Appendix A.

Georgia DOT also held an initial coordination meeting on February 13, 2015 with representatives of the various emergency services entities (e.g., police, fire and rescue, etc.) serving the local area jurisdictions. The purpose of this meeting was to introduce the current project conceptual design and proposed access changes to these groups, discuss communications protocols during construction, and gather input on their project-related concerns. During this meeting, the following concerns were expressed relating to the I-285/SR 400 Interchange Reconstruction project:

- Concerns about emergency vehicle access onto the proposed barrier-separated CD lanes and new exit ramps.

- Concerns about how to accurately communicate the location of incidents (e.g., mainline lanes vs. CD lanes vs. exit ramps) to dispatched officers and how the public would know their location within the system when calling for assistance. It was requested that Georgia DOT install some type of identifiers along the entire barrier wall that would indicate to the public where they were to minimize confusion when calling for help and responding to those calls.

- Concerns that responding stations would need to change due to the barricading of lanes (since lane barricading cuts off emergency vehicle access), that response times may increase, and that there would be a large overlap area in response areas between Sandy Springs and Dunwoody emergency service jurisdictions.

- Concerns about closure of access routes to hospitals during construction.

Meeting minutes from this meeting are included in Appendix A. During this meeting, the Georgia DOT offered to create a working group consisting of one point of contact from each emergency services group from each jurisdiction that would begin meeting prior to the selection of the Design-Build Contractor to keep communications open and to conduct pre-incident training. Additionally, Georgia DOT is investigating options to add special identifiers or markers to the new barrier-separated CD lanes and ramps to aid in accurately locating and responding to incidents occurring in those lanes. The results of this investigation will be communicated to the emergency services working group and will be part of the pre-incident training that will be conducted. Georgia DOT will continue to coordinate with these local emergency services (i.e., police and fire) and area hospitals throughout the project design to solicit their feedback and any concerns they have regarding the project design and changes in travel patterns and to provide project updates. This coordination will continue throughout the design and construction process.

As discussed in Section D.1, *Noise*, existing noise levels in many residential areas within the project limits along I-285 currently exceed the Federal Highway Administration's (FHWA's) noise abatement criteria (NAC) for residential land use and would continue to experience high traffic noise levels in the future with or without the proposed project. At the Public Information Open Houses (PIOHs) held for the project, concerns about noise levels and the desire for noise abatement were expressed by many area residents. Implementation of the project would increase traffic noise levels at some receivers over No-Build conditions, and would decrease traffic noise levels at other receivers. A total of eight new noise barriers and modification of one existing noise barrier are being considered along I-285 and SR 400

within the project limits (see Figures 19a through 19j in Appendix E), which would mitigate traffic-related noise levels at the majority of residences along the project corridor. Prior to the Georgia DOT's final decision on the placement of any noise abatement, Georgia DOT will conduct outreach with the affected individuals after final design to determine community support for abatement. Due the nature of the Design-Build process, determination of when Final Design has been met will be agreed upon by the Design-Build Contractor and the Georgia DOT Project Manager. All NEPA decisions are the responsibility of Georgia DOT and/or FHWA, and will not be made by the Design-Build Contractor.

In addition, several public comments were submitted at the PIOHs concerning noise and safety (from road debris flying off the road and landing on the property) impacts to the Georgetown Recreation Club, a small, private sports and recreation club containing tennis courts and an outdoor swimming pool located at 1465 Spring House Lane in Atlanta. This facility is open for membership to people living in or near the neighborhoods of Georgetown, Chateau Woods, Village Springs, North Springs, and Heathwood in Dunwoody. The results of the noise analysis conducted for the current conceptual design show that existing traffic-related noise levels at this facility exceed the FHWA's NAC for this land use type, and are expected to approach the NAC for this land use type in the design year (2039) after construction of the project if noise abatement were not constructed in this area. However, noise abatement is being considered in this location, which would reduce the anticipated design year (2039) traffic-related noise level at this facility to below the NAC. This reduction in noise levels would be perceptible to users of the facility. Project-related noise impacts are described in more detail in Section D.1, *Noise*. It should be noted that the noise analysis conducted for the project was based on the current conceptual project design, which is subject to change by the Design-Build Contractor during more detailed project design. As project design changes, anticipated future traffic-related noise levels along the corridor will be reassessed and abatement will be re-visited. Prior to the Georgia DOT's final decision on the placement of any noise abatement, Georgia DOT will conduct outreach with the affected individuals after final design to determine community support for abatement. Due the nature of the Design-Build process, determination of when Final Design has been met will be agreed upon by the Design-Build Contractor and the Georgia DOT Project Manager.

The current preferred project alignment would move the edge of pavement along I-285 approximately 20 feet closer to the Georgetown Recreation Club; this recreation facility would still be located approximately 80 feet from the edge of pavement. Construction of a noise abatement measure, as described above, would provide a buffer or wall between the facility and the interstate, which would minimize the potential for road debris to leave the roadway and pose safety problems at the facility. If noise abatement were not constructed in the vicinity of this facility (if the property owners and club users were to vote against such abatement), another type of roadside barrier, such as a guard rail or concrete barrier, would likely be constructed alongside I-285 in this area to minimize the potential for vehicles and/or debris leaving the roadway. Therefore, no safety impacts on this club are anticipated.

Concerns about visual impacts from the project were also expressed by several area residents during the PIOHs. The proposed project would result in visual impacts at some residences abutting I-285 through the removal of vegetation and the construction of noise abatement measures and retaining walls within the existing and proposed ROW. Removal of trees and other vegetation within the existing and proposed ROW and easement areas would be necessary for project construction. Walls are proposed along the majority of the project corridor to minimize the amount of additional ROW or easement necessary for the project, which would help to minimize vegetation removal. While tree removal in some areas could

expose some homes to more expansive views of the highway, most residential areas would not experience noticeable visual changes from the proposed roadway improvements. This is because there would either still be vegetation remaining on the residential property to serve as a visual buffer between the residence and the interstate or because the existing vegetation is not currently dense enough to visually shield I-285 from the adjacent land use. In such areas, I-285 already is a dominant feature of the landscape, and views from these areas would be similar to what they are today. In addition, in many areas, much of the vegetation within the existing I-285 ROW has already been cleared to such an extent that further clearing would have no discernible impact on the surrounding viewshed.

The construction of noise abatement measures and retaining walls are not expected to substantially affect the existing visual character of the area or obstruct important views. In many areas, these features are already part of the existing visual character of the corridor. Noise abatement construction, where proposed, may actually serve as a shield between residences and the interstate, blocking views of the interstate from residential areas.

Visual impacts from road elevation changes would be limited to the braided ramp locations just east of the Roswell Road interchange and just west of the Ashford Dunwoody Road, as well as to the I-285/ SR 400 interchange area itself. The proposed braided ramp just east of the Roswell Road interchange would be approximately 15 feet higher than the existing elevation of I-285. In this area, the Georgia DOT already owns a wide area of ROW, so the nearest residences (which are apartment buildings) to this proposed braided ramp are several hundred feet from the ramp and separated from the ramp by tall vegetation. While some of this existing vegetation (within existing Georgia DOT ROW) would likely be removed by the project, vegetation within the apartment complex separating the buildings from the interstate would remain and would continue to obscure much of the view to the interstate.

The proposed braided ramp just west of the Ashford Dunwoody Road would be only approximately three feet higher in elevation than the existing ramp in this area, which would barely be visually perceptible. The surrounding land use in this area is commercial; no residential areas would be affected by this elevation change.

The most prominent roadway elevation changes would occur in the I-285/SR 400 interchange area itself, which is surrounded by commercial uses. These commercial areas (offices) already overlook the interchange and have views of the existing interchange. Changes in roadway elevations at the interchange would be visible from these offices, but the proposed roadway improvements would not be considered a new element in the viewshed of these buildings. The closest residential area to the interchange is the Glenridge Forest-Hammond Hills neighborhood, which is located on the north side of I-285, west of SR 400. This neighborhood is separated from the interchange by a commercial development (Lakeside Development), which blocks the visibility of the interchange from this neighborhood.

During early stakeholder meetings and project correspondence, the PCIDs and City of Sandy Springs expressed concerns about aesthetic components of the project, and the desire to have locally preferred aesthetic features (such as landscaping at interchanges and particular retaining and noise wall finishes) included in the project design that are consistent with the “branding” preferred by PCIDs and the surrounding cities. The Georgia DOT is open to including locally preferred aesthetic features into the project design, where feasible. The exact nature of any aesthetic enhancements, including types and locations, would need to be approved through various Georgia DOT offices (such as the Offices of

Design and Maintenance), as well as FHWA. The Georgia DOT and Design-Build Contractor would work with stakeholders, such as the PCIDs, City of Sandy Springs, and other major stakeholders, during project development to incorporate locally preferred aesthetic features, where feasible. This coordination has been initiated (see December 16, 2014 and January 20, 2015 meeting minutes with PCIDs and the cities of Sandy Springs, Dunwoody, and Brookhaven in Appendix A) and will continue to occur throughout project development. Since any aesthetic enhancements to the Georgia DOT standard materials and specifications would add costs to the project, the Georgia DOT would enter into an agreement with the applicable local government to bear the cost of these additions, as appropriate.

In addition, the City of Sandy Springs expressed concerns about the recently constructed landscaping/ gateway project at the I-285/Roswell Road interchange (under an encroachment permit from the Georgia DOT), which may be affected by project implementation. A similar landscaping/gateway project at the I-285/Ashford Dunwoody Road interchange may also be affected by project implementation. The Georgia DOT would adhere to the stipulations included within the approved encroachment permits and maintenance agreements regarding re-landscaping at these interchanges.

Numerous comments relating to pedestrian and bicycle access and connectivity were received at the November 18, 2014 PIOH (held for the adjacent SR 400 CD Lanes Project, Georgia DOT P.I. No. 721850) and at the February 5, 2015 Public Hearing Open House (PHOH) for the proposed project. These included letters and resolutions from several organizations, such as the Sandy Springs Conservancy, PATH Foundation, Georgia Trail Summit, PEDS, Buckhead Community Improvement District, Sandy Springs/Perimeter Chamber of Commerce, Children's Healthcare of Atlanta, Livable Buckhead, Georgia Bikes, and Dunwoody Chamber of Commerce. Many commenters wanted such facilities added to the proposed project, or to have additional ROW included for the construction of a multi-use trail along the interstates.

The proposed project does not eliminate or change any existing bicycle or pedestrian access within the project area. I-285 and SR 400 are urban freeways, where pedestrian and bicycle access is prohibited by policy (Georgia Code §40-6-51, §32-6-113, and §32-6-114). The CD lanes proposed for construction as part of the I-285/SR 400 Interchange Reconstruction project are considered an extension of these urban freeways, and therefore, pedestrian access along these facilities is also prohibited by policy. However, the Georgia DOT is engaged in ongoing coordination with the PCIDs and the cities of Sandy Springs, Dunwoody, and Brookhaven to ensure the proposed I-285/SR 400 Interchange Reconstruction project does not preclude the future construction of bicycle and pedestrian facilities along roads within the project area. As part of these efforts, the Georgia DOT held a coordination meeting with the PCIDs and City of Sandy Springs on January 28, 2015 to discuss bicycle and pedestrian facility accommodations on the proposed project and the adjacent SR 400 CD Lanes Project (Georgia DOT P.I. No. 721850) and consistency with the local governments' adopted plans for these facilities. Minutes from this meeting are provided in Appendix A. The new CD system bridges over Glenridge Drive and Peachtree Dunwoody Road proposed to be constructed as part of the I-285 at SR 400 Interchange Reconstruction project are being designed with a wide enough span to accommodate potential bicycle and/or pedestrian facilities on these roads as part of separate, future projects.

The Georgia DOT would also stipulate in contract documents associated with the Design-Build process that structures constructed as part of the I-285/SR 400 Interchange Reconstruction project will not preclude the potential for future passage by a 12-foot shared-use path facility connecting the southeast

quadrant of the I-285/SR 400 Interchange to the northeast quadrant, within the footprint and proposed ROW of the I-285/SR 400 Interchange Reconstruction project. Several coordination meetings have occurred to date with the surrounding local governments, PCIDs, and the PATH Foundation to discuss their needs for a shared-use path facility traversing the I-285/SR 400 Interchange area, as well as potential alignments for such a facility. As a result of these meetings, it was determined that a 12-foot shared-use path connecting the southeast and northeast quadrants is a priority for the area. Prior to project construction and once an alignment is more fully defined, the Georgia DOT shall conduct environmental studies under NEPA to analyze the impacts of construction of such a shared-use path as part of the I-285/SR 400 Interchange Reconstruction project.

Once the project is completed, the proposed improvements are anticipated to have a beneficial impact on neighborhoods surrounding the interchange area. According to the representatives of Sandy Springs, Dunwoody, and PCIDs, the proposed improvements are anticipated to make the interchange area a more attractive commuting option, which should serve to decrease cut-through traffic in surrounding neighborhoods, thereby increasing quality of life. In addition, beneficial effects on the quality of life are expected from improved access to area and regional jobs, community facilities/activity centers, and residential areas surrounding the interchange area and along I-285 leading up to the interchange.

Indirect Impacts

As discussed in Section III.A.1, *Land Use Changes*, above, the proposed project is anticipated to contribute to the increases in development/redevelopment density and intensity that are already currently underway in the project vicinity. Since development/redevelopment would be limited to areas that are not currently in single-family residential use, no direct impacts on these neighborhoods are anticipated from such development. Because land use trends that have been occurring in the project area (the same types of land use patterns and changes) are expected to continue, such development is also not anticipated to result in new conflicts with existing single-family neighborhoods in the study area. Beneficial, indirect quality-of-life impacts could occur as a result of accelerated or enhanced development/redevelopment due to increases in employment opportunities in the immediate project vicinity and enhanced retail and residential development. However, older apartment complex communities in the area (primarily south of I-285 in the vicinity of the Roswell Road interchange) may be negatively affected by area redevelopment, as these areas may be targeted for redevelopment. As noted above, area development/redevelopment is occurring with or without the proposed project; the proposed project would just add to the development momentum that is already occurring and could accelerate the timing of some developments.

According to the local planners during the ICI workshop, the proposed improvements at and approaching the I-285/SR 400 interchange are expected to change commuting patterns in the area. A decrease in neighborhood cut-through traffic is expected as a result of the project. This is anticipated to have a beneficial, indirect, quality-of-life effect on some single-family neighborhoods in the area.

Cumulative Impacts

The initial construction of I-285 in the 1960s impacted some neighborhoods, and resulted in the separation of some communities from one another, as well as from community facilities. The improvements proposed as part of the I-285/SR 400 Interchange Reconstruction project are not anticipated to displace any residences, separate neighborhoods from each other or from community

facilities, or disrupt community cohesion. Therefore, cumulative impacts on communities from project-related displacements are not expected.

Cumulative changes to viewsheds would occur to some residences as a result of the proposed project in conjunction with other planned or programmed projects. Other transportation projects along the I-285 and SR 400 corridors could result in additional vegetation removal or changes to the roadway elevations, making some roadway features more visible from some residential communities along the corridors. Area development/redevelopment projects could also cumulatively affect the visual character of redeveloped areas and viewsheds, as development densities are typically increased (with taller buildings). However, redeveloped areas could beneficially affect area viewsheds, in the event that the redevelopment is more aesthetically pleasing or replaces aging buildings. Overall, the proposed project is anticipated to contribute only a small amount to cumulative visual quality changes.

Beneficial, cumulative, quality-of-life impacts are expected to result from the proposed project, in conjunction with other projects and activities occurring in the area. Other past, ongoing, and reasonably foreseeable future transportation projects in the surrounding area would improve motorist safety and mobility, as well as access to area residences, jobs, and shopping and recreational destinations. Other development projects (such as DRIs) would increase the availability of and choices for retail and service-related businesses, leisure activities, and employment and positively affect quality of life. Combined with the beneficial direct and indirect quality-of-life impacts expected to result from the proposed project, overall beneficial cumulative impacts are expected.

However, increased development/redevelopment could also increase vehicular traffic in the vicinity of neighborhoods surrounding new developments, or could make it more difficult for residents in those neighborhoods to access their usual destinations (e.g., area service and retail businesses, community facilities, etc.). In addition, some potential future developments or redevelopment projects themselves may generate public controversy, particularly within surrounding neighborhoods, if residents are not supportive of land use changes or intensification of existing land uses in the vicinity of their homes.

3. Relocations

The current preferred project alignment was designed to minimize impacts to residents and businesses to the fullest extent possible. The majority of the proposed project is located within the existing ROW of I-285 and SR 400. Required ROW has been minimized through the use of walls along the majority of the project corridor.

Cost to Cure – An adjustment to the value of an affected property for the dollar amount it would cost to restore the property to its original (pre-impacted) state.

The impact of the proposed project on residential and commercial properties has been assessed through a Conceptual Stage Study, which is provided in Appendix D. The proposed project would displace one corporate owner-occupied building, which provides approximately 45,962 square feet of medical office space (general offices for hospital food service) and employs approximately 125 to 150 people. Additionally, the proposed project would displace/impact a parking deck and surface parking servicing two multi-tenant buildings, known as the Pavilion at Lake Hearn. The two buildings contain approximately 352,876 square feet of office/medical space and house approximately 26 tenants. It is anticipated that a cost-to-cure study would be

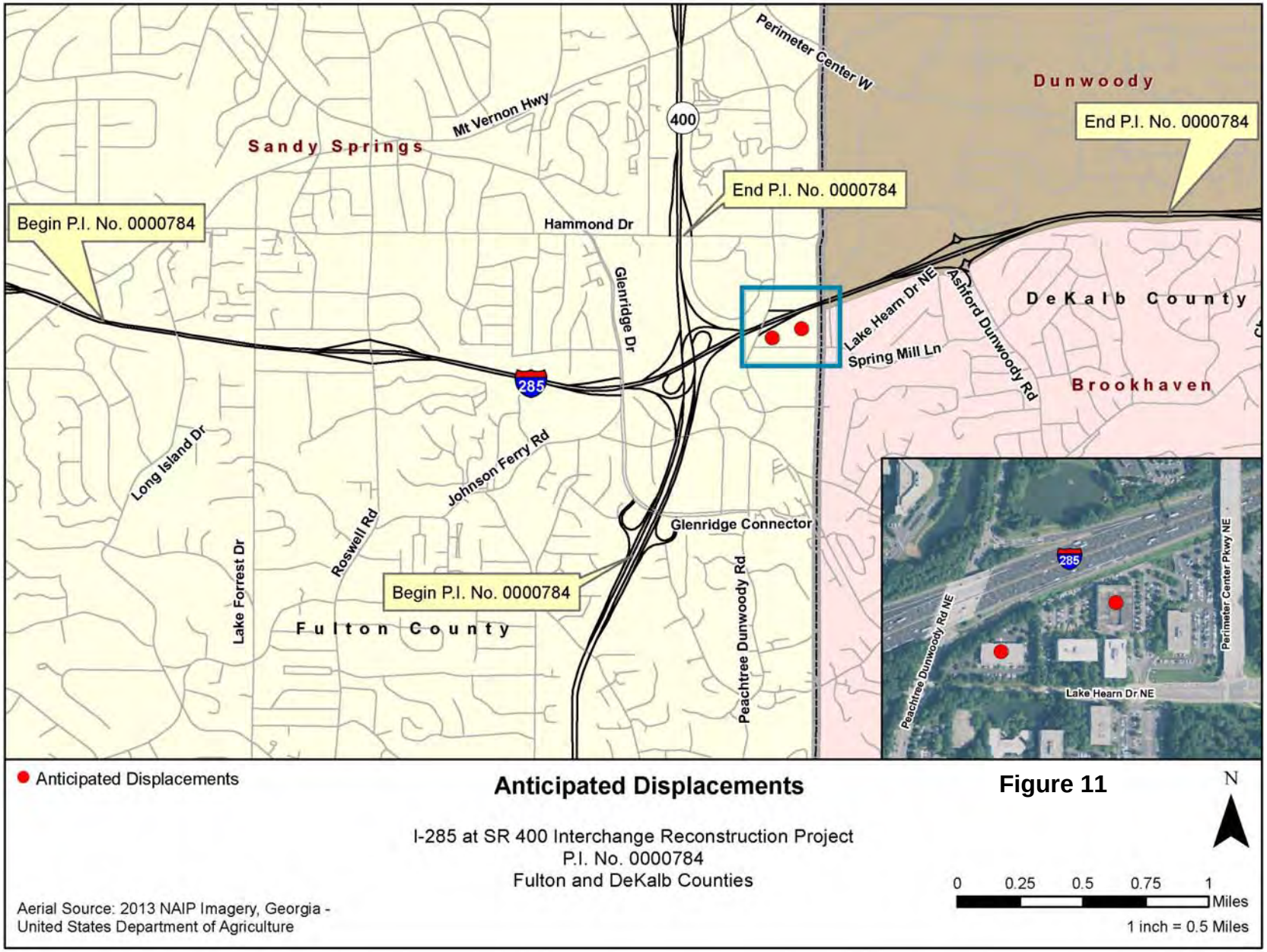
implemented to mitigate the displacement of the occupants of this complex, such that the parking deck could be redesigned and reconstructed on the remainder of the property. However, if an effective cost-to-cure cannot be implemented, then the occupants of these buildings would become consequential displacements. No residential displacements are anticipated with this project. Figure 11 shows the anticipated relocations resulting from the proposed project.

A market search was conducted in the Central Perimeter Submarket to determine the availability of replacement office and medical office space in the area. Twenty-two (22) multi-tenant buildings were identified that had an availability of over 937,803 square feet of Class A Office and Office/Medical space. Therefore, there is sufficient space in and around the project area to provide replacement space for the displaced business, as well as the potential consequential displacement (if a cost to cure cannot be effectively undertaken).

All property acquisition and relocations would be conducted in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 United States Code [USC] 4601 et seq. and 49 CFR Part 24 and 23 CFR Part 710) and the Georgia Relocation Assistance and Land Acquisition Policy Act (Title 22 Official Code of Georgia Annotated [OCGA] Chapter 4). The Uniform Relocation Assistance and Real Property Acquisition Policies Act requires that relocation and advisory assistance be provided to all eligible individuals and businesses displaced by a proposed transportation project. Comparable housing that is decent, safe, and sanitary must be available for displaced persons. The Act requires non-discriminatory policies and actions with regard to appraisals and acquisitions of properties. Property owners would be paid fair market value for acquired property and/or damages to the property.

The Georgia DOT Relocation Program provides for assistance to families or individuals in finding and relocating to decent, safe, and sanitary housing which is adequate to meet their needs and within their financial means. The Department would provide assistance to businesses, farm operators, and nonprofit organizations in relocating to other quarters. This assistance is provided to families, individuals, businesses, farms, and nonprofit organizations in the form of moving expenses in order for them to relocate. In addition, owner or tenant occupants of residential housing being displaced would be provided financial assistance for increased costs they may encounter in buying or renting. Owner-occupants may also be provided financial assistance for certain other incidental expenses, such as closing costs and increased interest payments required in their purchase of a replacement home.

In the event there are no replacement sites available at the time of acquisition, or if relocation is not within their financial means, businesses may qualify for “in lieu of” payments. An “in lieu of” payment is defined as a payment to be made to a business that (1) cannot be relocated without a substantial loss of its existing patronage, and (2) is not a part of a commercial enterprise having more than three similar establishments not being acquired by the Department. “Existing Patronage” is the average net annual earnings or clientele of the business during the two taxable years immediately preceding the taxable year in which the business is displaced. Any such payment determined would not be less than $1,000.00 or more than $40,000.00.


Perimeter Center W
Dunwoody
End P.I. No. 0000784
Mt Vernon Hwy
Sandy Springs
400
End P.I. No. 0000784
Begin P.I. No. 0000784
Hammond Dr
Glenridge Dr
Lake Hearn Dr NE
Ashford Dunwoody Rd
DeKalb County
Spring Mill Ln
285
Brookhaven
Long Island Dr
Johnson Ferry Rd
Glenridge Connector
Roswell Rd
Lake Forrest Dr
Begin P.I. No. 0000784
Fulton County
Peachtree Dunwoody Rd
Peachtree Dunwoody Rd NE
Perimeter Center Pkwy NE
Lake Hearn Dr NE
Anticipated Displacements
Anticipated Displacements
Figure 11
I-285 at SR 400 Interchange Reconstruction Project
P.I. No. 0000784
Fulton and DeKalb Counties
N
0 0.25 0.5 0.75 1
Miles
1 inch = 0.5 Miles
Aerial Source: 2013 NAIP Imagery, Georgia -
United States Department of Agriculture

Based on the foregoing information, the Georgia DOT can assure that all relocatees would be offered decent, safe, and sanitary housing, within their financial means, and a list of available and comparable housing furnished to all displacements attached with the notice to vacate as well as the notice of availability. Within a reasonable period of time prior to displacement, a comparable replacement dwelling will be available or provided for displaced individuals and families who are initial occupants or adequate replacement dwelling will be available or provided for subsequent occupants. The State Relocation Program is realistic and is adequate to provide orderly, timely, and efficient relocation of displaced persons.

4. Churches, Cemeteries, and Institutions

Institutions include religious institutions, educational facilities, hospitals, and cemeteries, as well as any public services provided by local government agencies and institutions, such as fire and rescue and public safety. While many parks and recreation areas are also considered public facilities, impacts to these types of facilities are described separately in Section III.B.4., *Parklands/Recreation Areas/Wildlife Refuges*, below.

Three schools, two religious facilities, one police headquarters, and a large medical complex consisting of four hospitals, are located within the vicinity of the project area and are shown in Figure 12. In addition, the Donnellan School recently acquired three tracts of land on the east side of Long Island Drive, south of I-285. Two of these tracts are currently undeveloped/wooded, and one is in single-family residential use. Currently, no plans have been submitted to City of Sandy Springs for development of these parcels.

Because public institutions are often so varied in function and services provided, the analysis of impacts to them focuses on the specific needs of the various affected facilities. Potential impacts may occur on their location or affect their operation. Impacts such as changes in access to the facility or changes to travel patterns in the vicinity, loss of parking, loss of functional land or changes in use of their land, and noise impacts were analyzed for each affected facility based on the current conceptual design and are summarized in Table 11.

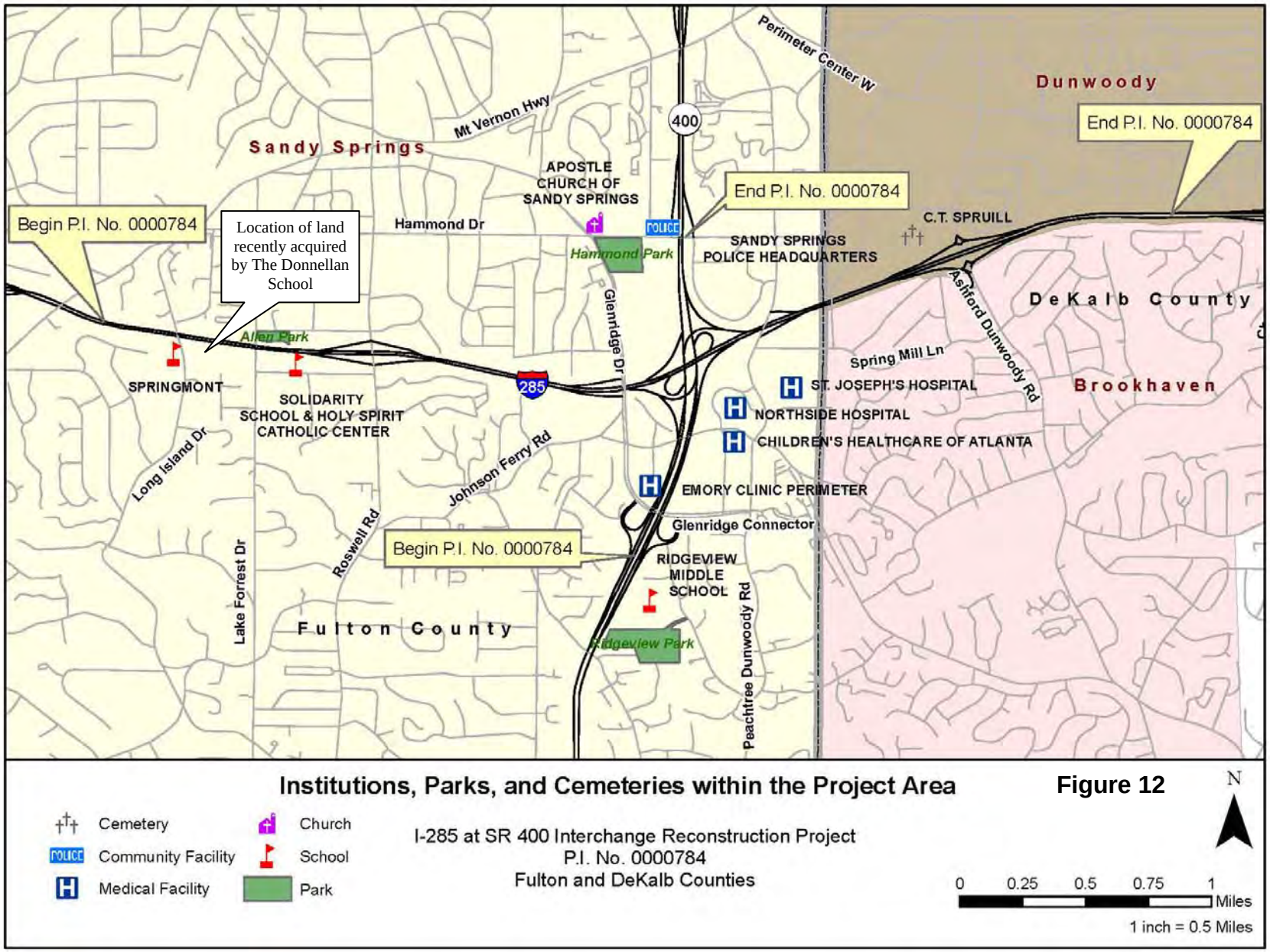

Perimeter Center W
Dunwoody
End P.I. No. 0000784
Mt Vernon Hwy
Sandy Springs
400
APOSTLE CHURCH OF SANDY SPRINGS
End P.I. No. 0000784
Begin P.I. No. 0000784
Location of land recently acquired by The Donnellan School
Hammond Dr
POLICE
Hammond Park
SANDY SPRINGS POLICE HEADQUARTERS
C.T. SPRUILL
Ashford Dunwoody Rd
DeKalb County
Glenridge Dr
Allen Park
Spring Mill Ln
ST. JOSEPH'S HOSPITAL
Brookhaven
SPRINGMONT
285
SOLIDARITY SCHOOL & HOLY SPIRIT CATHOLIC CENTER
NORTHSIDE HOSPITAL
CHILDREN'S HEALTHCARE OF ATLANTA
Long Island Dr
Johnson Ferry Rd
EMORY CLINIC PERIMETER
Glenridge Connector
Roswell Rd
Begin P.I. No. 0000784
RIDGEVIEW MIDDLE SCHOOL
Lake Forrest Dr
Fulton County
Ridgeview Park
Peachtree Dunwoody Rd
Institutions, Parks, and Cemeteries within the Project Area
Figure 12
N
Cemetery
Church
Community Facility
School
Medical Facility
Park
I-285 at SR 400 Interchange Reconstruction Project
P.I. No. 0000784
Fulton and DeKalb Counties
0 0.25 0.5 0.75 1
Miles
1 inch = 0.5 Miles

Table 11. Institutions in the Project Area and Project Impacts to Them

Institution Name	Location	Anticipated Project Impacts
Springmont (formerly the First Montessori School of Atlanta) (serves children ages 2.5 to 15 years)	5750 Long Island Drive NW, Atlanta	No impacts to the school building, parking area, or playground/ball court area would occur. No changes in access to this facility would occur. Because construction may occur in close proximity to the school property, the Georgia DOT would require the Design-Build Contractor to coordinate with the school on any necessary timing restrictions for construction within 500 feet of the school to ensure minimal impacts to special events at the school (such as standardized testing periods, outdoor events, celebratory events, etc.). Based on current preferred conceptual design, this facility would experience traffic-related noise levels that exceed FHWA's NAC for this land use type in the design year (2039) under Build conditions. While noise abatement[1] is being considered along I-285 in this area as part of the project, which would reduce traffic-related noise at this school, this facility would still experience traffic-related noise levels that exceed the NAC in the design year under the Build condition, partly because I-285 is elevated (on structure) over Long Island Drive in this area and partly due to the contribution of traffic on Long Island Drive to noise levels at this facility.
The Donnellan School Property	East side of Long Island Drive, south of I-285	Approximately 0.32 acres of ROW would be required from this property adjacent to I-285; however, this area is currently vacant/ undeveloped and wooded.
The Solidarity School (Catholic school serving children ages 4 to 8 years)	120 Northwood Drive, Atlanta	No ROW or easements would be required from this property; however, I-285 would move approximately 22 feet closer to this property within existing ROW. No changes in access to this facility would occur. Based on current preferred conceptual design, this facility would experience traffic-related noise levels that exceed FHWA's NAC for this land use type in the design year (2039) under Build conditions. However, noise abatement[1] is being considered along I-285 in this area, which would reduce traffic-related noise at this school to an acceptable level.
Holy Spirit Catholic Center	120 Northwood Drive, Atlanta (same building as the Solidarity School discussed above)	No ROW or easements would be required from this property; however, I-285 would move approximately 22 feet closer to this property within existing ROW. No changes in access to this facility would occur. Based on current preferred conceptual design, this facility would experience traffic-related noise levels that exceed the NAC for this land use type in the design year (2039) under Build conditions. However, noise abatement[1] is being considered along I-285 in this area, which would reduce traffic-related noise at this school to an acceptable level.
Apostles Church of Sandy Springs	6025 Glenridge Drive NE, Atlanta	No impacts.
Sandy Springs Police Headquarters	5995 Barfield Road, Sandy Springs	No impacts.
Northside Hospital complex	1000 Johnson Ferry Road, Atlanta (main building)	Approximately 0.03 acre of ROW and 0.08 acre of construction easement required from undeveloped rear portion of property. No impacts to structures, parking, or other developed features of the property would occur. Local access on I-285 between Peachtree Dunwoody Road and Ashford Dunwoody Road would be eliminated, as described in the paragraphs following this table. No traffic-related noise impacts anticipated from the project.

Table 11. Institutions in the Project Area and Project Impacts to Them

Institution Name	Location	Anticipated Project Impacts
Saint Joseph's Hospital complex	5665 Peachtree Dunwoody Road, Atlanta	No ROW impacts. Local access on I-285 between Peachtree Dunwoody Road and Ashford Dunwoody Road would be eliminated. No traffic-related noise impacts anticipated from the project.
The Children's Healthcare of Atlanta complex at Scottish Rite	1001 Johnson Ferry Road NE, Atlanta	No ROW impacts. Local access on I-285 between Peachtree Dunwoody Road and Ashford Dunwoody Road would be eliminated. No traffic-related noise impacts anticipated from the project.
Emory Clinic at Perimeter	875 Johnson Ferry Road, Atlanta	No ROW impacts. Local access on I-285 between Peachtree Dunwoody Road and Ashford Dunwoody Road would be eliminated. No traffic-related noise impacts anticipated from the project.
Ridgeview Charter Middle School	5340 South Trimble Road, Sandy Springs	No impacts.

[1] Prior to the Georgia DOT's final decision on the placement of any noise abatement, Georgia DOT will conduct outreach with the affected individuals after final design to determine community support for abatement. Due the nature of the Design-Build process, determination of when Final Design has been met will be agreed upon by the Design-Build Contractor and the Georgia DOT Project Manager. All NEPA decisions are the responsibility of Georgia DOT and/or FHWA, and will not be made by the Design-Build Contractor.

Local access between Peachtree Dunwoody Road and Ashford Dunwoody Road would no longer be provided along I-285 as a result of the proposed project, which would affect visitor and emergency vehicle access to the hospital complexes in the southeastern quadrant of the I-285/SR 400 interchange. Local east-west trips between these roads would have to use the surrounding parallel routes (Hammond Drive on the north side of I-285 and Lake Hearn Drive/Perimeter Summit Parkway on the south side of I-285) for access to and from the hospital complexes. This change in local access is not expected to have a major effect on operations at the hospitals. According to PCIDs and the City of Dunwoody, emergency vehicles usually avoid the I-285/SR 400 interchange area anyway, particularly during peak traffic periods. Surrounding routes, including the Perimeter Center Parkway bridge over I-285, which connects Hammond Drive and Lake Hearn Drive/Perimeter Summit Parkway approximately midway between Peachtree Dunwoody Road and Ashford Dunwoody Road, provide sufficient access to and from the hospitals in this area. As described in Section A.2, *Community Impacts*, above, Georgia DOT has begun coordinating with these hospitals on the project, and will continue to coordinate with them and other local emergency services (i.e., police and fire) throughout the project design regarding changes in travel patterns and roadway access resulting from the project. Up-to-date information resulting from these coordination efforts will be provided in the Final EA. However, this coordination will continue throughout the design and construction process.

One cemetery, a small family cemetery, is located within the study area between existing I-285 and Hammond Drive (see Figure 12). This cemetery is located just west of the existing Ashford Dunwoody Road/I-285 interchange, approximately 500 feet north of existing I-285 and approximately 450 to 500 feet from the I-285 entrance ramp. The cemetery is called the C.T. Spruill Cemetery, although it is not officially recorded in the DeKalb County cemetery database. The Spruills owned a large farm that once encompassed most of the Perimeter Center area. Currently, a large modern building and a wooded area separate the cemetery from existing I-285. No impacts to this cemetery would occur from the project.

Indirect Impacts

Indirect impacts on public facilities and institutions are not expected from the project. While development/redevelopment activities that are intensified by implementation of the project could encroach on some public facilities and institutions within the project vicinity, these facilities are anticipated to continue to operate as public facilities and institutions. Redevelopment of any facilities currently in public use is not expected, and the project would not induce any such redevelopment. In addition, many public facilities and institutions within the project vicinity, particularly schools and religious facilities, are located within single-family residential areas, which are expected to be protected from redevelopment pressure.

Cumulative Impacts

The proposed project is not anticipated to contribute to any adverse cumulative impacts on public facilities and institutions. Other reasonably foreseeable future transportation projects in the vicinity would improve access to some public facilities and institutions; the proposed project would add to these beneficial access effects.

5. Environmental Justice and Protection of Children

Analysis of Environmental Justice in relation to federally funded transportation projects is mandated by Title VI of the Civil Rights Act of 1964, NEPA, Federal-aid Highway Act of 1970 (23 United States Code [U.S.C.] 109[h]), Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority and Low Income Populations), USDOT's Order to "Address Environmental Justice in Minority Populations and Low-Income Populations" (DOT Order 5610.2), and FHWA's Order 6640.23A "FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (June 14, 2012). Under Title VI, "each federal agency is required to ensure that no person, on the ground of race, color, or national origin, is excluded from participation in, denied the benefits of, or subjected to discrimination under any program or activity receiving federal financial assistance." Executive Order 12898 mandates that "each federal agency identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

According to FHWA Order 6640.23A, minority means a person who is Black, Hispanic or Latino, Asian American, American Indian, Alaskan Native, Native Hawaiian, or other Pacific Islander. It further defines a person having low-income as a person whose household income is at or below the United States Department of Health and Human Services poverty guidelines (66 FR 17083, Mar. 29, 2001). Minority or low-income communities are groups of minority or low-income persons who live in reasonably close proximity to one another. In addition, CEQ's Environmental Justice Guidance further defines minority populations as occurring where either 1) the minority population of the affected area exceeds 50 percent or 2) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. Minority populations within the study area were identified where the percentage of minority persons in the affected Census block group is 50 percent or greater, or is meaningfully greater than the general population (based on comparisons with the Census tract and county within which the block group is located). Low-income and LEP populations were identified where the percentage of low-income or

LEP populations in the affected Census block group is meaningfully greater than the general population (based on Census block group demographic data and comparisons with the Census tract and county in which the block group is located). Whether a minority or low-income population was considered "meaningfully greater" than the general population was defined differently based on the professional judgment and experience, as follows.

- Because of the high percentage of minority persons in each project area county, smaller clusters of minority populations might be overlooked if percentages of minority persons in a Census block group were only compared to those for the County as a whole. Therefore, "meaningfully greater" for minority populations was defined where the Census block group has a minority population that is approximately double (or more) than that for the Census tract in which it is located (or where the Census tract has a minority population that is approximately double (or more) than that for the county in which it is located). The exception to this is where the minority population is less than five percent of the population. Minority populations were reviewed on a race-by-race basis, as well as overall (all races together).

- For low-income populations, an area was determined to have a "meaningfully greater" low-income population if the percentage of persons with income below the poverty threshold was greater than that for the county in which the area is located and/or the State of Georgia as a whole.

To verify collected data, windshield surveys of the affected communities and consultation with local officials were conducted.

Limited English Proficient (LEP) populations are also addressed under Environmental Justice. Individuals who do not speak English as their primary language and who have a limited ability to read, speak, write, or understand English can be limited English proficient, or LEP. Executive Order 13166 requires federally assisted programs to identify any need for services to those persons with LEP, and develop and implement a plan to provide services to LEP persons. Executive Order 13166 has a two-fold purpose. First, it provides enforcement and implementation of an existing obligation under Title VI of the Civil Rights Act of 1964, which prohibits recipients of federal financial assistance from discriminating based on national origins by failing to provide meaningful access to LEP individuals. Secondly, Executive Order 13166 sets forth a new obligation, which requires that all federal agencies meet the same standards as federal financial assistance recipients, to provide meaningful access to LEP individuals to federally conducted programs. Additionally, like Executive Order 12898, each federal agency must develop a plan to provide this access. Meaningful access can include availability of vital documents, printed and internet-based information in one or more languages depending on the location of the project, and translation services during public meetings. LEP populations were identified where greater than five percent of the households in a geographic area has no one age 14 or older that speaks English only or speaks English "very well."

The most recent available U.S. Census Bureau's Census and American Community Survey data were used for the Environmental Justice analysis. Since door-to-door surveys and interviews of the potentially affected communities have not been conducted for this project, data from the 2010 U.S. Census and American Community Survey at the county, tract, and block group levels provide the most reliable, comprehensive information on the population and income characteristics in the area. However, as shown

in Figure 13, the geographic boundaries of the Census block groups are larger than the proposed project corridor (and in some cases, extend well outside the corridor or include only a very small portion of the project corridor). Therefore, Census data at the block group level includes not only data for residences along the project corridor, but also data averaged for residences within the entire block group for the area.

In addition to U.S. Census data, coordination with ARC regarding their Equitable Target Area (ETA) index was conducted (see Appendix A). ARC's ETA index is a social equity indicator, which aims to identify concentrations of environmental justice communities based on the regional averages of five parameters (senior population, low education attainment, housing values, poverty, and the distribution of minorities). Areas that scored higher than the index's regional average were determined to be ETA communities, and were subsequently categorized into three levels of concentration: Medium ETA, High ETA and Very High ETA. According to Patrick Hall, Senior Planner with ARC, no ETAs are located within the project study area.

Portions of 9 census tracts and 15 census block groups (Census 2010) have lands that include a portion of the project corridor. Of these, 6 tracts (and 11 block groups) are in Fulton County and 3 tracts (and 4 block groups) are in DeKalb County (see Figure 13). Minority, low-income, and LEP populations within the study area are described individually below, followed by the anticipated project effects on these environmental justice populations.

Minority Populations

Table 12 provides U.S. Census 2010 data on minority persons for the State of Georgia, the two counties with lands within the project corridor, and the 2010 Census tracts and block groups containing a portion of the project corridor. Shading in the table indicates areas where the minority population exceeds 50 percent or where the minority population is meaningfully greater than the general population, as defined above.

As shown in Table 12, both Fulton County and DeKalb County have a higher minority population than that of the state of Georgia. In addition, several Census block groups containing a portion of the project area contain minority populations that are meaningfully higher than the county or Census tract in which the block group is located and/or greater than 50 percent.

In Fulton County, minority populations are concentrated on the north side of I-285 between Roswell Road and SR 400 and on the south side of I-285 surrounding the Roswell Road interchange and east of that interchange. Both sides of Roswell Road in this area have high percentages of persons identifying themselves as Hispanic. One Hispanic community was identified in the southwest quadrant of the I-285/Roswell Road interchange along Northwood Drive, where there are several businesses and a combined school/church/community center that provides services for the Hispanic population in the area. The businesses serving this population include a Hispanic grocery, restaurant, music/video store, coin laundry, and communication store. The Solidarity School is located here, and is geared to the education of Hispanic preschoolers. The Holy Spirit Catholic Center is in the same location as the school, and provides church and social services to the area's Hispanic population. Many members of this Hispanic population likely live in the surrounding apartment complexes in the vicinity of Northwood Drive.

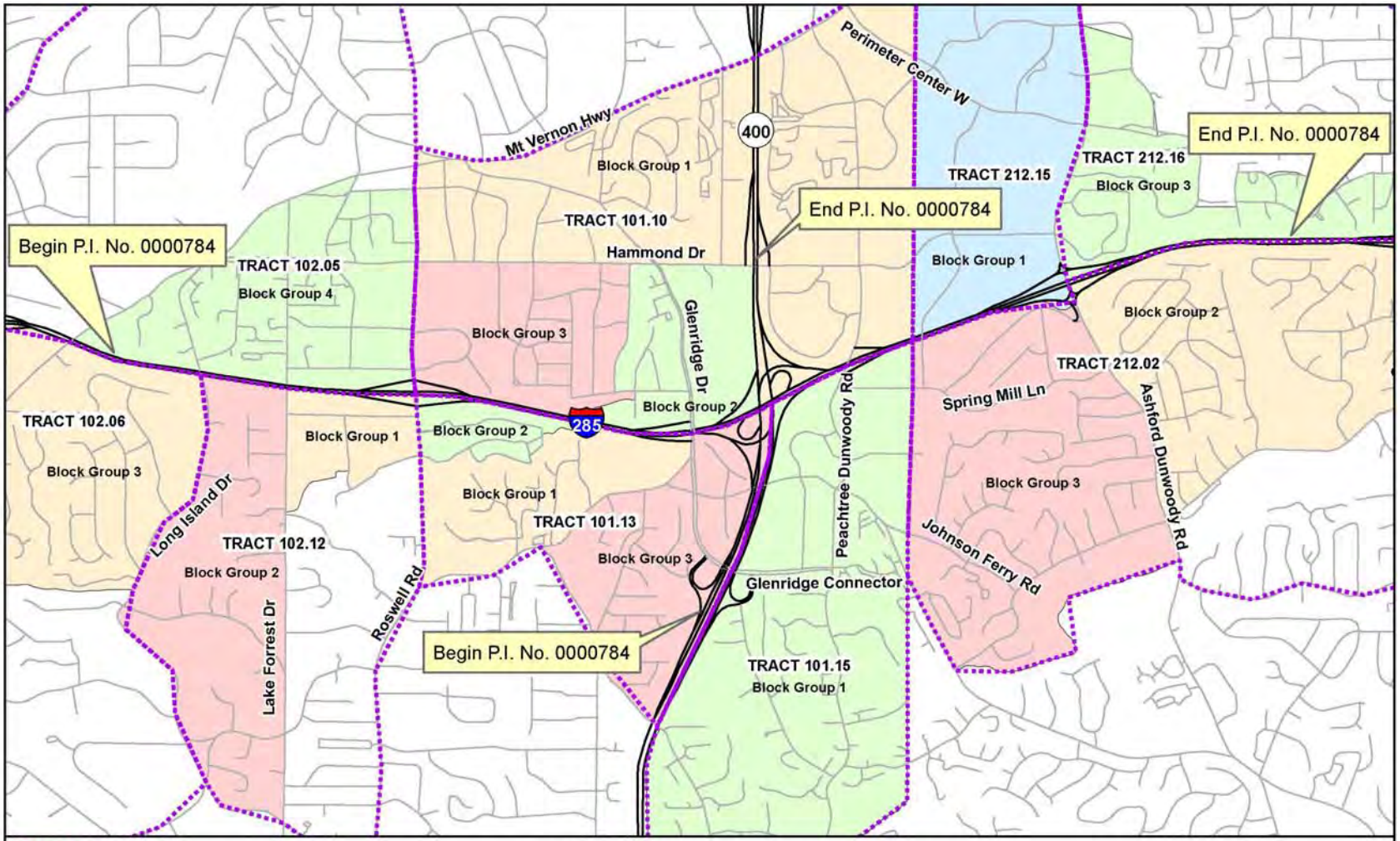

Perimeter Center W
Mt Vernon Hwy
400
End P.I. No. 0000784
TRACT 212.16
Block Group 3
TRACT 212.15
Block Group 1
End P.I. No. 0000784
TRACT 101.10
Hammond Dr
Begin P.I. No. 0000784
TRACT 102.05
Block Group 4
Block Group 3
Glenridge Dr
Block Group 1
Block Group 2
Block Group 2
TRACT 212.02
Spring Mill Ln
Ashford Dunwoody Rd
Peachtree Dunwoody Rd
285
TRACT 102.06
Block Group 3
Block Group 1
Block Group 2
Block Group 1
TRACT 101.13
Block Group 3
Long Island Dr
TRACT 102.12
Block Group 2
Lake Forrest Dr
Roswell Rd
Glenridge Connector
Johnson Ferry Rd
Begin P.I. No. 0000784
TRACT 101.15
Block Group 1
2010 Census Tract Boundaries
Note: Coloring is used only to differentiate adjacent census block group boundaries within the proposed project limits.
Source: 2010 Decennial Census Data - United States Census Bureau
2010 Census Tract/Block Group Map
I-285 at SR 400 Interchange Reconstruction Project
P.I. No. 0000784
Fulton and DeKalb Counties
Figure 13
N
0 0.25 0.5 0.75 1
Miles
1 inch = 0.5 Miles

Table 12. Population by Race within the Study Area

Geographic Area	Total	Not Hispanic or Latino														Hispanic or Latino		Total % Minority
		White Alone		Black or African American Alone		American Indian and Alaska Native alone		Asian Alone		Native Hawaiian and Other Pacific Islander alone		Some other race alone		Two or more races				
		No. of people	%	No. of people	%	No. of people	%	No. of people	%	No. of people	%	No. of people	%	No. of people	%	No. of people	%	
State of Georgia	9,687,653	5,413,920	55.9%	2,910,800	30.1%	21,279	0.2%	311,692	3.2%	5.152	0.1%	19,141	0.2%	151,980	1.6%	853,689	8.8%	44.1%
Fulton County	**920,581**	**376,014**	**40.9%**	**400,457**	**43.5%**	**1,586**	**0.2%**	**51,304**	**5.6%**	**287**	**0.03%**	**2,582**	**0.3%**	**15,785**	**1.7%**	**72,566**	**7.9%**	**59.2%**
Census Tract 101.10	5,022	3,343	66.6%	643	12.8%	17	0.3%	324	6.5%	0	0.0%	19	0.4%	102	2.0%	574	11.4%	33.4%
Block Group 1	2,404	1,772	73.7%	282	11.7%	7	0.3%	172	7.2%	0	0.0%	4	0.2%	44	1.8%	123	5.1%	26.3%
Block Group 2	1,111	604	54.4%	265	23.9%	0	0.0%	116	10.4%	0	0.0%	4	0.4%	34	3.1%	88	7.9%	45.6%
Block Group 3	1,507	967	64.2%	96	6.4%	10	0.7%	36	2.4%	0	0.0%	11	0.7%	24	1.6%	363	24.1%	35.8%
Census Tract 101.13	5,439	2,003	36.8%	1,315	24.2%	8	0.2%	248	4.6%	2	0.04%	24	0.4%	105	1.9%	1,734	31.9%	63.2%
Block Group 1	1,467	804	54.8%	287	19.6%	2	0.1%	107	7.3%	0	0.0%	8	0.6%	29	2.0%	230	15.7%	45.2%
Block Group 2	2,526	307	12.2%	690	27.3%	1	0.0%	76	3.0%	2	0.1%	7	0.3%	43	1.7%	1,400	55.4%	87.9%
Block Group 3	1,446	892	61.7%	338	23.4%	5	0.4%	65	4.5%	0	0.0%	9	0.6%	33	2.3%	104	7.2%	38.3%
Census Tract 101.15	2,546	2,061	81.0%	211	8.3%	4	0.2%	132	5.2%	3	0.1%	2	0.1%	33	1.3%	100	3.9%	19.1%
Block Group 1	2,546	2,061	81.0%	211	8.3%	4	0.2%	132	5.2%	3	0.1%	2	0.1%	33	1.3%	100	3.9%	19.1%
Census Tract 102.05	4,907	3,882	79.1%	276	5.6%	8	0.2%	210	4.3%	2	0.04%	11	0.2%	75	1.5%	443	9.0%	20.9%
Block Group 4	1,140	950	83.3%	65	5.7%	0	0.0%	68	6.0%	1	0.1%	0	0.0%	19	1.7%	37	3.3%	16.7%
Census Tract 102.06	4,977	4,480	90.0%	158	3.2%	4	0.1%	128	2.6%	4	0.1%	14	0.3%	43	0.9%	146	2.9%	10.0%
Block Group 3	1,297	1,160	89.4%	33	2.5%	0	0.0%	43	3.3%	0	0.0%	7	0.5%	16	1.2%	38	2.9%	10.6%
Census Tract 102.12	5,440	2,132	39.2%	449	8.3%	2	0.0%	143	2.6%	5	0.1%	18	0.3%	80	1.5%	2,611	48.0%	60.8%
Block Group 1	2,687	364	13.6%	124	4.6%	0	0.0%	41	1.5%	5	0.2%	10	0.4%	25	0.9%	2,118	78.8%	86.5%
Block Group 2	672	559	83.2%	36	5.4%	0	0.0%	36	5.4%	0	0.0%	0	0.0%	16	2.4%	25	3.7%	16.8%

Table 12. Population by Race within the Study Area

Geographic Area	Total	Not Hispanic or Latino														Hispanic or Latino		Total % Minority
		White Alone		Black or African American Alone		American Indian and Alaska Native alone		Asian Alone		Native Hawaiian and Other Pacific Islander alone		Some other race alone		Two or more races				
		No. of people	%	No. of people	%	No. of people	%	No. of people	%	No. of people	%	No. of people	%	No. of people	%	No. of people	%	
DeKalb County	**691,893**	**203,395**	**29.4%**	**370,963**	**53.6%**	**1,239**	**0.2%**	**35,173**	**5.1%**	**245**	**0.04%**	**1,644**	**0.2%**	**11,410**	**1.7%**	**67,824**	**9.8%**	**70.6%**
Census Tract 212.02	6,745	5,354	79.4%	650	9.6%	10	0.2%	290	4.3%	3	0.04%	10	0.2%	112	1.7%	316	4.7%	20.6%
Block Group 2	1,721	1,483	86.2%	44	2.6%	4	0.2%	72	4.2%	0	0.0%	1	0.1%	34	2.0%	83	4.8%	13.8%
Block Group 3	2,298	1,881	81.9%	158	6.9%	2	0.1%	97	4.2%	3	0.1%	5	0.2%	39	1.7%	113	4.9%	18.2%
Census Tract 212.15	5,371	2,430	45.2%	749	14.0%	21	0.4%	1,673	31.2%	5	0.1%	19	0.4%	144	2.7%	330	6.1%	54.8%
Block Group 1	3,311	1,581	47.8%	606	18.3%	13	0.4%	754	22.8%	5	0.2%	16	0.5%	87	2.6%	249	7.5%	52.3%
Census Tract 212.16	7,712	4,661	60.4%	1,144	14.8%	19	0.3%	1,286	16.7%	3	0.04%	35	0.5%	143	1.9%	421	5.5%	39.6%
Block Group 3	2,732	1,553	56.8%	530	19.4%	6	0.2%	394	14.4%	3	0.1%	11	0.4%	62	2.3%	173	6.3%	43.2%

Source: U.S. Census Bureau, 2010, Redistricting Data Summary File (PL 94-171)

Note: Shaded areas indicate areas where the minority population exceeds 50 percent and/or is meaningfully greater than the general population.

In DeKalb County, the Census data show that there are two Census block groups, located on the north side of I-285 on each side of the I-285/Ashford Dunwoody interchange, where the minority population either exceeds 50 percent or is substantially greater than the corresponding minority percentage for the DeKalb County as a whole. However, it should be noted that the entire area of these two Census block groups that is adjacent to the project corridor is commercial and is the location of the Perimeter Mall complex and surrounding office buildings. No residential areas occur adjacent to the project corridor in these Census block groups.

Low-Income Populations

Table 13 provides U.S. Census 2010 data on persons living at or below the poverty level for the State of Georgia, the two counties with lands within the project corridor, and the 2010 Census tracts and block groups containing a portion of the project corridor. Low-income populations within the study area were identified where the percentage of persons with income in the last 12 months below the poverty level in the affected census tract or block group is meaningfully greater than the general population (based on comparisons with counties within the project area and the state of Georgia as a whole), and are indicated by shading in the table.

Table 13. Poverty Status of Individuals in the Study Area (2008-2012)

Geographic Area	Total Population	Population with Income in the Last 12 Months Below Poverty Level	Percent of Population with Income in the last 12 Months Below Poverty Level
State of Georgia	9,448,393	1,645,272	17.4%
Fulton County	**899,689**	**151,055**	**16.8%**
Census Tract 101.10	4,628	312	6.7%
Block Group 1	2,130	80	3.8%
Block Group 2	1,184	68	5.7%
Block Group 3	1,314	164	12.5%
Census Tract 101.13	7,006	1,626	23.2%
Block Group 1	2,171	479	22.1%
Block Group 2	2,798	647	23.1%
Block Group 3	2,037	500	24.5%
Census Tract 101.15	2,370	49	2.1%
Block Group 1	2,370	49	2.1%
Census Tract 102.05	5,069	231	4.6%
Block Group 4	1,005	38	3.8%
Census Tract 102.06	4,985	379	7.6%
Block Group 3	1,114	201	18.0%

Table 13. Poverty Status of Individuals in the Study Area (2008-2012)

Geographic Area	Total Population	Population with Income in the Last 12 Months Below Poverty Level	Percent of Population with Income in the last 12 Months Below Poverty Level
Census Tract 102.12	5,018	859	17.1%
Block Group 1	2,310	650	28.1%
Block Group 2	714	10	1.4%
DeKalb County	**679,527**	**126,343**	**18.6%**
Census Tract 212.02	6,556	372	5.7%
Block Group 2	1,993	161	8.1%
Block Group 3	1,863	118	6.3%
Census Tract 212.15	5,283	400	7.6%
Block Group 1	3,292	139	4.2%
Census Tract 212.16	7,761	1,173	15.1%
Block Group 3	2,363	230	9.7%

Source: American Community Survey 5-Year Estimates 2008-2012, Table B17021

Note: Shaded areas indicate areas where the low-income population is meaningfully greater than the general population.

In Fulton County, most of the Census block groups located along the south side of I-285 between the project's western terminus and SR 400 have percentages of low-income persons greater than that for Fulton County as a whole. None of the Census block groups within DeKalb County within the project area contained low-income populations greater than the county as a whole.

Limited English Proficiency (LEP) Populations

Table 14 provides a breakdown of languages spoken in project area households. Data is provided for those households in which no one over the age of 14 speaks English only or speaks English "very well" for the following geographic areas: the state of Georgia, the two counties with lands within the project area, and the 2010 Census tracts and block groups containing a portion of the study corridor. This data was used to identify geographic areas where translation services may be necessary at public meetings or where information may need to be provided in multiple languages.

As shown in Table 14, in Fulton County, project area Census block groups where five percent or greater of the households do not speak English very well are located in the southwestern, southeastern, and northwestern quadrants of the I-285/Roswell Road interchange and in the northwestern quadrants of the I-285/SR 400 interchange. Spanish was the language noted to be spoken by the majority of LEP populations in these areas.

Table 14. Household Language Spoken within the Study Area (2008-2012)

Geographic Area	Total Households	No One Age 14 and Over Speaks English Only or Speaks English "Very Well"								Speak English Only		Percent of All Households Where No One Age 14 and Over Speaks English Only or Speaks English "Very Well"
		Speaks Spanish		Speaks Other Indo-European Languages		Speaks Asian and Pacific Island Languages		Speaks Other Languages				
		Households	%	Households	%	Households	%	Households	%	Households	%	
State of Georgia	**3,508,477**	**74,008**	**2.1%**	**12,477**	**0.4%**	**21,746**	**0.6%**	**3,379**	**0.1%**	**3,045,230**	**86.8%**	**3.2%**
Fulton County	**366,140**	**7,536**	**2.1%**	**2,523**	**0.7%**	**3,133**	**0.9%**	**691**	**0.2%**	**305,210**	**83.4%**	**3.8%**
Census Tract 101.10	2,481	187	7.5%	10	0.4%	13	0.5%	0	0.0%	1,878	75.7%	8.5%
Block Group 1	1,177	0	0.0%	0	0.0%	0	0.0%	0	0.0%	975	82.8%	0.0%
Block Group 2	599	90	15.0%	0	0.0%	13	2.2%	0	0.0%	393	65.6%	17.2%
Block Group 3	705	97	13.8%	10	1.4%	0	0.0%	0	0.0%	510	72.3%	15.2%
Census Tract 101.13	2,772	78	2.8%	32	1.2%	37	1.3%	27	1.0%	1,753	63.2%	6.3%
Block Group 1	875	0	0.0%	0	0.0%	37	4.2%	0	0.0%	676	77.3%	4.2%
Block Group 2	1133	78	6.9%	32	2.8%	0	0.0%	15	1.3%	537	47.4%	11.0%
Block Group 3	764	0	0.0%	0	0.0%	0	0.0%	12	1.6%	540	70.7%	1.6%
Census Tract 101.15	906	0	0.0%	31	3.4%	0	0.0%	0	0.0%	693	76.5%	3.4%
Block Group 1	906	0	0.0%	31	3.4%	0	0.0%	0	0.0%	693	76.5%	3.4%
Census Tract 102.05	2,225	11	0.5%	31	1.4%	20	0.9%	0	0.0%	1,949	87.6%	2.8%
Block Group 4	614	0	0.0%	18	2.9%	0	0.0%	0	0.0%	569	92.7%	2.9%
Census Tract 102.06	1,905	0	0.0%	9	0.5%	0	0.0%	0	0.0%	1,712	89.9%	0.5%
Block Group 3	392	0	0.0%	0	0.0%	0	0.0%	0	0.0%	354	90.3%	0.0%
Census Tract 102.12	1,933	312	16.1%	128	6.6%	16	0.8%	0	0.0%	1,151	59.5%	23.6%
Block Group 1	782	275	35.2%	115	14.7%	0	0.0%	0	0.0%	247	31.6%	49.9%
Block Group 2	326	0	0.0%	0	0.0%	0	0.0%	0	0.0%	310	95.1%	0.0%

Table 14. Household Language Spoken within the Study Area (2008-2012)

Geographic Area	Total Households	No One Age 14 and Over Speaks English Only or Speaks English "Very Well"								Speak English Only		Percent of All Households Where No One Age 14 and Over Speaks English Only or Speaks English "Very Well"
		Speaks Spanish		Speaks Other Indo-European Languages		Speaks Asian and Pacific Island Languages		Speaks Other Languages				
		Households	%	Households	%	Households	%	Households	%	Households	%	
DeKalb County	**264,276**	**8,077**	**3.1%**	**2,056**	**0.8%**	**3,424**	**1.3%**	**1,650**	**0.6%**	**216,122**	**81.8%**	**5.8%**
Census Tract 212.02	2,824	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2,464	87.3%	0.0%
Block Group 2	717	0	0.0%	0	0.0%	0	0.0%	0	0.0%	637	88.8%	0.0%
Block Group 3	877	0	0.0%	0	0.0%	0	0.0%	0	0.0%	772	88.0%	0.0%
Census Tract 212.15	2,487	0	0.0%	164	6.6%	139	5.6%	0	0.0%	1,465	58.9%	12.2%
Block Group 1	1,694	0	0.0%	128	7.6%	30	1.8%	0	0.0%	1,052	62.1%	9.3%
Census Tract 212.16	3,814	24	0.6%	128	3.4%	83	2.2%	0	0.0%	2,912	76.4%	6.2%
Block Group 3	1,507	20	1.3%	80	5.3%	0	0.0%	0	0.0%	1,114	73.9%	6.6%

Source: American Community Survey 5-Year Estimates 2008-2012, Table B16002.
Note: Shaded areas indicate areas where the LEP population is substantially greater than the county and/or Census tract in which it is located. Shading has not been applied to the rightmost column, as this is a "total population" column and does not offer meaningful information regarding languages spoken in the project corridor.

In DeKalb County, the only project area Census block group where five percent or greater of the households do not speak English very well is located in the northwestern quadrant of the I-285/Ashford Dunwoody Road interchange. However, as noted above, the entire portion of this Census block group adjacent to the project corridor in this area is in commercial use and is the location of the Perimeter Mall complex and surrounding retail businesses. No residences occur in this area.

Direct Effects on Environmental Justice Populations

No disproportionate, adverse impacts on minority or low-income populations are anticipated from the proposed project. The proposed project was designed to minimize impacts to residents and landowners within the project corridor. No residential displacements would occur from the project, and the proposed project would not separate communities from each other or from nearby community facilities/amenities. While the project would require some ROW from the backyards of private residences, some of which may be owned by low-income or minority individuals, these effects would occur along the length of the project, and would be greatly minimized by the use of retaining walls.

As discussed in Section D.1, *Noise*, the majority of residences along I-285 within the project limits currently experience traffic-related noise levels that exceed FHWA's NAC for residential land use, including some residences owned or occupied by minority and/or low-income persons. Implementation of the project would increase traffic noise levels at some receivers over No-Build conditions, and would decrease traffic noise levels at other receivers. A total of eight new noise barriers and an extension of one existing noise barrier are being considered along the project corridor (see Figures 19a through 19j in Appendix E) to reduce traffic-related noise levels at the majority of residences along the corridor. This would benefit residential areas within the project limits, including minority and low income communities. [Note: Prior to the Georgia DOT's final decision on the placement of any noise abatement, Georgia DOT will conduct outreach with the affected individuals after final design to determine community support for abatement. Due the nature of the Design-Build process, determination of when Final Design has been met will be agreed upon by the Design-Build Contractor and the Georgia DOT Project Manager. All NEPA decisions are the responsibility of Georgia DOT and/or FHWA, and will not be made by the Design-Build Contractor.] In addition, the proposed project would result in congestion relief and safety benefits for all roadway users, regardless of race or income level.

No disproportionate, adverse effect would occur to the Hispanic community identified along Northwood Drive in the southwest quadrant of the I-285/Roswell Road interchange. No ROW would be required from this community for project implementation. While there would be some vegetative clearing and CD lane construction occurring adjacent to this community within existing I-285 ROW, which may result in some visual changes to the rear of the community, I-285 is already visible from this community. No changes in access to this community or any of its features/facilities would occur. In the design year (2039) Build conditions, this community would experience unmitigated traffic-related noise levels (noise levels that would occur if noise abatement were not constructed) that are less than existing noise levels. However, noise abatement is proposed along I-285 in this area as part of this project, which would further reduce traffic-related noise levels to acceptable levels for residential use.

Public Involvement Efforts Targeting LEP Populations

As noted above, some Spanish-speaking LEP populations were identified adjacent to the project corridor. In order to provide these populations with meaningful access to information concerning the project and to solicit input from them, advertisement of the August 2014 PIOHs were translated into Spanish and published in an area Spanish-language newspaper (*Mundo Hispanico*). Public involvement materials were translated into Spanish, and translated handouts were available at the PIOHs. In addition, a Spanish-speaking translator was available at the PIOH to communicate information about the proposed project, translate comments and questions from LEP individuals, and to accept comments from such individuals. However, no LEP individuals were identified at any of the three August 2014 PIOHs held for the project.

Due to the lack of participation of LEP individuals at the PIOHs, fact sheets (both in Spanish and English) describing the project and containing a project location map and comment card were made available at the Holy Spirit Catholic Center and the leasing office for the Sierra Place Apartment complex (which was the only apartment complex with a leasing office in the area). Both of these facilities are located on Northwood Drive, in the area of the identified Hispanic community described above. A copy of this fact sheet is provided in Appendix B, and is the same as the fact sheet for the project provided at the November 18, 2014 PIOH for the adjacent SR 400 CD Lanes project (Georgia DOT P.I. No. 721850). No comments were received as a result of this effort.

Protection of Children

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks, directs federal agencies to "identify and assess environmental health risks and safety risks that may disproportionately affect children and ensure their policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks." No health or safety risks from the project that may disproportionately affect children have been identified. The Springmont School is located at 5750 Long Island Drive NW, adjacent to the existing I-285 ROW. The use of heavy construction equipment may occur within the existing I-285 ROW in close proximity to this school; however, the existing fence along the I-285 ROW line would be retained during construction, which would prevent children from accessing the construction site. In addition, Georgia DOT would require the Design-Build Contractor to coordinate with the school on any necessary timing restrictions for construction within 500 feet of the school to ensure minimal impacts to special events at the school (such as standardized testing periods, outdoor events, celebratory events, etc.) during project construction.

Indirect Impacts

Indirect impacts, both positive and negative, on low income and/or minority populations could occur as a result of area development/redevelopment that is intensified by project implementation. As discussed in Section III.A.1., *Land Use Changes*, areas of older multi-family apartment complexes are likely to experience redevelopment pressure, and these complexes may currently house low income and/or minority populations. This includes the Hispanic community identified in the southwest quadrant of the I-285/ Roswell Road interchange along Northwood Drive. Redevelopment of such complexes could displace these populations either through demolition of a complex or rent increases. Though rent would increase for everyone, this increase may be intolerable to low-income persons. As noted above, while areas currently in single-family residential use are expected to be protected from redevelopment,

development around these single-family areas could increase property values, thus increasing the tax burden on low-income or minority populations. However, as noted above, this redevelopment is occurring with or without the proposed project; the project may just intensify land densities and/or make redevelopment occur quicker. Redevelopment could also have beneficial effects on low-income and/or minority populations by providing new job opportunities and/or new services.

Cumulative Impacts

It is likely that past transportation projects and development within the project area have had some impact on low-income and minority populations, both positive and negative. Several other transportation projects are planned in the vicinity of the project area, and include some transit, managed-lane, roadway capacity-adding, and operational improvements, as well as pedestrian and bicycle enhancements. These reasonably foreseeable future projects have the potential to affect existing residential and commercial areas both directly (from ROW acquisition, displacement, or noise impacts) and through potential induced development/redevelopment. This could have both positive and negative impacts on the area's low-income and minority populations. Induced development from reasonably foreseeable future projects would likely bring about redevelopment in older multi-family apartment complexes, which may house minority and/or low-income populations. As noted above, redevelopment of such complexes could displace these populations either through complete demolition of a complex or because rent has increased beyond their means. Conversely, redevelopment of commercial areas would attract new businesses and services, which could benefit low-income and minority populations through the creation of new job opportunities and new services.

While other reasonably foreseeable future projects could result in disproportionate, adverse impacts on Environmental Justice populations, the proposed project is not anticipated to result in any direct or indirect, adverse, disproportionate impacts on low-income or minority populations in the project area. The proposed project would not disproportionately affect the identified Hispanic community along Northwood Drive, and would not require any ROW or easements from this community, or change access to this community. Therefore, the proposed project is not expected to contribute to disproportionate, adverse, cumulative impacts on low-income or minority communities.

6. Economics

The Perimeter Center area has the largest office market and largest concentration of medical facilities in Metro Atlanta, and is one of the largest employment centers in the southeastern United States. This area is the location of Perimeter Mall (the second largest shopping mall in the state), numerous surrounding big-box and other retail stores, and several other major employers, including Northside Hospital, St. Joseph's Hospital, UPS, Haverty's, Cox Communications, Hewlett Packard, First Data Corporation, Newell Rubbermaid, AT&T Mobility, Children's Healthcare of Atlanta, and others. Additional commercial uses occur along the Roswell Road corridor north and south of I-285.

Construction activities would likely result in some commuter delays in the region. The Design-Build Contractor would implement a public information and notification plan to provide project information, updates, and construction information to area businesses, residents, and the PCIDs throughout the project design and process so that the public can keep informed of upcoming construction activities and adjust their travel plans accordingly. This would also allow area businesses to provide information to their

employees regarding alternative travel routes and develop work plans (e.g., shifted work schedules, telecommuting options, etc.). In addition, during a project stakeholder meeting with PCIDs, representatives of the PCIDs indicated a willingness to work with the Department and the Design-Build Contractor during construction on messaging and educational outreach to local businesses to promote alternative commuting options (such as increased transit circulation and encouragement of teleworking), as well as staggering of work hours.

The construction of the proposed project would beneficially affect the local and regional economy through increased economic output, employment, and earnings. The design and construction of the proposed project would result in considerable construction expenditures over the duration of construction, including completing the final engineering plans, hiring local contractors to perform the construction labor, and purchasing of materials and equipment.

Sales volumes for some area businesses may temporarily drop during actual construction of the project; however, following construction, area businesses should benefit from the expected improvement in access. One concern voiced by the PCIDs and the City of Dunwoody during a project stakeholder meeting was the potential for construction-related travel delays to interfere with holiday shopping in the Perimeter Mall area. To reduce this concern, the Georgia DOT would restrict or shorten potential lane closure periods during peak holiday shopping times (such as weekend days from Thanksgiving Day through January 2nd, Black Friday, and Christmas Eve).

The amount of ROW needed to implement the proposed project would not result in a significant effect on the tax bases for the cities of Sandy Springs, Dunwoody, or Brookhaven. One commercial displacement would occur as a result of the project. This building contains approximately 45,960 square feet of office/medical-related office space, with approximately 120 to 150 employees. In addition, the proposed project would impact a parking deck and surface parking that provides parking for two office/medical office buildings (known as the Pavilion at Lake Hearn), which together house approximately 26 tenants. Approximately 90 percent of the available parking for these businesses would be impacted by the project. While it is anticipated that a cost-to-cure study would be implemented during the ROW acquisition process to mitigate the displacement of the occupants of this complex such that the parking deck could be redesigned and reconstructed on the remainder of the property, if a cost-to-cure cannot be implemented, then the occupants of these buildings would become consequential displacements of the project. According to the Conceptual Stage Study conducted for this project (see Appendix D), there is sufficient replacement office space in the immediate vicinity of the project into which all of these affected businesses could relocate. In addition, none of these businesses are unique to the area or community; medical offices are located north and south along Peachtree Dunwoody Road in the immediate area.

Parking impacts (both temporary and permanent) would occur at seven other businesses and/or office buildings along the project corridor due to the project, located at the following addresses:

- 200 Glenridge Point Parkway, Atlanta
- 1146 Lake Hearn Drive NE, Sandy Springs
- 1396 Lake Hearn Drive NE, Atlanta
- 5775 Glenridge Drive NE, Atlanta
- 5901 Peachtree Dunwoody Road, Sandy Springs
- 5780 Peachtree Dunwoody Road, Atlanta
- 244 Perimeter Center Parkway NE, Atlanta

Most of these businesses would only incur a small permanent loss of surface parking (affecting a small fraction, approximately 5 percent or less, of their total available parking area). This small loss of parking is not expected to affect continued operations at any of these businesses. The exception is the Cox Communications building on Lake Hearn Drive, where approximately 25 percent of their surface parking lot would be affected by the project. However, it is possible that the remaining property could be reconfigured to reconstruct additional parking at this building, as there is some undeveloped land within this parcel.

The proposed project would not eliminate access to any area businesses. While some changes to local access along I-285 would occur, as described previously, between Ashford Dunwoody Road and Peachtree Dunwoody Road, and between Glenridge Drive and Roswell Road (westbound only), these changes are not anticipated to adversely affect businesses or the local economy, since sufficient access would continue to be available via parallel surface streets. Overall, the proposed project is anticipated to have a beneficial impact on area businesses and the regional economy through improved access and reduced travel times for commuters.

Indirect Impacts

The proposed project is anticipated to have beneficial, indirect impacts on local and regional economies. The economic and employment trends that have been occurring in the project area are expected to continue, but would be somewhat intensified with implementation of the proposed project.

Economic growth refers to the increase in goods and services produced over time. Increases in economic growth and employment are generally beneficial, leading to increased income for workers due to an increase in job opportunities and wages, higher property values, and a larger tax base due to increasing property values. Additionally, an increase in retail sales associated with increasing incomes leads to higher sales tax collections. The proposed project is anticipated to enhance and potentially accelerate economic growth and employment in the Perimeter Center area due to improved traffic flow and access, reduced travel times, and reduced congestion at the I-285 and SR 400 interchange. These effects may also extend westward through the Roswell Road corridor, further into Sandy Springs. This growth would increase property values in the Perimeter Center area, and benefit the PCIDs, Sandy Springs, Dunwoody, and Brookhaven by increasing the tax base. Additionally, employment growth in Perimeter Center would lead to increased incomes for workers in the area and higher retail sales, benefitting Sandy Springs, Dunwoody, and Brookhaven through higher sales tax collections.

The potential for the proposed project to indirectly beneficially affect local and regional economic activity is reaffirmed in a letter of support for the project received from the President of the PCIDs (see Appendix A). As stated in this letter, easier access to and from the area as a result of the proposed improvements would attract additional businesses, create additional jobs, and allow for economic growth of the entire area. In addition, during a meeting with the City of Dunwoody, the Directors of Public Works and Community Development noted that the proposed project would help land values in the Perimeter Center area to remain strong over the long-term. They felt that, if the I-285/SR 400 interchange were not improved, the office market in the Perimeter Center area would suffer as traffic continued to worsen over time. Without the proposed improvements, the area could get branded as having too much congestion, which would make it unattractive to employers.

The proposed project is not expected to noticeably contribute to adverse indirect impacts on the regional or area economy. The small land use conversions that would result from this project, combined with any land use changes that would occur on adjacent lands as a result of potential future developments, are not anticipated to have a substantial impact on the area economy.

Cumulative Impacts

Prior to the construction of I-285 and the I-285/SR 400 interchange, the surrounding area was largely farmland; however, development of commercial areas along the project corridor was underway prior to I-285 opening to traffic. Currently, development and redevelopment is still occurring within the project vicinity, adding to economic and employment growth. Planned and programmed projects in the area that would occur regardless of the proposed project would have cumulative impacts on the local and regional economies. Economic and employment growth in the areas impacted by planned and programmed projects would be beneficial to the property tax bases of the PCIDs and project area cities, while workers would benefit from greater employment opportunities and possibly higher wages. Increases in sales tax from higher retail revenues as a result of increased employment and wages would be beneficial to the cities.

Cumulative impacts on the local economy, such as higher employment, incomes, property values, and tax revenues, are expected from the proposed project in conjunction with other planned and programmed projects. As discussed above, improved access/mobility and reduced congestion from the project are expected to help foster economic growth in the Perimeter Center and Sandy Springs areas. These effects would be compounded in the near-term by the implementation of the adjacent SR 400 CD Lanes project, and in the longer-term by planned and programmed managed-lane, operational, and transit-related projects along I-285 and SR 400 north. Together, these improvements would heighten redevelopment pressure not only in the Perimeter Center and Sandy Springs areas, but potentially well beyond these areas (in the case of the larger, managed-lane projects that would add capacity in the area and transit projects that would increase commuter throughput and modal choices). Effects of increased redevelopment pressure include an increase in property values, tax revenues, employment, and wages.

Combined with the I-285/SR 400 Interchange Reconstruction project, the cumulative effect of other planned and programmed transportation projects to improve traffic flow and access in the region, along with completion of planned area DRIs, would be substantially greater economic activity and increased employment in the Perimeter Center and Sandy Springs areas and beyond. The increase in economic activity would lead to increased property values and tax revenues, as well as higher employment, incomes, and retail sales and sales tax collections in the area. Higher property tax revenues would be beneficial to the PCIDs, Sandy Springs, Dunwoody, and Fulton and DeKalb counties. Increased sales tax collections would benefit the cities and counties.

Overall, beneficial cumulative impacts on the economy and employment would occur from implementation of the project. However, given the largely built-out, urban nature of the project area from past development activities, as well as the fact that other planned projects are anticipated to occur with or without the project, the proposed project is not anticipated to contribute a substantial amount to these cumulative economic effects.

7. Public Involvement

A series of three public information open houses (PIOHs) were held for the proposed project at Dunwoody Baptist Church, located at 1445 Mount Vernon Road, Dunwoody, Georgia 30338. One PIOH was held on August 19, 2014 (between 11 a.m. and 1 p.m.) and two PIOHs were held on August 21, 2014 (between 11 a.m. and 1 p.m. and between 5 p.m. and 7 p.m.). The purpose of these meetings was to provide information on the proposed I-285/SR 400 Interchange Reconstruction project to surrounding residents and business owners and to allow the affected communities an opportunity to comment on the proposal. Standard newspaper and sign advertisements were posted for these meetings. Due to the regional use of this interchange, the PIOHs were advertised in the legal organs for the three surrounding counties (Cobb, Fulton, and DeKalb), as well as on a radio news channel. The PIOHs were advertised in a metro-Atlanta Spanish language newspaper, *Mundo Hispanico*. Additionally, PCIDs announced the PIOHs to subscribers of their e-mail newsletter. An email blast introducing the project and announcing the PIOHs was also sent to the **revive**285 *top end* project mailing list. Television news media were also present at the August 19, 2014 PIOH, and information on the PIOHs was broadcast that evening on several news channels.

At the PIOHs, displays showing the proposed conceptual design of the project (overlain with environmental resources) were presented, along with displays showing an artistic rendering of what the proposed design might look like and another display outlining the needs in the corridor and the project's purpose. Representatives of the Georgia DOT were available to discuss the project with the public, and to answer any questions on the proposal. In addition, a display/station showing a concept for the adjacent SR 400 CD Lanes project (P.I. No. 721850) was available for public review, and representatives were available to answer questions on that project.

Local and state officials and public agencies were invited to these meetings. Officials attending one or more of the meetings included: Representative Tom Taylor, State House of Representatives District 79; Jim Riticher, Dunwoody City Council Post 2; Lynn Deutsch, Dunwoody City Council Post 5; Jennifer Giersch, FHWA; Alvin Gutierrez, FHWA; Yvonne Williams, President and Chief Executive Officer, PCIDs; Rebecca Williams, Brookhaven City Council District 1; Billy Grogan, Dunwoody City Manager; Mike Davis, City of Dunwoody; Steve Foote, Director of Community Development, City of Dunwoody; Kristen Wescott, Transportation Planning, Public Works Division, City of Sandy Springs; Michael Smith, Director of Public Works, City of Dunwoody; Tom Black, Director of Public Works, City of Johns Creek; Chris Chovan, Transportation Planning Division Manager, City of Roswell; Andrew Antweiler, Transportation Planning Division, City of Roswell; Rob Dell-Ross, City Project Manager, City of Roswell; Greg Nicolas, Engineering and Design, City of Roswell; and David Haynes, Senior Principal Planner, ARC.

One hundred thirteen (113) people attended the August 19th lunchtime meeting, 74 people attended the August 21st lunchtime meeting, and 97 people attended the August 21st evening meeting. In total, 143 people submitted comments on the proposed project during the 10-day comment period. These comments were submitted via comment sheets at the PIOH, by verbal statements that were recorded by a court reporter at the meeting, via e-mail, or were written and mailed in at a later date. Copies of the handouts and comments received are provided in Appendix B. Of the 143 people that submitted comments during the PIOH comment period, 32 were in favor of the project, 6 were against the project, 87 were conditional, and 18 were uncommitted or did not express an opinion of the project.

Of the comments received at the PIOHs, there were concerns about traffic-related noise impacts and the need for noise abatement along the corridor; visual impacts from vegetation removal, road construction, and noise and retaining wall construction; adequate interchange ramp design to accommodate traffic volumes; impacts to the Georgetown Recreation Club from road debris, noise, and ROW acquisition; traffic impacts during construction; the lack of westbound access via I-285 from Glenridge Drive to Roswell Road and the resulting increase in traffic on Hammond Drive; motorist confusion as a result of the improvements; depreciation of home values due to noise and visual impacts from the projects; and weaving/merging conditions in some areas as a result of the improvements. In addition, some commenters requested that MARTA and pedestrian/trail connections be considered as part of the project.

All comments received during the PIOH public comment period were addressed by responding to the citizens' questions through a response letter. Comments received during the public comment period, along with Georgia DOT's responses to those comments, are provided in Appendix B.

In addition to PIOHs, individual meetings were held with surrounding municipalities and stakeholders, including the City of Sandy Springs, City of Dunwoody, City of Brookhaven, and the PCIDs. These meetings are discussed in detail in Section IV, *Coordination and Comments*.

Lastly, a manned station for the proposed I-285/SR 400 Interchange Reconstruction project consisting of the same three displays that were presented at the PIOHs discussed above were also available for public review at the PIOHs for the adjacent SR 400 CD Lanes project (P.I. No. 721850), which were held on November 18, 2014 from 11 a.m. to 1 p.m. and from 5 p.m. to 7 p.m. at the St. Jude Catholic Church, located at 7171 Glenridge Drive in Sandy Springs, Georgia. A project fact sheet and comment card were also available for the public to take, and are provided in Appendix B. Comments received from this meeting are also provided in Appendix B. All public comments received from this meeting were addressed during the PHOH comment period for the proposed project (discussed below and in Section V of this EA).

After approval of the Draft Environmental Assessment (EA), a location and design public hearing was held for the proposed project. The PHOH was held on February 5, 2015 from 11:00 a.m. to 1:00 p.m. and from 4 p.m. to 8 p.m. at the Congregation B'nai Torah, located at 700 Mount Vernon Highway, NE, Sandy Springs, Georgia. One hundred forty-five (145) people attended the PHOH. A combined total of 67 people submitted comments on the proposed project during the November 18, 2014 PIOH and February 5, 2015 PHOH comment periods. These comments and the Georgia DOT's responses to them are provided in Appendix B. More detailed information about the PHOH, including the displays presented and the comments received, are provided in Section V of this EA.

B. Effects on the Cultural Environment

1. Historic Resources

In compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA) and subsequent amendments, the proposed project area was surveyed with respect to historic resources, especially those in or eligible for the National Register of Historic Places (NRHP). The purpose of the survey was to locate, identify, and evaluate any historical resources within the proposed project corridor. The survey boundary and methodology were established using Georgia DOT/ FHWA *Cultural Resources*

Survey Guidelines. These guidelines were established as a result of past consultation with the Georgia State Historic Preservation Officer (SHPO) and agreed upon by the SHPO and FHWA.

What is Section 106 of the NHPA of 1966?

Section 106 of the NHPA requires federal agencies to take into account the effects that their federally funded activities and programs have on historic properties that are included in, or eligible for, the NRHP. The NRHP is a list of districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, and culture, and is administered by the National Park Service in conjunction with the SHPOs.

The area of potential effects (APE), as defined in 36 CFR 800.16(d), is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such properties exist. The APE for the proposed project consists of the project viewshed and the proposed ROW of the project. Because the I-285/SR 400 interchange would be reconstructed and because the proposed project would extend to the adjacent interchanges along SR 400 and I-285, the potential for indirect effects outside the project corridor exists.

In addition to the Georgia SHPO, other potential consulting parties were identified based on the nature of the undertaking and the guidance in the Georgia DOT/FHWA *Cultural Resources Survey Guidelines* and were invited to participate in the Section 106 process. The consulting parties were informed of our efforts to identify historic properties by consulting existing information and the results of those efforts and asked to provide information on any unidentified NRHP-listed or eligible properties within the project's APE by Notification dated June 13, 2014 (see Appendix A). A response was received from the Georgia SHPO to the invitation to become a consulting party in the Section 106 process (see Appendix A); no other responses were received.

The review of existing information for previously identified historic properties revealed that no NRHP-listed properties, proposed NRHP nominations, National Historic Landmarks, or bridges determined eligible for inclusion in the NRHP in the updated Georgia Historic Bridge Survey (GHBS) were identified within the proposed project's APE. In addition, no properties 50 years old or older were identified within the proposed project's APE in the 1995 Georgia Department of Natural Resources (DNR) North Fulton County and Sandy Springs survey.

The review of existing information on previously identified historic properties revealed that 11 properties determined eligible for listing in the NRHP were identified within the APE of the proposed project in a 2010 Historic Resources Survey Report prepared for the **revive**285 *top end* Project [Georgia DOT Projects NHS00-0000-00(247), NHS00-0000-00(784), NHS00-0001-00(758), MSL00-0003-00(041), MSL00-0003-00(534), IM000-0075-03(212), IM000-0285-01(351), IM000-0075-03(213), MHIM0-0075-03(230), and IMNH0-0285-01(388), Cobb, Fulton, and DeKalb counties, P.I. Nos. 0000247, 0000784, 0001758, 0003041, 0003534, 712806, 713230, 713260, 713600, and 714000]. These properties are the Garrison House, Hamilton House, Allen House, Hardin House, Boone House, Comora House, Glenridge Forest-Hammond Hills Historic District, Mountain Creek Road Historic District, Sherrell-Colton Drive Historic District, Shanks House, and the Oak Forest Hills Historic District. A copy of the SHPO concurrence of eligibility for these resources is attached in Appendix A.

A historic architectural resources field survey was conducted for the proposed project to identify and evaluate all properties 50 years old or older located within the project's APE. Nineteen additional properties 50 years of age or older not identified in the Georgia DNR survey or the Historic Resources Survey Report for the **revive**285 *top end* Project were identified within the proposed project's APE during the current field survey. The Criteria of Eligibility for listing on the NRHP were applied to each of these properties. As a result, 10 additional resources were determined eligible for inclusion in the NRHP (see SHPO concurrence letter in Appendix A). These are the Fair Oaks Manor Historic District (Note: this resource includes the Garrison House property identified as part of the **revive**285 *top end* Project, described above), Coldstream Subdivision Historic District, Lake Island Estates Historic District, Marchman Estates Historic District, Copeland Road Historic District, Sandy Springs Apartments, Clementstone Estates Historic District, Georgetown Subdivision Historic District, Murphey Candler Park, and the Gainsborough Historic District. These 10 resources, along with the 10 other NRHP eligible resources previously identified within the corridor as part of the **revive**285 *Top End* Project, are summarized in Table 15 and shown in Figures 14a through 14c.

What are the NRHP Criteria?

Criterion A – Property associated with events that have made a significant contribution to the broad patterns of our history.

Criterion B – Property associated with the lives of significant persons in the past.

Criterion C – Properties that embody the distinctive characteristics of a type, period, or method of construction, or that represents the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

Criterion D – Properties that have yielded or may be likely to yield information important in history or prehistory.

Table 15. NRHP Eligible Resources within the Project's APE

Name of Resource	Date	Type/Style/Description	Location and NRHP Boundary	NRHP Criteria
Fair Oaks Manor Historic District (includes the Garrison House property)	1960-1972	Small, suburban residential subdivision consisting of 23 homes of two main house types (Ranch house and a two-story frame house of unrecognized type) that are historical revival in nature. The houses sit on large, rolling lots that vary from 1 to 2 acres and are filled with mature shade trees, foundation shrubs, and extensive decorative landscaping.	Located along Fair Oaks Manor (west of Riverside Drive and south of I-285). NRHP boundary corresponds to the sum of the legal property boundaries of the 23 parcels and contains about 34 acres. The ROW line along I-285 is the northern border, while the edges of pavement along Riverside Drive and Powers Ferry Road are the western and eastern borders because the existing ROW along these roads contains a portion of the properties' grassed lawns, which are contributing elements of their setting.	Criterion A—local level of significance in community development Criterion C—local level of significance in architecture
Coldstream Subdivision Historic District	1960-1973	A suburban, residential subdivision consisting of 35 homes of three main house types (one-story Ranch house, 1½-story Split-Level house, and a two-story house of unrecognized type), mostly historical revival in nature. The houses sit on large, rolling lots that are at least 1 acre and filled with mature shade trees, foundation shrubs, and extensive	Located along Coldstream Court (east of Riverside Drive and north of I-285). NRHP boundary corresponds to the sum of the legal property boundaries of the 36 parcels, contains about 52 acres, and includes the houses, their associated support structures, swimming pools, tennis courts, and other recreational facilities, and the immediate surrounds. The ROW line along I-285 is the southern border, while the edges of pavement along Riverside	Criterion A—local level of significance in community development Criterion C—local level of significance in architecture

Table 15. NRHP Eligible Resources within the Project's APE

Name of Resource	Date	Type/Style/Description	Location and NRHP Boundary	NRHP Criteria
		decorative landscaping. Many of the homes have swimming pools in the back yards, and at least 2 have private tennis courts.	Drive, Heards Ferry Road, and Mount Vernon Highway are the western, northern, and eastern borders of the boundary because the existing ROW contains a portion of the properties' grassed lawns, historic fencing, or other landscaping features that are contributing elements of the setting of the properties.	
Hamilton House	1956	Linear Ranch house with Rustic stylistic elements. Located on an informally landscaped lot with a grassed lawn, mature trees, shrubbery, paved driveway, and a brick walkway.	Located at 410 Highland Valley Court (southeast side of Mount Vernon Highway directly south of I-285). NRHP boundary corresponds to the legal property boundary (about 1.1 acres). The ROW line along Mount Vernon Highway is the northwestern boundary. Northeastern portion borders the existing ROW line along eastbound I-285.	Criterion C—local level of significance in architecture
Allen House	1956	Unrecognized house type; side-gabled residence with Colonial Revival style elements. Located on a large landscaped lot characterized by a grassed lawn, mature trees, shrubbery, paved driveway, and a paved walkway.	Located at 358 Mount Vernon Highway (east side of Mount Vernon Highway). NRHP boundary corresponds to the legal property boundary (about 2.31 acres). The edge of pavement along Mount Vernon Highway is the northwestern boundary because the existing ROW contains part of the property's grassed lawn, a contributing element of the setting. Rear portion borders the existing I-285 ROW line.	Criterion C—local level of significance in architecture
Hardin House	1954	Half Courtyard Ranch house; no stylistic elements. Located on an informally landscaped lot with a grassed lawn, mature trees, shrubbery, paved driveway, paved walkway, and a brick retaining wall in the rear. A brick well house is also located behind the resource.	Located at 336 Mount Vernon Highway (east side of Mount Vernon Highway north of I-285). NRHP boundary corresponds to the legal property boundary (about 2.58 acres). The edge of pavement along Mount Vernon Highway is the northwestern boundary because the existing ROW contains a portion of the property's grassed lawn, a contributing element of its setting. Rear portion borders the existing ROW line along westbound I-285.	Criterion C—local level of significance in architecture
Lake Island Estates Historic District	1965-1976	A high-style, suburban, residential subdivision consisting of 56 homes of three main house types (one-story Ranch house, 1½-story Split-Level house, and a two-story house of unrecognized type), the majority of which are historical revival in nature. The houses sit on large, rolling lots that are at least 1 acre and filled with mature shade trees, foundation shrubs, and extensive landscaping. Many of the homes have swimming pools in the back yards.	Located along Glen Lake Drive and Lake Island Drive (east of Long Island Drive and south of I-285). NRHP boundary consists of the sum of the legal property boundaries of the 56 parcels and contains about 70 acres. The edges of pavement along Glen Errol Road and Long Island Drive are the southern borders because the existing ROW along these roads contains a portion of the properties' grassed lawns and ornamental landscaping, which are contributing elements of the setting.	Criterion A—local level of significance in community development Criterion C—local level of significance in architecture

Table 15. NRHP Eligible Resources within the Project's APE

Name of Resource	Date	Type/Style/Description	Location and NRHP Boundary	NRHP Criteria
Comora House	1957	Linear-with-Clusters Ranch house; no stylistic elements. Located on a densely wooded lot that also includes some grassed areas immediately adjacent to the residence, foundation plantings, and a paved driveway.	Located at 5805 Mitchell Drive (south side of Mitchell Drive directly north of I-285). NRHP boundary corresponds to the legal property boundary (about 1.4 acres). The northern border abuts both the existing ROW along Mitchell Road as well as the roadway's former ROW line. The section of the boundary that abuts the former ROW line contains a part of the property's grassed lawn, a contributing element of the property. Southern portion borders the westbound I-285 ROW line.	Criterion C—local level of significance in architecture
Boone House	1957	Rambling Ranch house; no stylistic elements. Located on an informally landscaped lot with a grassed lawn, mature trees, shrubbery, and a paved driveway.	Located at 5757 Long Island Drive (east side of Long Island Drive south of I-285). NRHP boundary corresponds to the legal property boundary (about 2.2 acres). The edge of pavement along Long Island Drive is the western boundary because the existing ROW contains a portion of the property's grassed lawn, a contributing element of the property's setting. Northern portion borders existing I-285 ROW line.	Criterion C—local level of significance in architecture
Marchman Estates Historic District	1961-1972	Residential subdivision consisting of 26 homes of two main types (the one-story Ranch house and a two-story house of unrecognized type) and Neoclassical Revival, Colonial Revival, and Monterey styles. The houses sit on large lots about 0.6 acre in size, which are filled with mature shade trees, foundation shrubs, and extensive decorative landscaping.	Located along Marchman Drive, Eden Roc Lane, and Michelle Circle (west of Lake Forrest Drive and south of I-285). NRHP boundary corresponds to the multiple legal property boundaries and contains about 22 acres. All of the properties are considered contributing except 45 Michelle Circle and 40 Marchman Drive which significantly predate the development of the subdivision. The edge of pavement along Lake Forrest Drive is the eastern border because the existing ROW contains a portion of the property's grassed lawn, mature trees, historic vegetation, and granite curbing, which are contributing elements.	Criterion A—local level of significance in community development Criterion C—local level of significance in architecture
Copeland Road Historic District	1963-1971	Consists of 7 apartment complexes and a shopping center, including: Mosaic Apartments (5641 Roswell Road), which includes about 36 two- and three-story garden apartment buildings with long, rectangular, brick and concrete forms, a pool, sand volleyball court, a couple of playgrounds, and some free-standing sheds for grilling; Highland Circle Apartments (201 Northwood Drive), which includes 6 two- and three-story garden apartment buildings with long, rectangular, roman brick forms, and several formally landscaped court-yards; Prado North Condominiums (145 Northwood Drive), which	Located along both sides of Northwood Drive (formerly Copeland Road) and along Lake Placid Drive/Kayron Drive approximately 0.1 mile south of I-285. NRHP boundary is a dis-contiguous boundary corresponding to the legal property boundaries of the 7 apartment complexes and shopping center and contains about 71 acres. The edge of pavement along Northwood Drive is the northern border because the existing ROW contains a portion of the district's grassed lawn and sidewalk, which are contributing elements of the property's setting. The existing ROW along Lake Placid Drive (west of Roswell Road) is the southern border because the existing ROW consists of a vegetative slope and does not contain any contributing features.	Criterion A—local level of significance in community development Criterion C—local level of significance in architecture

Table 15. NRHP Eligible Resources within the Project's APE

Name of Resource	Date	Type/Style/Description	Location and NRHP Boundary	NRHP Criteria
		includes 16 two-story garden apartment buildings with brick veneer and aluminum siding, multiple formally landscaped courtyards, and a pool; Lake Placid Apartments (125 Northwood Drive), which includes 10 two-story garden apartment buildings of brick and stone veneer, board and batten, and vinyl siding, and formal landscaping; Charleston Square Condominiums (5558 Kingsport Drive), which includes 32 two-story garden apartment buildings of brick veneer and aluminum siding, formal landscaping, and a pool; Highland Springs Apartments (55 Northwood Drive), which includes 6 two-story garden apartment buildings of brick veneer, formal landscaping, and a pool; Sierra Place Apartments (64 Northwood Drive), which includes 15 two-story garden apartment buildings, formal landscaping, a pool, and a clubhouse; and the Copeland Village Shopping Center (215 Northwood Drive), a one-story, multiple retail facility.		
Sandy Springs Apartments	1967	Apartment complex consisting of 6 individual two-story buildings designed as a mid-20th century take on the Prairie School style of the late 19th and early 20th centuries. The grounds exhibit formal landscaping at the main entrance and along the foundation of each apartment building. The original pool is intact and is located near the main entrance.	Located at 346 Carpenter Road (south side of the road, about 0.2 mile east of its intersection with Roswell Road). NRHP boundary corresponds to the legal property boundary and contains about 1 acre. The ROW line along Carpenter Road is the northern border and the ROW line along I-285 is the southern border because the ROWs do not contain any contributing landscape features.	Criterion A—local level of significance in community development Criterion C—local level of significance in architecture
Mountain Creek Road Historic District	1956-1963	Residential Historic District consisting of 17 mid-20th century Ranch type residences with primarily Colonial Revival stylistic elements. All of the individual residences are sited on approximately 0.50-acre lots and are characterized by generously sized, grassed front lawns with foundation plantings, driveways, and groupings of trees and other plantings, and large private back yards for family gatherings. The street has a wide and open, tree-lined design.	Located along Mountain Creek Road on the north side of I-285 east of Roswell Road. NRHP boundary is a visual boundary containing about 7.5 acres. Included within are the 17 contributing residences and the wide, tree-lined street. The boundary follows the original plan of the Mountain Creek Subdivision as platted in 1957. The southern border follows the westbound I-285 ROW line.	Criterion A—local level of significance in community development and urban planning Criterion C—local level of significance in architecture and landscape architecture (suburban landscape)

Table 15. NRHP Eligible Resources within the Project's APE

Name of Resource	Date	Type/Style/Description	Location and NRHP Boundary	NRHP Criteria
Glenridge Forest-Hammond Hills Historic District	1953-c. 1963	Residential Historic District with mid-20th century Ranch and Split Level type residences with primarily Colonial Revival stylistic elements. Comprised of several contiguous residential subdivisions. Individual residences are sited on 0.25- to 0.50-acre lots and are characterized by generously sized, grassed front lawns with foundation plantings, driveways, and groupings of trees and other plantings, and large private back yards. The streets have a wide and open, tree-lined, winding design. The subdivision also contains a neighborhood recreation facility (a recreation building and bathhouse).	North side of I-285 between the Roswell Road and SR 400 interchanges. Roughly bounded by Hildebrand Drive to the west, Hammond Drive to the north, Glenridge Drive to the east, and Glen Forest Road to the south. NRHP boundary is a visual boundary that contains about 150 acres. Included within are the many contributing residences and the wide, tree-lined streets. The boundary follows the original plans of Units 1-5 of the Glenridge Forest Subdivision and Units 2-5 of the Hammond Hills Subdivision, as platted between 1955 and 1961. Southern border follows the westbound I-285 ROW line.	Criterion A—local level of significance in community development and urban planning Criterion C—local level of significance in architecture and landscape architecture (suburban landscape)
Sherrell-Colton Drive Historic District	1955-1961	Residential Historic District consisting of about 40 mid-20th century Ranch and Split Level type residences with primarily Colonial Revival stylistic elements. Lots along Sherrell Drive are about 0.50 acre; lots along Colton Drive generally are between 0.78 and 1.5 acres. The lots are characterized by generously sized, grassed front lawns with foundation plantings, driveways, and groupings of trees and other plantings, and large private back yards. The streets have a wide and open, tree-lined, winding design.	Located along Sherrell and Colton Drives on the south side of I-285 between Roswell Road and Glenridge Drive. NRHP boundary is a visual boundary that contains about 24 acres. Included within are the many contributing residences and the wide, tree-lined streets. The boundary follows the original plans of Unit 2 of the J.E. Starr Property as platted in 1955, and the Colton Drive Subdivision as platted in 1959. Northern border follows the eastbound I-285 ROW line.	Criterion A—local level of significance in community development and urban planning Criterion C—local level of significance in architecture and landscape architecture (suburban landscape)
Shanks House	1960	Courtyard Ranch type residence. Located along a busy 4-lane roadway in the City of Sandy Springs. The setting includes a grassed lawn to the front and rear of the residence, foundation plantings and scattered trees in the front yard, and a paved driveway.	Located at 1005 Hammond Drive (south side of Hammond Drive west of Peachtree Dunwoody Road). NRHP boundary corresponds to the legal property boundary and contains about 1.3 acres. The ROW line along Hammond Drive is the northern border because the ROW contains a non-historic sidewalk and a grassed strip that are non-contributing features.	Criterion C—local level of significance in architecture
Clement-stone Estates Historic District	1963-1979	A small residential district consisting of 9 homes of varying types. The houses sit on large lots with mature shade trees, extensive decorative landscaping, and circular driveways, or driveways that meander through the front yard.	Located along Clementstone Drive (west of Peachtree Dunwoody Road and south of the Glenridge Connector). NRHP boundary corresponds to the sum of the legal property boundaries of the 9 homes and contains about 10 acres.	Criterion A—local level of significance in community development Criterion C—local level of significance in architecture

Table 15. NRHP Eligible Resources within the Project's APE

Name of Resource	Date	Type/Style/Description	Location and NRHP Boundary	NRHP Criteria
Oak Forest Hills Historic District	1956-1964	Residential Historic District consisting of mid-20th century Ranch and Split Level type residences with primarily Colonial Revival stylistic elements. All of the individual residences are sited on approximately 0.50-acre lots and are characterized by generously sized, grassed front lawns with foundation plantings, paved driveways, and groupings of trees and other plantings, and large private back yards. The street has a wide and open, tree-lined design and uses cul-de-sacs.	Located along Oak Forest Drive, Ashwoody Trail, and portions of Ashwoody Court and Shawnee Lane on the south side of I-285 east of Ashford-Dunwoody Road. Roughly bounded by I-285 to the north and Ashford Dunwoody Road to the west. NRHP boundary is a visual boundary containing about 50 acres. Included within are the many contributing residences and the wide, tree-lined streets. The boundary follows the original plans of the Oak Forest Hills subdivision as platted between 1954 and 1960. Northwestern border follows the eastbound I-285 ROW line.	Criterion A—local level of significance in community development and urban planning Criterion C—local level of significance in architecture and landscape architecture (suburban landscape)
Georgetown Subdivision Historic District	1961-1968	A suburban residential subdivision consisting of 118 homes, a pool, tennis courts, and a clubhouse. There are three main house types: one-story Ranch house, Split-Level house, and a two-story house of unrecognized type, most of which are historical revival in nature. The houses sit on large lots about ½ to 1 acre, which are filled with mature shade trees, foundation shrubs, and extensive decorative landscaping.	Roughly bounded by Old Georgetown Trail to the west, Bishop Hollow Run and Old Spring House Lane to the north, and Old Spring House Lane to the south and east (north of I-285). NRHP boundary corresponds to the sum of the 119 legal property boundaries, contains about 71 acres, and includes the houses, any associated outbuildings, the pool, club house, tennis courts, and the immediate surrounds.	Criterion A—local level of significance in community development Criterion C—local level of significance in architecture
Murphey Candler Park	1954	A public park consisting of recreational facilities (walking trails, picnic areas, a public pool and bath house, and athletic fields and associated grandstands, concession stands, and restrooms) are located on the south side of the roadway surrounding a man-made lake. The park is bisected by a dam carrying West Nancy Creek Drive, which were both built in conjunction with the park. A sandy beach and fishing docks are located on the eastern bank of the lake, while a former caretaker's house is located on the western bank.	Located at 1551 West Nancy Creek Drive, along the north and south side of the roadway, on the south side of I-285. NRHP boundary corresponds to the legal property boundary (about 120.6 acres) and includes the lake, the surrounding nature preserves, walking trails, granite entrance markers, the pool and pool house, the dam and bridges, the former caretaker's house, and the athletic fields. The edge of pavement along Candler Lake West, Candler Lake East, and West Nancy Creek Drive are the western, eastern, and southern borders of the NRHP boundary because the existing ROW in these locations contains portions of the historic granite entry markers, athletic fields, and historic dam and bridges, which are contributing elements of the setting of the property.	Criterion A—significance in recreation and community development Criterion C—significance in landscape architecture
Gains-borough Historic District	1963-1973	A large, dis-contiguous suburban residential subdivision consisting of 280 homes, a community pool, and a clubhouse. There are three main house types (one-story Ranch house, Split-Level house, and a two-story	Located east and west of Chamblee Dunwoody Road, roughly bounded by Chancery Lane, Queens Way, Royal Court, and Gainsborough Drive, as well as by East Nancy Creek, Berkford Circle, and Brawley Circle (south side of I-285). Encompasses the Gainsborough	Criterion A—local level of significance in community development Criterion C—

Table 15. NRHP Eligible Resources within the Project's APE

Name of Resource	Date	Type/Style/Description	Location and NRHP Boundary	NRHP Criteria
		house of unrecognized type), mostly historical revival in nature. The houses sit on large lots that are 0.5 to 1 acre and filled with mature shade trees, foundation shrubs, and extensive decorative landscaping.	and Gainsborough West subdivisions. NRHP boundary consists of the sum of the legal property boundaries of the 280 parcels, contains about 165 acres, and includes the houses, associated outbuildings, pool and pool house, and the immediate surrounds. The edges of pavement along East Nancy Creek Drive and Chamblee Dunwoody Road are the southern border of the Gainsborough West subdivision and the western border of the Gainsborough subdivision because the existing ROW in these areas contains a portion of the properties' grassed lawns, decorative landscape features and the entrance markers to the subdivisions, which are contributing elements of the setting.	local level of significance in architecture

The March 2005 guidance adopted by the Advisory Council on Historic Preservation under 36 CFR 800.14[c] and published in the Federal Register (pp. 11928-11931) effectively relieves Federal agencies from the requirement of taking into consideration the effects of their undertakings on the Interstate Highway System under Section 106 of the NHPA, except with regard to certain individual elements or structures that are determined to be nationally or exceptionally significant features of the system. The FHWA subsequently published a final, state-by-state list of nationally and exceptionally significant features of the Interstate Highway System in June 2006. Based on this list, the interstate system in Georgia does not consist of any nationally or exceptionally significant features requiring further evaluation under Section 106. Therefore, the portion of I-285 and its associated highway-related facilities within the interstate ROW and carrying the interstate shield for this project fall under this exemption and do not require further evaluation as historic properties.

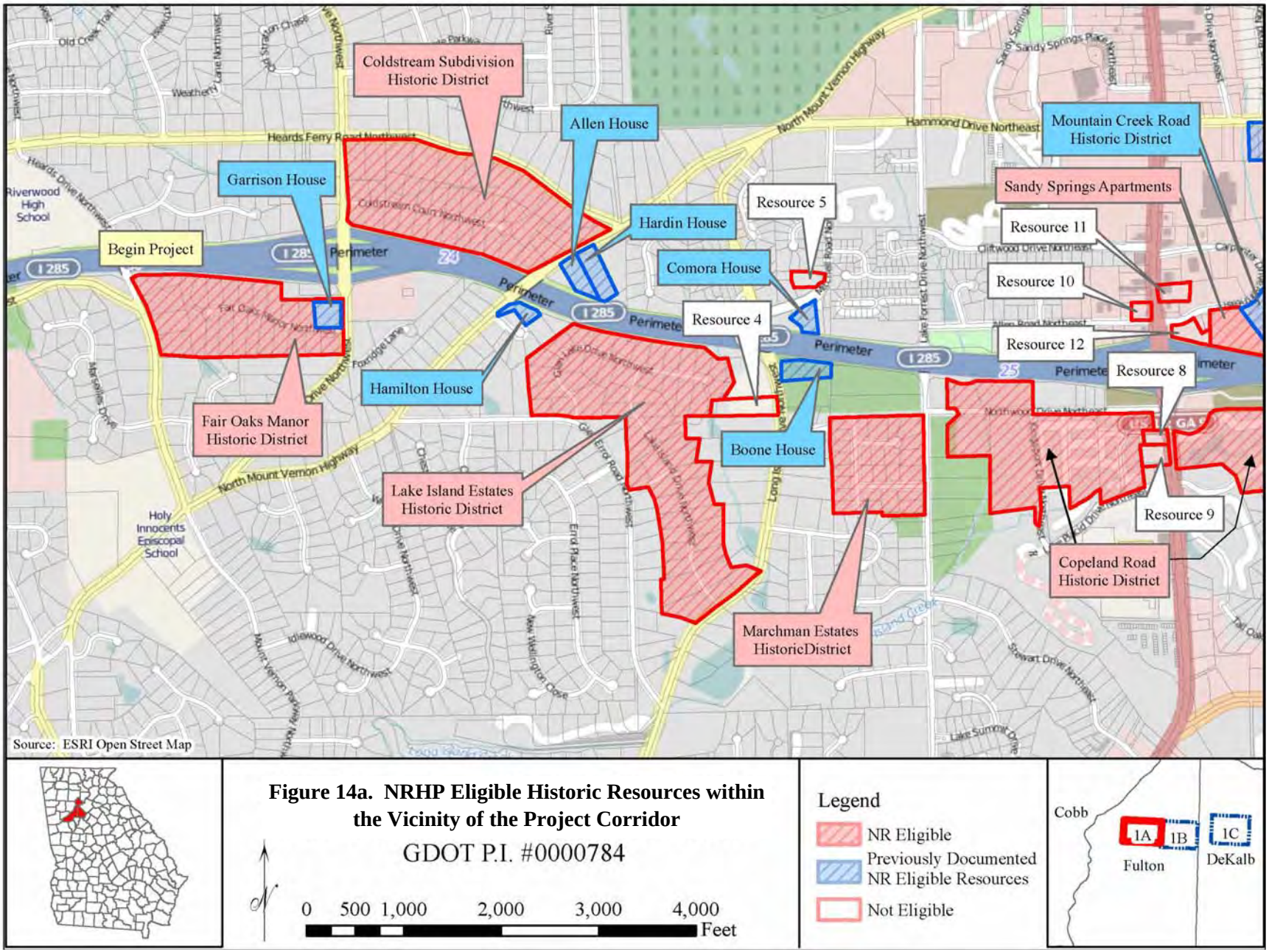
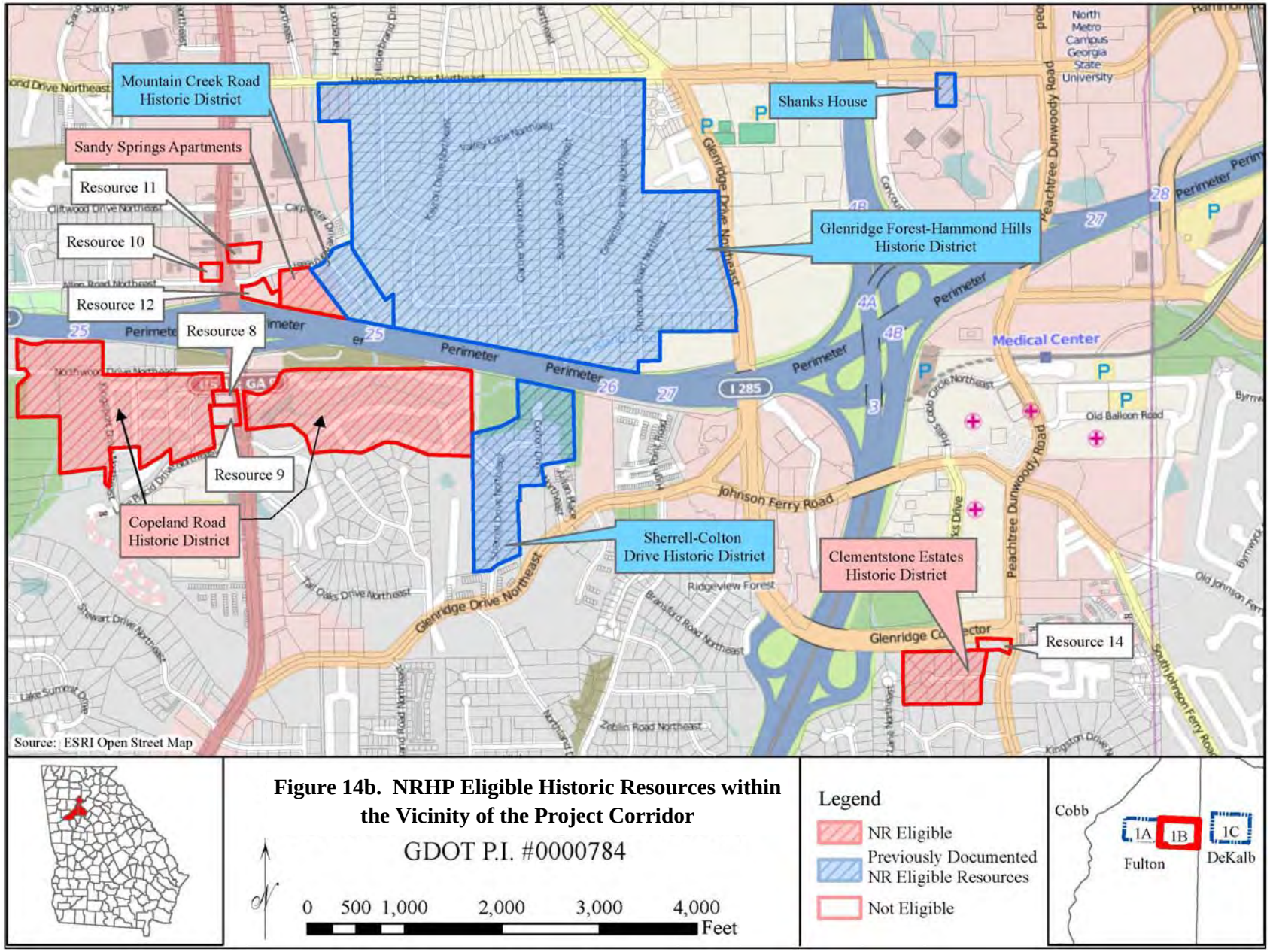
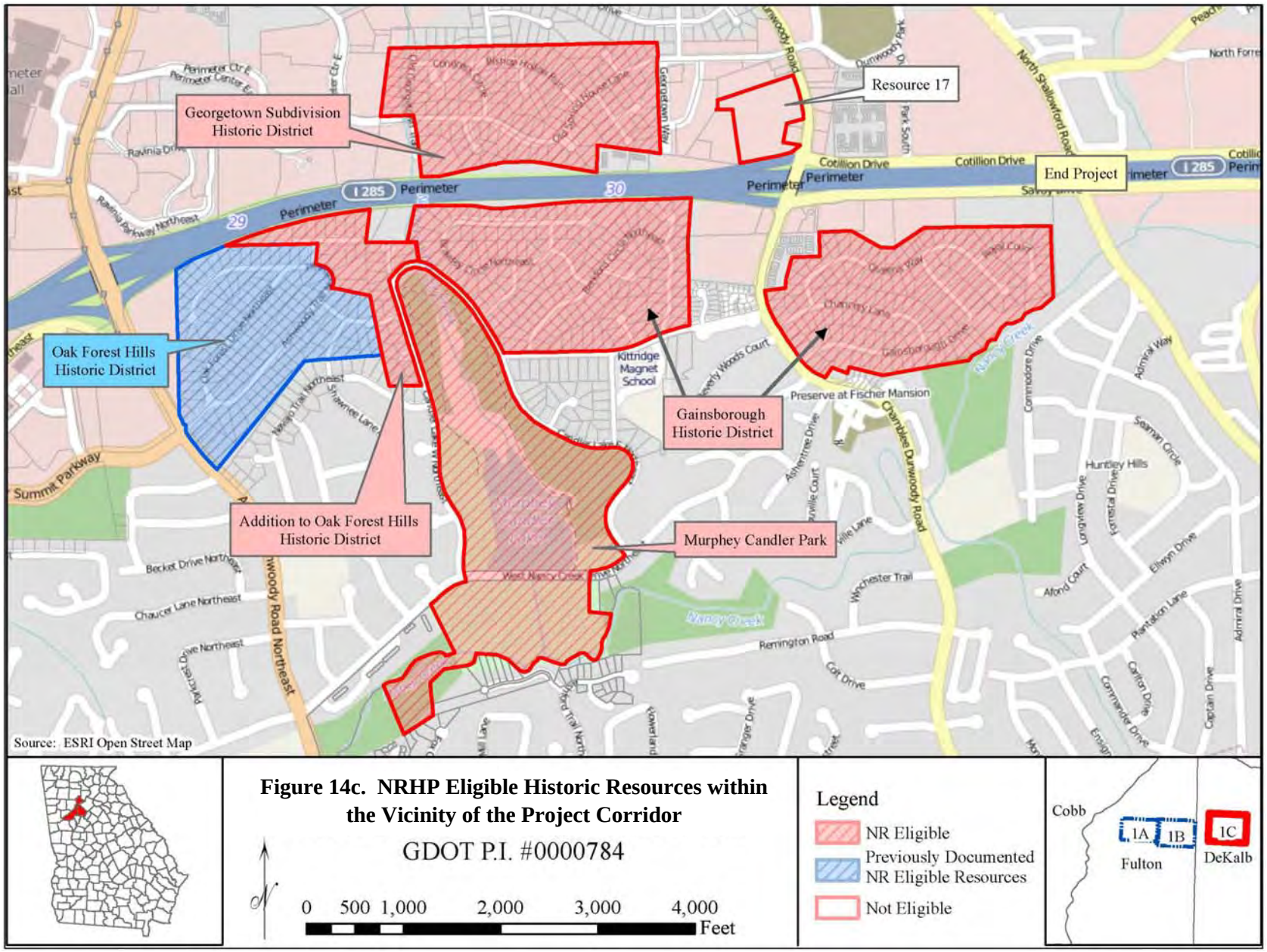


Figure 14a. NRHP Eligible Historic Resources within the Vicinity of the Project Corridor


Mountain Creek Road Historic District
Sandy Springs Apartments
Resource 11
Resource 10
Resource 12
Resource 8
Resource 9
Copeland Road Historic District
Shanks House
Glenridge Forest-Hammond Hills Historic District
Sherrell-Colton Drive Historic District
Clementstone Estates Historic District
Resource 14
Perimeter
Medical Center
Old Balloon Road
Johnson Ferry Road
Peachtree Dunwoody Road
Glenridge Drive Northeast
North Metro Campus Georgia State University
I 285
Source: ESRI Open Street Map
Figure 14b. NRHP Eligible Historic Resources within the Vicinity of the Project Corridor
GDOT P.I. #0000784
0 500 1,000 2,000 3,000 4,000
Feet
Legend
NR Eligible
Previously Documented NR Eligible Resources
Not Eligible
Cobb
1A
1B
1C
Fulton
DeKalb


Georgetown Subdivision Historic District
Resource 17
End Project
Oak Forest Hills Historic District
Addition to Oak Forest Hills Historic District
Gainsborough Historic District
Murphey Candler Park
Kittridge Magnet School
Preserve at Fischer Mansion
Perimeter
I 285
Cotillion Drive
Dunwoody Road Northeast
Chamblee Dunwoody Road
Summit Parkway
Source: ESRI Open Street Map
Figure 14c. NRHP Eligible Historic Resources within the Vicinity of the Project Corridor
GDOT P.I. #0000784
0 500 1,000 2,000 3,000 4,000 Feet
Legend
NR Eligible
Previously Documented NR Eligible Resources
Not Eligible
Cobb
1A
1B
1C
Fulton
DeKalb

Assessment of Effects

The impacts on historic resources from project implementation are summarized in Table 16, and in the sections following the table. A detailed impact analysis for each historic property can be found in the *Assessment of Effects on Historic Properties* (2014) report, which is available in the project file by contacting the Georgia DOT Office of Environmental Services (OES). The SHPO has concurred with the findings of the *Assessment of Effects on Historic Properties* report in a letter dated October 23, 2014 (see Appendix A). Subsequently, a Historic Resources Addendum Memorandum was completed on March 13, 2015, which re-evaluated ROW and easement needs on each historic property in light of more refined property boundary data collected during the project's land survey (see Appendix A). The results of this memorandum are incorporated below.

Table 16. Summary of Effects To NRHP Eligible Resources from the Project

Resource	Effect Determination and Noise Levels[1]
Fair Oaks Manor Historic District	No Effect; No effect to existing noise levels and resource is outside the limits of the project's noise study
Coldstream Subdivision Historic District	No Effect; No effect to existing noise levels and resource is outside the limits of the project's noise study
Hamilton House	No Effect; Existing noise level is approximately 69.1 decibels (dBA), while anticipated design year (2039) Build condition noise level would be approximately 68.6 dBA
Allen House	No Effect; Existing noise level is approximately 69.5 dBA, while anticipated design year (2039) Build condition noise level would be approximately 61.9 dBA
Hardin House	No Effect; Existing noise level is approximately 69.5 dBA, while anticipated design year (2039) Build condition noise level would be approximately 61.9 dBA
Lake Island Estates Historic District	No Effect; Existing noise levels range from approximately 61.7 dBA to 67.5 dBA, while anticipated design year (2039) Build condition noise levels would range from approximately 61.6 dBA to 67.4 dBA
Comora House	No Effect; Existing noise level is approximately 72.8 dBA, while anticipated design year (2039) Build condition noise level would be approximately 63.4 dBA
Boone House	No Adverse Effect (ROW acquisition/physical disturbance within boundary); Existing noise level is approximately 73.7 dBA, while anticipated design year (2039) Build condition noise level would be approximately 67.4 dBA
Marchman Estates Historic District	No Effect; No effect to existing noise levels and resource is outside the limits of the project's noise study
Copeland Road Historic District	No Adverse Effect (ROW and easement acquisition/physical disturbance within boundary; changes to viewshed); Existing noise levels range from approximately 63.3 dBA to 76.4 dBA, while anticipated design year (2039) Build condition noise levels would range from approximately 55.9 dBA to 63.6 dBA
Sandy Springs Apartments	No Adverse Effect (Easement acquisition; temporary construction-related parking impacts); Existing noise levels range from approximately 67.5 dBA to 74.0 dBA, while anticipated design year (2039) Build condition noise levels would range from approximately 61.6 dBA to 67.0 dBA

Table 16. Summary of Effects To NRHP Eligible Resources from the Project

Resource	Effect Determination and Noise Levels[1]
Mountain Creek Road Historic District	No Adverse Effect (ROW and easement acquisition/physical disturbance within boundary); Existing noise levels range from approximately 70.6 dBA to 77.3 dBA, while anticipated design year (2039) Build condition noise levels would range from approximately 60.5 dBA to 62.7 dBA
Glenridge Forest-Hammond Hills Historic District	No Adverse Effect (ROW and easement acquisition/physical disturbance within boundary); Existing noise levels range from approximately 66.8 dBA to 74.1 dBA, while anticipated design year (2039) Build condition noise levels would range from approximately 60.9 dBA to 63.2 dBA
Sherrell-Colton Drive Historic District	No Adverse Effect (ROW and easement acquisition/physical disturbance within boundary); Existing noise levels range from approximately 68.3 dBA to 69.1 dBA, while anticipated design year (2039) Build condition noise levels would range from approximately 63.2 dBA to 63.4 dBA
Shanks House	No Adverse Effect (cumulative effects); No effect to existing noise levels and resource is outside the limits of the project's noise study
Clementstone Estates Historic District	No Effect; No effect to existing noise levels and resource is outside the limits of the project's noise study
Oak Forest Hills Historic District	No Adverse Effect (ROW and easement acquisition/physical disturbance within boundary); Existing noise levels range from approximately 69.2 dBA to 77.5 dBA, while anticipated design year (2039) Build condition noise levels would range from approximately 64.5 dBA to 65.8 dBA
Georgetown Subdivision Historic District	No Effect; Existing noise levels range from approximately 65.9 dBA to 68.8 dBA, while anticipated design year (2039) Build condition noise levels would range from approximately 59.0 dBA to 62.8 dBA
Murphey Candler Park	No Effect; No effect to existing noise levels and resource is outside the limits of the project's noise study
Gainsborough Historic District	No Effect; Existing noise levels range from approximately 60.8 dBA to 67.8 dBA, while anticipated design year (2039) Build condition noise levels would range from approximately 60.4 dBA to 65.9 dBA

[1] Design year (2039) Build condition noise levels reflect abatement measures, where determined feasible by the noise study, as discussed in detail in Section D.1, *Noise*, of this document.

As shown in Table 16, the proposed project would have No Effect on 12 of the 20 NRHP eligible properties along the corridor, which signifies that the project would not:

- physically destroy or damage any of the property;
- disturb any landscape or other features which contribute to the resource's NRHP eligibility;
- result in a change in the character of the property's use (e.g., residential, institutional, industrial);
- result in a change in the character of the property's physical features within the property's setting that contribute to its historic significance;

- introduce visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic characteristics or features; or

- result in any indirect effects to the resource.

Most of these properties were constructed between the mid-1950s to 1970s; therefore, they have been sited adjacent to an interstate highway (i.e., I-285) for most of their existence. In addition, in most cases, these properties are currently shielded from existing I-285 by dense vegetation and/or other features (e.g., noise barriers, fences, topographical conditions), and would continue to be shielded by these same features after project implementation.

In the case of seven resources—the Boone House, Copeland Road Historic District, Sandy Springs Apartments, Mountain Creek Road Historic District, Glenridge Forest-Hammond Hills Historic District, Sherrell-Colton Historic District, and Oak Forest Hills Historic District—a No Adverse Effect determination has been made because the project would require a small amount of ROW and/or easement acquisition from and minor physical disturbance within the boundaries of each of these districts, but these effects would not be adverse. Construction activities in the vicinity of each of these historic properties are shown in Figures 15a through 15j in Appendix E, and are discussed below.

- Within the **Boone House** property, approximately 0.14 acre of ROW would be required along the northeast corner of the boundary in a densely wooded area for the extension of an existing culvert associated with a stream that is partially located within the historic boundary. The area between the house and the required ROW also consists of a densely wooded area that would remain intact after project implementation. The construction activity proposed to take place within the boundary would not significantly diminish any landscape elements that contribute to the property's NRHP eligibility. Additionally, the project would not alter the viability of this property for continued residential use and would not alter the visual perception from the property.

- Within the **Copeland Road Historic District**, approximately 0.14 acre of ROW would be required from the dense wooded area along the northern edge of the property in the Mosaic Apartments complex for extension of an existing box culvert and reconstruction of its associated head wall. Approximately two to three nearby parking spaces in the vicinity of the culvert would be temporarily impacted while construction activities are occurring at the culvert and head wall, but these parking spaces would be returned to their current use once these construction activities have ended. Their temporary use would not adversely affect the district as there would still be sufficient parking available in the vicinity of the culvert to house the tenants in the roughly half a dozen apartment buildings surrounding the culvert. An additional approximately 0.06 acre of ROW and 0.07 acre of permanent easement would be required from along a wooded slope behind two apartment buildings in the Mosaic Apartments complex for staging and clearing activities associated with construction of a retaining wall at the property's northeast corner. The land acquisition would not result in the alteration or removal of any buildings or any significant structural or landscape features that contribute to the NRHP eligibility of the district. Project implementation would not result in a change in the character of the property's use or a change in the character of the property's physical features within the property's setting that contribute to its historic significance.

The actual encroachment of the interstate towards the Copeland Road Historic District would not diminish its future residential viability or introduce visual elements that would diminish the integrity of the property's significant historic characteristics or features. While the edge of pavement along I-285 would encroach upon some apartment buildings in the district, this encroachment would not result in the removal of private yard space associated with any of the apartment buildings, nor would it result in the alteration or removal of any common area green space or parking facilities utilized by the complexes. In some areas, the encroaching edge of pavement would partially replace an existing embankment covered in non-historic vegetation that slopes up to the interstate with concrete retaining walls. However, these walls would not diminish the residential viability of the property as they would be located in areas not used for residential or recreational purposes. Incorporating a new, non-historic element (retaining wall) into a viewshed that already consists of a non-historic element (vegetation) is not considered a change that diminishes the property's visual character. It is simply adding another non-historic element to a viewshed that has already been compromised.

- Within the **Sandy Springs Apartments** property, approximately 0.25 acre of underground easement would be required from within the property's NRHP boundary for construction and maintenance of a concrete retaining wall. Structural elements that would provide stability to the wall would be installed from the interstate side of the property, outside its NRHP-eligible boundary. No disturbance would occur on the surface of the property, but parking would be temporarily prohibited in the area of the easement during construction of the retaining wall. Temporary construction fencing would be installed around the easement area on the parking lot to prevent parking of vehicles during this time. This fencing would not result in damage or removal of any structural or landscape features within the property's historic boundary. The temporary loss of parking in the easement area would not adversely affect the property, as ample parking would still exist outside the easement area throughout the rest of the property. The project would not alter the viability of this property for continued residential use and would not alter the visual perception from the property since the property is approximately 20 feet higher than the interstate.

- Within the **Mountain Creek Road Historic District**, approximately 0.04 acre of ROW would be required from a vacant wooded lot on the property for the extension of a non-historic box culvert and reconstruction of its head wall in the vicinity of a nearby creek. In addition, approximately 0.06 acre of permanent easement would be required along a stretch of dense vegetation in the southeast corner of the property for staging and clearing activities associated with construction of a proposed retaining wall. The required ROW and easement would not result in the alteration or removal of any significant structural or landscape features or yard space associated with the properties in the district. The project would not diminish the continued or future residential viability of the properties within the district. The property's immediate setting would continue to remain wooded, and the two houses closest to the interstate would continue to retain a view of the non-historic retaining wall across the property's southern boundary. The dense vegetation on each of these two properties between the houses and the interstate would also remain intact.

- Within the **Glenridge Forest-Hammond Hills Historic District**, approximately 0.06 acre of ROW would be required from a vacant wooded lot on the property for the extension of a non-historic box culvert and reconstruction of its head wall in the vicinity of Long Island Creek, along

with the construction of a retaining wall and associated paved ditch. The area of required ROW does not contain any structural or landscape features that contribute to the property's NRHP eligibility and no significant features associated with the property would be altered or removed. In addition, approximately 0.36 acre of permanent easement would be required from along most of the southern edge of the property for construction and maintenance of the proposed retaining wall. The easement would not result in the alteration or removal of any significant structural features or yard space associated with the properties in the district; nor would it result in the removal of any common area green space within the district boundary. The proposed project would not result in a change in the character of the property's use or a change in the character of the property's physical features within the property's setting that contribute to its historic significance. The project would also not introduce visual elements that diminish the integrity of the property's significant historic characteristics or features.

- Within the **Sherrell-Colton Drive Historic District**, approximately 0.14 acre of ROW and approximately 0.13 acre of permanent easement would be required along the northern edge of the property's NRHP eligible boundary for construction of a bridge, retaining wall, and paved ditch. The ROW and easement would be acquired from a densely vegetated slope behind three contributing houses in the district. The areas of ROW and easement do not include any structural features or landscape features (such as yard space or common area green space) that contribute to the district's NRHP eligibility. Project implementation would not result in a change in the character of the property's use and would not introduce visual elements that diminish the integrity of the property's significant historic characteristics or features.

- Within the **Oak Forest Hill Historic District**, approximately 0.03 acre of ROW would be required from a vacant wooded lot in the district for the extension of an existing box culvert and reconstruction of its associated head wall. The area of required ROW does not contain any significant structural features, yard space, or common area green space associated with the property. In addition, approximately 0.04 acre of permanent easement would be required from within the district's NRHP eligible boundary for construction of a retaining wall along the south side of I-285. The retaining wall would be constructed within existing I-285 ROW, and the easement would be required for staging and clearing activities associated with the wall's construction. The easement would be acquired from four parcels within the district, one of which consists of a vacant wooded lot. The three remaining properties each consist of a single-family residence, all of which are set back approximately 170 feet from the area of the proposed easement and buffered from the easement by a dense wooded area. The easement area does not contain any significant structural features, yard space, or common area green space associated with the property. Project implementation would not result in a change in the character of the property's use or a change in the character of the property's physical features within the property's setting that contribute to its historic significance. The project would also not introduce visual elements that diminish the integrity of the property's significant historic characteristics or features.

Planning to Minimize Harm

Planning to minimize harm was taken into consideration to the extent possible during project development. Project designers coordinated extensively with project historians to ensure that the project,

as currently designed, would not result in adverse effects to NRHP eligible historic resources. Additional ROW and easement, in the few instances when needed, was kept to a minimum with the use of retaining walls, and features such as noise walls were designed to be constructed within the existing interstate ROW or on top of proposed retaining walls.

Indirect Impacts

Project implementation is not anticipated to indirectly affect the Fair Oaks Manor Historic District, Coldstream Subdivision Historic District, Hamilton House, Allen House, Lake Island Estates Historic District, Harden House, Boone House, Comora House, Marchman Estates Historic District, Mountain Creek Historic District, Glenridge Forest-Hammond Hills Historic District, Sherrell-Colton Drive Historic District, Clemenstone Estates Historic District, Oak Forest Hills Historic District, Murphey Candler Park, Georgetown Subdivision Historic District, and Gainsborough Historic District. No existing access to or from these properties to existing transportation facilities would be modified or removed as a result of the project. No new intersections would be created in the vicinity of these properties. Existing land use in the vicinity of most of these properties is primarily low- and/or medium-density residential (except in the cases of the Glenridge Forest-Hammond Hills, Sherrell-Colton Drive, Oak Forest Hills, and Clemenstone Estates Historic Districts, which are also surrounded by medium- to high-density residential with some interspersed commercial use), and there are no known planned developments or zoning changes in the area of the properties anticipated to result in a change in all or part of the land use of the properties. None of these resources are located within close proximity of any identified DRIs along the project corridor and would therefore not encounter any redevelopment pressures that might be associated with these facilities. In the City of Sandy Springs, Dunwoody, and Brookhaven, single-family neighborhoods such as these resources are protected neighborhoods that, according to local officials, would not change to a different use. While it is apparent that redevelopment pressures are increasing along the project corridor due to high market demand, particularly in the vicinity of existing DRIs immediately surrounding I-285 and SR 400, these pressures are already occurring without the proposed project being implemented. While the proposed project might result in the intensification of this redevelopment, there are no reasonably foreseeable development plans that would pose a threat to the future viability of these NRHP eligible resources.

In the area of the Glenridge Forest-Hammond Hills and Sherrell-Colton Drive Historic Districts, some single-family homes along the west side of Glenridge Drive have recently been demolished and replaced with townhomes, and the Lakeside Office Park on the east side of Glenridge Drive (directly across from the townhomes) is proposed for a mixed-use redevelopment consisting of multi-family housing, restaurant space, office space, and an accessory commercial building. This redevelopment falls entirely within the Lakeside Redevelopment DRI at the northwest quadrant of I-285/SR 400 interchange, and has been in the works since approximately 2007. There is no plan to extend the Lakeside Redevelopment DRI or the townhome development within the boundary of either of the adjacent historic districts. In addition, all of this planned redevelopment would occur with or without implementation of the proposed project.

Project implementation is also not anticipated to indirectly affect the Copeland Road Historic District or the Sandy Springs Apartments. No existing access to or from these properties to existing transportation facilities would be modified or removed as a result of the project, and no new intersections would be created in the vicinity of them. Existing land use in the vicinity of these properties consists of multi-family residential and dense commercial areas along Roswell Road. The most notable recent

development in the area of the Copeland Road Historic District is the Prado Shopping Center, which consists of an approximately 340,000 square foot retail area adjacent to the south end of the property across Lake Placid Drive that was completed in 2009. In addition, an ice skating arena is currently being constructed on the north side of Northwood Drive directly north of (and across from) the Copeland Road Historic District on the site of a former motel. There are no known planned developments or zoning changes in the area of the either the Copeland Road Historic District or the Sandy Springs Apartments that are anticipated to result in a change in all or part of the land use of these properties. Their close proximity to I-285 and Roswell Road may increase the likelihood of the properties encountering redevelopment pressures, but they are not threatened by any known redevelopment plans dependent upon the proposed project. The area along Roswell Road has been a major commercial corridor since the late 1960s, but these properties have continually functioned as areas of multi-family apartment complexes since their construction. Future land use and redevelopment plans for the area surrounding the properties have been ongoing well before the I-285/SR 400 Interchange Reconstruction project was conceived, and the high market demand for this area would continue to remain at a high level regardless of whether or the not the project is implemented. While the proposed project might intensify redevelopment actions that are already ongoing in the area, there are no reasonably foreseeable development plans that would pose a threat to the future viability of the Copeland Road Historic District or Sandy Springs Apartments.

Project implementation is not anticipated to indirectly affect the Shanks House. No existing access to or from this property to existing transportation facilities would be modified or removed as a result of the project and no new intersections would be created in the vicinity of the property. Existing land use in the vicinity of the property is primarily high-density office and commercial, and the property is within close proximity to numerous DRIs in the vicinity of SR 400. The property is privately owned, and while its close proximity to SR 400, I-285, several DRIs, and numerous office parks may increase the likelihood of its eventual redevelopment, it is not threatened by any known redevelopment plans dependent upon project implementation. Future land use and redevelopment plans for the area surrounding the property have been ongoing well before this project was conceived, and the high market demand for this area would continue to remain at a high level regardless of whether or the not the project is implemented. While project implementation might result in the further intensification of this redevelopment, there are no reasonably foreseeable development plans that would pose a threat to the future viability of the Shanks House.

Cumulative Impacts

All of the growth along the project corridor can reasonably be attributed to the construction of I-285, which was ongoing around the City of Atlanta throughout the 1960s. During this time, the overwhelming majority of the project area consisted of dense woods, farmland, and clusters of single-family homes (individual and part of larger subdivisions). However, the eventual construction and opening of I-285 in 1967 saw the development of numerous multi-family housing facilities and commercial establishments along the top end of the I-285 corridor, with most of the initial development occurring along the interstate's interchange with Roswell Road. The rest of the corridor, which similarly consisted of woods, pastures, and clusters of single-family homes, gradually followed suit, due in large part to the opening of the northern segment of SR 400 in 1968. With the conversion of Scottish Rite from a children's convalescent home to a fully functional medical center in the mid-1960s, followed by the opening of Northside Hospital, the area southeast of the I-285/SR 400 interchange became established as the healthcare hub for the metro area. Approximately one mile east of the interchange, Perimeter Mall

opened its doors in the early 1970s along Ashford-Dunwoody Road and set the foundation for what would eventually become recognized as one of the largest "edge cities" in the United States. This growth and development continued well into the following four decades at an unprecedented rate. Between 1988 and 1993, completion of the segment of SR 400 south of I-285 to I-85 opened up much of the area around Glenridge Drive to extensive residential and commercial development and provided improved access to all of the medical facilities in the vicinity of Northside Hospital.

In the 2000s, the cities of Sandy Springs, Dunwoody, and Brookhaven (portions of which are located along the project corridor), all became incorporated cities, which in turn allowed them to exert far greater control in establishing plans to control growth and development as these relate to population, employment opportunities, land use changes, and infrastructure improvements. Each of these cities has established long-range comprehensive plans in an effort to guide future growth and identify key resources (commercial, environmental, cultural, for example) in their respective communities. However, none of these cities has adopted any type of local historic preservation ordinance that would provide some means of local protection to each city's significant cultural resources, and only Sandy Springs has undertaken an inventory survey of its cultural resources, although this survey was completed in 1996. Due to the absence of an established preservation ordinance, the cities also lack a local Historic Preservation Commission to review and comment on potential development or redevelopment projects that might affect cultural resources. As a result, preservation advocacy in these cities falls primarily to private community organizations. In Sandy Springs, there are two community groups that are involved to some degree in the preservation of the city's historic properties. Heritage Sandy Springs is a non-profit organization dedicated to preserving the community history of Sandy Springs through the offering of educational programs to the public. The Sandy Springs Society is a membership organization of volunteers who raise funds in support of various programs identified as "needed" in the city—one of which is Heritage Preservation. Similarly, the Dunwoody Preservation Trust is a non-profit organization with the goal of preserving the history and heritage of the City of Dunwoody through acquisition and/or underwriting the maintenance of historically significant properties, documenting historical and current happenings, and providing educational programs to the public on Dunwoody's history. Lastly, the Historic Brookhaven Foundation, Inc. manages historic preservation efforts for the City of Brookhaven, although their primary concern is preservation management solely within the boundary of the NRHP-listed Brookhaven Historic District, which encompasses the city's downtown area and is not within the geographical APE for this cumulative effects analysis.

Project implementation is not anticipated to contribute to cumulative effects on the Fair Oaks Manor Historic District, Coldstream Subdivision Historic District, Hamilton House, Allen House, Lake Island Estates Historic District, Hardin House, Boone House, Comora House, Marchman Estates Historic District, Mountain Creek Road Historic District, Glenridge Forest-Hammond Hills Historic District, Sherell-Colton Drive Historic District, Clemenstone Estates Historic District, Oak Forest Hills Historic District, Murphey Candler Park, Georgetown Subdivision Historic District, or Gainsborough Historic District. The residential viability of these properties has been maintained since they were first established, before the completion of the top end of I-285. Construction of the interstate did not result in the removal of any properties from within these neighborhoods. Similarly, subsequent development in the area of the resources over the past four decades, which has been predominately residential in nature, has not resulted in any significant alterations to the resources or any of their contributing features. Planned/programmed future transportation projects in the area would not result in the removal of current access to or from the properties, and, collectively, there is no evidence to suggest that they would

definitively encourage development or redevelopment in the vicinity of the historic resources. There are no known current or future planned developments or zoning changes in the area of the resources that are anticipated to result in a change in all or part of the land use of the resources. In the cities of Sandy Springs, Dunwoody, and Brookhaven, single-family neighborhoods are protected neighborhoods that, according to local officials, are not anticipated to change to a different use. In addition, the overall condition of the resources is stable and consists of established homeowners, no observable vacant houses, and very few examples of infill housing within the last 30 to 50 years. Individual resources appear to be structurally sound, with no outward signs of substantial deterioration that might considerably increase their potential for redevelopment.

The proposed project is also not anticipated to contribute to adverse cumulative effects to the Sandy Springs Apartments. The residential viability of this property has been maintained since it was first established. Subsequent development in the area of the apartments over the past four decades, which has been about equally residential and commercial in nature, has not resulted in any substantial alterations to the apartments or any of its contributing features. Collectively, planned and programmed transportation projects in the area are not anticipated to definitively encourage development or redevelopment in the vicinity of the district. The property's close proximity to I-285 and Roswell Road appears to increase the likelihood of the property encountering redevelopment pressures, but it is not specifically threatened by any known redevelopment plans. The area along Roswell Road surrounding the property has been a major commercial corridor since the late 1960s, but this property has continually functioned as a multi-family apartment complex since its construction. Future land use and redevelopment plans for the area surrounding the property have been ongoing well before this project was conceived, and the high market demand for this area would likely continue to remain at a high level as long as the economy remains relatively stable. While the proposed project may further intensify this redevelopment, there are no reasonably foreseeable development plans that would pose a threat to the future viability of the Sandy Springs Apartments. In addition, the property appears to be in stable condition and currently retains its historic use as multi-family housing. As a result, there are no reasonably foreseeable threats of demolition or redevelopment due to the property being vacant or structurally unsound.

While the proposed project would contribute to cumulative effects on the Copeland Road Historic District, this is not considered adverse. The residential viability of this property has been maintained since it was first established. Construction of the interstate did not result in the removal of any properties from within the district. Similarly, subsequent development in the area of the district over the past four decades, which has been predominately commercial in nature, has not resulted in any significant alterations to the district or any of its contributing features. Collectively, planned and programmed transportation projects in the area are not anticipated to definitively encourage development or redevelopment in the vicinity of the Copeland Road Historic District. Despite a flurry of redevelopment activity in the vicinity of the property within the past five years, there are no known planned developments or zoning changes in the area of the property anticipated to result in a change in all or part of the property's land use. Its close proximity to I-285 and Roswell Road, along with the lack of an established preservation ordinance in Sandy Springs, appears to increase the likelihood of the property encountering redevelopment pressures, but it is not specifically threatened by any known redevelopment plans. The area along Roswell Road surrounding the property has been a major commercial corridor since the late 1960s, but this property has continually functioned as an area of multi-family apartment complexes and an associated shopping center since its construction. Future land use and redevelopment plans for the area surrounding the property have been ongoing well before this project was conceived, and

the high market demand for this area will likely continue to remain at a high level as long as the economy remains relatively stable. While the proposed project may intensify redevelopment in the area, there are no reasonably foreseeable development plans that would pose a specific threat to the future viability of the Copeland Road Historic District. In addition, the property appears to be in stable condition and currently retains its historic use as multi-family housing. As a result, there are no reasonably foreseeable threats of demolition or redevelopment due to the property being vacant or structurally unsound.

In addition, cumulative effects on the Shanks House may occur; however, the proposed project is anticipated to only contribute a minimal amount to these effects, and this contribution would not be considered adverse. The residential viability of the Shanks House has been maintained since it was first constructed. Construction of I-285 and SR 400 did not result in the removal or alteration of the property. Similarly, subsequent development in the area of the property over the past five decades, which has been extensive and predominately commercial in nature, has not resulted in any major alterations to the property or any of its contributing features. There is no evidence to suggest that planned or programmed transportation projects in the area of the Shanks House, collectively, would definitively encourage development or redevelopment in the vicinity of the property, although redevelopment trends appear likely in this area due to its proximity to the convergence of I-285 and SR 400 and the extensive level of development that has already taken place over the years. Existing land use in the vicinity of the property is primarily high density office and commercial, and the property is within close proximity to numerous DRIs in the vicinity of SR 400. The property is privately owned, and while its close proximity to SR 400, I-285, several DRIs, and numerous office parks appears to increase the likelihood of its eventual redevelopment, it is not specifically threatened by any known redevelopment plans. The high market demand for this area will likely continue to remain at a high level as long as the economy remains relatively stable. While project implementation might further intensify this redevelopment, there are no reasonably foreseeable development plans that would pose a specific threat to the future viability of the Shanks House. In addition, the overall condition of the resource is stable. The resource is currently occupied and appears to be structurally sound with no outward signs of significant deterioration that might considerably increase its potential for redevelopment.

2. Archaeological Resources

Pursuant to Section 106 of the NHPA, as amended, an archaeological resource assessment was conducted of the proposed project corridor. The APE for archaeological resources for the proposed project is limited to the existing ROW, proposed ROW, and any required easements along I-285 and SR 400 within the project limits. A 100-foot expanded survey corridor (ESC) was also assessed. No field survey was conducted for the proposed project, since the APE and ESC have previously been surveyed by 11 previous surveys. As a result of these surveys, there are three previously recorded sites within one kilometer of the project, including one prehistoric Indian isolated artifact and two historic houses/structures, all of which are of unknown NRHP eligibility. However, no archaeological resources were located within the proposed project's APE as a result of the assessment. Since no archaeological resources were located within the project's APE, no signed concurrence from the Georgia SHPO is required.

Indirect Impacts

According to Georgia's Natural, Archaeological, and Historic Resources Geographic Information Systems (NAHRGIS) database, the entire region of influence for indirect impacts is rated as having a medium potential for archaeological resources. Redevelopment that is intensified or accelerated by the proposed improvements could impact previously unrecorded archaeological sites in the project vicinity. However, given the disturbed/built out nature of the project area and its vicinity, the potential for indirect effects on unidentified archaeological sites would be low. In addition, redevelopment in the area is occurring with or without the proposed project. Therefore, project implementation is not anticipated to result in adverse, indirect impacts on archaeological resources.

Cumulative Impacts

Since the proposed project is not anticipated to have any direct effects, and low potential for indirect impacts, on archaeological resources, the project would not contribute to cumulative impacts on archaeological resources.

3. Historic Markers

The proposed project would not require the removal or relocation of any historic markers, since none are present within the project area.

Indirect Impacts

No indirect impacts on historic markers are anticipated as a result of the project.

Cumulative Impacts

There are no reasonably foreseeable cumulative impacts on historic markers that would result from the proposed project.

4. Parklands/Recreation Areas/Wildlife Refuges

Three public parks—Allen Park, Hammond Park, and Ridgeview Park—are located in the vicinity of the project corridor (see Figure 12). Allen Park is owned by the City of Sandy Springs and is located at 5900 Lake Forrest Drive in Sandy Springs, immediately adjacent to the I-285 westbound corridor, just west of the I-285/Roswell Road interchange. This 2.97-acre park contains a playground, a multi-purpose court, basketball court, outdoor soccer arena, picnic tables, and a walking trail. According to city officials, Allen Park is primarily used by nearby residents.

Hammond Park and Community Center, a Fulton County park currently under the management of the City of Sandy Springs, is located at 705 Hammond Drive in Sandy Springs. This approximately 13.3-acre neighborhood park contains a multi-purpose community building, gymnasium with a gymnastics room and game room, soccer field, four tennis courts, two outdoor basketball courts, picnic shelters, two playgrounds, and walking paths.

Ridgeview Park is also managed by the City of Sandy Springs, and is located at 4200 Trimble Road between Glenridge Drive and Peachtree Dunwoody Road. This park is adjacent to Ridgeview Middle School, and includes nature trails, a picnic pavilion, and a playground.

No ROW or easements would be required from any of these public parks for the project. No other impacts to Hammond Park or Ridgeview Park would occur as a result of the proposed project. However, the proposed project would result in some visual changes in the area around Allen Park.

Some trees and other vegetation within the existing I-285 ROW adjacent to the southern border of Allen Park would be removed during construction. However, vegetation loss would be minimized by the construction of a retaining wall along I-285 in this area. The existing retaining wall along I-285 in the area of the park would be removed and reconstructed approximately 17 feet closer to Allen Park, but still within the existing I-285 ROW. This new wall would be approximately 8 feet taller than the existing I-285 road profile. No impacts (temporary or permanent) to any of the park's recreation facilities, parking areas, or driveways would occur.

Although construction would move the edge of pavement along I-285 closer to the park boundary, the interstate is currently visible from Allen Park (see Photos 1 and 2) and would continue to be visible after project construction. Although vegetation within the existing I-285 ROW would be removed for project construction, vegetation within the park's boundary would remain. Photo 3 shows the vegetation along the park's southern boundary (both within the park and within the existing I-285 ROW). Views from the park are not anticipated to be noticeably changed by the project. Additionally, during public outreach to users of Allen Park as part of the overlapping **revive**285 *top end* project, visitors that were interviewed felt that vegetation loss adjacent to the interstate would not affect current park uses because the interstate has always been visible from the park and has always been a part of the visual background. Therefore, the project is not anticipated to result in major adverse visual impacts to the park or its users.

Photos 1 and 2. Views of existing I-285 and retaining wall from Allen Park (I-285 is seen in the background)

Photo 3. View of existing vegetation between I-285 and the southern boundary of Allen Park

The project is also not anticipated to result in adverse traffic-related noise impacts to Allen Park. According to the Noise Impact Assessment conducted during conceptual design of the project (see Section D.1, *Noise*), existing noise levels at the park range from approximately 69.1 dBA to 70.0 dBA. After project construction (based on conceptual design), traffic-related noise levels at the park in the design year (2039) are expected to decrease to between approximately 57.3 dBA and 60.8 dBA, without the construction of any noise abatement. The reason for this decrease is two-fold. First, the proposed project would construct westbound CD lanes between the I-285 mainline and Allen Park in this area. Although the proposed CD lanes would be closer to the park than the existing I-285 mainline, the CD lanes would have lower traffic volumes and slower operating speeds than the I-285 mainline (whereas in existing conditions, the I-285 mainline [with higher volumes and higher speeds] is immediately adjacent to the park). Secondly, the noise generated by traffic on the I-285 mainline in this area would be "shielded" from receptors at the park by the earth embankment constructed for the CD lanes. The proposed westbound CD lanes in the area of Allen Park would have a proposed elevation approximately eight feet higher than the adjacent I-285 mainline. This new roadway would act as a natural barrier, decreasing noise levels from the I-285 mainline that would reach the park. It should be noted that these noise levels are based on the current conceptual project design, which is subject to change by the Design-Build Contractor during more detailed project design. As project design changes, the Georgia DOT will reassess anticipated future traffic-related noise levels along the corridor and abatement will be re-visited.

Indirect Impacts

No indirect impacts on public parks or recreation areas are anticipated. Any development or redevelopment that is induced or stimulated by the proposed project would occur outside of public parklands.

Cumulative Impacts

Cumulative impacts on Allen Park could occur from implementation of other programmed transportation projects in the area in addition to the proposed project. Specifically, some of the build alternatives under consideration for the **revive**285 *top end* project involve the proposed construction of managed lanes along I-285 in the area of Allen Park. While it is not yet known whether one or more of the build alternatives under consideration for this other project would require ROW from or otherwise directly impact Allen Park or its recreational facilities, it is likely the project would require additional vegetative clearing in the area of the park, and may result in other visual changes at the park from the construction of elevated managed lanes. The Department would work with the City of Sandy Springs to develop a mitigation plan for visual and other impacts to Allen Park as a result of **revive**285 *top end*. Therefore, cumulative visual

effects on Allen Park could occur; however, the currently proposed project's contribution to these cumulative impacts would be small.

5. Section 4(f) Applicability

Section 4(f) of the U.S. Department of Transportation Act of 1966 (codified at 23 USC 138 and 49 USC 303) is a special provision which stipulates that the FHWA and other DOT agencies cannot approve the use of land from publicly owned parks, recreation areas, wildlife and waterfowl refuges, public and private historical sites listed in or eligible for listing in the NRHP, or NRHP-eligible archaeological sites that are worthy of preservation in place unless there is no feasible and prudent alternative to the use of the land and the action includes all possible planning to minimize harm to the property resulting from the use. The "use" of land includes purchase of ROW, permanent incorporation of part of the property into a transportation facility, temporary easements that impact the functions of the property that qualify it as a Section 4(f) resource, or constructive use that substantially impairs Section 4(f) activities on the property.

The proposed project would require a small amount of ROW and/or easement from within the boundaries of seven NRHP-eligible historic properties: Boone House, Copeland Road Historic District, Sandy Springs Apartments, Mountain Creek Road Historic District, Glenridge Forest-Hammond Hills Historic District, Sherrell-Colton Historic District, and Oak Forest Hills Historic District. However, this ROW and easement acquisition would neither adversely damage nor destroy any structural, landscape, or other features or yard space that contribute to any of the properties' NRHP eligibilities nor alter the character of any physical features within their settings that contribute to their historic significance. This land acquisition (and the project as a whole) would not alter the viability of these properties for continued residential and/or commercial (in the case of the Copeland Road Historic District) use and would not adversely or substantially alter the visual perception from the properties. Temporary (construction-related) parking impacts would occur at the Copeland Road Historic District and Sandy Springs Apartments properties, but this effect would not adversely affect the properties, as ample parking would still exist throughout the rest of the properties and no permanent parking impacts would occur. The proposed project would have No Adverse Effect on each of these properties. The SHPO has concurred with these findings (see SHPO concurrence letter in Appendix A). Since the project would have No Adverse Effect on these properties, the proposed use of land from these resources has been determined to be *de minimis* under Section 4(f).

C. Effects on the Natural Environment

1. Water Quality

All waters associated with the proposed project are within the Upper Chattahoochee Watershed (a U.S. Environmental Protection Agency [USEPA] Region 4 priority watershed) within HUC 03130001. The Chattahoochee River Basin provides water for drinking, recreational opportunities (including fishing), and navigation and is used for hydroelectric and coal/steam power generation.

Groundwater recharge areas are those portions of the earth's surface where water infiltrates the ground to replenish an aquifer. The significant recharge areas of the state of Georgia are those areas mapped by the Georgia DNR Hydrologic Atlas 18 (1989 Edition). A review of Hydrologic Atlas 18 indicates that the project area is not within a significant recharge area for the state of Georgia. In addition, the USEPA

reports no sole source aquifers in the vicinity of the project corridor. There are also no known drinking water intakes in the project corridor.

The proposed project is not expected to decrease the overall quality of water available or the water supply (e.g., drinking water or other water-consumptive purposes). The proposed project would not result in a large demand from available water resources and would not degrade the quality of waters in the state.

The Georgia Environmental Protection Division's (EPD's) 2012 Integrated 305(b)/303(d) List indicates that portions of three water bodies within the vicinity of the project area (either that cross the project corridor or have tributaries that cross the project corridor) do not fully support their designated uses. These include:

- Long Island Creek (which is referred to as Perennial Stream 13 in this report), from its headwaters to the Chattahoochee River (approximately five miles), does not support its designated use for fishing due to high fecal coliform levels and its inability to support fish communities. The potential cause of this impairment is urban runoff. A total maximum daily load (TMDL) for fecal coliform was completed in 2007 for Long Island Creek, and a draft TMDL was prepared in 2007 to address fish communities.

- Nancy Creek, from its headwaters to Peachtree Creek (approximately 16 miles), does not support its designated use for fishing due to high fecal coliform levels and its inability to support fish communities. The potential cause of this impairment is urban runoff. A TMDL for fecal coliform has been completed for Nancy Creek, and a draft TMDL was prepared in 2007 to address fish communities.

- The segment of the Chattahoochee River from Morgan Falls Dam to Peachtree Creek (approximately 12 miles), does not support its designated uses for recreation and drinking water due to high levels of fecal coliform as a result of urban runoff. A TMDL for fecal coliform has been completed for this portion of the Chattahoochee River.

What is the Importance of Total Maximum Daily Loads (TMDLs)*?*

Every waterbody in Georgia has one or more designated uses and the state has adopted water quality criteria to protect these uses. The Georgia EPD determines whether a waterbody is supporting its designated uses by collecting water quality data and comparing this data against the water quality criteria. If it is determined that a water is not supporting its designated use, then Georgia EPD will typically develop a TMDL as the start of the process of restoring the water's quality. A TMDL determines how much of a particular pollutant a waterbody can contain and still support its designated use. The TMDL will state how much the pollutant load to the water needs to be reduced in order for the water to support its designated use.

Based on conceptual design, the proposed project would directly impact one 303(d) listed stream (Long Island Creek) and would impact some tributaries to each of the 303(d) listed streams above. In accordance with Georgia EPD's Erosion Control Plan checklist, the project's Erosion, Sediment, and Pollution Control Plan must include additional best management practices (BMPs) for construction areas which discharge to an impaired stream segment.

Because construction of the project would require ground disturbance and would increase the amount of impervious surface in the project area, impacts on water quality would occur. Approximately 23.8 acres of new impervious surface are anticipated to be added by the project. Construction activities could result in increased stormwater runoff, erosion, and sedimentation. However, provisions in the construction contract would require the contractor to exercise every reasonable precaution during construction to prevent the pollution of streams in the project vicinity. Where possible, early revegetation of disturbed areas would be accomplished to hold soil movement to a minimum. The use of spill plans on stream crossings to trap runoff pollutants would be analyzed during the design phase. Dumping of chemicals, fuels, lubricants, bitumens, raw sewage, or other harmful wastes into or alongside of streams or impoundments, or natural or manmade channels leading thereto, would be prohibited. Additional contract provisions would require the use of temporary erosion control measures as shown on the construction plans or as deemed necessary during construction. These temporary measures may include the use of berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains, and other erosion control devices or methods, as applicable. These provisions are coordinated with the permanent erosion control features insofar as practical to ensure economical, effective, and continuous erosion control throughout the construction and post-construction periods and to ensure compliance with the Federal-Aid Policy Guide, 23 CFR Part 650, Subpart B.

Per the requirements of Georgia's National Pollutant Discharge Elimination System (NPDES) General Permit (GAR100002), representative streams along the project corridor would be monitored to detect adverse effects on water quality resulting from construction. This monitoring would occur throughout the duration of construction activities. In accordance with the permit, streams selected for sampling would include all perennial and intermittent streams and other water bodies shown on the U.S. Geological Survey (USGS) topographic map and/or field-verified. Sampling sites would also include all outfalls into such streams and water bodies. Exception to the sampling requirements above may occur if a certified design professional demonstrates that an increase in turbidity in a specific, sampled water resource is representative of another stream or water body in the area. In such a case, sampling would not be required in the other water body. However, since the City of Brookhaven noted that the area around Murphey Candler Lake (south of the proposed project area) is an ecologically sensitive area during an August 2014 stakeholder meeting with the city, the Georgia DOT would require that Streams 29 and 30, which feed into this lake, specifically be monitored by the Design-Build Contractor during construction.

Over the long-term, implementation of the proposed project has the potential to increase stormwater runoff due to the increase in impervious surface within the project area and decrease water quality in receiving streams. In January 2012, the Georgia EPD issued the state of Georgia another NPDES General Permit (No. GAR041000), known as the Municipal Separate Storm Sewer System (MS4) Permit. This permit regulates all new and existing point source discharges of stormwater from roadways and other facilities owned and/or operated by the Department within the MS4 designated areas to the waters of the State of Georgia. Fulton and DeKalb counties, and all municipalities within the project corridor, are MS4 designated areas.

All new development and redevelopment (roadway and facility) projects that disturb greater than one acre or that add more than 5,000 square feet of impervious surface located in the MS4 designated area (with certain exceptions) are subject to the MS4 Permit and required to incorporate water quality control measures, where those measures have not been determined to be infeasible based on the exclusion and infeasibility criteria identified in Sections 1.2, 1.3, and 1.4 of the Georgia DOT Guidelines for Design of

Post-Construction BMPs (Guidelines). This includes the proposed I-285/SR 400 Interchange Reconstruction project. In accordance with the MS4 Permit requirements and in addition to other Georgia DOT drainage design guidance, the proposed project would be designed to meet the following design criteria:

- Removal of 80 percent of total suspended solids from runoff generated by the first 1.2 inches of rainfall;
- Detention storage for the one-year 24-hour storm event;
- Match pre-developed flow rates for the 25-year 24-hour storm event; and
- Control the 100-year 24 -hour storm event such that flooding is not exacerbated.

These design standards would ensure that the proposed project reduces stormwater runoff, protects stream channels, provides overbank protection, and protects against most extreme flood events.

A MS4 Conceptual Infeasibility and Feasibility Analysis was conducted for the proposed project to determine the feasibility of post-construction BMPs for the project based on conceptual design. This study is provided in Appendix F. This study evaluated each of the project area's 51 outfall locations for feasibility of installing BMPs based on the current conceptual design. Areas were determined to be excluded or infeasible for BMP installation where the following conditions occurred:

- Where the design of a BMP would require an existing roadway alignment change that would create a safety concern;
- Where construction of a BMP would require the realignment and/or piping of a stream;
- Where net impervious surface area within the drainage area has been reduced or remains the same as existing conditions;
- Where the use of the BMP would substantially damage a cultural or community resource such as a historic area, archaeological site, cemetery, park, wildlife refuge, nature trail, or school; or
- Where the BMP may increase flooding in a watershed.

The results of the preliminary MS4 feasibility/infeasibility study conducted for the project are shown in Table 1 in Appendix F. As shown in this study, 8 of the 51 outfall basins have a net impervious surface area that either remains the same or is reduced from pre-construction levels, thereby excluding the need to provide a BMP in those basins. In addition, 16 of the 51 outfall basins were determined to be infeasible for water quality treatment, and 28 of the outfall basins were determined to be infeasible to meet the detention-related standard design criteria. It should be noted that this feasibility analysis was conducted on the current conceptual design for the project. It is anticipated that changes to the project design by the Design-Build Contractor may require subsequent follow-up analysis and may result in modification of some of the BMP types used for a particular drainage area, the determination as to whether a BMP is feasible or infeasible, or the number of project site areas that qualify for an exclusion under the Georgia DOT Guidelines.

Detailed review of the outfalls will be conducted as the project progresses through Costing Plan development, and then through the Design-Build process. Decisions regarding the types and locations of BMPs that would be used for this project would be finalized during the Design-Build process. Types of BMPs could include enhanced swales (both dry and wet swales), infiltration trenches, bio retention areas, stormwater ponds, detention ponds, and filter strips. General guidelines for the design, construction, and maintenance for these BMPs are provided in the *Georgia Stormwater Management Manual* ("The Bluebook"). Implementation of these measures would reduce impacts from the proposed project on water quality.

Indirect Impacts

Indirect effects on water quality would occur, but would not be substantial. As discussed in Section III.A.1, *Land Use Changes*, the proposed improvements are anticipated to accelerate and/or intensify development/redevelopment that is occurring in the vicinity of the project corridor (particularly in the Perimeter Center area). Developments of buildings, driveways, parking areas, and roads would increase impervious surfaces in the project vicinity, thereby increasing stormwater runoff, which can increase flooding potential and erosion, as well as change the quality and quantity of groundwater. Therefore, indirect impacts on water quality would likely occur. Several streams which ultimately receive runoff from the areas with the highest probability for future development in the project vicinity are currently listed on the Georgia EPD's list of 303(d) impaired streams. These streams are listed due to high fecal coliform levels and inability to support benthic and/or fish communities due to urban runoff. Non-point sources of fecal coliform bacteria are sources that cannot be identified as entering a water body through a discrete conveyance at a single location. These sources generally, but not always, involve accumulation of fecal coliform bacteria on land surfaces and wash off as a result of storm events. The biota listings are primarily due to high sediment loads in streams (which reduces habitat quality). Increased sediment is typically due to stormwater runoff from construction sites and erosion of streambanks as a result of increased stream flow velocities from increased impervious surface cover (Metropolitan North Georgia Water Planning District, 2009).

Most development anticipated to be intensified or accelerated as a result of the project would consist of redevelopment of already developed areas (such as parking lots or older office buildings) and an increase in density of existing development. Since the majority of the project area is already a built-out, urban environment, further increases in impervious surface would be small. As with the proposed project, environmental harm from any potential future development project within the project area would be minimized by the implementation of standard sedimentation, erosion, and stormwater control measures. All land development within the project vicinity must comply with the technical specifications and standards of the *Manual for Erosion and Sediment Control in Georgia* and the *Georgia Stormwater Management Manual*. In addition, all municipalities within the project vicinity use stormwater BMPs for all new development, and all proposed developments would have to comply with the Georgia Erosion and Sedimentation Act of 1975 and NPDES standards, including the preparation and implementation of an erosion, sedimentation, and pollution control plan, before any land-disturbing activity would be permitted (ARC, 2001). Project area municipalities also have Water Quality Control/Post-development Stormwater Management for New Development and Re-development ordinances (Metropolitan North Georgia Water Planning District, 2009), which require control of stormwater runoff and nonpoint source pollution associated with post-development or new development in order to protect people and the environment.

Implementation of these measures and ordinances should minimize potential negative indirect impacts to water quality in the area.

Cumulative Impacts

Previously, nearly the entire I-285 corridor and adjacent lands consisted of rural farmland and forested areas (pervious surface), with a few scattered residential structures. Initial construction of I-285 and subsequent widenings of the roadway stimulated a complete transformation of the project corridor into a densely developed, urban area consisting largely of impervious surface, and also led to urban sprawl outside of the City of Atlanta core. Past urbanization of the project corridor, including residential, commercial, and industrial development, road construction, and increased population density has impacted water quality (Peters, 2009; USGS, 1996). Over the past five decades, development in Fulton and DeKalb Counties has substantially increased, and undeveloped areas along I-285 and SR 400 in the project vicinity have nearly completely disappeared. This is evidenced by the University of Georgia's analysis of impervious surface cover of Georgia, shown in Table 17 for Fulton and DeKalb counties. Data from this analysis is approximate and is only available for the years 1991, 2001, 2005, and 2008, but can be used to show the increasing trend in the amount of impervious surface in each of the project area counties over the past two decades.

Table 17. Changes in Impervious Surface Cover of Project Area Counties over Time

Percentage of Impervious Surface	Acreages by Year*							
	DeKalb				Fulton			
	2008	2005	2001	1991	2008	2005	2001	1991
0 (pervious)	56,500	60,500	67,500	80,000	160,000	169,500	182,000	212,500
1-5	13,500	15,000	18,500	22,000	18,500	21,000	26,000	32,500
5-10	8,000	10,000	10,000	12,000	12,000	15,000	15,000	15,500
10-15	8,000	10,000	11,000	11,000	11,500	14,500	15,500	13,000
15-20	8,000	9,000	10,000	9,000	10,500	12,000	12,500	10,000
20-25	11,000	10,500	9,500	7,000	15,000	13,000	12,500	8,000
25-30	10,000	9,000	8,000	6,000	13,500	12,500	11,000	7,000
30-35	8,500	7,500	6,000	4,500	13,000	11,000	9,000	6,000
35-40	7,000	6,000	5,000	3,000	11,500	10,000	8,000	5,000
40-45	6,000	5,000	4,000	2,500	10,000	9,000	7,500	4,500
45-50	5,000	4,500	3,500	2,500	8,500	8,000	6,500	4,000
50-55	5,000	4,000	3,000	2,000	8,000	6,500	5,000	3,500
55-60	3,500	3,000	2,500	2,000	6,000	5,500	4,000	3,000
60-65	3,500	3,000	2,000	1,500	6,500	5,000	3,500	2,500
65-70	3,000	2,500	2,000	1,500	5,000	4,000	3,500	2,500
70-75	2,500	2,000	2,000	1,500	4,500	4,000	3,000	2,500
75-80	2,500	2,000	2,000	1,500	4,500	4,000	3,000	2,000
80-85	2,000	2,000	1,500	1,000	4,000	3,500	3,000	2,000
85-90	2,000	2,000	1,500	1,000	4,000	3,500	3,000	1,900

Table 17. Changes in Impervious Surface Cover of Project Area Counties over Time

Percentage of Impervious Surface	Acreages by Year*							
	DeKalb				Fulton			
	2008	2005	2001	1991	2008	2005	2001	1991
90-95	2,000	2,000	1,500	500	4,000	3,500	2,500	1,500
95-100	6,000	5,000	3,500	2,000	13,000	10,000	6,500	3,000

* Acreages by county are approximate and are rounded to the nearest 500 acres.

Data from 1991, 2005, and 2008 are compiled from the statewide dataset created by the Natural Resources Spatial Analysis Laboratory, University of Georgia. Data from 2001 are compiled from the statewide dataset created by the U.S. Geological Survey.

Effects of urbanization on water quality include pollution from land use practices, increased water use and wastewater generation, increased erosion and sedimentation from construction, increased stormwater runoff and nonpoint source pollution and decreased infiltration due to increased impervious surfaces. These effects are evidenced by the listing of three streams in the vicinity of the project area on the state's 303(d) list of impaired streams. However, TMDL implementation plans have been completed for all three of these streams, which should improve the quality of these streams over time.

To manage the effects of urbanization on water, wastewater, and water quality in the greater metro Atlanta area, the Georgia General Assembly created the Metropolitan North Georgia Water Planning District (Metro Water District) in 2001 (O.C.G.A. §12-5-572). The District includes Fulton and DeKalb counties, as well as all surrounding counties. Among other goals, the Metro Water District is actively working to mitigate water quality and quantity impacts associated with increased stormwater runoff from urbanization, addressing streams that fail to meet water quality standards, managing stormwater infrastructure, and improving water quality in major lakes in the area (Metropolitan North Georgia Water Planning District, 2009). Of the six major river basins overseen by the Metro Water District, the project area and area of potential indirect and cumulative effects of the project lie entirely within the Chattahoochee River Basin.

According to the Watershed Management Plan (2009) for the Metro Water District, much of the Upper Metro Chattahoochee River sub-basin was developed prior to the implementation of Post-Development Stormwater Management and other ordinances designed to control nonpoint source pollution. The resulting inadequate stormwater management controls and increased runoff have led to stream scouring, sedimentation, and erosion problems and associated biota impairment. Some of the other major water quality issues that have been identified for the project area counties within this basin include the presence of several areas near the Chattahoochee River that are prone to sanitary sewer overflows and the impaired water quality of the Chattahoochee River. The Plan recommends the implementation of source water protection measures in all sub-watersheds upstream of Peachtree Creek, correction of sanitary sewer overflow problems and resultant fecal coliform bacteria inputs into surrounding waters, and implementation of watershed improvement projects such as stream restoration and streambank stabilization along streams with failing banks (Metropolitan North Georgia Water Planning District, 2009). In addition, all municipalities within the Metro Water District have been required to implement the Water District's five model stormwater ordinances or similar ordinances that are at least as effective

as the model ordinances. These five model ordinances, which will help to improve water quality in the region, include:

- *Post-Development Stormwater Management for New Development and Re-development*, which provides requirements for new development and redevelopment to address stormwater runoff quality and quantity impacts following construction as well as nonpoint source pollution from land use activities;

- *Floodplain Management/Flood Damage Prevention*, which regulates future-conditions floodplains and provides building standards in flood-prone areas in order to reduce flood hazards and protect the beneficial uses of floodplains, such as water quality protection;

- *Stream Buffer Protection*, which provides for the development of buffer zones around streams wherein land development is minimized (in order to protect and stabilize stream banks and protect water quality, among other goals);

- *Illicit Discharge and Illegal Connection*, which provides communities with the authority to deal with illicit discharges (discharges to a storm drainage system or surface water that are not composed entirely of stormwater) and establishes enforcement actions for those properties found to be in noncompliance; and

- *Litter Control*, which addresses the impacts of trash and debris on water resources.

Other ongoing and reasonably foreseeable future activities and projects (e.g., transportation improvements and land development projects, such as DRIs) would result in impacts to water quality. However, effects on water quality from these future projects and actions would be minimized through implementation of BMPs to control stormwater runoff and prevent pollution, as well as adherence to local ordinances and state regulations. Overall, cumulative impacts on water quality would occur from implementation of the project along with past, present, and reasonably foreseeable future projects and actions in the project vicinity. However, the project's contribution to cumulative effects on water quality is anticipated to be small due to the size of the overall footprint of the project (and small overall amount of new impervious surface [approximately 23.8 acres] created by the project), implementation of measures to reduce construction-related water quality effects, proper design of the roadway drainage system, and given the largely urbanized condition of the area surrounding the project corridor (limiting the amount of new impervious surface that could be added from intensified development/redevelopment).

2. Waters of the United States

Jurisdictional waters of the United States are defined by 33 CFR Part 328.3 (b) and are protected by Section 404 of the Clean Water Act (33 USC 1344), which is administered and enforced by the U.S. Army Corps of Engineers (USACE). An assessment of jurisdictional waters of the United States that would be impacted by the proposed project was performed in house using U.S. Geological Survey topographic maps, National Wetland Inventory (NWI) maps, and county soil survey maps and then refined during the field visits conducted in October and November 2013 and March, May, and June 2014. Additional field verification was completed in March 2015 order to consolidate the ecology field survey data with the topographic survey database.

Based on the proposed ROW limits, portions of 20 perennial streams, 14 intermittent streams, 2 ephemeral channels, 4 wetlands, and 7 open waters were identified during field studies. The locations of these waters are depicted on Figures 16a through 16f in Appendix E. All jurisdictional streams, wetlands, and open waters are also considered state waters. Descriptions of these resources and impacts anticipated as a result of project construction are provided in the sections below.

Wetlands and Open Waters

Wetland locations and boundaries were determined using the 1987 Corps of Engineers *Wetlands Delineation Manual*. This multi-parameter approach requires positive evidence of three criteria:

1) Hydrophytic vegetation
2) Hydric soils
3) Wetland hydrology

Areas were considered wetlands if they exhibited evidence of all three of the above wetland parameters.

Three jurisdictional wetlands and seven open waters were identified during field studies. These resources, and the anticipated impacts to them, are summarized in Table 18 below. The anticipated impacts to each resource listed here are the minimum permanent impacts based on conceptual design; since the project is in conceptual design, temporary impacts are unavailable at this time. Temporary impacts would be assessed and permanent impacts would be re-assessed during the final design phase by the Design-Build Contractor. More detailed information on each wetland and open water is provided in the project's Ecology Assessment of Effects report and April 2015 Addendum, which are available from the Georgia DOT OES.

Table 18. Anticipated Project Impacts on Wetlands and Open Waters

Resource Type and ID	Cowardin Classification	Approx. Size within Study Area	Resource Location/Description	Anticipated Impacts to Resource	Anticipated Buffer Impacts
Wetland (WL) 4	palustrine, forested wetland with a seasonally flooded/ saturated hydrologic regime	0.25 acre	Located about 600 feet west of Long Island Drive and about 100 feet north of I-285; found within a detention area that impounds Perennial Stream (PS) 5	None	N/A
Open Water (OW) 7	palustrine, artificially inundated, diked/ impounded, open water with an unknown substrate	0.25 acre; about 8 feet deep	Located about 75 feet north of I-285 and 600 feet east of Long Island Drive; drains through a 48-inch RCP beneath I-285 before connecting to PS9	None	No
WL 14	seasonally palustrine, forested wetland	0.07 acre	Located about 115 feet south of PS8 on the south side of I-285	None	N/A
WL 16	seasonally palustrine, forested wetland	0.03 acre	Located on the south side of I-285 about 700 feet southeast of PS15	None	N/A

Table 18. Anticipated Project Impacts on Wetlands and Open Waters

Resource Type and ID	Cowardin Classification	Approx. Size within Study Area	Resource Location/Description	Anticipated Impacts to Resource	Anticipated Buffer Impacts
OW 17b	palustrine, artificially inundated, diked/ impounded, open water with an unknown substrate	0.11 acre; unknown depth	Located approximately 160 feet south of I-285 and immediately west of Glenridge Drive	None	N/A (has extensive artificial banks and mowed-maintained vegetation)
OW 21	palustrine, artificially inundated, diked/ impounded, open water with an unknown substrate	1.15 acres; unknown depth	Artificial impoundment that provides stormwater detention for surrounding development and is constructed in-line with PS18; located about 230 feet north of I-285 adjacent to and immediately west of Peachtree Dunwoody Road	None	No
OW 22	palustrine, artificially inundated, diked/ impounded, open water with an unknown substrate	2.39 acres; unknown depth	Artificial impoundment that provides stormwater detention for surrounding development and is constructed in-line with PS18; located about 40 feet north of I-285 adjacent to and immediately east of Peachtree Dunwoody Road	0.25 acre (fill impacts from retaining wall construction)	Yes; Buffer Variance under Criteria 2(h)
OW 23	palustrine, artificially inundated, diked/ impounded, open water with an unknown substrate	0 acres; buffer located inside study area; unknown depth	Artificial impoundment that provides stormwater detention for surrounding development; located on the south side of Lake Hearn Drive, about 460 feet south of I-285 and about 300 feet east of Peachtree-Dunwoody Road	None	No
OW 24	palustrine, rock bottom, semi permanently flooded, open water with an artificial/ rubble substrate	0.03 acre; unknown depth	Deep, scoured pool and rubble-armored drainage feature constructed in-line with PS18; originates from a culvert on the south side of I-285, about 300 feet west of Perimeter Center Parkway	None	No
OW 27	palustrine, artificially inundated, semi-permanently flooded, diked/ impounded, open water with an unknown substrate	0.05 acre; unknown depth	Located within a heavily sediment-filled stormwater detention basin situated in-line with Intermittent Stream (IS) 26; located about 50 feet north of I-285 and 1,300 feet east of Perimeter Center Parkway	0.05 acre (fill from retaining wall construction)	Yes; Buffer Variance under Criteria 2(h)
WL 30a	palustrine, seasonally flooded/saturated, emergent wetland	0.007 acre	Located on the north side of I-285, about 1,400 feet west of Chamblee Dunwoody Road within a power line ROW parallel to I-285.	None	No

N/A = Not Applicable

In sum, based on conceptual design, the proposed project would result in a total of approximately 0.30 acre of permanent open water impacts. No wetland impacts are anticipated to occur as a result of the project. In addition, the proposed project would result in impacts to the buffers of OW22 and OW27 and would require a buffer variance from the Georgia EPD (pursuant to Georgia DNR Rules on Buffer Variance Procedures and Criteria 391-3-7-05(1)(d), as amended) under Criterion 2(h).

Wetland and Open Water Mitigation

The purchase of 1.7 wetland mitigation credits would be required to offset the proposed project's permanent impacts to open waters. Temporary impacts have not been assessed and may require additional credit purchase. Credits would be purchased from a USACE-approved mitigation bank that serves the Upper Chattahoochee River watershed (HUC 03130001).

Streams

Areas were considered jurisdictional streams if they exhibited a definite channel and showed evidence of water flow at times other than major storm events. Portions of 20 perennial streams (PS), 14 intermittent streams (IS), and 2 ephemeral channels (EC) were identified within the project study area during field surveys. These resources and anticipated impacts to them are summarized in Table 19. The anticipated impacts to each resource listed here are the minimum permanent impacts based on conceptual design; since the project is in conceptual design, temporary impacts are unavailable at this time. Temporary impacts would be assessed and permanent impacts would be re-assessed during the final design phase by the Design-Build Contractor. More detailed information on each stream is provided in the project's Ecology Assessment of Effects report and April 2015 Addendum, which are available from the Georgia DOT's OES.

Table 19. Anticipated Project Impacts on Jurisdictional Streams

Resource Type and ID	Resource Location/Description	303(d) Listed?/Quality*	Anticipated Impacts to Resource	Anticipated Buffer Impacts
IS1	Emanates from the outlet of a drainage structure beneath I-285 about 580 feet east of Riverside Drive; flows north. Channel: 6 to 10 feet wide and 2 feet deep. Wetted area: 6 feet wide and 3 inches deep (outside of pooled areas). Substrate: cobble-gravel.	No/Somewhat impaired stream due to moderate entrenchment with a channel dominated by cobble	None	No
PS2	Emanates from a 36-inch RCP beneath I-285 about 1,000 feet east of Riverside Drive; flows northwest. Channel: about 10 feet wide and 3 feet deep. Wetted area: 4 feet wide and up to 6 inches deep. Substrate: cobble-gravel with some exposed bedrock.	No/Somewhat impaired due to moderate entrenchment with a channel dominated by bedrock, cobble, and gravel	None	No
IS3	Located on the north side of I-285 about 1,050 feet east of Riverside Drive; flows west for about 45 feet before its confluence with PS2. Channel: 1 to 2 feet wide and 3 inches deep. Wetted area: 4 feet wide and up to 6 inches deep. Substrate: sand and silt.	No/Somewhat impaired due to a weak channel structure and since the system is not large enough to support a diverse biological community	None	No

Table 19. Anticipated Project Impacts on Jurisdictional Streams

Resource Type and ID	Resource Location/Description	303(d) Listed?/Quality*	Anticipated Impacts to Resource	Anticipated Buffer Impacts
PS5	Located on the north side of I-285 about 500 feet west of Long Island Drive; flows through WL4 to a detention area standpipe, then flows southeast, entering a culvert for about 430 feet, and exits flowing south. Channel: 8 to 15 feet wide and 1 to 10 feet deep. Wetted area: 2 to 5 feet wide and up to 6 inches deep. Substrate: bedrock, sand, and cobble-gravel.	No/Fully impaired due to increased erosion and sediment loading from stormwater runoff from surrounding land use	None	No
PS6	Originates below a stormwater culvert on the south side of I-285, about 350 feet west of Long Island Drive; flows southwest for about 170 feet before its confluence with PS5. Channel: up to 4 feet wide and up to 2 feet deep. Wetted area: 1 to 3 feet wide and up to 2 inches deep. Substrate: clay, sand, and cobble-gravel.	No/Somewhat impaired due to habitat characteristics, the effects of stormwater runoff from surrounding urban land use, and its inability to repair naturally	None	No
PS7a	Located along the north side of I-285 about 800 feet east of Long Island Drive. Begins as a groundwater seep adjacent to OW7 and flows south to PS9. Channel: 3 feet wide and 1 to 2 feet deep. Wetted area: 1 to 2 feet wide and up to about 4 inches deep. Substrate: clay, sand, and gravel.	No/Fully impaired due to significant, man-induced trash and debris and lack of a diverse biological community	26 linear feet (lf) (0.003 acre) from culvert extension and riprap placement	Anticipated Impacts Exempt
IS8	Originates on the south side of I-285 at a gully draining runoff from I-285, about 500 feet east of Long Island Drive; flows about 300 feet before its confluence with PS9. Channel: 2 to 8 feet wide and up to 2 feet deep. Wetted area: up to 4 feet wide and up to 1 foot deep. Substrate: clay, sand, and gravel.	No/Fully impaired due to significant bank erosion, partial channelization, and low biodiversity	35 lf (0.003 acre) from culvert extension and riprap placement	Anticipated Impacts Exempt
PS9	Located about 75 feet north of I-285 and about 675 feet east of Long Island Drive; flows south out of OW7 into a concrete-lined channel parallel to I-285 for approximately 130 feet, then spills into a scour pool before flowing into a 48-inch RCP beneath I-285. Upon exiting the culvert, PS9 flows for about 220 feet before exiting the project study area. Channel: 4 to 10 feet wide and 1 to 4 feet deep. Wetted area: 1 to 6 feet wide and up to 1 foot deep. Substrate: clay, sand, and gravel.	No/Fully impaired due to extensive piping and lack of diverse biological community	254 lf (0.05 acre) from culvert extension and riprap placement	Anticipated Impacts Exempt
PS10**	Located on the north side of I-285 within Allen Park, about 370 feet east of Lake Forrest Drive; flows approximately 200 feet before being piped beneath I-285 through a 6 by 6-foot concrete box culvert; exits the culvert about 100 feet south of I-285 in a concrete-lined channel and flows about 100 feet before its confluence with PS11. Channel: 6 to 10 feet wide and 1 to 2 feet deep.	No/Fully impaired due to extensive culverting and piping	None	No

Table 19. Anticipated Project Impacts on Jurisdictional Streams

Resource Type and ID	Resource Location/Description	303(d) Listed?/Quality*	Anticipated Impacts to Resource	Anticipated Buffer Impacts
	Wetted area: 4 to 8 feet wide and up to 1 foot deep. Substrate: cobble-gravel (rip-rap).			
PS11** (Sandy Springs Creek)	Located in Allen Park on the north side of I-285; flows southwest and is piped beneath I-285 though a 6- by 6-foot concrete box culvert. On the south of I-285, it flows in an open, concrete-lined channel before being piped outside the study area. Channel: 15 to 25 feet wide and 2 to 4 feet deep. Wetted area: 5 to 15 feet wide and up to 2 feet deep. Substrate: clay, sand, and gravel.	No/Fully impaired as a result of extensive culverting and piping	None	No
PS12	Enters the study area about 70 feet west of the terminus of Mountain Creek Road on the north side of I-285; flows south, openly, for about 150 feet before being piped beneath I-285 through a 6 by 8-foot concrete box culvert. Emerges and continues south, coring through two more local roadway culverts before its confluence with PS13. Channel: 8 to 15 feet wide and 2 to 5 feet deep. Wetted area: 3 to 10 feet wide and 1 foot deep. Substrate: sand, cobble, and gravel.	No/Fully impaired due to extensive culverting and piping	315 lf (0.17 acre) from culvert extension and riprap placement	Anticipated Impacts Exempt
PS13 (Long Island Creek)	Enters the study area on the north side of I-285, about 250 feet south of Glenforest Drive; flows southwest, passing beneath I-285 through an 8- by 8-foot concrete box culvert; continues west, roughly paralleling the south side of I-285. Channel: 8 to 15 feet wide and 1 to 3 feet deep. Wetted area: 4 to 8 feet wide and 2 to 18 inches deep. Substrate: sand, cobble, and gravel.	Yes (non-supporting of its full range of designated uses due to fecal coliform bacterial levels and an impaired fish community)/ Fully impaired due to the 303(d) listing and extensive piping throughout the reach	94 lf (0.04 acre) from culvert extension and riprap placement	Anticipated Impacts Exempt
PS15	Located on the south side of I-285 about 225 feet north of Colton Drive; flows to the northwest, parallel to I-285, for about 800 feet before its confluence with PS13. Channel: 3 to 5 feet wide and 6 to 18 inches deep. Wetted area: 2 to 4 feet wide and 2 to 8 inches deep. Substrate: sand, clay, and gravel.	No/Somewhat impaired because it is highly influenced by runoff and supports a weak biological community	None	No
PS17	Originates from a 48-inch RCP beneath Glenforest Drive on the north side of I-285. Channel: 6 to 15 feet wide and 1 to 3 feet deep. Wetted area: 2 to 6 feet wide and up to 20 inches deep. Substrate: bedrock, cobble-gravel, and sand.	No/Fully impaired due to extensive alterations, habitat characteristics, the effects of stormwater runoff from surrounding urban land use, culverting and piping, and limited biological community	None	No

Table 19. Anticipated Project Impacts on Jurisdictional Streams

Resource Type and ID	Resource Location/Description	303(d) Listed?/Quality*	Anticipated Impacts to Resource	Anticipated Buffer Impacts
IS17a**	Originates at OW17b on the south side of I-285; flows as natural channel for about 45 feet, is routed through an artificially-lined channel for about 125 feet, and is piped beneath I-285 via a 48-inch RCP, daylighting on the north side of I-285 in a heavily riprap-armored channel for about 60 feet before being routed through a 60-inch corrugated metal pipe (CMP) and ultimately to PS13. Channel: 2 to 4 feet wide and 1 foot deep (south side of I-285); 10 to 15 feet wide and up to 3 feet deep (north side of I-285). Wetted area: up to 3 feet wide and up to 8 inches deep (south side of I-285), 2 to 10 feet wide and up to 10 inches deep (north side of I-285). Substrate: sand, cobble/gravel, and silt (in natural section); riprap (north side of I-285).	No/Fully impaired due to extensive piping and armoring, petroleum-based sheen, foul odor, limited biological habitat, and low diversity	243 lf (0.06 acre) from culvert extension	Anticipated Impacts Exempt
IS17c	Originates at a 42-inch RCP beneath I-285, flows about 60 feet before being routed through a 42-inch CMP, then continues north until its confluence via pipes to PS18. Channel: 5 to 10 feet wide and up to 5 feet deep. Wetted area: 8 feet deep and up to 3 inches (with exception to an unknown depth at a scour pool immediately downstream of the I-285 outfall). Substrate: clay, sand, and boulder (riprap).	No/Fully impaired due to extensive piping and armoring, limited biological habitat, and low diversity	66 lf (0.01 acre) from culvert extension and riprap placement	No: Not Buffered (due to extensive armoring and concrete-lining)
PS18	Originates from a 42-inch RCP on the west side of SR 400, about 1,000 feet south of Hammond Drive; flows east-northeast parallel to SR 400 in an entirely concrete-lined artificial channel before entering a 6- by 6-foot concrete box culvert under SR 400. Channel: 12 to 15 feet wide and 3 to 4 feet deep. Wetted area: 3 to 5 feet wide and 1 to 3 feet deep.	No/Fully impaired due to the extensive alterations, culverting and piping, and lack of diverse biological community	488 lf (0.17 acre) from culvert extension and riprap placement	No: Not Buffered (entire stream is located within a concrete-lined channel)
EC/IS19**	Originates as a natural bed ephemeral channel at a 42-inch CMP on the west side of SR 400, about 1,000 feet south of Hammond Drive; flows for about 43 feet, then flows into an 8x8-foot concrete drop inlet (which is the start of the intermittent section). The intermittent stream flows about 40 feet through a double 42-inch RCP, then flows as natural channel (sand/ cobble/gravel substrates) for about 75 feet before being channelized into a concrete-lined ditch, then flows for about 375 feet on the western side and paralleling SR 400 before merging with PS18. Ephemeral channel: 8 feet wide and up to 1 foot deep. Wetted area: Dry except two small pools that contained up to 8 inches of water. Intermittent channel: 6 to 10 feet wide	No/Fully impaired due to extensive alterations, habitat characteristics, and the effects of stormwater runoff from surrounding urban land use	330 lf (0.11 acre) from culvert extension and riprap placement, plus piping an existing 352-foot concrete-lined portion of channel	Anticipated Impacts Exempt

Table 19. Anticipated Project Impacts on Jurisdictional Streams

Resource Type and ID	Resource Location/Description	303(d) Listed?/Quality*	Anticipated Impacts to Resource	Anticipated Buffer Impacts
	and 1 to 3 feet deep. Wetted area: 2 to 4 feet wide and up to 6 inches deep.			
PS20	Originates as a natural channel fed by adjacent roadway runoff and groundwater on the eastern side of SR 400 just north of the Glenridge Connector; becomes concrete-lined just before entering a 36-inch RCP and flowing south, beneath the Glenridge Connector. Channel: variable 4 feet to a braided 20 feet wide and 1 to 3 feet deep. Wetted area: 2 to 6 feet wide and up to 1 foot deep. Substrate: clay, sand, and gravel.	No/Fully impaired due to the extensive alterations and piping	None	No
IS/PS20a**	Located in and to the southeast side of the I-285/ SR 400 interchange. Originates as an intermittent natural streambed, flowing about 34 feet before being routed beneath the SR 400 northbound lanes through a 48-inch RCP. Flows about 210 feet as natural channel and naturalized, unmaintained concrete channel, then is routed beneath the SR 400 North on-ramp to I-285 East through a 48-inch RCP, then flows for about 210 feet through a concrete-lined channel, and then continues as a natural perennial stream for about 680 feet parallel to I-285 before being routed to OW23 via a 60-inch box culvert. Channel: 6 feet wide and 1 to 2 feet deep (intermittent); 10 to 20 feet wide and 3 to 6 feet deep (perennial). Wetted area: 4 feet wide and up to 1 foot deep (intermittent); 4 to 8 feet wide and up to 1 foot deep (perennial). Substrate: sand, cobble/gravel, and bedrock.	No/Fully impaired due to the extensive alterations and piping, sedimen-tation, and bank erosion	1,335 lf (0.39 acre) (469 lf, 0.09 acre intermittent; 866 lf, 0.30 acre perennial) from culvert extension	Anticipated Impacts Exempt
PS25** (Perimeter Creek)	Begins on the north side of I-285 about 150 feet west of Perimeter Center Parkway; flows south and is piped beneath I-285 through a double 8-by 8-foot concrete box culvert; emerges about 45 feet south of I-285 beneath the Perimeter Center Parkway viaduct into a channel lined entirely with rip-rap. Channel: 15 to 20 feet wide and 6 to 10 feet deep. Wetted area: 10 feet wide and up to 2 feet deep. Substrate: bedrock, boulder, and cobble-gravel.	No/Somewhat impaired north of I-285 and fully impaired south of I-285, due to the extensive piping of stream channel	None	No
IS26	Originates on the north side of I-285 about 1,200 feet east of Perimeter Center Parkway; flows southwest and then south before being piped beneath I-285 through a 60-inch RCP. Channel: 5 to 6 feet wide and 1 to 2 feet deep. No water was observed in the channel during the survey. Substrate: cobble-gravel and sand.	No/Fully impaired due to extensive piping, channel alteration, and lack of a diverse biological community	142 lf (0.03 acre) from culvert extension and riprap placement	Anticipated Impacts Exempt

Table 19. Anticipated Project Impacts on Jurisdictional Streams

Resource Type and ID	Resource Location/Description	303(d) Listed?/Quality*	Anticipated Impacts to Resource	Anticipated Buffer Impacts
IS28	Originates beneath a concrete drainage flume approximately 100 feet south of the beginning of the I-285 eastbound exit ramp to Ashford-Dunwoody Road; flows west and then southwest before being piped outside the study area. Channel: 10 to 12 feet wide and 5 to 6 feet deep. Wetted area: 3 to 5 feet wide and up to 6 inches deep. Substrate: cobble-gravel, sand, and silt.	No/Fully impaired due to extensive piping, channel alteration, and lack of a diverse biological community, despite habitat availability	680 lf (0.20 acre) from piping	Anticipated Impacts Exempt
PS28a	Located along the south side of I-285 about 800 feet east of the Ashford Dunwoody Road bridge over I-285. Begins at a 42-inch RCP and flows east-northeast for about 645 feet before entering a concrete-lined channel and flowing for approximately 1,490 feet to its confluence with PS29. Channel (natural bottom portion): 10 to 15 feet wide and up to 6 feet deep. Wetted area: 2 to 8 feet wide and up to 1 foot deep. Substrate: sand, cobble/gravel, and some small boulders.	No/Fully impaired due to significant, man-induced trash and debris and the majority of the stream being within a concrete-lined channel	1,551 lf (0.40 acre) from culvert extension	Yes; Buffer Variance under Criteria 2(h)
EC/IS28b	Located about 815 feet east of the Ashford Dunwoody Road bridge over I-285. Begins as an ephemeral channel at the outlet of a stormwater drain and headcuts down to form an intermittent stream flowing north to its confluence with PS28a. Channel: 10 to 15 feet wide and 2 to 8 feet deep. Wetted area: 1 foot wide and up to about 2 inches deep. Substrate: sand and some gravel.	No/Fully impaired due to significant, man-induced trash and debris and lack of a diverse biological community	None	No
PS29	Enters the study area from a drainage culvert on the north side of I-285, about 275 feet east of Ravinia Drive; flows through an open channel for about 600 feet before entering another culvert for about 350 feet beneath a parking structure. After exiting this culvert, it flows through an open channel for about 300 feet, parallel to the north side of I-285, until entering an approximately 350-foot long concrete box culvert under I-285. Upon exiting on the south side of I-285, it flows southeast. Channel (north of I-285): 8 to 10 feet wide and 6 feet deep, with multiple areas where the stream width has been expanded due to scour. Wetted area: 3 to 6 feet wide and up to 1 foot deep. Substrate: boulder and cobble-gravel.	No/Fully impaired due to habitat characteristics, including extensive piping and bank erosion, as well as effects of stormwater runoff from surrounding urban land use	801 lf (0.30 acre) from piping	Yes; Buffer Variance under Criteria 2(h)

Table 19. Anticipated Project Impacts on Jurisdictional Streams

Resource Type and ID	Resource Location/Description	303(d) Listed?/Quality*	Anticipated Impacts to Resource	Anticipated Buffer Impacts
IS29a	Located along the north side of I-285 about 2,600 feet east of the Ashford Dunwoody Road bridge. Originates at a small headcut and flows for about 56 feet west to its confluence with PS29. Channel: 3 to 5 feet wide and 2 to 4 feet deep. Wetted area: up to 1 foot wide and up to 2 inches deep. Substrate: clay and sand.	No/Somewhat impaired due to significant, man-induced trash and debris and runoff from I-285	59 lf (0.01 acre) from piping	Anticipated Impacts Exempt
IS29b	Located along the north side of I-285 about 2,600 feet east of the Ashford Dunwoody Road bridge. Enters the project area from the north, flowing for about 108 feet before entering a 60-inch CMP and flowing for another 40 feet before spilling over a concrete apron into the scour pool of PS29. Channel: 3 to 5 feet wide and 2 to 4 feet deep. Wetted area: up to 1 foot wide and up to 2 inches deep. Substrate: clay and sand.	No/Somewhat impaired due to significant, man-induced trash and debris and runoff from I-285	7 lf (0.001 acre) from piping	Anticipated Impacts Exempt
PS30 (North Fork Nancy Creek)	Enters study area on the north side of I-285, about 3,300 feet east of Ashford Dunwoody Road; flows south, entering a double 6- by 9-foot concrete box culvert to flow under I-285, exiting immediately south of I-285. Channel: 15 to 25 feet wide and 1 to 3 feet deep. Wetted area: 3 to 20 feet wide and up to 18 inches deep. Substrate: cobble-gravel, sand, and silt.	No/Somewhat impaired due to habitat characteristics, the effects of stormwater runoff from surrounding urban land use, and the biological community observed	61 lf (0.04 acre) from piping	Anticipated Impacts Exempt
EC30b	Located approximately 1,400 feet west of Chamblee Dunwoody Road. Formed at a headcut at the eastern end of WL30a, flowing for about 17 feet before its confluence with PS31. Channel: 1 to 2 feet wide and 2 feet deep. No water flowing in channel at the time of survey. Substrate: silt and sand.	No/Fully impaired due to significant, man-induced trash and debris, and erosion from failing hillslopes	None	No
IS/PS 30c	Located south of I-285 about 1,550 feet west of Chamblee Dunwoody Road. Begins at a 42-inch RCP, flows south for about 44 feet before it headcuts and becomes a perennial stream, then flows for another approximately 57 feet before its confluence with PS31. Channel: 2 to 5 feet wide and up to 5 feet deep. Wetted area: 2 to 4 feet wide and 2 to 4 inches deep. Substrate: sand, silt, and some cobble/gravel.	No/Fully impaired due to significant, man-induced trash and debris and substantial sedimentation	None	No
PS31	Enters study area on the north side of I-285 about 1,400 feet west of Chamblee- Dunwoody Road; flows south, entering a culvert under I-285 and emerging on the south side of I-285. Channel: 8 feet wide and 1.5 feet to 7 feet deep. Wetted area: 8 feet wide and is 2 to 4 inches deep. Substrate: cobble-gravel and sand.	No/Fully impaired due to habitat characteristics, the extent of piping, and the effects of stormwater runoff from surrounding urban land use	None	No

Table 19. Anticipated Project Impacts on Jurisdictional Streams

Resource Type and ID	Resource Location/Description	303(d) Listed?/Quality*	Anticipated Impacts to Resource	Anticipated Buffer Impacts
IS31a	Located on the north side of I-285, beginning about 800 feet west of Chamblee Dunwoody Road and flowing for approximately 350 feet before entering a concrete-lined channel for about 75 feet, then resuming a natural-bottom stream for an additional 120 feet before its confluence with PS31. Channel: 5 to 10 feet wide and up to 3 feet deep. Wetted area: 1 foot wide and 3 to 4 inches deep. Substrate: sand and some cobble/gravel.	No/Fully impaired due to significant, man-induced trash and debris and substantial sedimentation	None	No

* Based on the Compensatory Mitigation Definition of Factors (CMDF) found in the USACE Savannah Regulatory District's March 2004 *Standard Operating Procedure for Compensatory Mitigation.*

** A portion of these resources are non-buffered due to artificial lining.

In sum, based on conceptual design, the proposed project would result in a total of approximately 6,487 lf (2.0 acres) of permanent jurisdictional stream impacts. In addition, the proposed project would result in non-exempt impacts to the buffers of PS28a and PS29 and would require a buffer variance from the Georgia EPD (pursuant to Georgia DNR Rules on Buffer Variance Procedures and Criteria 391-3-7-05(1)(d), as amended) under Criteria 2(h).

Stream Mitigation

The purchase of 19,879 stream mitigation credits would be required to offset the proposed project's permanent impacts to jurisdictional streams. Temporary impacts have not been assessed and may require additional credit purchase. Credits would be purchased from a USACE-approved mitigation bank that serves the Upper Chattahoochee River watershed (HUC 03130001).

State Waters

All of the waters of the United States reported above are also state waters. Portions or all of the following waters do not have a state-mandated buffer due to artificial lining: PS9, PS10, PS11, IS17a, OW17b, IS17c, PS18, EC/IS19, IS/PS20a, PS25, PS28a, IS29b, and IS31a.

Measures to Avoid and Minimize Impacts

Measures during Planning

During the conceptual development phase, basic data on the proposed project corridor were gathered and studied. Data for this project included, at a minimum, USGS topographic maps, aerial photography, traffic data, previous studies, NWI maps, soil survey maps, floodplain maps, and Georgia DNR historic resource survey maps. Using these data and information gathered during field surveys of the project corridor, any existing wetland areas, floodplains, parks and recreational facilities, known or suspected historical and archaeological sites, ROW, potential underground storage tank (UST)/landfill/hazardous

waste sites, and areas of potential endangered species habitat were identified. Also noted were other constraints such as homes, churches, cemeteries, schools, hospitals, and other sensitive sites. In the case of unavoidable impacts to jurisdictional water(s) of the United States, all practicable measures would be taken to minimize harm. Table 20 summarizes minimization measures that were implemented to reduce impacts to each resource.

Table 20. Minimization Measures by Resource

Resource ID	Minimization Measure
IS1	No impact—No minimization required.
PS2	No impact—No minimization required.
IS3	No impact—No minimization required.
WL4	No impact—No minimization required.
PS5	Wall construction to avoid resource.
PS6	Wall construction to avoid resource.
OW7	Wall construction to avoid resource and minimize buffer impacts.
PS7a	Culvert extension required; avoidance is not feasible.
IS8	Slope reduction from 4:1 to 2:1 to minimize impacts; however, avoidance is not feasible because the culvert extension is required to accommodate roadway drainage needs.
PS9	Slope reduction from 4:1 to 2:1 to minimize impacts. However, avoidance is not feasible because the resource is perpendicular to the existing road; shifting the current preferred road alignment would not avoid the resource.
PS10	Wall construction to avoid resource.
PS11	Wall construction to avoid resource.
PS12	Wall construction and slope minimization from 4:1 to 2:1 to minimize impacts. However, avoidance is not feasible because the resource is perpendicular to the existing road; shifting the current preferred road alignment would not avoid the resource.
PS13	Wall construction and slope minimization from 4:1 to 2:1 to minimize impacts north of I-285. However, avoidance is not feasible because this section of the resource is perpendicular to the existing road; shifting the current preferred road alignment would not avoid the resource. Bridging avoids impacts south of I-285.
WL14	No impact—No minimization required.
PS15	Bridging to avoid stream impacts; however, buffer impacts would be anticipated for construction access.
WL16	No impact—No minimization required.
PS17	Bridging to avoid stream impacts.
IS17a	The majority of impacts occur within previously impacted section of stream; no stream loss would occur to these areas.
OW17b	No impact—No minimization required.
IS17c	Impacts occur within previously impacted section of stream; no stream loss would occur.
PS18	Impacts occur within previously impacted section of stream; no stream loss would occur.

Table 20. Minimization Measures by Resource

Resource ID	Minimization Measure
EC/IS19	Impacts occur within previously impacted section of stream; no stream loss would occur. Buffer impacts to natural section of stream may occur.
PS20	Wall construction to avoid resource.
IS/PS20a	Minimization is not feasible because the entire reach of stream is beneath the project footprint and there is limited amount of space between the existing roadway and adjacent commercial parcels. Piping full resource is the only option.
OW21	No impact—No minimization required.
OW22	Wall construction to minimize impacts; however, avoidance is not feasible because of the location of existing surrounding commercial buildings.
OW23	No impact—No minimization required.
OW24	This scour pool was converted from a stream to open water habitat due to the amount of water moving through this area. Piping this resource would fix the drainage problems.
PS25	The section north of I-285 is outside of the project footprint. Slope reductions from 4:1 to 2:1 were utilized to minimize impacts south of I-285.
IS26	Slope reductions from 4:1 to 2:1 to minimize impacts. Shifting the current preferred alignment to further reduce impacts to this resource would impact additional resources.
OW27	Wall construction to minimize impacts. Shifting the current preferred alignment to avoid this resource would impact additional resources.
IS28	Minimization is not feasible because the entire reach of stream is beneath the project footprint and there is limited space between the existing roadway and the commercial properties along Lake Herndon Drive. Piping full resource is the only option.
PS28a	Slope reduction to minimize impacts to natural-bottom channel. Impacts to concrete-lined portion occur within previously impacted section of stream; no stream loss would occur.
EC/IS28b	No impact—No minimization required.
PS29	Minimization is not feasible to the section of the stream north of I-285 because this entire section of the stream is beneath the project footprint; piping full resource is the only option. Wall construction to minimize impacts to portion south of I-285. Shifting the current preferred alignment to avoid this section would increase impacts to historic properties and other existing buildings.
IS29a	Minimization is not feasible because the entire reach of stream is beneath the project footprint. Piping full resource is the only option.
IS29b	Culvert extension required; avoidance is not feasible.
PS30	Slope reduction from 4:1 to 2:1 to minimize impacts to section north of I-285. Shifting the current preferred alignment to avoid this section would increase impacts to historic properties and other existing buildings. The section south of I-285 is outside of the project footprint.
WL30a	No impact—No minimization required.
EC30b	No impact—No minimization required.
IS/PS30c	No impact—No minimization required.
PS31	No impact—No minimization required.
IS31a	No impact—No minimization required.

Measures during Construction

The project would be expected to produce some increased siltation within streams during the construction phase. Environmental harm would be minimized by standard sedimentation, erosion, and hydrological control measures. These include the following:

1. Preservation of roadside vegetation beyond the limits of construction, where possible.
2. Early revegetation of disturbed areas to minimize soil erosion.
3. The use of slope drains, detention/retention structures, or 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 and specifications and contract pay items (Georgia Standard Specifications, Sections 161 through 171 and 700 through 715 identify the pollution control measures that may be used).
5. The dumping of chemicals, fuels, lubricants, bitumens, raw sewage, and other harmful waste into or alongside of streams or impoundments or into natural or manmade channels leading thereto would be prohibited.
6. Compliance with terms of the NPDES permit for construction activities to include preparation and submittal of project Notice of Intent and Notice of Termination. The NPDES permit also requires preparation and implementation of an erosion, sedimentation, and pollution control plan and a comprehensive monitoring program. BMPs 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*.

Interagency Coordination

Based on the anticipated amount of impacts to waters of the U.S. from the project, the proposed project would require a Section 404 Individual Permit (IP) with compensatory mitigation from the USACE prior to activities impacting waters of the United States. The Georgia DOT has a two-step process for obtaining an IP: the Practical Alternatives Review (PAR) process and the submittal of the permit application. The purpose of the PAR process is to obtain agency input on project alternatives, as well as to gather information for continued project review. The PAR coordination process with the agencies was initiated on August 1, 2014, when the PAR package was made available to the USACE, U.S. Fish and Wildlife Service (USFWS), USEPA, FHWA, and Georgia DNR EPD. Georgia DOT held a PAR meeting with these agencies on August 26, 2014. This meeting is discussed in detail in Section E.1 of this document. Minutes from the PAR meeting are provided in Appendix A.

Fish and Wildlife Coordination Act

It is the Department's policy that projects involving intermittent or perennial streams impacted by culverts on new location, by longitudinal encroachment, by morphologic change, or by culvert extensions greater than 100 feet as measured along the center of the impacted channel be coordinated with the USFWS

pursuant to the Fish and Wildlife Coordination Act (FWCA). Based on the current conceptual design, impacts to PS9, PS12, IS/PS20a, IS26, IS28, PS29, and IS29a require coordination with USFWS under the FWCA due to channel losses from pipe/culvert extensions greater than 100 feet. This coordination has occurred. In a letter dated May 6, 2015 (see Appendix A), the USFWS concurred with FHWA's determination that impacts to streams along the corridor are unavoidable and necessary to implement the proposed project, and that the proposed mitigation (described above) satisfies FHWA's responsibilities under the FWCA.

Indirect Impacts

Indirect effects on surface water or riverine systems could occur as a result of project implementation; however, they would be minimal. Redevelopments of existing urbanized/developed areas are primarily expected to occur, though some new development of currently undeveloped lands would likely also occur. Given the largely built-out nature of the project area, new impacts to streams and riverine systems are expected to be minimal. Surface waters and riverine systems in the region of influence for indirect impacts are within the Upper Chattahoochee River watershed. Smaller drainages that may be indirectly impacted by the implementation of the project include: Heards Creek, Long Island Creek, Marsh Creek, Perimeter Creek, North Fork Nancy Creek, and Nancy Creek in the general Perimeter Center area.

Surface waters and riverine systems are afforded protection under federal, state and local programs that serve to limit impacts to these areas from construction, such as NPDES regulations, USACE Section 404 permitting and mitigation, Georgia EPD buffer variance procedures and requirements, and local community ordinances. Specific local ordinances that would protect surface waters and riverine systems would be the same as those that protect terrestrial environments (presented in Table 24 in Section III.C.6, *Wildlife and Habitat*). Construction plans are designed to minimize impacts to surface waters and riverine systems in order to reduce the amount of sedimentation and degradation to these areas. Based on these additional protections, indirect impacts on surface water or riverine systems as a result of implementation of the project would be minimal.

Cumulative Impacts

The majority of the land in Fulton and DeKalb counties was comprised of rural farmland before development of I-285 and SR 400. Since the time of I-285's (1960s) and SR 400's (1970s and 1980s) initial construction, human impacts have greatly impacted surface waters and riverine systems in the vicinity of the project corridor from urban sprawl and development. Section 404 permitting data was obtained from the USACE Regulatory Analysis and Management Systems (RAMS) (from 1990 to 2004) and the Operations and Maintenance Business Information Link Regulatory Module (ORM) (from 2004 to 2012) databases for Fulton and DeKalb counties (Freas, 2012; 2013), which is the best available data regarding past stream impacts in the project vicinity. Table 21 summarizes this USACE data by county. Permitting data from before 1990 is not readily available. In addition, many more stream impacts likely occurred in project area counties from road and land development prior to the permitting requirements established by the Clean Water Act.

Table 21. Approximated Historic Permitted Stream Impacts by County

County	Linear Feet of Permitted Stream Impact		
	1990-2004 (from RAMS)	2004-2012 (from ORM)	Total
Fulton	39,000	71,000	110,000
DeKalb	5,000	38,000	43,000

Sources: Freas, 2012; 2013

In addition this data, the University of Georgia's Georgia Land Use Trends (GLUT) land cover data presented in Table 25 in Section III.C.6, *Wildlife and Habitat*, shows a considerable increase in impervious surfaces (represented by low- and high-intensity urban land uses in the table) from 1991 to 2008 (the most recent data available) in the project area counties, which can be an indirect measure of past impacts to streams and riverine systems. According to King and Bernstein (2009), research has documented that increases in impervious surfaces can result in greater impacts (both direct and indirect) on aquatic resources.

Reasonably foreseeable future and on-going projects would also contribute to cumulative impacts to surface waters and riverine systems by adding impervious surfaces in the project vicinity. However, all projects, regardless of whether they are implemented by a governmental, non-governmental, or private entity, would be required to comply with Section 404 of the Clean Water Act, including preparation of permit applications for proposed stream impacts. In reviewing such permit applications, the USACE analyzes cumulative impacts on streams based on the methodology described in *An Approach to Evaluating Cumulative Impacts in Georgia's Watersheds Using Best Available Data* (King and Bernstein, 2009). This method uses Natural Resources Spatial Analysis Lab (NARSAL) land cover classes to establish a baseline, RAMS data to estimate historical impacts, NARSAL and RAMS permit data to establish present day conditions, and population growth and impervious surface data to anticipate future impacts. The USACE's regulatory program aims to attain a cumulative 'no net loss' of aquatic resources within a given watershed. To achieve this, mitigation for impacts to aquatic resources must include 'in kind/in basin' replacement of the impacted resource, which is accomplished by requiring the use of mitigation banks with similar vegetation strata and appropriate service area (King and Bernstein, 2009).

The project would contribute to cumulative impacts on streams and riverine systems, both directly from project construction and indirectly from intensifying development/redevelopment. However, when viewed in conjunction with other past, present, and reasonably foreseeable future projects, the overall contribution of the project to cumulative impacts on surface waters and riverine systems would be small given the already largely built-out nature of the project vicinity. In addition, the federal, state, and local programs to limit impacts to surface waters discussed above under "Indirect Effects" should provide some protection to surface waters and riverine systems.

3. Floodplains

Protection of floodplains and floodways is required by Executive Order 11988 "Floodplain Management," U.S. DOT Order 5650.2 "Floodplain Management and Protection," and Title 23 Section 650 of the Code of Federal Regulations. These orders and regulations aim to avoid or minimize encroachments into floodplains and restrict land use that is incompatible with the natural function of floodplains.

What are Floodplains?

Floodplains are low-lying areas located adjacent to the channel of a river, stream, or other type of water body that are subject to periodic flooding during heavy rains and/or long periods of wet weather. A floodplain provides important functions in the natural environment such as:

- Providing temporary storage of flood waters;
- Preventing heavy erosion caused by fast moving water;
- Providing a vegetative buffer to filter silt and contaminants before entering a water body;
- Recharging and protecting groundwater; and accommodating the natural movement of streams.

The Federal Emergency Management Agency (FEMA), in cooperation with state and local governments, develops flood boundary and flood insurance mapping as part of the National Flood Insurance Program (NFIP). Under this program, a floodplain is defined as any land area susceptible to being inundated by water. The 100-year floodplain (or, special flood hazard area [SFHA]) is the boundary of a flood that has a one percent chance of being equaled or exceeded in any given year (or an average of once every 100 years). Fulton and DeKalb counties participate in the Regular Program of the NFIP.

The following FEMA FIRM panels were reviewed to identify flood hazard zones within the project corridor: 13121C0142F and 13121C0161F in Fulton County (dated September 18, 2013) and 13089C0011J and 13089C0012J in DeKalb County (dated May 16, 2013). Based on a review of these FIRM panels, the project corridor encounters SFHAs subject to inundation by 100-year flood events in three locations. These are:

- The Long Island Creek 100-year floodplain (Zone A SFHA) is located approximately 0.26 mile east of the Roswell Road overpass and 430 feet south of the existing I-285 centerline.
- The Perimeter Creek 100-year floodplain (Zone AE SFHA) and regulatory floodway perpendicularly cross I-285 under the Perimeter Center

Zone A SFHAs: Areas with a one percent annual chance of flooding (100-year floodplains) where base flood elevations have not been determined because detailed hydraulic analyses have not been performed.

Zone AE SFHAs: Areas with a one percent annual chance of flooding (100-year floodplains) where base flood elevations have been determined.

Regulatory Floodway: The channel of a stream plus the adjacent land areas that must be kept free of encroachments so that the 100-year flood discharge can be conveyed without increasing the base flood elevation more than a designated height. Communities must regulate development in these floodways to ensure that there are no increases in upstream flood elevations. FEMA has mandated that projects can cause no rise in the regulatory floodway and no more than a one-foot cumulative rise for all projects in the base (100-year) floodplain.

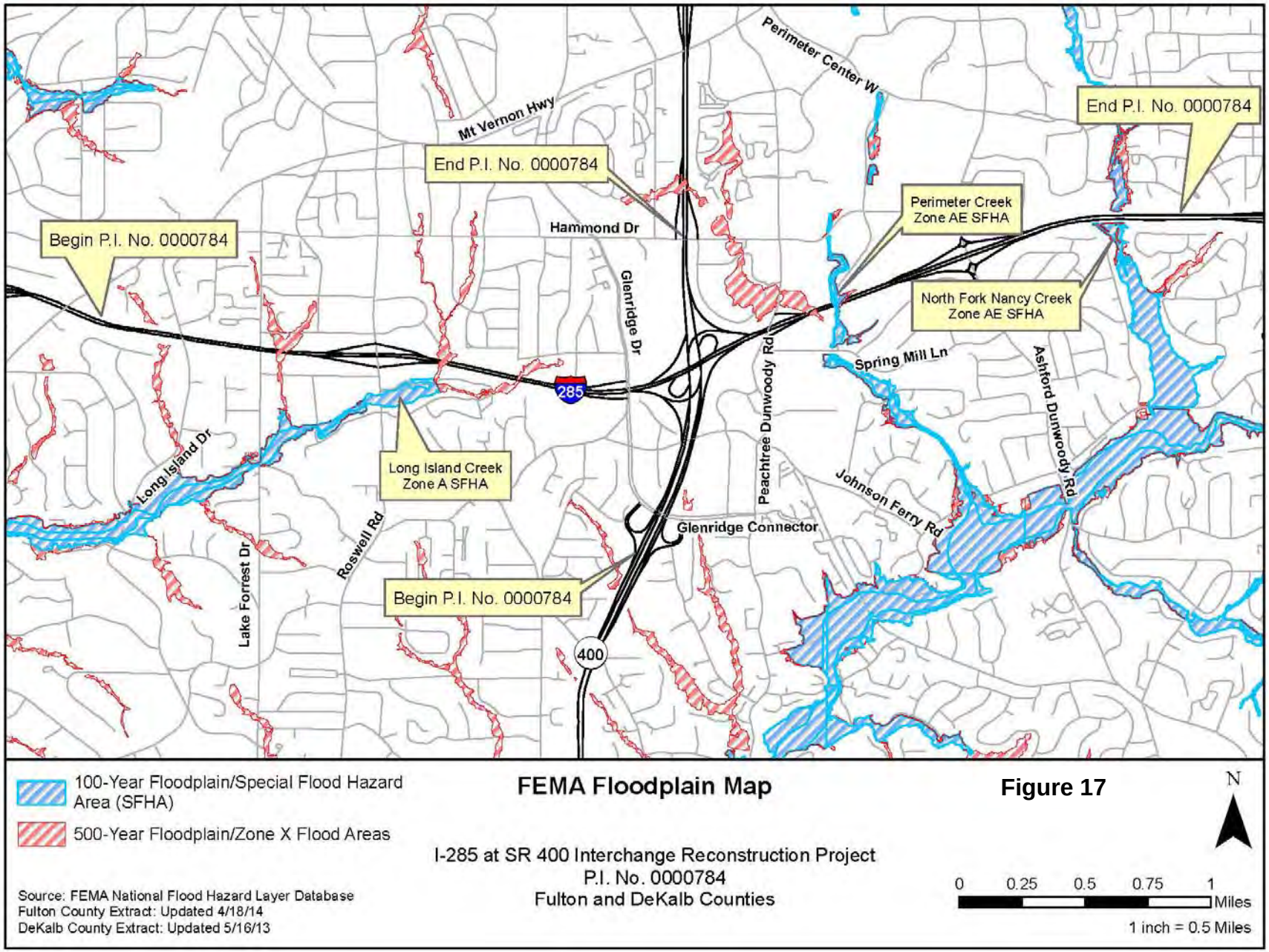
Parkway overpass. According to the FIRM panel, floodplain elevations in this area range from 912 feet to 940 feet above MSL.

- The North Fork Nancy Creek 100-year floodplain (Zone AE SFHA) perpendicularly crosses I-285 approximately 0.63 mile east of the Ashford Dunwoody Road overpass. In addition, a tributary to North Fork Nancy Creek perpendicularly crosses I-285 in this floodplain area approximately 600 feet west of the North Fork Nancy Creek crossing. According to the FIRM panel, floodplain elevations in this area range from 898 feet to 902 feet above MSL.

Zone X Flood Areas: Areas of 500-year floods, areas of 100-year floods with average depths of less than one foot or with drainage areas less than one square mile, and areas protected by levees from 100-year floods.

These areas are shown in Figure 17. In addition, the project corridor encounters additional areas that are considered Zone X Flood Areas (500-year flood areas) in six locations. These include four crossings of the Zone X/500-year Flood Areas associated with Long Island Creek and two crossings of the Zone X/500-year Flood Area associated with Perimeter Creek (see Figure 17). Since no coordination with FEMA or the local community is necessary for impacts within Zone X/500-year floodplain areas, impacts to these areas are not discussed in this section.

An early coordination letter was submitted to the FEMA Mitigation Division and Georgia DNR Floodplain Management Unit for this project (see Appendix A). A response was received from the Georgia DNR Floodplain Management Unit (see Appendix A), which confirmed the findings above, and noted that, since a regulatory floodway has been established for Perimeter Creek both upstream and downstream of its crossing under I-285, a culvert or bridge extension in this area must be designed for the "No-Rise" condition.


Perimeter Center W
Mt Vernon Hwy
End P.I. No. 0000784
End P.I. No. 0000784
Perimeter Creek
Zone AE SFHA
Begin P.I. No. 0000784
Hammond Dr
Glenridge Dr
North Fork Nancy Creek
Zone AE SFHA
Spring Mill Ln
Ashford Dunwoody Rd
Peachtree Dunwoody Rd
285
Long Island Dr
Long Island Creek
Zone A SFHA
Johnson Ferry Rd
Glenridge Connector
Roswell Rd
Lake Forrest Dr
Begin P.I. No. 0000784
400
100-Year Floodplain/Special Flood Hazard Area (SFHA)
500-Year Floodplain/Zone X Flood Areas
FEMA Floodplain Map
Figure 17
I-285 at SR 400 Interchange Reconstruction Project
P.I. No. 0000784
Fulton and DeKalb Counties
N
0 0.25 0.5 0.75 1
Miles
1 inch = 0.5 Miles
Source: FEMA National Flood Hazard Layer Database
Fulton County Extract: Updated 4/18/14
DeKalb County Extract: Updated 5/16/13

Anticipated project impacts at each 100-year floodplain/floodway crossing based on the current preferred design are summarized in Table 22, along with a discussion of potential requirements for FEMA and/or Community coordination for each crossing. Since no coordination with FEMA or the local community is necessary for impacts within Zone X/500-year floodplain areas, impacts to these areas are not discussed in the table. Preliminary FEMA Hydraulics and Hydrology studies were conducted for the proposed crossings at North Fork Nancy Creek (including the tributary of North Fork Nancy Creek) and Perimeter Creek based on the current preferred design for the I-285/SR 400 Interchange Reconstruction project. Based on these studies, the current preferred design for the I-285/SR 400 Interchange Reconstruction would not cause increases in floodplain or floodway elevations or changes to floodway widths. Therefore, the proposed widening of I-285 at both of these crossings would satisfy FEMA no-rise criteria and only Community coordination would be required. However, it should be noted that any changes to the current preferred design by the Design-Build Contractor in these areas would require additional hydrologic and hydraulic modeling to evaluate the proposed design's impacts to the currently effective floodplains/ floodways. This additional modeling would be done by the Design-Build Contractor once project design is more fully developed. Should the proposed project result in any increase to the base flood elevations, floodway elevations, or floodway widths outside the Georgia DOT ROW, FEMA coordination and Community coordination, as well as submittal of a Conditional Letter of Map Revision (CLOMR) prior to construction and Letter of Map Revision (LOMR) after construction, may be required. Any required Community coordination for impacts to floodplains or floodways would be completed by the Georgia DOT prior to construction of the proposed project.

Table 22. Anticipated Impacts to 100-Year Floodplains and Floodways from the Project

Floodplain/ Floodway	Approximate Impact Area	Impact Type	Comments/Coordination Required?
Long Island Creek	Not Impacted	Not Impacted	N/A
Perimeter Creek	0 square feet (0.0 acre)	The addition of lanes on I-285 between SR 400 and Ashford Dunwoody Road in this area would occur above the existing double 8-foot by 8-foot box culvert that conveys Perimeter Creek under I-285. There would be no change in the length of this culvert or the hydraulic opening. The effective FEMA FIRM indicates that the 100-year floodplain and floodway do not overtop the road and are contained within the existing culvert.	Based on the preliminary hydrologic and hydraulic analysis conducted for the current preferred project design, the design at this crossing satisfies FEMA no-rise criteria and only Community coordination is required.
North Fork Nancy Creek (including a tributary to North Fork Nancy Creek)	9,280 square feet (0.223 acre)	The addition of eastbound and westbound lanes along I-285 in this area would require extension of the existing 10-foot by 7-foot box culvert at the North Fork Nancy Creek crossing by 6 feet and extension of the existing 6-foot by 6-foot box culvert at the tributary to North Fork Nancy Creek crossing by 10 feet. These lane additions and culvert extensions may require the placement of fill, culvert sections, and wingwalls in the regulatory floodplain.	Based on the preliminary hydrologic and hydraulic analysis conducted for the current preferred project design, the design at this crossing satisfies FEMA no-rise criteria and only Community coordination is required. Although the existing and proposed conditions produce backwater at the tributary to North Fork Nancy Creek that exceed the 1 foot or less of backwater typically allowed by the Georgia DOT, because this is a culvert, it is not practical or cost-effective to resize

Table 22. Anticipated Impacts to 100-Year Floodplains and Floodways from the Project

Floodplain/ Floodway	Approximate Impact Area	Impact Type	Comments/Coordination Required?
			the opening or install additional barrels given that it meets Georgia DOT Risk Assessment guidelines. The proposed project does not result in a significant potential for interruption or termination of a transportation facility that is needed for emergency vehicles or provides a community's only evacuation route and there is no significant potential for property damage or hazard to life from the proposed project design.

The impacts presented in Table 22 already incorporate minimization measures, such as placing retaining walls at the 100-year floodplain crossings. However, the Design-Build Contractor may consider additional modifications in the project design, such as construction of bridge structures over stream corridors verses culverts, where feasible to further minimize floodplain impacts.

Indirect Impacts

Impacts on floodplains could occur from development on lands adjacent to the project corridor. The proposed I-285/SR 400 Interchange Reconstruction project is anticipated to intensify and/or accelerate redevelopment initiatives already occurring or planned to occur in the vicinity of the project corridor. Areas that could be particularly affected by this include the Perimeter Center area, which includes the Perimeter Creek, North Fork Nancy Creek, and South Fork Marsh Creek 100-year floodplains; and the vicinity of the Roswell Road, which includes the Long Island Creek 100-year floodplain. Development/ redevelopment or other land disturbance in these areas could require the placement of fill in these 100-year floodplains. However, any such development and associated infrastructure would have to comply with existing local ordinances that govern development in floodplains (Floodplain Management/Flood Damage Prevention Ordinances). All municipalities within the vicinity of the project corridor have adopted such regulations. These ordinances minimize floodplain encroachments from development, restrict developments that would cause a significant change in base flood elevations, and inhibit land uses that are incompatible with natural floodplain function. Therefore, while indirect impacts on floodplains could occur as a result of area redevelopment pressure, which could be intensified or accelerated by the proposed project, these effects are expected to be minimal.

Cumulative Impacts

In 1968, Congress created the NFIP to help provide a means for property owners to financially protect themselves and for participating communities to reduce the risk of flooding. Creation of the NFIP ultimately led to the development of Flood Insurance Studies and the identification of SFHAs for participating communities, such as Fulton and DeKalb counties. The SFHAs or regulatory floodways and floodplains found throughout the project corridor were not established until sometime after the 1969 opening of I-285. Initial construction of I-285 likely had an impact on the floodplains that existed prior to

its opening. For instance, the effective FIRM shows a constriction in the floodplain where I-285 crosses North Fork Nancy Creek, which is a result of the I-285 crossing.

Throughout I-285's operational history there have been modifications to the interstate and development, which have impacted regulatory floodways and floodplains in and beyond the project corridor. Interstate widenings, bridge replacements/modifications, interchange modifications, and new interchange construction have resulted in impacts to the regulatory floodplains and floodways since they were established. In addition, land developments, such as Perimeter Mall near Perimeter Creek and numerous other commercial and residential developments throughout the project corridor, have resulted in either direct impacts to the regulatory floodplains and floodways or indirect impacts by increasing the amount of overall impervious area. Increased impervious area leads to increases in peak stormwater runoff and the frequency of flooding, which could impact the regulatory floodway and floodplain.

Cumulative impacts on floodplains would occur from the project in conjunction with other past and reasonably foreseeable land development and transportation projects. Some of the DRIs proposed in the project area are located within the immediate vicinity of 100-year floodplains, such as the Palisades DRI and 245 Perimeter Center, both of which are located in the Perimeter Creek floodplain. However, according to the DRI application packages for these developments, no impacts to 100-year floodplains are anticipated to result from their construction. In addition, current and future land development would have to comply with local floodplain ordinances (Floodplain Management/Flood Damage Prevention Ordinances), which would minimize floodplain encroachments from developments.

Environmental documents have not yet been completed for most of the other planned or programmed highway transportation projects in the project vicinity, but most of these projects would make crossings of additional 100-year floodplains along their corridors and impacts to these floodplains could occur. With the exception of the **revive**285 *top end* project, these other transportation projects are not expected to involve crossings of the same 100-year floodplains that are directly crossed by the I-285/SR 400 Interchange Reconstruction project. With the potential future implementation of the **revive**285 *top end* project, cumulative impacts on the Perimeter Creak and North Fork Nancy Creek floodplains may occur. However, only minor effects on these floodplains are anticipated to result from the proposed project, so the proposed project's contribution to cumulative effects on these floodplains would be small. In addition, future roadway projects, such as those managed-lane projects planned/programmed along I-285 and SR 400, would have to comply with Executive Order 11988 (Floodplain Management), U.S. DOT Order 5650.2 (Floodplain Management and Protection), and 23 CFR 650 Subpart A regarding highway encroachments into floodplains. In accordance with these regulations, significant encroachments on floodplains are not permitted unless there is no practicable alternative.

Lastly, some floodplain areas within the project vicinity, including the 100-year floodplain associated with North Fork Nancy Creek, are designated as Conservation/Greenspace areas in their respective county's comprehensive plans. These areas are anticipated to be protected as such at least through the life of the comprehensive plans. This should further reduce the potential for adverse cumulative impacts on floodplains.

4. Farmland

This project is being developed in compliance with provisions of the National Farmland Protection Policy Act. According to the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) the proposed project is completely contained within an existing U.S. Census Bureau designated urban area, and is thus exempt from NRCS' Land Evaluation and Site Assessment (see coordination letter in Appendix A). Therefore, no further action under the Farmland Protection Policy Act is needed, and Form AD-1006 does not need to be completed for this project. In addition, there are no NRCS Farm and Ranch Land Protection Program easements or NRCS Watershed dams within the vicinity of the proposed project corridor that would be impacted by the project (see NRCS coordination letter in Appendix A).

Indirect Impacts

Project implementation would not have any indirect impacts on farmland since no farmland exists in the vicinity of the project area (see NRCS coordination letter in Appendix A).

Cumulative Impacts

Project implementation would have no reasonably foreseeable cumulative impacts to farmland since no farmland exists in the vicinity of the project area (see NRCS coordination letter in Appendix A).

5. Protected Species

Under the provisions of the Endangered Species Act of 1973, as amended, federal law requires that actions likely to adversely affect a species classified as federally protected be subject to review by U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS), as appropriate. Official lists of federal threatened, endangered, proposed, and candidate species with distributional ranges in Fulton and DeKalb counties were obtained from the Georgia DNR Natural Heritage Program (dated October 2011) and the USFWS, online Information, Planning, and Conservation (IPaC) System (accessed October 7, 2014). Table 23 lists these threatened and endangered species, their federal and state status, the existence of suitable habitat within the survey corridor, and the effects determination for the proposed project. In addition, a list of federal and state protected species with known occurrences within three miles of the project study corridor was provided by the Georgia DNR (see coordination letter in Appendix A). Field surveys of the proposed project area were conducted in October and November 2013 and in March, May, and June 2014. These surveys did not identify any listed threatened or endangered species.

Table 23. Federal and State Threatened and Endangered Species of Potential Occurrence in Fulton and DeKalb Counties

Common Name	Scientific Name	Federal Status	State Status	Suitable Habitat Present?	Determination of Effect for the Project
FAUNA					
Cherokee darter	*Etheostoma scotti*	T	T	No	No effect
purple bankclimber	*Elliptoideus sloatianus*	T	T	No	No effect
shinyrayed pocketbook	*Lampsilis subangulata*	E	E	No	No effect
Gulf moccasinshell	*Medionidus penicillatus*	E	E	No	No effect
oval pigtoe	*Pleurobema pyriforme*	E	E	No	No effect
Henslow's sparrow	*Ammodramus henslowii*	NL	R	No	No effect
Chattahoochee crayfish	*Cambarus howardi*	NL	T	No	No effect
delicate spike	*Elliptio arctata*	NL	E	No	No effect
FLORA					
little amphianthus	*Amphianthus pusillus*	T	T	No	No effect
black spored quillwort	*Isoetes melanospora*	E	E	No	No effect
dwarf sumac	*Rhus michauxii*	E	E	No	No effect
mountain witch-alder	*Fothergilla major*	NL	T	No	No effect
bay star-vine	*Schisandra glabra*	NL	T	Yes	No effect
sweet pinesap	*Monotropsis odorata*	NL	T	Yes	No effect

Legend: E = Endangered; NL = Not Listed; T = Threatened; R = Rare

Notes: The northern long-eared bat (*Myotis septentrionalis*), a federal threatened species, summer roosting habitat survey range previously extended into Fulton County; however, based on updated scientific information, the USFWS Georgia Field Office revised the survey range map for the species on September 29, 2014, removing its occurrence from Fulton County. Section 7 consultation is no longer required for this species.

Sources: Georgia DNR, Wildlife Resources Division, Natural Heritage Program, Locations of Special Concern Animals, Plants, and Natural Communities in Fulton and DeKalb counties (updated October 2010); Letter from Georgia DNR (Anna Yellin) dated June 19, 2014 documenting known occurrences of protected species within a three-mile radius of project; USFWS IPaC System, species list generated on October 7, 2014.

Federally listed species with potential occurrence in Fulton and DeKalb Counties and those state-listed species known to occur within three miles of the project corridor are described below, along with the survey results for these species. More detailed information on each species is provided in the Ecological Resources Survey Report and Ecological Resources Assessment of Effects Report prepared for this project, which are available from the Georgia DOT's OES.

Federally Listed Species

Cherokee darter (Etheostoma scotti)

Cherokee darters typically inhabit small to medium-sized streams, where they are found in association with gravel and cobble bed sediments. The species may also occur in pools at the head or tail of riffles. The species is not found in streams with moderate or thick deposits of silt and sediment, as it requires clean bed sediments for spawning. As with most darter species, the Cherokee darter requires moderate to swiftly flowing stream habitat, and it cannot survive in impoundments. The Cherokee darter is known to occur in approximately 20 small to moderately large tributaries of the middle and upper Etowah River system.

Effects Determination: No Effect. Suitable habitat within the documented range of the Cherokee darter was not observed within the project area, as the project is located outside of the species preferred range. Additionally, no suitable habitat for the Cherokee darter was identified within the project area, as urban conditions have led to pollutant overloading and poor water quality, as identified by one or a more of the following in identified perennial streams: sewage odor, presence of petroleum-based pollutants, lack of biological community, and appearance of high turbidity levels. Based on this information, project construction would have no effect to this species or its preferred habitat.

Purple bankclimber (Elliptoideus sloatianus), Shinyrayed pocketbook (Lampsilis subangulata), Gulf moccasinshell (Medionidus penicillatus), Oval pigtoe (Pleurobema pyriforme)

Preferred habitat for the purple bankclimber includes small to large rivers with moderate current and sandy to silty substrates. Preferred habitat for the shinyrayed pocketbook includes medium-sized streams to large rivers in sandy to muddy substrates with slight to moderate current. Suitable habitat for the Gulf moccasinshell includes channels of small- to medium-sized creeks to large rivers with sand and gravel or silty sand substrates in slow to moderate currents. Suitable habitat for the oval pigtoe includes small streams to large rivers with moderate flow and sand or gravel substrates. According to the USFWS, all of these species have been extirpated from the portion of the Chattahoochee River Basin encompassing the proposed project.

Effects Determination: No Effect. Per correspondence with the USFWS, a survey for protected aquatic mussels listed in Fulton and DeKalb counties is not required as the species have been extirpated from that portion of the Chattahoochee River Basin encompassing the proposed project. No suitable habitat for any of these species was identified within the project area, as urban conditions have led to pollutant overloading and poor water quality, as identified by one or a more of the following in identified perennial streams: sewage odor, presence of petroleum-based pollutants, lack of biological community, and appearance of high turbidity levels. Based on this information, project construction would have no effect to these species or their preferred habitat.

Little amphianthus (Amphianthus pusillus)

More-commonly known as pool sprite, little amphianthus is restricted to eroded depressions or (rarely) quarry pools formed on flat to doming granitic (either granite or granite-gneiss) outcrops. These outcrops

are generally large, isolated domes or gently rolling flatrocks typically associated with crystalline rock of Precambrian age.

Effects Determination: No Effect. No suitable habitats for the little amphianthus, including expansive areas of exposed crystalline rock outcrop and plant community associations, were identified within the project area. Based on this information, the construction of this project would have no effect to this species or its preferred habitat.

Black-spored quillwort (Isoetes melanospora)

The black-spored quillwort usually occurs in shallow, flat-bottomed pools/depressions found on the crest and flattened slopes of unquarried outcrops. The depressions are less than one foot in depth, are entirely rock-rimmed, and may be dry much of the summer except during rainy periods. The outcrops are generally large, isolated domes or gently rolling flatrocks typically associated with crystalline rock of Precambrian age.

Effects Determination: No Effect. No suitable habitat for the black-spored quillwort, including granite rock outcrops, was identified within the project area. Based on this information, the construction of this project would have no effect to this species or its preferred habitat.

Dwarf sumac (Rhus michauxii)

Dwarf sumac is found in openings in dry, open, rocky or sandy woodlands over mafic rock. Cleared ROW is considered potential habitat for this species.

Effects Determination: No Effect. Suitable habitat for dwarf sumac was not observed within the project area. Cleared areas along the project corridor are frequently mowed or demonstrate high levels of competition from invasive woody and herbaceous species. In addition, forest canopy is largely closed with dense areas of understory growth and invasive species. Based on this information, project construction would have no effect to this species or its preferred habitat.

State Listed Species

Henslow's sparrow (Ammodramus henslowii)

In the eastern part of the United States, breeding habitats for Henslow's sparrow include 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. In winter this species uses open, boggy pinewoods, pitcher plant bogs, power line ROW with dense grassy groundcover and little woody vegetation. Sites with moist soils or with areas of damp or moist soils seem to be preferred.

Effects Determination: No Effect. Georgia DNR data indicate occurrence records of this species approximately two miles west of the proposed project area. Suitable habitat for the Henslow's sparrow was not observed within the project area, as open areas are frequently cleared and mowed, and lack tall,

dense grasses or forbs. Based on this information, the proposed project would have no effect on this species or its suitable habitat.

Chattahoochee Crayfish (Cambarus howardi)

The Chattahoochee crayfish is found in riffle areas of clear, rapidly flowing streams ranging from small tributaries to the Chattahoochee River. During daylight, specimens are usually found sheltered under rocks.

Effects Determination: No Effect. Georgia DNR data indicate occurrence records of this species about 2.5 miles northwest of the proposed project area in Sope Creek. All streams within the project area with the potential of supporting Chattahoochee crayfish (PS11, PS12, PS13, PS20, PS25, PS29, and PS30), were surveyed as part of the **revive**285 *top end* study in November 2009. No Chattahoochee crayfish specimens were found and it was determined that suitable habitat did not exist in these streams during the 2009 survey.

The subsequent survey conducted on July 14, 2014 focused on sampling streams that could appear to contain potential habitat substrates based largely on a review of recent photography and prior site knowledge. Twenty-one individuals of a single crayfish species, the variable crayfish (*Cambarus latimanus*), were found and no individuals of Chattahoochee crayfish were observed. An additional stream, Stream 20a, was identified and surveyed for Chattahoochee crayfish on August 27, 2014. The survey resulted in two variable crayfish being found, neither of which were Chattahoochee crayfish. Therefore, it was determined that suitable habitat for Chattahoochee crayfish does not exist within the streams of the project area. Although the presence of boulder, cobble, or gravel substrates was present within the surveyed streams, all streams contained large amounts of sediment, which fill up the spaces between the larger substrates on which the Chattahoochee crayfish depend for habitat. Therefore, based on the results of the 2009 and subsequent 2014 surveys, the proposed project would have no effect on the Chattahoochee crayfish or its suitable habitat.

Delicate spike (Elliptio arctata)

Habitat for the delicate spike consists of sand, cobble, or gravel bottoms of large creeks and rivers with moderate to strong currents. This species is sometimes found in the bottom of rivers and creeks that are only three feet deep.

Effects Determination: No Effect. Georgia DNR data indicate occurrence records of this species about 1.5 miles northwest of the proposed project area in the Chattahoochee River. Suitable habitat for the delicate spike was not observed within the project area, as perennial streams identified lack the moderate to strong currents this species prefers. Based on this information, the proposed project would have no effect on this species or its suitable habitat.

Mountain witch-alder (Fothergilla major)

Suitable habitat for the mountain witch-alder includes mixed hardwood-pine forests on dry, rocky (sandstone or granite) slopes and bluffs with acidic soils, often including Virginia pine, scarlet oak, and

black oak; occasionally, moist forests with tulip poplar, Carolina silverbell, and cucumber magnolia along rocky stream banks.

Effects Determination: No Effect. Georgia DNR records indicate a single known Piedmont occurrence of this species approximately 2.5 miles southwest of the proposed project area in the Chattahoochee River National Recreation Area. No suitable habitat or plant community associated with this species was observed within the project area. Based on this information, the proposed project would have no effect on this species or its suitable habitat.

Bay star-vine (Schisandra glabra)

The bay star-vine is found twining over understory trees and shrubs in rich, forested bottomlands and adjacent lower slopes. However, older vines can occasionally occur on trunks of overstory trees or sprawl along the ground-forming patches rooted in the litter, especially near thickets of mountain laurel.

Effects Determination: No Effect. Georgia DNR data indicate occurrence records of this species about 1.5 miles south of the proposed project area. Although forested habitat in the project area is highly fragmented, field surveys carefully investigated remnants of identified suitable habitat for this species along several stream banks (PS6, PS9, PS13, PS25, PS29, and PS30) between April 9 and June 13, 2014. No individual specimens or populations were found during the field surveys. Much of the potentially suitable habitats are impaired by dense populations of Chinese privet, autumn olive, English ivy, Japanese honeysuckle, monkeygrass, kudzu, and aggressive, though native, poison ivy. All of these species would most likely out-compete bay star-vine for resources. Therefore, the project would have no effect to bay star-vine.

Sweet pinesap (Monotropsis odorata)

Sweet pinesap is in the acid-loving heath/rhododendron family that is parasitic on underground fungi associated with tree roots. Suitable habitat for this species consists of mixed pine and hardwood forests or chestnut oak dominated forests with dry, acidic soils.

Effects Determination: No Effect. Georgia DNR data indicate an occurrence record for this species approximately 0.5 mile east of the westernmost point of the project corridor. This occurrence, reported from a ravine at a subdivision located north of I-285 along Long Island Drive, could not be confirmed during field surveys for the proposed project. Suitable habitat for the sweet pinesap was observed near the western terminus of the project area north of I-285. A survey was conducted for this species between April 9 and June 13, 2014, which is during the appropriate survey window. No individual specimen or populations were found during the field surveys. Much of the potentially suitable habitats are impaired by dense populations of Chinese privet, autumn olive, English ivy, Japanese honeysuckle, monkeygrass, kudzu, and aggressive, though native, poison ivy. All of these species would most likely out-compete sweet pinesap for resources. Therefore, the project would have no effect to sweet pinesap.

Bald and Golden Eagle Protection Act

The Bald Eagle Protection Act of 1940 provides for the protection of the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*) by prohibiting, except under certain specified

conditions, the taking, possession and commerce of such birds. According to Georgia DNR (see Appendix A), the closest bald eagle nest to the project study area is located approximately 23 miles northwest on Lake Allatoona. In addition, no suitable foraging (i.e., large perch trees near a large body of water) or nesting habitat was observed within the project study area. The proposed 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 or its suitable habitat.

Indirect Impacts

Despite anticipated development/redevelopment in within and adjacent to the project corridor, indirect impacts to protected species would not be anticipated to be substantial because of the protection afforded to protected species and their associated habitats. The majority of the areas anticipated for development/ redevelopment are already in urban uses, which would limit the conversion of protected habitats to urbanized areas, thereby also limiting indirect impacts federal or state listed species, federal candidate species, bald eagle, or protected habitats discussed above.

Protected species and their associated habitats may exist in undeveloped, forested plots scattered throughout the region of influence for indirect effects. These areas include the undeveloped commercial lots around the SR 400/Mount Vernon Highway interchange and the mixed forest habitats associated with several smaller drainages within the Upper Chattahoochee watershed (e.g., Heards Creek, Long Island Creek, Marsh Creek, Perimeter Creek, North Fork Nancy Creek, and Nancy Creek in the general Perimeter Center area). Some of these areas may contain habitat for protected species, and even the species themselves. These areas may be affected by area development/redevelopment initiatives, which may be accelerated or intensified by the proposed project. The potential for indirect effects on these resources would be reduced with the use of protective measures that are in place to preserve terrestrial habitats, including State-mandated stream buffer regulations and local ordinances (further discussed in Section III.C.6, *Wildlife and Habitat*).

The area of potential indirect effects for the project along I-285 and SR 400 is within three miles of the project study corridor. The Georgia DNR coordination letter regarding protected species occurrence within the project corridor (see Appendix A) is generally applicable to this three-mile area. Species confirmed by Georgia DNR to occur within three miles of the project corridor include the Henslow's sparrow, Chattahoochee crayfish, delicate spike, mountain witch-alder, sweet pinesap, and bay star-vine. Detailed information regarding each species' preferred habitat, occurrence records, and presence within the project study corridor is presented above. It should be noted that the additional tributaries and habitats outside of the immediate project corridor but within the area of potential indirect effects were not investigated during field surveys for this project. The potential for indirect effects are discussed below by species.

- Henslow's sparrow suitable overwintering habitat is found in roadside edge, old field, and ruderal habitats in Cobb and Fulton counties; however, the species is not expected to occur within the project corridor. No known nesting sites were recorded by Georgia DNR within the region of influence for indirect effects. Additionally, the single reported sighting of this species was made during annual breeding bird surveys conducted when Henslow's sparrows are not expected to be found in the southeast. Therefore, while area redevelopment may cause indirect impacts to some of the Henslow's sparrow preferred habitats, it would not be expected to impact this species.

- The closest Chattahoochee crayfish occurrence is documented in Sope Creek in Cobb County. This is beyond the area of potential effect for indirect impacts of the proposed project.

- Delicate spike habitat is expected to occur in the Chattahoochee River in Cobb and Fulton counties. This is beyond the area of potential effect for indirect impacts of the proposed project. In addition, no development is expected in the vicinity of the Chattahoochee River because of the designation of these areas as part of the Chattahoochee River National Recreation Area (CRNRA).

- Mountain witch-alder habitat may be found along the Chattahoochee River in Fulton County; however, this species is believed to be extirpated from Fulton County. Additionally, development is not expected in the vicinity of the Chattahoochee River because of the protection afforded to the CRNRA.

- Sweet pinesap habitat may potentially be found within fragmented areas of mixed hardwood and pine forest in Fulton County; however, no species were identified during field surveys within the project corridor, including the previously reported location. Redevelopment in the vicinity of the I-285/Roswell Road and SR 400/Mount Vernon Highway interchanges that result in loss of mature forest canopy in areas adjacent to the species habitat may indirectly impact the sweet pinesap.

- Habitat for the bay star-vine was identified from along the bottomlands and ravine slopes associated with mature, forested areas with mountain laurel thickets adjacent to many of the identified streams (i.e., in the stream buffer) throughout the project study corridor in DeKalb and Fulton counties. However, no species were identified during field surveys, including at the previously reported locations along the project corridor. Development or redevelopment in stream buffers consisting of mature forests with mountain laurel understories may indirectly impact bay star-vine. However, indirect protection of this habitat could occur from the enforcement of a minimum of a 25-foot of stream buffer as required by State law and local ordinances.

In summary, impacts on protected species and their habitats from development/redevelopment accelerated or intensified by the proposed project may occur, but are likely to be minimal based on the extent of urbanization and poor habitat quality within the area of potential indirect effects. However, since field surveys were not conducted within the area of potential indirect effects that lies outside of the project study corridor, the presence or absence of protected species cannot be definitely stated.

There is no critical habitat designated in the area of indirect effects; therefore, no indirect impacts would occur on critical habitat.

Cumulative Impacts

Prior to construction of I-285, Fulton and DeKalb counties were primarily rural farmlands with few scattered residences. Development that has occurred along I-285 since its creation has greatly impacted protected species and their habitats in the project vicinity and in DeKalb and Fulton counties as a whole. This is evidenced by the GLUT land cover data trends between 1974 and 2008 (see Table 25 in Section

III.C.6, *Wildlife and Habitat*) and the University of Georgia's impervious surface cover data (see Table 17 in Section III.C.1, *Water Quality*), which together show that urbanization and other associated anthropogenic activity has affected natural habitats in the area. These types of effects have likely also affected the species themselves, possibly contributing to their listed status. As shown in Table 25, forested habitats decreased approximately 50 percent in DeKalb County between 1974 and 2008 and 40 percent in Fulton County in this same time period. Protected species habitats would generally have been found within the forested areas that have long since been converted to developments and impervious surfaces. Protective measures have since been put in place to help limit impacts to protected resources, as outlined in Table 24 in Section III.C.6, *Wildlife and Habitat*.

Cumulative impacts on protected species and their habitats would occur from the proposed project in combination with past and reasonably foreseeable future and on-going land development and transportation projects, as these projects would add additional impervious surfaces, clear additional vegetation, and further fragment habitat. However, the proposed project's overall contribution to cumulative impacts to protected species and habitats would be minimal.

Since the project would have no direct or indirect effects on critical habitat, the project would not contribute to cumulative impacts on critical habitat.

6. Wildlife and Habitat

A habitat evaluation was conducted during field surveys to determine the quality of habitats within the project study area. The majority of natural habitat throughout the project study area is highly fragmented by clearings, roads, or land development. No areas of contiguous high-quality forested habitat are present with the project study area.

All bridges and large culverts within the project study area were surveyed for active or recent evidence of nesting by migratory birds. The following structures within the project study area cross local roads or streams and provide the greatest potential for migratory bird nesting:

- I-285 bridge over Long Island Drive
- I-285 bridge over Lake Forrest Drive
- I-285 bridge over Glenridge Drive
- I-285 bridge over Peachtree Dunwoody Road
- Perimeter Creek culvert under I-285
- North Fork Nancy Creek culvert under I-285
- Perennial Stream 18 culvert under SR 400
- Perennial Stream 30 culvert under I-285

Migratory bird nests were observed within the Perimeter Creek culvert beneath I-285. Demolition or reconstruction of any bridge or culvert that is considered to be suitable and/or actively used nesting habitat for migratory birds, such as the barn swallow (*Hirundo rustica*), cliff swallow (*Hirundo pyrrhonota*), or Eastern phoebe (*Sayornis phoebe*), would be scheduled to take place at a time outside of the breeding season of migratory birds. If this cannot occur, exclusionary measures would be implemented to prevent migratory birds from occupying structures prior to construction. Special Provision 107.23G would be implemented, as necessary, for the project.

Bats

A habitat evaluation was conducted during field surveys to determine presence of bridge or culvert roosting bat habitat within the project study area. The following structures within the project study area cross local roads or streams and provide the greatest potential for use by bats:

- I-285 Bridge over Long Island Drive,
- I-285 Bridge over Lake Forrest Drive,
- I-285 Bridge over Glenridge Drive,
- I-285 Bridge over Peachtree Dunwoody Road,
- Perimeter Creek culvert under I-285,
- North Fork Nancy Creek culvert under I-285,
- PS 18 culvert under SR 400, and
- PS 30 culvert under I-285.

No visual observations of bats, stains due to body oils, or guano were observed at any of the aforementioned locations. According to the Bat Conservation International's *Bats in American Bridges Manual*, bats prefer to roost in bridges constructed of concrete when compared to other bridge construction materials, and tend to utilize bridges over streams rather than roadways. Although not all bridges within the study area span an interstate, all bridges span busy roads in highly developed areas. In addition, a study by A. Cleveland presented at the 2013 International Conference on Ecology and Transportation on bats under Georgia bridges, reported no roost bridges within the greater Atlanta area. Based on this information, the aforementioned bridge structures do not provide suitable habitat for bats. The forested and suburban/urban areas throughout the project area do contain suitable roosting and foraging habitat for some common bat species. Based on this information, the proposed project would have no significant effect on bridge or culvert roosting bats or their suitable habitat.

Indirect Impacts

Indirect impacts on wildlife and habitats, including some forested areas, could occur from intensified and/or accelerated development anticipated as a result of the project; however, the effects would not be substantial based on the land use types throughout and adjacent to the project corridor. Redevelopment of existing developed, urban areas is most likely to occur, with limited new development; there would be limited conversion of forested or undeveloped habitats to developed/urban areas. Therefore, indirect effects on wildlife and habitats would be limited.

Terrestrial wildlife and habitats that would potentially be affected by development intensified or accelerated by project implementation would be those within the Upper Chattahoochee River watershed. Terrestrial wildlife habitats within the project vicinity generally occur in undeveloped areas adjacent to streams and wetlands (including along Long Island Creek, Perimeter Creek, North Fork Nancy Creek and Nancy Creek) and areas surrounding single-family residential neighborhoods. These areas are generally protected from development. However, there are a few tracts of forested, undeveloped lands scattered throughout the region of influence that could be developed and result in indirect effects (including some already slated for DRI development).

All of the municipalities in the vicinity of the project corridor (City of Sandy Springs, City of Brookhaven, City of Dunwoody, Fulton County, and DeKalb County) have adopted a variety of ordinances that directly or indirectly aid in protecting terrestrial wildlife and habitats. These ordinances, which are in place in each of the above-listed municipalities, are listed in Table 24, along with their goals.

Table 24. Local Ordinances to Protect Wildlife and Habitat

Ordinance*	Goals/Protection
Soil Erosion and Sedimentation and Pollution Control Ordinance/ Environmental Control	Requires implementation of BMPs and re-vegetation requirements to minimize habitat degradation; education requirements help ensure habitat identification.
Tree Conservation/Protection	Preserves or calls for the planting of trees; identifies protective zones to protect buffers and other undeveloped habitats, contributing to the health of water quality and wildlife habitat.
Water Quality Control/Post-development Stormwater Management for New Development and Redevelopment	Controls stormwater runoff and nonpoint source pollution associated with post-development or new development/redevelopment in order to protect public and private lands, natural environments, and citizens.
Stormwater Management	Controls storm runoff into undeveloped areas and ultimately their associated waters to decrease nonpoint source pollution.
Stream Buffer Protection	Protects streams and their associated riparian habitats.
Floodplain Management	Requires stormwater management; water quality, stream bank, and stream corridor protection; wetland preservation; and protection of ecological functions of natural floodplain areas.
Pollution Control/Illicit Discharge and Illegal Connection	Indirectly protects forested habitats through protection of waters (fountains, ponds, lakes, streams, or storm sewers or those that drain into waters) from any substance, liquid or solid.
Litter Control/Solid Waste	Regulates refuse and limits trash and debris on public and private lands and increases the health of undeveloped areas.

* Some of the specific ordinances/protections listed in this table are included under a municipality's Land Development or Environmental Control ordinance, as in the case of the City of Dunwoody, City of Brookhaven, and DeKalb County.

In general, these local ordinances restrict development encroaching upon terrestrial wildlife and habitats. Adherence to these ordinances would minimize potential indirect impacts on terrestrial wildlife and habitats from development. Further reduction of indirect effects would occur through the application of protective measures in place to preserve terrestrial habitats, including State mandated stream buffer regulations and associated local ordinances. Therefore, indirect impacts to wildlife and habitats are anticipated to be minimal.

Cumulative Impacts

Terrestrial wildlife and habitats in the vicinity of the project corridor have been considerably impacted by past human activities associated with the development/urbanization resulting from urban sprawl that has occurred since I-285 and SR 400 were originally built. Prior to construction of the highways, the surrounding areas within Fulton and DeKalb counties were primarily rural farmlands with few scattered residences. These areas have long since been converted to urban/developed areas largely enveloped by impervious surfaces. Little to no undeveloped areas currently exists along the project corridor.

The Natural Resources Spatial Analysis Lab (NARSAL) of the University of Georgia created the Georgia Land Use Trends (GLUT) dataset in order to provide publicly available and consistent land use and land cover information to analyze statewide changes. Through the GLUT project, land cover datasets were created from satellite imagery for the following years: 1974, 1985, 1991, 2001, 2005, and 2008. A land cover classification system of 13 categories was used to delineate similar areas based on composite images over multiple seasons to better interpret and map the landscape. Some data represents composites of aerial imagery from multiple years, depending on the quality of the images; therefore, the acreages presented are approximated. A 1998 dataset was developed as part of the Georgia Gap Analysis Program (GAP) project by NARSAL using an 18-class land cover but cannot be accurately compared to the GLUT data. NARSAL's GLUT project data from DeKalb and Fulton counties were used to compare land use trends over time within the project vicinity, as shown in Table 25. The information provided in Table 25 was rounded (to the nearest 500) due to the ground resolution of the satellite imagery.

As shown in Table 25, the acreage of impervious surfaces (represented by low- and high-intensity urban land uses in the table) from 1974 to 2008 has nearly doubled in DeKalb County and increased about 150 percent in Fulton County according to the GLUT data, while the acreage of forested habitats (deciduous, evergreen, and mixed forest) has decreased approximately 50 percent in DeKalb County and 40 percent in Fulton County.

Reasonably foreseeable future and on-going land development and transportation projects would impact the terrestrial wildlife and habitats within the project vicinity by adding additional impervious surfaces, clearing vegetation, and further fragmenting habitats. However, these impacts would be limited by state regulations and the local ordinances described above.

Cumulative impacts on terrestrial wildlife and habitats would occur from the proposed project in combination with past, ongoing, and reasonably foreseeable future projects. However, the project's overall contribution to these cumulative impacts would not be substantial due to the already largely urbanized nature of the project vicinity and the minimal anticipated impacts to undeveloped land.

Table 25. Georgia Land Use Trends in Acres by County by Year*

Land Use/Land Cover	Fulton County (acres)						DeKalb County (acres)					
	1974	1985	1991	2001	2005	2008	1974	1985	1991	2001	2005	2008
Beaches, Dunes, and Mud	--	--	--	--	--	200	--	--	--	--	--	--
Open Water	2,300	2,500	4,400	4,800	4,600	3,800	800	700	1,700	1,900	1,800	1,500
Low Intensity Urban	57,400	89,400	91,500	122,800	123,400	122,600	47,500	68,300	66,400	84,800	84,900	84,000
High Intensity Urban	19,700	23,300	27,200	38,300	49,500	60,600	13,100	15,300	17,000	20,900	27,200	33,200
Clearcut, Sparse	8,200	12,800	8,900	9,600	19,400	11,200	3,000	8,600	5,800	5,100	6,300	3,200
Quarries, Strip Mines, Rock Outcrops	100	300	400	400	400	400	1,200	1,500	2,200	2,200	2,300	1,300
Deciduous Forest	116,900	98,900	95,100	69,000	63,800	62,900	48,700	40,800	35,900	19,600	19,000	17,900
Evergreen Forest	75,100	60,800	72,700	73,200	51,600	54,400	32,100	18,500	30,200	31,200	23,300	24,600
Mixed Forest	4,400	9,300	7,800	2,100	5,400	2,800	2,200	4,600	4,500	1,300	1,900	1,300
Row Crops and Pasture	50,400	37,300	24,600	15,600	17,900	16,800	20,900	11,700	6,700	3,600	4,200	3,700
Forested Wetland	8,100	8,200	7,300	7,000	6,800	7,000	4,100	3,400	3,300	2,900	2,700	3,000
Non-Forested Wetland (salt)	--	--	--	--	--	--	--	--	--	--	--	--
Non-Forested Wetland (fresh)	--	--	--	--	--	--	--	--	--	--	--	--

* Acreages by county are approximate and are rounded to the nearest 500 acres.

Data from the Natural Resources Spatial Analysis Laboratory, University of Georgia

7. Invasive Species

In accordance with Executive Order 13112, a survey for populations of Georgia Exotic Pest Plant Council (GEPPC)-designated "Category One" invasive species, which may be spread during construction, was conducted for this project. The following Category One species were identified within the proposed project area during field surveys and were determined to be invasive according to the Georgia DOT's invasive plant species policy:

- mimosa (*Albizia julibrissin*)
- Chinese wisteria (*Wisteria sinensis*)
- autumn olive (*Elaeagnus umbellata*)
- English ivy (*Hedera helix*)
- Chinese privet (*Ligustrum sinense*)
- Japanese honeysuckle (*Lonicera japonica*)
- Japanese siltgrass (*Microstegium vimineum*)
- marsh dewflower (*Murdannia keisak*)
- princesstree (*Paulownia tomentosa*)
- kudzu (*Pueraria montana*)
- multiflora rose (*Rosa multiflora*)

In addition to the aforementioned Category 1 species, oriental bittersweet (*Celastrus orbiculatus*), a GEPPC Category 1 Alert species was also observed within the project study area.

Seasonally appropriate measures would be taken during project construction to prevent or minimize the spread of these species. These measures would include removing and disposing of vegetative parts in the soil that may reproduce by root raking prior to moving the soil, burning on-site any such parts aboveground that bear fruit or spontaneously produce roots, controlling or eradicating infestations prior to construction, and cleaning vehicles and other equipment prior to leaving infested areas. The measures used on the project would be those that are appropriate for the particular species and the site-specific conditions as described in Georgia Standard Specifications Section 201, Clearing and Grubbing of Right-of-Way.

8. Essential Fish Habitat

The Sustainable Fisheries Act (Public Law 104-297) became law on October 11, 1996, and amended the habitat provisions of the Magnuson Act. The renamed Magnuson-Stevens Act calls for direct action to stop or reverse the continued loss of fish habitats. The act requires cooperation among National Marine Fisheries Service (NMFS), South-Atlantic Fisheries Management Council Site and Mid-Atlantic Fisheries Management Council Site (the Councils), fishing participants, and federal and state agencies to protect, conserve, and enhance essential fish habitat.

Essential fish habitat is defined for federally managed fish species as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Essential fish habitat can be found in the following Georgia counties: Camden, Glynn, McIntosh, Liberty, Bryan, and Chatham. Essential fish habitat is not found in Fulton or DeKalb counties; therefore, no essential fish habitat would be impacted by the proposed project.

Indirect Impacts

Essential fish habitat is not found in the project area counties; therefore, no indirect impacts on essential fish habitat would occur as a result of the proposed project.

Cumulative Impacts

Essential fish habitat is not found in the project area counties; therefore, no reasonably foreseeable cumulative impacts on essential fish habitat would occur as a result of the proposed project.

D. Effects on the Physical Environment

1. Noise

In compliance with 23 USC Section 109 (h) and (i), the FHWA established guidelines for the assessment of highway traffic-generated noise. These guidelines, published as 23 CFR Part 772, provide procedures to be followed in conducting noise analyses that would protect public health and welfare. In accordance with the Noise Control Act of 1972, coordination of this regulation with the USEPA has been completed.

The proposed I-285 at SR 400 Interchange Reconstruction project would include the addition of CD roads, additional interchange ramp capacity, and ramp alignment relocations, and therefore, would be classified as a Type I Project as defined by the Georgia DOT's noise policy. The Noise Impact Assessment and Addendum prepared for this project are available in the project file by contacting the Georgia DOT's OES. The Noise Impact Assessment and Addendum document the results of a noise analysis completed for the proposed project, in order to:

a. Provide baseline noise levels that will be used in determining project impact;
b. Predict the effects that the proposed project would have on the noise environment; and
c. Identify impacted locations where noise abatement is feasible and reasonable and likely to be included in the project and locations where impacts will occur and abatement is not feasible and reasonable.

Noise abatement criteria (NAC) for land uses adjacent to highways were established by FHWA and codified in 23 CFR 772. Table 26 below describes the lands by activity category and the noise level threshold for each category. Activity categories are assigned to receivers based on how the land at that receiver is being used. This means that if the land is being used as a residence, business, church, etc., it is matched up to the corresponding activity category shown in Table 26.

Table 26. FHWA Noise Abatement Criteria (NAC)

Activity Category	Activity Threshold Leq(h)[1]	Activity Category Description
A	57 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	Residential (single-family and multi-family)
C	67 (exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, daycare centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (interior)	Auditoriums, daycare centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F	None (not noise sensitive; no threshold)	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	None (not noise sensitive; no threshold)	Undeveloped lands that are not permitted.

For this project, there are 534 receivers, representing 3,887 receptors, in the study area. These include:

- Activity Category A: 0 receivers (representing 0 receptors)
- Activity Category B: 424 receivers (representing 2,413 receptors)
- Activity Category C: 19 receivers (representing 164 receptors)
- Activity Category D: 0 receivers (representing 0 receptors)
- Activity Category E: 74 receivers (representing 1,290 receptors)
- Activity Category F: 17 receivers (representing 20 receptors)

Activity Category F includes land uses that are generally not sensitive to highway noise, and therefore, are not included in the noise analysis. In coordination with local municipalities (the City of Sandy Springs, City of Brookhaven, and the City of Dunwoody), all undeveloped addresses identified within the study area were checked to verify if a development permit had been issued. Development permits were found for two undeveloped sites located inside the study area. One property will be the Sandy Springs Ice Arena, located in the southwest corner of the I-285/Roswell Road interchange, and the other will be the Glenridge Point Apartments, located in the southwest quadrant of the I-285/SR 400 interchange. Each of these properties was included in the noise model and was considered for potential noise abatement. In addition, 35 large undeveloped sites (Activity Category G) for which there are no active building permits

were identified along the project corridor. A noise analysis was conducted for these undeveloped lands, the results of which are included in the Noise Impact Assessment. However, undeveloped lands were not considered for noise abatement.

Georgia DOT defines a noise impact as occurring when predicted design year Build condition noise levels approach or exceed the applicable NAC thresholds listed in Table 26 or when predicted design year noise levels result in a substantial noise level increase over existing noise levels. The Georgia DOT considers approach levels as 1 dBA less than the noise levels shown in Table 26 and defines a substantial noise level increase as being 15 dBA or greater than existing noise levels.

Table 27 provides a breakdown of receptors exceeding the NACs in the design year by NAC land use category. The results of the noise analysis indicate that noise levels for existing (2014) and No-Build (2039) conditions range from 52.8 dBA to 78.3 dBA for properties along the project corridor. Under the 2039 Build condition, future traffic-generated noise levels would range from 51.2 dBA to 79.4 dBA. There are 206 receivers, representing 1,471 receptors, along the project corridor predicted to be impacted in the Build condition based on approaching/exceeding the NAC and 0 receivers predicted to be impacted based on a substantial increase in noise levels. The locations of the all receivers by land use type, coded by whether or not they are impacted under Build conditions, are shown on Figures 18a through 18k in Appendix E. A detailed table showing each study area receiver, its associated number of receptors, predicted noise levels at the receiver under existing, No-Build, and Build conditions, and whether there is an impact at each receiver, is provided in Appendix G.

Table 27. Receptors Exceeding the NAC in the Design Year (2039) by NAC Land Use Category

NAC Category (Sound Level Threshold)	Number of Receptors Exceeding NAC*	
	Existing and No-Build	Build
A (57 dBA)	0	0
B (67 dBA)	1,455	1,236
C (67 dBA)	157	149
D (52 dBA)	0	0
E (72 dBA)	88	86
TOTAL	1,700	1,471

* Under Build conditions, one receiver would be displaced to accommodate the proposed improvements, which would result in the reduction of one Activity Category E receiver under Build conditions compared to Existing and No-Build conditions.

There are two reasons for the reduction in receptors exceeding the NAC between the Existing/No-Build condition and the Build condition. First, the volume and operating speed of the traffic closest to the receptors is reduced from all traffic on I-285 (under Existing and No-Build conditions) to only traffic on the CD lanes (under Build conditions). The proposed project would construct CD roads that extend the length of I-285 within the study area. These CD roads would shift interchange traffic to the outside of the I-285 mainline lanes, and therefore, closer to the receptors. Through traffic would be maintained along the mainline lanes of I-285, adjacent to the median barrier, and farther from the receptors. Interchange

traffic serviced along the proposed CD roads would also operate at a reduced speed limit when compared to I-285 through traffic.

The second reason for the reduction is because the noise generated by I-285 through traffic would be shielded from the receptors by the earth embankment constructed for the CD roads. The current preferred vertical alignment would construct the CD roads on an earth embankment at a higher elevation than the I-285 mainline lanes. This vertical alignment shift would provide natural shielding of noise generated by traffic on the I-285 mainline lanes to the receptors adjacent to I-285.

Examination and Evaluation Of Noise Abatement Measures

In accordance with 23 CFR 772, all noise impacts were studied to determine if noise abatement measures to reduce or eliminate noise impacts are feasible and reasonable for the project. The following types of abatement measures were considered:

- Acquisition of ROW/Land Use and Zoning: The acquisition of ROW to create buffer zones or separation between noise sensitive receivers and traffic was considered, including relocation of impacted properties outside of the potential noise impact zone (where relocation is possible). However, none of the receivers to be impacted are of the type that such relocation is practical.
- Traffic Management: Measures, such as traffic control devices, reductions in operating speeds, and signing for prohibition of certain vehicle types, are not appropriate for this type of roadway, as they are not consistent with the roadway's intended purpose.
- Alteration of Horizontal and Vertical Alignment: Alignment modifications as a means of noise abatement are not feasible for the impacted area based on the level of development along I-285 and SR 400. A shift in alignment to reduce noise impacts would likely result in impacts to additional receivers and displacements. Because this project is on an established roadway, an alignment shift is not considered a reasonable noise abatement measure.
- Structural Barriers: The use of structural barriers was considered. The installation of free-standing noise barriers was identified as the preferred mode of noise abatement (if found feasible and reasonable) given the dense concentration of impacted sites that are located directly adjacent to and parallel with the highway ROW.

Structural Barriers

A noise barrier analysis was conducted for impacted receivers along the project corridor. Each noise barrier was evaluated to determine its feasibility and reasonableness. Barriers are considered feasible if they meet the following criteria:

- *Noise reduction:* A calculated noise reduction of at least 5 dBA must be achievable for a minimum of one impacted receptor. Each noise receptor which receives a 5 dBA reduction (whether classified as impacted or not) is considered to be a benefited receptor.
- *Constructability*: A noise abatement measure must be able to be constructed using reliable and common engineering practices.

- *Safety and Maintainability*: An exterior noise abatement measure should conform to the American Association of State Highway Transportation Officials (AASHTO) Green Book and Roadside Design Guide and should be accessible to maintenance personnel and not prevent access to other highway features (e.g., drainage structures). The maximum barrier height that can feasibly be maintained is 30 feet.
- *Access:* An abatement measure must allow sufficient access to adjacent properties.

Each noise abatement measure that is considered feasible was evaluated for its reasonableness based on the following criteria. The first two of the following criteria must be satisfied before contacting property owners and residents (which would be conducted by the Georgia DOT during the final design phase, as agreed upon by the Design-Build Contractor and the Georgia DOT Project Manager).

- *Noise Reduction:* At least one benefited receptor must receive a minimum noise level reduction of 7 dBA – i.e., the noise reduction design goal.
- *Cost Effectiveness:* Using a $20 per square foot cost for the required noise barrier, the total cost must not exceed a $55,000 average allowance per benefited receptor.
- *Property Owners and Residents:* The decision to provide abatement would be made in collaboration with property owners and tenants of a benefited receptor. Noise abatement would only be constructed if at a minimum 50 percent plus one of the respondents vote in favor of noise abatement.

Ten new noise barriers and potentially raising the height of one existing noise barrier were analyzed to mitigate the impacted receptors within the study area. Based on the results of this analysis, Noise Barriers 1A, 2, 3, 5A, 5B, 6, 7 and 8 are recommended to be constructed because they meet the feasible and reasonableness criteria. Noise Barrier 1B was found to not be reasonable, and Noise Barriers 4 and 9 were found to not be feasible (because none of the impacted receptors behind these barriers would experience a minimum 5 dBA reduction in sound levels, even with a maximum noise barrier height of 30 feet). Therefore, these three barriers are not recommended to be constructed. Table 28 describes these noise barriers and Figures 19a through 19j in Appendix E show those noise barriers that are recommended for construction.

Table 28. Noise Barriers Considered within the Project Corridor to Reduce Noise Levels

Barrier No.	Location (Subdivisions or Apartment Complexes Present)	Barrier Length and Height Range	Impacted Receiver # and # of Receptors Represented	Approximate Cost of Abatement
1A	North side of I-285 between the Mount Vernon Highway overpass and Lake Forrest Drive (De Clair, Montrose, Greywalls, and Lancaster)	3,775 feet long; 12 to 30 feet tall	R7, R8, R9, R10, R11, R13, R15, R16, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R38, R38A (42 receptors)	$1,757,560
1B	North side of I-285, west of Roswell Road	970 feet long; 6 to 12 feet high	R62 (1 receptor)	$407,500 (found not to be reasonable)

Table 28. Noise Barriers Considered within the Project Corridor to Reduce Noise Levels

Barrier No.	Location (Subdivisions or Apartment Complexes Present)	Barrier Length and Height Range	Impacted Receiver # and # of Receptors Represented	Approximate Cost of Abatement
2	South side of I-285 approximately between Long Island Drive (ties to existing barrier at this location) and Roswell Road (The Vineyard, Sierra Place, Highland Springs, Charleston Square, Lake Placid, Prado North, Highland Circle)	4,161 feet long; 6 to 30 feet tall	R49, R50A, R50B, R51, R85-2, R96-1, R96-2, R97A, R97D, R98-1, R98-2, R101, R104-2, R107-2 (69 receptors)	$1,586,480
3	North side of I-285 from Roswell Road to approximately Glenridge Drive (Mountain Creek, Hammond Hills, Glenridge Forest)	4,670 feet long; 10 to 30 feet tall	R75-2, R76-1, R76-2, R118-1, R118-2, R119-1, R119-2, R120-2, R121-1, R121-2, R122-1, R122-2, R124, R125, R126-1, R126-2, R127, R128, R130, R131, R136, R138, R143, R144, R146, R147, R148, R149, R151, R156, R202 (73 receptors)	$1,703,860[1]
4	South of I-285 between Roswell Road and the Glenridge Connector (Mosaic Apartments)	1,046 feet long; 30 feet high	R115-2, R115-3, R162-3, R164-3, R167-2, R167-3, R168-3, R169-3, R172-2, R172-3, R173-2, R173-3, R174-2, R174-3, R175-2, R176-2, R176-3, R177-2, R177-3, R179-2, R179-3, R183-2, R183-3, R184-3, R185-3, R187-3, R188-3, R191-3, R192-3, R206, R207, R214, R219, R221-1, R221-2, R221-3, R221-4, R221-5, R226, R350, R351 (92 receptors)	N/A (found not to be feasible)
5A	South side of I-285 from approximately 950 feet east of Roswell Road to approximately 0.5 mile east of Roswell Road (Mosaic Apartments)	1,997 feet long; 12 to 22 feet tall	R115-2, R115-3, R162-3, R164-3, R167-2, R167-3, R168-3, R169-3, R172-2, R172-3, R173-2, R173-3, R174-2, R174-3, R175-2, R176-2, R176-3, R177-2, R177-3, R179-2, R179-3, R183-2, R183-3, R184-3, R185-3, R187-3, R188-3, R191-3, R192-3, R350, R351 (92 receptors)	$642,520
5B	South side of I-285 from approximately 1,500 feet west of Glenridge Drive to approximately 380 feet west of Glenridge Drive (Colton Drive, Glenridge Heights)	1,128 feet long; 16 to 30 feet tall	R206, R207, R214, R219, R221-1, R221-2, R221-3, R221-4, R221-5, R226 (195 receptors)	$546,620
6	West side of SR 400, north of I-285, from Hammond Drive southward (Park Towers)	1,125 feet long; 18 to 30 feet tall	R267-7, R267-8, R267-9, R267-10, R267-11, R267-12, R267-13, R267-14, R267-15, R267-16, R267-17, R267-18, R267-19, R267-20, R267-21, R267-22, R267-23, R267-24, R267-25, R267-26, R267-27, R267-28, R267-29, R267-30, R267-31, R267-32, R267-33, R267-34, R269-4, R269-5, R269-6, R269-7, R269-8, R269-9, R269-10, R269-11, R269-12, R269-13, R269-14, R269-15, R269-16, R269-17, R269-18, R269-19, R269-20, R269-21, R269-22, R269-23, R269-24, R272-2, R272-3, R272-4 (570 receptors)	$620,340
7	North side of I-285 along the proposed new Ashford Dunwoody Road off-ramp (Georgetown Subdivision)	607 feet long; 20 to 30 feet tall	R312, R314 (141 receptors)	$342,640

Table 28. Noise Barriers Considered within the Project Corridor to Reduce Noise Levels

Barrier No.	Location (Subdivisions or Apartment Complexes Present)	Barrier Length and Height Range	Impacted Receiver # and # of Receptors Represented	Approximate Cost of Abatement
8	South side of I-285 from approximately 800 feet east of Ashford Dunwoody Road eastward (Oak Forest Hills, Ashwoody, Gainsborough)	3,486 feet long; 6 to 26 feet tall	R301, R302, R303, R304, R305, R306, R319, R320, R321, R322, R323, R324, R325, R326, R327, R328, R329, R330, R331, R334, R339, R340, R343 (44 receptors)	$1,302,360[1]
9	South side of I-285 between the Glenridge Connector and SR 400 (Glenridge Point)	1,540 feet long; 30 feet high	R226, R357-2, R357-3, R357-4, R357-5 (145 receptors)	N/A (found not to be feasible)

[1] The reasonableness criteria for Barriers 3 and 8 were evaluated based on the Georgia DOT's standard cost effectiveness criteria of $20 per square foot. However, the actual construction cost of these two barriers could be higher due to the type of construction required to install these barriers. Certain sections of Barriers 3 and 8 would need to be constructed on top of proposed Mechanically Stabilized Earth (MSE) retaining walls. Georgia DOT design standards limit the height of noise barriers constructed on top of MSE retaining walls to 18 feet. However, there are locations along the proposed MSE retaining walls in these areas where the barrier height would need to exceed the 18 feet maximum height in order to provide adequate noise abatement for the receivers located behind them. In order to accommodate these noise barrier sections that exceed 18 feet on top of proposed MSE walls, structural posts (to mount the noise barrier panels) are recommended to be built behind the MSE wall with their own footing, and would result in a higher construction cost (approximately $80 per square foot).

In addition to new barriers, the existing noise barrier (Barrier 2A) located along the southern side of I-285 between Mount Vernon Highway and Long Island Drive (the Lake Island Estates and Highland Valley subdivisions) was found to not provide adequate abatement to a receiver (R45, representing three receptors) located behind this barrier. In order to determine necessary abatement, a separate analysis was completed to determine what recommendations would be necessary to achieve abatement for the impacted receiver behind the barrier. The results of the analysis indicated that increasing the height of the easternmost approximately 200 feet of the barrier by 2 feet would provide adequate abatement. To achieve this height increase, Georgia DOT recommends this 200-foot section be reconstructed with new, taller barrier panels.

Based on the studies and conclusions of the Noise Impact Assessment and Addendum, it has been determined that noise abatement is likely, but not guaranteed, at the following eight locations: north and south sides of I-285 between Mount Vernon Highway and Lake Forrest Drive, south side of I-285 between Long Island Drive and Roswell Road, south side of I-285 between Roswell Road and the Glenridge Connector (two barriers), north side of I-285 from Roswell Road to the Glenridge Connector, north side of I-285 and west of SR 400 south of Hammond Drive, and north and south sides of I-285 between Ashford Dunwoody Road and Chamblee Dunwoody Road. Noise abatement at these locations is based upon preliminary noise analyses and design criteria and the current preferred project alignment.

A re-evaluation of the noise analysis would occur during final design, should changes warrant a re-evaluation. If during final design it has been determined that conditions have changed such that noise abatement is not feasible and reasonable, the abatement measures might not be provided. The final

decision on the installation of any abatement measure(s) would be made by the Georgia DOT upon the completion of the project's final design and the public involvement processes.

Construction Noise

The Georgia DOT recognizes that minimizing construction noise is important; however, in the absence of standardized federal criteria for assessing construction noise impacts related to transportation projects (FHWA Construction Noise Handbook, 2006), it is necessary to primarily rely on the standards and requirements developed by local governments to determine the criteria to which contractors must adhere.

In Georgia, contractors on all highway construction projects are required to adhere to Georgia DOT Standard Specification Section 107.01 – Laws to Be Observed, which states in part, "The Contractor shall at all times observe and comply with all such laws, ordinances, codes, regulations, orders and decrees…" unless the necessary variance is obtained. Additionally, nighttime construction is proposed for the proposed project. All construction activities would adhere to Special Provision 150.11.

Local governments in Fulton and DeKalb have noise ordinances. The City of Sandy Springs' and the City of Dunwoody's noise ordinances limits construction-related noise to between 7:30 a.m. and 8:30 p.m. Monday through Friday, and between 8:00 a.m. and 8:30 p.m. on Saturdays. Construction-related noise of any type is prohibited any time on Sunday and/or the following legal holidays: New Year's Day (observed), Memorial Day (observed), Independence Day (observed), Labor Day (observed), Thanksgiving Day, and Christmas Day (observed). The City of Brookhaven's noise ordinance prohibits noise-generating construction activity during certain times of the day based on the determination that the noise generated from the activity is plainly audible from a specified distance from the activity, as outlined below:

Day/Time	Distance
Sunday through Thursday:	
12:00 Midnight – 7:00 a.m.	100 feet
7:01 a.m. – 10:59 p.m.	300 feet
11:00 p.m. – 11:59 p.m.	100 feet
Friday and Saturday:	
12:00 Midnight – 7:00 a.m.	100 feet
7:01 a.m. – 11:59 p.m.	300 feet

During a December 16, 2014 meeting with PCIDs and the cities of Sandy Springs, Dunwoody, and Brookhaven, it was determined that the local governments would not require Georgia DOT or the Design-Build Contractor to obtain a variance or special approval to conduct construction activities during nighttime hours or on Sundays (see meeting minutes in Appendix A). The local governments stated that Georgia DOT has the authority to proceed with such work without having to seek official approval from the respective City Councils. While variances, special permits, or approvals are not required from local jurisdictions, if construction occurs during nighttime hours and/or on Sundays, GDOT would inform local jurisdictions of scheduled nighttime work so that local residents can stay informed.

In order to further minimize construction noise, Georgia DOT's OES would give the Project Manager and the design team the noise sensitive receptor information as early as possible during project development. This information would be used for the incorporation of construction noise control strategies in the project layout and design. The sequencing of construction activities and techniques could also be developed to minimize construction noise impacts.

Indirect Effects

Potential development/redevelopment in the vicinity of the project corridor is likely to occur with or without the proposed project (but the project may influence the timing and/or intensity of such development). The types of development/redevelopment that may be influenced by the project are primarily offices, service- and retail-commercial, and higher-density residential uses (or mixed use developments of these types); they are not uses that generate a lot of additional noise during their operations. However, future developments/redevelopments in the vicinity of the project corridor are likely to increase vehicular traffic, particularly as development densities increase. The Noise Impact Assessment conducted for this project took into consideration projected future traffic volumes on the proposed project corridor, including increases in volumes that may be associated with anticipated economic and residential growth (such as future developments within the noise study corridor).

Future noise levels anticipated on the 35 large undeveloped parcels along the project corridor without permitted future development were analyzed as part of the Noise Impact Assessment. Future design year noise levels were predicted at various distances from the edge of the nearest travel lane of the current preferred project alignment. All of these parcels are likely to be in Activity Category B, C, or E in the future. The results of this analysis show that the predicted future noise levels on many of the undeveloped parcels are anticipated to be at or approaching the NAC for these activity categories at particular distances from the roadway. Local officials with jurisdiction over the development of these parcels are encouraged to consider the noise level information provided in this analysis when considering future land use and development changes. Letters were prepared for local officials summarizing the results of the noise analysis for the undeveloped lands in the vicinity of the site. These letters are included in Appendix A of this EA. The information is provided by the Georgia DOT to discourage development that would be incompatible with the sound levels that are anticipated along the project corridor at these locations. Susceptibility to noise impacts depends not only on the amount and type of traffic, but also on the category of activity occurring on lands surrounding the road corridor. Some categories of land use are considered "noise sensitive." Sharing the results of the project's noise assessment with local governments would provide a mechanism to avoid or minimize noise impacts on such future developments.

Cumulative Effects

Other non-traffic, noise-generating land uses/activities within the project vicinity that contribute to noise levels in the project area include operation of the MARTA line (North Springs station southward) and ongoing construction activities associated with various developments in the area. There are no major noise generators such as airports or factories in the project area. Other reasonably foreseeable future developments/redevelopments in the vicinity of the project corridor include primarily office, service- and retail-commercial, and higher-density residential developments (or mixed-use developments of these types); they are not uses that generate a distinguishable amount of noise for their operations. However, construction activities associated with these developments would contribute to future noise levels in their

vicinity, but only for the duration of construction. Additionally, new developments and higher density redevelopments could increase vehicular traffic in the area, which would contribute to cumulative noise levels. Other reasonably foreseeable transportation projects in the area would also contribute to cumulative noise levels in the project area both during construction (from the use of construction equipment) and over the long-term (from changes in traffic volumes and traffic patterns). The Noise Impact Assessment conducted for this project took into consideration projected future traffic volumes on the proposed project corridor, including increases in volumes that may be associated with anticipated economic and residential growth, changes in traffic patterns within the project area, and other programmed transportation projects. The results of these analyses represent traffic-related cumulative noise impacts in areas where the project could influence traffic. In conjunction with increased traffic from regional economic development (outside the project corridor) and ongoing and future construction activities associated with land and transportation development projects, the proposed project would contribute to cumulative impacts on noise levels in the area. As discussed above, noise abatement measures are being considered for many areas of the project corridor, which would minimize the proposed project's contribution to cumulative noise impacts.

2. Air

This project was evaluated for its consistency with state and federal air quality goals. Potential impacts to air quality were investigated and reported in an Air Quality Impact Assessment, which is on file at the Georgia DOT's OES. The results of this analysis indicated that the proposed project is in compliance with both state and federal air quality standards.

In addition, the Clean Air Act (CAA), Section 176(c), requires that federal transportation projects be consistent with state air quality goals, found in the State Implementation Plan (SIP). The process to ensure this consistency is called transportation conformity. Conformity to the SIP means that transportation activities will not cause new violations of the National Ambient Air Quality Standards (NAAQS), worsen existing violations of the standards, or delay timely attainment of the relevant standard. Transportation conformity is required for federal transportation projects in areas that have been designated by USEPA as not meeting the NAAQS. These areas are called nonattainment areas if they currently do not meet air quality standards or maintenance areas if they have previously violated air quality standards but currently meet them and have an approved maintenance plan. The results of the Air Quality Impact Assessment indicated that the proposed project is consistent with the SIP for the attainment of clean air quality in Georgia.

<u>Ozone</u>

DeKalb and Fulton counties are classified by the USEPA as moderate nonattainment areas for 8-hour ground-level ozone 1997 standard, and marginal nonattainment areas for 8-hour ground-level ozone 2008 standard.

The proposed project is in an area for which the SIP contains transportation control measures for serious ozone nonattainment for air quality. Therefore, conformity procedures apply to this project. The CAA requires transportation plans and TIPs in areas not meeting the NAAQS to conform to the emissions budget of the SIP for air quality. Projects within an ozone non-attainment area, such as the proposed project, must be included in a conforming long-range plan and a short-term TIP. The Atlanta Regional Commission (ARC)'s PLAN 2040 RTP was originally adopted by the ARC Board in July 2011. This

document was updated in 2014 in response to the reauthorization of national transportation funding through Moving Ahead for Progress in the 21st Century (MAP-21). The I-285/SR 400 Interchange Reconstruction project is included in the PLAN 2040 RTP Update and regional conformity plan as AR-957.

The FY 2014-2019 TIP, a part of the PLAN 2040 RTP Update, was adopted by the ARC on March 26, 2014 and approved by the United States Department of Transportation (USDOT) on April 30, 2014. The FY 2014-2019 TIP was modified in Fall 2014 (USDOT approval was granted on September 29, 2014). The I-285/SR 400 Interchange Reconstruction project is identified in the FY 2014-2019 TIP by reference number AR-957. Inclusion in a conforming plan serves as project-level analysis for ozone; therefore no further analysis of ozone emissions is warranted for this project.

Carbon Monoxide (CO)

Generally, the modeled carbon monoxide (CO) concentrations for this project varied only slightly between No-Build and Build conditions. The Build condition is predicted to slightly increase the maximum one-hour CO concentrations at the two studied service interchanges (I-285/Chamblee Dunwoody Road and SR 400/Northridge Road interchanges) in the design year (2039) compared to the No-Build condition. However, at the I-285/SR 400 system interchange, the Build condition is predicted to slightly decrease the maximum one-hour CO concentration compared to the No-Build condition in the design year (2039). The highest modeled design-year CO concentrations under Build conditions (4.5 parts per million, or ppm) and No-Build conditions (4.8 ppm) along the project corridor are substantially below the NAAQS limits for both the one-hour (35 ppm) and eight-hour (9 ppm) averaging times. Since the highest one-hour concentrations are lower than both the one-hour and eight-hour standards, an eight-hour concentration analysis was not calculated. The complete Air Quality Impact Assessment prepared for this project is on file with the Georgia DOT's OES.

Particulate Matter (PM 2.5)

On January 5, 2005, USEPA designated Fulton and DeKalb counties as nonattainment areas for fine particulate matter (PM 2.5). This designation became effective on April 5, 2005, 90 days after USEPA's published action in the Federal Register. Transportation conformity for the PM 2.5 standards applies as of April 5, 2006, after the one-year grace period provided by the CAA. Metropolitan PM 2.5 nonattainment areas are now required to have a TIP and Long-Range Transportation Plan that conforms to the PM 2.5 standard.

Qualitative PM 2.5 assessments are required only for projects of air quality concern within the PM 2.5 nonattainment area. This project has been evaluated by an interagency group consisting of FHWA, USEPA, EPD, and ARC. The interagency group determined on October 21, 2014 that the I-285/SR 400 Interchange Reconstruction project is not a project of "air quality concern." Documentation of the determination of effect and interagency concurrence is provided in Appendix A. Therefore, a qualitative PM 2.5 hotspot analysis is not required for this project under 40 CFR 93.123(b)(1). The CAA and 40 CFR 93.116 requirements were met without performing a hotspot analysis.

Mobile Source Air Toxins (MSATs)

Mobile Source Air Toxics (MSAT) assessments are required statewide for most federal transportation projects. In addition to the criteria air pollutants that must meet the NAAQS, USEPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

The I-285 at SR 400 Interchange Reconstruction project would create new CD lanes along I-285 and SR 400 where the ADT is projected to be in the range of 300,000 to 400,000 vpd by the design year (2039). The project is located in proximity to populated areas. Due to these characteristics and based on the example projects defined in the FHWA guidance "Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents" dated December 6, 2012, the I-285 at SR 400 Interchange Reconstruction project would be classified as a project with *higher potential MSAT effects.*

Background

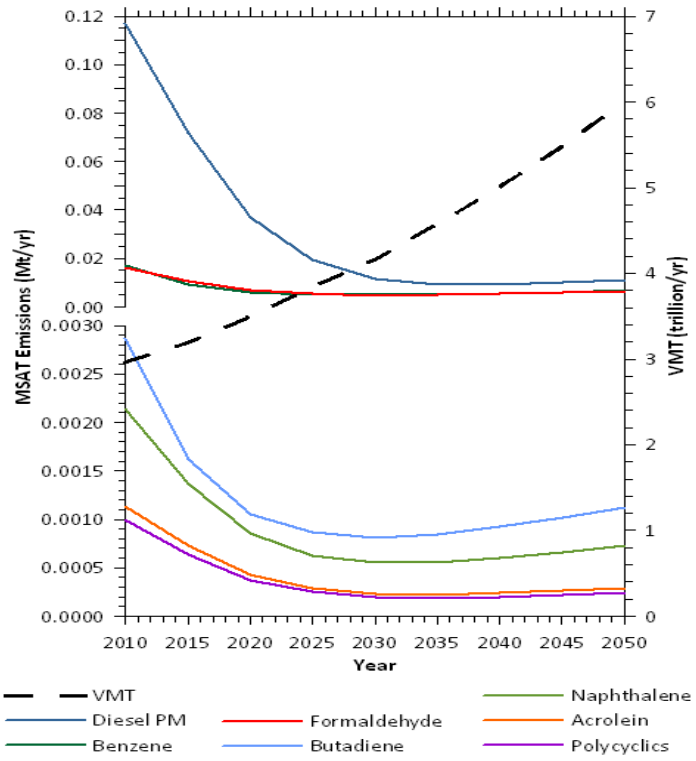
There are no NAAQS established for air toxics, as there are for the criteria pollutants (i.e., carbon monoxide, ozone, particulate matter, etc.) Controlling air toxic emissions became a national priority with the passage of the CAA Amendments of 1990, whereby Congress mandated that the USEPA regulate 188 air toxics, also known as hazardous air pollutants. The USEPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007), and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS) (http://www.epa.gov/iris/). In addition, USEPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment (NATA) (http://www.epa.gov/ttn/atw/ nata1999/). These are acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and Polycyclic Organic Matter (POM). While FHWA considers these the priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future USEPA rules. The 2007 USEPA rule mentioned above requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines.

Motor Vehicle Emissions Simulator (MOVES)

According to USEPA, MOVES improves upon the previous MOBILE model in several key aspects: MOVES is based on a vast amount of in-use vehicle data collected and analyzed since the latest release of MOBILE, including millions of emissions measurements from light-duty vehicles. Analysis of this data enhanced USEPA's understanding of how mobile sources contribute to emissions inventories and the relative effectiveness of various control strategies. In addition, MOVES accounts for the significant effects that vehicle speed and temperature have on PM emissions estimates, whereas MOBILE did not. MOVES2010b includes all air toxic pollutants in NATA that are emitted by mobile sources. USEPA has incorporated more recent data into MOVES2010b to update and enhance the quality of MSAT emission estimates. These data reflect advanced emission control technology and modern fuels, plus additional data for older technology vehicles.

Based on an FHWA analysis using USEPA's MOVES2010b model, as shown in Figure 20, even if Vehicle-Miles Traveled (VMT) increases by 102 percent as assumed from 2010 to 2050, a combined reduction of 83 percent in the total annual emissions for the priority MSAT is projected for the same time period.

Figure 20. National MSAT Emission Trends 2010 – 2050 for Vehicles Operating on Roadways Using USEPA's MOVES2010b Model



Note: Trends for specific locations may be different, depending on locally derived information representing vehicle-miles traveled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorology, and other factors.

Source: USEPA MOVES2010b model runs conducted during May - June 2012 by FHWA.

The implications of MOVES on MSAT emissions estimates compared to MOBILE are: lower estimates of total MSAT emissions; significantly lower benzene emissions; significantly higher diesel PM emissions, especially for lower speeds. Consequently, diesel PM is projected to be the dominant component of the emissions total.

Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how potential public health risks posed by MSAT exposure should be factored into project-level decision-making within the context of NEPA.

Nonetheless, air toxics concerns continue to be raised on highway projects during the NEPA process. Even as the science emerges, we are duly expected by the public and other agencies to address MSAT impacts in our environmental documents. The FHWA, USEPA, the Health Effects Institute (HEI), and

others have funded and conducted research studies to try to more clearly define potential risks from MSAT emissions associated with highway projects. The FHWA will continue to monitor the developing research in this field.

Monitored MSAT Emissions

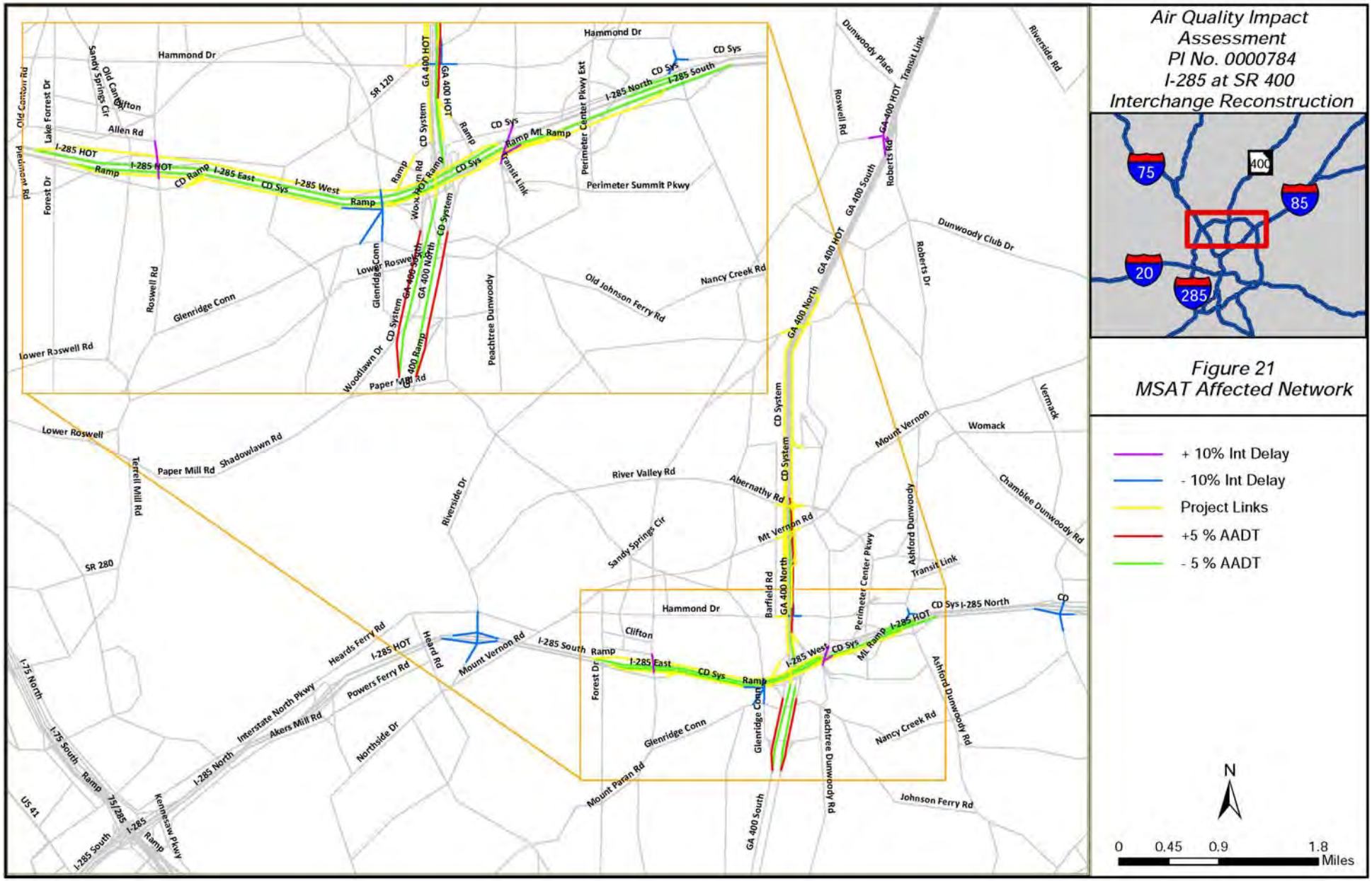
The most recent USEPA data on MSAT emissions in the vicinity of the project was obtained. Table 29 shows that the existing MSAT emission burdens for Fulton and DeKalb counties and the state of Georgia are approximately 604 tons per year, 996 tons per year, and 14,180 tons per year, respectively.

Table 29. Existing MSAT Emission Burdens (tons/year)

Location	Acrolein	Benzene	1,3-Butadiene	Formaldehyde	Naphthalene	POM	Total
DeKalb (2012)	10.8	299.7	52.4	208.7	25.3	31.9	603.5
Fulton (2012)	17.4	496.4	86.2	347.7	37.9	48.4	996.0
Georgia (2012)	284.8	7,103.4	1,192.0	4,896.3	554.4	703.9	14,180.4

Quantitative MSAT Assessment

A quantitative emissions analysis was conducted for the I-285/SR 400 Interchange Reconstruction project. The MSAT analysis was conducted using MOVES (version 2012/04/10). Data for the analysis was developed from the ARC travel demand model, as well as other local environmental factors. Daily emissions within the affected network were calculated by MOVES and then factored to produce annual emission burdens for the MSATs within the affected network. The affected network was defined by taking into account the changes in traffic volumes as predicted by the ARC model, the Traffic Technical Report, the construction of the adjacent SR 400 CD Lane Project (P.I. No. 721850) and by reviewing roadway segments were traffic volumes are predicted to change as a result of the proposed project, and is shown in Figure 21. In summary, the affected transportation network represents all highway links where the average annual daily traffic (AADT) is expected to change by 5 percent or more or where intersection delay is expected to change by 10 percent or more compared to No-Build conditions in the design year.


Air Quality Impact Assessment
PI No. 0000784
I-285 at SR 400
Interchange Reconstruction
Figure 21
MSAT Affected Network
+ 10% Int Delay
- 10% Int Delay
Project Links
+5 % AADT
- 5 % AADT
N
0 0.45 0.9 1.8
Miles
Hammond Dr
Sandy Springs Cir
Old Canton Rd
Clifton
Lake Forrest Dr
Allen Rd
SR 120
GA 400 HOT
CD System
Ramp
CD Sys
I-285 North
I-285 South
Perimeter Center Pkwy Ext
Ramp ML Ramp
Transit Link
Perimeter Summit Pkwy
I-285 HOT
I-285 East
I-285 West
CD Ramp
Forest Dr
Roswell Rd
Glenridge Conn
Lower Roswell
Woodlawn Dr
Paper Mill Rd
GA 400 Ramp
GA 400 North
GA 400 South
Peachtree Dunwoody
Old Johnson Ferry Rd
Nancy Creek Rd
Dunwoody Club Dr
Roberts Dr
Roberts Rd
Dunwoody Place
Riverside Rd
Transit Link
Terrell Mill Rd
Shadowlawn Rd
Riverside Dr
River Valley Rd
Abernathy Rd
Mt Vernon Rd
Sandy Springs Cir
Mount Vernon
Womack
Vermack
Chamblee Dunwoody Rd
Ashford Dunwoody
Ashford Dunwoody Rd
Barfield Rd
Perimeter Center Pkwy
SR 280
Heards Ferry Rd
Powers Ferry Rd
Heard Rd
Mount Vernon Rd
Interstate North Pkwy
Akers Mill Rd
Northside Dr
I-285 North
I-75 North
I-75 South Ramp
75/285
I-285
Ramp
Kennesaw Pkwy
US 41
I-285 South
Mount Paran Rd
Johnson Ferry Rd
75
400
85
20
285

The annual mass of MSAT emissions in the affected transportation network were estimated for the existing year (2014), open year (2019) Build and No-Build, and design year (2039) Build and No-Build conditions. The open year (2019) and design year (2039) Build conditions assume that both the I-285/ SR 400 Interchange Reconstruction and the adjacent SR 400 CD Lanes projects would be implemented, because both projects are scheduled to be let to construction together.

MOVES was used to calculate the running exhaust on-road annual emission burdens for total energy consumption as well as running exhaust and crankcase running exhaust on-road annual emission burdens. Because the regional travel demand model files that were provided by ARC were for the years 2015, 2020, and 2040, MOVES runs were performed for such years. It was assumed that the emissions that were obtained for years 2015, 2020, 2040 represent the emissions in the existing year (2014), open year (2019), and design year (2039) of the project, respectively. Table 30 summarizes the results of the MSAT analysis for the existing, No-Build, and Build conditions.

Table 30. Estimated MSAT Emission Burdens

Daily VMT and MSAT (tons/year)	Existing Year (2014)	Open Year (2019)			Design Year (2039)		
		No-Build	Build	% Change from No-Build	No-Build	Build	% Change from No-Build
Daily VMT	918,644	1,134,981	1,193,457	5.2	1,231,054	1,461,108	18.7
Acrolein	0.00026	0.00020	0.00015	-25.0	0.00012	0.00010	-16.7
Benzene	0.00354	0.00294	0.00269	-8.5	0.00250	0.00256	2.4
1-3 Butadiene	0.00053	0.00043	0.00039	-9.3	0.00034	0.00035	2.9
Diesel PM	0.06531	0.04714	0.04766	1.1	0.02698	0.03043	12.8
Formaldehyde	0.00404	0.00355	0.00364	2.5	0.00255	0.00218	-14.5
Naphthalene	0.000489	0.00040	0.00031	-22.5	0.00027	0.00025	-7.4
Polycyclic Organic Matter	0.00021	0.00015	0.00013	-13.3	0.00006	0.00007	16.7
Total	0.07438	0.05481	0.05496	0.3	0.03282	0.03592	9.4

Total MSAT emissions from the transportation network affected by the project are estimated to decline by almost 52 percent between the 2014 and 2039 (shown in Table 30). Regardless of the proposed project, especially large reductions are seen for diesel PM, which is classified as a probable human carcinogen by the USEPA, and a small reduction is expected in benzene, which is a known carcinogen. These reductions are primarily due to USEPA's motor vehicle and fuel control programs. The Build Alternative has total MSAT emissions that are slightly higher than the No-Build Alternative, with a 0.3 percent increase expected in open year (2019) and a 9.4 percent increase expected in design year (2039).

This document has provided a quantitative analysis of MSAT emissions relative to the proposed project. Based on this analysis, it is anticipated that the project would have no appreciable impact on regional MSAT levels. Projects that create new travel lanes or relocate economic activity closer to homes,

schools, businesses, and other populated areas may increase concentrations of MSAT at those locations relative to the No-Build Alternative. However, the magnitude and the duration of these potential increases compared to the No-Build Alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts. Because of these limitations, the following discussion is included in accordance with the President's CEQ regulations (40 CFR, Section 1502.22[b]) regarding incomplete or unavailable information.

Incomplete or Unavailable Information for Project-Specific MSAT Health Impacts Analysis

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The USEPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the CAA and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The USEPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System, which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (USEPA, http://www.epa.gov/iris/). Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the HEI. Two HEI studies are summarized in Appendix D of FHWA's *Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents*. Among the adverse health effects linked to MSAT compounds at high exposures are; cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI, http://pubs.healtheffects.org/view.php?id=282) or in the future as vehicle emissions substantially decrease (HEI, http://pubs.healtheffects.org/view.php?id=306).

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts - each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70-year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable.

It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways; to determine the portion of time that people are actually exposed at a specific location; and to

establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI (http://pubs.healtheffects.org/view.php?id=282). As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The USEPA (http://www.epa.gov/risk/basicinformation.htm#g) and the HEI (http://pubs.healtheffects.org/getfile.php?u=395) have not established a basis for quantitative risk assessment of diesel PM in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the USEPA as provided by the CAA to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires USEPA to determine an "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than one in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld USEPA's approach to addressing risk in its two step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than deemed acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

Construction

All phases of construction operations would temporarily contribute to air pollution. Particulates would increase slightly in the corridor as dust from construction collects in the air surrounding the project. The construction equipment would also produce slight amounts of exhaust emissions. The rules and regulations for air quality control outlined in chapter 391-3-1, rules of Georgia DNR's EPD, would be followed during the construction of the project. These include covering earth-moving trucks to keep dust levels down, watering haul roads, and refraining from open burning, except as may be permitted by local regulations.

The USEPA has listed a number of approved diesel retrofit technologies; many of these can be deployed as emissions mitigation measures for equipment used in construction. This listing can be found at: www.epa.gov/otaq/retrofit/retroverifiedlist.htm.

Indirect Effects

Other reasonably foreseeable future developments within the vicinity of the project corridor that may be intensified or accelerated by implementation of the proposed project would increase construction-related air emissions and are likely to increase vehicular traffic. The *Air Quality Impact Assessment* conducted for this project took into consideration projected future traffic volumes within the proposed project corridor, including increases in volumes that may be associated with anticipated economic and residential growth and changes in traffic patterns within the project area. In addition, the regional travel demand model was used for traffic forecasting for the project, which accounts for changes in travel patterns (e.g., rerouting of traffic) well outside of the project corridor itself as a result of the proposed improvements, and allows for the incorporation of "induced" travel demand. Induced travel is additional (new) travel that is created by increased accessibility of a transportation mode (e.g., a new roadway facility may result in route diversion and/or trip changes). The results of the *Air Quality Impact Assessment* indicated that the project is in compliance with both state and federal air quality standards.

Cumulative Effects

Cumulative impacts on air quality from planned transportation projects are addressed during the Regional Transportation Planning and TIP conformity processes. Overall, the cumulative effect of the past, present, and reasonably foreseeable future projects and actions within the project area is not expected to adversely affect the region's air quality.

The proposed project is identified in the PLAN 2040 RTP and the FY 2014-2019 TIP by reference number AR-957. The results of the emissions analysis conducted for the PLAN 2040 RTP and the FY 2014–2019 TIP for all analysis years for the Atlanta eight-hour ozone nonattainment area demonstrate a reduction in the level of emissions necessary to meet the 20-county established motor vehicle emissions budgets. Therefore, the PLAN 2040 RTP and the FY 2014–2019 TIP have demonstrated conformity to the eight-hour ozone standard. In addition, the results of the emissions analysis for all analysis years for the Atlanta PM 2.5 nonattainment area demonstrate a reduction in the level of emissions necessary to meet the No Greater Than Base Year Test. Therefore, the PLAN 2040 RTP and the FY 2014–2019 TIP have demonstrated conformity to the annual PM 2.5 standard. Upon completion of the technical conformity analysis, ARC determined that the PLAN 2040 RTP and the FY 2014–2019 TIP demonstrate compliance with the Clean Air Act as amended in 1990 in accordance with all conformity requirements as detailed in 40 CFR Parts 51 and 93 (the Transportation Conformity Rule) and 23 CFR Part 450 (the Metropolitan Planning Regulations as established in SAFETEA-LU). Because the proposed project is part of the PLAN 2040 RTP and the FY 2014–2019 TIP, and any future transportation projects in the project's vicinity are also in the conforming TIP, cumulative impacts are not anticipated to adversely affect the air quality in the region.

Other reasonably foreseeable future developments and land use changes within and around the project corridor are likely to increase vehicular traffic. As discussed above, the *Air Quality Impact Assessment* conducted for this project took into consideration projected future traffic volumes within and around the

project corridor and the results indicated that the project is in compliance with both state and federal air quality standards. However, in conjunction with increased traffic from regional economic development, the proposed project could contribute to cumulative impacts on regional air quality.

The proposed project, along with other programmed transportation projects in the region, is anticipated to allow for more efficient local and through travel around metro Atlanta and improved vehicular circulation in the area. More efficient traffic flow could result in an improvement in air quality despite higher future traffic volumes.

3. Climate Change/Greenhouse Gas (GHG) Analysis

Climate change is an important national and global concern. While the earth has gone through many natural changes in climate in its history, there is general agreement that the earth's climate is currently changing at an accelerated rate and will continue to do so for the foreseeable future. Anthropogenic (human-caused) greenhouse gas (GHG) emissions contribute to this rapid change. Carbon dioxide (CO_2) makes up the largest component of these GHG emissions. Other prominent transportation GHGs include methane (CH_4) and nitrous oxide (N_2O). The transportation section is the second largest source of total GHG emissions in the United States and the largest source of CO_2 emissions.

Many GHGs occur naturally. Water vapor is the most abundant GHG and makes up approximately two-thirds of the natural greenhouse effect. However, the burning of fossil fuels and other human activities are adding to the concentration of GHGs in the atmosphere. Many GHGs remain in the atmosphere for time periods ranging from decades to centuries. GHGs trap heat in the earth's atmosphere. Because the atmospheric concentration of GHGs continues to climb, our planet will continue to experience climate-related phenomena. For example, warmer global temperatures can cause changes in precipitation and sea levels. The U.S. Energy Information Administration's (EIA) *International Energy Outlook 2013* lists the global annual CO_2 emissions as 32,578.645 million metric tons for the year of 2011. The USEPA lists the annual CO_2 emissions from the State of Georgia as 136.88 million metric tons for the year of 2012.

To date, no national standards have been established regarding GHGs, nor has the USEPA established criteria or thresholds for GHG emissions pursuant to its authority to establish motor vehicle emission standards for CO_2 under the CAA. However, there is a considerable body of scientific literature addressing the sources of GHG emissions and their adverse effects on climate, including reports from the Intergovernmental Panel on Climate Change, the U.S. National Academy of Sciences, USEPA, and other federal agencies. The GHGs are different from other air pollutants evaluated in federal environmental reviews because their impacts are not localized or regional due to their rapid dispersion into the global atmosphere, which is characteristic of these gases. The affected environment for CO_2 and other GHG emissions is the entire planet. In addition, from a quantitative perspective, global climate change is the cumulative result of numerous and varied emissions sources (in terms of both absolute numbers and types), each of which makes a relatively small addition to global atmospheric GHG concentrations. In contrast to broad scale actions, such as actions involving an entire industry sector or very large geographic areas, it is difficult to isolate and understand the GHG emissions impacts for a particular transportation project. Furthermore, presently there is no scientific methodology for attributing specific climatological changes to a particular transportation project's emissions.

GHG Assessment

Under NEPA, detailed environmental analysis should be focused on issues that are significant and meaningful to decision-making. Based on the nature of GHG emissions and the exceedingly small potential GHG impacts of the Build alternative, the GHG emissions would not result in "reasonably foreseeable significant adverse impacts on the human environment" (40 CFR 1502.22(b)). The GHG emissions from the Build alternative would be insignificant, and would not play a meaningful role in a determination of the environmentally preferable alternative. More detailed information on GHG emissions "is not essential to a reasoned choice among reasonable alternatives" (40 CFR 1502.22(a)) or to making a decision in the best overall public interest based on a balanced consideration of transportation, economic, social, and environmental needs and impacts (23 CFR 771.105(b)). For these reasons, no alternatives-level GHG analysis has been performed for this project.

While the contribution of GHGs from transportation in the United States as a whole is a large component of United States GHG emissions, as the scale of analysis is reduced, the GHG contributions become quite small. Using CO_2 because of its predominant role in GHG emissions, the relationship between current and projected Georgia highway CO_2 emissions and total global CO_2 emissions, as well as information on the scale of the project relative to statewide travel activity was estimated.

Based on emissions estimates from MOVES 2010b model, and global CO_2 estimates and projections from the Energy Information Administration, CO_2 emissions from motor vehicles in the entire state of Georgia is less than two tenths of one percent of global emissions (0.18 percent) in the existing year (2014). These emissions are projected to contribute an even smaller fraction (0.17 percent) in the design year (2039). VMT in the project study area represents less than one percent of total Georgia travel activity and the project itself would increase statewide VMT by less than one percent. Table 31 shows the summary of statewide and project emissions potential, relative to global totals for the I-285/SR 400 Interchange Reconstruction project. Based on the design year VMT, it can be estimated that the I-285/SR 400 Interchange Reconstruction project could result in small increase in global CO_2 emissions in the design year (2039). This very small change in global emissions is well within the range of uncertainty associated with future emissions estimates.

Table 31. Statewide and Project Emissions Potential, Relative to Global Totals

Scenario	Global CO_2 Emissions, MMT[1]	Georgia Motor Vehicle CO_2 Emissions, MMT[2]	Georgia Motor Vehicle Emissions % Global Total	Project Study Area VMT[3] % of Statewide VMT	% Change in Statewide VMT Due to Project
Existing Year (2014)	33,200	60.44	0.18%	0.001%	(None)
Design Year (2039)	45,200	78.92	0.17%	0.001%	0.0001%

Legend: MMT = million metric tons; VMT = vehicle miles traveled.

Source: Global emissions estimates are from International Energy Outlook 2013 - http://www.eia.gov/forecasts/archive/ieo13/emissions.cfm data for Figure 104. Georgia emissions and statewide VMT estimates are from MOVES2010b model runs.

Notes:

[1] These estimates are from the EIA's International Energy Outlook 2013, and are considered the best-available projections of emissions from fossil fuel combustion. These totals do not include other sources of emissions, such as

cement production, deforestation, or natural sources; however, reliable future projections for these emissions sources are not available.

[2] MOVES2010b projections suggest that Georgia motor vehicle CO_2 emissions may increase by 30.57 percent between 2014 and 2039; more stringent fuel economy/GHG emissions standards will not be sufficient to offset projected growth in VMT.

[3] Represents PLAN 2040 model, which encompasses the 20-county region.

Mitigation for Global GHG Emissions

To help address the global issue of climate change, USDOT is committed to reducing GHG emissions from vehicles traveling on our nation's highways. USDOT and USEPA are working together to reduce these emissions by substantially improving vehicle efficiency and shifting toward lower carbon intensive fuels. The agencies have jointly established new, more stringent fuel economy and first-ever GHG emissions standards for model year 2012-2025 cars and light trucks, with an ultimate fuel economy standard of 54.5 miles per gallon for cars and light trucks by model year 2025. Further, on September 15, 2011, the agencies jointly published the first-ever fuel economy and GHG emissions standards for heavy-duty trucks and buses. Increasing use of technological innovations that can improve fuel economy, such as gasoline- and diesel-electric hybrid vehicles, will improve air quality and reduce CO_2 emissions in future years.

Consistent with its view that broad-scale efforts hold the greatest promise for meaningfully addressing the global climate change problem, FHWA is engaged in developing strategies to reduce transportation's contribution to GHGs—particularly CO_2 emissions—and to assess the risks to transportation systems and services from climate change. FHWA has developed a tool for use at the statewide level to model a large number of GHG reduction scenarios and alternatives for use in transportation planning, climate action plans, scenario planning exercises, and in meeting state GHG reduction targets and goals. To assist states and metropolitan planning organizations (MPOs) in assessing climate change vulnerabilities to their transportation networks, FHWA has developed a draft vulnerability and risk assessment conceptual model (http://www.fhwa.dot.gov/environment/climate_change/adaptation/ongoing_and_current_research/vulnerability_assessment_pilots/index.cfm) and has piloted it in several locations.

Local and State Measures to Reduce GHG Emissions

There are several programs underway in Georgia to address GHG emissions. Georgia is a member of the Climate Registry, a nationwide voluntary effort to quantify GHG emissions from all sources and lay the foundation for potential future carbon emissions trading and mitigation efforts.

Even though project-level mitigation measures would not have a substantial impact on global GHG emissions because of the exceedingly small amount of GHG emissions involved, measures to minimize air quality impacts during construction would also aid in reducing GHG emissions. These activities are part of a program-wide effort by FHWA to adopt practical means to avoid and minimize environmental impacts in accordance with 40 CFR 1505.2(c).

4. Energy/Mineral Resources

There are no mining operations, drilling operations, or mineral/energy reserves located within the project area, and none would be negatively impacted by the proposed project.

Energy is commonly measured in terms of British thermal units, or Btus. A Btu is defined as the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit. For transportation projects, energy usage is predominantly influenced by the amount of fuel used. The average Btu content of fuels is the heat value (or energy content) per quantity of fuel as determined from tests of fuel samples.

Transportation, which accounts for 28 percent of the energy consumed in the United States in 2014, is the second largest source of energy consumption in the United States. The transportation sector is the largest source of energy consumption in Georgia – accounting for about 31 percent of energy consumption.

Transportation energy is generally discussed in terms of direct and indirect energy. Direct energy involves all energy consumed by vehicle propulsion. This energy is a function of traffic characteristics, such as volume, speed, distance traveled, vehicle mix, and thermal value of the fuel being used. Direct energy estimates were calculated based on energy consumption rates for transportation modes developed by the U.S. Department of Energy, published in the Transportation Energy Data Book, Edition 33 (2014).

A regional analysis, based on link-by-link VMT estimates and associated vehicular speeds, was conducted for the Build and No-Build Alternatives. The effect of the Build Alternative on regional energy requirements was estimated by comparing the projected daily direct energy consumption for No-Build and Build Alternatives in the design year (2039). Table 32 shows the regional emissions assessment summary for the I-285/SR 400 Interchange Reconstruction project.

Table 32. Regional Emission Assessment

Scenario	Daily VMT	Energy Use (million BTUs/day)
No-Build Condition (2039)	206,063,452	1,311,166
Build Condition (2039)	206,149,698	1,311,868
Percent Change from No-Build	0.04%	0.05%

The proposed project is predicted to increase direct energy demand by 0.05 percent in the study region. This difference would result in no measurable impact on energy demands. As such, the Build condition is predicted to have a minimal effect on regional energy requirements.

Indirect energy consumption involves the non-recoverable, one-time energy expenditure involved in constructing the physical infrastructure associated with the project. At this stage of analysis, detailed construction information is currently not available; therefore an analysis of indirect energy has not been conducted. The construction of a transportation facility represents a considerable one-time expenditure of energy resources both in the fabrication of construction materials and the actual roadway construction

process. Large amounts of electricity are used in initial preparation and fabrication of materials, whether derived from hydro or fossil fuel (coal) sources, but the chief energy concern today involves the depletion of crude oil resources. Although the use of large amounts of energy during construction, and many construction materials themselves (plastics, asphalt, etc.), would require the consumption of crude oil, the net result of project construction would be long-term savings of this resource. The proposed improvements would allow for energy conservation by providing an efficient highway section that would help eliminate existing bottlenecks and provide a more stable flow of traffic.

Indirect Impacts

Implementation of the proposed project has the potential to intensify and/or accelerate the construction of development/redevelopment in the vicinity of the project corridor. However, this development is occurring regardless of the proposed project. Construction activity associated with such development would result in a one-time expenditure of building materials, which may include mineral resources, and energy resources both in the fabrication of construction materials and in the actual construction process. Over the long-term, increased development within the project vicinity could increase the local demand on energy and natural gas supply.

Cumulative Impacts

Cumulative impacts on energy and mineral resources would occur. Implementation of the project, which would have a short-term (during the construction period) increased demand on energy supplies and mineral resources from construction, combined with other reasonably foreseeable future transportation improvements projects and land development projects in the area, would place a greater demand on energy supplies and raw materials. However, the contribution of the proposed project to adverse cumulative effects on energy and mineral resources would be minimal. The long-term improvements to the state's transportation network from the collective transportation improvements would create a more efficient transportation system in the region, potentially offsetting increases in energy demand.

5. Construction/Utilities

Construction would be completed by the Design-Build Contractor, who would be responsible for designing, building, and partially financing the project. The Design-Build Contractor would seek to construct the entire project on an accelerated schedule through an integrated design-build process, rather than the traditional design-bid-build approach.

Construction activities would have short-term (lasting the duration of construction in a given area), adverse effects on surrounding communities. Construction activities would have the greatest potential to impact neighborhoods within two or three blocks of the construction areas and nearby construction equipment staging/storage areas. These residents would experience increased levels of noise, light and glare, and dust. Those with windows with a direct line-of-sight to the construction activities would be most affected. People tend to have a higher tolerance of increased noise levels during daytime hours. Therefore, noise associated with nighttime construction activities, if and when they occur, is expected to have greater impacts on surrounding communities. The Design-Build Contractor would comply with all state and local sound control and noise level rules, regulations, and ordinances. However, during a December 16, 2014 meeting with PCIDs and the cities of Sandy Springs, Dunwoody, and Brookhaven, it

was determined that the local governments would not require Georgia DOT or the Design-Build Contractor to obtain a variance or special approval to conduct construction activities during nighttime hours or on Sundays (see meeting minutes in Appendix A). While variances, special permits, or approvals are not required from local jurisdictions, if construction occurs during nighttime hours and/or on Sundays, GDOT would inform local jurisdictions of scheduled nighttime work so that local residents can stay informed.

Light and glare in construction areas (including equipment and material storage areas) would also continue through the nighttime hours in some areas for security and safety reasons. However, construction impacts would be short-term (lasting the duration of construction in a given area) and intermittent (only occurring in certain areas at certain times, and not necessarily lasting the entire duration of the construction contract). In addition, the Design-Build Contractor would implement a public information and notification plan to provide project information, updates, and construction information to area businesses, residents, the PCIDs, and emergency services throughout the project design and process so that the public can keep informed of upcoming construction activities, including nighttime work.

Construction of the proposed project would create some unavoidable inconveniences to motorists and adjacent property owners by interrupting regular traffic flow along I-285 and SR 400 within the project limits. However, construction activities would be conducted in a manner that would maintain access to neighborhoods and businesses and minimize conflict with traffic. Road closures and associated detours may be necessary in some areas; however, locations of potential closures and detour routes have not yet been determined. The need for any detours would be determined by the Design-Build Contractor during final design, and public outreach would occur regarding the proposed detour(s) for any road closures longer than five days as agreed upon by the Design-Build Contractor and the Georgia DOT Project Manager. Written documentation of coordination with the local government, emergency medical services, and school boards would be required for any road closures.

Some delays in traffic movement might occur during construction, but delays would be minimized to the extent possible. Residents adjacent to the project corridor may experience changes in access within their neighborhood due to short-term detours. Motorists may try to avoid construction-related traffic on or near the corridor by driving through residential neighborhoods, which may be disruptive to residents. Signage of detour routes and prohibition of through-traffic in residential neighborhoods is anticipated to reduce these impacts. All of these impacts would be short-term, lasting the duration of the construction period within a given area.

Long-term outside shoulder closures, and possibly some lane closures, would be required for the project. Where the proposed ramps tie into or cross existing ramps, temporary closures would be needed to tie in the proposed ramps. In addition, temporary and/or rolling closures would be needed for the milling and reconstruction of the existing lanes. Such closures would be mostly at night, weekends, or during off-peak hours, and access would be maintained at all other times to minimize the impact to the traveling public incurs. The closure types, locations, and schedule would be established by special provision 150.11 and would be finalized during the final design phase by the Design-Build Contractor. To minimize disruptions to emergency services during construction, the Georgia DOT would require the Design-Build Contractor to provide local emergency services (including Northside, St. Joseph's, and Children's Healthcare of Atlanta hospitals) a minimum of two weeks advance notice for lane/shoulder closures and/or traffic stage changes planned to be in effect longer than 24 hours, and a minimum of 24

hours advance notice for lane/shoulder closures that are planned to be in effect less than 24 hours. The safety and convenience of the general public and residents of the area would be provided for at all times.

Any necessary relocation of utilities (water, sewer, telephone, etc.) would be accomplished with no long-term interruption of services. All other construction functions would be accomplished in a timely and orderly fashion to keep disruptions minimal and to avoid compromising safety.

6. USTs/Hazardous Waste Sites

What are Recognized Environmental Conditions?

Recognized Environmental Conditions (RECs) are the presence or likely presence of hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. RECs do not include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be subject to an enforcement action if brought to the attention of government agencies. RECs also do not include such items as asbestos-containing materials, radon, lead-based paint, lead in drinking water, indoor air quality, or high-voltage power lines.

A Limited Phase I Environmental Assessment was conducted in 2012 in the project corridor to determine whether there is evidence of recognized environmental conditions (RECs, see text box), and concurrence was received from the Georgia DOT Office of Materials and Testing on October 7, 2013 (see Appendix A). This study was conducted as part of the **revive**285 *top end* project, but because it included the entire current project corridor and is less than five years old, it is being used as the Phase I survey for the proposed I-285/SR 400 interchange reconstruction. This Phase I Environmental Assessment is available in the project file by contacting the Georgia DOT OES, and is summarized here. This study was conducted in accordance with Georgia DOT guidelines for such assessments (which conform to the American Society for Testing and Materials Practice E 1527-00, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process), and more recent USEPA requirements in the All Appropriate Inquiry Rules (40 CFR 312, effective November 1, 2006).

The Phase I Environmental Assessment included reconnaissance of the project corridor and surrounding area; research of readily available federal and state environmental agency records for evidence of hazardous substance or related activities on or within one mile of the project corridor; research of reasonably available tribal records for the property and nearby properties; review of available historic maps and aerial photographs to assess area history and past use of project corridor properties; and interviews with current property owners, past property owners, local residents, and adjacent firms (as possible) to assess past and present use of the properties.

As part of the limited Phase I Environmental Assessment, numerous state and federal government agency records and databases were reviewed for evidence of regulated or investigated facilities within the minimum search distances required by the American Society for Testing and Materials Practice E 1527-00, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, which include the project corridor, adjoining properties, properties within a 0.5-mile radius, and properties within a 1.0-mile radius. The databases and records used included: the USEPA's National Priorities List (NPL) and delisted NPL list; USEPA's CORRACTS database; Georgia EPD's Hazardous

Site Inventory (also known as the State Priority List or State Superfund); U.S. Tribal records; U.S. Tribal Leaking Underground Storage Tank (LUST) and Underground Storage Tank (UST) records; Georgia Brownfields Public Records List; USEPA's Brownfields list; USEPA's Resource Conservation and Recovery Act (RCRA)-Treatment, Storage, or Disposal (TSD) Facilities list; USEPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database; USEPA's CERCLIS No Further Remedial Action Planned database; Georgia Compensation and Liability Information System list; Georgia LUST list; Georgia EPD Operating Solid Waste Facilities list; Georgia Registered UST list; USEPA's RCRA-Generators database; USEPA's Emergency Response Notification System (ERNS) database; Georgia Spills List database; U.S. Engineering Controls database; U.S. and State Institutional Controls database; and Georgia Drycleaner database.

For each of the listed, regulated facilities identified within the search radii, facility locations were field-verified and the direction of groundwater flow relative to the project corridor was estimated based on topographic maps and field observations. Facilities were reviewed for distance and topographic relation to the project corridor, and regulatory file reviews were performed for those facilities that were deemed as possibly having an impact on the project corridor.

A total of 14 facilities within one mile from the existing edge of pavement along I-285 and SR 400 within the limits of the proposed project were considered RECs in the study. These facilities are described Table 33, along with anticipated impacts to them based on conceptual design.

Table 33. Anticipated Impacts to Recognized Environmental Conditions (RECs) within the Project Corridor

Facility Name/Owner	Location	Potential Project Impacts
Citgo Gas Station/ Roswell Food Mart	5645 Roswell Road, Atlanta (southeast of the I-285/Roswell Road interchange)	None; outside construction limits
Royal Patio Shop (closed)	5690 Roswell Road, Atlanta (southwest of the I-285/Roswell Road interchange)	None; outside construction limits
Shell Gas Station/Sandy Springs Express Mart	5700 Roswell Road, Atlanta (southwest quadrant of the I-285/Roswell Road interchange)	None; outside construction limits
Palm Top Properties, Inc. (Chevron gas station)	5701 Roswell Road, Atlanta (southeast quadrant of the I-285/Roswell Road interchange)	None; outside construction limits
Mccullough Auto Care and Chevron	5810 Roswell Road, Sandy Springs (northwest of the I-285/Roswell Road interchange)	None; outside construction limits
Exxon Gas Station (closed)	5811 Roswell Road, Sandy Springs (northeast of the I-285/Roswell Road interchange)	None; outside construction limits
Shell Gas Station and Food Mart	5866 Roswell Road, Sandy Springs (northwest of the I-285/Roswell Road interchange)	None; outside construction limits
Former Conoco (closed)	5905 Roswell Road, Sandy Springs (northeast of the I-285/Roswell Road interchange)	None; outside construction limits
Housing Authority of Fulton County	144 Allen Road, Sandy Springs, (northwest of the I-285/Roswell Road interchange	None; outside construction limits
Northside Hospital (Parcels 16 and 17)	1000 Johnson Ferry Road, Atlanta (southeast quadrant of I-285/SR 400 interchange)	ROW and easement would be required from this property for the project.

Table 33. Anticipated Impacts to Recognized Environmental Conditions (RECs) within the Project Corridor

Facility Name/Owner	Location	Potential Project Impacts
Ashford Green (Manufacturer's Life Insurance Company) (closed)	4170 Ashford Dunwoody Road, Atlanta (southwest of the I-285/Ashford Dunwoody Road interchange)	None; outside construction limits
Goodyear Auto Service Center	4300 Ashford Dunwoody Road, Atlanta (northwest of the I-285/Ashford Dunwoody Road interchange)	None; outside construction limits
Southern Company (Parcels 69 and 74)	64 Perimeter Center, Atlanta (east of the I-285/Ashford Dunwoody Road interchange on the north side of I-285)	ROW and easement would be required from this property for the project.
Exxon Mobile Oil Corporation	77 Perimeter Center, Atlanta (northeast of the I-285/ Ashford Dunwoody Road interchange at Ashford Dunwoody Road)	None; outside construction limits

According to the Limited Phase I Environmental Assessment, the lateral extent of groundwater contaminate plumes from many of the facilities is largely unknown or undefined and may extend into the project corridor. Therefore, additional assessment for soil and/or groundwater contamination is warranted at the Northside Hospital and Southern Company properties prior to ROW acquisition.

Georgia DOT Office of Materials and Testing (OMAT) conducted a subsurface investigation on the Northside Hospital and Southern Company properties and immediate surrounding parcels (see Interdepartmental Correspondence dated February 4, 2015 and Addendum dated April 3, 2015 in Appendix A). Minimal soil contamination from hazardous waste was encountered at a depth of five feet in the studied area. Groundwater was not encountered. Soil contamination levels did not exceed Hazardous Site Response Act (HSRA) release notification requirements as established by the Georgia EPD. Additionally, there are no USTs in place in these areas. As a result, the Georgia DOT OMAT recommends that no additional investigations are necessary at these properties and that ROW acquisition at these sites may proceed. However, any soil excavated during construction activities at Parcels 16, 17, 18, 19, 69, and 74 must be disposed of at a permitted lined municipal solid waste landfill.

If contaminants are found through subsequent surveys, avoidance alternatives may be considered, or applicable laws and regulations concerning the removal of toxic or hazardous material would be followed. Removal would be coordinated with Georgia EPD. Implementation of the proposed project would not preclude any necessary site remediation to be performed by others.

During geotechnical investigations for the project, a limited field investigation was completed for existing monitoring wells within the project area. Groundwater monitoring wells were observed in the vicinity of the following gas stations:

- Exxon, 77 Perimeter Center, Atlanta, GA
- Chevron, 5701 Roswell Road, Sandy Springs, GA
- Shell, 5700 Roswell Road, Atlanta, GA

These monitoring wells are associated with ongoing groundwater monitoring of USTs regulated by the Georgia EPD. Based on these observations, it is expected that other monitoring wells exist near the other gas stations in the area. Existing monitoring wells were not observed in areas of the project other than the premises of the gas stations listed above. These observations were documented in a Memorandum to File and submitted to the Georgia DOT (see Appendix A). Therefore, no impacts to monitoring wells are anticipated based on the current project conceptual design.

E. Permits/Variances

1. Section 404 Permit (U.S. Army Corps of Engineers)

In accordance with provisions of Section 404 of the Clean Water Act (33 USC 1344), a permit is required from the USACE to discharge and place fill materials into any jurisdictional waters affected by the proposed project. Based on conceptual design, the I-285/SR 400 Interchange Reconstruction project would permanently impact a total of 6,487 lf (2.51 acre) of stream, 0.30 acre of open waters, and no wetlands. Because the project is currently in conceptual design, temporary impacts are not yet known. Temporary impacts would be assessed, and permanent impacts re-assessed, during the final design phase.

Based on the anticipated amount of impacts, the proposed project would require a Section 404 Individual Permit (IP) with compensatory mitigation from the USACE prior to activities impacting waters of the United States. The Georgia DOT has a two-step process for obtaining an IP: the PAR process and the submittal of the permit application.

The purpose of the PAR process is to obtain agency input on project alternatives, as well as to gather information for continued project review. The PAR report and coordination process with the agencies was initiated on August 1, 2014. The PAR package was made available via the internet to the USACE, USFWS, USEPA, FHWA, and Georgia DNR EPD. The PAR report analyzed two build alternatives: Alternative 1, which utilized standard Georgia DOT typical sections (4:1 slopes) with rural shoulders and no walls throughout the corridor, and Alternative 2, which used design measures such as wall construction or slope minimization, where feasible, to minimize impacts.

On August 26, 2014, the Georgia DOT conducted a PAR meeting at the USACE office in Morrow, Georgia. A high-level discussion of the purpose and need for the project was given and an overview of the impacts associated with each of the alternatives was presented. Georgia DOT explained that the impacts presented in the meeting and within this Draft EA are based on conceptual design, and may be reduced by the Design-Build Contractor during final design, as the Design-Build Contractor may use innovative approaches to reduce impacts and reduce mitigation costs. During the PAR meeting, the USACE noted that both the proposed project (Georgia DOT P.I. No. 0000784) and the adjacent SR 400 CD Lanes Project (Georgia DOT P.I. No. 721850) are expected to be permitted under a single IP since both projects would be let to construction together (combined under the same Design-Build-Finance contract), to maximize USACE staffing efficiency, and because of cumulative effects. [This approach was later modified, as described in the next paragraph.] The PAR meeting concluded with an understanding that Alternative 2 is the Department's preferred alternative. Minutes from the PAR meeting are provided in Appendix A.

On January 13, 2015, the Georgia DOT held an IP pre-application meeting with the USACE and Georgia DNR for the adjacent SR 400 CD Lanes Project (Georgia DOT P.I. No. 721850). During this meeting, the USACE stated that obtaining separate IPs for the I-285/SR 400 Interchange Reconstruction and SR 400 CD Lanes projects would be acceptable as long as the Georgia DOT can demonstrate that the two projects have separate and independent utility. As a result, the Georgia DOT intends to obtain two separate IPs for these projects. Minutes from this meeting are provided in Appendix A.

Compensatory mitigation would also be required for the proposed project based on the USACE Savannah District's SOP. The proposed permanent impacts to jurisdictional waters of the United States from the I-285/SR 400 Interchange Reconstruction project would require a total of 19,879 stream mitigation credits and 1.7 wetland mitigation credit. [Note: this does not include mitigation that would be required for the adjacent SR 400 CD Lanes Project (Georgia DOT P.I. No. 721850), which would be permitted under the same IP as the proposed project.] Temporary construction impacts have not been assessed and may require additional credit purchase. Mitigation credits would be purchased from a USACE-approved mitigation bank that serves the Upper Chattahoochee (HUC 03130001), if available. If no credits are available, mitigation requirements may be addressed through contribution to the USACE's in-lieu fee program or through other avenues as deemed appropriate by the USACE.

2. Buffer Variance

Pursuant to the Georgia Erosion and Sedimentation Control Rules, 391-3-7, promulgated under the Georgia Erosion and Sedimentation Control Act (O.C.G.A. 12-7), encroachments to buffered state waters would occur from the proposed project. Based on the nature and conditions for each encroachment, the identified resources would either be exempt from or require a buffer encroachment variance to be issued by the Georgia EPD under Criteria A or H of the Georgia DNR Rules on Buffer Variance Procedures and Criteria 391-3-7-05(1)(d), as amended. A concurrence with the buffered state waters determination for this project has been received from the Georgia EPD (see Appendix A). Portions or all of the following waters do not have a state-mandated buffer due to artificial lining (and therefore, impacts to these portions would not require a buffer variance): PS9, PS10, PS11, IS17a, OW17b, IS17c, PS18, EC/IS19, IS/PS20a, PS25, PS28a, IS29b, and IS31a.

Based on conceptual design, non-exempt buffer impacts are anticipated to the following buffers: OW22, OW27, PS28a, and PS29. These impacts would require a buffer variance from the Georgia EPD under Criterion 2(h) prior to construction activities that impact non-exempt buffers. Anticipated buffer impacts will be further refined and quantified during the final design phase by the Design-Build Contractor.

3. National Pollutant Discharge Elimination System (NPDES)

The NPDES was created by the federal Clean Water Act to control water pollution by regulating the discharge of pollutants to surface waters. In Georgia, any ground-disturbing activities that exceed one acre are covered under the State's NPDES permit. Ground-disturbing activities exceeding one acre would occur for the proposed project. Therefore, a Notice of Intent (NOI) to the NPDES General Permit would be submitted to the Georgia EPD prior to construction.

IV. COORDINATION AND COMMENTS

Early in the project development phase, letters were sent to local government and planning agencies, as well as state and federal government agencies, to solicit comments regarding the proposed action. Copies of the early coordination letters, the distribution list, and agency response letters are included in Appendix A. Agencies and persons that received early coordination letters include:

- U.S. Department of Agriculture, Natural Resources Conservation Service
- Regional Environmental Officer, U.S. Department of Housing and Urban Development, Regional Office of Environment
- Associate Regional Director, U.S. Department of the Interior, National Park Service, Planning and Compliance Division
- Medical Officer, Centers for Disease Control and Prevention, National Center for Environmental Health
- FEMA, Mitigation Division
- Georgia DNR, Floodplain Management Office
- Georgia DNR, Wildlife Resources Division, Nongame Conservation Section
- USEPA, Region Four
- Chief, U.S. Geological Survey, Environmental Affairs Program
- Chief, Forest Management, Georgia Forestry Commission
- Georgia State Historic Preservation Office
- David Haynes, Atlanta Regional Commission, Transportation Planning Division
- Randy Beck, Director, Fulton County Department of Planning and Community Services
- Representative Joe Wilkinson, Georgia House of Representatives, District 52
- Commissioner Tom Lowe, Fulton County Board of Commissioners, District 4
- Senator Judson Hill, Georgia State Senate, District 32
- Angela Parker, Director, City of Sandy Springs, Department of Community Development
- Councilman Tiberio DeJulio, City of Sandy Springs City Council, District 5
- Yvonne Williams, President and Chief Executive Officer, PCIDs
- Shawanna Qawiy, Senior Planner, DeKalb County Planning & Sustainability
- Steve Foote, Community Development Director, City of Dunwoody

In addition, because the proposed project could require an Individual Section 404 Permit from the USACE, a letter was sent to the USACE, Regulatory Division, requesting that the agency be a cooperating agency on this project. A copy of this letter is provided in Appendix A. No response from the USACE was received.

1. Meetings with Stakeholders

During early project development, staff and representatives from the Georgia DOT held meetings with each of the surrounding affected jurisdictions and stakeholders (City of Sandy Springs, City of Dunwoody, City of Brookhaven, and PCIDs). The purposes of these meetings were to discuss the proposed improvements; solicit comments, concerns, and other feedback from these stakeholders; work with them to address their concerns; and obtain project area data and input. These meetings are summarized in the following sections. Minutes from each of these meetings are provided in Appendix A.

Meeting with PCIDs

On June 27, 2014, staff and representatives of the Georgia DOT met with representatives of the PCIDs to discuss the proposed project and the adjacent SR 400 CD Lanes Project (P.I. No. 721850). The following input was received related to the I-285/SR 400 Interchange Reconstruction project. In addition, PCIDs informally submitted comments on the project design to the Georgia DOT during the initial concept team meeting process. The Department's responses to those comments are included in Appendix A.

- PCIDs expressed concern about commercial access remaining after project construction. The project team responded that commercial access would be retained, and that the Ashford Dunwoody Road Diverging Diamond Interchange (DDI), Ashford Dunwoody Road Bridge, and Roswell Road and its bridge would all remain after construction.
- PCIDs noted a concern with a weaving condition at the Ashford Dunwoody Road interchange (from vehicles exiting westbound I-285 onto Ashford Dunwoody Road trying to make a left turn onto Hammond Drive), and stated that any increase in storage capacity on that exit ramp would be a benefit. The project team noted that, while the project would likely provide a slight increase in storage at this off-ramp from realigning the off-ramp, it was not the intent of the project to improve this area.
- PCIDs expressed a lot of concern about construction staging and associated traffic impacts. The project team acknowledged that construction activities would likely worsen traffic temporarily regardless of what was done to stage construction due to such high traffic volumes at the I-285/SR 400 interchange. Therefore, the goal is to get the construction completed as quickly as possible. PCIDs agreed to work on a messaging strategy and educational outreach to encourage teleworking and staggered work hours at corporations in the Perimeter Center area during heavy construction times. Georgia DOT also noted that staging would largely be up to the Design-Build Contractor, but that some stipulations could be made part of the contract/request for proposals (RFP).
- PCIDs noted several problems at the existing I-285/SR 400 interchange, including problems with roadway geometry (trucks have difficulty making the existing tight turns at the interchange) and safety concerns associated with the tight weaving areas.
- PCIDs noted that the public will likely question whether traffic from planned or new local developments has been factored into the traffic modeling for the I-285/SR 400 interchange project. The project team responded that local developments are accommodated in the regional growth factors used in ARC's traffic demand model.
- PCIDs noted that they were in concept stage on a project under the Peachtree Dunwoody Road interchange to widen Peachtree Dunwoody Road under the bridge and to improve the Lake Hearn/Peachtree Dunwoody intersection. The project team will take this project into consideration in the design of the I-285/SR 400 interchange reconstruction.
- PCIDs noted that there is a new PATH Foundation trail project under construction along SR 400 in the Buckhead area (called the PATH400 Trail), which uses the MARTA rail line and the existing SR 400 ROW. PCIDs indicated that the City of Alpharetta would like to construct a trail south from the city to eventually connect to this trail.
- PCIDs noted that the northwest quadrant of the I-285/SR 400 interchange is underdeveloped due to the lack of connectivity between this area and the MARTA station in the southeast quadrant. PCIDs would like to develop pedestrian access or a circulator in this area to be able to get workers between these areas.

Meeting with City of Sandy Springs

On July 16, 2014, staff and representatives of the Georgia DOT met with representatives of the City of Sandy Springs to discuss the proposed project and the adjacent SR 400 CD Lanes Project (P.I. No. 721850). The following input was received related to the I-285/SR 400 Interchange Reconstruction. In addition, Sandy Springs submitted an early coordination response letter to the Georgia DOT. This letter, and the Department's response to that letter, is included in Appendix A.

- The City of Sandy Springs stated a desire for increased/new pedestrian/multi-modal circulation around the I-285/SR 400 interchange. The City noted that any opportunity for adding pedestrian, bicycle, or multimodal routes on any reconstructed bridges, or alongside SR 400, would be desirable.
- The City asked how their recently constructed landscaping/gateway project at the Roswell Road interchange would be affected by the I-285/SR 400 interchange reconstruction project. The project team noted that this area would be affected/reconstructed by the proposed CD lanes along I-285 in this area.
- The City expressed concerns about noise impacts, and asked if noise abatement would be considered as part of the project.
- The City noted that there are several new permitted and planned developments in the vicinity project.
- The City discussed the new PATH Foundation trail project under construction in Buckhead, which is being constructed north towards Sandy Springs. The City would like to extend this trail north alongside SR 400 through the City to provide multi-modal connectivity, and this extension is part of their Draft Sandy Springs Bicycle, Pedestrian and Trail Implementation Plan (not yet adopted).

Meeting with City of Dunwoody

On July 22, 2014, staff and representatives of the Georgia DOT met with representatives of the City of Dunwoody to discuss the proposed project. The following input from the City was received:

- The City of Dunwoody asked if storage at the Ashford Dunwoody Road westbound off-ramp would be increased by the proposed project. The project team noted that the project would likely provide a slight increase in storage at this off-ramp from realigning the ramp.
- ROW acquisition and displacements for the interchange project was discussed, including impacts to the parking lot at the Cox facility on the south side of I-285. The City noted that Cox has expressed future plans for that parking lot, which may be affected by the project.
- Other planned and permitted developments in the area were discussed:
    - The City noted that the Goldkist property is processing a parking deck request on their property on the north side of I-285, west of the Ashford Dunwoody Road interchange.
    - There is a planned development in the northeast quadrant of the I-285/Ashford Dunwoody Road interchange, but it does not appear that the development would be affected by the I-285/SR 400 Interchange Reconstruction project.
    - State Farm construction is occurring along Perimeter Center Parkway.
    - There are entitlements on several properties in the area (but no permits).
- The City of Dunwoody and PCIDs noted that construction-related traffic impacts would become a much greater concern around the holidays, when there is holiday shopping in the Perimeter Mall area. The project team noted that there could be restricted or shortened lane closure periods during certain times of the year, and this could be added to the RFP for the Design-Build Contractor. PCIDs stated

they would work with the City of Dunwoody on increasing telecommuting, as well as transit circulation and access during heavy construction times.

- The City noted that the residential area on the north side of I-285 from the end of the interchange reconstruction project limits east to Chamblee Dunwoody has expressed numerous complaints about noise from I-285. The project team stated that the limits of the noise study for the proposed project would extend approximately 1,000 feet beyond the end of the ramp construction limits, and a noise abatement analysis would be conducted as part of the project.
- The City noted that a longer-term impact of the proposed project would be that land values would remain strong; if the interchange were not improved, the office market in the Perimeter area would be hurt as traffic worsened. The area would get branded as having too much congestion, which would make it unattractive for the office market.

Meeting with City of Brookhaven

On August 12, 2014, staff and representatives of the Georgia DOT met with representatives of the City of Brookhaven to discuss the proposed project. The following input from the City was received:

- The City of Brookhaven noted that the residential area on the south side of I-285 between Ashford Dunwoody Road and Chamblee Dunwoody Road is very concerned about noise impacts from I-285.
- The City did not feel that the change in access between Peachtree Dunwoody Road and Ashford Dunwoody Road (vehicles would no longer be able to use I-285 to get access between these two interchanges) would pose a traffic problem, since there are other connecting/parallel roads in this area, such as Lake Hearn Drive.
- The City noted that the area around Nancy Creek (east of the current proposed project limits) and Murphey Candler Lake (south of the currently proposed project limits) is an ecologically sensitive area and has a vocal community.

Subsequent meetings and coordination have been conducted with PCIDs and the local governments to update them on project development, address their concerns, and to incorporate locally preferred aesthetic features into the project design, where feasible. Minutes from these meetings are included in Appendix A. The Georgia DOT will continue to coordinate with these stakeholders during project development.

2. Public Information Open Houses (PIOHs)

Three PIOHs were held at Dunwoody Baptist Church, located at 1445 Mount Vernon Road, in Dunwoody, Georgia. They were held on August 19, 2014 (from 11 a.m. to 1 p.m.), August 21, 2014 (from 11 a.m. to 1 p.m.), and August 21, 2014 (from 5:00 p.m. to 7:00 p.m.). Details of these PIOHs, including comments received from the public, are provided in Section III.A.7., *Public Involvement*, above. Comments received during the public comment period, along with Georgia DOT's responses to those comments, are provided in Appendix B.

A manned station for the proposed I-285/SR 400 Interchange Reconstruction project was also included at the PIOHs for the adjacent SR 400 CD Lanes project (P.I. No. 721850), which were held on November 18, 2014 at the St. Jude Catholic Church in Sandy Springs. Comments received from this meeting are provided in Appendix B, and were responded to as part of responses to comments received at the PHOH for the I-285/SR 400 Interchange Reconstruction project, discussed below.

V. PUBLIC HEARING, COMMENTS, AND COORDINATION

Public Hearing Open House (PHOH) and Comment Period

A location and design public hearing was held for the proposed project on February 5, 2015 from 11:00 a.m. to 1:00 p.m. and from 4 p.m. to 8 p.m. at the Congregation B'nai Torah, located at 700 Mount Vernon Highway, NE, Sandy Springs, Georgia. Copies of the Draft EA were available for public review at the PHOH, as well as at public libraries in Sandy Springs and Dunwoody in close proximity to the interchange.

Standard newspaper and sign advertisements were posted for the PHOH. The PHOH was advertised in the legal organs for the three surrounding counties (Cobb, Fulton, and DeKalb), as well as in a metro-Atlanta Spanish language newspaper, *Mundo Hispanico*. Additionally, PCIDs announced the PHOH to subscribers of their e-mail newsletter. An email blast announcing the PHOH was also sent to the **revive**285 *top end* project mailing list. Flyers announcing the PHOH were mailed to all persons who commented on the project during the previous PIOHs, and were posted at the two area libraries where the Draft EA copies were made available.

At the PHOH, displays showing the proposed conceptual design of the project (overlain with environmental resources) were presented, along with displays showing an artistic rendering of what the proposed design might look like and another display outlining the needs in the corridor and the project's purpose. A video simulation of traffic operations within the proposed project design was also shown. A display showing noise-impacted receivers and a sample of the proposed noise wall material were also presented at the PHOH, and copies of the detailed Noise Impact Assessment were made available. Representatives of the Georgia DOT were available to discuss the project with the public, and to answer any questions on the proposal. In addition, a display/station showing a concept for the adjacent SR 400 CD Lanes project (P.I. No. 721850) was available for public review, and representatives were available to answer questions on that project.

One hundred forty-five (145) people attended the PHOH. All of the citizens attending the PHOH were given the opportunity to comment on the project. In addition, written comments were accepted until February 15, 2015. Written comments received during this 10-day comment period were combined with comments received at the November 18, 2014 PIOH for the adjacent SR 400 CD Lanes project, as well as comments received between these two outreach activities, and a single response letter was prepared for all of these comments.

In total, 67 people submitted comments on the proposed project during the November 18, 2014 PIOH and February 5, 2015 PHOH comment periods. These comments were submitted via comment sheets at the meetings, by verbal statements that were recorded by a court reporter at the meetings, via e-mail, via electronic/online petitions (which counted as a single comment), or were written and mailed in at a later date. Of the 67 people that submitted comments during the PHOH comment period, 17 were in favor of the project, 3 were against the project, 11 were conditional, and 36 were uncommitted or did not express an opinion of the project. The major comments received during the comment period included:

- Concerns about construction noise, traffic-related noise post-construction, and noise abatement measures;

- Requests to add bicycle and pedestrian facilities to the project and to accommodate a multi-use trail within the project's ROW;
- Requests for transit expansion;
- Suggestions for improvements to other interchanges and surface streets in the project area;
- Concerns about truck and emergency vehicle access on the proposed CD lanes;
- Concerns about the capacity of the proposed CD lanes;
- Concerns that the project will increase traffic on congested surface streets;
- Concerns that the proposed new CD systems will be confusing to navigate;
- A request to retain I-285 westbound access from Glenridge Drive to Roswell Road;
- Concerns about increased traffic congestion and lane closures during construction;
- Concerns about the limited access on the proposed CD lanes, especially in the event of an accident on those lanes; and
- Concerns about stormwater management.

All comments received during the comment periods were addressed by responding to the citizens' questions and concerns through a response letter. Comments received and the Georgia DOT's responses to them are provided in Appendix B.

Distribution of the Final EA/Finding of No Significant Impact (FONSI)

The following agencies will receive a copy of the final EA/FONSI. Additional agencies or individuals to receive the final EA/FONSI may be identified by the Georgia DOT.

- USEPA, Region 4
- City Manager, City of Sandy Springs
- City Manager, City of Dunwoody
- City Manager, City of Brookhaven
- USACE
- USFWS

REFERENCES

Special Studies for P.I. No. 0000784*

- Ecological Resources Survey Report (Transmitted to FHWA July 31, 2014)
- Ecological Resources Assessment of Effects Report (Approved October 7, 2014)
- Ecological Resources Assessment of Effects Addendum (Approved April 10, 2015)
- Historic Resources Survey Report (SHPO concurrence September 10, 2014)
- Georgia DOT Archaeological Resources In-House Survey Report (August 13, 2014)
- Assessment of Effects on Report for Cultural Resources (SHPO concurrence October 23, 2014)
- Historic Resources Addendum Memorandum (dated March 13, 2015)
- Air Quality Impact Assessment (Transmitted to FHWA on December 5, 2014)
- Noise Impact Assessment (Transmitted to FHWA on December 5, 2014)
- Noise Impact Assessment Addendum Memo (dated March 9, 2015)
- Conceptual Stage Study (Approved September 4, 2014)
- MS4 Conceptual Infeasibility and Feasibility Analysis for I-285/SR 400 Interchange Reconstruction (October 8, 2014)
- Revised Results of Hazardous Waste Investigation, Georgia DOT Office of Materials and Testing Interdepartmental Correspondence (OMAT) (February 4, 2015)
- Addendum to Revised Results of Hazardous Waste Investigation, Georgia DOT OMAT (April 3, 2015)
- Interchange Modification Report, I-285 at SR 400 Interchange Reconstruction (March 2015)
- Road Widening and New Bridge on I-285 over Perimeter Creek (preliminary FEMA Hydraulics and Hydrology Study) (February 20, 2015)
- Road Widening on I-285 over North Fork Nancy Creek and Tributary (preliminary FEMA Hydraulics and Hydrology Study) (February 20, 2015)

*All special studies are on file at the Georgia DOT.

Meetings

- PIOHs – August 19, 2014 (11 a.m.) and August 21, 2014 (11 a.m. and 5 p.m.)
- PIOHs – November 18, 2014 (for SR 400 CD Lanes, Georgia DOT P.I. No. 721850)
- PHOH – February 5, 2015 (11 a.m. to 1 p.m. and 4 p.m. to 8 p.m.)
- Meeting with PCIDs – June 27, 2014
- Meeting with the City of Sandy Springs – July 16, 2014
- Meeting with the City of Dunwoody – July 22, 2014
- Meeting with the City of Brookhaven – August 12, 2014
- ICI Workshop with PCIDs and the cities of Sandy Springs, Dunwoody, and Brookhaven – August 12, 2014
- Meetings with PCIDs and cities of Sandy Springs, Dunwoody, and Brookhaven – December 16, 2014; January 20, 2015; January 28, 2015
- Meeting with Local Government Emergency Services – February 13, 2015
- Bicycle/Pedestrian Facility Coordination Meeting – March 4, 2015

Data Sources

- Historic Resources Survey Report for Revive285 Top End, 2010 [Georgia DOT Projects NHS00-0000-00(247), NHS00-0000-00(784), NHS00-0001-00(758), MSL00-0003-00(041), MSL00-0003-00(534), IM000-0075-03(212), IM000-0285-01(351), IM000-0075-03(213), MHIM0-0075-03(230), and IMNH0-0285-01(388), Cobb, Fulton, and DeKalb counties, P.I. Nos. 0000247, 0000784, 0001758, 0003041, 0003534, 712806, 713230, 713260, 713600, and 714000]
- Limited Phase I Environmental Assessment, April 2012, Revive I-285 Top End, NHS-0001-00(758) and MSL-003-00(534), P.I. Nos. 0001758 and 0003534, Cobb, Fulton, and DeKalb Counties, Georgia. Prepared by United Consulting.
- White Paper Documenting Changes in Performance Metrics due to VISSIM Model Adjustments, Project No. NH000-0056-01(052), Fulton County, PI No. 721850 (May 2015) 2010 U.S. Census Data (Redistricting Data Summary File (PL 94-171), available online at: http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml)
- Personal communication (email dated July 16, 2014) with Patrick Hall, Senior Planner, Travel Demand Model Applications, Transportation Access & Mobility Division, Atlanta Regional Commission
- American Community Survey data (2008-2012), Tables B17021 and B16002
- ARC, PLAN 2040 RTP
- ARC, FY 2014-2019 TIP
- City of Dunwoody Comprehensive Plan Community Assessment (Draft May 26, 2009)
- City of Dunwoody Comprehensive Plan Community Agenda (June 2010)
- Proposed 2012 Sandy Springs City Center Master Plan, Adopted December 18, 2012
- City of Sandy Springs City Center Master Plan, City Center – Phase I Implementation Plan (January 30, 2013)
- City of Sandy Springs Comprehensive Plan Community Agenda (November 20, 2007)
- City of Brookhaven Comprehensive Plan 2034
- ARC, Developments of Regional Impact (DRI) Reviews Online Database

- Personal communications with Jared Lombard (Principal Planner, ARC, Land Use Division), John Tuley (Principal Planner, ARC, Land Use Division), and Angela Parker (Community Development Director, City of Sandy Springs) regarding status of DRIs
- Georgia DNR Historic Resources Survey Maps
- 1995 DNR North Fulton County and Sandy Springs Survey
- Georgia Historic Bridge Survey
- Natural, Archaeological, and Historic Resources Geographic Information System (NAHRGIS)
- Georgia DNR Hydrologic Atlas 18 (1989 edition)
- Georgia DNR, EPD *Water Quality in Georgia 2010-2011: 2012 Integrated 305(b)/303(d) List*
- Manual for Erosion and Sedimentation Control in Georgia, Fifth Edition, Georgia Soil and Water Conservation Commission (2000)
- Georgia Stormwater Management Manual, Volume I: Stormwater Policy Guidebook, Fifth Edition, ARC (August 2001)
- Georgia DOT Guidelines for Design of Post-Construction BMPs (June 12, 2014)
- USGS Topographic Maps
- National Wetland Inventory Maps
- Fulton and DeKalb County Soil Survey (1999)
- Georgia DNR Trout Stream List
- USACE Savannah District SOP for Compensatory Mitigation (March 2004)
- FEMA FIRM panels 13089C0012J (dated May 16, 2013), 13121C0161F (dated September 18, 2013), 13121C0142F (dated September 18, 2013), and 13089C0011J (dated May 16, 2013)
- Georgia DNR, Wildlife Resources Division, Natural Heritage Program, Locations of Special Concern Animals, Plants, and Natural Communities in DeKalb County (updated June 2013)
- Georgia DNR, Wildlife Resources Division, Nongame Conservation Section Coordination Letter dated May 27, 2014
- Perimeter @ The Center - Future Focus, 2011 LCI Update, Final Report, PCIDs and ARC (November 2011)
- USFWS Information Planning and Conservation (IPaC) system (October 2014).
- Georgia DOT Crash Database
- Metropolitan North Georgia Water Planning District's Watershed Management Plan (May 2009)
- An Approach to Evaluating Cumulative Impacts in Georgia's Watersheds Using Best Available Data (King, J.K. and C.L. Bernstein, 2009, In: *Proceedings of the 2009 Georgia Water Resources Conference*, April 27-29, 2009, University of Georgia)
- USEPA, Region 4, Groundwater Protection, Sole Source Aquifers in the Southeast (2011).
- "I-285 Planner Recalls Effort to Build Perimeter Highway," Laura Ingram, *Gwinnett Daily Post*, May 10, 2002.
- Effects of urbanization on stream water quality in the city of Atlanta, Georgia, USA (Peters, Norman, 13 August 2009, *Hydrological Processes* 23 (2009): 2860-2878 [Published online in Wiley InterScience]).
- USGS, Water-Resources Investigation Report 96-4302, Everyone Lives Downstream (1996).
- Natural Resources Spatial Analysis Laboratory (NARSAL), Georgia Land Use Trends Impervious Surface Cover of Georgia 2008, 2005, and 1991, University of Georgia (2007 and 2008).
- Environmental Factors Influencing the Status and Management of Bats Under Georgia (USA) Bridges (Cleveland, A.G., 2013, In: *Proceedings from the 2013 International Conference on Ecology and Transportation*).

- Bats in American Bridges (Keeley, B.W. and Tuttle, M.D., 1999). Bat Conservation International, Inc. Publication 4.
- Personal communication (04 January 2013 e-mail) with Katherine Freas (Project Manager, Piedmont Branch, USACE) regarding USACE Operations and Maintenance Business Information Link (OMBIL) Regulatory Module (ORM) database query for reported impacts and mitigation for Cobb, DeKalb, and Fulton counties—01 January 2004 through 01 January 2013 (Excel database attachment).
- Personal communication (08 November 2012 e-mail) with Katherine Freas (Project Manager, Piedmont Branch, USACE) regarding USACE Regulatory Administrative Management System (RAMS) database query of reported impacts and mitigation by Georgia county through 2004 (Excel database attachment).
- U.S. Department of Energy, Transportation Energy Data Book, Edition 33, 2014.
- FHWA Construction Noise Handbook, 2006

APPENDIX A

COORDINATION AND CORRESPONDENCE

Project NHS00-0000-00(784)
Fulton and DeKalb Counties
P.I. No. 0000784

Early Coordination Letters and Responses

ARCADIS

Infrastructure · Water · Environment · Buildings

ARCADIS U.S., Inc.
2410 Paces Ferry Road
#400
Atlanta
Georgia 30339
Tel 770 431 8666
Fax 770 435 2666
www.arcadis-us.com

TRANSPORTATION

Regional Office of Environment
Regional Environmental Officer
U.S. Department of Housing and Urban Development
40 Marietta Street
Atlanta, GA 30303

Subject:
Re: Early Coordination Request for Project NHS00-0000-00(784), Fulton and DeKalb counties, P.I. No. 0000784—State Route (SR) 400 at Interstate 285 (I-285) Interchange Reconstruction

Date:
June 10, 2014

Our ref:
GADT0201.0160

Dear Sir/Madam:

The Georgia Department of Transportation (DOT) is in the beginning stages of project development for the above noted project. The proposed project would include operational improvements along I-285 and SR 400 in the vicinity of the I-285/SR 400 interchange, including the construction of barrier-separated collector-distributor (C/D) lanes along I-285 and SR-400, reconstruction of existing ramps, and construction of new flyover bridges, as well as reconstruction and widening of existing bridges in the interchange area. Grade-separated, braided ramps would be constructed in the vicinity of Ashford Dunwoody Road and Roswell Road to eliminate conflicts between traffic entering and exiting SR 400 and traffic entering and exiting the Roswell Road and Ashford Dunwoody interchanges. Along I-285, the proposed project would begin west of Roswell Road and end east of Ashford Dunwoody Road, for a distance of approximately four miles on I-285. Along SR 400, the proposed project would begin in the vicinity of the Glenridge Connector and extend north to the Hammond Drive interchange area, where it would tie into an adjacent project (project by others, Georgia DOT PI No. 721850). The total length of the proposed improvements along SR 400 is approximately two miles.

The design for the project is being developed concurrently with environmental documentation and in compliance with applicable environmental laws and regulations. This process, developed by the Georgia DOT to make our projects responsive to social, economic, and environmental concerns, offers you the opportunity to identify site-specific conditions to be addressed in the environmental assessment.

Please advise us of any known project area conditions of special concern. With your assistance, we can give these issues due consideration and integrate them into the development of the project alignment and design.

In particular, the Department would appreciate your assistance in identifying low income and minority neighborhoods (Environmental Justice Concerns). This would also include help in identifying neighborhood leaders and minority groups or associations located throughout the affected communities. We would like to be certain that these communities are recognized fully throughout project development.

Your assistance is appreciated. If you have any questions or need additional information, please contact the project engineer Shamir Poudel (shamir.poudel@arcadis-us.com) or the project environmental planner Robin Stevens with ARCADIS (robin.stevens@arcadis-us.com), or via telephone at 770-431-8666.

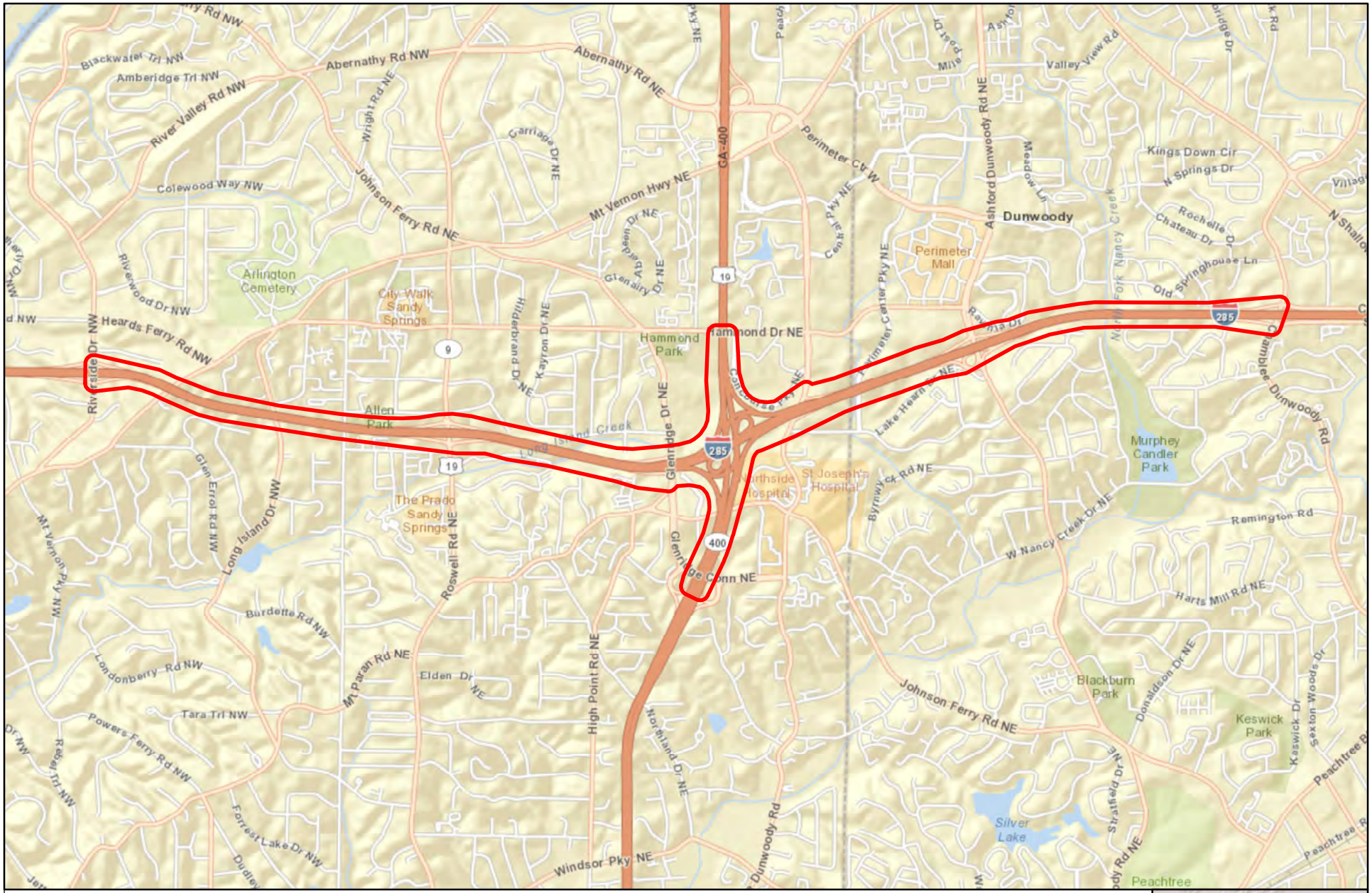
Sincerely,

ARCADIS U.S., Inc.

Robin Stevens
Senior NEPA Specialist

Attachment

Copies:
Marlo Clowers, PE, Georgia DOT Project Manager



Project Location Map
I-285 at SR 400 Interchange
Fulton and Dekalb counties, GA
P.I.# 0000784

N
W E
S

0 1,600 3,200 6,400
Feet

Project Study Area

EARLY COORDINATION LETTER DISTRIBUTION LIST

James E. Tillman, Sr., State Conservationist
U.S. Department of Agriculture
Natural Resources Conservation Service
355 East Hancock Avenue, Mail Stop 200
Athens, GA 30601-2769

Regional Office of Environment
Regional Environmental Officer
U.S. Department of Housing and Urban Development
40 Marietta Street
Atlanta, GA 30303

Centers for Disease Control and Prevention
National Center for Environmental Health
Attn: Medical Officer
1600 Clifton Road
Atlanta, GA 30333

David Vela, Regional Director
National Park Service
Planning and Compliance Division
100 Alabama Street, SW
1924 Building
Atlanta, GA 30303

Gary LeCain, Chief, Environmental Affairs Program
U.S. Geological Survey
12201 Sunrise Valley Drive
Mail Stop 423
Reston, VA 20192

Georgia Forestry Commission
Attn.: Forest Management
PO Box 819
Macon, GA 31202-0819

U.S. Environmental Protection Agency
Region Four
Atlanta Federal Center
100 Alabama Street, S.W.
Atlanta, Georgia 30303-3104

Atlanta Regional Commission
Attn: David Haynes, Senior Principal Planner
40 Courtland Street, NW
Atlanta, GA 30303-2538
Tom Lowe, Fulton County Commissioner
District 4
141 Pryor Street
Atlanta, GA 30303

Representative Joe Wilkinson
District 52
200 River Vista Drive, Unit #203
Atlanta, GA 30339

Senator Judson Hill
Senate District 32
3102 Raines Court
Marietta, GA 30062

Randy Beck, Director
Fulton County Department of Planning and Community Services
5440 Fulton Industrial Boulevard
Atlanta, Georgia 30336

Angela Parker, Director
City of Sandy Springs
Department of Community Development
7840 Roswell Road, Building 500
Sandy Springs, GA 30350

Tiberio DeJulio
City Council District 5
City of Sandy Springs
7840 Roswell Road, Building 500
Sandy Springs, GA 30350

Yvonne Williams, President & Chief Executive Officer
Perimeter Community Improvement Districts
One Ravinia Drive
Building One, Suite 1125
Atlanta, Georgia 30346

Shawanna Qawiy, Senior Planner
DeKalb County Planning & Sustainability
330 West Ponce de Leon Avenue
Decatur, Georgia 30030

Steve Foote, AICP, Community Development Director
City of Dunwoody
41 Perimeter Center East, Suite 250
Dunwoody, GA 30346

Susan Canon, Director of Community Development
City of Brookhaven
Brookhaven City Hall
4362 Peachtree Road
Brookhaven, Georgia 30319

ATLANTA REGIONAL COMMISSION

40 Courtland Street, NE
Atlanta, Georgia 30303
atlantaregional.com

June 24, 2014

Robin Stevens
Senior NEPA Specialist
ARCADIS
2410 Paces Ferry Road #400
Atlanta, GA 30339

RE: Early Coordination Request; PI # 0000784 – State Route 400 at Interstate 285 Interchange Reconstruction

Dear Ms. Stevens,

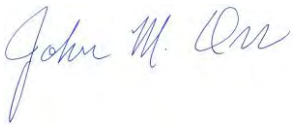
Thank you for the opportunity to allow the Atlanta Regional Commission to review and comment on the scope of this project as described in your June 10th letter. This project is currently programmed under ARC ID AR-957 and is listed in the PLAN 2040 Regional Transportation Plan (RTP). All remaining phases of this project (ROW, UTL and CST) will be programmed in the FY 2014-2019 Transportation Improvement Program (TIP) period pending the approval of Amendment #1 anticipated in September. Other related projects are as follows:

- AR-ML-200/PI#0001758 – I-285 North Managed Lanes and Collector/Distributor Lane Improvements from I-75 North to I-85 North
- AR-ML-300/PI#0001757/0008445 – SR 400 Managed Lanes from I-285 North to SR 20
- FN-AR-100A/PI#721850 – SR 400 Collector/Distributor Lanes from Vicinity of Hammond Drive and Abernathy Road to North of Spalding Drive

In response to your request for information on areas of special concern, ARC has available for the Atlanta region an Equitable Target Area (ETA) index which is a social equity indicator that aims to identify concentrations of environmental justice communities. The index is based on the regional averages of five parameters: the senior population, low education attainment, housing values, poverty, and the distribution of minorities. Areas that scored higher than the index's regional average were determined to be ETA communities, and were subsequently categorized into three levels of concentration: Medium ETA, High ETA and Very High ETA. The ETA index can be utilized to measure the impacts of programs and investments at the regional, local and project levels. For more information, contact Patrick Hall at phall@atlantaregional.com or (404) 463-3290.

We appreciate your consideration of these comments and look forward to working with you on this project.

Sincerely,



John Orr, AICP
Manager, Transportation Access and Mobility Division

jhb

C: Marlo Clowers, GDOT
Matthew Fowler, GDOT Planning

USDA

United States Department of Agriculture

June 26, 2014

Robin Stevens
Arcadis U.S., Inc.
2410 Paces Ferry Rd., #400
Atlanta, GA 30339

Re: Early Coordination Request for Project NHS00-0000-00(784), SR400 at I-285 Interchange Reconstruction, P.I. No. 0000784, Fulton and Dekalb Counties

Dear Ms. Stevens:

This letter is in reference to your request for information on the possible impacts the proposed interchange reconstruction project may have on land use, conservation, water quality and other general environmental concerns that may be of interest to our agency. The following outlines our concerns with the proposed project with regards to farmland protection, and Natural Resources Conservation Service (NRCS) watershed dams and project easements. **Please note, Georgia NRCS will have a new State Conservationist, Mr. Terrance Rudolph, beginning July 13, 2014. You may either keep addressing the State Conservationist or you may address Dan Wallace, Georgia NRCS Resource Inventory Coordinator, with early coordination requests, both at this same address.**

Farmland Protection

The Farmland Protection Policy Act (FPPA) is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a federal agency or with assistance from a federal agency. For the purpose of FPPA, farmland includes areas located within soil mapunits rated as prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land uses, but not water or urban built-up land. It should be noted that the FPPA does not authorize the Federal Government to regulate the use of private or nonfederal land or, in any way, affect the property rights of owners.

NRCS uses a Land Evaluation and Site Assessment (LESA) system to establish a farmland conversion impact rating score on proposed sites of federally funded and assisted projects. This score is used as an indicator for the project sponsor to consider alternative sites if the potential adverse impacts on the farmland exceed the recommended allowable level. It is our understanding that the proposed project involves federal funds or assistance, and thus could be subject to this assessment. However, this project is completely contained within an existing US Census Bureau designated urban area (Atlanta, GA 03817), and is thus exempt from this assessment. You need take no further action for FPPA purposes.

Natural Resources Conservation Service
Georgia State Office
355 East Hancock Avenue - Athens, GA - 30601-2775
Voice: 706-546-2272 Fax: 855-417-8490

NRCS Watershed Dams

More than 50 years ago, the U.S. Department of Agriculture was authorized by Congress to help local communities with flood control and watershed protection through the Watershed Program (PL-534 Flood Control Act of 1944 and PL-566 Watershed Protection and Flood Prevention Act). As a result, local communities, with NRCS assistance, have constructed over 11,000 dams in 47 states since 1948. These dams were originally constructed for protection of farmlands from flooding impacts. In 2000, PL-566 was amended to provide NRCS authorization to assist communities with rehabilitation of their aging dams. The legislation authorizes NRCS to work with local communities and watershed project sponsors to address public health and safety concerns and potential environmental impacts of aging dams.

We have reviewed our records and have determined that there are no PL566 structures in the vicinity or downstream of the proposed project that would be affected by these activities.

NRCS Easements

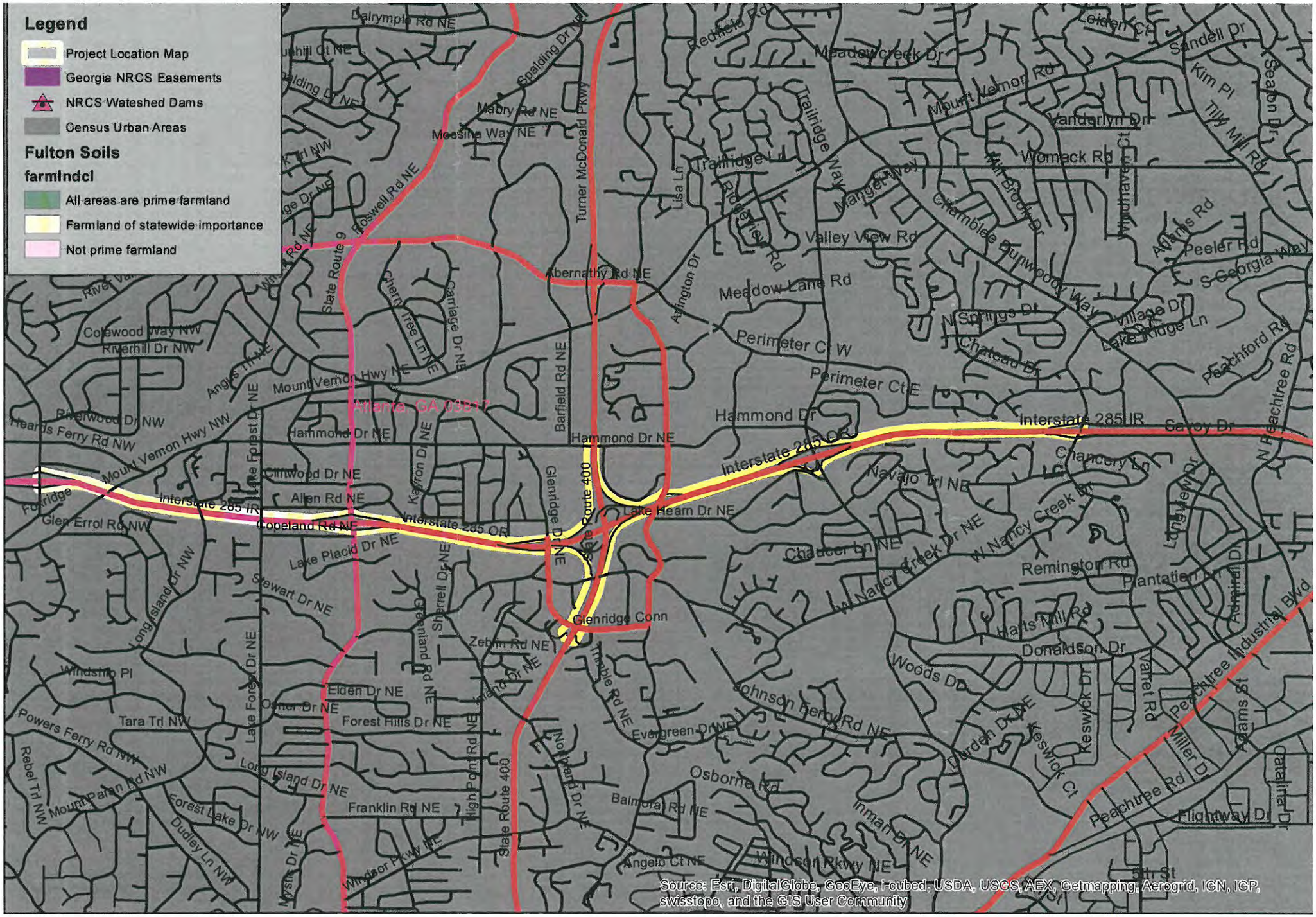
NRCS easements relate to our Wetland Reserve Program and the Farm and Ranchland Protection Program. We have reviewed our records and have determined that there are no such easements within the vicinity of the proposed project that would be impacted.

NRCS appreciates this opportunity to comment. If you have questions or need any additional information, please contact Dan Wallace of my staff at (706) 546-2244 or dan.wallace@ga.usda.gov.

Sincerely,

TANSEL HUDSON
Acting State Conservationist

cc: Michael Watson, Assistant State Conservationist (FO), NRCS, Griffin, GA
Valerie Pickard, District Conservationist, NRCS, Marietta, GA
Greg Clark, Resource Soil Scientist, NRCS, Griffin, GA
Dan Wallace, State Resource Inventory Coordinator, NRCS, Athens, GA



Fulton and DeKalb Counties Early Coordination Request. SR 400 at Interstate 285 (I-285) Interchange Reconstruction

June 25, 2014

0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 1.1 1.2 1.3 Miles

ARCADIS
Infrastructure · Water · Environment · Buildings

ARCADIS U.S., Inc.
2410 Paces Ferry Road
#400
Atlanta
Georgia 30339
Tel 770 431 8666
Fax 770 435 2666
www.arcadis-us.com

TRANSPORTATION

Mr. Brad Loar
Mitigation Division
Federal Emergency Management Agency
3003 Chamblee-Tucker Road
Atlanta, Georgia 30341

Subject:
Re: Early Coordination Request for Project NHS00-0000-00(784), Fulton and DeKalb counties, P.I. No. 0000784—State Route (SR) 400 at Interstate 285 (I-285) Interchange Reconstruction

Date:
June 10, 2014

Our ref:
GADT0201.0160

Dear Mr. Loar:

The Georgia Department of Transportation (DOT) is in the beginning stages of project development for the above noted project. The proposed project would include operational improvements along I-285 and SR 400 in the vicinity of the I-285/SR 400 interchange, including the construction of barrier-separated collector-distributor (C/D) lanes along I-285 and SR-400, reconstruction of existing ramps, and construction of new flyover bridges, as well as reconstruction and widening of existing bridges in the interchange area. Grade-separated, braided ramps would be constructed in the vicinity of Ashford Dunwoody Road and Roswell Road to eliminate conflicts between traffic entering and exiting SR 400 and traffic entering and exiting the Roswell Road and Ashford Dunwoody interchanges. Along I-285, the proposed project would begin west of Roswell Road and end east of Ashford Dunwoody Road, for a distance of approximately four miles on I-285. Along SR 400, the proposed project would begin in the vicinity of the Glenridge Connector and extend north to the Hammond Drive interchange area, where it would tie into an adjacent project (project by others, Georgia DOT PI No. 721850). The total length of the proposed improvements along SR 400 is approximately two miles.

The design for the project is being developed concurrently with environmental documentation and in compliance with applicable environmental laws and regulations. This process, developed by the Georgia DOT to make our projects responsive to social, economic, and environmental concerns, offers you the opportunity to identify site-specific conditions to be addressed in the environmental assessment.

Based on a review of the project area Flood Insurance Rate Maps, the project crosses one regulatory floodway (Perimeter Creek) and its associated 100-year floodplain. Please advise us of any other known project area conditions of special concern. With your assistance, we can give these issues due consideration and integrate them into the development of the project alignment and design.

The project is in early concept development phase, and impacts have not yet been determined. The project design and construction will comply with National Flood Insurance Program standards as required for Federal Aid Highway actions involving regulatory floodways. Guidelines set forth in the June 27, 1982 Federal Emergency Management Agency memorandum on "Procedures for Coordinating Highway Encroachments on Floodplains" will be followed.

If you have any questions or need additional information, please contact the project engineer Shamir Poudel (shamir.poudel@arcaduis-us.com) or the project environmental planner Robin Stevens with ARCADIS (robin.stevens@arcadis-us.com), or via telephone at 770-431-8666.

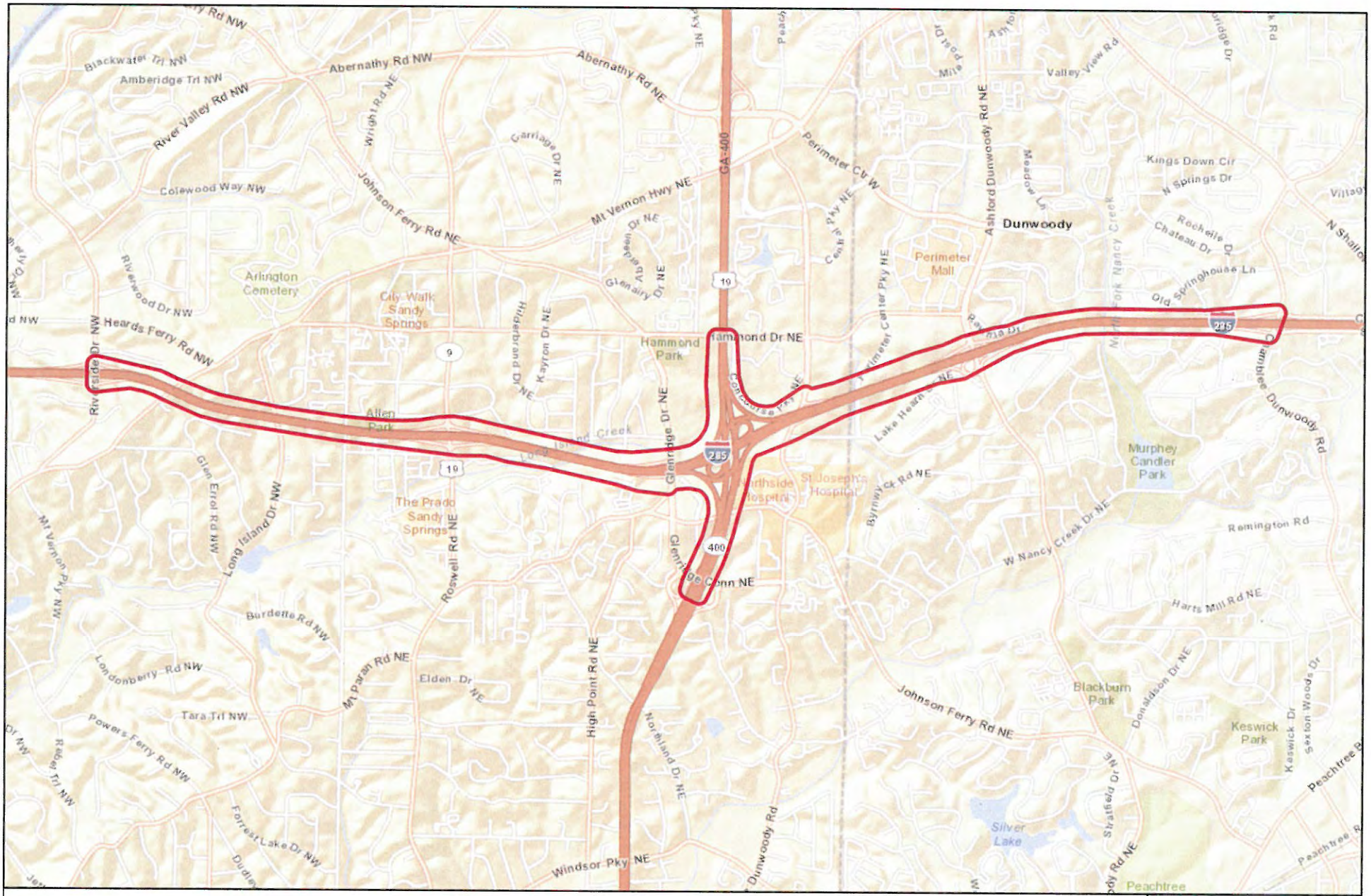
Sincerely,

ARCADIS U.S., Inc.

Robin Stevens
Senior NEPA Specialist

Attachment

Copies:
Marlo Clowers, PE, Georgia DOT Project Manager
Georgia Department of Natural Resources, Floodplain Management Office



Project Location Map
I-285 at SR 400 Interchange
Fulton and Dekalb counties, GA
P.I.# 0000784

N
W E
S

Project Study Area

0 1,600 3,200 6,400
Feet

FLOODING EFFECTS FROM PERIMETER CREEK

ZONE AE

dional Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

50 0 500 1000

FEET

METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0011J

FIRM

FLOOD INSURANCE RATE MAP

DEKALB COUNTY, GEORGIA
AND INCORPORATED AREAS

PANEL 11 OF 201

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
DEKALB COUNTY	130065	0011	J
DUNWOODY, CITY OF	130679	0011	J

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
13089C0011J

MAP REVISED
MAY 16, 2013

Federal Emergency Management Agency

From: Tkacs, Thomas
To: Stevens, Robin
Cc: SPugh@dot.ga.gov; Shillock, Tom
Subject: SR 400 at I-285, PI 0000784, Interchange Reconstruction Early Coordination Request
Date: Friday, June 20, 2014 9:51:27 AM
Attachments: 3117_001.pdf

I refer to your Early Coordination Request of June 10, 2014, for the above referenced project. The project would construct a C/D system beginning at approximately Riverside Drive and ends at approximately Chamblee-Dunwoody Road. The total length of the proposed improvements is approximately two miles. The amount of new right-of –way, if any, is not known.

In the project vicinity I-285 generally is aligned east-west and drainage runs north - south . Several drainage ways are conveyed under I-285 along the proposed project.

No.	Name	Status	Location/Comment
1	Unnamed Nancy Creek Trib	0.2%	Moderate risk
2	Long Island Creek	0.2%	Between Roswell Road and Long Island Drive. Moderate risk
3	Nancy Creek	1.0%	South of Project. High risk
4	North Fork Nancy Creek	1.0%	Near Ashford – Dunwoody Road. A-Zone. High risk. No floodway. 0.2% flow contained in culvert under I285.
5	Perimeter Creek	1.0%	Culvert contains 0.2% flow. Detailed study. Floodway has been established both upstream and downstream of I-285 culvert.

Perimeter Creek is the only creek that crosses the proposed project and has a floodway. A culvert or bridge extension must be designed for the ”no-rise” condition because a regulatory floodway has been established.

The project could result in floodplain impacts from the placement of fill in the floodplain to support the road/bridge structure extensions. The eight-step process defined below would document the absence or existence of a practicable alternative. A graphic showing the Floodplain in the general project vicinity is attached.

If there is a 100 year floodplain impact then the requirements of Executive Order 11988 would be implemented. EO 11988 requires that federal projects avoid direct and indirect floodplain impacts if a practicable alternative exists. EO 11988 describes an 8-step process. This process is outlined below.

1. Is action in the base floodplain (Special Flood Hazard Area)?
2. Hold early public review.
3. Document practicable alternatives.

4. Quantify impacts from the proposed action.
5. If impacts are unavoidable, minimize impacts.
6. Reevaluate alternatives.
7. Present findings and public explanation.
8. Implement action.

Thank you for the opportunity to review this project. As this project is developed, let us know if the Georgia Floodplain Management Unit can be of further assistance.

We moved February 14. Our new address is 200 Piedmont Ave., SW, Suite 418, Atlanta, Georgia 30334. If you have questions you can reach me at my new number 404-651-8478.

Thank you,
Thomas Tkacs, P.E.
GADNR

Cc: Sam Pugh/GDOT
Tom Shillock/EPD

GEORGIA FLOOD M.A.P. FLOOD RISK SNAPSHOT

Mapping Assessment & Planning

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

US-19 N

Atlanta, GA 30328

Legend with Flood Zone Designations

- Flood Control Structures
- Base Flood Elevations
- Cross Sections
- Coastal Transects
- FIRM Panel Index
- Floodway Decrease
- Floodway Increase
- 100-Year Flood Zone Decrease
- 100-Year Flood Zone Increase
- Zone Change
- 1% Flood -Floodway (High Risk)
- 1% Flood - Zone AE (High Risk)
- 1% Flood - Zone A, AH, AO, or D (HighRisk)
- 0.2% Flood - Shaded Zone X (Moderate Risk)
- 1% Flood - Zone VE (HighRisk)
- Area Not Included
- Letters of Map Revision
- Coastal Barrier Resource Area

Who needs flood insurance?

Federal flood insurance is required by most lenders for buildings mapped in the high-risk Special Flood Hazard Areas (SFHA) shown on flood hazard maps. Flood insurance is available to homeowners, renters, condo owners/renters, and commercial owners/renters within NFIP participating communities. Costs vary depending on how much insurance is purchased, what it covers, and the property's flood risk.

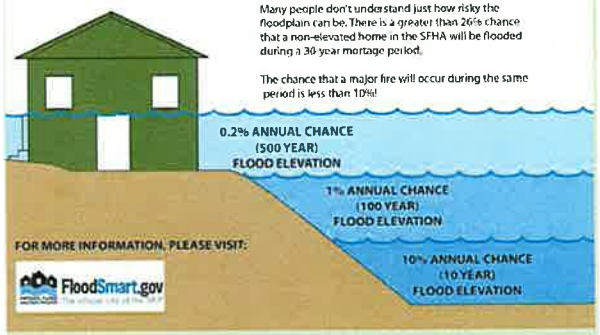
What is the Special Flood Hazard Area (SFHA)?

The SFHA is that portion of the floodplain subject to inundation by the 1% Annual chance flood and/or flood-related erosion hazards. These areas are shown on the FIRMs as Zones A, AE, AH, AO, AR AND A99

Not in a mapped floodplain?

Unfortunately, it's often after a flood that many people discover that their home or business does not cover flood damage. Approximately 25% of all flood damage occurs in low risk zones, commonly described as being 'ouside the mapped flood zone'.

Nature Doesn't Read Flood Maps



Flood Risk Status

Panel ID:	13089C0011J,13121C0161F
Current Flood Zone:	X
Preliminary Flood Zone:	N/A
Flood Zone Change Type:	N/A
*Probability of Flooding over 30-Year Period:	N/A

Disclaimer:This data is not to be used to determine any base flood elevations or flood zone designations for NFIP (National Flood Insurance Program) purposes. For NFIP flood insurance and regulation purposes, please refer to the published effective FIRM (Flood Rate Insurance Map) for your area of concern. Values displayed for Current Flood Zone, Preliminary Flood Zone, Flood Zone Change Type, and Probability of Flooding over a 30 -year period based on center of dot location, not extent of structure(s). Address search function provided by Bing Maps.

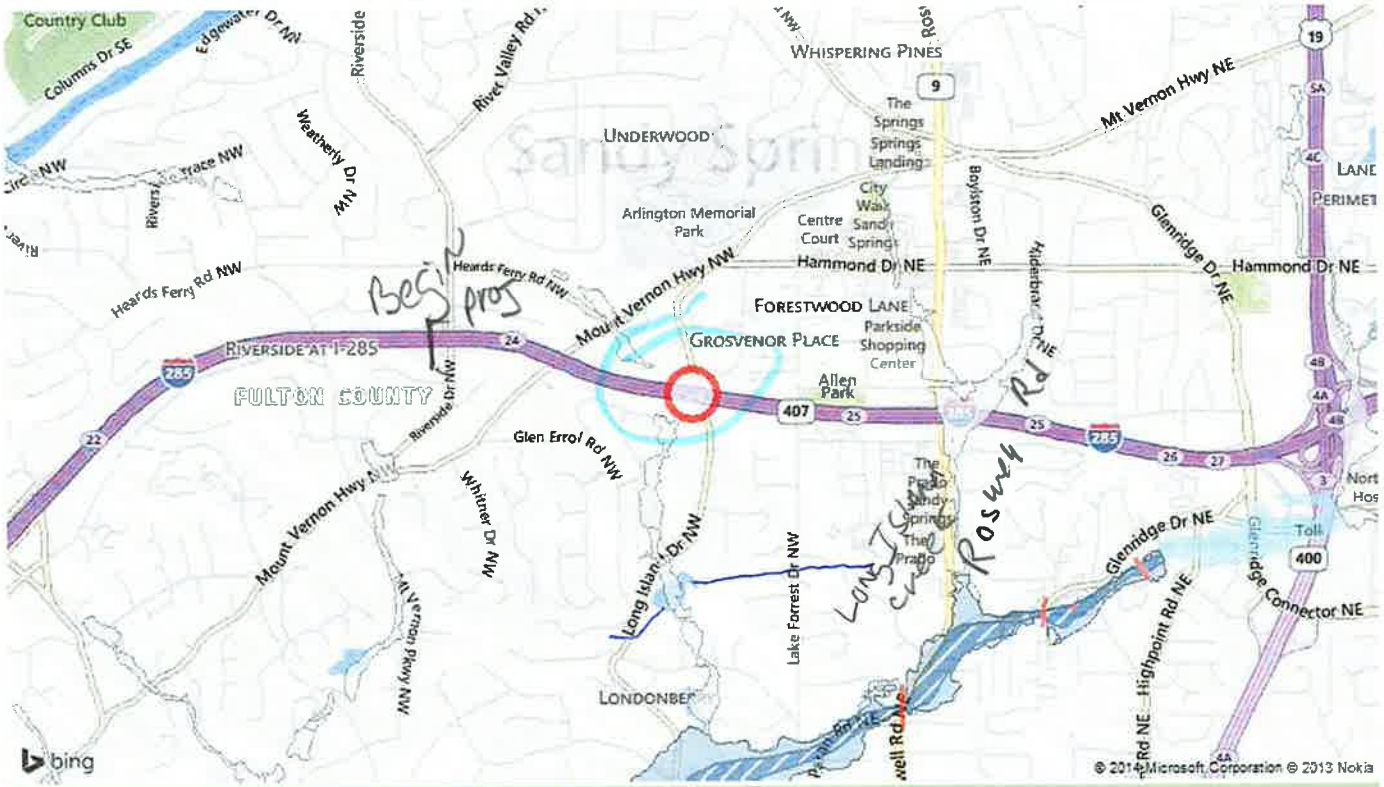
GEORGIA FLOOD M.A.P. FLOOD RISK SNAPSHOT

Mapping Assessment & Planning

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

I-285 E

Atlanta, GA 30328



Legend with Flood Zone Designations

- Flood Control Structures
- Base Flood Elevations
- Cross Sections
- Coastal Transects
- FIRM Panel Index
- Floodway Decrease
- Floodway Increase
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- Area Not Included
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Who needs flood insurance?

Federal flood insurance is required by most lenders for buildings mapped in the high-risk Special Flood Hazard Areas (SFHA) shown on flood hazard maps. Flood insurance is available to homeowners, renters, condo owners/renters, and commercial owners/renters within NFIP participating communities. Costs vary depending on how much insurance is purchased, what it covers, and the property's flood risk.

What is the Special Flood Hazard Area (SFHA)?

The SFHA is that portion of the floodplain subject to inundation by the 1% Annual chance flood and/or flood-related erosion hazards. These areas are shown on the FIRMs as Zones A, AE, AH, AO, AR AND A99

Not in a mapped floodplain?

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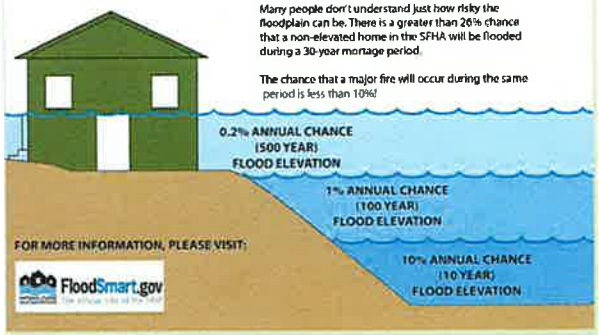
Nature Doesn't Read Flood Maps



Flood Risk Status

Panel ID:	13121C0142F
Current Flood Zone:	X
Preliminary Flood Zone:	N/A
Flood Zone Change Type:	N/A
*Probability of Flooding over 30-Year Period:	N/A

Disclaimer:This data is not to be used to determine any base flood elevations or flood zone designations for NFIP (National Flood Insurance Program) purposes. For NFIP flood insurance and regulation purposes, please refer to the published effective FIRM (Flood Rate Insurance Map) for your area of concern. Values displayed for Current Flood Zone, Preliminary Flood Zone, Flood Zone Change Type, and Probability of Flooding over a 30 -year period based on center of dot location, not extent of structure(s). Address search function provided by Bing Maps.

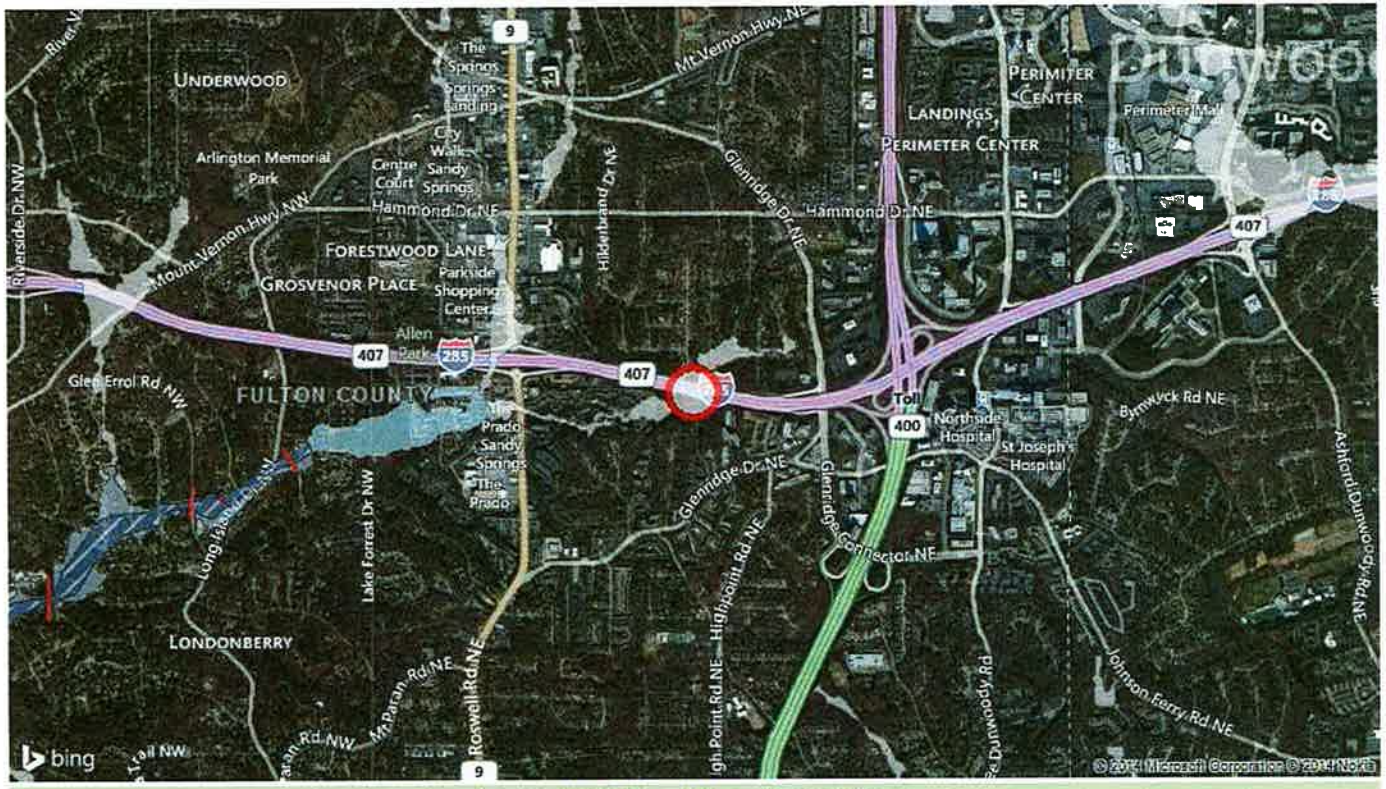
GEORGIA FLOOD M.A.P. FLOOD RISK SNAPSHOT

Mapping Assessment & Planning

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

I-285 E

Atlanta, GA 30328



Legend with Flood Zone Designations

- Flood Control Structures
- Base Flood Elevations
- Cross Sections
- Coastal Transects
- FIRM Panel Index
- Floodway Decrease
- Floodway Increase
- 100-Year Flood Zone Decrease
- 100-Year Flood Zone Increase
- Zone Change
- 1% Flood -Floodway (High Risk)
- 1% Flood - Zone AE (High Risk)
- 1% Flood - Zone A, AH, AO, or D (HighRisk)
- 0.2% Flood - Shaded Zone X (Moderate Risk)
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- Area Not Included
- Letters of Map Revision
- Coastal Barrier Resource Area

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Federal flood insurance is required by most lenders for buildings mapped in the high-risk Special Flood Hazard Areas (SFHA) shown on flood hazard maps. Flood insurance is available to homeowners, renters, condo owners/renters, and commercial owners/renters within NFIP participating communities. Costs vary depending on how much insurance is purchased, what it covers, and the property's flood risk.

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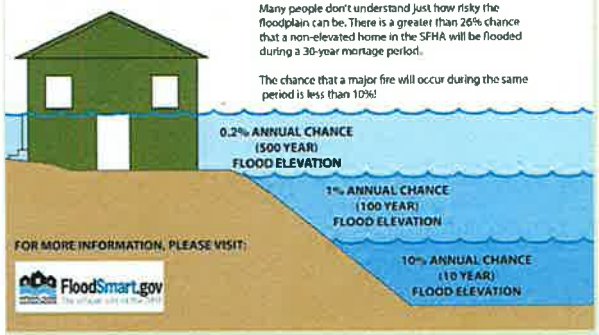

Flood Risk Status

Panel ID:	13089C0011J,13121C0161F
Current Flood Zone:	X
Preliminary Flood Zone:	N/A
Flood Zone Change Type:	N/A
*Probability of Flooding over 30-Year Period:	N/A

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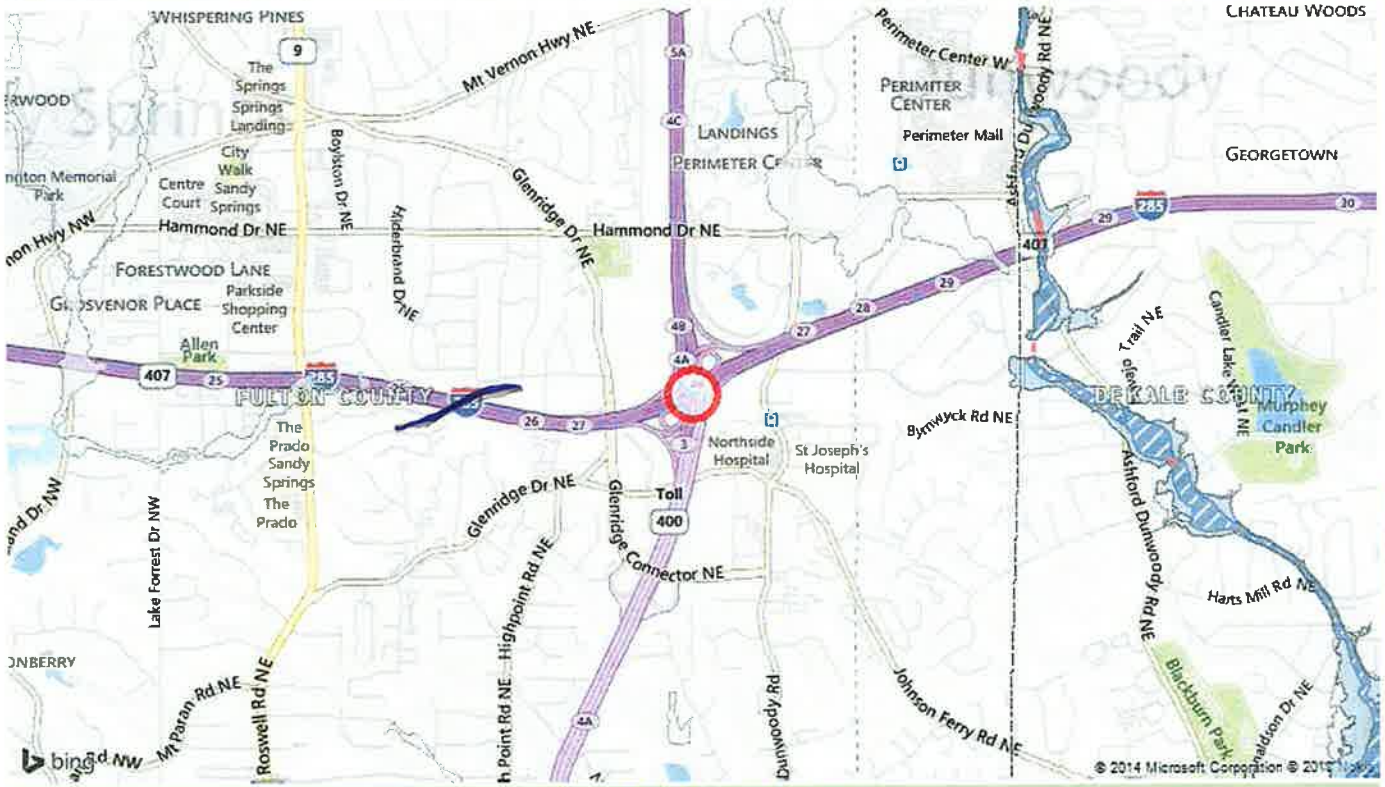
GEORGIA FLOOD M.A.P. FLOOD RISK SNAPSHOT

Mapping Assessment & Planning

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Ramp

Atlanta, GA 30328



Legend with Flood Zone Designations

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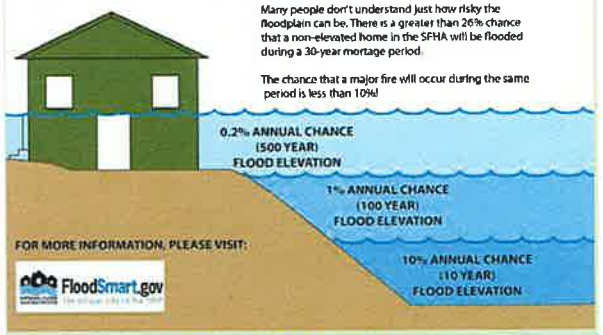

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Panel ID:	13089C0011J,13121C0161F
Current Flood Zone:	X
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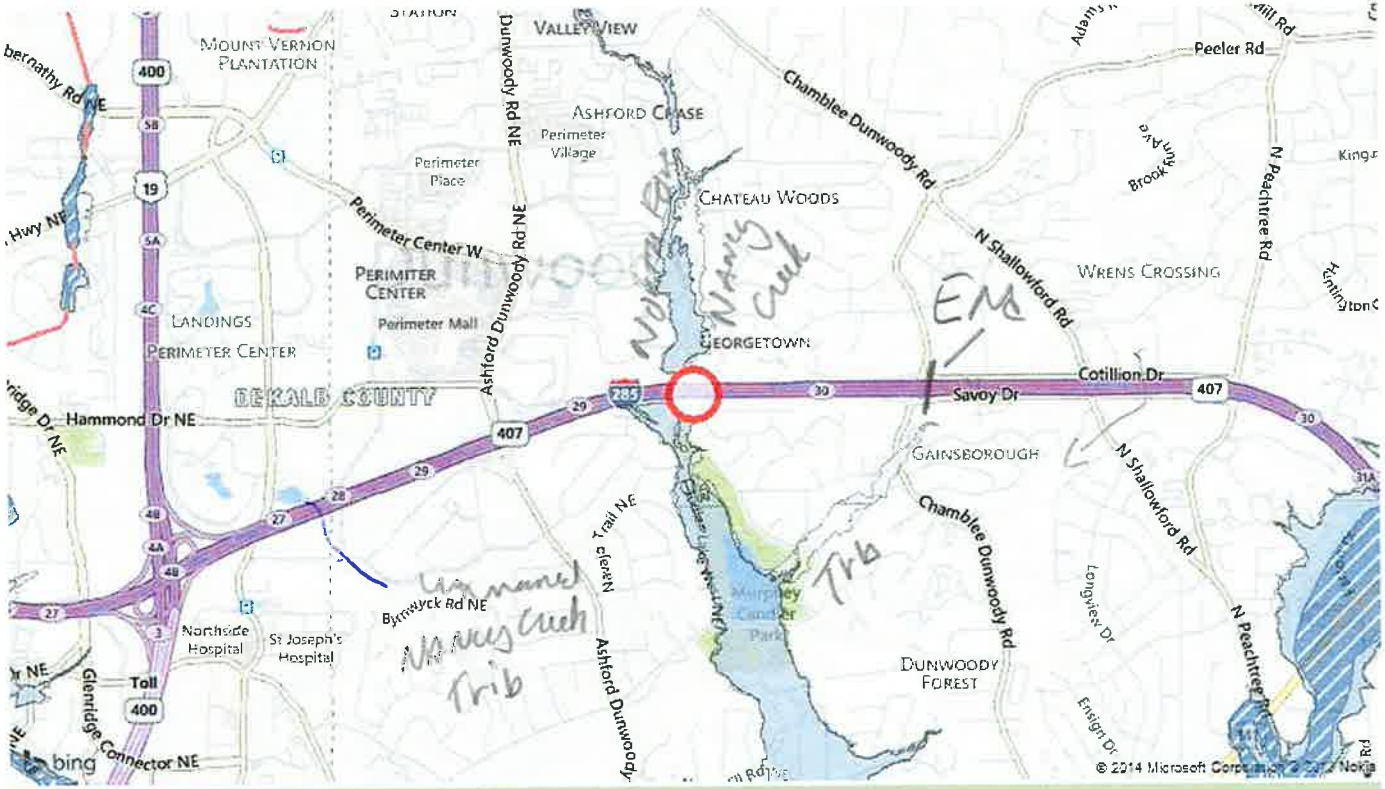
GEORGIA FLOOD M.A.P. FLOOD RISK SNAPSHOT

Mapping Assessment & Planning

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

I-285 E

Atlanta, GA 30319



Legend with Flood Zone Designations

- Flood Control Structures
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- FIRM Panel Index
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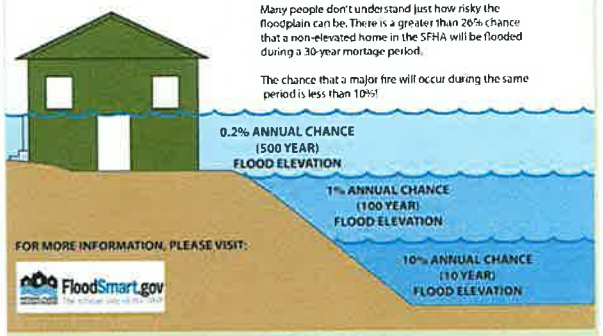

Flood Risk Status

Panel ID:	13089C0012J
Current Flood Zone:	X
Preliminary Flood Zone:	N/A
Flood Zone Change Type:	N/A
*Probability of Flooding over 30-Year Period:	N/A

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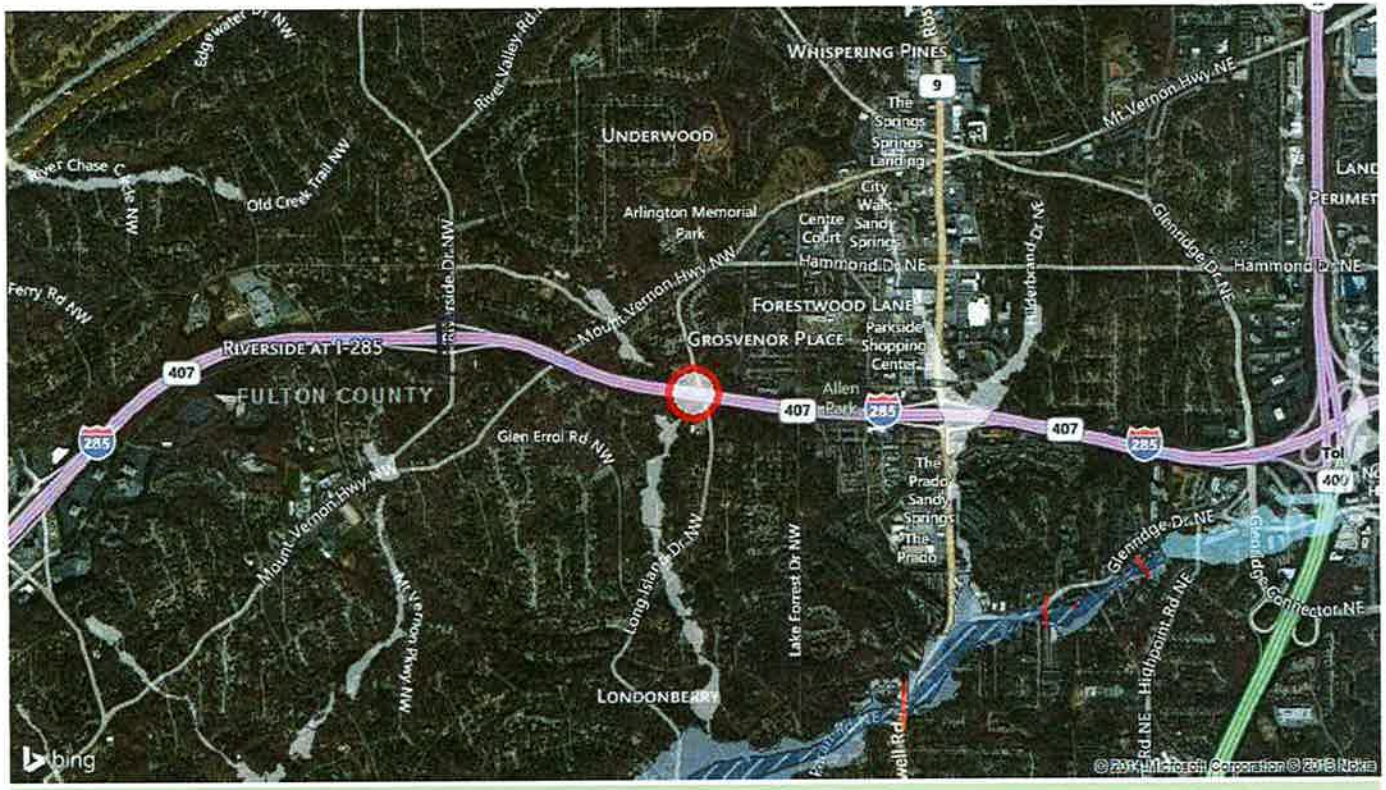
GEORGIA FLOOD M.A.P. FLOOD RISK SNAPSHOT

Mapping Assessment & Planning

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

I-285 E

Atlanta, GA 30328



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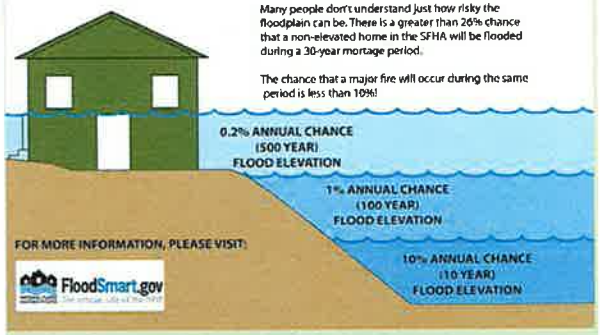

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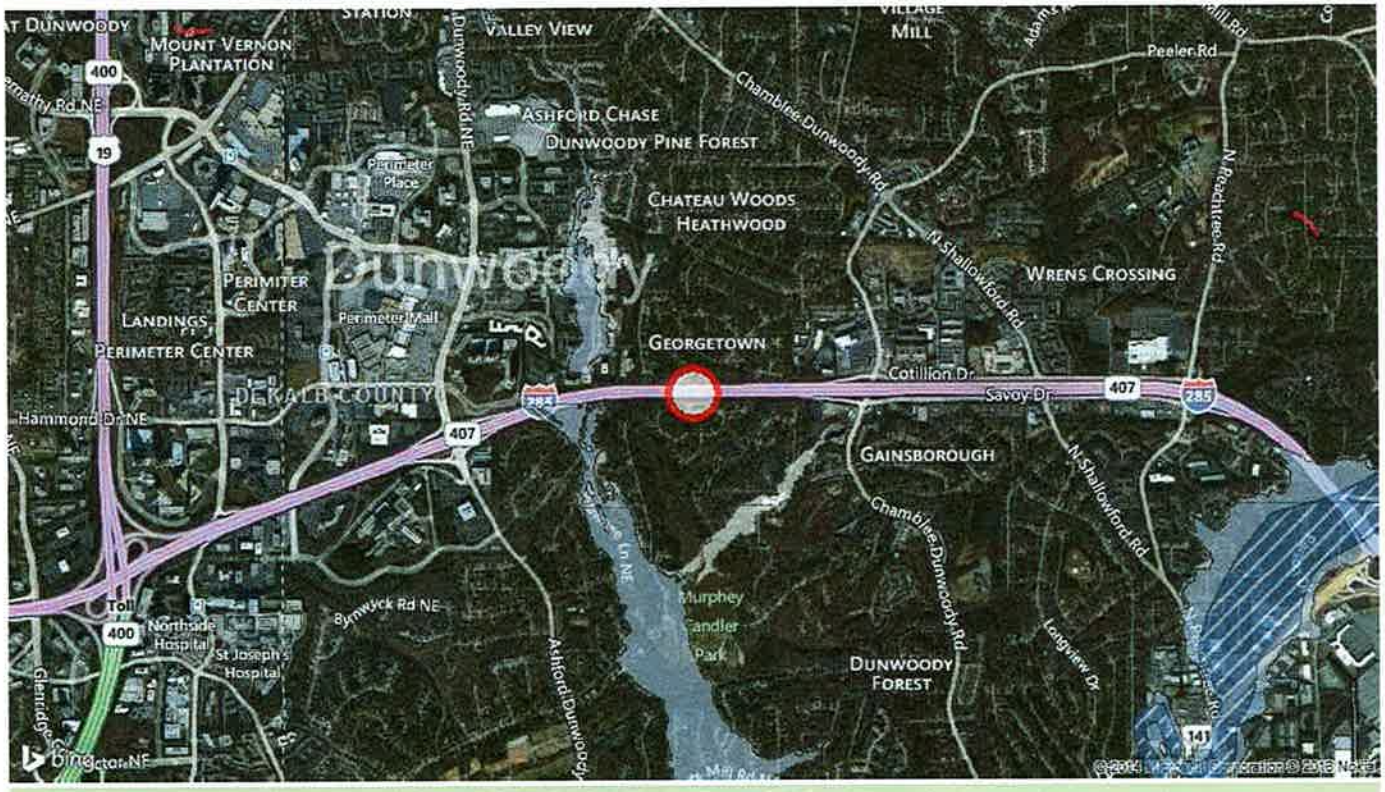
Mapping Assessment & Planning

DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

I-285 E

Atlanta, GA 30319



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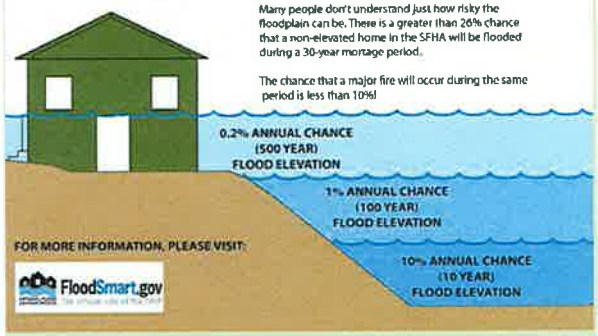

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Current Flood Zone:	X
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Keith Golden, P.E., Commissioner

GEORGIA DEPARTMENT OF TRANSPORTATION

One Georgia Center, 600 West Peachtree Street, NW
Atlanta, Georgia 30308
Telephone: (404) 631-1000

NOTIFICATION

Initiation of Section 106 Process for

GDOT P.I. # 0000784, Fulton and DeKalb Counties

June 13, 2014

The Georgia Department of Transportation (Department) is in the beginning stages of project development for this proposed transportation project. In compliance with Section 106 of the National Historic Preservation Act, the Department has determined that because of the nature and the scope of this undertaking, the proposed project has the potential to cause effects to historic properties if any such properties exist in the project area. The Department is attempting to identify historic properties already listed in the National Register of Historic Places (NRHP) and any properties not already listed that would be considered eligible for listing that are located within the geographic area of potential effects (APE) of the proposed project.

The proposed project would include operational improvements along Interstate 285 (I-285) and State Route (SR) 400 in the vicinity of the I-285/SR 400 interchange in Fulton and DeKalb Counties. The proposed improvements would include construction of barrier-separated collector-distributor (C/D) lanes along I-285 and SR-400, reconstruction of existing ramps, and new flyover bridges, as well as reconstruction and widening of existing bridges in the interchange area. Grade-separated, braided ramps would be constructed in the vicinity of Ashford Dunwoody Road and Roswell Road to eliminate conflicts between traffic entering and exiting SR 400 and traffic entering and exiting the Roswell Road and Ashford Dunwoody interchanges.

Along I-285, the proposed project would begin just west of Roswell Road and end just east of Ashford Dunwoody Road, for a distance of approximately four miles on I-285. Along SR 400, the proposed project would begin at the Glenridge Connector and extend north to the Hammond Drive interchange area, where it would join into an adjacent project (Georgia DOT project PI No. 721850). The total length of the proposed improvements along SR 400 is approximately two miles.

Additional right-of-way (ROW) would be required for the proposed project. However, the amount of additional ROW has not yet been determined and will be determined during more detailed project design.

Because of the nature and scope of the undertaking, the APE for the proposed project would include the areas within the proposed right-of-way and the viewshed of the proposed project (refer to attached graphic). Because the interchange would be reconstructed, and because the proposed project would extend to the adjacent interchanges along SR 400 and I-285, the potential for indirect effects outside the project corridor exists. This potential for indirect effects

will be further evaluated as projected data becomes available and a clearer picture of possible changes in traffic patterns and development pressures emerge.

Section 106 of the National Historic Preservation Act requires the Federal Highway Administration and the Department, in consultation with the Georgia State Historic Preservation Officer (SHPO), to identify potential consulting parties and to invite them to participate in the Section 106 process. This Notification letter is one of several methods the Department uses to encourage public participation in this process and it serves as your invitation to participate as a consulting party in the Section 106 process for this project.

A written request to become a consulting party for cultural resources for this project should be directed to:

Edwards-Pitman Environmental, Inc.
1250 Winchester Parkway
Suite 200
Smyrna, Georgia 30080

Attn: Katheryn Graff, Historian

Responses would be appreciated within thirty (30) days of receipt of this Notification letter. Please refer to the project identification number (**P.I.0000784**) in your response. The potential consulting parties identified and invited to participate in the Section 106 process for this project are the Atlanta Regional Commission, Georgia SHPO, the City of Atlanta, the City of Sandy Springs, the City of Dunwoody, the Atlanta History Center, the Atlanta Preservation Center, Sandy Springs Heritage, the Dunwoody Preservation Trust, the DeKalb History Center, the DeKalb County Commission, and the Fulton County Commission. If you are aware of other organizations or individuals interested in cultural resources in the project area not already identified, please forward their names to the Department.

Also, on behalf of the Federal Highway Administration Georgia Division (FHWA), in keeping with a government-to-government relationship and in compliance with 36CFR800, the following tribal governments are invited to participate in the Section 106 process for this project: Alabama-Coushatta Tribe of Texas, Muscogee (Creek) Nation, Muscogee (Creek) National Council, Poarch Band of Creek Indians, and the Thlopthlocco Tribal Town. Responses to this Notification regarding tribal concerns should be addressed to the attention of Mr. Jim Pomfret, the Department's American Indian liaison, at the above address.

Existing information on previously identified historic properties has been checked to determine if any are located within the APE of this undertaking. This review of existing information revealed that no properties listed in or nominated for listing in the NRHP, no National Historic Landmarks and no bridges determined eligible for inclusion in the National Register in the updated Georgia Historic Bridge Survey (GHBS) are located within the proposed project's APE. No properties 50 years old or older were identified within the proposed project's APE in the 1995 Department of Natural Resources (DNR) North Fulton County and Sandy Springs Survey.

Field surveys for historic properties will be conducted and the Criteria of Eligibility will be applied in consultation with the Georgia SHPO and other consulting parties to determine if any properties are eligible for inclusion in the NRHP.

Consulting parties are also invited to provide information concerning any historic or archaeological properties already listed in the NRHP or that could be eligible for listing in the NRHP that are not identified in this Notification letter. In accordance with Section 106 of the National Historic Preservation Act, the Department will assess project effects to any identified historic properties as preliminary project plans become available, endeavor to minimize harm to all identified historic properties and produce an Assessment of Effects report. This document will be provided to all consulting parties for comment when completed. The Department also wishes to know of any past, present or future local developments or zoning plans which may result in indirect or cumulative impacts to archaeological sites and historic structures as they relate to the proposed project.

Individuals and organizations that do not wish to become a consulting party, but would still like to comment on the proposed project will also have that opportunity throughout the plan development process. Historic resource concerns can be addressed to Katheryn Graff (770-333-9484 ext. 142 or kferrall-graff@edwards-pitman.com) of Edwards-Pitman Environmental, Inc.; archaeological resource concerns, including cemetery and other human burials, can be addressed to Jim Pomfret (404-631-1256 or jpomfret@dot.ga.gov) of this office. Questions concerning general design or location issues may be addressed to Robin Stevens (770-384-6597 or Robin.Stevens@arcadis-us.com) of Arcadis U.S., Inc.

PROJECT LOCATION MAP

GDOT P.I. #0000784 , Fulton County

N

SOURCE: Google Earth

EDWARDS-PITMAN

NOT TO SCALE

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
HISTORIC PRESERVATION DIVISION

MARK WILLIAMS
COMMISSIONER

DR. DAVID CRASS
DIVISION DIRECTOR

MEMORANDUM

TO: Hiral Patel, P.E.
State Environmental Administrator
Office of Environmental Services
Georgia Department of Transportation
Attn: Teresa Lotti

FROM: Stephanie Jordan
Transportation Projects Coordinator
Historic Preservation Division

RE: Receipt of Early Coordination Information

Project Title: PI 0000784 Improvements to I-285 & SR 400 Interchange

Project Number: HP-140616-002

County: Fulton and DeKalb

DATE: June 17, 2014

The Historic Preservation Division has received the early coordination information required by Section 106 of the National Historic Preservation Act and the Georgia Environmental Policy Act. Thank you for submitting this information. We look forward to working with you as this project progresses.

SCJ:

cc: Jennifer Giersch, FHWA
Jim Pomfret, GDOT
Dennis Cheek, GDOT
Katheryn Graff, EPEI

254 WASHINGTON STREET, SW | GROUND LEVEL | ATLANTA, GEORGIA 30334
404.656.2840 | FAX 404.657.1368 | WWW.GEORGIASHPO.ORG

Keith Golden, P.E., Commissioner

GEORGIA DEPARTMENT OF TRANSPORTATION

One Georgia Center, 600 West Peachtree Street, NW
Atlanta, Georgia 30308
Telephone: (404) 631-1000

June 10, 2014

Mr. David Lekson, Chief
Regulatory Division
U. S. Army Corps of Engineers
P. O. Box 889
Savannah, GA 31402-889

Subject: Project NHS00-0000-00(784), Fulton and DeKalb counties, P.I. No. 0000784—State Route (SR) 400 at Interstate 285 (I-285) Interchange Reconstruction

Dear Mr. Lekson:

In accordance with 40 CFR 1501.6 and 40 CFR 1508.5, we are requesting that your agency be a cooperating agency. This request is based on preliminary data collection indicating that the subject project could require an Individual Section 404 Permit from the U.S. Army Corps of Engineers. The proposed project involves operational improvements along I-285 and SR 400 in the vicinity of the I-285/SR 400 interchange, including the construction of barrier-separated collector-distributor (C/D) lanes along I-285 and SR-400, reconstruction of existing ramps, and construction of new flyover bridges, as well as reconstruction and widening of existing bridges in the interchange area. Grade-separated, braided ramps would be constructed in the vicinity of Ashford Dunwoody Road and Roswell Road to eliminate conflicts between traffic entering and exiting SR 400 and traffic entering and exiting the Roswell Road and Ashford Dunwoody interchanges.

At a later date, a discussion of logical termini, a detailed project description, and a need and purpose statement will be sent for your review once it is confirmed that the project does in fact require an Individual Permit. This project is proposed to be let as a Design-Build project, and as such, impacts are likely to change once the project is awarded and the design is refined by the Design-Build Contractor.

If you have any questions or need additional information regarding this project, please contact Michael Murdoch of the Georgia Department of Transportation's (GDOT) Office of Environmental Services at (404) 631-1178.

Sincerely,

Hiral Patel /mm

Hiral Patel, P.E.
State Environmental Administrator

HP/rlos

cc: Rodney N. Barry, P.E., FHWA
Lisa Westberry, GDOT Office of Environmental Services
Doug Chamblin, GDOT Office of Environmental Services
Marlo Clowers, GDOT Innovative Delivery

Keith Golden, P.E., Commissioner

GEORGIA DEPARTMENT OF TRANSPORTATION

One Georgia Center, 600 West Peachtree Street, NW
Atlanta, Georgia 30308
Telephone: (404) 631-1000

October 23, 2014

Mr. David Lekson, Chief
Savannah District, Regulatory Division
U. S. Army Corps of Engineers
ATTN: CESAS-RD
100 West Oglethorpe Avenue
Savannah, Georgia 31401-3640

Subject: Project NHS00-0000-00(784), Fulton and DeKalb counties, P.I. No. 0000784—State Route (SR) 400 at Interstate 285 (I-285) Interchange Reconstruction

Dear Mr. Lekson:

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If you have any questions or need additional information regarding this project, please contact Carla Benton-Hooks of the Georgia Department of Transportation's (GDOT) Office of Environmental Services at (404) 631-1415.

Sincerely,

Hiral Patel, PE

Hiral Patel, P.E.
State Environmental Administrator

HP/rlos

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Lisa Westberry, GDOT Office of Environmental Services
Doug Chamblin, GDOT Office of Environmental Services
Marlo Clowers, GDOT Innovative Delivery

SANDY SPRINGS
GEORGIA

September 10, 2014

Ms. Marlo Clowers
Georgia Department of Transportation
One Georgia Center, Suite 1900
600 West Peachtree Street, NW
Atlanta, Georgia 30308

RE: PI# 0000784 I-285 at SR 400 Interchange Reconstruction and Collector-Distributor Lane System
PI# 721850 SR 400 Collector-Distributor Lanes from Vicinity of Hammond Drive to north of Spalding Drive

Dear Ms. Clowers:

Sandy Springs appreciates its ongoing partnership and coordination with the Georgia Department of Transportation for projects within its corporate boundaries. In reference to the Early Coordination required for the Environmental Assessment as well as the Public Information Open House meetings conducted on August 19 and 21, 2014, City staff has prepared a summary of comments, questions, capital improvement projects, and planned projects identified in prior adopted plans for the Department's consideration and comment.

Combined, both projects are anticipated to improve traffic operations and mobility in Sandy Springs. Management and staff looks forward to meeting on September 22 to gain a better understanding of the projects and their traffic and physical impact on Sandy Springs.

Please do not hesitate to contact me or Bryant Poole (BPoole@SandySpringsga.gov) should you have any questions.

Sincerely,

John F. McDonough
City Manager

Enclosure

7840 Roswell Road, Building 500 • Sandy Springs, Georgia 30350 • 770.730.5600 • 770.206.1420 fax • SandySpringsGA.gov

Sandy Springs Public Works
Comments on I-285/SR 400 Interchange and associated Collector-Distributor Projects (PI#0000784, PI#721850)
10 September 2014

GDOT PI#0000784 (AR-957) I-285 at SR 400 Interchange Reconstruction and Collector-Distributor Lane System

Topic	Comment / Question
Concept and traffic study	What are the overall impacts of the proposed interchange and CD system improvements on Sandy Springs local street network? What modifications will be undertaken on local streets at interchanges to accommodate ramp access? At which access locations will ramp meters be included?
Design features	What accommodations are included in design for decorative lighting and architectural sound walls? What architectural features are included within design for new structures? Sandy Springs supports use of "Texas-style" barriers, granite-style facing on walls, and architectural bridges. What type of landscaping enhancements are included?
Hammond Drive access at existing half-diamond interchange	Can access to Hammond Drive from I-285 CD system to and from the south be provided?
No access between Roswell Road and Glenridge Drive	What are the local street impacts as a result of restricting access on the I-285 CD system between Glenridge Drive and Roswell Road?
Bridge or Local Street Connection to Sandy Springs Circle	What are results of the traffic study to provide access at a new access location at Sandy Springs Circle? What is the opportunity to add bridge across I-285 to provide local street access?
Roswell Road enhancements	GDOT permitted a landscaping plan for the I-285 at Roswell Road interchange. What is the plan for replacing landscaping planted with this permit?
Long Island Drive crossing	Will planned structures permit future widening of Long Island Drive to provide adequate bicycle and pedestrian facilities?
Lake Forrest Drive crossing	Will planned structures permit future widening of Lake Forrest Drive to provide adequate bicycle and pedestrian facilities?
Glenridge Drive interchange	Will adequate width be provided for dual left turn lanes from Glenridge Drive north to I-285 west? Will planned structures permit future widening of Glenridge Drive to provide adequate operations as well as bicycle and pedestrian facilities? Are pedestrian crossing improvements included in design for Glenridge Drive side of ramp?

Sandy Springs Public Works
Comments on I-285/SR 400 Interchange and associated Collector-Distributor Projects (PI#0000784, PI#721850)
10 September 2014

Topic	Comment / Question
Peachtree Dunwoody Road interchange	Will capacity be added to the Peachtree Dunwoody Road eastbound on-ramp to I-285? Will adequate width be provided for dual left turn lanes from Peachtree Dunwoody Drive south to I-285 east? Have the Perimeter CID (PCID) plans for the Lake Hearn Drive and Peachtree Dunwoody Road operational modifications been incorporated into the concept? Will planned structures permit future widening of Peachtree Dunwoody Road to provide adequate bicycle and pedestrian facilities? Are pedestrian crossing improvements included in design for Peachtree Dunwoody Road side of ramp?
No access between Peachtree Dunwoody Road and Ashford Dunwoody Road	What are the local street impacts as a result of restricting access on the I-285 CD system between Peachtree Dunwoody Road and Ashford Dunwoody Road?
Trail accommodation	Sandy Springs has identified an opportunity to add a trail along the I-285 corridor in the future. What is the opportunity for accommodating this trail?

Capital Projects – The following project is funded by local/federal funds is under design.

PI# 12629 (FN -282): SR 9 (Roswell Road) - ITS System Expansion/Congestion Reduction and Traffic Flow Improvements from Atlanta City Limits to Abernathy Road

Planned Projects - The following projects have been identified in adopted City or Perimeter CID Plans:

Planned Project Description	Plan
C13: Improve Mount Vernon Highway between Northside Drive and Peachtree Dunwoody Road to maintain two through lanes with intersection turn lanes, sidewalks and bicycle lanes.	Transportation Master Plan (adopted 2008)
E6: Install sidewalks along Mt. Vernon Highway from Lake Forrest Drive to Powers Ferry Road	Transportation Master Plan (adopted 2008)
E16: Connect sidewalks along Peachtree Dunwoody Road from Mount Vernon Highway to City of Atlanta to provide pedestrian walking route for MARTA and trail access	Transportation Master Plan (adopted 2008)
E17: Incorporate bike lane construction in other projects to provide cohesive and connected bicycle	Transportation Master Plan

Planned Project Description	Plan
network, including: Mount Vernon Highway (Northside Drive/Chattahoochee National Recreation area to Peachtree Dunwoody Road), Glenridge Drive (Johnson Ferry Road to Hammond Drive), Hammond Drive (Roswell Road to Barfield Road), Peachtree Dunwoody Road (Abernathy Road to Spalding Drive)	(adopted 2008)
T-3: Roswell Road Node Improvements; Includes sidewalk/ streetscape improvements, traffic signal upgrades, and mid-block crosswalks, Glenridge Drive to I-285	Roswell Road Corridor LCI Study (adopted 2008)
T-6: Lake Forrest Drive Sidewalks and Bicycle Lanes from Atlanta City Limits to I-285	Roswell Road Corridor LCI Study (adopted 2008)
BP202: Westside Parkway/SR 9 (or parallel roadway) bicycle route designation from Forsyth County to City of Atlanta. Enhance bike/pedestrian facilities along this corridor (or along a nearby parallel facility where development on SR 9 precludes), creating a continuous north-south route.	North Fulton Transportation Plan (adopted 2010)
T-5: Multi-Modal Improvements along Glenridge Connector / Glenridge Drive between Hammond Drive and Peachtree Dunwoody Road	PCID 10-year Update LCI (adopted 2011)
T-19: Multi-Modal Improvements and Intersection Improvement Program for Peachtree-Dunwoody Road (from I-285 to Abernathy Road)	PCID 10-year Update LCI (adopted 2011)
A20: Peachtree Dunwoody Road Sidepath SB, from Glenridge Connector to I-285	PCIDs Commuter Trail System Master Plan (2012)
Sidewalks and Streetscapes are required as included in Main Street Overlay District: Lake Forrest Drive and Roswell Road.	Zoning Ordinance, Article 12, Main Street Overlay District and City Center Master Plan (adopted 2012)
The following streets are included in the City's adopted Sidewalk Master Plan network (includes a minimum of 2-foot curb/gutter, 2-foot landscape strip, and 5-foot sidewalk on both sides of the street): Mt. Vernon Highway, Long Island Drive, Lake Forrest Drive, Glenridge Drive, Peachtree Dunwoody Road	Sidewalk Master Plan network (adopted 2008)

Sandy Springs Public Works
Comments on I-285/SR 400 Interchange and associated Collector-Distributor Projects (PI#0000784, PI#721850)
10 September 2014

GDOT PI#721850- (FN-AR-100A) SR 400 Collector/Distributor Lanes from Vicinity of Hammond Drive and Abernathy Road to north of Spalding Drive

Topic	Comment / Question
Concept and traffic study	What are the overall impacts of the proposed CD system improvements on Sandy Springs local street network? What modifications will be undertaken at interchanges to accommodate ramp access? At which access locations will ramp meters be included?
Design features	What accommodations are included in design for decorative lighting and architectural sound walls? What architectural features are included within design for new structures? ? Sandy Springs supports use of "Texas-style" barriers, granite-style facing on walls, and architectural bridges. What type of landscaping enhancements are included?
Hammond Drive access at existing half-diamond interchange	Is adding access to Hammond Drive from SR 400 to and from the south possible?
Abernathy Road interchange	What is the proposed interchange configuration and cross-section for Abernathy Road? Sandy Springs concerns include: eastbound weave in segment of Abernathy Road between SR 400 ramps and Peachtree Dunwoody Road left turn lanes; safe and separated access for bicyclists and pedestrians east-west on Abernathy Road through the interchange; if there is a significant reduction in right-of-way requirement in northeast corner, what is the plan for that abandoned right-of-way?
Access to Hines Development	Can the ramp configuration provide direct access to and from proposed Hines Development (east of SR 400, south of Abernathy Road, west of Peachtree Dunwoody Road, and north of Mt. Vernon Highway)?
Mt. Vernon Highway crossing	What is the proposed cross-section for the Mt. Vernon Highway overpass bridge? Is this location being considered for a future managed lane interchange? What accommodations will be provided for pedestrians and bicyclists?
MARTA access at the North Springs station	What is the opportunity to provide access to and from the south from the CD system?
New Bridge Crossing	What is the opportunity to create a new overpass bridge connecting Glenlake Parkway to Peachtree Dunwoody Road at a future location between the North Springs Bridge and Abernathy Road?
Spalding Drive crossing	If the Spalding Drive overpass bridge is replaced, what is the proposed cross-section? What accommodations will be provided for pedestrians and bicyclists?
Trail accommodation	Sandy Springs has identified an opportunity to extend the 400 trail (from Buckhead) along the SR 400 corridor in the future. What is the opportunity for accommodating this trail?

Capital Projects – The following projects are funded and in concept development.

PI# 12631 (FN-284): Perimeter Activity Center - ITS Upgrades and System Expansion/Congestion Reduction and Traffic Flow Improvements for Hammond Drive, Glenridge Drive, Johnson Ferry Road, Glenridge Connector, and Peachtree Dunwoody Road
Lake Hearn Drive/Peachtree Dunwoody Pedestrian and Operational Improvements (SRTA funded PCID project)

Planned Projects - The following projects have been identified in adopted City or Perimeter CID Plans:

Project	Plan
D5: Widen Abernathy Road from Roswell Road to SR 400 to 6 lanes with multiuse trail *(NOTE: Sandy Springs has removed widening of Abernathy Road to 6 lanes from the long range plan)*	Transportation Master Plan (adopted 2008)
C13: Improve Mount Vernon Highway between Northside Drive and Peachtree Dunwoody Road to maintain two through lanes with intersection turn lanes, sidewalks and bicycle lanes.	Transportation Master Plan (adopted 2008)
E17: Incorporate bike lane construction in other projects to provide cohesive and connected bicycle network, including: Mount Vernon Highway (Northside Drive/Chattahoochee National Recreation area to Peachtree Dunwoody Road), Glenridge Drive (Johnson Ferry Road to Hammond Drive), Hammond Drive (Roswell Road to Barfield Road), Peachtree Dunwoody Road (Abernathy Road to Spalding Drive)	Transportation Master Plan (adopted 2008)
D8: Improve Hammond Drive corridor between Glenridge Drive and Roswell Road to provide 4 through lanes as a "complete street" to include automobile, pedestrian, transit, bicycle, and landscaping/aesthetic components	Transportation Master Plan (adopted 2008)
E9: Construct multiuse trail along power line easement east from Morgan Falls to SR 400, north to Pitts Road, then east to Spalding Drive	Transportation Master Plan (adopted 2008)
E10: Construct multiuse trail along Spalding Drive from Peachtree Dunwoody Road to Pitts Road	Transportation Master Plan (adopted 2008)
T-10: Multi-Modal Improvements along Hammond Drive from GA 400 to DeKalb County Line: Includes widening from 4 to 6 lanes and improved facilities for bicyclists and pedestrians	PCID 10-year Update LCI (adopted 2011)
T-28: Multi-Use Path along Mt Vernon Highway	PCID 10-year Update LCI (adopted 2011)
T-2: Glenlake Parkway Corridor Improvements - Bicycle/Pedestrian Improvements, and shuttle stops along	PCID 10-year Update LCI

Project	Plan
Glenlake Parkway (to support planned transit along this corridor) - Including new bike/pedestrian connection from Glenlake Parkway to North Springs MARTA Station (across GA 400)	(adopted 2011)
A20: Peachtree Dunwoody Road Sidepath SB from Glenridge Connector to I-285	PCIDs Commuter Trail System Master Plan (2012)
A21: Peachtree Dunwoody Road Sidepath SB from I-285 to Hammond Drive	PCIDs Commuter Trail System Master Plan (2012)
A18: Hammond Drive Sidepath EB, from SR 400 to Peachtree Dunwoody Rd	
A25: Hammond Drive Sidepath EB (plus cantilever deck for overpass), road diet from Barfield Road to SR 400	PCIDs Commuter Trail System Master Plan (2012)
A35: Barfield Road - Convert existing shoulder to bike lanes or path within ROW or path along SB SR 400, restripe Hammond Drive to Mt. Vernon Highway	PCIDs Commuter Trail System Master Plan (2012)
A17: Mount Vernon Highway Sidepath WB (plus cantilever deck for overpass), from Barfield Road to Crestline Parkway	PCIDs Commuter Trail System Master Plan (2012)
A05: Abernathy Road Sidepath EB from Glenlake Parkway to SR 400	PCIDs Commuter Trail System Master Plan (2012)
A06: Abernathy Road Sidepath EB, path in ROW from SR 400 to Peachtree Dunwoody Rd	PCIDs Commuter Trail System Master Plan (2012)
Sidewalks and Streetscapes are required as included in PCID Overlay District: Mt. Vernon Highway, Glenridge Connector, Johnson Ferry Road, Hammond Drive, and Abernathy Road.	Zoning Ordinance, Article 12, PCID Overlay District
The following streets are included in the City's adopted Sidewalk Master Plan network (includes a minimum of 2-foot curb/gutter, 2-foot landscape strip, and 5-foot sidewalk on both sides of the street): Mt. Vernon Highway, Glenridge Connector, Johnson Ferry Road, Hammond Drive, Abernathy Road, Spalding Drive	Sidewalk Master Plan network (adopted 2008)

Keith Golden, P.E. Commissioner

GEORGIA DEPARTMENT OF TRANSPORTATION

One Georgia Center, 600 West Peachtree Street, NW
Atlanta, Georgia 30308
Telephone: (404) 631-1000

October 1, 2014

City of Sandy Springs, Public Works
7840 Roswell Road, Building 500
Sandy Springs, Georgia 30350
Attn: Mr. John McDonough, City Manager

Subject: **Response to Early Coordination and Public Information Open House (PIOH) Comments**
P.I. No's: 0000784, Fulton and DeKalb Counties and 721850-, Fulton County
I-285 @ SR 400 Interchange and SR 400 Collector-Distributor

Dear Mr. McDonough:

Georgia Department of Transportation (GDOT) appreciates your participation in this very important project and offers the attached responses to your comments submitted on September 10, 2014. We look forward to continued coordination with you for successful delivery of this project.

If you have any questions, please contact Ms. Marlo L. Clowers, P.E. at (404) 631-1713 or mclowers@dot.ga.gov.

Sincerely,

Darryl D. VanMeter, P.E.
State Innovative Delivery Engineer

DVM:MLC
Attachments

Cc: General Files

0000784 – 285/400 Interchange, Responses to City of Sandy Springs Comments

Concept and traffic study:

What are the overall impacts of the proposed interchange and CD system improvements on Sandy Springs local street network?

Suggested response: Detailed traffic studies are currently underway. It is expected that the overall traffic operations in the vicinity of the I-285/SR 400 interchange would improve, which would not only facilitate better traffic movements along I-285 and SR 400, but also along connecting service interchanges and surface streets.

What modifications will be undertaken on local streets at interchanges to accommodate ramp access?

Suggested response: No modifications are proposed on local streets. All ramps within the project limits would be reconstructed to accommodate the proposed CD lanes and associated braided ramps. This reconstruction may require minor modifications to the existing ramp tie-ins at the local streets (e.g., changing the radius). No new turn lanes would be added on local streets.

At which access locations will ramp meters be included?

Suggested response: Ramp meter locations are currently being evaluated. It is likely that the existing ramp meters would be replaced.

Design features:

What accommodations are included in the design for decorative lighting and architectural sound walls?

What architectural features are included within design for new structures? Sandy Springs supports use of "Texas-style" barriers, granite-style facing on walls, and architectural bridges.

What type of landscaping enhancements are included?

Suggested response: Georgia DOT is open to including locally preferred aesthetic features into the project design, where feasible. The exact nature of any aesthetic enhancements, including types and locations, would need to be approved through various Georgia DOT offices (including Design and Maintenance), as well as the Federal Highway Administration. Please provide the Department with details and specifications of these preferred enhancements as soon as possible so that they may be evaluated for inclusion into the project. Once a Design-Build Contractor is selected for the I-285/SR 400 Interchange Reconstruction project and the project advances to final design, it would be much more difficult to account for specific details in the project's design. In addition, any aesthetic enhancements to the GDOT standard materials and specifications add cost to the project, Georgia DOT would enter into an agreement with the local governments, as applicable, to bear the cost of these additions.

No access between Roswell Road and Glenridge Drive:

What are the local street impacts as a result of restricting access on the I-285 CD system between Glenridge Drive and Roswell Road?

Suggested response: After construction of the project, traffic leaving Glenridge Drive to access I-285 westbound would not be able access the Roswell Road exit via I-285 (however, vehicles would still be able to access I-285 from Glenridge Drive). Vehicles wishing to make this trip would have the options to use Hammond Drive to the north or Glenridge Drive to the south to access Roswell Road. Due to the existing connectivity between Glenridge Drive and Roswell Road, a review of traffic data for the area shows that very few vehicles currently use the I-285 westbound lanes to travel between these two roads. Eastbound access along I-285 between Roswell Road and Glenridge Drive would be maintained under the project.

Bridge or Local Street Connection to Sandy Springs Circle:

What are results of the traffic study to provide access at a new access location at Sandy Springs Circle?

Suggested response: Providing additional access at Sandy Springs Circle was not part of the traffic study for the I-285/SR 400 Interchange Reconstruction project.

What is the opportunity to add bridge across I-285 to provide local street access?

Suggested response: Providing additional local street access is not included as part of the I-285/SR 400 Interchange Reconstruction project, and does not meet the need and purpose for the project.

Roswell Road enhancements:

GDOT permitted a landscaping plan for the 1-285 at Roswell Road interchange. What is the plan for replacing landscaping planted with this permit?

Suggested response: GDOT will adhere to the stipulations included within the approved encroachment permit for landscaping.

Long Island Drive crossing:

Will planned structures permit future widening of Long Island Drive to provide adequate bicycle and pedestrian facilities?

Suggested response: The existing I-285 bridge over Long Island Drive would remain in-tact as part of this project. To accommodate the relocated entrance ramp from Roswell Road, the existing bridge is proposed to be widened. This widened bridge would match the existing pier locations of the existing bridge. The space available under the wider bridge would match the existing condition along Long Island Drive.

Lake Forrest Drive crossing:

Will planned structures permit future widening of Lake Forrest Drive to provide adequate bicycle and pedestrian facilities?

Suggested response: The existing I-285 bridge over Lake Forrest Drive would remain in-tact as part of this project. To accommodate the relocated entrance and exit ramps for Roswell Road, a bridge widening or separate bridge structures for the ramps are being studied. If the bridge is widened, the widened bridge would match the existing pier locations of the existing bridge. The space available under the wider bridge would match the existing condition along Lake Forrest Drive. If new bridge structures are constructed for the ramps, these structures could be designed to accommodate future construction of pedestrian/bicycle facilities along Lake Forrest Drive.

Glenridge Drive interchange:

Will adequate width be provided for dual left turn lanes from Glenridge Drive north to I-285 west?

Suggested response: No modifications to the existing I-285 bridge over Glenridge Drive are proposed as part of this project.

Will planned structures permit future widening of Glenridge Drive to provide adequate operations as well as bicycle and pedestrian facilities?

Suggested response: The existing I-285 bridge over Glenridge Drive would remain in-tact as part of this project. To accommodate the CD lanes, new bridge structures are proposed. These new structures could be designed to accommodate future widening of Glenridge Drive.

Are pedestrian crossing improvements included in design for Glenridge Drive side of ramp?

Suggested response: Pedestrian crossing improvements at ramp termini will be considered during the final design of the project to be consistent with Georgia DOT design standards and policies.

Peachtree Dunwoody Road interchange:

Will capacity be added to the Peachtree Dunwoody Road eastbound on-ramp to I-285?

Suggested response: No, additional capacity is not proposed for the Peachtree Dunwoody Road eastbound on-ramp. However, minor widening of this ramp is proposed to accommodate two lanes at the ramp termini, which would merge to a single lane prior to entering I-285.

Will adequate width be provided for dual left turn lanes from Peachtree Dunwoody Drive south to I-285 east?

Suggested response: No modifications to the existing I-285 bridge over Peachtree Dunwoody Road are proposed as part of this project.

Have the Perimeter CID (PCIDs) plans for the Lake Hearn Drive and Peachtree Dunwoody Road operational modifications been incorporated into the concept?

Suggested response: The Department has not received plan details from PCIDs for the Lake Hearn at Peachtree Dunwoody Road intersection improvement. The existing I-285 bridge over Peachtree Dunwoody Road is not proposed for replacement as part of the I-285/SR 400 Interchange Reconstruction project. Therefore, the existing spacing under the bridge would remain.

Will planned structures permit future widening of Peachtree Dunwoody Road to provide adequate bicycle and pedestrian facilities?

Suggested response: The existing I-285 bridge over Peachtree Dunwoody Road would remain in-tact as part of this project. To accommodate the CD lanes, new bridge structures are proposed. These new structures could be designed to accommodate future widening of Peachtree Dunwoody Road to provide bicycle and pedestrian facilities.

Are pedestrian crossing improvements included in design for Peachtree Dunwoody Road side of ramp?

Suggested response: Pedestrian crossing improvements at ramp termini will be considered during the final design of the project to be consistent with Georgia DOT design standards and policies.

No access between Peachtree Dunwoody Road and Ashford Dunwoody Road:

What are the local street impacts as a result of restricting access on the I-285 CD system between Peachtree Dunwoody Road and Ashford Dunwoody Road?

Suggested response: Coordination with transportation planners from the City of Dunwoody and City of Brookhaven regarding this loss of local east-west connectivity on I-285 has occurred. The cities indicated that the resulting changes in travel patterns would be accommodated by the existing parallel routes close to I-285 (Lake Hearn Drive/Perimeter Summit Parkway and Hammond Drive, with both Peachtree Dunwoody Road and Perimeter Center Parkway providing north-south access across I-285).

Trail accommodation:

Sandy Springs has identified an opportunity to add a trail along the I-285 corridor in the future. What is the opportunity for accommodating this trail?

Suggested response: During any project development, GDOT aims to not preclude the construction of future projects, where such a project is part of an adopted area Master Plan or Trail Plan. However, the construction of trails/paths is not currently within the scope of the proposed project. Georgia DOT is willing to work with local governments to help bring their projects to fruition, as part of a separate project or action.

Other Projects in the Area:

Capital Projects (local/federal funds):

PI# 12629 (FN -282): SR 9 (Roswell Road) - ITS System Expansion/Congestion Reduction and Traffic Flow Improvements from Atlanta City Limits to Abernathy Road

Planned Projects (identified in adopted City or PCID Plans):

C13: Improve Mount Vernon Highway between Northside Drive and Peachtree Dunwoody Road to maintain two through lanes with intersection turn lanes, sidewalks and bicycle lanes.

E6: Install sidewalks along Mt. Vernon Highway from Lake Forrest Drive to Powers Ferry Road

E16: Connect sidewalks along Peachtree Dunwoody Road from Mount Vernon Highway to City of Atlanta to provide pedestrian walking route for MARTA and trail access

E17: Incorporate bike lane construction in other projects to provide cohesive and connected bicycle network, including: Mount Vernon Highway (Northside Drive/Chattahoochee National Recreation area to Peachtree Dunwoody Road), Glenridge Drive (Johnson Ferry Road to Hammond Drive), Hammond Drive (Roswell Road to Barfield Road), Peachtree Dunwoody Road (Abernathy Road to Spalding Drive)

T-3: Roswell Road Node Improvements; Includes sidewalk/ streetscape improvements, traffic signal upgrades, and mid-block crosswalks, Glenridge Drive to I-285

T-6: Lake Forrest Drive Sidewalks and Bicycle Lanes from Atlanta City Limits to I-285

BP202: Westside Parkway/SR 9 (or parallel roadway) bicycle route designation from Forsyth County to City of Atlanta. Enhance bike/pedestrian facilities along this corridor (or along a nearby parallel facility where development on SR 9 precludes), creating a continuous north-south route.

T-5: Multi-Modal Improvements along Glen ridge Connector/Glenridge Drive between Hammond Drive and Peachtree Dunwoody Road

T-19: Multi-Modal Improvements and Intersection Improvement Program for Peachtree-Dunwoody Road (from I-285 to Abernathy Road)

A20: Peachtree Dunwoody Road Side path SB, from Glenridge Connector to I-285

Sidewalks and Streetscapes are required as included in Main Street Overlay District: Lake Forrest Drive and Roswell Road.

The following streets are included in the City's adopted Sidewalk Master Plan network (includes a minimum of 2-foot curb/gutter, 2-foot landscape strip, and 5-foot sidewalk on both sides of the street): Mt. Vernon Highway, Long Island Drive, Lake Forrest Drive, Glenridge Drive, Peachtree Dunwoody Road

Suggested Response: Any new bridge structures could be designed to accommodate future pedestrian and bicycle improvements on the cross streets as per the City of Sandy Springs' master plans.

721850 – SR 400 CD, Response to City of Sandy Springs Comments

Concept and traffic study:

What modifications will be undertaken on local streets at interchanges to accommodate ramp access?

Suggested response: No modifications are proposed on Hammond Drive or Spalding Drive. Existing ramp terminals at Hammond Drive are already constructed to accommodate the proposed CD lanes and associated braided ramps. The project proposes re-construction of the Abernathy Road interchange to accommodate the proposed CD lanes. This re-construction is anticipated to include modifications to Abernathy Road interchange configuration. . Detailed traffic studies (currently underway) are evaluating alternative interchange configurations at Abernathy Road. Re-construction of the interchange may entail widening and the relocation of existing signalized intersections along Abernathy Road.

Hammond Drive access at existing half-diamond interchange:

Can access to Hammond Drive from I-285 CD system to and from the south be provided?

Suggested response: No. South-facing access to Hammond Drive would substantially impact the operation of the I-285/SR 400 interchange without the construction of additional separated ramps. Therefore, this access was not included in the original concept of the project and is not being considered as part of the re-evaluation of the project. The existing Hammond Drive interchange improvements were approved under the need and purpose of the original project (approved in 1998). As those improvements have been constructed as part of a previous project, it is determined that the need and purpose of the original project (approved in 1998) has been met. Therefore, providing additional access to Hammond Drive is not consistent with the project's purpose and need.

Abernathy Road Interchange:

What is the proposed interchange configuration and cross-section for Abernathy Road ?

Suggested response: The ongoing detailed traffic studies are evaluating multiple alternative configurations for the Abernathy Road interchange. The traffic studies are considering a variety of concerns, including the eastbound weave between the NB SR 400 ramps and the Peachtree-Dunwoody Road left-turn lanes. Public comment at the recent PIOHs also identified this movement as one of concern. The team is aware of the desired treatments for pedestrians and bicyclists recommended in the *PCIDs Commuter Trail System Master Plan (2012)*. The treatments for providing pedestrian and bicyclist access through the interchange are potentially affected by the recommended interchange configuration. When the team determines a recommendation for the interchange configuration, a follow-up meeting will be held with PCIDs and the City of Sandy Springs to discuss the interchange recommendation and appropriate pedestrian/bicyclist treatments.

If there is a significant reduction in right-of-way requirement in the northeast corner, what is the plan for that abandoned right-of-way?

Suggested response: The ongoing detailed traffic studies are evaluating multiple alternative configurations for the Abernathy Road interchange. The configuration will determine if there is a significant reduction in the northeast quadrant. However, it is anticipated that any "additional" right-of-way would not be abandoned.

Access to Hines Development:

Can the ramp configuration provide direct access to and from proposed Hines Development?

Suggested response: GDOT does not typically provide direct access to private developments from ramps to/from limited access facilities. Also, providing additional access in the vicinity of Mt Vernon Highway was not part of the original need and purpose of the CD project. Additional access to Mt Vernon Highway or direct access to the Hines Development is beyond the need and purpose of the CD project.

Mt. Vernon Highway Crossing:

What is the proposed cross-section for the Mt. Vernon Highway overpass bridge?

Suggested response: The anticipated cross-section is a four-lane, raised-median divided facility. This cross-section is warranted based on the projection of future ADT volumes on Mt. Vernon Highway in the design year (2039). This cross-section also coordinates with the improvements on Mt. Vernon Highway near the Hines Development frontage (between Crestline Parkway and Peachtree-Dunwoody Road) to the east. The cross-section adapts to the existing three-lane section west of Barfield Road by dropping/adding the outside through lanes across this intersection. When the team requests a follow-up meeting to be held with PCIDs and the City of Sandy Springs, discussion of the recommended cross-section will be requested.

Is this location being considered for a future managed lane interchange?

Suggested response: Yes. Based on the previous managed lane feasibility study, Mt. Vernon Highway was recommended for a future access. While that recommendation is not final, the cross-section is being developed with a sufficient width raised median to allow for future construction of one (1) left-turn lane for south-facing or north-facing managed lane access.

What accommodations will be provided for pedestrians and bicyclists?

Suggested response: The cross-section is anticipated to include a pedestrian and bicyclist side-path along the northern edge of Mt. Vernon Highway, to coordinate with the proposed construction of side-path along the Hines Development frontage. The bride cross-section is anticipated to provide additional width to accommodate the northern side-path and a standard sidewalk section along the southern edge. When the team requests a follow-up meeting to be held with PCIDs and the City of Sandy Springs, discussion of the recommended cross-section and pedestrian/bicyclist treatments will be requested.

MARTA access at the North Springs Station:

What is the opportunity to provide access to and from the south from the CD system?

Suggested response: The construction of south-facing access to the North Springs Station was not a part of the need and purpose of the originally-approved environmental document. Providing this access now would be beyond the original need and purpose. Furthermore, based on initial coordination with MARTA to explore this possibility, significant re-construction would be required on the station site to modify circulation and construct new facilities to accept the new ramps. MARTA did not indicate any interest in making those changes.

New Bridge Crossing:

What is the opportunity to create a new overpass bridge connecting Glenlake Parkway to Peachtree Dunwoody Road at a future location between the North Springs Bridge and Abernathy Road?

Suggested response: The construction of this crossing is beyond the original purpose and need of the CD project. However, the location of this potential new crossing could be identified by the City and/or PCIDs and could be coordinated presently so the construction of the CD system could be planned to avoid precluding the future construction.

Spalding Drive Crossing:

If the Spalding Drive overpass bridge is replaced, what is the proposed cross-section?

Suggested response: Replacement of the existing Spalding Drive overpass bridge is not necessary to meet the need and purpose of the CD project. The CD lanes can be constructed within the footprint of the existing bridge. Furthermore, the existing bridge sufficiency rating does not indicate an imminent need to replace the structure. Georgia DOT has performed bridge condition surveys on the existing bridge and it is anticipated that the project will include minor deck rehabilitation only.

What accommodations will be provided for pedestrians and bicyclists?

Suggested response: Bicyclist and pedestrian accommodations will remain as existing.

Trail accommodation:

Sandy Springs has identified an opportunity to extend the 400 trail (from Buckhead) along the SR 400 corridor in the future. What is the opportunity for accommodating this trail?

Suggested response: During any project development, GDOT aims to not preclude the construction of future projects, where such a project is part of an adopted area Master Plan or Trail Plan. However, the construction of trails/paths is not currently within the scope of the proposed project. Georgia DOT is willing to work with local governments to help bring their projects to fruition, as part of a separate project or action.

Other Projects in the Area:

Capital Projects (local/federal funds):

PI# 12631 (FN -284): Perimeter Activity Center - ITS Upgrades and System Expansion/Congestion Reduction and Traffic Flow Improvements for Hammond Drive, Glenridge Drive, Johnson Ferry Road, Glenridge Connector, and Peachtree Dunwoody Road

Lake Hearn Drive/Peachtree Dunwoody Pedestrian and Operational Improvements (SRTA funded PCID project)

Planned Projects (identified in adopted City or PCID Plans):

D5: Widen Abernathy Road from Roswell Road to SR 400 to 6 lanes with multiuse trail (NOTE: Sandy Springs has removed widening of Abernathy Road to 6 lanes from the long range plan.

C13: Improve Mount Vernon Highway between Northside Drive and Peachtree Dunwoody Road to maintain two through lanes with intersection turn lanes, sidewalks and bicycle lanes.

E6: Install sidewalks along Mt. Vernon Highway from Lake Forrest Drive to Powers Ferry Road

E9: Construct multiuse t rail along power line easement east from Morgan Falls to SR 400, north to Pitts Road, then east to Spalding Drive

E10: Construct multiuse trail along Spalding Drive from Peachtree Dunwoody Road to Pitts Road

E16: Connect sidewalks along Peachtree Dunwoody Road from Mount Vernon Highway to City of Atlanta to provide pedestrian walking route for MARTA and trail access

E17: Incorporate bike lane construction in other projects to provide cohesive and connected bicycle network, including: Mount Vernon Highway (Northside Drive/Chattahoochee National Recreation area to Peachtree Dunwoody Road), Glenridge Drive (Johnson Ferry Road to Hammond Drive), Hammond Drive (Roswell Road to Barfield Road), Peachtree Dunwoody Road (Abernathy Road to Spalding Drive)

D8: Improve Hammond Drive corridor between Glenridge Drive and Roswell Road to provide 4 through lanes as a "complete street" to include automobile, pedestrian, transit, bicycle , and landscaping/aesthetic components.

T-3: Roswell Road Node Improvements; Includes sidewalk/ streetscape improvements, traffic signal upgrades, and mid-block crosswalks, Glenridge Drive to I-285

T-6: Lake Forrest Drive Sidewalks and Bicycle Lanes from Atlanta City Limits to I-285

BP202: Westside Parkway/SR 9 (or parallel roadway) bicycle route designation from Forsyth County to City of Atlanta. Enhance bike/pedestrian facilities along this corridor (or along a nearby parallel facility where development on SR 9 precludes), creating a continuous north-south route.

T-2: Glenlake Parkway Corridor Improvements - Bicycle / Pedestrian Improvements, and shuttle stops along Glenlake Parkway (to support planned transit along this corridor) - Including new bike/ pedestrian connection from Glenlake Parkway to North Springs MARTA Station (across GA 400)

T-5: Multi-Modal Improvements along Glen ridge Connector/Glenridge Drive between Hammond Drive and Peachtree Dunwoody Road

T- 10: Multi-Modal Improvements along Hammond Drive from GA 400 to DeKalb County Line: Includes widening from 4 to 6 lanes and improved facilities for bicyclists and pedestrians

T-19: Multi-Modal Improvements and Intersection Improvement Program for Peachtree-Dunwoody Road (from I-285 to Abernathy Road)

T-28: Multi-Use Path along Mt Vernon Highway

A20: Peachtree Dunwoody Road Side path SB, from Glenridge Connector to I-285

A21: Peachtree Dunwoody Road Sidepath SB from Glenridge Connector to I-285

A18: Hammond Drive Sidepath EB, from SR 400 to Peachtree Dunwoody Rd

A25: Hammond Drive Sidepath EB (plus cantilever deck for overpass), road diet from Barfield Road to SR 400

A35: Barfield Road- Convert existing shoulder to bike lanes or path within ROW or path along SB SR 400, restripe Hammond Drive to Mt. Vernon Highway.

A17: Mount Vernon Highway Sidepath WB (plus cantilever deck for overpass), from Barfield Road to Crestline parkway.

A05: Abernathy Road Sidepath EB from Glenlake Parkway to SR 400

A06 : Abernathy Road Sidepath EB, path in ROW from SR 400 to Peachtree Dunwoody Rd

Sidewalks and Streetscapes are required as included in Main Street Overlay District: Lake Forrest Drive and Roswell Road.

The following streets are included in the City's adopted Sidewalk Master Plan network (includes a minimum of 2-foot curb/gutter, 2-foot landscape strip, and 5-foot sidewalk on both sides of the street): Mt. Vernon Highway, Long Island Drive, Lake Forrest Drive, Glenridge Drive, Peachtree Dunwoody Road

Suggested Response: Any new bridge structures would be designed to accommodate future pedestrian and bicycle improvements on the cross streets as per the City of Sandy Springs' master plans.

Keith Golden, P.E. Commissioner

GEORGIA DEPARTMENT OF TRANSPORTATION

One Georgia Center, 600 West Peachtree Street, NW
Atlanta, Georgia 30308
Telephone: (404) 631-1000

October 1, 2014

Perimeter Community Improvement Districts
One Ravinia Drive – Building One Suite 1125
Atlanta, Georgia 30346
Attn: Ms. Yvonne Williams, President/CEO

Subject: **Response to Initial Concept Team Meeting Comments**
P.I. No's: 0000784, Fulton and DeKalb Counties
I-285 @ SR 400 Interchange

Dear Ms. Williams:

Georgia Department of Transportation (GDOT) appreciates your participation in this very important project and offers the attached responses to your comments submitted on July 31, 2014. We look forward to continued coordination with you for successful delivery of this project.

If you have any questions, please contact Ms. Marlo L. Clowers, P.E. at (404) 631-1713 or mclowers@dot.ga.gov.

Sincerely,

Darryl D. VanMeter, P.E.
State Innovative Delivery Engineer

DVM:MLC
Attachments

Cc: General Files

Concerns/Comments from Perimeter CIDs and GDOT Responses
(from Initial Concept Team Meeting and Stakeholder Meeting at PCIDs)

Concern/Comment	Status/GDOT Response
We appreciate the project preserves local governments, PCIDs, state, and federal investments in the Hammond Ramps at GA 400 Project, Roswell Road Bridge Reconstruction Project, Ashford Dunwoody Diverging Diamond Interchange, and the Peachtree Center Parkway "Flyover" Bridge.	Thank you for your comment.
We appreciate access to Ashford Dunwoody from SR 400 Southbound in included in the design as this is critical to our market.	Thank you for your comment.
Project plan should address traffic concerns during construction to the district as it relates to work hours and activities. Staging plans should include Mode Shift partnering with MARTA, ARC, GDOT and GRTA. Please include PCIDs in the decisions so we can support corporate employment needs.	GDOT will develop a transportation management plan (TMP) in the future to address traffic pattern changes on I-285 during construction. We will seek input from PCID and other local entities to include into the TMP.
PCIDs resource for the Abernathy Road/SR 400 Interchange design to include a slip ramp. We would like to be a resource to the project as we have studied the traffic pattern and extensive utility conflicts in that area. We would be willing to share data with the design time.	The Abernathy Road/SR 400 Interchange is outside the limits of the I-285/SR 400 Interchange Reconstruction project; however, it is within the limits and scope of GDOT P.I. No. 721850 (SR 400 CD Lanes Project. GDOT will coordinate with PCIDs regarding the interchange design as part of P.I. No. 721850. This comment has been shared with the project team for P.I. No. 721850.
It is important to future PCIDs market that the design not preclude currently planned project which includes SR 400 Trail (Buckhead to Alpharetta through SR 400 corridor), Commuter Trail Master Plan (currently in PE Phase) and Lake Hearn at Peachtree Dunwoody Intersection Reconstruction.	During any project development, GDOT aims to not preclude the construction of future projects, where such a project is part of an adopted area Master Plan or Trail Plan. However, the construction of trails/paths, as well as intersection improvements at the Lake Hearn/Peachtree Dunwoody Road intersection, are currently not within the scope of the proposed I-285/SR 400 Interchange Reconstruction project. Georgia DOT is willing to work with local governments to help bring their projects to fruition, as part of a separate project or action.
We recommend the design team look into lengthening the westbound off-ramp from I-285 onto Ashford Dunwoody in order to relieve overlapping signal timing and prevent weave issues.	The I-285/SR 400 Interchange Reconstruction project proposes to provide additional storage at this off-ramp; however, the current project does not include developing an auxiliary lane by extending the westbound off-ramp to the on-ramp from Chamblee Dunwoody.
PCIDs would like to be involved in the development of the communication plan and public	GDOT will develop a transportation management plan (TMP) in the future to address traffic pattern

outreach plan during the construction phase of the project and request that this be included as a requirement of the design build strategy.	changes during construction. We will seek input from PCID and other local entities to include into the TMP.
The aesthetic of the project needs to complement the PCIDs brand to include sound wall, lighting, bridge, sidewalk, crosswalk, etc. We should have an opportunity to assure that the final design phases will complement our brand.	GDOT is open to including locally preferred aesthetic features into the project design, where feasible. The exact nature of any aesthetic enhancements, including types and locations, would need to be approved through various GDOT offices (including Design and Maintenance), as well as the Federal Highway Administration. Please provide the Department with details and specifications of these preferred enhancements as soon as possible so that they may be evaluated for inclusion into the project. Once a Design-Build Contractor is selected for the I-285/SR 400 Interchange Reconstruction project and the project advances to final design, it would be much more difficult to account for specific details in the project's design. In addition, any aesthetic enhancements to the GDOT standard materials and specifications add cost to the project, GDOT would enter into an agreement with the local governments, as applicable, to bear the cost of these additions.
PCIDs would like to develop pedestrian access or a circulator between the northwest quadrant of the I-285/SR 400 interchange and the MARTA station in the southeast quadrant.	Providing pedestrian access and circulation around the I-285/SR 400 interchange is not within the scope of this project and would not meet the project's need and purpose. The I-285 at SR 400 Interchange Reconstruction project aims to reduce weaving along I-285 approaching the I-285/SR 400 interchange, increase ramp capacity at the interchange, and improve existing geometric deficiencies at the interchange, thereby reducing congestion and improving safety in the area of the interchange. However, Georgia DOT is willing to work with local governments to help bring their projects to fruition, as part of a separate project or action.

Other Agency Coordination and Correspondence

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. #0000784 **OFFICE** Environmental Services

DATE September 8, 2014

FROM Madeline L. White

TO Files

SUBJECT GDOT Project NHS00-0000-00(784); Fulton and DeKalb Counties;
P.I. #0000784 and HP #140616-002:
Final Survey Report.

Attached is the Final Survey Report prepared by Edwards-Pitman Environmental, Inc. of Smyrna, Georgia for the subject project. This document was revised following comments received from the Georgia SHPO by a letter dated August 15, 2014 (attached). The National Register boundary of Fair Oaks Manor Historic District, Coldstream Subdivision Historic District, and Clementstone Estates Historic District were revised based upon the comments. In addition, the period of significance was defined and justified, additional photographs provided, and minor boundary revisions and corrections have been made, where applicable.

MLW/

cc: Rodney N. Barry, P.E., FHWA, w/attachment (Attn: Jennifer Giersch)
David Crass, Deputy SHPO, w/attachment
Atlanta Regional Commission, w/attachment
Melissa Forgey, DeKalb History Center, w/attachment

CONCUR: _____ **DATE:** 9.10.14
for David Crass, Deputy SHPO

cc: Carla Benton-Hooks, GDOT NEPA
Katheryn Graff, Edwards-Pitman Environmental, Inc.
Marlo Clowers, GDOT Project Manager, Office of Program Delivery

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
HISTORIC PRESERVATION DIVISION

MARK WILLIAMS
COMMISSIONER

DR. DAVID CRASS
DIVISION DIRECTOR

August 15, 2014

Hiral Patel, P.E.
State Environmental Administrator
Georgia Department of Transportation
One Georgia Center
600 West Peachtree Street, NW
16th Floor
Atlanta, Georgia 30308

Attn: Madeline White

Re: *Improvements to I-285 & SR 400 Interchange*
GDOT Project PI# 0000784
Fulton and DeKalb Counties, Georgia
HP-140616-002

Dear Ms. Patel:

The Historic Preservation Division (HPD) has received the documentation regarding the above-referenced project. Our comments are offered to assist the Georgia Department of Transportation (GDOT) and the Federal Highway Administration (FHWA) in complying with the provisions of Section 106 of the National Historic Preservation Act, as amended.

HPD has reviewed the Historic Resources Survey Report prepared by Edwards-Pitman Environmental, Inc. for the proposed project. HPD concurs with GDOT's determination that the Copeland Road Historic District (Resource 7) and the Murphey Candler Park (Resource 18) should be considered **eligible** for listing in the National Register of Historic Places (NRHP). HPD also concurs with GDOT's determination that Resource 4, 5, 8, 9, 10, 11, 12, 14 and 17 should be considered **not eligible** for listing in the NRHP.

HPD concurs that the Fair Oaks Manor Historic District (Resource 1) should be considered eligible for the NRHP under Criteria C. However, we do not concur that the resource is not eligible under Criteria A in the area of community development. Resource 1 is a good and representative example of a mid-20th century residential development constructed during the period of suburban sprawl along the I-285 corridor in Fulton County, GA. Furthermore, HPD recommends the period of significance be redefined. The district's period of significance should be justified as a discrete period with a defined beginning and end. For instance, a defined beginning for a district could be the initial survey and plat of a subdivision or the first dates of construction. A defined end could be a variation in established development patterns, house types and styles or continuity within the district. Therefore, the homes developed after 1970 may need to be reevaluated and incorporated into the period of significance. Images of the homes constructed after 1970 were not included in the report. The four parcels located along Powers Ferry Road should not be excluded from the historic district. The historic plat map for the development included these four parcels. Additionally, the justification provided for excluding these homes from the district is subjective. The National Register (NR) boundary should encompass all properties delineated in the historic plat map and these properties should be identified as contributing or non-contributing.

HPD concurs that the Coldstream Subdivision Historic District (Resource 2) should be considered eligible for the NRHP under Criteria C. However, we do not concur that the resource is not eligible under Criteria A in the area of community development. Resource 2 is a good and representative example of a mid-20th century residential development constructed during the period of suburban sprawl along the I-285 corridor in Fulton County, GA. Furthermore, HPD recommends the period of significance be redefined. The district's period of

significance should be justified as a discrete period with a defined beginning and end. The subdivision was initially surveyed in 1965 and construction began the same year. This is a justifiable beginning date for the period of significance. The report states that one home along Heards Ferry Road was constructed in 1960 and predates the subdivision. This resource should be evaluated independently. There is also one home constructed in 1963. The report does not state whether this home predates the subdivision. Please clarify. A defined end could be a variation in established development patterns, house types and styles or continuity within the district. Therefore, the homes developed after 1972 may need to be reevaluated and incorporated into the period of significance. Images of the homes constructed after 1972 were not included in the report. The 10 parcels located along Heards Ferry Road and the 3 parcels located along Mt. Vernon Highway should not be excluded from the historic district. The historic plat map for the development included these parcels. Additionally, the justification provided for excluding these homes from the district is subjective. The NR boundary should encompass all properties delineated in the historic plat map and these properties should be identified as contributing or non-contributing. The three homes demolished along Heards Ferry Road and replaced with homes dating from 2004 may be considered non-contributing if they are found to be outside the redefined period of significance. This methodology may apply to other homes within the district. Images should also be included to support determinations. The Coldstream Subdivision Dates of Development chart also appears to be missing the home constructed in 2004 and tally's an additional home constructed in 1986.

HPD concurs that the Lake Island Estates Historic District (Resource 3) should be considered eligible for the NRHP under Criteria A and C. However, we recommend the period of significance be redefined. Even though a slightly more defined justification was presented in this PIF, and may be valid, no images were provided to support determinations. Therefore, the homes developed after 1976 may need to be reevaluated and incorporated into the period of significance. The historic plat map was also not included in the report. Please provide in order to verify historic boundaries.

HPD concurs that the Marchman Estates Historic District (Resource 6) should be considered eligible for the NRHP under Criteria A and C. However, we recommend the period of significance be redefined. The subdivision was initially surveyed in 1961 and construction began the same year. This is a justifiable beginning date for the period of significance.

HPD concurs that the Sandy Springs Apartments (Resource 13) should be considered eligible for the NRHP under Criteria C. However, we do not concur that Resource 13 should not be evaluated and considered eligible under Criteria A in the area of community development. Resource 13 is a good and representative example of a mid-20th century residential development constructed during the period of suburban sprawl along the I-285 corridor in Fulton County, GA.

HPD concurs that the Clementstone Estates Historic District (Resource 15) should be considered eligible for the NRHP under Criteria C. However, we do not concur that the resource is not eligible under Criteria A in the area of community development. Resource 15 is a good and representative example of a mid-20th century residential development constructed during the period of suburban sprawl along the I-285 corridor in Fulton County, GA. Furthermore, HPD recommends the period of significance be redefined. Even though a more defined justification was presented in this PIF, and may be valid, no images were provided to support determinations. Therefore, the homes developed after 1973 may need to be reevaluated and incorporated into the period of significance. The report states that one home within the district was constructed in 1960 and predates the subdivision. This resource should be evaluated independently. The NR boundary should encompass all properties delineated in the historic plat map and these properties should be identified as contributing or non-contributing.

HPD concurs that the Georgetown Subdivision Historic District (Resource 16) should be considered eligible for the NRHP under Criteria A and C. However, it appears that 7 homes located west of Old Georgetown Trail, identified in Section II of the historic plat map, have been excluded from the historic boundary.

HPD concurs that the Gainsborough Historic District (Resource 19) should be considered eligible for the NRHP under Criteria A and C. However, the NR boundary for the district does not match the historic plat map.

In regards to the addition to Oak Forest Hills (Resource 31), a parcel included in the resource location map Figure 1C is not included in the revised boundary graphic (Top right hand corner). Two parcels located in the revised boundary graphic are not included in the resource location map Figure 1C (Top of curve near park).

Additionally, the report repeatedly states that resources are not individually evaluated because they fall outside the APE. Please delineate the APE on the project location map.

If we may be of further assistance, please contact Stephanie Jordan, Transportation Projects Coordinator, at (404) 463-6687 or stephanie.jordan@dnr.state.ga.us.

Sincerely,

Jennifer Dixon
Program Manager
Environmental Review and Preservation Planning

JD:scj

cc: Rodney N. Barry, P.E., FHWA, (Attn: Jennifer Giersch)
Allison Duncan, Atlanta Regional Commission

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
HISTORIC PRESERVATION DIVISION

CHRIS CLARK
COMMISSIONER

DR. DAVID CRASS
DIVISION DIRECTOR

October 13, 2010

Glenn Bowman, P.E.
State Environmental Administrator
Georgia Department of Transportation
One Georgia Center
600 West Peachtree Street, NW
16th Floor
Atlanta, Georgia 30308

Attn: Madeline White

RE: **GDOT Projects NHS00-0000-00(247), et al.; PI#s 0000247/0000784 et al.**
I-285 North Managed Lanes & BRT, Revive 285 Top End
Cobb County, et al., Georgia
HP-090723-001

Dear Mr. Bowman:

The Historic Preservation Division (HPD) has received the documentation for the above-referenced project. Our comments are offered to assist the Georgia Department of Transportation (GDOT) and the Federal Highway Administration (FHWA) in complying with the provisions of Section 106 of the National Historic Preservation Act, as amended.

HPD has reviewed the Historic Resources Survey Report of June 8, 2010 prepared by Edwards-Pitman Environmental for the proposed project. We have several comments on this report.

For Resource 32, the Carver Hills neighborhood, a significant story is presented. This neighborhood was created to mitigate the displacement of African-Americans by the construction of the General Motors plant. The neighborhood was later bisected and disrupted by the construction of I-285. It appears that this neighborhood should be considered eligible for the National Register of Historic Places under Criterion A as the remnant of a post-war African-American subdivision with a significant history of displacement. There is another, eligible neighborhood nearby, the Happy Valley-Parsons Village Historic District (Resource 33) as well as the eligible Mt. Carmel AME Church (Resource 34). We would like to know if Resource 33 is also an African-American neighborhood. If so, perhaps all the above-mentioned resources should be combined into one large district. If not, it appears that the African-American Carver Hills and the Mt. Carmel AME Church should be considered an eligible district.

HPD concurs with the findings in the report that the Doraville General Motors Assembly Plant should be considered eligible under Criterion A. In addition, we believe that the Administration Building should be considered eligible under Criterion C. This building is

a good example of modern architecture. It appears that the metal screen on the façade is original to the structure.

Furthermore, we would like to note that the presence of the General Motors Plant is the result of DeKalb County's aggressive post-war effort to attract industry to the area. The county constructed a waterworks, sewer plant, and roads in order to support the industry it was attempting to attract. The General Motors Plant and other industry along Peachtree Industrial Boulevard spurred the extensive residential development that is shown in this report. We believe that this information provides a context with which to strengthen evaluation of the area's resources, including the Plant itself, under Criterion A. The residential development is typical of what is seen in Georgia: a small-scale, piecemeal development of subdivisions in response to industry rather than large, mega-developments that are seen in other states.

HPD concurs with all other determinations on eligibility and boundaries.

If we may be of further assistance, please contact Amanda Schraner, Transportation Projects Coordinator, at (404) 463-6687 or Amanda.Schraner@dnr.state.ga.us.

Sincerely,

Richard Cloues

Richard Cloues
Deputy State Historic Preservation Officer

RC:als

cc: Rodney N. Barry, P.E., FHWA, (Attn: Jennifer Giersch)
Allison Duncan, ARC

Keith Golden, P.E., Commissioner

GEORGIA DEPARTMENT OF TRANSPORTATION

One Georgia Center, 600 West Peachtree Street, NW
Atlanta, Georgia 30308
Telephone: (404) 631-1000

October 15, 2014

Dr. David Crass, Director,
Deputy State Historic Preservation Officer
Historic Preservation Division/DNR
254 Washington Street, SW
Ground Level
Atlanta, GA 30334

RE: Project NHS00-0000-00(784); Fulton and DeKalb Counties; P.I. #0000784;
HP #140616-002:
Section 106 Compliance - Federal Highway Administration.
Assessment of Effects

Dear Dr. Crass:

Project NHS00-0000-00(784), Fulton and DeKalb Counties consist of the proposed reconstruction of the I-285 and SR 400 interchange. Please find enclosed the Section 106 documentation for the Fair Oaks Manor Historic District; Coldstream Subdivision Historic District; Hamilton House; Allen House; Lake Island Estates Historic District; Hardin House; Boone House; Comora House; Marchman Estates Historic District; Copeland Road Historic District; Sandy Springs Apartments; Mountain Creek Road Historic District; GlenridgeForest-Hammond Hills Historic District; Sherrell-Colton Drive Historic District; Shanks House; Clemenstone Estates Historic District; Oak Forest Hill Historic District; Murphey Candler Park; Georgetown Subdivision Historic District, and the Gainsborough Historic District, twenty (20) National Register eligible historic properties located within the proposed project's area of potential effects (APE).

The enclosed documentation was prepared for use by Edwards-Pitman Environmental, Inc. of Smyrna, Georgia in compliance with Section 106 of the National Historic Preservation Act of 1966 and subsequent amendments. The Department concurs with this report. The documentation consists of the Effects Assessment and copies of the Final Survey Report Property Information Forms for the properties. The Final Survey Report was previously submitted to your office and to the Federal Highway Administration (FHWA) and to all other consulting parties in the Section 106 process for this project. In compliance with 36 CFR 800.4(c)(2), the aforementioned properties were considered eligible National Register properties by the FHWA and the SHPO.

In accordance with 23 CFR Part 774 (Sections 774.3(b) and 774.17) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Pub. L. 109-59, the FHWA and GDOT intend to make a *de minimis* finding based on your concurrence with

the Section 106 determination of *"No Adverse Effect"* for the resources listed in the table below. The Department requests the SHPO's acknowledgement of this *de minimis* finding and also requests that the SHPO's acknowledgement of *de minimis* includes any potential use of additional land from these resources as long as the change is coordinated with the SHPO, and the effect remains no adverse per the 2003 Memorandum of Understanding.

Name of Resource	Nature of Impact (i.e. minor use of the grass lawn or removal of non-contributing vegetation)	Total Acreage of Eligible Boundary	Total Acreage of Land Use Within Eligible Boundary
Boone House	Acquisition of right-of-way (ROW) for the extension of an existing culvert; area of required ROW is comprised of dense vegetation.	2.20 acres	0.14 acre
Copeland Road Historic District	Acquisition of ROW for the extension of an existing culvert; area of required ROW is comprised of dense vegetation. Additional ROW, as well as permanent easement, required for staging and clearing activities within a wooded slope.	71 acres	0.34 acre (0.27 acre of ROW; 0.07 acre of permanent easement)
Sandy Springs Apartments	Underground easement for the construction and maintenance of a concrete retaining wall; resource is located atop a rise, with easement required beneath the resource to stabilize the land and build the wall.	1 acre	0.16 acre
Mountain Creek Road Historic District	Permanent easement from within two contributing parcels located along the southern edge of the district, for staging and clearing activities associated with the construction of the noise wall; area is comprised dense vegetation. *The acquisition of ROW would occur within a vacant parcel and does not factor in the de minimis determination.*	7.5 acres	0.09 acre
Glenridge Forest-Hammond Hills Historic District	Permanent easement within contributing parcels located along the southern edge of the district, for construction and maintenance of a proposed retaining wall; area is comprised of dense vegetation. *The acquisition of ROW would occur within a vacant parcel and does not factor in the de minimis determination.*	150 acres	0.29 acre
Sherrell-Colton Drive Historic District	Acquisition of ROW and permanent easement required for construction of a bridge, retaining wall, and paved ditch; area consists of a densely vegetated slope.	24 acres	0.28 acre (0.15 acre of ROW; 0.13 acre of permanent easement)

Oak Forest Hill Historic District	Permanent easement within three contributing parcels, for the construction of a retaining wall; area is comprised of dense vegetation. *The acquisition of ROW would occur within a vacant parcel and does not factor in the de minimis determination.*	50 acres	0.03 acre

A copy of the enclosed documentation has been forwarded to the FHWA and to all consulting parties. Please notify this office of the scheduled consultation date, if any, with the FHWA to discuss this project. The Department requests an expedited review; please respond to this documentation within fifteen (15) days of receiving this information.

If additional information is required, please contact Madeline L. White (404-631-1421 or madwhite@dot.ga.gov) or Terri Lotti (404-631-1284 or tlotti@dot.ga.gov) of the Office of Environmental Services. We appreciate your assistance in this matter.

Sincerely,

Hiral Patel, P.E.
State Environmental Administrator

HP/mlw
Enclosure

cc: Rodney N. Barry, P.E., FHWA, w/attachment (Attn: Jennifer Giersch)
Atlanta Regional Commission, w/attachment
Carla Benton-Hooks, GDOT NEPA
Melissa Forgey, DeKalb History Center, w/attachment
Mark Grindstaff, Edwards-Pitman Environmental, Inc.
Marlo Clowers, GDOT Project Manager, Office of Innovative Program Delivery
Keisha Jackson, GDOT NEPA

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
HISTORIC PRESERVATION DIVISION

MARK WILLIAMS
COMMISSIONER

DR. DAVID CRASS
DIVISION DIRECTOR

October 23, 2014

Ms. Hiral Patel, PE
State Environmental Administrator
Georgia Department of Transportation
One Georgia Center
600 West Peachtree Street, NW
16th Floor
Atlanta, Georgia 30308

Attn: Madeline White

Re: Operational Improvements to I-285 and SR 400 Interchange
GDOT Project NHS00-0000-00 (784); PI# 0000784
Fulton & DeKalb Counties, Georgia
HP-140616-002

Dear Ms. Patel:

The Historic Preservation Division (HPD) has received the documentation regarding the above-referenced project. Our comments are offered to assist the Georgia Department of Transportation (GDOT) and the Federal Highway Administration (FHWA) in complying with the provisions of Section 106 of the National Historic Preservation Act, as amended.

Based on the information provided in the October 15, 2014 Assessment of Effects document prepared by Edwards-Pitman Environmental, Inc. for the above-referenced project, HPD concurs with GDOT's determination that the proposed project will have **no adverse effect** on the Boone House, Copeland Road Historic District, Sandy Springs Apartments, Mountain Creek Road Historic District, Glenridge Forest-Hammond Hills Historic District, Sherrell-Colton Drive Historic District, Shanks House and the Oak Forest Hill Historic District, as defined in 36 CFR Part 800.5(d)(1). HPD also concurs with GDOT's determination that the proposed project will have **no effect** on the Fair Oaks Manor Historic District, Coldstream Subdivision Historic District, Hamilton House, Allen House, Lake Island Estates Historic District, Hardin House, Comora House, Marchman Estates Historic District, Clemenstone Estates Historic District, Murphey Candler Park, Georgetown Subdivision Historic District and the Gainsborough Historic District.

HPD acknowledges that, based on the concurrence of no adverse effect on Boone House, Copeland Road Historic District, Sandy Springs Apartments, Mountain Creek Road Historic District, Glenridge Forest-Hammond Hills Historic District, Sherrell-Colton Drive Historic District and the Oak Forest Hill Historic District, GDOT intends to make a *de minimis* finding for the proposed project in accordance with Section 6009(1) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). HPD's acknowledgement of *de minimis* includes any potential use of additional land from this property so long as the change is coordinated with HPD and the finding remains no adverse effect.

If we may be of further assistance, please contact Stephanie Jordan, Transportation Projects Coordinator, at (404) 463-6687 or stephanie.jordan@dnr.state.ga.us.

Sincerely,

for Jennifer Dixon, MHP, LEED Green Associate
Program Manager
Environmental Review & Preservation Planning

JD:scj

cc: Rodney N. Barry, P.E., FHWA, (Attn: Jennifer Giersch)
Allison Duncan, Atlanta Regional Commission

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P.I.#0000784 **OFFICE** Environmental Services

DATE March 13, 2015

FROM Madeline L. White

TO Files

SUBJECT GDOT Project NHS00-0000-00(784), Fulton and DeKalb Counties;
P.I. #0000784;
HP #140616-002: Project Reevaluation Memo to File

Attached is the Project Reevaluation Memo to File, prepared by Edwards-Pitman Environmental, Inc. of Smyrna, Georgia for the subject project. Although there have been no design changes, this reevaluation provides an update to the amounts of required right-of-way and easement within several historic resource boundaries. Since there would be no change to the previous determination of effects, the Department agrees that no further documentation under Section 106 is required and the memo is distributed to the Georgia SHPO and FHWA for their project file.

MLW/

cc: David Crass, Deputy SHPO, w/attachment
Rodney N. Barry, P.E., FHWA, w/attachment (Attn: Jennifer Giersch)
Carla Benton-Hooks, GDOT NEPA
Marlo Clowers, Project Manager, Office of Innovative Program Delivery
Katheryn Graff, Edwards-Pitman Environmental, Inc.

EDWARDS-PITMAN
ENVIRONMENTAL, INC.

MEMORANDUM:

DATE March 13, 2015

FROM Katheryn Graff, Edwards-Pitman Environmental, Inc.

TO Project File

SUBJECT GDOT Project NHS00-0000-00(784), Fulton & DeKalb Counties; P.I.# 0000784; HP# 140616-002
Re-evaluation

The proposed project originally included operational improvements along I-285 and SR 400 in the vicinity of the I-285/SR 400 interchange in Fulton and DeKalb Counties. The proposed improvements would include construction of barrier-separated collector-distributor (C/D) lanes along I-285 and SR-400, reconstruction of existing ramps, and new flyover bridges, as well as reconstruction and widening of existing bridges in the interchange area. Grade-separated, braided ramps would be constructed in the vicinity of Ashford Dunwoody Road and Roswell Road to eliminate conflicts between traffic entering and exiting SR 400 and traffic entering and exiting the Roswell Road and Ashford Dunwoody Road interchanges.

Along I-285, the proposed project would begin west of Roswell Road and end east of Ashford Dunwoody Road, for a distance of approximately four miles on I-285. Along SR 400, the proposed project would begin at the Glenridge Connector and extend north to the Hammond Drive interchange area, where it would join into an adjacent project (Georgia DOT project P.I. No. 721850). The total length of the proposed improvements along SR 400 is approximately 1.3 miles.

After the original project description was developed, the project was modified as follows:

The project limits were extended west from Roswell Road to Riverside Drive along I-285 and extended east from Ashford Dunwoody Road to Chamblee Dunwoody Road along I-285, for a total project length of approximately 5.5 miles (refer to Figures 1A-1C). In addition, the project includes advanced roadway signage along I-285 and SR 400 beginning approximately two miles from the proposed project ramps. All new signs would be constructed within the existing right-of-way of I-285 or SR 400. Also, some existing signs would be removed and others would be replaced in close proximity to their current locations within the existing right-of- way. Exact sign locations are subject to change by the Design Build contractor, and final sign locations, once

determined, will need to be field surveyed by GDOT in a reevaluation or addendum. Vegetation would be cleared solely within the existing right-of-way along the entire project corridor.

Additional right-of-way (ROW) and easement would be required for the proposed project. The amount of required ROW, along with the nature and amount of required easement, varies throughout the project corridor and was more thoroughly explained in the Assessment of Effects (AOE) document dated October 15, 2014.

A historic resources survey report was completed in which twenty properties were identified within the proposed project's APE and determined to be eligible for the National Register of Historic Places APE. The State Historic Preservation Officer (SHPO) concurred with this finding via a memo dated September 10, 2014. A finding of No Effect was determined for Fair Oaks Manor Historic District, Coldstream Subdivision Historic District, Hamilton House, Allen House, Lake Island Estates Historic District, Hardin House, Comora House, Marchman Estates Historic District, Clemenstone Estates Historic District, Murphey Candler Park, Georgetown Subdivision Historic District, and Gainsborough Historic District. A finding of No Adverse Effect was determined for Boone House; Copeland Road Historic District, Sandy Springs Apartments, Mountain Creek Road Historic District, Glenridge Forest-Hammond Hills Historic District, Sherrell-Colton Drive Historic District Shanks House, and Oak Forest Hill Historic District. The Georgia SHPO concurred with these findings in a letter dated October 23, 2014.

Since that time, it has been determined that existing property lines along the I-285/SR 400 project corridor were slightly off from the property lines utilized by the project team in the past. Although the proposed project has not changed and none of the actual impacts or distances from the properties to the existing or proposed edge of pavement have changed, some of the measurements of proposed right-of-way and easements have changed. The only thing that has changed is the location of the existing property lines.

The following table details the previous proposed right-of-way and easement amounts compared to the new, accurate proposed right-of-way and easements at the relevant properties. Only those properties identified in the table had changes to the amounts of proposed right-of-way or easements; no other properties had changes.

Property	**Previous ROW and Easement**	**Current ROW and Easement**
Sandy Springs Apartments	0.16 acre underground easement	0.25 acre underground easement
Mountain Creek Road Historic District	0.09 acre ROW; 0.02 acre permanent easement	0.04 acre ROW; 0.06 acre permanent easement
Glenridge Forest-Hammond Hills Historic District	0.06 acre ROW; 0.29 acre permanent easement	0.06 acre ROW; 0.36 acre permanent easement
Sherrell-Colton Drive Historic District	0.15 acre ROW; 0.13 acre permanent easement	0.14 acre ROW; 0.13 acre permanent easement
Oak Forest Hills Historic District	0.02 acre ROW; 0.03 acre permanent easement	0.03 acre ROW; 0.04 acre permanent easement
Copeland Road Historic District	0.2 acre ROW from Area 1 and 0.07 acre ROW from Area 2; 0.07 acre permanent easement	0.14 acre ROW from Area 1 and 0.06 acre ROW from Area 2 (0.2 acre total ROW); 0.07 acre permanent easement (no change)

Note: on the Mountain Creek Road Historic District, one parcel inside the district was removed from proposed ROW acquisition because the City of Sandy Springs owns the ROW in this area. Therefore, GDOT would not need to acquire this ROW.

Therefore, because there were no changes to the proposed project and the purpose of this memo is only to reflect accurate right-of-way and easement calculations, the original findings of No Effect and No Adverse Effect in the October 2014 AOE are still valid and no additional documentation under Section 106 is required. .

Attachments:

SHPO concurrence letter dated October 23, 2014.

KFG/kfg

cc: David Crass, Deputy SHPO
Rodney N. Barry, FHWA (Attn: Jennifer Giersch)

Stevens, Robin

From: Floyd, Danielle <Danielle.Floyd@dnr.state.ga.us>
Sent: Tuesday, July 22, 2014 3:31 PM
To: Rottenberg, Melissa
Cc: Meyers, Sharilyn (SMeyers@dot.ga.gov); mclowers@dot.ga.gov; Poudel, Shamir; Stevens, Robin; 'LLReed@HNTB.com'
Subject: RE: PI 0000784, Fulton and DeKalb counties, EPD site visit - GDOT I-285 at SR 400 project

Sorry about that. Correct, concrete lined channels are NON-BUFFERED.

From: Rottenberg, Melissa [mailto:Melissa.Rottenberg@arcadis-us.com]
Sent: Tuesday, July 22, 2014 3:06 PM
To: Floyd, Danielle
Cc: Meyers, Sharilyn (SMeyers@dot.ga.gov); mclowers@dot.ga.gov; Poudel, Shamir; Stevens, Robin; 'LLReed@HNTB.com'
Subject: RE: PI 0000784, Fulton and DeKalb counties, EPD site visit - GDOT I-285 at SR 400 project

Danielle,
Thank you for the prompt response. Concrete-lined channels are non-buffered, correct? Your correspondence below says buffered.

I noticed errors in my table and have revised it to show which streams have artificial lining at some point.

285/400	Revive285	Buffered?*
IS1	--	Yes
PS2	--	Yes
IS3	--	Yes
WL4	WL36	NA
PS5	ST37	Yes
PS6	ST38	Yes
OW7	OW39	Yes
IS8	DF40	Yes
PS9	PS41	Yes
PS10	PS42	Partially concrete-lined
PS11	PS43	Partially concrete-lined
PS12	PS46	Yes
PS13	PS44	Yes
WL14	--	NA
PS15	PS47	Yes
WL16	--	NA
PS17	--	Yes
PS18	PS48	No; completely concrete-lined for entirety of stream
IS19	--	Partially concrete-lined
PS20	PS49	Yes

OW21	OW50	Yes
OW22	OW52	Yes
OW23	OW51	Yes
OW24	PS53	Yes
PS25	PS54	Partially riprip-lined channel and banks (confirmed sections are non-buffered in revive285 letter)
IS26	IS56	Yes
OW27	OW57	Yes
IS28	PS55	Yes
PS29	PS59	Yes
PS30	PS60	Yes
PS31	PS61	Yes
*Concrete-lined sections of state waters would not be buffered.		

Melissa Rottenberg | Project Ecologist | Melissa.Rottenberg@arcadis-us.com

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From: Floyd, Danielle [mailto:Danielle.Floyd@dnr.state.ga.us]
Sent: Tuesday, July 22, 2014 2:45 PM
To: Rottenberg, Melissa
Cc: Meyers, Sharilyn (SMeyers@dot.ga.gov); mclowers@dot.ga.gov; Poudel, Shamir; Stevens, Robin; 'LLReed@HNTB.com'
Subject: RE: PI 0000784, Fulton and DeKalb counties, EPD site visit - GDOT I-285 at SR 400 project

Since all the features (except for the wetlands) are buffered and I have seen some of these features already, a site visit and/or buffer letter are not warranted. I agree that the portions of the channels that are lined with concrete are buffered.

From: Rottenberg, Melissa [mailto:Melissa.Rottenberg@arcadis-us.com]
Sent: Tuesday, July 22, 2014 2:18 PM
To: Floyd, Danielle
Cc: Meyers, Sharilyn (SMeyers@dot.ga.gov); mclowers@dot.ga.gov; Poudel, Shamir; Stevens, Robin; 'LLReed@HNTB.com'
Subject: PI 0000784, Fulton and DeKalb counties, EPD site visit - GDOT I-285 at SR 400 project

Danielle,
The Georgia Department of Transportation (GDOT) is proposing operational improvements along Interstate 285 (I-285) and State Route (SR) 400 in the vicinity of the I-285/SR 400 interchange in Fulton and DeKalb counties, Georgia (PI 000**0**784). This proposed interchange reconstruction was extracted from the revive285 project (PI 0001758 and 0003534) as a stand-alone project. The project study area include**s** the area along I-285 from Riverside Drive to Chamblee Dunwoody Road. The alignment along SR 400 is from the Glenridge Connector north to Hammond Drive. In Fulton County, the project is located within the City of Sandy Springs. In DeKalb County, the project is located within the City of Dunwoody and the City of Brookhaven. The proposed design-build project would reconstruct the existing

interchange to include barrier-separated collector-distributor (CD) lanes along I-285 and SR 400, in addition to new flyover bridges. Reconstruction of existing ramps and reconstruction and widening of existing bridges in the interchange area would also be included. The total project length along I-285 is approximately 4.3 miles and the total project length along SR 400 is approximately 1.2 miles.

A site visit was conducted by you on April 11, 2012 for the revive285 project, with findings summarized in the attached letter dated April 13, 2012. The I-285 at SR 400 interchange project corridor was resurveyed in 2014, the revive285 streams were confirmed, and five new streams were identified. The five new streams are jurisdictional waters of the US: Intermittent Stream (IS) 1, Perennial Stream (PS) 2, IS3, PS17, and IS19. The entire length of IS1, PS2, IS3, and PS17 are also buffered State waters. Sections of IS19 were concrete-lined (non-buffered) and the natural channel portions would be buffered State waters, per standard procedure in these situations.

Below is a table outlining the I-285 at SR 400 project numbering and associated revive285 numbering. Resource descriptions and location figures for the I-285 at SR 400 project are also attached.

We respectfully request guidance regarding the need for a site visit for the I-285 at SR 400 project and new buffer letter. The project has an expedited schedule. If a new site visit is needed, can it be conducted before the end of August?

Regards,
Melissa

285/400	Revive285	Buffered?*
IS1	--	Yes
PS2	--	Yes
IS3	--	Yes
WL4	WL36	NA
PS5	ST37	Yes
PS6	ST38	Yes
OW7	OW39	Yes
IS8	DF40	Yes
PS9	PS41	Yes
PS10	PS42	Yes
PS11	PS43	Yes
PS12	PS46	Yes
PS13	PS44	Yes
WL14	--	NA
PS15	PS47	Yes
WL16	--	NA
PS17	--	Yes
PS18	PS48	Yes
IS19	--	Yes
PS20	PS49	Yes
OW21	OW50	Yes
OW22	OW52	Yes
OW23	OW51	Yes
OW24	PS53	Yes

PS25	PS54	Yes
IS26	IS56	Yes
OW27	OW57	Yes
IS28	PS55	Yes
PS29	PS59	Yes
PS30	PS60	Yes
PS31	PS61	Yes
*Concrete-lined sections of state waters would not be buffered.		

Melissa Rottenberg | Project Ecologist | Melissa.Rottenberg@arcadis-us.com

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Please consider the environment before printing this email.

Georgia Department of Natural Resources

Environmental Protection Division Northeast District Office
745 Gaines School Road, Athens, Georgia 30605
Reply To: Linda MacGregor, P.E., Branch Chief
Non Point Source 706/369-6376
FAX: 706/369-6398

April 13, 2012

Mr. Glenn Bowman
Georgia Department of Transportation
Office of Environmental Services
600 W. Peachtree Street, NW, 16th Floor
Atlanta, Georgia 30308
Attention: Rich Williams

Re: State Water Determination
GDOT Project # NHS00-0001-00(758) & MSL00-0003-00(433)
PI # 0001758 & 0003534
Cobb, DeKalb, and Fulton Counties

Dear Mr. Bowman:

A site visit was conducted on April 11, 2012 by the Georgia Environmental Protection Division (EPD) to determine if state waters that require an undisturbed buffer were present. Among those in attendance were Danielle Floyd (EPD) and Alex Levy (Arcadis). Based upon the site inspection, the EPD has determined the following:

(1) State Waters, identified as Ephemeral 13C, **does not** exhibit evidence of being at least an intermittent stream. The feature did not exhibit base flow, a defined channel, or wrested vegetation. As a result, EPD has determined the feature **is not** subject to state-mandated buffer requirements.

(2) State Waters, identified as Ephemeral 18, **does not** exhibit evidence of being at least an intermittent stream. The feature did not exhibit base flow or wrested vegetation. As a result, EPD has determined the feature **is not** subject to state-mandated buffer requirements.

(3) State Waters, identified as Ephemeral 28, **does not** exhibit evidence of being at least an intermittent stream. The feature did not exhibit base flow or a defined channel. As a result, EPD has determined the feature **is not** subject to state-mandated buffer requirements.

(4) State Waters, identified as Ephemeral 40, **does not** exhibit evidence of being at least an intermittent stream. The feature did not exhibit base flow or wrested vegetation. As a result, EPD has determined the feature **is not** subject to state-mandated buffer requirements.

(5) State Waters, identified as Stream 48, **does** exhibit evidence of being at least an intermittent stream. The feature did exhibit base flow; however, it is a concrete lined channel. As a result, EPD has determined the feature **is not** subject to state-mandated buffer requirements.

(6) State Waters, identified as Stream 54, **does** exhibit evidence of being at least an intermittent stream. The feature did exhibit base flow; however, it is lined with riprap.

As a result, EPD has determined the feature **is not** subject to state-mandated buffer requirements.

(7) State Waters, identified as Ephemeral 62, **does not** exhibit evidence of being at least an intermittent stream. The feature did not exhibit base flow, a defined channel, or wrested vegetation. As a result, EPD has determined the feature **is not** subject to state-mandated buffer requirements.

(8) State Waters, identified as Ephemeral 63, **does not** exhibit evidence of being at least an intermittent stream. The feature did not exhibit base flow, a defined channel, or wrested vegetation. As a result, EPD has determined the feature **is not** subject to state-mandated buffer requirements.

(9) State Waters, identified as Ephemeral 65, **does not** exhibit evidence of being at least an intermittent stream. The feature did not exhibit base flow, a defined channel, or wrested vegetation. As a result, EPD has determined the feature **is not** subject to state-mandated buffer requirements.

(10) State Waters, identified as Ephemeral 75, **does not** exhibit evidence of being at least an intermittent stream. The feature did not exhibit base flow, a defined channel, or wrested vegetation. As a result, EPD has determined the feature **is not** subject to state-mandated buffer requirements.

The EPD reserves the right to change this determination if additional information is obtained during a later site inspection or if site conditions have changed.

This letter does not relieve you from obtaining any other permits that would be required by any other local, state, or federal agency.

If additional information is required, please do not hesitate to contact me at (706) 369-6376.

Sincerely,

Danielle Floyd

Danielle Floyd
Environmental Specialist
Erosion and Sedimentation Control Unit

cc: EPD Mountain District Office
EPD Mountain District – Atlanta Satellite Office
Eugene Hopkins, GDOT ECB

ARCADIS
Infrastructure, environment, facilities

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TRANSPORTATION
PRACTICE

Date:
June 16, 2014

Contact:
Danny Figueroa

Email:
danny.figueroa@
arcadis-us.com

Our ref: GADT0201

Ms. Anna Yellin
Environmental Review Coordinator
Georgia Department of Natural Resources
Wildlife Resource Division
Nongame Conservation Section
2065 US Hwy 278 SE
Social Circle, GA 30025-4743

Subject: **Interstate 285 at State Route 400, Fulton County**
P.I. Number 0000784

Dear Ms. Yellin:

On behalf of the Georgia Department of Transportation (GDOT), ARCADIS is in the early process of conducting an evaluation of potential impacts to natural resources for proposed operational improvements to the I-285 Interchange at State Route 400 in Fulton County, Georgia. The proposed project would include all I-285 and SR 400 entry and exit ramps and would extend along SR 400 from the Glenridge Connector to Hammond Drive and along I-285 from Riverside Drive to Chamblee Dunwoody Road. The project is located on the USGS Sandy Springs and Chamblee, GA 7.5 minute topographic quadrangles.

I am writing to respectfully request your assistance in providing information on the known locations of federal- and state-listed species within the immediate project area, one-mile of the current roadway alignment, as well as known occurrences within three-miles of the project area. The approximate midpoint of the project corridor is located at latitude 33.9118, longitude -84.3574. The approximate east endpoint of the project corridor is latitude 33.9159, longitude -84.4066 and the west endpoint is latitude 33.9203, longitude -84.3149.

In providing the requested information, your assistance will facilitate careful project planning and design with respect to sensitive natural resources and would anticipate incorporation of appropriate conservation recommendations.

Sincerely,

ARCADIS US, Inc.

Danny Figueroa
Ecologist

Enclosure:
Project Location Map

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
WILDLIFE RESOURCES DIVISION

MARK WILLIAMS
COMMISSIONER

DAN FORSTER
DIRECTOR

June 19, 2014

Danny Figueroa
Ecologist
ARCADIS U.S., Inc.
2410 Paces Ferry Road
Suite 400
Atlanta, GA 30339

Subject: Known occurrences of natural communities, plants and animals of highest priority conservation status on or near Interstate 285 at State Route 400; PI # 0000784, DeKalb County, Georgia

Dear Mr. Figueroa:

This is in response to your request of June 16, 2014. According to our records, within a three-mile radius of the project corridor, there are the following Natural Heritage Database occurrences:

Western point (-84.40448, 33.91596; NAD27):
- GA *Ammodramus henslowii* (Henslow's Sparrow) approx. 2.0 mi. W of site
- GA *Cambarus howardi* (Chattahoochee Crayfish) approx. 2.5 mi. NW of site in Sope Creek
- GA *Elliptio arctata* (Delicate Spike) [HISTORIC] approx. 1.5 mi. NW of site in the Chattahoochee River
- GA *Fothergilla major* (Mountain Witch-alder) approx. 2.5 mi. SW of site
- *Micropterus cataractae* (Shoal Bass) approx. 1.5 mi. N of site in the Chattahoochee River
- *Micropterus cataractae* (Shoal Bass) approx. 2.5 mi. W of site in the Chattahoochee River
- GA *Monotropsis odorata* (Sweet Pinesap) approx. 0.5 mi. E of site
- *Quadrula infucata* (Sculptured Pigtoe) [HISTORIC] approx. 1.5 mi. NW of site in the Chattahoochee River
- GA *Schisandra glabra* (Bay Star-vine) approx. 2.0 mi. NW of site
- GA *Schisandra glabra* (Bay Star-vine) [EXTIRPATED] approx. 2.5 mi. SW of site
- Chattahoochee River National Recreation Area [NPS] approx. 1.5 mi. NW of site
- Greenspace [DeKalb County] approx. 1.5 mi. E of site
- Greenspace [DeKalb County] approx. 2.0 mi. N of site
- McFarlane Nature Park [County/Local] approx. 2.0 mi. N of site

Eastern Point (-84.32135, 33.92042; NAD27):
- GA *Schisandra glabra* (Bay Star-vine) approx. 1.5 mi. S of site
- Greenspace [DeKalb County] approx. 2.0 mi. S of site

* Entries above proceeded by "US" indicates species with federal status in Georgia (Protected or Candidate). 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. Since this project is in an urban setting, it is not likely to negatively impact rare species or habitats.

We are concerned about streams and other habitats that could be impacted by the proposed road improvement project. 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.

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,

Anna Yellin
Environmental Review Coordinator

Data Available on the Nongame Conservation Section Website

- Georgia protected plant and animal profiles are available on our website. These accounts cover basics like descriptions and life history, as well as threats, management recommendations and conservation status. Visit http://www.georgiawildlife.com/node/2721.

- Rare species and natural community information can be viewed 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.

- Downloadable files of rare species and natural community data by quarter quad and county are also available. They can be downloaded from: http://www.georgiawildlife.com/node/1370.

Figueroa, Danny

From: Ozier, Jim <Jim.Ozier@dnr.state.ga.us>
Sent: Tuesday, June 03, 2014 11:06 AM
To: Levy, Alex
Subject: RE: Bald Eagle Nesting Proximity Request: P.I. 0000784 - SR 400 at I-285 interchange improvements

Alex, the nearest known bald eagle nest is about 23 miles to the NW on Lake Allatoona.

Jim

From: Levy, Alex [mailto:Alex.Levy@arcadis-us.com]
Sent: Friday, May 30, 2014 10:52 AM
To: Ozier, Jim
Subject: Bald Eagle Nesting Proximity Request: P.I. 0000784 - SR 400 at I-285 interchange improvements
Importance: High

Dear Jim:

On behalf of the Georgia Department of Transportation (GDOT), ARCADIS is in the process of conducting an evaluation of potential impacts to natural resources for proposed operational improvements to the Interstate 285 (I-285) interchange at State Route (SR) 400 in Fulton and DeKalb counties, Georgia. The proposed project would include all I-285 and SR 400 entry and exit ramps and would extend in a northerly-direction, along SR 400, from the Glenridge Connector to Hammond Drive and in an easterly direction, along I-285, from Long Island Drive, east, to the North Fork of Nancy Creek. The project is located on the USGS Chamblee, GA 7.5 minute topographic quadrangle (see attached study-area location map).

I am writing to respectfully request your assistance in providing information on the known locations of bald eagle nesting in closest-proximity to the project area. The approximate midpoint of the project corridor is located at Latitude 33.9118, Longitude -84.3574.

In providing the requested information, your assistance will facilitate careful project planning and design with respect to these sensitive natural resources and would enable incorporation of appropriate conservation recommendations.

Sincere thanks,
Alex

Alexander Levy | Senior Ecologist | alex.levy@arcadis-us.com

Chair, TRB Committee on Ecology and Transportation
http://www.itre.ncsu.edu/ADC30/

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O. 770.384.6595 | M. 404.423.0311| F. 770.435.2666
www.arcadis-us.com

From: Pattavina, Pete
To: Ike, Claire; Jennifer.Giersch@dot.gov; Levy, Alex
Subject: Re: PI 0000784, Interstate 285 at State Route 400, Fulton and DeKalb Counties
Date: Friday, June 13, 2014 3:44:45 PM

Claire,

I reviewed the species list that you provided from our IPAC system. I provided previous comments on northern myotis (Myotis septentrionalis), and I copied you on those, so I won't reiterate them in this email. As for the other species identified by IPAC, I have the following comments:

Cherokee darter: Your project is not within the Etowah River basin, so you are not within the range of the species.

All mussel species indicated on the IPAC list: No habitat exists for any of these species in your project area. You are outside of the range for these species, since they have been extirpated from this section of the Chattahoochee River basin and have not been observed in more than 30 years.

Amphianthus pusillus and Isoetes melanospora: Our predictive range polygons do not indicate that granite outcrops with appropriate habitat would exist within your project's area of potential effect. I would consider your project outside of the range for these two species.

Rhus michauxii: Underlying geology is favorable for potential habitat for this species. However, we do not have any recent, nearby records for this species

Symphyotrichum georgianum (Georgia aster): Habitat could be present for this species. Please conduct surveys to determine if habitat or this species exists within your project's area of potential effect.

Northern myotis: Comments provided on this species via email on June 12, 2014.

Thank you for the opportunity to provide comments.

Pete

On Fri, May 23, 2014 at 11:29 AM, Ike, Claire <Claire.Ike@arcadis-us.com> wrote:

> Hello Pete,
>
> We are preparing an Ecology Resource Survey Report for the subject project. Upon reviewing the IPAC list for Fulton and DeKalb Counties transportation projects (see attached) I noticed several mussel species and one fish species is listed. The project is located in Sandy Springs (see attached Vicinity Map) and is outside of the known range for these species based on available USFWS GIS data. The project area is within the sub-watershed of Long Island Creek, Nancy Creek, and Perimeter Creek – all tributaries to the Chattahoochee River. I would like to request your concurrence that surveys for protected aquatic species listed for Fulton and DeKalb Counties would not be required for the project. Please let me know if you have questions or need more info.

Thank you,

Claire Ike | Ecologist | claire.ike@arcadis-us.com

ARCADIS U.S., Inc. | 2410 Paces Ferry Road, Suite 400 | Atlanta, GA, 30339

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--
Pete Pattavina
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service

Stevens, Robin

From: Rottenberg, Melissa
Sent: Thursday, October 23, 2014 1:40 PM
To: Stevens, Robin
Subject: FW: FWCA Coordination for STP00-0000-00(784), PI 0000784

Melissa Rottenberg | Senior Ecologist | Melissa.Rottenberg@arcadis-us.com

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---

From: Meyers, Sharilyn [mailto:SMeyers@dot.ga.gov]
Sent: Thursday, October 23, 2014 1:39 PM
To: Benton-Hooks, Carla
Cc: Rottenberg, Melissa
Subject: FW: FWCA Coordination for STP00-0000-00(784), PI 0000784

FYI-

Sharilyn Meyers
Ecology Team Leader
Office of Environmental Services
600 W. Peachtree Street, 16th Floor
Atlanta, GA 30308
(404) 631-1594 phone
(404) 631-1916 fax

From: Jennifer.Giersch@dot.gov [mailto:Jennifer.Giersch@dot.gov]
Sent: Thursday, October 23, 2014 1:35 PM
To: Carrie_Straight@fws.gov
Cc: Meyers, Sharilyn; Chamblin, Douglas
Subject: FWCA Coordination for STP00-0000-00(784), PI 0000784

Hello Carrie,

The subject project provides for reconstruction of the existing interchange at I-285 and SR 400 in Fulton and DeKalb Counties. The project would also include barrier separated collector-distributor lanes along I-285 and SR 400 for approximately 4.2 miles along I-285 and approximately 1.2 miles on SR 400 (total project length is longer to include tie-ins and advanced signing). Please reference the Ecology Assessment of Effects Report transmitted with the GDOT's letter of October 8, 2014.

Based on the information that has been provided to us, we have determined that the project will require a total of 4,887 linear feet of stream impacts. Coordination is required with the USFWS on the anticipated impacts to Perennial Stream 12, Intermittent/Perennial Stream 20a, Perennial Stream 25, Intermittent Stream 28, and Perennial Stream 29. We feel

that the GDOT has adequately evaluated and implemented, where possible, measures to avoid and minimize impacts, and that the proposed mitigation is commensurate with the level of impacts anticipated. We request your concurrence with this determination.

Additionally, we have determined that the project will have no effect to the federally protected Cherokee darter, purple bankclimber, shinyrayed pocketbook, Gulf moccasinshell, oval pigtoe, little amphianthus, black spored quillwort and dwarf sumac. Please let us know if you do not concur with this determination.

Regards,
Jen Giersch
Environmental Coordinator
FHWA – GA Division
404-562-3653

United States Department of the Interior

Fish and Wildlife Service
105 Westpark Drive, Suite D
Athens, Georgia 30606

West Georgia Sub Office
P.O. Box 52560
Ft. Benning, Georgia 31995-2560

Coastal Sub Office
4980 Wildlife Drive
Townsend, Georgia 31331

November 10, 2014

Mr. Rodney Barry, P.E.
Division Administrator.
Federal Highway Administration, Georgia Division
61 Forsyth Street, SW
Suite 17T100
Atlanta, Georgia 30303
ATTN: Ms. Jennifer Giersch

RE: USFWS Log# 04EG1000-2015-CPA-0147, GDOT P.I. No. 0000784

Dear Mr. Barry:

Thank you for your October 23, 2014, electronic mail regarding Georgia Department of Transportation (GDOT) I-285 and State Route 400 Interchange project. We submit the following comments under provisions of the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661 et. seq.) and the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.

GDOT project proposes to make improvements along Interstate 285 and State Route 400 in the vicinity of their intersection in Fulton and Dekalb Counties, Georgia. The purpose of the project is to address interchange deficiencies. The project lies in the Upper Chattahoochee watershed and within the potential range of endangered Dwarf Sumac (*Rhus michauxii*). Although endangered Cherokee Darter (*Etheostoma scotti*) is listed in IPaC as occurring in Fulton County, the project is in the Chattahoochee River basin where Cherokee Darters do no occur. Threatened Purple Bankclimber (*Elliptoideus sloatianus*), endangered Shinyrayed Pocketbook (*Hamiota subangulata*), endangered Gulf Moccasinshell (*Medionidus penicillatus*), endangered Oval Pigtoe (*Pleurobema pyriforme*) are all historic records are no longer expected to occur in the project area. No suitable habitat was found within the project area for threatened Little Amphianthus (*Amphianthus pusillus*), endangered Black-spored Quillwort (*Isoetes melanospora*), and Dwarf Sumac. Federal Highway Administration has rendered a no effects determination for all of the above threatened and endangered species.

Project implementation would impact approximately 4,887 linear feet of proposed stream impacts, requiring 18,836 stream credits. Impacts to Perennial Streams 12 and 25 were reduced through efforts to reduce the slope of the culverts from 4:1 to 2:1. GDOT has adequately evaluated and implemented, where possible, measures to avoid and minimize impacts to Intermittent/Perennial Stream 20a and Perennial Stream 29, however existing conditions have limited options for these two crossings.

We concur with your determination, that impacts to streams along the project corridor are unavoidable and necessary to implement the proposed project. GDOT's mitigation proposal satisfies your agency's responsibilities under FWCA. No additional compensation is necessary.

November 10, 2014
Letter to Mr. Rodney Barry, P.E.
Federal Highway Administration, Georgia Division
RE: GDOT Project 0000784

If you have any questions or require further information, please contact staff biologist Carrie Straight, at 706-613-9493, ext. 226.

Sincerely,

Donald W. Imm, Ph.D.
FOR Field Supervisor

cc: Doug Chamblin, GDOT
file

Stevens, Robin

From: Rottenberg, Melissa
Sent: Tuesday, April 28, 2015 9:17 AM
To: Stevens, Robin
Subject: FW: Continuing FWCA Coordination for STP00-0000-00(784), PI 0000784

FYI

Melissa Rottenberg | Senior Ecologist | Melissa.Rottenberg@arcadis-us.com

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O: 770-431-8666 | D: 770-384-6599 | F: 770-435-2666
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---

From: Meyers, Sharilyn [mailto:SMeyers@dot.ga.gov]
Sent: Tuesday, April 28, 2015 9:17 AM
To: Rottenberg, Melissa
Subject: FW: Continuing FWCA Coordination for STP00-0000-00(784), PI 0000784

☺

Sharilyn Meyers
Ecology Team Leader
Office of Environmental Services
600 W. Peachtree Street, 16th Floor
Atlanta, GA 30308
(404) 631-1594 phone
(404) 631-1916 fax

From: Jennifer.Giersch@dot.gov [mailto:Jennifer.Giersch@dot.gov]
Sent: Tuesday, April 14, 2015 12:12 PM
To: Carrie_Straight@fws.gov
Cc: Meyers, Sharilyn; Chamblin, Douglas; D'Avino, Gail
Subject: Continuing FWCA Coordination for STP00-0000-00(784), PI 0000784

Hello Carrie,

The subject project provides for reconstruction of the existing interchange at I-285 and SR 400 in Fulton and DeKalb Counties. The project would also include barrier separated collector-distributor lanes along I-285 and SR 400 for approximately 4.2 miles along I-285 and approximately 1.2 miles on SR 400 (total project length is longer to include tie-ins and advanced signing). Please reference the Addendum #1 to the Ecology Assessment of Effects Report transmitted with the GDOT's letter of April 10, 2015.

We made a no effect determination for protected species on October 23, 2014 (see email below). This determination has not changed.

We also initiated FWCA consultation at the same time. Since that time, the project design has progressed and it is necessary to coordination for additional anticipated stream impacts. The project will now require changes in stream impacts to streams 9, 12, 20a, 26, 28, 29, and 29a. We feel that these impacts are necessary for construction of the project, that GDOT has adequately worked to avoid and minimize impacts to the streams and that the proposed mitigation is commensurate with the level of impacts anticipated. We request your concurrence with this determination.

Regards,
Jen Giersch
404.562.3653

From: Giersch, Jennifer (FHWA)
Sent: Thursday, October 23, 2014 1:35 PM
To: Carrie_Straight@fws.gov
Cc: smeyers@dot.ga.gov; dchamblin@dot.ga.gov
Subject: FWCA Coordination for STP00-0000-00(784), PI 0000784

Hello Carrie,

The subject project provides for reconstruction of the existing interchange at I-285 and SR 400 in Fulton and DeKalb Counties. The project would also include barrier separated collector-distributor lanes along I-285 and SR 400 for approximately 4.2 miles along I-285 and approximately 1.2 miles on SR 400 (total project length is longer to include tie-ins and advanced signing). Please reference the Ecology Assessment of Effects Report transmitted with the GDOT's letter of October 8, 2014.

Based on the information that has been provided to us, we have determined that the project will require a total of 4,887 linear feet of stream impacts. Coordination is required with the USFWS on the anticipated impacts to Perennial Stream 12, Intermittent/Perennial Stream 20a, Perennial Stream 25, Intermittent Stream 28, and Perennial Stream 29. We feel that the GDOT has adequately evaluated and implemented, where possible, measures to avoid and minimize impacts, and that the proposed mitigation is commensurate with the level of impacts anticipated. We request your concurrence with this determination.

Additionally, we have determined that the project will have no effect to the federally protected Cherokee darter, purple bankclimber, shinyrayed pocketbook, Gulf moccasinshell, oval pigtoe, little amphianthus, black spored quillwort and dwarf sumac. Please let us know if you do not concur with this determination.

Regards,
Jen Giersch
Environmental Coordinator
FHWA – GA Division
404-562-3653

United States Department of the Interior

Fish and Wildlife Service
105 Westpark Drive, Suite D
Athens, Georgia 30606

West Georgia Sub Office
P.O. Box 52560
Ft. Benning, Georgia 31995-2560

Coastal Sub Office
4980 Wildlife Drive
Townsend, Georgia 31331

May 6, 2015

Mr. Rodney Barry, P.E.
Division Administrator.
Federal Highway Administration, Georgia Division
61 Forsyth Street, SW
Suite 17T100
Atlanta, Georgia 30303
ATTN: Ms. Jennifer Giersch

RE: USFWS Log# 04EG1000-2015-CPA-0629, GDOT P.I. No. 0000784

Dear Mr. Barry:

Thank you for your April 14, 2015, electronic mail regarding Georgia Department of Transportation (GDOT) project PI 0000784. We submit the following comments under provisions of the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661 et. seq.).

GDOT project proposes to reconstruct the State Route 400 and Interstate 285 interchange in DeKalb and Fulton Counties, Georgia. Initial FWCA coordination on 23 October 2014 determined that project implementation would impact approximately 4887 linear feet of impacts 18836 stream mitigation credits. New information now changes impacts to Streams 9, 12, 20a, 26, 28, 29, and 29a. The updated total stream impacts now include 6487 linear feet of impacts requiring 19879 stream credits. We believe impacts have been minimized to the extent reasonable and that the proposed mitigation is commensurate with the level of anticipated impact.

We concur with your determination, that impacts to streams along the project corridor are unavoidable and necessary to implement the proposed project. GDOT's mitigation proposal satisfies your agency's responsibilities under FWCA. No additional compensation is necessary.

If you have any questions or require further information, please contact staff biologist Carrie Straight, at 706-613-9493, ext. 226.

Sincerely,

Donald W. Imm, Ph.D.
Field Supervisor

cc: Doug Chamblin, GDOT
file

Stevens, Robin

From: Patrick Hall <PHall@atlantaregional.com>
Sent: Wednesday, July 16, 2014 10:37 AM
To: Stevens, Robin
Subject: RE: PI 0000784 (I-285/SR 400 Interchange Reconstruction)-ETA Index data

Robin,

Sorry, I somehow completely missed the first email, from June 26th. I have no idea how I missed it…

From looking at your proposed study area, it does not appear that any of our ETAs are within the boundaries.

Again, my apologies for not getting back to you sooner.

Patrick Hall
Senior Planner
Travel Demand Model Applications
Transportation Access & Mobility Division

Atlanta Regional Commission
regional impact + local relevance

40 Courtland Street, NE
Atlanta, Georgia 30303-2538

P | 404.463.3290
F | 404.463.3254

phall@atlantaregional.com
atlantaregional.com

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From: Stevens, Robin [mailto:Robin.Stevens@arcadis-us.com]
Sent: Wednesday, July 16, 2014 8:29 AM
To: Patrick Hall
Subject: RE: PI 0000784 (I-285/SR 400 Interchange Reconstruction)-ETA Index data

Hi Mr. Hall,

I am just following up on this data request from last month. Do you have the data regarding ETA areas discussed below? Thanks for your help!

Robin Stevens | Senior NEPA Specialist | Robin.Stevens@arcadis-us.com

ARCADIS U.S., Inc. | 2410 Paces Ferry Road, Suite 400 | Atlanta, GA 30339
T: 770.431.8666 | Direct: 770.384.6597 | F: 770.435.2666
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From: Stevens, Robin
Sent: Thursday, June 26, 2014 12:31 PM
To: 'phall@atlantaregional.com'
Subject: PI 0000784 (I-285/SR 400 Interchange Reconstruction)-ETA Index data

Hi Mr. Hall,

In response to our early coordination request for the I-285/SR 400 Interchange Reconstruction project (GDOT PI # 0000784), a letter from ARC was emailed to me that discussed ARC's Equitable Target Area (ETA) index used to identify potential environmental justice populations. Your name was provided as the contact for the ETA index.

I am attaching our study area map for the project. Could you let me know what kind of data, if any, you have for this area? Also, if there are medium, high, or very high ETA areas in the study area, do you have a breakdown for which parameters (senior populations, low education attainment, housing values, poverty, and minority distribution) the areas are rated as high?

The response letter from ARC indicated the ETA index data can be used to measure the impacts of programs/investments at a regional, local, and project level. Do you have more information on this use?

Thanks,

Robin Stevens | Senior NEPA Specialist | Robin.Stevens@arcadis-us.com

ARCADIS U.S., Inc. | 2410 Paces Ferry Road, Suite 400 | Atlanta, GA 30339
T: 770.431.8666 | Direct: 770.384.6597 | F: 770.435.2666
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DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE	NHS00-0001-00(758), Cobb, Fulton, Dekalb Counties PI 0001758 Revive I-285 Top End	**OFFICE**	Materials and Testing Forest Park, Georgia
		DATE	October 7, 2013

FROM Charles A. Hasty, P. E., State Materials Engineer

TO Darryl VanMeter, P.E., Office of Innovative Program Delivery
Attn: Marlo Clowers

SUBJECT **Review of Consultant's Limited Phase I Environmental Assessment**

The Phase I Environmental Assessment prepared by United Consulting dated April 20, 2012 for the above referenced project has been reviewed by this office.

It appears that adequate work has been performed by the consultant in identifying and evaluating recognized environmental conditions (RECs) within the project corridor for potential UST, hazardous waste, and other on-site environmental issues. This office concurs with the consultant's recommendation that based upon the proposed construction limits, a Phase II ESA should be conducted at 75 sites that were identified within the study corridor during field reconnaissance that have a potential for environmental impact to the proposed right-of-way.

If you have any questions, they may be addressed to Reginald Murph or Neoma Cole at (404) 608-4720 of this office.

CAH: NKC

cc: Bobby Hilliard, P.E., Office of Program Control
Glenn Bowman, Office of Environmental Services
Attn: Michael Murdoch
Howard Copeland, Office of Right-of-Way
Attn: Hershel Thompson
Vicki Gavalas, District Planning & Programming Engineer, Chamblee
District Right-of-Way Office, Chamblee

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE **NHS00-0000-00(784), FULTON**
PI NO. 0000784
I-285 @ SR 400 INTERCHANGE
RECONSTRUCTION & HOV SYSTEM

OFFICE Materials & Testing
Forest Park, Georgia

DATE February 4, 2015

D.E.T. for

FROM Charles A. Hasty, P.E., State Materials Engineer

TO Darryl VanMeter, P.E., Innovative Program Delivery
Attn: Marlo Clowers

SUBJECT **REVISED RESULTS OF HAZARDOUS WASTE INVESTIGATION**

This revised report replaces the previous report dated January 13, 2015. The report was revised due to errors in the boring location maps for borings 13 through 18. Also, locations information referenced as Sites has been changed to Parcels.

At the request of Arcadis, US, Inc.; based on the plans provided; and due to the time sensitive nature of this project, a subsurface investigation was conducted for the subject project to determine whether contamination from hazardous waste is present within the required right-of-way of the above referenced project. This investigation covered a large area near Interstate 285 at State Route 400 on State ROW, in the vicinity of several businesses to include the following property owners of concern: Hospital Authority of Fulton County; The Interchange, LLC; Morrison Management Specialist, Inc.; and Dunwoody Development Authority.

Minimal soil contamination from hazardous waste was encountered at a depth of 5 feet in the project area. Please refer to the attached laboratory test reports. Groundwater was not encountered. Soil contamination levels do not exceed HSRA release notification requirements as established by EPD directives. There are no USTs in place at these sites. It is the recommendation of this office that no additional investigations are necessary and right-of-way acquisition at these sites may proceed.

Any contaminated soil excavated during construction activities at Parcels 16, 17, 18, 19, and 69 must be disposed of at a permitted lined municipal solid waste landfill. Please add the appropriate note to the plans.

If you have any questions, they may be addressed to Ian Rish, P.E., at (404) 608-4726 or (404) 608-4720 of this office.

CAH/IDR

Attachment:

- Lab Test Results
- Boring Location Maps (REVISED)

cc: Bobby Hilliard, P.E., Office of Program Control
Howard Copeland (attn: Hershel Thompson), Office of Right-of-Way
Hiral Patel, Office of Environmental Services
Kevin Cowan, District Planning and Programming Engineer, Chamblee
District Right-of-Way Office, Chamblee

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE **NHS00-0000-00(784), FULTON**
PI NO. 0000784
I-285 @ SR 400 INTERCHANGE RECONSTRUCTION & HOV SYSTEM

OFFICE Materials & Testing
Forest Park, Georgia

DATE April 3, 2015

FROM Charles A. Hasty, P.E., State Materials Engineer

TO Darryl VanMeter, P.E., Innovative Program Delivery
Attn: Marlo Clowers

SUBJECT **ADDENDUM TO REVISED RESULTS OF HAZARDOUS WASTE INVESTIGATION**

This addendum pertains to the division of Parcel No. 69 based on information provided by Arcadis, US, Inc. In an e-mail dated March 26, 2015, Arcadis stated that it was discovered the Parcel referred to as Parcel No. 69 on the plans provided for use in the Revised Hazardous Waste Investigation dated February 4, 2015, has been subdivided since the plans were generated.

All recommendations in the previous Revised Hazardous Waste Investigation that relates to Parcel No. 69 now apply to both Parcel Nos. 69 and 74.

If you have any questions, they may be addressed to Ian Rish, P.E., at (404) 608-4726 or (404) 608-4720 of this office.

CAH/IDR

Attachment:
New Plan Sheet 13-017 (for New Parcel Nos. 69 and 74)
Old Plan Sheet 13-016 (for Old Parcel No. 69 with borings)

cc: Bobby Hilliard, P.E., Office of Program Control
Howard Copeland (attn: Hershel Thompson), Office of Right-of-Way
Hiral Patel, Office of Environmental Services
Kevin Cowan, District Planning and Programming Engineer, Chamblee
District Right-of-Way Office, Chamblee

9/26/2014 10:58:31 AM | GPLOT-V8 | C:\TRAVGDOT I-285\285_400\RDY\DGN\0000784_13-016.dgn | STATE GA | PROJECT NUMBER | SHEET NO. | TOTAL SHEETS

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69
N/F
DUNWOODY DEVELOPMENT
AUTHORITY
18 347 01 015

PERENNIAL STREAM #29

PC 23+42.44
B-DE214, STA. 1087+65.60
DE001, STA. 1058+11.11
54.0' LT

REQ'D R/W
REQ'D EASM'T
EXIST. R/W

B13 B14 B15 B16 B17 B18

PI 31+47.71
PI 1068+22.30

25+00 30+00 35+00

DE241 DE341-Curve # 2 DE341

1087+66 1060+00 1065+00 1070+00

DE001 DE001-Curve # 6 DE001

I-285

SEE DRAWING No. 13-015

SEE DRAWING No. 13-017

1100+00 1105+00 1110+00

24+13 DE211 DE211-Curve # 1 DE211

PC 1058+11.11

PCC 1107+09.94

PI 1109+00.91

END RAMP DE342
STA. 24+12.57
DE211, STA. 1098+18.95
12.0' RT

N

PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

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SCALE IN FEET
0 50 100 200

REVISION DATES

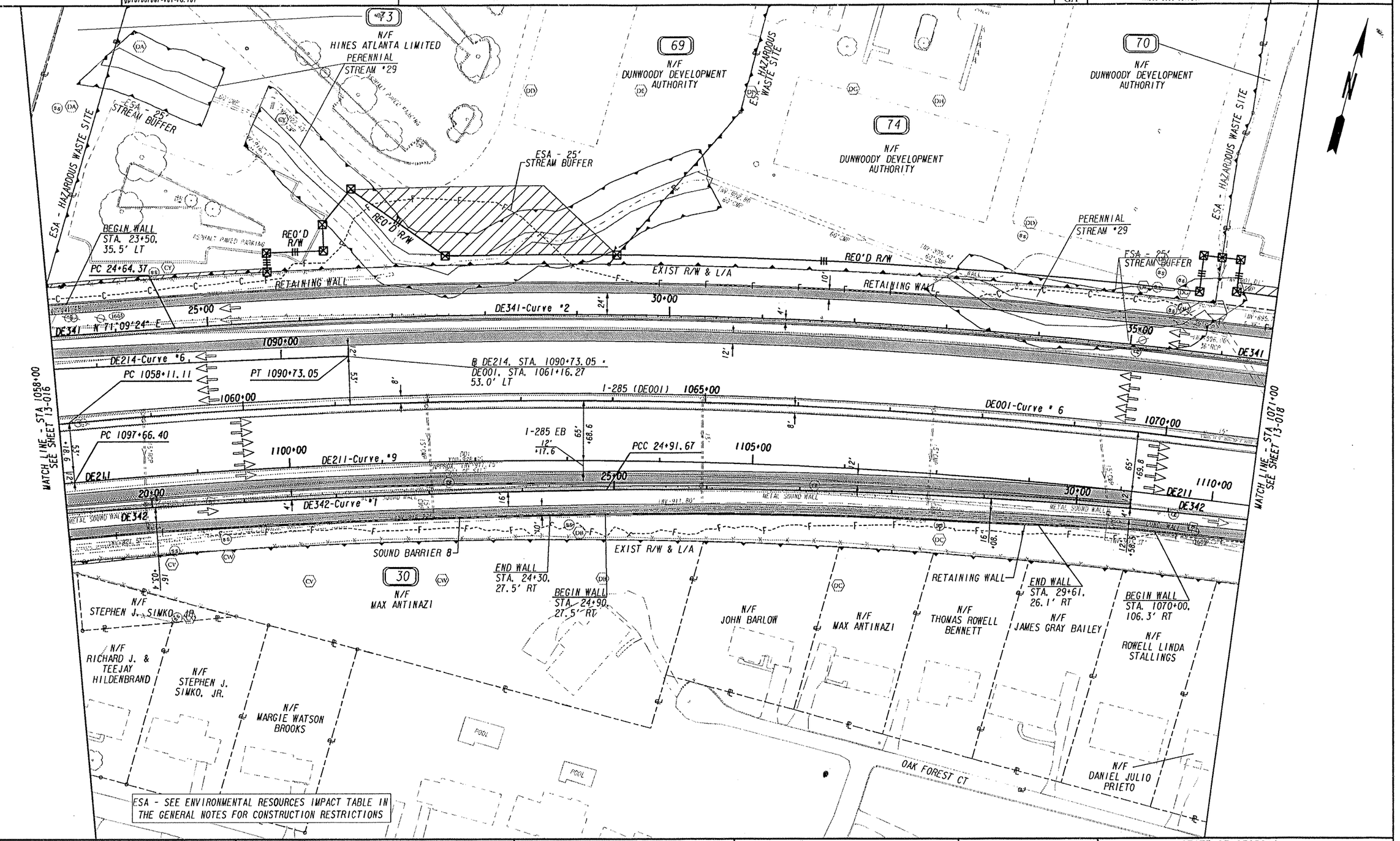
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:

MAINLINE PLAN

DRAWING No. 13-016

12/14/2012 GPLN

3/26/2015 2:03:12 PM USER:woosborne	GPLOT-V8 gplotborder-V81-P0.tbl	G:\TRA\GDOT 1-285\285_400\RDY\DGN\0000784_13-017.dgn	STATE GA	PROJECT NUMBER NHS00-0000-00(784)	SHEET NO.	TOTAL SHEETS



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS
PROPOSED PAVED SHOULDER
PROPOSED LANE

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0 50 100 200

COSTING PLANS

NOT FOR CONSTRUCTION

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: INNOVATIVE DELIVERY

MAINLINE PLAN
I-285

I-285 AT SR 400 RECONSTRUCTION

DRAWING No. 13-017

12/14/202 GPLM

ARCADIS
Infrastructure · Water · Environment · Buildings

ARCADIS U.S., Inc.
1000 Cobb Place Blvd.
Bldg. 500-A
Kennesaw
Georgia 30144
Tel 770 428 9009
Fax 770 428 4004
www.arcadis-us.com

INFRASTRUCTURE

To: File

Subject:
Groundwater Monitoring Wells Observations During Field Activities
0000784, I-285 at SR 400 Interchange Reconstruction
Atlanta, Georgia

Date:
September 9, 2014

Contact:
Christina Vulova

Phone:
404-952-1607

Email:
christina.vulova@arcadis-us.com

Our ref:
GADT0201.0174

To whom it may concern:

ARCADIS has been tasked to perform the geotechnical investigation for the I-285 @ SR 400 Interchange Reconstruction Project. This design-build-finance project extends along either side of I-285 and SR 400, and includes over 4 miles of freeway and 5 interchanges. As part of the field activities associated with the geotechnical investigation, ARCADIS has been tasked to take a note of existing monitoring wells in the study area. The purpose of this letter is to report ARCADIS' observations of existing monitoring wells in the project area.

Project Background

The geotechnical investigation was performed along I-285 and SR 400 in the following areas

- I-285 Corridor
  In the east-west direction, the investigation extends along I-285 approximately from Ashford Dunwoody Road (i.e., the end of the access ramps on the east side) to Long Island Drive.

- SR 400 Corridor
  In the north-south direction, the investigation extends along SR 400 approximately from the Glenridge Connector ramps to Spalding Drive.

Groundwater Monitoring Wells Observations

During the field activities, the field personnel have been observing the area for existing monitoring wells. Groundwater monitoring wells were observed in the vicinity of the following gas stations:

- **Exxon**
  77 Perimeter Center, E
  Atlanta, GA

- **Chevron**
  5701 Roswell Rd,
  Sandy Springs, GA

- **Shell**
  5700 Roswell RD,
  Atlanta, GA

Apparently these monitoring wells are associated with the ongoing groundwater monitoring of underground storage tanks regulated by the Environmental Protection Division of the Georgia Department of Natural Resources. Based on these observations, we would expect that other monitoring wells exist near the gas stations in the area.

Existing monitoring wells were not observed in areas of the project other than the premises of the gas stations listed above.

ARCADIS appreciates the opportunity to be of service to the Georgia Department of Transportation on this project. If you have any questions regarding the information presented in this letter, please contact the undersigned at 770-428-9009.

Sincerely,

ARCADIS U.S., Inc.

Christina Vulova

Christina Vulova, P.E.
Senior Geotechnical Engineer

Copies:
Benjamin Black, ARCADIS; File

Keith Golden, P.E., Commissioner

GEORGIA DEPARTMENT OF TRANSPORTATION

One Georgia Center, 600 West Peachtree Street, NW
Atlanta, Georgia 30308
Telephone: (404) 631-1000

July 31, 2014

Mr. Ed Johnson, Branch Chief
US Army Corps of Engineers
Regulatory Division, Piedmont Branch
1590 Adamson Parkway, Suite 200
Morrow, Georgia 30260-1777

Re: Practical Alternatives Report, GDOT NHS00-0000-00(784), PI 0000784, Fulton and DeKalb counties
I-285 at SR 400 Interchange Reconstruction

Dear Mr. Johnson:

The Georgia Department of Transportation (GDOT) is proposing operational improvements along Interstate 285 (I-285) and State Route (SR) 400 in the vicinity of the I-285/SR 400 interchange in Fulton and DeKalb counties, Georgia. The project study area includes the area along I-285 from Riverside Drive to Chamblee Dunwoody Road. The alignment along SR 400 is between the Glenridge Connector north to Hammond Drive. In Fulton County, the project is located within the City of Sandy Springs. In DeKalb County, the project is located within the City of Dunwoody and the City of Brookhaven. The proposed design-build project would reconstruct the existing interchange to include barrier-separated collector-distributor (CD) lanes along I-285 and SR 400, in addition to new flyover bridges. Reconstruction of existing ramps and reconstruction and widening of existing bridges in the interchange area would also be included. The project will connect to SR-400 CD project (PI 721850), which consists of the construction of CD lanes along each side of SR 400 between Hammond Drive and Spalding Drive. The total project length along I-285 is approximately five miles and the total project length along SR 400 is approximately two miles.

GDOT intends to procure a design-build-finance (DBF) contract to finalize the design and construct both of the projects. An approved environmental document and costing plans (30% plans) will be prepared by GDOT to provide to the DBF team. The project would address interchange deficiencies by separating traffic with the CD system and additional ramp capacity between I-285 and SR 400.

The project is anticipated to be awarded to a Design-Build Contractor in December 2015, with construction beginning shortly after. Construction is anticipated to last approximately three years, and the reconstructed interchange is anticipated to be open to traffic in 2019.

Please find the attached Practical Alternatives Report for the above referenced project. The project layout is limited due to the existing infrastructure and tie-in locations along I-285 and SR 400. Because the footprint did not allow shifting of the project location, the alternatives focus is for design modification options that would be available to the GDOT and DBF team. The final design would be chosen and implemented by the DBF, with GDOT approval. A summary of the design alternatives is presented below.

Alternative 1 utilizes standard GDOT typical sections with rural shoulders. Tie-ins with the existing ground were assumed to be made with 4:1 slopes. No side barriers or walls were utilized. Impacts would result in approximately:

- 6,374 linear feet of jurisdictional stream impact,
- 357,945 square feet (8.2 ac) of non-exempt impact to state regulated stream buffers,
- 1.595 acres of impact to jurisdictional wetlands and open waters,
- 38,244 stream mitigation credits and 9.6 wetland mitigation credits
- No impacts to archaeological resources,
- Potential impacts to six historical districts,
- Potential impacts to one Environmental Justice (EJ) property,
- Potential impacts to one community park, and
- Displacements to 14 multifamily (apartments), 22 residential, and 13 commercial properties.

.

Alternative 2 maximizes design measures to minimize impacts, where feasible, and would result in approximately:

- 3,015 linear feet of jurisdictional stream impact,
- 184,225 square feet (4.2 ac) of non-exempt impact to state regulated stream buffers,
- 0.592 acre of impact to jurisdictional open water,
- No jurisdictional wetland impact,
- 21,630 stream mitigation credits and 3.2 wetland mitigation credits,
- No impacts to archaeological resources, EJ properties, or community park impacts,
- Potential impacts to four historical districts, and
- Displacements to 2 multifamily, 3 residential, and 3 commercial properties.

Suitable habitat for state protected Georgia aster (*Symphyotrichum georgianum*) [federal candidate], sweet pinesap (*Monotropsis odorata*) and bay star-vine (*Schisandra glabra*) was identified within the project area; a protected species survey and effects determination is pending the Fall of 2014 survey. An aquatic survey for the state protected Chattahoochee crayfish (*Cambarus howardi*) was completed in 2009 and 2014 within the project area; no suitable habitat or individual specimens were found.

If you should have any questions or need additional information, please contact Sharilyn Meyers 404-631-1594 (smeyers@dot.ga.gov) or Doug Chamblin at 404-631-1447 (dchamblin@dot.ga.gov).

Sincerely,

Hiral Patel /sc

Hiral Patel, P.E.
State Environmental Administrator

HP/HDC/mbr
Attachment

cc: Marlo Clowers, GDOT Project Manager
Michael Murdoch, GDOT NEPA
Carla Benton-Hooks, GDOT Scheduler
Lisa Westberry, GDOT Mitigation
Jennifer Giersch, FHWA
Mark LaRue, USEPA
Pete Pattavina, USFWS
Anna Yellin, GDNR-WRD
Jan Sammons, GDNR- EPD

ARCADIS U.S., Inc.
2410 Paces Ferry Road, Suite 400
Atlanta
Georgia 30339
Tel 770.431.8666
Fax 770.435.2666

MEETING REPORT

Subject:

PAR Meeting
I-285 at SR 400 Interchange
(PI 0000784)

Location:
USACE Morrow Georgia

ARCADIS Project No.:
GADT0201.0174

Date of Meeting:
August 26, 2014
10:00 AM

Report No.:
1

Minutes by:
Melissa Rottenberg

Issue Date:
August 26, 2014

Participants:
USACE – Ed Johnson, Joe Rivera, Natalie Edwards
GDOT – Marlo Clowers, Sharilyn Meyers, Carla Benton-Hooks, Hannah Pruett
USFWS – Pete Pattavina
USEPA – Mark LaRue (via phone)
GEPD – Danielle Floyd
ARCADIS – William Dial, Robin Stevens, Melissa Rottenberg

Not Present:
FHWA

Copies:
File
GDOT
USACE
USFWS
GEPD
USEPA

Purpose:
The purpose of the PAR is to provide reviewing agencies a project summary and opportunity to express design concerns prior to submittal of the USACE permitting.

Meeting Notes:
The following presents a summary of the discussion during the meeting.

1. Project Overview

The Interstate 285 (I-285) at State Road (SR) 400 Interchange Improvements (PI 0000784) consist of interchange reconstruction and installation of barrier separated collector-distributor (CD) lane along each side of I-285 from west of Roswell Road to east of Ashford Dunwoody Road and along SR 400 from just south of the Glenridge Connector to Hammond Drive. Entry and exit ramps to/from SR 400 and I-285 are also included. The project will connect to the SR-400 CD project (PI 721850), which consists of construction of CD lanes along each side of SR-400 from Hammond Drive to Spalding Drive. The Georgia Department of Transportation (GDOT) intends to procure one design-build-finance (DBF) contract to finalize the design for and construct both projects. An approved Environmental Assessment (EA) for the Interchange Reconstruction project, an approved Environmental Re-evaluation for the SR 400 CD Lanes

project, costing plans (30% plans) for both projects will be prepared by GDOT to provide to the DBF team. The benefits to GDOT from a DBF process includes reduced environmental impacts and costs by utilizing innovative construction techniques, abbreviated PDP process, and DBF allows projects to be completed sooner while GDOT repays the DBF holders over time.

The professional services (EA and costing plans) on the I-285 at SR 400 Interchange project (PI 0000784) are being provided by ARCADIS. Professional services (NEPA Re-Evaluation and costing plans) on the SR 400 CD project (PI 721850) are being provided by Kimley-Horn and Associates, Inc.

The ecological assessment was originally conducted by ARCADIS during the revive285 top end project (PI 0001758, 003534, et al.) in 2009 and the I-285 at SR 400 Interchange Reconstruction project corridor was re-assessed by ARCADIS in 2014.

Alternative 1 utilizes standard GDOT design using typical sections with rural shoulders. Tie-ins with the existing ground were assumed to be made with 4:1 slopes. No side barriers or walls were utilized. Alternative 2 (preferred) maximizes design measures, including walls and bridges, where feasible, to reduce impacts.

2. Need and Purpose
   The project would address interchange deficiencies (including substantial weaving leading up to the interchange, insufficient ramp capacity, and geometric deficiencies) by separating traffic with the CD system, providing additional ramp capacity between I-285 and SR 400, and reconstructing the ramps and tie-ins.

3. Environmental Resources
   a. Ecology – updated PAR impact tables, environmental resource maps, plan sheets, and typical section were presented to participants. Full PAR package was not revised.
      - Alternative 1 approximated impacts include: 19 streams, 7,983 linear feet of impact, and would require 39,900 stream credits; 2 wetlands, 4 open waters, 1.606 acres of impact, and would require 9.6 wetland credits; 22 impacted non-exempt buffers, 420,645 square feet of impact. An Individual Permit (IP) and a Stream Buffer Variance would be required.
      - Alternative 1 is not practical due to ROW costs, displacements, impacts to historical resources, and increased impacts to waters of the US.
      - Alternative 2 approximated impacts include: 14 streams, 5,069 linear feet of impact, and would require 21,000 stream mitigation credits; 17 impacted non-exempt buffers, 224,950 square feet of impact. No wetland or open water impacts. An IP and a Stream Buffer Variance would be required.
      - Protected species assessment is the same for Alternative 1 and 2.
        - No federal threatened or endangered species impacts.
        - Not likely to adversely affect northern long-eared bat populations.
        - A survey for federal candidate Georgia aster is scheduled for October 2014 during the blooming season. However, none were found during the survey for Revive285 within the project limits 5 years ago.
        - No effect to state listed species.

b. History
National Register eligible historic properties are located throughout the majority of the project corridor. Both alternatives impact historic properties; however, Alternative 2 significantly reduces impacts to these properties.
c. Environmental Justice
One EJ community is located within the Copeland Road Historic District that would be impacted by Alternative 1.

4. Permitting
   a. The DBF Team would be responsible for permitting. GDOT is applicant. DBF contractor would complete any re-evaluations and permit application process, with GDOT approvals. DBF contractor would be responsible for purchasing mitigation.
   b. Per USACE, both projects would be permitted under one IP since both projects would be let together, combined under the DBF contract, and because of cumulative impacts. This also maximizes USACE staffing efficiency.
   c. IP schedule would need to be considered in the DBF contract schedule. USACE expressed concern that the minimum time required, 120 days, is generally unlikely to occur on a project, especially when design and impacts would not be final until DBF contract is secured. Temporary impacts are unknown at this time. Any major modification to the IP would require the USACE to re-do public outreach. Six months is a more realistic timeline to expect to obtain permit.
   d. PAR meeting planned for November on the SR 400 C/D project.
   e. Per GDOT, impact table could be completed for both projects at the end of 2014 to ensure no double impacts in overlap area.

5. Agency Concerns
   a. USACE concern regarding other alternatives considered for the project. Wider footprint of revive285 was prior consideration; however, it was not appropriate to include it in the PAR for this project since the two are no longer tied. No feasible alternatives available due to existing infrastructure; therefore, approach was to assess typical 4:1 slope impacts versus minimization impacts.
   b. USACE concern regarding areas where large impact under Alternative 1 went to no impacts for Alternative 2. Bridging was utilized for Alternative 2, where feasible to avoid impacts. Stream 15 is an example of bridging.
   c. GEPD concern regarding NA listed under buffer impacts for Stream 18 and 19. Stream 18 is entirely contained within a concrete flume. Stream 19 has a short section of natural stream bed and is buffered in this section; however, the majority of the stream is contained in a concrete flume.
   d. GEPD concern regarding resources in the Hammond Drive project overlap areas for interchange and C/D project. Coordination occurred between ARCADIS and Kimley-Horn in the project overlap area. The resources match in this area, although numbering would be different.
   e. USFWS concern regarding repeating FWCA concurrence on the project numerous times with every design change. Preference is to reduce the number of concurrence requests. GDOT mentioned plan is to obtain FWCA concurrence upon completion of AOE and second concurrence prior to construction.

Innovative Program Delivery
Meeting Minutes

PROJECT: **SR 400 CD Lanes & I-285/SR 400 Interchange**

PI NOs.: **PI 721850- & PI 0000784**

PURPOSE: **Section 404 Individual Permit Coordination**

DATE: **January 13, 2015**

TIME: **1:25 pm - 2:30 pm**

CHAIRPERSON: **Marlo Clowers, GDOT PM**

LOCATION: **GDOT, 16th Floor Conference Room**

TO: **Distribution and all Attendees**

ATTENDEES:

Names	Organization / Title	Phone Number	Email Address
See attached sign in sheet			

PREPARED BY: Heidi Schneider, HNTB

ISSUE DATE: 01/27/15

Meeting called to order at 1:25 pm

Item No.	*Item Description*	*Responsibility*	*Due Date*

1.0 Introductions

2.0 Overview of Design Build for PI 721850- & PI 0000784

2.1 Marlo Clowers stated that the Georgia Department of Transportation (GDOT) had met a few months ago with the US Army Corps of Engineers (USACE) to discuss the two projects and present a Practical Alternative Report (PAR) for PI 000784 (I-285/SR 400 interchange).

2.2 Marlo reiterated that there are two PI numbers (PI 000784 & PI 721850-) which correspond to two environmentally independent projects. Each project is able to be a standalone project. However, the two projects will be Let for construction as a single project with one DB team. It is assumed that the SR 400 CD lanes will be in place and will be part of the I-285 interchange's No-Build condition. In other words, the SR 400 CD lanes project is part of both of the No-Build and Build alternatives for the interchange.

2.3 The shortlist for the DB team selection will be announced on 2/13/15.

3.0 PI 721850- (SR 400 CD Lanes) Presentation

3.1. Mike Rushing, Kimley-Horn, presented a roll plot of the entire SR 400 CD lane project. The project starts north of PI 000784 and ends past Spalding Drive.

3.2. The project was conceived in the 1990s. Environmental clearance was received in 1998.

3.3. The original project was to tie the project into the existing I-285/SR 400 interchange without modifying the interchange. The Hammond Drive interchange was pulled out of the original project concept in 2008. The Hammond Drive interchange was built in 2009/2010.

3.4. The proposed project would create a parallel northbound and southbound system which allows multiple entries and exits without disrupting the traffic on SR 400. The project would also include a diamond interchange redesign for Abernathy Road and SR 400. The purpose is to improve operations and remove conflicting movement.

3.5. The project has already purchased 2/3 of the required right-of-way (ROW). GDOT will acquire the remaining parcels prior to Notice to Proceed (NTP) 1 for the DB team.

3.6. Natalie Edwards, USACE, asked which project would be constructed first. Marlo responded that most likely the DB team would choose to construction the CD lanes first due to ROW already being acquired and it having a more straight forward design. However, the DB team could choose to construct either project first, or portions of both projects simultaneously.

4.0 Section 404 Individual Permit (IP) Options

4.1. Heidi Schneider, HNTB, discussed phasing the IP by completing a full application based on costing or concept plans. The IP (Phase 1) would follow the 120-day legal review clock and would be submitted for public comment as part of the process. The USACE would issue Conditional Approval.

4.2. Then the DB team would send in the final plans and any required documentation involving modifications to the original IP. If there are no substantial changes/modification, the USACE would issue the approved IP within approximately 30 days of receipt of the final information and all requested outstanding information.

4.3. The USACE had stated in December 2014 that they would allow this

Item No.	Item Description	Responsibility	Due Date

permit phasing approach to be used.

4.4. Melissa Rottenberg, ARCADIS, presented an impact to the waters of the US table. It summarized the impacts to each PI number separately. It also showed where the impacts to the two projects overlap.

4.5. Melissa stated that the methods for calculating the impacts had been different between the PI numbers. For PI 0000784, the impacts included artificially lined channels but did not include these channels in the required mitigation calculation. For PI 721850-, the impacts did not include artificially lined channels.

4.6. Ed Johnson, USACE, stated that it is up to GDOT has to how to present the information in the Section 404 application. However, it should be clearly explained as to how the impact calculations were determined. Also, each permit should report the impacts in the same manner.

4.7. Ed stated that two permits would double the coordination with the agencies and take longer to review and make two evaluations.

4.8. It was suggested that the IP application (Phase 1) submissions be staggered by at least 45 days to help the USACE with the workload of reviewing the applications.

4.9. Heidi stated that the schedule is not formalized yet. However, it is anticipated that the Phase 1 IP submittals would occur in late Spring & early Summer.

4.10. Ed stated that two IP applications are acceptable provided that it can be demonstrated that each PI number has separate and independent utility and is a complete job.

4.11. It was suggested that a graphic be included in the IP applications which show where the independent projects overlap.

4.12. Danielle Floyd, Georgia Environmental Protection Division (GAEPD), suggested providing a graphic or labeling on the plans identifying the location of natural streambed verse artificially lined channel (i.e. concrete flume).

4.13. A Practical Alternative Report (PAR) has been completed and approved for PI 0000784. However, a PAR has not been prepared for PI 721850-.

4.14. Heidi asked if a PAR is required for PI 721850- due to the lack of available alternatives (build and no-build).

4.15. Doug Chamblin, GDOT, explained that the PAR is not a legal requirement of the IP process: it is an agreement. Ed agreed.

Item No.	Item Description	Responsibility	Due Date
4.16.	Doug will reach out to the US Fish and Wildlife Service (USFWS) to get in writing that a PAR for PI 721850- is not requested.	GDOT	1/16/15
4.17.	Marlo will ask FHWA (Jennifer Giersch) at the meeting on Thursday (1/15/15) if FHWA will require a PAR for PI 721850-.	GDOT	1/15/15
4.18.	Natalie will call the US Environmental Protection Agency (USEPA) and ask if they are requesting a PAR for PI 721850-.	USACE	1/23/15

5.0 Stream Buffer Variance (SBV), Section 401 Water Quality Certification (Section 401), and National Pollution Elimination Discharge System (NPDES)

5.1. Each project will likely have multiple Notice of Intent (NOI) submissions due to phasing of the construction.

5.2. In the past the GAEPD was requiring multiple SBVs, one per NOI. However, for the Northwest Corridor (PI 0008256), one SBV was authorized to be used for the entire project corridor regardless of NOI phasing.

5.3. GAEPD issued a Section 401 based on the initial IP application for PI 0008256. It contained conditions for the SBVs. Ed has a copy of this Section 401 Certification if GAEPD would like to review it.

6.0 Action Items

Item No.	Item Description	Responsibility	Due Date
1.	Doug Chamblin is to discuss the need for a PAR with USFWS for PI 721850-.	***GDOT***	***1/16/15***
2.	Marlo Clowers is to discuss the need for a PAR with FHWA for PI 721850-.	***GDOT***	***1/15/15***
3.	Natalie Edwards is to discuss the need for a PAR with USEPA for PI 721850-.	***USACE***	***1/23/15***

7.0 Next Meeting

7.1. Another meeting will be scheduled as needed.

7.2. The USACE requested monthly interagency team meetings when the DB team is on board (after NTP 1) to discuss design changes and permit modifications.

Please notify the author of the minutes of any corrections and/or clarifications within five (5) business days. If no comments or corrections are received, the minutes are considered final as written.

cc: Attendees

GDOT Georgia Department of Transportation

HNTB

SIGN IN SHEET

PI No.: 0000784 & 721850-, Fulton County

Date: Tuesday, January 13, 2015

Name	Company	Email	Phone Number
Heidi Schneider	HNTB	hlschneider@hntb.com	404/946-5707
Danielle Floyd	EPD	danielle.floyd@dnr.state.ga.us	706-612-4720
Doug Chamblin	GDOT-OES	dchamblin@dot.ga.gov	404-631-1447
MIKE RUSHING	KIMLEY-HORN	mike.rushing@kimley-horn.com	678/533-3925
Will Smith	EPD	will.smith@dnr.state.ga.us	404 631 8553
Melissa Rottenberg	ARCADIS	melissa.rottenberg@arcadis-us.com	770-384-6599
Robin Stevens	ARCADIS	Robin.Stevens@arcadis-us.com	770-431-8666
Debbie Wilson	Kimley-Horn	debbie.wilson@kimley-horn.com	678 | 502-1882
ERIC MARTIN	KIMLEY-HORN	eric.martin@kimley-horn.com	678-533-3947
Carla Benton-Hooks	GDOT OES	cbenton-hooks@dot.ga.gov	404-631-1415
Marlo Clowers	GDOT OID	mclowers@dot.ga.gov	(4)631-1713
Natalie Edwards	USACE	Natalie.M.Edwards@USACE.army.mil	(678)804-5228
Ed Johnson	USACE	edward.b.johnson@usace.army.mil	(678)422-2727

Stevens, Robin

From: Peace, Jody
Sent: Tuesday, October 21, 2014 10:16 AM
To: Poudel, Shamir; Stevens, Robin; Korkut, Murat
Subject: Fwd: PM Determination, Atlanta Nonattainment Area
Attachments: I-285 at SR 400 Interchange Reconstruction (P I #0000784) - Determinati....pdf; ATT00001.htm

Sent from my iPhone

Begin forwarded message:

> **From:** "Phillips, Amber" <aphillips@dot.ga.gov>
> **To:** "Peace, Jody" <Jody.Peace@arcadis-us.com>
> **Cc:** "Shakshuki, Soli" <sshakshuki@dot.ga.gov>, "Clowers, Marlo" <mclowers@dot.ga.gov>
> **Subject: FW: PM Determination, Atlanta Nonattainment Area**
>
> See Below for PM 2.5 concurrence on 0000784.
>
> Amber L. Phillips
> Georgia Department of Transportation
> Office of Environmental Services
> One GA Center
> 600 West Peachtree Street
> Floor 16
> Atlanta, GA 30308
> Phone: 404-631-1117
> Fax: 404-631-1916
>
> From: Myers, Dianna [mailto:Myers.Dianna@epa.gov]
> Sent: Tuesday, October 21, 2014 9:32 AM
> To: Jennifer.Giersch@dot.gov; rgoodwin@grta.org; KKim@atlantaregional.com; Somerville, Amanetta; dhaynes@atlantaregional.com; ddonofrio@atlantaregional.com; Benjamin, Lynorae; james_kelly@dnr.state.ga.us; JOrr@atlantaregional.com; syamala@hallcounty.org; Keith.Melton@dot.gov; jbarrett@atlantaregional.com
> Cc: Heath, Andrew; Crane, Jason; Jackson, Kelvin; Shakshuki, Soli; Phillips, Amber; Katy.Allen@dot.gov; Chetna.Dixon@dot.gov; Clay, Andrew; Myers, Dianna
> Subject: RE: PM Determination, Atlanta Nonattainment Area
>
> Hello Jennifer,
>
> Thanks for sending this for our review. We have completed our review and agree that these project(s) do NOT appear to be a "Project of Concern" per the Transportation Conformity Rule,

and thus meets the statutory and regulatory requirements for PM 2.5 hotspots without a qualitative analysis.

Dianna B. Myers
Environmental Scientist
Regional Transportation Conformity Contact
Air Quality Modeling and Transportation Section
Phone: (404) 562-9207 Fax: (404) 562-9019
e-mail myers.dianna@epa.gov<mailto:myers.dianna@epa.gov>

From: Jennifer.Giersch@dot.gov<mailto:Jennifer.Giersch@dot.gov>
[mailto:Jennifer.Giersch@dot.gov]
Sent: Wednesday, October 01, 2014 7:26 AM
To: Myers, Dianna; rgoodwin@grta.org<mailto:rgoodwin@grta.org>;
KKim@atlantaregional.com<mailto:KKim@atlantaregional.com>; Somerville, Amanetta;
dhaynes@atlantaregional.com<mailto:dhaynes@atlantaregional.com>;
ddonofrio@atlantaregional.com<mailto:ddonofrio@atlantaregional.com>; Benjamin, Lynorae;
james_kelly@dnr.state.ga.us<mailto:james_kelly@dnr.state.ga.us>;
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Keith.Melton@dot.gov<mailto:Keith.Melton@dot.gov>;
jbarrett@atlantaregional.com<mailto:jbarrett@atlantaregional.com>
Cc: aheath@dot.ga.gov<mailto:aheath@dot.ga.gov>;
jcrane@dot.ga.gov<mailto:jcrane@dot.ga.gov>;
kjackson@dot.ga.gov<mailto:kjackson@dot.ga.gov>;
sshakshuki@dot.ga.gov<mailto:sshakshuki@dot.ga.gov>;
aphillips@dot.ga.gov<mailto:aphillips@dot.ga.gov>;
Katy.Allen@dot.gov<mailto:Katy.Allen@dot.gov>;
Chetna.Dixon@dot.gov<mailto:Chetna.Dixon@dot.gov>;
anclay@dot.ga.gov<mailto:anclay@dot.ga.gov>
Subject: PM Determination, Atlanta Nonattainment Area

Hello Interagency Group,

Please see the attached PM 2.5 Determination sheets for a project in the Atlanta Nonattainment Area. FHWA has determined that the project is NOT of air quality concern and is requesting consensus from the Interagency consultation group.

Please review and provide comments back by COB 10/15/14.

If no comments are received from your agency, consensus with this determination will be assumed. Thanks in advance for responding quickly.

Jennifer Giersch

Environmental Specialist

Federal Highway Administration

61 Forsyth Street, SW

Suite 17T100

Atlanta, GA 30303

Phone: 404-562-3653

Fax: 404-562-3703

Georgia DOT introduces Variable Speed Limits (VSL) on I-285 top end. VSLs increase the overall speed limit, enhance driver safety, provide early warnings to motorists, reduce congestion and crash frequency. Learn more at http://www.dot.ga.gov/travelingingeorgia/Pages/VSL.aspx or visit us at http://www.dot.ga.gov; follow us on http://www.facebook.com/GeorgiaDOT and http://twitter.com/gadeptoftrans

Determination of Project Categorization for PM2.5 Hotspot Requirements for Fulton and DeKalb Counties

Project Name: I-285 at SR 400 Interchange Reconstruction
Project Number: PI. No. 0000784
Location: Fulton and DeKalb Counties
Document Type: Environmental Assessment
Project Status: PE
FHWA Contact: Jennifer Giersch
GDOT NEPA Planner: Carla Benton

Project Description:

The proposed improvements would include construction of barrier-separated collector-distributor (CD) lanes along I-285 and SR 400, reconstruction of existing ramps, new flyover bridges, as well as reconstruction and widening of existing bridges in the interchange area. Grade-separated, braided ramps (where one ramp crosses over the other) would be constructed to eliminate conflicts between traffic entering and exiting SR 400 and traffic entering and exiting the Roswell Road and Ashford Dunwoody interchanges.

Along I-285, the proposed project would begin west of Roswell Road and continue for a distance of approximately 4.3 miles, ending east of Ashford Dunwoody Road. Along SR 400, the proposed project would begin just south of the Glenridge Connector and extend north to the Hammond Drive interchange area, where it would tie into an adjacent project (Georgia DOT P.I. No. 721850). The total length of the proposed improvements along SR 400 is approximately 1.2 miles.

The newly improved Roswell Road and Ashford Dunwoody Road bridges would not be impacted, and the new Diverging Diamond Interchange at Ashford Dunwoody Road would be retained. The project location and concept is shown in Attachment 1.

Is this project in a conforming plan/Transportation Improvement Program (TIP)? **Yes.** This proposed project is part of the approved FY 2014-2019 TIP. The reference number in the TIP is AR-957.

Is the project on a new highway that has a significant number of diesel vehicles (such as a facility with greater than 125,000 annual average daily traffic (AADT) and 8% or more of such AADT is diesel truck traffic) or an expanded highway with a significant increase in the number of diesel vehicles? **No.** The proposed project is on an existing highway with a truck percentage of 9.1% on I-285 and 3.7% on SR 400; however, there is no increase in the number of truck percentage in the build alternative compared to the no-build alternative in the open and design years, as shown in Table 1. Volume diagrams are also included as Attachment 2.

Table 1: I-285 and SR 400 Traffic Volumes

I-285					
Between Peachtree Dunwoody Road and Ashford Dunwoody Road	**2014 Existing Year**	**2019 Open Year – Build**	**2019 Open Year – No Build**	**2039 Design Year – Build**	**2039 Design Year – No Build**
AADT (vehicles per day)	253,540	267,100	266,580	400,380	388,380
Trucks per day	23,072	24,360	24,259	36,435	35,343
Percent Trucks (rounded)	9.1%	9.1%	9.1%	9.1%	9.1%
SR 400					
North of Hammond Drive	**2014 Existing Year**	**2019 Open Year – Build**	**2019 Open Year – No Build**	**2039 Design Year – Build**	**2039 Design Year – No Build**
AADT (vehicles per day)	212,720	224,680	224,020	337,300	327,200
Trucks per day	7,871	8,313	8,289	12,480	12,106
Percent Trucks (rounded)	3.7%	3.7%	3.7%	3.7%	3.7%

Determination of Project Categorization for PM2.5 Hotspot Requirements for Fulton and DeKalb Counties

Does the project construct new exit ramps or other highway facility improvements that connect a highway or expressway to a major freight, bus, or intermodal terminal? **No.** New exit ramps or other highway facility improvements that connect a highway or expressway to a major freight, bus, or intermodal terminal are not part of the proposed project.

Does the project expand an existing highway or other facility that affects a congested intersection (Operates at LOS D, E, or F) that has a significant increase in the number of diesel trucks? **No.** The proposed project does not result in a significant increase in the number of diesel trucks.

Does the highway project involve a significant increase in the number of diesel transit buses and/or diesel trucks? **No.** The proposed project does not involve a significant increase in the number of diesel transit buses and/or diesel trucks.

Based on the information presented above, a qualitative PM2.5 hotspot analysis is not required for this project because it is not a project of local air quality concern under 40 Code of Federal Regulations (CFR) 93.123(b)(1). The Clean Air Act and 40CFR 93.116 requirements were met without performing a hotspot analysis because this project does not involve air quality concerns under 40 CFR 93.123(b)(1). Therefore, the project meets statutory and regulatory transportation conformity requirements without performing a hotspot analysis.

Keith Golden, P.E., Commissioner

GEORGIA DEPARTMENT OF TRANSPORTATION

One Georgia Center, 600 West Peachtree Street, NW
Atlanta, Georgia 30308
Telephone: (404) 631-1000

December 3, 2014

City of Brookhaven Community Development
4362 Peachtree Road
Brookhaven, GA 30319

ATTN: Ben Song

Subject: Interstate 285 at State Route 400 Interchange Reconstruction, P.I. No.0000784;

Dear Mr. Song:

The Georgia Department of Transportation (Department) has completed a study of noise impacts that are anticipated as a result of this project. As part of this study, the Department has identified traffic noise levels that are expected on nearby undeveloped parcels. In accordance with 23 CFR 772.17, we are providing this information to your office for use in compatible land use planning efforts. Please visit www.ecfr.gov (Title 23, part 772) for more information.

The Federal Highway Administration (FHWA) has set Noise Abatement Criteria (NAC) for different land uses in 23 CFR 772, Table 1, which is attached for reference. In accordance with the Department's criteria, areas within one decibel of the NAC are considered impacted by traffic noise. The attached results from the project's noise study shows traffic noise levels at differing distances from the proposed roadway, and the individual study areas in Table 7 can be located on Figure 7.

For a complete copy of the noise study or if any additional information is needed, please contact Amber Phillips at (404) 631-1117, aphillips@dot.ga.gov or Adam Promesse at (404) 631-1803 apromesse@dot.ga.gov.

Sincerely,

Hiral Patel, P.E.
State Environmental Administrator

GB/AP

Cc: General File (letter, report)
Project File (electronic copies of letter & report)

Keith Golden, P.E., Commissioner

GEORGIA DEPARTMENT OF TRANSPORTATION

One Georgia Center, 600 West Peachtree Street, NW
Atlanta, Georgia 30308
Telephone: (404) 631-1000

December 3, 2014

City of Dunwoody Community Development
41 Perimeter Center East, Suite 250
Dunwoody, GA 30346

ATTN: Steve Foote

Subject: Interstate 285 at State Route 400 Interchange Reconstruction, P.I. No.0000784;

Dear Mr. Foote:

The Georgia Department of Transportation (Department) has completed a study of noise impacts that are anticipated as a result of this project. As part of this study, the Department has identified traffic noise levels that are expected on nearby undeveloped parcels. In accordance with 23 CFR 772.17, we are providing this information to your office for use in compatible land use planning efforts. Please visit www.ecfr.gov (Title 23, part 772) for more information.

The Federal Highway Administration (FHWA) has set Noise Abatement Criteria (NAC) for different land uses in 23 CFR 772, Table 1, which is attached for reference. In accordance with the Department's criteria, areas within one decibel of the NAC are considered impacted by traffic noise. The attached results from the project's noise study shows traffic noise levels at differing distances from the proposed roadway, and the individual study areas in Table 7 can be located on Figure 7.

For a complete copy of the noise study or if any additional information is needed, please contact Amber Phillips at (404) 631-1117, aphillips@dot.ga.gov or Adam Promesse at (404) 631-1803 apromesse@dot.ga.gov.

Sincerely,

Hiral Patel, P.E.
State Environmental Administrator

GB/AP

Cc: General File (letter, report)
Project File (electronic copies of letter & report)

Keith Golden, P.E., Commissioner

GEORGIA DEPARTMENT OF TRANSPORTATION

One Georgia Center, 600 West Peachtree Street, NW
Atlanta, Georgia 30308
Telephone: (404) 631-1000

December 3, 2014

City of Sandy Springs Planning Commission
7840 Roswell Road
Sandy Springs, GA 30350

ATTN: Lee Duncan

Subject: Interstate 285 at State Route 400 Interchange Reconstruction, P.I. No.0000784;

Dear Mr. Duncan:

The Georgia Department of Transportation (Department) has completed a study of noise impacts that are anticipated as a result of this project. As part of this study, the Department has identified traffic noise levels that are expected on nearby undeveloped parcels. In accordance with 23 CFR 772.17, we are providing this information to your office for use in compatible land use planning efforts. Please visit www.ecfr.gov (Title 23, part 772) for more information.

The Federal Highway Administration (FHWA) has set Noise Abatement Criteria (NAC) for different land uses in 23 CFR 772, Table 1, which is attached for reference. In accordance with the Department's criteria, areas within one decibel of the NAC are considered impacted by traffic noise. The attached results from the project's noise study shows traffic noise levels at differing distances from the proposed roadway, and the individual study areas in Table 7 can be located on Figure 7.

For a complete copy of the noise study or if any additional information is needed, please contact Amber Phillips at (404) 631-1117, aphillips@dot.ga.gov or Adam Promesse at (404) 631-1803 apromesse@dot.ga.gov.

Sincerely,

Hiral Patel, P.E.
State Environmental Administrator

GB/AP

Cc: General File (letter, report)
Project File (electronic copies of letter & report)

Report Coordination

Keith Golden, P.E., Commissioner

GEORGIA DEPARTMENT OF TRANSPORTATION

One Georgia Center, 600 West Peachtree Street, NW
Atlanta, Georgia 30308
Telephone: (404) 631-1000

July 31, 2014

Mr. Rodney N. Barry, P.E.
Division Administrator
Federal Highway Administration
Suite 17T10061 Forsyth Street, S.W.
Atlanta, Georgia 30303-3104
ATTN: Jennifer Giersch

Re: Ecology Resource Survey Report Transmittal, Georgia Department of Transportation Project NHS00-0000-00(784), Fulton and DeKalb counties, P.I. No. 0000784, State Route 400 at Interstate 285 Interchange Reconstruction

Dear Mr. Barry:

The Georgia Department of Transportation (GDOT) has identified the need to implement improvements to the State Route (SR) 400 and Interstate 285 (I-285) interchange in Fulton and DeKalb counties, Georgia. The proposed project would include construction of barrier-separated collector-distributor (CD) lanes along I-285 and SR 400, reconstruction of existing ramps, and new flyover bridges, as well as reconstruction and widening of existing bridges in the interchange area. Grade-separated, braided ramps would be constructed in the vicinity of Ashford Dunwoody Road and Roswell Road to eliminate conflicts between traffic entering and exiting SR 400 and traffic entering and exiting the Roswell Road and Ashford Dunwoody interchanges. Total project length is approximately five miles along I-285 and approximately two miles along SR 400. The approximate midpoint of the project is located at latitude 33.9116° N and longitude 84.3557° W.

Please find attached the Ecology Resource Survey Report for the above referenced project. This report describes ecological investigations of the project study area. Surveys for jurisdictional waters of the US, waters subject to State buffer regulations, and protected species (State and Federal) were conducted throughout the project study area; results are presented below.

- Thirty-one jurisdictional resources (six intermittent streams, 16 perennial streams, six open waters, and three wetlands) are located within the project study area. All non-wetland jurisdictional resources are considered state waters and all but one stream are subject to state mandated buffer requirements.
- Habitat types identified within the project area include: developed/landscaped, mixed-pine hardwood forest, upland hardwood forest, and bottomland hardwood forest.
- Nine federally protected species are listed in Fulton and DeKalb counties: Cherokee darter (*Etheostoma scotti*), gulf moccasinshell (*Medionidus penicillatus*), oval pigtoe (*Pleurobema pyriforme*), purple bankclimber (*Elliptoideus sloatianus*), shinyrayed pocketbook (*Lampsilis subangulata*), little amphianthus (*Amphianthus pusillus*), black spored quillwort (*Isoetes melanospora*), and dwarf sumac (*Rhus michauxii*). Neither federally protected species nor suitable habitats were identified during field survey.
- The proposed federally endangered northern long-eared bat (*Myotis septentrionalis*) is listed in Fulton County; however, the project area lacks suitable summer maternity colony roost habitat and the existing forested areas are highly fragmented.
- Suitable habitat for the federal candidate species Georgia aster (*Symphyotrichum georgianum*) was identified within the project study area; a protected species survey would be completed in the Fall 2014.
- The following state-listed species have known occurrences within three miles of the project: Henslow's sparrow (*Ammodramus henslowii*), delicate spike (*Elliptio arctata*), Chattahoochee crayfish (*Cambarus howardi*), mountain witch alder (*Fothergilla major*), sweet pinesap (*Monotropsis odorata*), and bay star-vine (*Schisandra glabra*). Although suitable habitat for the bay star-vine was observed within the project area, none were found. A survey for Chattahoochee crayfish was conducted on July 14, 2014 where in suitable habitat was found not to exist and no individuals were found. Suitable habitat for the sweet pinesap was observed within the project study area. A Protected Species Survey Report (PSSR) was completed for project P.I. No. 0010925 on April 9, 2014, in which the current project area was included. No sweet pinesap plants were observed during the blooming-season pedestrian survey within the project area on April 9, 2014, nor were plants observed during the SR 400 at I-285 Interchange Reconstruction project field survey. No suitable habitat for the remaining state-listed species was identified within the project study area.
- Bald eagle, golden eagle and their foraging and nesting habitat are not found within the project area.

- Migratory bird nesting habitat was identified within the project area at the following bridges and culverts: I-285 Bridge over Long Island Drive, I-285 Bridge over Lake Forest Drive, I-285 Bridge over Glenridge Connector, I-285 Bridge over Peachtree Dunwoody Road, the Perimeter Creek culvert under I-285, the North Fork Nancy Creek culvert under I-285, the Perennial Stream 18 culvert under SR 400, and the Perennial Stream 32 culvert under I-285. Migratory bird nests were observed within the Perimeter Creek culvert beneath I-285.
- The following structures within the project area cross local roads or streams and provide minimal, potential use by bridge-roosting bats: I-285 Bridge over Long Island Drive, I-285 Bridge over Lake Forest Drive, I-285 Bridge over Glenridge Connector, I-285 Bridge over Peachtree Dunwoody Road, the Perimeter Creek culvert under I-285, the North Fork Nancy Creek culvert under I-285, the Perennial Stream 18 culvert under SR 400, and the Perennial Stream 32 culvert under I-285. No visual observations of bats, stains due to body oils, or guano were observed at any of the aforementioned locations.
- The following Category 1 invasive species published by the Georgia Exotic Pest Plant Council (GEPPC) were identified within the project area: mimosa (*Albizia julibrissin*), Chinese wisteria (*Wisteria sinensis*), autumn olive (*Elaeagnus umbellata*), English ivy (*Hedera helix*), Chinese privet (*Ligustrum sinense*), Japanese honeysuckle (*Lonicera japonica*), Japanese siltgrass (*Microstegium vimineum*), marsh dayflower (*Murdannia keisak*), princesstree (*Paulownia tomentosa*), kudzu (*Pueraria montana*), and multiflora rose (*Rosa multiflora*). In addition to the aforementioned Category 1 species, oriental bittersweet (*Celastrus orbiculatus*), a GEPPC Category 1 Alert species was also identified.
- Critical Habitat is not present within the project study area.
- Essential Fish Habitat is not present within the project study area.

The Department respectively requests your concurrence with the listed biological determinations. If you should have any questions or need additional information, please contact Sharilyn Meyers (404-631-1594 or smeyers@dog.ga.gov) or Doug Chamblin (404-631-1447 or dchamblin@dot.ga.gov) with the GDOT Office of Environmental Services.

Sincerely,

Hiral Patel /sc

Hiral Patel, P.E.
State Environmental Administrator

HP/HDC/dvf
Attachment

Cc: Marlo Clowers, GDOT Project Manager
Carla Benton-Hooks, GDOT NEPA
Eugene Hopkins, GDOT ECB
Lisa Westberry, GDOT Mitigation
Jan Sammons, EPD
Danielle Floyd, EPD
Pete Pattavina, USFWS
Anna Yellin, GDNR
Mark LaRue, EPA

Keith Golden, Commissioner

GEORGIA DEPARTMENT OF TRANSPORTATION

One Georgia Center
600 West Peachtree Street, NW
Atlanta, Georgia 30308
Telephone: (404) 631-1000

October 8, 2014

Mr. Rodney N. Barry, P.E., Division Administrator
Federal Highway Administration
Suite 17T10061 Forsyth Street, S.W.
Atlanta, Georgia 30303-3104
ATTN: Jennifer Giersch

Re: Ecology Assessment of Effects Report Transmittal and Request for Coordination under Fish and Wildlife Coordination Act for Georgia Department of Transportation Project STP00-0000-00(784), Fulton and DeKalb counties, P.I. No. 0000784; I-285 at SR 400 Interchange Reconstruction

Dear Mr. Barry:

The Georgia Department of Transportation (GDOT) is proposing operational improvements along Interstate 285 (I-285) and State Route (SR) 400 in the vicinity of the I-285/SR 400 interchange in Fulton and DeKalb counties. The proposed design-build project would reconstruct the existing interchange to include barrier-separated collector-distributor (CD) lanes along I-285 and SR 400, in addition to new flyover bridges. Reconstruction of existing ramps and reconstruction and widening of existing bridges in the interchange area would also be included. The project will connect to SR-400 CD project (PI 721850), which consists of construction of CD lanes along each side of SR-400 between Hammond Drive and Spalding Drive. The total project length along I-285 is approximately five miles and the total project length along SR 400 is approximately two miles. The project is located within the Upper Chattahoochee (Hydrologic Unit Code [HUC] 031300001) Watershed.

The GDOT intends to procure one design-build-finance (DBF) contract to finalize the design and construct both of the projects. The project is anticipated to be awarded to a Design-Build Contractor in December 2015, with construction beginning shortly after. Construction is anticipated to last approximately three years, and the reconstructed interchange is anticipated to be open to traffic in 2019. The project would address interchange deficiencies by separating traffic with the CD system and additional ramp capacity between I-285 and SR 400.

Please find attached the Ecology Assessment of Effects Report (EAOER) for the above referenced project. Impacts calculated in the EAOER are based on costing plans (30%) and will be updated after the DBF contract has been awarded. The Ecology Resource Survey Report was transmitted to your office on July 31, 2014. This report outlines the impacts resulting from construction of the proposed project as follows:

- No impacts to wetlands. Approximately 0.18 acre open water impacts requiring 1.0 wetland mitigation credits;
- Approximately 4,887 linear feet of proposed stream impacts, requiring 18,836 stream credits;
- Application for a Section 404 Individual Permit to the US Army Corps of Engineers (USACE) would be required for open water and stream impacts;
- Non-exempt encroachments to state buffered waters would require a Stream Buffer Variance from the Georgia Environmental Protection Division under Criterion 2(a) and (h). Buffer variances are required at Streams 8, 9, 12, 13, 15, 17a, 19, 20a, 25, 26, 28, 29, and 30 and Open Waters 7, 22, 24, and 27.
- Special Provision 107.23 would be required to avoid impacts to migratory birds.
- Project impacts would have "No Effect" on the federally protected Cherokee darter (*Etheostoma scotti*), purple bankclimber (*Elliptoideus sloatianus*), shinyrayed pocketbook (*Lampsilis subangulata*), Gulf moccasinshell (*Medionidus penicillatus*), oval pigtoe (*Pleurobema pyriforme*), little amphianthus (*Amphianthus pusillus*), black spored quillwort (*Isoetes melanospora*), and dwarf sumac (*Rhus michauxii*).
- Project impacts would have "No Effect" on the state protected Henslow's sparrow (*Ammodramus henslowii*), Chattahoochee crayfish (*Cambarus howardi*), delicate spike (*Elliptio arctata*), mountain witch-alder (*Fothergilla major*), sweet pinesap, (*Monotropsis odorata*), and bay star-vine (*Schisandra glabra*).
- No impacts to essential fish habitat or critical habitat.

While the proposed roadway elevation and profiles were minimized to the greatest extent practicable to reduce required earthwork and impacts to streams and adjacent habitats, a requirement to tie the proposed roadway to the elevation of existing, intersecting local

roads, in addition to safety considerations for horizontal and vertical alignments, precludes the availability of additional impact-reducing measures. Coordination under FWCA is required for intermittent and perennial stream channel losses due to impacts from culverts on new location, by longitudinal encroachment, by morphologic change, or by culvert extensions greater than 100 feet, at the following five streams:

Perennial Stream 12 would be impacted by approximately 328 linear feet of culvert extension and riprap placement. Impacts to this stream were reduced through use of a wall and slope reductions from 4:1 to 2:1.

Intermittent/Perennial Stream 20a would be longitudinally encroached upon by approximately 1,311 linear feet of culvert extension. This stream starts at SR 400 at I-285 and continues to flow parallel and directly adjacent to the I-285 eastbound on-ramp before being piped beneath I-285. Because of the limited amount of space between the existing roadway and adjacent commercial parcels, minimization of this resource is not feasible as the entire stream reach is located beneath the proposed CD lane. Piping this resource was the only practical option.

Perennial Stream 25 would be impacted by approximately 166 linear feet of culvert extension and riprap placement. The reach north of I-285 would be avoided by project implementation. Slope reductions from 4:1 to 2:1 were utilized to minimize impacts to the stream reach south of I-285.

Intermittent Stream 28 would be longitudinally encroached upon by approximately 675 linear feet of culvert extension. This resource begins immediately adjacent to I-285 near the Marta rail crossing east of Ashford Dunwoody Road and continues flowing east parallel to the interstate until leaving the project corridor. Due to the limited space between the existing roadway and the commercial properties off of Lake Herndon Drive, minimization of this resource is not feasible as the entire stream reach is located beneath the proposed CD lane. Piping this resource is the only practical option.

Perennial Stream 29 would be longitudinally encroached by approximately 874 linear feet of culvert extension and riprap placement. Wall construction was utilized to minimize impacts to the stream reach south of I-285. This resource flows parallel to I-285 behind commercial properties off of Perimeter Center East before being piped beneath I-285. Due to the limited space between existing roadway and adjacent commercial properties, minimization of the stream reach north of I-285 is not feasible as the stream is located beneath the proposed CD lane. Piping this section is the only practical option.

The Department respectfully requests your concurrence with the listed biological determinations and initiation of coordination with the US Fish and Wildlife Service (USFWS) under FWCA. If you should have any questions or need additional information, please contact Sharilyn Meyers at 404-631-1594 (smeyers@dot.ga.gov) or Doug Chamblin at 404-631-1447 (dchamblin@dot.ga.gov) with the GDOT Office of Environmental Services.

Sincerely,

Hiral Patel

Hiral Patel, P.E.
State Environmental Administrator

HP/HDC/mbr
Attachment

Cc: Marlo Clowers, GDOT Project Manager
Carla Benton-Hooks, GDOT NEPA
Eugene Hopkins, GDOT ECB
Lisa Westberry, GDOT Mitigation
Carrie Straight, USFWS
Danielle Floyd, EPD
Mark LaRue, US EPA
Jan Sammons, GA EPD
Anna Yellin, GDNR

Russell R. McMurry, P.E., Commissioner

GEORGIA DEPARTMENT OF TRANSPORTATION

One Georgia Center
600 West Peachtree Street, NW
Atlanta, Georgia 30308
Telephone: (404) 631-1000

April 10, 2015

Mr. Rodney N. Barry, P.E., Division Administrator
Federal Highway Administration
61 Forsyth Street, S.W., Suite 17T100
Atlanta, Georgia 30303-3104
ATTN: Jennifer Giersch

Re: Addendum #1 to the Ecology Assessment of Effects Report Transmittal and Request for Coordination under Fish and Wildlife Coordination Act for Georgia Department of Transportation Project STP00-0000-00(784), Fulton and DeKalb counties, P.I. No. 0000784; I-285 at SR 400 Interchange Reconstruction

Dear Mr. Barry:

Please find attached the Addendum #1 to the Ecology Assessment of Effects Report for the above referenced project. Georgia Department of Transportation (GDOT) is proposing operational improvements along Interstate 285 (I-285) and State Route (SR) 400 (project PI 0000784) in the vicinity of the I-285/SR 400 interchange in Fulton and DeKalb counties, Georgia. This addendum described and reports impacts to new resources identified during a field survey conducted in March 2015.

Field surveys did not identify suitable habitat for any federally protected species within the project area. Therefore, it is recommended that this project will have "no effect" on the federally protected Cherokee darter (*Etheostoma scotti*), purple bankclimber (*Elliptoideus sloatianus*), shinyrayed pocketbook (*Lampsilis subangulata*), Gulf moccasinshell (*Medionidus penicillatus*), oval pigtoe (*Pleurobema pyriforme*), little amphianthus (*Amphianthus pusillus*), black spored quillwort (*Isoetes melanospora*), and dwarf sumac (*Rhus michauxii*).

Coordination under the Fish and Wildlife Coordination Act is requested for impacts to Perennial Stream 9, Perennial Stream 12, Intermittent/Perennial Stream 20a, Intermittent Stream 26, Intermittent Stream 28, Perennial Stream 29, and Intermittent Stream 29a. Detailed avoidance and minimizations measures for the impacts to these streams are included in the attached report.

The Department recommends a determination of "no effect" for federally listed species. The Department also respectfully requests initiation of coordination under the Fish and Wildlife Coordination Act for proposed impacts to streams. If you should have any questions or need additional information, please contact Sharilyn Meyers at 404-631-1594 (smeyers@dot.ga.gov) or Doug Chamblin at 404-631-1447 (dchamblin@dot.ga.gov) with the GDOT Office of Environmental Services.

Sincerely,

Hiral Patel/mh

Hiral Patel, P.E.
State Environmental Administrator

HP/MH/mh
Attachment

Cc: Marlo Clowers, GDOT Project Manager
Carla Benton-Hooks, GDOT NEPA
Eugene Hopkins, GDOT ECB
Anna Yellin, GDNR
Mark Larue, EPA
William Smith, EPD
Michael Berry, EPD
Lisa Westberry, GDOT Mitigation
Carrie Straight, USFWS

Keith Golden, P.E., Commissioner

DEPARTMENT OF TRANSPORTATION

One Georgia Center, 600 West Peachtree Street, NW
Atlanta, Georgia 30308
Telephone: (404) 631-1000

December 5, 2014

Mr. Rodney N. Barry, P.E.
Division Administrator
Federal Highway Administration
Atlanta Federal Center
61 Forsyth Street, S.W.
Suite 17 T100
Atlanta, Georgia 30303-3104

ATTN: Jennifer Giersch

Dear Mr. Barry:

Re: Project: NHS00-0000-00(784), Fulton and DeKalb Counties, P.I. No. 0000784, I-285 at SR 400 Interchange Reconstruction.

Please find enclosed the Air and Noise assessments for the above noted project for your review. They are being sent to you for your review and comments.

Should you need further information, please contact Soli Shakshuki at (404) 631-1093 or Amber Phillips at (404) 631-1117.

Sincerely,

Hiral Patel, P.E.
State Environmental Administrator

HP/SS
Enclosures

cc: Marlo Clowers
General Files

Russell R. McMurry, P.E., Commissioner

DEPARTMENT OF TRANSPORTATION

One Georgia Center, 600 West Peachtree Street, NW
Atlanta, Georgia 30308
Telephone: (404) 631-1000

March 12, 2015

Mr. Rodney N. Barry, P.E.
Division Administrator
Federal Highway Administration
Atlanta Federal Center
61 Forsyth Street, S.W.
Suite 17 T100
Atlanta, Georgia 30303-3104

ATTN: Jennifer Giersch

Dear Mr. Barry:

Re: Project NHS00-0000-00(784), Fulton & DeKalb Counties, P.I. No. 0000784 – I-285 at SR 400 Interchange Reconstruction

Please find enclosed the noise memo for the above noted project. It is being sent to you for your information and files.

Should you need further information, please contact Amber Phillips at (404) 631-1117 or Soli Shakshuki at (404) 631-1093.

Sincerely,

Hiral Patel, P.E.
State Environmental Administrator

HP/AP
Enclosures

cc: GF

Meeting Minutes from Stakeholder Meetings

ARCADIS U.S., Inc.
2410 Paces Ferry Road
#400
Atlanta
Georgia 30339
Tel 770 431 8666
Fax 770 435 2666

MEETING REPORT

Subject:
I-285/State Route (SR) 400 Interchange Reconstruction Project (Georgia Department of Transportation [DOT] P.I. No. 0000784, Fulton and DeKalb counties)

Department:
Transportation

ARCADIS Project No.:
GADT0201.0160

Place/Date of Meeting:
Perimeter Community Improvement Districts (PCIDs) Office/June 27, 2014

Report No.:
1

Minutes by:
Robin Stevens, Senior NEPA Specialist

Issue Date:
June 30, 2014

Participants:
Darryl VanMeter, Georgia DOT
Marlo Clowers, Georgia DOT
Shamir Poudel, ARCADIS
Robin Stevens, ARCADIS
Jennifer Harper, PCIDs
Yvonne Williams, PCIDs
Donna Mahaffey, PCIDs
Dawn Minecci, PCIDs

Not Present:

Copies:

The purpose of this meeting was to present the current concept for the I-285/SR 400 Interchange Reconstruction to the PCIDs and to gather feedback from the PCIDs on the proposal. The following is a summary of the discussions from the meeting.

- Georgia DOT and ARCADIS presented an overview of the current conceptual design for the interchange reconstruction, the accelerated project schedule, and the anticipated project delivery type (Design Build Finance [DBF] Public Private Partnership [P3]).
- Right-of-way (ROW) acquisition for the interchange project was discussed. Georgia DOT stated that only the ROW needed for the interchange reconstruction would only be acquired at this time, and would not include any additional ROW needed for proposed future managed lanes or transit ROW preservation being considered under the separate Revive285 Top End project (PI No. 0001758). This may mean impacting the same land owners twice, but the Revive285 project would impact them much further into the future.
- PCIDs expressed concern about the SR 400/Abernathy Road interchange (along the proposed SR 400 Collector-Distributor [C/D] lanes project, PI 721850) and ROW acquisition in the vicinity of this interchange. This area has high development potential, including a proposed Development of Regional Impact [DRI] in the southeast quadrant. PCID wants to work with Georgia DOT to minimize ROW acquisition in this area, while providing the necessary improvements to enhance traffic flow from

existing and new developments. PCIDs noted that Abernathy Road is the next PCID gateway corridor and is the last big development area remaining in the PCID district.

- PCIDs expressed concern about commercial access remaining after project construction. Georgia DOT responded that the Ashford Dunwoody Road Diverging Diamond Interchange (DDI), Ashford Dunwoody Road bridge, and Roswell Road and its bridge would all remain after construction. Commercial access would be retained.
- Anticipated displacements were discussed. PCID acknowledged that it appeared required ROW had been minimized. The anticipated displacement in the southeast quadrant of the SR 400/I-285 interchange was believed by PCID to be a condominium complex of doctor's offices.
- PCID noted the concern of the weave at Ashford Dunwoody Road (from vehicles exiting westbound I-285 onto Ashford Dunwoody Road trying to make a left-turn onto Hammond Drive), which was somewhat worsened by the development of the DDI at that interchange. PCIDs noted that any increase in storage capacity on that exit ramp would be a benefit. ARCADIS noted that, while the project could provide a little more storage at this off-ramp, it was not the intent of the project to improve this area.
- Georgia DOT noted that the Mount Vernon Road bridge over SR 400 would need to be replaced as part of the SR 400 C/D Lanes project (PI No. 721850) because there was not enough room under the existing bridge to fit in the proposed C/D lanes.
- PCIDs expressed a lot of concern about construction staging and associated traffic impacts. Georgia DOT acknowledged that construction activities would likely worsen traffic temporarily regardless of what was done to stage construction due to such high traffic volumes at the SR 400/I-285 interchange. Therefore, the goal is to get the construction completed as quickly as possible. PCIDs agreed to work on a messaging strategy and educational outreach to encourage teleworking and staggered work hours at corporations in the Perimeter Center area during heavy construction times.
    - Georgia DOT noted that staging would largely be up to the design-build contractor but that some stipulations could be made part of the contract/request for proposals (RFP).
- PCID indicated they would like to attend the concept team meeting for the project to discuss any design-related concerns or questions they had. Georgia DOT stated that District 7 can send the concept team meeting invitation to PCID.
- PCID agreed to assist in announcing the Public Information Open House (PIOH) for the SR 400/I-285 interchange project. ARCADIS will send the approved legal ad to PCID for their use once it is available.
- PCID noted several problems at the existing SR 400/I-285 interchange, including problems with roadway geometry (trucks cannot make the existing tight turns at the interchange) and safety problems associated with the tight weaves.
- PCID noted that the public consistently seems to want more transit. However, transit cannot answer the congestion problem at Perimeter Center. Current origin/destination data shows that people do not live near transit centers, and do not have access to transit near their homes, necessitating the use of cars. Therefore, transit would not solve connectivity issues between commuters' homes and offices. Also, transit does not address the existing safety problems at the interchange.
- PCIDs noted that the public will likely question whether traffic from planned or new local developments has been factored into the traffic modeling for the SR 400/I-285 project. The response is that local developments are accommodated in the regional growth factors used in Atlanta Regional Commission's (ARC's) traffic demand model.

- Georgia DOT noted that no final decisions have been made on the proposed project's design or alignment; only a technical concept has been developed to date.
- PCIDs noted one additional concern for the Abernathy Road interchange is that they would the opportunity to beautify the interchange with PCIDs' "brand" during actual project construction and not after the fact. This would make it much easier, more cost effective, and less disruptive. PCIDs would pay for the beautification/branding improvements. Georgia DOT noted that this would need to be part of the Design Build RFP.
- PCID noted that they were in concept stage on a project under the Peachtree Dunwoody Road interchange to widen Peachtree Dunwoody Road under the bridge and to improve the Lake Hearn/Peachtree Dunwoody intersection.
- PCID noted that there is a new PATH Foundation trail project under construction along SR 400 in Buckhead (called the PATH400 Trail), which uses the MARTA rail line and the SR 400 ROW. PCID indicated that the City of Alpharetta would like to construct a trail south from the city to eventually connect to this trail, and that PCID has received phone calls from Alpharetta regarding this desire (as it would require the trail to go through PCID).
- PCID noted that the northwest quadrant of the SR 400/I-285 interchange is underdeveloped due to the lack of connectivity between this area and the MARTA station in the southeast quadrant. PCID would like to develop pedestrian access or a circulator in this area to be able to get workers between these areas.
- ARCADIS noted that the indirect and cumulative impact (ICI) analysis for the EA will require some input from PCID, as well as planners from each of the local jurisdictions. PCID noted they have a standing meeting with the planners of each jurisdiction the second Tuesday of each month at 1230pm, and they could add us to the schedule at one of these meetings to discuss ICI.

ARCADIS U.S., Inc.
2410 Paces Ferry Road
#400
Atlanta
Georgia 30339
Tel 770 431 8666
Fax 770 435 2666

MEETING REPORT

Subject:
I-285/State Route (SR) 400 Interchange Reconstruction Project (Georgia Department of Transportation [DOT] P.I. No. 0000784, Fulton and DeKalb counties); SR 400 Collector Distributor Lanes Project (Georgia DOT P.I. No. 721850, Fulton County)

Department:
Transportation

ARCADIS Project No.:
GADT0201.0160

Place/Date of Meeting:
City of Sandy Springs Public Works/July 16, 2014

Report No.:
1

Minutes by:
Robin Stevens, Senior NEPA Specialist

Issue Date:
July 25, 2014

Participants:
Marlo Clowers, Georgia DOT
Shamir Poudel, ARCADIS
Robin Stevens, ARCADIS
Mike Rushing, Kimley-Horn
Gary Newton, Kimley-Horn
Cristina Pastore, Kimley-Horn
Kristen Wescott, City of Sandy Springs
Marty Martin, City of Sandy Springs
Angela Parker, City of Sandy Springs
Brad Edwards, City of Sandy Springs
Patrice Dickerson, City of Sandy Springs
Chris McCrary, City of Sandy Springs

Not Present:
Garrin Coleman, City of Sandy Springs
Bryant Poole, City of Sandy Springs
Andrea Hall, City of Sandy Springs
Carla Benton-Hooks, Georgia DOT
Debbie Wilson, Kimley-Horn

Copies:

The purpose of this meeting was to present the current concept for the I-285/SR 400 Interchange Reconstruction Project and the SR 400 Collector Distributor (CD) Lanes Project to the City of Sandy Springs and to gather feedback from the City on the proposal. The following is a summary of the discussions from the meeting.

- Georgia DOT, ARCADIS, and Kimley-Horn presented an overview of the current conceptual design for the I-285/SR 400 interchange reconstruction and the SR 400 CD lanes, the accelerated project schedule, and the anticipated project delivery type (Design Build Finance [DBF] Public Private Partnership [P3]). ARCADIS noted that the current design preserves the Roswell Road and Ashford Dunwoody Road bridges (including the new Diverging Diamond Interchange [DDI]). ARCADIS also noted that the I-285 bridge over Lake Forrest Drive would need to be widened, and that the I-285 bridge over Long Island Drive may either need to be widened or a new bridge constructed to carry

additional pavement. The existing bridge currently carrying I-285 traffic would remain as-is. Kimley-Horn noted that the Mount Vernon bridge over SR 400 would be reconstructed as part of the CD lanes project, but the typical section of the reconstructed bridge has not been determined. Kimley-Horn also noted that the conceptual design at the Abernathy Road interchange is currently being validated, and the configuration for this interchange has not yet been determined. At this time, it is expected that the southbound slip ramp from SR 400, along Abernathy Road (west side) to Glenlake Parkway, would be included in all concepts.

- ARCADIS mentioned that the I-285/SR 400 interchange improvements have been part of the revive285 top end project, and are now being separated from revive285 as an individual project for accelerated implementation. Sandy Springs Circle was discussed. It was mentioned that revive285 top end had considered a managed-lane access option and a general-purpose access option to Sandy Springs Circle. Both of these options included extending Sandy Springs Circle under I-285 to the south. Sandy Springs Circle access from I-285 and extension to the south is not included in the current interchange project concept.
- Sandy Springs stated a desire for increased/new pedestrian/multi-modal circulation around the I-285/SR 400 interchange. Sandy Springs has a Draft Sandy Springs Bicycle, Pedestrian and Trail Implementation Plan (has not yet been adopted by the City Council) that identifies routes where pedestrian/multi-modal facilities are desired and needed, and prioritizes them. The City noted that any opportunity for adding pedestrian, bicycle, or multimodal routes on any reconstructed bridges/overpasses, or along SR 400, would be the desire of the City. Sandy Springs does not yet know when the Draft Sandy Springs Bicycle, Pedestrian and Trail Implementation Plan will be adopted by the City.
- Sandy Springs asked whether their recently constructed landscaping/gateway project at the Roswell Road interchange would be affected by the I-285/SR 400 interchange reconstruction project. ARCADIS noted that this area would be affected/reconstructed by the proposed CD lanes along I-285 in this area.
- MARTA's plans for the corridor were discussed. Originally, MARTA's expansion plans were along the east side of SR 400, where the existing Sandy Springs MARTA station is located; however, Sandy Springs is petitioning to move the expansion plans to the west side of SR 400 because that is where the population density/ridership is located.
    - The SR 400 CD Lanes concept currently assumes that MARTA is on the east side, but Georgia DOT has a coordination meeting scheduled with MARTA for this Friday.
- Sandy Springs noted they would like Georgia DOT to consider southbound access for use by vehicles accessing the end-of-line Sandy Springs MARTA station.
- The Abernathy Road Interchange area and the new Hines development at this interchange was discussed. Sandy Springs indicated that the Abernathy Road corridor is a very important corridor for the City and pedestrian access is a key concern in this area. People are currently walking between Barfield and the MARTA station in this area. Georgia DOT and Kimley-Horn discussed the ongoing coordination with the Hines developer to try to decrease the amount of right-of-way (ROW) needed from the Hines parcel for the CD Lanes project. The Hines developer has been able to lower their site profile and construct a wall to aid in reducing ROW needs. Sandy Springs noted that a pedestrian/ multi-modal path was to be constructed along Abernathy Road as part of this development at the request of the City, and that this change could affect this path. Sandy Springs will forward the current Hines site plan to Georgia DOT (Russell McMurry).

- Sandy Springs inquired about the potential for direct access to the Hines development from the new CD Lanes. Georgia DOT stated that it is not typically the Department's policy to provide direct access to a private development from the interstate and that any such access would need to be reviewed and approved by Federal Highway Administration (FHWA). Georgia DOT noted that no new access is being proposed as part of either project.
- Sandy Springs inquired about the potential for noise walls as part of the project. Georgia DOT stated that updated noise studies were being conducted for both projects to determine where noise walls are needed, as well as their reasonableness and feasibility. At this time, this data is not available. However, any location that currently has noise walls would continue to have noise walls under these projects. Sandy Springs also inquired about the type of noise wall to be constructed (metal vs. concrete). Georgia DOT indicated that the type had not yet been determined, but would likely be whatever the standard Georgia DOT noise wall type is at the time of the Request for Proposals (RFP) for the DBF contract.
- Sandy Springs noted that there were numerous new permitted and/or planned developments in the vicinity of these projects. The City will send Georgia DOT and the project teams information on these developments.
- Sandy Springs noted that there is a new PATH Foundation 12-foot-wide trail project under construction in Buckhead, which is being constructed north towards Sandy Springs. Sandy Springs would like to extend this trail north along SR 400 through the City to provide multi-modal connectivity, and this extension is part of their Draft Sandy Springs Bicycle, Pedestrian and Trail Implementation Plan. The opportunity to fit such a trail extension inside the SR 400 ROW was discussed. Georgia DOT noted that the current CD Lanes project is in many ways constrained by the ROW that has already been acquired for that project, and they do not want to increase the environmental footprint or required ROW above what is required for the CD Lanes project. The area along the west side of SR 400 between Spalding Drive and Colquitt Road was identified by the City as an area lacking pedestrian connectivity. Georgia DOT noted that the CD lanes project was already within existing ROW in this area (no new ROW is needed for the project), but that they could review the design to make sure that a future trail expansion would not be precluded in the remaining ROW in this area.

Upcoming Public / Coordination Meetings:

- Georgia DOT Coordination Meeting with Brookhaven and Dunwoody – July 2014
- ICI meeting with PCID and partners (includes Sandy Springs) - August 12
- Public Information Open House (PIOH) Meetings for the I-285/SR 400 Interchange Project - August 19 (mid-day), 21st (mid-day, evening) at Dunwoody Baptist Church (located on Mt. Vernon/Ashford Dunwoody Road)
- Public Hearing for the I-285/SR 400 Interchange Project – Date and Location TBD
- PIOH for the SR 400 CD Lanes Project – Date and Location TBD

Action Items:

Sandy Springs will provide Georgia DOT, ARCADIS, and Kimley-Horn with the following data:

1) GIS data – current street file and recent aerial photography
2) Permitted developments adjacent to project areas

3) Potential for the projects individually and together to induce development, as well as expected development type and location/vicinity (This will be the topic of the August 12th meeting at Perimeter CIDs)
4) Identification of any sensitive or environmentally significant features adjacent to project areas, such as areas that are important to the surrounding communities
5) Identification of specific projects or plans (bike, pedestrian, etc.) on local street network intersecting project areas
6) Early Coordination formal comment – before October
7) Current site plan for the Hines development

Georgia DOT, ARCADIS, and Kimley-Horn will provide Sandy Springs with the following:

1) Information on how to qualify/quantify Indirect and Cumulative Impacts (ARCADIS)
2) Public Meeting Notice(s) (Georgia DOT)
3) Project Fact Sheets (Georgia DOT; project fact sheets are currently in development)

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MEETING REPORT

Subject:
I-285/State Route (SR) 400 Interchange Reconstruction Project (Georgia Department of Transportation [DOT] P.I. No. 0000784, Fulton and DeKalb counties)

Department:
Transportation

ARCADIS Project No.:
GADT0201.0160

Place/Date of Meeting:
Perimeter Community Improvement Districts (PCIDs) Office/July 22, 2014

Report No.:
1

Minutes by:
Robin Stevens, Senior NEPA Specialist

Issue Date:
August 1, 2014

Participants:
Marlo Clowers, Georgia DOT
Shamir Poudel, ARCADIS
Robin Stevens, ARCADIS
Jennifer Harper, PCIDs
Yvonne Williams, PCIDs
Donna Mahaffey, PCIDs
Steve Foote, City of Dunwoody
Michael Smith, City of Dunwoody

Not Present:

Copies:

The purpose of this meeting was to present the current concept for the I-285/SR 400 Interchange Reconstruction to the City of Dunwoody and to gather feedback from the city on the proposal. The following is a summary of the discussions from the meeting.

- Georgia DOT and ARCADIS presented an overview of the current conceptual design for the interchange reconstruction, the accelerated project schedule, and the anticipated project delivery type (Design Build Finance [DBF] Public Private Partnership [P3]).
- The City of Dunwoody asked if storage at the Ashford Dunwoody Road westbound off ramp would be increased by the project. ARCADIS noted there would be a slight increase as a result of ramp redesign.
- Changes in access and travel patterns in the vicinity of the City of Dunwoody were discussed:
    - Access to I-285 for the city would remain the same, and may be improved due to the reduction in weaving along I-285 in the area.
    - Access to SR 400 northbound would be improved
    - Access to SR 400 southbound would be largely the same
    - Access to Ashford Dunwoody would be modified. Eastbound access would begin west of the SR 400 interchange; therefore, signage would be critical.

    - There would be a change in access between Peachtree Dunwoody Road and Ashford Dunwoody Road—vehicles would no longer be able to use I-285 to get access between these two roads. Local one-exit trips will become side street/surface street trips.
    - There would be a change in access to the hospital complex to the Dunwoody area. Traveling to and from the hospital and Ashford Dunwoody Road (Perimeter Mall area), ambulances/vehicles would not get on I-285; they would need to use parallel routes. An ambulance in the Mall area would either need to use the Perimeter Center flyover bridge or use Lake Hearn Drive to the south of I-285. The City of Dunwoody and PCIDs noted that ambulances try to avoid using the I-285/SR 400 interchange now because of traffic.
- Right-of-way (ROW) acquisition and displacements for the interchange project was discussed. Georgia DOT stated that only the ROW needed for the interchange reconstruction would only be acquired at this time, and would not include any additional ROW needed for proposed future managed lanes or transit ROW preservation being considered under the separate Revive285 Top End project (PI No. 0001758). This may mean impacting the same land owners twice, but the Revive285 project would impact them much further into the future.
    - ARCADIS noted that the Marriott Conference Center and some medical offices on the south side of I-285 (on Lake Hearn) would likely be displaced. Parking at some medical offices on the south side of I-285 would also likely be impacted. Additionally, Cox's parking lot would be impacted. The City of Dunwoody noted that Cox has future plans for that parking lot, which we may be affecting.
- Other planned and permitted developments in the area were discussed:
    - The City of Dunwoody noted that the Goldkist property is processing a parking deck request on their property on the north side of I-285, west of the Ashford Dunwoody Road interchange.
    - There is a planned development in the northeast quadrant of the I-285/Ashford Dunwoody Road interchange, but it does not appear that the development would be affected by the I-285/SR 400 Interchange Reconstruction project.
    - State Farm construction is occurring along Perimeter Center Parkway.
    - There are entitlements on several properties in the area (but no permits)—The City of Dunwoody will send information on these entitlements to ARCADIS.
- PCIDs discussed concerns about construction staging and associated traffic impacts. PCIDs noted that this will become a much greater issue around the holidays, when there is holiday shopping in the Perimeter Mall area. Georgia DOT noted that there could be restricted or shortened lane closure periods during certain times of the year, and this could be added to the Request for Proposals (RFP) for the Design Build contractor. However, since the goal is to get the construction completed as quickly as possible. PCIDs stated they would work with the City of Dunwoody on increasing telecommuting, as well as transit circulation and access during heavy construction times.
- The owner of the Goldkist site has previously asked Georgia DOT and the City of Dunwoody about getting access to their property at the intersection of I-285 and Ashford Dunwoody Road (northwest quadrant) via a slip lane to the I-285 on-ramp or through extension of their existing driveway parallel to the south side of Hammond Road to Ashford Dunwoody Road. Georgia DOT responded that it is not usually FHWA's policy to provide direct access from a private property onto an interstate.

- GDOT and ARCADIS discussed the upcoming the Public Information Open Houses (PIOHs) for the SR 400/I-285 interchange project. ARCADIS will send information on the dates, times, and location for the PIOHs to the City of Dunwoody so they can send the information to elected officials.
- The goals of the interchange reconstruction project were discussed, and include improving safety by reducing weaving and increasing throughput at the interchange, which will improve travel times. GDOT also noted that the duration of congestion (peak periods) would be shortened, too.
- The City of Dunwoody asked whether there would be driveway allowed along the collector-distributor (C/D) lanes. GDOT responded that no driveways would be permitted along the C/Ds; there would only be ramps entering and exiting.
- ARCADIS noted that the recent improvements at the Roswell Road and Ashford Dunwoody Road interchanges would be retained by the project, but that the slopes under the bridges would be removed by the project and walls would be put in to fit improvements under the bridges.
- The City of Dunwoody questioned whether noise walls would be constructed for the project. The City noted that the residential area on the north side of I-285 from the end of the interchange reconstruction project limits east to Chamblee Dunwoody has expressed numerous complaints about noise from I-285. ARCADIS noted that the limits of the noise study would extend approximately 1,000 feet past the end of the ramp construction limits, and a noise abatement analysis would be conducted as part of the project.
    - PCID questioned the proposed noise wall design and whether it would be consistent with their branding/theme. GDOT stated that the details on design had not yet been established for the project.
- PCIDs noted that, with improved I-285/SR 400 interchange operations, residential areas in Dunwoody may see a decrease in cut-through traffic from motorists trying to avoid the interchange.
- ARCADIS briefly discussed the potential for indirect and cumulative impacts (ICI), and that a meeting has been set up for mid-August with the PCIDs and planners from each of the local jurisdictions, including Dunwoody.
    - The City of Dunwoody noted that a longer-term impact of the project would be that land values would remain strong; if the interchange were not improved, the office market in the Perimeter area would be hurt as traffic worsened. The area would get branded as having too much congestion, which would make it unattractive for the office market.
    - PCIDs noted that side roads would become more manageable after the proposed improvements, since traffic would be sitting on the C/D lanes and not Ashford Dunwoody Road, lessening the backup on this road.
    - PCIDs noted that they have an ongoing Economic Impact Analysis and Fiscal Impact study, which is evaluating the impact of the Ashford Dunwoody Road Diverging Diamond Interchange project and Hammond Road interchange construction. This is a 5-month study that was recently kicked off to give a comprehensive look at land uses and revenues; preliminary results should be available in 3 to 4 months. PCIDs will share this data when it comes in. PCIDs will also share their Geographic Information Systems (GIS) database built by Chris Simons (Atkins) and Lauren Leary (RS&H), which contains land use and road information.

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MEETING REPORT

Subject:
I-285/State Route (SR) 400 Interchange Reconstruction Project (Georgia Department of Transportation [DOT] P.I. No. 0000784, Fulton and DeKalb counties)

Department:
Transportation

ARCADIS Project No.:
GADT0201.0160

Place/Date of Meeting:
Perimeter Community Improvement Districts (PCIDs) Office/August 12, 2014

Report No.:
1

Minutes by:
Robin Stevens, Senior NEPA Specialist

Issue Date:
August 13, 2014

Participants:
Marlo Clowers, Georgia DOT
Carla Benton-Hooks, Georgia DOT
Shamir Poudel, ARCADIS
Robin Stevens, ARCADIS
Jennifer Harper, PCIDs
Yvonne Williams, PCIDs
Richard Meehan, City of Brookhaven

Not Present:

Copies:

The purpose of this meeting was to present the current concept for the I-285/SR 400 Interchange Reconstruction to the City of Brookhaven and to gather feedback from the city on the proposal. This meeting was held as part of the project's Indirect and Cumulative Impacts meeting at the Perimeter CIDs office. The following is a summary of the discussions from the meeting.

- Georgia DOT and ARCADIS presented an overview of the current conceptual design for the interchange reconstruction and the accelerated project schedule.
- The City of Brookhaven noted that the residential area on the south side of I-285 between Ashford Dunwoody Road and Chamblee Dunwoody Road is a very vocal neighborhood and is very concerned about noise impacts from I-285. The City noted it is likely that these residents would attend the upcoming public meetings on the project because a former design of the interchange from approximately 20 years ago showed collector-distributor (CD) lanes extending to Chamblee Dunwoody Road and impacting these residents.
- Changes in access and travel patterns in the vicinity of the City of Brookhaven were discussed:
    - There would be a change in access between Peachtree Dunwoody Road and Ashford Dunwoody Road—vehicles would no longer be able to use I-285 to get access between these two interchanges. Local one-exit trips will become side street/surface street trips.

The City of Brookhaven noted that this did not appear to be a problem, since there are other connecting/parallel roads in this area, such as Lake Hearn Drive.

- The City of Brookhaven also noted that the area around Nancy Creek (east of the current proposed project limits) and Murphey Candler Lake (south of the currently proposed project limits) is an ecologically sensitive area. The community in that area is also a vocal community.
- The City acknowledged that there appeared to be very little right-of-way impacts to the City from the project.