

3. Affected Environment, Environmental Consequences, and Mitigation

Implementation of transportation improvements may affect social, economic, and natural resources. Informed decision-making begins with identifying and understanding the existing environmental conditions (affected environment) and the potential impacts (environmental consequences) and benefits (**Chapter 1, Need and Purpose**, and **Section 3.14, Relationship Between Short-Term Uses and Long-Term Productivity**) of Proposed Project alternatives. FHWA’s Technical Advisory T6640.8A, Guidance for Preparing and Processing Environmental and Section 4(f) Documents, advises that the Environmental Consequences section of an EIS should include a discussion of the effects of the Reasonable Range of Alternatives. To avoid redundancy and streamline the presentation of information, a comparative analysis of the environmental effects and engineering considerations of the alternatives is included in **Chapter 2, Alternatives Evaluation**, and will not be repeated in this chapter. As allowed under FHWA regulations (23 CFR 771.123(f)), **Chapter 3, Affected Environment, Environmental Consequences, and Mitigation**, will provide additional details about the effects of the Preferred Alternative to further focus efforts on avoidance and minimization as well as to support decisions related to permitting. Environmental commitments discussed in this chapter are summarized in the Environmental Commitments Table and found in **Appendix P, Environmental Mitigation Plan**. This chapter also presents information about the No-Build Alternative as a baseline for comparison with the Preferred Alternative.

This chapter provides information on the probable benefits and adverse effects of the Proposed Project as it relates to land use; community facilities, neighborhoods, and cities; environmental justice (EJ) and communities of concern; economics; historic and archaeological resources; visual quality and aesthetics; hazardous waste and materials; air quality; noise; water resources; ecosystems; geology and soils, and construction. Also presented are study areas specific to the aforementioned resources and comprehensive analyses and comparisons of the No-Build Alternative and the Preferred Alternative to identify any direct, indirect, and/or cumulative effects on resources in the Project Area. Although identified in the NEPA guidance, coastal barriers, coastal zones, prime farmland, and wild and scenic rivers are not being considered because the Preferred Alternative would have no potential for impacts to these resources. The determination to exclude consideration of prime farmland was achieved through correspondence from the Georgia Natural Resources Conservation Service dated July 29, 2020 (refer to **Appendix M, Agency Correspondence**).

The Council on Environmental Quality’s (CEQ’s) Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR 1500-1508),¹ FHWA,² and Georgia DOT³ provide the following

¹ 40 CFR 1500-1508. <https://www.govinfo.gov/app/details/CFR-2011-title40-vol33/CFR-2011-title40-vol33-part-id1102>.

² Federal Highway Administration (FHWA). 2020b. *Questions and Answers Regarding the Consideration of Indirect and Cumulative Impacts in the NEPA Process*. <https://www.environment.fhwa.dot.gov/nepa/QAimpact.aspx>.

³ Georgia Department of Transportation (Georgia DOT). 2012. *Online Environmental Procedures Manual*. <http://www.dot.ga.gov/PartnerSmart/DesignManuals/Environmental/GDOT-EPM.pdf>.

1 definitions for effects and impacts (**Appendix B, Applicable Laws and Regulations**, further describes the
2 regulatory context for all areas of evaluation):

- 3 • Direct effects are caused by some action immediately related to and geographically proximate to the
4 project and which are caused by the action and occur at the same time and place.
- 5 • Indirect effects are caused by the action and are later in time or farther removed in distance but are still
6 reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to
7 induced changes in the pattern of land use, population density, or growth rate and related effects on air
8 and water and other natural systems, including ecosystems.
- 9 • Cumulative effects consider not only direct and indirect project effects, but the total impact on the
10 environment that results from incremental effects of the action when added to other past, present, and
11 reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person
12 undertakes such actions. Cumulative effects can result from individually minor but collectively significant
13 actions taking place over a period of time.

14 **Appendix D, Indirect and Cumulative Effects Report**, provides additional information on indirect and
15 cumulative effects. The **Appendix H** series provides separate technical reports as they pertain to the resources
16 analyzed in this chapter.

17 3.1 Land Use

18 This section provides information and analysis on the direct, indirect, and cumulative impacts of the No-Build
19 Alternative and Preferred Alternative on land use and future growth as it relates to the Preferred Alternative.

20 3.1.1 Affected Environment

21 The Study Area and methodology used for the affected environment are described in **Appendix D, Indirect and**
22 **Cumulative Effects Report**. The characterization of the affected environment consisting of the existing land use
23 within and adjacent to the Preferred Alternative is based on data from ARC and the City of Brookhaven, the City
24 of Chamblee, the City of Doraville, the City of Dunwoody, the City of Sandy Springs, the City of Smyrna,
25 DeKalb County, and Cobb County. The Area of Impact (AOI) for land use, as defined in the **Appendix D,**
26 **Indirect and Cumulative Effects Report**, does not include the City of Tucker because there were no direct land
27 use impacts within the limits of the City of Tucker; however, under the evaluation of impacts for other resources,
28 areas within the limits of the City of Tucker are included as applicable. The findings from other resource
29 evaluations were reviewed and do not warrant changes to the land use impact analyses.

30 3.1.1.1 Corridor and Study Area History

31 In the first available historic aerial photograph for the Proposed Project corridor, dated 1938, the area within the
32 corridor was primarily undeveloped lands interspersed with agricultural fields with minimal commercial
33 development along the future I-285 corridor. After I-285 was constructed in 1969, the corridor and surrounding
34 areas continued to develop into commercial areas (primarily at intersections along the corridor), light industrial (at
35 select locations), and as single-family and multi-family residences. Over the last five decades, the Study Area has
36 experienced an increase in urbanization with associated land use and economic changes; it has transitioned from

1 rural and industrial to commercial and service-based economies, especially around I-285. The Metro Atlanta
2 region is now home to several Fortune 500 companies and other large employers. Some of these corporations
3 (including Home Depot, Cox Media, Havertys Furniture, and Focus Brands corporate headquarters) have
4 established their presence along the I-285 top end corridor, particularly near the intersection of SR 400 and I-75.

5 According to ARC, over the 30-year period from 2020 through 2050, the Metro Atlanta region (20-county region
6 which includes the Study Area⁴) is forecasted to grow by 2.3 million residents, resulting in a total population of
7 8.5 million.⁵ Employment for the region is projected to increase by 725,000 jobs between 2020 and 2050, for a
8 total job base of more than 3.8 million. In total, the region expects 23% growth in jobs, with the average annual
9 employment growth rate during this period forecast at 0.96%.

10 The historic baseline for land use is 1969, the year I-285 was built, which (according to local land use planners
11 and historic aerial photographs) spurred much of the development seen today in the I-285 corridor. I-285 was
12 constructed during the late 1960s as a 4-lane highway to allow traffic to bypass the City of Atlanta. A historical
13 perspective of development and traffic on I-285 indicates that traffic volumes have increased consistently since
14 the facility was built. Between 1980 and 1990, there was a 200% increase in employment density along I-285, the
15 majority of which occurred along the northern portion. The top end portion of I-285 (between I-75 and I-85) was
16 widened twice in subsequent decades in response to increasing development and traffic congestion, reaching its
17 current 10-lane configuration in 1996.⁶ The existing ROW ranges from approximately 300 feet to 700 feet wide.

18 3.1.1.2 Existing Land Use

19 The entire I-285 corridor is identified as *limited access highways* (such as interstates) land use classification.
20 Adjacent to the I-285 corridor are a wide range of land uses. **Exhibit 3-1, Existing Land Use**, depicts land use
21 covers in 2012. A review of historical aerial photographs from 1993, 1999/2000, 2007, and 2017 (**Appendix H-7,**
22 **Phase I Environmental Site Assessment**) shows that the land use covers have remained unchanged since 2012
23 for the most part. Changes that have occurred since 2012 have been limited and would not be noticeable at the
24 scale of the exhibit used to depict land use covers. Along the western segment of the Study Area, several
25 employment and activity centers are located near the I-285/SR 400 interchange at the northern portion of the
26 corridor, also referred to as the apex of the corridor. Directly west of the apex are mostly *commercial* and
27 *medium-density residential* developments with a few *institutional* tracts. This trend continues with mostly low-
28 and medium-density residential land use in the central/northern segment of the corridor with large tracts of
29 *commercial* and *institutional* developments. Primarily *commercial* and *high-density residential* developments are
30 located in the eastern segment of the corridor. Land use data presented in this section are based on the best
31 available information from the local jurisdictions and ARC. Existing land use characteristics within the impacted
32 identified jurisdiction are depicted in **Appendix D, Indirect and Cumulative Effects Report**, and are further
33 described as follows. Most of the Study Area is located within incorporated communities (i.e., located within the

⁴ The Atlanta Regional Commission (ARC) is the region's federally designated Metropolitan Planning Organization. ARC collaborates with local governments and transportation agencies to develop the Regional Transportation Plan (RTP), which prioritizes transportation investments in the 20-county Atlanta region through 2050 to improve mobility in the Atlanta region. More information about ARC can be found at <https://atlantaregional.org/>.

⁵ Atlanta Regional Commission (ARC). n.d. *Population and Employment Forecasts*. <https://atlantaregional.org/atlanta-region/population-employment-forecasts/>.

⁶ This paragraph references the revive285 TopEnd DEIS, Arcadis, September 2012, which references data from ARC Envision 6 RTP: http://documents.atlantaregional.com/Land%20Use/lu_draft_ra_doc_2-1-10.pdf.

1 boundaries of a local governing municipality other than a county). In the context of this study, unincorporated
2 areas are located within the limits of a county but do not have a local governing authority such as a city, town
3 council, township, village, borough, etc.

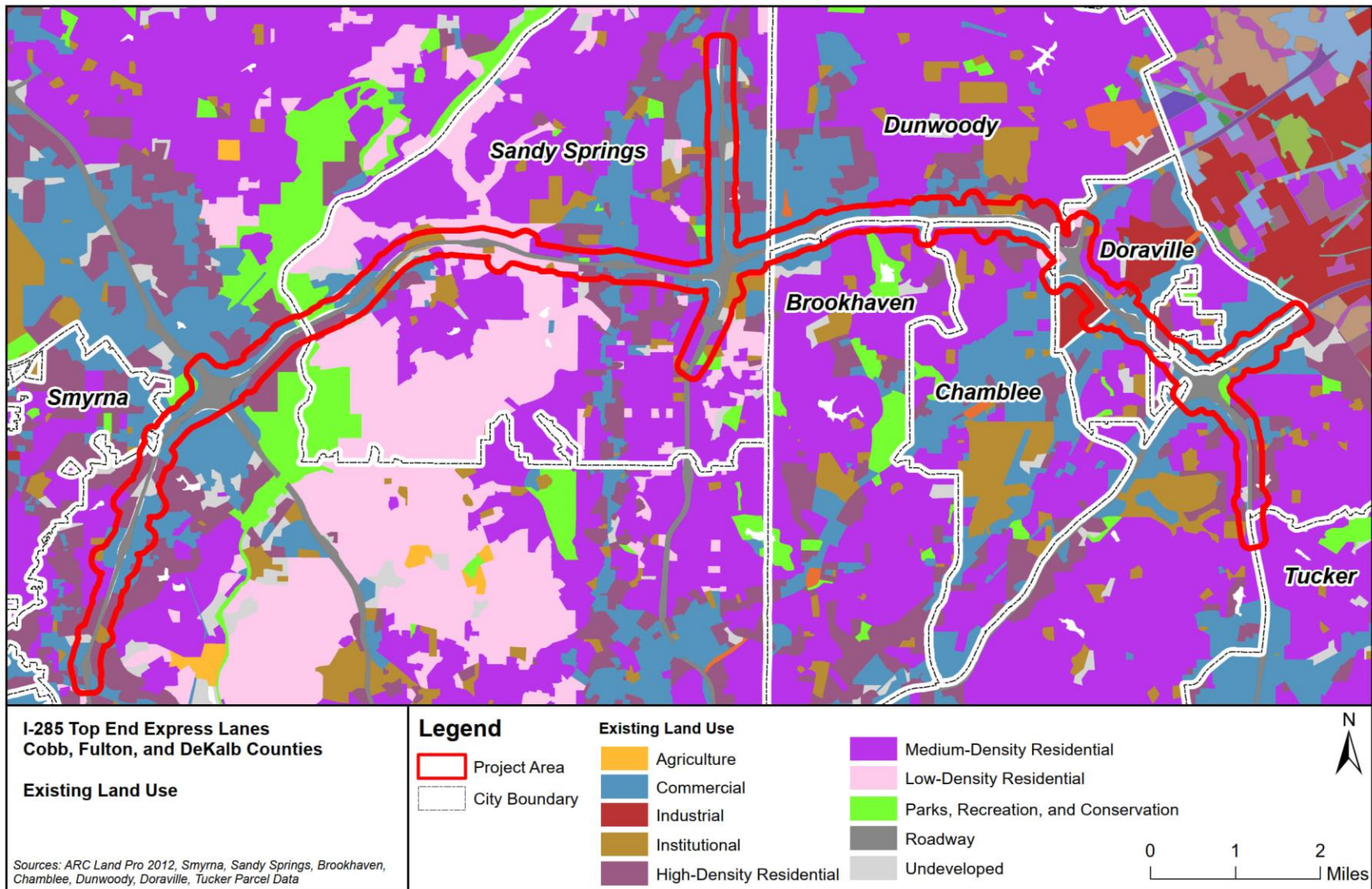
- 4 • Starting at the western edge of the Study Area and moving east toward I-75, in areas of unincorporated
5 Cobb County, land uses along the Preferred Alternative are *high-density residential, multi-family*
6 *residential, and medium-density single-family residential* (such as townhouses), followed by *commercial,*
7 *forest, and multi-family residential*. In the area of the I-285 and I-75 interchange and Smyrna, land uses
8 are predominately *commercial*, with smaller areas of *urban* and other land uses. East of the interchange
9 and west of the Chattahoochee River are *commercial, multi-family residential, parkland, and forest* land
10 uses along the river.
- 11 • East of the river and west of SR 400 in Sandy Springs are a variety of land uses: *multi-family residential,*
12 *parkland, forest, commercial, high-density residential, medium-density single-family residential, intensive*
13 *institutional, low-density single-family residential, and church*. Along SR 400 north of the I-285 and
14 SR 400 interchange in Sandy Springs, are mostly *commercial* land uses, with areas of *multi-family*
15 *residential, forest, and medium-density single-family* land uses interspersed. South of the interchange are a
16 mix of *commercial, intensive institutional* (areas with high concentration of institutional facilities such as
17 healthcare facilities), *medium-density single-family residential, parks, parkland, and high-density*
18 *residential*.
- 19 • Continuing east into Brookhaven, south of I-285, and Dunwoody, north of I-285, these areas include
20 *commercial, medium-density single-family residential, and multi-family residential* land uses. Those land
21 uses are also present in Chamblee, along with a few areas of *low-density single-family residential* land
22 uses around SR 141 in both Chamblee (south of I-285) and Dunwoody (north of I-285).
- 23 • Around SR 141 continuing east into Doraville there are *low-density single-family residential, multi-family*
24 *residential, commercial, industrial, medium-density single-family residential, and commercial* land uses.
25 Around the I-285 and I-85 interchange in Doraville and unincorporated areas of DeKalb County are
26 *medium-density single-family* land uses, *multi-family residential* land uses, *forest, parks, and industrial*
27 and *commercial* complexes land uses. Continuing west and south along I-285 toward Tucker are
28 *commercial, medium-density single-family, intensive institutional, and forest* land uses.

29 The following list provides a summary of the land use and zoning classifications for the jurisdictions described
30 previously:

- 31 • **Brookhaven Existing Land Use and Zoning** – Land use in Brookhaven is predominately *residential,*
32 with 58% of the city consisting of *single-family residential* and 10% consisting of *multi-family*
33 *residential*. The next largest land uses are *commercial/office* at 13%, followed by *park recreation-*
34 *conservation* at 9%, and *public-institutional* at 5%. The remaining land use is *transportation-*
35 *communication-utilities* at 4% (constructed) and under construction at 1%.

36 Along the Preferred Alternative corridor, from west to east in Brookhaven, parcels are zoned for *office-*
37 *institution, single-family residential, office-institution* again, and *local commercial* land uses along
38 Chamblee Dunwoody Road.

1 Exhibit 3-1: Existing Land Use



2

- 1 • **Chamblee Existing Land Use and Zoning** – The largest category of land use in Chamblee is *single-*
2 *family residential* at 39%, followed by *roadway/transportation* at 25% and *commercial* at 13%. Chamblee
3 has relatively small proportions of *industrial* (7%), *institutional/public* (5%), and *office* (4%) land uses.
4 The remaining area in Chamblee is *unknown/vacant* (4%), *parks* (2%), and *mixed-use* (1%).

5 Along the Preferred Alternative corridor, the entire area immediately adjacent to I-285 is zoned as *mixed-*
6 *use-business center*. South of that, within the Project Area, from west to east, the area is zoned as *village*
7 *residential*, *neighborhood residential 1*, *village commercial*, *corridor commercial*, and *neighborhood*
8 *residential 1* and *corridor commercial* again in the vicinity of Peachtree Road and SR 141.

- 9 • **Doraville Existing Land Use and Zoning** – *Industrial* (38%) and *residential* (37%) are the two largest
10 land uses in Doraville. *Commercial* is the next largest land use at 11%, followed by *urban* and *special*
11 *district* land uses, at nearly 7% and 6%, respectively. *Institutional* land uses make up 1% of Doraville’s
12 land area.

13 The area in Doraville along the Project Area is zoned for a variety of land uses. Immediately northwest of
14 I-85, the area is predominantly zoned for *light manufacturing*, interspersed with areas of unincorporated
15 DeKalb County northwest of that. Farther northwest, around Buford Highway, are areas zoned as *office*
16 *institutional conditional*, *office warehouse*, *general business*, and *Urban Core*, with one small area zoned
17 as *multi-family residential* along New Peachtree Road. Northwest of New Peachtree Road are a variety of
18 zoning districts including the following designations: *light manufacturing*, *special district*, *office*
19 *warehouse*, *single-family residential*, *general business*, *neighborhood commercial*, and *heavy*
20 *manufacturing*.

- 21 • **Dunwoody Existing Land Use and Zoning**—Dunwoody, at 84%, consists primarily of *residential* land
22 uses. *Institutional* and *commercial* land uses occupy the next largest portions of the city at 7% and 6%,
23 respectively. *Mixed-use* land use covers 2% of the city, and *office* and *vacant* land uses at 1%.

24 Along the Project Area, between the western limit of Dunwoody and Ashford Dunwoody Road, the area
25 immediately adjacent to I-285 is zoned as *office-institution*, with areas of *planned development*, *local*
26 *commercial*, and *multi-dwelling residential* north of that, but still within the Project Area. East of Ashford
27 Dunwoody Road is an area zoned as *office-commercial residential*, followed by *office-institution*, and
28 then *single-dwelling residential*. East of that, around Chamblee Dunwoody Road and west of North
29 Shallowford Road, is a cluster of varied zoning designations, including *multi-dwelling residential*, *office-*
30 *institution*, *local commercial*, *neighborhood commercial*, and *office-distribution*. East of North
31 Shallowford Road are areas zoned as *multi-dwelling residential*, *office-distribution*, and *neighborhood*
32 *commercial*.

- 33 • **Sandy Springs Existing Land Use and Zoning**—Sandy Springs is made up of almost entirely
34 *residential* land uses (94%) with the remaining land categorized as *mixed uses* (2%), *parks*, *open spaces*,
35 *conservation* (2%), and *institutional* (2%) land uses.

36 In the far eastern portion of the Project Area in Sandy Springs are areas zoned as *perimeter medical* and
37 *perimeter mixed uses*, along with *parks and recreation* and *residential detached* and *residential estate*
38 designations around SR 400. West of that are more varied zoning districts including those zoned as
39 *residential townhouse*, *office mixed-use*, *residential detached*, *residential multiunit*, *commercial mixed-*
40 *use*, *residential mixed-use*, *office mixed-use*, and *parks and recreation*. West of Lake Forest Drive
41 Northwest are *residential multiunit*, *residential estate*, and *residential detached districts*. These are

1 followed by a cluster of *office mixed-use, residential estate, shopfront mixed-use, commercial corridor,*
 2 *residential townhouse,* and *residential mixed-unit* land uses. Conservation areas and open spaces are
 3 located along the Chattahoochee River in the far western edge of Sandy Springs.

- 4 • **Smyrna Existing Land Use and Zoning**—The majority of Smyrna is *residential* land use at 54%. The
 5 next largest uses by percentage are *commercial* at 14% and *transportation-utilities* at 12%, followed by
 6 *parks-recreation-conservation* at 10%. Smyrna also has small areas of *undeveloped* (4%), *industrial*
 7 (3%), and *institutional-public* (2%) land uses. *Transitional, agriculture,* and *construction* land uses make
 8 up the remainder of Smyrna, each less than 1% of Smyrna’s area.

9 Areas along the Preferred Alternative corridor are zoned as single-family residential, general commercial,
 10 tourist services, office-institution, and neighborhood shopping.

11 3.1.1.3 Local Land Use Plans and Policies

12 In accordance with state law (Official Code of Georgia Annotated § 36-66-1 [2009] “The Zoning Procedures
 13 Law”), local governments are responsible for future land use planning and zoning within their respective
 14 incorporated limits. Therefore, existing and future land use plans were evaluated to identify development trends in
 15 the Study Area. The Study Area includes the Cities of Smyrna, Sandy Springs, Dunwoody, Brookhaven,
 16 Chamblee, Doraville and portions of unincorporated Cobb and DeKalb Counties (refer to **Exhibit 1-1** in
 17 **Appendix D, Indirect and Cumulative Effects Report**). All areas within Fulton County are incorporated;
 18 a portion of the Project Area falls within the City of Sandy Springs in Fulton County. The land use and
 19 transportation elements of comprehensive plans were reviewed for each jurisdiction. Key elements for the six
 20 local jurisdictions and unincorporated Cobb and DeKalb Counties are summarized in the following sections.

21 Regional Summary

22 The entire Project Area is located within the planning and coordination responsibilities of ARC. ARC is the
 23 regional planning and intergovernmental coordination agency for the 11-county member governments and the City
 24 of Atlanta. ARC also develops population and employment forecasts for the 20-county region. The areas around
 25 the Preferred Alternative are expected to continue growing in both population and employment over the next three
 26 decades, as indicated in ARC’s *The Atlanta Region’s Plan*,⁷ which provides forecasts through year 2050.

27 Of the 20-county Metro Atlanta region, Fulton, Cobb, and DeKalb Counties are expected to experience the
 28 second, third, and fourth largest increases in population. For Fulton County, this means a population increase
 29 from 1,116,831 in 2020 to 1,473,300 by 2050 (32% increase). In Cobb County, the population is expected to
 30 increase from 806,754 in 2020 to 1,035,796 by 2050 (28% increase). In DeKalb County, the population is
 31 expected to increase from 809,802 in 2020 to 1,012,022 in 2050 (25% increase). In support of this growth, ARC’s
 32 RTP identifies three goal areas: providing and maintaining world class infrastructure, healthy livable
 33 communities, and a competitive economy. The ARC RTP is part of the overall document known as *The Region’s*
 34 *Plan*, which guides balanced growth to maintain quality of life across the 11-county region. ARC’s role related to
 35 ELs has been in leading regional policy for MLs in conjunction with Georgia DOT.

⁷ Atlanta Regional Commission (ARC). 2022a. *The Atlanta Region’s Plan. Regional Transportation Plan*. December.
<https://cdn.atlantaregional.org/wp-content/uploads/2050-rtp-main-doc.pdf>.

1 In March 2022, Georgia DOT, Atlanta-region Transit Link Authority (ATL), MARTA, Cobb County, Gwinnett
2 County, and ARC entered into a Memorandum of Understanding⁸ (MOU) to advance the MARTA-led planning
3 study for high capacity transit within the I-285 Top End ELs. The comprehensive plans for these jurisdictions and
4 ARC Developments of Regional Impact (DRI) data do not yet reflect new developments that might have been
5 spurred by this MOU and ensuing land use changes.

6 **Smyrna**

7 The City of Smyrna is located west of the I-75/I-285 interchange and of the Preferred Alternative. The *City's*
8 *Comprehensive Plan*⁹ was completed and adopted in 2017. It provides a 20-year vision to the horizon year of
9 2040, which includes four major land use components to further community growth:

- 10 • **Target public investment in key nodes and corridors:** The city devised priority redevelopment areas,
11 which are significant areas that need increased public and private investment.
- 12 • **Increase adaptability of development regulations:** The city would achieve this goal by revising and
13 updating the city zoning ordinance, offering public education on codes and zoning regulations,
14 maintaining a broad range of land uses in the city, and providing bonuses and incentives to encourage the
15 creation and preservation of greenspace.
- 16 • **Ensure infill development is compatible with its context:** The city would support and encourage infill
17 residential development, and redevelopment of the "Main Street" downtown area retail, including
18 conducting infill housing studies.
- 19 • **Maintain high design standards:** The city would assess current architectural design standards,
20 regulations, and their impact on development to study current applications at key activity centers and
21 corridors of the city. The city would then update, implement, and enforce the city's design guidelines for
22 development along major corridors such as Spring Road Corridor from Cobb Parkway to Atlanta Road
23 (City of Smyrna, 2017).

24 To support these land use goals, the *City's Comprehensive Plan* also addresses transportation needs such as the
25 enhancement and expansion of transit services, the reduction of congestion on major roads, and the expansion of
26 the existing bike/pedestrian network.

27 The parcels in Smyrna adjacent to the proposed ELs have a primary future land use as a *regional activity center*.
28 The parcels are zoned for a mix of *commercial*, *multi-family residential*, and *neighborhood shopping*.
29 One proposed direct-access ramp (DAR) for the proposed ELs is located in the area at Cumberland Boulevard.

⁸ Atlanta-region Transit Link Authority, Metropolitan Atlanta Rapid Transit Authority, Cobb County, Gwinnett County, the Georgia Department of Transportation, and the Atlanta Regional Commission. 2022. *Memorandum of Understanding Regarding Funding and Collaboration By and Between the Atlanta-region Transit Link Authority, the Metropolitan Atlanta Rapid Transit Authority, Cobb County, Gwinnett County, the Georgia Department of Transportation, and the Atlanta Regional Commission*. Effective March 9, 2022. Signed May 11, 2022.

⁹ City of Smyrna. 2017. *City of Smyrna, 2040 Comprehensive Plan*. <https://www.smyrnaga.gov/home/showdocument?id=9296>.

1 **Brookhaven**

2 Brookhaven is located central to and south of I-285, abutting I-285 on the north and I-85 on the south. The most
3 current *City of Brookhaven Comprehensive Plan* (City of Brookhaven, 2019) looks to horizon year 2034 and was
4 adopted in 2019. The city’s long-term vision emphasizes both preservation and change. A central community
5 within the Atlanta region, Brookhaven aims to preserve its people, neighborhoods, parks, tree canopy, and
6 accessibility, while supporting redevelopment and additional investment to enhance transit use, walkability, and
7 community hubs. Considerable development trends in the area focus on mixed-use pedestrian-friendly
8 development and residential infill development within older neighborhoods, as well as redevelopment of older
9 *commercial/office* uses in the possible future. Developing areas include Town Brookhaven (*office-commercial-*
10 *residential* zoning) of the Brookhaven-Peachtree Overlay District and Brookhaven Village (Dresden Drive
11 corridor), which is also included in the Brookhaven-Peachtree Overlay District. Finally, Perimeter Summit at
12 I-285 and Ashford Dunwoody Road is another mixed-use node with *multi-family housing* and *office development*.
13 Brookhaven is considered fully developed, with limited land available for new developments. Thus, future land
14 use changes will primarily come about via redevelopment of existing *commercial/office* and *residential* land uses.
15 Its land use map indicates designations of *residential* and *highway corridor* along I-285. There are no local access
16 points proposed within the City of Brookhaven.

17 **Chamblee**

18 The City of Chamblee is located south of I-285. It is bounded by the City of Brookhaven to the west, I-85 to the
19 south and southeast, and the City of Doraville to the east and I-285 to the north. Along the northern border of
20 Chamblee adjacent to the I-285 corridor, the current mix of *commercial* and *abandoned* land uses is zoned for
21 mixed-use business center. Based on the future land use plan, the recommended future land uses along Savoy
22 Drive are a mix of *high-density residential*, *office and commercial*, and *mixed-use*.

23 The City of Chamblee’s *One Chamblee Comprehensive Plan Update*¹⁰ was last amended in September 2016 and
24 adopted in December 2019. With a 20-year planning horizon, this comprehensive plan serves as a “guide for
25 making rezoning and capital investment decisions and sets policies for City officials and staff concerning the
26 future development.” The following events and developments influenced the most recent update to its
27 comprehensive plan, including the annexation of 2.8 square miles of land area, the announcement of the nearby
28 General Motors Plant redevelopment (Assembly Yards)¹¹, the conclusion of the *Chamblee Town Center Livable*
29 *Centers Initiative Study*,¹² and an update to the *Georgia Department of Community Affairs Minimum Standards*
30 *and Procedures*.¹³ Creating a healthy and safe living environment that supports a thriving business environment,
31 as well as strong multimodal connections to deliver a greater sense of community identity, the city seeks to

¹⁰ City of Chamblee, Georgia. 2016. *City of Chamblee Comprehensive Plan*.
<https://www.chambleega.com/DocumentCenter/View/113/Comprehensive-Plan-Amended-September-20-2016?bidId=>.

¹¹ Capelouto, J. D. 2019. “‘City Within a City’ Rises on Site of Shuttered GM Plant.” The Atlanta Journal-Constitution.
<https://www.ajc.com/news/local/mattress-company-and-self-driving-shuttle-are-coming-dekalb/MfpROcpJhvLRBtgMKb9o9L/>

¹² City of Chamblee, Georgia. 2014. *Chamblee Town Center Livable Centers Initiative Study*. February.
<https://www.chambleega.com/DocumentCenter/View/251/Town-Center-LCI-10-Year-Update-February-2014?bidId=>.

¹³ Georgia Department of Community Affairs. n.d. *Rules of Georgia Department of Community Affairs*.
<http://apps.dca.ga.gov/development/PlanningQualityGrowth/DOCUMENTS/Laws.Rules.Guidelines.Etc/DCARules.LPRs.pdf>.

1 provide quality government service through partnership and cooperation as outlined in its comprehensive plan,
2 including:

- 3 • Creating a sense of community identity, the plan supports constructing new gateways to the city and
4 wayfinding and beautification efforts.
- 5 • Facilitating its vision for the future, the city can create new zoning districts; *transit-oriented development*,
6 *neighborhood infill district*, *airport*, and *mixed-use business center*.
- 7 • Promoting supportive land use patterns to capitalize on the nearby redevelopment of the General Motors
8 site in Doraville.
- 9 • Redevelopment and infill of older office parks and commercial properties should feature intensities that
10 transition between higher densities appropriately along key corridors.
- 11 • Increase in community facility planning that can be addressed in part by obtaining additional funding and
12 investment to maintain and improve existing community facilities, as well as for creating more.

13 The main goals of the plan are to improve safety, promote community access, strengthen connectivity to local
14 Atlanta regions, and encourage and enable economic development. Within the City of Chamblee, the Proposed
15 Project adds a direct-merge location along I-285 at North Shallowford Road, and a direct access point at North
16 Shallowford Road.

17 **Doraville**

18 The City of Doraville straddles I-285 roughly from Peachtree Industrial Boulevard to I-85. It is bounded by the
19 City of Dunwoody to the northwest, the City of Peachtree Corners to the northeast, and I-85 to the south. The *City*
20 *of Doraville Comprehensive Plan 2022-2042* (City of Doraville, 2021) guides land use and planning decisions for
21 the City of Doraville from 2022 to 2042 and aims for the city to further embrace its cultural diversity. This is to be
22 accomplished by creating a new dynamic area consisting of mixed-use properties within its core, streets for all
23 users, especially at the city's center. This will be facilitated by the recent annexation of industrial land and the
24 coming redevelopment of the city's core. In November 2015, at the initiation of the 2016 Comprehensive Plan,
25 downtown Doraville's layout featured large surface parking lots with disconnected buildings and streets.
26 Consistent with the goals of its comprehensive plan, the redevelopment of downtown seeks to promote mixed-use
27 development by consolidating government facilities onto one parcel, expanding the amount of greenspace, and
28 creating a sense of place for Doraville. The Comprehensive Plan identified critical roadway and transit networks
29 such as U.S. Highway 23 and SR 141, the MARTA system, and other alternative public transportation options.
30 As noted in the new plan, the "2021 update process largely reaffirms but in some cases adjusts the tone and
31 direction documented in the 2016 plan."

32 With its limits extending on both sides of I-285, Doraville has designations in its future land use plan for
33 neighborhood preservation and a Buford Highway Cultural Corridor (BuHi). This area of Doraville is referred to
34 as DeKalb's International Corridor, which, according to the *DeKalb Convention and Visitors Bureau* (DeKalb
35 Convention and Visitors Bureau, 2019), offers "the matchless opportunity to enjoy cuisine from around the world
36 in one destination." DARs for the proposed ELs would be located at Old Flowers Road and New Peachtree Road.

1 Dunwoody

2 Dunwoody is located northeast of the SR 400 and I-285 interchange. It is bounded on the west and north by the
3 City of Sandy Springs, to the south by I-285, and to the east by Peachtree Industrial Boulevard and the City of
4 Doraville. The *City of Dunwoody 2020-2040 Comprehensive Plan*¹⁴ (adopted in December 2020) is a 5-year
5 update from the previous 2015-2035 Plan that was adopted by the city in 2015. It is “a policy guide for making
6 zoning and capital investment decisions, and it sets policies for City officials and staff concerning the future
7 development of the City.” The crux of Dunwoody’s 2020 plan is to further establish the city as a community
8 “where all people can thrive – with a balanced mix of urban and suburban environments and amenities, high-
9 quality employment, equitable housing, and transportation options, a commitment to sustainability, and best in
10 class infrastructure, facilities and services.” The city plans to conduct small area planning studies, construct
11 beautification projects and new gateways to the city, beautify streets, update and implement the transportation
12 master plan, along with the *Dunwoody Sustainability Plan* (City of Dunwoody, 2016) (adopted in 2014 and
13 amended in 2016), and promote land use patterns that support and capitalize redevelopment. *The Dunwoody 2017*
14 *Comprehensive Transportation Plan Update* (Pond Engineering Laboratories, Inc., 2017) identifies transportation
15 strategies and projects for the city to implement based on the goals and policies established in its comprehensive
16 plan.

17 Dunwoody’s future land use plan (updated in 2021) identifies land uses along I-285 including *commercial*, the
18 Perimeter Center district, and *mixed-use*. A master plan is in place along Ashford Dunwoody Road between I-285
19 and Mt. Vernon Highway as part of Perimeter Center, with recommended land uses of *transit-oriented*
20 *development, shops, employment/office, and residential*. The *Georgetown /North Shallowford Master Plan* (City
21 of Dunwoody, 2011) focuses on residential and redeveloped public spaces within the community along I-285.
22 Proposed DARs would be located at Perimeter Center Parkway on I-285 and at Mt. Vernon Highway on SR 400.
23 One action item from the 2020 comprehensive plan update is to leverage connections to express lane access at
24 North Shallowford Road and bus rapid transit (BRT) facilities.

25 Sandy Springs

26 Sandy Springs encompasses the top end of I-285 from approximately I-75 to just east of SR 400. The city extends
27 south of I-285 about 2.5 miles and north of I-285 along the Chattahoochee River bounded by the City of
28 Dunwoody to the east. There are six interchanges located within the city, including one major interchange at I-285
29 and SR 400. Transform 285/400 is the location of the I-285 and SR 400 interchange reconstruction project, which
30 is currently under way. The Transform 285/400 area features a medical complex as well as the MARTA Medical
31 Center Station. The *Sandy Springs Transportation Master Plan* (Sandy Springs, 2021 [adopted in April 2021]) has
32 a 20-year planning horizon and establishes a transportation vision for the city that enables a livable and vibrant
33 community; it seeks to integrate transportation and land use policy while considering the needs of all modes,
34 including driving, biking, walking, transit, and freight transportation.

35 Sandy Springs is located in the middle of ongoing construction for the Transform 285/400 project and within the
36 SR 400 corridor that will add ELs as part of the Preferred Alternative. Located along SR 400 and I-285 are

¹⁴ *City of Dunwoody 2015-2035 Comprehensive Plan*. Adopted December 14, 2020.
<https://www.dunwoodyga.gov/home/showpublisheddocument/1363/637483890708600000>.

1 character areas, including Perimeter Center, urban neighborhoods, and the hospital complex. The nearby DARs
2 include ramps at Mt. Vernon Highway, Johnson Ferry Road, and Perimeter Center Parkway.

3 The Sandy Springs Transportation Master Plan identifies short-range projects connected to the proposed EL
4 project, including the following:

- 5 • *I-285 BRT Feasibility Study*, which is a proposed feasibility study for BRT along I-285. This study
6 includes conceptual station planning and design, service plan, implementation plan, and a roadway
7 project, the I-285 Top End Bridge Enhancements.
- 8 • *I-285 at Roswell Road Station Area Study* is for a proposed station area study to assess connectivity and
9 land use improvements for the planned I-285 BRT station at Roswell Road.
- 10 • *I-285 Top End Bridge Enhancements Project* proposes bicycle and pedestrian facilities and aesthetic
11 enhancements for the Mt. Vernon Highway Bridge over I-285 that will be replaced as part of the Georgia
12 DOT Top End 285 Managed Lanes Project.
- 13 • *I-285/Roswell Road Innovative Interchange Study* is a proposed innovative interchange study of the
14 Roswell Road at I-285 eastbound ramps and I-285 westbound ramps to identify long-term improvement.

15 **DeKalb County**

16 DeKalb County developed its *DeKalb County Comprehensive Plan 2035* (DeKalb County, 2017) and then went
17 through its mandatory 5-year update, which was adopted in May 2021. The 2021 Comprehensive Plan 5-year
18 update includes recommendations and strategies to improve the overall quality of life for its communities. It takes
19 a comprehensive approach to land use, transportation, greenspace, recreation, housing, economic development,
20 infrastructure improvements, natural resources, environmentally sensitive areas (ESA), community facilities and
21 services, and intergovernmental coordination. The “Future Land Use Plan” section of the *DeKalb County*
22 *Comprehensive Plan* designates the land adjacent to I-285 within the area of the Preferred Alternative as Office
23 and Town Center, which is one of the DeKalb County’s primary mixed-use categories. An accompanying Future
24 Development Concept Map identifies the interchange area of I-285 and I-85 as a strategic employment center; the
25 Preferred Alternative connects to the I-285/I-85 interchange. There are no local access points proposed within
26 unincorporated DeKalb County.

27 **Cobb County**

28 Cobb County prepared the *2040 Comprehensive Plan: Vision for a New Era in 2017* (Cobb County Community
29 Development Agency, 2017) to guide its sustained growth. The *2022 Comprehensive Plan and Future Land Use*
30 *Amendments* are part of the 2040 Comprehensive Plan 5-year update that was approved by the Cobb County
31 Board of Commissioners in October 2022. Part of the plan’s vision is to support development while also ensuring
32 “that new development incorporates necessary enhancements on site to improve infrastructure quality.” The plan
33 identifies Cobb County’s rapid growth, indicated by a 63% increase in population since 1990 and projections for
34 another 150,000 residents over the next 25 years. The land use changes identified in the 2022 plan are not located
35 in the vicinity of the proposed ELs.

36 The unincorporated Cobb County land adjacent to the proposed ELs in the Preferred Alternative is designated as
37 the Cumberland Regional Activity Center, with future land uses of *office, retail, and high-density residential*.

1 The Preferred Alternative would consist of two ELs with shoulders in each direction from Henderson Road to
2 South Atlanta Road. The Cumberland Boulevard access point is located within the City of Smyrna in Cobb
3 County. There are no local access points proposed within unincorporated Cobb County.

4 3.1.1.4 Local Planning Interviews

5 Land use change information and predictions were taken mainly from reviewing planning documents and
6 conducting interviews with local planners from the various municipalities along the Preferred Alternative
7 corridor. Planning, public works, and community development staff participated to provide insights about land
8 use trends and planning. The interviews were conducted between December 9, 2019, and December 18, 2019,
9 using the Land Use Questionnaire based on procedures and guidance from the Georgia DOT Office of
10 Environmental Services (OES). The discussion included on-screen displays of maps from the respective
11 comprehensive plans as well as Proposed Project maps including the AOI. The maps assisted with informing the
12 discussion and supported the steps toward identifying areas needing further analysis. **Appendix D, Indirect and**
13 **Cumulative Effects Report**, includes maps showing the Preferred Alternative's AOI, local future land use plans,
14 and copies of the completed questionnaire and interview responses.

15 The primary comments included the following:

- 16 • Most communities would not expect the ELs to induce changes to their respective land use plans.
- 17 • The ELs were seen as compatible in some locations. In other locations adjacent to I-285 and near
18 proposed access points, they would likely spur changes to more compatible future land uses.
- 19 • The final location of local access through DARs would determine whether communities would experience
20 indirect effects through increased traffic or facilitated redevelopment.

21 3.1.2 Environmental Consequences

22 The effects on land use are considered for the No-Build Alternative and Preferred Alternative to identify direct,
23 indirect, and cumulative impacts. Direct land use changes are a result of ROW and easement acquisition. For the
24 purpose of this section, the threshold for direct land use impact is defined as land or easement acquisition
25 converting land from its current land use category to *transportation* use. The areas of interest for environmental
26 consequences as it pertains to indirect effects to land use are briefly described in this section and are further
27 documented in **Appendix D, Indirect and Cumulative Effects Report**.

28 The Preferred Alternative consists of two ELs in each direction, with shoulders. Along I-285, two lanes in each
29 direction are provided from just north of South Atlanta Road to Henderson Road. Along SR 400, one lane in each
30 direction is provided from the Glenridge Connector to the I-285/SR 400 interchange. From the I-285/SR 400
31 Interchange to the North Springs MARTA Station, the Preferred Alternative provides two ELs in each direction.
32 Additionally, the Preferred Alternative would provide network connectivity by connecting the existing I-75
33 Northwest Corridor (NWC) EL and I-85 HOT EL networks and the planned SR 400 Express Lanes Project (PI
34 0001757). Including ramp connections, the Preferred Alternative covers a total of 22.5 miles of EL improvements.

35 Because the lanes are mostly elevated with the Preferred Alternative, the main areas of direct land use impacts
36 occur mainly in the vicinity of DARs and near intersections with local access roads. Locations of the direct-access

ramps on I-285 include Cumberland Parkway, Perimeter Center Parkway, North Shallowford Road, Flowers Road, and New Peachtree Road. On the SR 400 section, DARs are located at Johnson Ferry Road and Mt. Vernon Highway. System-to-system connections with existing EL systems are at I-75 NWC ELs and I-85 HOT lanes.

For the assessment of indirect impacts, information is provided on anticipated land use changes based on interviews conducted with land use planners of the relevant local jurisdictions. The compatibility of the Preferred Alternative with existing and future state, county, and local land use plans was also assessed.

3.1.2.1 Direct Land Use Impacts – Right-of-Way Acquisition

The following subsections describe the land use types that would be converted to *transportation* use by the Preferred Alternative and No-Build Alternative. The subsections also include an assessment of land use compatibility and consistency with the Preferred Alternative based on local land use plans and policies.

Impacts of the No-Build Alternative

The No-Build Alternative assumes that all other projects in the ARC RTP would be constructed. Within the Preferred Alternative corridor, this includes the other MMIP projects that are being implemented independently of the Preferred Alternative. As the MMIP developed and design work progressed, the program was evaluated and refined to advance six improvement projects along I-285. While the Preferred Alternative would benefit from coordination with the other planned MMIP projects, it does not depend on other transportation improvements to provide independent utility (**Chapter 1, Need and Purpose**). Advancing these projects, which were already part of the MMIP, will provide local road improvements earlier, mitigate traffic challenges during the construction of the major EL projects, and provide early operational improvements to the I-285 general purpose (GP) lanes. The following I-285 improvement projects are located within the limits of the Project Area:

- 0000784 Transform 285/400 is currently under way.
- 0001757 SR 400 Express Lanes is scheduled for completion in 2030 (MMIP).
- 0017130 I-285 Westbound Auxiliary Lane Extension from SR 9 to Riverside Drive, including Mt. Vernon. This project is located between Roswell Road and Riverside Drive and is planned for completion in 2024.
- 0017126 I-285/Peachtree Industrial Boulevard Interchange Improvements. This project is planned for completion in 2024.
- 0017125 (AIP) I-285 Westbound Ramp Lanes would be included in the Top End EL East Express Lanes (PI No 0017135) Phase I construction package.

These projects are currently in the preliminary engineering, environmental, and design stages.

Since these programmed projects would be constructed regardless of the Preferred Alternative, they are assumed in the modeling and land use forecasting for both the No-Build and Build alternatives. Thus, the direct effects of the No-Build Alternative would only consider those effects that would occur without building the Preferred Alternative.

1 Regional mobility and congestion would continue to worsen under the No-Build Alternative. No-Build conditions
 2 would increase traffic volumes which would result in associated effects including, but not limited to, the
 3 following: highway air emissions, increased cut-through traffic on adjacent local roadways, congestion, unreliable
 4 trip times, and delays for transit and emergency response vehicles using I-285 in the top end corridor. Because the
 5 No-Build Alternative would not address congestion, it could result in future impacts to adjacent residential and
 6 commercial areas.

7 The No-Build Alternative would not result in the acquisition of additional ROW within the Project Area and no
 8 existing land uses would be directly converted to *transportation* uses. As a result, there would be no
 9 displacements along the I-285 top end corridor.

10 **Impacts of the Preferred Alternative**

11 The existing I-285 ROW ranges from 300 feet to 700 feet. The required ROW for the Preferred Alternative would
 12 range from 300 feet to 750 feet. This range is subject to change as project plans are developed.

13 Direct land use impacts are the result of ROW and easement acquisition and a potential source of direct and
 14 indirect effects to environmental resources along the Preferred Alternative corridor. The Preferred Alternative
 15 would have direct impacts to land use consisting of the conversion of existing land uses to *transportation* use for
 16 areas that would be acquired (e.g., ELs, access points, ramps, local road intersections, and drainage). Direct land
 17 use impacts would primarily consist of impacts to land parcels that are developed. Much of the Preferred
 18 Alternative is located within impervious areas of transportation facilities and the existing I-285 ROW. **Exhibit 3-2**
 19 summarizes land acreages proposed to be converted from existing land use categories to *transportation* use,
 20 including impact of noise barrier walls. These acreages are composed of 137 separate strip takes.

21 [Exhibit 3-2: Proposed Land Use Conversion \(in Acres\)](#)

Land Use Types	Preferred Alternative	Strip Take Range per Land Use Type
Commercial	43.6	<0.01 to 10.5 acres
Residential	31.2	<0.1 to 5.5 acres
Parks/Recreation (Atlanta Silverbacks Soccer Field and Bob Callan/Rottenwood Creek Trail)	0.4	<0.02 to 0.34 acre
Industrial	6.3	6.3 acres
Public/Institutional	7.2	<0.03 to 3.6 acres
Undeveloped	2.3	<0.3 to 1.5 acres
Total	91.0	

22 *Note: Atlanta Silverbacks Soccer Field is a private recreational facility.*

23 Most of the land use direct effects would occur in small areas generally parallel to the existing I-285 ROW, where
 24 several parcels with a total 21 residential buildings and 17 commercial buildings would require full acquisition
 25 with displacement of the primary structure and permanent conversion into *transportation* uses. The direct impacts
 26 to specific resources and facilities are assessed in other technical studies and sections of the Draft EIS.

1 Land use changes directly impacting specific resources and facilities are assessed within other technical studies
2 and in the following sections:

- 3 • **Section 3.2, Community Facilities, Neighborhoods, and Cities**, discusses effects to community
4 resources. A total of 47 community facilities are located within the Project Area and were evaluated to
5 determine potential direct impacts from the Preferred Alternative. ROW acquisition and temporary
6 construction impacts would occur at some facilities in the Project Area. These facilities are further
7 described below and include four schools, five places of worship, two Jewish erubin, and several parks
8 and trails.
- 9 • **Section 3.9, Noise**, describes land uses for which potential noise impacts have been evaluated, including
10 uses where serenity and quiet are essential; such land uses include *single-family* and *multi-family*
11 *residences* and some *institutional* land uses. This section also discusses the feasibility of implementing
12 noise abatement such as noise barriers. For each noise-sensitive land use, the corresponding noise level at
13 which the use of that land is assumed to be impacted is referred to as the Noise Abatement Criteria
14 (NAC). A noise level that is 1 dBA less than the NAC is considered to approach the NAC. Prior to noise
15 abatement, design-year Preferred Alternative noise levels would approach or exceed the NAC at 1,371
16 receivers (representing 8,809 receptors). There would be no impact due to exceeding the substantial
17 increase criterion. A substantial noise level increase is defined as 15 dBA or greater.
- 18 • **Chapter 4, Section 4(f) and Section 6(f) Resources**, evaluates effects to Section 4(f) and Section 6(f)
19 resources. Among prominent undeveloped landforms, the CRNRA is the largest natural resource within
20 the Project Area. Direct effects to the CRNRA are limited to the Chattahoochee River wherein the
21 Proposed Project would construct new bridge piers adjacent to the existing piers that support the Powers
22 Ferry Road and the Interstate North Parkway bridges. Direct effects outside of the CRNRA were
23 identified on undeveloped land consisting primarily of impacts to small patches of urban forest, streams,
24 wetlands, and open water. Within a section of the Chattahoochee River managed by the National Park
25 Service (NPS), the project will include 100 linear feet (LF) (1.377 acres) of permanent fill within the
26 Chattahoochee River (PS 20). PS 20 is identified as an impact freeze area where avoidance is prioritized
27 and proposed impacts will be coordinated with USACE, U.S. Fish and Wildlife Service (USFWS), the
28 NPS, and Georgia Department of Natural Resources (GADNR).
- 29 • **Section 3.10, Water Resources**, illustrates that all water bodies in the Study Area are within the
30 Chattahoochee River Basin. Some unavoidable impacts would occur to small undeveloped areas such as
31 crossings of waters of the United States (WOTUS) summarized as follows:
 - 32 › Impacts to 33 streams totaling 3,396 LF, or 2.765 acre, of permanent fill. The potential impacts of
33 other major transportation projects (Transform 285/400 and other MMIP projects) that would be built
34 under the No-Build Alternative are evaluated under the cumulative impact analysis. There will be
35 impacts to 2,034 LF, or 0.756 acres, of streams that will be mitigated as part of the Transform
36 285/400 and other MMIP projects.
 - 37 › Impact to two open waters (Open Water 51, Open Water 91), totaling 0.08 acre of permanent fill.
 - 38 › Impacts to nine wetlands, totaling 0.7 acre of permanent fill.
 - 39 › Federal Emergency Management Agency (FEMA) coordination would occur during final design to
40 ensure that any floodplain encroachments are consistent with local floodway plans and floodplain

1 management programs. For floodways, a “no rise” certification may be required. These analyses will
2 be completed as design progresses. If substantial increases in flood heights are expected, mitigation
3 alternatives including conveyance and storage improvements will be evaluated. If necessary, a risk
4 assessment or risk analysis will be performed.

5 The impacts of the Preferred Alternative are summarized in the following sections. Because different jurisdictions
6 have different land use categories, the categories listed previously represent a consolidation of several
7 subcategories. The impacts to ROW are further depicted in **Appendix H 1, Direct Land Use Change**.

8 **ROW Acquisition and Displacement Impacts**

9 As discussed, the direct impacts to land use associated with the Preferred Alternative are estimated at 91 acres.
10 These direct impacts comprise necessary ROW acquisitions of parcels with a total of 21 residential buildings and
11 17 commercial buildings. Much of the Preferred Alternative footprint is located within the existing I-285 ROW;
12 therefore, most acquisitions would occur in small areas generally parallel to the existing I-285 ROW; those areas
13 did not warrant full acquisition of the parcels impacted. There is a total of 137 strip takes; the range of strip takes
14 acreage is described in **Exhibit 3-2**. Several parcels would require full acquisition with displacement of the
15 primary structure (21 residential buildings and 17 commercial buildings) and permanent conversion into
16 *transportation* use. Other parcels would be impacted by permanent ROW easement.

17 **Residential Displacements** – ROW acquisition for the Preferred Alternative would displace 21 residential
18 buildings, which include 12 single-family residences, five multi-family buildings with 42 tenant-occupied
19 residences (Dunwoody Village Apartment Homes), one building with 4 owner-occupied residences (Henderson
20 Mill), and three buildings comprising 20 townhomes, for a total of 78 residences.

21 As noted previously, 12 of the 78 residences are single-family residences located adjacent to existing I-285 ROW
22 in the Hardin Ridge, Glen Vernon Estates, Highland Valley, Dunnington, and Greystone North communities.
23 In addition to displacements, the Preferred Alternative would require frontage acquisitions equivalent to 0.50 acre
24 at the Madison Square at Dunwoody Condos, 0.82 acre at the Oak Forest Court neighborhood, 0.14 acre at the
25 Embury Hills neighborhood, and 0.32 acre at the Georgetown neighborhood. These minor strips of land acquisition
26 would occur on the edges of the existing neighborhoods and, therefore, would not result in substantial changes or
27 disruptions to neighborhood cohesion or diminish access to community facilities.

28 **Commercial Displacements** – The Preferred Alternative would also displace 17 commercial buildings with
29 49 business spaces consisting of 44 active businesses and 5 vacant spaces. It is anticipated that two of the
30 buildings will be relocated within the existing properties, and the businesses would not be negatively affected by
31 the relocations. **Exhibit 3-2** presents data on these displacements.

32 As described in **Section 3.3, Environmental Justice and Communities of Concern**, these communities were
33 assessed to determine if EJ displacements would occur. Following are brief descriptions of the impacted communities.

- 34 • Dunwoody Village Apartments was established in 1982 and contains 794 units. The Preferred Alternative
35 would displace 42 housing units in five buildings, totaling approximately 5% of housing units in the
36 neighborhood. Dunwoody Village Apartments is located in the northeast quadrant of North Peachtree
37 Road and I-285 within a 3.7 % low-income and 48.7% minority census block group (BG). Of the
38 42 tenant-occupied units that would be impacted, approximately one unit could have low-income
39 residents and 20 could have minority residents.

- 1 • Madison Square at Dunwoody is a condominium building adjacent to I-285 (within the northeast quadrant
2 of Chamblee Dunwoody Road and I-285) within a low-income and minority Census BG; however,
3 displacement of Madison Square at Dunwoody Condominiums is not expected. Due to site constraints
4 and the terrain, the Preferred Alternative requires 0.50-acre of ROW from Madison Square at Dunwoody
5 in order to maintain EL access points without requiring displacement of the condominium buildings. The
6 minor ROW easements needed by the Preferred Alternative would not result in substantial changes or
7 disruptions to neighborhood cohesion or diminish access to community facilities for any EJ populations
8 living at Madison Square at Dunwoody Condominiums.
- 9 • In the early stages of project design, Monarch Villas, a multi-family complex adjacent to I-285 and
10 identified as supporting EJ populations, was within the boundaries of proposed ROW. As the design
11 proceeded, an effort was made to refine the design to minimize impacts to this EJ population. The original
12 design presented at PIOH showed the displacement of two multi-unit apartment buildings and the
13 removal of parking along the I-285 frontage of a third building. The revised design placed the ELs within
14 the existing ROW and resulted in avoiding impacts to Monarch Villas.
- 15 • Implementation of the Preferred Alternative would displace the Chateau Club condominiums.
16 The Chateau Club comprised three buildings with 20 townhomes, which have all been acquired.
17 These residences are within CT 212.26, BG 2, which is 42% minority, indicating that approximately
18 8 townhomes were minority households. Displacement of the Chateau Club affected minority
19 populations.
- 20 • Per 23 CFR 710.501, a state may undertake early acquisition of ROW “before the completion of the
21 environmental review process for the proposed transportation project for corridor preservation, access
22 management, or other purposes.” Based on the requirements outlined, Georgia DOT has acquired all or
23 portions of 62 parcels via the early acquisition process for the Proposed Project (Project Identification
24 #0001758 Cobb/Fulton/Dekalb Counties) as of October 2022. These early ROW acquisitions included 1
25 single family home with 1 tenant, 20 townhomes, and 1 office building with 26 businesses.
- 26 • The displacements of all 20 Chateau Club condominiums would remove an entire community and disrupt
27 its community cohesion. All 20 Chateau Club condominiums were acquired through the early acquisition
28 process. These townhomes were acquired by Georgia DOT between April 2021 and January 2022.
- 29 • In addition to the early acquisition displacements, the Proposed Project would potentially displace
30 11 single family residences, including 1 tenant-occupied residence, 5 apartment buildings with
31 42 apartments, and 4 owner-occupied condominiums. The Proposed Project would also potentially
32 displace 23 businesses in 16 buildings.
- 33 • In total, early acquisition displacements plus future acquisition displacements associated with the
34 Proposed Project would equal 78 residential displacees and 17 buildings with 49 business displacees (44
35 active businesses and 5 vacant spaces).
- 36 • One of the structures composed of four residences within the Henderson Mill complex would be
37 displaced. Henderson Mill is located in CT 217.0512, BG 1, which is 3.6% low-income and 52.6%
38 minority, indicating that approximately 2 condominiums are minority households. Displacement of the
39 Henderson Mill building could affect minority populations.

- 1 • One single-family residence is in CT 218.08, BG 3, which is 72.8% minority, indicating this displacement
2 would likely affect a minority household. Eight single-family residences are in CT 218.08, BG 1, which is
3 21.2% minority, indicating approximately two residences are minority households.
- 4 • Three minority-owned businesses, EMDEE International (EMDEE International, 2020), Creole•ish
5 (VoyageATL, 2020), and The Spanish Preschool, would be displaced. Besides these three businesses, no
6 other businesses proposed to be displaced are readily identifiable as EJ businesses, and none were
7 identified as points of interest during project planning.

8 Based on the data available, up to 34 of the 78 displaced residences (44%) could be EJ populations. In addition,
9 three of the 44 active business displacements would be EJ displacements. Adverse impacts would, therefore,
10 occur to EJ populations from displacements associated with the Preferred Alternative. However, based on the
11 percentage of minority residents and low-income residents in the Study Area, these are not disproportionate
12 numbers of displacements. Therefore, no disproportionate impacts would occur to EJ populations from ROW
13 acquisition and displacements associated with the Preferred Alternative.

14 The Chateau Club Townhomes were acquired by Georgia DOT between April 2021 and January 2022 under the
15 early ROW acquisition program. Relocation assistance was provided to owners and tenants per the Uniform
16 Relocation Assistance and Property Acquisition Act of 1970 (Uniform Act).

17 In addition to displacements, the Preferred Alternative would require frontage acquisitions equivalent to 0.50 acre
18 at the Madison Square at Dunwoody Condominiums, 0.82 acre at the Oak Forest neighborhood, 0.14 acre at the
19 Embury Hills neighborhood, and 0.32 acre at the Georgetown neighborhood.

20 **Appendix H-2, I-285 Top End Project, A Demographic, Social, Economic, and Community Profile**
21 **Analysis**, provides additional information on these displacements.

22 **Appendix H-2, I-285 Top End Project, A Demographic, Social, Economic, and Community Profile**
23 **Analysis**, also lists commercial properties and provides data on the commercial displacements. Approximately
24 300 employees would be affected by the displacements and the potential lost property tax revenue equivalent to
25 0.26% of the DeKalb County anticipated 2022 real property tax revenue and 0.02% of the Cobb County proposed
26 2022 tax revenue.

27 Community facilities impacted under the *public/institutional* category are listed in the following bullets.
28 These facilities are also evaluated under **Section 3.2, Community Facilities, Neighborhoods, and Cities**:

- 29 • Four schools – Heards Ferry Elementary School, Riverwood International Charter School, The Spanish
30 Preschool, and Tabula Rasa
- 31 • Five places of worship – Sandy Springs Community Church, First Baptist Church Atlanta, Tribe Church,
32 Encounter Church Atlanta and Kairos Church
- 33 • Two Jewish Congregations – Eruv15 Sandy Springs and B’nai Torah Eruv

¹⁵An eruv (plural, erubin) is an urban area enclosed by a wire boundary that symbolically extends the private domain of Jewish households into public areas, permitting activities within it that are normally forbidden in public on the Sabbath.

- 1 • Several parks and trails – Akers Mill (East) Trail, Bob Callan/Rottenwood Creek Trail, the PATH400
2 Trail (under construction), the CRNRA, Mountain-to-River Trail, Interstate North Trail, and Silver Comet
3 Cumberland Connector Trail

4 ROW impacts also include permanent and temporary easements:

- 5 • Temporary construction easements often are required to gain access to underground utilities or to obtain
6 additional space to maneuver construction equipment. All anticipated temporary easements are currently
7 classified as permanent ROW and are reflected in the direct land use impact analyses. No substantial
8 long-term physical changes are anticipated in areas with temporary easements as these areas are returned
9 to their original condition.

10 Relocations, displacements, and compensations are further discussed in **Section 3.2, Community Facilities,**
11 **Neighborhoods, and Cities,** and **Section 3.3, Environmental Justice and Communities of Concerns.**

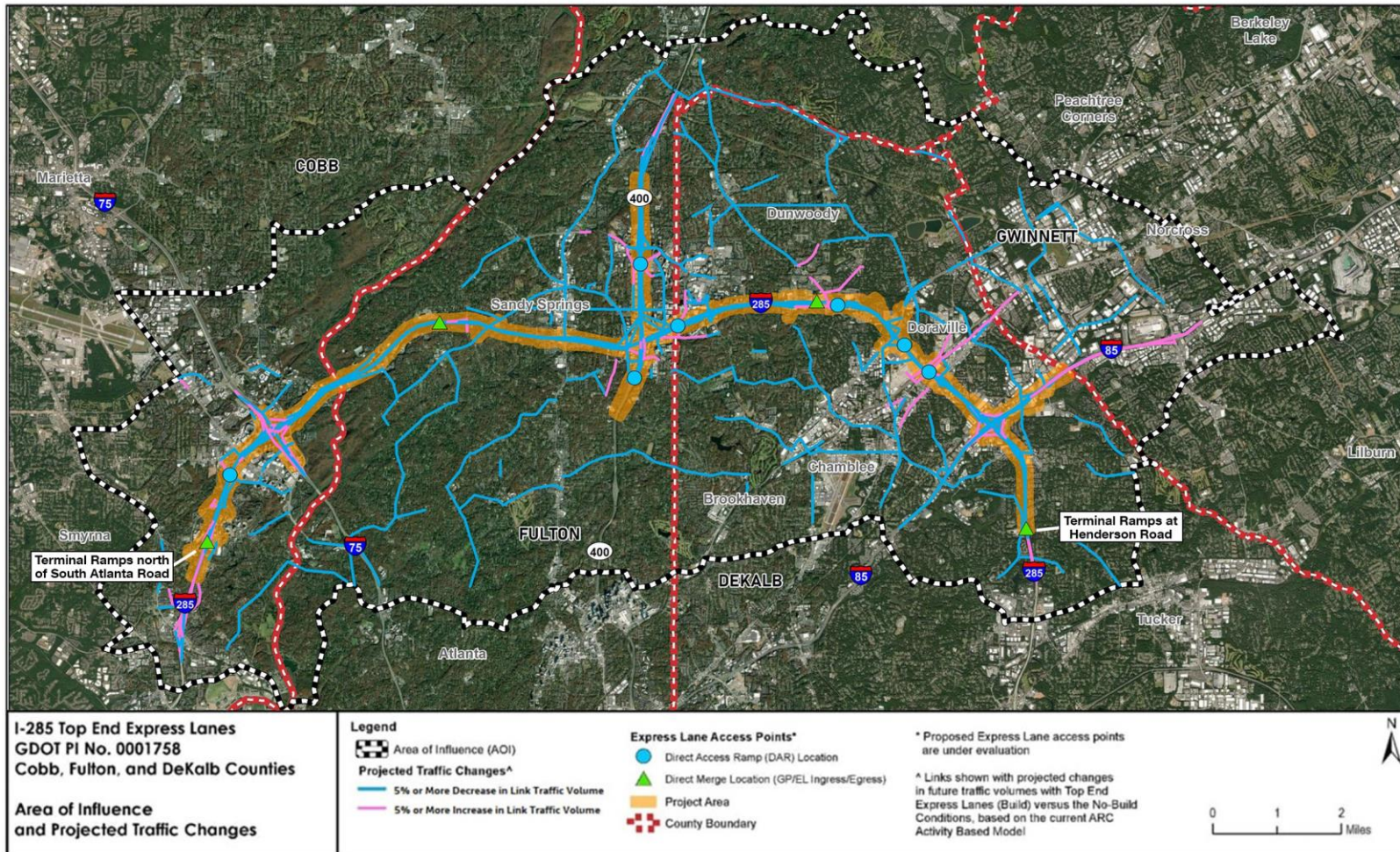
12 **3.1.2.2 Determination of Area of Influence**

13 To establish an initial area to consider the potential for indirect effects of the Preferred Alternative, preliminary
14 changes in traffic volumes were projected using the ARC Activity-Based Model (ABM). The 2050 ABM is the
15 currently available regional model for transportation planning and air quality conformity. However, the
16 2050 model was not available when this analysis began, and the 2040 model was used initially to project traffic
17 volumes. When the 2050 model became available, it yielded similar results for the Preferred Alternative AOI.
18 The 2050 model was run with and without the Preferred Alternative, representing the Preferred Alternative and
19 No-Build Alternative future traffic conditions on the network. The No-Build Alternative assumes construction of
20 all other projects in the approved ARC RTP including adjacent proposed EL projects. Roadway links having at
21 least a 5% decrease or increase in average daily traffic with 2050 Preferred Alternative volumes compared to the
22 2050 No-Build Alternative volumes which are defined as having a meaningful change in traffic. The roadway
23 links that meet the 5% threshold were mapped to create the AOI as a final boundary in the indirect and cumulative
24 effects assessment and the impact analyses that follow.

25 For consistency, the boundary of the AOI was adjusted beyond the roadway links with meaningful changes in
26 traffic volume to the nearest boundary of a traffic analysis zone (TAZ) in the model. The resulting AOI was used
27 as a starting point for coordination with local planners about potential areas of land use changes. This AOI
28 constitutes the Study Area for the assessment of land use impacts.

29 A new model run was completed in 2022 using the latest version of the MMIP v2022 Horizon Year 2050 travel
30 demand model. Based on the output of the model, the AOI boundaries were extended because of the change in
31 project limits to South Atlanta Road and additional roadways with link traffic volume with 5% increase or
32 decrease between the No-Build Alternative and the Build Alternative. The resulting amended AOI, as shown on
33 aerial background in **Exhibit 3-3**, was used to identify additional potential areas of land use changes and the
34 assessment of land use impacts. The areas added to the AOI were relatively small compared to the total AOI area
35 and were not concentrated within any specific area of the project.

1 Exhibit 3-3: Area of Influence and Projected Traffic Volume Changes



2

1 Comprehensive plans and new DRIs within the amended AOI were reviewed. The findings related to potential
2 zoning and land use changes within the amended AOI limits do not warrant a revision to the Indirect and
3 Cumulative Effects analysis. The limits of assessment of indirect and cumulative impacts to resources were not
4 revised because the areas evaluated extend beyond the original AOI limits.

5 3.1.2.3 Indirect Effects Analysis

6 The potential for indirect effects pertaining to land use could include the following:

- 7 • **Induced growth effects:** The result of induced development or induced land use changes, defined as land
8 use development or change pursued by a private, public, or institutional entity that would not occur in the
9 reasonably foreseeable future but for the project being constructed. Given the large scale of the Preferred
10 Alternative and multiple jurisdictions involved, “reasonable and foreseeable” future is by the horizon of
11 each local comprehensive plan, which varies from horizon year 2034 to horizon year 2040.
- 12 • **Facilitated growth effects:** Caused by land use changes, likely to occur with or without the Preferred
13 Alternative and in the reasonably foreseeable future. What makes “facilitated effects” subject to indirect
14 and cumulative impact analysis is that the project would cause the land use changes and effects to occur at
15 an earlier date in the reasonably foreseeable future.
- 16 • **Encroachment alteration effects:** Unique to ecological and socioeconomic resources, encroachment
17 alteration effects are more difficult to isolate and measure than induced growth or facilitated growth
18 effects because they involve complex and dynamic relationships. This is especially true for the ecological
19 variant, as it includes such complex effects as habitat fragmentation and degradation. Examples of
20 socioeconomic encroachment effects could include the loss of community cohesion and quality of life due
21 to the encroachment of project-generated traffic increases or project-induced commercial development.
22 These impacts are further described in **Section 3.11, Ecosystems**, which discusses habitat fragmentation
23 and degradation, as well as **Section 3.2, Community Facilities, Neighborhood and Cities**, and
24 **Section 3.3, Environmental Justice and Communities of Concerns**, which discuss neighborhood and
25 community cohesion. The impact of travel time on quality of life is addressed in **Appendix H-4,**
26 **Transportation Systems Report** (Section 3.3).

27 The initial coordination with local planners and mapping exercises were completed as part of the preliminary
28 indirect and cumulative impact analysis. This analysis defines areas wherein indirect and cumulative effects are
29 anticipated so that these areas can be included in the Assessments of Effects analyses of various environmental
30 disciplines (e.g., historic resources, archaeology, ecological resources). The impact analyses, based on the special
31 studies, are included in subsequent sections of the Draft EIS and the reports are included in the Draft EIS as
32 appendices, listed as follows:

- 33 • **Appendix H-2, I-285 Top End Project, A Demographic, Social, Economic, and Community Profile**
34 **Analysis**
- 35 • **Appendix H-3, Evaluation of Tolling Effects on Low-Income Populations**
- 36 • **Appendix H-4, Transportation Systems Report**
- 37 • **Appendix H-5, Cultural Resources Assessment of Effects Report and Addenda**
- 38 • **Appendix H-6, Visual Impact Assessment**
- 39 • **Appendix H-8, Air Quality Impact Assessment**

- 1 • **Appendix H-9, Noise Impact Assessment**
- 2 • **Appendix H-10, Ecology Resource Survey and Assessment of Effects Report**

3 The findings from these reports and analyses are summarized in the following sections. Findings on indirect and
4 cumulative effects on resources are further described within subsequent sections of this document.

5 **3.1.2.4 Induced or Facilitated Land Use Changes**

6 The Preferred Alternative is located in an urban corridor with local planning documents designating land uses in its
7 vicinity for future redevelopment or compatible zoning. The Preferred Alternative consists primarily of elevated
8 lanes located primarily within the existing ROW of the existing freeway. As a result, the Preferred Alternative
9 would be deemed consistent and compatible with most local land uses and future developments except as identified
10 in some areas of potential induced or facilitated land use changes. While indirect effects may be a consequence of
11 induced growth, the Preferred Alternative would have minimal potential to induce new development of undisturbed
12 land as most of the Project Area is already highly developed including areas anticipated for future growth and
13 redevelopment occurring independently of the Preferred Alternative. The Preferred Alternative has the potential to
14 influence decision-making for development, including development triggered by anticipated growth and
15 redevelopment; it is not expected to precipitate developments on its own because the Study Area is already
16 urbanized. However, if redevelopments were to occur, there would not be major changes in the development pattern
17 currently present within the Study Area; therefore, indirect impacts would not be significant.

18 Most communities in the Study Area would not expect the ELs to induce changes to their respective land use
19 plans. The elevated ELs were seen as compatible in some locations while likely to require changes from existing
20 land uses to more compatible future land uses in several locations adjacent to I-285 and near proposed access
21 points. The location of the local access through DARs was used to determine whether communities would
22 experience indirect effects through increased traffic or facilitated redevelopment of nearby sites.

23 Although there is limited potential to induce new development, several areas were identified by local planners as
24 having potential for facilitated land use changes when comparing future land use plans with the future build
25 conditions, particularly with regard to the proximity of the proposed ELs to parcels that are not currently
26 compatible with the Preferred Alternative. For example, the Preferred Alternative may create a level of increased
27 noise or other effects such as *heavy commercial* developments that are incompatible with the *office* and
28 *residential* land use recommended in the future land use plan. An area for conducting an indirect and cumulative
29 effects analysis is identified at parcels along I-285 at Chamblee and Doraville (refer to **Exhibit 2-15** and
30 **Exhibit 2-16 in Appendix D, Indirect and Cumulative Effects Report**).

- 31 • In the City of Chamblee, the area includes 21 parcels recommended for *residential/office* areas in future
32 land use plan around North Shallowford Road and North Peachtree Road. These parcels would likely
33 change to *commercial/mixed-use* to be compatible with adjacent ELs and similar to existing zoning along
34 the existing I-285.
- 35 • In the City of Doraville, the area also includes 66 parcels zoned as Urban Center or Urban Core.
36 The Urban Center zoning category includes *multi-family residential, commercial, institutional, parks,* and
37 *forest/undeveloped* land uses. The Urban Core zoning category includes *commercial* and *transitional* land
38 uses such as redevelopment projects. The ELs could induce changes in downtown walkable Doraville.

1 Residential parcels planned for Urban Center/Core could shift toward more *commercial/heavy*
2 *commercial* to adapt to ELs.

3 Additional research and assessment of impacts to resources are documented under other sections of this Draft EIS.
4 The areas likely to require some changes to the designated land use are generally developed; however, natural
5 resources may remain in portions of the identified parcels.

6 In addition, analyses were conducted for the traffic conditions at the arterials adjacent to the I-285 corridor as part
7 of the overall traffic studies for the Preferred Alternative. The results of traffic studies and modeling (described in
8 **Appendix H-4, Transportation System Report**) provided a more accurate determination of whether the DARs
9 would induce additional traffic impacts in the adjacent local streets. This report depicts the area of influence of
10 each of the DARs by representing the amount of traffic using the particular access and the roadways this traffic
11 would potentially travel to access the I-285 Top End ELs via each ramp. The findings of the traffic analyses were
12 coordinated with the specialists to confirm the potential for encroachment alteration effects resulting from
13 increased traffic on the existing roadway network adjacent to the access points. Roadway links having at least a
14 5% decrease or increase in Annual Average Daily Traffic with Build Alternative volumes compared to the future
15 No-Build Alternative volumes are defined as having a meaningful change in traffic. The roadway links meeting
16 that threshold were mapped to create an AOI as a preliminary boundary in the Indirect and Cumulative Effects
17 assessment. The resulting AOI was used as a starting point for coordination with local planning officials about
18 potential areas of land use changes. The AOI was revised in 2022 based on a new model run completed using the
19 latest version of the MMIP v2022 Horizon Year 2050 travel demand 3 model.

20 **3.1.2.5 Cumulative Effects Analysis**

21 Conducting the cumulative effects assessment requires a determination of the window of time in years (time or
22 temporal boundaries) and the geographic limits (geographic or spatial boundaries). The review of local plans and
23 interviews provided insights into development trends in past years as well as the planning horizons for the various
24 jurisdictions.

25 The temporal boundaries of the cumulative effects assessment include a baseline of 1969 and a future horizon of
26 2057. 1969 represents the opening of I-285 as the primary catalyst for land development in the project corridor.
27 The future year of 2057 represents the 20-year period after the entire Preferred Alternative is anticipated to open
28 for traffic in 2037. The local comprehensive plans' planning horizons vary with each municipality and generally
29 fall sooner than the Preferred Alternative's 2057 planning horizon. Therefore, to gauge potential impacts beyond
30 the municipalities' planning horizons, the analysis relied upon interviews with the local planners. Construction
31 activities are proposed to occur between 2025 and 2037. Input from interviews with local land use planners
32 included local perspectives on major past development that affected subsequent land use, ranging from the 1960s
33 to recent years. Their input, assisted with the identification of past developments, deemed significant because they
34 contributed to past land use changes within areas that are subject to cumulative impact analyses; the history and
35 timing of these land use changes and their past impacts to resources are evaluated under the cumulative impact
36 analyses. Overall, the landscape has been in a constant state of increased urbanization over the past five decades.

37 The spatial boundaries were determined based on this research on past catalysts to land use changes and coordination
38 with land use planners. The boundaries included the areas of direct effects, the final location of DARs review of
39 traffic conditions, and areas likely to incur induced or facilitated land use changes. The resulting area of potential
40 indirect and cumulative effects was narrowed from the AOI, based on projected traffic changes as described, to the
41 specific areas of potential induced or facilitated land use changes in the Preferred Alternative corridor.

1 Cumulative effects result from the incremental impact of a project when added to other past, present, and reasonably
2 foreseeable future actions. The assessment of cumulative effects considers the combination of direct effects of the
3 Preferred Alternative, indirect effects, and the potential for cumulative effects in the context of how the project
4 setting has changed in the past and how it will continue to change in the reasonably foreseeable future. Cumulative
5 effects can result from all actions within the project setting, regardless of what agency (federal or non-federal) or
6 person undertakes them. The potential impacts of the other projects (Transform 285/400 and other MMIP projects)
7 that would be built under the No-Build Alternative are also considered under the cumulative impact analysis.
8 Cumulative impacts can result from individually minor but collectively significant actions taking place over a
9 period of time.¹⁶ Cumulative impacts to resources are described in the respective resources section of the Draft EIS.

10 Past, present, and reasonably foreseeable future changes, when they take place in the vicinity of Preferred
11 Alternative effects, have the potential to contribute to cumulative effects. Resources within the AOI were assessed
12 for cumulative impacts from these changes and Preferred Alternative incremental impact.

13 **Past Land Use Changes**

14 Past land use changes are defined in this assessment as changes completed since the 1969 baseline year in and
15 around areas of direct and indirect land use changes associated with the Preferred Alternative. Growth has
16 occurred largely in response to the construction of I-285 as Atlanta's new beltway during the 1960s, with
17 completion in 1969 followed closely by SR 400 construction as a north-south connection.

18 Other significant developments that have contributed to the growth of the region are depicted in **Exhibit 2-17** in
19 **Appendix D, Indirect and Cumulative Effects Report**, and include General Motors Plant (1947–2008),
20 Northside Hospital Atlanta (1970), Perimeter Mall/Perimeter Center (1971), and most recently Truist Park (2017).
21 Overall, land use patterns changed from *agricultural* to *residential* and/or *mixed-use development* along the
22 Preferred Alternative corridor. These changes are reflected in the urbanization map from ARC (**Exhibit 2-18**,
23 **Appendix D, Indirect and Cumulative Effects Report**). Local governments and Georgia DOT have undertaken
24 many transportation improvement projects within the I-285 corridor during the past five decades to support the
25 increasing volumes as major employment centers developed. The incremental changes of the primarily linear
26 transportation projects have led to direct land use impacts consisting of incremental decreases in forest edge along
27 ROW and impacts to streams and wetlands. These direct land use impacts have led to impacts to other resources.

28 **Present Land Use Changes**

29 Land use changes are under way along the I-285 corridor independent of the Preferred Alternative. From a review
30 of online development proposals and input from planners interviewed along the I-285 corridor, *mixed-use*,
31 *commercial*, and *residential* developments or redevelopments are either under construction or planned to occur.
32 Many private development projects are in planning, design, or construction phases throughout the Preferred
33 Alternative limits adjacent to I-285. Recent and notable projects under way are listed in **Exhibit 3-4**.

34 The Transform 285/400 project with associated CD lanes is a major construction effort that has included direct
35 effects to land use, WOTUS, and other resources. Its location overlaps with the Preferred Alternative, contributing
36 to cumulative effects in the Project Area. These impacts would occur with or without the construction of the
37 Preferred Alternative.

¹⁶ Council on Environmental Quality, 40 CFR 1508.7 - Cumulative Impacts.

Exhibit 3-4: Developments of Regional Impact, 2010–2023

DRI ID Number	DRI Name	ARC Review Year	City or County	Project Description and Status	Size (Acres)	Type
2183	Metro Green, LLC – Pleasantdale Road	2011	Doraville	Waste handling facility to process and recycle construction and demolition debris at 4351 Pleasantdale Road. Status: Built as indicated.	17	Industrial
2290	Chastain Mixed-Use	2012	Sandy Springs	Mixed-use development at Roswell Road and Weiuca Road. Multi-family residential, office, retail (including grocery store). Status: Built in similar configuration to plans.	21	Mixed-Use
2334	100 Northpark	2013	Sandy Springs	Mixed-use development at Highway 400, Mt. Vernon Highway, and Abernathy Road. 1.5 million ft ² office, 150K ft ² retail, 250 hotel rooms, 500 multi-family units. Status: Unbuilt. New proposal in predevelopment discussions as of July 2022.	14	Mixed-Use
2381	Atlanta Braves Stadium and Mixed-Use	2014	Cobb County	44,676-seat stadium and mixed-use development at northwest, with 600K ft ² office, 500K ft ² retail, 450 hotel rooms, 600 multi-family units. Status: Built in similar configuration to plans as SunTrust Park, now Truist Park.	75	Mixed-Use
2419	The Heights at Sandy Springs	2014	Sandy Springs	Mixed-residential development at Roswell Road and Franklin Road with 173 townhomes and 368 multi-family units. Status: Built in similar configuration to DRI plans as The Townes at Chastain.	17	Residential
2501	Park Center	2015	Dunwoody	An office and commercial development located adjacent to Dunwoody MARTA Station, with 1.65 million ft ² of office and 82K ft ² of commercial/retail space. Status: Built in similar configuration to DRI plans as State Farm office.	13	Office
2494	Abernathy Road/ Glenridge Drive Development	2015	Sandy Springs	Mixed-use development on Abernathy Road at Glenridge Drive with 1,058 residential units, 36,401 ft ² of commercial, and 460,000 ft ² of office. Status: Southern portion built as Mercedes office, northern portion in progress.	76	Mixed-Use
2565	Chamblee Village Park	2016	Chamblee	Proposed 2,546-space surface parking lot for automobile dealer vehicle inventory storage, with 24K ft ² building for office space and maintenance. Status: Unbuilt. Rezoned to become an Amazon distribution center, then resold and under construction as Chamblee International Logistics Park.	24	Industrial

Exhibit 3-4: Developments of Regional Impact, 2010–2023 (continued)

DRI ID Number	DRI Name	ARC Review Year	City or County	Project Description and Status	Size (Acres)	Type
2567	Dunwoody Crown Tower	2016	Dunwoody	Proposed 2.1 million ft ² mixed-use development just north of I-285 and southeast of Dunwoody MARTA Station. The west side has two office towers (24 stories each, 567K ft ² each), a restaurant and conference center (96K ft ²), and a hotel tower (28 stories, up to 500 rooms or 356K ft ²). The east side proposes 380 condo units (416K ft ²) and a hotel (150 rooms, 115K ft ²) in two towers, along with a retail center (3 stories, 44K ft ²). Status: Unbuilt. Developer sold property to another developer. Renovating existing building.	14	Mixed-Use
2552	1117 Perimeter West	2016	Sandy Springs	Mixed-use development at 1117 Perimeter Center West with 1,587 new residential units (1,064 apartments, 523 condominiums); 1.5 million ft ² of new office, 313K ft ² of existing office, 138K ft ² new retail, and 50K ft ² restaurant. Status: Unbuilt, future plans unknown.	13	Mixed-Use
2560	Jim Ellis Parking Structure	2016	Chamblee	Parking facility for car dealership with 1,538 spaces to store inventory before sale. Status: Built as planned.	11	Industrial
2620	Vinings Atlanta	2016	Cobb County	Proposed mixed-use development on Cumberland Parkway at Paces Walk with 300 apartment units, 50 condominiums, 225 senior housing units, 200 assisted living units, a 300-room hotel, 100K ft ² office, and 101K ft ² retail. Status: Under development with lower-density residential plan. Details unknown to ARC.	19	Mixed-Use
2635	Nexus Town Center	2016	Doraville	Proposed mixed-use development on site of former shopping plaza at 5597 Buford Highway, with 350 apartments, 175 senior living units, a 125-room hotel, 60K ft ² retail, 50K ft ² office, and 12K ft ² daycare. Status: Unbuilt. Renamed Lotus Grove and is under construction.	13	Mixed-Use
2590	Peachtree Dunwoody Pavilion	2016	Sandy Springs	Proposed mixed-use development on site of existing office park directly north of Medical Center MARTA Station. 240K ft ² new office, 355 apartment units, 200-room hotel, 30K ft ² retail/restaurant, and 343K ft ² existing office. Status: Partially built. Renamed Altmore and currently under construction.	19	Mixed-Use
2615	Galleria 75	2016	Cobb County	Proposed mixed-use project on Cobb Galleria Parkway at Riverwood Parkway with seven buildings of 450K ft ² office, 45K ft ² retail, and 600 apartments. Status: Unbuilt, future plans unknown.	8	Mixed-Use

Exhibit 3-4: Developments of Regional Impact, 2010–2023 (continued)

DRI ID Number	DRI Name	ARC Review Year	City or County	Project Description and Status	Size (Acres)	Type
2469	Assembly Yards	2016	Doraville	Proposed 7.53 million ft ² mixed-use development on site of former General Motors Doraville factory at Motors Industrial Way and I-285, west of the Doraville MARTA Station with 2.95 million ft ² office, 4,300 residential units, 150K ft ² retail, 130K ft ² film studio. Status: Film studio and some commercial partially built, construction under way to develop entire area and to be completed in 2023.	165	Mixed-Use
2691	The Park at Perimeter Center	2017	Dunwoody	Proposed mixed-use development on site of former office park bounded by Perimeter Center East and Abercorn Avenue with 1,200 residential units, 500K ft ² office, and 12K ft ² retail. Status: Unbuilt, new plan and rezoning application was submitted in June 2022.	19	Mixed-Use
2764	Emerson Center	2017	Cobb County	Proposed mixed-use development on Spring Road west of Cobb Parkway and adjacent to I-285 with 87,500 ft ² office, 11K ft ² retail, 310 apartments and a 200-room hotel. Status: Approved by the City of Smyrna in July 2021, land annexation and zoning variation were approved. Construction is ongoing.	9	Mixed-Use
3113	Lake Hearn	2020	DeKalb	Proposed mixed-use development at 1396/1400 Lake Hearn Drive. Redevelopment of 21-acre former office park with 25K ft ² commercial, 615 multi-family units, and 5 acres of publicly accessible greenspace. DRI Pre-Review meeting held July 27, 2020. DRI review not yet opened as of August 2020. Status: The project is expected to be completed by 2024. Currently the parcels are mixed-use with commercial offices and condominiums.	21	Mixed-Use
3321	White Road Site	2021	Cobb County	Two distribution warehouses on a 41-acre site in unincorporated Cobb County on White Road, approximately 3,000 feet north of Riverside Parkway. Two buildings totaling 569,160 ft ² are proposed.	13	Industrial
3292	Chamblee Park	2021	Chamblee	Mixed-use project in the City of Chamblee on a 30.5-acre site north of the intersection of North Shallowford Road/Parsons Drive and Peachtree Boulevard (SR 141) and west of the interchange with I-285. Includes 37 detached single-family homes, 404 townhomes/condo units, 375 apartment units, and 20,000 ft ² of retail.	30	Mixed Use

Exhibit 3-4: Developments of Regional Impact, 2010–2023 (continued)

DRI ID Number	DRI Name	ARC Review Year	City or County	Project Description and Status	Size (Acres)	Type
3129	Cumberland Mall	2020	Cobb County	Mixed-use and transit-oriented development at a portion of the Cumberland Mall bound by Cobb Parkway (US 41/SR 3) to the north, Akers Mill Road to the east, and Cumberland Boulevard to the south. Includes 445,000 ft ² of office, 312 multi-family residential units, 31,200 ft ² of retail/restaurant, a 9,000 ft ² fire station, and a transit station with 10 bus bays for the planned Connect Cobb Arterial Rapid Transit (ART) project.	14	Mixed Use
3133	Lake Hearn	2020	Brookhaven	Mixed-use project at 1396 and 1400 Lake Hearn Drive with 19,000 ft ² of commercial space, 615 multi-family apartment units, and 5 acres of greenspace.	21	Mixed Use
3169	Circle 75	2020	Cobb County	Mixed-use project at 900-1100 Circle 75 located between I-285 to the southeast and across Circle 75 Parkway from The Battery with 500 multi-family residential units, 500 hotel rooms, and 400,000 ft ² of office space.	4	Mixed Use
3783	Apex Audubon	2022	DeKalb County	Mixed-use project at 3355 Northeast Expressway with 700 residential units and 20,000 ft ² of retail space on approximately 7.24 acres. Status: Built as planned.	7	Mixed Use

1 Source: ARC and other sources

2 ft² = square foot (feet)

Reasonably Foreseeable Future Land Use Changes

Reasonably foreseeable land use changes would occur throughout the I-285 corridor by 2057 independently of the Preferred Alternative. The primary future land uses changes within the Project Area would occur as a result of redevelopment activities and transportation projects because the Project Area has no undeveloped lands available for new developments. These transportation projects include the AIP, MMIP and other projects discussed in **Section 3.1.2.1, Direct Land Use Impacts – Right-of-Way Acquisition**. Based on a review of the comprehensive plans and input from local land use planners, most of the adjacent land uses would continue in their current uses or transition toward compatible future land uses including *mixed-use*, *multi-family*, and *commercial* redevelopment projects during that timeframe. While it is not possible to foresee all private development decisions in future decades, some major development projects have been identified by local governments and planning agencies. Major past, present, and future transportation projects identified in the ARC RTP are listed in **Appendix D, Indirect and Cumulative Effects Report**. Recent and planned DRI are listed in **Exhibit 3-4**.

3.1.3 Summary of Findings

Special studies were conducted to evaluate resources in areas where potential impacts were identified. More detailed discussion of impacts to resources is included in other sections of this chapter. A brief summary of impacts to resources and mitigation proposed to date is provided in **Exhibit 3-5**. Proposed mitigations are presented in **Appendix P, Environmental Mitigation Plan**. Temporary impacts will be covered in **Section 3.13, Construction Impacts**.

Exhibit 3-5: Summary of Impact to Resources and Proposed Mitigations

Resources	Impact Description	Proposed Mitigation
Noise	Noise-sensitive land uses have been identified in accordance with FHWA Activity Categories. Receptors are eligible for noise abatement for all categories except the agricultural, industrial, and manufacturing land use category (Category F).	Noise abatement such as noise barriers will be incorporated into the Preferred Alternative where warranted, feasible, and reasonable.
Economic Impacts	Negative economic consequences include potential lost property tax revenue estimated at 0.26% of the DeKalb County anticipated 2022 real property tax revenue and 0.02% of the Cobb County proposed 2022 tax revenue in addition to localized temporary construction-related impacts around EL access points.	Preferred Alternative would work with local authorities and key economic sectors and development projects to minimize local disruptions.
Socioeconomic and EJ	ROW acquisition and displacements would have adverse effects to EJ communities, but these adverse impacts would not be disproportionate to impacts experienced by non-EJ communities.	No additional avoidance and minimization are required.
Ecosystems: Delineated Stream and Wetlands	Delineated Stream Impacts and Delineated Wetland, Open Water, and Ditch Impacts.	Avoidance and minimization measures required. Compensatory mitigation for impacts not avoided are summarized in Exhibit 3-70, USACE Mitigation for Temporary and Permanent WOTUS Impacts for the Preferred Alternative .

Exhibit 3-5: Summary of Impact to Resources and Proposed Mitigations (continued)

Resources	Impact Description	Proposed Mitigation
Ecosystems: Critical habitat	No Effect on Proposed or Designated Critical Habitat. Suitable habitat is present for one federal species (tricolored bat, expected to be listed as Endangered in 2024), and seven state-protected species. There is potential to impact two protected species.	No additional avoidance and minimization are required. Restriction of construction activities in the vicinity of streams with suitable habitat for the 2 state projected species: Chattahoochee crayfish and bluestripe shiner.
Historical and Archaeological Resources	Historical Resources present: Fair Oaks Manor Historic District, Coldstream Subdivision Historic District, Lake Island Estates Historic District, Comora House, Landmark Executive Center, Lakeside Business Park, Oak Forest Hills Historic District, Georgetown Subdivision Historic District, Gainsborough Historic District, Moon Manor-Harber Valley Historic District, Melvin House, Brown House, and Hardin House. Draft Assessment of Effects document recommends a Finding of No Adverse Effect. As designed, the Preferred Alternative would not have adverse effects on historic resources. The State Historic Preservation Officer (SHPO) concurs with this determination (see Appendix H-5). The State Historic Preservation Officer is housed within the Georgia Historic Preservation Division (HPD).	No additional avoidance and minimization are recommended.

1 **3.1.4 Potential Avoidance, Minimization, and Mitigation Measures**

2 The Preferred Alternative is very complex and large in terms of both the project limits and the public investment;
 3 therefore, Georgia DOT and FHWA are committed to implementing avoidance, minimization, and mitigation
 4 measures for unavoidable impacts as part of the Preferred Alternative. This subsection discusses potential
 5 avoidance, minimization, and/or mitigation measures applicable to the Preferred Alternative based on potential
 6 impacts to land use.

7 To standardize and streamline existing requirements to avoid and minimize impacts to ESA and to assist in timely
 8 project delivery, an “Avoidance and Minimization Measures Meeting” was held in April 2020. As part of the
 9 process, information was collected on ESAs and the type of potential impacts that would result in agency
 10 consultation. Avoidance and minimization measures were considered along with feasible design efforts to avoid
 11 or minimize impacts. If avoidance or minimization was not feasible, justification was provided for unavoidable
 12 impacts and mitigation was discussed. A brief summary of land use related avoidance, minimization, and
 13 mitigation measures implemented to date is provided as follows:

- 14 • The selection of ELs on elevated structures as the Preferred Alternative constitutes the primary avoidance
 15 measure for the Preferred Alternative. Construction of elevated ELs instead of at-grade lanes avoided
 16 most direct impacts to land use and other resources.
- 17 • Minimization measures are ongoing and include the refinement of the Preferred Alternative alignment
 18 and areas of connection to local roads to minimize direct ROW impacts.

- 1 • To minimize potential adverse impacts from ROW acquisition, compensation and relocation assistance is
2 provided to eligible recipients for full and partial property acquisitions, as required by the Uniform Act as
3 defined in **Appendix B, Applicable Laws and Regulations**. Relocation resources are available to all
4 residential and business relocates without discrimination. The Uniform Act directs that when an agency
5 acquires property for a federal-aid project, a process is in place to provide benefits, protection, and
6 payment of just compensation. When a project displaces an individual, family, business, farm, or
7 nonprofit organization, additional services and payments are required. FHWA does not consider
8 compensation to be a mitigation measure.¹⁷
- 9 • Drainage areas within the project limits were evaluated separately according to four major post-
10 construction stormwater management minimum standards, including stormwater runoff quantity/quality
11 control and aquatic resource protection. The new proposed construction areas were considered for water
12 quality treatment, whereas the total drainage areas were considered for stormwater runoff quantity control
13 measures. As required by the General National Pollutant Discharge Elimination System (NPDES)
14 Stormwater Permit¹⁸ issued by Georgia Environmental Protection Division (Division), the Georgia DOT
15 employs best management practices (BMPs) to eliminate or minimize, to the maximum extent
16 practicable. In addition, a downstream hydrologic assessment was performed and determined that
17 stormwater runoff quantity would not increase substantially, and there were no expected associated
18 negative impacts such as water-quality degradation, flooding, overtopping channels and roads, or other
19 adverse effects on downstream properties.

20 Additional avoidance, minimization, and mitigation measures from other resource categories (e.g., water
21 resources) are described in the respective sections related to those resources.

22 3.2 Community Facilities, Neighborhoods, and Cities

23 This section discusses the Preferred Alternative's potential impact on community facilities, neighborhoods, and
24 cities, and any opportunities to minimize or reduce impacts on these resources. The following community
25 facilities provide services that contribute to the general welfare, neighborhood cohesion, and identity of a
26 community:

- 27 • Schools and daycares, hospitals and medical facilities, religious facilities, police and fire stations,
28 libraries, and government offices
- 29 • Parks and recreational facilities
- 30 • Utilities

¹⁷ Federal Highway Administration (FHWA). n.d. *Introduction to Right-of-Way Requirements and the Uniform Act*.
<https://www.fhwa.dot.gov/federal-aidessentials/catmod.cfm?id=6>.

¹⁸ Georgia Department of Transportation (Georgia DOT). 2021. *General NPDES Stormwater Permit No. GAR041000*.
<https://epd.georgia.gov/document/document/gdot-2022-final-permitpdf/download>.

1 Neighborhoods and cities that encompass these community facilities are analyzed within this section based on the
2 following criteria:

- 3 • Population characteristics, including demographics and socioeconomic characteristics
- 4 • Neighborhoods, communities, and community character
- 5 • Housing

6 **Appendix H-2, Demographic, Social, Economic, and Community Profile Analysis**, provides the full analysis
7 of community facilities, neighborhoods, and cities.

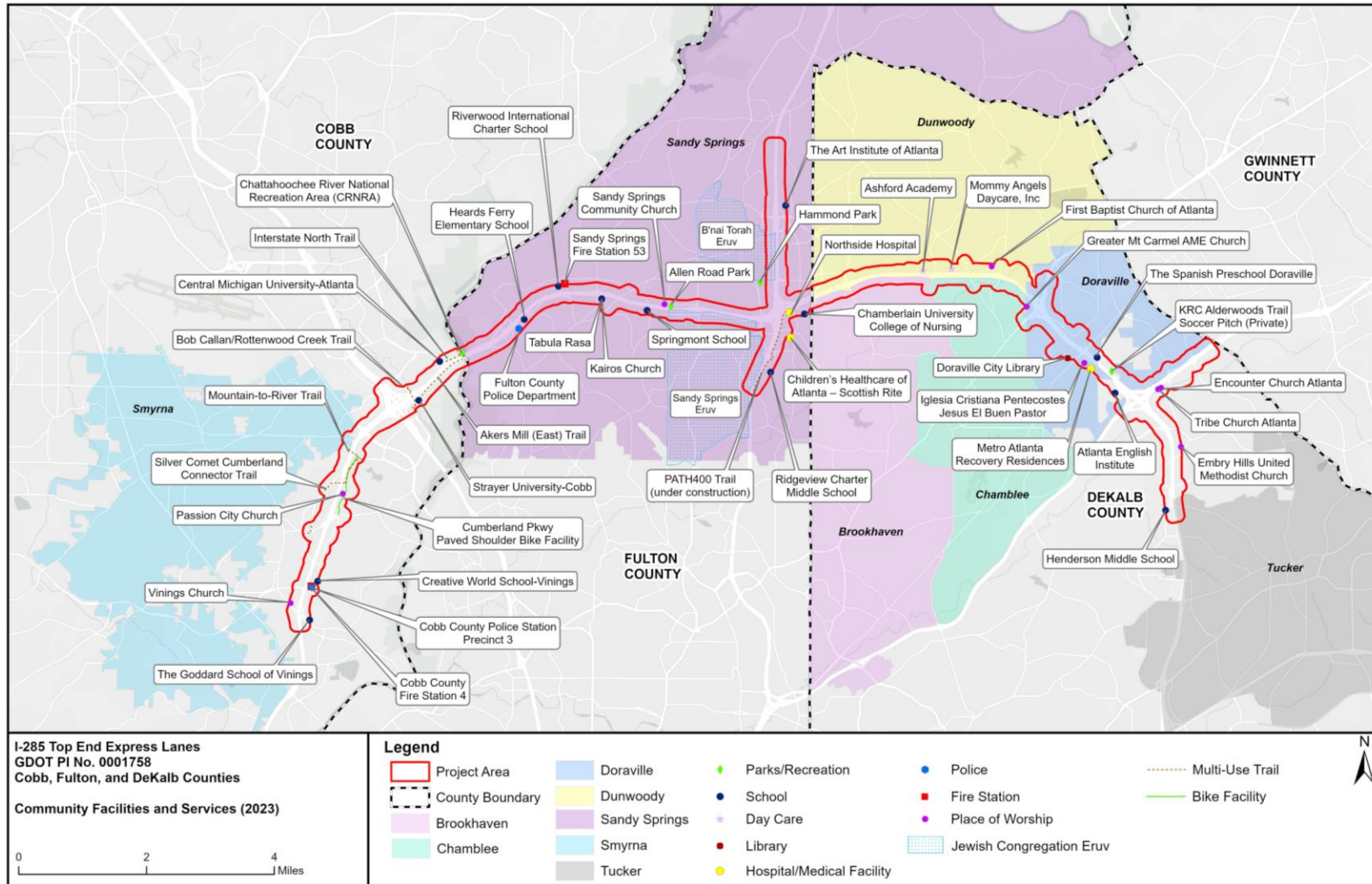
8 **3.2.1 Affected Environment**

9 Existing community facilities, as well as neighborhoods and cities, were determined to be within the Project Area
10 by desktop review of publicly available sources, including municipal websites. Because the Proposed Project is in
11 an urbanized and developed area, many neighborhoods, cities, and community facilities are located within the
12 Project Area that were identified as within 1,000 feet of the existing Georgia DOT ROW.

13 **3.2.1.1 Community Facilities**

14 Within 1,000 feet of the existing Georgia DOT ROW are 47 community facilities, which include 12 schools,
15 four daycare centers, two police stations, two fire stations, two hospitals, one medical facility, 10 places of worship,
16 four parks, seven trails, one library and two Jewish erubin, as shown on **Exhibit 3-6**. These facilities are discussed by
17 county after the exhibit.

1 Exhibit 3-6: Community Facilities and Services within the Project Area



2

1 **Cobb County**

2 In Cobb County are two schools, two daycare facilities, one police station, one fire station, two places of worship,
 3 one park (also in Fulton County), and six trails within the Project Area, as listed in **Exhibit 3-7**. All of these
 4 community facilities are located within unincorporated Cobb County.

5 **Exhibit 3-7: Identified Community Facilities within Cobb County**

Type	Name	Address	City
School	Strayer University—Cobb County Campus	3101 Towercreek Parkway SE	Unincorporated Cobb County
School	Central Michigan University Atlanta	2120 Powers Ferry Road SE	Unincorporated Cobb County
Daycare	Creative World School - Vinings	1975 Cumberland Parkway SE	Unincorporated Cobb County
Daycare	The Goddard School of Vinings	1975 Cumberland Parkway SE2375 Log Cabin Drive SE	Unincorporated Cobb County
Police	Cobb County Police Precinct 3	1901 Cumberland Parkway SE	Unincorporated Cobb County
Fire Station	Cobb County Fire Station 4	1901 Cumberland Parkway SE	Unincorporated Cobb County
Place of Worship	Vinings Church	4479 S. Atlanta Road SE	Unincorporated Cobb County
Place of Worship	Passion City Church	2625 Cumberland Parkway SE	Unincorporated Cobb County
Park	CRNRA	1956 Eugene Gunby Road	Unincorporated Cobb County
Trail	Silver Comet Cumberland Connector Trail	Cumberland Parkway SE and Mt. Wilkinson Parkway SE	Unincorporated Cobb County
Trail	Akers Mill (East) Trail	Akers Mill Road SE and Cumberland Boulevard SE	Unincorporated Cobb County
Trail	Mountain-to-River Trail	Cumberland Boulevard SE	Unincorporated Cobb County
Trail	Interstate North Trail	Interstate North Parkway SE	Unincorporated Cobb County
Trail	Bob Callan/Rottenwood Creek Trail	Cumberland Boulevard SE, Akers Mill Road SE, and Interstate North Parkway	Unincorporated Cobb County
Trail	Cumberland Parkway Paved Shoulder Bike Facility	Cumberland Parkway	Unincorporated Cobb County

6 **Fulton County**

7 Within the Project Area in Fulton County are seven schools, one police station, one fire station, two hospitals,
 8 two places of worship, two areas that Jewish congregations have designated as erubin, three parks (one is also
 9 within Cobb County), and one trail as listed in **Exhibit 3-8**. All of these community facilities are located within
 10 the City of Sandy Springs.

1 **Exhibit 3-8: Identified Community Facilities within Fulton County**

Type	Name	Address	City
School	Heards Ferry Elementary School	6151 Powers Ferry Road	Sandy Springs
School	Riverwood International Charter School	5900 Raider Drive	Sandy Springs
School	The Art Institute of Atlanta	100 Embassy Row	Sandy Springs
School	Chamberlain University College of Nursing	5775 Peachtree Dunwoody Road	Sandy Springs
School	Springmont School	5750 Long Island Drive	Sandy Springs
School	Ridgeview Charter School	5340 S Trimble Road	Sandy Springs
School	Tabula Rasa	5855 Riverside Drive	Sandy Springs
Police	Fulton County Police Department	6201 Powers Ferry Road NW	Sandy Springs
Fire Station	Sandy Springs Fire Station 53	6025 Raider Drive	Sandy Springs
Hospital	Northside Hospital	1000 Johnson Ferry Road	Sandy Springs
Hospital	Children’s Healthcare of Atlanta – Scottish Rite	1001 Johnson Ferry Road NE	Sandy Springs
Place of Worship	Kairos Church	5855 Riverside Drive	Sandy Springs
Place of Worship	Sandy Springs Community Church	5784 Lake Forrest Drive	Sandy Springs
Jewish Congregation	Eruv Sandy Springs	Southwest quadrant of the I-285/SR 400 interchange	Sandy Springs
Jewish Congregation	B’nai Torah Eruv	Roswell Road NE west of SR 400	Sandy Springs
Park	Allen Road Park	5900 Lake Forrest Drive	Sandy Springs
Park	CRNRA	1956 Eugene Gunby Road	Sandy Springs
Park	Hammond Park	705 Hammond Drive	Sandy Springs
Trail	PATH400 Trail (under construction)	Glenridge Connector, Johnson Ferry Road, SR 400, Peachtree Dunwoody Road	Sandy Springs

2 **DeKalb County**

3 Within the Project Area in DeKalb County are two daycare centers, three schools, six places of worship, one
 4 medical facility, one library, and one private recreational facility as listed in **Exhibit 3-9**. These community
 5 facilities are located within the cities of Dunwoody, Doraville, and unincorporated DeKalb County.

Exhibit 3-9: Identified Community Facilities within DeKalb County

Type	Name	Address	City
Daycare	Mommy Angels Daycare, Inc.	1 Dunwoody Park No. 111	Dunwoody
Daycare	Ashford Academy	4472 Chamblee Dunwoody Road	Dunwoody
School	The Spanish Preschool	2861 N. DeKalb	Doraville
School	Atlanta English Institute	4000 DeKalb Technology Parkway	Unincorporated DeKalb County

Exhibit 3-9: Identified Community Facilities within DeKalb County (continued)

Type	Name	Address	City
School	Henderson Middle School	2830 Henderson Mill Road	Unincorporated DeKalb County
Library	Doraville City Library	3748 Central Avenue	Doraville
Medical Facility	Metro Atlanta Recovery Residences	2801 Clearview Place	Doraville
Place of Worship	First Baptist Church Atlanta	4400 N. Peachtree Road	Dunwoody
Place of Worship	Greater Mt Carmel AME Church	4078 Carver Drive	Doraville
Place of Worship	Iglesia Cristiana Pentecostes Jesus el Buen Pastor	2000 Clearview Avenue, Ste 115	Doraville
Place of Worship	Encounter Church Atlanta	4209 Northeast Expressway	Unincorporated DeKalb County
Place of Worship	Tribe Church	4183 Northeast Expressway	Unincorporated DeKalb County
Place of Worship	Embry Hills United Methodist Church	3304 Henderson Mill Road	Unincorporated DeKalb County
Park	KRC Alderwood Trails Soccer Pitch (private)	2941 N. DeKalb Drive	Unincorporated DeKalb County

1 **3.2.1.2 Neighborhoods and Cities**

2 This subsection describes the existing neighborhoods and cities located within and adjacent to the Project Area;
 3 it qualitatively notes the presence or absence of current community cohesion. *Community cohesion* is the degree
 4 to which residents have a sense of belonging to their neighborhood, their level of commitment to the community,
 5 or a strong attachment to neighbors, groups, or institutions, usually as a result of continued association over
 6 time.¹⁹

7 *Neighborhoods* are a subset of the geographic community and are based on personal interactions among residents.
 8 The boundaries of neighborhoods can often be delineated by physical barriers, activity centers, home values,
 9 selected demographic characteristics, and residents’ perceptions. They may be areas that are predominantly
 10 residential in character, or mixed-use areas. A sense of community may or may not exist, depending on factors
 11 such as how long residents have lived in the area, whether friends and family live nearby, and the extent of shared
 12 activities within the neighborhood. Neighborhood cohesion is likely in areas where residents have engaged in the
 13 neighborhood planning process, organized a neighborhood association, and/or have a well-known or long-
 14 established identity with the area.

15 The following sections describe identifiable neighborhoods within cities in the Project Area, organized by county.

16 **Cobb County**

17 Based on the analysis of census data presented in **Appendix H-2, Demographic, Social, Economic, and**
 18 **Community Profile Analysis**, the Project Area within Cobb County is more densely populated than the

¹⁹ California Department of Transportation. 2011. Community Impact Assessment. <https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-4-community-impacts-assessment>.

1 remainder of the County. Approximately 26% of the population in the Cobb County Project Area is under the age
2 of 20, and approximately 56% of the population is between the ages of 20 and 59 years old indicating a strong
3 presence of families. Of the 287,426 occupied residences in the Project Area census tracts, approximately 34% are
4 rental units. These data indicate the Project Area has some stability with a high number of owned units. The types
5 of neighborhoods within the Project Area reflect the census data. Of the 51 neighborhoods, 38 are apartment,
6 condominium, or townhome complexes; 11 are single-family neighborhoods, and 2 are assisted living facilities.
7 The community facilities found within the Cobb County portion of the Project Area include two universities, two
8 daycare facilities, one police station, one fire station, two places of worship, one park (also in Fulton County), and
9 six trails (**Exhibits 3-6 and 3-7**). No grade schools, high schools, or medical facilities are located within the Cobb
10 County portion of the Project Area. One unincorporated neighborhood, Vinings, is located directly east of I-285
11 near the western Project Area limit. The Vinings online magazine indicates the area has historical preservation
12 societies, entertainment, dining, outdoor festivals, parades, and farmers markets²⁰. Community cohesion would
13 likely be strong in this area because census data, rental rates, and neighborhood types in the Project Area indicate
14 a strong likelihood of families. Additionally, activities supported by the Vinings neighborhood demonstrate
15 community engagement. These data indicate residents in the Project Area are likely to engage in their community
16 for a lengthy period of time, establishing bonds and building communal trust. The incorporated part of the Project
17 Area, the City of Smyrna, does not contain any residential neighborhoods. No neighborhoods would be impacted
18 by ROW acquisition associated with the Proposed Project in Cobb County.

19 **Fulton County**

20 The Project Area within Fulton County is entirely within the City of Sandy Springs. Incorporated as a city in
21 2005, Sandy Springs is the sixth largest city in Georgia.²¹ The City of Sandy Springs was developed after I-285
22 was established; therefore, I-285 has always been part of the city's landscape. The City of Sandy Springs has
23 approximately 49,941 occupied housing units with over 50% rented.

24 Based on census tract data, the portion of the Project Area within Fulton County is the least dense and supports
25 the oldest population along the Preferred Alternative corridor. Most of the Project Area supports 5 to 10 people
26 per acre. The median age range in Fulton County is 35.9 years old. Four schools, one college and one art institute
27 are located within the Fulton County portion of the Project Area, as well as two places of worship, two Jewish
28 eruvim, one police station, one fire station, and two hospitals. The Project Area has 89 neighborhoods, and close to
29 half of those (40) are single-family neighborhoods. Of the remaining neighborhoods, 23 are townhome and/or
30 condominium complexes, 25 are apartment complexes, and 1 is an assisted living facility. Eruvim are only found
31 within a Jewish community, allowing observant Jewish people the ability to move more freely on the Sabbath.
32 The presence of the two indicates strong community ties. Additionally, census data, rental rates, and school
33 facilities indicate a stable population of families with school-age children. These data demonstrate the Project
34 Area in Fulton County is likely well established with strong community cohesion based on civic, educational, and
35 religious bonds that typically develop between members of an organization like a school, neighborhood, or
36 religious community. **Exhibit 3-10** lists the neighborhoods that would be impacted by ROW acquisition
37 associated with the Preferred Alternative, as discussed in further detail in **Section 3.2.2, Environmental**
38 **Consequences.**

²⁰ Vinings.com. n.d. About Vinings. Accessed September 19, 2022. <https://www.vinings.com/information/>.

²¹ Sandy Springs Georgia. n.d. City History and Culture. Accessed April 24, 2020. <https://www.sandyspringsga.gov/city-history>.

1 Exhibit 3-10: Neighborhoods Impacted by ROW Acquisition from the Proposed Project in
 2 Fulton County

Name	Address	City	Zip Code	Type
Hardin Ridge	Mount Vernon Highway NW	Sandy Springs	30328	Single-Family
Glen Vernon Estates	Mount Vernon Highway NW	Sandy Springs	30327	Single-Family
Highland Valley	Mount Vernon Highway NW	Sandy Springs	30327	Single-Family

3 **DeKalb County**

4 DeKalb County encompasses the longest section of the Proposed Project and the greatest number of cities
 5 adjacent to the Proposed Project corridor. The population density within the relevant census tracts is higher than
 6 Fulton County but slightly lower than Cobb County, indicating a very urban corridor. According to the census
 7 data presented in **Appendix H-2, Demographic, Social, Economic, and Community Profile Analysis**,
 8 approximately 25% of the population is under the age of 20 and approximately 56% is between 20 and 60 years
 9 old, indicating a strong presence of families and individuals of the age to work.

10 Of the five cities within this portion of the Project Area, Chamblee (established 1908), Doraville
 11 (established 1871), and Tucker (established 1820) were established prior to the construction of I-285. Brookhaven
 12 (established 1976) and Dunwoody (established 2008) were officially established after the construction of I-285
 13 and benefit from the access to the highway system. The City of Dunwoody is known for its close and vibrant
 14 sense of community²² while the City of Doraville has a diverse and affordable housing market with historic
 15 neighborhoods and active civic organizations.²³ The City of Brookhaven includes locally owned restaurants and
 16 shops, a vibrant arts scene, and parks.²⁴ Community cohesion would likely be highest within this portion of the
 17 Project Area due to established families and careers and the numerous small cities that engender civic pride.

18 Within the DeKalb County portion of the Project Area are 77 neighborhoods, including 38 single-family
 19 neighborhoods, 11 townhome complexes, 12 condominium complexes, and 16 apartment complexes.

20 **Exhibit 3-11** lists the neighborhoods that would be impacted by ROW acquisition associated with the Proposed
 21 Project.

²² City of Dunwoody Georgia. n.d. Creating an economic landscape for a better and brighter future. Accessed April 27, 2020.
<https://www.dunwoodyga.gov/community>.

²³ City of Doraville. n.d. About Doraville. Accessed April 24, 2020. https://www.doravillega.us/community/visitors/about_doraville.php.

²⁴ City of Brookhaven Georgia. n.d. City of Brookhaven, Ga. web page. Accessed April 23, 2020.
<https://www.brookhavenga.gov/community/page/city-brookhaven-ga>.

Exhibit 3-11: Neighborhoods Impacted by ROW Acquisition from the Proposed Project in DeKalb County

Name	Address	City	Zip Code	Type
Oak Forest Hills	Ashford Dunwoody Road NE	Brookhaven	30319	Single-Family
Chateau Club	Bethesda Trail	Dunwoody	30338	Townhome Complex
Madison Square at Dunwoody	Cotillion Drive	Dunwoody	30338	Condominium Complex
Dunwoody Village Apartments	2311 Dunwoody Crossing	Dunwoody	30338	Apartment Complex
Embry Hills	Chamblee Tucker Road	Unincorporated DeKalb	30341	Single-Family
Greystone North	Greystone Circle	Unincorporated DeKalb	30341	Single-Family
Henderson Mill Condominiums	Henderson Mill Road	Unincorporated DeKalb	30341	Condominium Complex
Dunnington	Henderson Mill Road	Unincorporated DeKalb	30341	Single-Family

1 **3.2.2 Environmental Consequences**

2 This subsection briefly describes the environmental consequences methodology as it pertains to community
 3 facilities, neighborhoods, and cities. Community facilities, neighborhoods, and cities have been evaluated for the
 4 No-Build Alternative and Preferred Alternative to identify any direct impacts. This subsection discusses the ROW
 5 impacts, air quality impacts and visual impacts on community facilities, neighborhoods, and cities, as well as
 6 accessibility changes resulting from the alternatives. Additionally, this subsection characterizes the direct and
 7 indirect effects on travel patterns, accessibility, and community cohesion due to changes in accessibility. More
 8 detailed discussions of the impacts related to traffic noise impacts, and construction activities are included in
 9 **Section 3.9, Noise** and **Section 3.13, Construction Impacts**.

10 **3.2.2.1 No-Build Alternative**

11 The No-Build Alternative would maintain the existing configuration of I-285 and would not result in changes to
 12 existing conditions of the I-285 corridor. No temporary impacts would occur to the neighborhoods, community
 13 facilities, or the services they provide in the Project Area. No permanent changes to, removals of, or relocations of
 14 existing neighborhoods or community facilities would occur. As such, the No-Build Alternative would not result
 15 in a direct adverse effect on community cohesion or any facilities in the Study Area. However, under the No-
 16 Build Alternative, traffic conditions and accessibility would continue to deteriorate as traffic operations worsen,
 17 which could overtime result in negative effects on communities. Negative effects of the No-Build Alternative
 18 might include poor air quality due to increased traffic congestion, increased congestion on surface streets adjacent
 19 to I-285, and lack of economic development due to traffic congestion and poor travel-time reliability.

20 **3.2.2.2 Preferred Alternative**

21 One preschool, The Spanish Preschool, would be displaced as a part of the Preferred Alternative. As identified in
 22 **Section 3.2.1, Affected Environment**, 47 community facilities are located within the Project Area and were
 23 evaluated to determine potential direct impacts from the Preferred Alternative. **Exhibit 3-12** summarizes

1 community facilities in the Project Area and identifies whether the Preferred Alternative would impact them.
 2 “No” in the table indicates the resource would not be impacted at all; “Yes” indicates permanent impacts to the
 3 resource, and “Yes – Temporary” indicates the facility would only be impacted during construction and full use of
 4 the facility would be restored once construction is completed. Details on these impacts are discussed after
 5 **Exhibit 3-12** and can be found in **Appendix H-2, Demographic, Social, Economic, and Community Profile**
 6 **Analysis.**

7 In general, the Preferred Alternative is not anticipated to alter community facilities or the services they provide,
 8 but ROW acquisition and temporary construction impacts would occur on some facilities in the Project Area.
 9 The Preferred Alternative would construct ELs that would improve regional accessibility and connectivity in the
 10 Metro Atlanta area. The Preferred Alternative would not construct a new roadway through established
 11 neighborhoods; therefore, the Preferred Alternative would not introduce any barriers that would disrupt
 12 community cohesion or interrupt local traffic access and circulation. Although one preschool would be displaced
 13 by the Proposed Project, the building had been vacant for years and the preschool is new to the community
 14 without long-established connections. The preferred alternative would require relocating and reconstructing a
 15 portion of Akers Mill Road Trail, however, impacts associated with the preferred alternative are not considered a
 16 Section 4(f) use of the trail as outlined in the 2012 MOU between Georgia DOT, Cobb County Department of
 17 Transportation (CCDOT), and Cumberland Community Improvement District (CCID) (**Appendix M, Agency**
 18 **Correspondence**). Additionally, parking spaces associated with three churches would be removed under the
 19 Preferred Alternative, please see section below on Impacts on Places of Worship and Jewish Congregations for
 20 more information on the removal of parking spaces. No other substantial changes would occur to existing
 21 community facilities and the ability for the identified community facilities to provide related services to the
 22 public, other than temporary, short-term closures to trails during construction. During the construction process,
 23 the Preferred Alternative is anticipated to require temporary detours and modified access to community facilities.
 24 While not known at this time, the location and duration of these detours would be coordinated with the cities
 25 affected and would be communicated to the public in advance of taking effect.

26 Neighborhoods near the Project Area would experience the most noticeable effects of construction activities, as
 27 discussed in more detail in **Section 3.13, Construction Impacts.**

Exhibit 3-12: Community Facilities within the Project Area

Type	Name	Impact	ROW Acquisition
Cobb County			
School	Strayer University—Cobb County Campus	No	N/A
School	Central Michigan University Atlanta	No	N/A
Daycare	The Goddard School of Vinings	No	N/A
Daycare	Creative World School – Vinings	No	N/A
Police	Cobb County Police Precinct 3	No	N/A
Fire Station	Cobb County Fire Station 4	No	N/A
Park	CRNRA	Yes	0.03 acre
Place of Worship	Vinings Church	No	N/A
Place of Worship	Passion City Church	No	N/A
Trail	Mountain-to-River Trail	Yes – Temporary	N/A
Trail	Interstate North Trail	Yes – Temporary	N/A

Exhibit 3-12: Community Facilities within the Project Area (continued)

Trail	Bob Callan/Rottenwood Creek Trail	Yes	0.03 acre
Trail	Cumberland Parkway Paved Shoulder Bike Facility	No	N/A
Fulton County			N/A
School	Heards Ferry Elementary School	Yes	1.37 acres
School	Riverwood International Charter School	Yes	1.06 acres
School	Springmont School	No	N/A
School	The Art Institute of Atlanta	No	N/A
School	Ridgeview Charter Middle School	No	N/A
School	Chamberlain University College of Nursing	No	N/A
School	Tabula Rasa	Yes	0.25 acre (same parcel as Kairos Church)
Police	Fulton County Police Department	No	N/A
Fire Station	Sandy Springs Fire Station 53	No	N/A
Park	Allen Road Park	No	N/A
Park	CRNRA	Yes	0.03 acre permanent 0.4 acre temporary
Hospital	Northside Hospital	No	N/A
Hospital	Children's Healthcare of Atlanta – Scottish Rite	No	N/A
Place of Worship	Kairos Church	Yes	0.25 acre (same parcel as Tabula Rasa)
Place of Worship	Sandy Springs Community Church	Yes	0.36 acre
Jewish Congregation	Eruv Sandy Springs	Yes – Temporary	N/A
Jewish Congregation	B'nai Torah Eruv	Yes – Temporary	N/A
Trail	PATH400 Trail (under construction)	Yes	N/A
DeKalb County			
Daycare	Mommy Angels Daycare Inc.	No	N/A
Daycare	Ashford Academy	No	N/A
School	The Spanish Preschool	Yes	1.2 acres
School	Atlanta English Institute	No	N/A
School	Henderson Middle School	No	N/A
Medical Facility	Metro Atlanta Recovery Residences	No	N/A
Park	KRC Alderwoods Trail Soccer Pitch (private)	No	N/A
Place of Worship	First Baptist Church Atlanta	Yes	1.3 acres
Place of Worship	Greater Mt Carmel AME Church	No	N/A
Place of Worship	Iglesia Cristiana Pentecostes Jesus el Buen Pa	No	N/A
Place of Worship	Encounter Church Atlanta	Yes	0.03 acre
Place of Worship	Tribe Church	Yes	0.05 acre
Place of Worship	Embry Hills United Methodist Church	No	N/A
Library	Doraville City Library	No	N/A

1 Impacts on Schools and Daycare Centers

2 The Preferred Alternative would require displacement of one preschool, and additional ROW from three schools
3 in the City of Sandy Springs: 1.37 acres at Heards Ferry Elementary School located on Powers Ferry Road
4 adjacent to eastbound I-285, 1.06 acres at Riverwood International Charter High School located on Raider Drive
5 along westbound I-285, and 0.25 acre at Tabula Rasa located on Riverside Drive on the same parcel as Kairos
6 Church. The additional ROW would be required along the existing buffer with I-285 at these properties.

7 The preschool to be displaced, The Spanish Preschool, is a newly opened location of a preschool in west Atlanta,
8 outside the Study Area. Georgia DOT is working with the property owner through early coordination to provide
9 the time and assistance necessary to successfully relocate the displaced business to comparable accommodations.

10 The Preferred Alternative would avoid any direct effects to Heards Ferry Elementary School, Riverwood
11 International Charter High School, and Tabula Rasa buildings and structures. No structures are located within the
12 proposed ROW at these locations. The existing I-285 main lanes are approximately 130 feet away from Heards
13 Ferry Elementary School, and the proposed elevated ELs would be constructed approximately 80 feet away from
14 the campus buildings within the existing Georgia DOT ROW.

15 During coordination with FCS in early 2020²⁵, FCS expressed concerns with the nearness of the Preferred
16 Alternative to Heards Ferry, particularly to a play area for special needs classes, a playground, and a large field
17 occasionally leased to the City of Sandy Springs for events. Concerns from FCS for Heards Ferry included noise,
18 constructability, safety, and construction impacts (for example, noise, dust). Georgia DOT is committed to not
19 using the school property for construction personnel, vehicles, and equipment. During construction of the
20 Preferred Alternative, BMPs and procedures outlined by Georgia DOT for the Developer would be adhered to in
21 order to address the construction impacts to Heards Ferry. Noise mitigation efforts are under evaluation at the
22 school and a transportation plan detailing the timing of any lane closures and detours would be made available to
23 FCS and the school during construction (Environmental Commitments Table No. E-23).

24 FCS also expressed concerns with potential noise, safety, and construction traffic issues related to the football field
25 and bleachers at Riverwood International Charter School. However, after receiving a thorough explanation of the
26 proposed design at the school, all concerns related to safety were removed. Noise mitigation efforts are under
27 evaluation at the school and a transportation plan detailing the timing of any lane closures and detours would be
28 made available to FCS and the school during construction (Environmental Commitments Table No. E-23).

29 No impacts to the function of the schools or the school districts are anticipated. During and after construction of
30 the Preferred Alternative, bus routes, school activities, and all district-required events would continue as they
31 currently do.

32 As discussed in detail in **Section 3.8, Air Quality**, Mobile Source Air Toxics (MSAT) emissions in the Study
33 Area will be substantially lower in the future than they are today, regardless of the alternative chosen. The
34 Preferred Alternative is consistent with the State Implementation Plan (SIP) for the attainment of clean air quality
35 in Georgia and complies with both state and federal air quality standards. As such, no air quality impacts on
36 schools and daycare centers adjacent to the Preferred Alternative are anticipated.

²⁵ Coordination documents, including meeting minutes, can be found in Georgia DOT's I-285 Top End project file.

1 A comparison of greenhouse gas (GHG) emissions between the existing condition, No-Build Alternative and the
2 Preferred Alternative was conducted and is also included in **Appendix H-8, Air Quality Impact Assessment**.
3 Based on the anticipated vehicle miles traveled (VMT), the Preferred Alternative would increase emissions by
4 16% in 2037 and 36% in 2057 over existing conditions. However, compared to the No-Build Alternative
5 emissions in the same years, the increase would only be 5% and 7%, respectively. The Proposed Project GHG
6 emissions would add to the cumulative impact of GHG in the atmosphere.

7 Temporary impacts such as lane closures and detours could occur during construction. A public information and
8 notification program would advise area residents of traffic detours to minimize construction impacts and to
9 maintain access and connectivity to schools. Coordination with FCS officials would occur to identify specific
10 concerns to address during construction (Environmental Commitments Table No. E-23). A more detailed
11 discussion of the impacts related to construction activities is included in **Section 3.13, Construction Impacts**.

12 **Impacts on Hospitals, Medical Facilities, and Emergency Response**

13 Construction of the Preferred Alternative would require both long-term and short-term lane and shoulder closures.
14 In areas where proposed ramps tie into or cross existing ramps, temporary closures would be needed to tie into the
15 proposed ramps. Similarly, construction or modifications of bridges might require partial closures of existing
16 bridges. Georgia DOT would establish the specific types, locations, and schedule of closures in coordination with
17 emergency services (including those servicing hospitals along the Project Area) during the final design phase as a
18 part of the Transportation Management Plan (TMP). A more detailed discussion of the impacts related to
19 construction activities is included in **Section 3.13, Construction Impacts**.

20 Once construction is complete, the Preferred Alternative is anticipated to benefit and improve emergency
21 response times for local emergency service providers. This is due to an anticipated reduction in congestion on GP
22 lanes, as well as more route options for emergency medical services vehicles to access an emergency via the ELs.

23 **Impacts on Places of Worship and Jewish Congregations**

24 The Preferred Alternative would require ROW immediately adjacent to four church properties and one
25 commercial area that hosts a church within the Project Area while avoiding any direct effects to the respective
26 buildings: 0.25 acre at Kairos Church, 0.36 acre at Sandy Springs Community Church, 1.30 acres at First Baptist
27 Church Atlanta, 0.03 acre at Encounter Church, and 0.05 acre at Tribe Church of Atlanta. These ROW impacts
28 may permanently impact 44 parking spaces and close 3 driveways during construction at the First Baptist Church
29 Atlanta. These impacts are not anticipated to substantially impact operations at the church since other access
30 points to the church and 2,701 total parking spots would be unimpacted during construction, and the three
31 driveways that would be closed during construction would be reopened to provide access following completion of
32 construction (Environmental Commitments Table No. E-66). In addition, the Preferred Alternative is anticipated to
33 impact 21 parking spaces out of the 52 parking spaces available at the commercial facility that hosts Tribe
34 Church. These spaces would be repainted at an angle and 2 spaces would be lost, resulting in 19 front parking
35 spaces following project construction. These parking spaces are shared with other facilities in the commercial
36 building. Finally, 13 out of 96 parking spaces would be impacted in front of Encounter Church. Accounting for
37 the loss of parking is a component of the compensation that is offered as part of the ROW transaction.
38 The compensation for lost parking is typically a cost determined in the Parking Impact Mitigation Plan and would
39 allow the property owner to restore impacted parking. **Exhibit 3-13** presents these impacts.

Exhibit 3-13: Permanent Impacts to Places of Worship

Facility Name	Facility Address	ROW Acquisition	Additional Impact
Kairos Church	5855 Riverside Drive	0.25 acre	None
Sandy Springs Community Church	5784 Lake Forrest Drive	0.36 acre	None
First Baptist Church Atlanta	4400 N. Peachtree Road	1.30 acres	44 parking spaces lost (1.6% of parking) 3 driveways closed during construction
Encounter Church Atlanta	4209 Northeast Expressway	0.03 acre	13 parking spaces lost (14% of parking)
Tribe Church Atlanta	4183 Northeast Expressway	0.05 acre	2 parking spaces lost (4% of parking)

1 Following Georgia DOT procedures, coordination with leadership at each church would be ongoing to identify
 2 any unavoidable land acquisition, plans for the current site and any long-term development, and cost-to-cure plans
 3 to address unavoidable impacts. Access to these places of worship would be maintained during construction since
 4 driveway access points would not be impacted, apart from First Baptist Church Atlanta. The Preferred Alternative
 5 would not result in substantial changes or disruptions to operations at these places of worship.

6 Construction activities would occur adjacent to two areas that Jewish congregations have designated as eruv:

- 7 • Eruv Sandy Springs sits in the southwest quadrant of I-285/SR 400 interchange
- 8 • The B’nai Torah Eruv is located west of SR 400 and is roughly bounded to the west by Roswell Road NE
 9 and is maintained by congregants of B’nai Torah

10 During construction, the Preferred Alternative might impact facilities (for example, existing noise barriers, fences)
 11 that serve as the boundary of an eruv. To avoid inconveniences to adherents, Georgia DOT would coordinate with
 12 local Jewish congregations with established eruv as part of a Public Involvement and Communications Plan as
 13 indicated by the Environmental Commitments Table No. E-40 and found in **Appendix P, Environmental**
 14 **Mitigation Plan**. Therefore, no permanent or long-term impacts on these two eruv are anticipated.

15 **Impacts on Parks**

16 The Preferred Alternative would require the construction of two bridges for ELs along I285 over the
 17 Chattahoochee River. A full analysis of impacts on the CRNRA is provided in **Chapter 4, Section 4(f) and**
 18 **Section 6(f) Resources**. Based on coordination with the CRNRA, the Chattahoochee River at the I285 crossing is
 19 located within the park’s jurisdictional waters; however, the bridges are located within the Georgia DOT ROW.
 20 Under the Preferred Alternative, the proposed ELs would be conveyed by bridges in between the existing I285
 21 parallel bridges on Interstate North Parkway and Powers Ferry Road.

22 Construction of the proposed EL bridges would require the installation of temporary jetties in the Chattahoochee
 23 River, which would cause some temporary partial obstruction; however, based on coordination with the NPS, the
 24 main river channel would always be kept open. Notifications and signage directed at both land and water users
 25 would inform watercraft operators of upcoming construction work and direct safe navigation around construction.

1 Impacts on Trails

2 The Preferred Alternative would require potential encroachment of up to 863 LF on the Akers Mill Road (East)
3 Trail. This would result in closure of a portion of the trail while it is reconstructed. Further short-term closures of
4 portions of the trail might be required to ensure public safety during construction activities. Georgia DOT would
5 coordinate with Cobb County to provide advance notice of closures to the public.

6 The Preferred Alternative would require 0.03 acre of ROW acquisition and temporary short-duration (overnight)
7 closures of the Bob Callan/Rottenwood Creek Trail under I-285 during construction of the ELs above the trail.
8 These closures are to ensure the safety of trail users when active construction of the ELs is occurring over the
9 localized trail areas. Georgia DOT would coordinate with Cobb County to provide advance notice of closures to
10 the public.

11 The Preferred Alternative would require construction of ELs under the Silver Comet Cumberland Connector
12 Trail. The segment of trail over I-285 consists of a caged bridge and a paved sidewalk along Cumberland Parkway
13 SE. Construction may require temporary, short-duration (overnight) closures of the trail in the area during
14 construction. No ROW or easement is required within the trail boundary itself. Georgia DOT would coordinate
15 with Cobb County to provide advance notice of closures to the public.

16 The Preferred Alternative would require construction of ELs over the Mountain-to-River Trail. The Preferred
17 Alternative may require temporary, short-duration (overnight) closures of the trail over I-285 during construction.
18 The purpose of this closure is to ensure the safety of trail users when active construction of the ELs is occurring
19 over the localized trail areas. The segment of trail over I-285 currently consists of a caged bridge. No ROW or
20 easement is required within the trail boundary itself. Georgia DOT would coordinate with Cobb County to
21 provide advance notice of closures to the public.

22 The Preferred Alternative would not require ROW nor result in direct impact to the Interstate North Trail.
23 Construction may require temporary, short-duration (overnight) closures of the trail in the area during
24 construction. The trail currently consists of a paved sidewalk along Interstate North Parkway NE. No ROW or
25 easement is required within the trail boundary itself. Georgia DOT would coordinate with Cobb County to
26 provide advance notice of closures to the public.

27 The Preferred Alternative would require relocating a portion (1,600 LF) of the PATH400 Trail (under
28 construction) approximately 25 to 50 feet east of its location. The relocated segment of the trail would tie in south
29 of Johnson Ferry Road where the trail runs parallel to I-285. In addition, the Preferred Alternative is anticipated to
30 result in temporary closures of the PATH400 Trail (under construction) for the construction of the ELs along
31 SR 400 from the Glenridge Connector to the I-285 interchange and above I-285 at Peachtree Dunwoody Road.
32 Georgia DOT would coordinate with the City of Sandy Springs to provide advance notice of closures to the public
33 and their anticipated durations.

34 In general, construction effects on trails and other recreational facilities within the Study Area could include
35 temporarily elevated levels of noise, dust, and pollutant levels. A more detailed discussion of the impacts related
36 to construction activities on trails is included in **Section 3.13, Construction Impacts**, and **Chapter 4,**
37 **Section 4(f) and Section 6(f) Resources**.

1 **Impacts on Neighborhoods**

2 Due to the presence of community resources along both sides of existing I-285 infrastructure, the Preferred
 3 Alternative would have unavoidable impacts. Limited land is available for development because the Preferred
 4 Alternative is within densely developed urban areas. The Preferred Alternative implemented elements, including
 5 the use of cantilevered lanes, to reduce the amount of required ROW. Displacements by the Preferred Alternative
 6 would consist of 12 single-family homes, 24 condominiums/townhomes, 42 apartments, and 17
 7 commercial/industrial structures. **Exhibit 3-14** presents the displaced residential and commercial/industrial
 8 structures and their associated neighborhoods and cities.

Exhibit 3-14: Residential and Commercial Displacements

Displacement	Type of Displacement (Residential/Commercial)	Number of Displaced Residences or Businesses	Neighborhood
Unincorporated Cobb County			
J E Dunn Construction	Commercial	1 business	N/A
Sandy Springs			
Single-Family Structure	Residential	1 residence	Hardin Ridge
Single-Family Structure	Residential	1 residence	Highland Valley
Single-Family Structure	Residential	1 residence	Glen Vernon Estates
Dunwoody			
Georgia Power	Commercial	1 structure*	N/A
Townhome Structures	Residential	20 residences	Chateau Club
Shared Space	Commercial	26 businesses	N/A
Apartment Structures	Residential	42 residences	Dunwoody Apartment Homes
Chamblee			
Texaco	Commercial	1 business	N/A
Doraville			
Office Structures on Flowers Road	Commercial	12 businesses	N/A
Royel	Commercial	1 business	N/A
Warehouse	Commercial	2 businesses	N/A
Doraville Maintenance Department	Civic	1 business	N/A
Underfoot Design	Commercial	1 business	N/A
The Spanish Preschool	Commercial	1 business	N/A
Janilink Janitorial Supply	Commercial	1 business	N/A
Tucker Castleberry Printing	Commercial	1 business	N/A
EMDEE International	Commercial	1 business	N/A
Unincorporated DeKalb County			
Single-Family Structure	Residential	1 residence	Dunnington
Single-Family Structures	Residential	8 residences	Greystone North
Condominium Structure	Residential	4 residences	Henderson Mill
Atlanta Noland Company	Commercial	1 structure*	N/A

9 * These structures are anticipated to be rebuilt within the existing parcel.

1 Dunwoody Village Apartments, established in 1982, is an apartment community comprising 794 units in
2 buildings of approximately 6 to 8 units each. The apartment complex includes several amenities, such as a pool,
3 tennis court, laundry facilities, fitness center, and gated entrance. The Preferred Alternative would displace
4 approximately 42 housing units in 5 buildings adjacent to the existing I-285 ROW. The Preferred Alternative
5 would not affect any of the amenities.

6 Chateau Club was a townhome community developed in 2001 with 20 units in 3 buildings. The Preferred
7 Alternative would displace all 20 owner-occupied housing units. These townhomes were acquired by Georgia
8 DOT between April 2021 and January 2022. Per 23 CFR 710.501, a state may undertake early acquisition of
9 ROW “before the completion of the environmental review process for the proposed transportation project for
10 corridor preservation, access management, or other purposes.” Relocation assistance was provided to owners and
11 tenants per the Uniform Act.

12 Henderson Mill Condominiums is a condominium community developed in 1968 with 96 owner-occupied units.
13 The Preferred Alternative would displace four owner-occupied housing units within one building. These housing
14 units are each approximately 1,770 ft². Based on Zillow.com listings from May 2022, 12 condominiums of
15 comparable size were for sale within 2.5 miles of the Henderson Mill Condominiums, and more than 20 of
16 various sizes were within a 4-mile radius, so relocations likely would be able to occur within unincorporated
17 DeKalb County.

18 Based on the analysis presented in **Appendix H-2, Demographic, Social, Economic, and Community Profile**,
19 community cohesion was noted to be strong within the Project Area. The displacement of three single-family
20 homes within three separate neighborhoods would not affect overall community cohesion in Sandy Springs.
21 The dwellings are located directly adjacent to I-285 at three separate corners of the intersection with Mount
22 Vernon Highway, and all are large lot homes with trees acting as a barrier between the homes and adjacent
23 neighbors. Long-term impacts on community cohesion could occur with the removal of single-family homes from
24 the Greystone North neighborhood. Greystone North was constructed in the late 1990s and comprises 77 homes
25 on less than 0.2-acre lots. Eight residences (10% of the neighborhood) adjacent to the I-285 corridor would be
26 displaced, potentially affecting the existing community cohesion as neighbors adjust to the loss of these
27 residences and the highway encroachment.

28 The loss of five apartment buildings is not likely to affect community cohesion within the Dunwoody Village
29 Apartments, considering the buildings represent 5% of the residences in the community. Apartment residents
30 often stay in apartments for a shorter period than homeowners stay in houses and may not create strong bonds
31 with neighbors or the larger community. Additionally, these buildings are at the edge of the community and not
32 close to community amenities where residents would gather regularly.

33 The displacement of all 20 Chateau Club Townhomes in Dunwoody would remove an entire community and
34 disrupt their community cohesion. As noted in **Section 3.3, Environmental Justice and Communities of**
35 **Concern**, the Chateau Club is primarily a minority community and the loss of this community would be an
36 adverse impact on EJ populations. Of the 77 neighborhoods in the DeKalb County Project Area, there are 10 other
37 townhome complexes where residents could potentially move. (These displacements have already occurred).

38 Concern over decreasing property values is frequently cited in regard to highway reconstruction projects. Home
39 resale values are affected by numerous variables, including location, home condition, mortgage rates, and the

1 economy. The Preferred Alternative would add ELs to an existing highway and not change the function or
2 designated use of the corridor. To determine a net change to property values due to the ROW impacts and ELs
3 would be difficult because the project includes noise walls, visual impacts, and changes in access that may
4 increase or decrease property values. While there has been some research on this topic, it is difficult to rely on the
5 results of a study to draw meaningful conclusions given the variables. As part of any large transportation project,
6 Georgia DOT evaluates the impacts that may lead to diminishing property values and mitigates for specific
7 impacts to the extent practicable and allowed by law, such as noise and visual impacts, to minimize the impacts
8 on property values.

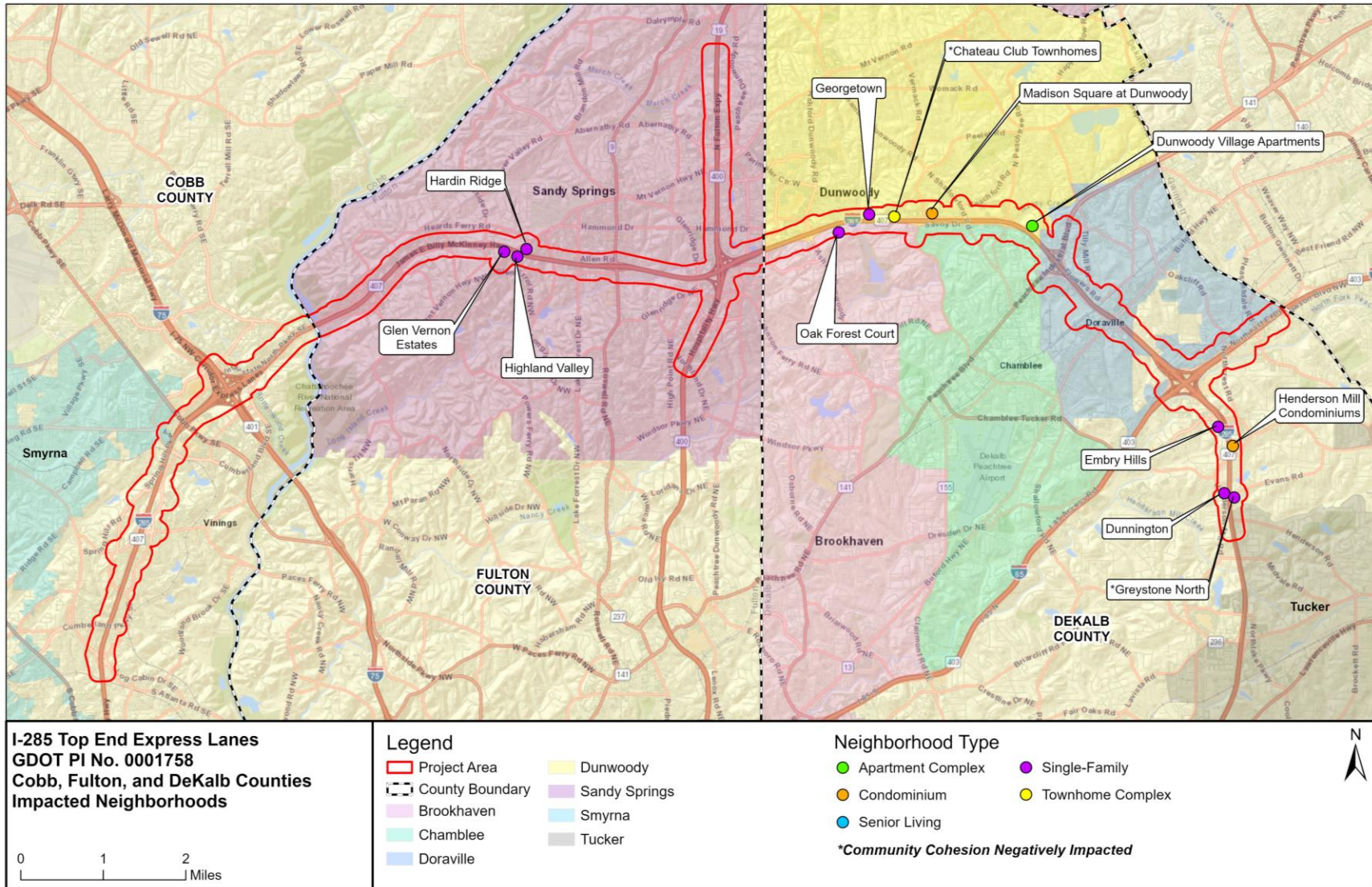
9 In addition to displacements, the Preferred Alternative would require frontage acquisitions equivalent to 0.50 acre
10 at the Madison Square at Dunwoody Condominiums, 0.82 acre at the Oak Forest neighborhood, 0.14 acre at the
11 Embury Hills neighborhood, and 0.32 acre at the Georgetown neighborhood. These minor ROW acquisitions
12 would occur on the edges of the existing neighborhoods and would not result in substantial changes or disruptions
13 to neighborhood cohesion or diminish access to community facilities. Temporary indirect effects on community
14 cohesion could occur due to traffic shifts during the construction period depending on established detour routes.
15 Any necessary traffic shifts would be temporary and would only occur during construction.

16 As discussed in detail in **Section 3.8, Air Quality**, Mobile Source Air Toxics (MSAT) emissions in the Study
17 Area will be substantially lower in the future than they are today, regardless of the alternative chosen. The
18 Preferred Alternative is consistent with the State Implementation Plan (SIP) for the attainment of clean air quality
19 in Georgia and complies with both state and federal air quality standards. As such, no air quality impacts on
20 schools and daycare centers adjacent to the Preferred Alternative are anticipated.

21 A comparison of greenhouse gas (GHG) emissions between the existing condition, No-Build Alternative and the
22 Preferred Alternative was conducted and is also included in **Appendix H-8, Air Quality Impact Assessment**.
23 Based on the anticipated vehicle miles traveled (VMT), the Preferred Alternative would increase emissions by
24 16% in 2037 and 36% in 2057 over existing conditions. However, compared to the No-Build Alternative
25 emissions in the same years, the increase would only be 5% and 7%, respectively. The Proposed Project GHG
26 emissions would add to the cumulative impact of GHG in the atmosphere.

27 Overall, Georgia DOT does not expect the Preferred Alternative to substantially disrupt existing neighborhood
28 character or community cohesion, because the Preferred Alternative would modify an existing transportation
29 corridor, and the impacts discussed would primarily be on or adjacent to the existing transportation facility.
30 The Preferred Alternative would negatively impact community cohesion for two neighborhoods in Dunwoody and
31 Sandy Springs, which were established after the construction of the highway. Neighborhood character and
32 community cohesion would be maintained for the remaining 215 neighborhoods within the Project Area. The
33 neighborhood impacts would be in an urbanized area, and the Preferred Alternative is not anticipated to physically
34 separate or isolate residential areas or community facilities through changes in land use. **Exhibit 3-15** depicts the
35 locations of the impacted residential buildings and neighborhoods.

1 Exhibit 3-15: Impacted Local Neighborhoods and Communities



2

1 As presented in **Appendix H-2, Demographic, Social, Economic, and Community Profile Analysis**, construction
2 of the Preferred Alternative would require the relocation of 44 active businesses and 5 vacant spaces in 17
3 commercial buildings. From a local tax perspective, the potential loss of property tax revenue associated with these
4 business displacements would equal \$73,518 for Cobb County (0.02% of tax revenue) and \$528,979 for DeKalb
5 County (0.26% of tax revenue). In addition, based on the locations of the displaced businesses adjacent to an existing
6 transportation corridor, these displacements would not result in the isolation of one community from another or
7 substantial changes to community character. Georgia DOT does not anticipate the displacement of these businesses
8 to result in the loss of major sources of tax revenue such that local jurisdictions would be unable to maintain existing
9 service capacity or substantially depreciate property values in the community. In addition, none of the displaced
10 businesses are a community facility directly serving the community nor have they been identified as a key business
11 in the community; the relocation of which could result in substantial impacts on the existing community cohesion
12 and character.

13 As shown in **Exhibit 3-15**, commercial displacements associated with the Preferred Alternative would occur in
14 Chamblee, Dunwoody, Doraville, and unincorporated Cobb County. Only one of the commercial displacements,
15 The Spanish Preschool, is considered a community facility that provides a needed service to a specific community
16 group (children). The displacement of this bilingual preschool would have a modest effect on community
17 cohesion within Doraville, which has a high percentage of Spanish-speaking individuals who could use this
18 preschool. The displacement of the Texaco gas station may affect local members of the community who use it
19 regularly but there are two other gas stations that offer the same services within 300 feet of the Texaco.

20 The other commercial displacements are a mixture of owner/operator facilities, such as JE Dunn Construction;
21 leased office space, such as Shared Space; or warehouses, such as Janilink Janitorial Supply. While some of the
22 businesses to be displaced, like Tucker Castleberry Printing, likely have repeat customers, the services provided
23 are not specific to the community around them and are focused on the delivery of goods or provision of services
24 (like construction and catering) within a wide service area. Community cohesion within nearby neighborhoods is
25 unlikely to be impacted by the business displacements because they do not serve as a local meeting spot or engage
26 with the nearby communities regularly through repeat walk-in business. Community cohesion within each city
27 would also remain unchanged because the number of businesses to be displaced is small in comparison to the total
28 number of businesses in each city, plus the businesses may be able to relocate within the same city.

29 Displaced properties would be relocated prior to construction within the same community or to another nearby
30 community. Displacement of these businesses could affect up to 300 employees. Retail employees affected by the
31 Preferred Alternative may be able to find comparable work within the area prior to displacement, leading to no loss
32 of income. Employees with specialized skills at industrial facilities that require a specific type of building and/or
33 equipment may be economically impacted if a new facility cannot be found in the same area or in a timely manner.
34 However, the unemployment rate in the Atlanta-Sandy Springs-Alpharetta Metropolitan Statistical Area (MSA) is
35 2.8%²⁶, indicating a healthy economy for employees of displaced businesses who may need to look for other
36 employment options. The improved access to I-285 and consistent travel-time benefits would also improve the
37 transfer of people and goods leading to potential benefits to local businesses, employers, and employees.

²⁶ Bureau of Labor Statistics (BLS). 2023. *Atlanta, GA, Area Economic Summary*. Updated April 17, 2023.
https://www.bls.gov/regions/southeast/summary/blssummary_atlanta.pdf.

1 As discussed in more detail in **Appendix H-6, Visual Impact Assessment**, the new infrastructure would
2 introduce elevated traffic lanes along the existing I-285 top end corridor. Overall, while the visual character of the
3 Preferred Alternative is generally compatible in materials and form, it differs in scale and would, therefore, be
4 incompatible with much of the existing visual character of the I-285 top end corridor. Georgia DOT has
5 developed a visualization of the Preferred Alternative, available online.²⁷

6 3.2.2.3 Indirect Effects

7 The Preferred Alternative is located in an urban corridor with local planning documents designating most adjacent
8 land uses for future redevelopment or compatible zoning. Indirect effects from induced growth are unlikely because
9 most of the Preferred Alternative corridor is already highly developed. The Proposed Project could serve as an
10 element of decision-making for development, including development triggered by anticipated growth and
11 redevelopment, but it is not expected to precipitate development on its own. The Preferred Alternative would have
12 the potential to facilitate future land use changes in approximately 21 parcels in the City of Chamblee that are
13 adjacent to I-285 along Savoy Drive. These parcels encompass 37.4 acres of land that are currently zoned
14 Commercial Corridor, Village Commercial, and Village Residential. The Preferred Alternative would have the
15 potential to facilitate land use changes in approximately 66 parcels in the City of Doraville that are adjacent to
16 I-285. These parcels encompass 42.5 acres of land that are currently zoned Urban Center and Urban Core.
17 No community facilities are located within the Chamblee parcels, but some community facilities are located within
18 the Doraville parcels because they are part of the Doraville Town Center. Municipal facilities such as schools,
19 libraries, and police stations are not expected to be impacted by redevelopment within the Doraville Town Center.
20 As such, any changes in redevelopment because of the introduction of elevated ELs would not affect community
21 facilities in the areas where future land use changes could occur in Chamblee and Doraville.

22 3.2.2.4 Cumulative Effects

23 This subsection assesses the cumulative effects of the Preferred Alternative on community resources, defined in
24 40 CFR 1508.1(g)(3) as “the impact on the environment which results from the incremental impact of the action
25 when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or
26 non-federal) or person undertakes such other actions.”²⁸

27 Multiple private development projects adjacent to I-285 are in planning, design, or construction phases. Most of
28 the adjacent land uses would continue in their current uses or transition toward compatible future land uses
29 including mixed-use, multi-family, and commercial redevelopment projects. The ARC RTP identifies projects
30 being implemented independently of this Preferred Alternative. The RTP is a long-range plan that prioritizes
31 transportation project spending in the Atlanta region through 2050. Projects in the RTP include interchanges with
32 the Proposed Project that provide connections to SR 400, I-20 West, and I-20 East.

33 The relevant projects that would be constructed within the Preferred Alternative’s construction period could result
34 in temporary construction impacts related to access, visual/aesthetic, air quality, and noise that could be
35 incompatible with existing land uses and affect public enjoyment of neighborhoods, cities, and community

²⁷ Georgia Department of Transportation (Georgia DOT). 2020a. I-285 Top-End Express Lanes Visualization. January 21.
<https://youtu.be/WyHoyGsn9FQ>.

²⁸ 40 CFR 1508.7 – Cumulative Impact. <https://www.govinfo.gov/content/pkg/CFR-2012-title40-vol34/pdf/CFR-2012-title40-vol34-sec1508-7.pdf>.

1 facilities. Therefore, the Preferred Alternative may contribute to temporary cumulative impacts on neighborhoods,
2 cities, and community facilities.

3 As noted in **Appendix D, Indirect and Cumulative Effects Report**, a review of the comprehensive plans and
4 input from local planners indicated most of the land uses in adjacent cities would continue in their current uses or
5 transition toward compatible future land uses including mixed-use, multi-family, and commercial redevelopment
6 projects. Although community facilities could be redeveloped, the extent of future redevelopment and impacts to
7 community facilities from reasonably foreseeable projects is unknown. When considered in conjunction with
8 relevant ongoing or planned projects, the direct impacts on community facilities from the Preferred Alternative
9 would not contribute substantially to permanent cumulative impacts on community facilities, neighborhoods, and
10 cities since direct impacts are limited, and past, present and reasonably foreseeable projects have or would be
11 consistent with adopted land use plans and policies to the extent practicable. The Preferred Alternative is
12 supportive of ARC's planning policies in addressing long-term transportation solutions for the projected growth
13 in population, employment, and traffic volumes. In support of this growth, ARC's RTP identifies three goal areas:
14 providing and maintaining world class infrastructure, healthy livable communities, and a competitive economy.
15 The Preferred Alternative would not permanently displace any existing community facilities nor would the
16 Preferred Alternative construct a new community facility. As such, the Preferred Alternative's contribution to
17 cumulative impacts on community facilities and neighborhoods would be minimal. As discussed in more detail in
18 **Section 3.2.3, Potential Avoidance, Minimization, and Mitigation Measures**, any displaced persons, facility,
19 or business would be treated fairly, consistently, and equitably. Therefore, any cumulative impacts as a result of
20 displacements would be substantially minimized.

21 **3.2.3 Potential Avoidance, Minimization, and Mitigation Measures**

22 Georgia DOT and the FHWA are committed to avoidance and minimization, as well as mitigation for unavoidable
23 impacts. This subsection discusses any potential avoidance, minimization, and mitigation measures that would be
24 implemented as part of the Preferred Alternative, based on potential impacts on community facilities and
25 neighborhoods. It also describes measures to reduce direct and indirect effects on travel patterns, accessibility, and
26 community cohesion. Proposed avoidance, minimization, and mitigation measures will be reviewed on an
27 ongoing basis throughout project development.

28 During project planning, Georgia DOT personnel conducted more than 250 meetings of various types to share
29 Preferred Alternative information with interested parties. This type of information gathering informed the
30 development of the design so that impacts on adjacent properties could be minimized. A meeting with First Baptist
31 Church Atlanta allowed Georgia DOT to estimate ROW for partial acquisition from the church as the church was
32 developing a new master plan to reconstruct/expand the church campus. Other efforts to minimize impacts on
33 community facilities included reducing ROW from adjacent residential neighborhoods to reduce impacts on EJ
34 communities. These minimization efforts are discussed in **Section 3.3, Environmental Justice and Communities
35 of Concern**.

36 To promote employment opportunities for residents along the corridor, pursuant to Section 25019 of the Bipartisan
37 Infrastructure Law, Georgia DOT may consider programs to expand local workforce participation in construction
38 activities. Any requirements for workforce development included in a Project-related construction contract will be
39 consistent with the law, FHWA federal-aid regulations, and applicable Georgia DOT policies. The Georgia DOT

1 will coordinate with FHWA to provide periodic reporting on its workforce development programs and outcomes
2 during the construction period.

3 To minimize potential adverse impacts from ROW acquisition, compensation and relocation assistance are provided
4 to eligible recipients for full and partial property acquisitions, as required by Uniform Act (further defined in
5 **Appendix B, Applicable Laws and Regulations**). The Uniform Act directs that when an agency acquires property
6 for a federal-aid project, ROW requirements are in place to provide benefits, protection, and payment of just
7 compensation. When a project displaces an individual, family, business, farm or nonprofit organization, additional
8 services and payments are required. FHWA does not consider compensation to be a mitigation measure. The
9 Preferred Alternative would avoid impacts on neighborhoods to the greatest extent possible. For example, the
10 Preferred Alternative design has evolved to avoid impacts on a pool in the Georgetown neighborhood in Dunwoody.
11 Additionally, impacts on Monarch Villas in Sandy Springs have been avoided through design considerations. These
12 avoidance measures would further preserve community cohesion with the neighborhoods and cities.

13 The Preferred Alternative has been designed to avoid impacts on most community facilities within the Project
14 Area. Georgia DOT has been in ongoing coordination with the FCS system to ensure the Preferred Alternative
15 would not adversely impact the Heard's Ferry Elementary School and Riverwood International Charter High
16 School. Design considerations have been evaluated through these conversations to ensure impacts are minimized.
17 Impacts on the trail systems would be temporary and occur during construction, except for the Bob
18 Callan/Rottenwood Creek Trail in which minor ROW would be required, and the PATH400 Trail (under
19 construction), in which a portion of the path would be relocated and reconstructed (more information is provided
20 in **Chapter 4, Section 4(f) and Section 6(f) Resources**).

21 Georgia DOT personnel and contractors will comply with a Safety and Communications Plan developed in
22 coordination with agencies that provide emergency response services. In particular, to minimize disruptions to
23 emergency services (including those servicing hospitals within the Project Area), Georgia DOT would provide
24 local emergency service providers at least 2 weeks advance notice for lane/shoulder closures and traffic stage
25 changes planned to be in effect for longer than 24 hours. Additionally, Georgia DOT would provide at least
26 24 hours advance notice for lane/shoulder closures planned to be in effect for less than 24 hours, as well as
27 provide signage detailing detour routes and prohibit through traffic in neighborhoods.

28 Measures to minimize adverse effects on the public include the following:

- 29 • Georgia DOT would be required to plan their activities so that changes in access are anticipated,
30 scheduled in advance, and as brief as reasonably possible. Advance notification for such disruptions
31 would be provided to affected property owners and businesses.
- 32 • Deliveries of construction materials would be scheduled to minimize disruptions to surrounding areas.
- 33 • A public information and notification program would advise area residents of traffic detours.

34 For additional details regarding actions being taken to minimize construction-related impacts on community
35 facilities and neighborhoods, refer to **Section 3.13, Construction Impacts**.

36 Georgia DOT would mitigate impacts associated with the installation of temporary jetties in the Chattahoochee
37 River and for loss of enjoyment due to construction impacts by compensating NPS through an in-lieu fee, as

1 discussed further in **Chapter 4, Section 4(f) and Section 6(f) Resources**. The Statement of Findings for
2 Wetlands and Floodplain Management and the National Park CRNRA – Section 4(f) Commitment Letter can be
3 found in **Appendix H-11, National Park Service Statement of Findings**, and **Appendix M, Agency**
4 **Correspondence**, respectively, both of which present the proposed commitments for impacts on this Section 4(f)
5 recreation area.

6 **3.3 Environmental Justice and Communities of Concern**

7 EO 12898,²⁹ *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*,
8 mandates that “each federal agency identify and address disproportionately high and adverse human health or
9 environmental effects of its programs, policies, and activities on minority populations and low-income
10 populations.” This requirement is supported by the laws and regulations discussed in **Appendix B, Applicable**
11 **Laws and Regulations**, which focus on protecting communities that have historically borne the burden from the
12 impacts of federal actions. EO 14096,³⁰ *Revitalizing Our Nation’s Commitment to Environmental Justice For All*,
13 has been recently issued (April 21, 2023). Per CEQ directions, the new EO 14096 on EJ does not rescind EO
14 12898, which FHWA is implementing through the current DOT and FHWA EJ Orders (DOT 5610.2C and
15 FHWA 6640.23A) until further guidance is provided regarding the implementation of the new EO on EJ.

16 EJ populations are defined as minority or low-income populations. FHWA Order 6640.23A and USDOT
17 Order 5610.2 define these populations as follows:

- 18 • Minority individuals include those who are one or more of the following: Black or African American;
19 Hispanic or Latino; Asian American; American Indian and Alaskan Native; or Native Hawaiian and Other
20 Pacific Islander.
- 21 • Minority Population means any readily identifiable groups of minority persons who live in geographic
22 proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers
23 or Native Americans) who will be similarly affected by a proposed DOT program, policy, or activity.
- 24 • Low-income individuals are persons whose median household income is at or below the Department of
25 Health and Human Services (HHS) poverty guidelines.
- 26 • Low-Income Population means any readily identifiable group of low-income persons who live in
27 geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as
28 migrant workers or Native Americans) who will be similarly affected by a proposed DOT program,
29 policy, or activity.

30 In addition to summarizing how the Preferred Alternative would affect the populations identified above, this
31 section will separately summarize impacts to Limited English Proficiency (LEP), disabled, and elderly
32 populations as well as the health of children. Together, these communities are referenced as communities of

²⁹ Executive Order 12898 of February 11, 1994. “Federal Actions to Address Environmental Justice in Minority and Low-Income Populations.” *Federal Register*. No. 1994-7629 (February 16, 1994).

³⁰ Executive Order No. 14096 of April 21, 2023. “Revitalizing Our Nation’s Commitment to Environmental Justice For All.” *Federal Register*. No. 2023-08955 (April 25, 2023).

1 concern. The full analysis of impacts to EJ populations and communities of concern can be found in
2 **Appendix H-2, Demographic, Social, Economic, and Community Profile Analysis.**

3 **3.3.1 Methodology**

4 Georgia DOT employs four tools to identify communities and EJ populations: census analysis, consultation with
5 planning authorities, a field survey, and public involvement. Efforts to identify communities necessarily focus on
6 “readily identifiable” communities, defined as groups of persons living in close geographic proximity, typically
7 neighborhoods, subdivisions, apartments, and mobile home parks, or communities that make their presence
8 known by providing feedback at public involvement events. Dispersed residents that do not live in close
9 geographic proximity are deemed communities or EJ populations only if they would incur common adverse
10 effects from the project (e.g., experience increased traffic or a similar loss of access due to a median) or if they
11 raise common concerns during project development. FHWA Order 6640.23A defines *disproportionate and*
12 *adverse effects* as those that are predominately borne by a minority population and/or a low-income population or
13 suffered by the minority population and/or low-income population at an appreciably more severe or greater
14 magnitude than the adverse impacts suffered by the nonminority population and/or non-low-income population.

15 Addressing impacts to EJ populations requires identification of an appropriate Study Area specific to
16 communities. Here, the appropriate Study Area was established as the 106 Census BGs adjacent to the Preferred
17 Alternative. A preliminary analysis of EJ populations was conducted during the planning stages of the Preferred
18 Alternative. The ARC 11-county area and the 3-county area encompassing the Preferred Alternative were used to
19 identify EJ populations based on census data percentages. This information from the preliminary analysis is
20 provided and compared to city-level data for a more exact determination of where EJ populations are located near
21 the Preferred Alternative. Throughout the analysis discussion, reference will be made to these various geographic
22 areas, as appropriate, in order to provide the most thorough assessment of how the Preferred Alternative affects EJ
23 populations.

24 Addressing impacts to communities of concern requires identification of an appropriate Study Area specific to
25 communities. Here, the appropriate Study Area was established as the 106 Census BGs adjacent to the Preferred
26 Alternative. Data from the Census BGs and the associated cities and counties encompassing the Preferred
27 Alternative were used to identify communities of concern based on census data percentages. Throughout the
28 analysis discussion, reference will be made to these various geographic areas, as appropriate, in order to provide
29 the most thorough assessment of how the Preferred Alternative affects communities of concern.

30 **3.3.1.1 Census Analysis**

31 As noted, census data was evaluated at various levels to identify EJ populations and communities of concern who could
32 be impacted by the Preferred Alternative. Census data consolidated by ARC for the ARC region was compared with
33 the three-county area of Cobb, DeKalb, and Fulton Counties as well as data from the 106 BGs encompassing the
34 Preferred Alternative. Data from the U.S. Census Bureau’s 2020 Decennial Census, and the 2017 – 2021 American
35 Community Survey (ACS) 5-Year Estimates were used to establish the presence of potential EJ populations and
36 communities of concern. These estimates include data on race, age, ethnicity, language, and income.

37 While planning public involvement efforts, census tract data adjacent to the Preferred Alternative were mapped
38 based on the percent of minority individuals and low-income households compared to the state average.

1 Additionally, the percentage of LEP individuals was mapped. This data guided initial plans for public outreach in
2 the communities adjacent to the Preferred Alternative.

3 **3.3.1.2 Consultation with Local Authorities**

4 The Preferred Alternative passes through the cities of Smyrna, Dunwoody, Sandy Springs, Brookhaven,
5 Chamblee, Doraville, and Tucker. These cities' governments were identified as key stakeholders and were
6 involved in early meetings with Georgia DOT as well as two series of public meetings in May 2019 and
7 January 2020. Leaders in each of these municipalities were asked to provide local knowledge on the presence of
8 EJ populations and communities of concern within their jurisdictions and to identify any communities at-risk of
9 missing an opportunity to participate in public involvement activities. The cities indicated there were no at-risk
10 communities who may be left out of the meetings. One local official recommended contacting consulates in the
11 area about upcoming public involvement events. In response to this recommendation, promotion for the
12 January 2020 PIOH series included Spanish translations of flyers and posters delivered to the Costa Rican and
13 Mexican consulates. City communications personnel also requested copies of public involvement materials to
14 have available for community leaders within their city limits. Meeting flyers were provided in English and
15 Spanish to the local government personnel as well as other language support before and during the PIOH series
16 (refer to **Section 3.3.1.4, Public Involvement**). A full discussion of public involvement/outreach for the Preferred
17 Alternative is found in **Chapter 5, Consultation and Coordination**.

18 **3.3.1.3 Field Survey**

19 Field visits were conducted along the entire Proposed Project corridor to establish the location of nearby multi-
20 family housing, neighborhood, shopping centers, and places of worship that could indicate EJ populations or
21 communities of concern. The locations of 91 local points of interest, including churches, shopping centers,
22 associations, and libraries were identified during the field visits. These points of interest were further reviewed for
23 any indications of low-income, minority populations, and non-English businesses or shopping areas, indicating
24 the potential presence of EJ populations or communities of concern.

25 As an example, a multi-family apartment complex that is directly adjacent to I-285, Monarch Villas (previously
26 Sierra Place), was noted as a minority, low-income, and LEP community. The complex is directly adjacent to a
27 small retail area with numerous signs in Spanish including nearby quick cash and pay-by-use phone stores. To the
28 east of Monarch Villas, across Roswell Road, The Harrison multi-family apartment complex was identified as a
29 minority community with a range of low to moderate income levels. Informational materials were posted in English
30 and Spanish about upcoming public involvement opportunities at Monarch Villas, The Harrison, and many of the
31 other local points of interest. Maps of the local points of interest and nearby residential neighborhoods can be found
32 in Chapter 5 of **Appendix H-2, Demographic, Social, Economic, and Community Profile Analysis**.

33 No additional residential areas were identified as having the need for additional public outreach of this type.

3.3.1.4 Public Involvement

To address public engagement as part of the NEPA process, a series of public meetings called Community Conversations were held on May 14, 15, 21, 22, and 23, 2019. The series consisted of seven meetings over the course of those five days, located at convenient public facilities throughout the Preferred Alternative corridor in six municipalities that intersect the Preferred Alternative limits along I-285. The meetings were open to anyone interested in the corridor improvements and did not focus on a particular group or community. The series introduced the public to the Preferred Alternative and hosted a total of 562 attendees (including some who attended more than one meeting). The locations and times for the Community Conversations provided access to interested parties throughout the Preferred Alternative corridor, including three afternoons (12 p.m. to 2 p.m.) and four evenings (6 p.m. to 8 p.m.). On May 15 and 22, meetings were conducted during both times at different locations. **Chapter 5, Consultation and Coordination**, provides more information on the Community Conversations.

In addition, Georgia DOT hosted seven PIOH meetings in January 2020 along the Preferred Alternative corridor. Meetings were scheduled across two consecutive weeks on Tuesdays and Thursdays in order to avoid days typically used for religious gatherings. The multi-date schedule provided convenient options for local residents to attend near their homes or workplaces at any of the seven meetings (all of which provided the same materials and format). The meetings included four mid-day and three evening times for a total of 18 hours of open house availability. The locations were selected for convenience, free parking, adequate space, and facilities compliant with the Americans with Disabilities Act of 1990. Language needs were identified through census research, field surveys, and input from local officials. Spanish speakers are the largest population of non-English speakers along the Preferred Alternative corridor, so resources were focused on hardcopy materials in Spanish with access to translators or language-identification tools (digital and hardcopy) for other non-English speakers. The PIOH meetings attracted 722 attendees (including some who attended more than one meeting). During the 90 days leading up to these PIOH meetings, outreach activities focused on the areas identified by the three previous identification tools. The activities included:

- Posting English and Spanish versions of meeting flyers/posters at seven local libraries, minority and/or low-income multi-family housing communities, and community centers.
- Providing copies of English and Spanish meeting flyers/posters to the Costa Rican and Mexican consulate offices and to local government communications personnel for their distribution to minority and Spanish-speaking community contacts.

During the PIOH series, public outreach included the following measures:

- Providing translated materials in Spanish, including a welcome letter, project fact sheet, noise sheet, air quality sheet, and comment cards at the meetings.
- Scheduling a Spanish interpreter with the court reporter at all seven PIOH meetings for transcription of verbal comments. Also, individuals were available with native speaker language skills in Spanish and Mandarin Chinese to respond to questions posed in either language. As discussed further in **Section 3.3.2.3, Limited English Proficiency Communities**, Spanish speakers represent the largest LEP population within the Study Area, with speakers of Asian languages representing the second-largest (though notably smaller) LEP population.

- 1 • Offering language-identification tools (hardcopy and digital) upon request at each PIOH meeting to determine
2 any other LEP concerns by attendees so that translations or interpreter support could be provided.
- 3 • Providing ADA-compliant public meeting space for all PIOH meetings. Public notices advertising the
4 PIOH meetings provided a point of contact for anyone to request additional accommodations.

5 Information was gathered from the public at the Community Conversations via informal surveys that included
6 questions about commute durations, use of I-285, and topics of concern. One hundred thirty-two surveys were
7 received at the Community Conversations. Topics raised by municipalities during the Community Conversations
8 included the location of access points, community impacts, transit, and noise impacts. One specific concern was the
9 potential for impacts to Monarch Villas Apartments. No other concerns specific to EJ communities were presented.
10 The Community Conversations series provided the project team with insights about community concerns while
11 helping in the future planning and preparations for the larger PIOH series that followed in early 2020.

12 Formal comment cards were collected at the PIOH meetings and 485 public comments were received in addition
13 to phone calls, letters, and emails. The respondents showed high levels of interest in noise, transit, ROW, traffic,
14 property values, design, and local access points as project topics. **Appendix L, Public Involvement Open House**
15 **Comments**, provides the PIOH comment record and the Georgia DOT response letter that was distributed to
16 commenters and available to the public online. Project changes considered and/or implemented as a result of
17 public input included consideration of an Underpass Option from Raider Drive to Riverside Drive and the re-
18 design of an off-ramp to avoid impacts to Monarch Villas Apartments. No new EJ populations or communities of
19 concern beyond those identified as part of the preliminary survey process were identified through these public
20 involvement opportunities. A full discussion of public involvement/outreach for the Preferred Alternative is found
21 in **Chapter 5, Consultation and Coordination**.

22 3.3.2 Affected Environment

23 3.3.2.1 Environmental Justice Communities

24 Although census tract data was evaluated for potential EJ and LEP communities prior to public involvement
25 activities, it was a preliminary analysis that did not delineate individual communities. A closer inspection of
26 detailed census data, neighborhood boundaries, and community and economic centers along with a comparison to
27 appropriate city and county data was conducted to ascertain the presence of EJ communities in the Study Area that
28 could be impacted by the Preferred Alternative. The public involvement outreach, field visits, and census data
29 analysis ensured no small clusters or dispersed communities were overlooked. For this resource, the Study Area is
30 the census BGs adjacent to the I-285 top end corridor. This smaller area was evaluated because it relates more
31 directly to the area affected by the Preferred Alternative's potential adverse impacts, particularly related to
32 construction, land use, and noise. **Appendix H-2, Demographic, Social, Economic, and Community Profile**
33 **Analysis**, provides the full evaluation which is also summarized in this Draft EIS.

34 Demographic data percentages for the seven cities that encompass the Preferred Alternative were compared to
35 their respective counties, the ARC region, and the state in order to assess the presence of EJ communities within
36 the cities relative to larger geographic areas. **Exhibit 3-16** provides the breakdown of White, non-Hispanic
37 individuals versus minority individuals within the cities of Smyrna, Dunwoody, Sandy Springs, Brookhaven,
38 Chamblee, Doraville, and Tucker; Cobb, DeKalb and Fulton Counties; the ARC region; and the state of Georgia.

1 Exhibit 3-16: Racial Composition of Geographic Areas

Geographic Area	White, Non-Hispanic		Total Minority	
	Total	Percentage	Total	Percentage
State of Georgia	5,362,156	50.1%	5,349,752	49.9%
ARC Region	2,552,931	42.6%	3,438,451	57.4%
Cobb County	369,182	48.2%	396,967	51.8%
Smyrna	24,159	43.4%	31,504	56.6% (Higher than Cobb County)
DeKalb County	215,895	28.2%	548,487	71.8%
Dunwoody	27,824	53.8%	23,859	46.2%
Doraville	1,695	16.0%	8,928	84.0% (Higher than DeKalb County)
Chamblee	9,421	31.2%	20,743	68.8%
Brookhaven	30,423	55.2%	24,738	44.8%
Tucker	14,387	38.9%	22,618	61.1%
Fulton County	404,793	37.9%	661,917	62.1%
Sandy Springs	58,130	53.8%	49,950	46.2%

2 Source: U.S. Census Bureau. 2020 Decennial Census. Table P2.

3 Notes:

4 The total minority population includes Hispanics of any race and non-Hispanics of any race except the non-Hispanic White population.

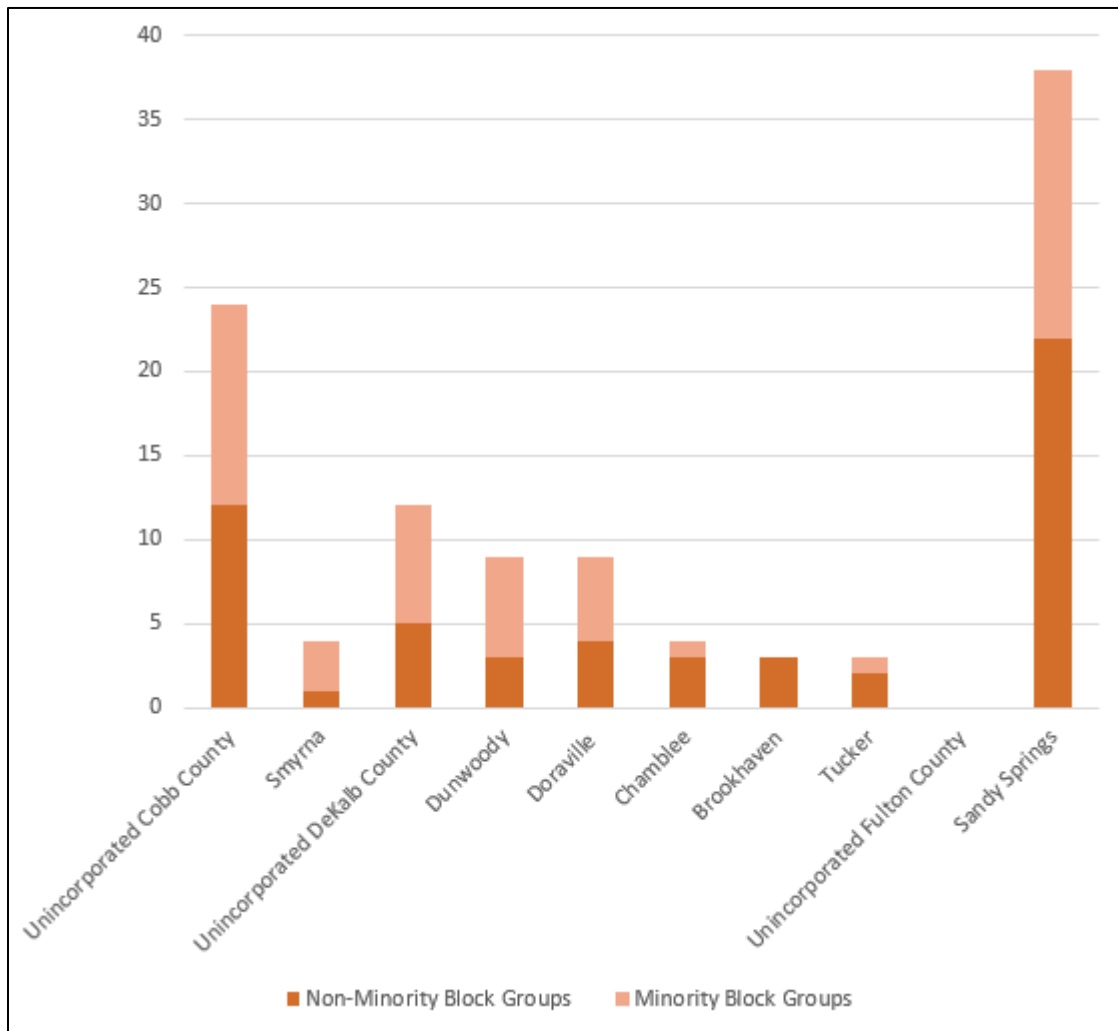
5 The racial composition for the Project Area, presented by census blocks, is found in **Appendix H-2, Demographic, Social, Economic, and**
 6 **Community Profile Analysis.**

7 **Bolded** numbers indicate a higher percentage of minority individuals in the city versus the respective county.

8 The data indicate that the population in Georgia is an almost equal number of minority individuals and White,
 9 non-Hispanic individuals. The ARC region, representing the Metro Atlanta area, has a higher percentage of
 10 minority individuals than the state and DeKalb County has a demonstrably higher percentage of minority
 11 individuals than the region. Cobb and Fulton Counties, as well as the cities of Smyrna, and Sandy Springs, are
 12 roughly equivalent to the state and regional percentages. While this does not eliminate the need to address impacts
 13 to minority populations within Cobb County, Fulton County, and the affected cities within those counties, it
 14 emphasizes the increased risk for disproportionate impacts to minority populations in DeKalb County.
 15 Additionally, the cities of Smyrna and Doraville have a higher percentage of minority individuals within their
 16 jurisdiction than their respective counties of Cobb and DeKalb, indicating the potential for a higher number of
 17 minority populations near the Preferred Alternative.

18 The 106 census BGs adjacent to the I-285 top end corridor were evaluated to identify minority populations
 19 proximate to the Preferred Alternative. A BG was identified as a minority BG if the minority population percentage
 20 was higher than its respective city, county, and/or three-county area average which is representative of the Metro
 21 Atlanta region for this analysis. Fifty-one minority BGs were identified, including 12 out of 24 BGs in
 22 unincorporated Cobb County, 3 out of 4 BGs in Smyrna, 7 out of 12 BGs in unincorporated DeKalb County, 6 out
 23 of 9 BGs in Dunwoody, 5 out of 9 BGs in Doraville, 1 out of 4 BGs in Chamblee, 1 out of 3 in Tucker, none in
 24 Brookhaven, and 16 out of 38 in Sandy Springs. **Exhibit 3-17** illustrates this data. **Appendix H-2, Demographic,**
 25 **Social, Economic, and Community Profile Analysis,** presents the census data for the Project Area BGs.

1 Exhibit 3-17: Block Group Minority Status Within Project Area



2

3 In addition to identifying minority populations, census data on low-income households were obtained and compared
 4 to larger data sets to identify potential EJ populations based on income. A household is identified as low-income
 5 when the median household income is at or below the HHS poverty guideline, which for 2021 was \$26,500 for a
 6 family of four.³¹ Statewide, low-income households represent 13.4% of the population which is a higher percentage
 7 than all local geographies shown in **Exhibit 3-18**. Fulton County has the highest percentage of households below
 8 poverty level for the three counties, but the Fulton County Project Area is within Sandy Springs, which has the
 9 second lowest percentage of household below the poverty level. Doraville reports the highest percentage of
 10 households below the poverty level along the Preferred Alternative corridor. However, the population of Doraville
 11 (under 4,000 people) is much lower than others adjacent to the Preferred Alternative corridor indicating that higher
 12 percentages do not equate to higher numbers of low-income households. For example, it is possible there could be

³¹ DOT and FHWA use the HHS poverty guidelines to establish low-income populations; however, the U.S. Census Bureau uses different thresholds to determine households in poverty. The HHS Poverty Guideline of \$26,500 is lower than the weighted average threshold of \$26,740 used by the U.S. Census Bureau to report poverty levels but close enough to provide a similar number of households living below the poverty threshold.

1 more low-income populations near the I-285 top end corridor in Brookhaven than in Doraville because the
 2 population is greater in Brookhaven (even though the percentage of low-income population is lower).

Exhibit 3-18: Low-Income Comparison Between Geographic Areas

Geographic Area	Total Households	Households Below Poverty Level	
		Total	Percentage
State of Georgia	3,885,371	519,640	13.4%
3-County Study Area	1,015,452	110,256	10.9%
Cobb County	287,426	23,578	8.2%
Smyrna	24,696	1,865	7.6%
DeKalb County	286,068	32,984	11.5%
Dunwoody	21,043	1,230	5.8%
Doraville	3,796	458	12.1%
Chamblee	12,384	1,305	10.5%
Brookhaven	23,632	2,244	9.5%
Tucker	15,137	1,584	10.5%
Fulton County	441,958	53,694	12.1%
Sandy Springs	49,941	3,323	6.7%

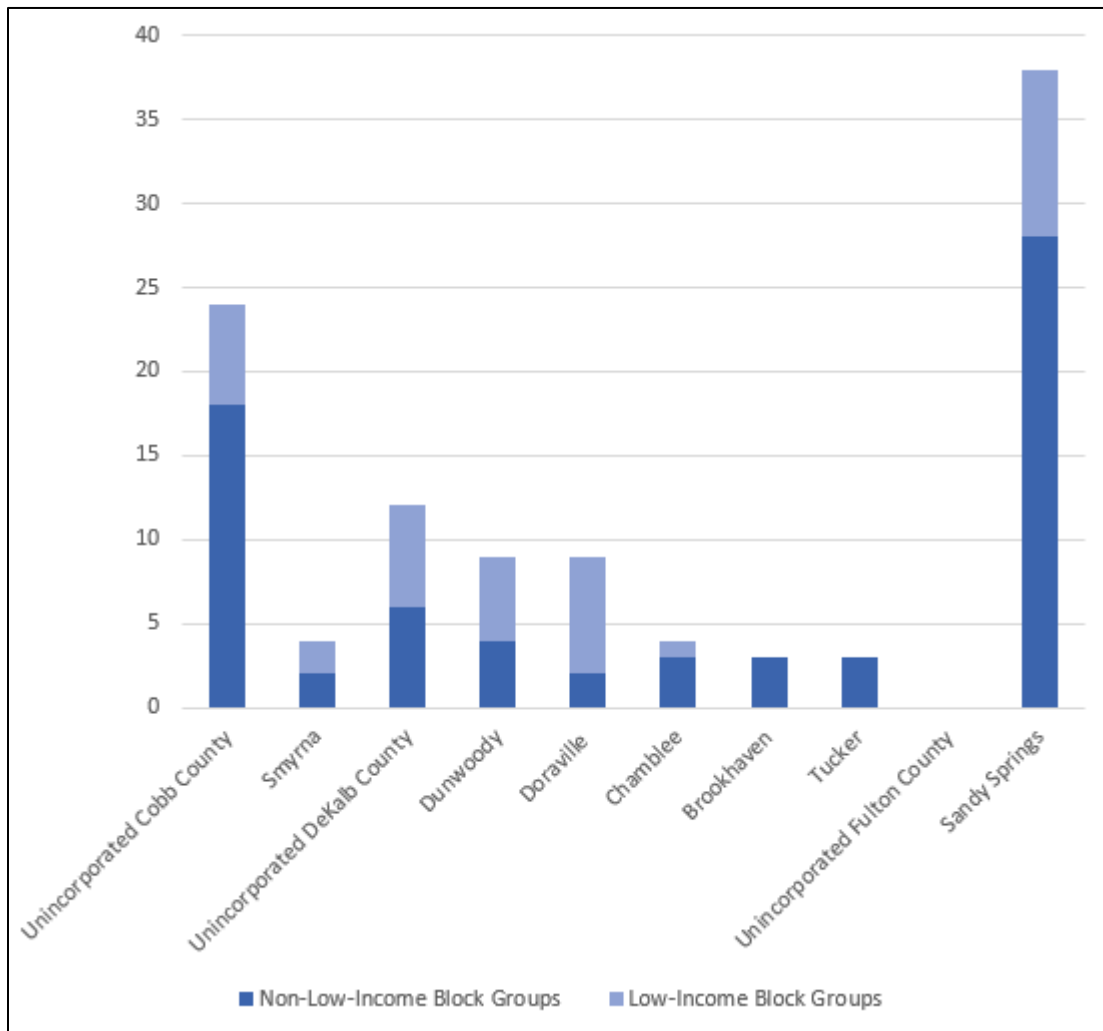
3 Source: U.S. Census Bureau. 2017-2021 American Community Survey 5-Year Estimates, B17017.

4 Notes: The low-income composition for the Project Area, presented by census blocks, is found in **Appendix H-2, Demographic, Social, Economic,**
 5 **and Community Profile Analysis.**

6 **Bolded** numbers indicate a higher percentage of low-income households in the city or county versus the respective county and/or three-county
 7 average.

8 For a more in-depth analysis of low-income populations, the 106 census BGs that are adjacent to the I-285 top
 9 end corridor were evaluated to identify pockets of low-income communities near the Preferred Alternative. A BG
 10 was identified as low-income if the percentage of households in poverty was greater than the respective city,
 11 county, or three-county area which is representative of the Metro Atlanta region for this analysis. Thirty-seven
 12 BGs were identified as low-income, including six in unincorporated Cobb County, two in Smyrna, six in
 13 unincorporated DeKalb County, five in Dunwoody, seven in Doraville, one in Chamblee, none in Brookhaven or
 14 Tucker, and 10 in Sandy Springs. **Exhibit 3-19** illustrates this data. The total number of households below
 15 poverty level within the 106 BGs is 4,482 out of 62,862 (7%). **Appendix H-2, Demographic, Social, Economic,**
 16 **and Community Profile Analysis,** provides detailed tables and graphics about the low-income BGs.

1 Exhibit 3-19: Block Group Low-Income Status within Project Area



2

3 Once census data has established the presence of EJ populations within a Study Area, it is important to connect
 4 those populations to known communities with established boundaries, such as neighborhoods, to methodically
 5 assess impacts to EJ populations. As noted previously, Georgia DOT focuses on “readily identifiable”
 6 communities, defined as groups of persons living in close geographic proximity, typically neighborhoods,
 7 subdivisions, apartments, and mobile home parks, to assist in identifying EJ populations within a Study Area that
 8 may be impacted by a project. Neighborhoods can provide a sense of community and place whether they are
 9 single-family subdivisions or multi-family condominiums or apartment complexes. Residents meet with their
 10 neighbors through formal meetings and informal interactions, creating a bond based on the place they choose to
 11 live. Level of income, lifestyle, language, and culture can be commonalities of neighborhoods which helps to
 12 identify EJ populations.

13 Neighborhoods within 1,000 feet of the existing Georgia DOT ROW were overlaid on the 51 minority and
 14 37 low-income BGs to identify neighborhoods likely to include EJ populations. One hundred twenty potential EJ
 15 neighborhoods were identified.

1 Additional methods for identifying low-income neighborhoods are to research properties that participate in the
2 federal Housing Choice Voucher Program Section 8 (Section 8), which is a federal program assisting low-income
3 families, elderly, and the disabled to afford decent, safe, and sanitary housing in the private market³² and
4 properties that received a Low Income Housing Tax Credit. These properties must provide affordable rent to
5 tenants that qualify based on their income.

6 Section 8 and Low Income Housing Tax Credit properties within 1,000 feet of the Proposed Project corridor
7 (refer to **Exhibit 3-15** for boundary) include:³³

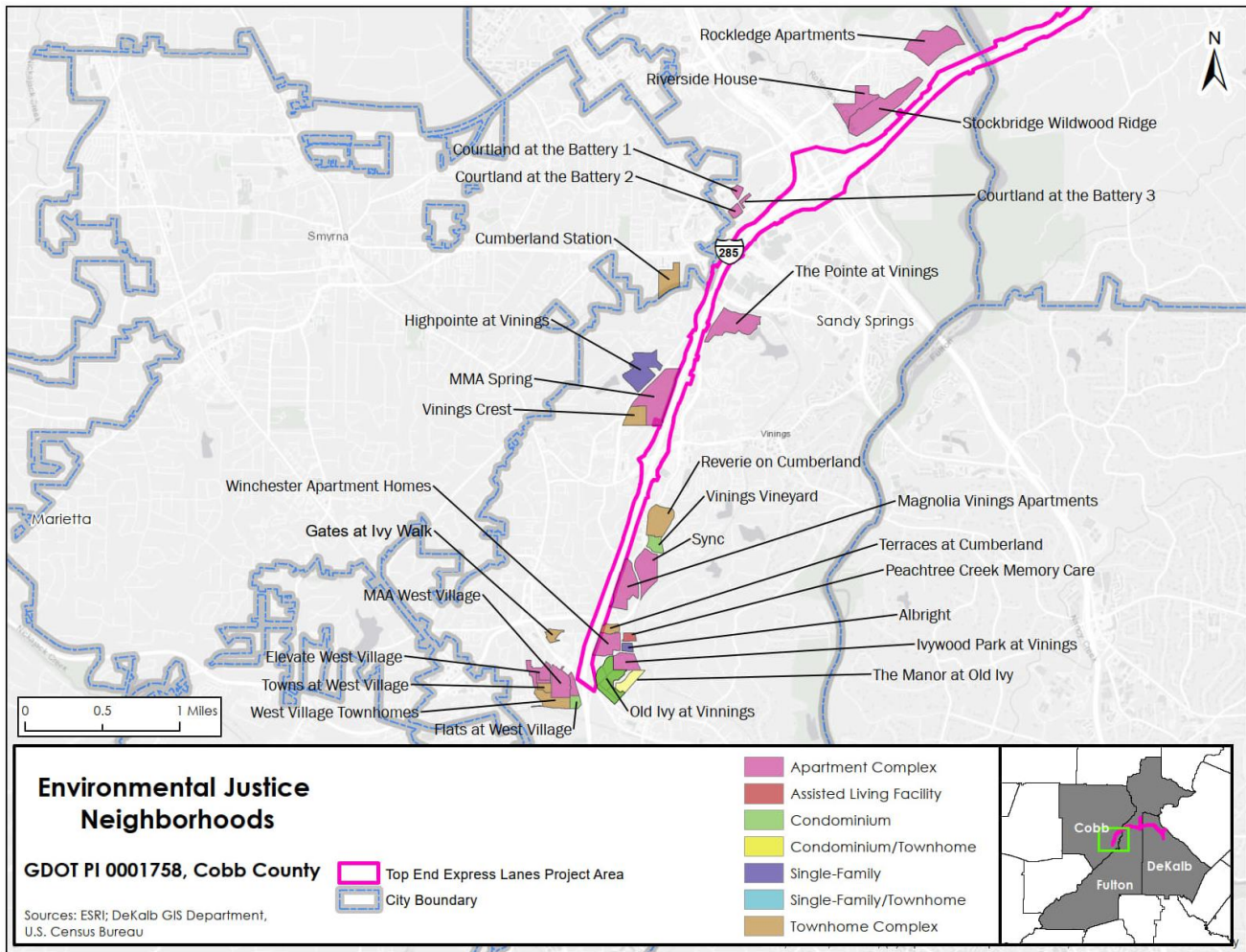
- 8 • Sterling Place 144 Allen Road NW, Sandy Springs, GA 30328
- 9 • Campbell-Stone North Apartments 350 Carpenter Drive NE, Atlanta, GA 30328

10 Both of these properties are included in the list of potential EJ neighborhoods. In total, 120 neighborhoods adjacent
11 to the Preferred Alternative corridor are “readily identifiable” as EJ populations and were evaluated for impacts to
12 EJ populations. **Exhibits 3-20** through **3-22** present the location of these neighborhoods within each county.

³² Housing choice vouchers are administered locally by public housing agencies. The public housing agencies receive federal funds from the U.S. Department of Housing and Urban Development to administer the voucher program. The program and its eligibility are outlined in Section 8 of the United States Housing Act of 1937 (42 U.S.C. 1437f); regulations are outlined in 24 CFR 982.

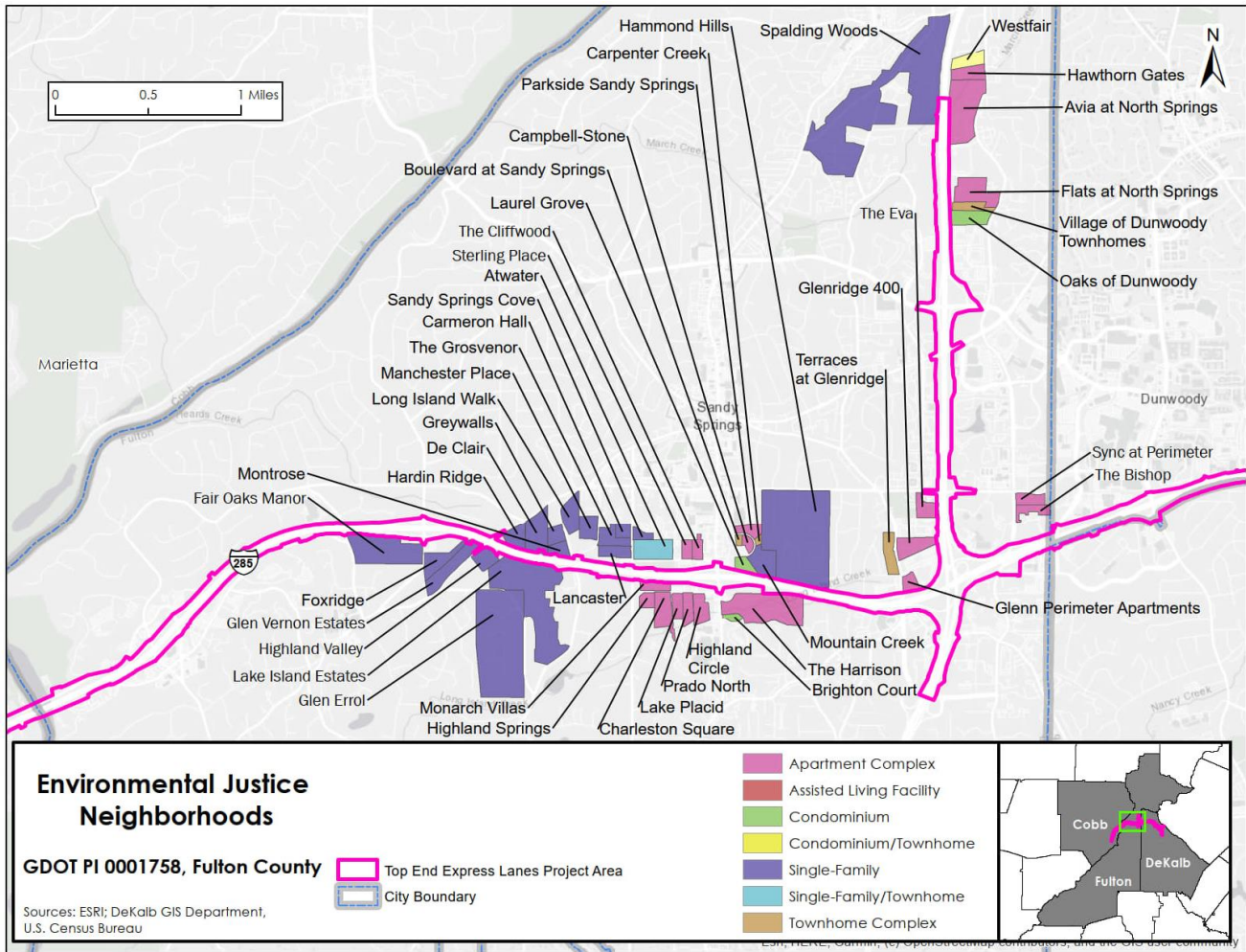
³³ Information on the program within the Study Area was retrieved from the U.S. Department of Housing and Urban Development Resource Directory, <https://resources.hud.gov/>, updated July 2022.

1 Exhibit 3-20: Environmental Justice Neighborhoods – Cobb County



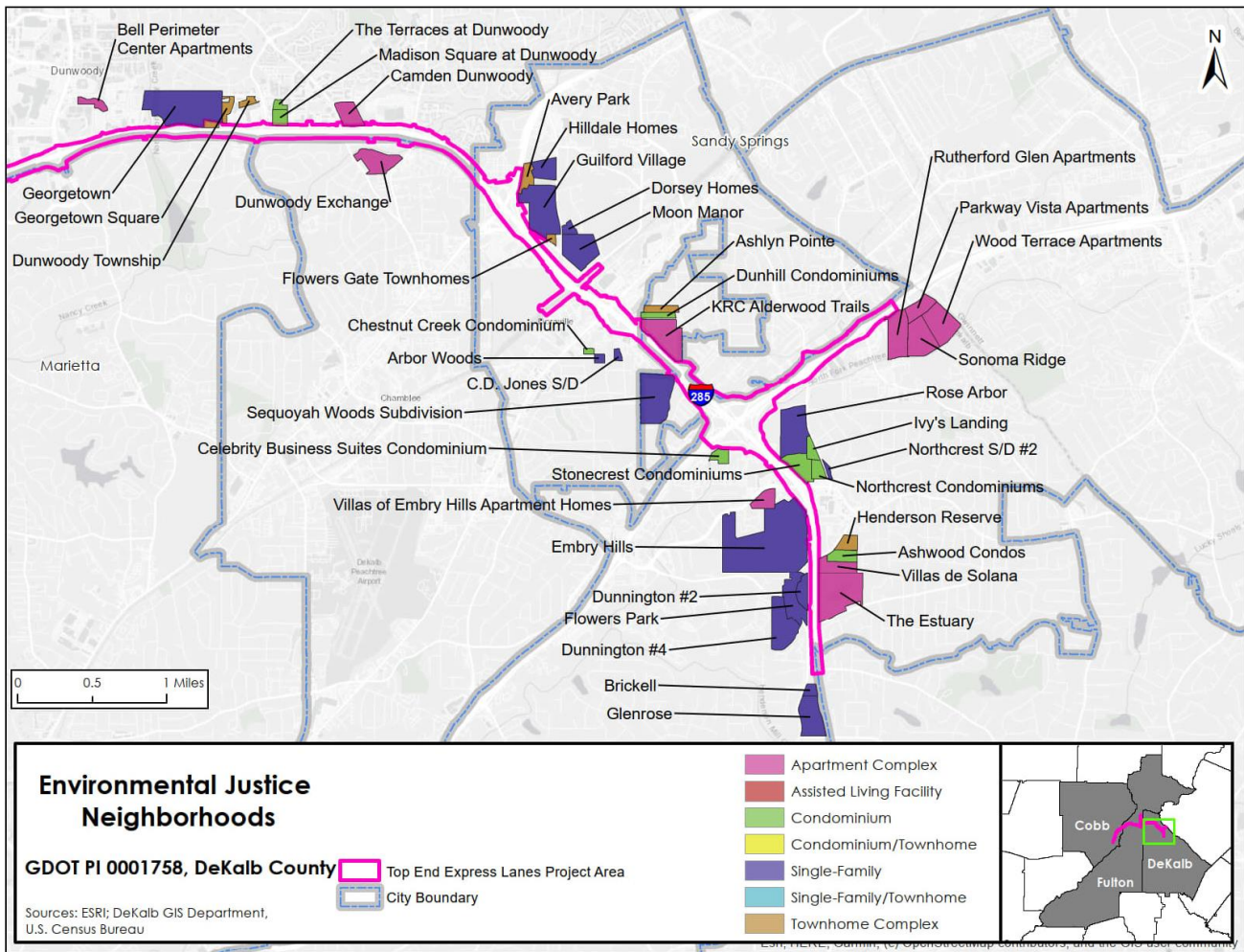
2

1 Exhibit 3-21: Environmental Justice Neighborhoods – Fulton County



2

1 Exhibit 3-22: Environmental Justice Neighborhoods – DeKalb County



2
 3 **3.3.2.2 Tolling Area of Influence for Low-Income Communities**

4 Use of the Preferred Alternative ELs would not be limited to adjacent communities but could include motorists
 5 from the 20-county ARC region. For this reason, impacts from the tolls associated with the ELs may be
 6 anticipated beyond the census BGs immediately adjacent to the Preferred Alternative corridor. The ELs would use
 7 congestion pricing; therefore, FHWA and Georgia DOT must identify, analyze, and address the potential for
 8 disproportionate and adverse tolling effects on low-income populations following the recently issued EO 14096
 9 (April 21, 2023). Per CEQ directions, the new EO 14096 on EJ does not rescind EO 12898, which FHWA is
 10 implementing through the current DOT and FHWA EJ Orders (DOT 5610.2C and FHWA 6640.23A) until further
 11 guidance is provided regarding the implementation of the new EO on EJ. The full analysis is presented in
 12 **Appendix H-13, Tolling Effects on Low Income Populations.**

13 The AOI for tolling impacts to low-income communities was developed by identifying roadway links that are
 14 projected to experience at least a 5% increase or decrease in traffic with the Preferred Alternative ELs in operation

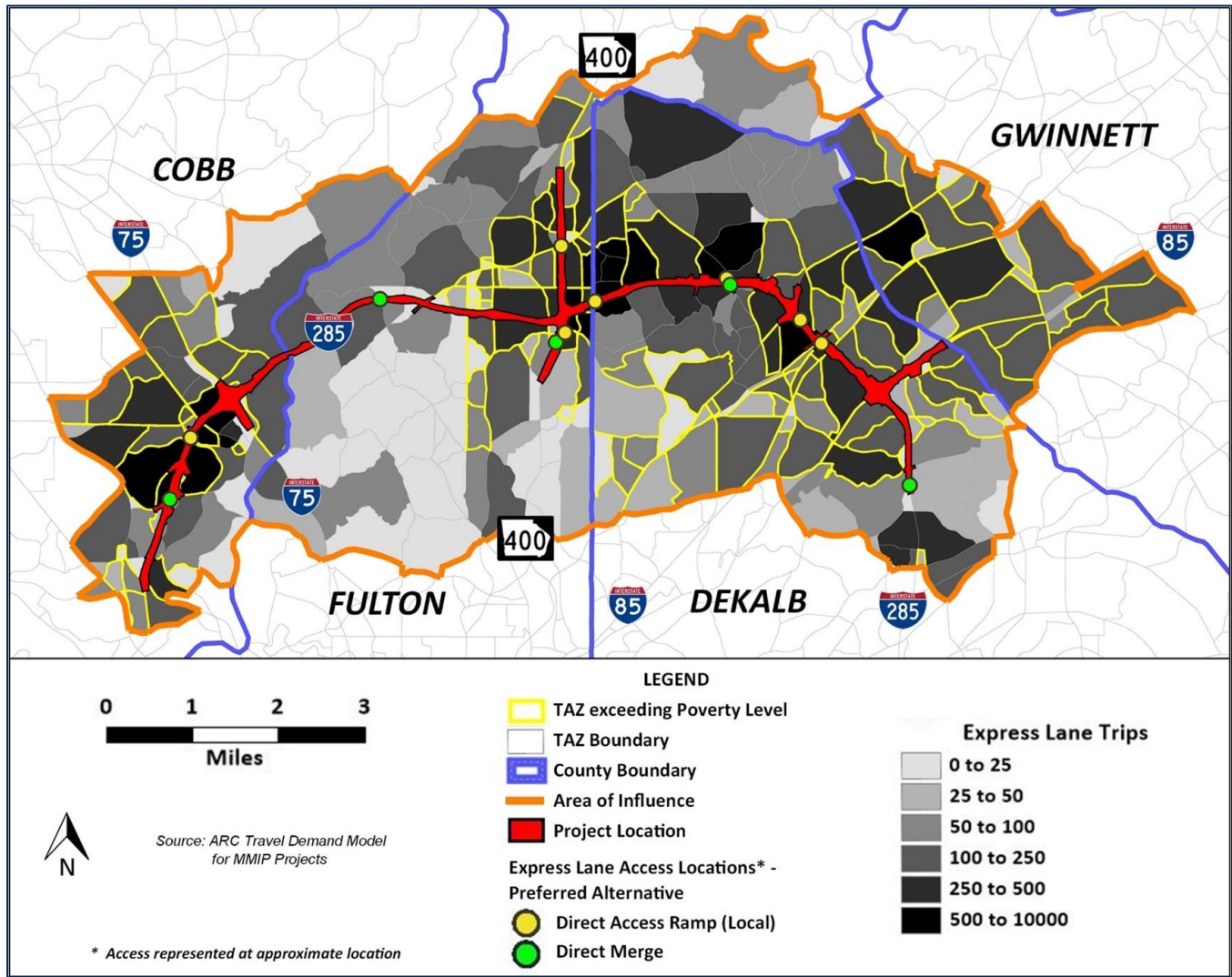
1 compared to the No-Build Alternative.³⁴ Household income was summarized for the AOI and the 20-county ARC
2 region for 2015 and 2050 based on the existing and future condition years used in ARC's ABM. The regional
3 average of the population below the poverty guideline (12%) was used to identify low-income populations within
4 the TAZs³⁵ of the ABM; TAZs with a low-income percentage above 12% were flagged as low-income. Using this
5 data, a Select Link Analysis³⁶ identified the EL trips associated with low-income TAZs. **Exhibit 3-23** presents a
6 map of TAZs in the AOI and the number of EL trips expected to originate from those TAZs in 2050. The low-
7 income TAZs are highlighted in yellow. These TAZs represent the low-income populations that could be affected
8 by the cost of tolls to use the ELs.

³⁴ The AOI was developed using the ARC regional travel model and following FHWA guidance. In order to identify segments of the roadway network that would be affected by the Proposed Project in a meaningful way, links where there was a +/-5% or greater change in average daily traffic on congested highway links with LOS D between the Build and No-Build networks were noted. This network boundary is used for the MSAT and Indirect and Cumulative Effects analyses as well.

³⁵ TAZs are geographic units used in traffic modeling software. The Metro Atlanta TAZs were developed by the Travel Demand Model Development Team in ARC's Transportation Access and Mobility Group for use with base and forecasted population, employment, household data, and university enrollment. The 5,873 TAZs are incorporated into existing and future highway and transit networks in the ARC's ABM to model how users are likely to use the regional transportation network.

³⁶ A Select Link Analysis is used by traffic modelers to extract specific data associated with selected links within the modeled transportation system.

1 Exhibit 3-23: Express Lane Trip Origins Within the AOI



3 **3.3.2.3 Limited English Proficiency Communities**

4 EO 13166,³⁷ *Improving Access to Services for Persons with Limited English Proficiency*, requires federal agencies
 5 to ensure that individuals who are not native English speakers and may not have an exhaustive understanding of
 6 the language can still receive benefits from the services provided by the agency. LEP is defined as individuals
 7 who identify themselves as someone who speaks English less than “very well” on census forms. Statewide, LEP
 8 individuals represent 5.4% of the population. **Exhibit 3-24** provides the percentage of LEP individuals within the
 9 three counties encompassing the Preferred Alternative.

³⁷ Exec. Order 13166, 65 *Federal Register* 50121 (Aug. 6, 2000).

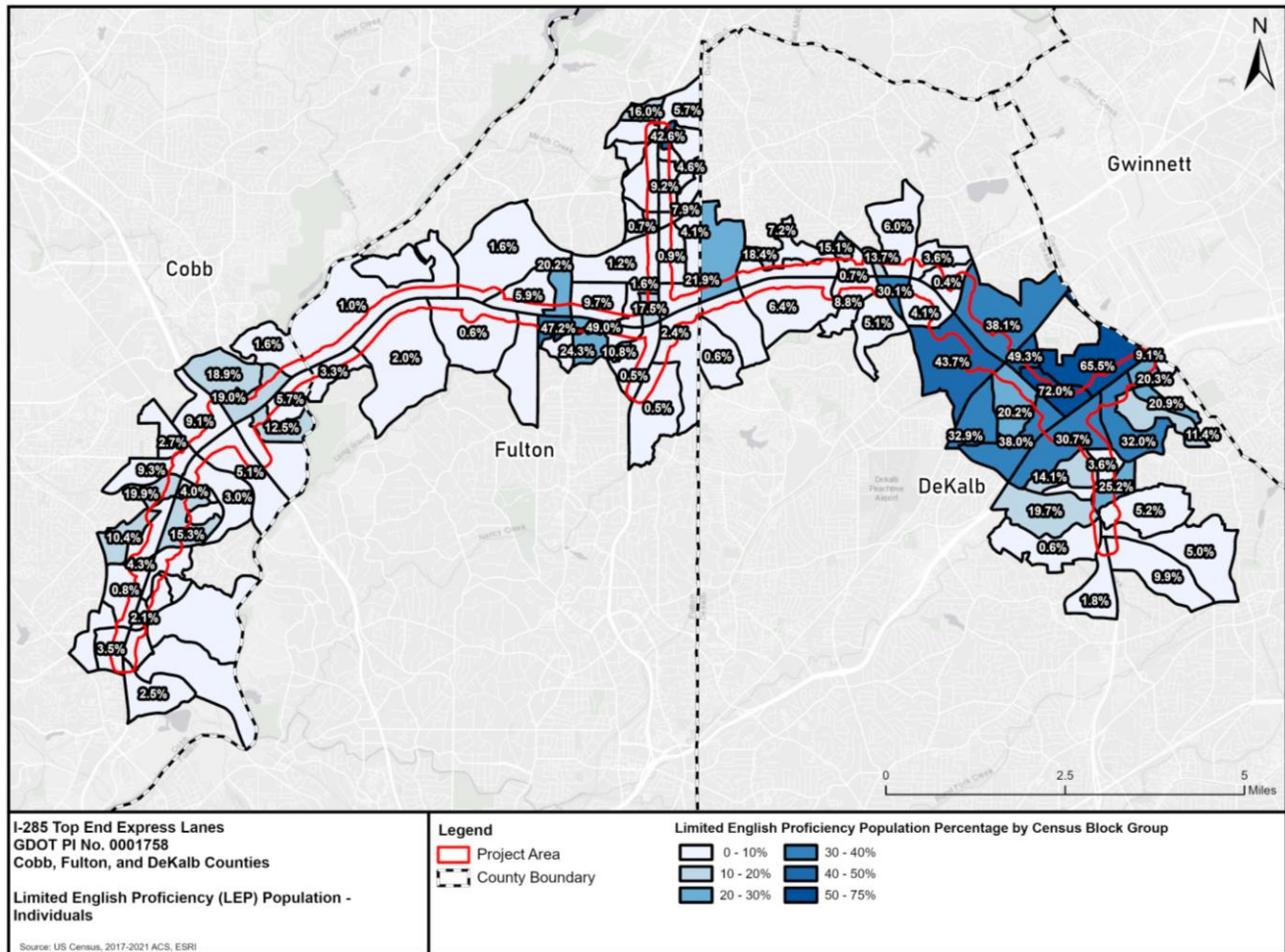
Exhibit 3-24: Percentage of Limited English Proficiency Individuals in the Study Area

LEP Status	Cobb County	DeKalb County	Fulton County	ARC Region	Georgia
Not LEP	92.9%	90.2%	95.2%	91.9%	94.6%
LEP	7.1%	9.8%	4.8%	8.1%	5.4%
Spanish-Speaking	4.6%	3.7%	2.2%	4.5%	3.4%
Asian Languages	1.0%	1.8%	1.4%	1.9%	1.1%
Other Languages	1.5%	4.3%	1.2%	1.7%	0.9%
TOTAL	100%	100%	100%	100%	100%

1 Source: U.S. Census Bureau. 2017-2021 American Community Survey 5-Year Estimates, B16004. <https://data.census.gov/cedsci/>.

2 LEP data for the census BGs along the I-285 top end corridor are presented in **Appendix H-2, Demographic,**
 3 **Social, Economic, and Community Profile Analysis**, and indicate that LEP individuals are present within
 4 88 BGs in the Study Area and are primarily Spanish speakers which was supported by coordination with local
 5 municipalities and organizations during the public involvement process. Of the 88 BGs with LEP populations,
 6 34 have a LEP population that primarily speaks Spanish, 32 have a LEP population that primarily speaks Asian
 7 languages, and 22 have a LEP population that primarily speaks Other languages. **Exhibit 3-25** identifies the BGs
 8 with LEP individuals along the Preferred Alternative corridor.

1 Exhibit 3-25. Limited English Proficiency Along the Project Corridor



2

3 Based on the analysis in **Appendix H-2, Demographic, Social, Economic, and Community Profile Analysis**,
 4 BGs in unincorporated DeKalb County, Doraville, and Sandy Springs exhibit a strong likelihood of LEP
 5 populations living near the Preferred Alternative while businesses in Chamblee indicate a large presence of
 6 individuals who speak Asian languages who support, and possibly own, these businesses. Impacts to BGs within
 7 these jurisdictions could negatively affect LEP populations.

8 **3.3.2.4 Disabled and Elderly Populations**

9 Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, as amended,
 10 require federal agencies to ensure that no qualified disabled individuals shall, solely on the basis of his or her
 11 disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under
 12 any of its programs, services, or activities. Georgia DOT is subject to these requirements and has policies in place
 13 to uphold these laws.

14 The Age Discrimination Act of 1975, as amended, is designed to prohibit discrimination on the basis of age in
 15 programs or activities receiving federal financial assistance, like Georgia DOT. The policies and services in place
 16 to accommodate disabled individuals often correlate to the policies and services in place for senior adults

1 (65 years and older) who may need special transportation considerations. This section identifies both populations
2 for analysis of potential Preferred Alternative impacts.

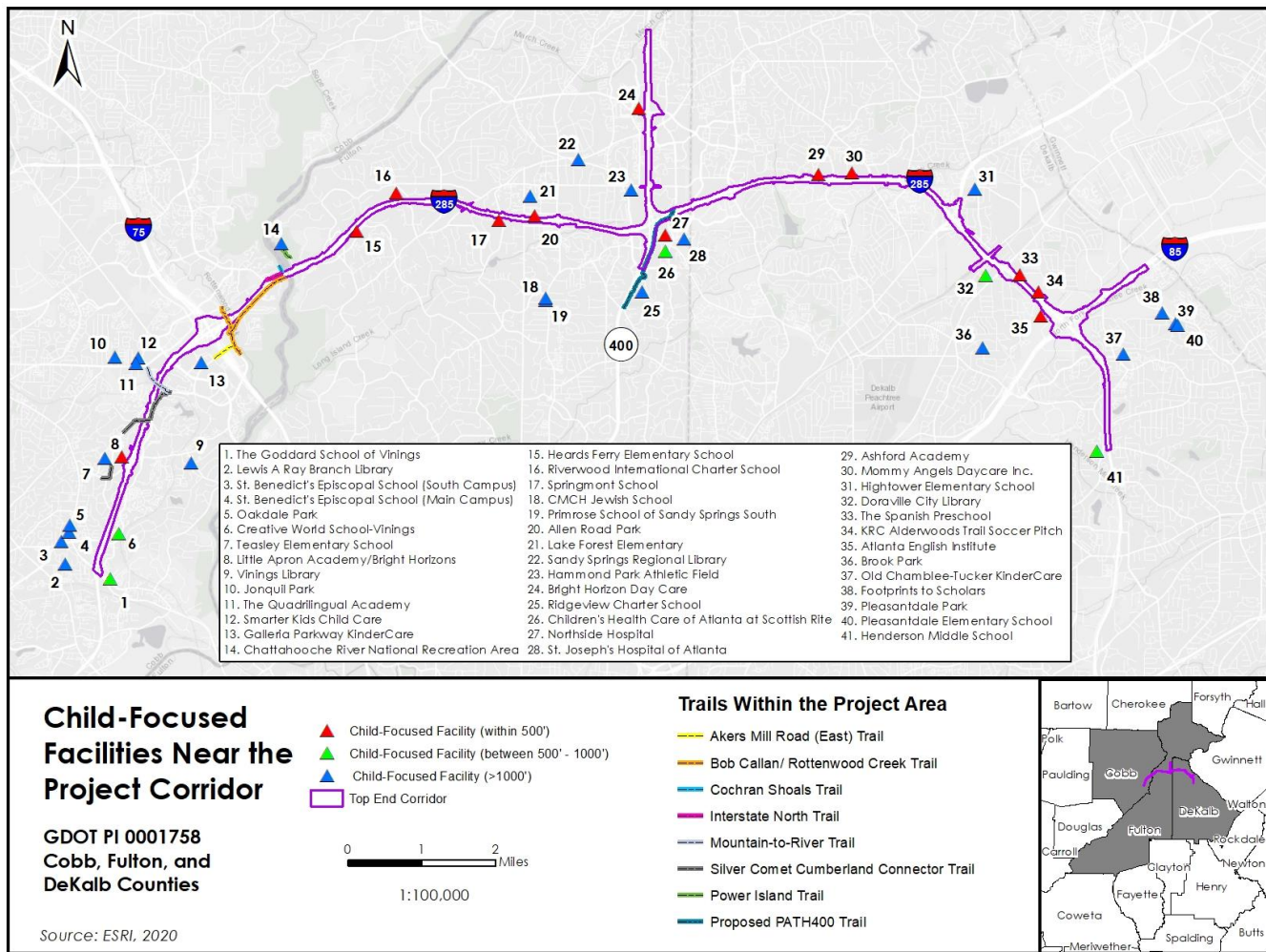
3 The ACS collects data on non-institutionalized individuals with disabilities (hearing, vision, cognitive, ambulatory,
4 self-care and independence) at the city level. **Appendix H-2, Demographic, Social, Economic, and Community**
5 **Profile Analysis**, provides a breakdown of the 2017-2021 ACS 5-Year Estimates for the seven cities along the
6 I-285 top end corridor. A total of 27,343 individuals out of the seven-city population of 343,971,
7 representing 7.9%, have a disability. Of these individuals, 5,661 people (20.7%) are also part of the 65 and older
8 population. According to census data for the seven cities surrounding the Preferred Alternative, individuals over
9 the age of 65 represent 12.6% (43,209 individuals).

10 **3.3.2.5 Health of Children**

11 EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, requires federal agencies to
12 ensure its policies, programs, activities, and standards identify, assess, and address disproportionate
13 environmental health and safety risks to children. According to census data for the three-county area, children
14 (0 to 18 years) represent 22.7% (582,013 individuals) of the population.

15 In order to identify potential impacts to the health of children, it is important to identify locations near the Preferred
16 Alternative, besides residences, where children's activities would be concentrated. These include schools, daycares,
17 hospitals, libraries, and parks. **Appendix H-2, Demographic, Social, Economic, and Community Profile**
18 **Analysis**, presents a list of these facilities within the BGs surrounding the Preferred Alternative and **Exhibit 3-26**
19 shows a map of child-focused facilities within 1,000 feet of the I-285 top end corridor.

1 Exhibit 3-26: Child-Focused Facilities Near the Corridor



2

3 **3.3.3 Environmental Consequences**

4 There are many impacts related to transportation projects that can affect EJ populations and communities of
 5 concern. This analysis addresses how ROW acquisition, displacements, noise impacts, air quality impacts, visual
 6 quality, access, transportation, and tolling impacts from the Preferred Alternative would affect the EJ populations
 7 and communities of concern identified in **Section 3.3.2, Affected Environment**. Direct effects from the Preferred
 8 Alternative are discussed and compared to the No-Build Alternative in the following subsections.

9 **3.3.3.1 No-Build Alternative**

10 The No-Build Alternative would not involve construction of the Preferred Alternative ELs but would include all
 11 other proposed transportation improvements included in the MMIP, plus the Transform 285/400 project. There
 12 would be no direct effects from the No-Build Alternative, however, regional mobility and congestion would continue
 13 to worsen which would negatively affect EJ populations and communities of concern using the highway system.

1 **3.3.3.2 Direct Effects on Environmental Justice Populations – Preferred Alternative**

2 **ROW Acquisition and Displacement Impacts**

3 The Preferred Alternative would require acquisition of 91 acres of new ROW. Much of the Preferred Alternative
 4 footprint is located within the cross section of the roadway and the existing I-285 ROW, therefore, most
 5 acquisitions would occur in narrow strips generally parallel to the existing I-285 ROW.

6 **Exhibit 3-27** presents the amount of acreage for each land use type that would be converted to transportation use
 7 for the Preferred Alternative.

8 **Exhibit 3-27: Approximate ROW Acquisition by Land Use Type**

Land Use Types	Preferred Alternative	Acreage Range per Parcel
Commercial	43.6 acres	<0.01 acre to 10.5 acres
Residential	31.2 acres	<0.1 acre to 5.5 acres
Parks and Recreation (Atlanta Silverbacks Soccer Field ^a and Bob Callan/Rottenwood Creek Trail)	0.4 acre	<0.02 acre to 0.34 acre
Industrial	6.3 acres	All ROW is from one parcel
Public/Institutional	7.2 acres	<0.03 acre to 3.6 acres
Undeveloped	2.3 acres	<0.3 acre to 1.5 acres
Total	91.0 acres	

9 ^a Atlanta Silverbacks Soccer Field is a private recreational facility.

10 ROW acquisition for the Preferred Alternative would displace 21 residential buildings and 17 commercial
 11 buildings. The 21 residential buildings include 12 single-family residences, 5 multi-family buildings with
 12 42 tenant-occupied residences (Dunwoody Village Apartment Homes), 1 building with 4 owner-occupied
 13 residences (Henderson Mill), and 3 buildings comprising 20 townhomes (Chateau Club) for a total of
 14 78 residences. **Exhibit 3-14** provides this information by city/neighborhood.

15 Early in the project development process, four communities were identified as potential sites for displacements
 16 within the Preferred Alternative corridor:

- 17 • Dunwoody Village Apartments
- 18 • Madison Square at Dunwoody
- 19 • Monarch Villas (previously Sierra Place Apartments)
- 20 • Chateau Club

21 These communities were assessed to determine if EJ populations would be impacted by the proposed
 22 displacements. Dunwoody Village Apartments was established in 1982 and contains 794 units. The Preferred
 23 Alternative would displace 42 housing units in five buildings, totaling approximately 5% of housing units in the
 24 neighborhood. The portion of Dunwoody Village Apartment Homes that would be impacted is located in CT
 25 213.06, BG 4 which is 3.7% low-income and 48.7% minority. Of the 42 tenant-occupied units that would be
 26 impacted, approximately 1 unit could have low-income residents and 20 could have minority residents.

1 Madison Square at Dunwoody is a condominium building adjacent to I-285 within a low-income and minority
2 BG, however, displacement of Madison Square at Dunwoody is not expected. Due to site constraints and the
3 terrain, the Preferred Alternative requires 0.50-acre of ROW from Madison Square at Dunwoody in order to
4 maintain EL access points without requiring displacement of the condominium buildings. The narrow ROW strips
5 needed by the Preferred Alternative would not result in substantial changes or disruptions to neighborhood
6 cohesion or diminish access to community facilities for any EJ populations living at Madison Square at
7 Dunwoody as ROW would be taken from non-residential portions of the property.

8 In the early stages of project design, Monarch Villas, a multi-family complex adjacent to I-285 identified as
9 supporting an EJ population, was within the boundaries of proposed ROW. As the design proceeded and the status
10 of Monarch Villas was identified as supporting an EJ population, effort was made to refine the design and place
11 the ELs within the existing ROW to avoid and minimize impacts to this EJ population. The original design
12 presented at PIOH showed the displacement of two multi-unit apartment buildings and the removal of parking
13 along the I-285 frontage of a third building. As a result of the design refinements, ROW acquisition from the
14 Monarch Villas is not necessary and none is anticipated. This removed the need to take ROW from Monarch
15 Villas and no displacements would occur to this EJ population.

16 The Chateau Club comprised three buildings with 20 townhomes. All 20 townhomes have been acquired
17 following procedures set forth in 23 CFR 710.501 and the Uniform Act. These residences were within Census
18 Tract 212.26, Block Group 2, which is 42% minority, indicating that approximately 8 townhomes were minority
19 households. Displacement of the Chateau Club adversely affected minority populations. As of August 2020, there
20 were six townhomes of comparable size for sale within 2.5 miles of the Chateau Club and over 200 townhomes of
21 various sizes within a 4-mile radius; therefore, it is likely that relocations were able to occur within the same area.

22 After ROW requirements were determined, additional communities were identified where displacements would
23 occur. One structure, which comprises four owner-occupied residences within the Henderson Mill complex,
24 would be displaced. Henderson Mill is located in CT 217.12, BG 1, which is 3.6% low-income and 52.6%
25 minority, indicating that approximately 2 condominiums are minority households.

26 One single-family residence has been displaced, and 11 additional single-family residences would be displaced.
27 Of these single-family residential displacements, the residence that was acquired under 23 CFR 710.501 was
28 located in a low-income block group in Sandy Springs. The Hardin Ridge property was located in CT 102.20,
29 BG 3, which is 11.8% low-income. However, the residence was valued over \$420,000 based on DeKalb appraisal
30 district data and was unlikely to house low-income populations. Of the remaining 10 single-family residential
31 displacements, 8 are in unincorporated DeKalb County in the Greystone neighborhood. These residences are
32 located in CT 218.08, BG 1, which is 9.9% low-income and 21.2% minority. The residences are valued at over
33 \$400,000 based on DeKalb appraisal district data and are unlikely to house low-income populations.
34 Approximately two of the residences could be minority households. One single-family displacement is located in
35 CT 218.08, BG 3, which is 7.0% low-income and 72.8% minority. It is unlikely this residence would be a low-
36 income household, but it is likely to be a minority household.

37 Based on the data available, approximately 34 of the 78 displaced residences/units (44%) could house EJ
38 populations. **Exhibit 3-28** compares the EJ displacements to non-EJ displacements along the corridor.

1 Exhibit 3-28: EJ and Non-EJ Displacements Associated with the Preferred Alternative

Community	% Minority in City (% Low-Income in City)	% Minority in Block Group (% Low-Income in Block Group)	% EJ Displacements (No. of EJ displaced / total neighborhood displacement)	% Non-EJ Displacements (No. of non-EJ displaced / total neighborhood displacement)
City of Dunwoody				
Dunwoody Village Apartment Homes	46.2% (5.8%)	48.7% (3.7%)	50% (21 of 42)	50% (21 of 42)
Dunnington Subdivision		72.8% (7.0%)	100% (1 of 1)	0% (0 of 1)
Chateau Club		42.2% (0%)	40% (8 of 20)	60% (12 of 20)
DeKalb County				
Greystone North Subdivision	71.8% (11.5%)	21.2% (9.9%)	20% (2 of 8)	80% (6 of 8)
Henderson Mill Condominiums		52.6% (3.6%)	50% (2 of 4)	50% (2 of 4)
Sandy Springs				
Hardin Ridge Subdivision	46.2% (6.7%)	28.0% (11.8%)	0% (0 of 1)	100% (1 of 1)
Glen Vernon Estates		8.9% (7.3%)	0% (0 of 1)	100% (1 of 1)
Highland Valley Subdivision		8.9% (7.3%)	0% (0 of 1)	100% (1 of 1)
			Total 44% (34 of 78)	56% (44 of 78)

2 Two additional EJ neighborhoods, the Georgetown and Embry Hills subdivisions, would have small amounts
 3 (less than 0.5 acre combined) of ROW taken as part of the Preferred Alternative. ROW acquisition would be on
 4 the edge of the neighborhoods and no substantial disruptions to community cohesion or access to community
 5 facilities would occur.

6 The Preferred Alternative would also displace 17 commercial buildings consisting of 44 active businesses and
 7 5 vacant spaces. **Appendix H-2, Demographic, Social, Economic, and Community Profile Analysis**, lists the
 8 properties and businesses to be displaced. It is anticipated that Georgia Power (office building) and the Atlanta
 9 Noland Company (shed) would relocate the two displaced structures within their existing parcels. Three minority-
 10 owned businesses, EMDEE International,³⁸ Creole•ish,³⁹ and The Spanish Preschool⁴⁰ are located in three of the

³⁸ EMDEE International. n.d. About Us. https://goemdee.com/about_us/. Accessed September 11, 2020.

³⁹ VoyageATL 2020. "Meet Chef Pink of Creole•ish Catering in South Atlanta." VoyageATL. October 28. <http://voyageatl.com/interview/meet-asia-greer-creole%e2%80%a2ish-catering-south-atlanta/>.

⁴⁰ The Spanish Preschool. 2022. About Us. <https://thespanishpreschool.com/our-team>. Accessed October 11, 2022.

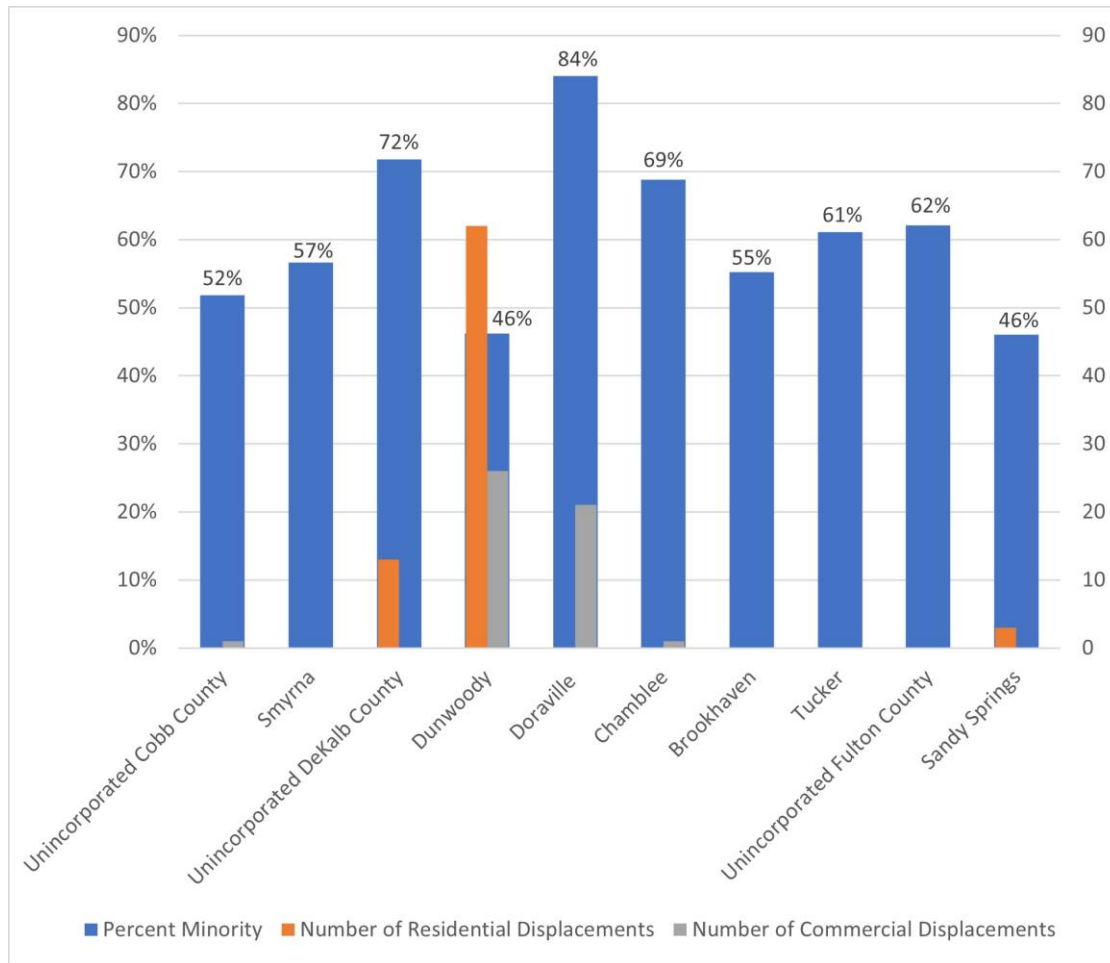
1 affected commercial buildings and would therefore be displaced as a result. Additionally, 16 of the 17 commercial
2 buildings (including the commercial buildings housing EMDEE International, Creole•ish, and The Spanish
3 Preschool) are within EJ BGs. Besides these three businesses, no other businesses are readily identifiable as EJ
4 businesses and none were identified as points of interest during project planning. Additionally, none of the
5 displaced businesses provide key services to EJ communities.

6 Based on the data presented, adverse impacts would occur to EJ populations from displacements associated with
7 the Preferred Alternative. However, adverse impacts to EJ populations from ROW acquisition and displacements
8 associated with the Preferred Alternative would not be disproportionate when compared to impacts to non-EJ
9 populations. Approximately 34 of the 78 residential displacements (44%) and 3 of the 44 active business
10 displacements (7%) would be EJ displacements. Thus, the number and percentage of residential and commercial
11 displacements is significantly lower than the non-EJ population of 44 of the 78 residential displacements (56%)
12 and 41 of the 44 active business displacements (93%).

13 The population in most of the counties and municipalities in the Project Area is greater than 50% minority. The
14 largest number of residential displacements (62 apartment/townhome residences) are in Dunwoody, which has
15 51,683 residents and is 46% minority. These data indicate that the percentage of displacements that are EJ (40%)
16 is less than the EJ percentage of the communities where the displacements would occur (46% or greater).
17 Additionally, impacts to potential EJ populations at Monarch Villas and Madison Square at Dunwoody from
18 displacements were minimized during development of the design.

19 The largest number of commercial displacements (9 structures and 21 businesses) is in Doraville, which is 84%
20 minority, but only three of the businesses were identified as EJ businesses. Based on the high number of minority
21 residents in the area, the displacement of 8 EJ townhomes, 1 EJ single-family home, and 21 EJ apartment units in
22 Dunwoody; 2 EJ condominiums and 2 EJ single-family homes in unincorporated DeKalb County; and 3 EJ
23 businesses in Doraville would not be considered disproportionate impacts to EJ populations when compared with
24 displacements of non-EJ homes and businesses in the same area. **Exhibit 3-29** illustrates the number of residential
25 and commercial displacements and minority percentage for each municipality in the Project Area.

1 Exhibit 3-29: Proposed Displacements and Minority Percentages Within Project Area



2

3 **Noise Impacts**

4 A noise analysis evaluated the Preferred Alternative Corridor modeling 3,953 receivers (representing 19,642
5 receptors). Of these receivers:

- 6 • 3,268 receivers (representing 15,349 receptors) are residential receivers;
- 7 • 1,034 residential receivers (484 EJ receivers [representing 3,282 receptors] and 550 non-EJ receivers
8 [representing 3,323 receptors]) would experience noise levels that approach or exceed the NAC with the
9 Preferred Alternative;
- 10 • Therefore, less than half of the receivers along the Preferred Alternative Corridor would experience noise
11 levels that approach or exceed the NAC from the Preferred Alternative.

12 Based on the findings of a noise abatement analysis, presented in **Appendix H-9, Noise Impact Analysis**, the
13 Proposed Project would construct 15 new noise barriers and replace 14 existing noise barriers that would conflict
14 with the project design. With the 13 existing barriers that would remain, the I-285 top end corridor within the
15 Proposed Project limits would have 42 noise barriers with the Preferred Alternative.

1 Where reasonable and feasible (dependent on factors such as the safety, acoustical effectiveness, and cost
2 effectiveness of the barrier), noise barriers decrease the impact of highway noise on adjacent residences to an
3 acceptable level. All receivers that approach or exceed the FHWA NAC in the 2057 design year were evaluated
4 for a new or improved noise barrier. Existing noise barriers, including those built as part of other projects, were
5 included in the modeled conditions for the Preferred Alternative.

6 **Appendix H-2, Demographic, Social, Economic, and Community Profile Analysis, Appendix H-9, Noise**
7 **Impact Analysis, and Section 3.9, Noise,** present detailed data on the noise analysis modeling methods and
8 assumptions, noise impacts, and noise barriers proposed throughout the Preferred Alternative corridor. **Appendix**
9 **H-2** also provides the methodology for determining disproportionate and adverse impacts to EJ communities.

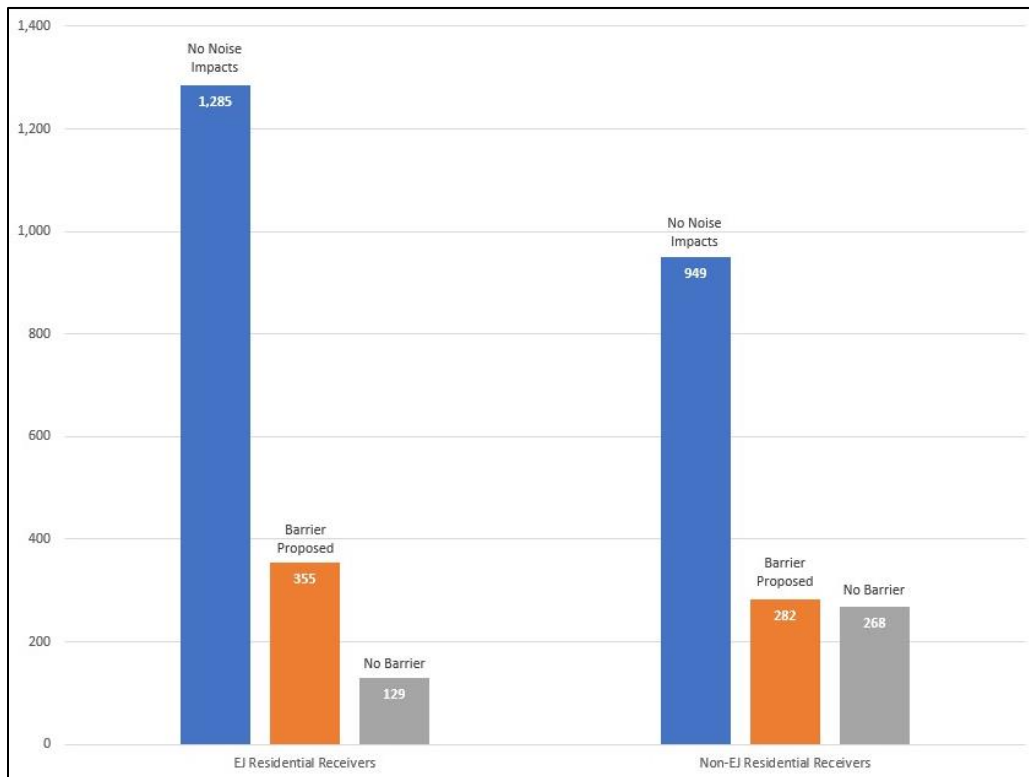
10 There are 3,268 residential receivers. A total of 1,034 receivers (32%) would experience noise levels that
11 approach or exceed the NAC with the Proposed Project but 970 receivers already approach or exceed the NAC in
12 Existing Conditions (2019). Of the 1,034 receivers, 484 represent residents that are considered for evaluation
13 under EJ. When analyzing the 484 EJ receivers, 476 approach or exceed the NAC in the Existing Conditions
14 (2019). Based on the data presented below, an additional eight EJ receivers, out of nearly 500, would approach or
15 exceed the NAC with the Proposed Project (2057) compared to Existing Conditions (2019).

- 16 • EJ Receivers that Approach or Exceed the NAC in Existing Conditions (2019): 476
- 17 • EJ Receivers that Approach or Exceed the NAC with the Proposed Project (2057): 484
- 18
- 19 • Total Receivers that Approach or Exceed NAC in Existing Conditions (2019): 970
- 20 • Total Receivers that Approach or Exceed the NAC with the Proposed Project (2057): 1,034
- 21

22 Under the Proposed Project conditions with proposed mitigation (noise barriers), 382 EJ receivers would
23 experience noise levels that approach or exceed the NAC, which is fewer than today.

24 **Exhibit 3-30** presents the results of the noise analysis broken down by EJ and non-EJ receivers. The results
25 indicate that fewer EJ receivers would experience noise levels above the NAC than non-EJ receivers (484 vs 550)
26 and more EJ receivers would receive a barrier than non-EJ receivers (355 vs 282).

1 Exhibit 3-30: Results of Noise Barrier Analysis for All Residential Receivers



2
 3 Many of the 397 receivers (129 EJ receivers + 268 non-EJ receivers) that would not receive a noise barrier are far
 4 enough away from the highway (typically 500 feet) that noise levels from the highway cannot be differentiated
 5 from other noise sources and a noise barrier would not reduce noise impacts.

6 Noise exceeding the NAC in EJ populations would be adverse; however, the majority of receivers along the
 7 corridor are already experiencing high levels of noise without the project. The proposed project would introduce
 8 an average of less than two decibels of noise throughout the corridor. Fewer EJ receivers would experience noise
 9 levels above the NAC from the Proposed Project (based on proposed noise mitigation) compared to existing
 10 conditions, fewer EJ receivers than non-EJ receivers would experience noise levels above the NAC, and more EJ
 11 receivers than non-EJ receivers would receive a noise barrier.

12 Based on the data presented, adverse impacts to EJ communities would occur but would not be disproportionate
 13 in comparison to non-EJ communities.

14 **Air Quality Impacts**

15 The State of Georgia is in attainment for carbon monoxide (CO) and particulate matter 2.5 micrometers or less
 16 (PM_{2.5}) but the Preferred Alternative is in a nonattainment area for ozone (O₃). The Preferred Alternative would
 17 be classified as a project with higher potential MSAT effects, therefore a MSAT analysis was conducted. Based
 18 on the MSAT analysis, projected emissions of all MSAT pollutants under the 2037 and 2057 Preferred
 19 Alternative scenarios would be lower than today. The discussion of the MSAT analysis and limitations to
 20 identifying localized impacts to sensitive receptors is included in **Section 3.8, Air Quality**. Overall, the Preferred

1 Alternative is consistent with state and federal air quality goals, including CO, O₃, PM_{2.5}, and MSAT. Results
2 indicated that the Preferred Alternative is consistent with the SIP for the attainment of clean air quality in Georgia
3 and complies with both state and federal air quality standards.

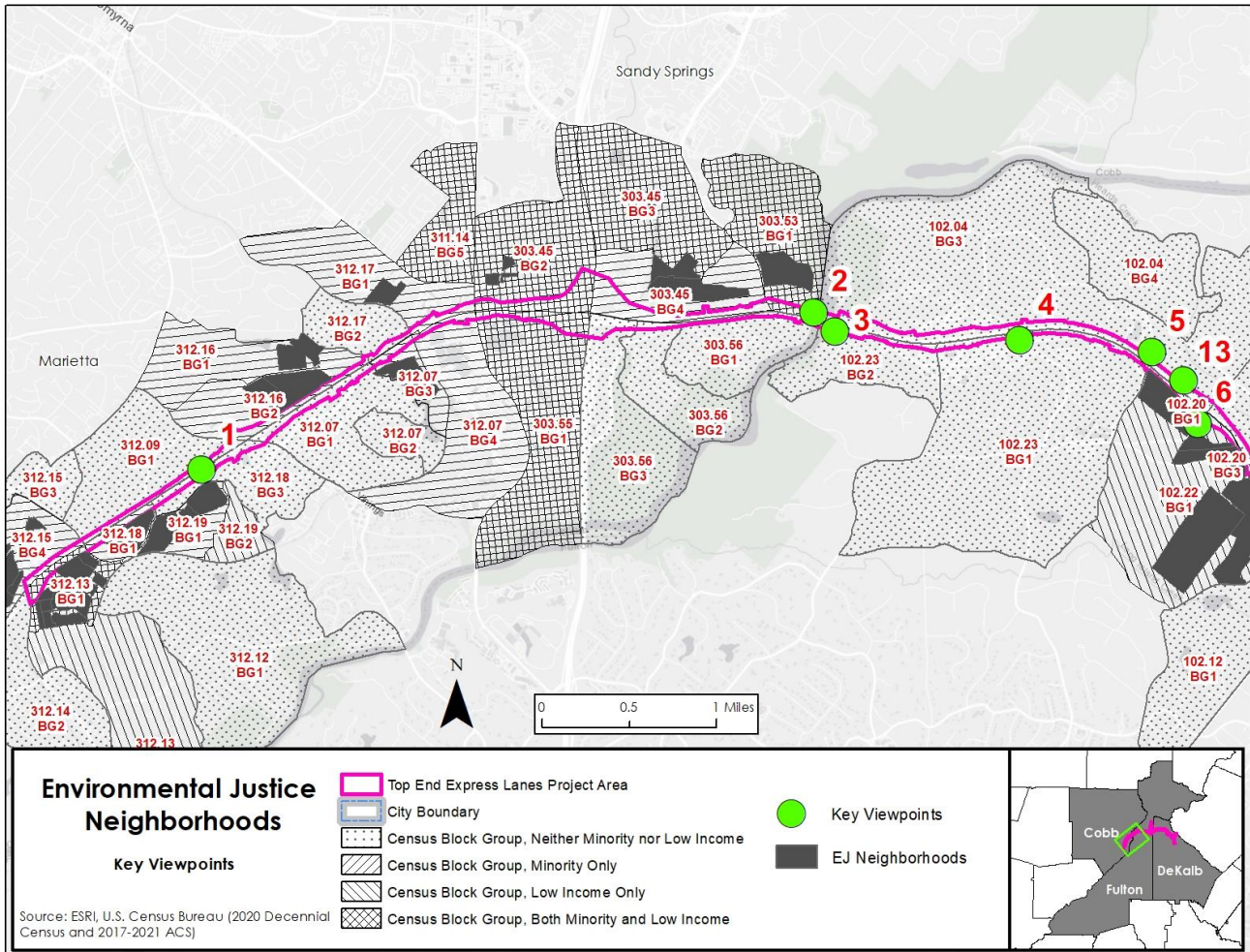
4 EJ populations would not be adversely impacted by air quality from the Preferred Alternative. **Appendix H-8,**
5 **Air Quality Impact Assessment,** and **Section 3.8, Air Quality,** present data on the air quality impacts
6 throughout the entire Preferred Alternative corridor.

7 **Visual Impacts**

8 Changes proposed as part of the Preferred Alternative include tree clearing and adding elevated structures along
9 I-285. This would remove the visual buffer between I-285 and the adjacent residential, park, and educational
10 properties within much of the Area of Visual Effect (AVE). Generally, viewers would experience a high level of
11 change in exposure and a moderate level of change in awareness. *Exposure* is a measure of the viewer's ability to
12 see a particular object. Viewer exposure has three attributes: proximity, extent, and duration. *Awareness* is a
13 measure of the viewer's recognition of a particular object. Viewer awareness has three attributes: attention, focus,
14 and protection. Based on **Appendix H-6, Visual Impact Assessment,** the Preferred Alternative would have an
15 adverse effect on the experience of overall visual quality within the AVE for neighbors of I-285 and travelers on
16 I-285.

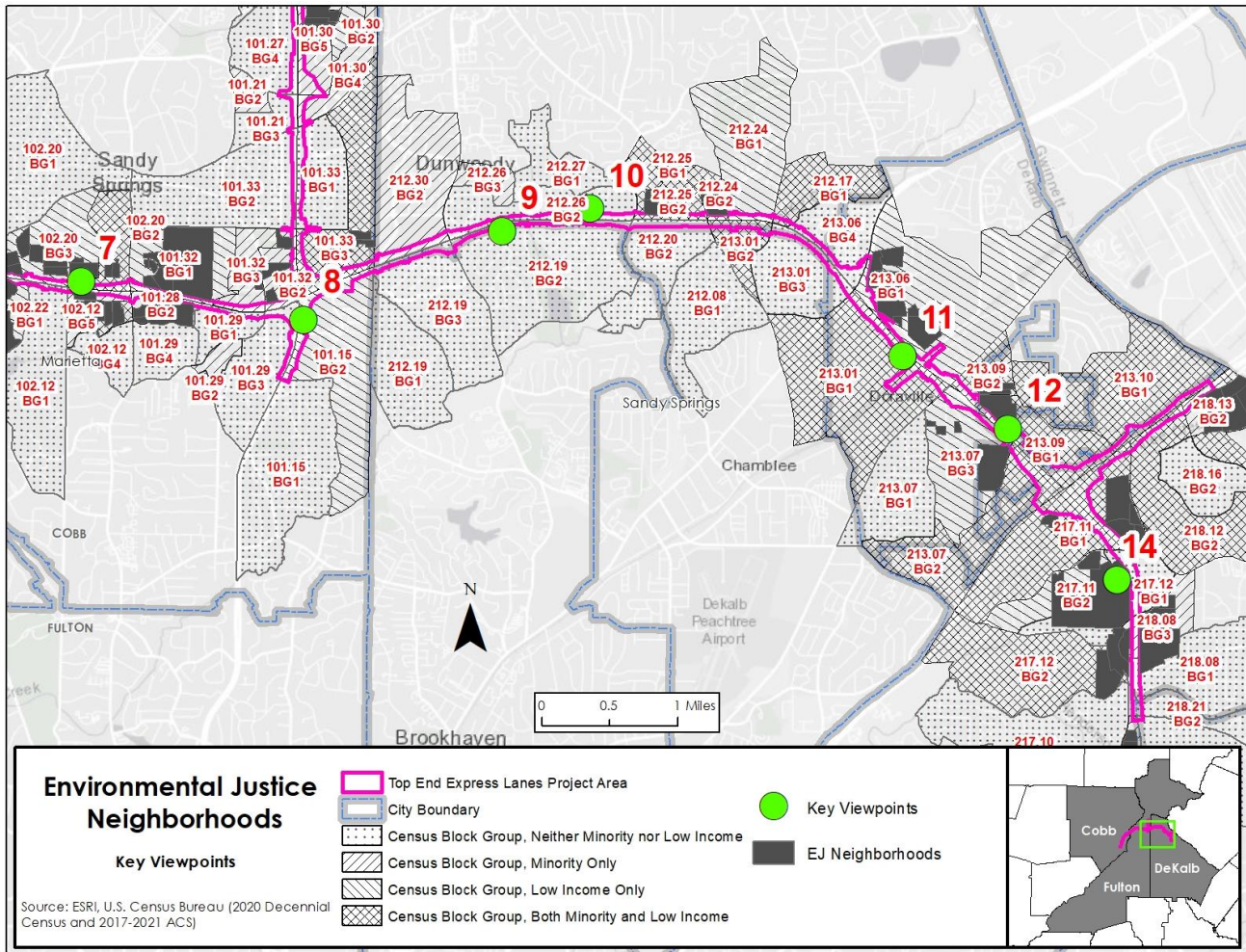
17 Based on the Visual Impacts Assessment (VIA), Key Views 6, 7, 12, and 14 best represent the views experienced
18 by EJ communities and EJ roadway travelers. **Exhibits 3-31** and **3-32** present the location of the key views in
19 relation to the EJ BGs and neighborhoods along the Proposed Project corridor. Visual quality adverse impacts are
20 anticipated at all key views within EJ communities except for Key View 7 as part of the construction of the
21 Preferred Alternative. Adverse impacts to visual quality are expected at all but three key views (Key Views 1, 7,
22 and 8) along the Preferred Alternative corridor in both EJ and non-EJ census blocks; therefore, impacts will be
23 experienced by all communities regardless of EJ status. The Preferred Alternative is expected to have adverse
24 effects on EJ communities but not affect EJ communities disproportionately compared with non-EJ communities.

1 Exhibit 3-31: Key Viewpoints and Census Block Groups in Project Area



2

1 Exhibit 3-32: Key Viewpoints and Census Block Groups in Project Area



2
3 **Impacts to Regional and Local Mobility**

4 The Preferred Alternative was analyzed for its impacts on regional and local mobility. Regional mobility would
 5 improve with the implementation of the Preferred Alternative. VMT is anticipated to increase over the No-Build
 6 Alternative in 2057 due to additional system capacity, but VHT would decrease compared to the No-Build
 7 Alternative. This results in reduced congestion and improved mobility for all motorists using the regional
 8 highway system.

9 Although particular areas along the Preferred Alternative corridor may experience specific transportation impacts,
 10 overall, the Preferred Alternative would improve regional and local mobility and congestion. Adverse impacts to
 11 EJ populations are not anticipated.

12 **Express Lane Access**

13 Approximately 67 of the 120 EJ neighborhoods within the Preferred Alternative Project Area would be close to
 14 the EL DARs. The majority of EJ neighborhoods are located in the eastern half of the Project Area and six of the
 15 seven direct-access ramps are also located in the eastern half of the Project Area. Additionally, any EJ populations
 16 using the I-285 Top End GP lanes would have six direct-merge locations to use for access to the ELs.
 17 The Preferred Alternative does not limit or restrict EL access for EJ populations.

1 Tolling Impacts

2 For the Preferred Alternative, all vehicles, except state-registered transit, state-registered vanpools, registered law
 3 enforcement, and emergency vehicles, would be charged for using the ELs, indicating that all users would be
 4 affected by the cost. An analysis of tolling effects on low-income populations was conducted and can be found in
 5 **Appendix H-3, Evaluation of Tolling Effects on Low-Income Populations**. The analysis used existing and
 6 forecasted socioeconomic data, projected traffic, and travel times from ARC's ABM combined with ACS
 7 population and income data as they related to TAZs⁴¹ to identify low-income areas in the region, identify origins
 8 and destinations of EL trips, and analyze projected travel times of priced/free route choices. The analysis of travel
 9 times indicates that in 2050 the Preferred Alternative ELs would improve travel times by approximately 33% to
 10 54%. GP lanes would see between a 10% and 24% improvement in travel times from the 2050 No-Build
 11 Alternative to the 2050 Preferred Alternative. Whether low-income users of I-285 stay on the GP lanes or choose
 12 to use the ELs, trip time would be reduced with the implementation of the Preferred Alternative.

13 During the planning of the Preferred Alternative, specific components of the toll system and how they may affect
 14 low-income populations were considered. These included, but were not limited to, the availability of non-tolled
 15 facilities, transit vehicle toll policies, methods of toll collection, cost difference based on credit card versus cash,
 16 toll rates, and the location of tolling facilities. **Appendix H-3, Evaluation of Tolling Effects on Low-Income
 17 Populations**, presents a complete list of considerations but for reference, an evaluation of methods of toll
 18 collection and cost difference indicated that cash options are available that allow low-income users access to a
 19 Peach Pass without needing a credit card or bank account. The BancPass Pay n Go Starter Kit requires a \$5.00
 20 activation fee and initial deposit of \$15.00 (for a total of \$20.00), purchase includes a Peach Pass transponder and
 21 a BancPass Reload Card. There is a \$2.00 convenience fee to reload an account. Cash purchases via BancPass Pay
 22 n Go can be made at participating retail stores. A comparison of purchase options via BancPass Pay-n-go versus
 23 direct purchase from PeachPass Georgia is provided below:

- 24 • BancPass Pay-n-go Option:
 - 25 † \$5.00 Activation Fee (will receive Transponder and BancPass Reload Card)
 - 26 † Minimum opening balance of \$15.00 (Note: \$2.00 convenience fee each time funds added)
 - 27 † Total for starter kit is \$20.00
 - 28 † No low balance threshold
 - 29 † Payment options: Cash, Debit Card, Credit Card
- 30 • Peach Pass Option:
 - 31 † No activation fee (will receive Transponder with option of windshield or exterior mounting)
 - 32 † Minimum opening balance of \$20.00
 - 33 † \$10.00 low balance threshold
 - 34 † Payment options: Cash, Debit Card, Credit Card, Check, Money Order

35 Sources: Peach Pass Retail Center. Nov 2023. Peach Pass Retail Center website. <https://www.peachpass.com/>; Peach Pass Retail Center.
 36 Nov 2023. BancPass Pay n Go. <https://peachpass.com/pay-n-go/>.

⁴¹ TAZs are geographic units used in traffic modeling software. The Atlanta area TAZs were developed by the Travel Demand Model Development Team in the ARC's Transportation Access and Mobility Group for use with base and forecasted population, employment, household data, and university enrollment. The 5,873 TAZs are incorporated into existing and future highway and transit networks in ARC's ABM to model how users are likely to use the regional transportation network.

1 **Appendix H-3, Evaluation of Tolling Effects on Low-Income Populations**, indicates that the implementation
 2 of new, tolled capacity is anticipated to generate adverse impacts on all populations, including the low-income
 3 populations, due to the addition of a toll fare. However, the effects would not be disproportionate on low-income
 4 populations. The Preferred Alternative would maintain the same number of existing, non-tolled, GP lanes, which
 5 would be anticipated to experience improved travel times due to the proposed ELs. Furthermore, transit users
 6 would be able to share the same benefits as those in personal vehicles while paying their normal fee, avoiding the
 7 toll, and still obtaining reliable trip times to their destination. The rates paid are not anticipated to
 8 disproportionately result in an economic impact to low-income individuals because use of the proposed ELs
 9 would be at the discretion of the individual. The benefits of the project would accrue to all users of the ELs,
 10 regardless of income, and to all users of the GP lanes, regardless of income. Therefore, the addition of a toll
 11 would not amount to a denial, reduction, or significant delay in the receipt of benefits to low-income populations.

12 **Comparison Between EJ and Non-EJ Impacts**

13 Based on the analysis presented, EJ populations would experience adverse impacts from the Preferred Alternative,
 14 but there would be no disproportionate effects to EJ populations. The cumulative impacts identified would not be
 15 predominately borne by EJ populations and would not be appreciably more severe or greater in magnitude than
 16 impacts to non-EJ populations. **Exhibit 3-33** presents the findings and justification for this assessment.

17 **Exhibit 3-33: Comparison of Impacts between EJ and non-EJ Populations**

Impact Type	Impact to EJ Populations	Impact to Non-EJ Populations	Disproportionate and Adverse Assessment	Mitigation	Off-Setting Benefits
ROW Acquisition (non-displacement)	0.96 acre of narrow strips of ROW adjacent to highway from three communities (3.1% of residential ROW)	0.82 acre of narrow strips of ROW adjacent to highway from one community (2.6% of residential ROW)	Impacts to EJ populations are not disproportionate. Adverse impacts would be borne by EJ and non-EJ populations.		Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, 42 U.S.C. 4601
Displacements	34 residential displacements (44%) 3 active business displacements (7%)	44 residential displacements (56%) 41 active business displacements (93%) 2 commercial onsite relocations	Impacts to EJ populations are not disproportionate. Adverse impacts would be borne by EJ and non-EJ populations.		Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, 42 U.S.C. 4601
Transportation	Regional and local mobility and congestion improve	Regional and local mobility and congestion improve	Impacts would be beneficial to all populations.	No mitigation required	

1 Exhibit 3-33: Comparison of Impacts between EJ and non-EJ Populations (continued)

Impact Type	Impact to EJ Populations	Impact to Non-EJ Populations	Disproportionate and Adverse Assessment	Mitigation	Off-Setting Benefits
Tolling	Adverse impact	Adverse impact	Impacts to EJ populations are not disproportionate. Adverse impacts would be borne by EJ and non-EJ populations.	Offer multiple payment options (including a cash option in line with industry standards. Currently BancPass Pay n Go)	<ul style="list-style-type: none"> Transit vehicles and state-registered vanpools operate in ELs for free; GP travel time improvements; EL access near EJ communities
Air Quality	No CO, O ₃ , or PM _{2.5} analyses required No MSAT impacts identified	No CO, O ₃ , or PM _{2.5} analyses required No MSAT impacts identified	No impacts to either EJ or non-EJ populations.	No mitigation required	
Noise*	484 receivers impacted by noise 129 impacted receivers would not benefit from noise barriers	550 receivers impacted by noise 268 impacted receivers would not benefit from noise barriers	Impacts to EJ populations are not disproportionate. Adverse impacts would be borne by EJ and non-EJ populations.	42 proposed noise barriers throughout corridor	
Visual	Adverse impacts to visual quality at one out of four Key Views in EJ areas	Adverse impacts to visual quality at 2 out of 10 Key Views in non-EJ areas	Impacts to EJ populations are not disproportionate. Adverse impacts would be borne by EJ and non-EJ populations.	Seeking public input during Public Hearing Open House. Mitigation to be developed after the Public Hearing Open House.	
EL Access	Majority of EJ neighborhoods within proximity to direct access ramps	No direct access to ELs between Cumberland Boulevard and Mount Vernon Highway	No adverse impacts to EJ populations related to direct access ramp availability.	No mitigation required	

2 Notes:

3 Resources that would be impacted by the project and are discussed in the Draft EIS but would not affect EJ populations were not analyzed.

4 These include historical structures, archeological resources, hazmat sites, water/biological resources, and geology/soils.

5 Refer to Section 3.3.4 for mitigation.

6 *Voting by the public on whether or not they are in favor of the noise barrier will occur after LET and the approval of Final Design plans.

7 Off-Setting Benefits are defined as aspects or effects of a proposed project that would benefit environmental justice communities Department of Transportation (DOT) Order 5610.2(a) 2012.

3.3.3.3 Direct Effects on Communities of Concern – Preferred Alternative

Limited English Proficiency Populations

Although LEP populations could be affected by any of the residential displacements, only one of the residential displacements is in a Census BG that has a LEP population over 6%. The Chateau Club Townhomes were in CT 212.26, BG 2, which has no LEP populations; Dunwoody Village Apartment Homes, Glen Vernon Estates and Highland Valley are in BGs that report less than 1% LEP; Henderson Mill Condominiums are in CT 217.12, BG 1, which reports 3.6% LEP, the Hardin Ridge single-family displacement is within CT 102.20, BG 3, which reports 5.9% LEP, and the Greystone single-family displacements are within CT 218.08, BG 1, which reports 5.2% LEP. The single-family displacement in the Dunnington neighborhood is in CT 218.08, BG 3, which is 25.2% LEP. Impacts to LEP populations from residential displacements are unlikely based on the data presented. No businesses would be displaced within the identified LEP commercial areas and only one of the commercial displacements, The Spanish Preschool, exhibits signage that caters to LEP clientele. The Spanish Preschool is an English/Spanish preschool focused on bilingual learners.

Noise impacts have been identified throughout the Preferred Alternative corridor and noise barriers proposed where reasonable and feasible to the benefit of all communities adjacent to the Preferred Alternative corridor. Of the 62 noise barriers evaluated along the corridor, 53 are within LEP block groups. Of those, 35 would provide noise benefits to LEP neighborhoods, and 18 are not recommended because they are not feasible and reasonable. Additional information regarding noise impacts and barriers can be found in **Appendix H-9, Noise Impact Assessment**, and **Section 3.9, Noise**.

The State of Georgia is in attainment for CO and PM_{2.5} but the Preferred Alternative is in a nonattainment area for O₃. The Preferred Alternative would be classified as a project with higher potential MSAT effects, therefore a MSAT analysis was conducted. The full discussion of the MSAT analysis and limitations to identifying localized impacts to sensitive receptors is included in **Appendix H-8, Air Quality Impact Assessment**. Overall, the Preferred Alternative is consistent with state and federal air quality goals, including CO, O₃, and PM_{2.5}. Results indicated that the Preferred Alternative is consistent with the SIP for the attainment of clean air quality in Georgia and complies with both state and federal air quality standards.

A comparison of GHG emissions between the existing condition, No-Build Alternative, and the Preferred Alternative was conducted and is also included in **Appendix H-8, Air Quality Impact Assessment**. Based on the anticipated VMT, the Preferred Alternative would increase emissions by 16% in 2037 and 36% in 2057 over existing conditions. However, compared to the No-Build emissions in the same years, the increase would only be 5% and 7%, respectively. The Proposed Project GHG emissions would add to the cumulative impact of GHG in the atmosphere.

Visual and transportation impacts to LEP communities would be the same as those for non-LEP communities. LEP communities were included in all planning and public involvement activities associated with the Preferred Alternative and ROW impacts to Monarch Villas, an identified LEP community, were eliminated during design development. Current and future users of ELs can access information on the Peach Pass in Spanish on the Peach

1 Pass website⁴² and information on the “Pay n Go” BancPass option is available in eight non-English languages on
2 the BancPass website (About BancPass, 2021).

3 Additional information regarding air quality and visual and transportation impacts can be found in **Section 3.8,**
4 **Air Quality, Section 3.6, Visual Quality and Aesthetics, and Appendix H-4, Transportation Systems Report.**

5 In conclusion, the Preferred Alternative would impact LEP communities.

6 **Elderly and Disabled Populations**

7 Direct impacts to hospitals or known services for the elderly and disabled would not occur. State-registered transit
8 and state-registered vanpools would not be charged to use the ELs, eliminating the cost of tolls for elderly and
9 disabled individuals using those services. Implementation of the Preferred Alternative would improve traffic
10 conditions for all users, including the elderly and disabled, as discussed in **Appendix H-4, Transportation**
11 **Systems Report.** Based on the lack of known direct impacts and potential positive impacts from improved traffic
12 conditions, the Preferred Alternative would not exclude from participation in, deny the benefits of, or subject to
13 discrimination the elderly and disabled under any of its programs, services, or activities.

14 Disabled and elderly residents adjacent to the construction area might experience minor changes to neighborhood
15 access due to short-term detours during construction. Likewise, traffic volumes might increase temporarily on
16 some neighborhood roads when drivers attempt to bypass construction-related traffic delays by driving through
17 residential neighborhoods. Construction-related traffic impacts would vary in intensity and duration depending on
18 construction methodologies and phasing. Details on construction-related impacts can be found in **Section 3.13,**
19 **Construction Impacts.**

20 **Health of Children**

21 The Preferred Alternative would impact the Silver Comet Cumberland Connector Trail, Akers Mill (East) Trail,
22 Mountain-to-River Trail, Interstate North Trail, Bob Callan/Rottenwood Creek Trail, and the PATH400 Trail
23 (under construction). Minor impacts would occur to these resources and portions of the trails may temporarily
24 close during construction in order to ensure the safety of trail users when construction of the ELs is occurring over
25 the trail areas. The Preferred Alternative would not permanently affect the recreational use of the parks and trails
26 by children and would maintain the safety of all users of the parks and trails during construction.

27 The Preferred Alternative would require property from three schools in the City of Sandy Springs: 1.37 acres at
28 Hears Ferry Elementary School located at Powers Ferry Road adjacent to eastbound I-285, 1.06 acres at
29 Riverwood International Charter High School located on Raider Drive along westbound I-285, and 0.25 acres at
30 Tabula Rasa located on Riverside Drive adjacent to eastbound I-285 on the same property as Kairos Church. No
31 buildings are located within the proposed ROW at these locations. The existing I-285 main lanes are
32 approximately 130 feet away from Hears Ferry Elementary School, and the proposed elevated ELs would be
33 constructed approximately 80 feet away from the campus building within the existing Georgia DOT ROW.

34 During coordination with FCS in early 2020, FCS expressed concerns with the nearness of the Preferred
35 Alternative to Hears Ferry Elementary School, particularly to a play area for special needs classes, a playground,
36 and a large field occasionally leased to the City of Sandy Springs for events. Concerns from FCS for Hears Ferry

⁴² Peach Pass Retail Center. n.d. Peach Pass website. <https://www.peachpass.com/>.

1 Elementary School included noise, constructability, safety, and construction impacts (noise, dust, etc.).
2 Georgia DOT is committed to not using the school property for construction personnel, vehicles, and equipment.
3 FCS also expressed concerns with potential noise, safety, and construction traffic issues related to the football
4 field and bleachers at Riverwood International Charter School. Georgia DOT would coordinate with FCS prior to
5 the commencement of and during the final design phase. Noise mitigation efforts are under evaluation at the
6 school and a transportation plan detailing the timing of any lane closures and detours would be made available to
7 FCS and the school during construction. (Environmental Commitments Table No. E-23)

8 The Preferred Alternative would displace The Spanish Preschool in Doraville which is a newly opened location of
9 a preschool in west Atlanta, outside the Study Area. Georgia DOT is working the property owner through early
10 coordination to provide the time and assistance necessary to successfully relocate the displaced business to
11 comparable accommodations.

12 The air quality analysis presented in **Appendix H-8, Air Quality Impact Assessment**, found no environmental
13 health and safety risks that would disproportionately affect children.

14 There would be no environmental health risks or safety risks that may disproportionately affect children because
15 of the Preferred Alternative.

16 **3.3.3.4 Indirect Effects**

17 The Preferred Alternative has the potential to influence decision-making for development along the corridor, but
18 new development associated with the Preferred Alternative would be limited due to the finite land available along
19 the Preferred Alternative corridor. Land use changes are discussed in-depth in **Appendix D, Indirect and**
20 **Cumulative Effects Report**. Land use change would be characterized by accelerated redevelopment in areas with
21 direct access to the ELs and changes in future planned land use adjacent to the ELs.

22 The Preferred Alternative would have the potential to facilitate future land use changes in approximately 21 parcels
23 in the City of Chamblee that are adjacent to I-285 along Savoy Drive. These parcels encompass 37.4 acres of land
24 that are currently zoned Commercial Corridor, Village Commercial, and Village Residential and includes
25 10 Perimeter Park, which is a potential EJ neighborhood. The Future Land Use map from the City's One Chamblee
26 Comprehensive Plan shows that these parcels are recommended for redevelopment as Office Space or High-Density
27 Residential areas. As described by local planning staff, the proximity of the proposed elevated ELs to these parcels
28 may create a level of increased noise or other effects that are incompatible with the office and residential land use
29 recommended in the plan. Therefore, one potential EJ neighborhood could be indirectly affected by the presence of
30 elevated ELs. The future land use for the identified parcels would need to be reevaluated with the presence of the
31 elevated ELs factored into the City of Chamblee's future redevelopment plans.

32 The Preferred Alternative would have the potential to induce future land use changes at approximately 66 parcels
33 in the City of Doraville that are adjacent to I-285. These parcels are currently zoned Urban Center and Urban Core
34 and are part of the Doraville Town Center and BuHi Cultural Corridor. The Doraville Town Center is within an
35 EJ BG, but no residential areas are present within this area. Future Land Use data from the City of Doraville
36 shows that these parcels are recommended for redevelopment as part of the Doraville Town Center and the BuHi
37 Cultural Corridor, which will feature mixed-use environments including office and residential space. The
38 proximity of the elevated ELs to these parcels may create incompatible conditions adjacent to proposed new
39 office and residential land use. Therefore, as identified by local planning staff, the recommended future land use

1 for the identified parcels should be reevaluated with the presence of the elevated ELs factored into the City of
2 Doraville’s future redevelopment plans.

3 Impacts to EJ populations could be possible from these future land use changes because parts of both areas fall
4 within EJ BGs and minority and low-income populations could benefit from these developments. However, these
5 potentially adverse impacts would be minimal and may be offset by revisions to the City’s planned future land uses.

6 3.3.3.5 Cumulative Effects

7 The growth and expansion of communities in the Project Area have largely occurred in response to construction
8 of I-285 in 1969, followed by construction of SR 400 and the opening of I-75. Additional development
9 contributors to community growth to date have included the General Motors Plant (1947), Northside Hospital
10 complex (1970), Perimeter Mall and Perimeter Center (1971), and the Atlanta Braves stadium and The Battery
11 Atlanta (2017). The area along the Preferred Alternative corridor has been in a constant state of increasing
12 urbanization over the past five decades. As urbanization has spread, the racial composition of the area has shifted
13 from primarily White to a multi-ethnic, multi-cultural area. Additionally, incomes in the area have continued to
14 rise as the Atlanta region has benefited from the previous decade’s economic growth. No known impacts to EJ
15 populations occurred from previous major developments in the area (listed as DRI in **Appendix D, Indirect and**
16 **Cumulative Effects Report**). Future developments would be subject to review and approval by local
17 municipalities, ensuring they conform to the values and standards outlined in city planning documents. Future
18 developments include areas such as the BuHi Cultural Corridor that focuses on the Hispanic and Asian cultures
19 present in the area. Cumulative impacts to EJ populations from the Preferred Alternative would be negligible
20 within the Indirect and Cumulative Effects Area of Potential Effects (APE) (refer to **Appendix D, Indirect and**
21 **Cumulative Effects Report**) because past and present developments have not led to substantial impacts on EJ
22 populations and reasonably foreseeable impacts would follow current planning guidelines.

23 3.3.4 Potential Avoidance, Minimization, and Mitigation

24 A full list of environmental commitments can be found in **Appendix P, Environmental Mitigation Plan**.
25 Measures to minimize or mitigate adverse effects would be implemented for the following:

- 26 • **Acquisition and Displacement:** To minimize potential adverse impacts from ROW acquisition,
27 compensation and relocation assistance are provided to eligible recipients for full and partial property
28 acquisitions, as required by the Uniform Act (defined in **Appendix B, Applicable Laws and**
29 **Regulations**). The Uniform Act directs that when an agency acquires property for a federal-aid project,
30 ROW requirements are in place to provide benefits, protection, and payment of just compensation. When
31 a project displaces an individual, family, business, farm or nonprofit organization, additional services and
32 payments are required. FHWA does not consider compensation to be a mitigation measure.
- 33 • **Population and Housing:** A Public Involvement and Communications Plan would be developed and
34 implemented to inform the surrounding communities about the Preferred Alternative construction
35 activities (**Appendix P, Environmental Mitigation Plan**).
- 36 • **Schools:** Ongoing coordination would continue between Georgia DOT and the FCS system to ensure the
37 Preferred Alternative would not adversely impact Heards Ferry Elementary School or Riverwood
38 International Charter High School.
- 39 • **Businesses and Employment:** A Public Involvement and Communications Plan would be developed and
40 implemented to inform the community about the Preferred Alternative construction activities. A TMP

1 would also be developed and implemented to maintain access to and from the affected communities
2 through signage, detours, flagmen, etc. (**Appendix P, Environmental Mitigation Plan**).

- 3 • **EJ Communities, including Low-Income:** To promote employment opportunities for residents along the
4 corridor, pursuant to Section 25019 of the Bipartisan Infrastructure Law, Georgia DOT may consider
5 programs to expand local workforce participation in construction activities. Any requirements for
6 workforce development included in a Project-related construction contract will be consistent with the law,
7 FHWA federal-aid regulations, and applicable Georgia DOT policies. Georgia DOT will coordinate with
8 FHWA to provide periodic reporting on its workforce development programs and outcomes during the
9 construction period. For each of the Project’s construction packages, at the time procurement is initiated,
10 Georgia DOT will establish a contract-specific Disadvantaged Business Enterprise goal in accordance
11 with its current *Disadvantaged Business Enterprise Program Plan* and 49 CFR 26 (Participation by
12 Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs).
- 13 • **Noise:** Forty-two noise barriers would be included where design-year noise levels approach or exceed the
14 FHWA NAC and are reasonable and feasible which depends on factors such as the safety, acoustical
15 effectiveness, cost effectiveness of the barrier, and public input.
- 16 • **Visual Impacts:** Georgia DOT will receive input during the Draft EIS Public Review process on visual
17 preferences and a suite of potential mitigation measures and enhancements to sustain them. Georgia DOT
18 is seeking to establish a suite of potential aesthetic mitigation measures for use either corridor wide or as
19 site-specific mitigation, such as a combination of lighting, special landscape zones, and aesthetic
20 treatments near sensitive viewers.
- 21 • **Tolling Impacts:** Low-income toll users who do not use credit cards have the option to load their Peach
22 Pass at participating retail centers or they may purchase a BancPass Pay n Go at participating retailers and
23 not tie the purchase to a bank or credit card.

24 3.4 Economics

25 This section discusses the Preferred Alternative’s potential economic impact on the regional economy and any
26 opportunities to minimize or reduce impacts on the public and/or private sectors. Where applicable, this section also
27 references state economic information for context purposes. **Appendix H-2, I-285 Top End Project, A Demographic,**
28 **Social, Economic, and Community Profile Analysis**, provides additional information on these topics.

29 3.4.1 Affected Environment

30 For this resource, the Study Area is the U.S. Office of Management and Budget’s Atlanta-Sandy Springs-
31 Alpharetta Metropolitan Statistical Area (Atlanta MSA). The Atlanta MSA encompasses 29 counties, including
32 those encompassing the Preferred Alternative corridor: Cobb, DeKalb, and Fulton Counties. The seven cities that
33 intersect or are adjacent to the Preferred Alternative—Brookhaven, Doraville, Chamblee, Dunwoody, Sandy
34 Springs, Smyrna, and Tucker—are within these three counties. Not all economic data needed to support this
35 analysis is provided by the U.S. Office of Management and Budget; therefore, where applicable, Atlanta MSA
36 data is supplemented by data for ARC’s 20-county Metro Atlanta area.

3.4.1.1 Economic Conditions and Trends: Atlanta MSA

The Atlanta MSA (i.e., the Study Area) is a key economic driver for the state of Georgia. With roughly half of the state's population, this area was responsible for 69% of the gross domestic product (GDP) in Georgia in 2020.⁴³ In 2020, the Atlanta MSA's GDP was \$425 billion in current dollars.⁴⁴ Compared to other metropolitan areas, Atlanta's gross regional product per capita has been documented to be below the values for many other benchmark metropolitan areas such as Washington, D.C., Dallas-Fort Worth, and Nashville.⁴⁵ **Exhibit 3-34** displays the Atlanta MSA's GDP in current dollars, which has grown steadily every year since 2010, by between \$9 billion and \$27 billion annually, until 2020, when the COVID-19 pandemic began.

Exhibit 3-34: Atlanta MSA Current-Dollar GDP 2010-2020 (Billions of Current Dollars)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
\$272	\$281	\$292	\$305	\$325	\$347	\$369	\$389	\$411	\$438	\$425

Source: Bureau of Economic Analysis. 2021. *Regional Data GDP and Personal Income Atlanta-Sandy Springs-Alpharetta, GA (Metropolitan Statistical Area)*. <https://apps.bea.gov/itable/iTable.cfm?ReqID=70&step=1>.

According to ARC, employment is projected to grow to 3.8 million in 2050 in the 20-county Metro Atlanta area, the closest equivalent geography to the Atlanta MSA for which economic projections were available.⁴⁶ As of 2021, the Atlanta MSA's annual mean wage was approximately \$59,100,⁴⁷ about \$840 higher than the national annual mean wage.⁴⁸

In terms of employment growth, as of June 2022, total non-farm employment in the Atlanta MSA grew 6.4% in the preceding 12 months. The COVID-19 health crisis caused employment in the Atlanta MSA to drop approximately 12% in April 2020, but current data indicate the economy is recovering.⁴⁹ For wages and salaries, the Atlanta MSA's Employment Cost Index has grown every year from 2018 to 2022 by between approximately 1.7% and 3.4%. In June 2022, the Atlanta MSA's Employment Cost Index grew by approximately 4.4%, which was lower than the United States growth of approximately 5.7% in the preceding 12 months. As of June 2022, the unemployment rate in the Atlanta MSA was 3.2%, down from 4.5% in June 2021.⁵⁰

In general, over the last five decades, the Atlanta MSA has experienced an increase in urbanization, with associated land use and economic changes, transitioning from rural and industrial to commercial and service-based economies,

⁴³ Bureau of Economic Analysis. n.d. *Regional Data GDP and Personal Income Atlanta-Sandy Springs-Alpharetta, GA (Metropolitan Statistical Area)*. Accessed July 18, 2022. <https://apps.bea.gov/itable/iTable.cfm?ReqID=70&step=1>.

⁴⁴ Bureau of Economic Analysis. n.d. *Regional Data GDP and Personal Income, Gross Domestic Product by State*. Accessed September 1, 2022. <https://apps.bea.gov/itable/iTable.cfm?ReqID=70&step=1>.

⁴⁵ Bureau of Economic Analysis. n.d. *Regional Data GDP and Personal Income, Personal Income Summary*. Accessed September 19, 2022. <https://apps.bea.gov/itable/iTable.cfm?ReqID=70&step=1>.

⁴⁶ Atlanta Regional Commission (ARC). n.d. *Population and Employment Forecasts*. Accessed April 2, 2020. <https://atlantaregional.org/atlanta-region/population-employment-forecasts/>.

⁴⁷ Bureau of Labor Statistics (BLS). n.d. *2021 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates Atlanta-Sandy Springs-Roswell, GA*. May. Accessed July 6, 2022. https://www.bls.gov/oes/current/oes_12060.htm.

⁴⁸ Bureau of Labor Statistics (BLS). n.d. *May 2021 National Occupational Employment and Wage Estimates*. Accessed July 6, 2022. https://www.bls.gov/oes/current/oes_nat.htm.

⁴⁹ Bureau of Labor Statistics (BLS). n.d. *Atlanta Area Employment*. Accessed July 19, 2022. https://data.bls.gov/timeseries/SMU1312060000000001?amp%253bdata_tool=XGtable&output_view=data&include_graphs=true.

⁵⁰ Bureau of Labor Statistics (BLS). n.d. *Atlanta, GA, Area Economic Summary*. Accessed July 6, 2022. https://www.bls.gov/regions/southeast/summary/blssummary_atlanta.pdf.

1 especially around I-285. That shift is reflective of the entire state of Georgia, where the agricultural sector employed
 2 more than 21% of residents in 1950, but by 2000, that number had dropped to 1.4%. Statewide, farm earnings as a
 3 percent of total personal income dropped from 10% in 1950 to 2.7% in 1970 and 0.7% in 2000, while in the Atlanta
 4 MSA, those numbers dropped from 0.4% in 1970 to 0.1% in 2000.⁵¹ Exhibit 3-35 presents more detailed and recent
 5 employment trends from the Bureau of Labor Statistics for the Atlanta MSA since 2000 in terms of the role of each
 6 employment sector in the Atlanta MSA economy. The years 2000, 2010, and 2020 are included as benchmarks to
 7 demonstrate trends in 10-year increments and over the last 20 years.

8 Exhibit 3-35: Employment Trends, Atlanta MSA Total Employment Breakdown by Sectors

Bureau of Labor Statistics Major Occupation Title	2000	2010	2020
Office and Administrative Support Occupations	19.8%	18.5%	13.2%
Sales and Related Occupations	10.9%	11.3%	10.7%
Transportation and Material Moving Occupations	8.1%	7.7%	10.1%
Food Preparation and Serving Related Occupations	7.0%	8.5%	7.9%
Business and Financial Operations Occupations	4.6%	6.3%	7.6%
Management Occupations	7.5%	6.7%	7.6%
Educational Instruction and Library Occupations	5.2%	6.7%	5.7%
Production Occupations	7.2%	4.8%	5.3%
Healthcare Practitioners and Technical Occupations	3.7%	4.6%	5.1%
Computer and Mathematical Occupations	3.6%	3.6%	4.7%
Installation, Maintenance, and Repair Occupations	4.2%	4.0%	3.7%
Construction and Extraction Occupations	4.8%	3.2%	3.1%
Healthcare Support Occupations	1.5%	1.9%	2.9%
Building and Grounds Cleaning and Maintenance Occupations	2.9%	2.7%	2.3%
Protective Service Occupations	2.5%	2.2%	2.3%
Personal Care and Service Occupations	1.6%	1.9%	1.6%
Arts, Design, Entertainment, Sports, and Media Occupations	1.1%	1.1%	1.8%
Architecture and Engineering Occupations	1.8%	1.6%	1.6%
Community and Social Service Occupations ^a	0.7%	1.1%	1.0%
Legal Occupations	0.6%	0.9%	1.1%
Life, Physical, and Social Science Occupations	0.6%	0.5%	0.7%
Farming, Fishing, and Forestry Occupations	0.1%	0.1%	0.1%

9 Sources:

10 Bureau of Labor Statistics (BLS). 2000. Occupational Employment Statistics Data 2000 Metropolitan area. <https://www.bls.gov/oes/tables.htm>.

11 Bureau of Labor Statistics (BLS). 2010. Occupational Employment Statistics Data May 2010 Metropolitan and nonmetropolitan area.
 12 <https://www.bls.gov/oes/tables.htm>.

13 Bureau of Labor Statistics (BLS). 2021. May 2021 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates
 14 Atlanta-Sandy Springs-Roswell, GA. May. https://www.bls.gov/oes/current/oes_12060.htm#00-0000.

15 ^a These two title names changed slightly across years. The 2020 title is used here.

16 Percentages represent percentages of total employment.

⁵¹ Kassis, M. M. and D. Boldt. 2005. *A Historical Perspective on Georgia's Economy*. Fiscal Research Center, Andrew Young School of Policy Studies, Georgia State University. https://cslf.gsu.edu/files/2014/06/historical_perspective_of_georgias_economy.pdf.

1 Today, research and development and healthcare are frequently cited as key industries in the region (refer to
 2 **Exhibit 3-35**).⁵² Additionally, 16 Fortune 500 companies have their headquarters in Metro Atlanta out of a
 3 total 21 Fortune 500 companies with headquarters in Georgia.^{53 54}

4 **3.4.1.2 Community-Specific Economic Conditions**

5 **Development and Housing**

6 The seven cities that intersect or are adjacent to the Preferred Alternative have developed land use plans that
 7 reference economic growth and community development. **Section 3.1, Land Use**, includes details on land use
 8 plans. Specific examples from plans are below:

- 9 • Brookhaven is characterized as fully developed, so its Comprehensive Plan emphasizes redevelopment
 10 and infill development, focusing on pedestrian-friendly mixed-use projects.⁵⁵
- 11 • Chamblee promotes infill and redevelopment, such as the old General Motors Plant.⁵⁶
- 12 • Doraville promotes redevelopment and mixed-use development, especially in the context of the existing
 13 roadway network and MARTA infrastructure.⁵⁷
- 14 • Dunwoody plans to update the Transportation Master Plan and capitalize on redevelopment.⁵⁸
- 15 • Sandy Springs highlights a need to balance local and through traffic (Sandy Springs, 2016).
- 16 • Smyrna identifies priority redevelopment areas and indicates the need to address transportation issues,
 17 including congestion on major roads.⁵⁹
- 18 • Tucker includes “Improve Transportation Connections” as one of its five framework goals.⁶⁰

⁵² Atlanta Regional Commission (ARC). 2017. *Metro Atlanta Regional Economic Competitiveness Strategy*.
<https://cdn.atlantaregional.org/wp-content/uploads/catalyst-strategy-2018-chapter-1.pdf>.

⁵³ Metro Atlanta Chamber of Commerce. 2019. *Metro Atlanta Fortune 500 & 100 Headquarters*.
<https://www.metroatlantachamber.com/resources/most-popular/fortune-500-fortune-1000-in-metro-atlanta>.

⁵⁴ McKinsey & Company. 2019. *Expanding the Economic Pie in the Peach State*. <https://www.mckinsey.com/industries/public-and-social-sector/our-insights/expanding-the-economic-pie-in-the-peach-state#>.

⁵⁵ City of Brookhaven Georgia. 2019. *City of Brookhaven Comprehensive Plan*.
<https://www.brookhavenga.gov/commdev/page/comprehensive-plan-2034>.

⁵⁶ City of Chamblee, Georgia. 2016. *City of Chamblee Comprehensive Plan*.
<https://www.chambleega.com/DocumentCenter/View/113/Comprehensive-Plan-Amended-September-20-2016?bidId=>

⁵⁷ City of Doraville. 2016. City of Doraville, Comprehensive Plan 2017-2037, adopted October 17, 2016.
https://www.doravillega.us/departments/community_development_department/design_doraville.php.

⁵⁸ Pond Engineering Laboratories, Inc. 2017. *Dunwoody 2017 Comprehensive Transportation Plan Update*, Adopted September 18, 2017.
<https://www.dunwoodyga.gov/home/showpublisheddocument?id=244>.

⁵⁹ City of Smyrna. 2017. *City of Smyrna, 2040 Comprehensive Plan*. <https://www.smyrnaga.gov/home/showdocument?id=9296>.

⁶⁰ City of Tucker, Georgia. 2018. *Tucker Tomorrow Comprehensive Plan*.
https://www.tuckerga.gov/document_center/Tucker%20Tomorrow/Tucker-Comprehensive-Plan.pdf.

1 County and regional plans also reference development and transportation projects. Examples include the following:

- 2 • Cobb County indicates the need to provide adequate physical infrastructure, especially in the context of
3 recent and projected population growth.⁶¹
- 4 • DeKalb County includes “Transportation” as one of the five key planning goals, with 14 specific policies
5 under that goal.⁶²
- 6 • Fulton County highlights the intersection between future growth, transportation infrastructure, and air
7 quality.⁶³
- 8 • ARC’s RTP emphasizes infrastructure and a competitive economy as key goals.⁶⁴

9 Several transit plans for the area also highlight the importance of connecting regional employment centers with
10 the established cities and residential areas throughout the Study Area.

11 Since the 1940s, several completed and planned large developments have reflected the regional economic trends
12 referenced in the previous section:

- 13 • General Motors Plant, Doraville: Opened in 1947 and closed in 2008. The 165-acre site is currently
14 undergoing redevelopment as a mixed-use project called Assembly Yards, a “mini-city.”⁶⁵
- 15 • Perimeter Center: Mixed-use development expanded in the 1980s, following Perimeter Mall which
16 opened in 1971. Today, with more than 5,000 businesses and 123,000 employees, the area is one of the
17 largest employment, retail, and commercial activity centers in the region.⁶⁶
- 18 • Northside Hospital Complex: Built at the I-285 and SR 400 interchange in the early 1970s.
- 19 • The Battery Atlanta Development and new Atlanta Braves stadium (Truist Park, formerly SunTrust Park):
20 Built in 2017 along I-285.
- 21 • Third Rail Studios: A recently developed film and television production studio and office complex is off
22 Peachtree Road near I-285 and the former General Motors Plant.
- 23 • Several CID projects are underway in or adjacent to the Preferred Alternative.
- 24 • The Transform 285/400 project overlaps with the Preferred Alternative.

⁶¹ Cobb County Community Development Agency. 2017. *Cobb County 2040 Comprehensive Plan: Vision for a New Era*. November. <https://s3.us-west-2.amazonaws.com/cobbcounty.org.if-us-west-2/prod/2019-06/COBB-2040-COMPREHENSIVE-PLAN-FINAL-2019.pdf>.

⁶² DeKalb County Georgia. 2017. *DeKalb County 2035 Comprehensive Plan*. https://www.dca.ga.gov/sites/default/files/dekalb_county_comp_plan_update_2017.pdf.

⁶³ Fulton County. 2016. *2035 Fulton County Comprehensive Plan 2016-2035*. https://www.dca.ga.gov/sites/default/files/fulton_county_comp_plan_2016_0.pdf.

⁶⁴ Atlanta Regional Commission (ARC). 2022a. *The Atlanta Region’s Plan. Regional Transportation Plan. December*. <https://cdn.atlantaregional.org/wp-content/uploads/2050-rtp-main-doc.pdf>.

⁶⁵ Capelouto, J. D. 2019. “‘City Within a City’ Rises on Site of Shuttered GM Plant.” *The Atlanta Journal-Constitution*. <https://www.ajc.com/news/local/mattress-company-and-self-driving-shuttle-are-coming-dekalb/MfpROcpJhvLRBtgMKb9o9L/>.

⁶⁶ Perimeter Community Improvement Districts. 2017. *About Perimeter CIDs*. Accessed April 7, 2019. <https://perimetercid.org/about/>.

1 To provide additional context, **Exhibit 3-36** includes housing and per capita income data for the seven cities that
 2 intersect or are adjacent to the Preferred Alternative corridor. **Section 3.3, Environmental Justice and**
 3 **Communities of Concern**, includes further information on local socioeconomic conditions.

4 **Exhibit 3-36: Housing and Per Capita Income Data**

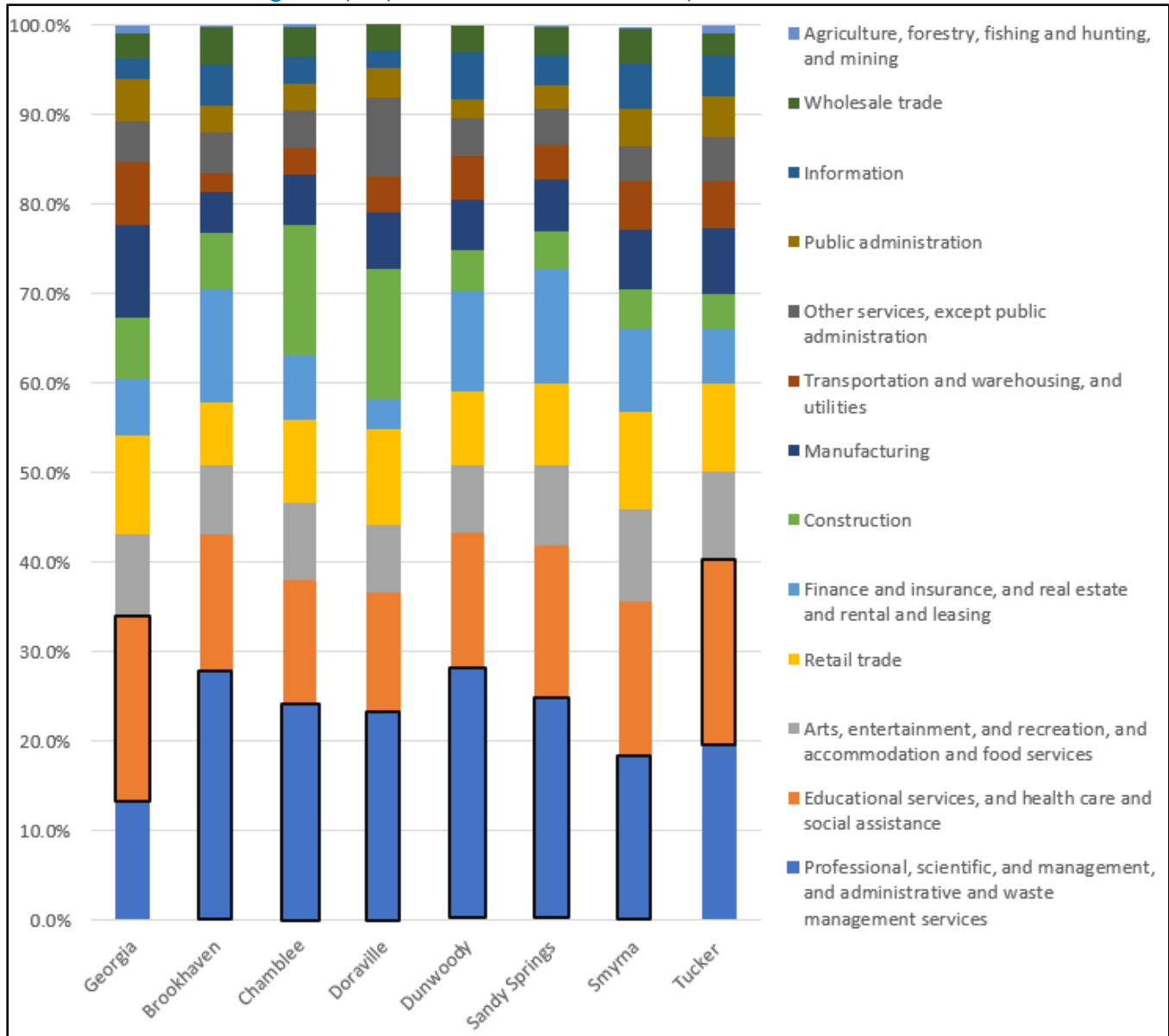
Community	Georgia	Brookhaven	Chamblee	Doraville	Dunwoody	Sandy Springs	Smyrna	Tucker
Median Home Value (Owner-Occupied Units)	\$206,700	\$548,600	\$332,400	\$251,100	\$468,000	\$490,200	\$328,600	\$287,600
Median Rent	\$1,110	\$1,511	\$1,494	\$1,395	\$1,610	\$1,490	\$1,396	\$1,242
Per capita income in the past 12 months (in 2021 inflation-adjusted dollars)	\$34,516	\$67,388	\$42,749	\$25,647	\$57,873	\$68,652	\$55,671	\$41,694

5 *Source: U.S. Census Bureau. 2017-2021 American Community Survey 5-Year Estimates. Tables DP04 and B19301,*
 6 *<https://data.census.gov/cedsci/>.*

7 **Current Employment**

8 The role of service, research, and development sectors in the economy is reflected in current employment data for
 9 these seven cities, presented in **Exhibit 3-37**. In all of the cities that intersect or are adjacent to the Preferred
 10 Alternative, except for Tucker, the largest employer by percentage in U.S. Census Bureau categories is the
 11 “professional, scientific, and management, and administrative and waste management services” sector. In Tucker,
 12 and Georgia as a whole, that sector is the second-largest employer by percentage. The “educational services, and
 13 health care and social assistance” sector is the largest employer by percentage in Tucker and Georgia-wide.
 14 Statewide, the “retail trade” is closely behind “professional, scientific, and management, and administrative and
 15 waste management services” as the third largest sector of employment. **Exhibit 3-37** presents further details with
 16 each geography’s largest sector of employment outlined in black.

1 Exhibit 3-37: Percentage Employment Sector in Each City



2
 3 Source: U.S. Census Bureau. 2017-2021 American Community Survey 5-Year Estimates. Table DP03. <https://data.census.gov/cedsci/>.
 4 Note: Bracketed blocks indicate each geography's largest sector of employment by percentage.

5 **3.4.2 Environmental Consequences**

6 This section briefly describes the environmental consequences methodology as it pertains to economics.
 7 The effects of the Preferred Alternative on the economy and employment were considered against the No-Build
 8 Alternative to identify any direct and indirect impacts, as presented in the following subsection.

9 Potential environmental consequences were determined based on a desktop review of the data and regional
 10 economic development activity information from regional planning agencies and the U.S. Census Bureau and other
 11 government sources presented in the previous section. A qualitative analysis was conducted by comparing
 12 anticipated impacts of the No-Build Alternative and Preferred Alternative, incorporating expected economic trends.

1 Because of the potential for other resource categories to impact economics, other sections of this Draft EIS are
2 also relevant to this section. Repetition has been avoided in the following assessment, but other sections of
3 particular relevance to economics include **Sections 3.1, Land Use; 3.2, Community Facilities, Neighborhoods,**
4 **and Cities; 3.3, Environmental Justice and Communities of Concern; and 3.13, Construction Impacts.**

5 The No-Build Alternative would not address existing transportation conditions that could lead to deteriorating
6 economic conditions. Trip times for the movement of people and goods along the I-285 top end corridor would
7 become increasingly unreliable and traffic congestion would worsen. These conditions would make the I-285 top
8 end corridor less desirable as a freight route and would make the surrounding Metro Atlanta area less desirable for
9 commercial development.

10 The Preferred Alternative would not make wholesale changes to regional land use or transportation patterns
11 (**Section 3.1, Land Use**). Limited land is available for development because the Preferred Alternative is within
12 densely developed urban areas.⁶⁷ Therefore, economic consequences from development would be minor or
13 unlikely. If the Preferred Alternative is built, transportation volumes are expected to change and shift; throughput
14 is expected to increase; and density, travel speeds, and travel time are anticipated to improve. The improved
15 access to I-285 and consistent travel-time benefits would improve the transfer of people and goods, leading to
16 potential economic benefits across the region under the Preferred Alternative.

17 The Preferred Alternative would limit local economic impacts to areas with ROW acquisition. Displacements by
18 the Preferred Alternative would consist of 17 commercial buildings comprising 44 active businesses and 5 vacant
19 business spaces. **Appendix H-2, I-285 Top End Project, A Demographic, Social, Economic, and Community**
20 **Profile Analysis**, provides data on the commercial displacements. Up to 300 employees would be affected by the
21 displacements, and the potential lost property tax revenue is approximately \$73,518 (2022 dollars) in Cobb
22 County, where there is 1 building/1 active business displacement, and \$528,979 (2022 dollars) in DeKalb County
23 where there are 16 buildings/43 active business displacements. Due to the small percentage of the overall property
24 tax revenue that these displacements comprise, it is not anticipated that they would have a measurable effect on
25 the Cobb County or DeKalb County tax base or economy as a whole.

26 Construction of the Preferred Alternative would create approximately 10,292 jobs per year for the 12-year
27 construction duration of the Preferred Alternative. Of these, approximately 6,587 would be direct and indirect
28 jobs and 3,705 would be induced jobs (refer to **Section 3.13, Construction Impacts**). *Direct* jobs are those
29 created in the government-sponsored projects (i.e., construction workers, managers, engineers, surveyors, etc.).
30 *Indirect* jobs are those created at suppliers who make the materials used in the project. *Induced* jobs are those
31 created elsewhere in the economy as a result of increases in incomes from the direct infrastructure investment
32 leading to additional increases in spending by workers employed on the project or firms supplying the project.
33 These additional jobs could increase local and regional spending as workers make purchases during the day near
34 the Preferred Alternative corridor and throughout the Metro Atlanta area at other times. These expenditures would
35 have the potential to increase economic activity in adjacent cities.

⁶⁷ Georgia Department of Transportation (Georgia DOT). 2020c. *Preliminary Indirect and Cumulative Effects with Land Use. Project: I-285 Top End Express Lanes, GDOT PI No. 0001758.*

3.4.2.1 Indirect Effects

Minimal negative indirect economic consequences are anticipated as a result of the Preferred Alternative. The Preferred Alternative is located in an urban corridor with local planning documents designating most adjacent land uses for future redevelopment or zoning compatible with a highway corridor. The Preferred Alternative would not precipitate wholesale revisions to these current planning documents but the ELs may require changes from existing land uses containing residential components to more compatible land uses, such as commercial, in several locations adjacent to I-285. These include 21 parcels of land in Chamblee and 66 parcels of land in Doraville. While indirect economic effects may be a consequence of induced growth, the Preferred Alternative would have minimal potential to induce new development of undisturbed land as the majority of the Preferred Alternative corridor is already highly developed. Additionally, the adjacent cities have already identified areas of redevelopment and infill development through their land use plans. The Preferred Alternative would not lead to new development but could influence local approvals for redevelopment projects and new developments that are anticipated to occur with or without the Preferred Alternative. The Preferred Alternative has the potential to serve as an element of decision-making for development, including development triggered by anticipated growth and redevelopment, but it is not expected to precipitate development on its own.

3.4.2.2 Cumulative Effects

Local and regional planning entities have identified and planned the land use and economic development projects that are considered reasonably foreseeable. The Preferred Alternative would lead to small changes in land use designations within Chamblee and Doraville but there would be no major impact to current plans. Cumulative effects related to land use changes induced or facilitated by the Preferred Alternative, some of which are relevant to economic conditions and employment, are included in **Appendix D, Indirect and Cumulative Effects Report**.

As indicated in **Section 3.1, Land Use**, the Preferred Alternative would not preclude construction of future transportation or transit projects, including those proposed by others. The No-Build Alternative would result in a less effective transportation system for the region than implementation of the Preferred Alternative. The Preferred Alternative and all other components of the MMIP and other EL projects would work together to create a more efficient, effective roadway network. Georgia DOT would ensure smooth connections between existing facilities and proposed elements of the MMIP in order to effectively assist the transfer of people and goods, leading to potential beneficial cumulative effects in terms of consistent travel times and improved mobility. According to Georgia DOT's MMIP Fact Sheet, the MMIP network will cumulatively create \$3.28 billion in travel-time savings, reduce commercial fleet operating costs by \$355 million, and yield a benefit of \$1.10 for every \$1 invested.⁶⁸ Overall, cumulative economic impacts from the Preferred Alternative and other regional transportation improvements are expected to be beneficial.

⁶⁸ Georgia Department of Transportation (Georgia DOT). 2019a. *MMIP Fact Sheet*. March 27. http://www.dot.ga.gov/BuildSmart/Projects/Documents/MMIP/MMIP_Fact_Sheet.pdf.

3.4.3 Potential Avoidance, Minimization, and Mitigation Measures

As indicated in the preceding sections, minimal negative economic consequences are anticipated from the Preferred Alternative. The loss of property tax associated with the 17 building displacements would be minimal compared to the anticipated overall 2022 tax revenue collected by the counties (\$331 million for Cobb County and \$200 million for DeKalb County); this loss would be offset by greater efficiency in the regional transportation network for commuters to regional activity centers. To minimize impacts from property acquisitions and construction impacts to economic centers, Georgia DOT would implement the following:

- Acquisition and Displacement—To minimize adverse impacts from ROW acquisition, compensation and relocation assistance are provided to eligible recipients for full and partial property acquisitions, as required by the Uniform Act (defined in **Appendix B, Applicable Laws and Regulations**). The Uniform Act directs that when an agency acquires property for a federal-aid project, ROW requirements are in place to provide benefits, protection, and payment of just compensation. When a project displaces an individual, family, business, farm or nonprofit organization, additional services and payment are required. FHWA does not consider compensation to be a mitigation measure.
- Businesses and Employment—A Public Involvement and Communication Plan will be developed and implemented to inform the economic community about Preferred Alternative construction activities. A TMP will also be developed and implemented to maintain access to and from the affected economic centers (signage, detours, flagmen, etc.).

Georgia DOT would work with local authorities and key economic sectors and development projects to minimize any local disruptions as much as possible. Specific minimization measures may include timing construction to avoid rush hours; sharing information on the Preferred Alternative website to inform local stakeholders about any potential disruptions, so that they can plan accordingly; coordinating with local businesses and development plans and projects; and designing Preferred Alternative components to not impede economic activities as much as possible. Further details on temporary impacts and potential avoidance, minimization, and mitigation measures associated with them are provided in **Section 3.13, Construction Impacts**.

3.5 Historic and Archaeological Resources

This section describes the direct, indirect, and cumulative impacts of the No-Build Alternative and Preferred Alternative on historic and archaeological resources. Public involvement activities conducted under NEPA for the Proposed Project satisfy public involvement requirements under Section 106 of the National Historic Preservation Act (NHPA). The information and analysis presented in this section rely on the findings of technical reports and other project documentation appended to this Draft EIS: **Appendix B, Applicable Laws and Regulations; Appendix D, Indirect and Cumulative Effects Report; Appendix H-5, Cultural Resources Assessment of Effects Report and Addenda**; and Georgia Department of Community Affairs – Historic Preservation Division/State Historic Preservation Office correspondence in **Appendix M, Agency Correspondence**.

3.5.1 Affected Environment and Area of Potential Effects

In compliance with Section 106 of the NHPA of 1966 and amendments thereto, the Preferred Alternative has been surveyed for archaeological and historic resources. The purpose of the surveys was to locate, identify, and

1 evaluate the significance of any historic and archaeological resources within the affected environment and to
2 determine if these resources were listed, or were eligible for listing, in the National Register of Historic Places
3 (NRHP). For archaeological resources, the survey boundary and methodology were established using 36 CFR 800
4 and the Georgia DOT/FHWA Cultural Resource Survey Guidelines. These guidelines were established as a result
5 of past interaction with the Georgia SHPO and staff and were agreed upon by FHWA and the SHPO (Georgia
6 DOT, 2020). The APE for historic resources was defined in accordance with the MOU between FHWA, Georgia
7 DOT, and the Georgia SHPO for the MMIP (**Appendix M, Agency Correspondence**, includes a copy of the
8 MMIP Historic Properties MOU).

9 **3.5.1.1 Area of Potential Effects**

10 As per the specific criteria provided in the Georgia DOT/FHWA/SHPO MOU for the MMIP, the APE for historic
11 resources was defined as the areas with potential for visual impacts, audible impacts, or physical impacts consisting
12 of impacts to manmade features or greater than 25% ROW encroachment. The APE for archaeological resources is
13 defined as the geographic area or areas wherein implementation of the Preferred Alternative would involve ground-
14 disturbing activities.

15 The GADNR surveys for historic resources in Cobb County (1978, 2005, and 2014), Fulton County (1976 and 1995),
16 and DeKalb County (1976 and 1997) were consulted to locate any previously identified historic resources. This
17 background review also included NRHP-listed properties, proposed NRHP nominations, National Historic Landmarks,
18 and the updated Georgia Historic Bridge Survey. The state archaeological site files at the University of Georgia and
19 existing survey reports were reviewed to locate previously identified cultural resources within the APE. Topographic
20 maps, aerial photography, and tax assessor records were also assessed to identify areas with potential for cultural
21 resources. Finally, field surveys for potentially eligible historic and archaeological resources were conducted within the
22 APE.

23 **3.5.1.2 Consulting Parties**

24 In compliance with 36 CFR 800, potential consulting parties were identified and invited to participate in the
25 Section 106 of the NHPA process. The consulting parties also assisted in identifying cultural resources.
26 The invitation letters were sent to the parties on September 23, 2009, and October 17, 2019. Also, on behalf of
27 FHWA, in keeping with a government-to-government relationship and in compliance with 36 CFR 800,
28 applicable federally recognized tribal governments were invited to participate in the Section 106 process
29 (**Exhibit 3-38**).

Exhibit 3-38: Invited Consulting Parties

Potential Consulting Party	Dates of Notification Letters	Response Received?
ARC	9/23/09; 10/17/19	No
Georgia SHPO	9/23/09; 10/17/19	10/8/09
DeKalb History Center/DeKalb County Historical Society	9/23/09; 10/17/19	No
Heritage Sandy Springs	9/23/09; 10/17/19	5/2/11
Atlanta History Center	10/17/19	No
DeKalb County Commission	9/23/09; 10/17/19	No
Fulton County Commission	9/23/09; 10/17/19	No
Cobb County Commission	9/23/09; 10/17/19	No
City of Sandy Springs	9/23/09; 10/17/19	No
City of Doraville	9/23/09; 10/17/19	No
City of Dunwoody	10/17/19	No
City of Brookhaven	10/17/19	No
Cobb County Historic Preservation Commission	9/23/09; 10/17/19	10/12/09
Fulton County Department of Environment and Community Development	9/23/09; 10/17/19	No
Cobb Landmarks	10/17/19	No
DeKalb County Historic Preservation Commission	9/23/09; 10/17/19	No
Northwoods Area Neighborhood Association	10/17/19	5/23/19 ^a
Stonecrest Homeowners Association	10/17/19	No
Eastern Band of Cherokee Indians	10/17/19	No
United Keetoowah Band of Cherokee Indians	10/17/19	No
Cherokee Nation	10/17/19	No
Alabama-Coushatta Tribe of Texas	10/17/19	No
Alabama-Quassarte Tribal Town	10/17/19	No
Muscogee (Creek) Nation	10/17/19	No
Muscogee (Creek) National Council	10/17/19	No
Poarch Band of Creek Indians	10/17/19	No
Seminole Nation of Oklahoma	10/17/19	No
Thlopthlocco Tribal Town	10/17/19	No

1 ^a The Northwoods Area Neighborhood Association requested to become a consulting party and their status as a consulting party was
 2 acknowledged in a letter dated May 23, 2019.

3 Copies of correspondence with consulting parties are located in **Appendix H-5, Cultural Resources Assessment**
 4 **of Effects Report and Addenda.**

1 3.5.2 Historic Resources

2 The results of the field surveys and background research for historic resources are summarized in the reports in
 3 **Exhibit 3-39**. In addition to the reports prepared specifically for the Proposed Project (PI 0001758), the APE of
 4 the Preferred Alternative has also been studied as part of adjacent projects (PI 0000784, 0010925, 0013917,
 5 0013914); the results of these previous reports have been included within the documentation for the Proposed
 6 Project. As a result of these efforts, 13 historic resources determined eligible for listing in the NRHP were
 7 identified within the APE (**Exhibits 3-40 to 3-45**).

Exhibit 3-39: Historic Resource Survey Reports

Report	Original Project	SHPO Approval date
Historic Resource Survey Report	PI 0001758	10/13/10, 1/6/11 ^a
Historic Resource Survey Report Addendum	PI 0001758	2/20/13
Reevaluation Memorandum	PI 0001758	4/10/17
Reevaluation Memorandum	PI 0001758	9/1/17
Historic Resource Survey Report Addendum #2	PI 0001758	3/2/20
Historic Resource Survey Report Addendum #3	PI 0001758	6/3/20
Historic Resource Survey Report Addendum #4	PI 0001758	9/1/20
Historic Resource Survey Report Addendum #5	PI 0001758	2/18/22
Historic Resource Survey Report Addendum #6	PI 0001758	9/27/22
Historic Resource Survey Report Addendum #7	PI 0001758	3/14/23
Historic Resource Survey Report	PI 0000784	9/10/14
Reevaluation Memorandum	PI 0000784	7/11/14
Historic Resource Survey Report	PI 0010925	4/1/14
Historic Resource Survey Report	PI 0013917	6/18/20

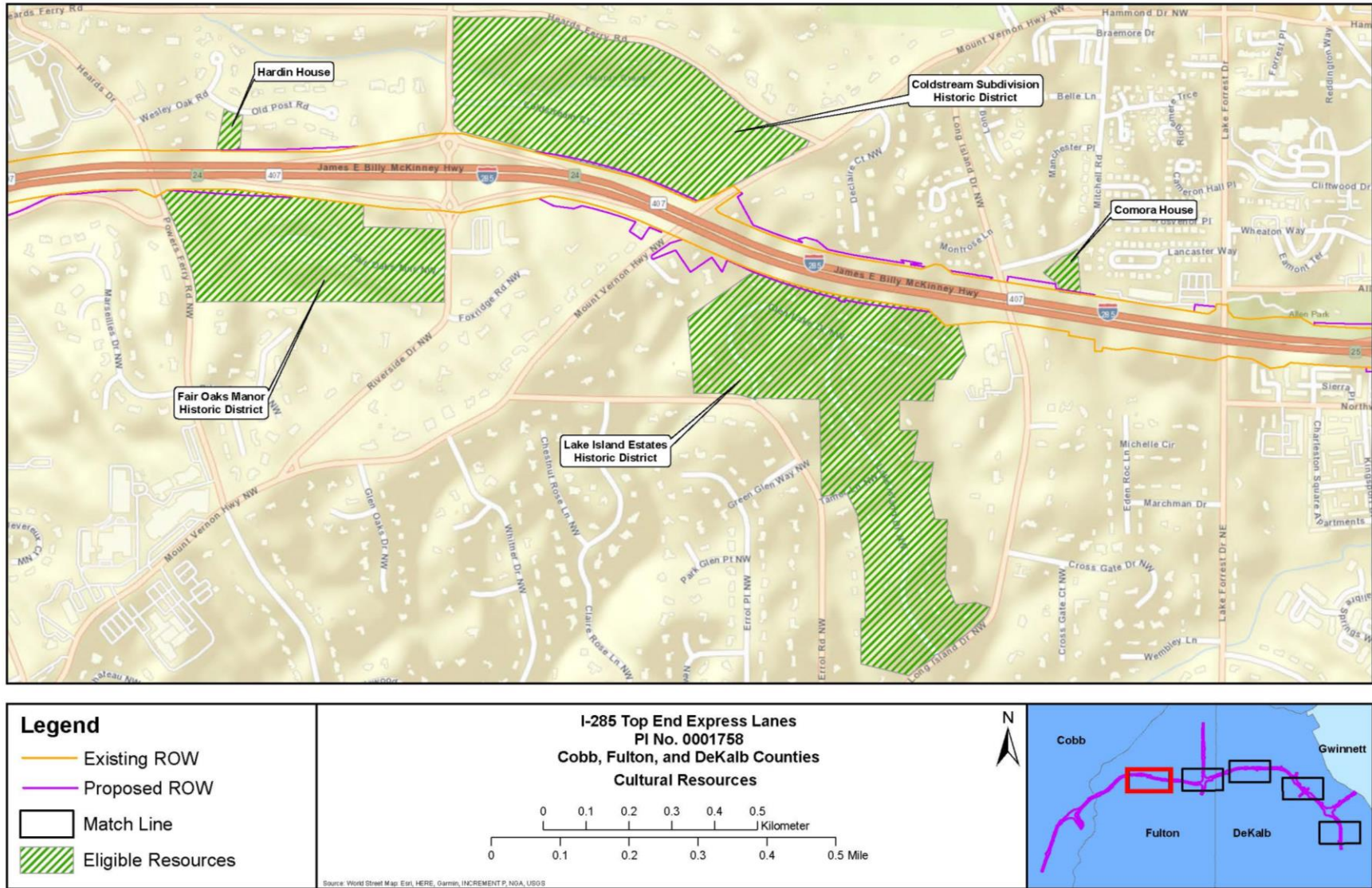
8 ^a SHPO concurred with some findings in the report on Oct. 13, 2010, and, after additional coordination, concurred with the remainder of the
 9 findings on January 6, 2011.

1 Exhibit 3-40: Historic Resources Eligible for Listing in the NRHP

Name of Resource	Location	Date of Construction	Type/Style
Fair Oaks Manor Historic District	Fair Oaks Manor	1960-1972	Residential Historic District
Coldstream Subdivision Historic District	Coldstream Court	1960-1973	Residential Historic District
Lake Island Estates Historic District	Glen Lake Drive and Lake Island Drive	1965-1976	Residential Historic District
Comora House	5805 Mitchell Road	1957	Ranch House
Landmark Executive Center	100-200 Glenridge Parkway	1970	Office Tower/Late Modern
Lakeside Business Park	5775 Glenridge Drive	1970-1972	Office Complex/New Formalist
Oak Forest Hills Historic District	Ashwoody Trail, Oak Forest Drive, Oak Forest Court, Long Branch Court	1956-1966	Residential Historic District
Georgetown Subdivision Historic District	Old Georgetown Trail, Congress Circle, Bishop Hollow Run	1961-1968	Residential Historic District
Gainsborough Historic District	Candler Lake East, Berkford Circle	1962-1973	Residential Historic District
Moon Manor-Harber Valley Historic District	Along Doral Drive	1945-1955	Residential Historic District
Melvin House	3647 Embry Circle	1962	New Traditional House/No Academic Style (NAS)
Brown House	3603 Embry Circle	1962	Split-Level House/NAS
Hardin House	772 Old Post Road	1973	New Traditional House/NAS

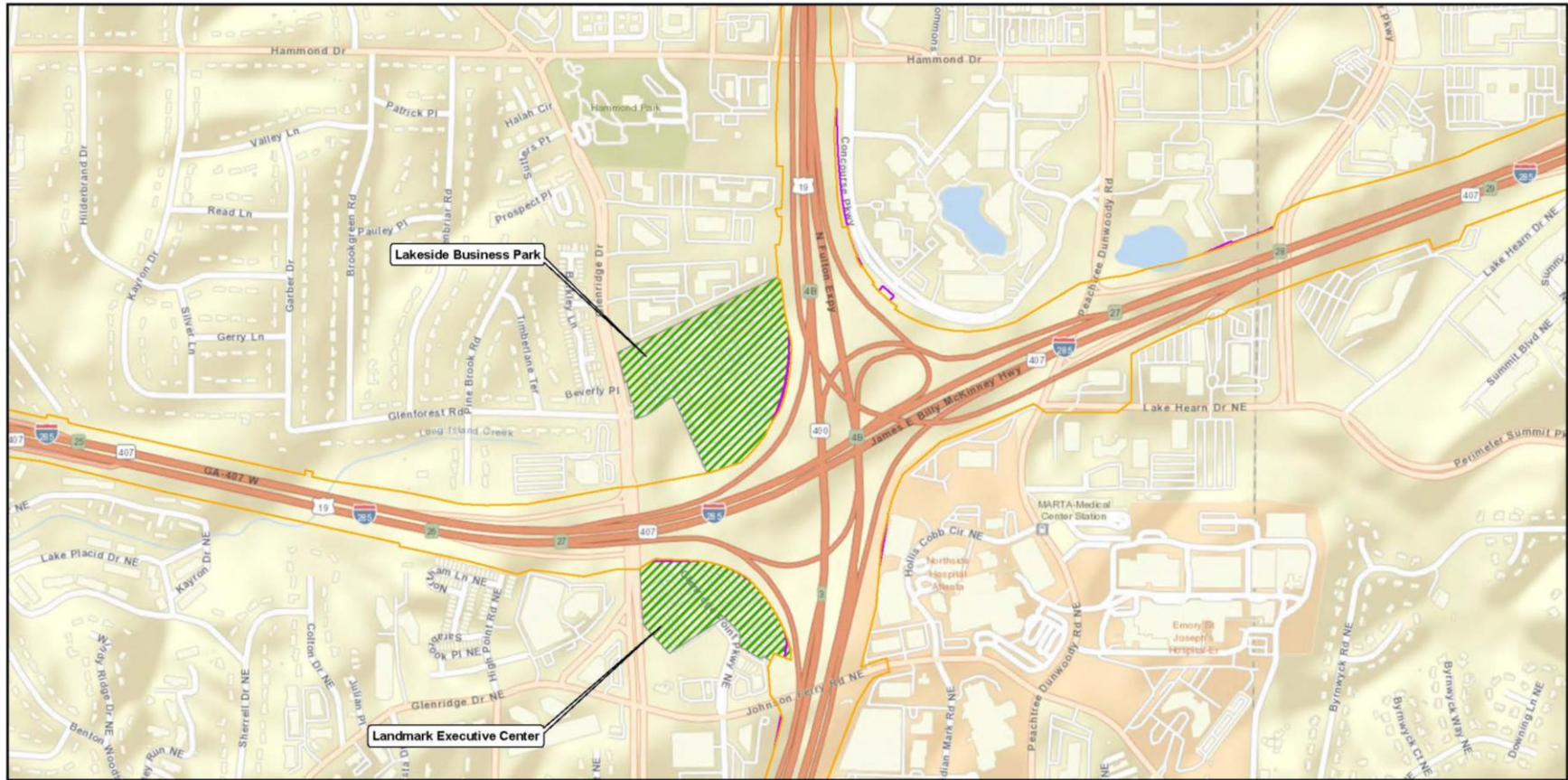
2 More detailed information about these eligible properties and their areas of significance can be found in the property assessment forms in
 3 **Appendix H-5, Cultural Resources Assessment of Effects Report and Addenda**, and in the Historic Resource Survey Reports on file at
 4 the Georgia DOT OES.

1 Exhibit 3-41: Cultural Resources Map



2

1 Exhibit 3-42: Cultural Resources Map



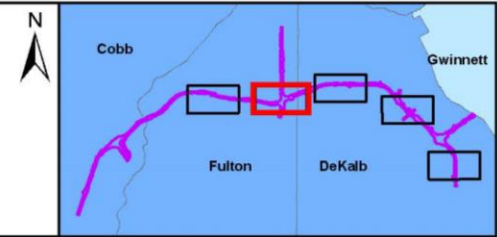
- Legend**
- Existing ROW
 - Proposed ROW
 - Match Line
 - Eligible Resources

**I-285 Top End Express Lanes
PI No. 0001758
Cobb, Fulton, and DeKalb Counties
Cultural Resources**

0 0.1 0.2 0.3 0.4 0.5
Kilometer

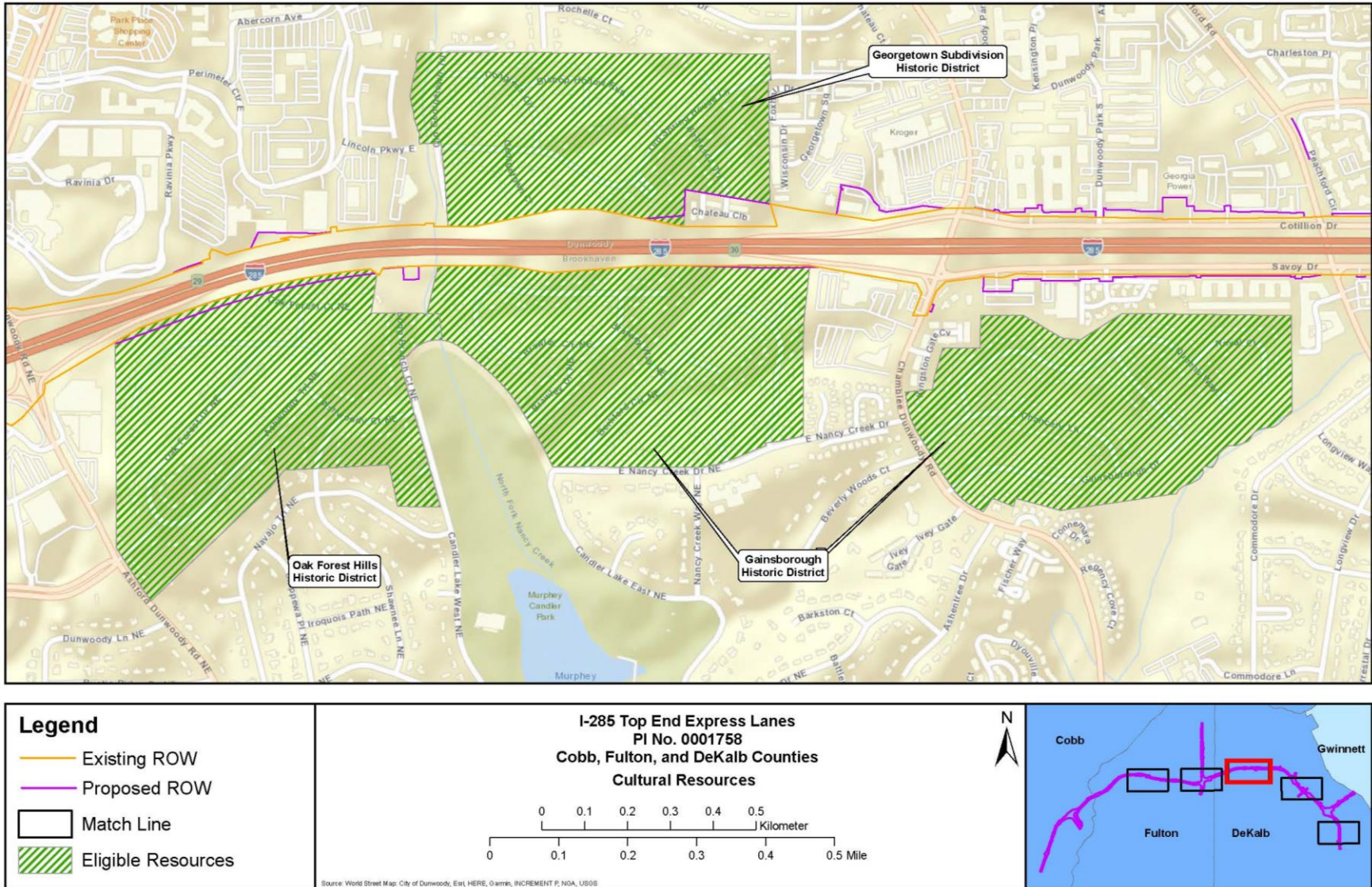
0 0.1 0.2 0.3 0.4 0.5
Mile

Source: World Street Map Esri, HERE, Garmin, INCREMENT P, NOAA, USGS



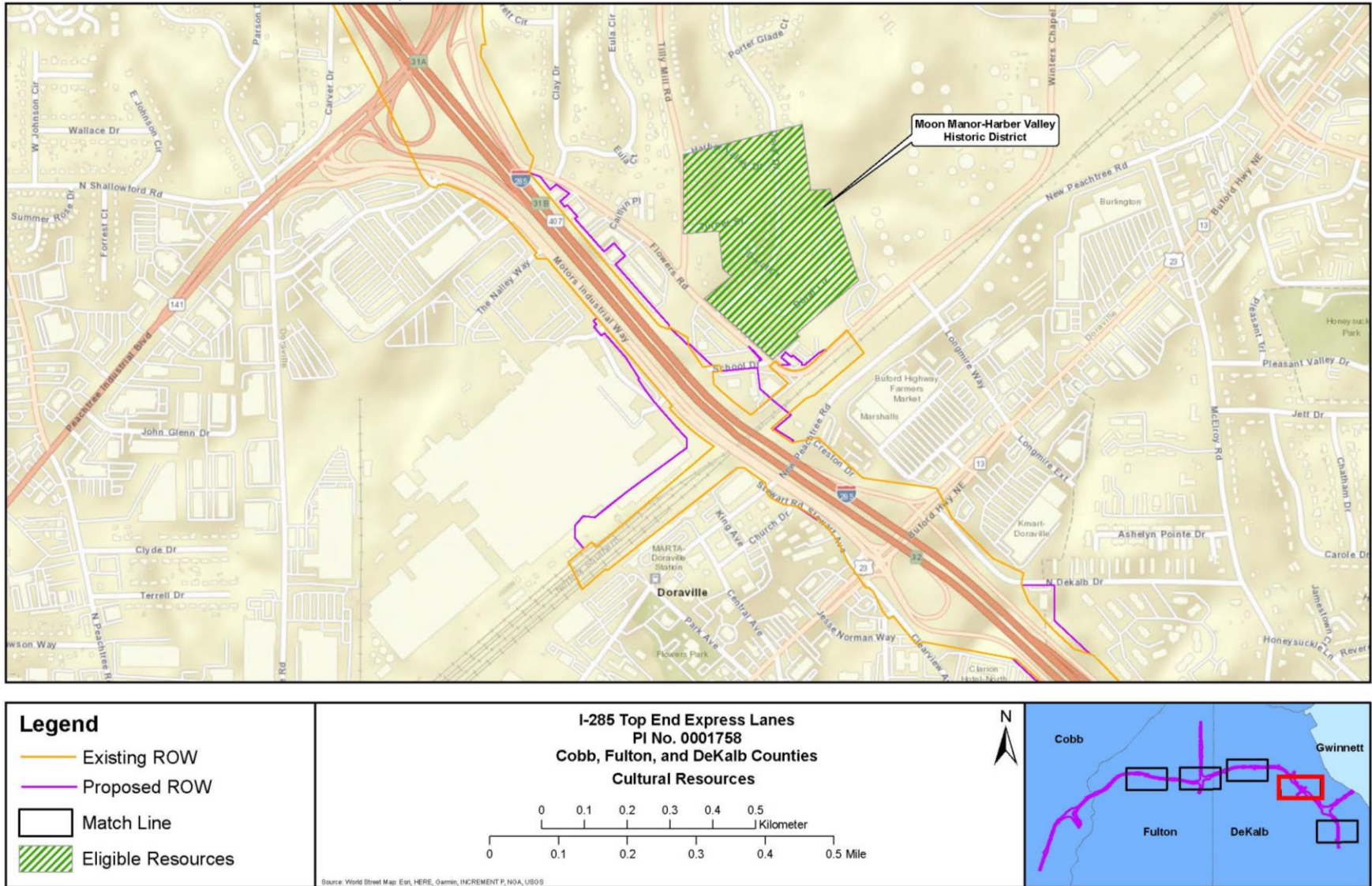
2

1 Exhibit 3-43: Cultural Resources Map



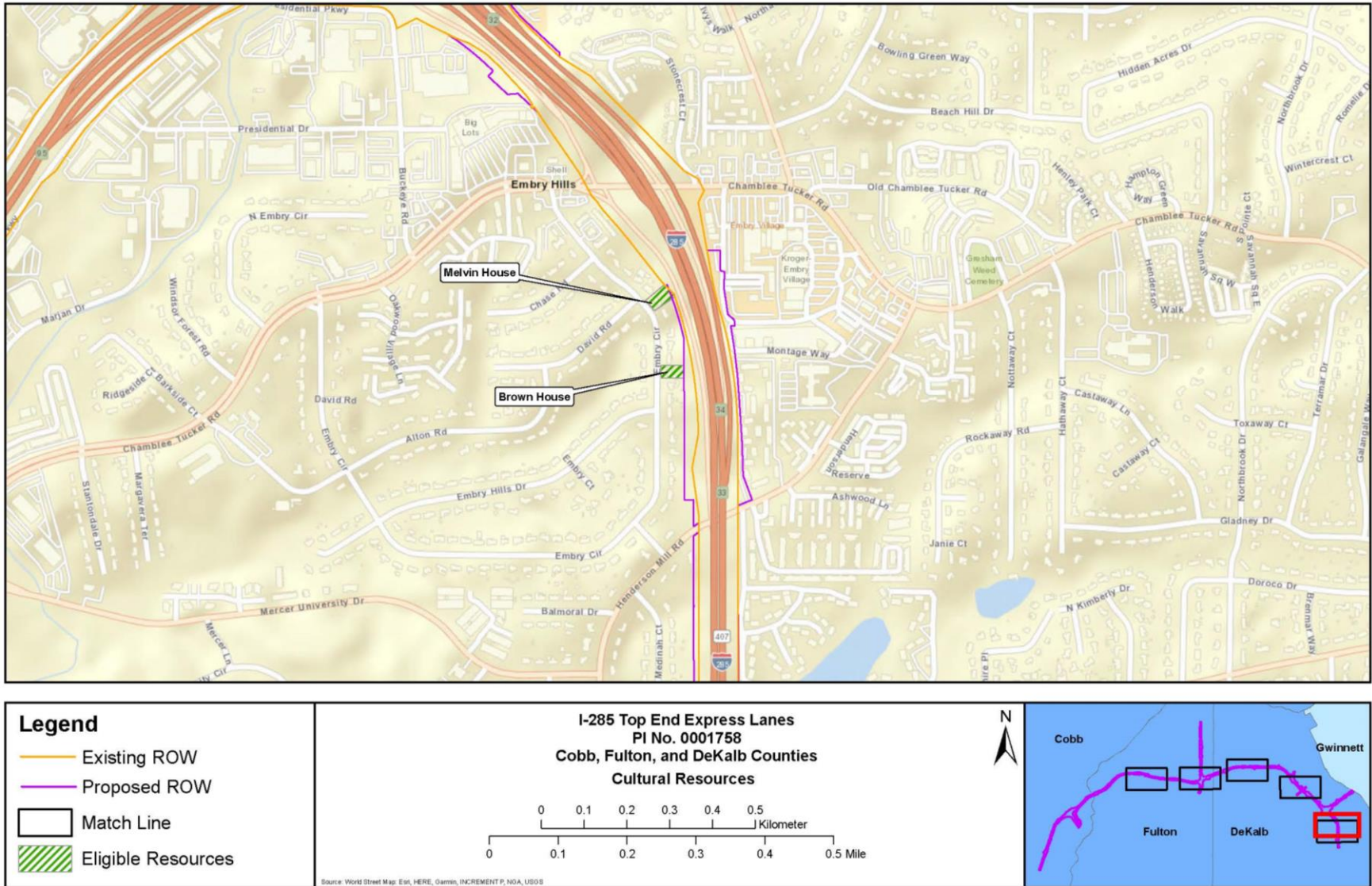
2

1 Exhibit 3-44: Cultural Resources Map



2

1 Exhibit 3-45: Cultural Resources Map



2

1 **3.5.3 Archaeological Resources**

2 Surveys for archaeological resources have been conducted in support of project development over the past
 3 20 years. These surveys were conducted in accordance with Georgia DOT Archaeological Survey Guidelines
 4 developed by the Georgia DOT Staff Archaeologists in consultation with the Georgia SHPO and concurred with
 5 by FHWA. These guidelines provide general survey boundaries and methodological approaches to archaeological
 6 surveys based on the type/scope of proposed highway projects and were followed during the initial identification
 7 of archaeological resources.

8 In 2019, Georgia DOT conducted a Phase I Archaeological Survey of the Preferred Alternative, which is
 9 summarized in the *Fifth Addendum to the Phase I Archaeological Survey of the I-285 Top End Express Lanes*
 10 *Project and Underwater Archaeological Investigations of the Interstate 285 Top End Express Lanes Over the*
 11 *Chattahoochee River, Fulton and Cobb Counties, Georgia*, (refer to **Appendix H-12, Archaeological**
 12 **Resources**). The Georgia SHPO concurred with the findings of this report on April 20, 2020 (refer to Georgia
 13 Department of Community Affairs – Historic Preservation Division/State Historic Preservation Office
 14 correspondence in **Appendix M, Agency Correspondence**). Since that time, three additional addendum reports
 15 have been prepared to document archaeological surveys of additional areas added to the APE (refer to
 16 **Exhibit 3-46**). Each of these surveys recorded no archaeological sites present within the project APE.

17 [Exhibit 3-46: Additional Archaeological Survey Reports](#)

Report	SHPO Approval Date
Sixth Addendum to the Phase I Archaeological Survey of the I-285 Top End Express Lanes Project	7/22/21
Seventh Addendum to the Phase I Archaeological Survey of the I-285 Top End Express Lanes Project	9/28/21
Eighth Addendum to the Phase I Archaeological Survey of the I-285 Top End Express Lanes Project	8/24/22

18 No NRHP-eligible or listed archaeological resources are located within the APE. Some sites with unknown
 19 eligibility are located within or adjacent to the Preferred Alternative; however, the portion of these sites within the
 20 APE have been determined to be not eligible. Sites with unknown eligibility will be labeled as Environmental
 21 Sensitive Areas on the plans and protected during construction. Therefore, the Preferred Alternative would not
 22 affect archaeological resources listed in, or eligible for listing, in the NRHP.

23 **3.5.4 Environmental Consequences and Effects Assessment**

24 Avoiding all impacts to the identified historic resources would be possible only through the No-Build Alternative.
 25 The No-Build Alternative would avoid impacts to historic resources, such as ROW acquisition or the addition of visual
 26 features. However, as stated in **Chapter 1, Need and Purpose**, the projected growth in population, employment, and
 27 traffic volumes necessitate long-term transportation solutions, including the implementation of ELs to help manage the
 28 increasingly congested conditions. The No-Build Alternative would not address the region’s mobility needs.

29 A project would have an adverse effect on a historic property if the project were to alter, directly or indirectly, any of
 30 the characteristics of a historic property that qualify the property for inclusion in the NRHP by diminishing the
 31 integrity of the property’s location, design, setting, materials, workmanship, feeling, or association. Examples of
 32 adverse effects to historic properties include physical damage to all or part of a property or removal from its historic
 33 location, a change in the character of a property’s use or of physical features within the property’s setting that

1 contribute to its historic significance, and introduction of visual, atmospheric, or audible elements that diminish the
 2 integrity of the property’s significant historic features. A project can also indirectly affect historic properties. Indirect
 3 effects to historic properties are those caused by the project that are later in time or farther removed in distance but are
 4 still reasonably foreseeable. Examples of indirect effects to historic properties could include isolation of a property
 5 from its surrounding environment and neglect of a property which causes its deterioration. If a project would not affect
 6 a property, either directly or indirectly, then the project would have “no effect” on the historic property. If a project
 7 affects a property but effects to the property do not diminish the integrity of the property’s characteristics that convey
 8 its historic significance, then the project is found to have “no adverse effect” on the property.

9 The Preferred Alternative would not have adverse effects on historic resources, as summarized in **Exhibit 3-47**.
 10 **Appendix H-5, Cultural Resources Assessment of Effects Report and Addenda**, contains additional information
 11 on these impacts. The Georgia SHPO concurred with the findings of these reports on October 5, 2020, January 8,
 12 2021, February 25, 2021, and March 27, 2023 (available in Georgia Department of Community Affairs – Historic
 13 Preservation Division/State Historic Preservation Office correspondence in **Appendix M, Agency**
 14 **Correspondence**).

15 Implementation of the Preferred Alternative would require small strips of ROW (ranging up to 56 feet wide) from
 16 the rear yards of historic properties. Although physical impacts would occur, these effects would not be adverse.
 17 Small amounts of screening vegetation would be removed, and some historic chain-link fences would be removed
 18 and replaced in kind. The Preferred Alternative would not alter the use of historic resources. Many of the properties
 19 were developed in response to the mobility provided by the construction of I-285 and improvements to I-285 are
 20 expected to support the continued residential and commercial uses of these properties. Implementation of the
 21 Preferred Alternative would have no adverse effect on the setting of historic properties. The I-285 corridor was part
 22 of the original setting for most of the historic properties, most of the vegetative buffers would remain intact, and the
 23 Proposed Project would not alter the physical characteristics of the properties’ settings or their visual character.
 24 Audible and visual impacts to historic properties would not be adverse and the Preferred Alternative would have no
 25 adverse indirect effects on historic resources.

Exhibit 3-47: Historic Resource Impacts

Name of Resource	Physical	Use	Setting	Audible	Visual	Indirect
Fair Oaks Manor Historic District	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Effect
Coldstream Subdivision Historic District	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Effect
Lake Island Estates Historic District	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Effect
Comora House	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Effect
Landmark Executive Center	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
Lakeside Business Park	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Effect
Oak Forest Hills Historic District	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Effect

Exhibit 3-47: Historic Resource Impacts (continued)

Name of Resource	Physical	Use	Setting	Audible	Visual	Indirect
Georgetown Subdivision Historic District	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Effect
Gainsborough Historic District	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
Moon Manor-Harber Valley Historic District	No Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
Melvin House	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Effect
Brown House	No Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Effect
Hardin House	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Effect

1 **3.5.4.1 Cumulative Effects**

2 As described in the Cultural Resources Assessment of Effects Reports for this project, the historic resources near
 3 I-285, except for the Comora House, the Moon Manor-Harber Valley Historic District, the Melvin House, and the
 4 Brown House, were built as a direct result of the mobility provided by the construction of I-285. Therefore, the
 5 construction of I-285 in 1969 was established as a base year for the analysis of cumulative impacts to historic
 6 resources.

7 The resources have been impacted by past undertakings. Since its original construction, I-285 has been widened
 8 several times. In addition, interchanges have been altered in some locations and some bridges have been widened.
 9 None of these actions have impacted the boundary of any historic resource; however, the edge of pavement of
 10 I-285 has moved closer to the historic properties over time. Although the edge of pavement has moved
 11 approximately 30 feet closer to the historic resources, the edge of pavement remains within the original ROW of
 12 I-285. In addition, noise barriers have been constructed along the I-285 ROW for many of the historic properties,
 13 changing the view from the resources. Similarly, noise levels have risen over time in the area of the resources as
 14 traffic volumes have increased.

15 As described in **Chapter 2, Alternatives Evaluation**, and **Section 3.1, Land Use**, numerous projects are planned
 16 or under way in or near the I-285 corridor, including multiple private mixed-use, commercial, and residential
 17 developments or redevelopments. According to information provided during interviews with local planning
 18 officials, these trends will likely continue; however, most of the land use adjacent to I-285 is expected to continue
 19 in their current uses or redevelop in similar land uses (refer to **Appendix D, Indirect and Cumulative Effects**
 20 **Report**). Although redevelopment would continue in the I-285 corridor, the historic properties are expected to
 21 remain desirable for their existing residential and commercial uses.

22 The edge of pavement would move closer as part of the Preferred Alternative; however, the pavement would
 23 remain mostly within the original ROW of the roadway. The visual character of the properties would not change
 24 due to the cumulative changes to I-285 as the roadway has merely expanded within its original corridor. The view
 25 would change slightly due to the previous construction of noise barriers and the proposed noise barriers.

1 Additionally, with the Preferred Alternative, elevated ELs would be visible to a greater number of the constituent
2 properties within historic districts adjacent to the corridor. However, I-285 was part of the original setting of the
3 historic districts in the Project Area and the view from these historic districts has always included transportation
4 features. The proposed noise barriers would be only additional components of I-285 and would be consistent with
5 the original settings and views from the historic districts adjacent to the Preferred Alternative.

6 In addition, despite small amounts of ROW acquisition for the construction and maintenance of the roadway as
7 part of the Preferred Alternative, the historic properties would retain the character of their original rear yards.
8 The properties would retain the physical and setting characteristics that make them eligible for listing in the
9 NRHP and the buildings would remain viable for their current residential and commercial uses. The noise levels
10 at the properties have risen over time as traffic volumes increased; however, the Preferred Alternative would
11 reduce noise levels at the historic properties due to the construction of new noise barriers. These improved noise
12 barriers are expected to keep noise levels below Georgia DOT standards for the future traffic volumes as
13 identified in the design year. The cumulative impact of the past, present, and reasonably foreseeable actions
14 would not alter the National Register eligibility of the historic properties. As a result of the consultation process,
15 the Georgia SHPO concurred with this finding on October 5, 2020, January 8, 2021, February 25, 2021, and
16 March 27, 2023.

17 3.5.5 Potential Avoidance, Minimization, and Mitigation Measures

18 The Georgia DOT made extensive efforts to avoid impacts to historic and archaeological resources. No NRHP-
19 eligible or listed archaeological resources are located within the archaeology APE. Some previously recorded
20 archaeological sites are located within or adjacent to the APE; additional archaeological work would be needed to
21 fully delineate the boundaries of these sites outside the project limits and to determine their eligibility for
22 inclusion in the NRHP. However, archaeological work conducted for this project shows that the portions of those
23 sites that might be impacted by the Proposed Project lack significant research potential because of extensive
24 disturbance to the sites from previous agricultural and construction-related activities. Thus, the known portions of
25 these sites are not eligible for listing in the NRHP.

26 Historic resources have been avoided to the greatest extent practicable by focusing design efforts on confining the
27 improvements to the existing ROW. As a result of these efforts, many resources that were initially identified as
28 within the APE were subsequently determined to be outside the APE, as documented in APE Reevaluation
29 Memoranda dated Feb. 24, 2020 (Reevaluation #1 and #2) and July 10, 2020 (Reevaluation #3). In addition,
30 historic and archaeological resources would be delineated as ESAs on design plans provided to Georgia DOT
31 construction contractors. During construction, orange barrier fencing would be installed around the resources to
32 prevent accidental impacts beyond those impacts included on the design plans and evaluated in the Cultural
33 Resources Assessment of Effects Reports.

34 Plans to minimize harm to the extent possible were considered during project development (**Exhibit 3-48**).
35 Multiple strategies were evaluated for their potential to reduce impacts to the historic properties. These
36 minimization strategies were discussed during numerous coordination meetings within the project team and in
37 Avoidance and Minimization Measures meetings for the Preferred Alternative. As designed, the Preferred
38 Alternative minimizes harm to historic resources and would have no adverse impacts to cultural resources.
39 The SHPO concurred with this finding on October 5, 2020, January 8, 2021, February 25, 2021, and March 27,
40 2023 (refer to Georgia Department of Community Affairs – Historic Preservation Division/State Historic

1 Preservation Office correspondence in **Appendix M, Agency Correspondence**); therefore, no mitigation is
 2 required or planned for the Preferred Alternative.

3 **Exhibit 3-48: Design Considerations to Avoid and Minimize Impacts**

Avoidance/ Minimization Strategy	Description	Implementation Status	Determination
Alignment shifts	Shift lanes to opposite sides of I-285 to minimize impacts	No	Unable to notably minimize impacts to resources because of lengthy transitions; would require extensive use of straddle bents and could cause more impacts to other resources.
Central alignment	Construct ELs in the center of I-285	No	No extra ROW exists within the center of I-285; therefore, similar ROW would be required. Project would be more expensive because of the need to reconstruct GP lanes.
Reduced typical section	Reduce lane widths to 11 feet; reduce shoulder widths	No	Reducing lane widths on GP lanes would require expensive reconstruction of lanes. Reduction of lane widths on ELs would reduce safety for very minor ROW reductions. Reducing shoulder widths for long stretches would decrease safety. No locations for spot reductions of shoulder widths were identified that could reduce impacts.
Straddle bents	Use bridge piers that straddle GP lanes or ramps so that the elevated ELs would be constructed above the GP lanes and thus require less/no additional ROW	Partial	Considered for use at Fair Oaks Manor Historic District, Coldstream Subdivision Historic District, and Oak Forest Hills Historic District but eliminated based on constructability challenges and requirement to reconstruct portions of the Transform 285/400 project. Implemented within the Georgetown Subdivision Historic District and Gainsborough Historic District.
Cantilevered bridges	Construct elevated ELs so that they partially overhang the GP lanes to require less ROW	Partial	Cantilevered bridges used to reduce ROW impacts in areas with substantial topography changes. Not prudent in area near the Comora House as would require reconstructing sections of the Transform 285/400 project. Implemented within the Lake Island Estates Historic District and Oak Forest Hills Historic District.
Reduced bridge heights	Use underpasses instead of overpasses to reduce visual impacts	Partial	Underpass locations have been used where practical but other locations were determined to have greater ROW impacts or bridge reconstruction costs.
Replace fencing	Replace chain-link fencing with in-kind materials	Yes	The Preferred Alternative would replace chain-link fencing in-kind when approved by the property owner to minimize impacts to the character of historic resources.

4 **3.6 Visual Quality and Aesthetics**

5 This section identifies the visual and aesthetic effects of the Preferred Alternative corridor based on current
 6 guidelines from FHWA (USDOT, 2015). Following these guidelines, the VIA attached as **Appendix H-6** evaluates
 7 the potential for adverse visual impacts via the four phases illustrated in **Exhibit 3-49** and proposes mitigation
 8 measures to address these impacts (**Section 3.6.4, Mitigation**). Visual resources are components of the natural,

1 cultural, or project environments that are capable of being seen. Visual quality includes aspects of natural harmony,
2 cultural order, and project coherence and serves as the baseline for determining the degree of visual impacts, i.e.,
3 changes to visual quality that affect a viewer's attitude and experience, as beneficial, adverse, or neutral.⁶⁹ While
4 some of the neighborhoods considered in the VIA are "historic resources" as defined by Section 106 of the NHPA,
5 the VIA did not directly evaluate the effect on cultural resources under Section 106. Instead, an assessment of visual
6 effects on historic resources for the Preferred Alternative is provided in **Appendix H-5, Cultural Resources**
7 **Assessment of Effects Report and Addenda**.

8 **3.6.1 Affected Environment**

9 This section summarizes the methodology used in the VIA provided in **Appendix H-6, Visual Impact**
10 **Assessment**, establishes the AVE, identifies potentially affected viewer groups, and characterizes the existing
11 visual quality of the Preferred Alternative corridor.

12 **3.6.1.1 Methodology**

13 The VIA generally followed the *Guidelines for the Visual Impact Assessment of Highway Projects*, published by
14 FHWA in January 2015, which recommends a four-step assessment process (USDOT, 2015). **Exhibit 3-49**
15 illustrates how FHWA's VIA concepts and processes relate to each other and result in a degree of impact that can
16 be used to identify mitigation measures and enhancements. **Exhibit 3-49** illustrates that *project visual character* is
17 a broad term that encompasses the *environment*, the *people*, and their interaction, defined as follows:

- 18 1. The left (blue) ovals represent the affected environment. In the VIA, the physical attributes describing the
19 environment are referred to as *visual resources*.
- 20 2. The right (yellow) ovals represent the people in the affected environment. In the VIA, these people are
21 referred to as *viewers*. The viewers can be static (stationary viewers such as residents) or dynamic (mobile
22 viewers such as drivers).
- 23 3. The center (green) intersecting ovals represent the relationship of viewers with their environment. In the
24 VIA, this relationship reflects how the environment is perceived through the lens of the viewer's
25 preferences and sensitivities.

26 The center ovals are the conclusions of each of the four phases of the VIA (more detail provided in
27 **Appendix H-6, Visual Impacts Assessment**). In the Establishment phase, the FHWA Scoping Questionnaire was
28 used to determine the appropriate level of assessment (refer to Attachment A of **Appendix H-6, Visual Impacts**
29 **Assessment**), the AVE defines the boundaries of potential visual effects (refer to Section 4 of **Appendix H-6,**
30 **Visual Impacts Assessment**) and the VIA methodology is described. In the inventory phase (refer to Section 5 of
31 **Appendix H-6, Visual Impacts Assessment**), visual quality describes the environment as perceived by the
32 viewers. In the Analysis phase (refer to Section 6 of **Appendix H-6, Visual Impacts Assessment**), degree of
33 impact (adverse, neutral, or beneficial) assesses the compatibility of the visual change from the Preferred
34 Alternative based on the viewer's sensitivity. In the Mitigation phase (refer to Section 7 of **Appendix H-6, Visual**

⁶⁹ Refer to the Glossary of **Appendix H-6, Visual Impacts Assessment**, for definitions of visual quality, natural harmony, cultural order and project coherence.

1 **Impacts Assessment, and Section 3.6.4, Mitigation),**
 2 potential mitigation measures are recommended to
 3 reduce unavoidable adverse visual effects.

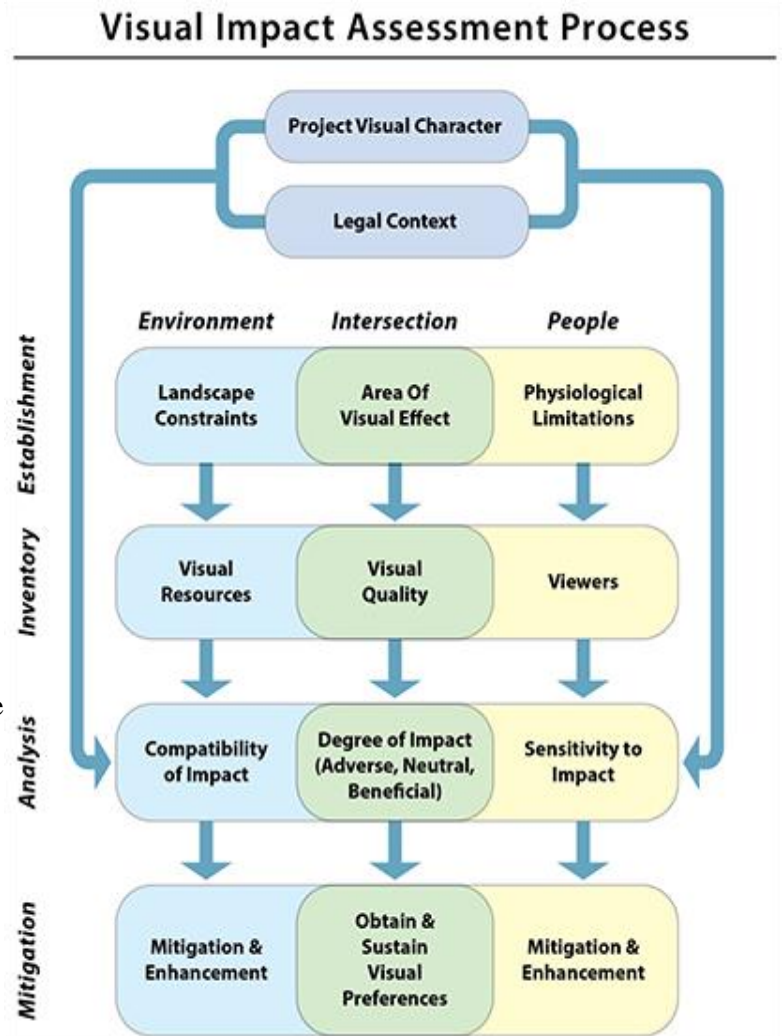
4 **3.6.1.2 Area of Visual Effect**

5 The AVE is the area of project visibility, determined by
 6 the physical constraints of the environment and the
 7 physiological limits of human sight (refer to
 8 **Exhibit 3-49**). The AVE considers both the *static*
 9 *viewshed* (what neighbors of the Proposed Project see
 10 from a stationary location) and the *dynamic viewshed*
 11 (what travelers on the Proposed Project see as they move
 12 through the landscape), as well as where the viewshed is
 13 *restricted* (by development or natural obstacles).

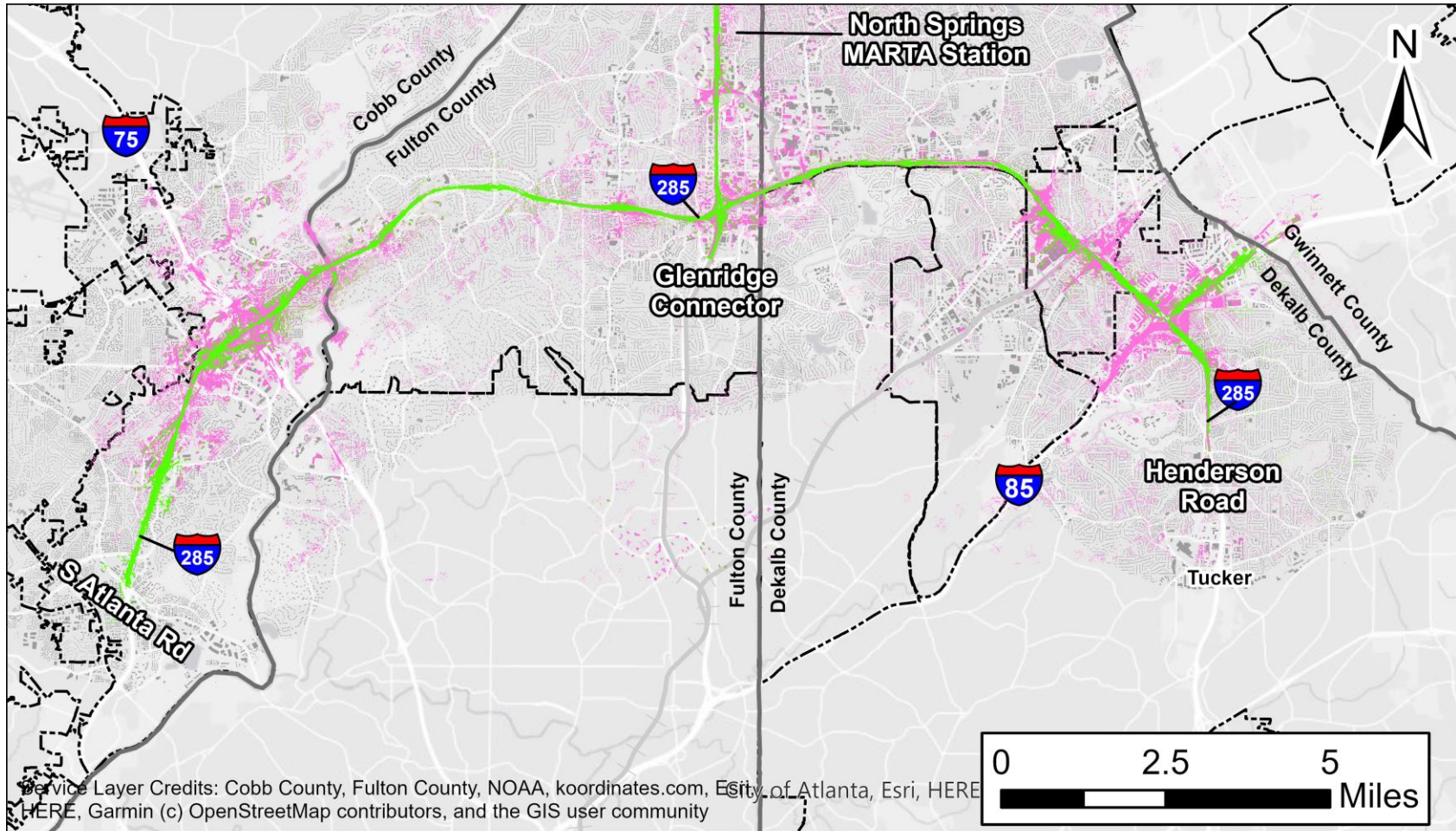
14 **Exhibit 3-50** provides the existing and future viewsheds
 15 map, which identifies those areas that currently have a
 16 view of the I-285 GP lanes and those that could have a
 17 view of the Proposed Project. However, note that the
 18 viewshed points shown on this **Exhibit 3-50** are from the
 19 tops of all elements, including local roadways, parks,
 20 buildings, and trees, which can greatly overestimate the
 21 extent of potential visibility for the Viewer Groups
 22 described in Section 4.4 of **Appendix H-6, Visual**
 23 **Impacts Assessment.**

24 The individual viewsheds of residential, educational,
 25 park, and commercial neighbors and of highway and
 26 local roadway travelers are highly dependent on their
 27 vertical location in the landscape and possible movement; these aspects, combined with season and frequency of
 28 ROW clearing and maintenance, can influence their exposure, awareness, and sensitivity. The existing viewshed
 29 of the I-285 GP lanes is limited along most of the Preferred Alternative corridor because the elevation of I-285 is
 30 like that of adjacent properties and mature vegetation, which create a buffer along much of the corridor. Since the
 31 Preferred Alternative proposes an elevated structure and since portions of this mature buffer (within the ROW)
 32 would need to be cleared for construction, the Preferred Alternative would result in an extended AVE, or future
 33 viewshed, for both those on I-285 GP lanes and those located on adjacent properties. More detailed existing and
 34 future viewshed maps are provided in Attachment 4 of **Appendix H-6, Visual Impacts Assessment.**

Exhibit 3-49: FHWA VIA Process Diagram



1 Exhibit 3-50: Existing and Future Viewsheds Map



- Counties
- Incorporated Municipalities
- Future Viewshed
- Existing Viewshed

Note: The existing and future viewshed points shown on this exhibit are from the tops of all elements, including local roadways, parks, buildings and trees. As such, they can overestimate the extent of potential visibility.

2

1 The existing built and natural environment (winter 2023 is illustrated in the key views) of the Preferred
2 Alternative corridor has notable variations in land use, density, and character, which were used to divide it into a
3 series of seven *landscape units* ranging in length from 1.2 miles to 3.2 miles (refer to **Exhibits 3-52** and **3-53**).
4 The presence of multiple landscape units across the I-285 top end corridor was one of the drivers for completing
5 this “Standard VIA” under FHWA guidance versus an “Abbreviated VIA” or “VIA Memorandum,” which would
6 require a less intense analysis and likely would not include photo-simulations. The seven landscape units and their
7 associated 14 key views are described further in **Appendix H-6, Visual Impacts Assessment**.

8 **3.6.1.3 Viewer Groups**

9 Viewer groups, including neighbors (views to the road) and travelers (views from the road) are discussed in detail
10 in Section 4 of **Appendix H-6, Visual Impacts Assessment**. The following six viewer groups were considered by
11 the VIA:

- 12 1. Residential neighbors: These include owners and tenants of single-family and multi-family housing
13 within the AVE.
- 14 2. Educational neighbors: These include children, staff, and faculty at schools.
- 15 3. Park neighbors: These include those visitors of parks, trails, and other recreational facilities adjacent to
16 I-285, including those on the Chattahoochee River that might float under the Preferred Alternative.
- 17 4. Commercial neighbors: These include retail, restaurants, and office neighbors.
- 18 5. Highway travelers: These include I-75, I-285, SR 400, I-85, and MARTA rail travelers. Under the
19 Preferred Alternative, highway travelers on I-285 include those on the GP lanes and those on the new
20 ELs.
- 21 6. Local roadway travelers: These include motorists, pedestrians, transit (bus) riders, and bicyclists on local
22 and state roads within the AVE, including roads crossing and parallel with I-285.

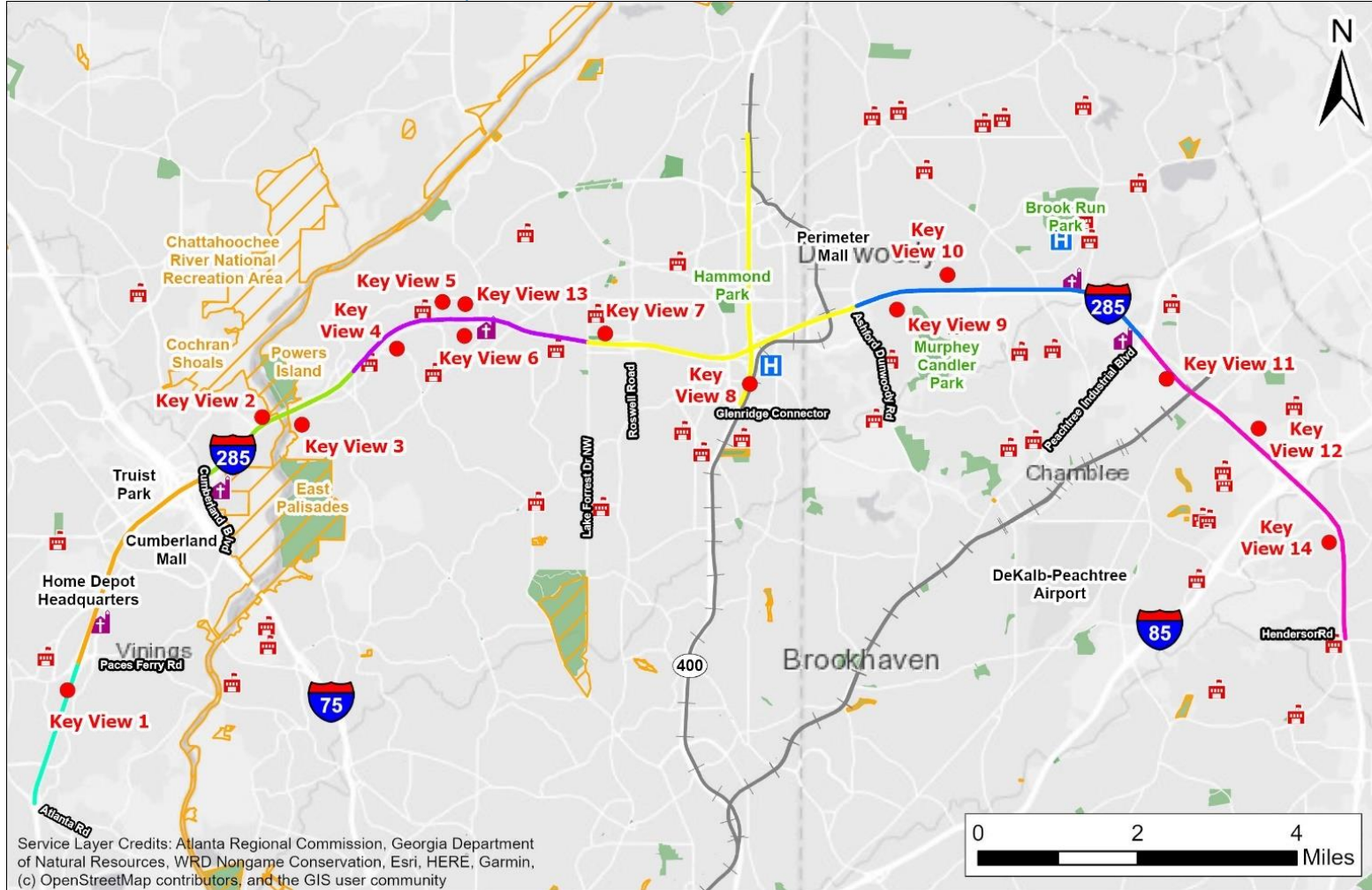
23 Viewer sensitivity is the degree to which viewers are sensitive to changes in the visual character of visual
24 resources. Viewers are either sensitive or insensitive to visual impacts as a result of their exposure and awareness.
25 Viewer exposure is a measure of the viewer’s ability to see a resource. Viewer exposure has three attributes:
26 proximity (distance), extent (how many people see a resource), and duration (movement). Distance is not
27 characterized by group because it varies widely based on the location of any viewer within that group. Movement
28 of the viewer also affects viewer sensitivity. The speed a person is moving affects the area of focus. Travelers
29 generally have more movement than neighbors. Although not a key factor in determining viewer group
30 sensitivity, the speed at which travelers—vehicles, bicyclists, and pedestrians—move could affect their
31 sensitivity. Viewer awareness is a measure of the viewer’s recognition of a particular resource. Viewer awareness
32 has three attributes: attention, focus, and protection. Each of these factors is defined further in the Glossary of
33 **Appendix H-6, Visual Impact Assessment**. Following FHWA guidelines, viewer exposure and viewer
34 awareness were considered together to establish the viewer sensitivity of each viewer group, as shown in
35 **Exhibit 3-51**.

1 Exhibit 3-51: Summary of Viewer Sensitivity By Group

Group	Viewer Exposure	Viewer Awareness	Viewer Movement	Viewer Sensitivity
Residential Neighbors	Moderate-high	High	Low	Sensitive
Educational Neighbors	Moderate-high	Moderate	Low	Sensitive
Park Neighbors	Moderate	Moderate	Moderate	Sensitive
Commercial Neighbors	Moderate	Low	Moderate	Not Sensitive
Highway Travelers	Moderate-high	Moderate-low	High	Not Sensitive
Local Roadway Travelers	Moderate	Moderate	Moderate-high	Sensitive

2 *Note: Viewer sensitivity is based on viewer exposure and viewer awareness. Viewer distance is variable and therefore not captured in the*
 3 *table. All four factors—viewer exposure, viewer awareness, movement, and distance—were considered in **Appendix H-6, Visual Impacts***
 4 ***Assessment.***

1 Exhibit 3-52: Landscape Units and Key Views



2



Exhibit 3-53: Summary of Existing Visual Character by Landscape Unit

Landscape Unit	Limits of Landscape Unit	Natural Environment (Summer Conditions)	Cultural Environment	Project Environment
0	South Atlanta Road to Paces Ferry Road	Tall, mature trees with a consistent height and rough green foliage in a dense line behind the noise walls on both sides of I-285; green grass adjacent to travel lanes.	Overhead metal static and dynamic signs; concrete and metal road bridges over I-285; concrete noise walls and the tops of mature trees dominate the viewshed along I-285; occasional tops of rooflines made of various colors in rough surfaces can be seen slightly above the noise walls.	Straight 8-lane, dark gray asphalt highway with paved shoulders comprised of coarse textures and occasional cracks with an existing white metal noise wall of consistent height relative to grade.
1	<ul style="list-style-type: none"> Paces Ferry Road to Cumberland Boulevard Southeast on I-285 Ramp connections with the existing I-75 (western terminus EL network) 	Sparse, tall, mature trees with a consistent height and rough green foliage behind the travel lanes, especially in southern section; green grass adjacent to travel lanes.	Overhead metal static and dynamic signs; concrete and metal road bridges over I-285; tall, multistory hotel and office buildings made of concrete and glass with smooth flat surfaces and various colors dominate the skyline, especially in northern section.	Curvilinear 6- to 8-lane, dark gray highway with curving ramps and elevated bridge structures, and notably complex arching structures at several interchanges with other highways.
2	Cumberland Boulevard SE to New Northside Drive on I-285	Dense, tall, mature trees with a consistent height and rough green foliage behind the travel lanes; the Chattahoochee River flows under I-285 with a cool blue color and rippled surface.	Overhead metal static and dynamic signs; concrete and metal road bridges over I-285; occasional tall, multistory buildings with variable colors and surfaces made of concrete and glass are at the edge of the view.	Generally linear, 6- to 10-lane, dark gray asphalt highway with paved shoulders of coarse textures and occasional cracks and with a consistent height; short concrete median barrier following the lines of the road; metal guardrail and tan concrete or metal noise walls where needed with bold lines and repeating patterns at irregular heights.

Exhibit 3-53: Summary of Existing Visual Character by Landscape Unit (continued)

Landscape Unit	Limits of Landscape Unit	Natural Environment (Summer Conditions)	Cultural Environment	Project Environment
3	New Northside Drive to Lake Forest Drive on I-285	Generally, dense vegetation with multiple layers and heights of trees with rough foliage in various shades of green behind the travel lanes until Mt Vernon Highway. East of Mt Vernon, the density of vegetation varies and is in a state of transition due to AIP construction-related activities.	Overhead metal static and dynamic signs; concrete and metal road bridges over I-285; occasional houses and short multistory office buildings with rough brown concrete surfaces that can be seen slightly through the tree buffer.	<ul style="list-style-type: none"> Generally curvilinear, 10-lane, dark gray asphalt highway with paved shoulders of coarse textures and occasional cracks and with a consistent height; short concrete median barrier following the lines of the road; metal guardrail and tan concrete or metal noise walls where needed with bold lines and repeating patterns at irregular heights. East of Mt Vernon, the Project Environment varies and is in a state of transition due to AIP construction-related activities.
4	<ul style="list-style-type: none"> Lake Forest Drive to Ashford Dunwoody Road on I-285 Glenridge Connector to North Springs MARTA Station on SR 400 	Variable densities of vegetation with multiple layers and heights of trees with rough foliage in various shades of green set back from the travel lanes in limited locations. The balance of LU-4 is in transition due to AIP and Transform 285/400 construction-related activities.	Overhead metal static and dynamic signs; concrete and metal road bridges over I-285; clusters of multistory buildings with variable heights, diverse colors, and concrete and metal surfaces frequently seen adjacent to I-285.	<ul style="list-style-type: none"> Generally linear, 10-lane, dark gray asphalt highway with paved shoulders of coarse textures and occasional cracks; metal guardrail and tan concrete or metal noise walls. The Project Environment of LU-4 is in transition due to AIP and Transform 285/400 construction-related activities.
5	Ashford Dunwoody Road to Peachtree Industrial Boulevard on I-285	Tall mature trees with a consistent height, dense in sections, with rough green foliage behind the travel lanes. Portions of LU-5 are in transition due to AIP and Transform 285/400 construction-related activities.	Overhead metal static and dynamic signs; concrete and metal road bridges over I-285; clusters of single- and multistory glass and concrete office and retail buildings with diverse colors and surfaces; single- and multistory wood residences that can be increasingly seen through the tree buffer.	<ul style="list-style-type: none"> Curvilinear, 10-lane, dark gray highway with notable changes in grade relative to adjacent property and crossed by multiple elevated bridge structures and noise walls of different materials. Most of the Project Environment within LU-5 is in transition due to AIP and Transform 285/400 construction-related activities.

Exhibit 3-53: Summary of Existing Visual Character by Landscape Unit (continued)

Landscape Unit	Limits of Landscape Unit	Natural Environment (Summer Conditions)	Cultural Environment	Project Environment
6	<ul style="list-style-type: none"> • Peachtree Industrial Boulevard to eastern terminus, Henderson Road, on I-285 • Ramp connection with the existing I-85 HOT network at Pleasantdale Road on I-85 	<p>Dense vegetation adjacent to the westbound lanes in limited segments, generally associated with residential neighborhoods. This vegetation has multiple layers and trees heights, and rough foliage in various shades of green set back from the travel lanes. The majority of LU-6 has limited vegetation due to its current use or due to the start of AIP construction-related activities near Peachtree Industrial Boulevard.</p>	<p>Overhead static and dynamic signs; road bridges over I-285; Assembly Atlanta, elevated car dealership displays, MARTA – railroad, I-285/I-85 interchange (“Spaghetti Junction”), occasional single- and multistory office buildings with various surface textures and colors, especially at interchanges.</p>	<p>Curvilinear, 10-lane dark gray asphalt highway transitioning to 6 lanes after the I-285/I-85 interchange (“Spaghetti Junction”). Paved shoulders of coarse textures and occasional, short concrete median barriers following the lines of the road. Metal guardrail and tan concrete or metal noise walls where needed; I-285/I-85 interchange consists of curving ramps and elevated bridge structures, with notably complex arching structures.</p>

1 **3.6.1.4 Existing Visual Quality**

2 Visual quality is a measure of the visual character—described by natural harmony (based on the natural
 3 environment), cultural order (based on the cultural environment), and project coherence (based on the project
 4 environment)—as perceived by the viewer. Overall visual quality is not described as a summary of these three
 5 characteristics because compatibility and impacts are based on comparing the proposed action with the existing
 6 environment for the natural, cultural, and project environments separately. Each of these three characteristics are
 7 defined in the Glossary of **Appendix H-6, Visual Impacts Assessment**, and are used to describe the existing
 8 visual quality of the key views, landscape units, and the AVE.

9 **Exhibit 3-54** lists the key viewer groups captured by the key views in each landscape unit and generally
 10 characterizes its existing visual quality in the summer. With the limited exceptions of its major interchanges at
 11 I-75, SR 400, and I-85, I-285 GP lanes are the dominant element within the AVE and each landscape unit.
 12 However, visual quality reflects both I-285 and adjacent land uses because there are viewers from both
 13 perspectives. Overall, natural harmony within the AVE is high due to the rolling topography and dense
 14 orderliness of vegetation along the roadways and within most of the developed areas. However, this vegetation,
 15 and the screening it provides, varies substantially by season, as illustrated in the VIA. Cultural order in the AVE
 16 is generally low, reflecting the inconsistent sizes, types, and materials that make up the buildings and other
 17 structures within the transportation corridors and developed areas. Project coherence is low within the AVE
 18 because the roadway corridors—both highways and local roads—are frequently interrupted by visual intrusions
 19 such as bridges, utilities, and light poles.

20 **Exhibit 3-54: Summary of Existing Viewers and Visual Quality by Landscape Unit**

Landscape Unit	Limits of Landscape Unit	Key Viewers ^a	Natural Harmony	Cultural Order	Project Coherence
0	South Atlanta Road to Paces Ferry Road	Highway travelers on I-285	▲	▼	▲
1	<ul style="list-style-type: none"> Paces Ferry Road to Cumberland Boulevard SE on I-285 Ramp connections with the NWC, the existing EL network on I-75 (western termini) 	Highway travelers on I-285	▲	▼	▲
2	Cumberland Boulevard SE to New Northside Drive on I-285	Local roadway travelers and park and residential neighbors	▲	▲	▲
3	New Northside Drive to Lake Forrest Drive on I-285	Local roadway travelers and educational neighbors	▲	▲	▲
4	<ul style="list-style-type: none"> Lake Forrest Drive to Ashford Dunwoody Road on I-285 Glenridge Connector to the North Springs MARTA Station on SR 400 	Highway travelers on SR 400 and park and residential neighbors	▼	▼	▼
5	Ashford Dunwoody Road to Peachtree Industrial Boulevard on I-285	Local roadway travelers and residential neighbors	▲	▼	▲
6	<ul style="list-style-type: none"> Peachtree Industrial Blvd to Eastern Termini at Henderson Road on I-285 Ramp connection with the existing HOT network at Pleasantdale Road on I-85 	Local roadway travelers and park neighbors	▼	▲	▼

21 ^a Viewer groups captured by the key views within each landscape unit.

22 Notes:

23 ▲ = Landscape unit currently has high natural harmony, cultural order, or project coherence

24 ▼ = Landscape unit currently has low natural harmony, cultural order, or project coherence

3.6.2 Environmental Consequences

This section presents the environmental consequences for visual and aesthetics for the Preferred Alternative. Because it is not feasible to analyze all the views in which the Preferred Alternative would be seen within the AVE, it was necessary to select a sample that would demonstrate the potential change in the Proposed Project's visual resources. Key views also represent the viewer groups that have the highest potential to be affected by the Preferred Alternative considering their exposure and sensitivity; therefore, the scale of their impacts is not necessarily indicative of the impacts along the length of the entire landscape unit. Chapter 6 of **Appendix H-6, Visual Impacts Assessment**, provides a detailed description and illustrations of the potential visual impacts by key view, landscape unit, and AVE, comparing existing conditions during leaf-off conditions (as of January/February 2023) to the Preferred Alternative and concluding if it would result in a beneficial, adverse, or neutral change to the visual environment.

Under the No-Build Alternative, the existing visual quality summarized in **Exhibit 3-54** would remain largely unchanged for the viewer groups noted except for Landscape Units 4 and 5, affected by Transform 285/400 and the AIPs as discussed further in **Section 3.6.3, Cumulative Impacts**, and select areas in which ongoing, routine maintenance of Georgia DOT's existing ROW will result in clearing of vegetation and trees. As a result, the Preferred Alternative is compared with updated existing conditions (January/February 2023) in **Appendix H-6, Visual Impacts Assessment**, instead of a simulated No-Build Alternative. The effects of these projects that will be completed prior to the Preferred Alternative are included in the future proposed visual characteristics (via photo-simulation) illustrated by Key Views 7, 8, 9, and 10 in Section 6.2 of **Appendix H-6, Visual Impacts Assessment**.

Changes proposed as part of Preferred Alternative include tree clearing and constructing ELs to the outside of the existing GP lanes on elevated structures. This would remove the visual buffer within Georgia DOT's proposed ROW along much of the AVE increasing the exposure of adjacent properties and the Preferred Alternative being incompatible with the AVE's natural environment. Although the materials of the elevated EL structures would be similar to the existing roads and would have the same orderliness by following the existing curvilinear highway path, the Preferred Alternative would be incompatible with the cultural environment because of the form and scale of the structures. The new structures would increase the visible hardscape and associated shadows within much of the AVE, visibly dominating the environment due to the size and scale except in locations with existing overpasses or interchange; therefore, the Preferred Alternative would be incompatible with the existing project environment. While the visual character of the Preferred Alternative is generally compatible in materials and form, it differs in scale and would be incompatible with much of the existing visual character of the Preferred Alternative corridor.

Generally, viewers would experience a high level of change in exposure and a moderate level of change in awareness. The Preferred Alternative would have an adverse effect on the experience of overall visual quality within the AVE. Following evaluation of visual impacts at the key views found in **Appendix H-6, Visual Impacts Assessment**, the potential visual impacts within each landscape unit are then evaluated. Visual impacts by landscape unit reflect the land uses and visual character unique to that landscape unit, using the specific changes at the key views and to key viewers of similar landscapes (**Exhibit 3-55**).

1 Exhibit 3-55: Visual Impact by Landscape Unit

Landscape Unit	Overall Visual Compatibility	Key Viewers ^a	Overall Visual Quality Impact
0	Compatible	Highway travelers on I-285 GP lanes	Neutral
1	Incompatible	Highway travelers on I-285 GP lanes, local roadway travelers, and residential and commercial neighbors	Adverse
2	Incompatible	Local roadway travelers and park, residential, and commercial neighbors	Adverse
3	Incompatible	Local roadway travelers, educational, and residential neighbors	Adverse
4	Incompatible	Highway travelers on SR 400 GP lanes and park and residential neighbors	Adverse
5	Incompatible	Local roadway travelers and residential neighbors	Adverse
6	Incompatible	Local roadway travelers, commercial, and park neighbors	Adverse

2 ^a Viewer groups captured by the key views within each landscape unit

3 **3.6.3 Cumulative Impacts**

4 The VIA, **Appendix H-6, Visual Impacts Assessment**, compares the anticipated visual landscape resulting from
 5 the Preferred Alternative with existing, leaf-off conditions in winter 2023. The proposed conditions described in
 6 Section 6 of **Appendix H-6, Visual Impact Assessment**, include features from three of the four Georgia DOT
 7 projects scheduled for completion in advanced of the Preferred Alternative (i.e., since I-285/Peachtree Industrial
 8 Boulevard Interchange Improvements [PI 0017125] does not overlap with a key view, it was not depicted in the
 9 photo-simulations). This includes relevant features such as new flyover ramps and CD lanes from the Transform
 10 285/400 project and two of the I-285 AIPs. The Transform 285/400 project extends 4.3 miles along I-285 from west
 11 of Roswell Road to east of Ashford Dunwoody Road and 6.2 miles along SR 400 from the Glenridge Connector to
 12 Spalding Drive. The Transform 285/400 project is adding new flyover ramps, new CD lanes, and other facilities that
 13 will be readily visible along much of the eastern limit of Landscape Unit 4 and the western limit of Landscape Unit
 14 5, as well as the portions of the planned SR 400 ELs. As a result, efforts were made to integrate key design features
 15 from these projects into the future photo-simulations in Chapter 6 of **Appendix H-6, Visual Impacts Assessment**.
 16 The potential cumulative visual changes of the Preferred Alternative paired with the Transform 285/400 project and
 17 AIPs are informed by the existing versus proposed visual characteristics (via photo-simulation) illustrated by Key
 18 Views 7, 8, 9, and 10. Transform 285/400 contributes noticeably to the visual change observed for Key View 8,
 19 looking north at I-285/400, and for Key View 10, looking south from Chateau Club, while barely being visible, if at
 20 all, from Key Views 7 and 9. While not within sight of one of the key views, the fourth I-285 AIP, the I-
 21 285/Peachtree Industrial Boulevard Interchange is also in the Preferred Alternative corridor.

22 Other reasonably foreseeable future actions include the proposed I-285 Eastside and Westside Express Lanes
 23 projects. The proposed I-285 Eastside Project plans to add two, barrier-separated ELs in each direction on I-285
 24 between the eastern termini of the Preferred Alternative corridor and its intersection with I-20 in DeKalb County.
 25 The proposed I-285 Westside Express Lanes Project plans to add two barrier-separated ELs in each direction on
 26 I-285 from just north of South Atlanta Road (Exit 16) in Cobb County and to I-20 in Fulton County. Details about
 27 other reasonably foreseeable future actions funded or anticipated projects within the Preferred Alternative corridor
 28 are addressed in **Appendix D, Indirect and Cumulative Effects Report**. As a result, the Preferred Alternative

1 will result in an aggregate adverse change in the overall visual quality and character due to its incremental,
2 cumulative impact when considered with other past, present, and reasonably foreseeable future actions.

3 **3.6.4 Mitigation**

4 FHWA guidance suggests that as part of the VIA, a qualitative/aesthetic approach should be taken to address
5 visual quality loss in the Project Area, see **Exhibit 3-49**, FHWA VIA Process Diagram. Now that the
6 environmental consequences and cumulative impacts without mitigation have been analyzed, Georgia DOT will
7 receive input during the Draft EIS comment period on visual preferences and a suite of potential mitigation
8 measures and enhancement to sustain them. Mitigation measures to avoid or minimize visual impacts can be
9 applied to the natural, cultural, or project environments and can be construction or design related. The current
10 Proposed Project design includes extensive avoidance and minimization efforts. For example, Allen Road Park
11 was initially going to be impacted by expanded ROW that subsequent design refinements were able to avoid.
12 However, potential visual impacts to Allen Road Park without further aesthetic mitigation measures could remain
13 as is the case with all the photo-simulations (see **Section 6.2.8**, Key View 7, of **Appendix H-6, Visual Impacts**
14 **Assessment**). Coordination with the public as well as leaderships of adjacent cities, counties, and CIDs (refer to
15 **Exhibit 3-1**), is a key step of the comment period of the Draft EIS. Georgia DOT will seek feedback on a suite of
16 potential aesthetic mitigation measures, see Chapter 7 of **Appendix H-6, Visual Impacts Assessment**. Similarly,
17 the funding for construction versus long-term maintenance of these mitigation measures will vary by location,
18 type of measure, and context sensitive preferences that would be outlined via written agreement or a MOU.

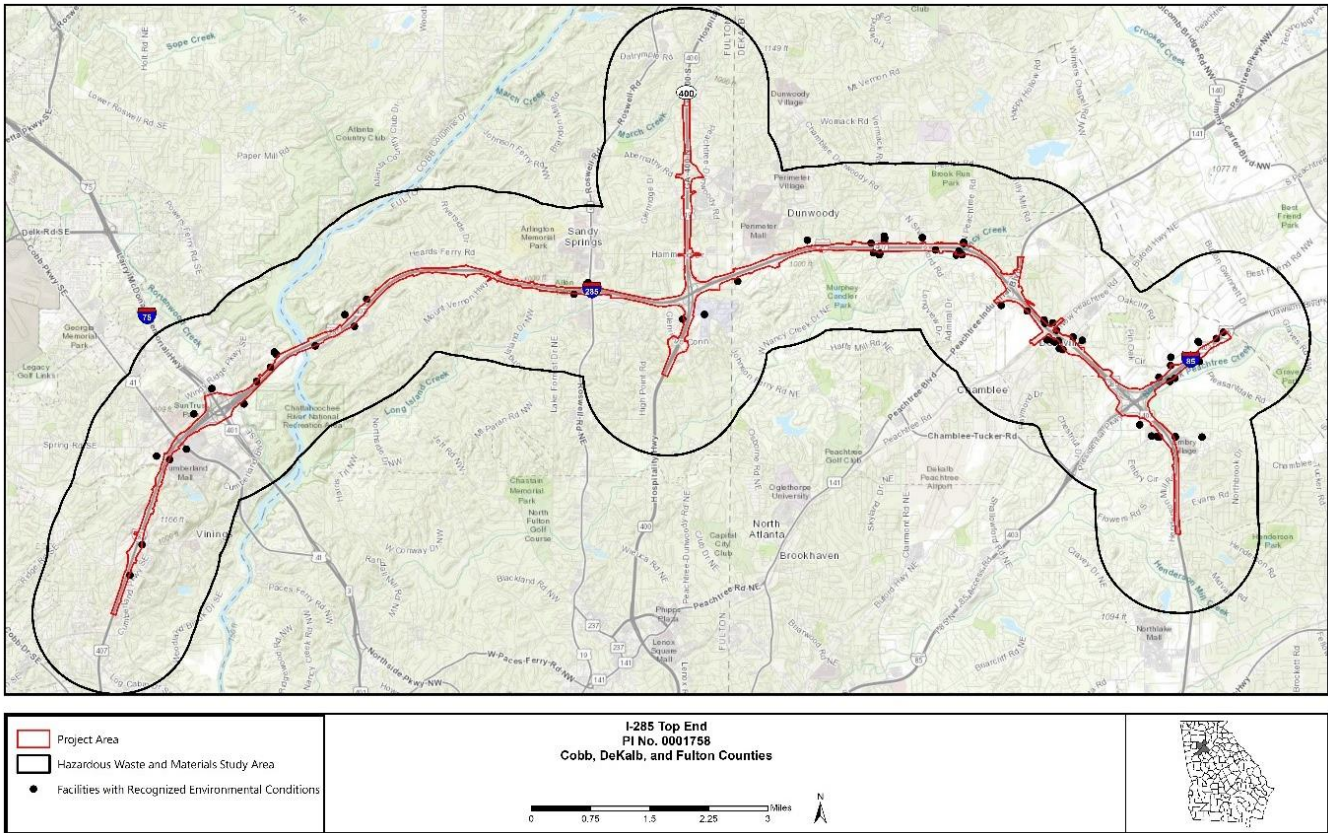
19 **3.7 Hazardous Waste and Materials**

20 This section discusses hazardous waste and materials and any direct, indirect, or cumulative effects that may
21 result from the No-Build Alternative or Preferred Alternative. This section also discusses potential avoidance,
22 minimization, and/or mitigation measures.

23 **3.7.1 Affected Environment**

24 The Study Area for hazardous waste and materials is a 1-mile buffer around the Project Area and consists of
25 existing roadways, commercial (e.g., gasoline service stations, retail stores, dry cleaners, and office buildings) and
26 industrial land uses (the demolished General Motors Doraville manufacturing plant), and undeveloped land (refer
27 to **Exhibit 3-56**). The Study Area was chosen based on the Project Area described in **Chapter 1, Need and**
28 **Purpose**, and the **Appendix H-7, Environmental Site Assessment**, completed by Wilmer Engineering in 2020.

1 Exhibit 3-56: Hazardous Waste and Materials Study Areas



2

3 The Phase I ESA identified, classified, and tabulated properties within a 1-mile buffer area that may have been
 4 environmentally impacted by hazardous materials; reviewed public records and readily accessible data sources;
 5 and conducted field reconnaissance. The Phase I ESA identified areas with the potential for contaminated soil or
 6 ground water (known as, recognized environmental concerns [RECs]) that are located directly within or adjacent
 7 to the Project Area and included those that have the potential to affect the Preferred Alternative due to location
 8 and topographic gradient compared to the Project Area.

9 Defined by ASTM International (ASTM), a REC is “the presence or likely presence of any hazardous substances
 10 or petroleum products in, on, or at a property.”⁷⁰ The Phase I ESA identified 71 REC facilities. Thirty of these
 11 facilities required a Phase II site investigation as Georgia DOT may require ROW from these sites to implement
 12 the Proposed Project. These facilities are primarily existing or former drycleaners, gasoline stations, and
 13 automotive distribution or service businesses. The ESA also listed other facilities including food markets and
 14 grocery stores, an electric company, a chemical company, shopping centers, malls, and a hospital as RECs.
 15 Within the list of RECs are 32 existing or former drycleaners, 33 existing or former gas stations, three
 16 Brownfields, nine aboveground storage tanks, and 48 underground storage tanks (USTs). The ESA listed 36 of the
 17 USTs as leaking USTs. The list of RECs also includes Northside Hospital, which is a Resource Conservation and
 18 Recovery Act (RCRA) large quantity generator, five RCRA conditionally exempt small quantity generators that

⁷⁰ ASTM E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

1 generate 100 kilograms or less hazardous waste per month, and 28 RCRA facilities that are no longer regulated.
2 Refer to **Appendix H-7, Environmental Site Assessment**, for the full list and locations.

3 Contaminants that may be present at the RECs include perchloroethylene (PCE); trichloroethylene (TCE);
4 cis-1,2-dichloroethene (cis-DCE); trans-1,2-dichloroethene (trans-DCE); diesel range organics; petrol or gasoline
5 range organics; benzene, toluene, ethylbenzene, and xylenes (BTEX); and vinyl chloride (VC). Many of these
6 contaminants, such as PCE, TCE, cis- and trans-DCE, and VC, are chlorinated solvents used in dry-cleaning
7 activities and are resistant to environmental degradation. Other contaminants like diesel range organics, petrol or
8 gasoline range organics, and BTEX enter the environment through diesel and petroleum products, like gasoline.
9 As they slowly degrade, most of these contaminants persist in soil and groundwater.

10 3.7.2 Environmental Consequences

11 3.7.2.1 Direct and Indirect Impacts

12 Within the Study Area, there are 71 RECs potentially contaminated with hazardous materials (**Appendix H-7,**
13 **Environmental Site Assessment [Phase I and Phase II]**). Based on the Phase I ESA, which considers
14 contamination type and medium, proximity to proposed areas of construction, and the hydrologic connectivity to
15 the Study Area based on the topography, these contaminants may have the potential to cause direct and indirect
16 impacts. Soil samples for laboratory testing were collected at 30 sites where the Preferred Alternative would
17 require additional ROW to implement the project. These findings are documented in the Environmental Site
18 Assessment Phase II report. At 14 of these sites, the level of soil contamination was insignificant and did not
19 warrant further investigation. Samples from 16 of the sites contained contaminants at levels that may require
20 remediation or the implementation of other engineering controls to protect workers and public safety.
21 Georgia DOT will report the results of testing at these locations to the Georgia Environmental Protection Division
22 (GAEPD), Response and Remediation Program and GAEPD, Land Protection Branch, Underground Storage
23 Tank Management Program for review and direction regarding further evaluation.

24 With the Preferred Alternative, the hazardous materials identified in the Phase II field analysis would have the
25 potential to cause direct and indirect adverse impacts on human health and the environment. The No-Build
26 Alternative would have no impacts because potentially contaminated land would remain undisturbed under that
27 alternative. Direct impacts from the Preferred Alternative would be associated with the excavation and removal of
28 solid waste and hazardous waste generation from use of construction equipment. Per Georgia DOT's policy for
29 disposal, at locations where it is determined that the Preferred Alternative construction would intersect with
30 contaminated soils and debris, the contaminated materials would be moved off-site and brought to an appropriate
31 receiving facility depending on chemical characteristics. Appropriate receiving facilities for contaminated soils
32 may include landfills or recycling facilities. Off-site transportation of these materials would cause indirect impacts
33 due to the increase in solid waste generation and disposal. Other indirect impacts would include the possible
34 spilling of contaminated soil during transport to waste facilities and the release of dust particles into the air during
35 excavation.

36 Applicable laws and regulations concerning the removal of toxic or hazardous material would be followed and the
37 removal coordinated with GAEPD. Implementation of the Preferred Alternative would not preclude any necessary
38 site remediation from being performed by others outside of the Project Area, and proposed ROW, or pertaining to
39 other construction activities in the vicinity.

3.7.2.2 Hazardous Materials Construction Impacts

The construction of the Preferred Alternative would generate construction debris. During construction, Georgia DOT would remove and dispose of solid waste generated during clearing and grubbing, demolition, and other construction operations according to local and federal regulations.

Georgia DOT would inventory potentially hazardous materials prior to any structural demolition or renovation work. If Georgia DOT finds these hazardous materials present within active construction areas, they would properly handle and dispose of the materials in accordance with state and local regulations. The materials would be transferred to a receiving facility licensed to handle the specific type of solid waste. A more robust discussion of the potentially hazardous materials within the proposed ROW to be removed during construction can be found in **Section 3.13, Construction Impacts**.

3.7.3 Potential Avoidance, Minimization, and Mitigation Measures

Georgia DOT conducted an Environmental Site Assessment to determine the main sites of concern where a plan for a subsurface investigation was required. Impacted soils and groundwater/stormwater impacted by any regulated compounds that are disturbed or removed during the construction of the Proposed Project are considered “solid waste” by GAEPD. These solid waste materials require appropriate excavation, handling, and disposal techniques in accordance with Solid Waste Management regulations. Solid Waste Management policy allows the removal and transportation of such soils and water to a facility permitted to handle impacted soils. Excavation of impacted soils during construction adjoining or at the REC facilities will be performed by a specialized contractor experienced with handling and disposal of similar materials and with the Occupational Safety and Health Administration regulations pertaining to waste removal activities. An environmental professional will be onsite to monitor soil excavation. Furthermore, the Georgia DOT would develop a Health and Safety Plan (HSP) to provide the minimum health and safety specifications for contractors during construction including requirements for environmental monitoring, personal protective equipment, site control and security, and training (Environmental Commitments Table, No. E-38).

Hazardous waste materials associated with normal operations of the Preferred Alternative would primarily be associated with stormwater runoff containing fuel, lubricants, heavy metals, compounds from tires, and automobile engine coolants, such as ethylene glycol (i.e., antifreeze). Municipal separate storm sewer ponds, which treat stormwater prior to being released, would capture much of the waste from stormwater runoff. Georgia DOT would design stormwater and water quality treatment facilities to collect and retain pollutants resulting from normal traffic operations. Spill response programs that would specify emergency response procedures for spill and leak events would mitigate spills and leaks associated with vehicles and heavy machinery during construction (Environmental Commitments Table, No. E-43). Depending on the nature of the spill or discharge to the environment, it may also be necessary to contact regulatory agencies such as the National Response Center and GAEPD.

3.8 Air Quality

This section describes the Preferred Alternative’s affected environment and environmental consequences related to air quality. The air quality impacts of the Preferred Alternative were assessed using local meteorological data and data regarding the attainment status for various criteria pollutants.

3.8.1 Affected Environment

3.8.1.1 Criteria Pollutant Attainment Status

The 1990 Clean Air Act (CAA) amendments, and guidelines issued by EPA, are followed by agencies responsible for compliance with the National Ambient Air Quality Standards (NAAQS). The NAAQS have been established for air pollutants identified by EPA as being of nationwide concern. These air pollutants, referred to as criteria pollutants, are CO, lead, nitrogen dioxide, PM_{2.5} and particulate matter 10 micrometers or less (PM₁₀), O₃, and sulfur dioxide.

EPA assesses an area's compliance with the NAAQS by classifying the area under one of the following four designations for each criteria pollutant: attainment, nonattainment, maintenance, and unclassifiable. An attainment designation occurs when an area's ambient air concentrations are less than the respective NAAQS. Nonattainment areas have ambient air concentrations of criteria pollutants that are greater than the NAAQS for one or more criteria pollutant. A maintenance designation indicates that an area has recently achieved attainment after having a previous designation as a nonattainment area. An unclassifiable designation specifically refers to an area where insufficient data exist to classify as either attainment or nonattainment. Unclassifiable areas are generally treated as attainment areas. In addition to federal air quality standards, CAA Section 176(c) requires that federal transportation projects are consistent with the state air quality goals outlined in the SIP. Transportation Conformity is the process used to ensure consistency with the SIP's state air quality goals. Conformity to the SIP means that transportation activities will not cause new violations of the NAAQS, worsen existing violations of the standards, or delay attainment of the relevant standard.

Lead, Nitrogen Dioxide, PM₁₀, and Sulfur Dioxide

As stated in **Appendix H-8, Air Quality Impact Assessment**, the state of Georgia is currently in attainment for lead, nitrogen dioxide, PM₁₀, and sulfur dioxide with respect to the NAAQS, and no independent state-level air quality controls are currently established; therefore, no air quality analysis is required for these pollutants.⁷¹

Carbon Monoxide

EPA set air quality standards for CO in 1971. Nationally, and particularly in urban areas, most CO emissions to ambient air come from mobile sources. To protect both public health and welfare, EPA set an 8-hour primary standard at 9 parts per million and a 1-hour primary standard at 35 parts per million. As of May 1, 2020, no regional or project-level CO conformity requirements are in effect for the state of Georgia. In accordance with 40 CFR 93.102(b), Transportation Conformity determinations only apply in nonattainment and maintenance areas, but Georgia is in attainment for CO as no counties in Georgia are currently categorized as being in nonattainment or maintenance for CO. As such, regional and project-level Transportation Conformity requirements do not apply for CO in Georgia. Furthermore, Georgia DOT has determined that quantitative CO project-level analyses are not required in any CO attainment areas within the state, and effective May 1, 2020, project-level CO analysis is considered unnecessary for NEPA purposes as outlined in *2020 Agreement*:

⁷¹ U.S. Environmental Protection Agency (EPA). 2020b. "Nonattainment Areas for Criteria Pollutants (Green Book)." October 30. <https://www.epa.gov/green-book>.

1 *Qualitative Project-Level Analyses for GA Areas in Attainment for Carbon Monoxide* (please refer to this
2 agreement for further detail).⁷²

3 **PM_{2.5}**

4 Transportation Conformity is required for federal transportation projects in areas that have been designated by
5 EPA as not meeting the NAAQS. These areas are called nonattainment areas if they currently do not meet air
6 quality standards; they are called maintenance areas if they have previously violated air quality standards, but
7 currently meet them and have an approved maintenance plan. On August 24, 2016, EPA revoked the 1997
8 Primary Annual PM_{2.5} NAAQS that designated 24 counties and 3 partial counties in Georgia as nonattainment
9 areas for PM_{2.5}. As a result, effective October 24, 2016, Transportation Conformity for the PM_{2.5} standard in the
10 state of Georgia is no longer required, the state of Georgia is considered to be in attainment for PM_{2.5}, and no
11 further analysis of PM_{2.5} emissions is warranted.

12 **Ozone**

13 The Preferred Alternative is in a maintenance area for O₃ and is in an area where the SIP contains transportation
14 control measures.⁷³ The CAA requires Transportation Plans and TIPs in areas not meeting the NAAQS to achieve
15 conformity to the SIP for air quality. The FY 2020-2025 TIP is the currently adopted plan for the Metro Atlanta
16 area showing the region's highest transportation priorities. ARC received the most recent conformity
17 determination from USDOT on February 18, 2020, in which the Preferred Alternative is identified in the ARC
18 2050 RTP and the FY 2020-2025 TIP. As stated in **Appendix H-8, Air Quality Impact Assessment**, inclusion in
19 a conforming plan demonstrates that the Proposed Project meets conformity requirements for O₃; therefore, no
20 further analysis of O₃ emissions is warranted.

21 **3.8.1.2 Mobile Source Air Toxics Methodology and Study Area**

22 In addition to the criteria air pollutants for which there are NAAQS, EPA also regulates MSAT. MSAT are
23 hazardous air pollutants that primarily originate from human-made sources, including on-road mobile sources,
24 non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners), and stationary sources (e.g., factories
25 or refineries). Controlling air toxic emissions became a national priority with the passage of the CAA
26 Amendments of 1990, whereby Congress mandated that EPA regulate 188 air toxics, also known as hazardous air
27 pollutants. EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants
28 from Mobile Sources (*Federal Register*, Vol. 72, No. 37, page 8430, February 26, 2007), and identified a group of
29 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System.⁷⁴
30 In addition, EPA identified nine compounds with significant contributions from mobile sources that are among
31 the national and regional-scale cancer risk drivers from their 2011 National Air Toxics Assessment.⁷⁵

⁷² Federal Highway Administration (FHWA) – Georgia Department of Transportation (Georgia DOT). 2020. *2020 Agreement: Qualitative Project-Level Analyses for GA Areas in Attainment for Carbon Monoxide*. Technical Approach for GDOT Air Assessments following May 1, 2020. April 13.

⁷³ U.S. Environmental Protection Agency (EPA). 2022. "US EPA Region 4 Approves Georgia's Ozone Redesignation Request and Maintenance Plan for the Atlanta 2015 8-Hour Ozone NAAQS Nonattainment Area." October 17. <https://www.epa.gov/newsreleases/us-epa-region-4-approves-georgias-ozone-redesignation-request-and-maintenance-plan>.

⁷⁴ U.S. Environmental Protection Agency (EPA). 2023. "Integrated Risk Information System." <https://www.epa.gov/iris>. February 27.

⁷⁵ U.S. Environmental Protection Agency (EPA). 2011. "National Air Toxics Assessment." <https://www.epa.gov/national-air-toxics-assessment/2011-nata-assessment-results>.

1 The following are the nine identified compounds: 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel
2 particulate matter, ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. While FHWA
3 considers these the priority MSAT, the list is subject to change and may be adjusted in consideration of future
4 EPA rules.

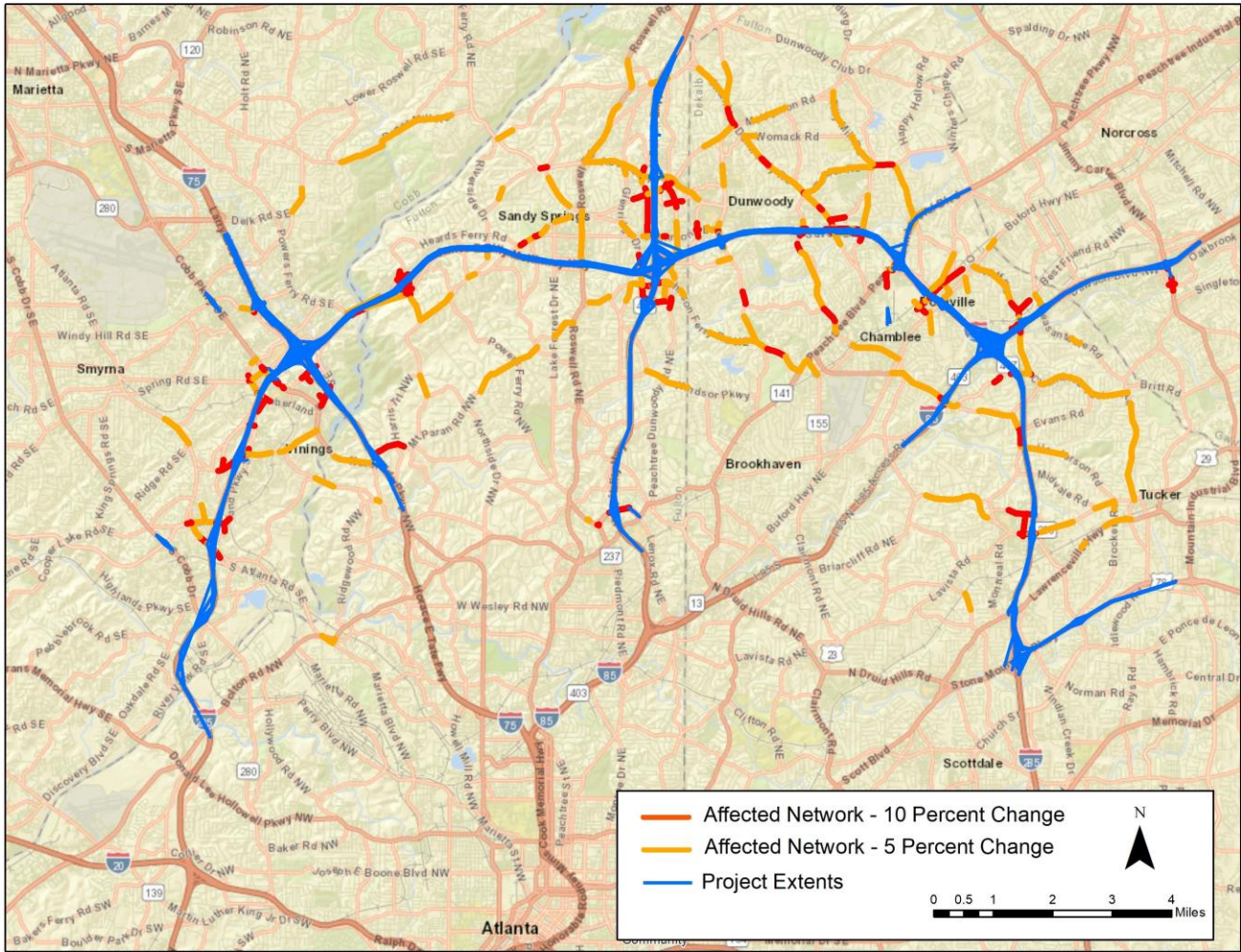
5 MSAT analyses for NEPA highway projects are conducted following FHWA’s “Interim Guidance Update on
6 Mobile Source Air Toxic (MSAT) Analysis in National Environmental Policy Act (NEPA) Documents.”
7 The most recent version of this guidance was issued January 18, 2023, but allows for projects that began analysis
8 prior to January 9, 2023, to continue analysis under the 2016 version of the guidance. Since this project’s MSAT
9 analysis began prior to issuance of the 2023 guidance document, the analysis presented herein follows the 2016
10 version of the FHWA guidance document.

11 Based upon anticipated design year Annual Average Daily Traffic volumes, the Preferred Alternative may have
12 higher potential MSAT effects per FHWA guidance⁷⁶ and therefore requires a quantitative MSAT analysis. The air
13 quality study used EPA’s Motor Vehicle Emissions Simulator⁷⁷ to model the amount of MSAT emitted for the
14 No-Build Alternative and the Preferred Alternative in the existing year (2019), the expected first year of operation
15 (2037), and the design-year (2057). For purposes of the MSAT analysis, the Study Area encompasses an entire
16 region, known as the Regional Study Area. The Regional Study Area was established in accordance with the
17 affected transportation network, which provides a framework for an objective quantitative assessment by
18 identifying all roadway segments associated with the Preferred Alternative, as well as segments expecting
19 meaningful changes in emissions, to capture the anticipated changes in MSAT emissions that would directly result
20 from implementation of the Preferred Alternative. **Appendix H-8, Air Quality Impact Assessment**, further
21 explains the primary data sources and technical criteria used to establish the affected transportation network.
22 The resulting MSAT analysis Regional Study Area includes affected roadway links that span Cobb, DeKalb,
23 Fulton, and Gwinnett counties as depicted in **Exhibit 3-57**. The links in Gwinnett County were also part of the
24 affected network, so Gwinnett County was included in the modeling analysis even though the Proposed Project is
25 not physically located in this county. The “Project Extents” in **Exhibit 3-57** extend beyond the Project Area.
26 The Project Extents are a function of the modeling exercise and have been extended beyond the Project Area to
27 capture changes in traffic on links leading to all studied intersections that were considered affected due to changes
28 in intersection delay. The Project Extents in **Exhibit 3-57** do not represent the extent of Proposed Project work.

⁷⁶ Federal Highway Administration (FHWA). 2016. Federal Highway Administration (FHWA). 2016. “Updated Interim Guidance on Mobile Source Air Toxic (MSAT) Analysis in National Environmental Policy Act (NEPA) Documents.” October 18.

⁷⁷ U.S. Environmental Protection Agency (EPA). 2020a. “Latest Version of Motor Vehicle Emission Simulator (MOVES). November 16. <https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves>.

1 Exhibit 3-57: MSAT Analysis Regional Study Area



2

3 **3.8.1.3 Local Meteorology**

4 The nature of the surrounding atmosphere is an important element in assessing the ambient air quality of an area
 5 as regional climate and meteorological conditions can substantially affect air quality across the region. Emission,
 6 transport, and dispersion of pollutants emitted from motor vehicles are dependent on wind speed, wind direction,
 7 air temperature, precipitation, humidity, and other meteorological factors. For example, CO concentrations are
 8 greatest when low wind speeds occur. Generally, the Study Area exhibits a humid subtropical climate.⁷⁸

9 This climate category typically experiences hot and humid summers, with moderate to heavy precipitation
 10 occurring throughout the year. A review of historical wind data from DeKalb-Peachtree Airport indicates that the
 11 predominant wind direction for the Study Area is from the northwest, with an average annual wind speed of

⁷⁸ Köppen Classification: Cfa. World Map of the Köppen-Geiger Climate Classification Updated Map for the United States of America. <http://koepfen-geiger.vu-wien.ac.at/usa.htm>.

1 6 miles per hour.⁷⁹ Wind direction and wind speed influence the direction of pollutant travel and rate of pollutant
 2 dispersion, which factor into pollutant concentrations.

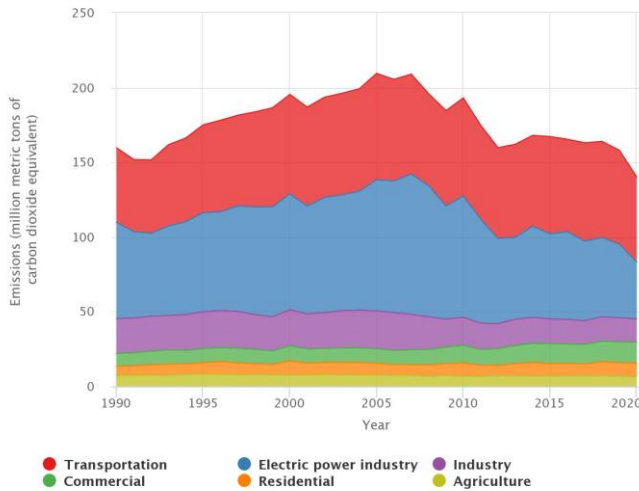
3 **3.8.1.4 Greenhouse Gases**

4 The emission of gases that contribute to changing atmospheric conditions is an important concern. Burning fossil
 5 fuels adds to the concentration of these gases in the atmosphere. Transportation contributes to these emissions
 6 through both the fuels used by vehicles and the construction and maintenance of infrastructure. Carbon dioxide
 7 (CO₂) makes up the largest component of these emissions. Other relevant tailpipe emissions include methane and
 8 nitrous oxide. These emissions are different from criteria air pollutants since their effects in the atmosphere are
 9 global rather than localized and because many of these gases remain in the atmosphere for decades to centuries,
 10 accumulating over time. EPA has not established criteria or thresholds for ambient concentrations of these gases.

11 For the purposes of this study, available data gathered includes state-level data using EPA’s Greenhouse Gas
 12 Inventory Data Explorer. State-level information was used to provide a general characterization of the emissions
 13 for the Project Area. **Exhibit 3-58** shows GHG emissions in the state of Georgia compared to the total national
 14 GHG emissions from 1990 to 2020.

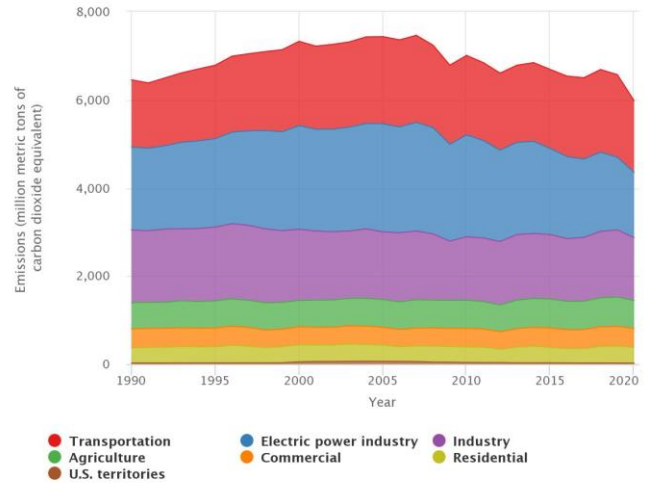
Exhibit 3-58: US and Georgia Greenhouse Gas Emission Trends

Georgia Greenhouse Gas Emissions by Economic Sector, 1990–2020



Source: U.S. EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks by State: 1990-2020.
<https://www.epa.gov/ghgemissions/state-ghg-emissions-and-removals>

U.S. Greenhouse Gas Emissions by Economic Sector, 1990–2020



Source: U.S. EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020.
<https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>

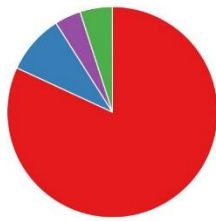
⁷⁹ Iowa State University. 2022. *DeKalb-Peachtree Airport Historical Windrose*.
https://mesonet.agron.iastate.edu/sites/windrose.phtml?%20station=PDK&network=GA_ASOS.

1 Overall, GHG emissions in Georgia have decreased by 19 million metric tons between 1990 and 2020. Over the
 2 30 years, GHG emissions from the transportation sector increased by about 7 million metric tons, reaching a peak
 3 at 71.2 million metric tons in 2005. The transportation sector accounted for approximately 40% of the
 4 140.2 million metric tons of GHG emissions in 2020 in Georgia, as shown in **Exhibit 3-59**.

5 **Exhibit 3-59: 2020 Georgia Greenhouse Gas Emissions by Gas and Sector**

Georgia Greenhouse Gas Emissions by Gas, 2020

Emissions in million metric tons of carbon dioxide equivalent

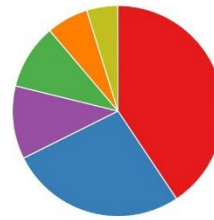


- Carbon dioxide (81.9%)
- Methane (9.1%)
- Nitrous oxide (4.0%)
- Fluorinated gases (5.0%)
- Land use and forestry carbon stock change (-24.7%)

Source: U.S. EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks by State: 1990-2020.
<https://www.epa.gov/ghgemissions/state-ghg-emissions-and-removals>

Georgia Greenhouse Gas Emissions by Economic Sector, 2020

Emissions in million metric tons of carbon dioxide equivalent



- Transportation (40.6%)
- Industry (11.2%)
- Residential (6.4%)
- Electric power industry (27.0%)
- Commercial (10.0%)
- Agriculture (4.8%)

Source: U.S. EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks by State: 1990-2020.
<https://www.epa.gov/ghgemissions/state-ghg-emissions-and-removals>

6
 7 To compare against a larger scale, Georgia’s total GHG emissions accounted for 2% of the 5,981.4 million metric
 8 tons of CO₂ equivalent (CO₂E) of national total GHG emissions in 2020. Georgia’s GHG emissions from the
 9 transportation sector made up approximately 4% of the 1,627.6 million metric tons of national GHG emissions of
 10 the transportation sector. This Proposed Project will be an incremental contribution to the state and national level,
 11 as this project is one project out of many that make up the emissions of the transportation sector. However, it
 12 should be acknowledged that even an incremental increase in GHG emissions contributes towards a larger
 13 cumulative increase at both the state and national levels.

14 **3.8.2 Environmental Consequences**

15 **3.8.2.1 Air Quality**

16 The air quality analysis conducted for the Preferred Alternative considered potential impacts related to MSAT
 17 emissions. Based on the criteria defined in “Updated Interim Guidance on Mobile Source Air Toxic (MSAT)
 18 Analysis in National Environmental Policy Act (NEPA) Documents,”⁸⁰ the Preferred Alternative would be
 19 classified as a project with higher potential MSAT effects. As such, a quantitative MSAT analysis was performed
 20 in accordance with FHWA and Georgia DOT guidance methodology.

⁸⁰ Federal Highway Administration (FHWA). 2016. “Updated Interim Guidance on Mobile Source Air Toxic (MSAT) Analysis in National Environmental Policy Act (NEPA) Documents.” October 18.

1 The air quality analysis forecasts that the emissions of all MSAT pollutants will increase slightly from the No-
2 Build to the Preferred Alternative scenario in the expected first year of operation (2037) and design year (2057).
3 However, when compared to existing conditions, the projected emissions of all MSAT pollutants under the 2037
4 and 2057 Preferred Alternative scenarios are lower than what exist today. EPA’s stringent vehicle emission and
5 fuel regulations, combined with fleet turnover, are the primary factors that cause this reduction with time and
6 mitigate emissions from the Proposed Project. Further information on EPA’s promulgated regulations can be
7 found on EPA’s website.⁸¹ Overall, the best available information indicates that, nationwide, regional levels of
8 MSAT are expected to decrease in the future due to fleet turnover and the continued implementation of more
9 stringent emission and fuel quality regulations. Specifically, when compared to the existing year (2019)
10 conditions, emissions of all pollutants in the Preferred Alternative scenarios show decreases of up to 99% in 2037
11 and in 2057. The magnitude of the EPA-projected reductions is such that, even after accounting for VMT growth,
12 MSAT emissions in the Study Area would be lower in the future regardless of the scenario (No-Build or Preferred
13 Alternative) chosen. For a full presentation of the MSAT emissions analysis, please reference **Appendix H-8, Air**
14 **Quality Impact Assessment**.

15 It is possible that some localized areas may show an increase in emissions and ambient levels of these pollutants
16 due to locally increased traffic levels associated with the project. The additional travel lanes contemplated as part
17 of the Preferred Alternative will have the effect of moving some traffic closer to nearby receptors (such as homes,
18 schools, and businesses); therefore, under the Preferred Alternative there may be localized areas where ambient
19 concentrations of MSAT could be higher than the No-Build Alternative. The localized increases in MSAT
20 concentrations would likely be most pronounced along the expanded roadway sections that would be built along
21 I-285, where the express lanes would be constructed. However, the magnitude and the duration of these potential
22 increases compared to the No-Build Alternative cannot be reliably quantified due to incomplete or unavailable
23 information in forecasting project-specific MSAT health impacts (further described in **Appendix H-8, Air**
24 **Quality Impact Assessment**). In sum, when express lanes are added, the localized level of MSAT emissions for
25 the Preferred Alternative could be higher relative to the No-Build Alternative, but this could be offset due to
26 increases in speeds and reductions in congestion (which are associated with lower MSAT emissions).
27 As described previously, regional MSAT emissions under the Preferred Alternative are expected to be
28 substantially lower than those that exist today due to implementation of more stringent emission and fuel quality
29 regulations and fleet turnover.

30 The analysis shows that the Preferred Alternative is consistent with state and federal air quality regulations for
31 CO, O₃, and PM_{2.5} and guidelines for assessment of MSAT. Results indicated that the Preferred Alternative is
32 consistent with the SIP for the attainment of clean air quality in Georgia and complies with both state and federal
33 air quality standards. As such, no air quality impacts are anticipated for the Preferred Alternative. Additionally, as
34 the projected emissions of all MSAT pollutants under the 2037 and 2057 Preferred Alternative scenarios are
35 lower than what exist today, the Preferred Alternative’s air quality analysis has not identified any environmental
36 health or safety risks that would disproportionately affect children, in compliance with Executive Order (EO)
37 13045, as amended by EO 13229.

⁸¹ U.S. Environmental Protection Agency (EPA). 2023. “Regulations for Onroad Vehicles and Engines.” January 26.
<https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-onroad-vehicles-and-engines>.

3.8.2.2 Greenhouse Gases

EPA has established GHG emission factors for passenger cars, light-duty trucks, and medium/heavy duty trucks on a per mile basis for use in GHG inventories.⁸² To provide a project-level comparison among alternatives considered for the Proposed Project, estimated VMT data were used to determine GHG emissions with the EPA emission factors (refer to **Exhibits 3-60 and 3-61**). VMT data for each Proposed Project scenario was derived in the MSAT analysis described in **Appendix H-8, Air Quality Impact Assessment**. These comparisons show the differences in GHG emissions at the project level.

The EPA calculator provides ways to interpret the emissions data (refer to **Exhibit 3-61**), which are included in the discussion for the purpose of providing a different understanding on the emission data. Translating abstract measurements into converted terms such as annual emissions from vehicles, barrels of oil consumed, or gallons of gasoline consumed was considered a relatable comparison between alternatives for the Proposed Project. These equivalencies would help explain abstract measurements using more understandable, concrete terms.

Exhibit 3-60: GHG Emissions Estimation

Vehicle Type	Annual Million Vehicle Miles Traveled (VMT) ^a					CO ₂ E Emissions (Thousand Metric Tons) ^b				
	2019		2037		2057	2019		2037		2057
	Existing	No-Build	Build	No-Build	Build	Existing	No-Build	Build	No-Build	Build
Passenger Car	3,176	3,528	3,711	4,040	4,325	1,062	1,179	1,240	1,350	1,446
Light-Duty Truck	783	863	908	996	1,072	358	395	415	455	490
Medium- and Heavy-Duty Truck	321	355	367	408	427	469	519	535	595	623
Total	4,280	4,747	4,985	5,443	5,824	1,889	2,093	2,190	2,401	2,559

^a VMT data derived in quantitative MSAT analysis are presented in **Appendix H-8, Air Quality Impact Assessment**.

^b CO₂E emissions estimated from VMT data using factors from EPA's *Emission Factors for Greenhouse Gas Inventories*.⁷⁵

Exhibit 3-61: Percent Change in No-Build and Build Alternatives

Parameter	2037 No-Build		2037 Build		2057 No-Build		2057 Build	
	% Change from Existing	% Change from Existing	% Change from No-Build	% Change from No-Build	% Change from Existing	% Change from Existing	% Change from No-Build	% Change from No-Build
Total VMT	11%	16%	5%	5%	27%	36%	7%	7%
CO ₂ E GHG Emissions	11%	16%	5%	5%	27%	35%	7%	7%

⁸² U.S. Environmental Protection Agency (EPA). 2022. *Emission Factors for Greenhouse Gas Inventories*. Center for Corporate Climate Leadership. April 1. https://www.epa.gov/system/files/documents/2022-04/ghg_emission_factors_hub.pdf.

1 Exhibit 3-62: GHG Emissions Equivalents

Scenario	Million VMT	Thousand Metric Tons CO ₂ E	Equivalent to: ^a			
			Passenger Vehicles per year ^b	Barrels of Oil Consumed	Gallons of Gasoline Consumed	Number of Tanker Truck's Worth of Gasoline
2019 Existing	4,280	1,889	420,296	4,368,475	212,525,712	25,003
2037 No-Build	4,747	2,093	465,670	4,840,078	235,469,112	27,702
2037 Build	4,985	2,190	487,444	5,066,389	246,479,127	28,998
2057 No-Build	5,443	2,401	534,244	5,552,824	270,144,143	31,782
2057 Build	5,824	2,559	569,462	5,918,874	287,952,402	33,877

^a Equivalent values calculated using EPA's Greenhouse Gas Equivalencies Calculator.⁸³

^b Passenger vehicles per year represents the CO₂E in terms of average gasoline-powered passenger vehicles, considering average fuel economy and average annual VMT.

2 **No-Build Alternatives**

3 The total GHG emissions for the No-Build Alternative in the 2037 opening year is estimated to be
 4 2,092,614 metric tons of CO₂E and in the 2057 design year is estimated to be 2,400,771 metric tons of CO₂E. In
 5 the opening year, this total would be equivalent to emissions resulting from 465,670 annual passenger vehicles,
 6 4,840,078 barrels of oil consumed, 235 million gallons of gasoline consumed, or 27,702 tanker trucks worth of
 7 gasoline. The design year emissions are equivalent to 534,244 annual passenger vehicles, 5,552,824 barrels of oil
 8 consumed, 270 million gallons of gasoline consumed, or 31,782 tanker trucks worth of gasoline. Compared to the
 9 1,888,716 metric tons of CO₂E projected in the existing-year GHG emissions, this is approximately an 11%
 10 increase in emissions in 2037 and a 27% increase in emissions in 2057, as shown in **Exhibit 3-61**. This increase
 11 from existing is expected with population growth in the area and an increase in vehicles that will travel on these
 12 roadways.

13 **Build Alternatives**

14 The GHG emission for the Build Alternative in the 2037 opening year is estimated to be 2,190,460 metric tons of
 15 CO₂E and in the 2057 design year is estimated to be 2,559,033 metric tons of CO₂E. In the opening year, this total
 16 would be equivalent to emissions resulting from 487,444 annual passenger vehicles, 5,066,389 barrels of oil
 17 consumed, 246 million gallons of gasoline consumed, or 28,998 tanker trucks worth of gasoline. The design year
 18 emissions are equivalent to 569,462 annual passenger vehicles, 5,918,874 barrels of oil consumed, 287 million
 19 gallons of gasoline consumed, or 33,877 tanker trucks worth of gasoline. Compared to the 1,888,716 metric tons
 20 of CO₂E projected in the existing-year GHG emissions, this is approximately 16% increase in emissions in 2037
 21 and a 36% increase in emissions in 2057. However, compared to the 2,092,614 metric tons of CO₂E projected in
 22 the No-Build Alternative in the opening year and the 2,400,771 metric tons of CO₂E in the design year, this is
 23 approximately a 5% and 7% increase in emissions, respectively.

⁸³ U.S. Environmental Protection Agency (EPA). 2022. "Greenhouse Gas Equivalencies Calculator." October 11.

1 Overall, the GHG emissions resulting from the construction of the Build Alternative would be greater than the
2 No-Build Alternative because of the increased capacity and attracting traffic from other roadways resulting in
3 greater total VMT in the area.

4 **3.8.3 Potential Avoidance, Minimization, and Mitigation Measures**

5 The Preferred Alternative requires no mitigation measures as it does not anticipate causing or exacerbating any
6 violation of the NAAQS and conforms to all air quality regulations.

7 **3.9 Noise**

8 This section identifies the Preferred Alternative’s potential noise impacts and examines the potential for
9 implementation of noise abatement, such as noise barriers. The noise analyses presented in this section have been
10 conducted in accordance with the applicable FHWA regulations (23 CFR 772) and *Georgia DOT Highway Noise*
11 *Abatement Policy for Federal-Aid Projects* (March 2020) for assessing noise impacts and evaluating abatement of
12 highway traffic noise. The noise analyses are also consistent with other Georgia DOT requirements including
13 *Georgia DOT Noise Barrier Policy – Material Type Requirements* (April 18, 2017) and the 2018 MOU between
14 FHWA, Georgia DOT, and the Georgia SHPO defining the APE of historic properties for the MMIP
15 (**Appendix M, Agency Correspondence**).

16 **3.9.1 Affected Environment**

17 This section presents background on noise and its potential impact on the human environment including the
18 methods used to measure and model existing traffic noise levels throughout the Study Area, the types of land uses
19 that are considered to be sensitive to noise, the results of traffic noise measurements and the process to validate
20 the Traffic Noise Model (TNM), and the resulting loudest-hour existing noise levels at all receivers in the
21 Study Area.

22 **3.9.1.1 Methodology**

23 The methodology to determine existing noise levels requires having a validated base model and includes the
24 following:

- 25 • Identifying noise-sensitive receptors and TNM receivers in accordance with FHWA land use Activity
26 Categories (A-G)
- 27 • Conducting traffic noise measurements with simultaneous traffic counts
- 28 • Developing and validating a TNM based on the measurement results
- 29 • Predicting the loudest-hour noise levels at all receivers in the Study Area

30 The noise Study Area (refer to **Exhibit 3-63**) includes noise-sensitive receptors extending up to 800 feet away from
31 the highway. Beyond 800 feet, highway traffic noise rarely approaches or exceeds the thresholds for noise impact.

32 As discussed in **Section 3.9.1.2**, each receptor was assigned an FHWA Activity Category (A-G) based on the
33 applicable land use category (refer to Exhibit 1 and Section 2.4 in **Appendix H-9, Noise Impact Assessment**).

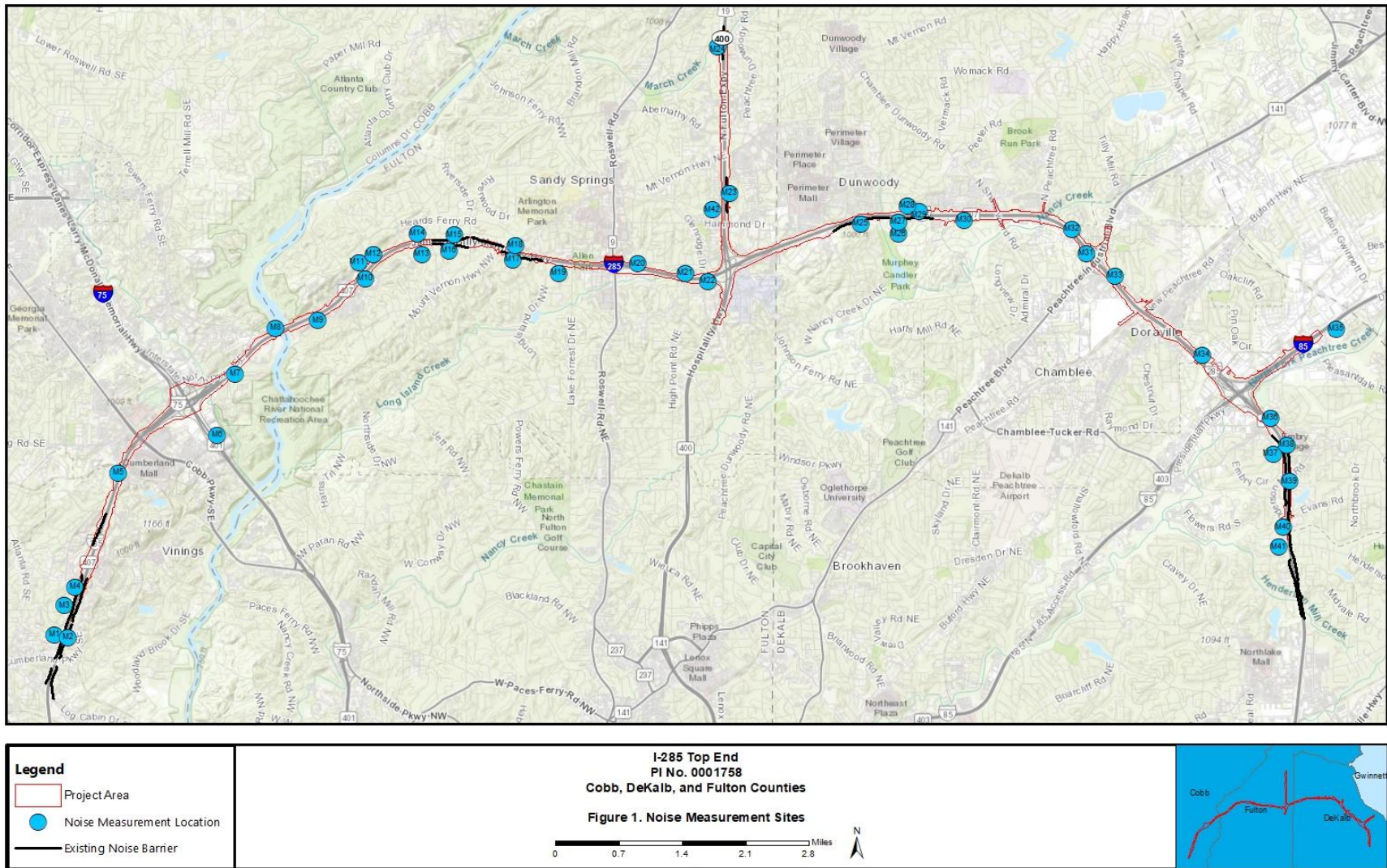
1 To ensure the TNM could be validated, traffic noise measurements were conducted at 43 locations representative
2 of receptors throughout the Study Area. It is typically not possible, or necessary, to conduct noise monitoring at
3 all receptor locations in a Study Area. Measurement sites were chosen to capture a wide range of traffic,
4 terrain, and existing noise barrier conditions. Ambient noise measurements were conducted using Larson Davis
5 Model LxT and 831 sound level meters which were calibrated in the field as well as by a laboratory traceable to
6 the National Institute of Standards and Technology. All measurements were performed during acceptable weather
7 and traffic conditions consistent with Georgia DOT policy guidelines. Measurements were taken for
8 approximately 20 minutes at each location. Measurements were taken outside of peak traffic conditions (typically
9 between 10:00 am and 2:30 pm) to ensure free-flow traffic. Free-flow traffic results in higher sound levels
10 compared to congested traffic. Simultaneous noise measurements and traffic counts were conducted including
11 counts by vehicle type (i.e., cars, medium trucks, heavy trucks, motorcycles, and buses) and observations of
12 vehicle speeds. Traffic counts were conducted by recording videos of the highway during the measurements and
13 then subsequently counting vehicles by type.

14 In accordance with FHWA and Georgia DOT Noise Abatement Policy, TNM 2.5 computer models were created
15 to predict traffic noise throughout the Study Area. Ambient noise measurements are performed in order to
16 establish a baseline noise condition in undeveloped areas and used to validate the TNM. The validated TNM
17 provides a base for predicting typical, loudest-hour traffic noise levels for existing conditions and assessing
18 impacts caused by the potential change in noise levels in the Preferred Alternative. Existing roadways, traffic
19 volumes (by vehicle type), speeds, terrain data, and acoustically significant structures observed in the field during
20 the noise monitoring event are then fed into the computer model and the model is then validated through a
21 comparison between measured and predicted noise levels. For each measurement location where the predicted
22 noise level is within 3 decibels, A-weighted (dBA), the model is considered validated. Three decibels is the
23 threshold generally considered to be a perceptible change in noise level. If the measurements and modeling results
24 are not within 3 dBA, the model is adjusted to improve the accuracy of the results.

25 Once the noise model was validated, existing condition noise predictions were made using FHWA's TNM version
26 2.5. TNM is a three dimensional model that accounts for roadway geometries, terrain/topography, type of ground
27 cover, buildings, roadway surface type, atmospheric conditions, and presence of noise barriers.

28 Loudest-hour existing traffic volumes were input into the validated noise model to calculate the existing noise
29 levels for all receiver locations in the Study Area. Loudest-hour noise is assumed to be the highest traffic volume
30 that can operate at free-flow speeds (LOS C). Traffic volumes were based on the Highway Capacity Manual
31 (HCM) and the ARC traffic tables. HCM volumes were used for interstate/freeway and expressway roads and the
32 ARC tables were used for all other roadways, assuming a high-density urban environment. Vehicle speeds of
33 65 miles per hour were used for all interstates and expressways, and speeds between 30 and 45 miles per hour
34 were used for all other roadways depending on their ARC facility type and posted speed limit.

1 Exhibit 3-63: Noise Study Area



2
3 Source: VHB, 2022

1 **3.9.1.2 Noise-Sensitive Land Use**

2 Noise-sensitive land uses in the Study Area have been identified in accordance with FHWA Activity Categories
 3 (A through G). The Activity Categories considered the following:

- 4 • Lands where serenity and quiet are essential to their intended use (Category A)
- 5 • Single- and multi-family residences (Category B)
- 6 • Institutional land uses such as hospitals, schools, libraries, parks, and places of worship (Category C)
- 7 • Institutional land uses with no outdoor areas of frequent human use such as medical facilities or public
 8 meeting rooms (Category D)
- 9 • Hotels, motels, and restaurants with outdoor use (Category E)
- 10 • Agricultural, industrial, and manufacturing land uses (Category F)
- 11 • Undeveloped lands that have not been permitted for noise-sensitive use (Category G)

12 Receptors have been identified and the Activity Category has been assigned based on regional tax assessor
 13 databases, aerial imagery, and field visits. Receptors are primarily located at ground-level outdoor areas of frequent
 14 human use. If a multi-family residence has upper floors with exterior areas such as balconies or roof decks, then
 15 receptors will be located at these upper elevations as well. Noise levels at Activity Category F facilities have been
 16 evaluated for the purposes of disclosure, but these receptors are not eligible for noise abatement.

17 For each noise-sensitive land use, there exists a corresponding noise level at which the use of that land is assumed
 18 to be impacted in the Preferred Alternative and consideration of measures to reduce noise levels is therefore
 19 warranted (**Exhibit 3-64**). This level is referred to as the NAC. A noise level that is 1 dBA less than the NAC is
 20 considered to approach the NAC. In addition to these absolute thresholds, noise impacts can occur if there is a
 21 substantial increase in future build noise levels over comparable existing noise levels. Georgia DOT defines a
 22 substantial noise level increase as 15 dBA or greater.

Exhibit 3-64: FHWA Noise Abatement Criteria

Activity Category	L _{eq} (h)	Description of Activity Category
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.
C	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care 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, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.

Exhibit 3-64: FHWA Noise Abatement Criteria (continued)

Activity Category	L _{eq} (h)	Description of Activity Category
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A-D or F.
F	-	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	-	Undeveloped lands that are not permitted.

1 Source: FHWA, 23 CFR 772.

2 L_{eq} = equivalent sound level

3 L_{eq}(h): A single value that is equivalent in sound energy to the fluctuating levels over a period of 1 hour

4 **3.9.1.3 Noise Model Validation Results**

5 To confirm the noise model is validated, noise monitoring data is input into the TNM for each measurement site.
 6 Noise monitoring data includes simultaneously measured noise levels and traffic volumes that were collected at
 7 each measurement site. A detailed comparison of the measurements and modeling results is summarized in
 8 Exhibit 4 of **Appendix H-9, Noise Impact Assessment**. Noise measurement results generally ranged between
 9 52 and 78 dBA (L_{eq}). The difference between the measurement and modeling results was less than 3 dBA at 38 of
 10 the measurement locations. The results of the validation did not meet the criteria of 3 dBA at five locations (M11,
 11 M13, M19, M26, and M37). The model was refined to minimize the difference between the measurements at
 12 these sites; however, these differences are generally attributed to abnormalities in the measured sound levels
 13 (landscapers working nearby, idling parked vehicles, etc.). Each noise-sensitive area contained at least one
 14 validated measurement and is therefore considered a validated model in accordance with Georgia DOT standards.

15 **3.9.1.4 Existing Conditions**

16 The results of the existing model indicate that existing noise levels currently approach or exceed the NAC at
 17 approximately 1,371 out of 3,953 receivers (8,809 out of 19,642 receptors) throughout the Study Area.⁸⁴ Existing
 18 outdoor sound levels throughout the Study Area range from 44.4 to 82.3 dBA (L_{eq}) depending on distance to the
 19 highway, presence of intervening buildings or terrain, proximity to other major arterial roadways, and presence of
 20 existing noise barriers.

21 The dominant source of noise throughout the Study Area is traffic on I-285, I-75, SR 400, and I-85. Sound waves
 22 dissipate over distance, meaning the farther away from the noise source a receptor is, the lower the sound level
 23 will be. For receptors near the highway, where there are no existing noise barriers and no other major arterial
 24 roadways, sound levels generally range from the mid-70s to lower 80s (dBAs) within 100 feet, upper 60s to mid-
 25 70s within 300 feet, and upper 50s to mid-60s within 700 feet. For reference, sound levels in the range of mid- to
 26 upper 70s are similar to a vacuum cleaner at a distance of 10 feet. Sound levels in the 60s are similar to an air
 27 conditioner at a distance of 3 feet. Although the interstate/freeway is the dominant noise source, traffic on major

⁸⁴ A **receiver** is a discrete point modeled in the TNM program, whereas a **receptor** is a representative location of a noise-sensitive area for various land uses.

arterial roads can contribute significantly to the overall noise environment and may cause traffic noise levels to approach or exceed the NAC at receptors that are near these major arterial roads.

The presence of intervening objects, such as buildings, terrain, or existing noise barriers between the receptor and a noise source, will reduce sound levels. There are 10 existing noise barriers and several locations where intervening objects shield residential communities from highway traffic noise. Traffic noise levels at receptors behind existing noise walls are typically in the range of low to mid-60s (dBAs) within 100 feet, mid-50s to lower 60 within 300 feet, and upper 50s within 700 feet. The majority of receptors that are behind existing noise barriers are below the NAC, except for certain receptors near the ends of barriers where noise will propagate around the edges of the barriers or for certain multi-family buildings where receptors are located at upper floors and noise barriers are not effective since they may not block the line of sight between the receptor and the noise sources.

3.9.2 Environmental Consequences

This section presents the environmental consequences of noise for the No-Build Alternative and Preferred Alternative. The Study Area has been divided into 19 Common Noise Environments (CNEs) which are areas exposed to similar noise sources, and have similar traffic volumes, speeds, and topographic features. CNEs typically occur between cross-roads, intersections, or interchanges. CNEs, as presented here, include receptors of varying Activity Categories (refer to **Exhibit 3-65**).

Similar to the existing noise levels, loudest-hour No-Build and Preferred Alternative (Design Year 2057) traffic conditions were predicted using FHWA’s TNM based on the highest traffic volume that can operate at free-flow speeds (LOS C) according to the HCM and the ARC traffic tables. Level of Service C lane-by-lane traffic volumes were used for most roadways under all modeled conditions.

The range of existing, No-Build Alternative, and Preferred Alternative noise levels (prior to noise abatement considered for the Preferred Alternative) are presented in **Exhibit 3-65**. Traffic noise levels typically range from the mid-40s to lower 80s for the existing, No-Build Alternative, and Preferred Alternative.

Exhibit 3-65: Traffic Noise Level Summary

CNE	Location	Existing (2019) (Leq, dBA)	No-Build Alternative (2057) (Leq, dBA)	Preferred Alternative (2057) (Leq, dBA)
A	I-285 NB/SB from Atlanta Road to Paces Ferry Road SE	50.2 --78.5	50.2 --78.5	51.6 - 80.5
B	I-285 NB/SB from Paces Ferry Road SE to I-75	46.4 --79.0	46.4 --79.1	48.2 - 77.5
C	I-75 from Windy Ridge Pkwy SE to Akers Mill Road	60.2 --76.2	59.8 --76.2	60.3 - 76.2
D	I-285 EB/WB from I-75 to Chattahoochee River	48.8 --76.7	47.7 --77.0	50.0 - 78.4
E	I-285 EB/WB from Chattahoochee River to Riverwood Charter School	48.9 --79.5	49.2 --80.0	49.9 - 80.3
F	I-285 EB/WB from Riverwood Charter School to Roswell Road	46.5 --78.1	46.2 --77.2	47.3 - 79.2
G	I-285 EB/WB from Roswell Road to Glenridge Drive NE	48.5 --79.1	48.2 --78.1	48.1 - 78.8
H	SR 400 NB/SB from Glenridge Connector to Hammond Drive NE	50.2 --76.2	50.8 --76.2	52.0 - 78.1

Exhibit 3-65: Traffic Noise Level Summary (continued)

CNE	Location	Existing (2019) (Leq, dBA)	No-Build Alternative (2057) (Leq, dBA)	Preferred Alternative (2057) (Leq, dBA)
I	SR 400 NB/SB from Hammond Drive NE to Abernathy Road NE	44.4 --75.6	47.4 --79.5	50.2 - 79.9
J	SR 400 NB/SB from Abernathy Road NE to north of Northgreen Drive NE	47.0 --74.2	44.7 --76.3	50.7 - 77.3
K	I-285 EB/WB from Peachtree Dunwoody Road NE to Chamblee Dunwoody Road	45.9 --76.9	42.0 --78.1	43.8 - 78.4
L	I-285 EB/WB from Chamblee Dunwoody Road to N Peachtree Road	44.8 --77.6	44.6 --77.7	44.7 - 79.0
M	I-285 NB/SB from N Peachtree Road to S- 141	50.2 --80.5	50.2 --79.3	51.2 - 81.0
N	I-285 NB/SB from SR 141 to New Peachtree Road	47.8 --82.3	47.5 --82.3	49.7 - 78.9
O	I-285 NB/SB from New Peachtree Road to I-85	53.2 - 79.2	53.5 - 79.4	53.8 - 79.5
P	I-85 NB/SB from DeKalb Technology Parkway to Pleasantdale Road	55.0 - 77.6	55.3 - 77.7	55.5 - 78.4
Q	I-285 NB from I-85 to Montage Way	53.0 - 75.6	53.0 - 75.5	56.1 - 76.9
R	I-285 NB from Montage Way to Henderson Road	45.6 - 77.4	45.6 - 77.4	52.3 - 81.2
S	I-285 SB from I-85 to Bolero Drive	47.8 - 77.6	47.6 - 77.6	48.6 - 81.7

1 Source: **Appendix H-9, Noise Impact Assessment** (Section 3, Table 6)

2 **3.9.2.1 No-Build Alternative**

3 The No-Build Alternative would not include construction of the Preferred Alternative by the project’s target Design
 4 Year (2057), but would include other projects approved in the RTP including PI 0000784 (Transform 285/400),
 5 PI 0001757 (SR 400 Express Lanes), and PI 0017130 (AIP and Aux Projects) in place by the Design Year (2057).

6 There are currently 10 noise barriers in the Study Area and 16 noise barriers that would be constructed as part of
 7 other projects in the No-Build Alternative. Two noise barriers that would be constructed by others with the No-
 8 Build Alternative would replace existing barriers, including one on SR 400 northbound between Hammond Drive
 9 NE and Mt. Vernon Highway and one on I-285 eastbound between Ashford Dunwoody Road and Chamblee
 10 Dunwoody Road. In total, there would be 26 noise barriers in the Study Area with the No-Build Alternative (refer
 11 to **Exhibit 3-66**).

Exhibit 3-66: Noise Impacts and Noise Abatement Areas

Impact Area	CNE	Location	Barrier Length (ft)	Barrier Height (ft)	Noise Reduction (dBA)	Impacts Receivers (Receptors)	Benefits Receivers (Receptors)	Est. Cost	Abatement Feasible and Reasonable?
1	A	I-285 SB Cumberland Parkway SE to Atlanta Rd	953	13 to 20	0	0 (0)	0 (0)	\$0	Existing to Remain
2	A	I-285 NB Atlanta Rd to Cumberland Parkway SE	275	15	7.7	3 (26)	12 (12)	\$103,125	Existing to Remain with Extension
3	A	I-285 SB Orchard Rd SE to Cumberland Parkway SE	2,299	12 to 27	0	32 (32)	0 (0)	\$0	Existing to Remain
4	A	I-285 NB Cumberland Parkway SE to Orchard Rd SE	2,206	14 to 23	0	12 (96)	0 (0)	\$0	Existing to Remain
5	A	I-285 SB Paces Ferry Rd NW to Orchard Rd SE	2,770	30	5 to 14.3	21 (148)	31 (31)	\$2,077,500	Replace in Kind
6	A	I-285 NB Orchard Rd SE to Paces Ferry Rd NW	2,690	30	5.1 to 13.2	25 (253)	25 (301)	\$2,017,500	Replace in Kind
7	B	I-285 NB Paces Ferry Rd NW to Mt Wilkinson Pkwy	--	--	0	1 (1)	0 (0)	\$0	Not Feasible
8	B	I-285 SB Mt Wilkinson Pkwy to Paces Ferry Rd NW	2,690	30	5 to 15.8	26 (323)	34 (450)	\$2,017,500	Replace in Kind
9	B	I-285 SB Cumberland Blvd SE to Mt Wilkinson Pkwy	--	--	0	11 (529)	0 (0)	\$0	Not Feasible ^a
10	B	I-285 NB Mt Wilkinson Pkwy to Cumberland Blvd SE	2,257	30	5 to 8.9	20 (77)	19 (77)	\$1,692,750	Yes

Exhibit 3-66: Noise Impacts and Noise Abatement Areas (continued)

Impact Area	CNE	Location	Barrier Length (ft)	Barrier Height (ft)	Noise Reduction (dBA)	Impacts Receivers (Receptors)	Benefits Receivers (Receptors)	Est. Cost	Abatement Feasible and Reasonable?
11	B	I-285 SB 2876 Spring Hill Pkwy (Hampton Inn Suites)	738	22	8.2	3 (81)	1 (79)	\$405,900	Yes
12	B	I-285 SB 925 Battery Ave	--	--	0	5 (240)	0 (0)	\$0	Not Feasible
13	D	I-285 NB/EB Cumberland Blvd SE to Chattahoochee River	--	--	0	172 (1,062)	0 (0)	\$0	Not Feasible ^a
14	D	I-285 SB/WB Powers Ferry Rd to Cumberland Blvd SE	--	--	0	22 (127)	0 (0)	\$0	Not Feasible
15	D	I-285 SB/WB CRNRA	--	--	0	4 (20)	0 (0)	\$0	Not Feasible ^a
16	E	I-285 NB/EB Chattahoochee River to Northside Dr	--	--	0	25 (386)	0 (0)	\$0	Not Feasible ^a
17	E	I-285 SB/WB Riverwood International Charter School to New Northside Dr NW	3,600	30	5.3 to 10.7	28 (28)	4 (4)	\$0	Feasible Not Reasonable
18	F	I-285 WB Riverwood International Charter School	--	--	0	4 (4)	0 (0)	\$0	Not Feasible
19	F	I-285 EB Powers Ferry Rd NW to Raider Dr NW	905	26	5.2 to 7.9	10 (10)	11 (11)	\$588,250	Yes
20	F	I-285 WB Riverside Dr NW to Raider Dr NW	2,226	30	5 to 15.3	16 (16)	23 (23)	\$1,669,500	Replace in Kind ^b
21	F	I-285 EB Raider Dr to Riverside Dr NW	2,087	30	5.9 to 11.2	14 (14)	14 (14)	\$1,565,250	Replace in Kind ^b

Exhibit 3-66: Noise Impacts and Noise Abatement Areas (continued)

Impact Area	CNE	Location	Barrier Length (ft)	Barrier Height (ft)	Noise Reduction (dBA)	Impacts Receivers (Receptors)	Benefits Receivers (Receptors)	Est. Cost	Abatement Feasible and Reasonable?
22	F	I-285 WB Mt Vernon Hwy to Riverside Dr NW	1,950	22	5.3 to 7.9	9 (9)	14 (14)	\$1,072,500	Replace in Kind ^b
23	F	I-285 EB Riverside Dr NW to Mt Vernon Hwy	1,575	30	5.3 to 8.3	3 (3)	3 (3)	\$1,181,250	Replace in Kind ^b
24	F	I-285 WB Long Island Dr NW to Mt Vernon Hwy	2,200	12 to 22	5 to 14.1	32 (32)	23 (23)	\$1,210,000	Replace in Kind ^b
25	F	I-285 EB Mt Vernon Hwy to Long Island Dr NW	2,510	12 to 18	5.3 to 7.9	18 (18)	4 (4)	\$1,054,500	Replace in Kind
26	F	I-285 EB Lake Forest Dr NW to Long Island Dr NW	1,620	18	5.3 to 12.1	29 (29)	2 (2)	\$729,000	Replace in Kind ^b
27	F	I-285 WB Long Island Dr NW to Lake Forest Dr NW	1,820	30	0	8 (8)	0 (0)	\$0	Barrier to Remain ^b
28	F	I-285 EB Lake Forest Dr NW to Roswell Rd	2,347	26	5.2 to 8.6	15 (90)	6 (36)	\$1,525,550	Yes
29	F	I-285 WB Roswell Rd to Lake Forest Dr NW	--	--	0	44 (85)	0 (0)	\$0	Not Feasible ^a
30	G	I-285 WB Glenridge Dr NE to Roswell Rd	4,015	30	0	79 (241)	0 (0)	\$0	Barrier to Remain ^b
31	G	I-285 EB Roswell Rd to Glenridge Dr NE	4,200	30	0	21 (262)	0 (0)	\$0	Barrier to Remain ^b
32	H	I-285 WB 5765 Glenridge Rd NE Apartments	1,290	30	6.3 to 6.6	4 (320)	2 (160)	\$0	Feasible Not Reasonable
33	H	SR 400 SB South of Hammond Dr	1,145	30	0	20 (390)	0 (0)	\$0	Barrier to Remain ^b

Exhibit 3-66: Noise Impacts and Noise Abatement Areas (continued)

Impact Area	CNE	Location	Barrier Length (ft)	Barrier Height (ft)	Noise Reduction (dBA)	Impacts Receivers (Receptors)	Benefits Receivers (Receptors)	Est. Cost	Abatement Feasible and Reasonable?
34	I	SR 400 NB Hammond Dr NE to Mt Vernon Hwy	3,800	30	0	12 (58)	0 (0)	\$0	Barrier to Remain ^b
35	I	SR 400 SB Abernathy Rd NE to Mt Vernon Hwy	1,650	30	0	18 (117)	0 (0)	\$0	Barrier to Remain ^b
36	J	SR 400 SB Somerby Sandy Springs	800	30	5.7 to 10.1	8 (216)	6 (160)	\$600,000	Yes
37	J	SR 400 NB, The Flats at North Springs Apartments	1,950	30	0	19 (151)	0 (0)	\$0	Barrier to Remain ^b
38	J	SR400 SB Mabry Rd NE (Extension)	1,570	30	0	5 (5)	0 (0)	\$0	Barrier to Remain ^b
39	J	SR 400 NB Avia at North Springs Apartments (SR 400 Barrier)	4,475	30	0	0 (0)	0 (0)	\$0	Barrier to Remain ^b
40	K	I-285 WB Perimeter Center Pkwy NE to Peachtree Dunwoody Rd	--	--	0	11 (400)	0 (0)	\$0	Not Feasible
41/42	K	I-285 EB Ashford Dunwoody Rd to Chamblee Dunwoody Rd	6,857	30	5 to 19.3	111 (212)	78 (179)	\$5,142,750	Replace in Kind ^b
43	K	I-285 WB Perimeter Center E	--	--	0	1 (1)	0 (0)	\$0	Not Feasible
44	K	I-285 WB Chamblee Dunwoody Rd to North Fork Nancy Creek	2,355	12 to 30	5 to 8.1	12 (21)	6 (354)	\$1,132,500	Yes and Replace in Kind ^b

Exhibit 3-66: Noise Impacts and Noise Abatement Areas (continued)

Impact Area	CNE	Location	Barrier Length (ft)	Barrier Height (ft)	Noise Reduction (dBA)	Impacts Receivers (Receptors)	Benefits Receivers (Receptors)	Est. Cost	Abatement Feasible and Reasonable?
45	L	I-285 WB N Shallowford Rd to Chamblee Dunwoody Rd	1,608	18	5.5 to 5.6	12 (305)	3 (77)	\$0	Feasible Not Reasonable
46	L	I-285 EB Chamblee Dunwoody Rd to N Shallowford Rd	1,600	18	5 to 8.5	13 (457)	11 (213)	\$720,000	Yes
47	L	I-285 WB Camden Dunwoody Apartments	1,050	18	5.3 to 9.3	8 (88)	4 (32)	\$472,500	Yes
48	L	I-285 EB N Shallowford Rd to N Peachtree Rd	2,047	30	5 to 5.6	25 (76)	10 (27)	\$0	Feasible Not Reasonable
49	L	I-285 WB First Baptist Church of Atlanta	1,060	30	0	0 (0)	0 (0)	\$0	Not Feasible
50/52	M	I-285 WB/NB North Carver Drive to N Peachtree Rd	4,500	18 to 30	5 to 17.3	76 (447)	80 (562)	\$2,955,000	Yes
51	M	I-285 EB/SB N Peachtree Rd to Perimeter Park Drive	3,290	26	5 to 16.6	15 (103)	23 (100)	\$2,138,500	Yes
53	M	SR 141 SB N Carver Circle Connector to Ridgeway Dr	1,985	22	5.2 to 10.1	1 (1)	8 (8)	\$0	Feasible Not Reasonable
54	N	SR 141 NB Garrett Circle to Van Fleet Circle	1,240	22	5.2 to 9.0	5 (20)	9 (37)	\$682,000	Yes
55	N	I-285 WB/NB Flowers Rd	2,320	30	5 to 12.2	34 (34)	35 (35)	\$1,740,000	Yes
56	O	I-285 WB/NB Pebblewood Apartments	800	22	5.5 to 10.6	14 (36)	9 (20)	\$440,000	Yes

Exhibit 3-66: Noise Impacts and Noise Abatement Areas (continued)

Impact Area	CNE	Location	Barrier Length (ft)	Barrier Height (ft)	Noise Reduction (dBA)	Impacts Receivers (Receptors)	Benefits Receivers (Receptors)	Est. Cost	Abatement Feasible and Reasonable?
57	O	I-285 WB/NB KRC Alderwood Trails	2,825	30	5 to 10	56 (346)	61 (378)	\$2,118,750	Yes
58	O	I-285 EB/SB Santa Fe Trail	990	30	5 to 6.5	4 (4)	7 (7)	\$0	Feasible Not Reasonable
59	Q	I-285 & I-85 NB Chamblee Tucker Rd to Northcrest Rd	--	--	0	23 (59)	0 (0)	\$0	Not Feasible
60	S	I-285 SB Chamblee Tucker Rd at Embry Circle	--	--	0	2 (8)	0 (0)	\$0	Not Feasible
61	R	I-285 NB Henderson Rd to Chamblee Tucker Rd	5,100	12 to 30	5 to 11.9	89 (588)	63 (392)	\$2,786,625	Replace in Kind
62	S	I-285 SB Chamblee Tucker Rd to Henderson Rd	5,010	12 to 30	5 to 9.3	61 (97)	39 (51)	\$3,051,400	Replace in Kind

- 1 Source: **Appendix H-9, Noise Impact Assessment**
- 2 ^a Barrier would not be feasible due to constructability and/or maintenance conflicts.
- 3 ^b Barrier to be constructed by others under the No-Build Alternative (Refer to Appendix H-9, Noise Impact Assessment).

3.9.2.2 Preferred Alternative

The Preferred Alternative would introduce the I-285 Top End Express Lanes and shift the alignment of some of the I-285 GP lanes. The Preferred Alternative would physically conflict with 13 of the barriers in the No-Build Alternative, including 6 existing barriers and 7 constructed by other projects in the Study Area, as follows:

Existing Barriers:

- Along eastbound and westbound I-285 between Orchard Road and Paces Ferry Road (CNE A, IAs 5 and 6)
- Along southbound I-285 between Mount Wilkinson Parkway to Paces Ferry Road (CNE B, IA 8)
- Along eastbound I-285 between Mount Vernon Hwy and Long Island Drive (CNE F, IA 25)
- Along east and westbound I-285 between Chamblee Tucker Road and the eastern terminus of the project at Henderson Road (CNE R, IA 61 and CNE S, IA 62)

Transform (285/400) Project Barriers:

- Along westbound I-285 between Mount Vernon Hwy and Long Island Drive (CNE F, IA 24)
- Along eastbound I-285 between Long Island Drive and Lake Forrest Drive (CNE F, IA 26)
- Along eastbound I-285 between Ashwood Drive and Chamblee Dunwoody Road (CNE K, IA 41/42)

AIP Project Barriers:

- Along westbound I-285 between Raider Rive and Riverside Drive (CNE F, IAs 20)
- Along eastbound I-285 between Raider Rive and Riverside Drive (CNE F, IAs 21)
- Along westbound I-285 between Riverside Drive and Mount Vernon Hwy (CNE F, IA 22)

Aux Project Barrier:

- Along eastbound I-285 between Mount Vernon Hwy and Riverside Drive (CNE F, IA 23)

These 13 noise barriers would physically conflict with the Preferred Alternative and would be replaced with barriers of similar or greater height and length. The four existing noise barriers, seven Transform (285/400) Project noise barriers, and two SR 400 EL Project noise barriers that would not physically conflict, would remain in the baseline Preferred Alternative condition. Figures depicting various types of barriers included in the project can be found in **Appendix H-9, Noise Impact Assessment**.

Noise impacts were assessed based on whether design-year Preferred Alternative noise levels approach or exceed the NAC as presented in **Exhibit 3-67**. The noise impact assessment for Activity Category D receivers includes outdoor-to-indoor noise reduction ranging from 20 to 35 dBA based on the building type and window framing (refer to Table 3 and Section 2.4 in **Appendix H-9, Noise Impact Assessment**). The total number of noise impacts (receivers) that would approach or exceed the NAC is presented in **Exhibit 3-67**. Prior to noise abatement, design-year Preferred Alternative noise levels would approach or exceed the NAC at a total of 1,371 receivers (8,809 receptors). There would be no impacts due to exceeding the substantial increase criterion.

1 Exhibit 3-67: Noise Impacts (Preferred Alternative) Prior to Abatement

NAC B	NAC C	NAC D	NAC E	Total
1,314	50	0	7	1,371

2 Source: **Appendix H-9, Noise Impact Assessment** (Section 3, Table 7)

3 At receivers where there would not be existing noise barriers that would remain or that would be replaced, noise
 4 abatement must be considered where design-year Preferred Alternative noise levels approach or exceed the NAC.

5 **3.9.3 Potential Avoidance, Minimization, and Mitigation Measures**

6 This subsection presents potential avoidance, minimization, and/or mitigation measures applicable to the
 7 Preferred Alternative based on the noise impact assessment. In accordance with Georgia DOT’s Noise
 8 Abatement Policy,⁸⁵ noise abatement that has been considered includes alteration to the horizontal or vertical
 9 alignment, traffic control measures, acquisition of land to create buffer zones, planting vegetation, and/or quieter
 10 pavements. As an existing highway with substantial developments along the ROW, it would not be feasible to
 11 realign the project to result in a significant change in traffic noise level to avoid impact. Similarly, traffic control
 12 measures such as reducing the speed limit on the highways or prohibiting trucks from traveling in certain lanes
 13 may interfere with the function of the freeway and would not result in a significant change in traffic noise levels
 14 to avoid impact. With existing developments adjacent to the project, there are no opportunities to introduce
 15 enough vegetation (i.e., 100 feet or more of dense non-deciduous trees with undergrowth) or acquire land for
 16 buffer zones to reduce impact. Quieter pavement designs temporarily reduce traffic noise by 5 dBA or more;
 17 however, research shows that these benefits last only a few years and that additional maintenance is necessary.
 18 Therefore, quieter pavements are not an approved abatement measure according to FHWA and Georgia DOT.
 19 There are existing noise barriers within the Study Area and new or replacement noise barriers that would be
 20 constructible. This subsection presents locations where noise barriers were evaluated and identifies locations
 21 where they would be feasible and reasonable based on the preliminary design. Noise barriers are typically only
 22 needed for the GP lanes since the contribution of noise from the express lanes is generally lower, there are
 23 generally no trucks on the express lanes, and the elevated roadway and parapet provide acoustic shielding.

24 In accordance with Georgia DOT’s Noise Abatement Policy, barriers are considered feasible based on several
 25 factors including their constructability, safety and maintainability, access limitations, and potential noise
 26 reduction. A noise barrier is considered to be feasible if it can provide at least 5 dBA of noise reduction to at least
 27 one impacted receptor. When a barrier is considered to be feasible it must then meet the reasonableness criteria.
 28 A reasonable noise barrier must meet the noise reduction design goal of 7 dBA to at least one benefited receptor
 29 and meet the overall cost-reasonable criteria. Using a \$25 per square foot cost for the barrier, the total cost must
 30 not exceed \$55,000 per benefited receptor. In accordance with Georgia DOT’s Noise Abatement Policy, the cost
 31 basis is adjusted to account for costs if “special engineering techniques” are required. Additionally, for a noise
 32 barrier to be reasonable, the viewpoints of benefited receptors must be considered. Georgia DOT policy is that a
 33 noise barrier is considered reasonable if a majority of the benefited receptors are in favor of its construction.

⁸⁵ Georgia Department of Transportation (Georgia DOT). 2020d. *Highway Noise Abatement Policy for Federal-Aid Projects*. March 14. <https://www.dot.ga.gov/PartnerSmart/EnvironmentalProcedures/Noise/References/Noise%20-%20Highway%20Noise%20Abatement%20Policy%20for%20Federal-Aid%20Projects.pdf>.

1 As outlined by the Georgia DOT Noise Abatement Policy, outreach methods to determine the viewpoints of
2 benefited property owners and residents may consist of a first class mailed letter and survey provided to property
3 owners and tenants, public meetings, phone conversations, or any other method based on the project
4 circumstances. If there are no or minimal responses (less than 25%) then the outreach method utilized will be
5 reviewed to determine if another method would result in increased participation. A noise barrier will only be
6 constructed if a minimum 50% plus one of the respondents vote in favor of noise abatement. Both property
7 owners and dwellers get a vote and their vote must be returned within 30 calendar days to receive consideration.
8 Property owners will receive one vote per unit owned and an additional vote if they reside in the unit, and tenants
9 will receive one vote for the benefited unit they occupy. For some projects, individual meetings, community
10 meetings, or other outreach efforts may also be utilized to determine a majority consensus. Efforts for the
11 Proposed Project's noise outreach will be finalized as the project proceeds to final design.

12 3.9.3.1 Noise Abatement Analysis

13 The 19 CNEs have been divided into a total of 62 noise impact areas where noise abatement analyses are
14 warranted based on the results of the noise impact assessment. There is the potential for new noise barriers to be
15 constructed with the Preferred Alternative where noise levels approach or exceed the NAC and where the
16 barriers would be feasible and reasonable in accordance with the Georgia DOT Noise Abatement Policy. Refer
17 to **Appendix H-9, Noise Impact Assessment**, Attachment 2, Section 4.4, for more information on the feasibility
18 and reasonableness analysis. Existing noise barriers that would physically conflict with the Preferred Alternative
19 would be replaced with the Preferred Alternative. These replacement barriers have been evaluated to determine
20 whether the noise reduction design goal of 7 dBA could be met; however, cost-reasonableness criteria was not
21 considered. At a minimum, these barriers would be replaced with barriers at a similar or greater height and length
22 to the existing barriers.

23 A preliminary evaluation was conducted for a total of 60 noise walls (Impact Areas 41 and 42, and 50 and 52
24 were evaluated for a single barrier system). Figures with noise wall locations are presented in **Appendix H-9,**
25 **Noise Impact Assessment**, Attachment 2. **Exhibit 3-66** presents the results of the noise abatement analysis
26 including the location, length, and height of potential barriers and the number of impacted and benefited
27 (receiving 5 dBA or more of noise reduction) receivers/receptors. The table presents the estimated barrier cost
28 based on \$25 per square foot and whether the noise barrier is an existing barrier to remain, an existing barrier to
29 be replaced, or, if a potential new barrier, whether it is feasible and reasonable.

30 Based on the studies and conclusions of this report, it was determined that noise abatement is likely, but not
31 guaranteed, at 15 locations where new noise barriers would be feasible and reasonable for the Preferred
32 Alternative. Additionally, 13 noise barriers that exist today or will be built as part of other projects would remain,
33 with one of these barriers being recommended for a feasible and reasonable extension. Fourteen noise barriers
34 would be replaced with barriers of similar or greater length and height. The noise barriers would all be ground-
35 mounted, mounted on MSE wall, or on bridge.

36 Noise abatement for these 29 locations (new, replaced, and extension barriers) is based on preliminary noise
37 analyses and design criteria. A reevaluation of the noise analysis will occur during final design, should changes
38 warrant a reevaluation. If during final design, it is determined that conditions have changed such that noise
39 abatement is not feasible and reasonable, these abatement measures would not be provided. The final decision on

1 the installation of any abatement measure(s) will be made upon the completion of the project’s final design and
2 the public involvement processes.

3 Noise barrier materials will comply with the Georgia DOT *Design Policy Manual*.⁸⁶ Typically, concrete noise
4 barriers will have an ashlar, brick, rock-textured, or plain finish. Input from local governments may be considered
5 for the aesthetics of the noise barriers, but the public will not be asked to vote on the aesthetic treatment.

6 Noise levels have been evaluated at Section 4(f) properties including the Bob Callan/Rottenwood Creek Trail,
7 Interstate North Trail, Mountain-to-River Trail, Silver Comet Cumberland Connector Trail, PATH400 Trail
8 (under construction), and the CRNRA. Portions of these trails and lands approach or exceed the NAC; however,
9 the build noise levels are generally within 1 to 2 dBA of the No-Build Alternative. At no receptor would Preferred
10 Alternative noise levels increase by more than 3 dBA compared to the No-Build condition in these areas.
11 Therefore, there would be no constructive use related to potential noise effects to any Section 4(f) properties.
12 Potential noise abatement has been considered for these properties in accordance with the Georgia DOT Noise
13 Abatement Policy.

14 3.10 Water

15 This section characterizes the water resources in the Study Area. The Study Area for water resources is the same
16 as the Preferred Alternative corridor including surface waters (streams and open water), groundwater (quantity
17 and quality), floodplains, and wetlands.

18 3.10.1 Affected Environment

19 The affected environment was determined based on the surveys conducted in 2014, 2015, 2017, 2019, 2020, and
20 2022 for the Preferred Alternative. The environmental survey boundary established the Study Area, which
21 includes 100 feet beyond the proposed and existing ROW of the Preferred Alternative along 19.0 miles of I-285
22 between South Atlanta Road (Exit 16) and Henderson Road, along 3.5 miles of SR 400 from south of the
23 Glenridge Connector to the vicinity of the North Springs MARTA Station, and along approximately 1.0 mile of
24 I-85 from I-285 north to the vicinity of Pleasantdale Road (refer to **Appendix H-10, Ecology Resource Survey
25 and Assessment of Effects Report, Addendum 1**).

26 Coordination under the Fish and Wildlife Coordination Act (FWCA) is required for a loss of perennial stream
27 (PS) length of more than 100 feet or for impacts to high-quality wetlands. The required information on impacts to
28 these resources and proposed mitigation was submitted to USFWS in early 2021, with a request for concurrence
29 with the planning, design, and mitigation efforts that have been incorporated to minimize stream impacts from the
30 Preferred Alternative. The USFWS reviewed the Ecology Resource Survey and Assessment of Effects Report and
31 concurred that impacts to streams on the project are unavoidable and that the avoidance, minimization, and
32 mitigation measures proposed by Georgia DOT were appropriate and sufficient (refer to **Appendix M, Agency
33 Correspondence**). The Ecology Assessment of Effects report was updated in June 2023, with a change in the
34 number of streams that require FWCA coordination, and the addition of new streams.

⁸⁶ Georgia Department of Transportation (Georgia DOT). 2022a. *Design Policy Manual*. June 28.
<https://www.dot.ga.gov/PartnerSmart/DesignManuals/DesignPolicy/GDOT-DPM.pdf>.

1 **3.10.1.1 Water Quality**

2 All water bodies in the Study Area are within the Chattahoochee River basin. The major water bodies within the
 3 Study Area include the following PSs: Rottenwood Creek (PS 16), Chattahoochee River (PS 20), Long Island
 4 Creek (PS 58), Marsh Creek (PS 85), Perimeter Creek (PS 92), North Fork Nancy Creek (PS 100), Nancy Creek
 5 (PS 113), North Fork Peachtree Creek (PS 125), and Kitchen Creek (PS 129). Effects of urbanization, including
 6 non-point source pollution (pollution carried by surface flows of rainfall into waterbodies) and altered hydrology,
 7 have degraded some of these streams.

8 Georgia collects and maintains water quality data in the Georgia Environmental Monitoring and Assessment
 9 System. Georgia produces a report titled *Water Quality in Georgia*⁸⁷ every 2 years in compliance with
 10 Sections 303 and 305 of the CWA. **Exhibit 3-68** presents the findings of the latest (2022) *Water Quality in*
 11 *Georgia* assessment for area water bodies that are on the 305(b)/303(d) list. Water bodies are categorized and
 12 reported as either supporting (Category 1) or not supporting (Categories 4 and 5; i.e., “impaired”) their designated
 13 uses, and subject (Category 1) or not subject to Total Maximum Daily Load (TMDL) restrictions (Category 4 and
 14 5). Designated uses of 6 of the 9 Study Area water bodies are impaired due to water quality issues. Two of the
 15 Study Area water bodies are not included in the 2022 *Water Quality in Georgia* report, and one water body is not
 16 listed as impaired.

Exhibit 3-68: Water Quality Summary Table

Water Body	Designated Use	Supporting	TMDL	Category	Listing Cause
Rottenwood Creek	Fishing	No	Yes	4a	Bio F, Bio M
Chattahoochee River	Drinking water, recreation, fishing	No	Yes	4a, 5	<i>E.Coli</i> , FC, Fish Tissue (PCBs)
Long Island Creek	Fishing	No	Yes	4a	FC
Marsh Creek	Fishing	No	Yes	4a	FC, Bio F
Perimeter Creek	Not included in 2022 <i>Water Quality in Georgia</i> report				
North Fork Nancy Creek	Not included in 2022 <i>Water Quality in Georgia</i> report				
Nancy Creek	Fishing	No	Yes	4a	FC, Bio F
Kitchen Creek	Fishing	Yes	No	1	
North Fork Peachtree Creek	Fishing	No	Yes	4a	FC, Bio F, Bio M

17 Source: *Water Quality in Georgia 2020-2021*, GAEPD, 2022.

18 Notes:

19 Category 0 indicates that a stream has not been evaluated by GAEPD.

20 Category 1 indicates that all designated uses are met.

21 Category 4a indicates a TMDL is in effect for the parameter that is causing the water body not to meet its designated use.

22 Category 5 indicates a TMDL still needs to be developed for a parameter affecting designated use.

23 Bio F = Biota Impacted (Fish Community)

24 Bio M = Biota Impacted (Macroinvertebrate Community)

25 FC = Fecal Coliform Bacteria

⁸⁷ Georgia Environmental Protection Division. 2020. *Water Quality in Georgia*. <https://epd.georgia.gov/watershed-protection-branch/georgia-water-quality-standards>.

3.10.1.2 Surface Waters and Riverine Systems

The most recent surface water surveys of the Study Area were conducted in 2019 and 2020 covered approximately 2,317 acres (**Appendix H-10, Ecology Resource Survey and Assessment of Effects Report, Addendum 1**). Stream classifications were performed using the North Carolina Division of Water Quality *Methodology for Identification of Intermittent and Perennial Streams and Their Origins, Version 4.11* (2010). State waters were delineated using the GAEPD *Field Guide for Determining the Presence of State Waters that Require a Buffer* (2017).

There are 114 streams in the Study Area, 64 are included in Hydrologic Unit Code (HUC) 0313000111 of the Sope Creek-Chattahoochee River watershed and 50 are included in HUC 0313000112 of the Peachtree Creek Watershed. The Utoy Creek-Chattahoochee River watershed (HUC 0313000201) is in the Study Area, but no streams in this watershed will be impacted by the Preferred Alternative. Fifteen of the streams in the Study Area have FEMA mapped floodplains and are discussed further in Section 3.10.1.4. There are three types of streams in the Study Area:

- 56 PS, which are streams that flow in a well-defined channel throughout most of the year under normal climatic conditions;
- 49 Intermittent streams (IS), which are streams that flow in a well-defined channel during wet seasons of the year but not for the entire year;
- Nine ephemeral channels (EC), which are streams that typically have no well-defined channel and which flow only in direct response to precipitation with runoff.

There are 11 open water areas in the Study Area, with five in HUC 0313000111 and six in HUC 0313000112.

3.10.1.3 Groundwater

The Preferred Alternative is located within the Piedmont Province with groundwater typically occurring as an unconfined aquifer. The portion of the I-285 top end corridor between the intersection with Chamblee Dunwoody Road and the intersection with I-85 partially lies in an area of thick soils, an important groundwater recharge area within Georgia (Davis et al., 1989).

There is a U.S. Geological Survey groundwater monitoring station (335517084164001 11FF04) within the Study Area near Peachtree Industrial Boulevard. Groundwater levels over the 34 years of available data range from 6.5 feet to 7.9 feet below ground surface, with a general trend of declining groundwater levels over time.

3.10.1.4 Floodplains

The Preferred Alternative would encroach on the mapped 100-year FEMA floodplain of the following listed waterbodies. All floodplains in the list have regulatory floodways, except for Marsh Creek and Marsh Creek Tributary 5:

- I-285/Rottenwood Creek
- I-285/Chattahoochee River

- 1 • SR 400/Marsh Creek Tributary 5
- 2 • SR 400/Marsh Creek
- 3 • I-285/Perimeter Creek
- 4 • I-285/North Fork Nancy Creek
- 5 • I-285/Nancy Creek Tributary A
- 6 • I-285/Nancy Creek
- 7 • Peachtree Industrial Boulevard/Nancy Creek Tributary 2
- 8 • I-285 and I-85/North Fork Peachtree Creek, North Fork Peachtree Creek Tributary C, North Fork
- 9 Peachtree Creek Unnamed Tributary 11
- 10 • I-85/North Fork Peachtree Creek Tributary 2 and Kitchen Creek

11 There are two streams that are conveyed perpendicular to the roadway in cross drains where longitudinal
12 encroachments to floodplains would occur:

- 13 1. South of I-285 and along Savoy Drive from North Shallowford Road to North Peachtree Road at a
14 floodplain/floodway in a commercial area associated with PS 107 Nancy Creek Tributary A and PS 113
15 Nancy Creek, for a distance of 2,700 LF.
- 16 2. I-85, both north and south of I-285, encroachment of floodplain/floodway associated with PS 125-128
17 North Fork Peachtree Creek and three tributaries, for a distance of 1,300 LF of a commercial area along
18 Presidential Parkway, in the southeast quadrant of the I-85/I-285 interchange, and 4,500 LF of a
19 recreational and commercial area from the I-85/I-285 interchange to near Pleasantdale Road including
20 2,100 feet of I-85.

21 3.10.1.5 Wetlands

22 Wetland delineations were performed using the three-parameter approach (prevalence of hydrophytic vegetation,
23 presence of hydric soils, and permanent or periodic inundation or saturation) of the *1987 Corps of Engineers*
24 *Wetlands Delineation Manual*,⁸⁸ the *2012 Eastern Mountains and Piedmont Regional Supplement (USACE)*, and
25 33 CFR 328.3(b) (issued on November 13, 1986) as guidance.

26 There are 24 wetlands within the Study Area, 14 of which are included in HUC 0313000111 and 10 in HUC
27 0313000112. Wetlands were identified during environmental field surveys conducted from May 2017 to
28 November 2019. These wetlands function as wildlife habitat, and provide nutrient/sediment retention, dissipation
29 of erosive forces, and additional flood storage capacity for associated water bodies.

30 *EO11990—Protection of Wetlands* directs all federal agencies to avoid, to the extent possible, the long- and short-
31 term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect

⁸⁸ U.S. Army Corps of Engineers (USACE), Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Wetlands Research Program Technical Report Y-87-1 (on-line edition). January. *Final Report*. <https://www.lrh.usace.army.mil/Portals/38/docs/USACE%2087%20Wetland%20Delineation%20Manual.pdf>.

1 support of new construction in wetlands wherever there is a practicable alternative. In the absence of such
2 alternatives, agencies must modify actions to preserve and enhance wetland values and minimize degradation.
3 Consistent with EO 11990 and *NPS Director's Order #77-1: Wetland Protection* (NPS, June 2016), NPS adopted
4 a goal of “no net loss of wetlands.” Director's Order #77-1 states that for new actions where impacts to wetlands
5 cannot be avoided, proposals must include plans for compensatory mitigation that restore wetlands on NPS lands,
6 where possible, at a minimum acreage ratio of 1:1.

7 NPS defines wetlands according to the Federal Geographic Data Committee Wetlands Classification Standard
8 (FGDC-STD-004-2013) as vegetated areas that are flooded or saturated for a duration sufficient to allow
9 development of at least one of the three wetland indicators described in the *1987 USACE Wetland Delineation*
10 *Manual*. The three wetland indicators are wetland hydrology, hydric soil, and hydrophytic vegetation. Whereas
11 the USACE definition requires the presence of all three indicators for an area to be classified as a wetland, the
12 NPS definition encompasses some additional aquatic environments, such as stream channels, so long as at least
13 one parameter is met.

14 The Preferred Alternative would not encroach within NPS lands. Adjacent to the CRNRA, proposed construction
15 consists of EL bridges over the Chattahoochee River (PS 20). Field surveys were conducted in the area around the
16 proposed bridges. The only NPS wetland observed is the reach of the Chattahoochee River that flows through the
17 CRNRA; this NPS wetland also is a PS under USACE indicators. Following *NPS Procedural Manual #77-1:*
18 *Wetland Protection*, A Statement of Findings has been prepared for impacts within the Chattahoochee River (refer
19 to **Appendix H-11, NPS Statement of Findings**).

20 Detailed information on wetlands in the Study Area is included in **Appendix H-10, Ecology Resource Survey**
21 **and Assessment of Effects Report, Addendum 1**.

22 3.10.2 Environmental Consequences

23 3.10.2.1 Direct and Indirect Effects

24 The direct effects of the Preferred Alternative on water resources include:

- 25 • Permanent and temporary impacts to 22 of the 56 PS resources, totaling 2,133 LF (2.503 acres). Total
26 permanent and temporary impacts to streams total 3,504 LF (2.82 acres). Of the 49 IS and 9 EC resources,
27 the Proposed Project would impact 17 (1,048 LF and 0.247 acre) and three (323 LF and 0.07 acre),
28 respectively (**Exhibit 3-69**). In addition to stream impacts associated with the Preferred Alternative,
29 concurrent and/or impacts of similar temporal nature will result from five other transportation projects in
30 the Atlanta area, and these impacts will be mitigated by those projects. Five streams that would be
31 impacted by other transportation projects also would have subsequent impacts by the Preferred
32 Alternative, with additional mitigation required (PS 53, PS 54, IS 62, PS 96, and PS 106). One stream
33 resource (EC 105) would be removed as existing conditions by the preceding construction of the AIP
34 project PI 0017125.
- 35 • Impacts to two open waters, totaling 0.08 acre of permanent fill. There are no temporary impacts to open
36 waters.

- 1 • Impacts to nine wetlands, totaling 0.7 acre of permanent fill (**Exhibit 3-70**). Wetland 7 will be filled in its
2 entirety (0.13 acre) due to construction of slopes needed for at-grade EL construction. Wetland 29 would
3 be filled (0.08 acre of 0.21 acre total wetland area) due to construction of slopes needed for at-grade EL
4 construction. Wetland 39 would be filled (0.14 acre of 0.33 acre total wetland area) due to construction of
5 at-grade ELs, installation of bridge piers, and construction of noise walls. Wetland 43 would be filled
6 (0.01 acre of 0.02 acre total wetland area) due to construction of at-grade express lanes, installation of
7 bridge piers, and construction of a noise wall. Wetland 110 would be filled in its entirety (0.01 acre of
8 0.01 acre total wetland area) due to the need for construction of tie-in slopes from the widening of
9 Cotillion Drive. Wetland 112 would be filled in its entirety (0.17 acre of 0.17 acre total wetland area) due
10 to the need for construction of tie-in slopes from the widening of Cotillion Drive. Wetland 115 would be
11 filled in its entirety (0.01 acre of 0.01 acre total wetland area) due to the need for construction of the I-285
12 westbound ramp to North Peachtree Road. Wetland 116 would be filled in its entirety (0.13 acre of
13 0.13 acre total wetland area) due to the need for construction of the I-285 westbound ramp to North
14 Peachtree Road. Wetland 124 would be filled (0.02 acre of 1.51 acres of total wetland area) due to the
15 need for construction of elevated ELs and bridge piers. There are no temporary impacts to wetlands.
16 In addition, one wetland resource (WL 104) would be removed as existing conditions by the preceding
17 construction of the AIP project PI 0017125.
- 18 • Floodplain fill volumes have not been fully quantified, and Georgia DOT will update the volumes when
19 the final design is complete.

20 Temporary impacts of the Preferred Alternative to water resources would likely occur during construction, including
21 those from dewatering activities. At this time, details are not available for the anticipated construction methods and
22 dimensions of temporary fill or other encroachment into WOTUS or floodplains. To provide a conservative estimate,
23 stream impacts have been classified as temporary or permanent. Some stream areas would have temporary impacts
24 for access during construction, such as use of jetties, access roads, or work bridges. Where those access areas are also
25 within the proposed construction limits, temporary impacts would be replaced by the permanent impacts to the water
26 resource. For purposes of estimating impacts and relevant compensatory mitigation (refer to **Section 3.11.3,**
27 **Cumulative Effects**), the most severe level of impact to a specific resource location replaces the temporary impacts
28 that could occur during construction. The No-Build Alternative would avoid the permanent and temporary impacts to
29 water resources resulting from the Proposed Project.

Exhibit 3-69: Stream Permanent Impact Summary for the Preferred Alternative

Stream Name	Permitted/ Mitigated Impact Length (Feet)	Permitted/ Mitigated Impact Area (Acres)	Non-Permitted/ Non-Mitigated Impact Length (Feet)*	Non-Permitted/ Non-Mitigated Impact Length (Acres)*
West Phase I				
IS 1	119	0.02	469	0.07
IS 2	50	0.01	0	0
PS 6	51	0.02	0	0
PS 12	5	0.001	0	0
EC 17	89	0.01	0	0
IS 18	37	0.01	0	0
PS 20 (Chattahoochee River)	100	1.377	0	0
IS 20A	110	0.02	0	0
East Phase I				
IS 28	10	0.01	0	0
EC 30	64	0.01	0	0
IS 32	25	0.01	0	0
IS 33	59	0.02	0	0
PS 34	58	0.01	0	0
IS 35	68	0.01	0	0
IS 38	0	0	33	0.006
PS 40	147	0.03	0	0
IS 41	48	0.01	0	0
EC 42	170	0.05	0	0
PS 46	41	0.01	0	0
PS 53	94	0.02	53	0.01
PS 54	60	0.008	0	0
IS 62	0	0	54	0.01
PS 76	0	0	432	0.16
PS 79	0	0	21	0.02
PS 96	372	0.15	283	0.08
PS 100 (North Fork Nancy Creek)	6	0.004	53	0.04
IS 101	29	0.005	0	0
PS 103	102	0.14	50	0.13
IS 106	0	0	547	0.12
PS 107	238	0.21	0	0
IS 108	100	0.01	0	0

Exhibit 3-69: Stream Permanent Impact Summary for the Preferred Alternative (continued)

Stream Name	Stream Name	Stream Name	Stream Name	Stream Name
IS 109	194	0.05	0.	0
IS 111	119	0.04	0	0
East Phase II				
PS 113 (Nancy Creek)	198	0.17	0	0
PS 114	14	0.006	0	0
PS 123	213	0.02	0	0
PS 125 (North Fork Peachtree Creek)	183	0.19	0	0
PS 132	0	0	39	0.01
PS 134	120	0.08	0	0
PS 135	56	0.02	0	0
PS 136	47	0.004	0	0
Total Permanent Loss Impacts			3,396 ft.	2.765 ac.
Total Non-Permitted/Non-Mitigated Impacts			2,034 ft.	0.656 ac.

- 1 Source: **Appendix H-10, Ecology Resource Survey and Assessment of Effects Report, Addendum 1, June 2023.**
- 2 Notes:
- 3 Temporary dewatering impacts (108 ft./0.055 ac) are not enumerated in Exhibit 3-69.
- 4 EC = ephemeral channel
- 5 IS = intermittent stream
- 6 PS = perennial stream
- 7 *The two right-hand columns represent impacts that do not require mitigation

Exhibit 3-70: Wetland Permanent Impact Summary for the Preferred Alternative

Wetland (WL) Name	Impact Area (Acres)	Wetland Name	Impact Area (Acres)
WL 7	0.13	WL 112	0.17
WL 29	0.08	WL 115	0.01
WL 39	0.14	WL 116	0.13
WL 43	0.01	WL 124	0.02
WL 110	0.01		
Total Wetland Impacts			0.70

- 8 Source: **Appendix H-10, Ecology Resource Survey and Assessment of Effects Report Addendum 1, June 2023**

1 Avoidance and minimization of impacts to water resources was an important part of the PAR process that resulted
2 in the selection of the Preferred Alternative. The Preferred Alternative consists of a smaller footprint than the
3 other alternatives considered and has been developed with substantial BMPs in order to protect portions of
4 wetlands within the Project Area that are not required for construction of the project. Orange barrier fencing and
5 silt fencing will be used just outside of the areas within the wetlands required for construction of the project as
6 well as the use of steeper slopes where practicable in order to avoid/minimize impacts. USACE has preliminarily
7 concurred that the applicant's Preferred Alternative is the Least Environmentally Damaging Practicable
8 Alternative based on the Section 404(b)(1) alternatives analysis and information provided (see **Appendix M,**
9 **Agency Correspondence**).

10 The Preferred Alternative would typically have indirect impacts from land development such as an increase in
11 runoff and sediments, fragmentation, loss of recharge area, or changes in drainage patterns as a result of addition
12 and/or augmentation of impervious surfaces. The Preferred Alternative has the potential to encroach on state-
13 mandated buffers intended to prevent indirect impacts to water resources at 48 locations. A buffer variance would
14 be required for non-exempt impacts to the state-mandated buffers of 38 of these resources. The Preferred
15 Alternative would not induce new development of undisturbed land as most of the Preferred Alternative corridor
16 is already highly developed. The Preferred Alternative has the potential to serve as an element of decision-making
17 for development but is not expected to induce development on its own (refer to Section 3.1, Land Use).
18 The No-Build Alternative would have no direct or indirect impacts to water resources.

19 **3.10.2.2 Cumulative Effects**

20 Past, present, and reasonably foreseeable future land use changes, when they take place in or near the Study Area,
21 have the potential to contribute to cumulative effects. For water resources, such changes could potentially alter
22 and increase runoff, sedimentation, fragmentation, loss of recharge area, and drainage patterns. Past, present, and
23 reasonably foreseeable future land use changes are discussed in **Section 3.1, Land Use**.

24 The effects of various changes in land use and land cover, including types and degree of contamination found in
25 residential, industrial, and commercial watersheds, are major contributors to watershed degradation. This section
26 summarizes findings and correlates the effects of land use with conditions throughout the study watersheds. As
27 shown in **Exhibit 3-68**, and based on information from the *2022 Water Quality in Georgia* report, the
28 Study Area's urban watersheds range from relatively good to impaired conditions.

29 There has been a general trend of a decrease in groundwater levels in the past 34 years, but it is not anticipated
30 that implementation of the Preferred Alternative will contribute to additional decreases in groundwater levels.

31 The Preferred Alternative has the potential to induce or facilitate redevelopment of parcels near the Proposed
32 Project corridor, especially those proximate to ingress and egress. Desktop reviews of the parcels identified as
33 potential locations of induced development determined that no WOTUS would be affected. Applicable state and
34 federal water quality and pollution statutes would require any such land developments to include all practicable
35 measures to avoid and minimize harm to water resources, and to mitigate—where applicable—for unavoidable
36 impacts.

37 Cumulative impacts to water resources include streams that are impacted by the Preferred Alternative and other
38 transportation and development projects including the AIP, Westside EL, and Eastside EL projects. While there

1 will be additional runoff produced from execution of the Preferred Alternative and potential to contribute to
 2 cumulative increases in stormwater runoff, the implementation of stormwater management will minimize
 3 cumulative impacts from stormwater. Overall cumulative effects to water resources are anticipated to be minimal
 4 because the Preferred Alternative would mainly be constructed on elevated structure and within existing
 5 developed highway corridors. It is anticipated that stormwater runoff would increase but would be addressed
 6 through the implementation of stormwater retention, included in the project design. The Preferred Alternative area
 7 is located within an area where compliance with the Municipal Separate Storm Sewer System Program is
 8 required, which includes multiple water quality improvement strategies to treat any increased stormwater runoff
 9 generated by the Preferred Alternative. Preferred Alternative implementation would include various Municipal
 10 Separate Storm Sewer System Program water quality treatment facilities including:

- 11 • Recharge basins
- 12 • Swales
- 13 • Other standard stormwater facilities to ensure that increased stormwater runoff is treated prior to being
 14 discharged to existing streams within the Preferred Alternative corridor.

15 **3.10.3 Potential Avoidance, Minimization, and Mitigation Measures**

16 The Preferred Alternative would result in temporary and permanent, mitigated impacts to 3,504 LF (2.82 acres) of
 17 streams, 0.08 acre of open waters, and 0.70 acre of wetlands. The Proposed Project requires authorization
 18 pursuant to Clean Water Act Section 404. A Department of the Army Individual Permit will be obtained for
 19 impacts to Waters of the United States. Additionally, the Proposed Project requires authorization pursuant to
 20 Rivers and Harbors Act of 1899 Section 10 due to construction activities occurring in the Chattahoochee River.
 21 Authorization will be applied for prior to the commencement of construction as part of the Department of the
 22 Army permit application. During the PAR process (**Appendix F-G, Practicable Alternatives Review**),
 23 alternatives involving avoidance, minimization, and mitigation of impacts to water resources were presented to
 24 USACE. The purchase of wetland and stream mitigation credits would be required to offset the permanent
 25 impacts to WOTUS from the Preferred Alternative. The USACE Mitigation Bank Program was revised in 2018,
 26 so mitigation credits are calculated and purchased through banks as legacy credits or as 2018 credits using the
 27 calculations of the program implemented in 2018. The Preferred Alternative would require the purchase of legacy
 28 and/or 2018 credits (**Exhibit 3-71**). The type of credit purchased is dependent on the type of credits that are
 29 available for purchase.

Exhibit 3-71: USACE Mitigation for Temporary and Permanent WOTUS Impacts for the Preferred Alternative

2018 Credits	Legacy Credits
Stream Credits:	
Ephemeral Channels: 88.75	
Non-Perennial Streams: 686.62	
Perennial Streams (less than 3 square miles): 1332.70	Stream Credits: 24,422.08
Perennial Streams (greater than 3 square miles): 237.25	Wetland Credits: 4.56
Total 2018 Stream Credits: 2,345.32	
Wetland Credits: 0.57	

1 To provide a conservative estimate of credits required, the totals include both estimated permanent impacts as
2 well as temporary impacts during construction. Credits that are authorized under either the legacy or 2018 wetland
3 mitigation banking programs would be purchased from a USACE-approved mitigation bank that serves HUC
4 03130001, Upper Chattahoochee Watershed.

5 Coordination with FEMA and the FEMA local sponsor agencies will occur to ensure that the encroachments are
6 consistent with local floodway plans and floodplain management programs. For floodways, a “no rise”
7 certification may be required. These analyses will be completed as design progresses. If an increase in flood
8 heights is expected, mitigation alternatives including conveyance and storage improvements will be evaluated. If
9 necessary, a risk assessment or risk analysis will be performed.

10 Permanent BMPs were evaluated at each of the 296 drainage basins to determine whether they would be feasible
11 in minimizing impacts to water quality. For 172 of the drainage basins, BMPs were either determined to be
12 infeasible or were not required due to an outfall level exclusion. The outfall level exclusions that applied included
13 the case where the BMP installation would have stream or wetland buffer impacts, or where there is little to no
14 increase in impervious area in the basin. The BMPs that were recommended to mitigate indirect and cumulative
15 impacts on water resources include, in order of frequency, sand filter, bioretention basin, bioslope, dry detention
16 basin, and wet detention pond. Potential locations for the construction of these BMPs have been identified in the
17 design plans throughout the Preferred Alternative area.

18 Floodplain mitigation calculations have not been completed. As design progresses, Georgia DOT will update
19 floodplain fill volumes.

20 3.11 Ecosystems

21 This section addresses potential impacts to natural communities, threatened and endangered species, neotropical
22 migratory birds and bats, and the presence of invasive species.

23 3.11.1 Affected Environment

24 The affected environment was determined based on surveys conducted from 2014 through 2022. The Study Area
25 was defined in coordination with design and includes 100 feet beyond the proposed and existing ROW of the
26 Preferred Alternative. The Preferred Alternative includes a 19-mile stretch of I-285 between South Atlanta Road
27 (Exit 16) and Henderson Road, passing through portions of Cobb, Fulton, and DeKalb Counties, as well as
28 3.5 miles of SR 400 from south of Glenridge Connector to the vicinity of the North Springs MARTA Station, and
29 1 mile of I-85 at Pleasantdale Road (refer to Figure 1, Project Location Map, in **Appendix H-10, Ecology**
30 **Resource Survey and Assessment of Effects Report, Addendum 1**).

3.11.1.1 Natural Communities

Within the Study Area, developed/landscaped, mixed pine-hardwood forest, planted pines, upland hardwood forest, ruderal, bottomland hardwood forest, and water comprise the habitat and land use types.

- **Developed/Landscaped:** Impervious surfaces, such as paved roadways and sidewalks; public transit facilities; parking structures and lots; commercial, residential, and institutional buildings; and transportation ROW. This land use comprises 84.18% of the Study Area.
- **Mixed Pine-Hardwood Forest:** Fragmented areas of naturally occurring, secondary successional mixed hardwood and pine forest. Dominant overstory species include loblolly pine (*Pinus taeda*), black cherry (*Prunus serotina*), tulip poplar (*Liriodendron tulipifera*), red maple (*Acer rubrum*), sweetgum (*Liquidambar styraciflua*), water oak (*Quercus nigra*), American beech (*Fagus grandifolia*), white oak (*Quercus alba*), northern red oak (*Quercus rubra*), and blackgum (*Nyssa sylvatica*). This habitat type is suitable habitat for the state-protected Indian olive (*Nestronia umbellula*), pink lady's slipper (*Cypripedium acaule*), sweet pinesap (*Monotropsis odorata*), and bay star-vine (*Schisandra glabra*). This habitat type comprises 11.44% of the Study Area.
- **Planted Pines:** Areas planted with pines, such as medians, ROW, and neighborhoods. This habitat type is suitable for the state-protected pink lady's slipper and comprises 2.07% of the Study Area.
- **Upland Hardwood Forest:** Fragmented canopy of mature, secondary successional hardwoods. Dominant overstory species include white oak, southern red oak (*Quercus falcata*), mockernut hickory (*Carya tomentosa*), tulip poplar, American beech, northern red oak, and pignut hickory (*Carya glabra*). This habitat type is suitable for the state-protected Indian olive and comprises 1.14% of the Study Area.
- **Ruderal:** Disturbed areas colonized by early successional species; includes fallow fields, utility ROW, and unmaintained or abandoned areas that were formerly developed and are largely unused or only occasionally maintained. This habitat type is suitable for the state-protected Georgia aster (*Symphotrichum georgianum*) where not dominated by invasive kudzu (*Pueraria montana*) and comprises 0.45% of the Study Area.
- **Bottomland Hardwood Forest:** Low gradient, secondary successional forested areas typically associated with riparian areas, including floodplains and wetlands. Dominant overstory species include river birch (*Betula nigra*), American sycamore (*Platanus occidentalis*), sweetgum, tulip poplar, red maple, green ash (*Fraxinus pennsylvanica*), water oak, Eastern cottonwood (*Populus deltoides*), and boxelder (*Acer negundo*). This habitat type is suitable for the state-protected bay star-vine and comprises 0.53% of the Study Area.
- **Water:** Large areas of open water, including the Chattahoochee River, Rottenwood Creek, ponds, and large stormwater retention ponds. This habitat type is suitable for the state-protected Chattahoochee crayfish (*Cambarus howardi*) and bluestripe shiner (*Cyprinella callitaenia*) and comprises 0.2% of the Study Area.

3.11.1.2 Protected Species

Potential habitat for federally and state-protected species was determined through desktop reviews and presence/absence field surveys of the Study Area. Assessments for protected species and suitability for their

1 habitats were conducted using approved survey methodologies and/or appropriate resource agency
2 recommendations (refer to **Appendix H-10, Ecology Resource Survey and Assessment of Effects Report,**
3 **Addendum 1** for detailed information on survey methodologies).

4 Initial correspondence from USFWS and GADNR (circa June 4, 2021 - refer to Early Coordination in
5 **Appendix H-10, Ecology Resource Survey and Assessment of Effects Report, Addendum 1**) indicated that
6 there are eight federally protected and 11 state-protected species that have ranges within the Study Area. The April
7 2021 Ecology Assessment of Effects Report documented a determination of “no effect” for all federally protected
8 species. However, after further coordination, USFWS determined that the project is outside of the consultation
9 range for the following federally protected species: pool sprite (*Amphianthus pusillus*), Cherokee darter
10 (*Etheostoma scotti*), black-spored quillwort (*Isoetes melanospora*), Gulf moccasinshell (*Medionidus penicillatus*),
11 shinyrayed pocketbook (*Hamiota subangulata*), oval pigtoe (*Pleurobema pyriforme*), and northern long-eared bat
12 (*Myotis septentrionalis*). Coordination with GADNR also determined that the project is no longer within the range
13 of the state-protected highscale shiner (*Notropis hypsilepis*).

14 The following federally listed species are currently identified as potentially occurring within the Study Area:
15 monkeyface orchid (*Platanthera integrilabia*), and dwarf sumac (*Rhus michauxii*). Additionally, the federal
16 candidate monarch butterfly (*Danaus plexippus*) and federally proposed endangered tricolored bat (*Perimyotis*
17 *subflavus*) are listed as potentially occurring within the Study area. The June 2023 Ecology Resource Survey and
18 Assessment of Effects Report, Addendum 1, recommended a “no effect” determination for monkeyface orchid
19 and dwarf sumac, and a “not likely to jeopardize” determination for monarch butterfly. Affects to tricolored bat
20 will be determined at a later date. Additional information on these species is included in **Appendix H-10,**
21 **Ecology Resource Survey and Assessment of Effects Report, Addendum 1.**

22 The following state-protected species were identified as potentially occurring within the Study Area: Henslow’s
23 sparrow (*Ammodramus henslowii*), Chattahoochee crayfish, bluestripe shiner, pink lady’s slipper, delicate spike
24 (*Elliptio arctata*), large witch-alder (*Fothergilla major*), sweet pinesap (*Monotropis odorata*), Indian olive
25 (*Nestronia umbellula*), bay star-vine, and Georgia aster. Suitable habitat for the state-protected Chattahoochee
26 crayfish, bluestripe shiner, pink lady’s slipper, sweet pinesap, Indian olive, bay star-vine, and Georgia aster was
27 identified within the Study Area. Suitable habitat for the state-protected Henslow’s sparrow, delicate spike, and
28 large witch-alder is not present within the Study Area. It is Georgia DOT policy and in compliance with the
29 Georgia Endangered Wildlife Act and Georgia’s Wildflower Preservation Act of 1973 to notify GADNR of any
30 potential impacts to these species.

31 There are no federally designated critical habitats in Cobb, Fulton, or DeKalb Counties. The Preferred Alternative
32 will have “no effect” to federally designated critical habitat (refer to Section III in **Appendix H-10, Ecology**
33 **Resource Survey and Assessment of Effects Report, Addendum 1**).

34 There are no known bald eagle nests within 3 miles of the Study Area. The Chattahoochee River and adjacent
35 forested corridor does provide suitable foraging and nesting habitat for the bald eagle. However, traffic along
36 I-285 in both directions would likely deter eagles from foraging within or near the Study Area.

37 Bridges and culverts are often potential bat-roosting locations and forested areas can serve as roosting and
38 foraging habitats for bat species. Signs of bat roosts include visual, audible, and olfactory identification; presence
39 of guano; and staining from guano or body oils. During the February 7-22, 2023, winter culvert inspection for bats

1 survey, all culverts 36 inches or larger throughout the ESB were inspected for individual bats as well as bat sign.
2 Bats were observed roosting on plugged drains, cracks and crevices, vertical access flumes, vertical access
3 reinforced concrete pipes, and along interior culvert walls in ten of the 74 total culverts that were inspected during
4 the survey. A total of 40 bats (39 tricolored bats and one southeastern bats) were observed within the culverts for
5 PS 1D, PS 4, PS 6, PS 12, PS 13, PS 26, PS 56A, PS 85, PS 92, PS 96, and PS 128. During the 2023 field surveys,
6 no visual observations of stains due to body oils, or guano were observed within any potential roosting structures.
7 All potential roosting structures are located within highly developed, high traffic areas, with the exception of the
8 forested margins of the Chattahoochee River (PS 20). Foraging habitat exists within stream corridors and open
9 waters; however, these areas are fragmented from residential, commercial, and transportation development. For
10 these reasons, foraging habitat would be marginal for bat species with the exception of the forested areas along
11 each bank of PS 20.

12 Suitable habitat exists for one federally protected species and seven state-protected species in the Study Area
13 (refer to Figure 4, Protected Species Habitat Map in **Appendix H-10, Ecology Resource Survey and**
14 **Assessment of Effects Report, Addendum 1**, for the suitable habitat locations). Discussions of the likelihood of
15 occurrence of these species follows.

16 **Tricolored Bat**

17 This species roosts in caves, mines, cave-like tunnels, trees, or roadway culverts in the winter. Summer roosts
18 include dead or live tree foliage, caves, mines, rock crevices, bridges, culverts, and riparian areas. Presence of
19 suitable roosting habitat throughout the Preferred Alternative is provided by bridges, culverts, and wooded areas.
20 A species-specific survey began in February 2023 during which 39 tricolored bats were observed roosting within
21 10 culverts located within the Study Area. On September 13, 2022, USFWS announced a proposal to list the
22 tricolored bat as endangered under the ESA. Suitable tricolored bat habitat occurs statewide and may be present
23 within existing and proposed GDOT ROW. In compliance with the ESA, surveys were conducted in February
24 2023 to assess the suitability of winter roosting habitat and determine presence/absence of the tricolored bat along
25 the project corridor. In addition, 74 culverts with suitable habitat along the express lanes project corridor, which
26 are constructed of concrete and are greater than or equal to 36 inches in width and height were surveyed. Thirty-
27 nine tricolored bats were identified in culverts during this survey. Effects to the tricolored bat due to project
28 construction are not known at this time and will be determined at a later date. Bridge surveys for roosting bats are
29 currently underway, and a biological assessment of how construction of the project will affect the tricolored bat
30 will be written concurrently and included with the FEIS. An Addendum II to the Ecology Resource Survey and
31 Assessment of Effects Report is planned and will document the tricolored bat biological assessment as well as the
32 bridge surveys that occurred in the third quarter of 2023 for roosting bats. FHWA will initiate Formal Conference
33 for this project upon receipt of the biological assessment.

34 **Chattahoochee Crayfish**

35 This species prefers riffle areas and cobble/bedrock crevices of clear, rapidly flowing streams and has known
36 occurrences within the mainstem of the Chattahoochee River. Due to the presence of suitable habitat in
37 19 streams within the Preferred Alternative, and in concurrence with Georgia DOT OES and GADNR, the
38 Chattahoochee crayfish is assumed to occur within the Study Area.

1 Bluestripe Shiner

2 This species prefers large streams with riffles and/or runs with rubble or sand substrate and with swift-flowing
3 water. Due to the presence of suitable habitat in eight streams within the Preferred Alternative, and in concurrence
4 with Georgia DOT's OES and GADNR, the bluestripe shiner is assumed to occur within the Study Area.

5 Pink Lady's Slipper

6 This species prefers upland pine-hardwood forests with acidic soils. There are five areas of mixed pine-hardwood
7 forest with acidic soils identified within the Study Area that contain suitable habitat for pink lady's slipper. Most of
8 the suitable habitat contains areas of relatively open understories. However, many of these areas also contain a
9 heavy presence of aggressive ground cover plants, such as nonnative English ivy (*Hedera helix*) or native
10 muscadine (*Vitis rotundifolia*). A species-specific survey was conducted in July 2019 to verify the previous
11 species survey in 2017. Neither survey observed individuals within the Study Area. While surveys occurred after
12 flowering, the plant is identifiable by its basal leaves that do not resemble any other species in Georgia.

13 Sweet Pinesap

14 This parasitic species prefers mixed pine-hardwood forests with dry, acidic soils and mountain laurel (*Kalmia*
15 *latifolia*) or *Rhododendron* spp. understory. GADNR has one record of the species onsite within the Study Area.
16 Much of the formerly suitable habitat is impaired by dense populations of nonnative invasive Chinese privet
17 (*Ligustrum sinense*), autumn olive (*Elaeagnus umbellata*), English ivy, Japanese honeysuckle (*Lonicera*
18 *japonica*), monkeygrass (*Liriope* sp.), kudzu, and aggressive native poison ivy (*Toxicodendron radicans*), which
19 would likely out-compete sweet pinesap for soil moisture. The recorded location for sweet pinesap has been
20 developed into a single-family residential subdivision. Moreover, while a few 20- to 40-year-old chestnut oak
21 (*Quercus montana*) and pignut hickory remain, the remaining, formerly suitable forested habitat abutting this land
22 use has been altered by ongoing dumping of dense leaf humus, grass clippings, and other landscape debris.
23 One remnant area of low suitability habitat remains south of I-285 and east of Riverside Drive. A species-specific
24 survey was conducted in April 2019 and March 2020. No individuals were observed during either survey within
25 the Study Area.

26 Indian Olive

27 This species prefers dry, open, upland mixed hardwood-pine forests with acidic soils. There were five areas of
28 upland mixed pine-hardwood and hardwood forest with acidic soils identified within the Study Area that contain
29 marginally suitable habitat for Indian olive. A species-specific survey was conducted in July 2019 to verify the
30 previous 2017 species survey for these areas. Neither survey identified individuals within the Study Area. While
31 portions of the Study Area were surveyed after flowering, the plant can be identified by leaf arrangement and lack
32 of odor when leaves and twigs are broken. A similar species, sweetshrub, was observed in habitat unit HAB3.
33 It occurred in small colonies at the base of numerous hardwood trees, but individual plants lacked reddish-brown
34 stems and had fragrant odor when the leaves and twigs were broken. Any suitable habitat for Indian olive within
35 the Study Area is considered marginal due to habitat fragmentation, disturbed soils, and heavy invasive species
36 competition. In addition, previously identified suitable habitat within portions of habitat units HAB4 and HAB5
37 have been cleared and active construction to support Georgia DOT PI 721850 (Transform 285/400 project) was

1 underway during the site visit (refer to Figure 4, Protected Species Habitat Map in **Appendix H-10, Ecology**
2 **Resource Survey and Assessment of Effects Report, Addendum 1**).

3 **Bay Star-Vine**

4 This species prefers moist, deciduous hardwood forests along lower slopes, stream terraces, and floodplains.
5 The 2017 Ecology Resource Survey Report identified suitable habitat for bay star-vine along sunny openings within
6 the margins of PS 16 (Rottenwood Creek). Based on adjustments in the Preferred Alternative limits, the Study Area
7 now excludes this area while extending south of Glenridge Connector to Northland Drive. The area south of
8 Glenridge Connector contains two areas along perennial streams (PS 68 and PS 71) with low-slope and flat terraces
9 dominated by hardwoods with a heavy presence of American beech and some filtered sunlight. A species-specific
10 survey was conducted after flowering, but during fruiting in July 2019, which is within the acceptable survey
11 period. Vine species such as Virginia creeper (*Parthenocissus quinquefolia*) and climbing hydrangea (*Hydrangea*
12 *barbara*) were observed during the survey, but no bay star-vine individuals were observed in the survey area.

13 **Georgia Aster**

14 This species prefers edges and openings in dry, rocky, upland oak-hickory-pine forests, and highway ROW that is
15 present through these habitats. The Study Area contains numerous areas of ruderal ROW and easements that lack
16 canopy species and have dominating tall herbaceous species. However, mowing regimens maintain all these areas.
17 In addition, many of these areas have a high ground cover of species such as the nonnative Japanese honeysuckle
18 and native blackberry (*Rubus* sp.). The Study Area also contains some dry mixed pine-hardwood forests with
19 some openings. However, this habitat is considered marginally suitable for Georgia aster due to fragmentation,
20 disturbed soils, and activity from nearby residential and commercial developments. In addition, much of the
21 previously identified suitable habitat has now been cleared. Active construction was underway for Georgia DOT
22 PI 0000784 (Transform 285/400 project) during the survey visits. Species-specific surveys were conducted to
23 verify the 2017 Ecology Resource Survey Report survey in October 2018 and November 2019. None of the
24 surveys identified individuals within the Study Area.

25 **3.11.1.3 Neotropical Migratory Birds**

26 Surveys observed 56 migratory bird nests for the barn swallow (*Hirundo rustica*), cliff swallow (*Petrochelidon*
27 *pyrrhonota*), and eastern phoebe (*Sayornis phoebe*) at seven bridge locations and 11 box culvert locations within
28 the Study Area. These species are protected under the Migratory Bird Treaty Act of 1918, as well as subsequent
29 amendments.

30 **3.11.1.4 Invasive Species**

31 A survey for populations of invasive species that may spread during construction was conducted. The invasive
32 species observed in the survey are those identified by Georgia DOT as having the highest priority due to
33 environmental and economic impacts. Within the Study Area, the survey identified 11 priority one invasive
34 species, with coverage concentrated at 17 locations. Refer to Section III. F. in **Appendix H-10, Ecology**
35 **Resource Survey and Assessment of Effects Report, Addendum 1**, for more details.

1 **3.11.2 Environmental Consequences**

2 Avoiding impacts to the identified resources would be possible only through the No-Build Alternative. However,
3 as stated in **Chapter 1, Need and Purpose**, the projected growth in population, employment, and traffic volumes
4 will need long-term transportation solutions including the implementation of ELs to help manage the increasingly
5 congested conditions. The No-Build Alternative would not address the region’s mobility needs.

6 The Preferred Alternative would have minimal effects on natural communities, important wildlife, fish, or habitat
7 due to the Study Area’s existing urban setting, including the loss of accessible natural habitat not already in
8 perpetual protection. Suitable habitat is present for one federal species (tricolored bat, expected to be listed as
9 Endangered in 2024), seven state-protected species: Chattahoochee crayfish, bluestripe shiner, pink lady’s slipper,
10 sweet pinesap, Indian olive, bay star-vine, and Georgia aster. **Exhibit 3-72** lists potential impacts to state- and
11 federal-protected species by the Preferred Alternative.

Exhibit 3-72: Protected Species with Potential to Occur in the Study Area

Common Name	Scientific Name	Federal Status	State Status	Habitat	Habitat Available	Effect Determination	Special Provision
Henslow's sparrow	<i>Ammodramus henslowii</i>		R	Grassy areas, especially wet grasslands, pitcher plant bogs, pine flatwoods, and power line corridors.	No	No effect	No
Chattahoochee crayfish	<i>Cambarus howardi</i>		T	Riffle areas and cobble/bedrock crevices of clear, rapidly flowing streams ranging from small tributaries to the Chattahoochee River.	Yes	Significant adverse effect	Yes: 107.23H and 165.3.05
Bluestripe shiner	<i>Cyprinella callitaenia</i>		R	Mainstem river and large streams, usually found in riffles and runs with rubble or sand substrate and swift-flowing water.	Yes	Significant adverse effect	Yes: 107.23H and 165.3.05
Pink lady's slipper	<i>Cypripedium acaule</i>		U	Mixed pine-hardwood forest and planted pine.	Yes	No significant adverse effect	No
Monarch butterfly*	<i>Danaus plexippus</i>	C		Open habitats that contain milkweed plants or other nectar-producing plants.	Not assessed	Not likely to jeopardize	No
Delicate spike	<i>Elliptio arcata</i>		E	Gravel or sand shoals in medium to large rivers.	No	No effect	No
Large witch-alder	<i>Fothergilla major</i>		T	Xeric hardwood-pine forests on rocky sandstone or granite ridges and bluffs often with Virginia pine (<i>Pinus virginiana</i>), scarlet oak (<i>Quercus coccinea</i>), and black oak (<i>Quercus velutina</i>).	No	No effect	No
Black-spored quillwort	<i>Isoetes melanospora</i>	E	E	Shallow, temporarily flooded flat-bottomed pools formed on granite outcrops. Pools are inundated during winter and early spring, and are typically dry during summer and fall.	No	No effect	No
Sweet pinesap	<i>Monotropsis odorata</i>		T	Mixed pine-hardwood forest.	Yes	No significant adverse effect	No
Indian olive	<i>Nestronia umbellula</i>		R	Mixed pine-hardwood forest and upland hardwood forest.	Yes	No significant adverse effect	No

Exhibit 3-72: Protected Species with Potential to Occur in the Study Area (continued)

Common Name	Scientific Name	Federal Status	State Status	Habitat	Habitat Available	Effect Determination	Special Provision
Tricolored bat**	<i>Perimyotis subflavus</i>	PE		<p>Winter roosts are composed of caves, mines, cave-like tunnels, trees, or roadway culverts.</p> <p>Summer roosts are mainly in dead or live tree foliage, but may also be in caves, mines, rock crevices, bridges, and culverts. This species also typically roosts in riparian areas.</p>	Yes	To be determined	No
Monkeyface orchid	<i>Platanthera integrilabia</i>	T	T	Seepage sphagnum bogs, springheads, seepy stream banks, or red maple-blackgum swamps.	No	No effect	No
Dwarf sumac	<i>Rhus michauxii</i>	E	E	Dry, open, rocky, or sandy woodlands over mafic bedrock or granite; often on ridges and river bluffs.	No	No effect	No
Bay star-vine	<i>Schisandra glabra</i>		T	Moist, deciduous hardwood forest along lower slopes, stream terraces, and floodplains.	Yes	No significant adverse effect	No
Georgia aster	<i>Symphotrichum georgianum</i>		T	Edges and openings in dry, rocky, upland oak hickory-pine forests and ROW through these habitats.	Yes	No significant adverse effect	No

1 Key: Threatened (T), Endangered (E), Rare (R), Unusual (U), Proposed Endangered (PE), and Candidate (C)

2 * Habitat for the monarch butterfly was not assessed due to presence of the species being assumed.

3 ** Consultation for tricolored bat is currently underway.

3.11.2.1 Migratory Birds

Surveys identified 56 barn swallow, cliff swallow, and eastern phoebe nests on bridges and in culverts throughout the Study Area. Implementation of Georgia DOTs Special Provision 107.23G would protect migratory birds through the implementation of BMPs and time of year restrictions in areas where migratory birds may be present. The Preferred Alternative likely would not adversely impact the habitat of migratory birds. Adverse indirect impacts are not expected to affect migratory birds at the population level given the prevalence of suitable forested habitats and urban land uses in the three-county vicinity. (Refer to **Appendix H-10, Ecology Resource Survey and Assessment of Effects Report, Addendum 1.**)

3.11.2.2 Invasive Species

Surveys identified concentrations of 11 invasive species on the state's priority list within the Study Area. As stated in **Appendix H-10, Ecology Resource Survey and Assessment of Effects Report, Addendum 1**, the Developer will adhere to the earthwork provisions outlined in Section 201, Clearing and Grubbing of Right-of-Way, of Georgia DOT's Standard Specifications for Construction Transportation Systems (2001). Generally, the work defined by Section 201 includes the clearing, grubbing, removing and disposing of vegetation, buildings, and debris within the entire ROW and easement areas adjacent to the ROW or as designated by the project engineer. Specifically, clearing includes: the removal and disposal of trees, brush, stumps, logs, grass, weeds, roots, decayed vegetable matter, poles, stubs, rubbish, refuse dumps, sawdust piles, and loose boulders of one cubic yard or less existing outside of the construction limits, debris resting on or protruding through the ground surface, or appearing on the ROW before final acceptance of the work. Furthermore, grubbing includes the removal from ROW and proper disposal of all objectionable matter, defined under clearing, which is embedded in the underlying soil. As such, adherence to the primary measures outlined in Section 201 is anticipated to minimize the spread of invasive species.

3.11.3 Cumulative Effects

The Indirect and Cumulative Effects Report (refer to **Appendix D, Indirect and Cumulative Effects Report**) was used to support the cumulative effects analysis. It describes in detail the cumulative effects analysis, including the analysis of the cumulative effects to biological resources. The Preferred Alternative could disturb wildlife and their habitat, causing wildlife to leave the Study Area. However, the wildlife that currently occupy the habitat within the Study Area are accustomed to living in urban areas and may not be disturbed by the construction-related activity and habitat alteration. Individuals that are more sensitive to disturbance would be displaced to other areas of suitable habitat. These effects are generally not permanent, as urbanized wildlife are adaptable to changing conditions.

In general, habitat for protected species in the Study Area is low quality because the Preferred Alternative corridor is surrounded by developed areas. Past development actions, such as road construction and housing, have adversely affected the protected species habitat within the Study Area. The Study Area was converted from agricultural to residential and/or mixed-use development along the entirety of the Preferred Alternative corridor by the 1990s. Past and present trends of declines in habitat quality and quantity are expected to continue in response to present actions and reasonably foreseeable actions. These actions include alteration of ecosystem processes; loss, alteration, and fragmentation of suitable habitat; introduction of invasive species; increases in

1 impervious surface area and water pollution; changes in natural flow regimes; and temporary increases in
2 pollutant emissions impacting air quality during construction. Altogether, these effects have resulted in significant
3 loss of species habitat in the Study Area. Transportation systems, which are a component of the overall urban
4 development pattern within the Metro Atlanta area, have historically played a key part in these ecosystem
5 changes. In the reasonably foreseeable future within the Project Area, wildlife and suitable habitat, with the
6 exception of urban-adapted wildlife, is likely to continue to decline as development continues (refer to
7 **Appendix D, Indirect and Cumulative Effects Report**, for additional information on the past, present, and
8 reasonably foreseeable actions along the Preferred Alternative corridor).

9 The natural ecosystem in the Study Area has been substantially affected and would continue to be affected by past
10 actions, present actions, and reasonably foreseeable actions. The Project Area is already highly disturbed due to
11 the past and ongoing actions in the area. Reasonably foreseeable future actions will continue to disturb native
12 ecosystems within the Project Area. Accordingly, the incremental effect of the Preferred Alternative and the other
13 Build Alternatives will be minimal, as all Proposed Project actions would occur in an already highly disturbed
14 area. While continued development in the present and reasonably foreseeable future could affect one federally
15 proposed species and seven state-protected species with suitable habitat present through continued degradation,
16 the Preferred Alternative is subject to Georgia DOT special provisions for the protection of these species and their
17 habitats. The temporary impacts to natural ecosystems due to the construction of ELs and at-grade tie-ins are
18 discussed in **Section 3.13, Construction Impacts**.

19 3.11.4 Potential Avoidance, Minimization, and Mitigation Measures

20 3.11.4.1 Protected Species Habitat

21 Georgia DOT implements special provisions when there is potential to impact protected species. Implementation
22 of Special Provisions 107.23H and 165.3.05 would protect state-listed aquatic species such as the Chattahoochee
23 crayfish and bluestripe shiner. The Special Provisions have conditions restricting construction activity and
24 implementation of erosion and sediment control practices in the vicinity of the streams in the Study Area that
25 contain suitable habitat. These provisions include:

- 26 • Equipment staging areas and equipment maintenance areas should be located at least 200 feet from the
27 banks of the streams to minimize the potential for wash water, petroleum products, or other contaminants
28 from construction equipment entering the streams.
- 29 • All disturbed soil, excavation spoil/overburden, and stockpiled materials should be located at least
30 200 feet away from the stream banks to prevent rain runoff.
- 31 • No application of pesticides or herbicides can be within 200 feet of the streams.
- 32 • Georgia DOT or their contractor(s) shall notify the project engineer immediately in the event of an
33 erosion or sediment control failure that results in the discharge of sediment into the streams.
- 34 • Georgia DOT or their contractor(s) shall keep a log during construction activities detailing any sightings
35 or incidents that could cause injury to the protected species (refer to **Appendix H-10, Ecology Resource
36 Survey and Assessment of Effects, Addendum 1**, June 2023, for additional details of Special Provision
37 107.23H and 165.3.05).

3.11.4.2 Migratory Birds

Avoidance and minimization measures, including seasonal work restrictions near bridges and culverts, would be implemented to protect migratory birds. The U.S. Department of Agriculture’s Animal and Plant Health Inspection Service (APHIS) would conduct deterrence measures on bridges on behalf of Georgia DOT. Following federal procedures, APHIS would remove any old nests and would monitor the bridges for new nests. Georgia DOT would be required to notify APHIS 30 calendar days prior to the start of construction. The February 2020 update to SP107.23G notes that the construction of extensions or demolition or maintenance activities on any box culvert would take place outside of the breeding and nesting season of migratory birds, which begins April 1 and extends through August 31, “unless exclusionary barriers consisting of overlapping strips of flexible plastic are put in place to prevent birds from nesting. Due to the risk of entanglement, nets are not appropriate exclusionary barriers on a box culvert. Exclusionary barriers on any box culvert must be installed prior to March 15, but at no time between March 15 and August 31 unless the Georgia DOT State Environmental Liaison provides written authorization” (Georgia DOT). If exclusionary barriers are put in place to prevent birds from nesting activities, construction activities may take place without calendar restrictions. For any box culvert being extended, demolished, or maintained, the Developer would install exclusionary barriers at the inlet and outlet opening where the work would take place prior to March 15, but at no time between March 15 and August 31 unless the Georgia DOT State Environmental Liaison provides written authorization.

3.11.4.3 Invasive Species

During the construction process, Georgia DOT would take measures to prevent or minimize the spread of invasive species as appropriate for the time of the year. These measures would include removal and disposal of vegetative parts in the soil that may reproduce by root raking, burning onsite any such parts and aboveground parts that bear fruit, controlling or eradicating infestations prior to construction, and cleaning of vehicles and other equipment prior to leaving the infested site or upon entering the site from another site unless invasive species were absent from the previous site where the equipment was used. The measures used would be those that are appropriate for the particular species and the specific site conditions that exist within the Preferred Alternative area, as described in Georgia Standard Specifications Section 201, Clearing and Grubbing of Right-Of-Way.

3.12 Geology and Soils

This section discusses the Study Area for geology and soil resources and seismic risk, the potential impacts of the Preferred Alternative on these resources, and proposed avoidance, minimization, and mitigation measures to offset any potential adverse effects.

3.12.1 Affected Environment

The Study Area for geology and soils includes all areas wherein ground-disturbing activities will occur and the area of any required ROW and easements. The Preferred Alternative would lie in the Piedmont physiographic province of Georgia. Bedrock in the Piedmont Province consists of metamorphic rocks with localized igneous intrusions. Common conditions include residual soils and weathered rocks above bedrock, which are a product of chemical and physical weathering of the parent rock. Generally, soils in the Study Area are not suitable for agriculture without the use of fertilizers. These soils are often hues of red due to the presence of iron oxides. Weathering is most advanced near the surface and decreases with depth. The near-surface soils are often clayey,

1 grading to sandy silts or silty sands with increasing depth. The depth to rock is highly variable and can vary
2 greatly over short horizontal distances. Zones of partially weathered rock within residual soil and zones of soil
3 within the rock mass are also common.

4 According to the U.S. Department of Agriculture Soil Conservation Service’s Soil Surveys of Cobb, Fulton, and
5 DeKalb Counties, Georgia,⁸⁹ the most common soil types are Urban Land, Louisa soils, Cecil-Urban land
6 complex, Pacolet-Urban land complex, and various sandy loam soils. Cutting, filling, and grading has extensively
7 altered the land. Fill material covers the natural soils in many places, but one can find remnants of natural soils in
8 drainage bottoms. Natural soils on ridgetops and sloping uplands are generally made up of a shallow surface
9 stratum of sandy loam with sandy clay subsoils. Gentle sideslopes and shallow valleys generally host deeper soils
10 made up of an upper stratum of sandy loam underlain by red sandy clay. Soils in floodplains are made up of
11 alluvial soils formed from sedimentation from infrequent flooding of streams. Floodplains range in breadth from
12 very narrow at well-defined and deeply etched streams to broad floodplains along streams that are less defined
13 and silted.

14 The Brevard Fault Zone runs southwest to northeast across Alabama, Georgia, and North Carolina; however, it is
15 not an active fault.⁹⁰ In Georgia’s Piedmont Province, the Brevard Fault Zone runs southwest to northeast. The
16 Brevard Fault Zone is a distinct linear zone of ductile shearing (a fracture in the Earth’s crust and rocky upper
17 mantle) that is traceable from the Coastal Plain onlap/overlap in Alabama, northeastward through Georgia, South
18 Carolina, and most of North Carolina. In the Study Area, the Chattahoochee River follows the path of the Brevard
19 Fault Zone. The fault last moved about 185 million years ago.

20 The Piedmont crystalline-rock aquifer underlies the survey area. The Piedmont and Blue Ridge crystalline-rock
21 aquifers span 11 states and rank second in the United States as a source of groundwater for private domestic
22 supply.⁹¹ In northern Georgia, however, the bedrock geology of the region does not support cost-effective
23 groundwater use. Groundwater makes up less than 1% of the public water supply for the 11 counties in the
24 Metropolitan North Georgia Water Planning District (including Cobb, Futon, and DeKalb Counties). No sole
25 sources or local aquifers are known in the survey area.

26 3.12.2 Environmental Consequences

27 The following sections consider geology and soils against the No-Build Alternative and Preferred Alternative to
28 identify any direct impacts. Geologic resources include geology, soils, and seismic risk.

29 3.12.2.1 Direct Effects

30 Under the No-Build Alternative, there would be no effects to geologic resources. Direct effects are anticipated as
31 a result of the Preferred Alternative. Such effects would be associated with the excavation and construction
32 required for implementing the ELs. The near-surface bedrock layer underlying the project corridor is a deep
33 weathered granite extending several hundred feet below the surface. Analysis shows the effects of the Preferred

⁸⁹ U.S. Department of Agriculture (USDA). 2005. *Published Soil Surveys of Georgia*.

⁹⁰ Georgia Emergency Management Agency. 2020. *Georgia Earthquake Awareness Guide 2020*.
http://geophysics.eas.gatech.edu/GTEQ/EMGuide/GEMA_Earthquake_Guide_2021.pdf.

⁹¹ Metropolitan North Georgia Water Planning District. 2017. *Water Resource Management Plan*. https://northgeorgiawater.org/wp-content/uploads/2015/05/Water-Resource-Management-Plan_Amended-20190227.pdf.

1 Alternative on the geology or topography within the project corridor would be minimal. Forecasts for the
2 Preferred Alternative show no long-term effects on the soils of the Study Area. Construction of the Preferred
3 Alternative also shows no indication of encountering problem soils with a high potential for subsidence or
4 instability in the Project Area.

5 The No-Build Alternative and Preferred Alternative will not cause earthquakes. The Brevard Fault Zone wherein
6 lies the Study Area is not an active fault and implementation of the project would not exacerbate the activity level
7 of the fault.

8 **3.12.3 Potential Avoidance, Minimization, and Mitigation Measures**

9 Implementation of standard soil erosion and hydrological control measures would minimize soil erosion and
10 sedimentation in and around the Study Area for the Preferred Alternative. Georgia DOT would implement the
11 following measures to minimize and mitigate the anticipated soil and geological impacts of the Preferred
12 Alternative:

- 13 • Preservation of vegetation beyond the limits of construction where possible.
- 14 • Early revegetation of disturbed areas to hold soil movement to a minimum.
- 15 • Inclusion of construction features for the control of predicted erosion and water pollution in the plans,
16 specifications, and contract pay items (Georgia Standard Specifications - 1993, Section 161 through
17 Section 171 and Section 700 through Section 715 identify pollution control measures to be used).
- 18 • Fill material obtained from a borrow area that is free of contaminants and pollutants.
- 19 • Use of BMPs during construction to minimize any potential for soil erosion.

20 **3.13 Construction Impacts**

21 This section describes the construction impacts anticipated for the Preferred Alternative. The discussion does not
22 include the No-Build Alternative because no construction activities would occur under it, other than general
23 maintenance of the existing lanes. Construction impacts include temporary disruptions and inconveniences to
24 motorists using the I-285 top end corridor, as well as to residents, businesses, and pedestrians near construction
25 areas. Construction activities may also cause other temporary impacts (e.g., noise, vibration, air quality) for
26 individuals adjacent to the Proposed Project. Unlike the long-term direct effects described in other sections of
27 **Chapter 3, Affected Environment, Environmental Consequence, and Mitigation**, the impacts described in
28 this section would not be considered permanent as they occur only before and during construction activities.

29 **3.13.1 Anticipated Construction Activities**

30 Implementing the Preferred Alternative would require constructing new roadway facilities within the Project
31 Area, as well as modifying some existing transportation facilities (for example, ramps, bridges) within the Project
32 Area. Construction would occur within existing Georgia DOT ROW and ROW acquired by Georgia DOT to
33 implement the project. Early construction stages would involve clearing and excavating vegetation and relocating
34 any utilities (for example, transmission lines, sewer pipes, natural gas pipes) that would be affected during
35 construction. During this stage, Georgia DOT would install control devices, including fences, ditches, and

1 catchment basins, to control soil erosion during construction. Later construction stages would involve more earth
2 moving to lay a path for the proposed lanes and install culverts and drains. The next construction phase would
3 involve grading and stabilizing the path upon which the roadway would be constructed. For elevated portions of
4 the Proposed Project, ground-disturbing activities would involve ground-preparation to install bridge piers. In the
5 last construction stages, the new roadway would be paved and bridge platforms installed for elevated portions of
6 the Proposed Project. In all construction stages, heavy equipment, trucks, laborers, and materials would be present
7 along the top end corridor. Construction activities will require temporary lane and road closures that would create
8 unavoidable inconveniences for motorists on the I-285 GP ramps and lanes. Construction activities would be
9 conducted so that traffic flow access is maintained and disruptions are minimized. Combined, portions of the
10 Preferred Alternative corridor would be under construction for approximately 8 to 10 years.

11 The Developer would be responsible for determining the specifics of how the Preferred Alternative would be
12 constructed. The plan for construction must fit the framework of the design specified in the construction contract
13 document, as evaluated in this Draft EIS. The construction contract document includes restrictions or special
14 provisions that the Developer must undertake to ensure compliance with the environmental mitigation
15 requirements in this Draft EIS. The Final EIS and any subsequent reevaluations will provide a more detailed
16 discussion of potential construction impacts and the provisions and restrictions that would guide the Developer's
17 work (that is, more specific staging plans, memoranda of understanding with utility owners). Many avoidance,
18 minimization, and mitigation measures outlined in this section might be implemented by the Developer(s).
19 The specific roles and responsibilities for the final design, implementation, operation, and maintenance of the
20 Proposed Project will be determined through contract negotiations between Georgia DOT and prospective
21 Developers. Georgia DOT will be responsible for avoidance, minimization, and mitigation measures discussed
22 within the Draft EIS. Ultimately, Georgia DOT may delegate the implementation of some or all of these measures
23 to a Developer(s).

24 3.13.2 Temporary Construction Easements

25 In addition to the permanent ROW and easements needed, temporary construction easements may be needed on
26 some adjacent properties to access underground utilities or to provide additional space to maneuver construction
27 equipment. No substantial long-term physical changes are anticipated in areas with temporary easements, as these
28 areas would be returned to pre-project conditions. In areas where construction would be especially disruptive to
29 the public (e.g., at a school where construction activities may interrupt school activities), Georgia DOT may
30 instead temporarily close some lanes on I-285 or SR 400 and use that space to stage equipment. Advance
31 notification and coordination would take place if temporary closures on I-285 or SR 400 were required.

32 3.13.3 Community Facilities, Neighborhoods, and Cities

33 3.13.3.1 Neighborhoods and Community Facilities

34 Neighborhoods and community facilities near the Project Area would experience the most noticeable effects from
35 construction activities. This section discusses temporary impacts in terms of community access, ground vibration,
36 and light/glare issues. Other temporary effects to neighborhoods and community facilities, including air quality
37 and noise, are discussed in 3.13.9 and 3.13.10, respectively. The Project is required to adhere to federal and state
38 requirements but is generally not subject to local ordinances and is exempt from complying with local regulations.

1 Construction activities would have the potential to change the way that residents, employees, and visitors access
2 neighborhoods, commercial establishments, and community facilities. Communities and neighborhoods adjacent
3 to construction areas may experience changes to neighborhood access as a result of detours and neighborhoods
4 may experience temporary increases in traffic if drivers attempt to bypass construction-related traffic delays by
5 diverting through residential neighborhoods rather than using the marked detour routes. To minimize these
6 potential impacts, Georgia DOT would be required to notify neighborhood residents and communities in advance
7 of planned detours. This would be included in the Public Involvement and Communications Plan and would
8 establish communication protocols for communities and representatives to engage with Project representatives
9 and coordinate on construction activities. It would also establish advance notification procedures for construction
10 activities impacting communities and community facilities. (Environmental Commitments Table Nos. E-5 and
11 E-15)

12 Construction activities would occur adjacent to two areas that Jewish congregations have designated as eruv:
13 (1) Beth Tefillah (Eruv Sandy Springs), in the southwest quadrant of the I-285/SR 400 interchange, and
14 (2) B'nai Torah Eruv, west of SR 400 and roughly bounded to the west by Roswell Road NE. During
15 construction, the Project may impact facilities (such as existing noise barriers, fences, or similar) that serve as the
16 boundary of an eruv. To avoid inconveniences to adherents, Georgia DOT would coordinate with local Jewish
17 congregations with established eruv (Environmental Commitments Table No. E-46).

18 Certain roadway construction activities have the potential to cause ground vibration. While most construction
19 activities are imperceptible, vibration caused by controlled blasting (using explosives to dislodge bedrock) and
20 pile driving is sometimes noticeable within a relatively wide radius around the source. Most of the Preferred
21 Alternative corridor is elevated and on structure. Typically, piers would be placed on both sides of existing I-285
22 or SR 400 every 150 feet along 14 miles of corridor, so there would be locations where pile driving may be
23 required. While most construction-related vibration poses no risk to health or property, more severe vibrations can
24 damage nearby buildings and other structures. To prevent vibration-related damages and to help address public
25 concerns related to construction-related vibration, Georgia DOT would evaluate the potential for vibration
26 impacts during the final design phase and develop and implement a Vibration Control Plan (Environmental
27 Commitments Table No. E-42). The Vibration Control Plan would identify specific triggers of action to prevent
28 any damage to existing structures as well as how Georgia DOT would address public concerns about vibration at
29 any level. Georgia DOT would use vibration data published by applicable agencies or equipment manufacturers to
30 estimate zones within which vibrations caused by the Preferred Alternative may impact existing properties and
31 facilities. The Vibration Control Plan would also include during-construction monitoring of select locations to
32 ensure acceptable levels of vibration are maintained, following Georgia DOT's monitoring provisions (Georgia
33 DOT, 2021).

34 Construction activities have the potential to cause light or glare issues. To the greatest extent practicable,
35 activities that would introduce light or glare would be limited to daily hours when additional light and glare would
36 be less noticeable. However, construction activities would also occur overnight, and those activities would have
37 the potential to introduce light or glare impacts. In addition, areas used for equipment and materials storage may
38 be lighted overnight for security purposes. Georgia DOT would implement mitigation measures as appropriate,
39 such as the use of directional lighting and shielding (Environmental Commitments Table No. E-55).

3.13.3.2 Parks and Trails (including Section 4(f) and 6(f) Resources)

There are seven publicly owned recreation trails that would be potentially impacted during construction.

Within a section of the Chattahoochee River managed by NPS, the construction of jetties to allow machinery and personnel access to the bridge bents from the riverbank would result in temporary impacts of approximately 0.424 acre within the Chattahoochee River. Construction of the bridges over the Chattahoochee River would occur in two phases, occupying only half of the river at any given time. This may cause some level of obstruction, but river access would always be maintained for recreational users. Both the Public Involvement and Communications Plan and HSP would incorporate advanced notification of construction activities for recreational visitors to NPS properties (for both land and water) and include protocols for providing warning signs and restricting public access to temporary work and construction areas. Commitments to NPS are detailed in the I-285 Top End Express Lanes Statement of Findings for Wetlands and Floodplain Management (**Appendix H-11, NPS Statement of Findings**), in the Section 4(f) Commitment Letter (**Appendix M, Agency Correspondence**), and in **Appendix P, Environmental Mitigation Plan** (Environmental Commitments Table No. E-14).

About 1,600 LF of the PATH400 Trail (under construction) would be relocated approximately 25 to 50 feet to the east in order to accommodate construction of access and terminal ramps associated with the improvements. Pedestrian and bicycle traffic will be maintained throughout construction, but may require scheduled closures for public safety with the implementation of elevated bridge structures. To minimize effects to recreational users, Georgia DOT would continue to coordinate closely with the City of Sandy Springs prior to and during the construction phase (Environmental Commitments Table No. E-20). Commitments to the City of Sandy Springs are outlined in **Chapter 4, Section 4(f) and Section 6(f) Resources**, and in **Appendix P, Environmental Mitigation Plan. Appendix M, Agency Correspondence**, contains the officials with jurisdiction letters.

Temporary closures of Bob Callan/Rottenwood Creek Trail, Interstate North Trail, Mountain-to-River Trail, and Silver Comet Cumberland Connector Trail may also occur during construction. These closures would be short-duration and would be scheduled to occur overnight to reduce the impact to trail users. Akers Mill Road (East) Trail would experience longer-term closures during reconstruction of a portion of the trail. To minimize effects to recreational users on these trails, Georgia DOT would continue to coordinate closely with Cobb County DOT and Cobb County Department of Parks and Recreation prior to and during the construction phase, to ensure adequate notification to recreational users is provided. Georgia DOT will coordinate any trail closures and any needed pedestrian detours with the Cobb County Department of Transportation and the Cobb County Department of Parks and Recreation. Commitments to the Cobb County Department of Parks and Recreation are outlined in **Chapter 4, Section 4(f) and Section 6(f) Resources**, and in **Appendix P, Environmental Mitigation Plan. Appendix M, Agency Correspondence**, contains the officials with jurisdiction letters (Environmental Commitments Table Nos. E-16, E-17, E-18, E-19, and E-21).

All phases of construction operations would also temporarily contribute to air pollution for park and trail users. The Rules and Regulations for Air Quality Control outlined in Chapter 391-3-1, Rules of GAEPD, would be followed during the construction of the project (detailed in **Appendix H-8, Air Quality Impact Assessment**).

Construction activities would also lead to temporary increases in noise levels at various times for trail users. Given the limitations of the area and the proximity to trails and the Chattahoochee River, it is assumed that construction-related noise will occur for park users. The Developer will be required to develop a noise abatement

1 plan and take measures to minimize or prevent adverse construction noise impacts in the Project Area during
2 construction (detailed in **Appendix H-9, Noise Impact Assessment** and, for the Chattahoochee River, in the
3 Section 4(f) concurrence letter request (refer to Section 4(f) Correspondence in **Appendix M, Agency**
4 **Correspondence**) (Environmental Commitments Table No. E-41).

5 **3.13.3.3 Emergency Services and Utilities**

6 Construction of the Preferred Alternative would require long-term outside shoulder closures, reduced shoulder
7 widths, and some short-term lane closures, as well as temporary road closures (for example, ramps). In areas
8 where proposed ramps tie into or cross existing ramps, temporary closures of existing ramps would be needed.
9 Similarly, construction or modifications of bridges may possibly require partial closure of an existing bridge.
10 Where possible, such closures would occur mostly on weekends or during off-peak hours. Georgia DOT would
11 establish the specific types, locations, and schedule of closures during the final design phase. To minimize
12 disruptions to emergency services, including those servicing hospitals along the Project Area, Georgia DOT
13 would provide local emergency service providers at least two weeks advance notice for lane/shoulder closures and
14 traffic stage changes planned to be in effect longer than 24 hours and at least 24 hours of advance notice for
15 lane/shoulder closures planned to be in effect less than 24 hours (Environmental Commitments Table No. E-56).
16 This requirement would be part of the Public Involvement and Communications Plan (Environmental
17 Commitments Table Nos. E-15 and E-40). Georgia DOT would also create a TMP for communication with all
18 entities affected by closures and disruptions during construction (Environmental Commitments Table No. E-39).

19 The Preferred Alternative would not adversely affect utilities. Although some utilities may need to be relocated,
20 they would all be moved as needed before or during construction. Necessary precautions would be implemented
21 during utility relocation to minimize disturbances to normal day-to-day household, institutional, and business
22 operations. If service interruptions are unavoidable, their duration would be limited. Georgia DOT regularly
23 coordinates with utility providers to discuss the strategy (including design and schedule) for relocating utilities to
24 avoid any long-term interruption in service to the public (Environmental Commitments Table No. E-32). Georgia
25 DOT would obtain a MOU with each utility provider that would outline the requirements and processes for
26 coordination between Georgia DOT and the respective utility provider (utility providers with significant facilities
27 within the Project Area include Colonial Pipeline, Georgia Power, Atlanta Gas Light Southern Company, and
28 DeKalb County Water and Sewer) (Environmental Commitments Table No. E-7).

29 **3.13.4 Environmental Justice and Communities of Concern**

30 Construction of the Preferred Alternative could have the potential to impact communities located adjacent to the
31 Preferred Alternative corridor, including minority, low-income, and LEP populations. Impacts during construction
32 would include increased levels of light, noise, dust, vibration, traffic, and minor utility service interruptions.
33 While these impacts would be the same as those experienced by the population at large, LEP populations may
34 have more difficulty engaging with Georgia DOT regarding their concerns. To address challenges that
35 construction impacts would pose on these communities, Georgia DOT would incorporate into the Public
36 Involvement and Communications Plan methods to effectively communicate with minority, low-income, and LEP
37 populations living and working in the Preferred Alternative corridor. This would include measures to translate
38 written communication to ensure effective communication with non-English speaking residents.

1 3.13.5 Economics

2 During construction of the Preferred Alternative, businesses may experience temporary impacts such as sidewalk
3 closures, removal of customer parking spaces, and detours to accessing storefronts. However, implementation of
4 the Preferred Alternative would benefit the local and regional economy by providing both temporary and multi-
5 year opportunities for workers in the construction, transportation/material moving, management, and engineering
6 trades, among others.

7 Construction of the Preferred Alternative will require a large construction workforce. To ensure that opportunities
8 are provided for area residents and that there is an adequate workforce for construction, Georgia DOT would
9 create a workforce planning and development program, if needed. The Project may require a relatively small
10 number of specialists (e.g., specialist welders) and based on national demand for some skilled workers, these
11 specialists may need to come from outside of the Metro Atlanta area. As specialized workers are generally not
12 used for extended durations, it is assumed their involvement would be temporary and workers would reside in
13 local hotels or apartments short-term and would be unlikely to relocate their families.

14 The Preferred Alternative would affect the local and regional economy during construction through creation of
15 direct, indirect, and induced jobs.⁹² The estimated total cost to construct the Preferred Alternative is
16 approximately \$9.5 billion.⁹³ The Council of Economic Advisor's most recent official estimate of the impacts of
17 infrastructure investment on employment found that 13,000 jobs (direct, indirect, and induced) are created per
18 year for every \$1 billion invested. Thus, construction of the Preferred Alternative would create approximately
19 10,292 jobs per year for the 12-year construction duration of the Preferred Alternative. Of these, approximately
20 6,587 would be direct and indirect jobs and 3,705 would be induced jobs.

21 3.13.6 Transportation

22 Construction activities would likely result in some commuter delays due to temporary lane or road closures. The
23 Public Involvement and Communications Plan would include a strategy for how to provide residents and
24 businesses with project information, including the timing of construction activities and closures. This would help
25 the public to consider construction-related delays when planning their trips. It would also allow local businesses
26 to provide information to their employees so that they could potentially adjust commutes or make other work
27 arrangements (e.g., altered schedules, remote work, or similar) during planned closures. Examples of
28 communication methods that could be incorporated into the strategy include traffic impact reports, press
29 releases/media advisories, and a project webpage.

30 Work zone impacts and issues along the Preferred Alternative corridor would vary, and so, to best serve the
31 mobility and safety needs of road users, highway workers, businesses, and community, a TMP would be prepared
32 as part of the final design. The TMP would lay out a set of coordinated transportation management strategies and
33 describe how they would be used to manage the work zone impacts of the Preferred Alternative. The TMP would

⁹² Direct jobs are those created in the government-sponsored project (i.e., construction workers, managers, engineers, surveyors, and similar). Indirect jobs are those created at suppliers who make the materials used in the project. Induced jobs are those created elsewhere in the economy as a result of increases in income from the direct infrastructure investment leading to additional increases in spending by workers employed on the project or firms supplying the project.

⁹³ The \$9.5 billion construction cost estimate includes the estimated cost to implement the project adjusted to account for inflation that would occur by the year of expenditure.

1 include components for temporary traffic control, transportation operation, detour routes, and public information
2 to ensure that access to residences, businesses, public facilities, community services, and local roads is maintained
3 during construction to the best possible degree. Local police and fire departments would be notified in advance of
4 construction activities to allow for planning to minimize disruption of community and emergency services.
5 Signs would be used and local media would be contacted to provide early notice of detours, closings, and other
6 major construction activities that could potentially disrupt the community.

7 Although a full TMP document would not be developed until final design, conducting transportation management
8 analyses during PE and environmental processes would ensure that the TMP would help with scheduling and
9 coordinating other projects that are within or adjacent to the Preferred Alternative to minimize cumulative work
10 zone impacts on a particular area. This includes examining the adequacy of detour or alternate routes and
11 coordinating with the agencies responsible for those routes.

12 3.13.7 Historic and Archaeological Resources

13 There are 13 NRHP-eligible historic sites and no NRHP-eligible archaeological sites within the APE that would
14 potentially be affected by construction activities. All NRHP-eligible resources would be identified as ESAs on the
15 project design plans and accompanied by notes that prohibit any clearing or ground-disturbing work beyond
16 specified limits. Likewise, archaeological sites of unknown NRHP eligibility adjacent to the Project Area would
17 also be delineated on design project plans within ESAs. The installation and maintenance of 4-foot-high orange
18 barrier fence at the allowable disturbance limit would ensure that Georgia DOT does not impact any
19 non-permitted portions of these known or unknown NRHP-eligible historic resources or archaeological sites.
20 The project design plans would include notes to prohibit the staging of equipment and materials and the use of
21 any borrow pits from within ESAs.

22 3.13.8 Hazardous Waste and Materials

23 Construction of the Preferred Alternative would generate construction debris. Soils and groundwater/stormwater
24 impacted by any regulated compounds that are disturbed or removed during the construction project will be
25 considered “solid waste” by GAEPD. These solid wastes will require appropriate excavation, handling, and
26 disposal techniques in accordance with Solid Waste Management regulations. Excavation of impacted soils
27 during construction adjoining or at the REC facilities, including spoils from deep foundation construction, should
28 be performed by a specialized contractor experienced with handling and disposal of similar materials and with the
29 Occupational Safety and Hazard Administration regulations pertaining to waste removal activities.

30 During construction adjoining or at the REC facilities, the recommended action is that grading and excavation be
31 monitored by an environmental professional (refer to **Appendix P, Environmental Mitigation Plan**)
32 (Environmental Commitments Table No. E-8).

33 Georgia DOT would inventory potentially hazardous materials prior to any structural demolition or renovation
34 work. If Georgia DOT finds hazardous materials present in the structures, they would properly handle and dispose
35 of the materials in accordance with state regulations. The materials would be transferred to a receiving facility
36 licensed to handle the specific type of solid waste. Hazardous materials issues that may arise in the construction
37 phase not otherwise identified in earlier phases would be managed in accordance with two specific plans: the Spill
38 Prevention, Control and Countermeasure (SPCC) Plan, and the HSP. The SPCC Plan would establish procedures

1 intended to prevent and mitigate potential effects to water resources from the potential release of hazardous
2 materials. The HSP would establish guidelines and policies to protect workers and the public and provide
3 emergency preparedness information and procedures.

4 3.13.9 Air Quality

5 Demolition and construction activities would temporarily contribute to air pollution. Particulates would
6 temporarily increase in the Preferred Alternative corridor as dust produced by demolition and construction
7 activities collects in the surrounding air. The potential air quality impacts would be short-term, occurring only
8 while demolition and construction work is in progress and local conditions are appropriate. The potential for
9 fugitive dust emissions is typically associated with demolition, ground clearing, site preparation, grading,
10 stockpiling of materials, onsite movement of equipment, and transportation of materials. The potential is greatest
11 during dry periods, periods of intense construction activity, and during high wind conditions. During construction,
12 the Preferred Alternative would comply with the GAEPD Rules and Regulations regarding air quality.
13 To minimize the amount of airborne particulates and fugitive dust generated by construction activities,
14 Georgia DOT would:

- 15 • Minimize land disturbance
- 16 • Use irrigation trucks during certain construction activities or under hot/dry weather conditions
- 17 • Cover trucks when hauling dirt and other materials that create dust
- 18 • Stabilize or cover dirt piles if not removed immediately
- 19 • Use windbreaks to prevent accidental dust pollution
- 20 • Limit vehicle paths and stabilize temporary roads

21 Construction equipment would also result in a temporary increase of equipment-related exhaust emissions,
22 including the emission of particulates. As such, Georgia DOT may deploy EPA-approved diesel retrofit
23 technologies as emissions mitigation measures for equipment used during construction. Additional construction
24 equipment exhaust emissions mitigation strategies that could potentially be incorporated as part of the Preferred
25 Alternative include:

- 26 • Use properly sized and properly maintained equipment
- 27 • Replace older, less fuel-efficient equipment with newer more efficient equipment
- 28 • Reduce equipment idling time
- 29 • Use clean fuels

30 3.13.10 Noise

31 Construction activities would create noise that would impact residences, communities, businesses, and institutions
32 near the construction area. The severity of impacts from construction-related noise would depend upon the noise
33 levels of the source equipment and activities, the schedule of construction activities, and the distance of the noise
34 source from sensitive receptors. To minimize or prevent adverse construction noise emissions, contract
35 specifications and special provisions containing absolute noise criterion may be applied to generic classes of
36 heavy equipment during the design stages of project development and may be included in the project plans and
37 contract documents. **Exhibit 3-73** shows examples of possible noise emissions criteria limits, evaluated at a

reference distance of 50 feet from the noise source, of construction equipment that may be used to construct the Preferred Alternative. Generally, noise levels would be highest during the earliest phases of construction when initial earthmoving activities would occur and daily truck traffic would be employed to haul dirt and other materials. As depicted in **Exhibit 3-73**, example noise levels of typical construction equipment range from 77 dBA for pavers and trucks to 110 dBA for pile drivers. For context, the noise level in a library would be approximately 30 dBA and a typical gas lawnmower’s noise level would be approximately 100 dBA, as demonstrated within Section 2.1.2 of **Appendix H-9, Noise Impact Assessment**.

Exhibit 3-73: Typical Construction Equipment Noise

Construction Phase	Loudest Equipment	Maximum Sound level at 50 Feet (dBA)
Paving	Paver, truck	77 dBA
Foundation	Backhoe, loader	79 dBA
Base Preparation	Truck, bulldozer	82 dBA
Clearing and Grubbing	Bulldozer, backhoe	82 dBA
Earthwork	Scraper, bulldozer	84 dBA
Pile Driving	Pile Driver	110 dBA

Source: FHWA Construction Noise Handbook, 2006.

^a Equipment-specific A-weighted L_{max} noise limits, in dBA, evaluated at a reference distance of 50 feet

In general, construction-related noise would occur during weekday daytime hours. However, construction activities would be expected to occur during the weekend or nighttime periods. For example, this would occur where construction activities require complete closure of traffic lanes on roadways that are extremely congested during weekdays. Nighttime construction activities would result in potential adverse noise impacts, especially to sensitive receptors such as adjacent residences.

While the Proposed Project would not be subject to local noise ordinances, Georgia DOT would develop a Construction Noise Mitigation Plan (Environmental Commitments Table No. E-41). The following measures would be incorporated into the Plan to minimize or prevent adverse construction noise impacts at sensitive receptors in the Project Area:

- Georgia DOT would coordinate with local municipalities to determine sensitive locations where certain noise producing activities should be limited at specific times.
- The Plan would list all the proposed construction equipment and types of construction activity anticipated.
- The Plan would stipulate that each internal combustion engine used would be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine would be operated without such a muffler.

Project-specific construction noise abatement practices that can be used to minimize the noise impact in areas outside the construction site boundary include, but are not limited to, the following:

- Keep the public informed when work would take place
- Provide a means for receiving public input on noise-related issues

- 1 • Limit the number and duration of idling equipment onsite
- 2 • Maintain all construction equipment in good repair
- 3 • Where possible, reduce noise from all stationary site equipment and facilities by using suitable enclosures
- 4 • When possible, minimize the use of back-up alarms if construction is to occur during nighttime hours
- 5 • Relocate haul roads to areas that would minimize construction vehicle noise exposure to sensitive
- 6 receptors
- 7 • Schedule truck-loading, unloading, and handling operations to minimize construction site noise

8 3.13.11 Water and Wetland Resources

9 3.13.11.1 Chattahoochee River Crossing

10 At the Chattahoochee River, the Preferred Alternative is within the NPS CRNRA; therefore, extensive
11 coordination occurred with NPS regarding impacts to the Chattahoochee River. More detail can be found in the
12 Statement of Findings for Wetlands and Floodplain Management (found in **Appendix H-11, NPS Statement of**
13 **Findings**).

14 Preliminary constructability reviews have estimated 0.028 acre of PS 20/Chattahoochee River would be
15 permanently filled by the construction of new spread footings to accommodate and support the proposed
16 westbound and eastbound EL bridges. Approximately 0.396 acre of PS 20/Chattahoochee River would be
17 temporarily filled as a result of the Proposed Project due to a temporary work bridge and for construction of
18 temporary access jetties.

19 Construction of the bridge over the Chattahoochee River would occur in two phases, occupying only half of the
20 river at any given time. Notifications would be posted to inform watercraft of upcoming construction work and
21 safe navigation around construction (this would be detailed in both the Public Involvement and Communications
22 Plan and the HSP) (Environmental Commitments Table No. E-14). Land- and water-based erosion/sedimentation
23 control BMPs would be used wherever possible to minimize water quality impacts due to the bridge construction.
24 BMPs will be included on Georgia DOT ROW to minimize sedimentation and bank destabilization that could
25 affect Chattahoochee River water quality (Environmental Commitments Table No. E-37). BMPs may include
26 vegetative controls (such as mulching) and structural controls (such as silt fences and check dams). This will be
27 detailed in an Erosion, Sedimentation, and Pollution Control Plan and will incorporate erosion control measures in
28 areas that are adjacent to, or have the potential to impact, lands under the management of NPS as outlined in the
29 Special Provision 107.23H (refer to **Appendix P, Environmental Mitigation Plan**, for erosion control
30 commitments).

31 During construction, water quality monitoring within the Chattahoochee River would include measurement and
32 reporting of water quality parameters to quantitatively measure potential impacts (Environmental Commitments
33 Table No. E-37). NPS has stated a preference for real-time monitoring that would allow access to the log via a
34 web-based interface. Such real-time reporting would ensure that any water quality exceedances would result in
35 immediate notification, allowing faster response time for corrective actions. Water quality monitoring sites would
36 be installed both up and downstream of the bridge construction sites to monitor water quality and assess potential
37 impacts due to construction. The water quality data will serve multiple purposes, including ensuring conformance

1 to National Pollutant Discharge Elimination System (NPDES) and TMDL requirements, as well as satisfying
2 water quality monitoring requirements set by NPS. Turbidity will serve as a measure of direct water quality
3 impact. A turbidity daily log will be maintained and communication between the onsite work and NPS will be
4 outlined in communication plans.

5 The metric for evaluating construction-related disturbance will be established as part of a pre-construction
6 meeting between Georgia DOT and NPS. Additionally, prior to any construction occurring on NPS-managed
7 lands, a Special Use Permit would be obtained from CRNRA (refer to **Appendix P, Environmental Mitigation**
8 **Plan**, for these details).

9 Construction of the new bridge structure between I-285 and Powers Ferry Road within and adjacent to IS 20A
10 may result in temporary water degradation of the Chattahoochee River within the purview of the NPS. Similar to
11 measures that will be implemented for the Chattahoochee River discussed in previous paragraphs, erosion control
12 BMPs will be utilized to minimize sedimentation from construction and water quality monitoring will be
13 undertaken.

14 Effective August 1, 2018, the GAEPD issued General NPDES Permit No. GAR100002, which coincides with
15 Section 402 of the CWA of 1972 (33 U.S.C. 402) and governs water discharges associated with infrastructure
16 construction projects. Under this permit, a discharge that results in a substantial decrease in water clarity for
17 waters classified as trout streams is unlawful (the Chattahoochee River within the Project Area is considered a
18 secondary trout stream). Although this permit will expire by the time construction starts, a new permit will have
19 been issued, and this Project will adhere to the requirements of the new permit. In summary, two types of
20 monitoring efforts are proposed:

- 21 • Pursuant to the NPDES permitting, rain event monitoring is required.
- 22 • In accordance with NPS, a daily or real-time monitoring log would be maintained throughout bridge
23 construction and provided to NPS on a daily basis.

24 3.13.11.2 Other Regulated Water Bodies

25 In addition to the Chattahoochee River (discussed in **Section 3.13.11.1, Chattahoochee River Crossing**), there
26 are 113 other streams, open water bodies, and delineated wetlands in the Study Area including PS, IS, and EC.
27 Construction activities would potentially temporarily increase sedimentation in locations near these sites. In-water
28 construction activities, including the removal or installation of bridges and culverts, would have an impact on
29 waterways. To minimize sedimentation caused by construction activities, Georgia DOT would use cofferdams,
30 caissons, or temporary casings. Turbidity curtains would minimize impacts from construction activities in open
31 water with outlets to streams or rivers. To minimize impacts to waterways and their buffers established as ESAs
32 in the design phase, Georgia DOT would install orange barrier fences around ESAs within the ROW to prevent
33 accidental impacts. Potential mitigation measures could include the use of temporary down drains, over-side
34 drains, detention/retention structures, and surface, subsurface and cross drains, so that discharge would occur in
35 locations and in such a manner that surface and subsurface water quality would be unaffected. Additionally, no
36 construction activity or stockpiling would occur in wetland areas.

37 Georgia DOT would implement BMPs to minimize sedimentation resulting from erosion caused by land-side
38 construction activities adjacent to waters. BMPs include stabilizing dirt by applying mulch or erecting silt fences

1 or other barriers and implementing temporary drainage or catchment facilities (e.g., sediment basins, dams, or
2 slope drains). Georgia DOT would monitor the efficacy of BMPs employed as well as the turbidity of waterways
3 in accordance with Georgia DOT and GADNR requirements. Data would be collected to assess whether the
4 measures are effective and whether the Preferred Alternative is causing water quality degradation; and, if so,
5 modifications would be made to activities.

6 Georgia DOT would prepare a SPCC Plan that would detail spill control protocols in the event of accidental
7 releases of hazardous materials in or near waters during construction. Hazardous materials and waste collection
8 areas would be located away from streets, gutters, waterways, waters' buffers, and storm drains. These protocols
9 would require regular inspection of petroleum storage facilities to minimize contamination from leaks.

10 3.13.12 Ecosystems

11 3.13.12.1 Protected Species

12 One federally proposed species (tricolored bat) was found to occur within the Project Area and is anticipated to
13 have a biological determination of "may affect, not likely to adversely affect." During construction, the tricolored
14 bat may be affected by tree removal, culvert extensions or replacements, and bridge replacements; however,
15 effects to the tricolored bat will be determined at a later date. Georgia DOT is currently in consultation with
16 USFWS to determine avoidance, minimization, and mitigation measures to implement during construction.

17 Two state-protected aquatic species (Chattahoochee crayfish and bluestripe shiner) were found to occur within the
18 Project Area and are proposed to have a biological determination of "significant adverse effect." Georgia DOT
19 would implement the following measures during construction to ensure protection of these species:

- 20 • Restrict construction activity in the vicinity of streams in the Project Area that contain suitable habitat.
- 21 • Locate equipment staging/maintenance areas at least 200 feet from the banks of streams to minimize the
22 potential for wash water, petroleum products, or other contaminants from construction equipment entering
23 the streams.
- 24 • Locate disturbed soils, excavation spoil/overburden, and stockpiled materials at least 200 feet away from
25 stream banks to prevent rain runoff.
- 26 • Restrict the application of pesticides or herbicides within 200 feet of streams.
- 27 • Require immediate notification by Georgia DOT or their contractor(s) to the project engineer in the event
28 of an erosion or sediment control failure that results in the discharge of sediment into streams.
- 29 • Require Georgia DOT to keep a log detailing any sightings or incidents that could cause injury to these
30 protected species.

31 Five other state-protected species (bay star-vine, pink lady's slipper, sweet pinesap, Indian olive, and Georgia
32 aster), while found to occur within the Project Area, are proposed to have a biological determination of "no
33 significant adverse effect." Avoidance/minimization efforts involve using a sufficient construction envelope in
34 order to limit impacts in ESAs.

3.13.12.2 Migratory Birds

The Proposed Project would require the replacement or modification of several bridges and culvert structures, including some that are used by migratory birds. Seasonal work restrictions would be established near bridges and culverts to protect migratory birds (Environmental Commitments Table No. B-2). As described in SP107.23G for the Preferred Alternative (in **Appendix H-10, Ecological Assessment of Effects**), Georgia DOT would provide a schedule by January 1 for any proposed work on the underside of a bridge that is proposed to occur between April 1 and August 31. Georgia DOT would also coordinate with the APHIS Biologist at least 30 calendar days prior to the start of construction, demolition, or maintenance activities on the underside of any bridges. The construction of extensions and demolition or maintenance activities on any box culverts would take place outside of the breeding and nesting season of migratory birds (April 1 to August 31) (Environmental Commitments Table No. B-2).

3.13.12.3 Invasive Species

During construction, measures to prevent or minimize the spread of invasive species would include removal and disposal of vegetative parts in the soil that may reproduce by root raking, burning onsite any such parts and aboveground parts that bear fruit, controlling or eradicating infestations prior to construction, and cleaning vehicles and other equipment prior to leaving the infested site. The measures used will be those which are appropriate for the particular species and the specific site conditions, as described in Georgia Standard Specifications Section 201, Clearing and Grubbing of Right-of-Way.

3.13.13 Geology and Soils

The Preferred Alternative would require land clearing, grubbing, removal of topsoil, and other site preparation work. The proposed improvements are mostly within existing public ROW; therefore, there would be minimal impact beyond the existing ROW during construction. The debris resulting from clearing and stripping would be removed from the Project Area or stockpiled in staging areas (e.g., infield areas at major interchanges) for later use, as appropriate. An Erosion and Sediment Control Plan would set forth construction practices for the Preferred Alternative. Proper erosion control methods would be employed to minimize erosion and sedimentation. Erosion control devices would be installed before the onset of construction work that would cause erosion. Disturbed areas would be seeded or stabilized upon completion of construction.

3.14 Relationship Between Short-Term Uses and Long-Term Productivity

This section considers the relationship between the No-Build Alternative's and Preferred Alternative's potential short-term uses of the human and natural environment and the maintenance and enhancement of long-term productivity throughout the life of the Preferred Alternative. Temporary impacts on the environment typically result from construction impacts. Long-term productivity generally relates to the operations and maintenance of a project, including consistency of a project with local and regional transportation and economic, social, planning, and sustainability objectives. Long-term productivity differs from long-term impacts in that it considers the long-term environmental gains/benefits as a result of project direct and indirect impacts, which affect future generations.

1 **3.14.1 Short-Term Uses**

2 Construction of the Preferred Alternative would have greater temporary impacts on the environment than the
 3 No-Build Alternative. However, these short-term effects would, definitionally, be temporary, and any
 4 construction-related environmental impacts would be avoided, minimized, and mitigated wherever practicable
 5 **(Exhibit 3-74)**.

Exhibit 3-74: Comparison of Short-term Uses and Impacts of the No-Build Alternative and Preferred Alternative

Resource	No-Build Alternative Temporary Impacts	Preferred Alternative Temporary Impacts
Land Use	No short-term use or impact	Temporary easements required for construction and staging
Community Facilities, Neighborhoods, and Cities	No short-term use or impact	<ul style="list-style-type: none"> • Construction-related impacts from temporary road/trail closures, noise, air quality, and utility relocations • Construction-related impacts from increased levels of light, noise, dust, vibration, traffic, and minor utility service interruptions • Reduced access to transportation facilities, local services, community facilities, businesses, and trails during construction
Environmental Justice and Communities of Concern	No short-term use or impact	<ul style="list-style-type: none"> • Construction-related impacts from increased levels of light, noise, dust, vibration, traffic, and minor utility service interruptions • Reduced access to transportation facilities, local services, community facilities, businesses, and trails during construction
Economics	No short-term use or impact	No short-term use or impact
Transportation	No short-term use or impact	<ul style="list-style-type: none"> • Short-term lane closures • In areas where proposed ramps tie into or cross existing ramps, temporary closures might be needed to construct ties into the proposed ramps • Temporary increase in congestion and delay due to lane closures • Construction or modifications of bridges might require partial closure of existing bridges
Historic and Archaeological Resources	No short-term use or impact	Temporary visual and noise impacts related to construction activities
Visual Quality and Aesthetics	No short-term use or impact	Temporary visual impacts related to construction staging, lighting, and temporary structures
Hazardous Waste and Materials	No short-term use or impact	<ul style="list-style-type: none"> • Potential identification of hazardous waste and materials during excavation and removal of solid waste • Possible spills during removal of hazardous waste • Dust particle releases during excavation
Air Quality	No short-term use or impact	Temporary increase in pollutant emissions (i.e., fugitive dust) from construction activities

6

Exhibit 3-74: Comparison of Short-term Uses and Impacts of the No-Build Alternative and Preferred Alternative (continued)

Resource	No-Build Alternative Temporary Impacts	Preferred Alternative Temporary Impacts
Noise	No short-term use or impact	Noise impacts related to construction activities
Water	No short-term use or impact	Minimized disturbances to water quality, surface water and riverine systems, and wetlands
Ecosystems	No short-term use or impact	Special provisions are in place for the protection of streams to avoid any temporary impacts
Geology and Soils	No short-term use or impact	Minimized potential for soil erosion during construction

1 **3.14.2 Long-Term Productivity**

2 The No-Build Alternative would not address the traffic volumes, traffic congestion, delays, and lack of
 3 connections on the I-285 top end corridor resulting in worsening of traffic conditions for the traveling public and
 4 businesses. Therefore, it would not maintain or enhance long-term productivity. In contrast, the Preferred
 5 Alternative would:

- 6 • Provide reliable trip times for commuters.
- 7 • Improve regional accessibility and connectivity through congestion-priced ELs that integrate with the
 8 existing and planned greater Metro Atlanta EL network.

9 **3.14.3 Short-Term Uses Versus Long-Term Productivity**

10 While the No-Build Alternative would not have short-term uses or impacts, because no construction is involved,
 11 it would not maintain or enhance long-term productivity due to enduring congestion and poor travel-time
 12 reliability. Once constructed, the Preferred Alternative would be consistent with the goals for improved long-term
 13 productivity by improving travel-time reliability and accessibility to regional activity centers in the Project Area.
 14 Transportation improvements as a result of the Preferred Alternative are based on state and local comprehensive
 15 planning that considers the need for present and future traffic requirements within the context of present and
 16 future land use development. The Preferred Alternative would conform to the ARC and Georgia DOT guiding
 17 policies for new managed lanes, as documented in the 2007 GSTB lane management policies and 2007 ARC
 18 MLP, and carry out plans as documented in local and regional planning initiatives, including the 2010 MLSP,
 19 2015 TFA, 2015 MLIP, 2016 MMIP, ARC TIP (updated October 2023), and 2050 RTP. Therefore, local
 20 temporary impacts and use of resources to implement the Preferred Alternative, which would result in long-term
 21 benefits, are consistent with the maintenance and enhancement of long-term productivity for the local area,
 22 region, and state. The long-term benefits, such as improved travel-time reliability and improved efficiency and
 23 accessibility to regional activity centers, offered by the long-term productivity of the Preferred Alternative should
 24 offset any short-term inconvenience and effects on the human and natural environment.

25 **3.15 Irreversible and Irretrievable Commitment of Resources**

26 In accordance with NEPA and the CEQ Implementing Regulations for NEPA, this Draft EIS includes an analysis
 27 of any irreversible or irretrievable commitment of resources that would occur if the Preferred Alternative is

1 constructed. No irreversible or irretrievable commitment of resources would occur under the No-Build
2 Alternative.

3 An irreversible or irretrievable commitment of resources results from the use of a resource that cannot be replaced
4 or recovered and results in the permanent loss of the resource for any future or alternate use. Irreversible
5 commitments involve the use or destruction of a specific resource that cannot be replaced within a reasonable
6 timeframe. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be
7 restored because of the action. **Sections 3.1 through 3.14** describe the measures that would be implemented to
8 avoid, minimize, and mitigate adverse impacts to resources in the Project Area.

9 Construction of the Preferred Alternative would require the commitment of natural, human, monetary, and energy
10 resources. Generally, these resources would be committed irreversibly and irretrievably. Construction materials
11 such as concrete, steel, cement, and aggregate would be irretrievably expended during construction. Whereas
12 these materials would be largely irretrievable when used, these resources are not in short supply and many of the
13 unused materials could be recycled for other projects. Bare ground is prone to erosion and surface compaction by
14 rain; as a result, there would be potential for irretrievable loss of soil stability and increased soil compaction
15 between construction and revegetation, which can reduce air and water entry into the soil. Additionally, land
16 clearing, use of land for construction, and permanent filling of streams, open waters, and wetlands would also
17 result in irretrievable commitments that would occur after approval of the project. However, as stated in
18 **Section 3.10.3, Potential Avoidance, Minimization, and Mitigation Measures**, compensatory mitigation would
19 be required to offset the permanent, short-term, and temporary impacts to waters of the United States resulting
20 from the Preferred Alternative.

21 Energy consumption related to highway projects includes the energy required for both construction and vehicle
22 operation. Construction energy consumption involves the manufacture of new materials and equipment needed to
23 build or maintain the highway. Operational energy consumption includes the fuel used by vehicles traveling the
24 roadway, which is affected by vehicle types; roadway grades, surface condition, and other geometric
25 characteristics; vehicle speed; and congestion or idling; among other, lesser factors. The Preferred Alternative
26 would consume energy in the form of fossil fuels and electricity during construction, which would impact the
27 availability of this energy for other purposes. However, due to the newer pavement, uniform travel speed,
28 reduction in congestion, and anticipated decrease in accidents, once constructed, the Preferred Alternative would
29 require less energy in the form of fossil fuels compared to existing conditions and would offset some of the
30 energy expenditure during construction.

31 In addition to materials and energy, an investment of funds and human labor would be required to design and
32 construct the Preferred Alternative. The funds and human labor are irretrievable and would not be available for
33 other projects once final design and construction begin, but the benefits of improved capacity, connectivity, and
34 reliability in the corridor are anticipated to outweigh the commitment of monetary resources. Prior to final design
35 and construction, there are funds and human labor required for preliminary design associated with assessing
36 environmental impacts. These sorts of pre-approval commitments are not considered irreversible and irretrievable.

37 The No-Build Alternative would contribute to more congestion and an increase in fossil fuels due to idling of
38 vehicles. However, none of these resources have been committed as part of the Preferred Alternative.