



U.S. Department
of Transportation
**Federal Transit
Administration**

REGION IV
Alabama, Florida, Georgia,
Kentucky, Mississippi,
North Carolina, Puerto
Rico, South Carolina,
Tennessee, Virgin Islands

230 Peachtree St.,
N.W., Suite 1400
Atlanta, GA 30303
404-865-5600

January 27, 2017

Mr. Andre Bittas
City of Birmingham
710 North 20th Street, Room 220
Birmingham, Alabama 35203

RE: Categorical Exclusion – Birmingham Bus Rapid Transit Project – Jefferson County, Birmingham Alabama

Dear Mr. Bittas:

The Federal Transit Administration (FTA) has received and reviewed the Categorical Exclusion (CE) documentation submitted on December 30-31, 2016 and January 4, 2017, for the subject project ("Project"). Based on our review of the material submitted, the project qualifies as a CE pursuant to 23 CFR Section 771.118(d). This CE determination covers the Project described in the attached figure in Jefferson County, Birmingham Alabama.

Please be aware that if there are changes to the Project, you must notify FTA in writing. You are required to consult with FTA prior to requesting major approvals or grant awards for this Project to determine the validity of this CE. FTA will determine whether or not any additional environmental review will be required. FTA may require reevaluation of this CE for compliance with other statutes at its discretion.

Please attach this signed CE concurrence letter from FTA, the CE document, and supporting documentation to the TrAMS grant for the above referenced project. If we can be of further assistance, please contact Mr. Stan Mitchell or Ms. Carrie Walker of my staff at 404-865-5643/5645 or stanley.a.mitchell@dot.gov/julia.walker@dot.gov.

Sincerely,

Yvette G. Taylor, Ph.D.
Regional Administrator

Encl Project Vicinity Figure



ALABAMA HISTORICAL COMMISSION

468 South Perry Street
Montgomery, Alabama 36130-0900
334-242-3184 / Fax: 334-240-3477

Lisa D. Jones
Executive Director
State Historic Preservation Officer

December 13, 2016

Karla McPherson Calvert
Historic Preservation Manager
City of Birmingham
Department of Planning, Engineering, and Permits
710 North 20th Street / Room 500, City Hall
Birmingham, Alabama 35203

Re: AHC 2016-0822
Cultural Resources Assessment / Survey
Tiger 7 Birmingham Bus Rapid Transit (BRT) Project, Birmingham
Jefferson County

Dear Ms. Calvert:

Upon review of the above-referenced project forwarded by your office, we have determined that the proposed BRT Transit Station (Alternate 1 at 5612 1st Avenue South) and bus stops E-2, E-5, ITP-1, WV-1, and WV-4 will have no adverse effect on any cultural resources listed on or eligible for the National Register of Historic Places, provided that architectural elements (i.e. scale, rhythm, and style) from the surrounding built environment are incorporated into the design of the proposed transit station and bus stops. We look forward to continuing consultation on the future design of these facilities.

Should artifacts or archaeological features be encountered during project activities, work shall cease and our office shall be consulted immediately. Artifacts are objects made, used or modified by humans. They include but are not excluded to arrowheads, broken pieces of pottery or glass, stone implements, metal fasteners or tools, etc. Archaeological features are stains in the soil that indicate disturbance by human activity. Some examples are post holes, building foundations, trash pits and even human burials. **This stipulation shall be placed on the construction plans to insure contractors are aware of it.**

We appreciate your commitment to helping us preserve Alabama's historic archaeological and architectural resources. Should you have any questions, please contact Christopher Kinder at 334.230.2653 or Christopher.Kinder@ahc.alabama.gov. Have the AHC tracking number referenced above available and include it with any future correspondence.

Sincerely,

Lee Anne Wofford
Deputy State Historic Preservation Officer

LAW/WJL/CWK/law



OFFICE OF THE MAYOR
CITY OF BIRMINGHAM

WILLIAM A. BELL, SR.
MAYOR

December 29, 2016

Julia Carrie Walker, MHP
Environmental Protection Specialist
Federal Transit Administration (FTA) Region 4
230 Peachtree St. NW, Ste. 1400

Reference: Recommendation of Findings for the Proposed Tiger 7 Birmingham Bus Rapid Transit (BRT) Project located in Birmingham, Jefferson, Alabama as a Documented Categorical Exclusion (DCE)

Dear Ms. Walker:

Enclosed are the reference Categorical Exclusion and Documented Categorical Exclusion Worksheets with appendices of the environmental studies completed for the proposed project.

The City of Birmingham (COB) has gathered and organized the materials for the environmental analysis required under the National Environmental Policy Act (NEPA), particularly for projects that may qualify as a Categorical Exclusion (CE) or Documented Categorical Exclusion (DCE).

We recommend that the submission of the documentation meets the NEPA requirements for a DCE and therefore request that FTA concur/approve of the findings.

Please feel free to contact me or our consultant firm STRADA Professional Services, Ms. Alfredo Acoff at 205-307-6655.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kevin Owens", is written over a horizontal line.

Kevin Owens
Assistant to the Mayor
City of Birmingham

RT/AA/AA

c: Mayor William Bell, COB
Barbara Murdock, BJCTA
Andre' Bittas, COB
Scott Phillips, STRADA
Ronald Thompson, STRADA
Alfredo Acoff, STRADA

Enclosures

**FTA Region 4
CATEGORICAL EXCLUSION and
DOCUMENTED CATEGORICAL EXCLUSION WORKSHEET**

Note: The purpose of this worksheet is to assist sponsoring agencies (grantees) in gathering and organizing materials for environmental analysis required under the National Environmental Policy Act (NEPA), particularly for projects that may qualify as a Categorical Exclusion (CE) or Documented Categorical Exclusion (DCE). The use and submission of this particular worksheet is NOT required. The worksheet is provided merely as a helpful tool for assembling information needed by FTA to determine the likelihood and magnitude of potential project impacts. **NOTE: Fields are expandable, so feel free to use more than a line or two if needed.**

Submission of the worksheet does not satisfy NEPA requirements. FTA must concur in writing in the sponsoring agency's NEPA recommendation. Project activities may not begin until this process is complete. Contact the FTA Region 4 office at (404) 865-5600 if you have any questions or require assistance.

I. Project Description

Sponsoring Agency City of Birmingham, Alabama	Date Submitted 12/15/2016	FTA Grant Number(s) (if known) AL-03-0058-02 AL-95-X-007
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Project Title
Birmingham Bus Rapid Transit (BRT)

Project Description (brief, 1-2 sentences)

The City of Birmingham (COB), Alabama in cooperation with the Birmingham-Jefferson County Transit Authority (BJCTA), proposes to update its inner city public-transit system by developing a bus rapid transit that will connect 25 neighborhoods from Woodlawn on the east side to Five Points on the west side of Birmingham. BRT Implementation will require the construction of thirty-four (34) bus stops/stations along the BRT corridor and two (2) community transit centers, one at each end of the corridor. The corridor is approximately 10 miles in length. (See Figure 1)

Purpose and Need for Project (brief, 1-2 sentences, include as an attachment if adopted statement is lengthy)

The purpose and need for the Birmingham Bus Rapid Transit (BRT) is to connect communities to opportunities and enable Birmingham's residents, especially low-income citizens and public-transit dependent citizens, to reach employment, educational opportunities, healthcare, and community services. It will also allow visitors access to Birmingham's rich historic and cultural locations. The Birmingham BRT will improve access and mobility for residents and visitors by providing convenient, reliable, and safe public-transit options.

Project Location (include City and Street address)

The project corridor is located within Jefferson County, Alabama completely within the Birmingham city limits.

The BRT corridor consists of three major segments – the East BRT Corridor beginning at a new Woodlawn community transit station located at 5621 1st Avenue North, Birmingham, AL 35212. The BRT Corridor will continue through the In-Town Transit Partnership (ITP) route central to downtown and the new Intermodal Facility located at Morris Avenue between 17th and 19th street. The final leg of the BRT corridor is the West BRT Corridor ending at the new Five-Points West community transit station across from the Birmingham Crossplex facility along Avenue W at 2331 Bessemer Road, Birmingham, AL 35208 and adjacent to the Birmingham Police Department's West Precinct located at 2236 47th Street, Birmingham, AL 35208. (See Figure 1)

The East BRT Corridor from the future Woodlawn Transit Station will contain the following bus stops locations:

- E-1 1st Ave. North between 56th Street & 57th Street (Transit Center)
- E-2 1st Ave. North & 50th Street North
- E-3 1st Ave. North & 43rd Street North
- E-4 1st Ave. North & 41st Street North
- E-5 1st Ave. North & 34th Street

The ITP route navigating downtown Birmingham will contain the following stops locations:

- ITP-1 18th Street & Morris Ave. (Intermodal Center)
- ITP-2 18th Street & 2nd Ave. South
- ITP-3 18th Street & 5th Ave. South
- ITP-4 5th Ave. South & Children's Hospital
- ITP-5 5th Ave. South & 14th Street
- ITP-6 5th Ave. South & 10th Street South
-

The West BRT Corridor from future West Five Points/Crossplex will contain the following stops locations:

- W-1 6th Ave. South & 6th Street South
- W-2 6th Ave. South & 1st Street South
- W-3 6th Ave. South & Gold wire Street
- W-4 Martin Luther King Jr. Drive & Loveman Village
- W-5 Lomb Avenue & Tuscaloosa Ave.
- W-6 Lomb Avenue & Princeton Pkwy. West
- W-7 Lomb Avenue & 13th Street
- W-8 47th Street Ensley (Five Points West Community transit center & Avenue W)

Project Contact (include phone number, mailing address and email address)

Alfedo Acoff, NEPA Project Manager
STRADA Professional Services, LLC
Direct phone: 205-307-6655 Cell phone: 205-417-1126
Post Office Box 55375
Birmingham, AL 35255
aacoff@stradaps.com

If your project involves construction, include the following:

- Project vicinity map
- Project site plan showing access points and project boundaries
- Other useful maps as appropriate (topo, for instance, depending on circumstances, and/or Google Earth aerial, NEPA Assist, etc.)
- A few photographs of the site if useful to illustrate important features
- Details pertaining to the depth of soil excavation
- Note if the soil has been previously disturbed by prior construction or other activity
- List parks or recreation areas within the project vicinity
- Any previous consultations that might be relevant? (HUD, SHPO, or DOTs)

Attachment 1 includes a vicinity map, Figures 1-4. Figure 1 shows the corridor alignment with the station/stop location. Figure 2 shows the existing land uses and Figure 3 shows the zoning designations that surround the BRT. Figure 4 identifies sensitive noise and vibration receptors, including parks, churches, hospitals, etc., throughout the corridor.

Prior ground disturbance has occurred within the area due to other construction of projects surrounding the project corridor by the COB. These project are mostly urban renewal such as adding condominiums, grocery stores, street improvements such as resurfacing, etc.

For the Section 106 consultation ground disturbance depth range from 30 to 50 centimeters which is approximately 12 inches to 51 inches for the archaeological shovel test which was done as part of the field investigations conducted by the University of Alabama, Office of Archaeological Research (OAR). The complete consultation with Alabama Historic Commission, State Preservation Officer is addressed in Part III, Section M of this worksheet and the complete studies are in Appendix I.

II. NEPA Class of Action

Answer the following questions to determine the project's potential class of action. If the answer to any of the questions in Section A is "YES", contact the FTA Region 4 office to determine whether the project requires preparation of a NEPA environmental assessment (EA) or environmental impact statement (EIS).

A. Will the project significantly impact the natural, social and/or economic environment?

- ☐ YES (contact FTA Regional office)
- ☒ NO (continue)

A.1 Is the significance of the project's social, economic or environmental impacts unknown?

- ☐ YES (contact FTA Regional office)
- ☒ NO (continue)

A.2 Is the project likely to require detailed evaluation of more than a few potential impacts?

- ☐ YES (contact FTA Regional office)
- ☒ NO (continue)

A.3 Is the project likely to generate intense public discussion, concern or

controversy, even though it may be limited to a relatively small subset of the community?

☐ YES (contact FTA Regional office)

☒ NO (continue)

B. Does the project appear on the following list of Categorical Exclusions (CEs)?

The types of activities listed below describe actions which, when the corresponding conditions are met, are under usual circumstances categorically excluded from further NEPA analysis under [23 CFR 771.118\(c\)](#). Unusual circumstances may include, but are not limited to, the presence of wetlands, historic buildings and structures, parklands, or floodplains in the project area, or the potential for the project to impact other resources. (Descriptions of each type of activity, and corresponding conditions, are available [here](#); this worksheet simply lists the name of each exclusion.)

☐ YES (If checked AND there are no special circumstances, check the applicable box and briefly describe the activity in Section III. A; then proceed to the signature block on the back page.)

☒ NO (continue to Section II. C)

[23 CFR 771.118\(c\)\(1-16\)](#)

- ☐ (1) Utility and Similar Appurtenance Action
- ☐ (2) Pedestrian or Bicycle Action
- ☐ (3) Environmental Mitigation or Stewardship Activity
- ☐ (4) Planning and Administrative Activity
- ☐ (5) Activities Promoting Transportation Safety, Security, Accessibility and Communication
- ☐ (6) Acquisition, Transfer of Real Property Interest
- ☐ (7) Acquisition, Rehab, Maintenance of Vehicles or Equipment
- ☐ (8) Maintenance, Rehab, Reconstruction of Facilities
- ☐ (9) Assembly or Construction of Facilities
- ☐ (10) Joint Development of Facilities
- ☐ (11) Emergency Recovery Actions
(Several conditions attach to this type of CE. We recommend you consult with FTA if you think this CE may apply to your action.)
- ☐ (12) Projects Entirely within the Existing Operational Right-of-Way.
- ☐ (13) Federally Funded Projects
(Must be less than \$5 million in federal funding, or having a total estimated cost of not more than \$30,000,000 and Federal funds comprising less than 15 percent of the total estimated project cost.
- ☐ (14) Bridge Removal and Related Activities.
- ☐ (15) Preventative Maintenance to Certain Culverts and Channels
- ☐ (16) Geotechnical and Similar Investigations

C. Does the project appear on the following list of potential documented Categorical Exclusions?

Projects that are categorical exclusions under [23 CFR 771.118\(d\)](#) require additional documentation demonstrating that the specific conditions or criteria for the CEs are satisfied and that significant effects will not result.

☒ YES (Check correct box below and continue to Part III)

☐ NO (Contact FTA Regional Office)

[23 CFR 771.118\(d\)\(1-8\)](#)

- ☐ (1) Modernization of a highway by resurfacing, restoring, rehabilitating, or reconstructing shoulders or auxiliary lanes.
- ☐ (2) Modernization of a highway by resurfacing, restoring, rehabilitating, or reconstructing shoulders or auxiliary lanes.
- ☐ (3) Acquisition of land for hardship or protective purposes. (NOTE: Hardship and protective buying will be permitted only for one or a limited number of parcels, and only where it will not limit the evaluation of alternatives (including alignments) for planned construction projects.
- ☒ (4) Acquisition of right-of-way. (NOTE: No project development on the acquired right-of-way may proceed until the NEPA process for such project development, including the consideration of alternatives, where appropriate, has been completed.)
- ☐ (5) Construction of bicycle facilities within existing transportation right-of-way.
- ☐ (6) Facility modernization through construction or replacement of existing components.
- ☐ (7) Minor realignment for rail safety purposes
- ☐ (8) Facility modernization/expansion outside existing ROW
- ☒ "Other" actions which meet the criteria for a CE in the CEQ regulations (40 CFR 1508.4) and will not result in significant environmental effects. Actions must not: induce significant impacts to planned growth or land use; require the relocation of significant numbers of people; have a significant impact on any natural, cultural, recreational, historic or other resource; cause significant air, noise, or water quality impacts; have significant impacts on travel patterns; or otherwise have significant environmental impacts (either individually or cumulatively).

III. Information Required for Documented Categorical Exclusions

If you checked "Yes" to any of the options in [Part II. C](#), complete each relevant subject area for [Part III. Sections B-AA](#) and submit to FTA. Depending on the project, some of the subject areas may not be applicable. In such cases, no discussion is needed.

The list below is not all-inclusive. If your proposed project has the potential to cause impacts to resources which are not listed below, please provide supplemental information about those potential impacts.

A. Detailed Project Description

Describe the project and explain how it satisfies the purpose and need identified in Part I.

The proposed BRT corridor is divided into three sections/segments: Featuring stations E-1 through E-5, the eastern section begins at the proposed Woodlawn community transit center in the historic community of Woodlawn and extends southwestward to 18th Street North in downtown Birmingham via 1st Avenue North; featuring stations ITP-1 through ITP-6, an intermediary section begins at the intersection of 18th Street and 1st Avenue North, heads south on 18th Street North then southwest on 5th Avenue South to the intersection of 8th Street South where the transit line turns and continues one block south and then trends southwest along 6th Avenue South to its terminus at the Amtrak and CSX railroad corridor; featuring stations W-1 through W-8, the western section begins at the Amtrak and CSX railroad corridor, continues southward to the intersection of Martin Luther King Jr. Drive along the eastern boundary of Elmwood Cemetery where the route turns north to a “Y”-intersection with Lomb Avenue, then turns due west to the end of the line across from the Birmingham CrossPlex in Five Points (see Figure 1).

The BRT project will be the first bus rapid transit project in the state of Alabama. The Project will be designed to operate with a headway of 10-15 minutes in the peak travel periods, and 20-30 minutes in off-peak travel periods. It will have a service span of nineteen (19) hours, with service beginning at 5:00 a.m. and ending at 12:00 a.m. Monday through Sunday. The proposed project will improve the frequency of transit services both in the BRT corridor and on adjacent parallel corridors. The project will be operated in both dedicated lanes and mixed-traffic throughout the corridor.

The associated improvements to the local bus system will provide greater flexibility for the community residing and/or working within the City by affording them the ability to better plan trips and determine when they will travel. Existing bus services operate on frequencies that range from 30 minutes to 60 during peak travel times, and 60 minutes to 120 minutes during off-peak.

The BRT corridor facilities will include the following features:

- Exclusive guideway at the Birmingham CrossPlex
- Dedicated bus lanes
- Transit signal priority treatments and signal coordination throughout the BRT corridor
- Low-floor, multi-door, low-emission 40-foot BRT vehicles
- Branding of the service to create a unique identity and image

The BRT stops will include:

- Shelter canopies, passenger furnishings, wayfinding, security enhancements, and lighting
- Electronic ticketing and/or pre-paid ticketing and proof-of-payment fare verification
- Raised station platforms to provide level boarding that facilitates boarding and alighting; persons in wheelchairs and other with physical mobility issues can access the bus via an extended ramp
- Real-time passenger information (information display signage)

The project will construct two (2) community-based transit centers, one in the Woodlawn Community at the project's eastern terminus and the other in the Five-Points West Community at the project's western terminus. In addition to the BRT, both facilities will host local bus services. Both the transit center at Woodlawn and Five Points West will include:

- Four (4) bus bays
- One (1) or Two (2) layover bays
- Driver convenience facilities, and
- Employee and service vehicle parking.

In addition, the Five-Points West community transit center will include a vehicle refueling station in order that BRT vehicles and local transit buses can refuel without having to leave their service corridors.

B. Location and Zoning

Attach a map identifying the project's location and surrounding land uses. Note any critical resource areas (historic, cultural or environmental) or sensitive noise or vibration receptors (schools, hospitals, churches, residences, etc.). Briefly describe the project area's zoning and indicate whether the proposed project is consistent with it. Briefly describe the community (geographic, demographic, economic and population characteristics) in the project vicinity.

Land Use and Zoning. Figure 2 and 3 presents the City of Birmingham's existing land uses and zoning designations that surround the BRT corridor. Figure 4 identifies sensitive noise or vibration receptors throughout the corridor.

The project corridor features a range of land uses and development densities, including residential, commercial, office, industrial, institutional, recreational, and governmental. The BRT corridor uses existing City of Birmingham streets following the corridor of existing bus public-transit services.

The eastern section of the project corridor along 1st Avenue North, between 56th & 57th Street in Woodlawn and 18th Street in downtown Birmingham, the land uses are primarily characterized by a mix of commercial, residential, institutional, and industrial land development. In the vicinity of the proposed Woodlawn Community transit center, located in the Woodlawn neighborhood's traditional center, a mix of commercial, residential, and institutional uses characterize the area. Continuing along the project's 1st Avenue North corridor, just west of the Woodlawn neighborhood's traditional center, the predominant land uses include both light and medium industrial development, as well as low-to-medium density residential use. The residential development includes both single-family and multi-family units.

The project's corridor along 1st Avenue North between 41st Street and the U.S. 31/U.S. 280 (Red Mountain Expressway) underpass, is primarily characterized by industrial development. The Sloss Furnace historic site and the Jimmy Hale Mission homeless shelter is also located in the vicinity of this section of the project corridor.

The Birmingham City Center is the Birmingham region's primary employment center. The project's corridor along 1st Avenue North between U.S. 31/U.S. 280 (Red Mountain Expressway) underpass and 18th Street, as it enters downtown Birmingham, has a predominant land use of mixed residential and commercial. The residential uses are higher-density units, and tend to be located above ground-floor retail and offices. Office towers, converted warehouses, and one high rise hotel are also located in this section of the corridor.

Along the 18th Street segment, between 1st Avenue North and 5th Avenue South, the BRT corridor is comprised of institutional, residential, retail, and office uses. Along the 5th Avenue South segment between 18th Street and 8th Street South, land uses are predominantly institutional as this corridor services the major hospitals, UAB's Bartow Arena, UAB Facilities Planning offices, and remote parking lots.

Along 6th Avenue South, between the I-65 underpass and Martin Luther King Jr. Boulevard, the existing land use development pattern is predominantly industrial and residential in nature. It should be noted that much of the neighborhood that surrounds the project corridor is largely vacant and/or abandoned, although the structures are still standing.

The land uses located immediately adjacent to the 6th Avenue South corridor, between I-65 and 6th Street South, include: The City of Birmingham's fleet maintenance facility and sign shop, the Birmingham City Jail, and Memorial Park. Between 6th Street South and Goldwire Street, land uses include a mix of single-family residential and neighborhood-oriented highway commercial. Between Goldwire and Martin Luther King Jr. Boulevard, land uses include both commercial and light industrial development.

Between 6th Avenue South and Lomb Avenue (the railroad underpass), immediately adjacent to the project's corridor along Martin Luther King Jr. Boulevard, the predominant land uses include park/open

space and residential. Specific uses include Elmwood Cemetery and Mausoleum, and the Loveman Village public housing development.

The project's corridor along Lomb Avenue, between Martin Luther King Jr. Boulevard (railroad underpass) and Fairgrounds Drive, the predominant land use is residential. However, between Cotton Avenue and Fulton Avenue, the predominant use on the lands immediately adjacent to the corridor are commercial and institutional; Brookwood Princeton Medical Center and a number of affiliated commercial uses are located here. Brookwood Princeton Medical Center is the largest employer in the project corridor outside of the Birmingham City Center. Residential uses include a mix of low-density, single-family units, as well as high-density residential and group quarters facilities.

Land uses around the project termini in the Five Points West Community transit center is predominantly comprised of institutional and commercial development.

C. **Traffic**

Describe potential traffic and parking impacts, including whether the existing roadways have adequate capacity to handle increased bus or other vehicular traffic. Include a map or diagram if the project will modify existing roadway configurations. Describe connectivity to other transportation facilities and modes, and coordination with relevant agencies.

The **Birmingham Bus Rapid Transit (BRT): Traffic Impact Assessment (TIA)** (See Appendix A) was conducted in two steps. The first step of the analysis focused collecting traffic data for existing and future conditions. These data, to include the data collection methodology, were summarized in the TIA, and is presented as **Part 1. Traffic Data Report**. In addition to collecting information about existing traffic conditions, estimates of future traffic volumes were developed using forecasts derived from the Regional Planning Commission of Greater Birmingham's (RPCGB) regional travel demand model for 2040. The RPCGB is the metropolitan planning organization for the Birmingham metropolitan area. An abridged explanation of the modeling methodology is provided in the Analysis Approach section. A detailed description is included in the **Part 1** Traffic Data Report.

Part 2. Capacity Analysis Report performed volume examination at critical intersections to assess the impact of bus rapid transit on intersection/roadway capacity and travel times for both existing and anticipated future traffic conditions. **Part 2** analyzed the following five scenarios:

1. **Existing Conditions** – Existing traffic volumes with existing traffic operations
2. **Future No-Build** – Future traffic volumes with existing traffic operations
3. **Future + BRT-Only Lanes** – Future traffic volumes with BRT-only lanes on all segments
4. **Future + Project + Mitigations** – Future traffic volumes with BRT-only and mixed-use lanes plus additional mitigations
5. **Approved TIGER Alternative** – Alternative presented to the Federal Transit Administration (FTA) in the TIGER project's Scope, Schedule, and Budget (SS&B) template. The TIGER project limited BRT-only lanes to 18th Street South and 5th Avenue South.

Finally, **Part 2. Capacity Analysis Report** includes recommendations on the feasibility of implementing dedicated BRT lanes throughout the corridor, as well as potential mitigation measures.

Modeling Methodology. The imminent construction project on I-59/20 in downtown Birmingham will change interstate access points, and alter traffic flows in the area. Because of this, it was necessary to establish base traffic volume conditions. These base volumes were used for all subsequent traffic evaluations. Additionally, the impending I-59/20 construction project necessitated that future traffic volume be forecast to evaluate the impact of the I-59/20 modifications on travel patterns and the underlying transportation system. As such, intersection volume forecasts were developed for the previously listed study intersections to year 2040.

Intersection forecast volumes were derived from the RPCGB 's regional travel demand model. RPCGB uses the CUBE modeling platform, and the existing model has forecast to year 2040. The RPCGB model

is a traditional 4-step travel demand model with Trip Generation, Trip Distribution, Mode Choice, and Assignment steps. The RPCGB model is validated at the screenline level for the base year 2010.

Prior to developing intersection forecasts, the proposed BRT alignment was coded into the RPCGB travel demand model. This included transit access links. Additionally, new highway links were coded into the model with restrictions for BRT-only access. Coding the network in this way is intended to reflect the exclusive nature of bus-only/BRT guideway segments within existing rights-of-way. It was assumed that BRT-only lanes would be implemented by re-striping and/or making minor improvements to the existing roadways. This included assessing the practicality of these facilities on 6th Avenue South, 5th Avenue South, 18th Street North/South and 1st Avenue North. Further, on-site reviews and examination of aerial imagery revealed that parking lanes and/or continuous left turn lanes exist on many of the alignment segments. This roadway configuration could allow for both BRT and through travel lanes in the future. Consequently, the forecasting process assumed that the through travel lanes would be maintained in the future year 2040. This assumption yielded the most conservative forecasts (worst case scenario) for traffic and air quality analysis purposes.

Prior to post processing the regional travel model results, a review of the BRT ridership was conducted to assure a reasonable transit ridership was obtained. It is important to note that the purpose of this forecasting effort was to obtain a reasonable ridership and associated modal split for the study corridor. A separate, more detailed transit forecasting effort will need to be undertaken to meet the Federal Transit Administration's (FTA) criteria for transit ridership forecasting, specifically for New Starts.

Additional network assumptions included interchange modifications on I-65 and I-20/I-59 that will be constructed by the Alabama Department of Transportation. Other network assumptions include consideration of the 18th Street one-way to two-way conversion between 1st Avenue North and 6th Avenue North.

Capacity Analysis. Traffic conditions within the study area for the four-analysis scenarios were conducted using the methods described in the Highway Capacity Manual (HCM2010), published by the Transportation Research Board. HCM2010 expresses traffic capacities as levels of service (LOS) ranging from "A" to "F". A detailed description of each level of service designation is included in the full TIA report. Generally, LOS "C" is considered desirable, while LOS "D" is considered acceptable during peak hours of traffic flow. Complete printouts of the capacity analysis are provided in the full TIA report. The results are summarized in Table 2.

A traffic simulation model was created using Synchro to determine the appropriate locations for BRT-only lanes by first modeling the existing roadway network with existing volumes (Scenario 1). Then future volumes were added to the existing network (Scenario 2). Next, BRT-only lanes were added to each segment of the corridor (Scenario 3). From that model, critical intersections with unacceptable LOS were identified. If mitigations could be performed to bring the critical intersections to an appropriate LOS, then they were applied to the model. If mitigations could not improve the unacceptable LOS or were not feasible within the constraints of this project, then the BRT-only lane was removed from that intersection and/or segment and the BRT was modeled with a mixed-use traffic lane (Scenario 4). Improvements that were not within the existing right-of-way were considered infeasible for this project.

Findings.

Capacity Impacts. Following are the findings of the Capacity Analysis. A detailed description of these findings are included in the full TIA report.

1. Study intersections operate at acceptable levels of service under existing conditions (Scenario 1), during peak hours of traffic flow.
2. Most study intersections operate at acceptable levels of service under future conditions (Scenario 2), during peak hours of traffic flow. Exceptions to this include intersections at:
 - 1st Avenue North and 24th Street North (PM peak hour LOS E), and
 - 6th Avenue Southwest and Martin Luther King Jr. Drive (PM peak hour LOS F).

3. Scenario 3, which included the addition of BRT-only lanes on every segment with signal timing changes but no physical mitigations, resulted in unacceptable levels of service during peak hours of traffic flow at 16 of the study intersections. In a few instances, the LOS improved from Scenario 2 to Scenario 3 due to signal retiming.
4. Scenario 4, which included the addition of BRT-only lanes and mixed-use lanes plus mitigations, resulted in acceptable levels of service during peak hours of traffic flow at all study intersections. The mitigations are identified in Table 2 of Part 2. Capacity Analysis Report for each intersection.

Parking Impacts. Construction of dedicated BRT lanes in the 18th Street alignment segment between 1st Avenue North and 5th Avenue South will eliminate approximately 59 parallel parking spaces.

Construction of dedicated BRT lanes in the 5th Avenue South alignment segment between 11th Street South and 18th Street South will eliminate approximately 115 parallel parking spaces.

To offset this loss of parking spaces, the City of Birmingham will revisit the recommendations of a 2008 plan developed specifically to address parking within the Birmingham City Center. The Transit District Parking Plan, completed by the RPCGB, identified that there was already an extensive inventory of parking facilities encompassing a range of parking types to include on-street parallel spaces, surface lots, and parking structures. Recommendations from this plan are still relevant, and the parking losses that will be experienced as part of the BRT project can be offset through better utilization of structured parking facilities located along the project alignment segments, and coordinated/improved curb-side management for intersecting and parallel roadways.

The University of Alabama is currently constructing a 1,100 space surface parking lot to serve as remote parking for employees. This lot is located directly adjacent to the project alignment segment along 5th Avenue South between 8th Street South and 10th Street South. There is a planned BRT stop at this lot location. It is identified as ITP-6.

Two (2) structured parking facilities are located along 18th Street between 1st Avenue North and 5th Avenue South, of which one is a privately-accessed facility, and one is a public facility. Based on previously collected data, the private facility contains between 200 and 400 spaces, and has an occupancy between 50% and 75%. The public facility, operated by the University of Alabama at Birmingham, has between 400 and 1,600 spaces. No information was available about the occupancy of this facility, although it is estimated that utilization is between 50% and 75%.

D. Aesthetics

Will the project have an adverse effect on a scenic vista?

☒ No

☐ Yes, describe

The transit stations structures and bus stops shelters will be design to blend with the architectural settings along the BRT alignment. The Woodlawn community transit is located with the Woodlawn Historic District (WHD) and renderings have been included in **Appendix B** with a proposed conceptual design to fit within the historic district.

Will the project substantially degrade the existing visual character or quality of the site and its surroundings?

☒ No

☐ Yes, describe

The design of the transit stations and bus stop will enhance the areas by adding architectural features with open-air design along the route.

Will the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

☒ No

☐ Yes, describe

Lighting will be provided at the transit stations and the bus stops along the BRT alignment. This lighting will be at the stations and bus stops height and will be directed downward to adequately light the BRT station areas. The lighting will improve the safety and security for the public riding the transit system.

E.

Air Quality

Does the project have the potential to impact air quality?

- ☒ No
☐ Yes, describe

Is the project located in an EPA-designated non-attainment or maintenance area?

- ☐ No
☒ Yes, indicate the criteria pollutant and contact FTA to determine if a hot spot analysis is necessary.
- ☐ Carbon Monoxide (CO)
 - ☐ Ozone (O₃)
 - ☒ Particulate Matter (PM₁₀ or PM_{2.5})

The project is located within Jefferson County, which is currently in attainment for CO, ozone, and nitrogen dioxide. Jefferson County is currently designated as being in maintenance for PM 2.5. The Interagency Consultation on Alabama Transportation Conformity (IAC) was consulted on whether the project was a project of air quality concern. The IAC voted on November 21, 2016 that the project is not a project of air quality concern. The PM 2.5 hot-spot analysis forms are included in **Appendix C**. Since the project was found to not be a project of air quality concern under 40 CFR 93.123(b)(1), a quantitative PM 2.5 analysis is not required.

If the non-attainment area is also in a metropolitan area, was the project included in the MPO's Transportation Improvement Program (TIP) air quality conformity analysis?

- ☐ No
☒ Yes, Date of USDOT conformity finding:

The project is included in the 2016 State Transportation Improvement Program (STIP) and is listed in the Five Year Transportation Plan from 2014 to 2019. The proposed Birmingham Bus Rapid Transit Project (BRT) is included in the current conforming Birmingham Metropolitan Planning Area 2040 Long Range Transportation Plan (LRTP), as amended in April 13, 2016. According to the LRTP, the BRT is not a project of air quality concern. The BRT is included in the LRTP, which has shown to conform and is in compliance with the National Ambient Air Quality Standards (NAAQS).

This project was evaluated for its consistency with state and federal air quality goals, including CO, Ozone, PM 2.5, and MSATs as part of this assessment. Results indicated that the project is consistent with the STIP for the attainment of clean air quality in Alabama and is in compliance with both state and federal air quality standards.

F. Coastal Zone

Is the proposed project located in a designated coastal zone management area?

☒ No

☐ Yes, describe coordination with the State regarding consistency with the coastal zone management plan and attach the State finding, if available.

G. Environmental Justice

Determine the presence of minority and low-income populations (business owners, land owners, and residents) within about a quarter-mile of the project area. Indicate whether the project will have disproportionately high and adverse impacts on minority or low-income populations. Describe any potential adverse effects. Describe outreach efforts targeted specifically at minority or low-income populations. Guidance is [here](#).

The Birmingham BRT Environmental Justice (EJ) Analysis complies with FTA's Environmental Justice Guidance (FTA Circular C 4703.1) that was finalized in August 2012 (**See Appendix D**).

The study area of potential impact (API) i.e. study area for the proposed project is set at one half (½) mile on either side of the Project's ten (10)-mile long alignment. Because the Project includes two (2) community-based multimodal transfer centers as termini on either end of the alignment, the API also incorporates the neighborhood boundaries at these locations. These boundaries are also used to assess the potential effect of both direct and indirect adverse impacts. In total, the Project's API touches twenty-five (25) of Birmingham's ninety-nine (99) neighborhoods, of which twenty-four (24) have some population residing within the API. The EJ study area limits and the locations of communities are illustrated on Figure 2 of Appendix D.

The EJ population is present within the API, information about race and ethnicity was compiled using the 2010 Decennial Census dataset. Likewise, data about household income were also compiled from the 2010-2014 American Community Survey and supplemental data sources, as well as from supplemental data sources. The data were assembled and mapped to the block groups intersecting or contained wholly within the API. This information was compared to data about minority and low-income population at the metropolitan planning area geography for Jefferson County and the existing BJCTA transit service area. Figure 2 of Appendix D illustrates the API relative to these geographies. Analysis of the U.S. Bureau of the Census's demographic data shows that approximately 23,700 individuals out of a total population of 29,267 (82.2%) are classified as a U.S. Census defined minority. This is more than two times that of the metropolitan planning area, 34.4% greater than Jefferson County, and 17.9% higher than the BJCTA service area.

A comparison of the Project API's median household incomes with the geographies of the metropolitan planning area, Jefferson County, and the BJCTA service area shows that the number of households living below poverty is greater than each of the comparison geographies. The Project API households living below poverty is twice that of the metropolitan planning area, nearly twice that of Jefferson County, and approximately 12% greater than that of the BJCTA service area. 35.5% of the total households located within the Project API have incomes below the federal poverty level.

The proposed project will improve public-transit service such as improved transit reliability, decreased transit travel times, and station area safety improvements, are expected to have an overall benefit to the EJ populations in the Project API. In addition, the project should help attract new businesses to the corridor that could serve EJ populations. There would be no disproportionately high and adverse human health or environmental effects on minority and low-income populations.

Public engagement activities were conducted for the EJ populations throughout the course of this proposed project. Meetings were conducted in the EJ communities and the time for the meetings were scheduled in the morning and early evening to provide community accessibility and obtain full participation from the communities. The open house meetings were held in different locations, and different times of day to provide greater opportunity for attendance. Community leaders, Neighborhood presidents, schools, local churches, etc., were notified of the meetings well in advanced with letters, flyers and publication in the largest circulation newspaper in the area (Birmingham News) and local minority newspaper (the Birmingham Times). Also, a website was established and will continue to be operational for the EJ community to have continued input/concerns pertaining to the Birmingham BRT. The public engagement activities to date have been comprehensive and have provided numerous and diverse opportunities for the EJ populations to learn about and provide input into the Birmingham BRT project.

H. Floodplains

Is the proposed project located within the Federal Emergency Management Agency (FEMA) 100-year floodplain?

☐ No

☒ Yes, describe potential impacts, indicate if the project will impact the base flood elevation, and include or link to the FEMA Flood Insurance Rate Map (FIRM) with the project location identified.

The Crossplex guideway, located across from the community transit center, crosses the FEMA 100-year floodplain. The project will not affect or change the base flood elevation of the floodplain. See Appendix E which shows the location of the guideway within the floodplain.

I. Hazardous Materials

Is there any known or potential contamination at the project site? This may include, but is not limited to, lead/asbestos in existing facilities or building materials; above or below ground storage tanks; or a history of industrial uses of the site.

- ☐ No, describe steps taken to determine whether hazardous materials are present on the site.
- ☒ Yes, note mitigation and clean-up measures that will be taken to remove hazardous materials from the project site. If the project includes property acquisition, identify if a Phase I Environmental Site Assessment for the land to be acquired has been completed and the results.

Appendix F presents the Hazardous Material Technical Memorandums and the Phase I Environmental Assessment for the Crossplex prepared early for the COB and the Limited Phase I Environmental Site Assessment report prepared for the BRT project for the E-1 site.

The presence of hazardous materials was evaluated within the proposed project area, by a search of local, state, and federal regulatory databases was performed by Environmental Data Resources (EDR). The result of this database search indicated that community transit station E-1 and bus stop E-4 may have some concerns. Because of the concerns near the E-4 bus-stop site location was moved away from the potential area of impact.

The anticipated level of construction requiring structure foundations at the E-1 site are reason for preliminary concern, though they do not necessarily preclude COB and BJCTA from taking ownership of the site. For Site E-1 a Limited Phase I Environmental Site Assessment was conducted and it is recommended that these next steps be taken:

- Perform a limited site investigation (LSI, or limited Phase II) to assess potential impact of recognized environmental conditions (RECs) to the site's soil and/or groundwater. This would involve the collection and analysis of soil and groundwater samples during construction activities.
- Review the prospective construction details at the site (depth of excavation, new building location, etc.) to assist in determining if samples are required and best sampling locations.
- Perform a ground penetrating radar (GPR) survey of the site to identify the possible presence of onsite USTs.

No RECs were identified that resulted from onsite activities.

J. Navigable Waterways

Does the proposed project cross or have the potential to impact a navigable waterway?

- ☒ No
- ☐ Yes, describe potential impacts and any coordination with the US Coast Guard.

K. Noise and vibration

Does the project have the potential to increase noise or vibration?

☐ NO

☒ YES, describe impact and provide map identifying sensitive receptors such as schools, hospitals, parks and residences. If the project will result in a change in noise and vibration sources, you must use FTA's "Transit Noise and Vibration Impact Assessment"

The noise and vibration impacts for the No-Build Alternative and one (1) proposed Build Alternative were analyzed for the Birmingham Bus Rapid Transit (BRT) East/West Corridor.

Appendix G contains the Noise and Vibration Technical Report that provides an analysis of the potential for noise and vibration impacts due to construction and operation of the project. This report has been prepared in accordance with guidance from the Federal Transit Administration (FTA) and methodologies described in the Transit Noise and Vibration Impact Assessment (Federal Transit Administration 2006).

Operational noise from increased BRT service would result in a project-related increase of one decibel or less at sensitive noise receptor locations. For the 2036 Build Condition, there are 276 Category 2 receptors (85 residences and 191 commercial structures) experiencing a "moderate impact." No Category 3 receptors are impacted. No receptors experience a "severe impact."

Construction of the proposed project would temporarily result in increased noise levels at adjacent sensitive land uses on an intermittent basis. Construction at a given location would be short term. Construction would occur primarily during daytime hours, and any evening and nighttime work would only occur on an occasional basis. Construction may also result in groundborne vibration levels that would be perceptible to receptors located directly adjacent to the project corridor and in close proximity to construction sites. Any potential impact due to vibration would be intermittent and short term.

The BRT fleet would consist of rubber-tired vehicles. There are no project features or highly-sensitive uses along the corridor that suggest that BRT service would be a significant source of groundborne vibration. Therefore, operation of the project would not result in vibration impacts.

Operational noise from increased BRT service would result in a project-related increase of one decibel or less at sensitive noise receptor locations. No impacts are projected to result from project-related noise relative to the FTA noise impact criteria.

L. Prime and Unique Farmlands

Does the proposal involve the use of any prime or unique farmlands?

☒ No

☐ Yes, describe potential impacts and any coordination with the Soil Conservation Service of the U.S. Department of Agriculture.

See Appendix H

M. Historic & Cultural Resources

Impacts to cultural, historic, or recreational properties may trigger Section 106 or tribal consultations or a Section 4(f) evaluation, requiring consideration of avoidance alternatives. Does the project involve any ground disturbing activities?

☐ No

☒ Yes, provide the approximate maximum ground disturbance depth. Also provide information on previous disturbances or where ground disturbance will occur.

Ground disturbance depth approximately maximum depth was 19 inches (50 centimeters) as part of the field investigations conducted by the University of Alabama, Office of Archaeological Research (OAR). No cultural materials were recovered and no archaeological sites were recorded. The majority of the terrain within the Area of Potential Effect (APE) is comprised of asphalt paved streets and concrete sidewalks, surrounded by commercial, industrial, and/or residential development. This environment offered limited opportunities for subsurface testing. In those areas, where subsurface testing was possible, shovel tests revealed a high degree of existing ground disturbance resulting from the surrounding road and sidewalk construction, as well as past urban development. (see Appendix I)

Are there any historic resources in the vicinity of the project?

☐ No

☒ Yes, Attach photos of structures more than 45 years old that are within or adjacent to the project site and describe any direct or indirect impacts the project may cause.

The University of Alabama, Office of Archaeological Research (OAR) performed a cultural resources assessment. The background research indicated a total of 162 Historic Architectural Resources (HARs) within the Area of Potential Effect (APE). Of the 162 HARs identified, a total of 48 are previously recorded contributing and/or noncontributing resources to three NHRP historic districts: Woodlawn Historic District (WHD), the Woodlawn Commercial Historic District (WCHD) and the Birmingham Downtown Retail/Theatre Historic District (R/THD); four individually listed National Register of Places (NHRP); two are individually listed on the Alabama Register of Landmarks and Heritage (ARLH); and one listed as a National Historic Landmark (NHL). In addition, a total of 14 previously unrecorded HARs were recommended as eligible for listing to the NRHP. Please see table 1 in the attached Cultural Resource Assessment/Survey Management Summary and the full report with the location of APE provided in Appendix I.

The project was coordinated with the Alabama State Preservation Officer (SHPO), of the Alabama Historic Commission (AHC), by letter dated November 30, 2016 and a follow-up meeting on December 9, 2016 to discuss the findings and the recommendation of no adverse effect on any cultural resources listed on or eligible for the National Register of Historic Places. Sequentially the SHPO responded on December 13, 2016 that upon review they determined that the proposed BRT project station E-1 and bus stops E-2, E-5, ITP-1, W-1 and W-4 will have no adverse effect on any cultural resources provided that architectural elements (i.e. scale, rhythm, and style) from the surrounding built environment are incorporated into the design of the proposed transit station and bus stops. Also, that a plan note should be incorporated into the construction plan to ensure the contractors are aware that the discovery of artifacts or archaeological features encountered during work activities will require that all work will cease and the AHC contacted.

N. Biological

Are there any species located within the project vicinity that are listed as threatened or endangered under the Endangered Species Act? Determine this by obtaining lists of threatened and endangered species and critical habitat from the US Fish and Wildlife Service and the National Marine Fisheries Service.

☐ No

☒ Yes, describe any critical habitat, essential fish habitat or other ecologically sensitive areas within or near the project area.

Research and field review was conducted on July 26, 2016 regarding the potential presence or absence of protected species within the proposed project limits. The results were presented to the U.S. Fish and Wildlife Service's (USFWS) and the concurrence letter received from the USFWS on 9/14/2016. (See Appendix J)

Describe any critical habitat, essential fish habitat or other ecologically sensitive areas within or near the project area.

There is no critical habitat located within the proposed project area or adjacent area.

O. Recreational

Is the project located in or adjacent to a park or recreation area?

☒ No

☐ Yes, provide information on potential impacts to the park or recreation area. Please also indicate if the park involved Land and Water Conservation Act funds (Section 6(f))

P. Seismic and Soils

Are there any unusual seismic or soil conditions in the project vicinity? If so, indicate on project map and describe the seismic standards to which the project will be designed.

☒ No

☐ Yes, describe

Q. Water Quality

Does the project have the potential to impact water quality, including during construction?

☒ No

☐ Yes, describe potential impacts and best management practices which will be in place.

Will there be an increase in new impervious surface or restored pervious surface?

☒ No

☐ Yes, describe potential impacts and proposed treatment for stormwater runoff.

Is the project located in the vicinity of an EPA-designated sole source aquifer (SSA)?

☒ No

☐ Yes, provide the name of the aquifer which the project is located in and describe any potential impacts to the aquifer. Also include the approximate amount of new impervious surface created by the project. (May require completion of SSA worksheet.)

R. Wetlands

Does the proposal temporarily or permanently impact wetlands or require alterations to streams or waterways?

☒ No

☐ Yes, describe potential impacts

S. Construction Impacts

Describe the construction plan and identify impacts due to construction noise, utility disruption, debris and spoil disposal, and staging areas. Address air and water quality impacts, safety and security issues, and disruptions to traffic and access to property.

The construction activities for the proposed BRT project are confined to limited locations and primarily at community transit centers. Construction activities occurring at the individual bus stops/stations include construction of platforms, utility trenching, relocation of utilities to include power poles, installation of new American with Disabilities Act (ADA) compliant canopy shelters, modification of sidewalks to comply with entrance/exit requirements for ADA compliance, and an addition or replacement of refuse receptacles to include recycle options for transit riders. In the event a bus stop is deemed to be removed along the route, construction activities will remain short in duration and all efforts will be made to return impacted area to previous condition to allow for seamless transfer of passengers. The major construction impacts are planned for the community transit centers located at the beginning and the end of the corridor for the proposed BRT project, namely the Five Points West (Crossplex) and Woodlawn Stations.

Business, Residents, Public Facilities

Access for businesses and the public through the construction zones would meet applicable federal, state, county and city regulations including ADA. Property access to residences and businesses would be maintained to the extent possible and every effort will be made to account for property access during construction with the businesses, residences, and public facilities. The allowable construction activity hours would be mandated by local codes and statutes, during high traffic volume times, and holiday and seasonal activities. If access closures are needed it would be short termed and coordinated with affected businesses and residents.

Noise

Every effort will be made to limit noise impacts to adjacent residential and business during the construction phases of the project. Construction noise levels are attributed to the type, size, and proximity of equipment and work being performed along the adjacent structures and established property lines. The most prominent noise exposures include equipment dedicated to concrete removal, and material hauling activities which may have a larger range of noise impact along corridor. Activities will be limited to established daytime mandates for construction activities for affected residents and businesses along the corridor throughout the duration of the BRT project.

Utility Disruptions

Possible utilities within the BRT corridor construction limits include but not limited to water, sanitary sewer, storm water, electricity, natural gas, telecommunications, cable, and fiber communication. Existing utilities will be identified in the construction plans/ drawings and all underground utilities should also be identified by field inspections before construction. All Contractors working on the BRT project will be required utilized the Alabama 811/One Call System, renewable every fourteen days, prior to proceeding with any work activities.

Debris and Spoil Removal

Project contract specifications would require the contractor to dispose of construction-generated solid waste. The disposal method would either be transportation of materials to an approved disposal facility or collection by an approved agent. No waste would be disposed of or incinerated on site.

Air Quality

Protocols for limiting airborne dust during construction are important to the success of the proposed BRT project, both environmentally and with respect to community relations. Contractors will take into consideration current and imminent weather conditions when mobilizing any new activity that may cause particulate disturbance and lower air quality in and adjacent to a construction area. Identification of most direct routes, with the least impact to the public, will be important as airborne particulates are not limited only to soil disturbances. Direct emissions from construction equipment are not expected to produce adverse effects on air quality provided the equipment is properly operated and maintained. Emissions from project-related construction equipment and trucks would be much less than the total emissions from other industrial and transportation sources in the region, and therefore, are not expected to be insignificant with respect to compliance with the NAAQS.

Water Quality

Best Management Practice (BMP) Plans would be included in all construction documents at the time of bid and will be implemented and signed off by resident inspectors prior to any construction moving forward on individual sites to prevent the offsite migration of materials from storm water runoff. Protective measures would be defined in the BMP Plan which will be maintained and replaced as required during length of construction duration and in accordance with local and state National Pollutant Discharge Elimination System (NPDES) requirements. The contract documents would also require a

Stormwater Pollution Prevention Plan (SWPPP) and Spill Prevention, Control, and Countermeasures (SPCC) Plan for managing activities to minimize hazardous spill occurrences and implementation of containment measures during construction to protect water quality.

Safety and Security

Safety and site security during construction of the BRT project would be very important and a top priority for the project sponsor and team. Not only would this ensure worker safety but it would also ensure safety for the surrounding communities. This is key to securing 'buy-in' with the public at large and individuals contracted to complete construction activities in a safe and protective manner. Measures would be implemented to reinforce and monitor safety in the work place and security measures during low-activity hours would be defined and implemented by the Design Team. Final requirements would be included in the Construction Documents with provisions for ensuring compliance. Monitoring would be included throughout the Program and verification by documentation of correct procedure implementation would be submitted with each Contractor Pay Application and recorded at project completion for a Lessons Learned contribution. All required Safety and Security plans, including occupational health and safety requirements, would comply with all federal, state, county and city statutes and requirements prior to starting construction work and throughout project implementation.

Traffic and Property Access

Major construction activities include construction of the BRT route terminal stations planned for Five Points West/CrossPlex on the west side of town and Woodlawn area on the east side of town. Activities contained within these sites would only impact the public in the form of entry and exit access routes to the construction sites. Equipment deliveries and haul activities would be limited to non-peak traffic times and, when available, access routing would be shifted off major thoroughfares and redirected to ancillary roadways thereby reducing potential detours, road closures, and access issues to adjacent properties. The remaining BRT corridor requires enhancements to existing bus stops, modifications in defined areas of existing street corners and sidewalks for ADA compliance, and in certain instances, new bus stop construction. During these construction events, which typical take no more than a week to complete, roadway access to adjacent land owners and businesses and reduction of traffic congestion would be required of the Contractor to mitigate disruption due to construction activities in rights-of-way.

T. Cumulative and Indirect Impacts

Are cumulative and indirect impacts likely?

☒ No

☐ Yes, describe the reasonably foreseeable:

a) Cumulative impacts, which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes them. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

b) Indirect impacts, which are caused by the action but are later in time or farther removed in distance, yet are still reasonably foreseeable. Indirect impacts may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air, water and other natural systems, including ecosystems.

U. Property Acquisition

If property is to be acquired for the project, indicate whether acquisition will result in relocation of businesses or individuals.

Note: For acquisitions over \$500,000, FTA concurrence in the property's valuation is also required.

The proposed project's thirty-four (34) bus-stop shelter locations will not require the acquisition of right-of-way. However, the project will require obtaining real property for construction of the two (2) community transit centers in the Woodlawn and West End areas, and approximately 0.6 miles of exclusive busway on the Birmingham CrossPlex Facility. The Woodlawn properties are privately-owned requiring acquisition, both the West End and CrossPlex properties are owned by COB that will be contributed to the project as an in-kind match. There are no residential occupants on any of these properties. The proposed properties are as follows:

- **Woodlawn:** The amount of real property under consideration include up to seven parcels totaling approximately 1.8 acres that may be acquired in whole or partial. The properties of interest include parcels 11, 5600, 5608, 5612, 5613, 5619, and 5627, all located within 1st Avenue North and 1st Avenue South, and 56th Street North and 57th Street North, as illustrated in Appendix K Diagram 1. The rendering of the conceptual layout of the transit station (see Appendix B) will require, a total acquisition of 1 parcel, and, partial acquisitions of 3 parcels, which will not require relocating businesses or residents and will not require modifications to existing structures. All parcels were assessed at less than \$500,000 fair market value.
- **West End:** City of Birmingham will contribute properties totaling approximately 4 acres. The properties include parcels 4802 and 4812, bound by 47th Street Ensley, Avenue W, Court V, and Birmingham Public Library Five Points West Regional Branch, as illustrated in Appendix K Diagram 2. The taking of this property will not require relocating businesses or residents and will not require modifications to existing structures. This property has a combined assessed fair market value greater than \$500,000. Both the market value appraisal report and the appraisal review report will be submitted to the FTA for concurrence. A formal -in-kind match request will also be submitted to the FTA.
- **CrossPlex Guideway:** City of Birmingham will contribute a strip of real property to construct a guided busway on the Birmingham CrossPlex Facility, depicted in Appendix K Diagram 3. The taking of this property will not require relocating businesses or residents and will not require modifications to existing structures. The proportion of the property was assessed at less than \$500,000 fair market value.

V. Energy

If the project includes the construction or reconstruction of a building, identify potential opportunities to conserve energy which could be employed. This includes building materials and techniques used for construction; special innovative conservation features; fuel use for heating, cooling and operations; and alternative renewable energy sources.

The proposed project will consist of constructing two community transit stations located at the beginning of the proposed project in the eastern section (Woodlawn) of the City and the end of the corridor in the western section (Five Points West) of the City. During all design phases of the BRT project, the COB and BJCTA would identify opportunities to incorporate energy conservation measures. The COB Comprehensive Plan for Sustainability and Green Practices encourages the efficient use of energy in operations and facilities and the use of construction practices that incorporates recycling, salvaging, and reducing greenhouse gases.

Electricity needed to power the BRT community transit centers, bus stops, and other facilities would not require the development of additional energy sources.

The BRT buses would use compressed natural gas (CNG) which is environmentally friendly. CNG is the cleanest burning transportation fuel on the market today. CNG burns cleaner than petroleum-based products because of its lower carbon content. CNG produces the fewest emissions of all other fuels and contains significantly less pollutants than gasoline. BJCTA currently operates its bus fleet using CNG and is familiar with the receipt, storage, fueling, bus operation, and safety requirements associated with using CNG fuel.

W. Public Involvement

Describe public outreach efforts undertaken on behalf of the project. Indicate opportunities for public meetings (e.g. board meetings, open houses, special hearings). Indicate any significant concerns expressed by agencies or the public regarding the project.

There have been numerous stakeholders and public involvement meetings held for the proposed project beginning October 13, 2013 through the present. Through this lengthy process, the stakeholders along the corridor were identified. Stakeholders such as, the Birmingham Neighborhood Associations Presidents and Residents, the COB, BJCTA, Birmingham-Shuttlesworth Airport Authority, Birmingham Business Alliance, Birmingham Jefferson Convention Center (BJCC), REV Birmingham, Birmingham Housing Authority, Woodlawn Foundation, Citizen Advisory Board, Alabama Department of Transportation (ALDOT), the University of Alabama at Birmingham (UAB), Regional Planning Commission of Greater Birmingham (RPCGB), the City of Bessemer, City of Mountain Brook, City of Vestavia, City of Hoover and the Federal Transit Administration, Local Media, Legislative Delegation, and Congressional Delegations.

The information for the public meetings were posted on websites, such as the RPCGB, City of Birmingham, ALDOT, etc., newsletters, flyers were given/sent to neighborhood presidents and all local churches. Public meetings were held in the following Communities:

1. Woodlawn Community	October 13, 2013
2. Crestwood Community	October 13, 2013
3. Huffman Community	October 29, 2013
4. East Lake Library	June 23, 2014
5. JCCEO in East Birmingham	June 23, 2014
6. Girls Inc. in Crestwood	June 23, 2014
7. Parkwood Christian School	June 23, 2014
8. RPCGB	June 24, 2014
9. East Lake United Methodist	June 24, 2014
10. Social Venture (Woodlawn)	June 24, 2014
11. Downtown Community	May 18, 2015
12. Five Points West Community	May 18, 2015
13. Roebuck Community	May 19, 2015
14. Woodlawn Community	May 19, 2015
15. East Lake Community	May 19, 2015
16. Five Points West	August 22, 2016
17. Woodlawn Community	August 23, 2016
18. Fountain Heights Community	August 24, 2016

The public is overwhelmingly in favor of the project and there were no significant concerns expressed by stakeholders or the public regarding the project. A comment summary of the most recent meetings held August 22-23, 2016 is attached in Appendix L. BJCTA and the COB will continue to reach out and provide information to the public and stakeholders as the project moves through early design and later through project final design and development stages.

X. Mitigation Measures

Describe all measures to be taken to mitigate project impacts.

The following are mitigation measures, by element of the environment, that will be taken to minimize and mitigate for the proposed project's impacts during construction of the proposed project:

Construction Mitigation

Maintain property access to local streets during construction.

Work with adjacent Businesses during construction process to minimize or eliminate disruption to their business operations.

Provide advance notice of utility relocation.

Provide notification of the construction schedule and activities for planned temporary road closures and detours and changes to other access routes.

Air Quality

Use relatively well-maintained construction equipment to reduce CO and NOx emissions

Plant vegetative cover as soon as possible after grading to reduce windblown particulates in the area.

Route construction trucks away from residential areas to minimize annoyance from exhaust emissions and dust.

Hazardous Materials

Although no impacts are anticipated, BMP's will include contractors preparing project-specific and site-specific hazardous material management plans, health and safety plans, contaminated media management plans, stormwater pollution prevention plans, and spill prevention, control, and countermeasures plans. In addition, the contractor must comply with all state and federal storm water pollution control requirements.

Historic and Cultural Resources

The City of Birmingham, neighborhoods, Alabama Historic Commission (AHC) will be consulted during the design of the proposed community transit centers and bus stops to advise on the architectural elements such as the scale, rhythm and style from the surrounding built environment incorporation into the design.

Should artifacts or archaeological features be encountered during project activities, work will cease and the AHC will be consulted immediately. This stipulation will be placed on the construction plans to ensure contractor are aware and comply.

Noise and Vibration

Limited above ground jack-hammering and impact pile-driving during after-hour periods such as night-time hours.

Limit or avoid certain noisy activities during after-hour periods such as night-time hours near residential areas

The Construction Contract Specifications will apply the appropriate FTA construction vibration criteria for avoiding damage to buildings adjacent to construction activities.

Y. Other Federal Actions

Provide a list of other federal NEPA actions related to the proposed project or in the vicinity.

ESA Section 7 Compliance

Section 106 Consultation

Z. State and Local Policies and Ordinances

Is the project in compliance with all applicable state and local policies and ordinances?

☐ No, describe noncompliance:

☒ Yes

AA. Related Federal and State/Local Actions

☐ Corps of Engineers Permit (Section 10, Section 404)

☐ Coast Guard Permit

☐ Coastal Zone Management Certification

☐ Critical Area Ordinance Permit

☒ ESA and EFH Consultation

☐ Floodplain Development Permit

☐ Forest Practice Act Permit

☐ Hydraulic Project Approval

☒ Local Building or Site Development Permits

☐ Local Clearing and Grubbing Permit

☒ National Historic Preservation Act-Section 106 consultation

☐ National Pollutant Discharge Elimination System General Construction Permit

☐ Shoreline Permit

☐ Solid Waste Discharge Permit

☐ Sole Source Aquifer Consultation

☐ Section 4(f) (Historic or Recreational Properties; Wildlife Refuges)

☐ Section 6(f) (Recreational Properties)

☒ Section 106 (Historic Properties)

☐ Stormwater Site Plan (SSP)

☐ Temporary Erosion and Sediment Control Plan (TESC)

☐ Water Rights Permit

☐ Water Quality Certification—Section 401

☐ Tribal Consultation or Permits (if any, describe below)

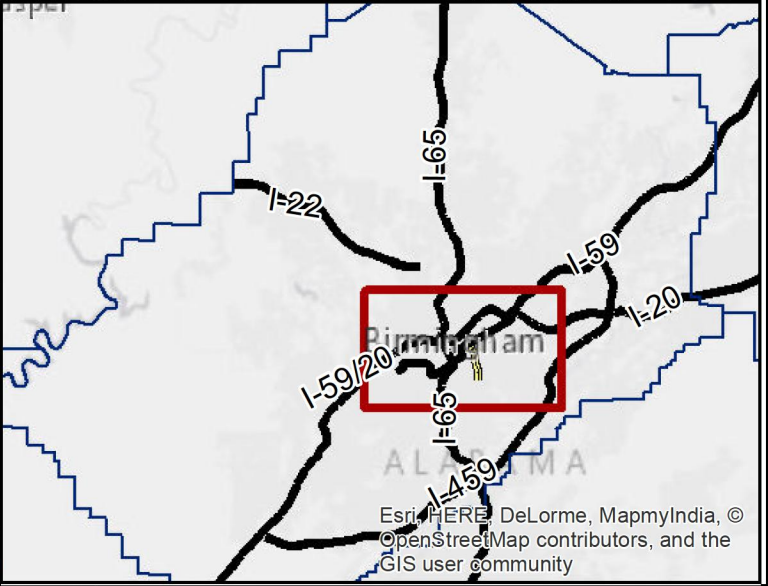
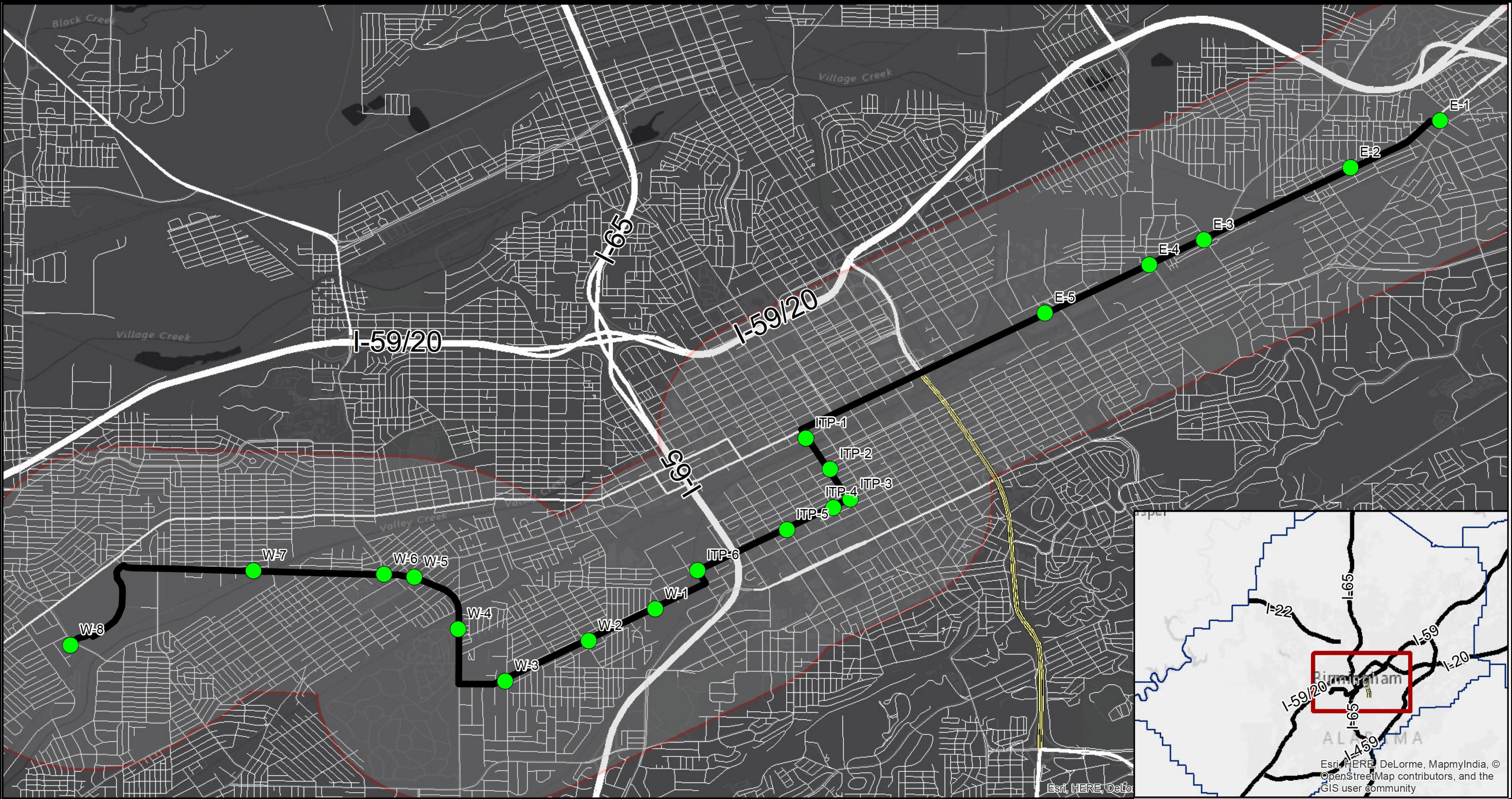
☐ Other

Others (describe as applicable):

Submitted By (name, title): <i>Stephen J. NEPA Open Link</i>	Date: <i>12/29/2016</i>
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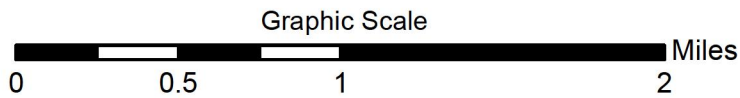
Please submit an electronic copy of this form, attachments, and a signed transmittal letter recommending a NEPA finding to either julia.walker@dot.gov or stanley.a.mitchell@dot.gov

For links to further topical guidance, please visit Region 4's webpage.



Map Contents

BRT Stations	Interstates	Minor Collectors
BRT	Freeway	Collectors
BRT Buffer	Major Arterials	Local Roads



Inset Map Contents

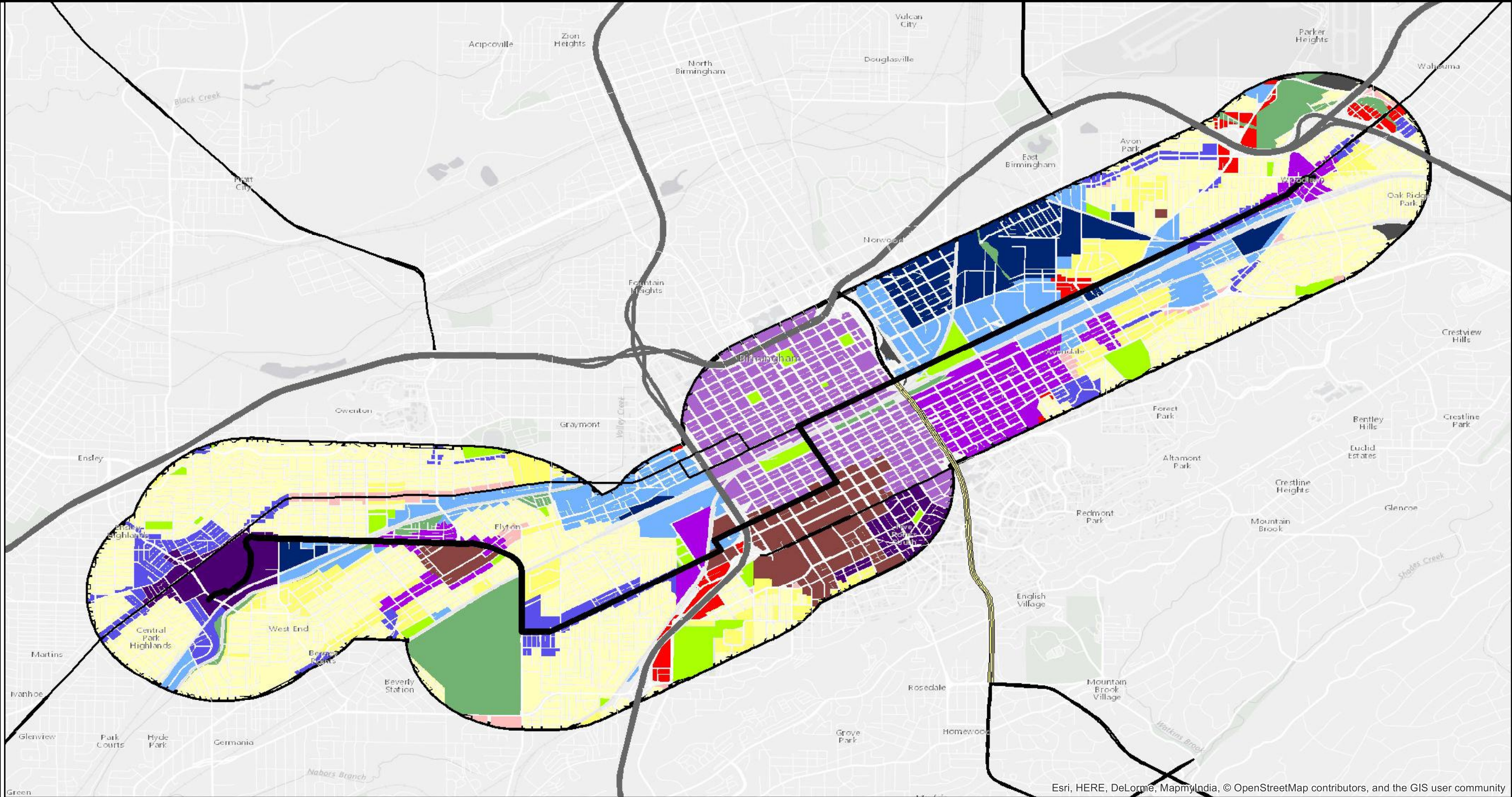
Coverage Area
Jefferson County
BRT

City of Birmingham Alabama
BRT Corridor Vicinity Map

Birmingham Transit Program

BIRMINGHAM FORWARD

FIGURE 1

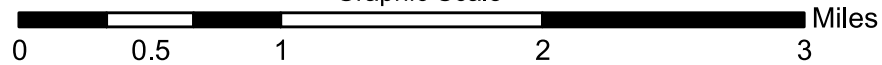


Map Contents

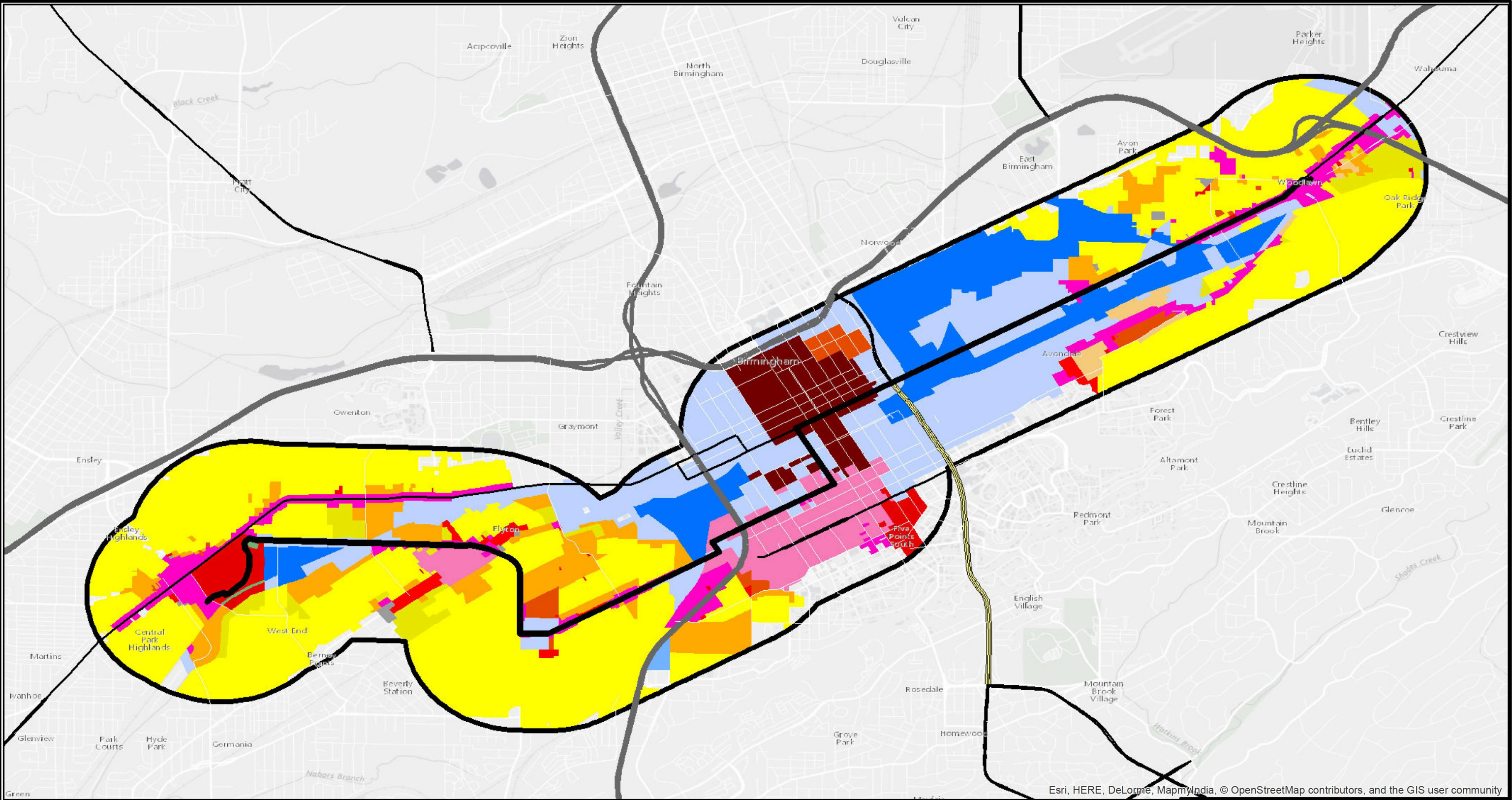
- | | | | | |
|---------------|--------------------|-------------------------|----------------------|------------------------------|
| BRT | General Commercial | MXU-High | Parks and Recreation | Resource Extraction |
| Interstates | Heavy Industrial | MXU-Low | Planned Development | Rural Enterprise |
| Freeway | Institutional | MXU-Medium | Residential-High | Transportation and Utilities |
| U.S. Highways | Light Industrial | Neighborhood Commercial | Residential-Low | BRT Buffer |
| | MXU-Downtown | Open Space | Residential-Medium | |



Graphic Scale

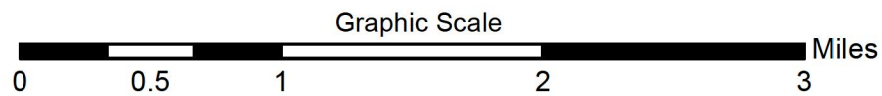


City of Birmingham Alabama BRT Corridor Land Use	
Birmingham Transit Program	
 BIRMINGHAM FORWARD	FIGURE 2



Map Contents

BRT	BRT Buffer	B4	M2	R2	R6
Interstates	Zoning Areas	B6	M3	R3	R7
Freeway	B1	E1	O&I	R4	R8
U.S. Highways	B2	M1	PRD	R4A	
	B3	M1A	R1	R5	



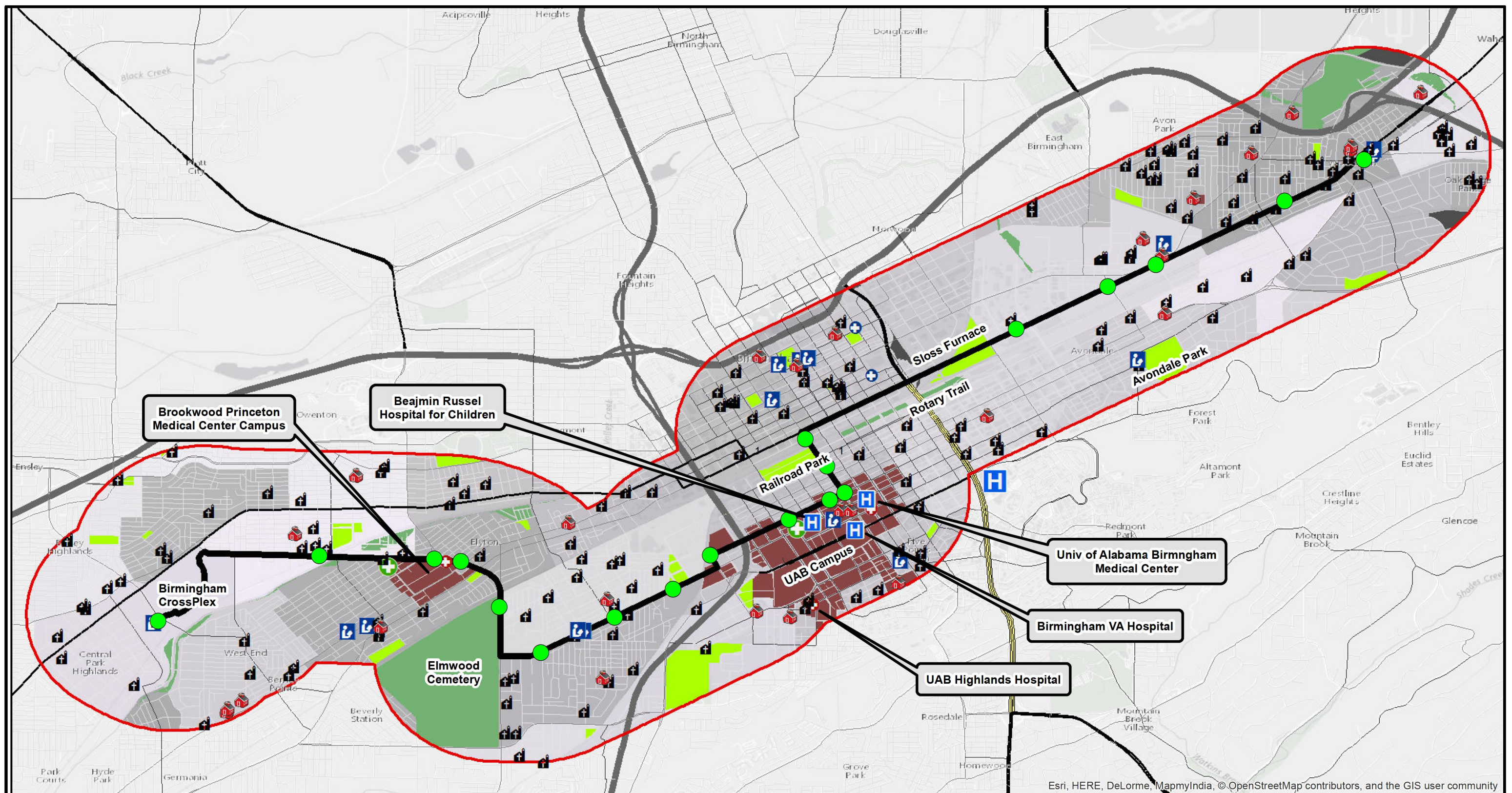
City of Birmingham Alabama
BRT Corridor Zoning

**Birmingham Transit
Program**



BIRMINGHAM FORWARD

FIGURE
3



Map Contents

- | | | | |
|------------------|------------------------|-------------|------------------|
| BRT Stations | Hospitals | BRT Buffer | Major Arterials |
| Schools | Medical Centers | BRT | Minor Collectors |
| Library | Health Centers | Interstates | Collectors |
| Place of Worship | Home Health Facilities | Freeway | Local Roads |
| St. Vincent's | | | |

