



Embracing Shades Creek APPLE Study Advance Planning Report

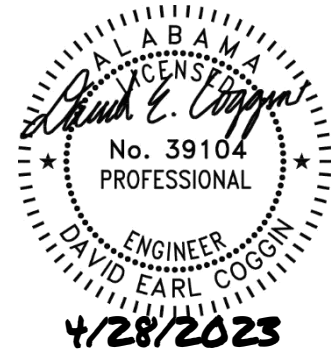
RPCGB Project. No. 1289.48

April 2023

Embracing Shades Creek APPLE Study

RPCGB Project Number 1289.48

Irondale, Alabama



Prepared For:

The City of Irondale

The Regional Planning Commission of Greater Birmingham

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SAIN
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Executive Summary

Study Initiation

This study was initiated by the City of Irondale through the Advanced Planning, Programming, and Logical Engineering (APPLE) program developed by the Regional Planning Commission of Greater Birmingham (RPCGB). The City requested professional planning assistance in evaluating the feasibility of constructing a trail that would follow Shades Creek through the City of Irondale. A map of the study area is shown in [Figure 1](#).

Purpose for the Study

This study was undertaken to assess the feasibility of constructing a trail that would follow Shades Creek through the City of Irondale from the Shea Brothers Softball Complex to the Irondale city limit, which is just east of Flora Johnston Nature Park. The purpose of this study is to identify improvements and provide stakeholders with information for their use in decision-making. This document summarizes:

- existing conditions,
- the process used to identify potential improvements,
- an evaluation of potential positive and negative impacts to the area and adjacent properties that may be associated with each potential improvement,
- funding options
- stakeholder input.

The primary goal of constructing a trail following Shades Creek is to provide continuous active transportation connectivity within the study area that would complement future redevelopment opportunities and reestablish Shades Creek as a focal point.

Improvement Options

For this study, improvement options were segmented into four sections:

- Section A: East of 25th Street South
- Section B: 25th Street South to 20th Street South
- Section C: 20th Street South to 16th Street South
- Section D: 16th Street South to Irondale City Limit

The following improvements are recommended within Section A of the study area:

1. Construct a 10' wide concrete path from the Shea Brothers Softball Complex to 25th Street South. Where feasible, maintain a 25' buffer from the existing Shades Creek bank.
2. Install high-visibility marked crosswalks at the softball complex and 25th Street South.
3. Incorporate green infrastructure such as bioretention, constructed wetlands, dry swales, or rain gardens along Shades Creek where feasible.

The following improvements are recommended within Section B of the study area:

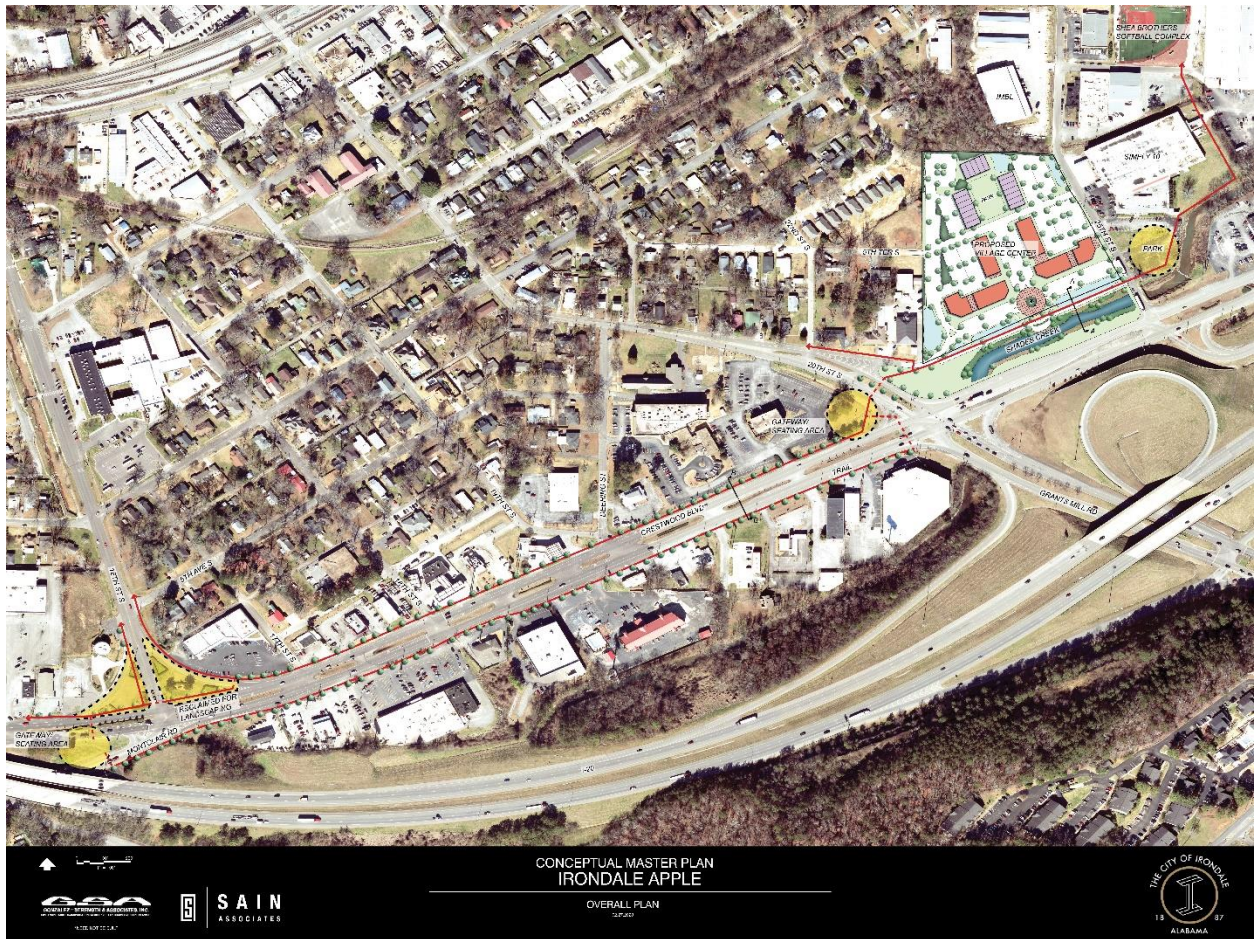
1. Mill existing pavement and base along the frontage road between 25th Street South and the existing Morris-Shea Bridge Company access.
2. **Construct a 10' wide concrete path from 25th Street South to 20th Street South.** The northern edgeline of the proposed path should match the existing edge of pavement of the frontage road after its milling. Where feasible, maintain 3:1 slopes from the proposed path to Shades Creek.
3. Construct connections to the trail in concurrence with any redevelopment of the existing Devon Self-Storage property.
4. **Install additional 6' wide sidewalk along 20th Street South** to connect the proposed trail to the existing sidewalk at 22nd Street South.
5. Incorporate green infrastructure such as bioretention, constructed wetlands, dry swales, or rain gardens along Shades Creek where feasible.

The following improvements are recommended within Section C of the study area:

1. Develop a comprehensive access management plan for Crestwood Boulevard between 16th Street South and 20th Street South to improve multimodal accommodations, safety operations, and traffic operations.
2. **Construct a 10' wide concrete path on the south side of Crestwood Boulevard** from 20th Street South to 16th Street South.
3. **Construct a 6' wide sidewalk on the north side of Crestwood Boulevard** from 20th Street South to 16th Street South.
4. **Construct additional 6' wide sidewalk along 16th Street South** from Crestwood Boulevard to the existing sidewalk at 5th Avenue South.
5. Reclaim the space currently held by large radii channelized right turn lanes on the north side of Crestwood Boulevard at 16th Street South. Mill existing pavement and replace with landscaping or multimodal accommodations. In conjunction with milling, install a non-channelized right turn lane along Crestwood Boulevard westbound at 16th Street South. Note that 16th Street South is a signed Truck Route, and the turn radius should accommodate the appropriate design vehicle.
6. In conjunction with Recommendation #2 and #3, install marked crosswalks and pedestrian signal heads on the west leg of the Crestwood Boulevard intersection with 20th Street South and Kilgore Memorial Parkway.
7. In conjunction with Recommendation #2 and #3, install marked crosswalks and pedestrian signal heads on the east and west legs of the Crestwood Boulevard intersection with 18th Street South.
8. In conjunction with Recommendation #2 and #3, install marked crosswalks and pedestrian signal heads on the east leg of the Crestwood Boulevard intersection with 16th Street South.

The following improvements are recommended in Section D:

1. Coordinate with the City of Birmingham's Shades Creek to Eastwood Trail APPLE Study project team to establish an appropriate accommodation along Montclair Road to ultimately reconnect with Shades Creek.
2. If accommodations along Montclair Road are not considered in the City of Birmingham's APPLE Study, the following improvements are recommended:
 - a. Construct a 6' wide sidewalk along the north side of Montclair Road from Crestwood Boulevard to the existing sidewalk near W.E. Putnam Middle School. Install marked crosswalks and rectangular rapid flashing beacons (RRFB) at Wildoak Drive and Northumberland Road.
 - b. Construct a 6' wide sidewalk along the south side of Montclair Road from Trailer Lane to Crestwood Boulevard.



A high-resolution conceptual diagram of proposed improvements can be found in Appendix A, along with cross-sections of the proposed trail along Shades Creek. Image boards displaying the character of the proposed trail can be found in Appendix B.

Stakeholder Involvement

A kickoff meeting was held on September 7, 2022, at Irondale City Hall to discuss the project background, identify study priorities, and determine expectations for the study. Representatives from the City of Irondale, Cahaba River Society, Regional Planning Commission of Greater Birmingham (RPCGB), and Sain Associates were present.

A second meeting was held on January 10, 2023, at Irondale City Hall to discuss findings from existing conditions, preliminary trail alignments, deliverables, and next steps for the study. Representatives from the City of Irondale, Cahaba River Society, Regional Planning Commission of Greater Birmingham (RPCGB), Gonzalez-Strength & Associates, and Sain Associates were present.

A third meeting was held on April 3, 2023, at the Freshwater Land Trust office to coordinate with other trail planning efforts adjacent to the study area. Coordination was performed with the City of Birmingham's Shades Creek APPLE Study and planning efforts of the Freshwater Land Trust. Representatives from Sain Associates, Freshwater Land Trust, the City of Birmingham, and Dynamic Civil Solutions were present.

Next Steps

There are several near-term tasks to be completed that could make the overall picture clearer within the study area. The following items should be addressed prior to pursuing a funding source for constructing the recommended improvements:

- Complete the Cahaba River Society's pocket park feasibility study to determine what role it could play in the implementation of this study's recommended improvements.
- Initiate discussions with the owner of the Devon Self-Storage property owner to assess the appetite for redevelopment.
- When the City of Birmingham's Shades Creek to Eastwood Trail APPLE Study is completed, coordinate with the project team to determine any overlap in recommendations.
- Develop a conceptual plan for comprehensive access management recommendations between 16th Street South and 20th Street South.

Completing the tasks above would further determine what funding sources are appropriate to pursue for the recommended improvements. Once Federal funds are in place for the project, an environmental document will need to be prepared prior to design, right-of-way acquisition, utility relocation, and construction would follow.

If the City chooses to move forward with a locally funded project, the timing, scheduling, and implementation of the installation would be at their discretion.

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1 Introduction

This study was initiated by the City of Irondale through the Advanced Planning, Programming, and Logical Engineering (APPLE) program developed by the Regional Planning Commission of Greater Birmingham (RPCGB). The City requested professional planning assistance in evaluating the feasibility of constructing a trail that would follow Shades Creek through the City of Irondale. A map of the study area is shown in [Figure 1](#).

1.1 Purpose of the Study

This study was undertaken to assess the feasibility of constructing a trail that would follow Shades Creek through the City of Irondale from the Shea Brothers Softball Complex to the Irondale city limit, which is just east of Flora Johnston Nature Park. The purpose of this study is to identify improvements and provide stakeholders with information for their use in decision-making. This document summarizes:

- existing conditions,
- the process used to identify potential improvements,
- an evaluation of potential positive and negative impacts to the area and adjacent properties that may be associated with each potential improvement,
- funding options
- stakeholder input.

The primary goal of constructing a trail following Shades Creek is to provide continuous active transportation connectivity within the study area that would complement future redevelopment opportunities and reestablish Shades Creek as a focal point.

1.2 Study Approach

The study consisted of a two-stage process. The first stage included an evaluation of the existing conditions, a review of past studies, and definition of constraints within the study area. The second stage included developing conceptual plan alternatives.

A detailed, quantitative traffic analysis was deemed unwarranted due to the study's focus on pedestrians and cyclists. A base map was prepared using aerial images and available GIS data. A field review was performed as part of stage one. This field review consisted of assessing existing bicycle and pedestrian accommodations within the study area and establishing potential alignments for new location trail along Shades Creek.

Stage two included an evaluation of potential right-of-way (ROW) issues and Americans with Disabilities Act (ADA) considerations. After identifying the challenges and opportunities associated with a potential project, conceptual plan alternatives were developed.

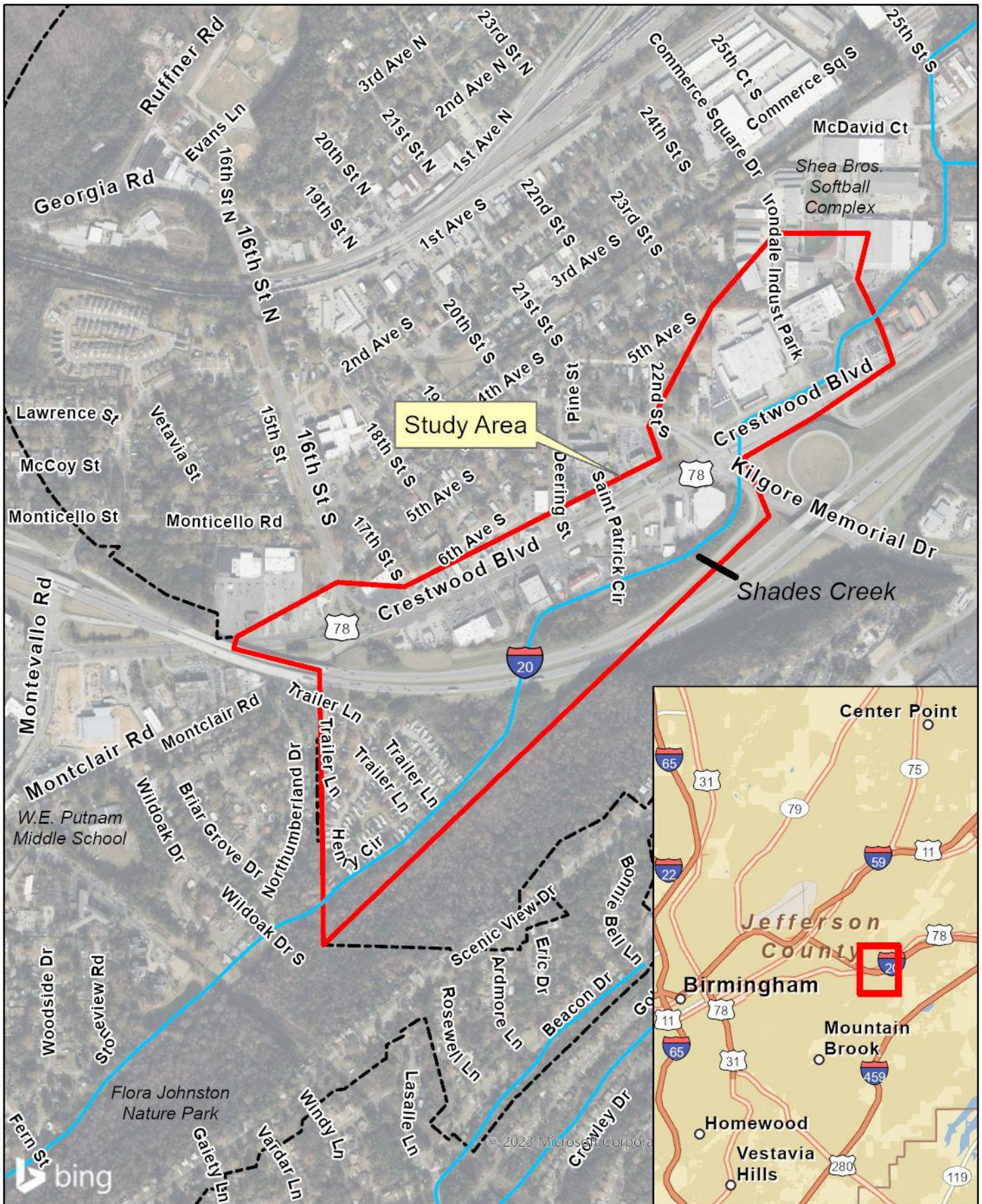


Figure 1: Study Area Location Map

Embracing Shades Creek APPLE Study
Irondale, Alabama



- Study Area
- City Limit

2 Existing Conditions

2.1 Description of the Study Area

The study area is located along Shades Creek, which flows east-to-west adjacent to Interstate 20 and Crestwood Boulevard (US-78/State Route 4) to the south of downtown Irondale, Alabama. At the eastern end of the study area is Shea Brothers Softball Complex and several industries. Shades Creek flows under 25th Street South, Crestwood Boulevard, and I-20 before exiting the city limits of Irondale near Flora Johnston Nature Park. The most prominent land use along the creek is commercial, but residential areas exist to the immediate north and west of the study area.

2.2 Bicycle and Pedestrian Accommodations

Few bicycle and pedestrian accommodations exist within the study area. The City's downtown grid is well-outfitted with sidewalks, providing excellent connectivity between residences and local businesses. There are no pedestrian or bicycle accommodations along Crestwood Boulevard or 25th Street South. A sidewalk exists on the east side of 20th Street South, but no other pedestrian accommodations exist within the immediate study area. The only bicycle accommodation nearby is located along Grants Mill Road south of I-20. A five-lane typical section with bicycle lanes in each direction begin at the Grants Mill Station signalized intersection, which is approximately 2,500 feet south of Crestwood Boulevard.

2.3 Roadway Geometrics

Several key streets within the study area would need to be crossed or otherwise incorporated into a proposed trail.

Crestwood Boulevard (US-78, State Route 4) is a four-lane, urban principal arterial roadway with a posted speed limit of 35 MPH within the study area. Pavement width ranges from 80 to 112 feet throughout the study area, including intermittent grass median and turn lanes at intersections. Paved shoulder width ranges from two (2) feet to 12 feet. According to the ALDOT Traffic Data website, the AADT (Average Annual Daily Traffic) volume in 2021 along Crestwood Boulevard between 20th Street South and 16th Street South was 23,341 vehicles per day. East of 20th Street South, the 2021 AADT was approximately 12,191 vehicles per day.

Interstate 20 (I-20) is a six-lane, median divided interstate within the study area. Shades Creek crosses under I-20 through a culvert located just south of the Crestwood Boulevard intersection with 18th Street South. Exit 133 provides interstate access to and from Grants Mill Road. The I-20 westbound exit ramp intersects Crestwood Boulevard and 25th Street South at a signal-controlled intersection.

Grants Mill Road is a four-lane, divided minor arterial intersecting Crestwood Boulevard and the I-20 ramps within the study area. The roadway transitions to a five-lane, undivided typical section with bicycle lanes approximately 2,500 feet south of Crestwood Boulevard.

Vulcan Drive is a two-lane, local street providing access to Shea Brothers Softball Complex and Motion Industries. Pavement width ranges from 24 to 30 feet.

25th Street South is a two-lane, local street providing access to Irondale Industrial Park from Crestwood Boulevard. Pavement width ranges from 24 to 30 feet. Shades Creek crosses under 25th Street South via a large box culvert near Crestwood Boulevard.

20th Street South is a two-lane, local street connecting Crestwood Boulevard to downtown Irondale. The street transitions from a four-lane, divided section to a two-lane, undivided street just north of Crestwood Boulevard. Pavement width varies significantly, and a sidewalk exists on the east side of the street beginning at 22nd Street South.

20th Street South Access Road is a two-lane, local street connecting 20th Street South to 25th Street South parallel to Crestwood Boulevard. Shades Creek runs parallel between this street and Crestwood Boulevard.

18th Street South is a two-lane, local roadway intersecting Crestwood Boulevard at a signalized intersection between 16th Street South and 20th Street South.

16th Street South is a two-lane, minor arterial connecting Crestwood Boulevard to downtown Irondale. Irondale Community School is located along this street, approximately 1,000 feet north of Crestwood Boulevard. The intersection of 16th Street South and Crestwood Boulevard is controlled by a traffic signal and possesses channelized right turn lanes with large curve radii.

Montclair Road is a two-lane, minor arterial connecting Crestwood Boulevard to the Eastwood area of Birmingham. It intersects Crestwood Boulevard at 16th Street South and passes under I-20 immediately south of Crestwood Boulevard.

2.3 Existing Parks and Recreational Areas

Parks and recreational facilities often represent sufficient logical termini for sidewalks, bicycle facilities, trails, and other active transportation accommodations. Shea Brothers Softball Complex is a privately-owned parcel containing two softball fields on the eastern end of the study area. The Flora Johnston Nature Park, owned by the City of Birmingham, is located on the western side of the study area. Shades Creek flows through this park after crossing under I-20 and an undeveloped, privately-owned parcel of land within Irondale city limits.

2.4 Field Observations

A field review was performed on Tuesday, September 27, 2022, to assess the opportunities and challenges within the study area along Shades Creek. Vehicular traffic in the study area generally consists of commuting motorists along Crestwood Boulevard during peak hours and local traffic from businesses and homes on other roadways. Vehicular traffic should be considered with any improvements affecting the roadway network, but the focus and goals of this study involve increasing access to businesses and amenities for cyclists and pedestrians. A map of available utilities and parcel data can be found in [Appendix C](#).

Section A: East of 25th Street South

On the eastern end of the study area, land use is industrial, commercial, and recreational. Shades Creek flows along the eastern side of the industries accessing 25th Street South and crosses 25th Street South parallel to Crestwood Boulevard. [Photo 1](#) shows the northeast portion of the study area, including views of Simply 10 and Motion Industries near Shades Creek.



Photo 1: View of Simply 10 near Shades Creek, Looking North

Between the Simply 10 and Golden Rule BBQ sites, the bank of Shades Creek has eroded over time. The erosion of the creek bank can be seen in [Photo 2](#). South of Vulcan Drive and Shea Brothers Softball Complex, Motion Industries and IBML operate on either side of a drainage ditch feeding into Shades Creek. A sanitary sewer line runs along the north side of the creek in this area, with an additional line splitting off to cross the creek between Simply 10 and Golden Rule BBQ. This line is visible from the creek bank and

nearby parking lots, as shown in Photo 3. Additionally, a 10" water line runs along the north side of the creek alongside the sanitary sewer line. It also crosses Shades Creek just upstream of the sanitary sewer line crossing.



Photo 2: View of Shades Creek between Simply 10 and Golden Rule BBQ, Looking North



Photo 3: View of Sanitary Sewer Line crossing Shades Creek, just north of Crestwood Boulevard

At 25th Street South, Shades Creek flows through a box culvert approximately 50 feet in length. The roadway width above this box culvert is approximately 28 feet wide with unpaved shoulders of 8 to 12 feet in width.

East of the 25th Street South box culvert, Shades Creek is exposed. The challenges in this section include:

- Maintaining stability of the creek bank
- Avoiding impact to sanitary sewer and water utility lines
- Defining the access to businesses between the softball complex and Shades Creek
- Connecting the trail to the softball complex or defining an alternative logical terminus

Section B: 25th Street South to 20th Street South

Between 25th Street South and 20th Street South, Shades Creek travels parallel to Crestwood Boulevard on its north side. A frontage road also connects the two streets, while providing access to Devon Self Storage and Morris-Shea Bridge Company. A bird's eye view of Section B is shown in Photo 4.



Photo 4: Bird's Eye View of Section B from 25th Street South to 20th Street South, Looking South

The green space between Crestwood Boulevard and Shades Creek is within the ALDOT right-of-way. The frontage road north of the creek is City-owned and maintained. The challenges in this section include:

- Maintaining stability of the creek bank
- Avoiding impact to power, sanitary sewer, water utility lines
- Reevaluating the space required for each mode of travel, especially regarding the frontage road along Shades Creek

Section C: 20th Street South to 16th Street South

From 20th Street South to 16th Street South, Shades Creek is located south of Crestwood Boulevard. Between the Public Storage building (See Photo 5) and I-20, Shades Creek passes through interstate right-of-way owned and maintained by ALDOT. Shades Creek crosses under I-20 via a large culvert approximately 0.2 miles east of 16th Street South. No bicycle or pedestrian accommodations exist in Section C at the time of this study.



Photo 5: Bird's Eye View of the Crestwood Boulevard Intersection with 20th Street South and Grants Mill Road

Establishing a trail entirely along Shades Creek from Section C to the Irondale City Limit would require boring a tunnel below I-20 to cross under it. This would be extremely costly from a construction standpoint and require approval by ALDOT and the Federal Highway Administration (FHWA).

Photo 6 shows a typical view of Shades Creek within Section C between Crestwood Boulevard and I-20. Much of the creek bank is slope-paved with concrete. Photo 7 is a view of the large box culvert where Shades Creek flows under I-20. There is evidence of water overtopping the slope-paved banks during high-intensity rainfall events, indicating that a bored tunnel would likely flood.



Photo 6: Typical View of Shades Creek within Section C



Photo 7: Shades Creek Culvert under Interstate 20

The Montclair Road underpass represents a more feasible location for the trail to cross under I-20 to Section D. Utilizing this connection would change the most direct route for a bicycle and pedestrian accommodations in Section C to the footprint of Crestwood Boulevard. Photo 8 is a view of Montclair Road passing under I-20.



Photo 8: Montclair Road at Interstate 20, Approaching Crestwood Boulevard

Figure 2 displays aerial imagery of Section C. Within the 0.5-mile segment of Crestwood Boulevard between 20th Street South and 16th Street South, the following conditions exist:

- three (3) signalized intersections (16th Street South, 18th Street South, and 20th Street South)
- at least seven (7) full-access, unsignalized intersections,
- at least 16 additional driveways provide access to businesses along Crestwood Boulevard.



Figure 2: Section C Aerial Imagery

The challenges in this section include:

- Finding a solution amenable to many stakeholders
- Utilizing ALDOT right-of-way for a multimodal connection
- Identifying crossing locations on Crestwood Boulevard to reconnect the residential grid to the businesses along Crestwood Boulevard

Section D: Southwest of 16th Street South to Irondale City Limit

Shades Creek flows south of the Eastwood neighborhood approximately 0.25 miles southeast of Montclair Road. This would require the trail to follow Montclair Road for some distance before diverting south along the street network to rejoin Shades Creek.

The Irondale City Limit crosses Montclair Road at Interstate 20, just south of Crestwood Boulevard. Drainage ditches exist along the south side of Montclair Road from Wildoak Drive to Trailer Lane and represent a barrier to multimodal accommodations. The drainage ditch, which contains several utilities and evidence of bank erosion can be seen in Photo 9.



Photo 9: Montclair Road at Northumberland Drive near the Irondale City Limit, Traveling Northeast

Additionally, W.E. Putnam Middle School is located approximately 2000 feet from Crestwood Boulevard. Existing sidewalk on the south side of Montclair Roads stretches from Montevallo Road to Wildoak Drive. To make a connection to the existing sidewalk, the alignment would likely need to follow the north side of Montclair Road from Crestwood Boulevard to Wildoak Drive and cross the road. The frontage road from Northumberland Drive to Wildoak Drive could also be utilized as a low-stress route with a crossing at Northumberland Drive.

The challenges in this section include:

- Multi-jurisdictional connectivity between the Cities of Irondale and Birmingham
- Avoiding drainage ditches and utilities along Montclair Road
- Pedestrian safety at uncontrolled crossing locations

3 Previous Documents and Adjacent Projects

Several documents were reviewed to evaluate the existing conditions of the study area. This section summarizes the documents that were reviewed.

3.1 RPCGB Regional Transportation Plan (RTP)

The Regional Transportation Plan (RTP) is a long-range, 25-year investment plan on a regional-scale. It is a multimodal plan including proposed projects for all types of transportation. The RTP, which is updated every five years, defines the region's transportation goals, and guides the region's federal transportation investments. The 2045 RTP was reviewed to identify any projects adjacent to the study area. The RTP places projects in two categories: fiscally constrained and visionary. Visionary projects are defined as projects that are needed but are not funded. There are no projects currently included in the RTP that directly impact or influence the study area.

3.2 RPCGB Transportation Improvement Program (TIP)

The Transportation Improvement Program (TIP) is a short-term strategic tool used to implement the objectives of the RTP. The TIP is a four-year work program that includes projects for all modes of transportation that are regionally significant and federally funded. A project cannot be included in the TIP if it is not consistent with the RTP. Although, it is a four-year program, the TIP is often amended to account for changes related to specific project needs and/or funding. The Regional TIP is also a part of the Statewide Transportation Improvement Program (STIP). Currently, the TIP includes the following project applicable to the study area:

- ALDOT sponsored resurfacing project for Crestwood Boulevard (US-78) from near 46th Alley South to St. Patrick Street. This project let to construction in January 2020.
- City of Irondale sponsored sidewalk project on 16th Street South, 2nd Avenue, 5th Avenue, and 20th Street South. This project is currently in the final design stages and is scheduled to let for construction in 2023. This project would include the installation of sidewalk on 16th Street South that would offer connectivity to improvements identified and documented in this report.

3.3 RPCGB B-Active Plan

The B-Active Plan was adopted by the Birmingham MPO in March of 2019. It is the Active Transportation Plan for the Greater Birmingham region. The B-Active Plan categorizes regional roadways as Policy Roads or Primary Network. US-78 is categorized as a Policy Road meaning bicycle and pedestrian facilities along the route would be beneficial in providing connectivity within the Region but the roadway is complex and would require large-scale construction. For Policy Roads, the B-Active Plan states, "when significant improvements are made, safe bicycle and pedestrian travel should be considered."

The B-Active Plan does not include specific facility type recommendations; however, it provides context-specific design menus and generalized design guidelines for facility recommendations based on land use category (urban core, urban, suburban, rural, and rural town). The B-Active Plan recommends urban context improvements be installed along 20th Street between Beacon Drive and 3rd Avenue North. Several facility options that would be appropriate for the 20th Street urban context are provided by the B-Active Plan. These facility types are wide ranging and can be tailored to the constraints of the roadway.

3.4 Blueprint: Irondale (2021)

Blueprint: Irondale is the City's Comprehensive Plan; it is an update to the 2016 *Irondale on the Move* Comprehensive Plan. *Blueprint: Irondale* includes three focus Areas, two of which are located adjacent to the study area included in this APPLE Study: Downtown Irondale and Grants Mill Station.

Downtown Irondale opportunities listed in *Blueprint: Irondale* include the installation of a roundabout at the intersection of 16th Street South and Crestwood Boulevard and the addition of bicycle lanes or sharrows on 16th Street and/or the expansion of the existing path along 16th Street South.

Grants Mill Station recommendations include the installation of a roundabout at the intersection of Grants Mill Road and Beacon Drive and the extension of bicycle lanes along Grants Mill Road to Crestwood Boulevard.

One of the goals listed in the City's Comprehensive Plan is to “build a multi-modal transportation network with a wide range of choices.” A subset of this goal, which is listed as a high priority, is to expand sidewalk coverage and provide links between residential areas and other pedestrian generators. Specific proposed sidewalk recommendations related to this report's study area include installation along Crestwood Boulevard between the Irondale city limits and Golden Rule restaurant, and along 20th Street between existing sidewalks to Grants Mill Road. In addition to sidewalk recommendations, *Blueprint: Irondale* also includes bicycle accommodation recommendations. Those applicable to this APPLE study include:

- 20th Street – bike lanes, buffered bicycle lanes, bicycle boulevard (neighborhood street)
- Crestwood Boulevard – separated bicycle lane
- 16th Street – bike lane or buffered bicycle lane

In addition to bicycle and pedestrian recommendations, *Blueprint: Irondale* also includes green infrastructure recommendations around 16th Street, Crestwood Boulevard, and 20th Street, the comprehensive plan recommends the use of bioretention, constructed wetlands, dry swales, or rain gardens along Shades Creek.

3.5 The Red Rock Ridge and Valley Trail System Master Plan (2010)

The Freshwater Land Trust (FWLT) is a conservation organization that aims to build trails and conserve land throughout central Alabama with the goal of connecting communities and increasing healthy recreational opportunities. The FWLT developed the Red Rock Ridge and Valley Trail System Master Plan (RRRVTS), and it includes 750 miles of multi-use trails, parks, bicycle lanes, and sidewalks. Since the Plan's inception in 2010, FWLT has seen the installation of 127 miles of trails in Jefferson County (per freshwaterlandtrust.org).

The RRRVTS Plan includes seven corridors. The goal of the Shades Creek Corridor is to connect Red Mountain Park to Ruffner Mountain. The main corridor ends at Flora Johnston Nature Park; however, there are several Shades Creek connectors proposed near the study area:

- Oporto Madrid Boulevard Trail – a proposed street-based trail that would connect Redwood Street along Oporto Madrid Boulevard to Crestwood Boulevard (approximately 0.8 miles west of 16th Street South)
- Montclair Road Trail – a proposed street-based trail connecting Rushton Park in Birmingham along Montclair Road to 16th Street South in Irondale; this proposed trail continues north on 16th Street South to connect to the existing 16th Street Greenway located between 4th Avenue South and Montevallo Road
- Crestwood Boulevard Trail – a proposed street-based trail along Crestwood Boulevard between Cresthill Road and 16th Street South (connection to the proposed Montclair Road Trail)
- Irondale Trail – a proposed street-based trail beginning at the intersection of 2nd Avenue North and 16th Street South in Irondale. The trail is proposed to travel along 2nd Avenue North to 20th Street South and then along 20th Street South under I-20 and connecting to Old Grants Mill Road.
- 16th Street North Trail – a proposed street-based trail beginning at the intersection of Montevallo Road and 16th Street South and continuing north along 16th Street connecting to Ruffner Road
- 1st Avenue South Trail – beginning at the intersection of 1st Avenue South and 16th Street South this proposed street-based trail travels east on 1st Avenue South until connecting to Crestwood Boulevard

The opportunity to add recommendations from this study to the RRRVTS Plan exists, should plans move forward to implement recommendations.

3.6 Shades Creek Watershed Management Plan (2021)

As stated in the Shades Creek Watershed Management Plan (WMP), its purpose is to serve as a guide to protect the greater Shades Creek Watershed, its waters, and habitats as well provide recreation opportunities along and in Shades Creek. The WMP established

four goals: improve water quality, protect natural areas, reduce flooding issues, and promote and improve access. To accomplish these goals the WMP identifies a variety of management measures which include potential opportunities and projects for implementation.

Applicable to this APPLE Study, the WMP recommends the use of green infrastructure like permeable pavements, bioretention areas, curb and gutter eliminations, and riparian buffers. These types of green infrastructure allow for reduced post-construction runoff rates, volumes, and pollutant loads. The incorporation of green infrastructure into the installation of proposed improvements would benefit Shades Creek.

In addition to green infrastructure, the WMP recommends stream buffer restoration. A riparian buffer zone can vary from 25-150 feet in width. Considering the current land uses and roadway network in the study area, achieving the minimum 25 feet of buffer is not feasible. Related to stream buffer restoration is actual stream restoration. Stream restoration involves several steps and follows specific guidelines laid out by four different federal government agencies. There are four priority restoration types. The types most applicable to the section of Shades Creek located in the study area are priority 3 (widen the floodplain at the exiting bankfull elevation) and priority 4 (stabilize existing stream banks in place). To determine if these types of improvements can be or should be made to Shades Creek within the study area requires more in-depth analysis that is outside the scope of this APPLE Study. However, stream bank stabilization and impacts to the creek should be considered during design and construction of proposed improvements.

3.7 Planned Studies

At the time this study was performed and this report was prepared, two other proposed studies with a related focus were discussed. The City of Irondale provided the Cahaba River Society with a grant to perform a feasibility study at the site of the Simply10 Outlet Store. This study will evaluate the feasibility of a pocket park installation and will include drainage improvements and stream restoration. At the time this report was prepared, this study was still in the planning stages.

Like this City of Irondale sponsored APPLE Study, the City of Birmingham has sponsored an APPLE Study to evaluate similar improvements along Shades Creek. At the time of the Irondale APPLE Study, the City of Birmingham – Shades Creek to Eastwood Trail Study is in progress. Dynamic Civil Solutions and ALTA Planning & Design have been selected to perform the study. The most recent coordination on April 3, 2023, with the City of Birmingham, Dynamic Civil Solutions, and the Freshwater Land Trust indicated that **Birmingham's APPLE study is evaluating the feasibility of connecting the existing Irondale Furnace Trail to Flora Johnston Nature Park.** The Freshwater Land Trust, through its RRRVTS Plan, will continue efforts to connect Flora Johnston Nature Trail and Montclair Road and 16th Street South through Irondale.

4 Environmental Features

A search of documents, databases, a field review, and compilation of GIS data was performed to analyze existing conditions and identify environmental features. This section further discusses the gathered data.

4.1 Historic Assets

A search of various databases was performed to identify any known historic properties. This section summarizes this research. To verify the historic and/or archeological importance of the area, a full cultural resources report should be prepared should the City opt to utilize federal monies to fund improvement projects within this area.

The National Register of Historic Places (NRHP)

There are no properties within the study area listed on the National Register of Historic Places.

Alabama Register of Landmarks and Heritage (ARLH)

There are no properties within the study area recorded on the Alabama Register of Landmarks and Heritage.

Alabama Historic Cemetery Register (ACHR)

There are no cemeteries within the study area recorded on the Alabama Historic Cemetery Register.

4.2 Section 4(f) Properties

The U.S. Department of Transportation Act of 1996 included a Section 4(f) which provided for consideration of park and recreation areas, wildlife and waterfowl refuges, and historic sites during transportation project development. Although this Act is now implemented by the Federal Highway Administration (FHWA) through the regulation 23 Code of Federal Regulations (CFR) 774, Section 4(f) is still used to describe the above-mentioned property types.

There are softball fields located at the eastern terminus of the study area; however, they are privately owned. There are no Section 4(f) properties located within the study area.

4.3 Threatened and Endangered Species

A search using the US Fish and Wildlife Service's IPaC Information for Planning and Consultation database was performed, and the resulting resource list is included in [Appendix D](#). The search provided a list of known or expected threatened or endangered species located within the study area. In all, IPaC lists thirteen (13) species that could be potentially impacted by activities in the study area. [Table 1](#) provides a listing of the species and associated status. Per USFWS IPaC there are no critical habitats located in the study area.

Table 1: USFWS IPaC Results

Name	Status
Gray Bat	Endangered
Indiana Bat	Endangered
Northern Long-eared bat	Threatened
Alabama Moccasinshell	Threatened
Finelined Pocketbook	Threatened
Orangenacre Mucket	Threatened
Ovate Clubshell	Endangered
Southern Clubshell	Endangered
Triangular Kidneyshell	Endangered
Upland Combshell	Endangered
Monarch Butterfly	Candidate
Georgia Rockcress	Threatened
Tennessee Yellow-eyed Grass	Endangered

In addition to the thirteen (13) species listed in [Table 1](#), there are eight (8) species of migratory birds that could be found in the study area. These species are protected under the Migratory Bird Treaty Act. [Appendix C](#) includes a list of these species along with a probability of presence summary.

Based on the information provided by the USFWS IPaC, a Threatened and Endangered Species survey would be required should the City opt to utilize federal monies to fund improvement projects within this area. A species study would likely be required for USACE permitting as well.

4.4 Streams and Wetlands

A search of the National Wetlands Inventory (NWI) was performed. The study area includes Shades Creek, which is a riverine (Classification Code R2UBH) located within the Cahaba River watershed. Other than the Creek (riverine wetland), there are no other wetlands located in the study area. A streams and wetlands jurisdictional determination study will likely be required if Shades Creek is traversed or impacted by the proposed trail. Impacts to jurisdictional streams and wetlands could require a USACE permit. Further details from the National Wetlands Inventory are included in [Appendix D](#).

The United States Army Corps of Engineers (USACOE) will require that a permit be obtained for any construction projects that will impact the Creek, including discharge of storm runoff. In addition to the USACOE permit, the Alabama Department of Environmental Management (ADEM) will also require a stormwater permit for the discharge of storm runoff associated with any construction project that disturbs an acre or more of land. ADEM considers any site located within the Cahaba River watershed to be a priority construction site since the river is impaired due to high levels of siltation. Great care must be taken during construction to maintain erosion and sediment controls.

The drainage area flowing to the Shades Creek culvert under Crestwood Boulevard is approximately 4,750 acres. The amount of fill required for the proposed improvements should be considered so that adverse impacts to the floodplain will not occur. Concurrence from the City's floodplain manager will be required.

The Federal Emergency Management Agency's (FEMA) Map Service Center provides a flood hazard layer for informational purposes. The mapping shown in Figures 3-5 indicate that Sections A and B of the study area lie within the 100-year (blue) and 500-year (orange) floodplain, with the most recent study completed in September of 2021.

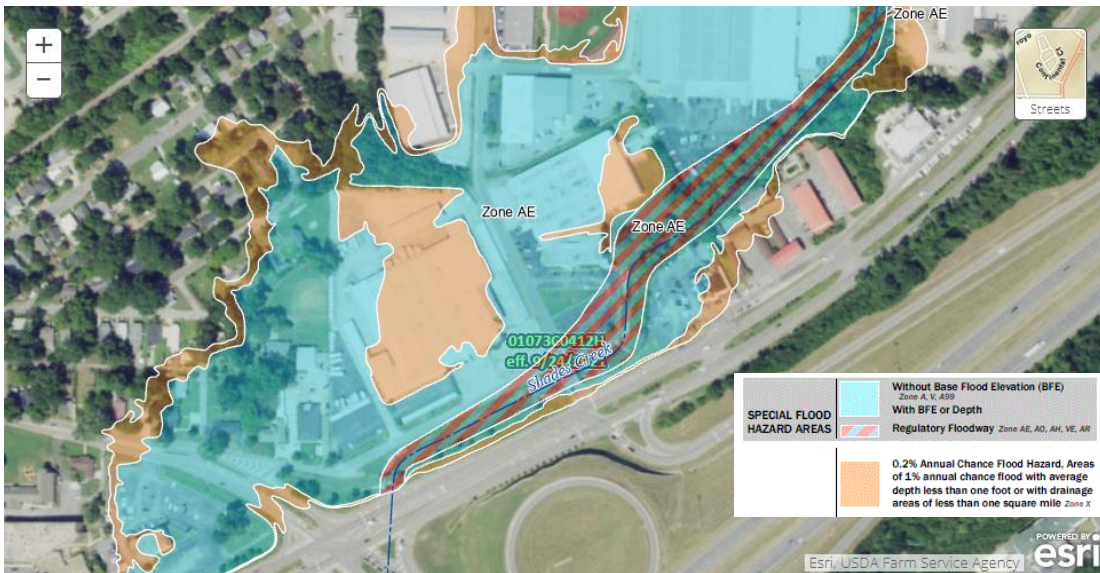


Figure 3: FEMA Flood Hazard Map - Sections A & B

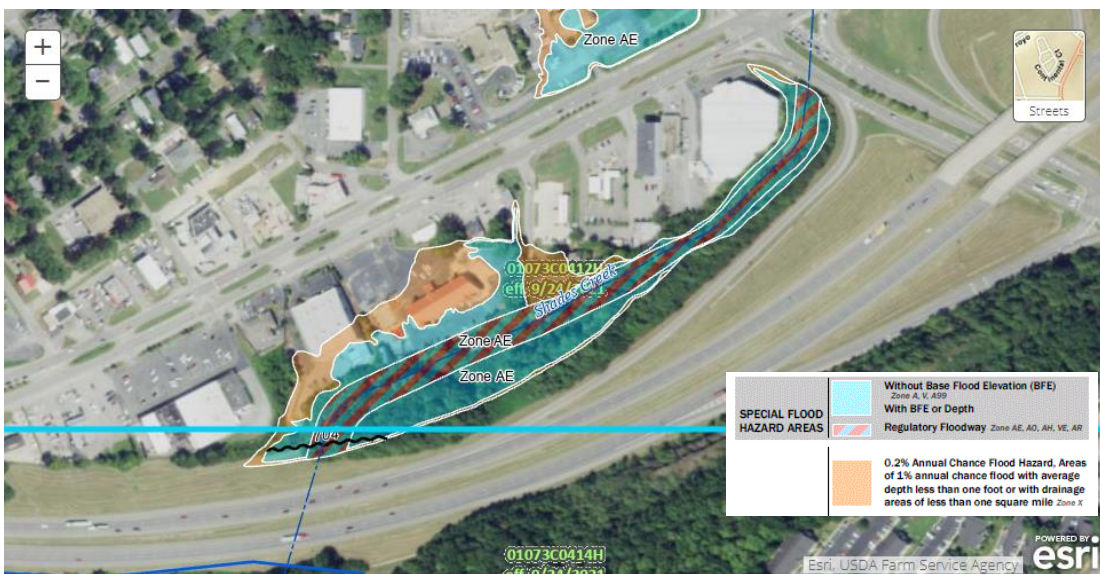


Figure 4: FEMA Flood Hazard Map - Section C

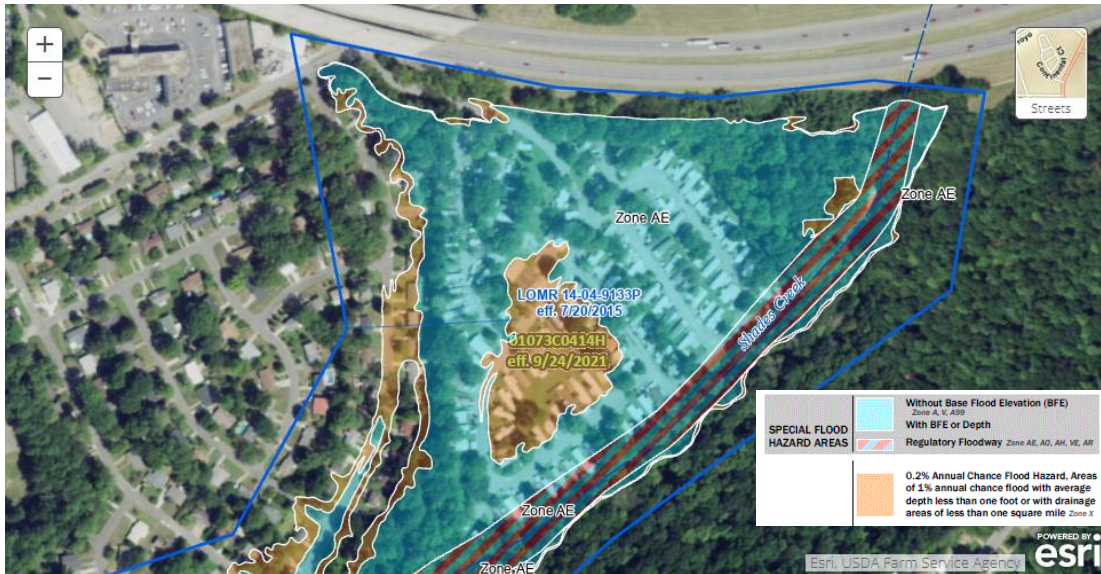


Figure 5: FEMA Flood Hazard Map - Section D

4.5 Prime and Unique Farmlands

For highway projects using federal funds, the Farmland Protection Policy Act applies. This means for federal highway projects that have the potential to convert important farmland to a non-farm use, the land must be evaluated using the NRCS's LESA system. This land evaluation and site assessment system establishes a farmland conversion impact rating score, and this score is used to determine if potential adverse impacts on the farmland exceed the recommended allowable level.

A search of the Natural Resources Conservation Service's (NRCS) Web Soil Survey was used to determine the potential for prime and unique farmlands within the study area. Mapping generated by the Web Soil Survey website is provided in Appendix E. The NRCS Web Soil Survey shows that the study contains no prime farmland.

4.6 Hazardous Materials Properties

A search of the Alabama Department of Environmental Management's (ADEM) GIS Inspector tool was performed. There are a few underground storage tank (UST) incident sites in the vicinity of the study area; however, these sites have a cleanup date. The gas stations located in the study area have regulated USTs but there are no open incidents in the study area. Should the City elect to move forward with improvements using Federal or State money, a hazardous materials clearance letter will have to be obtained from ALDOT's Environmental Technical Section (ETS).

4.7 Environmental Justice

Environmental Justice (EJ) is a component of the National Environmental Policy Act (NEPA) that seeks to ensure that all socio-economic groups share in the benefits and burdens of Federal transportation projects. Two areas of environmental justice that frequently become a concern are areas with a high minority population or areas where the majority of the inhabitants are members of low-income households.

Table 2 provides a brief overview of the socioeconomic demographics surrounding the study area. The data is from the Environmental Protection Agency's (EPA) Environmental Justice Screening Tool (EJ Screen). The EJ Screen report is included in Appendix F. A 0.50-mile buffer area was added to the study area as that is a typical buffer used for FHWA projects. The information provided by the EJ Screen report reveals there are EJ communities present in the buffered study area.

Adverse effects to these communities are unlikely due to the nature of the proposed improvements centering on pedestrian and bicycle mobility. If federal monies are used to install proposed improvements, the sponsoring agency will need to ensure that all planning and outreach components of the project comply with environmental justice regulations under NEPA.

Table 2: Environmental Justice Screen Tool Summary

Socioeconomic Overview	Value	State Average	Percentile in State	USA Average	Percentile in USA
Demographic Index	34%	38%	53	35%	57
People of Color	41%	35%	62	40%	60
Low Income	27%	36%	33	30%	49
Linguistically Isolated	2%	1%	83	5%	61
Less Than High School Education	6%	13%	27	12%	41

4.8 Utilities and Right-of-Way

Major utilities within the study area include above-ground power lines, water lines, and sewer lines. Telecommunications and natural gas lines are also present in the study area.

Alabama Department of Transportation (ALDOT) right-of-way along Crestwood Boulevard (US-78) varies from approximately 147 feet to 220 feet. The right-of-way is narrowest between 17th Street South and 18th Street South. In addition to the City streets within the study area, the frontage road between 20th Street South and 25th Street South is within City right-of-way. Figures 6-7 display two right-of-way maps from Crestwood Boulevard (US-78) widening projects in the area which constructed the roadway to its current footprint. Appendix C includes mapping of parcel data, water lines, and sewer lines within the study area.

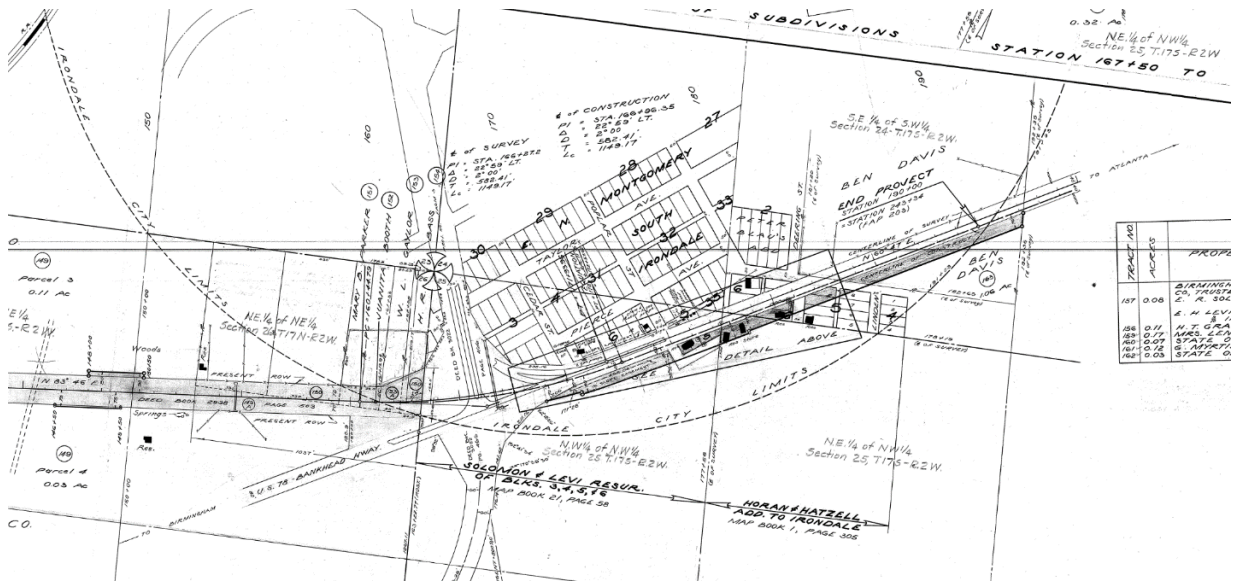


Figure 6: ROW Map from Crestwood Boulevard (US-78) Widening Project, 1946

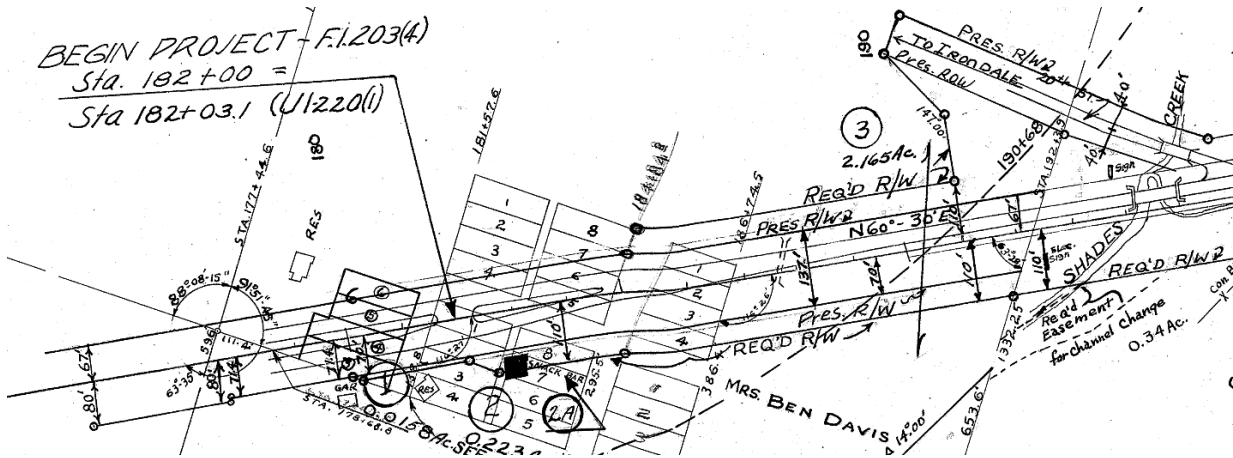


Figure 7: ROW Map from Crestwood Boulevard (US-78) Widening Project, 1952

Based on the right-of-way map dated 1946 (Figure 6), Crestwood Boulevard was realigned and widened west of 16th Street South, with project limits extending to Deering Street. Based on the right-of-way map dated 1952 (Figure 7), Crestwood Boulevard was widened with additional right-of-way acquisitions executed east of present-day 18th Street South. East of 18th Street South, the right-of-way width appears to be approximately 147 feet, based on the map in Figure 7. With the acquisition from the widening project, the right-of-way width incrementally steps to approximately 220 feet. On the north side of Crestwood Boulevard, the increase in width appears to occur at Deering Street. On the south side of Crestwood Boulevard, the increase appears to occur just east of 18th Street South. Throughout Section C, slightly more right-of-way exists south of the Crestwood Boulevard centerline than north of the centerline, which could become relevant for evaluating constructability of bicycle and pedestrian accommodations.

5 Improvement Alternatives

This study explored improvement opportunities in the study area to create a path for pedestrians and cyclists. The goal is to provide active transportation connectivity for both modes from one end of the route to the other. As a combined multi-use trail, it is recommended that a 10-foot wide asphalt or concrete path be implemented along the route. There are several challenges in both constructability and incorporating the facility within the confines of existing right-of-way, existing structures, terrain, street crossings, and streams.

For the purposes of this study, the overall study area was divided into four different subsections based on existing roadway cross sections and land use along Shades Creek. The improvement options for each of these sections have been developed in consideration of the constraints and needs of each. These sections are described below. Because each section contains specific challenges, they can be implemented together or separately through phases. Figure 8 shows an overall plan rendering of the trail. Higher resolution versions of each conceptual figure and cross section are available in Appendix A of this report.

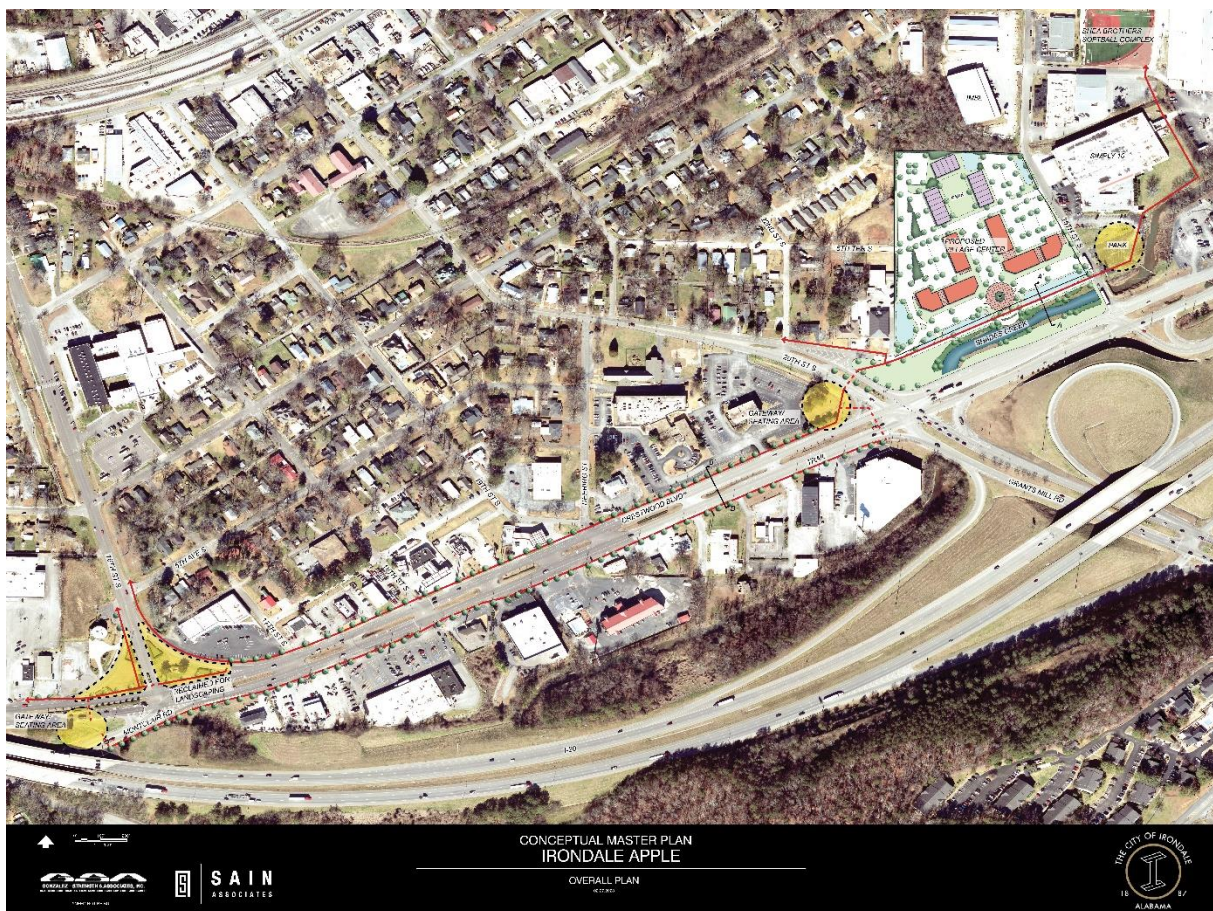


Figure 8: Overall Conceptual Plan

5.1 Section A: East of 25th Street South

The proposed improvements for Section A include implementing a 10-foot multi-use trail originating at the Shea Brothers Softball Complex to the proposed pocket park at the Simply 10 site. The trail would be located adjacent to the existing ditch between the Motion Industries and Simply 10 parcels line to Shades Creek, where the trail is proposed to turn west alongside the creek. The Cahaba River Society's feasibility study for a pocket park within the footprint of the Simply 10 parking lot will impact the path of the trail moving forward, but a connection to the proposed pocket park should be implied if plans for the park come to fruition.

The following improvements are recommended within Section A of the study area:

1. Construct a 10' wide concrete path from the Shea Brothers Softball Complex to 25th Street South. Where feasible, maintain a 25' buffer from the existing Shades Creek bank.
2. Install high-visibility marked crosswalks at the softball complex and 25th Street South.
3. Incorporate green infrastructure such as bioretention, constructed wetlands, dry swales, or rain gardens along Shades Creek where feasible.

Figure 9 shows the proposed improvements in Sections A and B.

5.2 Section B: 25th Street South to 20th Street South

There are two options to continue the trail through Section B: utilize the frontage road just north of Shades Creek, or Crestwood Boulevard just south of Shades Creek. It was determined that utilizing the frontage road north of Shades Creek would provide benefits to pedestrian and cyclist safety while allowing the trail to remain on City right-of-way.

The following improvements are recommended within Section B of the study area:

1. Mill existing pavement and base along the frontage road between 25th Street South and the existing Morris-Shea Bridge Company access.
2. Construct a 10' wide concrete path from 25th Street South to 20th Street South. The northern edgeline of the proposed path should match the existing edge of pavement of the frontage road after its milling. Where feasible, maintain 3:1 slopes from the proposed path to Shades Creek.
3. Construct connections to the trail in concurrence with any redevelopment of the existing Devon Self-Storage property.
4. Install additional 6' wide sidewalk along 20th Street South to connect the proposed trail to the existing sidewalk at 22nd Street South.
5. Incorporate green infrastructure such as bioretention, constructed wetlands, dry swales, or rain gardens along Shades Creek where feasible.

Figure 9 shows the proposed improvements in Sections A and B, while Figure 10 shows Cross-Section A'-A of the trail along Shades Creek.



Figure 9: Conceptual Diagram of Improvements - Sections A & B



Figure 10: Trail Cross Section A'-A

The Village Center shown in Figure 11 is a conceptual master plan of what redevelopment could look like at the current site of Devon Self Storage. The plan is purely conceptual; the parcel is not owned by the City. However, the installation of a multi-use trail adjacent to Shades Creek would provide a prospective developer with a vision of this location's potential adjacent to downtown Irondale and key roadways.

Land uses within the Village Center could include shopping, dining, municipal, office, or entertainment uses. A trail connecting to the existing sidewalk network would provide a low-stress alternative mode to access a high-traffic, human-oriented development.

Removing the existing frontage road does not limit meaningful access to the parcel. 25th Street South intersects Crestwood Boulevard at a signalized intersection, and the parcel would retain multiple accesses along 25th Street in this scenario. A connection could also be reestablished at the southwest corner of the parcel, but it would be redundant with the opportunity to connect to the existing street network at 5th Terrace South.

A high-resolution version of Figure 11 is also included in Appendix B.



Figure 11: The Village Center - A Conceptual Sketch Master Plan

5.3 Section C: 20th Street South to 16th Street South

With the feasibility concerns of constructing a trail along Shades Creek in Section C, the more direct multimodal connection lies along Crestwood Boulevard (US-78). Providing a multi-use trail, sidewalk, and pedestrian crossing accommodations along Crestwood Boulevard would reconnect the residential blocks of downtown Irondale to the isolated commercial developments between Crestwood Boulevard and I-20.

The following improvements are recommended within Section C of the study area:

1. Develop a comprehensive access management plan for Crestwood Boulevard between 16th Street South and 20th Street South to improve multimodal accommodations, safety operations, and traffic operations.
2. **Construct a 10' wide concrete path** on the south side of Crestwood Boulevard from 20th Street South to 16th Street South.
3. Construct a **6' wide sidewalk** on the north side of Crestwood Boulevard from 20th Street South to 16th Street South.
4. **Construct additional 6' wide sidewalk along 16th Street South** from Crestwood Boulevard to the existing sidewalk at 5th Avenue South.
5. Reclaim the space currently held by large radii channelized right turn lanes on the north side of Crestwood Boulevard at 16th Street South. Mill existing pavement and replace with landscaping or multimodal accommodations. In conjunction with milling, install a non-channelized right turn lane along Crestwood Boulevard westbound at 16th Street South. Note that 16th Street South is a signed Truck Route, and the turn radius should accommodate the appropriate design vehicle.
6. In conjunction with Recommendation #2 and #3, install marked crosswalks and pedestrian signal heads on the west leg of the Crestwood Boulevard intersection with 20th Street South and Kilgore Memorial Parkway.
7. In conjunction with Recommendation #2 and #3, install marked crosswalks and pedestrian signal heads on the east and west legs of the Crestwood Boulevard intersection with 18th Street South.
8. In conjunction with Recommendation #2 and #3, install marked crosswalks and pedestrian signal heads on the east leg of the Crestwood Boulevard intersection with 16th Street South.

Several planning documents recommended separated or buffered bicycle lanes along Crestwood Boulevard in this area. The recommended improvements in Section C are not intended to replace or rule out any form of on-street bicycle lane. Providing accommodations for both high-confidence cyclists and low-confidence cyclists is critical to developing a multimodal transportation network for all.

Figure 12 shows the proposed improvements in Section C, while Figure 13 shows Cross-Section B'-B of the proposed improvements along Crestwood Boulevard. Higher resolution versions of both figures are included in Appendix A.



Figure 12: Conceptual Diagram of Improvements for Section C

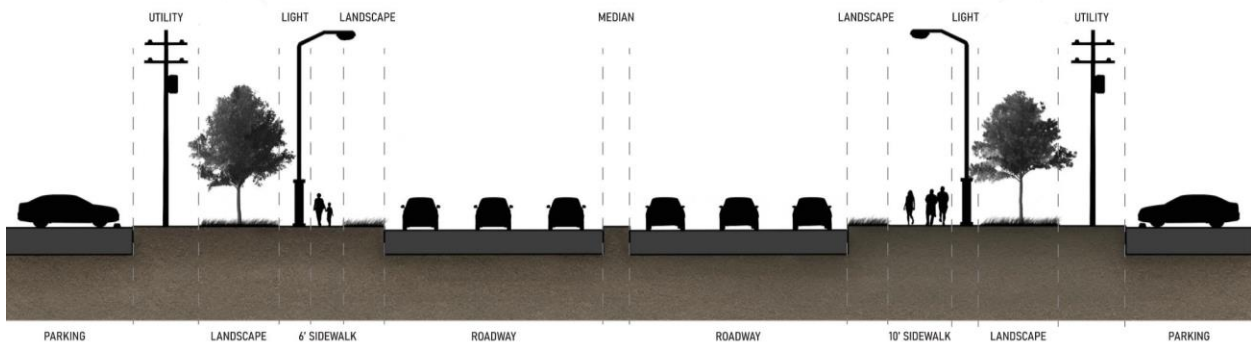


Figure 13: Roadway Cross-Section B'-B

5.4 Section D: 16th Street South to Irondale City Limit

The Irondale-Birmingham City Limit is located near the I-20 bridge over Montclair Road, only a short stretch of Montclair Road lies within the study area. For the improvement recommendations of this study, the logical termini lies at 16th Street South and the existing sidewalk on 16th Street South near 5th Avenue South. Continuing the trail along Montclair Road and reconnecting to Shades Creek would require a multi-jurisdictional effort between the cities of Birmingham and Irondale.

The following improvements are recommended in Section D:

1. Coordinate with the City of Birmingham's Shades Creek to Eastwood Trail APPLE Study project team to establish an appropriate accommodation along Montclair Road to ultimately reconnect with Shades Creek.
2. If accommodations along Montclair Road are not considered in the City of Birmingham's APPLE Study, the following improvements are recommended:
 - a. Construct a 6' wide sidewalk along the north side of Montclair Road from Crestwood Boulevard to the existing sidewalk near W.E. Putnam Middle School. Install marked crosswalks and rectangular rapid flashing beacons (RRFB) at Wildoak Drive and Northumberland Road.
 - b. Construct a 6' wide sidewalk along the south side of Montclair Road from Trailer Lane to Crestwood Boulevard.

A partnership between the Alabama Power Company and St. Martin's in the Pines could be explored to utilize an existing power easement to establish a trail connection from Montclair Road to Flora Johnston Nature Park. Establishing a street-based trail via Elder Street is another opportunity to connect to Flora Johnston Nature Park.

5.5 Image Boards: Trail Furnishings, Green Infrastructure, and Character

Throughout Sections A, B, and C, the proposed improvements would benefit from a uniform set of furnishings to tell a story on behalf of the City. The City of Irondale has a rich history, and a trail offers an opportunity to enhance its image and promote use of the trail. Figures 14-16 show image boards of the proposed trail. High-resolution versions of the image boards can also be found in Appendix B.



Figure 14: Image Board 1 of 3 – The Trail



Figure 15: Image Board 2 of 3 – The Village Center

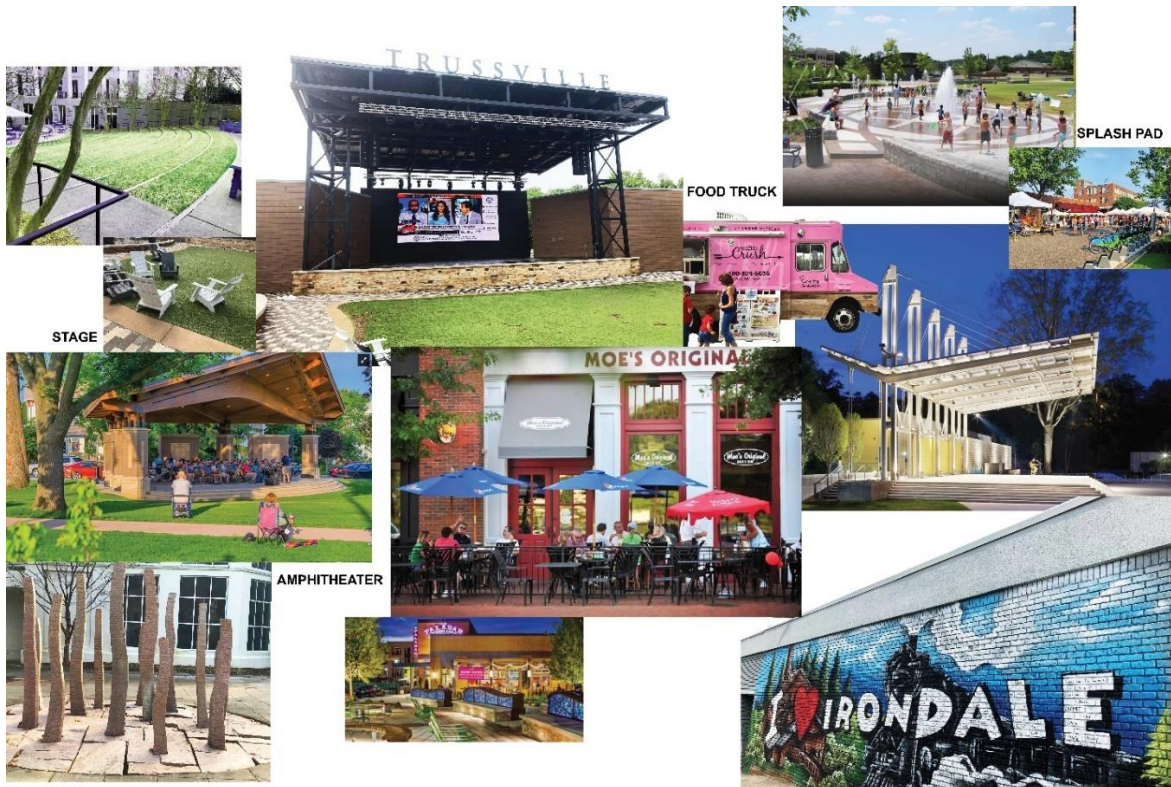


Figure 16: Image Board 3 of 3 – The Village Center

5.6 Opinions of Probable Cost

All costs included in this report are planning level costs and assume the project utilizes federal funding to install the improvements. Roadway items including sidewalk were estimated based on engineering experience and bid tabulations from recent projects. The total estimated project cost was prepared for the 2023 planning year. This number should be increased to account for rising costs due to inflation should the improvements not be implemented in 2023.

The totals include opinions of probable cost of construction, preliminary engineering (15%), construction engineering and inspection (15%), ALDOT indirect costs (13.7%), and a 20% contingency. Contingency includes miscellaneous and/or unknown items that cannot be quantified at the time of this study. The totals do not include utility relocation and right-of-way costs. Both are highly variable and depend on several factors with limited information available at the time of this study. The cost of street trees and landscape remediation are not included in the opinions of probable cost.

Sections A & B

Table 3 provides a summary of opinions of probable cost of improvements in Sections A and B, with the assumption that the project uses federal funds. Appendix G contains detailed estimates of opinions of probable cost.

Table 3: Opinions of Probable Cost Proposed Improvements

Improvement Section	Opinion of Probable Cost
Section A: East of 25 th Street South	\$630,000
Section B: 25 th Street South to 20 th Street South	\$1,450,000
Sections A and B Subtotal	\$2,080,000

*Utility Relocation and Right-of-Way Acquisition Not Included in Totals

Right-of-way acquisition will be necessary in Section A as the trail alignment passes through the Simply 10 parcel. Decorative lighting was included in Sections A and B at a spacing of 90 feet per post. Within Section B, the slope between the creek bank and the concrete path will determine the need for a handrail. A handrail was included in the estimate for Section B as a conservative measure if a 3:1 slope is not feasible.

Section C

Implementing the recommendations in Sections A and B is more financially attainable than doing so in Section C. Opinions of probable cost for the recommended improvements in Section C were developed on a per-mile basis due to the unknowns associated with comprehensive access management. The goal of developing opinions of probable cost in Section C for the purposes of this study is to establish an order-of-magnitude cost for a comprehensive access management project with bicycle and

pedestrian accommodations. Implementing the recommended improvements in Section C is estimated to be approximately \$5,000,000. A more precise opinion of probable cost would heavily depend on access management recommendations.

Section D

For the improvement recommendations of this study, the logical termini lies at 16th Street South and the existing sidewalk on 16th Street South near 5th Avenue South. Continuing the trail along Montclair Road and reconnecting to Shades Creek would require a multi-jurisdictional effort between the cities of Birmingham and Irondale. With the majority of Section D lying outside of the study area in Birmingham City Limits, the recommended improvements were omitted from opinions of probable cost.

Additionally, the Montclair Road and Elder Street areas lie within the scoped study area of the City of Birmingham's Shades Creek to Eastwood Trail APPLE Study. At the conclusion of that study, coordination should occur between Birmingham and Irondale to establish appropriate connections at the city limits.

Phasing and Prioritization

Implementation of improvements in Sections A and B will likely operate on a different timeline than Sections C and D due to the scope, cost, and type of recommended improvements. Further details regarding potential funding sources for improvements are outlined in Section 7 of this report.

Sections A and B could heavily depend on adjacent redevelopment as a catalyst for the implementation of recommended improvements. For example, if redevelopment occurred at the site of Devon Self Storage, the new development could account for improvements associated with Section B by leaving space for the trail or constructing it in that location. This could reduce the scope of improvements that would need to be constructed with federal or state funds.

Due to the cost and scope of recommended improvements in Sections C and D, the timeline will likely be heavily dependent on the pursuit of federal funding and ALDOT coordination.

6 Accessibility

Per the Americans with Disabilities Act (ADA), facilities located within the public right-of-way must provide accessibility for all users including those with disabilities. The United States Access Board has developed proposed guidelines for pedestrian facilities in public rights-of-way. These guidelines are more commonly referred to as *Public Rights-Of-Way Accessibility Guidelines* or PROWAG. Per PROWAG, design, construction, and any alteration of pedestrian facilities within public rights-of-way, including local rights-of-way,

must be made accessible for pedestrians with disabilities. Although PROWAG has not yet been officially adopted by the United States Department of Justice, it is the standard recognized by ALDOT. Once PROWAG is officially adopted, it will be mandatory that the guidelines set forth by the United States Access Board be implemented into projects located within public rights-of-way. All proposed improvements should be designed in a manner that meets ADA and PROWAG guidelines.

7 Funding Sources

Costs associated with the design and construction of the proposed improvements could exceed the City’s current available resources. This section discusses funding sources that are available to aid in design and construction. Federal programs are administered by the Alabama Department of Transportation.

Table 4 details funding sources, the category of the source, and type of project for which the funding can be used.

Table 4: Funding Options

Funding Source	Category	Match Type
Transportation Alternatives Program (TAP)	Federal	80% Federal / 20% Local
Reconnecting Communities (RCP) Planning Grant	Federal	80% Federal / 20% Local
Reconnecting Communities Pilot (RCP) Implementation Grant	Federal	50% Federal / 50% Local
Safe Streets and Roads for All (SS4A)	Federal	80% Federal / 20% Local
Recreational Trail Program (RTP)	Federal	80% Federal / 20% Local
Rebuild Alabama Act – Annual Grant Program	State	Up to 100% State
Local Municipality	Local	100% Local

7.1 Federal Funding

The Transportation Alternatives Program (TAP) is an 80% Federal/20% Local match program continued through the Bipartisan Infrastructure Law (BIL), also known as the Infrastructure Investment and Jobs Act (IIJA). TAP funding is available for projects defined as transportation alternatives. Example of transportation alternatives include the

following scenarios: on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhance mobility, community improvement activities such as historic preservation and vegetation management, environmental mitigation related to stormwater and habitat connectivity, recreational trail projects, safe routes to school projects, and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former divided highways.

TAP funding can be pursued through an application with RPCGB and ALDOT. The same application can be used for submittal to ALDOT and RPCGB. The application deadline is typically due in early summer of each year. The total amount of federal participating funding for a project is capped at \$1,000,000 (\$800,000 federal/\$200,000 local match).

The Reconnecting Communities Pilot (RCP) program is a discretionary grant program established by the Bipartisan Infrastructure Law (BIL) with \$1 billion in funding over the next five years. The program is dedicated to reconnecting communities that were previously cut off from economic opportunities by transportation infrastructure. Similar to SS4A, planning grants and capital construction grants are available through the Reconnecting Communities Pilot Program. Any local government or metropolitan planning organization is eligible to apply. The planning grants require an 80% Federal/20% Local match, while the implementation grants are a 50% Federal/50% Local match.

Eligible facilities include highways, streets, or other transportation facilities that create a barrier to community connectivity. This includes barriers to mobility, access, or economic development due to high speeds, grade separations, or other design factors. Interstate 20 and Crestwood Boulevard (US-78) bisect Irondale and appear to fit the description for the RCP program. For this reason, recommended improvements in all sections of the study area could be eligible, but the recommended improvements in Section C and D appear to best fit the description for this funding opportunity.

The NOFO for FY 2022 program closed in October 2022, and 45 grants totaling \$185 million were announced on February 28, 2023. A timeline for the next NOFO has yet to be announced. The City is an eligible entity to apply for a planning grant to further study the improvements recommended in Section C along Crestwood Boulevard and under I-20, especially the improvements that cannot be adequately evaluated within the scope of an APPLE study. The owner of the roadway facility must be the applicant of record for a capital construction grant, which would be ALDOT in the case of both roadways.

The Safe Streets and Roads for All (SS4A) discretionary program is a competitive grant program enacted by the Bipartisan Infrastructure Law (BIL). The goal of the program is to reduce fatal and serious injury crashes on roadways, which is commonly known as Vision Zero. Approximately \$5 billion in appropriated funds are available from Fiscal Year (FY) 2022 through FY 2026. Planning grants and implementation grants for FY 2022 cycle

totaling \$800 million were announced on February 1, 2023. The next notice of funding opportunity (NOFO) for SS4A is expected in April 2023. Any local government or metropolitan planning organization is eligible to apply for SS4A funding, which is an 80% Federal/20% Local match program.

The City of Irondale falls within the scope of the RPCGB's planning grant, which was awarded February 1, 2023, for the development of a comprehensive safety action plan. Once this plan is completed, the City would be eligible for implementation grants through FY 2026. However, the implementation grants are limited to improvements outlined in the safety action plan which demonstrate a reduction in serious and/or fatal injury crashes. It's possible that certain safety action plan recommendations align with certain recommendations from this study, but it's likely that other funding sources will need to be tapped to construct the bulk of recommended improvements. The safety action plan should be reviewed upon completion for overlaps in recommendations.

Eligible activities for SS4A funding include the development or update of a comprehensive safety action plan, planning or design activities in support of a safety action plan, and carrying out projects or strategies identified in the safety action plan. Examples of implementation grants include installing pedestrian safety enhancements, closing network gaps, and supporting the development of bikeway networks. This program could supplement, recommend, or construct certain improvements recommended within each section of the study area.

The Recreational Trail Program (RTP) is a federal competitive grant program that is administered by the Alabama Department of Economic and Community Affairs (ADECA). During the FY2023 Funding Cycle, a total of \$1.6 million was appropriated for the program. The RTP allowed varying maximum grant amounts based on the trail type (\$200,000 for non-motorized, single-use trails; \$400,000 for non-motorized, diverse-use trails). Applicable permissible uses include the following: development of urban trail linkages; development of trailside and trailhead facilities; acquisition of easement for trail use; and construction of new trails.

Applications are typically due in the fall each year, and consultation with ADECA staff is required prior to submitting an application. Applicants with an open Land and Water Conservation Fund (LWCF) or unresolved compliance issues from a previous grant may be ineligible to apply for this funding source.

If the improvements within Section B are constructed first, the RTP could be an opportunity to implement recommended improvements in Section A due to the restricted funding total per project.

7.2 State Funding

The Rebuild Alabama Act authorizes the ALDOT Annual Grant Program, a \$10 million fund, for which cities and counties may apply. Additionally, the Program provides the opportunity for cities and counties to partner with the State on larger projects where adequate local funding may not be available. There is not a specified or required match for local governments to take on, but any funds that local governments can leverage to team with ALDOT to fund a project could play a role in the decision-making process. Up to \$250,000 per project can be awarded from this fund, and funds must be used for construction or a federal match when construction is imminent.

7.3 Local Funding

The City has the option to fund the design and construction of the recommended improvements using only local funds. Choosing this route allows the project design and construction to have shorter timelines and the potential for reduced project costs since fewer plan reviews would be required and City guidelines will govern the project design. The timeline for a locally funded project is estimated at 2-4 years.

8 Stakeholder Involvement

A kickoff meeting was held on September 7, 2022, at Irondale City Hall to discuss the project background, identify study priorities, and determine expectations for the study. Representatives from the City of Irondale, Cahaba River Society, Regional Planning Commission of Greater Birmingham (RPCGB), and Sain Associates were present.

A second meeting was held on January 10, 2023, at Irondale City Hall to discuss findings from existing conditions, preliminary trail alignments, deliverables, and next steps for the study. Representatives from the City of Irondale, Cahaba River Society, Regional Planning Commission of Greater Birmingham (RPCGB), Gonzalez-Strength & Associates, and Sain Associates were present.

A third meeting was held on April 3, 2023, at the Freshwater Land Trust office to coordinate with other trail planning efforts adjacent to the study area. Coordination was performed with the City of Birmingham's efforts on the Shades Creek APPLE Study and trail planning efforts of the Freshwater Land Trust. Representatives from Sain Associates, Freshwater Land Trust, the City of Birmingham, and Dynamic Civil Solutions were present.

9 Next Steps

There are several near-term tasks to be completed that could make the overall picture clearer within the study area. The following items should be addressed prior to pursuing a funding source for constructing the recommended improvements:

- Complete the Cahaba River Society's pocket park feasibility study to determine what role it could play in the implementation of this study's recommended improvements.
- Initiate discussions with the owner of the Devon Self-Storage property owner to assess the appetite for redevelopment.
- When the City of Birmingham's Shades Creek to Eastwood Trail APPLE Study is completed, coordinate with the project team to determine any overlap in recommendations.
- Develop a conceptual plan for comprehensive access management recommendations between 16th Street South and 20th Street South.

Completing the tasks above would further determine what funding sources are appropriate to pursue for the recommended improvements. Once Federal funds are in place for the project, an environmental document will need to be prepared prior to design, right-of-way acquisition, utility relocation, and construction would follow.

If the City chooses to move forward with a locally funded project, the timing, scheduling, and implementation of the installation would be at their discretion.

Appendix A – Conceptual Master Plan of Improvements

The Appendix was too big to upload to the website. For a copy of the Appendix please email Mike Kaczorowski: mkaczorowski@rpcgb.org