

Dunnavant Valley Greenway-APPLE Study

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Executive Summary

Study Initiation

The study was initiated by Shelby County through the Advanced Planning, Programming, and Logical Engineering (APPLE) program developed by the Regional Planning Commission of Greater Birmingham (RPCGB). The County requested professional planning assistance to evaluate the feasibility of completing the Dunnivant Valley Greenway, a distance of approximately three (3) miles.

Study Area

The study area is located in a rural, unincorporated area of Shelby County and primarily follows along County Road 41, a northeasterly route. Prior to the initiation of this study, the County established potential phasing for the Dunnivant Valley Greenway. The existing Dunnivant Valley Trail (Phase 1; 1.8 miles) connects the trailhead located at the 1996 Fields and the County Road 41 trailhead. This existing portion serves as the southern study area limits. Phase 2 of the trail stretches from the County 41 trailhead northward to Mt Laurel, a distance of approximately 1.6 miles. Phase 3 encompasses Mt Laurel and ends at Villas Belvedere, the northern study limits, a distance of approximately 1.7 miles.

Purpose for the Study

This study was undertaken to assess the feasibility of providing a recreational trail within the study area that would allow users the opportunity to enjoy the scenic environment offered by Dunnivant Valley. This trail would be accessible to the immediate community as well as attract others to the area. The purpose of this study is to evaluate options including trail alignments and funding opportunities and to identify a preferred build option. Through discussions with the County, RPCGB, and stakeholders, a preferred trail alignment was selected and is discussed in this report.

This document summarizes:

- existing conditions,
- the process used to identify potential alternatives for recreational use,
- the resulting alternatives that were developed from that process,
- an evaluation of potential positive and negative impacts to the area and adjacent properties that may be associated with each potential improvement,
- identification of a preferred build option,
- funding options, and
- stakeholder input.

Improvement Options

Different options for improvement exist for the study area and are listed below:

- No Build – The No Build Option assumes no additional improvements are constructed. This option provides no recreational improvement to the area.
- Build Option 1 – Build Option 1 includes the use of federal funds to construct a multi-use path, a 10 foot wide asphalt paved path that would accommodate all users and allow for bikes and pedestrians to use the facility concurrently.
- Build Option 2 – Build Option 2 includes the installation of a six foot wide recreational trail; installation using either local funding (Build Option 2A) or federal funding (Build Option 2B) was evaluated.

- Build Option 3 - Build Option 3 evaluates the installation of a path that begins as a recreational trail and then transitions to a multi-use path as it approaches the developed area of Mt Laurel. A facility that transitions in character to match its surroundings is consistent with the rural-urban transect planning model. It could be constructed using either local funding (Build Option 3A) or federal funding (Build Option 3B).

Each build option could be developed in phases based on logical segments.

Stakeholder Involvement

Three stakeholder meetings were conducted throughout the duration of this study. Representatives from Shelby County, RPCGB, Friends of Dunnavant Valley Greenway, and EBSCO were present at both meetings. An in-field stakeholder meeting was held on October 19, 2016 at the existing Dunnavant Valley Greenway trailhead. The purpose of this meeting was to discuss findings from the initial field review and to obtain input from the stakeholders. Following the development of potential build options, a second stakeholder meeting was held on December 19, 2016 at Double Oak Community Church located in Mt Laurel. Stakeholders selected Build Option 2A as their preferred build option with a few revisions to the alignment. On April 4, 2017, a third stakeholder meeting was held to present the Preferred Alternative.

Preferred Alternative

Both stakeholder groups suggested that the Build Option 2A alignment, presented during the December 19, 2016 meeting, be revised at the intersection of Kessler Avenue and Abbott Square within Mt Laurel. Previously, the alignment for Build Option 2A turned right at this intersection and continued through a residential portion of Mt Laurel; however, stakeholders prefer that the alignment turn left at this intersection and the trail continue along County Road 41 and then connect to the sidewalk located on Belvedere Cove. The sidewalk network in Belvedere Cove connects to the sidewalk network in Villas Belvedere. In addition to the change associated with Kessler Avenue, the proposed alignment of Build Option 2A was modified to eliminate its access through Shelby County Board of Education (BOE) property. It is the BOE's preference that no trails access their property. These alignment revisions to Build Option 2A created the Preferred Alternative. For the purposes of this study, the timeline associated with the Preferred Alternative has been estimated at one to two years with an approximate total cost estimate of \$470,000.

Next Steps

The County has stated a preference for using local funds to construct the project. If locally funded, the timing, scheduling, and implementation of the installation would be at their discretion. If instead Shelby County chooses to move forward with implementing any or a portion of the Preferred Alternative with Federal CMAQ or TAP funding, the next step would be to request inclusion of a project in RPCGB's Transportation Improvement Plan (TIP). In 2019, RPCGB will solicit for projects to be included in the next TIP planning cycle. Projects that utilize the APPLE program provide local governments the opportunity to request funding between TIP cycles. The preparation of this feasibility study can be used in the application for funds from the RPCGB for future improvements.

Once Federal funds are in place for the project, an environmental document will need to be prepared. The environmental document must include technical studies and public involvement outreach necessary to comply with procedures of the National Environmental Policy Act (NEPA). Once the environmental study has been completed, the design would be undertaken, and construction would follow. If it is determined that additional right-of-way is required, acquisition would be conducted prior to construction.

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1 Introduction

1.1 Purpose of the Feasibility Study

The study was initiated by Shelby County through the Advanced Planning, Programming, and Logical Engineering (APPLE) program developed by the Regional Planning Commission of Greater Birmingham (RPCGB). The County requested professional planning assistance to evaluate the feasibility of completing the Dunnavant Valley Greenway, a distance of approximately three (3) miles.

Shelby County recognizes the community's desire, as expressed in the Dunnavant Valley Small Area Plan, to extend the existing Dunnavant Valley Greenway to allow for increased recreational opportunity and improved non-motorized connectivity within the Dunnavant Valley community. This study was undertaken to assess the feasibility of providing a recreational trail within the study area that would allow users the opportunity to enjoy the scenic environment offered by Dunnavant Valley. This trail would be accessible to the immediate community as well as attract others to the area. The purpose of this study is to evaluate options including trail alignments and funding opportunities and to identify a preferred build option. Through discussions with the County, RPCGB, and stakeholders, a preferred trail alignment was selected and is discussed in this report.

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- existing conditions,
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- identification of a preferred build option,
- funding options, and
- stakeholder input.

1.2 Study Approach

The study was performed using a two-stage process. Step one included an evaluation of the existing conditions and constraints. After all constraints were identified, alternatives were developed to address identified limitations.

For stage one, a base map was prepared using aerial images and available GIS data. All information was compiled and evaluated to define the needs that should be addressed by the project along with constraints and opportunities for improvement. Previously prepared planning documents including the Dunnavant Valley Small Area Plan and the Dunnavant Valley Community Greenway Plan were reviewed, as well as design plans for a greenway between Birch Creek and Mt Laurel. A field review was also performed as part of stage one. This field review consisted of walking the study area, taking measurements and inventory, and investigating what impacts improvement options would have to the study area.

For stage two, "build options" were developed and evaluated relative to their ability to address the purpose and need for the project. These build options were presented during a stakeholder meeting. Items presented included potential trail dimensions, alignments, comparative cost estimates, and funding sources. Stage two concluded with the identification of a preferred build option based on stakeholder input.

2 Existing Conditions

A search of documents and databases, field reviews, and compilation of GIS data were performed to analyze existing conditions and identify environmental features. Planning documents, adopted by Shelby County, document their efforts to develop a vision for the Dunnivant Valley area including the installation of a recreational trail. This section provides an overview of these documents and discusses the gathered data.

2.1 Description of the Study Area

The study area is located in a rural, unincorporated area of Shelby County and primarily follows along the northeasterly route of County Road 41/Dunnivant Valley Road, hereafter referred to as County Road 41. Prior to the initiation of this study, the County established potential phasing for the Dunnivant Valley Greenway. The existing Dunnivant Valley Trail (Phase 1; 1.8 miles) connects the 1996 Fields and the County Road 41 trailhead. This existing portion serves as the southern study area limits. Phase 2 of the trail stretches from the County Road 41 trailhead northward to Mt Laurel, a distance of approximately 1.6 miles. Phase 3 encompasses Mt Laurel and ends at Villas Belvedere, the northern study limits, a distance of approximately 1.7 miles. Figure 1 provides a map of the study area.

2.2 Overview of Existing Planning Documents

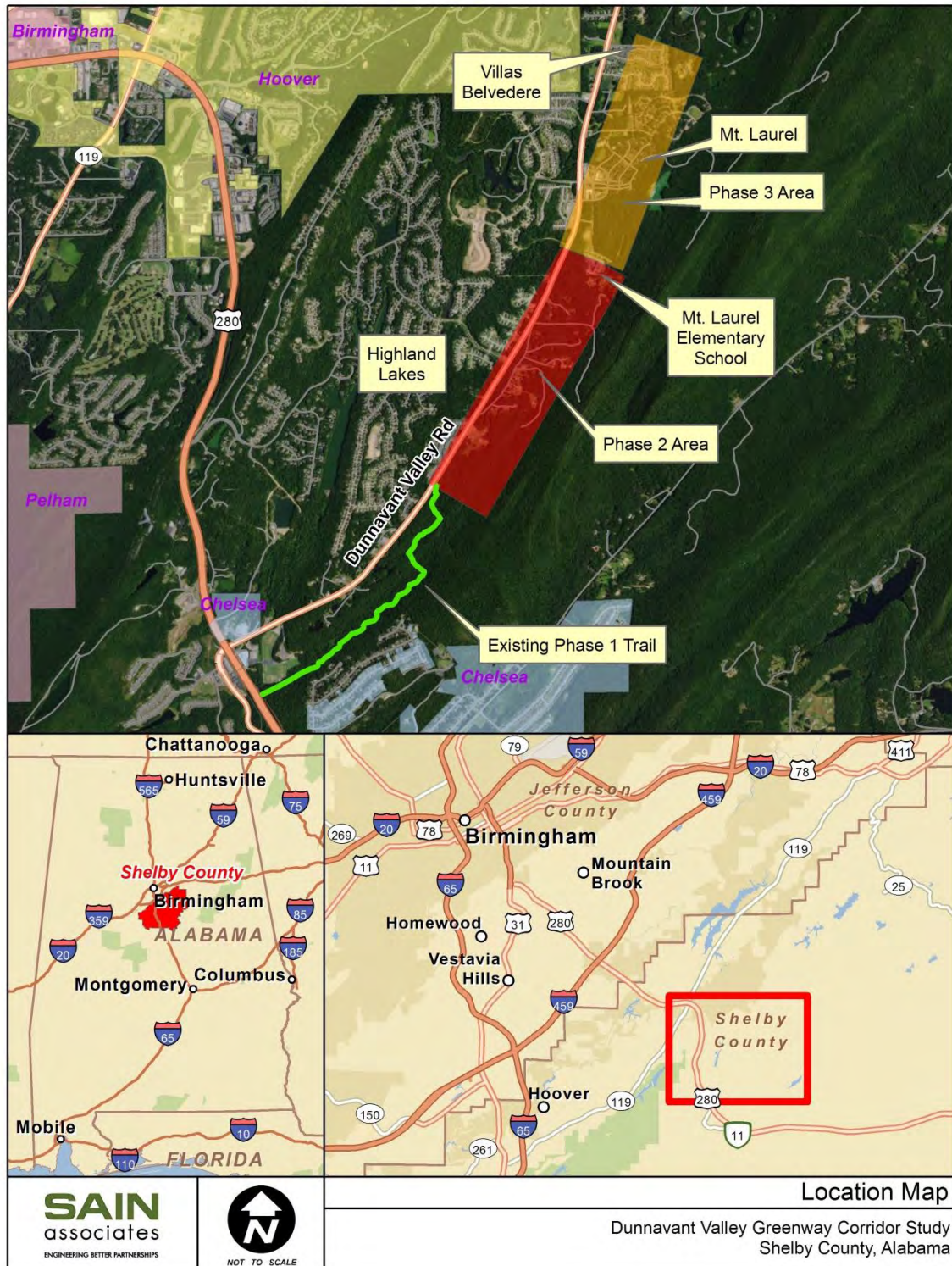
The *Dunnivant Valley Small Area Plan* prepared by the Shelby County Department of Development Services, and approved by the Shelby County Planning Commission and ratified by the Shelby County Commission in 2014 contains a Parks and Recreation Section. Per this section the existing Phase 1 of the Dunnivant Valley Greenway uses Shelby County and private rights-of-way. Future phases of the greenway are planned to extend toward Mt Laurel and Villas Belvedere. This section of the *Dunnivant Valley Small Area Plan* also includes two goals for the greenway: improve pedestrian and bicycle safety and increase public recreational opportunities.

The *Dunnivant Valley Community Greenway Plan* was sponsored by Shelby County and prepared by the RPCGB in 2007. As part of this plan a series of public meetings were held. Citizens attending these meetings expressed their desires for the valley. The goals included:

- maintaining County Road 41 as a two-lane facility,
- reducing the travel speeds along the corridor,
- maintaining the rural character of the area,
- establishing pedestrian connections between subdivisions, and
- developing a trail linking Villas Belvedere and the 1996 Fields.

In 2011, the Shelby County Highway Department completed a cost analysis study for the construction of a six foot wide paved trail along a portion of County Road 41 and Old Dunnivant Valley Road from the County Road 41 trailhead to Mt Laurel.

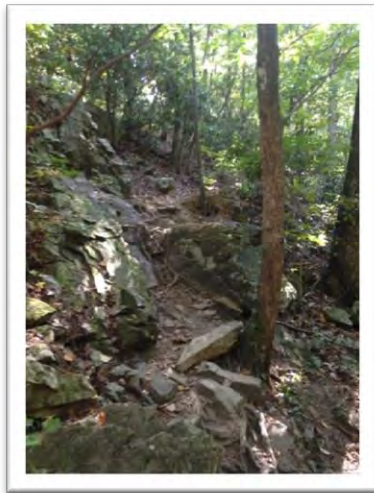
Figure 1: Location Map



2.3 Field Review Observations

A field review of the area was performed on September 13, 2016. During this field visit, observations were made concerning several phases of the Dunnavant Valley Greenway. The entire Phase 1 section was walked. The typical section of Phase 1 varies from a narrow width, only wide enough for one person to travel, to a much wider area large enough for several users. The walking surface along Phase 1 also varies from very rough, rocky terrain to a smooth gravel path. There is a gravel parking area located at the trailhead with enough space to accommodate roughly eight to 10 vehicles (see Figure 2). A map of the existing trail along with rules is posted at the County Road 41 trailhead. A small section of the trail leaving the trailhead is rather steep and covered in gravel. The gravel soon gives way to a bare earth

Figure 3: Rock Scramble



trail with exposed tree roots (see Figure 3). Phase 1 also includes what is referred to as a rock scramble and a rock garden. In these areas, the trail surface consists of large rocks in which the user has to climb over to continue along the trail. Figure 4 shows a view of the rock scramble.

For the most part, the Phase 1 trail parallels Yellowleaf Creek; however there are some areas where bridges are used to cross the trail. These bridges range from a narrow log bridge to a wider, wooden foot bridge, to a large concrete and steel bridge that connects the soccer fields to the trail. Photos of the varying bridge types are shown in Figures 5, 6, and 7.

Figure 5: Log bridge



Figure 6: Foot bridge

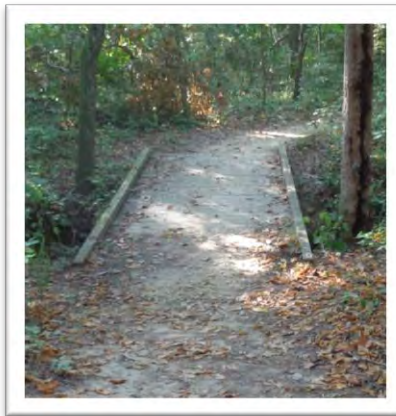


Figure 7: Bridge at soccer fields



Figure 2: Dunnavant Valley Greenway Trailhead



Figure 4: Exposed Tree Roots



Potential locations of Phases 2 and 3 were also investigated during the initial field review. As shown in Figure 1, Phase 2 extends from the County Road 41 trailhead northward to connect to Mt Laurel. Currently, there is a worn path, shown in Figure 8, which follows this alignment. The Phase 2 area is primarily wooded with some residential properties. It is likely that agreements with private property owners would be required to extend the trail northward. Figure 9 provides a view of the wooded area located between County Road 41 and Old Dunnivant Valley Road. This area is primarily flat; however, there are other parts of the Phase 2 area with greater topographical variations.

Figure 8: Worn path leaving the trailhead



Figure 9: Property between CR-41 and Old Dunnivant Valley Road



Phase 2 connects to Phase 3 at Mt Laurel, more specifically near Mt Laurel Elementary School. There is an existing sidewalk that connects the school to the Mt Laurel commercial area. This sidewalk is six and one-half feet wide with a brick paver surface (see Figures 10 and 11). The same type of sidewalk extends throughout most of Mt Laurel. There are several areas within the community where the existing sidewalk doesn't meet the Americans with Disabilities Act. Although sidewalk ramps exist at the intersections, most exceed the maximum allowable grade. In addition, there are no ramps located at the alleyways (see Figure 12). During the field review permanent sidewalk obstacles were also observed; these obstacles included rock mailboxes and a rock tree well located at the park (see Figures 13 and 14). The paver area shown in Figure 14 is also used as parking area. Phase 3 connects to the Belvedere Cove subdivision where concrete sidewalk is present throughout the neighborhood.

Figure 10: Sidewalk near Mt Laurel Elementary School

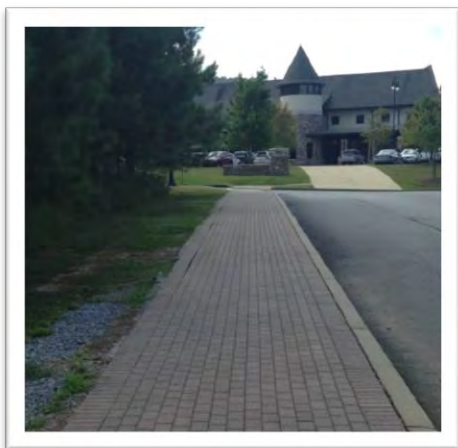


Figure 11: Sidewalk ramp in Mt Laurel commercial area



Figure 12: Lack of ramps at alleyway



Figure 13: Rock mailbox



Figure 14: Rock tree well and parking area at park



2.4 Property Research

Property research shows that the proposed build options travel through sixteen to twenty parcels. The majority of these parcels are owned by developers, with Ebsco Industries, Inc. holding the largest stake with ten parcels. Other owners include Highland Lakes Development, LLC., Eddleman Lands, LLC., Town Builders, Inc., and the Shelby County Board of Education. In order to extend the Dunnavant Valley Greenway, property would have to be acquired or easements obtained from these property owners. The mapping and table provided in Appendix A provides the property owner and number of parcels impacted.

2.5 Utility Identification

GIS data was collected to identify utilities located in the study area. These in-place utilities include overhead power, sanitary sewer, gas, and water. GIS data reveals two water mains, a 12" and 20" line, parallel to the east side of County Road 41. Near Mt Laurel Elementary School it appears that the 20" water main crosses to the west side of County Road 41. Additionally, a 10" force main is located on the west side of County Road 41. This force main crosses to the east side of County Road 41 near the Mt Laurel community and transitions to a 4" force main north of Highland Village Drive. The water mains and the force main are located within the County Road 41 right-of-way. Also located within County Road 41 right-of-way is an 8" high pressure gas main. This gas main is primarily located along the east side of County Road 41. Although the utilities present in the study area are rather significant, it is expected that any utility conflicts with the proposed build options would be minor and could easily be avoided by revising the trail alignment or narrowing the trail if needed. Appendix A provides mapping that shows the utilities discussed in this section.

3 Environmental Features

3.1 Threatened and Endangered Species

A letter was sent to the United States Fish and Wildlife Service (USFWS) on September 15, 2016 to obtain background information on potential items of concern. USFWS responded with a letter dated September 29, 2016 noting that there are ten endangered or threatened species that may occur in the project area. A habitat assessment and applicable surveys are recommended by USFWS in order to determine whether or not any of the listed species occur in the area. See Appendix B for the USFWS response letter.

The presence of any of these species does not prevent the County from moving forward with a trail project but it will have an impact on the project. Should the County elect to use Federal funding for the design or construction of the trail, additional coordination with USFWS will be required and the presence of certain species could impact construction scheduling.

3.2 Primary and Unique Farmlands

On September 13, 2016 a letter was sent to the United States Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS). Mapping produced via USDA's Web Soil Survey was also included with the letter. This mapping shows the potential greenway study area as well as areas of prime farmland and farmland of statewide importance. The intent of the letter was to obtain concurrence from NRCS that these farmlands would not be impacted by the proposed trail. Per correspondence from NRCS dated December 5, 2016, there is in fact no prime farmland located in the project area. Appendix C provides the package submitted to NRCS and their concurrence.

3.3 Historic and Archaeological Properties

Per the National Register of Historic Places (NRHP) database, there are no known historic properties located in the study area. During the field review, no potential historic properties were identified. Research performed by the University of Alabama's Office of Archaeological Records (OAR) on September 21, 2016 indicates there are no previously recorded archeological sites or surveys located within the study area. This is not an indicator that no sites exist in the area but that no areas have been studied or filed with OAR. See Appendix D for documentation of coordination with OAR. The presence of archaeological sites does not mean the trail cannot be built but it does mean that additional steps will be required during the design and construction processes.

Should the County move forward with obtaining Federal monies for the installation of the trail, it is recommended that a Phase 1 cultural resources study be performed. This study would be able to identify and document any historic properties, as well as, identify any known or unknown archaeological sites. The Alabama Historic Commission would also have to concur with the findings in the cultural resources study. If local funds are used, a Phase 1 cultural resources study is not required.

3.4 Wetlands and Floodplains

According to the Cahaba Heights Quadrangle map and the National Wetlands Mapper there are three blue line streams that the proposed trail would cross. One of the streams is the North Fork Yellowleaf Creek and the other two are unnamed tributaries of this creek. A United States Army Corps of Engineers' (USACOE) permit will be required for any improvements that will cause storm drainage to discharge to any blue line stream. A USACOE permit will also be required if any bridge is installed below the normal high water mark. An ADEM permit will be required for improvements greater than one acre in size.

Although there are freshwater ponds located within the study area, there are no wetlands that would be impacted by the extension of the Dunnivant Valley Greenway. In addition, the ponds shown on the National Wetlands Mapper have since been modified by subdivision developments. There are no floodplains or flood zones that would be impacted by the Dunnivant Valley Greenway extension. Mapping showing wetlands and flood zones is provided in Appendix E.

3.5 Public Recreational Areas

Section 4(f) is a term that refers to a special provision included in the Department of Transportation ACT (DOT Act) of 1966 governing the use of land for Federal Highway Administration (FHWA) and other DOT agency projects. Section 4(f) properties include publically owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites. If a project is constructed with Federal funds, Section 4(f) properties are a concern as they require a specific approval process through FHWA which adds time to a project development schedule. For Section 4(f) permitting, documentation must be provided to prove there is no feasible and prudent alternative to the use of land and the action includes all planning to minimize harm to the property resulting from use. Section 4(f) properties are not a concern for the extension of the Dunnivant Valley Greenway.

3.6 Environmental Justice

Environmental Justice 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. Figure 15 shows a map view of the traffic analysis zones (TAZ) that encompass the study area. Table 1 provides a very brief overview of the socioeconomic demographics of the study area as shown in 2010 Census data. When compared to census information for Shelby County, it can be concluded that there are no concerns related to environmental justice since the study area has fewer families living below the poverty level and a smaller minority population.

Figure 15: Traffic Analysis Zones

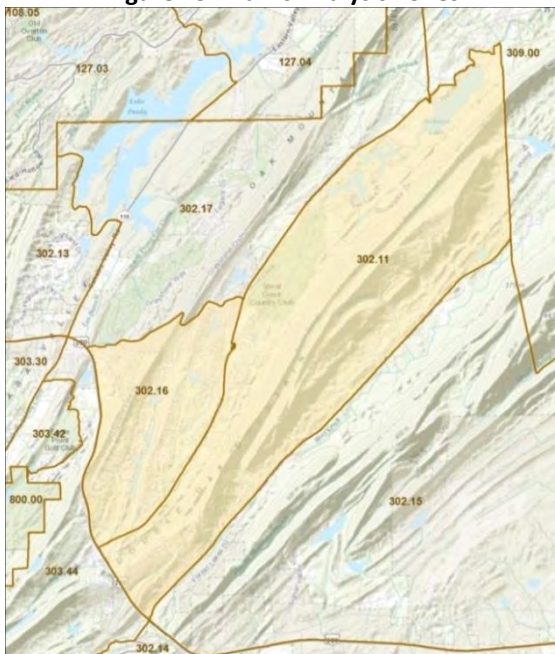


Table 1: Socioeconomic Overview

	TAZ		Shelby
	302.11	302.16	County
Population Total	2718	6429	195,085
Race:			
White	91.6%	85.9%	83%
African American	5.0%	5.95%	10.6%
Hispanic	1.69%	1.80%	5.9%
% Families Living Below Poverty Level	0.0%	1.9%	5.4%

4 Purpose and Need for Improvements

Shelby County recognizes the community's desire, as expressed in the Dunnavant Valley Small Area Plan, to extend the existing Dunnavant Valley Greenway to allow for increased recreational opportunity and improved non-motorized connectivity within the Dunnavant Valley community that maintains the current rural feel. An improved recreational facility would further enhance the community's connection to the scenic environment offered by Dunnavant Valley. A recreational trail that provides connectivity throughout the area would not only benefit livability in the immediate surrounding community, but it would also attract others to the area, whether it is for permanent residence or simply for recreational opportunities.

In addition to the recreational opportunities and connectivity offered by the trail extension, there are several other benefits associated with a trail:

- **Healthier Environment:** Providing an alternative to motorized travel may reduce emission related pollution.
- **Healthier Residents:** A trail will provide the area with an additional option for physical exercise to improve the health of area residents. Reduced medical costs are a direct result of improved health.
- **Property Value:** Studies show that the presence of a trail can increase property values. In a survey performed by the National Association of Home Builders and the National Association of Realtors, home buyers ranked trails as the second most important community amenity.
- **Local Economy:** An improved (longer) recreational facility is not just appealing to the locals. A trail has the potential to attract others to the area which in turn provides new patrons for local businesses and restaurants. An increase in visitors can also entice new businesses to move to the area.

5 Options for Improvement

The goal for extending the Dunnavant Valley Greenway is to offer additional recreational areas that allow people the opportunity to enjoy the scenic environment of Dunnavant Valley and provide non-motorized connectivity between residential properties, soccer fields, Mt Laurel Elementary School, and the Mt Laurel commercial center. Prior to the study initiation, the County participated in several planning efforts and developed design plans for a potential trail extension. As part of the study, this proposed alignment along with other slightly modified alignments was reviewed in the field for feasibility. These alternatives are presented in this section as build options. Variations between the options are primarily associated with typical section, trail surfacing, and funding type; however there are slight alignment differences found among the options. Mapping of the build options is shown in Figures 16 through 19.



P:\2016\160125\SasGISData\BuildOptions.mxd



1 in = 400 ft

- Match Line
- Build Option 1
- - - Build Option 2A and 2B
- - - Build Option 3A and 3B

Figure 16: Build Options - Sheet 1

Dunnavant Valley Greenway (Apple Program)
Shelby County, Alabama

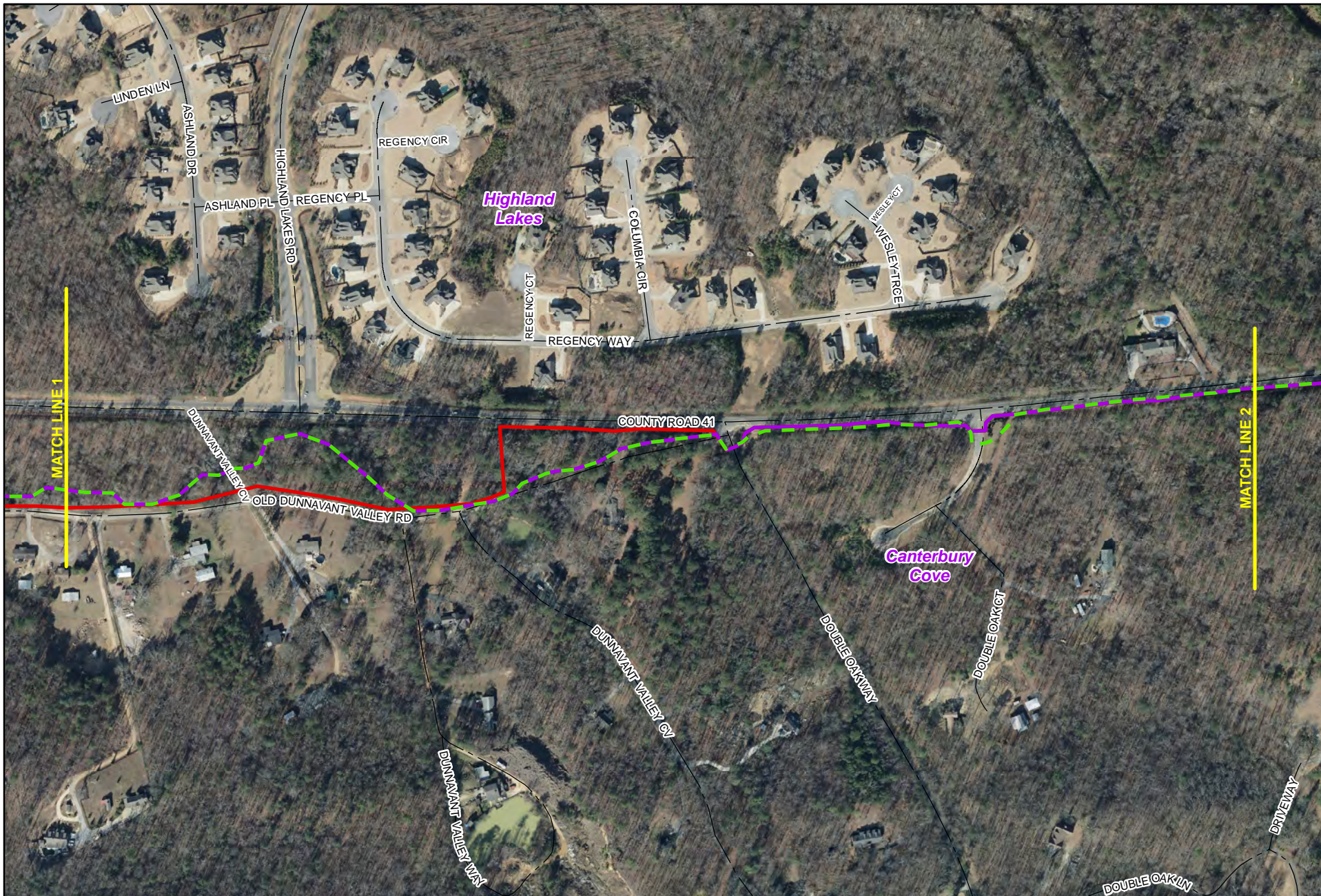


Figure 17: Build Options - Sheet 2

Dunnavant Valley Greenway (Apple Program)
Shelby County, Alabama



Figure 18: Build Options - Sheet 3

Dunnavant Valley Greenway (Apple Program)
Shelby County, Alabama

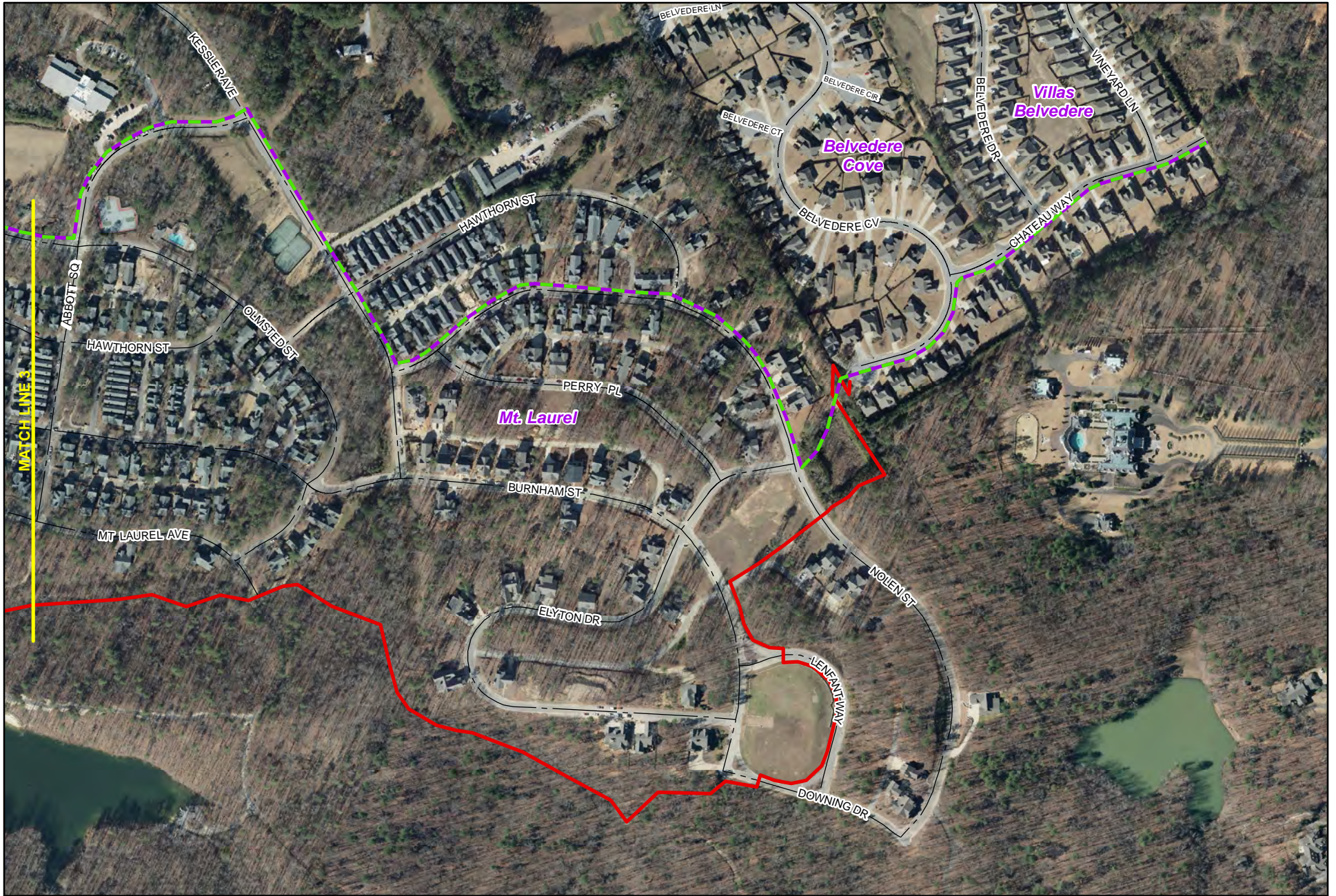


Figure 19: Build Options - Sheet 4

Dunnavant Valley Greenway (Apple Program)
Shelby County, Alabama



- Match Line
- Build Option 1
- - - Build Option 2A and 2B
- - - Build Option 3A and 3B

5.1 No Build Option

The No Build Option assumes no trail extension is installed. This option provides no additional recreational opportunities or non-motorized connectivity in the area.

5.2 Build Option 1 – Federally Funded Multi-use Path

Build Option 1 includes the use of federal funds to construct a multi-use path. It is possible for the County to elect to use Federal funds for a portion or portions of the trail and not the entire length. Funding options are discussed in Section 6.3 of this report.

5.2.1 Build Option 1 Trail Alignment

Like all of the build options, the trail alignment associated with Build Option 1 commences at the County Road 41 trailhead and heads north paralleling County Road 41 until reaching Old Dunnavant Valley Road. At this point the proposed alignment follows Old Dunnavant Valley Road until it connects back to County Road 41 via a sharp left turn seen on Figure 17. This ninety degree angle is due to maintaining an ADA acceptable longitudinal grade for a multi-use path and the topographical constraints in the area. The proposed alignment then continues north before connecting to Mt Laurel Elementary School. From Mt Laurel Elementary School, the path continues around the east side of Mt Laurel where it eventually ties to Belvedere Cove and continues to Villas Belvedere on the north side of the subdivision. Since this option uses federal funds, use of any existing facilities within Mt Laurel will require the upgrading of those facilities in order to meet ADA compliance. There is also a connection made to the planned pedestrian tunnel beneath County Road 41. Build Option 1 travels through 20 parcels of property.

5.2.2 Build Option 1 Trail User

The trail users for Build Option 1 would include a variety of individuals. The width of a federally funded multi-use path (10 feet, minimum) allows for multiple users to comfortably use the trail simultaneously. These users can vary from recreational cyclists and fitness enthusiasts to trail runners and families. A federally funded trail must also be accessible for all users and compliant with the Americans with Disabilities Act (ADA).

5.2.3 Build Option 1 Typical Section

Build Option 1 includes the use of federal funds to construct a multi-use path through Phases 2 and 3 of the Dunnavant Valley Greenway. If federal funds are used to build a multi-use path, the width of the path must be at least 10 feet. The reason for this specified width is to make certain that there is enough room to truly accommodate multiple users at all times. Appendix F provides a typical section for this type of multi-use path and Figure 20 shows a rendering of a multi-use path in the Dunnavant Valley area. In Figure 20 County Road 41 is seen in the top left with the multi-use path located between it and Old Dunnavant Valley Road.

Figure 20: Multi-Use Path



5.2.4 Build Option 1 Trail Surface

The recommended trail surface for a multi-use path is asphalt for the full length of the path. This will provide a hard, smooth surface for bicycles and strollers, and would ensure a surface compliant with the ADA.

5.2.5 Build Option 1 Opinion of Cost and Estimated Timeline

The cost associated with Build Option 1 is estimated at \$2,180,000. It is estimated it would take at least three to five years to design and construct Build Option 1. See Appendix G for more detailed cost information.

5.3 Build Option 2 – Recreational Trail

Build Option 2 evaluates the installation of a recreational trail using either local funding (Build Option 2A) or Federal funding (Build Option 2B). The County may find that portions of the trail are better suited for local funds and may choose to construct a portion or portions of the trail using only local funds. Funding options are discussed in Section 6.3 of this report. Build Option 2 travels through 17 parcels of property.

5.3.1 Build Option 2A Trail Alignment

The alignment for Build Option 2A parallels County Road 41 from the existing trail head gravel parking lot until it reaches Old Dunnivant Valley Road. It then follows Old Dunnivant Valley Road until it connects back to County Road 41. The alignment continues north from there before turning east to connect to Mt Laurel Elementary school. From Mt Laurel Elementary School, the alignment uses existing facilities through Mt Laurel to connect to Belvedere Cove and Villas Belvedere. Since this option uses local funds, the upgrading of existing facilities in Mt Laurel to meet ADA requirements and a hard, traversable surface are not required.

5.3.2 Build Option 2A Trail User

Build Option 2A would accommodate specifically recreational users for the purpose of hiking. Since the design and construction would not use federal funding, compliance with ADA may not be required if the trail serves a purely recreational hiking purpose and is posted as such.

5.3.3 Build Option 2A Typical Section

The typical section for Build Option 2A Phase 2 would be a 6 foot path to comfortably accommodate users in opposing directions. If the topography demands, the width could narrow since local funds would be used and a specific width is not required. Appendix F provides an example of this typical section. For Phase 3, no new facilities would be constructed; however, wayfinding signs would be installed to navigate the user through the Mt Laurel development.

5.3.4 Build Option 2A Trail Surface

Build Option 2A could be an unpaved surface, meaning a cleared path with exposed tree roots and rocks like what is present throughout Phase 1 of the Dunnavant Valley Greenway.

5.3.5 Build Option 2A Opinion of Cost and Estimated Timeline

The cost associated with Build Option 2A is estimated at \$380,000. It is estimated that it would take one to two years to design and construct Build Option 2A. Although, this estimated cost and timeline could be reduced if the County considers allowing the trail to be constructed using volunteer labor, i.e. Eagle Scouts, etc. See Appendix G for more detailed cost information.

5.3.6 Build Option 2B Trail Alignment

Build Option 2B includes the use of federal funds to construct a recreational trail. Similar to Build Option 2A, the alignment for Build Option 2B parallels County Road 41 from the existing trail head gravel parking lot until it reaches Old Dunnavant Valley Road. It then follows Old Dunnavant Valley Road until it connects back to County Road 41. The alignment continues north from there before turning east to connect to Mt Laurel Elementary school. From Mt Laurel Elementary School, the alignment uses existing facilities through Mt Laurel to connect to Belvedere Cove and Villas Belvedere. Since this option uses federal funds, the upgrading of existing facilities in Mt Laurel to be ADA compliant would be required.

5.3.7 Build Option 2B Trail User

Build Option 2B would target specifically users with recreational hiking purposes. Since the design and construction would be using federal funding, compliance with ADA will be required; however ADA guidelines governing recreational facilities are not as stringent as those for sidewalks. For further discussion about accessibility, see section 6.1 of this report.

5.3.8 Build Option 2B Typical Section

The typical section for Build Option 2B Phase 2 includes a six foot path to comfortably accommodate users in opposing directions. If the topography demands, the width could be reduced in short sections of the trail. Appendix F provides an example of this typical section. For Phase 3, no new facilities would be constructed; however, modifications to the existing sidewalk and curb ramps located in Mt Laurel would be required in order for the marked path to be ADA compliant. Wayfinding signs would be installed to navigate the user through the Mt Laurel development.

5.3.9 Build Option 2B Trail Surface

The recommended trail surface for Build Option 2B is either compacted crushed aggregate or asphalt. For the purposes of preparing an opinion of cost for this study, crushed aggregate was assumed.

5.3.10 Build Option 2B Opinion of Cost and Estimated Timeline

The cost associated with Build Option 2B is estimated at \$870,000. It is estimated it would take at least three to five years to design and construct Build Option 2B. See Appendix G for more detailed cost information.

5.4 Build Option 3 – Rural-Urban Transect

Build Option 3 evaluates the installation of a recreational trail that transitions from a rural recreational trail to a multi-use path using either local funding (Build Option 3A) or Federal funding (Build Option 3B). A facility that transitions in character to match its surroundings is consistent with the rural-urban transect planning model. The County may find that portions of the trail are better suited for local funds and may choose to construct a portion or portions of the trail using only local funds. Funding options are discussed in Section 6.3 of this report. Build Option 3 travels through 16 parcels of property.

5.4.1 Build Option 3A Trail Alignment

The alignment for Build Option 3A parallels County Road 41 from the County Road 41 trailhead gravel parking lot until it reaches Old Dunnivant Valley Road. It then follows Old Dunnivant Valley Road until it connects back to County Road 41. The alignment continues north from there before turning east to connect to Mt Laurel Elementary school. From Mt Laurel Elementary School, the alignment uses existing facilities through Mt Laurel to connect to Belvedere Cove and Villas Belvedere. Since this option uses local funds, the upgrading of existing facilities in Mt Laurel and a hard, traversable surface are not required.

5.4.2 Build Option 3A Trail User

Trail users for Build Option 3A are similar to Build Option 1 and cover a variety of individuals. The unpaved portion of the trail would serve the users with recreational purposes. The 10 foot width of the multi-use path allows for multiple users to comfortably use the trail simultaneously. These users can vary from recreational cyclists and fitness enthusiasts to trail runners and families.

5.4.3 Build Option 3A Typical Section

The typical section for Build Option 3A varies since the intent of this option is to offer varying trail experiences. For Build Option 3A the recreational trail as seen in Phase 1 would extend northward utilizing a six foot width and then transition to a 10 foot width, multi-use path beginning near the northern most intersection of County Road 41 and Old Dunnivant Valley Road and continuing to Mt Laurel Elementary School, a distance of approximately 3400 feet. The trail would then utilize the existing sidewalk located in Mt Laurel. Wayfinding signs would be installed to navigate the user through Mt Laurel. Appendix F provides an example of the typical sections to be used.

5.4.4 Build Option 3A Trail Surface

Like the typical section for Build Option 3A, the recommended trail surface also varies. The recreational portion of the trail could be unpaved while the multi-use section would use asphalt surfacing. This type of surface provides a hard, smooth surface to accommodate road bicycles and strollers.

5.4.5 Build Option 3A Opinion of Cost and Estimated Timeline

The cost associated with Build Option 3A is estimated at \$630,000. It is estimated that it would take one to two years to design and construct Build Option 3A. See Appendix G for more detailed cost information.

5.4.6 Build Option 3B Trail Alignment

Build Option 3B includes the use of federal funds to construct a recreational trail. Similar to Build Option 3A, the alignment for Build Option 3B parallels County Road 41 from the existing trail head gravel parking lot until it reaches Old Dunnivant Valley Road. It then follows Old Dunnivant Valley Road until it connects back to County Road 41. The alignment continues north from there before turning east to connect to Mt Laurel Elementary school. From Mt Laurel Elementary School, the alignment uses existing facilities through the Mt Laurel community to connect to Belvedere Cove and Villas Belvedere. Since this option uses Federal funds, the upgrading of existing facilities in Mt Laurel to meet ADA requirements and a hard, traversable surface is required. Wayfinding signs would be installed to navigate the user through Mt Laurel.

5.4.7 Build Option 3B Trail User

The trail user for Build Option 3B is similar to Build Option 1 and covers a variety of individuals. The unpaved portion of the trail would serve the users with recreational hiking purposes. The 10 foot width of the multi-use path allows for multiple users to comfortably use the trail simultaneously. These users can vary from recreational cyclists and fitness enthusiasts to trail runners and families.

5.4.8 Build Option 3B Typical Section

Like Build Option 3A, the typical section for Build Option 3B varies since the intent of this option is to offer varying trail experiences. For Build Option 3B the recreational trail as seen in Phase 1 would extend northward utilizing a six foot width and then transition to a 10 foot width multi use path as the trail approaches the Mt Laurel Elementary School. The trail would then utilize the existing sidewalk located in Mt Laurel. Appendix F provides an example of the typical sections discussed in this section.

5.4.9 Build Option 3B Trail Surface

Like the typical section for Build Option 3B, the recommended trail surface also varies. The recreational portion of the trail could be unpaved while the multi-use section would use asphalt surfacing. This type of surface provides a hard, smooth surface to accommodate road bicycles and strollers.

5.4.10 Build Option 3B Opinion of Cost and Estimated Timeline

The cost associated with Build Option 3B is estimated at \$1,110,000. It is estimated that it would take at least three to five years to design and construct Build Option 3B. See Appendix G for more detailed cost information.

6 Components of Build Options

This section of the report discusses in further detail the varying aspects of the build options including accessibility, trail surfacing options, funding sources and cost estimates.

6.1 Accessibility

If Federal funds are used for the design and construction of the proposed trail, accessibility for all users including those with disabilities must be provided. In addition, 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 state and local rights-of-way, must be made accessible for pedestrians with disabilities. Although PROWAG has not yet been officially adopted; once it is 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.

The United States Access Board under the Architectural Barriers Act (ABA) establishes standards for recreation facilities, including trails, in section 1017 of the ABA Standards. These standards provide regulations concerning, among other things, trail surfacing, tread obstacles and slopes and should be referenced during the design Phase of the proposed trail. The trail surface must be stable and firm. Tread obstacles must be minimized. For persons with disabilities, a gradual running slope is preferred; when running slopes have to be steeper, resting intervals are required.

Although a topographical survey of the study area has not been performed, a review of existing contours provided by the County via GIS data was performed. For the purposes of evaluating the feasibility of an ADA compliant trail, preliminary horizontal alignments provided by the County were used to develop vertical alignments. For trails, ADA

allows slopes between 5% and 8.3% to extend no more than 200 feet. At the end of this 200 foot stretch, a resting area or break in the slope is required. The maximum slope for a trail is 12% but this grade is only allowed for 10 feet. For Phase 2 we did see one slope just greater than 12% and one 10.5% slope, both of these extended roughly 80 feet. It's possible that this Phase 2 alignment could be adjusted during the design Phase to achieve somewhat flatter slopes. Overall, it appears that slopes are not an eliminating factor for moving forward with the installation of a trail.

The preliminary connection of Phase 2 to Phase 3, near Mt Laurel Elementary School, does exceed the 12% maximum slope and it extends approximately 150 feet. Again, adjustments in the design Phase could reduce the steep grade. The alignment that travels through Mt Laurel is relatively flat; however, there are ADA compliance issues within the development. These include non-compliant sidewalk surfacing, ramps, and obstructions. But, the Mt Laurel community is not subject to ADA compliance since it is a private development. If Federal monies were used to acquire designated right-of-way for the trail, then the route through the Mt Laurel community would have to be modified to meet ADA standards. If not, a minimum of wayfinding signage should be provided for trail users.

If slope requirements or any other requirements cannot be met, the County may request a technical infeasibility determination from the ADA Technical Infeasibility Committee (ADATIC). Lack of right-of-way or increased project costs are not reasons that will satisfy technical infeasibility. If the technical infeasibility is granted, the proposed trail should be posted as not fully accessible.

6.2 Trail Surfacing

As discussed in the accessibility portion of this report, the type of trail surfacing used for a recreational trail is important. The County has essentially three options when selecting a surface treatment for the greenway extension, crushed stone, asphalt, and concrete. This section of the report discusses these options. A summary of the features of each surface treatment type is provided in Table 2.

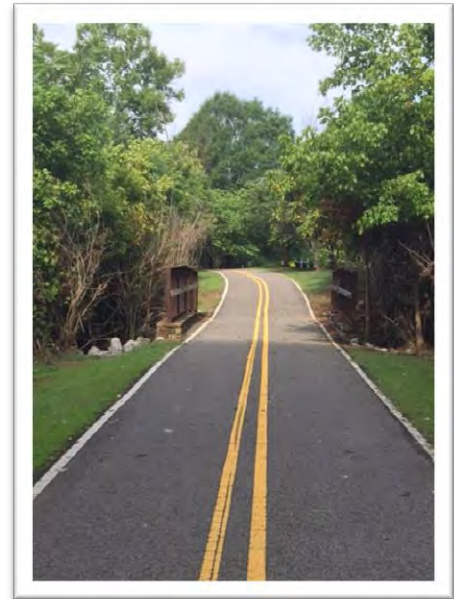
Crushed Stone – Of the three surface treatments, crushed stone has the lowest installation cost at approximately \$25 per linear foot (2017 estimate) and provides a more natural aesthetic. It is also the preference of runners since it allows for less impact on runners' joints. Crushed stone, if installed and compacted correctly, responds well to heavy use and is suitable for all users and is considered ADA accessible. The downside to crushed stone is the risk of the material washing away during a flood event. Tree roots and the obstacle they pose to users, especially those with special needs, is more evident in a crushed stone trail since stone is more likely to shift to allow for these roots to grow causing tripping hazards. Also, when compared to asphalt and concrete, the need for routine maintenance is increased for crushed stone treatments. Due to the potential material washing that can be associated with flooding, maintenance to replace and re-compact the crushed stone would be more frequent than the maintenance required for an asphalt or concrete trail. Even though crushed stone is more susceptible to flooding-related erosion, it is not likely that there would be a major maintenance issue associated with erosion, since the trail is not located in a floodplain. Within the Birmingham area, crushed stone has been utilized on many trails including the Jemison Park Trail located in Mountain Brook (see Figure 21).

Figure 21: Crushed Stone Trail in Jemison Park, Mountain Brook, Alabama



Asphalt – Asphalt provides a smooth surface which is a preference for road cyclists. It has a typical service life between 8 and 15 years; however, the life span can be extended by filling cracks or applying seal coats to the surface. Although the cost to install asphalt is more expensive than crushed stone it is roughly 50% cheaper than the installation costs associated with concrete. Since asphalt can be designed to be porous, runoff can drain through the pavement which is beneficial during flooding. However, applying seal coats may eliminate this benefit. Unlike crushed stone, asphalt is more likely to withstand flooding. The material should not experience any washing during flooding. The maintenance issues associated with asphalt include potential rutting or pavement failure due to improper installation. If this were to occur, the entire trail or trail section would have to be removed and re-installed. Also, in areas adjacent to hillsides, stormwater runoff could channelize and create washout areas beneath the surface; areas where this occurs would require the installation of fill material beneath the trail as well as continued monitoring. Since a natural aesthetic is desired for the trail and because trees provide protection from erosion during flooding, the potential exists for tree roots to break through the trail surface creating tripping hazards and maintenance issues. Figure 22 is a photo of the Shades Creek Greenway located in Homewood, Alabama between Green Springs Highway and Brookwood Boulevard. The trail surface for the Shades Creek Greenway is primarily asphalt. The RPCGB performed a Saturday count at the Shades Creek Greenway that revealed the trail hosted 600 users, the majority of which were pedestrians, within a six-hour period.

Figure 22: Shades Creek Greenway



Concrete – Concrete is arguably the most durable trail surface material considering its 25 year life cycle. Concrete is fairly easy to maintain and can be easily cleaned following rain events. There are drawbacks to concrete. Concrete is the most expensive option of the three surface types listed.

Also, concrete is rigid and doesn't provide any cushion to ease impact on runners' joints. Like asphalt trails, in areas adjacent to hillsides runoff may channelize and create washout areas beneath the concrete surface. When this occurs, the area beneath the concrete would have to be supplemented with additional fill material. Tree roots also pose a problem for concrete surfacing. As they grow, tree roots have the potential to create cracks and break up portions of the concrete. Once broken into pieces, the concrete is more likely to become a tripping hazard than smooth trail surface. Figure 23 shows an example of concrete sidewalk that has been lifted by tree root growth creating a tripping hazard for users.

Figure 23: Damaged Sidewalk



The County may elect to choose one surface type for the entire length of the trail or may choose to vary the surface treatment by section of trail. Table 2 provides an evaluation of the three surface treatments discussed in this section.

Table 2: Trail Surfacing Options

Surfacing Option	Nature Trail Feel	Lowest Installation Cost	Service Life	Lowest Maintenance Costs	Best Flood Performance	Road Cyclist Preference	Runner Preference	Easiest Installation
Crushed Stone	✓	✓	varies				✓	✓
Asphalt			8-15 years		✓	✓		
Concrete			25+ years	✓				

Of course, the County could elect to simply clear the trail area and not install any surfacing. The benefits to this option are very similar to those seen with crushed stone surfacing including: lower installation costs, ease of installation, and recreational user preference. Additionally, a bare earth trail could potentially lower maintenance costs. Although, bare earth is more susceptible to erosion, the trail is not located in a floodplain. Maintenance associated with erosion is less likely on this surface type. The surfacing seen on Phase 1 of the Dunnavant Valley Greenway is primarily bare earth.

6.3 Funding Sources

Costs associated with the design and construction of the proposed trail could exceed the County's current available resources. This section discusses federal and private funding sources that are available to aid in design and construction. Federal programs are administered by the Alabama Department of Transportation. Table 3 details funding sources, the category of the source and type of project for which the funding can be used.

Table 3: Funding Options

Funding Source	Category	Relevant Project Type	Match Type
Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Federal	Surface transportation projects including pedestrian facilities	80% Federal/ 20% Sponsoring Agency Design and Construction
Transportation Alternatives (TA)	Federal	Recreational trails	80% Federal/ 20% Sponsoring Agency Construction Only
Recreational Trails Program (RTP)	Federal (Administered by ADECA)	Development and maintenance of recreational trails and trail-related facilities	80% Federal/ 20% Sponsoring Agency \$70,000 (2017) Grant Ceiling Design and Construction
National Park Service Land & Water Conservation Fund (LWCF)	Federal (Administered by ADECA)	Outdoor recreational areas	50% Federal/ 50% Sponsoring Agency \$150,000 Grant Ceiling
American Hiking Society's National Trails Fund	Private	Recreational hiking projects	NA
PeopleForBikes	Private	Bike facilities	NA

Federal Funding

The use of Federal funding for the construction of pedestrian facilities within a transportation project includes the condition that the new facilities are accessible to all, meaning standards set forth by the Americans with Disabilities Act (ADA) must be followed. For outdoor developed areas the Federal Highway Administration (FHWA) references guidelines established by the United States Access Board and the Architectural Barriers Act (ABA) Accessibility Standards. The requirements established in these Standards apply to national parks and other federally developed outdoor areas. Additional information as well as access to the Board's provisions concerning outdoor areas can be found at www.access-board.gov. Below is a brief description of available federal funding programs.

- CMAQ and TAP funding programs have been continued through the Fixing America's Surface Transportation Act (FAST Act). Of the nationwide available funding, approximately \$30 million in funds is allocated to RPCGB. These funds are then distributed amongst various municipalities and ALDOT. The members of the RPCGB vote on projects to determine which projects receive funding through RPCGB. The CMAQ and TAP funding programs are further discussed below.
 - The Congestion Mitigation and Air Quality Improvement (CMAQ) Program's goal is to improve air quality. The installation of pedestrian facilities is one way CMAQ achieves this goal. Pedestrian facilities have the potential to reduce vehicle emissions since they encourage walking instead of motor vehicle transportation. CMAQ funding can be used for both design and construction of a project. With CMAQ funding, an 80/20 match is required meaning the Federal funding provides 80% of the funding and the County would be responsible for the remaining 20% of funding. Since this report was prepared as part of the APPLE program, it can be used in conjunction with the application and will streamline the County's request for CMAQ funding. The downside to CMAQ funding is the time it adds to the overall project. Additional time is required in order to account for ALDOT and FHWA involvement including additional plan reviews and more stringent design and construction standards. For these reasons, a timeframe for completing a CMAQ pedestrian facility project is estimated at three to five years.
http://www.fhwa.dot.gov/environment/air_quality/cmaq/
 - Projects defined as transportation alternatives are eligible for Transportation Alternatives Program (TAP) funding. More specifically, applicable projects include: construction of facilities for pedestrians, bicyclists, and other non-motorized forms of transportation; construction of safe routes for non-drivers; conversion of railroad corridors to trails; construction of turnouts, overlooks, and viewing areas; community improvement activities; and environmental mitigation activities. TAP applicable projects are funded through a competitive process. Project design is not covered by TAP funds, meaning the County would have to use other funding for engineering and surveying services. Like CMAQ funding, an 80/20 match is required with TAP funding. TAP funds cover 80% of the construction cost and the County would be responsible for 20% of the construction cost plus all engineering services for the project. In theory the timeframe for completing a TAP project should be shorter than a CMAQ project since the design is separate from the construction funding; however, three to five years should be assumed since design plans and construction specifications are required to meet ALDOT standards. The application deadline for 2018 projects is December 15, 2017 at 5:00 PM; The total amount a project sponsor can apply for has been increased for the 2018 cycle from \$500,000 to \$800,000 (\$640,000

Federal and \$160,000 local match. Municipalities wanting to pursue TAP funds should apply with RPCGB and ALDOT.

http://www.fhwa.dot.gov/environment/transportation_alternatives/

<https://www.rpcgb.org/transportation-alternatives-program/>

- The Recreational Trails Program (RTP) and the National Park Services' Land & Water Conservation Fund (LWCF) are two funding programs established by the federal government and administered by the Alabama Department of Economic and Community Affairs (ADECA). Details concerning these two programs are listed below. Generally, the County or entity cannot apply for both RTP and LWCF funding for the same project nor can either grant be applied for if the entity already has an open grant; however, waivers to these requirements can be approved by ADECA but only prior to the pre-application submittal deadline
 - Recreational Trails Program (RTP) – Eligible RTP projects include the development and maintenance of recreational trails and trail related facilities for motorized and non-motorized uses. Pre-applications for the 2017-2018 fiscal year were due January 6, 2017. A project will not be considered if a pre-application was not submitted. The application deadline for the next RTP cycle (2018-2019) has not yet been set; however the next workshop application is likely to be in mid-November. There are four applicable RTP funding categories: non-motorized, single-use trails; non-motorized, diverse-use trails; motorized, diverse-use trails; and education. The Preferred Alternative discussed in this report falls under the “non-motorized, single-use trail” category. For 2017, projects that fall in this category are eligible for \$70,000 of RTP funding. RTP is an 80/20 matching program, meaning the sponsoring agency would be responsible for 20% of the overall project. RTP funds cannot be used solely for the design of a trail.
http://www.fhwa.dot.gov/environment/recreational_trails/
<http://adeca.alabama.gov/Divisions/ced/Recreation/Pages/Programs.aspx>
 - Land & Water Conservation Fund (LWCF) – During its lifetime, the National Park Service's Land & Water Conservation Fund (LWCF), a fund matching program, has provided over forty thousand grants to state and local governments. These grants have been applied to small recreation projects as well as significant state and national parks. The amount of each grant varies. As part of the requirements set forth by LWCF, ADECA prepares a five-year planning document called the Statewide Comprehensive Outdoor Recreation Plan (SCORP). This plan provides various agencies with a guide on how to plan for recreation and natural resources. The current SCORP was adopted in 2013 and remains applicable until it is revised in 2018. For the 2017 fiscal year, ADECA had an estimated \$1,100,000 in available funding, with a grant ceiling of \$150,000. LWCF is a 50/50 matching program, meaning the sponsoring agency has to match the grant fund dollar for dollar. For example, a project receiving the maximum grant amount, the sponsoring agency would also be responsible for \$150,000 for a total project cost of \$300,000. Any costs above and beyond the \$300,000 would be the responsibility of the project sponsor. It should be noted that securing LWCF funds for the proposed trail would require the project sponsor to agree to manage and operate the trail indefinitely.
http://www.nps.gov/ncrc/programs/lwcf/fed_state.html
<http://adeca.alabama.gov/Divisions/ced/Recreation/Pages/Programs.aspx>

Private Funding

In addition to the available Federal funding, private funding is also available. The following list provides a brief description of two national private funding options. In addition to these, there are several local organizations that have a history of providing grants for trail projects. The RPCGB is an excellent source for information on potential local partners.

- The American Hiking Society's (AHS) National Trails Fund provides grants once per year for projects improving hiking access. To receive funding the organization requesting the funds must be an American Hiking Society Alliance Member and be a 501(c)3 non-profit group or have a 501(c)3 non-profit fiscal agent act on their behalf. Over \$679,000 in National Trails Fund grants have been provided by AHS. These grants are awarded yearly and have funded 209 trail projects. Grants range from \$500 to \$3000. The deadline for applying for a grant in 2017 was February 17, 2017. The deadline for 2018 applications has not been advertised.
<http://www.americanhiking.org/national-trails-fund/>
- PeopleForBikes is a bicycling advocacy group that involves both riding enthusiasts and the bicycle industry. Their community grant program provides funding to communities throughout the US and seeks to fund projects that will increase and improve bicycling facilities. PeopleForBikes provides funding for engineering, construction costs, and volunteer support costs. In 2009 PeopleForBikes issued a \$10,000 grant to the Birmingham Urban Mountain Pedalers to aid in the construction of the Lake Trail in Oak Mountain State Park. Grants distributed in the Fall of 2016 ranged from \$1860 for bike racks to \$10,000 to help fund a trail project in Louisiana. The online application opens June 12, 2017 for the Fall 2017 grant cycle.
<http://www.peopleforbikes.org/pages/community-grants>

6.4 Cost Estimates

Cost estimates were prepared for each build option. Table 4 shows the estimated project cost and provides recommended funding types per build option. The amounts shown in the estimated costs for the County are relative to the recommended funding type. Funding types are described in the previous section. For TAP projects the engineering fee is included in the costs incurred by the County along with the 20% funding match for construction costs. CMAQ is the recommended funding type for Build Option 1. For CMAQ projects, the federal funding covers 80% of the engineering and construction costs; therefore, the County is responsible for a 20% funding match. Similar to CMAQ, RTP also provides 80% funding. At the time this report was written and opinions of cost prepared a grant ceiling of \$70,000 was in place for the non-motorized, single-use trail presented in this report. For Build Options 2A and 3A, RTP funds could be pursued to help offset the costs incurred by the County and the use of RTP funds allows the project to be constructed without ALDOT involvement. Both CMAQ and TAP funds require involvement from ALDOT via plan reviews and required standards and specifications that are typically more stringent than those associated with non-ALDOT projects. The ALDOT required plan reviews and more stringent design and construction standards influence the timeframe of a project as well as the cost. The timeframes provided in Table 4 are estimated and are subject to change.

Appendix G provides more detailed cost information including the cost based on only local funds being used. The major difference between local and federal funding is the costs associated with construction engineering and inspection (CE&I) and ALDOT's indirect costs. If federal funds are pursued, CE&I costs and ALDOT's indirect costs are 15% and 10%, respectively, of the overall cost. Although, the cost to the County increases with the use of local

funds the estimated timeframe is typically reduced considerably since the County is responsible for approving plans and construction specifications. Overall construction costs also tend to be lower. Typically, contractors are likely to provide bids for non-federally funded trail projects that are 20% to 40% lower than the bids associated with federally funded projects. Other ALDOT required items that can be eliminated if the County funds a project include some required permitting, preparation and approval of an environmental document, and public involvement meetings.

Right-of-way costs are not included in the cost estimates shown in Table 4. It should be noted that if the County is able to take advantage of volunteer labor to build the proposed trail, the estimated cost for the County could be reduced.

Table 4: Cost Estimate Summary

Build Option	Phase 2 Project Cost	Phase 3 Project Cost	Total Project Cost	Cost for the County	Recommended Funding Type	Estimated Timeframe
Build Option 1	\$1.2M	\$980,000	\$2.18M	\$710,000	CMAQ	3-5 years
Build Option 2A	\$370,000	\$10,000	\$380,000	\$380,000	Local	1-2 years
Build Option 2B	\$660,000	\$210,000	\$870,000	\$360,000	TAP	3-5 years
Build Option 3A	\$620,000	\$10,000	\$630,000	\$630,000	Local	1-2 years
Build Option 3B	\$900,000	\$210,000	\$1.11M	\$410,000	CMAQ	3-5 years

7 Stakeholder Input

An in-field stakeholder meeting was held on October 19, 2016 at the existing Dunnivant Valley Greenway trailhead. The purpose of this meeting was to discuss findings from the initial field review and to obtain input from the stakeholders. Representatives from Shelby County, RPCGB, Friends of Dunnivant Valley Greenway, and EBSCO were present. The Friends of Dunnivant Valley Greenway are a non-profit stakeholder group and EBSCO is the Mt Laurel developer. During this meeting an overview of the APPLE program and the project were provided. Participants expressed a strong desire to provide a recreational facility that would preserve the scenic value of the Dunnivant Valley area and maintain its rural feel as well as connect the existing Dunnivant Valley Greenway to the Mt Laurel development. Meeting minutes from the in-field meeting are included in Appendix H.

Following the development of potential build options, a second stakeholder meeting was held on December 19, 2016 at Double Oak Community Church located in the Mt Laurel community. Again, representatives from Shelby County, RPCGB, Friends of Dunnivant Valley Greenway, and EBSCO were present. All build options discussed in Section 5 of this report were presented and discussed. Following the meeting, materials presented were distributed via e-mail to the meeting attendants. Feedback from the Friends of Dunnivant Valley Greenway was received January 14, 2016. The Friends expressed their preference to implement Build Option 2A. Feedback from EBSCO was received January 20, 2017. EBSCO also selected Build Option 2A as their preferred build option with a small change to the alignment, discussed in Section 8 of this report. Feedback from stakeholders can be found in Appendix H.

On April 4, 2017, a third stakeholder meeting was held at the Double Oak Community Church. During this meeting the stakeholders were presented with the Preferred Alternative as shown in Section 8 of this report. The potential

for the Friends of Dunnavant Valley Greenway to pursue a Recreational Trails Grant was discussed. Appendix H includes the meeting notes from this meeting.

8 Preferred Alternative

As discussed in Section 7 of this report, stakeholders selected Build Option 2A as their preferred build option with slight changes to the alignment presented during the stakeholder meeting on December 19, 2016 and as shown in Figures 16 through 19. Both stakeholder groups suggested that the alignment be revised at the intersection of Kessler Avenue and Abbott Square within the Mt Laurel development. Previously, the alignment for Build Option 2A turned right at this intersection and continued through a residential portion of Mt Laurel; however, stakeholders prefer that the alignment turn left at this intersection and the trail continue along County Road 41 and then connect to the sidewalks located in Belvedere Cove and Villas Belvedere. Figure 24 shows the alignment change.

Figure 24: Preferred Alternative



In addition to the change associated with Kessler Avenue, the proposed alignment of Build Option 2A was modified to eliminate its access through Shelby County Board of Education (BOE) property. It is the BOE's preference that no trails access their property. Figure 25 shows the entire Preferred Alternative alignment.



8.1 Preferred Alternative Opinion of Cost and Estimated Timeline

Like Build Option 2A, the Preferred Alternative utilizes local funds for the installation of a six foot wide recreational trail in Phase 2; similar to what is seen in the existing Phase 1 of the Dunnavant Valley Greenway. The recreational trail surface for Phase 2 of the Preferred Alternative is primarily bare earth with exposed tree roots and rocks which would maintain the rural feel desired by the stakeholders. The majority of the area covered by Phase 3 of the Preferred Alternative is located within Mt Laurel and does not require any additional improvements other than wayfinding signs; however, the section of the alignment along Kessler Avenue and the portion of the alignment located along County Road 41 between Mt Laurel and Belvedere Cove would consist of a six foot wide recreational facility. The connection to Villas Belvedere would complete Phase 3 of the Dunnavant Valley Greenway.

In addition to the desires of the stakeholders, additional reasons the County should consider this alternative their preferred build option includes timeline and cost. If the County elects to use local funds, the trail design and installation can move at the pace the County sets. No ALDOT or FHWA involvement is required when using local funds so there would be fewer guidelines to follow and no plan reviews to attend or address. For the purposes of this study, the timeline has been estimated at one to two years with an approximate total cost estimate of \$470,000 as shown in Table 5. This cost is increased from the \$380,000 estimated for Build Option 2A since the cost for the Preferred Alternative takes into account the alignment change suggested by the stakeholders and the revision of removing the access to the BOE property. The estimated cost and timeline for the Preferred Alternative could be reduced if the County considers allowing the trail to be constructed using volunteer labor.

Table 5: Cost Estimate Summary for the Preferred Alternative

Preferred Alternative	
Phase 2 Project Cost	\$360,000
Phase 3 Project Cost	\$110,000
Total Project Cost	\$470,000
Cost for the County	\$470,000
Recommended Funding Type	Local
Estimated Timeframe	1-2 years

8.2 Additional Input from Stakeholders

Additional suggestions from the Friends of Dunnavant Valley include the addition of some type of permanent barrier between County Road 41 and the trail when the alignment of the trail is parallel to the roadway. There is a concern that motorists or road cyclists may inadvertently leave the roadway and encroach on the trail creating a safety issue for trail users. To further accommodate road cyclists, the Friends of Dunnavant Valley suggest installing Share the Road signs as a short term improvement or, for the long term, install wider travel lanes or bike lanes on County Road 41. These additional suggestions are not included in the opinions of cost associated with this study.

8.3 Potential Challenges

As with any project, potential challenges are a concern. Table 6 provides a listing of these potential challenges.

Table 6: Potential Challenges

Potential Challenge	Discussion
Right-of-way acquisition and/or property easements	The Preferred Alternative travels through 17 parcels of property. Of these parcels, one owner is unknown and is located near Villas Belvedere. Eight (8) of the parcels impacted by the proposed trail are owned by Ebsco Industries. A listing of all parcels can be found in Appendix A. Access to these parcels will require right-of-way acquisition or an easement agreement with the property owner.
Foot Bridges	The proposed trail alignment crosses three blue line streams. These streams are jurisdictional by the United States Army Corps of Engineers (USACOE). A USACOE permit is not required as long as the bridge spans the normal high water mark.
Permitting	An ADEM permit will be required for improvements greater than one acre in size.
Utilities	There are large utility lines located along County Road 41. Typically, underground utilities pose a challenge for excavation or storm drainage installation. Depending on the depths of these utilities, it is not likely that construction of the proposed trail would incur any conflicts with these utilities. It should be noted that if it is determined during design or construction that there is a utility conflict, relocation can be timely and costly.
Pedestrian Crossings	It is likely that residents on the west side of County Road 41 will want to access the trail whether for recreational use or for access to the elementary school or commercial development. The County should consider providing pedestrian crossings at Kings Way and Highland Lakes Road.
Conflict Points	The proposed trail alignment crosses several side streets which creates conflict points between pedestrians, cyclists, and motorists. Options to mitigate these conflicts include pavement markings and signage warning motorists of crossings.
Parking	With the extension of the Dunnavant Valley Greenway, it is likely that more visitors will be drawn to the area which creates a potential need for additional parking or trailheads.
Future Development	There are several parcels of property along County Road 41 that have not been developed. The County should consider including accommodation of the proposed trail in future discussions and agreements with developers.

9 Segmentation and Prioritization

As documented, Phase 1 of the Dunnavant Valley Greenway is currently in use and connects the 1996 Fields and the County Road 41 trailhead. Phase 2 of the trail stretches from the County Road 41 trailhead northward to Mt Laurel, a distance of approximately 1.6 miles. Phase 3 encompasses Mt Laurel and ends at Villas Belvedere, the northern study limits, a distance of approximately 1.7 miles. Even though the County created this potential phasing of the Dunnavant Valley Trail, which is referenced throughout this report and previous planning documents, further segmentation and prioritization of the Preferred Alternative alignment as described in Section 8 allows for smaller installation projects with more manageable budgets and timelines. The segmentation of the Preferred Alternative provided in Tables 7 and 8 and shown in Figures 26 and 27 allows the County the option of installing

smaller pieces of the proposed trail in the event the installation of the entire length is unattainable due to funding, time, or other constraints.

Segmentation and prioritization were evaluated from two varying viewpoints: recreational opportunity and destination focused. The focus for the segmentation and prioritization associated with increasing the recreational opportunity in the area builds upon the existing trail and County Road 41 trailhead. Beginning at the County Road 41 trailhead and working north allows for the user's recreational experience to be lengthened as the trail is extended. Table 7 provides the segmentation and prioritization from a recreational view.

Table 7: Segmentation and Prioritization (Recreation)

Priority Ranking	Description	Length (linear feet)	Estimated Cost
1	CR-41 Trailhead to Old Dunnivant Valley Road	2506	\$100,000
2	Along Old Dunnivant Valley Road	3235	\$130,000
3	Old Dunnivant Valley Road to Robinson Road	3326	\$130,000
4	Abbott Square to Belvedere Cove	2646	\$106,000
5	Mt Laurel Wayfinding Signage		\$2,000
Total			\$470,000

From a destination focus standpoint, connectivity takes precedence, making connections between Mt Laurel, neighborhoods, and the elementary school the central focus. Table 8 shows the segmentation and prioritization for the Dunnivant Valley Greenway based on providing greater connectivity.

Table 8: Segmentation and Prioritization (Destination Focused)

Priority Ranking	Description	Length (linear feet)	Estimated Cost
1	Belvedere Cove to Abbott Square	2646	\$106,000
2	Robinson Road to Highland Lakes Road	4760	\$190,000
3	Highland Lakes Road to CR-41 Trailhead	4307	\$170,000
4	Mt Laurel Wayfinding Signage		\$2,000
Total			\$470,000

Wayfinding signage is considered a low priority since sidewalk facilities are already present in Mt Laurel. The County could elect to include the installation of wayfinding signage with an adjacent segment.



Figure 26: Recreation Segmentation

Dunnavant Valley Greenway Corridor Study
Shelby County, Alabama

10 Next Steps

The County has stated a preference for using local funds to construct the project. If locally funded, the timing, scheduling, and implementation of the installation would be at their discretion. If instead Shelby County chooses to move forward with implementing any or a portion of the Preferred Alternative with Federal CMAQ or TAP funding, the next step would be to request inclusion of a project in RPCGB's Transportation Improvement Plan (TIP). In 2019, RPCGB will solicit for projects to be included in the next TIP planning cycle. Projects that utilize the APPLE program provide local governments the opportunity to request funding between TIP cycles. The preparation of this feasibility study can be used in the application for funds from the RPCGB for future improvements.

Once Federal funds are in place for the project, an environmental document will need to be prepared. The environmental document must include technical studies and public involvement outreach necessary to comply with procedures of the National Environmental Policy Act (NEPA). Once the environmental study has been completed, the design would be undertaken, and construction would follow. If it is determined that additional right-of-way is required, acquisition would be conducted prior to construction.

List of Appendices

Appendix A – Parcel Data and Utilities Information

Appendix B – USFWS Concurrence Request Letter and USFWS Response

Appendix C – NRCS Concurrence Request Package and NRCS Concurrence

Appendix D – Coordination with the University of Alabama's Office of Archaeological Records

Appendix E – Wetlands and Floodplains Mapping

Appendix F – Typical Sections

Appendix G – Cost Estimates

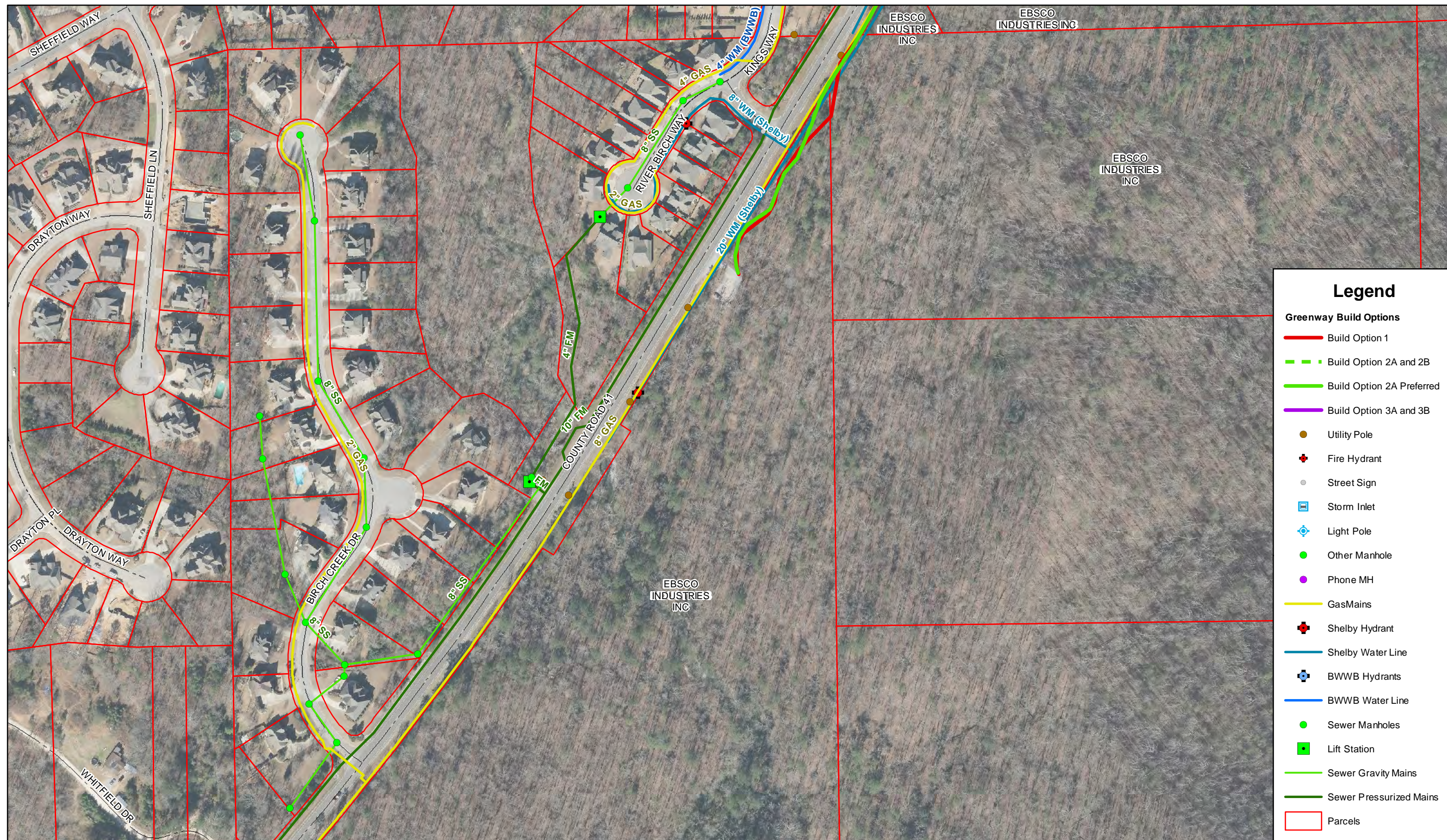
Appendix H – Stakeholder Meeting Minutes and Stakeholder Input

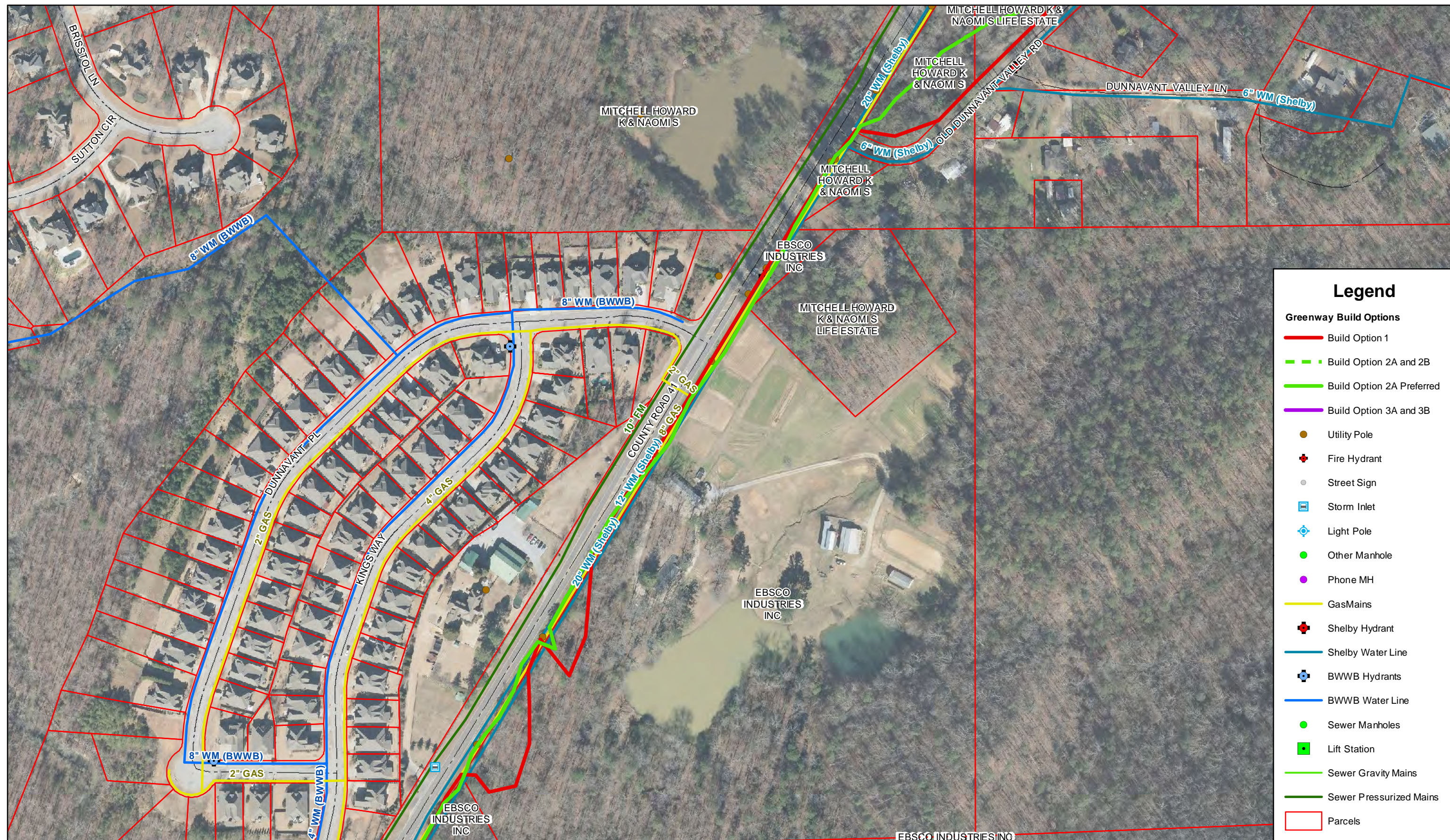
Appendix A

Parcel Data and Utilities Information

Build Option 1	Number of Parcels
Ebsco Industries, Inc	4
Mitchell, Howard K & Naomi S	1
Mitchell, Howard K & Naomi S Life Estate	1
Highland Lakes Development, LTD	1
Ebsco Industries, Inc	1
Sanderson, Stephen & Gwen 1/2 Int & Entru	1
Eddleman Lands, LLC	1
Shelby County Board of Education	1
Ebsco Development Co, Inc	4
Town Builders, Inc	2
Ebsco Development Co, Inc	1
Unknown Owner	1
Wright, Clifford A & Zuckerman, Samuel J	1
Total Parcels:	20
Build Option 2A and 2B	Number of Parcels
Ebsco Industries, Inc	4
Mitchell, Howard K & Naomi S Life Estate	1
Mitchell, Howard K & Naomi S	1
Mitchell, Howard K & Naomi S Life Estate	1
Highland Lakes Development, LTD	1
Ebsco Industries, Inc	1
Sanderson, Stephen & Gwen 1/2 Int & Entru	2
Eddleman Lands, LLC	1
Shelby County Board of Education	1
Ebsco Development Co, Inc	2
Unknown Owner	1
Wright, Clifford A & Zuckerman, Samuel J	1
Total Parcels:	17
Build Option 3A and 3B	Number of Parcels
Ebsco Industries, Inc	4
Mitchell, Howard K & Naomi S Life Estate	1
Mitchell, Howard K & Naomi S	1
Mitchell, Howard K & Naomi S Life Estate	1
Highland Lakes Development, LTD	1
Ebsco Industries, Inc	1
Sanderson, Stephen & Gwen 1/2 Int & Entru	1
Eddleman Lands, LLC	1
Shelby County Board of Education	1
Ebsco Development Co, Inc	2
Unknown Owner	1
Wright, Clifford A & Zuckerman, Samuel J	1
Total Parcels:	16

Preferred Build Option 2A	Number of Parcels
Ebsco Industries, Inc	4
Mitchell, Howard K & Naomi S Life Estate	1
Mitchell, Howard K & Naomi S	1
Mitchell, Howard K & Naomi S Life Estate	1
Highland Lakes Development, LTD	1
Ebsco Industries, Inc	1
Sanderson, Stephen & Gwen 1/2 Int & Entru	2
Eddleman Lands, LLC	1
Ebsco Development Co, Inc	3
Lynn, George H.	1
Unknown Owner (Lake at Belvedere Cove)	1
Total Parcels:	17



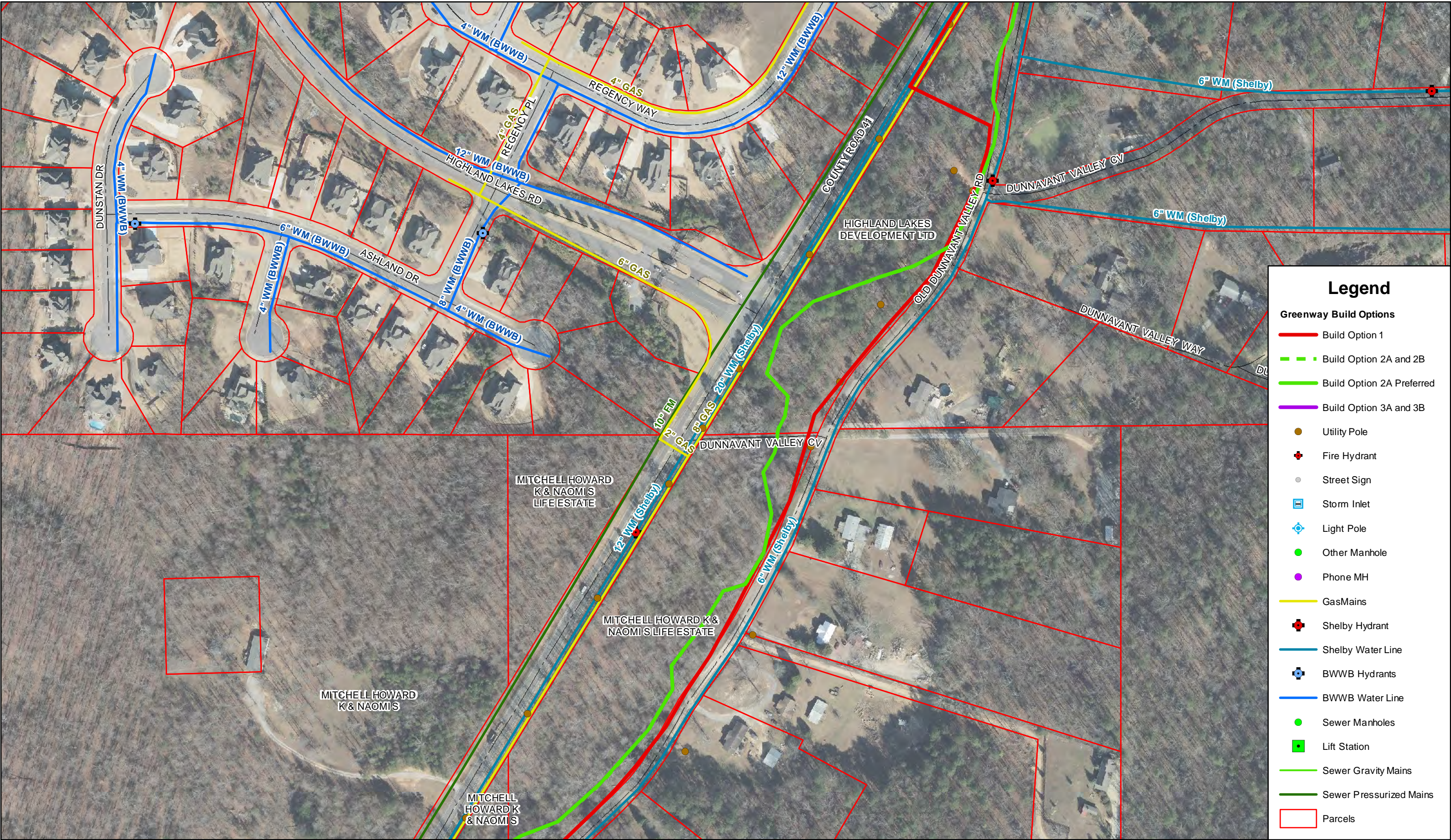


Legend

Greenway Build Options

- Build Option 1
- Build Option 2A and 2B
- Build Option 2A Preferred
- Build Option 3A and 3B
- Utility Pole
- Fire Hydrant
- Street Sign
- Storm Inlet
- Light Pole
- Other Manhole
- Phone MH
- GasMains
- Shelby Hydrant
- Shelby Water Line
- BWWB Hydrants
- BWWB Water Line
- Sewer Manholes
- Lift Station
- Sewer Gravity Mains
- Sewer Pressurized Mains
- Parcels





Legend

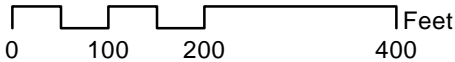
Greenway Build Options

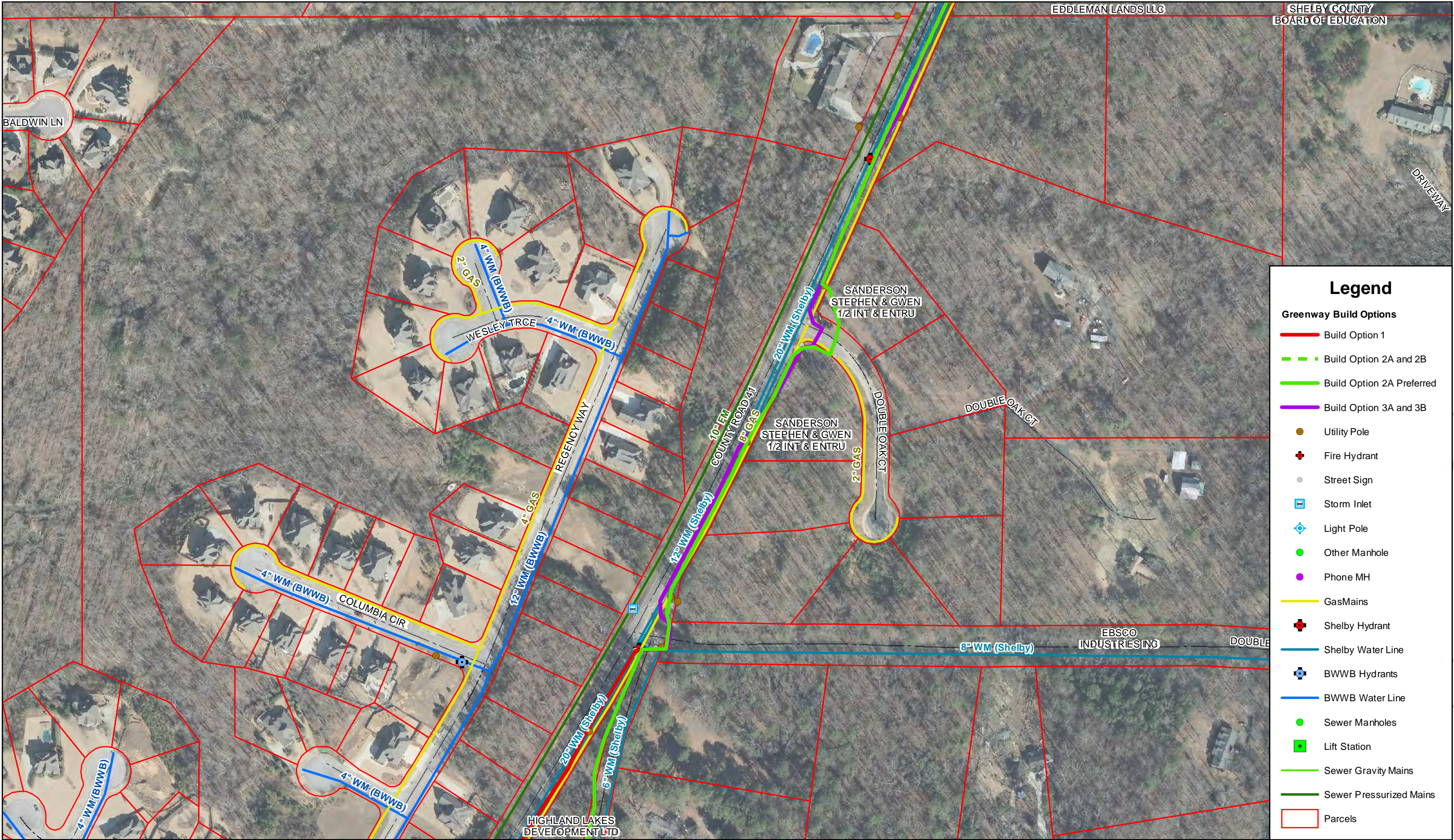
- Build Option 1
- Build Option 2A and 2B
- Build Option 2A Preferred
- Build Option 3A and 3B

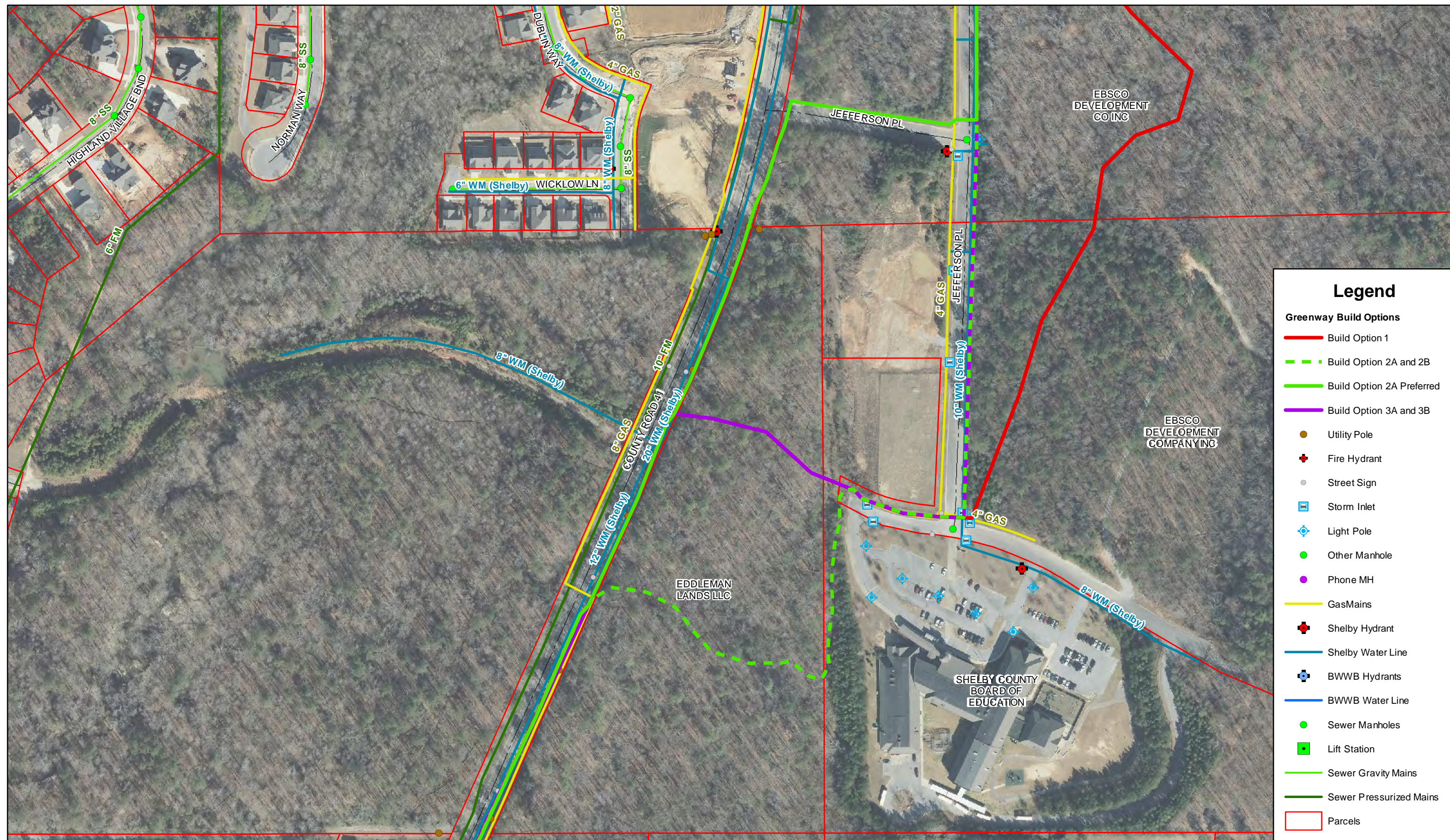
- Utility Pole
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- Street Sign
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- Other Manhole
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- GasMains
- Shelby Hydrant
- Shelby Water Line
- BWWB Hydrants
- BWWB Water Line
- Sewer Manholes
- Lift Station
- Sewer Gravity Mains
- Sewer Pressurized Mains
- Parcels



1 inch = 200 feet







Legend

Greenway Build Options

- Build Option 1
- Build Option 2A and 2B
- Build Option 2A Preferred
- Build Option 3A and 3B

- Utility Pole
- + Fire Hydrant
- Street Sign
- Storm Inlet
- ⬢ Light Pole
- Other Manhole
- Phone MH
- Gas Mains
- + Shelby Hydrant
- Shelby Water Line
- + BWWB Hydrants
- BWWB Water Line
- Sewer Manholes
- Lift Station
- Sewer Gravity Mains
- Sewer Pressurized Mains
- Parcels





EBSco
DEVELOPMENT
CO, INC

Legend

Greenway Build Options

Build Option 1

Build Option 2A and 2B

Build Option 2A Preferred

Build Option 3A and 3B

Utility Pole

Fire Hydrant

Street Sign

Storm Inlet

Light Pole

Other Manhole

Phone MH

GasMains

Shelby Hydrant

Shelby Water Line

BWWB Hydrants

BWWB Water Line

Sewer Manholes

Lift Station

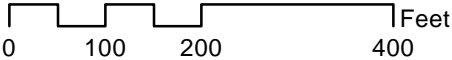
Sewer Gravity Mains

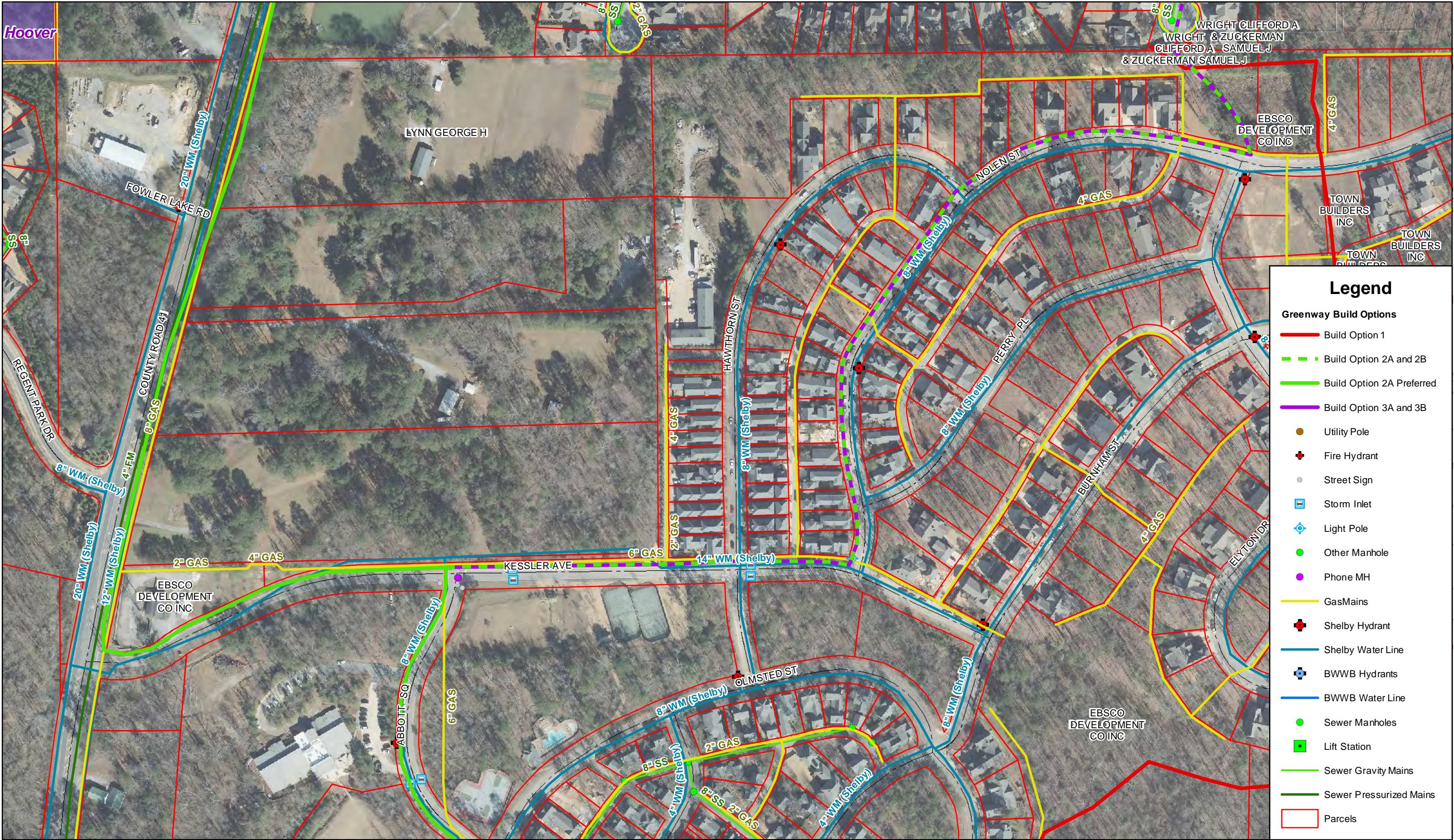
Sewer Pressurized Mains

Parcels



1 inch = 200 feet





Legend

Greenway Build Options

Build Option 1

Build Option 2A and 2B

Build Option 2A Preferred

Build Option 3A and 3B

Utility Pole

Fire Hydrant

Street Sign

Storm Inlet

Light Pole

Other Manhole

Phone MH

GasMains

Shelby Hydrant

Shelby Water Line

BWWB Hydrants

BWWB Water Line

Sewer Manholes

Lift Station

Sewer Gravity Mains

Sewer Pressurized Mains

Parcels

Parcel and Utility Map 07Dunnavant Valley Greenway Corridor Study
Shelby County, Alabama



Legend

Greenway Build Options

- Build Option 1
- Build Option 2A and 2B
- Build Option 2A Preferred
- Build Option 3A and 3B

Utility Pole

Fire Hydrant

Street Sign

Storm Inlet

Light Pole

Other Manhole

Phone MH

GasMains

Shelby Hydrant

Shelby Water Line

BWWB Hydrants

BWWB Water Line

Sewer Manholes

Lift Station

Sewer Gravity Mains

Sewer Pressurized Mains

Parcels





Legend

Greenway Build Options

Build Option 1

Build Option 2A and 2B

Build Option 2A Preferred

Build Option 3A and 3B

Utility Pole

Fire Hydrant

Street Sign

Storm Inlet

Light Pole

Other Manhole

Phone MH

GasMains

Shelby Hydrant

Shelby Water Line

BWWB Hydrants

BWWB Water Line

Sewer Manholes

Lift Station

Sewer Gravity Mains

Sewer Pressurized Mains

Parcels



Appendix B

**USFWS Concurrence Request Letter and
USFWS Response**



September 13, 2016

Mr. William J. Pearson
Field Supervisor
U.S. Fish and Wildlife Service
1208-B Main Street
Daphne, AL 36526

Subject: **USFWS Species Request
Dunnavant Valley Greenway – Shelby County/APPLE
Regional Planning Commission of Greater Birmingham
Shelby County, Alabama**

Dear Mr. Pearson:

Shelby County in conjunction with the Regional Planning Commission of Greater Birmingham is evaluating the feasibility of completing the Dunnavant Valley Greenway. The intent of this letter is to request your assistance in identifying threatened and endangered species that may occur in the vicinity of the project area. The study area is shown on the enclosed map.

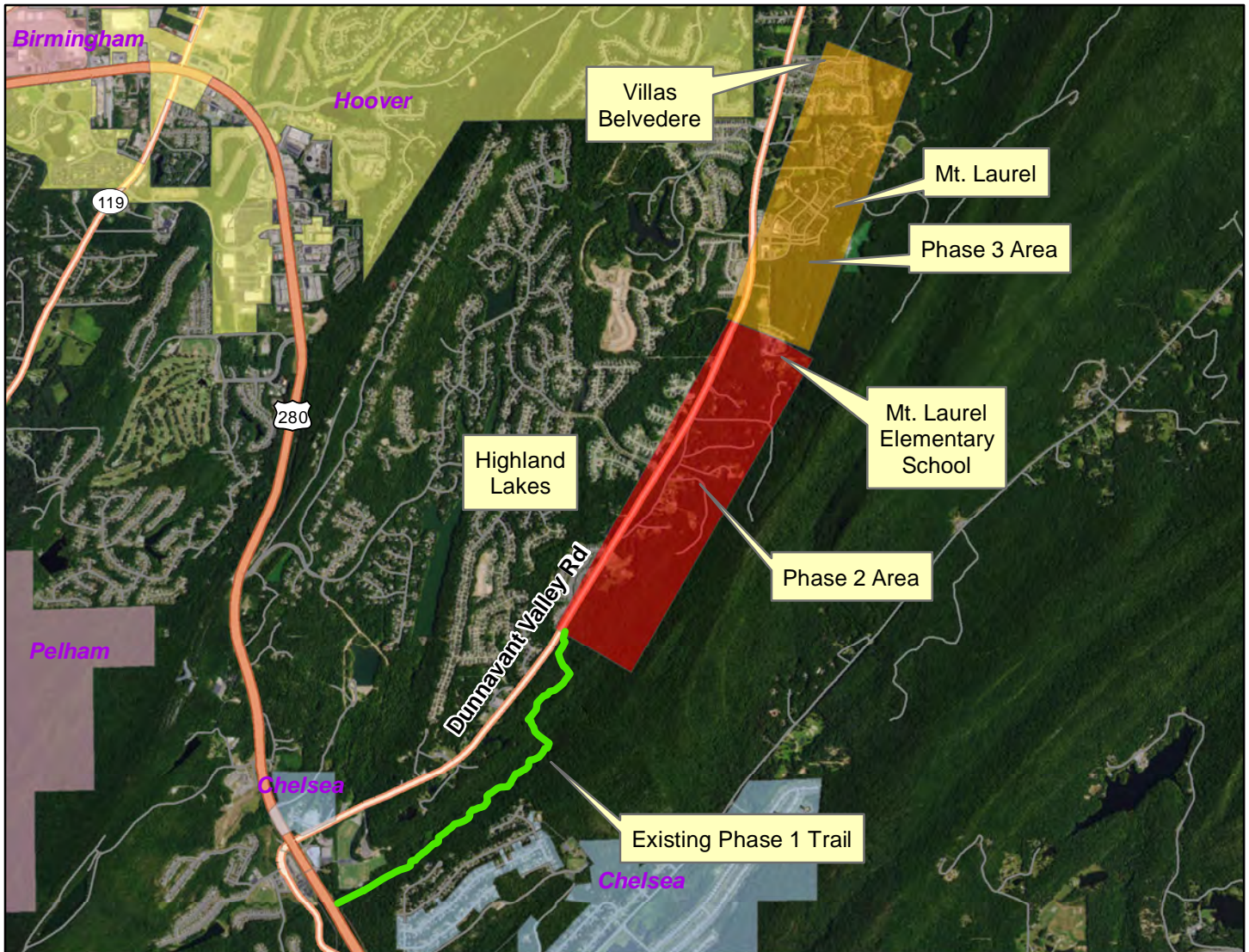
Please let me know if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, reading "Jennifer G. Brown". The signature is written in a cursive, flowing style.

Jennifer G. Brown, PE
Project Manager
Alabama Reg. #32726

Attachment





United States Department of the Interior

FISH AND WILDLIFE SERVICE
1208-B Main Street
Daphne, Alabama 36526

IN REPLY REFER TO:

2016-TA-0837

SEP 29 2016

RECEIVED
OCT 13 2016

BY:

Ms. Jennifer G. Brown, PE
Sain Associates
Two Perimeter Park South
Suite 500 East
Birmingham, AL 35243

Dear Ms. Brown:

Thank you for your September 15, 2016, letter requesting a list of endangered and threatened species that occur or may occur within the project study area for the proposed Dunnavant Valley Greenway Corridor Study in Mt. Laurel, Shelby County, Alabama. We have reviewed your information and are providing the following comments in accordance with the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) (ESA) and the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. § 668-668d) (BGEPA).

Federally Listed and Protected Species and Critical Habitat

The following federally listed and protected species may occur within the proposed project area:

Gray bat, *Myotis grisescens* - Endangered
Indiana bat, *Myotis sodalis* - Endangered
Northern long-eared bat, *Myotis septentrionalis* - Threatened
Coosa moccassinshell, *Medionidus parvulus* - Endangered
Fine-lined pocketbook, *Hamiota altilis* - Threatened
Southern pigtoe, *Pleurobema georgianum* - Endangered
Ovate clubshell, *Pleurobema perovatum* - Endangered
Southern clubshell, *Pleurobema decisum* - Endangered
Triangular kidneyshell, *Ptychobranhus greenii* - Endangered
Upland combshell, *Epioblasma metastriata* - Endangered

Recommended Surveys

If the proposed project will impact any streams, either directly or indirectly, we recommend that a habitat assessment, followed by surveys as appropriate, be conducted by a qualified biologist with a current collecting permit(s) from the U.S. Fish and Wildlife Service (Service) to determine whether the above-listed aquatic species may be present in the project area. Prior experience with each of these species is strongly recommended for the consultant(s) undertaking the survey.

Please provide the name of the surveyor(s), his/her credentials, and a thorough description of survey methods to our office prior to undertaking the actual surveys so that we may work with the surveyor(s) to ensure that the appropriate area is surveyed.

With respect to the gray bat, Indiana bat, and northern long-eared bat, we recommend a thorough site investigation for any karst features within the project area (i.e., sinkholes, sinking streams, caves). If such topographic features are located on or near the project area, we request that you inform our agency of their location so that we may determine if further consultation is necessary.

Suitable summer habitat for the Indiana bat and northern long-eared bat consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥ 5 inches dbh (12.7 centimeters) for the Indiana bat and ≥ 3 inches (7.62 centimeters) dbh for the northern long-eared bat that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. To avoid impacts to spring/summer roosting and maternity colonies of the Indiana bat and northern long-eared bat in the State of Alabama, we recommend that tree clearing occur from October 15 to March 31.

If there is no suitable habitat on site for the Indiana bat, or if there is suitable habitat and the project proponent carries out all tree removal for this project between October 15 and March 31, we will concur that the proposed project is not likely to adversely affect the Indiana bat. If this timing is not achievable and no other measures to avoid adverse effects are possible (e.g., selective tree removal), then we recommend that the project proponent proceed to acoustic and/or mist-netting surveys to determine presence or probable absence of Indiana bats in accordance with the 2015 Range-wide Indiana Bat Summer Survey Guidelines (April 2015) (<http://www.fws.gov/midwest/Endangered/mammals/inba/surveys/pdf/2015IndianaBatSummerSurveyGuidelines01April2015.pdf>).

With respect to the northern long-eared bat, the proposed project is not within 0.25 mile of a known hibernacula or within 150 feet of a known maternity roost tree. Therefore, the proposed project will not result in prohibited incidental take of the northern long-eared bat. However, if tree removal will occur within suitable habitat (see above), the lead Federal agency must still adhere to the requirements for consultation under section 7 of the ESA. Guidelines for Federal agencies are specified in the January 13, 2016, *Key to the Northern Long-Eared Bat 4(d) Rule for Federal Actions that May Affect Northern Long-Eared Bats*, available at <http://www.fws.gov/midwest/endangered/mammals/nleb/>.

Best Management Practices

We also recommend incorporating measures into the project design to protect water quality. For information regarding best management practices, consult the Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas (March 2009), available on-line at:

http://swcc.alabama.gov/pages/erosion_control.aspx?sm=b_b.

We appreciate the opportunity to comment on this project and look forward to working with you in the future. If you have any questions, please contact Ms. Shannon Holbrook of my staff at (251) 441-5871. Please refer to the reference number located at the top of this letter in future phone calls or written correspondence.

Sincerely,



William J. Pearson

Field Supervisor

Alabama Ecological Services Field Office

Appendix C

**NRCS Concurrence Request Package and
NRCS Concurrence**



September 13, 2016

Mr. Milton Tuck
Resource Soil Scientist
Natural Resources Conservation Service
Milton.tuck@al.usda.gov
420 Hackberry Lane
Tuscaloosa, Alabama 35486

Subject: **Primary and Unique Farmland Concurrence Request
Dunnavant Valley Greenway – Shelby County/APPLE
Regional Planning Commission of Greater Birmingham
Shelby County, Alabama**

Dear Mr. Tuck:

Shelby County in conjunction with the Regional Planning Commission of Greater Birmingham is evaluating the feasibility of completing the Dunnavant Valley Greenway. Mapping is included for your use in determining the prime farmland status for the subject project.

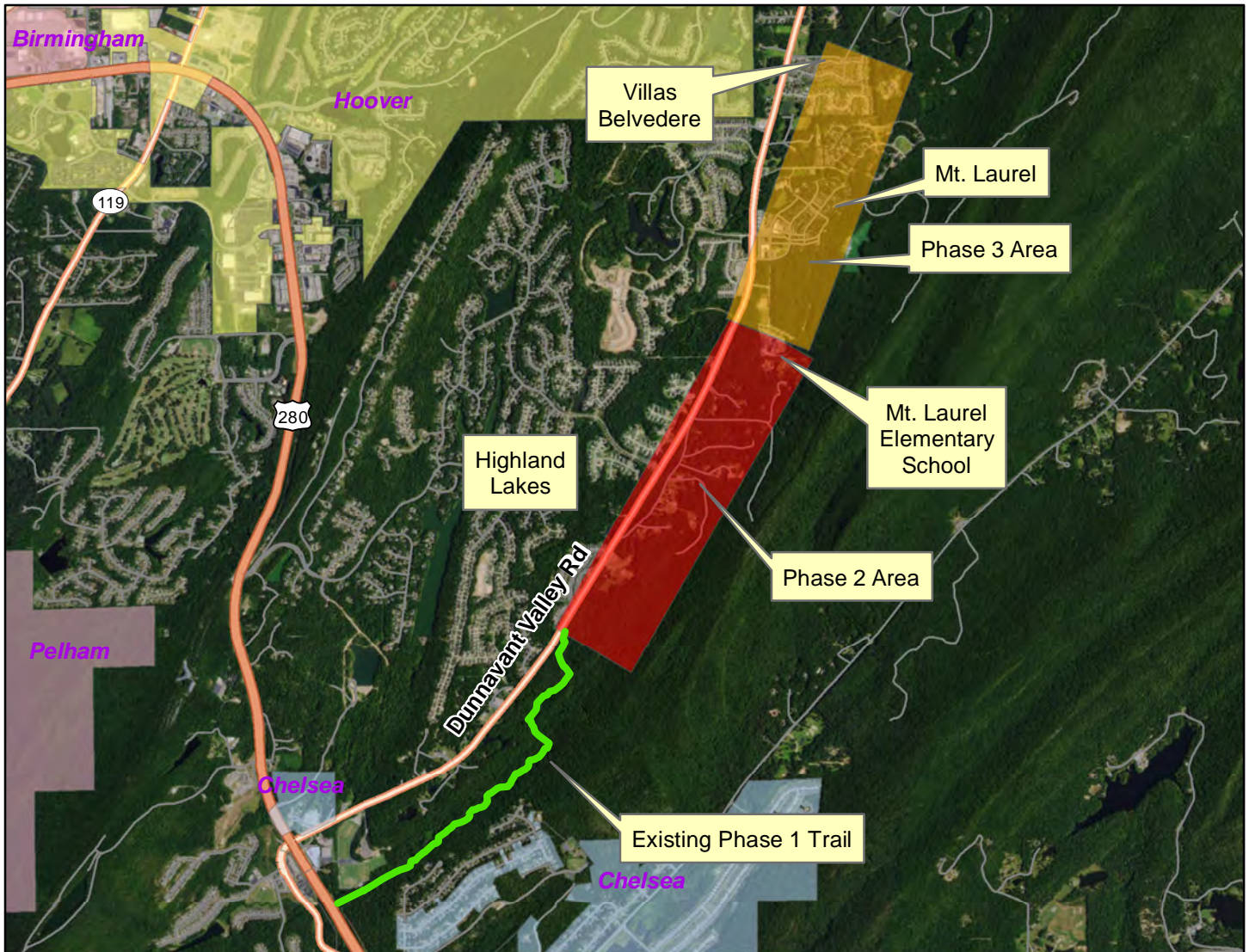
Please let me know if you have any questions or need additional information.

Sincerely,

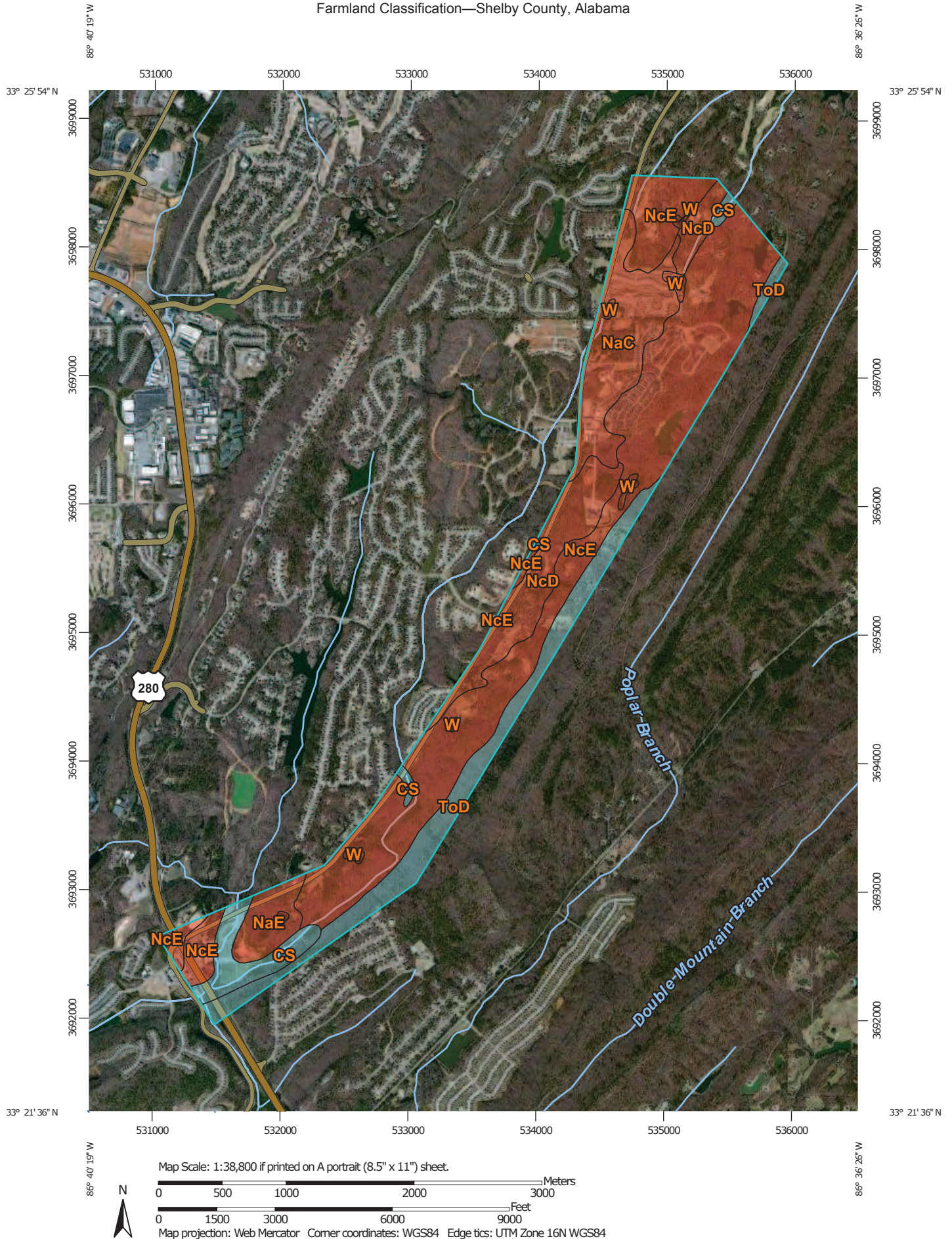
A handwritten signature in black ink, reading "Jennifer G. Brown". The signature is written in a cursive, flowing style.

Jennifer G. Brown, PE
Assistant Project Manager
Alabama Reg. #32726
D: (205) 263-2159
jbrown@sain.com

Attachment



Farmland Classification—Shelby County, Alabama




**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

9/7/2016
Page 1 of 4









MAP LEGEND








Area of Interest (AOI)

-  Area of Interest (AOI)




Soils








Soil Rating Polygons






-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available







Soil Rating Lines










-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained

-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available


Soil Rating Points

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available


Water Features

MAP INFORMATION

 Streams and Canals

Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Shelby County, Alabama

Survey Area Data: Version 8, Sep 22, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 13, 2011—May 20, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Farmland Classification

Farmland Classification— Summary by Map Unit — Shelby County, Alabama (AL117)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CS	Choccolocco-Sterrett association, frequently flooded	Farmland of statewide importance	78.1	5.6%
NaC	Nauvoo loam, 2 to 8 percent slopes	Not prime farmland	174.4	12.5%
NaE	Nauvoo loam, 15 to 35 percent slopes	Not prime farmland	54.1	3.9%
NcD	Nauvoo-Sunlight complex, 8 to 15 percent slopes	Not prime farmland	175.6	12.6%
NcE	Nauvoo-Sunlight complex, 15 to 25 percent slopes	Not prime farmland	713.5	51.0%
ToD	Townley silt loam, 4 to 12 percent slopes	Farmland of statewide importance	182.0	13.0%
W	Water	Not prime farmland	21.1	1.5%
Totals for Area of Interest			1,398.8	100.0%

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)

Name of Project DUNNAVANT VALLEY GREENWAY
 Proposed Land Use TRAIL (DUNNAVANT VALLEY ROAD)

Date Of Land Evaluation Request 11/15/16
 Federal Agency Involved REG PLANNING Commission
 County and State SHELBY CO - ALABAMA

PART II (To be completed by NRCS)

Date Request Received By NRCS 11/5/16 Person Completing Form: M. Tuck

Does the site contain Prime, Unique, Statewide or Local Important Farmland? (If no, the FPPA does not apply - do not complete additional parts of this form) YES ☐ NO ☐ Acres Irrigated _____ Average Farm Size _____

Major Crop(s) _____ Farmable Land In Govt. Jurisdiction Acres _____ % Amount of Farmland As Defined in FPPA Acres _____ %

Name of Land Evaluation System Used _____ Name of State or Local Site Assessment System _____ Date Land Evaluation Returned by NRCS _____

PART III (To be completed by Federal Agency)

A. Total Acres To Be Converted Directly
 B. Total Acres To Be Converted Indirectly
 C. Total Acres In Site

No Prime Farmland Involved

Alternative Site Rating
 Site A Site B Site C Site D

PART IV (To be completed by NRCS) Land Evaluation Information

A. Total Acres Prime And Unique Farmland
 B. Total Acres Statewide Important or Local Important Farmland
 C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted
 D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value

PART V (To be completed by NRCS) Land Evaluation Criterion
 Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)

Site Assessment Criteria (Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)	Maximum Points	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)				
2. Perimeter In Non-urban Use	(10)				
3. Percent Of Site Being Farmed	(20)				
4. Protection Provided By State and Local Government	(20)				
5. Distance From Urban Built-up Area	(15)				
6. Distance To Urban Support Services	(15)				
7. Size Of Present Farm Unit Compared To Average	(10)				
8. Creation Of Non-farmable Farmland	(10)				
9. Availability Of Farm Support Services	(5)				
10. On-Farm Investments	(20)				
11. Effects Of Conversion On Farm Support Services	(10)				
12. Compatibility With Existing Agricultural Use	(10)				
TOTAL SITE ASSESSMENT POINTS	160				
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)	100				
Total Site Assessment (From Part VI above or local site assessment)	160				
TOTAL POINTS (Total of above 2 lines)	260				

Site Selected:

Date Of Selection

Was A Local Site Assessment Used?

YES ☐NO ☐

Reason For Selection:

*Under 658.2 (2) Rules and Regulations Prime Farmland which has been zoned for non-agricultural use by a state or local government and committed to other use. Rule to apply; The exemption for Farmland.

Name of Federal agency representative completing this form:
 (See Instructions on reverse side)

Milton Tuck 11/15

Date: 12/5/16

Appendix D

Coordination with the University of Alabama's Office of Archeological Records

Brown, Jennifer

From: Mizelle, Samuel <sam.mizelle@ua.edu>
Sent: Wednesday, September 21, 2016 2:37 PM
To: Brown, Jennifer
Subject: RE: Background Research

Hi Jennifer,

There are no previously recorded sites or surveys within your area of interest for the Greenway. Hope all is well!

Best,
-sam

Sam Mizelle

Cultural Resources Investigator / IT Manager

Office of Archaeological Research

[The University of Alabama](#)

office 205-371-8708

smizelle@ua.edu | <http://museums.ua.edu/oar/>



From: Brown, Jennifer [<mailto:jbrown@sain.com>]
Sent: Wednesday, September 21, 2016 12:42 PM
To: Mizelle, Samuel
Subject: Background Research

Hey Sam,

We are preparing a feasibility study for a trail system in Shelby County. The study consists of evaluating the feasibility of extending the existing Dunning Valley Greenway. Attached is a vicinity map for the study. Could you please perform a background search for this area to see if there are any areas of interest within the study area?

Please let me know if you have any questions or need additional information.

Thanks,
Jennifer

Jennifer G. Brown, PE

Project Manager

Sain Associates, Inc.

Two Perimeter Park South
Suite 500 East

Birmingham, Alabama 35243

205.263.2159

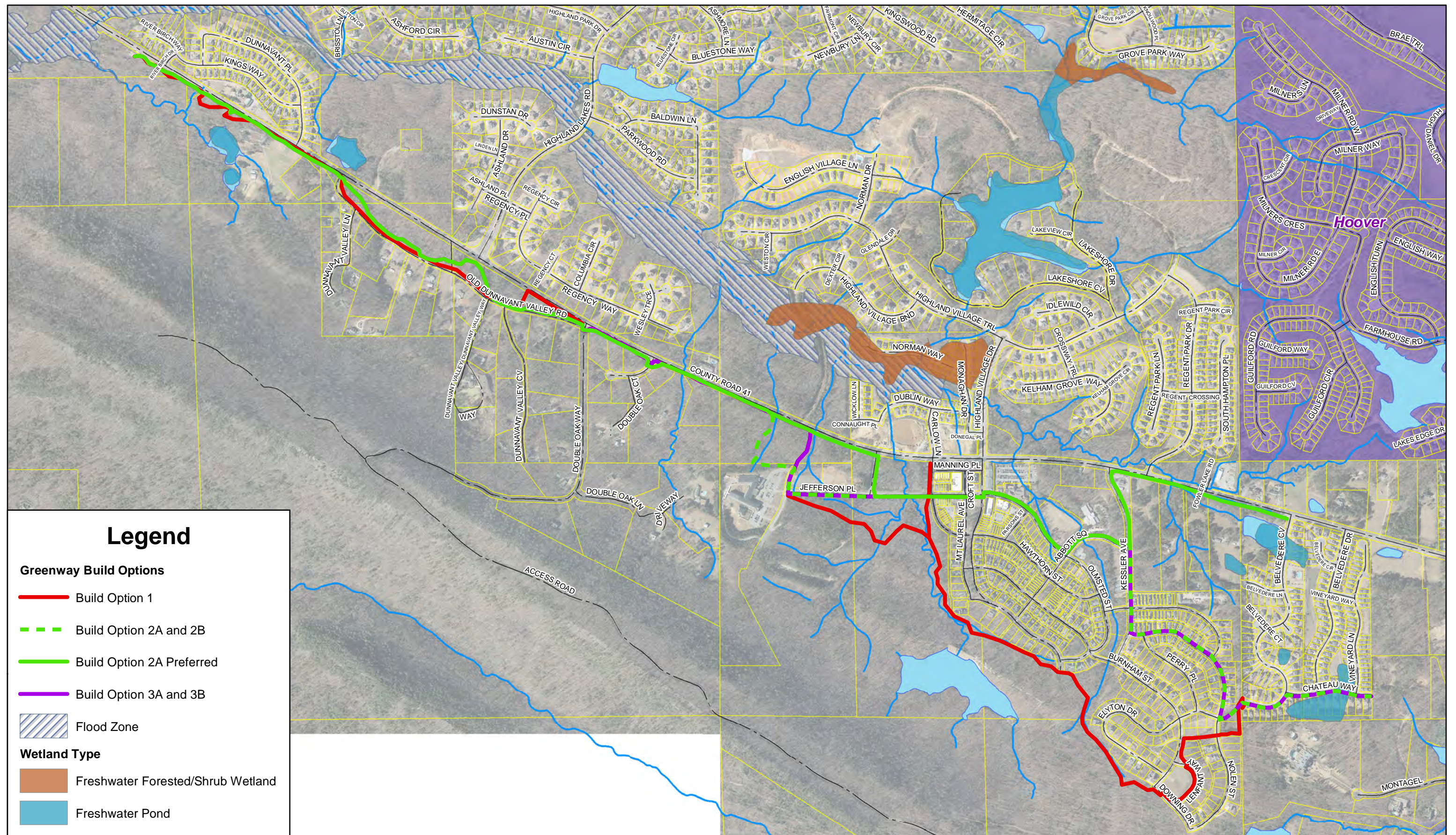
jbrown@sain.com

www.sain.com







Appendix E

Wetlands and Floodplains Mapping





Legend

Greenway Build Options

-  Build Option 1
-  Build Option 2A and 2B
-  Build Option 2A Preferred
-  Build Option 3A and 3B

 Flood Zone

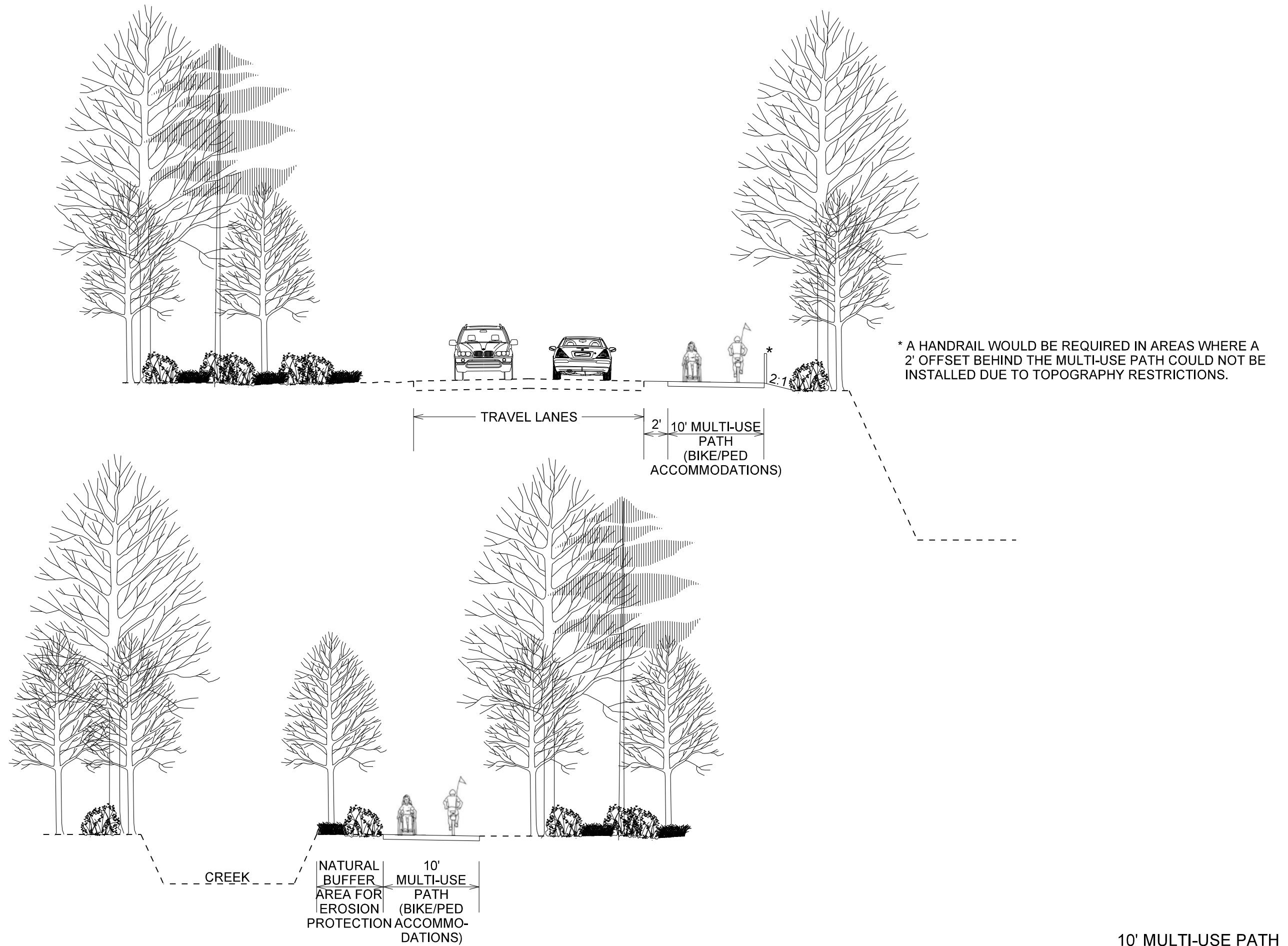
Wetland Type

-  Freshwater Forested/Shrub Wetland
 Freshwater Pond



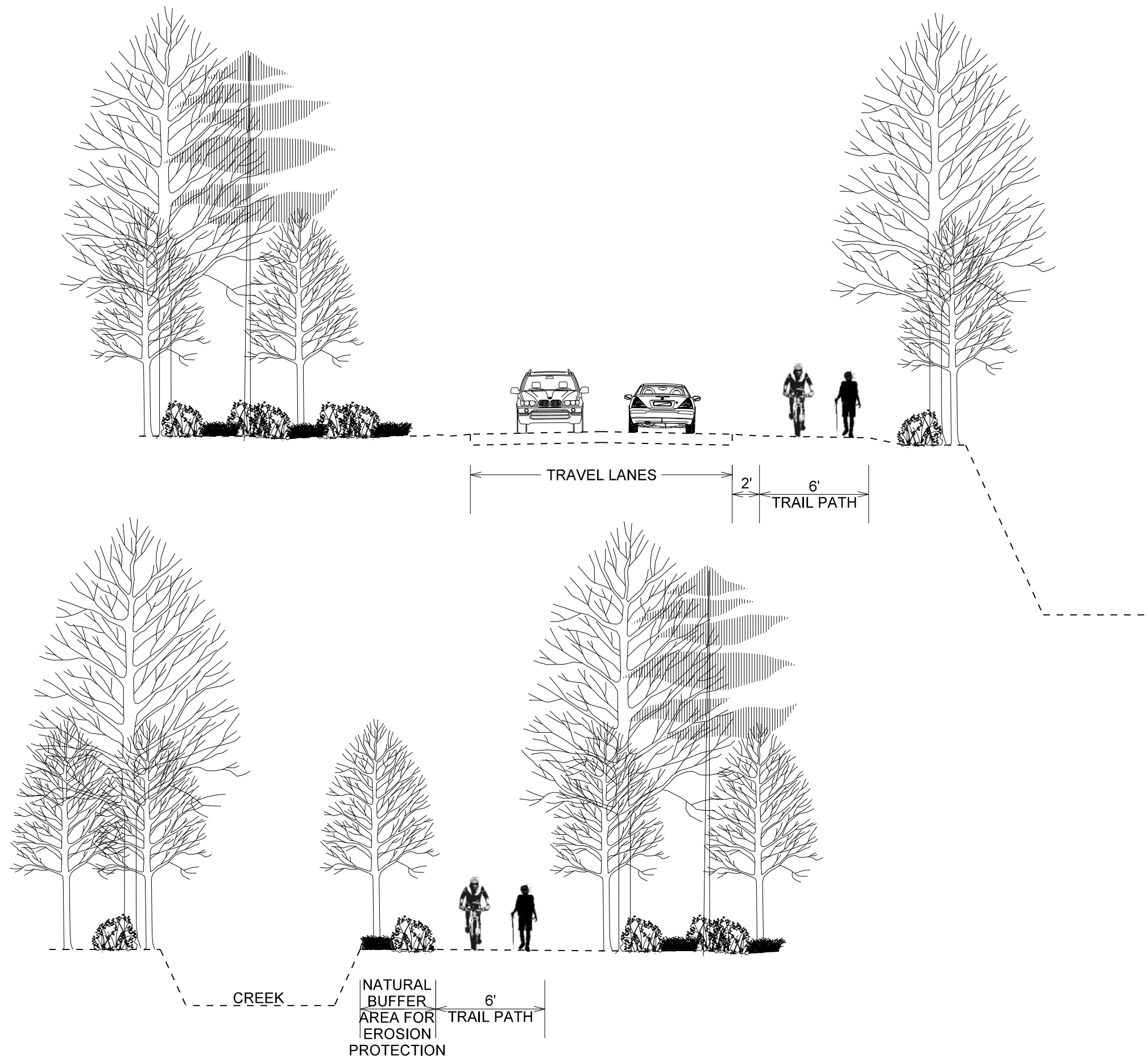
Appendix F

Typical Sections



NOT TO SCALE

10' MULTI-USE PATH



NOT TO SCALE

RECREATIONAL TRAIL

Appendix G

Cost Estimates

**Dunnavant Trail Study
Cost Summary**

	Build Option					
	1	2A	2B	2 Preferred	3A	3B
Phase 2 Local Funds	\$ 390,000.00	\$ 370,000.00	\$ 280,000.00	\$ 360,000.00	\$ 620,000.00	\$ 330,000.00
Phase 3 Local Funds	\$ 320,000.00	\$ 10,000.00	\$ 80,000.00	\$ 110,000.00	\$ 10,000.00	\$ 80,000.00
Phase 2 Federal Funds	\$ 810,000.00	\$ -	\$ 380,000.00	\$ -	\$ -	\$ 570,000.00
Phase 3 Federal Funds	\$ 660,000.00	\$ -	\$ 130,000.00	\$ -	\$ -	\$ 130,000.00
Local Funds Grand Total:	\$ 710,000.00	\$ 380,000.00	\$ 360,000.00	\$ 470,000.00	\$ 630,000.00	\$ 410,000.00
Federal Funds Grand Total:	\$1,470,000.00	\$ -	\$ 510,000.00	\$ -	\$ -	\$ 700,000.00
Total Cost	\$2,180,000.00	\$ 380,000.00	\$ 870,000.00	\$ 470,000.00	\$ 630,000.00	\$1,110,000.00

NOTE: FEDERAL AND LOCAL FUNDS WERE TABULATED ASSUMING AN 80/20 SPLIT, WITH LOCAL FUNDS COVERING THE ENTIRETY OF THE PRELIMINARY ENGINEERING.

NOTE: ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST PROVIDED IS MADE ON THE BASIS OF ENGINEER'S EXPERIENCES AND QUALIFICATION AND REPRESENTS ENGINEER'S BEST JUDGMENT WITH THE INDUSTRY. ENGINEER DOES NOT GUARANTEE THAT PROPOSALS, BIDS, OR ACTUAL COST WILL NOT VARY FROM ENGINEER'S OPINION OF PROBABLE COST.

OPINION OF PROBABLE COST

Build Option 1 - Multi-use Path

Description: Phase 2 Alignment with alternative Phase 3 Alignment behind Mt. Laurel with a 10' paved, ADA compliant shared use path

Item Description	Unit	Quantity		Unit Price	Amount	
		Phase 2	Phase 3		Phase 2	Phase 3
Clearing & Grubbing (\$4000/Acre)	LS	1	1	\$52,000.00	\$52,000.00	\$52,000.00
Unclassified Excavation	CY	3710	3090	\$15.00	\$55,650.00	\$46,350.00
Borrow Excavation	CY	5340	4460	\$15.00	\$80,100.00	\$66,900.00
Structure Excavation	CY	230	180	\$15.00	\$3,450.00	\$2,700.00
Foundation Backfill	CY	70	50	\$30.00	\$2,100.00	\$1,500.00
Asphalt (3" Wearing 4" CAB)	LF	9360	7840	\$42.00	\$393,120.00	\$329,280.00
Striping (Crosswalk)	SF	960	960	\$3.00	\$2,880.00	\$2,880.00
Signs	SF	120	120	\$15.00	\$1,800.00	\$1,800.00
Roadway Pipe 18"	LF	140	110	\$30.00	\$4,200.00	\$3,300.00
Roadway Pipe 24"	LF	90	60	\$40.00	\$3,600.00	\$2,400.00
Roadway Pipe 36"	LF	30	20	\$70.00	\$2,100.00	\$1,400.00
Erosion Control	LS	0.6	0.4	\$75,000.00	\$45,000.00	\$30,000.00
Traffic Control	LS	0.6	0.4	\$30,000.00	\$18,000.00	\$12,000.00
Mobilization (9.7% of Overall Cost)	LS	0.6	0.4	\$118,001.47	\$70,800.88	\$47,200.59
Engineering Controls(1.3% of Overall Cost)	LS	0.6	0.4	\$15,814.63	\$9,488.78	\$6,325.85

Total Construction Costs	\$744,289.66	\$606,036.44
Contingency (10%)	\$74,428.97	\$60,603.64
Preliminary Engineering:	\$180,000.00	\$150,000.00
CE&I and Indirect Costs (25%):	\$186,072.42	\$151,509.11
Local Match Grand Total:	\$390,000	\$320,000
Federal Funds Grand Total:	\$810,000	\$660,000
Total Phase Cost	\$1,200,000	\$980,000
Total Alternative Cost	\$2,180,000	

NOTE: ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST PROVIDED IS MADE ON THE BASIS OF ENGINEER'S EXPERIENCES AND QUALIFICATION AND REPRESENTS ENGINEER'S BEST JUDGMENT WITH THE INDUSTRY. ENGINEER DOES NOT GUARANTEE THAT PROPOSALS, BIDS, OR ACTUAL COST WILL NOT VARY FROM ENGINEER'S OPINION OF PROBABLE COST.

List of Unit Abbreviations

Abbreviation	Definition
CY	Cubic Yard
LF	Linear Foot
LS	Lump Sum
SF	Square Foot

OPINION OF PROBABLE COST

Build Option 2A - Recreational Trail with Local Funding

Description: Phase 2 Alignment with a 6' unpaved path. Phase 3 through Mt. Laurel existing facilities. Mt Laurel and Belvedere Cove connected via a new connection between Nolen Street and Belvedere Cove

Item Description	Unit	Quantity		Unit Price	Amount	
		Phase 2	Phase 3		Phase 2	Phase 3
Clearing & Grubbing (\$4000/Acre)	LS	1		\$16,000.00	\$16,000.00	\$0.00
Unclassified Excavation	CY	1890		\$15.00	\$28,350.00	\$0.00
Borrow Excavation	CY	3140		\$15.00	\$47,100.00	\$0.00
Structure Excavation	CY	275		\$15.00	\$4,125.00	\$0.00
Foundation Backfill	CY	85		\$30.00	\$2,550.00	\$0.00
Striping (Crosswalk)	SF	960	960	\$3.00	\$2,880.00	\$2,880.00
Signs	SF	120	120	\$15.00	\$1,800.00	\$1,800.00
Roadway Pipe 18"	LF	175		\$30.00	\$5,250.00	\$0.00
Roadway Pipe 24"	LF	100		\$40.00	\$4,000.00	\$0.00
Roadway Pipe 36"	LF	25		\$70.00	\$1,750.00	\$0.00
Erosion Control	LS	1		\$40,000.00	\$40,000.00	\$0.00
Traffic Control	LS	1		\$30,000.00	\$30,000.00	\$0.00
Mobilization (9.7% of Overall Cost)	LS	1	1	-	\$17,829.09	\$453.96
Engineering Controls(1.3% of Overall Cost)	LS	1	1	-	\$2,389.47	\$60.84

Total Construction Costs	\$204,023.55	\$5,194.80
Contingency (10%)	\$20,402.36	\$519.48
Preliminary Engineering:	\$140,000.00	\$0.00
Local Funds Grand Total:	\$370,000	\$10,000
Federal Funds Grand Total:	\$0	\$0
Total Phase Cost	\$370,000	\$10,000
Total Alternative Cost	\$380,000	

NOTE: ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST PROVIDED IS MADE ON THE BASIS OF ENGINEER'S EXPERIENCES AND QUALIFICATION AND REPRESENTS ENGINEER'S BEST JUDGMENT WITH THE INDUSTRY. ENGINEER DOES NOT GUARANTEE THAT PROPOSALS, BIDS, OR ACTUAL COST WILL NOT VARY FROM ENGINEER'S OPINION OF PROBABLE COST.

List of Unit Abbreviations

Abbreviation	Definition
CY	Cubic Yard
LF	Linear Foot
LS	Lump Sum
SF	Square Foot

OPINION OF PROBABLE COST
Build Option 2B - Recreational Trail with Federal Funding

Description: Phase 2 Alignment with a 6' unpaved path. Phase 3 route through Mt. Laurel; Curb ramps upgraded to meet ADA.

Item Description	Unit	Quantity		Unit Price	Amount	
		Phase 2	Phase 3		Phase 2	Phase 3
Clearing & Grubbing (\$4000/Acre)	LS	1		\$16,000.00	\$16,000.00	\$0.00
Unclassified Excavation	CY	1990		\$15.00	\$29,850.00	\$0.00
Borrow Excavation	CY	3300		\$15.00	\$49,500.00	\$0.00
Structure Excavation	CY	275		\$15.00	\$4,125.00	\$0.00
Foundation Backfill	CY	85		\$30.00	\$2,550.00	\$0.00
Crushed Aggregate Base	LF	9200		\$14.00	\$128,800.00	\$0.00
Sidewalk Ramps	EA		25	\$4,000.00	\$0.00	\$100,000.00
Striping (Crosswalk)	SF	960	960	\$3.00	\$2,880.00	\$2,880.00
Signs	SF	120	120	\$15.00	\$1,800.00	\$1,800.00
Roadway Pipe 18"	LF	175		\$30.00	\$5,250.00	\$0.00
Roadway Pipe 24"	LF	100		\$40.00	\$4,000.00	\$0.00
Roadway Pipe 36"	LF	25		\$70.00	\$1,750.00	\$0.00
Erosion Control	LS	1		\$40,000.00	\$40,000.00	\$0.00
Traffic Control	LS	1		\$30,000.00	\$30,000.00	\$0.00
Mobilization (9.7% of Overall Cost)	LS	1	1	-	\$30,700.99	\$10,153.96
Engineering Controls(1.3% of Overall Cost)	LS	1	1	-	\$4,114.57	\$1,360.84

Total Construction Costs	\$351,320.55	\$116,194.80
Contingency (10%)	\$35,132.06	\$11,619.48
Preliminary Engineering:	\$180,000.00	\$40,000.00
CE&I and Indirect Costs (25%):	\$87,830.14	\$29,048.70
Local Match Grand Total:	\$280,000	\$80,000
Federal Funds Grand Total:	\$380,000	\$130,000
Total Phase Cost	\$660,000	\$210,000
Total Alternative Cost	\$870,000	

NOTE: ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST PROVIDED IS MADE ON THE BASIS OF ENGINEER'S EXPERIENCES AND QUALIFICATION AND REPRESENTS ENGINEER'S BEST JUDGMENT WITH THE INDUSTRY. ENGINEER DOES NOT GUARANTEE THAT PROPOSALS, BIDS, OR ACTUAL COST WILL NOT VARY FROM ENGINEER'S OPINION OF PROBABLE COST.

List of Unit Abbreviations

Abbreviation	Definition
CY	Cubic Yard
EA	Each
LF	Linear Foot
LS	Lump Sum
SF	Square Foot

OPINION OF PROBABLE COST
Build Option 3A - Rural-Urban Transect with Local Funding

Description: Transition from a 6' unpaved path to a 10' paved path as Phase 2 nears the elementary school. Phase 3 route through existing Mt. Laurel facilities.

Item Description	Unit	Quantity		Unit Price	Amount	
		Phase 2	Phase 3		Phase 2	Phase 3
Clearing & Grubbing (\$4000/Acre)	LS	1		\$24,000.00	\$24,000.00	\$0.00
Unclassified Excavation	CY	4100		\$15.00	\$61,500.00	\$0.00
Borrow Excavation	CY	4900		\$15.00	\$73,500.00	\$0.00
Structure Excavation	CY	275		\$15.00	\$4,125.00	\$0.00
Foundation Backfill	CY	85		\$30.00	\$2,550.00	\$0.00
Asphalt (3" Wearing 4" CAB)	LF	3400		\$42.00	\$142,800.00	\$0.00
Striping (Crosswalk)	SF	960	960	\$3.00	\$2,880.00	\$2,880.00
Signs	SF	120	120	\$15.00	\$1,800.00	\$1,800.00
Roadway Pipe 18"	LF	175		\$30.00	\$5,250.00	\$0.00
Roadway Pipe 24"	LF	100		\$40.00	\$4,000.00	\$0.00
Erosion Control	LS	1		\$40,000.00	\$40,000.00	\$0.00
Traffic Control	LS	1		\$30,000.00	\$30,000.00	\$0.00
Mobilization (9.7% of Overall Cost)	LS	1	1	-	\$35,735.29	\$453.96
Engineering Controls(1.3% of Overall Cost)	LS	1	1	-	\$4,789.27	\$60.84

Total Construction Costs	\$432,929.55	\$5,194.80
Contingency (10%)	\$43,292.96	\$519.48
Preliminary Engineering:	\$140,000.00	\$0.00
Local Funds Grand Total:	\$620,000	\$10,000
Federal Funds Grand Total:	\$0	\$0
Total Phase Cost	\$620,000	\$10,000
Total Alternative Cost	\$630,000	

NOTE: ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST PROVIDED IS MADE ON THE BASIS OF ENGINEER'S EXPERIENCES AND QUALIFICATION AND REPRESENTS ENGINEER'S BEST JUDGMENT WITH THE INDUSTRY. ENGINEER DOES NOT GUARANTEE THAT PROPOSALS, BIDS, OR ACTUAL COST WILL NOT VARY FROM ENGINEER'S OPINION OF PROBABLE COST.

List of Unit Abbreviations

Abbreviation	Definition
CY	Cubic Yard
LF	Linear Foot
LS	Lump Sum
SF	Square Foot

OPINION OF PROBABLE COST

Build Option 3B - Rural-Urban Transect with Federal Funding

Description: Transition from a 6' unpaved path to a 10' paved path as Phase 2 nears the elementary school. Phase 3 route through Mt. Laurel; Curb ramps upgraded to meet ADA.

Item Description	Unit	Quantity		Unit Price	Amount	
		Phase 2	Phase 3		Phase 2	Phase 3
Clearing & Grubbing (\$4000/Acre)	LS	1		\$24,000.00	\$24,000.00	\$0.00
Unclassified Excavation	CY	4100		\$15.00	\$61,500.00	\$0.00
Borrow Excavation	CY	4900		\$15.00	\$73,500.00	\$0.00
Structure Excavation	CY	275		\$15.00	\$4,125.00	\$0.00
Foundation Backfill	CY	85		\$30.00	\$2,550.00	\$0.00
Asphalt (3" Wearing 4" CAB)	LF	3400		\$42.00	\$142,800.00	\$0.00
Crushed Aggregate Base	LF	5800		\$14.00	\$81,200.00	\$0.00
Sidewalk Ramps	EA		25	\$4,000.00	\$0.00	\$100,000.00
Striping (Crosswalk)	SF	960	960	\$3.00	\$2,880.00	\$2,880.00
Signs	SF	120	120	\$15.00	\$1,800.00	\$1,800.00
Roadway Pipe 18"	LF	175		\$30.00	\$5,250.00	\$0.00
Roadway Pipe 24"	LF	100		\$40.00	\$4,000.00	\$0.00
Erosion Control	LS	1		\$40,000.00	\$40,000.00	\$0.00
Traffic Control	LS	1		\$30,000.00	\$30,000.00	\$0.00
Mobilization (9.7% of Overall Cost)	LS	1	1	-	\$45,939.69	\$10,153.96
Engineering Controls(1.3% of Overall Cost)	LS	1	1	-	\$6,156.87	\$1,360.84

Total Construction Costs	\$525,701.55	\$116,194.80
Contingency (10%)	\$52,570.16	\$11,619.48
Preliminary Engineering:	\$180,000.00	\$40,000.00
CE&I and Indirect Costs (25%):	\$131,425.39	\$29,048.70
Local Match Grand Total:	\$330,000	\$80,000
Federal Funds Grand Total:	\$570,000	\$130,000
Total Phase Cost	\$900,000	\$210,000
Total Alternative Cost	\$1,110,000	

NOTE: ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST PROVIDED IS MADE ON THE BASIS OF ENGINEER'S EXPERIENCES AND QUALIFICATION AND REPRESENTS ENGINEER'S BEST JUDGMENT WITH THE INDUSTRY. ENGINEER DOES NOT GUARANTEE THAT PROPOSALS, BIDS, OR ACTUAL COST WILL NOT VARY FROM ENGINEER'S OPINION OF PROBABLE COST.

List of Unit Abbreviations

Abbreviation	Definition
CY	Cubic Yard
EA	Each
LF	Linear Foot
LS	Lump Sum
SF	Square Foot

OPINION OF PROBABLE COST**Build Option 2 Preferred - Recreational Trail with Local Funding**

Description: Phase 2 Alignment with a 6' unpaved path to Robinson Road; Phase 3 through Mt Laurel existing facilities and 6' unpaved path along CR-41 between Mt Laurel and Belvedere Cove

Item Description	Unit	Quantity		Unit Price	Amount	
		Phase 2	Phase 3		Phase 2	Phase 3
Clearing & Grubbing (\$4000/Acre)	LS	1	1	-	\$16,000.00	\$4,530.00
Unclassified Excavation	CY	1830	520	\$15.00	\$27,450.00	\$7,800.00
Borrow Excavation	CY	3040	870	\$15.00	\$45,600.00	\$13,050.00
Structure Excavation	CY	275	80	\$15.00	\$4,125.00	\$1,200.00
Foundation Backfill	CY	85	30	\$30.00	\$2,550.00	\$900.00
Striping (Crosswalk)	SF	960	960	\$3.00	\$2,880.00	\$2,880.00
Signs	SF	0	120	\$15.00	\$0.00	\$1,800.00
Roadway Pipe 18"	LF	175	50	\$30.00	\$5,250.00	\$1,500.00
Roadway Pipe 24"	LF	100	30	\$40.00	\$4,000.00	\$1,200.00
Roadway Pipe 36"	LF	25	10	\$70.00	\$1,750.00	\$700.00
Erosion Control	LS	1	1	-	\$40,000.00	\$11,320.00
Traffic Control	LS	1	1	-	\$30,000.00	\$8,490.00
Mobilization (9.7% of Overall Cost)	LS	1	1	-	\$17,421.69	\$5,370.89
Engineering Controls(1.3% of Overall Cost)	LS	1	1	-	\$2,334.87	\$719.81

Total Construction Costs	\$199,361.55	\$61,460.70
Contingency (10%)	\$19,936.16	\$6,146.07
Preliminary Engineering:	\$140,000.00	\$40,000.00

Local Funds Grand Total:	\$360,000	\$110,000
Federal Funds Grand Total:	\$0	\$0
Total Phase Cost	\$360,000	\$110,000
Total Alternative Cost	\$470,000	

NOTE: ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST PROVIDED IS MADE ON THE BASIS OF ENGINEER'S EXPERIENCES AND QUALIFICATION AND REPRESENTS ENGINEER'S BEST JUDGMENT WITH THE INDUSTRY. ENGINEER DOES NOT GUARANTEE THAT PROPOSALS, BIDS, OR ACTUAL COST WILL NOT VARY FROM ENGINEER'S OPINION OF PROBABLE COST.

List of Unit Abbreviations

Abbreviation	Definition
CY	Cubic Yard
LF	Linear Foot
LS	Lump Sum
SF	Square Foot

OPINION OF PROBABLE COST

Build Option 2 Preferred - Recreational Trail with Local Funding - Recreational Phasing

Description: Phase 2 Alignment with a 6' unpaved path to Robinson Road; Phase 3 through Mt Laurel existing facilities; 6' unpaved path along CR-41 between Mt Laurel and Belvedere Cove; Phased Construction based on Recreational Opportunity Perspective.

Item Description	Unit	Quantity					Unit Price	Amount				
		Segment 1	Segment 2	Segment 3	Segment 4	Segment 5		Segment 1	Segment 2	Segment 3	Segment 4	Segment 5
Clearing & Grubbing (\$4000/Acre)	LS	1	1	1	1	-	-	\$4,392.40	\$5,670.16	\$5,829.66	\$4,637.79	-
Unclassified Excavation	CY	502	649	667	530	-	\$15.00	\$7,530.00	\$9,735.00	\$10,005.00	\$7,950.00	-
Borrow Excavation	CY	836	1079	1110	883	-	\$15.00	\$12,540.00	\$16,185.00	\$16,650.00	\$13,245.00	-
Structure Excavation	CY	75	98	100	80	-	\$15.00	\$1,125.00	\$1,470.00	\$1,500.00	\$1,200.00	-
Foundation Backfill	CY	24	31	32	25	-	\$30.00	\$720.00	\$930.00	\$960.00	\$750.00	-
Striping (Crosswalk)	SF	410	530	545	433	-	\$3.00	\$1,230.00	\$1,590.00	\$1,635.00	\$1,299.00	-
Signs	SF	-	-	-	-	120	\$15.00	-	-	-	-	\$1,800.00
Roadway Pipe 18"	LF	48	62	63	50	-	\$30.00	\$1,440.00	\$1,860.00	\$1,890.00	\$1,500.00	-
Roadway Pipe 24"	LF	27	35	36	29	-	\$40.00	\$1,080.00	\$1,400.00	\$1,440.00	\$1,160.00	-
Roadway Pipe 36"	LF	7	9	9	7	-	\$70.00	\$490.00	\$630.00	\$630.00	\$490.00	-
Erosion Control	LS	1	1	1	1	-	-	\$10,979.93	\$14,174.01	\$14,572.72	\$11,593.33	-
Traffic Control	LS	1	1	1	1	-	-	\$8,234.95	\$10,630.51	\$10,929.54	\$8,695.00	-
Mobilization (9.7% of Overall Cost)	LS	1	1	1	1	-	-	\$4,876.48	\$6,295.06	\$6,472.13	\$5,148.91	-
Engineering Controls(1.3% of Overall Cost)	LS	1	1	1	1	-	-	\$653.55	\$843.67	\$867.40	\$690.06	-

Total Construction Costs

Contingency (10%)

Preliminary Engineering:

Local Funds Grand Total:

Federal Funds Grand Total:

Total Phase Cost

Total Alternative Cost

\$55,800.00	\$72,000.00	\$74,062.56	\$58,920.49	\$1,800.00
\$5,600.00	\$7,200.00	\$7,406.26	\$5,892.05	\$180.00
\$38,500.00	\$49,700.00	\$51,112.44	\$40,662.51	\$0.00
\$100,000	\$130,000	\$130,000	\$106,000	\$2,000
\$0	\$0	\$0	\$0	\$0
\$100,000	\$130,000	\$130,000	\$106,000	\$2,000
		\$470,000		

NOTE: ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST PROVIDED IS MADE ON THE BASIS OF ENGINEER'S EXPERIENCES AND QUALIFICATION AND REPRESENTS ENGINEER'S BEST JUDGMENT WITH THE INDUSTRY. ENGINEER DOES NOT GUARANTEE THAT PROPOSALS, BIDS, OR ACTUAL COST WILL NOT VARY FROM ENGINEER'S OPINION OF PROBABLE COST.

List of Unit Abbreviations

Abbreviation	Definition
CY	Cubic Yard
LF	Linear Foot
LS	Lump Sum
SF	Square Foot

Segment 1	DVG Trailhead to Old Dunnivant Valley Road
Segment 2	Old Dunnivant Valley Road
Segment 3	Old Dunnivant Valley Road to Robinson Road
Segment 4	Abbott Squire to Belvedere Cove
Segment 5	Mt Laurel Signing

OPINION OF PROBABLE COST

Build Option 2 Preferred - Recreational Trail with Local Funding - Destination Focused Phasing

Description: Phase 2 Alignment with a 6' unpaved path to Robinson Road; Phase 3 through Mt Laurel existing facilities; 6' unpaved path along CR-41 between Mt Laurel and Belvedere Cove; Phased Construction based on Transportation Facility Perspective.

Item Description	Unit	Quantity				Unit Price	Amount			
		Segment 1	Segment 2	Segment 3	Segment 4		Segment 1	Segment 2	Segment 3	Segment 4
Clearing & Grubbing (\$4000/Acre)	LS	1	1	1	-	-	\$4,637.79	\$8,343.11	\$7,549.11	-
Unclassified Excavation	CY	530	955	864	-	\$15.00	\$7,950.00	\$14,325.00	\$12,960.00	-
Borrow Excavation	CY	883	1588	1437	-	\$15.00	\$13,245.00	\$23,820.00	\$21,555.00	-
Structure Excavation	CY	80	144	130	-	\$15.00	\$1,200.00	\$2,160.00	\$1,950.00	-
Foundation Backfill	CY	25	46	42	-	\$30.00	\$750.00	\$1,380.00	\$1,260.00	-
Striping (Crosswalk)	SF	433	780	706	-	\$3.00	\$1,299.00	\$2,340.00	\$2,118.00	-
Signs	SF	-	-	-	120	\$15.00	-	-	-	\$1,800.00
Roadway Pipe 18"	LF	50	91	82	-	\$30.00	\$1,500.00	\$2,730.00	\$2,460.00	-
Roadway Pipe 24"	LF	29	52	47	-	\$40.00	\$1,160.00	\$2,080.00	\$1,880.00	-
Roadway Pipe 36"	LF	7	14	12	-	\$70.00	\$490.00	\$980.00	\$840.00	-
Erosion Control	LS	1	1	1	-	-	\$11,593.33	\$20,855.73	\$18,870.93	-
Traffic Control	LS	1	1	1	-	-	\$8,695.00	\$15,641.80	\$14,153.20	-
Mobilization (9.7% of Overall Cost)	LS	1	1	1	-	-	\$5,148.91	\$9,262.58	\$8,381.08	-
Engineering Controls(1.3% of Overall Cost)	LS	1	1	1	-	-	\$690.06	\$1,241.38	\$1,123.24	-

Total Construction Costs	\$58,900.00	\$106,000.00	\$95,900.00	\$1,800.00
Contingency (10%)	\$5,900.00	\$10,600.00	\$9,600.00	\$180.00
Preliminary Engineering:	\$40,700.00	\$73,100.00	\$66,200.00	\$0.00

Local Funds Grand Total:	\$106,000	\$190,000	\$170,000	\$2,000
Federal Funds Grand Total:	\$0	\$0	\$0	\$0
Total Phase Cost	\$106,000	\$190,000	\$170,000	\$2,000
Total Alternative Cost		\$470,000		

NOTE: ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST PROVIDED IS MADE ON THE BASIS OF ENGINEER'S EXPERIENCES AND QUALIFICATION AND REPRESENTS ENGINEER'S BEST JUDGMENT WITH THE INDUSTRY. ENGINEER DOES NOT GUARANTEE THAT PROPOSALS, BIDS, OR ACTUAL COST WILL NOT VARY FROM ENGINEER'S OPINION OF PROBABLE COST.

List of Unit Abbreviations

Abbreviation	Definition
CY	Cubic Yard
LF	Linear Foot
LS	Lump Sum
SF	Square Foot

Segment 1	Belvedere Cove to Abbott Square
Segment 2	Robinson Road to Highland Lakes Road
Segment 3	Highland Lakes Road to DVG Trailhead
Segment 4	Mt Laurel Signage

Appendix H

**Stakeholder Meeting Minutes and
Stakeholder Input**



Dunnavant Valley Greenway Study / APPLE Program
In-Field Stakeholder Agenda

October 19, 2016

9:00 AM

In-Field (DVG Trailhead and Mt. Laurel Community)

Purpose of the meeting is to provide a project overview and gain input from stakeholders.

- I. Introductions
- II. General Description of Project
 - A. Purpose of Project – evaluate the feasibility of completing the Dunnavant Valley Greenway including Phase II and Phase III of the original project scope.
 - B. Definition of Greenway
 - C. Scope of Project
 - a. Existing Conditions (Collect Data and Analyze Existing Plans)
 - i. Overview of what has been done
 - 1. Review of existing studies/plans
 - 2. USFW Response
 - 3. NRCS Communication
 - 4. Cultural Resources
 - b. Concept Plan Development and Evaluation
 - i. Federal funds vs. non-Federal funds
 - D. Stakeholders' Goals
- III. Field Review
 - a. Dunnavant Valley Greenway Trailhead
 - i. Trail conditions
 - ii. Accessibility
 - iii. Connectivity
 - iv. Impacts
 - b. Mt. Laurel Community
 - i. Transect
 - ii. Accessibility
 - iii. Potential Routes
 - iv. Impacts
- IV. Project Schedule Milestones
 - A. In-Field Stakeholder Meeting 10/19/2016
 - B. Stakeholder meeting to present Findings 12/7/2016
 - C. Draft Advanced Planning Report February 2017



Dunnavant Valley Greenway Study / APPLE Program

Feasibility Study

In-Field Stakeholder Meeting

October 19, 2016

9:00 AM

DVG Trailhead and Mt. Laurel Community

Sign-In Sheet

Name	Organization	Telephone	E-mail
Jennifer Brown	Sain Associates	205.263.2159	jbrown@sain.com
JEFF FLANNERY	DVG	205-585-5023	Jeffreyh.flannery@gmail
VIRGINIA RANDOLPH	DVG	205-699-5572	vrandolph517@windstream.net
Ward Tishler	DVG	205-995-1805	
		208-515-0129	TX Ag 520 bellsouth.com
Scott & Renee Prescott	Friends of DVG	205-980-2598	spreesc4685@aol.com
Kristine Goddard	Shelby Co.	205-620-6612	kgoddard@shelbyal.com
Eric Womack	Shelby Co	205-620-6629	ewomack@shelbyal.com
Byron Phillips	Ebsco - Mt Laurel	205-294-4725	bphillips@ebSCO.com
Nick Dawson	ERSCO	205-408-8980	ndawson@ebSCO.com
Scott Holladay	Shelby Co.	205-669-3880	sholladay@shelbyal.com
Mila Kaczorowski	RPCGB	(205) 213-6889	kaz@rpcgb.org
Chad Scroggins	Shelby Co.	205-620-6650	cscroggins@shelbyal.com
Tom Opie	DVG	205-249-6743	thegolfgigolo@AOL.com



MEETING NOTES

PROJECT #: RPC#1289.13; SA#16-0125
PROJECT NAME: Dunnavant Valley Greenway APPLE Study
PROJECT LOCATION: Shelby County, Alabama
MEETING DATE: 10/19/2016
MEETING LOCATION: Dunnavant Valley Greenway Trailhead
MEETING PURPOSE: In-Field Stakeholder Meeting

ATTENDEES:

Jeff Flannery	Dunnavant Valley Greenway	205.585.5023	jefferyhflannery@gmail.com
Virginia Randolph	Dunnavant Valley Greenway	205.699.5582	Vrandolph517@windstream.net
Ward Tishler	Dunnavant Valley Greenway	205.995.1305/205.515.0129	Txag520@bellsouth.com
Tom Opie	Dunnavant Valley Greenway	205.249.6743	thegolfgigolo@aol.com
Scott & Renee Prescott	Dunnavant Valley Greenway	205.980.2598	Spresc4685@aol.com
Bryan Phillips	EBSCO-Mt. Laurel	205.296.4725	bphillips@ebSCO.com
Nick Dawson	EBSCO	205.408.8980	ndawson@ebSCO.com
Erick Womack	Shelby County	205.620.6629	ewomack@shelbyal.com
Kristine Goddard	Shelby County	205.620.6612	kgoddard@shelbyal.com
Scott Holladay	Shelby County	205.669.3880	sholladay@shelbyal.com
Chad Scroggins	Shelby County	205.620.6650	cscroggins@shelbyal.com
Mike Kaczorowski	RPCGB	205.213.6889	kaz@rpcgb.org
Becky White	Sain Associates	205.263.2141	bwhite@sain.com
Jennifer Brown	Sain Associates	205.263.2159	jbrown@sain.com

The purpose of this meeting was to provide a project overview to stakeholders and gain their input.

Discussion

- The Regional Planning Commission of Greater Birmingham (RPCGB) provided an overview of the Advance Planning Programming and Logical Engineering (APPLE) program. The purpose of this APPLE study is to determine the feasibility of extending the Dunnavant Greenway to Mt. Laurel (Phase 2) and then on to Villas Belvedere (Phase 3). The study will also evaluate potential funding sources.
- Typically a Greenway is at least 10 feet in width, is multi-use, and is traversable by wheelchair.
- Designating a trail as a Greenway does not necessarily protect it from development. It depends on how the Greenway owner obtains the property whether through an easement or right-of-way acquisition. Ordinances may be an option for providing protections to the Greenway.
- The study is broken down into two tasks, 1) Existing Conditions and 2) Concept Plan Development and Evaluation. As a part of the existing conditions task, previously prepared plans were reviewed. In the Dunnavant Valley Small Area Plan recommendations were made to improve cycling and pedestrian safety. During the meeting it was clarified that the intent of this goal was to get people off of CR-41 for recreational and non-motorized transportation trips. Ideally this alternate mode of transportation would be ADA compliant as long as it is feasible. Additionally, a cyclist stakeholder pointed out that cycling needs vary and a Greenway with lots of curves and

unpaved tread surface would not be suitable for high skill road cyclists who travel at higher speeds. If those conditions are present, skilled cyclists would continue to choose CR-41 for their transportation needs.

- Stakeholders shared the following concerns:
 - Safety of school children crossing CR-41 as well as their travel along CR-41
 - Desire to preserve the scenic value of the Dunnavant Valley area and maintain its rural feel
- Stakeholders from EBSCO expressed that the extension of the Greenway would be a positive asset for the Dunnavant Valley Area and they are in agreement with the concept.
- Sain Associates, using the preliminary trail alignment provided by Shelby County, took an initial look at profile grades for the trail. The preliminary trail alignment extends north from the existing Dunnavant Valley Greenway trailhead along CR-41, Old CR-41, and then back to CR-41 making use of the existing road right-of-way. Near Mt. Laurel Elementary School, the preliminary trail alignment turns east and connects to the existing brick paver sidewalk located inside the Mt. Laurel development. Finally, the preliminary trail alignment travels through Mt. Laurel and connects to Villas Belvedere. From this initial look it appears that installation of a trail using Federal funds is technically feasible; however, cost and time impacts associated with Federal funds are still a factor when establishing feasibility of trail construction.
- Prior to the stakeholder meeting, Sain Associates performed an initial field review. During this review it was noted that there are potential ADA compliance issues within Mt. Laurel associated with the brick pavers, obstructions located on sidewalks, and non-compliant sidewalk ramps. It was discussed that the use of Federal funds would require that at least the trail route through Mt. Laurel would have to be modified to meet ADA compliance. EBSCO suggested that the trail route focus on the commercial area and the Montessori School.
- The idea of varying the trail typical section based on a targeted trail user was discussed. Using this approach the trail would transition from a more urbanized village look and feel to a recreational facility similar to what is already in place along Phase 1 of the Dunnavant Valley Greenway.

Next Steps

- Continue compiling the existing conditions
- Identify potential alternatives taking into account the stakeholder input
- Present findings to Stakeholder group; Preliminary meeting date set for Wednesday, December, 7, 2016



Dunnavant Valley Greenway Study / APPLE Program
In-Field Stakeholder Agenda

December 15, 2016

1:00 PM

Double Oak Community Church

Purpose of the meeting: Obtain Stakeholder input on three alternatives.

- I. Status of the Study
- II. Purpose and Need
- III. Presentation of Alternatives
 - A. Build Option 1: Multi-Use Path
 - a. By FHWA Definition is a 10' asphalt path that accommodates all users and allows for bikes and pedestrians concurrently.
 - b. Goes behind Mt. Laurel before connecting to Villas Belvedere
 - c. Ballpark Cost: \$2.2M with Federal Funds
 - d. Timeframe: 3-5 years
 - B. Build Option 2: Recreational Trail
 - a. 2A-Local Funding
 - i. 6' wide trail between existing trailhead and Mt. Laurel (clearing with exposed tree roots and rocks)
 - ii. Sidewalks in Phase 3 remain as is
 - iii. Ballpark Cost: \$420K
 - iv. Timeframe: 1-2 years
 - b. 2B-Federal Funding
 - i. 6' wide trail between existing trailhead and Mt. Laurel (crushed, compacted aggregate surfacing)
 - ii. Upgrade sidewalks in Phase 3
 - iii. Ballpark Cost: \$850K
 - iv. Timeframe: 3-5 years
 - C. Build Option 3: Rural-Urban Transect
 - a. Maintain Rural trail feel in Phase 2 to Northern Old DVR connection
 - b. Transition area includes 10' asphalt path to school
 - c. Urban sidewalk in Mt. Laurel
 - d. Ballpark Cost and Timeframe:
 - i. Local Funds-\$740K 1-2 years
 - ii. Federal Funds-\$1.1M 3-5 years
- IV. Next Steps

- A. Incorporate Stakeholder feedback
- B. Identify Preferred Alternative
- C. Draft Advanced Planning Report February 2017
- V. Other News
 - A. Shelby County Bicycle and Pedestrian Plan Public Involvement Meeting
 - a. Tuesday, January 10, 2017 Chelsea City Hall 4:00-7:00 PM
 - b. Thursday, January 12, 2017 Shelby County Services Building 4:00-7:00 PM



Dunnavant Valley Greenway Study / APPLE Program
 Feasibility Study
 Second Stakeholder Meeting
 December 15, 2016
 1:00 PM
 Double Oak Community Church
Sign-In Sheet

Name	Organization	Telephone	E-mail
Jennifer Brown	Sain Associates	205.263.2159	jbrown@sain.com
Tom O'Leary	DV	205-249-6743	tomoleary44011@aol.com
Kristine Goodland	Shelby Co. D.S.	205-620-6612	kgoodland@shelbyal.com
Eric Womack	Shelby Co	620-6629	ewomack@shelbyal.com
Becky White	Sain	263-2141	bwhite@sain.com
Tony Montanaro	Sain	263-2116	tmontanaro@sain.com
Renee Prescott	DVG-Friend	980-2598	spresc4685@aol.
Virginia Randolph	DVG	205.699.5542	vrandolph517@windstream.net
Chad Croggins	Shelby Co	205 620-6653	ccroggins@shelbyal.com
Scott Holladay	Shelby Co.	205-669-3880	sh.holladay@shelbyal.com
Nick Dawson	Mt Laurel	205-408-8980	ndawson@ebsco.com
RAY JACKSON	MTLAUREL	205-601-6180	RJACKSON@EBSCO.COM
Ann Price	Mt Laurel Newsletter	910-1608	annandjay.price@gmail.com
Jeff Flannery	DVG	205-585-5023	(over)



MEETING NOTES

PROJECT #: RPC#1289.13; SA#16-0125
PROJECT NAME: Dunnavant Valley Greenway APPLE Study
PROJECT LOCATION: Shelby County, Alabama
MEETING DATE: 12/15/2016
MEETING LOCATION: Double Oak Community Church
MEETING PURPOSE: Obtain Stakeholder input on three alternatives

ATTENDEES:

Jeff Flannery	Dunnavant Valley Greenway	205.585.5023	jeffreyhflannery@gmail.com
Virginia Randolph	Dunnavant Valley Greenway	205.699.5582	Vrandolph517@windstream.net
Ann Price	Mt. Laurel Newsletter	205.910.1608	Annandjay.price@gmail.com
Tom Opie	Dunnavant Valley Greenway	205.249.6743	tomopie44011@aol.com
Renee Prescott	Dunnavant Valley Greenway	205.980.2598	Spresc4685@aol.com
Ray Jackson	EBSCO-Mt. Laurel	205.601.6180	rjackson@esbsco.com
Nick Dawson	EBSCO-Mt. Laurel	205.408.8980	ndawson@esbsco.com
Erick Womack	Shelby County	205.620.6629	ewomack@shelbyal.com
Kristine Goddard	Shelby County	205.620.6612	kgoddard@shelbyal.com
Scott Holladay	Shelby County	205.669.3880	sholladay@shelbyal.com
Chad Scroggins	Shelby County	205.620.6650	cscroggins@shelbyal.com
Becky White	Sain Associates	205.263.2141	bwhite@sain.com
Tony Montanaro	Sain Associates	205.263.2116	tmontanaro@sain.com
Jennifer Brown	Sain Associates	205.263.2159	jbrown@sain.com

The purpose of this meeting was to present the three alternatives that Sain developed and obtain input from the stakeholders on these alternatives.

Discussion

- Since the last meeting, Sain Associates has developed three potential build options (alternatives) for the Stakeholders' consideration.
- The agenda provided defines these three alternatives and provides high level cost estimates for each. ROW and utility relocation costs were not included in the cost estimates
- The alternatives had not been reviewed by EBSCO.
- Build Option 1 – 10' Multi-Use Path:
 - Deviates from the initial County alignment
 - The 10 foot width allows for pedestrians and cyclists to use the path at the same time
 - An ADA compliant longitudinal grade is maintained
 - Asphalt surfacing would be used also to ensure ADA compliance
 - Utilizes Federal funding
 - The overall path footprint for the majority of the path would be 15'-20'; however, in some areas the footprint could extend to 30' in order to tie to slopes.

- Per the County, Build Option 1 would be the most difficult option to install and it is not very likely that it would be constructed.
- Build Option 2A and 2B – Recreational Trail
 - Build Option 2A would use local funds to construct a 6' wide recreational trail through Phase 2 and connect to the existing sidewalks in Mt. Laurel. Wayfinding signs would be used to navigate trail users through the Mt. Laurel Community. These sidewalks would remain as-is. The 6' width could vary, if local funds are used. A 6' width was used for the alternatives development to allow for an apples to apples comparison concerning cost.
 - Question: How is local funding defined? Answer: Any funding not associated with the Federal Government is considered local funding
 - Question: With local funding, who would maintain the trail? Answer: Maintenance would be controlled by agreements between the County and the private property owner. If Federal monies are used, the County would be required to purchase ROW and maintain the trail using County forces.
 - Tom Opie stated that there is an existing trail that circles the Village of Highland Lakes. A connection to this trail should be considered.
 - Similar to Build Option 2A, Build Option 2B would consist of a 6' wide recreational trail through Phase 2 and connects to the existing sidewalk network in Mt. Laurel; however 2B assumes Federal funding. In Contrast to 2A, Build Option 2B would require the following: 6' width must be maintained; a compacted crushed stone surfacing must be maintained; longitudinal grade must meet ADA's recreational trail guidelines; and sidewalks through Mt. Laurel would need to be updated to achieve ADA compliance.
- The County pointed out the challenge of getting a developer to commit to a trail ROW within a development plan that is in flux. The developer is not going to want to commit to a fixed ROW alignment for a recreational path that can easily be moved.
- Build Option 3 – Rural-Urban Transect
 - Extend the existing recreational trail from the existing trailhead through Phase 2 until a certain point where the trail transitions to a 10' wide asphalt paved trail. For the purposes of the alternatives development, the point selected is the northern most connection of Dunnavant Valley Road and Old County Road 41. The 10' wide path would extend $\frac{3}{4}$ mile to the Mt. Laurel Elementary School before connecting to the existing sidewalk network. The shorter paved section would allow a section of the trail available to all users before transitioning into the rural, recreational trail. As with Build Option 2B if Federal monies were used for this option, the sidewalks located in Mt. Laurel would have to be upgraded to meet ADA compliance.
 - Question: Could you phase Build Option 3 so that the recreational trail could be installed first and then install the asphalt portion later? Answer: yes
 - The County brought up the potential to obtain an ADECA grant for the installation of the trail. Question: Are ADECA grants available every year? Answer: Yes. However, the County already has 1 active grant and can only get one grant per year and can only have one active at a time. The Friends of the Dunnavant Valley Greenway could apply for one but the deadline for the grant application is January 7, 2017
- Stakeholders were informed of the upcoming Shelby County Bicycle and Pedestrian Plan Public Involvement Meetings.
 - Tom Opie informed the group of his efforts in alerting local bike shops of the upcoming meetings.

Action Items

- Sain Associates provide information discussed at meeting to the Stakeholders. JGB provided mapping, typicals, and rendering on 12/19.

- Stakeholders provide Sain Associates with their input the week of January 16th.
- Tom Opie to send Sain a summary of his Public Involvement coordination efforts concerning the SCBPP Public Involvement Meetings.

Next Steps

- Incorporate Stakeholder Input
- Identify preferred alternative
- Draft Advanced Planning Report February 2017

CONCEPTUAL ONLY
ALIGNMENTS NOT FINAL

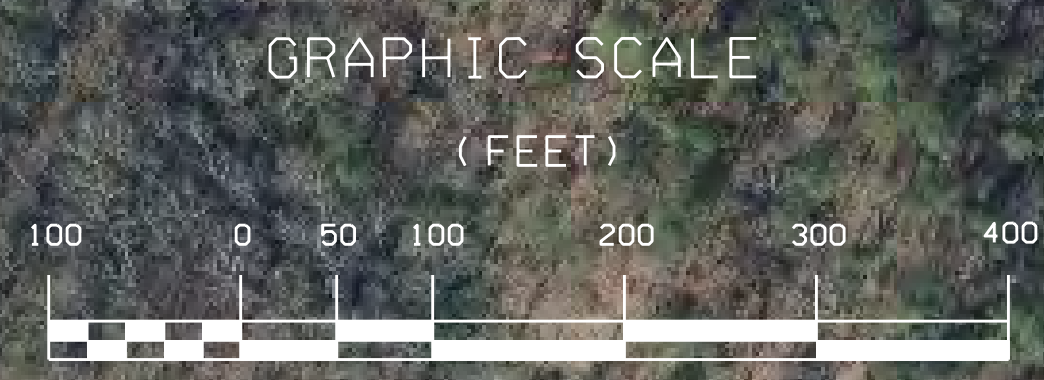
MATCHLINE PLOT 2 OF 4



BUILD OPTION 1

BUILD OPTION 2A AND 2B

BUILD OPTION 3A AND 3B



SAIN

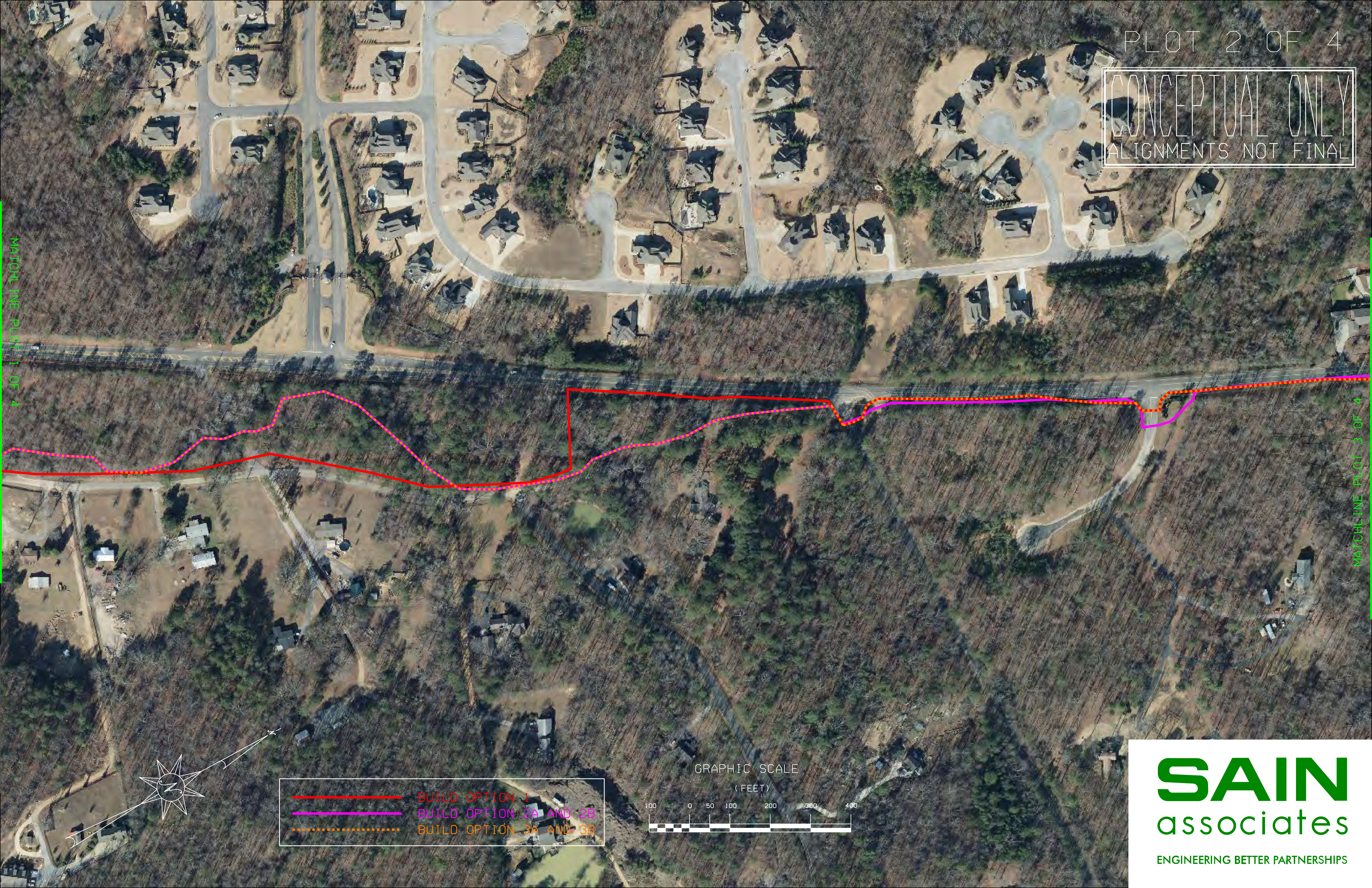
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ENGINEERING BETTER PARTNERSHIPS

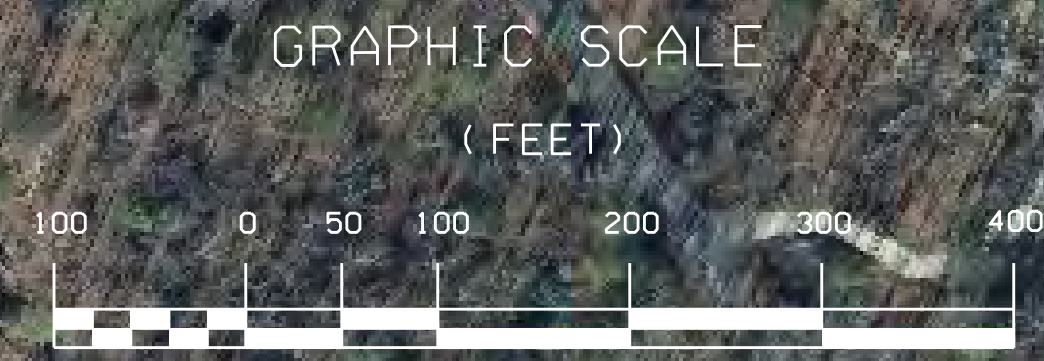
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ALIGNMENTS NOT FINAL

MATCHLINE PLOT 1 OF 4

MATCHLINE PLOT 3 OF 4



- BUILD OPTION 1
- BUILD OPTION 2A AND 2B
- BUILD OPTION 3A AND 3B



CONCEPTUAL ONLY
ALIGNMENTS NOT FINAL

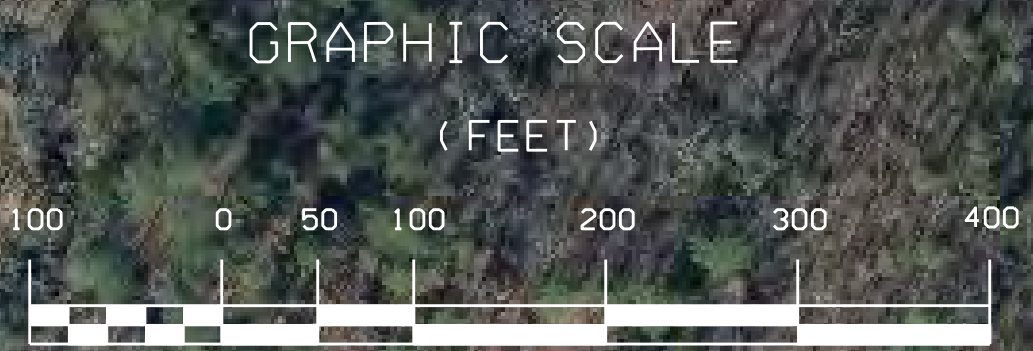


MATCHLINE PLOT 2 OF 4

MATCHLINE PLOT 4 OF 4



- BUILD OPTION 1
- BUILD OPTION 2A AND 2B
- BUILD OPTION 3A AND 3B



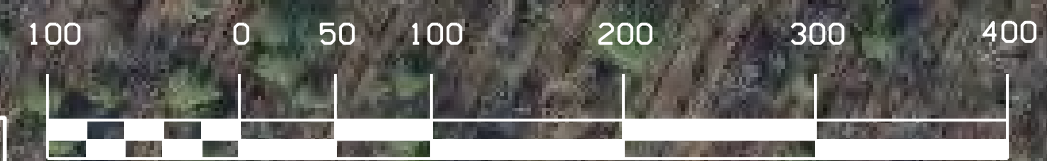
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ENGINEERING BETTER PARTNERSHIPS



MATCH LINE PLOT 3 OF 4

GRAPHIC SCALE
(FEET)



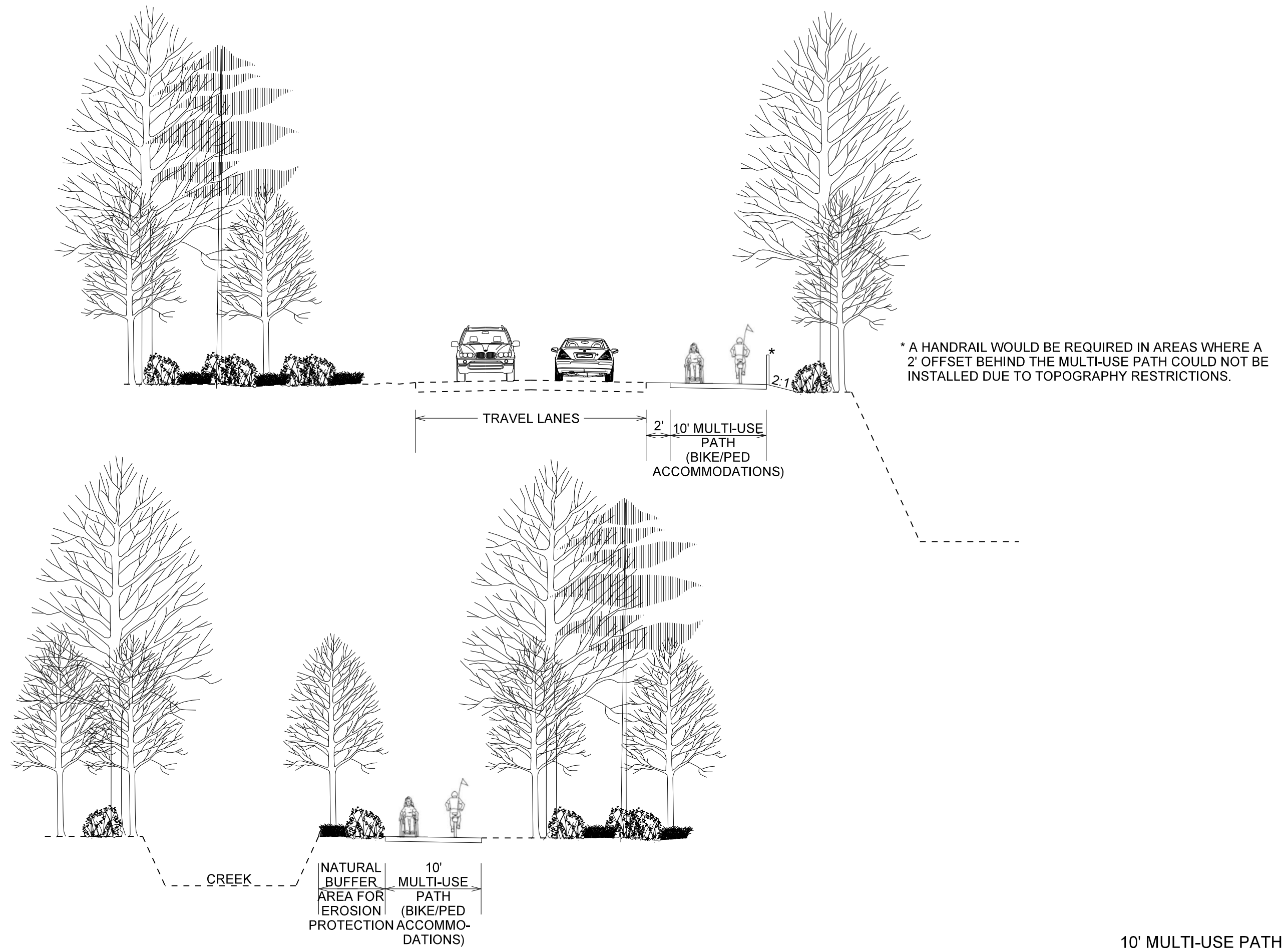
CONCEPTUAL ONLY
ALIGNMENTS NOT FINAL

PLOT 4 OF 4

- BUILD OPTION 1
- BUILD OPTION 2A AND 2B
- BUILD OPTION 3A AND 3B

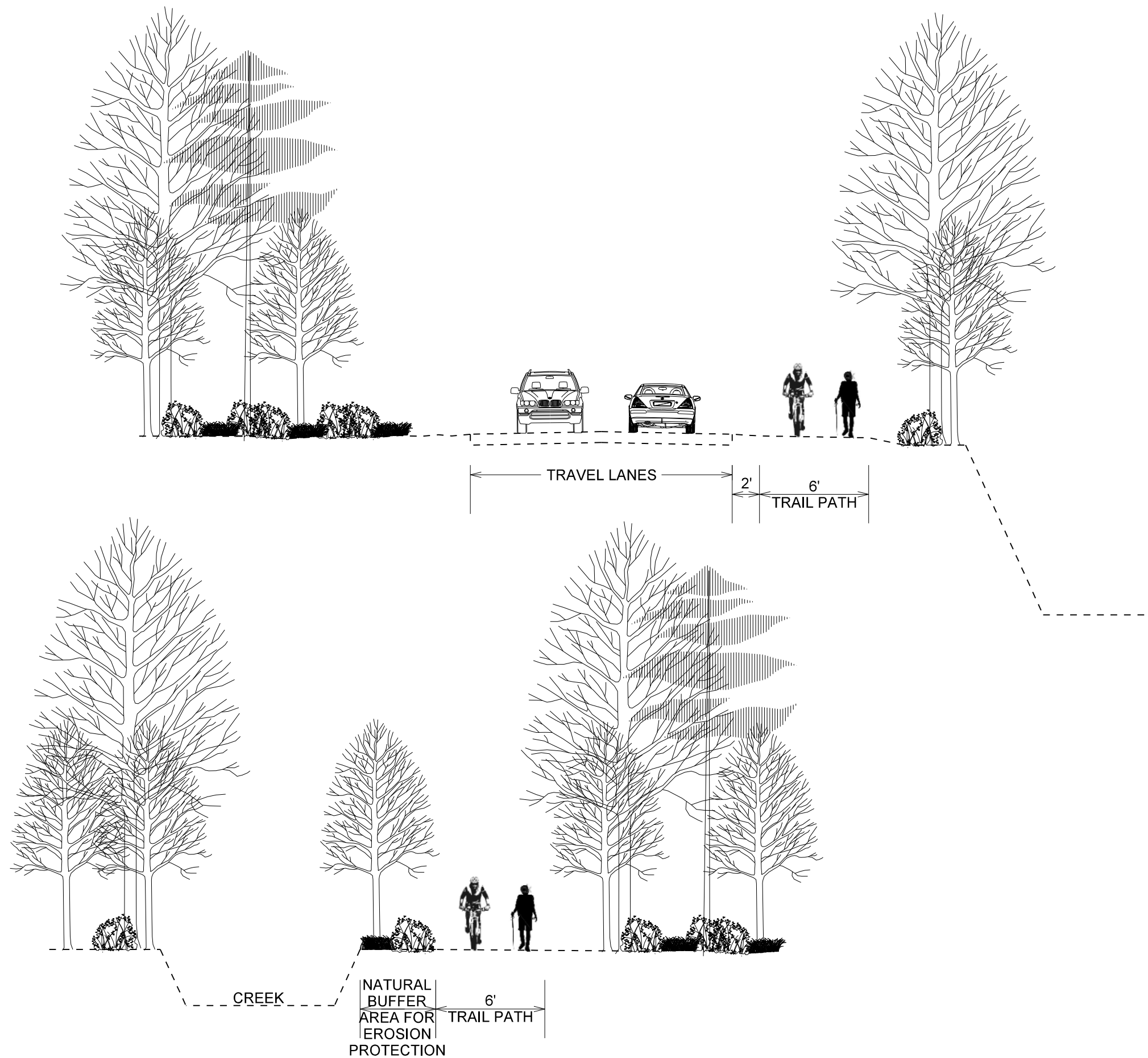






NOT TO SCALE

10' MULTI-USE PATH



NOT TO SCALE

RECREATIONAL TRAIL



Ms. Jennifer Brown
Sain Associates
Two Perimeter Park South
Suite 500 East
Birmingham, AL 35243

January 13, 2017

Dear Ms. Brown,

The Friends of Dunnavant Valley Greenway, Inc, a non-profit stakeholder group met to discuss the proposals of the DVG Study/APPLE Program and unanimously agreed that we support Build Option 2 Recreational Trail 2A Local Funding with the following notes:

- Near the end of the trail turn left on Kessler Drive rather than right and proceed to Hwy 41 and then along Hwy 41 to Belvedere.
 - This will enable students to walk to Mt Laurel Elementary School and both children and adults to walk to the Mt Laurel Library and commercial district.
 - It appears that there is a dead end if the trail turns to the right on Kessler Drive and there is a barrier to Belvedere. Homeowners in both Mt Laurel and Belvedere may wish to have the trail in a location other than their own front sidewalk. On the other hand once on the trail anyone can take a sidewalk on an alternate path so this opportunity is not lost.
- Use the yellow or purple routes listed on the maps.
 - The red path did not seem feasible as it does not bring people into the commercial district in a direct fashion.
- Any place the trail is near Hwy 41, we suggest some type of barrier, either tree or fencing or metal posts between the trail and the road.
 - This is for safety and will inhibit bikes or cars crossing into the trail.
- Along with the trail we suggest "Share the Road" signs along Highway 41
- Additionally we suggest wider outside vehicle lanes on Hwy 41 where possible. This may be the responsibility of the Highway Engineer
 - A wider vehicle outside lane will allow walkers, road runners and bicycle road riders greater safety
 - There are places that currently do not support a wider lane and we understand that they may not be widened at this time.

We look forward to the development of the DVG trail extension to allow the community the opportunity to walk, and run in general safety. We appreciate Sain's well respected

reputation and insights in helping us make Dunnavant Valley and the Greenway an example of what people can do together when they care!

Sincerely,

Ward Tishler

Ward Tishler
President

Sent via mail by V Randolph

cc: R Shepherd, C Scroggins, E Womack, K Goddard

Brown, Jennifer

From: Nick Dawson <ndawson@ebsco.com>
Sent: Friday, January 20, 2017 11:31 AM
To: Brown, Jennifer
Cc: Ray Jackson
Subject: FW: Dunnavant Valley Greenway Meeting Follow-Up
Attachments: TYP Multi Use.pdf; TYP Recreational Trail.pdf; gw3dall2.pdf; TrailModel1.pdf; Alternatives Roll Plots_12-15-2016.pdf

Jennifer,

As stated in prior conversations, EBSCO Development Company believes that a trail for use by the public could be an asset for the current and future residents of Dunnavant Valley. EDC, being a significant land owner and developer in the valley must weigh any proposals for a trail against its business goals, and any final trail proposal located within EBSCO land must be approved by **both EDC and EBSCO Industries, Inc. owners**. Based on the presentation given by Sain Engineering to the stakeholders in December 2017, EDC will continue to support the planning and conceptualization of a trail which, in regards to land owned by EBSCO or EDC, closely follows the path layout shown as 2A – with exception that a left turn be located at the intersection of Kessler Avenue and Abbott Square, not a right turn. This left turn shall lead the path back to Hwy 41.

We look forward to hearing the consolidated feedback.

Thank you,



Nick Dawson
Financial Analyst
EBSCO Development, Mt Laurel
205-408-8980 office | 205-568-7213 cell
ndawson@ebsco.com | mtlaurel.com

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From: Brown, Jennifer [mailto:jbrown@sain.com]
Sent: Monday, December 19, 2016 3:54 PM
To: 'T. Opie (tomopie44011@aol.com)' <tomopie44011@aol.com>; 'AICP Kristine R. Goddard (kgoddard@shelbyal.com)' <kgoddard@shelbyal.com>; 'Eric Womack (ewomack@shelbyal.com)' <ewomack@shelbyal.com>; 'spresc4685@aol.com' <spresc4685@aol.com>; 'vrandolph517@windstream.net' <vrandolph517@windstream.net>; 'CHAD SCROGGINS (CSCROGGINS@shelbyal.com)' <CSCROGGINS@shelbyal.com>; 'sholladay@shelbyal.com' <sholladay@shelbyal.com>; Nick Dawson <ndawson@ebsco.com>; Ray Jackson <RJackson@ebsco.com>; 'annandjay.price@gmail.com' <annandjay.price@gmail.com>; 'jeffreyhflannery@gmail.com' <jeffreyhflannery@gmail.com>
Cc: White, Becky <bwhite@sain.com>; Montanaro, Tony <TMontanaro@sain.com>
Subject: RE: Dunnavant Valley Greenway Meeting Follow-Up

Attached is the information presented at our meeting last week. The large map we viewed during the meeting has been broken into 4 separate maps (Alternatives Roll Plots 12-15-2016.pdf) to improve legibility. Please let me know if you have any questions. As we discussed, please provide us with your input the week of January 16th.

Thanks,
Jennifer

Jennifer G. Brown, PE
Project Manager

Sain Associates, Inc.
205.263.2159
jbrown@sain.com

From: Brown, Jennifer
Sent: Friday, December 16, 2016 1:34 PM
To: T. Opie (tomopie44011@aol.com); AICP Kristine R. Goddard (kgoddard@shelbyal.com); Eric Womack (ewomack@shelbyal.com); spresc4685@aol.com; vrandolph517@windstream.net; CHAD SCROGGINS (CSCROGGINS@shelbyal.com); sholladay@shelbyal.com; Nick Dawson (ndawson@ebsco.com); 'rjackson@ebsco.com'; 'annandjay.price@gmail.com'; jeffreyhflannery@gmail.com
Cc: White, Becky; Montanaro, Tony
Subject: Dunnavant Valley Greenway Meeting Follow-Up

Stakeholders,

Thanks again for attending the meeting yesterday. We will send out the information discussed at the meeting on Monday. We are making a few tweaks to the mapping to improve legibility. Please let me know if you have any questions.

Thanks,
Jennifer

Jennifer G. Brown, PE
Project Manager

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