Advance Planning Report
Trails and Greenways Study
City of Pelham, Alabama
RPC Project No. 1289.07

Prepared for:
The City of Pelham
Regional Planning Commission
of Greater Birmingham

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Sain Project #14-0244
Executive Summary

Study Initiation
The study was initiated by the City of Pelham through the Advanced Planning, Programming, and Logical Engineering (APPLE) program developed by the Regional Planning Commission of Greater Birmingham (RPCGB). The City requested professional planning assistance to evaluate the feasibility of a potential trail system connecting to an in-place sidewalk at Bearden Road and to the entrance of Oak Mountain State Park.

Study Area
The study area is located primarily along a creek in the City of Pelham and along Oak Mountain Park Road between Amphitheater Road and John Findley Drive. Some historical maps label the creek as Cahaba Valley Creek. For this study, Bishop Creek will be used in order to match what is shown on the Federal Emergency Management Agency (FEMA) mapping. The City’s envisioned trail alignment follows the bank of Bishop Creek, beginning at Bearden Road and continuing to Oak Mountain Park Road. At Oak Mountain Park Road, the proposed trail alignment leaves the creek bank and extends southward to the entrance of Oak Mountain State Park at the intersection of John Findley Drive.

The City is currently sponsoring a sidewalk project along Bearden Road and is also a partner in a roadway improvements project along Oak Mountain Park Road. The roadway improvements project includes the addition of bike accommodations; however, at the time of this study, the project is in the very early stages of design and the specifics of how bikes will be accommodated have not yet been decided. Options include on-street bike lanes as well as an off-street alternative discussed in this report.

Purpose for the Study
This study was undertaken to assess the feasibility of providing a recreational trail within the study area that would allow pedestrians and cyclists the opportunity to enjoy the environment offered by Bishop Creek as well as provide non-motorized connectivity between City amenities. This trail would be accessible to the immediate community as well as attract others to the area. The purpose of this study is not to select a preferred trail alternative, but to identify feasible installation options and their potential impacts. If the City of Pelham chooses to move forward with an improvement project for the area, a preferred alternative would be selected.

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,
- funding options, and
- stakeholder and public 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.
Build Option 2 – Build option 2 includes the use of non-federal funds, or local funds, to construct a multi-use path.
Each build option could be developed in phases based on logical segments.

Stakeholder Involvement
An in-field stakeholder meeting was held on April 9, 2015. Prior to this meeting a technical memorandum that summarized field review findings, existing conditions, and background research was provided to the City for their distribution to stakeholders. The meeting started at the Bearden Road entrance of the City Park, near the western terminus of the study area. An overview of the technical memorandum was provided and input from stakeholders was requested. The agenda for the meeting included several stops along the proposed trail alignment to view existing conditions and discuss trail options.

Public Involvement
A short presentation was presented at the April 30, 2015 City of Pelham Town Hall Meeting. This presentation included background information on the study, current status of the study, and next steps. An information table was also set up at the Town Hall Meeting and included a roll map of the proposed trail alignment and an illustration of a potential typical section. Attendees were given the option to fill out a comment form. Of the completed forms received, all were in favor of the City installing a trail.

Next Steps
If the City of Pelham chooses to move forward with implementing any or some of the build options and would like to pursue Federal funding, the next step would be to request inclusion of a project in the Birmingham Regional Transportation Plan. Once 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 City of Pelham has a vision to provide the citizens of Pelham with a recreational facility that would further enhance the community’s connection to the scenic environment offered by Bishop Creek as well as improve non-motorized connectivity within the community. The City’s first step in determining the feasibility of such a facility was to initiate the study documented in this report. The study was initiated by the City of Pelham through the Advanced Planning, Programming, and Logical Engineering (APPLE) program developed by the Regional Planning Commission of Greater Birmingham (RPCGB). The City requested professional planning assistance in evaluating the feasibility of a potential trail system connecting to an in-place sidewalk at Bearden Road and to the entrance of Oak Mountain State Park.

The City is currently sponsoring a sidewalk project along Bearden Road and is also partnering with Shelby County in a roadway improvements project along Oak Mountain Park Road. This roadway improvements project includes the addition of bike accommodations; however, at the time of this study, this project is in the very early stages of design and the specifics of how bikes will be accommodated have not yet been decided. Options include on-street bike lanes as well as an off-street alternative discussed in this report.

This study was undertaken to assess the feasibility of providing a recreational trail within the study area that would allow pedestrians and cyclists the opportunity to enjoy the environment offered by Bishop Creek as well as provide non-motorized connectivity between City amenities such as schools, parks, and the Pelham Civic Center. These amenities would be accessible to the immediate community as well as attract others to the area. The purpose of this study is not to select a preferred alternative, but to identify feasible installation options and their potential impacts. If the City of Pelham chooses to move forward with an improvement project for the area, a preferred alternative would be selected.

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,
- funding options, and
- stakeholder and public 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 deficiencies.

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. A field review was 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 prepared and evaluated relative to their ability to address the purpose and need for the project. Stage two concluded with the preparation of comparative cost estimates, development of an evaluation matrix, a schedule of construction phasing, and a presentation to the City.

2 Existing Conditions

Although the City has prepared GIS mapping and had numerous discussions about the potential for a trail system, there are currently no documented plans for the study area. The City has made the public aware that they are investigating the feasibility of a trail system. The preparation of this feasibility study can be used in the application for funds from the RPCGB for future improvements. A search of documents, databases, field reviews, and compilation of GIS data were performed to analyze existing conditions and identify environmental features. This section and section three of this report further discuss the gathered data.

2.1 Description of the Study Area

The study area is located primarily along a creek in the City of Pelham and along Oak Mountain Park Road between Amphitheater Road and John Findley Drive. Some historical maps label the creek as Cahaba Valley Creek. For this study, Bishop Creek will be used in order to match what is shown on the Federal Emergency Management Agency (FEMA) mapping. The City’s envisioned trail alignment follows the bank of Bishop Creek, beginning at Bearden Road and continuing to Oak Mountain Park Road. At Oak Mountain Park Road, the proposed trail alignment leaves the creek bank and extends southward to the entrance of Oak Mountain State Park at the intersection of John Findley Drive. Figure 1, shown on the next sheet, provides a view of the study area. Land use within the study area includes residential, commercial and industrial. In addition, the proposed trail, which is approximately six and half miles in length, travels through the City Park.
2.2 Field Review Observations

A field review was performed to identify any potential issues along the proposed trail alignment. The following sections describe observations made during the field review. Photos and mapping associated with the listed mapping sections are provided in Appendix A.

**Trail Alignment** – The proposed trail alignment is located primarily on the east side of Bishop Creek before crossing to the west via an existing foot bridge located at Oak Mountain Amphitheater. The proposed trail continues on the west side of the creek until its intersection with Oak Mountain Park Road. At this point, the proposed trail alignment leaves Bishop Creek to follow along Oak Mountain Park Road before reaching its eastern terminus at John Findley Drive. The alignment location relative to Bishop Creek is logical as it avoids the heavily developed areas on the west bank.

**Trail Pinch Points** – At the time of the field review, a typical section for the proposed trail had not yet been decided. However, there were areas noted during the review where the presence of sufficient trail width was lacking. These areas of concern, labeled pinch points, were identified with the assumption that no matter the width, installation of the trail will be more difficult in these areas. Solutions for these areas include retaining walls, boardwalk structures, or acquisition of property easements or right-of-way.

**Maintenance** – Due to the flooding issues experienced by the City and discussed in the Hydraulic Review section of this report, maintenance becomes a major component of the proposed trail. Trail material type and its reaction to flooding is an important factor for the proposed trail. It is likely that varying material types could be used in the study area in order to reduce maintenance requirements.

Another potential maintenance item concerns tributaries of Bishop Creek. There are several tributaries of Bishop Creek that the trail would be required to cross using either a bridge structure or pipe culverts. A bridge or pipe culvert requires maintenance in the sense that the passages must be kept clear to avoid upstream flooding. In total, there are eleven tributaries along the proposed trail path that currently do not have crossing structures.

**Security** – As discussed in the property research section of this report, there are many parcels of property in the trail footprint that are not currently owned by the City. Depending on whether or not property is acquired or easements are obtained from these owners, controlling access to the trail could be difficult. Posting trail rules and potentially installing fencing can increase the feeling of security for trail users. If the trail is available for night-time use, the installation of lighting may also aid in users feeling more comfortable.

**Section 01** – Section 01 of the study area begins on the western terminus of the proposed trail. In this section, the proposed trail connects to existing sidewalk near the entrance of the City Park and extends in two different directions. Firstly, the trail alignment crosses beneath the in-place bridge on Bearden Road utilizing City owned property to create a trail loop. This area is relatively flat and no potential issues concerning the trail were observed during the field review. Next, GIS information provided by the City shows the proposed trail crossing a tributary to connect to an in-place sidewalk just across from the entrance to the first set of ball fields. Connecting the trail at this location would require the installation of a new bridge structure across a tributary whereas, connecting the trail at the end of the in-place sidewalk would eliminate the need for this new structure. The trail alignment shown on the section 01 map shows both options as “A” and “B”. Option A depicts the trail continuing along the creek bank. Option B follows the in-place sidewalk, wraps around a parking lot and then connects to an in-place trail behind the baseball fields. This in-place trail will connect to the future park expansion.

**Section 02** – In section 02 the proposed trail alignment encounters its first pinch point located between the creek and a water treatment facility. This pinch point is labeled on the included mapping. For the purposes of this study,
the term pinch point is used to describe areas where the topography and existing land use will make the installation of a trail more difficult because of insufficient width. The topography for the remainder of this section appears to be conducive to the installation of a trail. Also in section 02 is the City owned Belle Vista Mobile Home Park. This facility will be replaced with an expansion of the City Park and the in-place mobile homes will be removed prior to construction of the expansion. Continuing beyond Belle Vista the land use to the east of the trail becomes more industrial.

Section 03 – The section 03 area map shows the proposed trail alignment continuing along the east side of Bishop Creek. At the beginning of the section 03 map additional pinch points were noted. These pinch points are caused by steep topography and insufficient widths between the creek and the industrial business building. An in-place gate that allows access to the business also creates a pinch point for the proposed trail. This gate would block trail access and would need to be removed or modified. Continuing on, the proposed trail alignment crosses four tributaries that would require either a culvert of bridge structure. Also shown on the section 03 map are two roadway crossings. There appears to be adequate width for the trail to cross beneath the Crosscreek Trail bridge but the vertical clearance is tight at approximately six feet. Further investigation is required to determine if any excavation could be performed to increase the vertical clearances beneath this bridge. The proposed trail alignment could not be placed beneath the Chandalar Drive bridge due to the lack of separation between the creek bed and bridge piers and the frequent flooding experienced in this area. At the end of section 03, the proposed trail alignment connects to the in-place YMCA trail.

Section 04 – During the field review some immediate maintenance issues were noted in section 04. There are several locations along the existing YMCA trail where erosion and bank failure are being experienced. These areas are not preventing the use of the trail but the failures could worsen if left uncorrected. Bank failures can result in further erosion and the addition of sediment into Bishop Creek. In the areas where failures are occurring, the trail is located very close to the top of the creek bank. A lesson learned from the occurrences on the YMCA trail can be applied to the proposed trail. In an effort to prevent future bank failures and erosion issues, the proposed trail should be located such that a vegetated buffer area is allowed between the creek bank and the trail.

At the end of the existing YMCA trail, the proposed trail alignment continues but reaches a pinch point at the existing fenced lumber yard. There is insufficient width between the creek and the fence for the proposed trail. Discussion with an employee at the lumber yard revealed that flooding of the yard happens frequently and at times the flooding reaches the buildings.

The Southgate Estates mobile home park is also located in section 04 of the proposed trail. Although the topography in the area of the mobile home park is relatively flat and conducive to a trail, there is insufficient width to place the trail behind some of the mobile homes. These homes would have to be removed in order to install the proposed trail. Near the end of section 04 is a tributary to Bishop Creek. There is evidence of a makeshift bridge over this tributary and evidence of a worn path leading from the Southgate Estates mobile home park.

Section 05 – The same makeshift bridge shown at the end of section 04 is also labeled on section 05. The worn path leading from Southgate Estates mobile home park continues behind Valley Elementary School and crosses another tributary before turning east toward the businesses located along US Highway 31. It is possible residents of the Southgate Estates mobile home park are using this path to access these businesses instead of walking along the heavily traveled US Highway 31.

The proposed trail alignment continues behind the businesses that front US Highway 31 and then crosses beneath the US Highway 31 bridge where there appears to be adequate width and height for the proposed trail. The
proposed trail alignment follows Bishop Creek behind the Pelham Civic Complex and eventually emerges parallel
with the existing Oak Mountain Amphitheater parking lot.

Section 06 – The proposed trail alignment shown at the beginning of Section 06 has potential to impact several
parking spaces. An agreement with the parking lot owner in the form of easement or right-of-way will be required
to install the trail. Section 06 also shows the proposed trail alignment crossing to the west side of Bishop Creek via
an in-place footbridge. The alignment continues behind several businesses where overflow event parking is located
for the Oak Mountain Amphitheater. The proposed alignment should not interfere with this overflow parking. The
proposed trail continues to follow Bishop Creek until it intersects Oak Mountain Park Road. At this point the
proposed trail alignment turns south to follow the alignment of Oak Mountain Park Road.

Section 07 and Section 08– The topography on the western side of Oak Mountain Park Road is steeper than other
parts of the study area. Space for a trail along the roadway shoulder is very narrow as seen in the photos in
Appendix A. On the west side of Oak Mountain Park Road farther away from the roadway edge there appears to be
a flat shelf area. This flat shelf area is located at a slightly higher elevation than the roadway and could be used for
the trail. The distance between the proposed trail and the roadway would provide a buffer between pedestrians
and motor vehicles. As the proposed trail gets closer to Interstate 65 the land somewhat flattens bringing the trail
horizontally and vertically closer to the roadway.

Section 09 – The eastern terminus of the proposed trail is located at the intersection of Oak Mountain Park Road
and John Findley Drive and is shown on the Section 09 map. This intersection was selected as the eastern terminus
for the study since Oak Mountain State Park begins at this location. There are no existing bike or pedestrian
facilities at this intersection for the proposed trail to connect; however, additional facilities for this area have been
discussed that would allow the trail to cross Oak Mountain Park Road or John Findley Drive via crosswalks in order
to enter Oak Mountain State Park.

2.3 Transportation Review
The land use along Bishop Creek is primarily residential with some commercial and industrial areas. In some parts
of the study area, it appears that pedestrians have created trails that provide them access to areas that they could
not necessarily access by walking along US Highway 31 since no pedestrian accommodations exist along this
roadway within the study area. It can be assumed that the proposed trail may be used not only for recreation but
also for local transportation. Pelham High School is located on Bearden Road and Valley Elementary School is
located on Highway 31 adjacent to the proposed trail. Valley Elementary School is scheduled to close in just over a
year. It is possible that high school students and students at the new middle school would also use the proposed
trail as a route to and from school. The possibility of utilizing the trail as a transportation feature raises the
question of ADA compliance. If the trail is to be marketed as a safe alternative for pedestrians and federal monies
are used, compliance with ADA guidelines would be required.

Since the proposed trail is primarily off-road, an in depth transportation analysis was excluded from the study.
However, traffic counts for areas where pedestrians may cross roadways were performed. Table 1, on sheet 7,
provides these counts along with a level of service (LOS) associated with the traffic volumes (ADT-Average Daily
Traffic). For motor vehicle traffic, level of service (LOS) is a measure of congestion stated in a range from “A” to
“F”, with “A” representing the lowest level of congestion and “F” representing extreme congestion where traffic
volumes reach or exceed the capacity of the roadway.
### Table 1: ADT and Levels of Service (LOS)

<table>
<thead>
<tr>
<th>Roadway Segment</th>
<th>ADT</th>
<th>Motor Vehicle LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crosscreek Trail</td>
<td>5,755</td>
<td>B</td>
</tr>
<tr>
<td>Chandalar Drive</td>
<td>901</td>
<td>A</td>
</tr>
<tr>
<td>US Highway 31</td>
<td>31,350</td>
<td>F</td>
</tr>
<tr>
<td>Amphitheater Road</td>
<td>2,361</td>
<td>A</td>
</tr>
<tr>
<td>Oak Mountain Park Road North of Amphitheater Road</td>
<td>5,300</td>
<td>B</td>
</tr>
<tr>
<td>Oak Mountain Park Road South of Amphitheater Road</td>
<td>4,846</td>
<td>A</td>
</tr>
</tbody>
</table>

US Highway 31 is the only roadway segment listed in Table 1 that experiences a failing level of service. The goal of this study is not to determine how to improve the LOS on US-31; however, the highway’s failing LOS and lack of pedestrian accommodations should be mentioned in order to show that crossing US-31 via the proposed trail system could present an unsafe environment for pedestrians. Even though the remaining segments listed in Table 1 experience acceptable levels of service none of the segments offer pedestrian accommodations. The lack of pedestrian features along these roadways discourages pedestrian activity.

In addition to the lack of pedestrian accommodations, bicycle accommodations are also absent for the study area. Experienced cyclists generally prefer to be on the roadway and per Alabama state law they are allowed to ride with traffic; however, school age children and novice cyclists typically prefer an alternative to on-roadway facilities. In contrast to motor vehicle LOS, bicycle and pedestrian LOS is a measure of how safe or comfortable one feels walking or riding based on the roadway geometry and the characteristics of the traffic. The incorporation of bike lanes, wider outside travel lanes, or paved shoulders would improve bicycle LOS for on-road facilities. A specific location within the study area where bicycle use is most noticed is along Oak Mountain Park Road. Narrow travel lanes, high vehicle speeds, and a lack of paved shoulders create a feeling of discomfort for cyclists. Widening the roadway to allow for bike lanes would improve the LOS for cyclists. Another option for accommodating bikes would be to include bicycle traffic on the proposed trail. Even with adding bicycle accommodations to the trail, experienced cyclists will maintain a preference to be on the roadway.

### 2.4 Property Research

Property research shows that the proposed trail travels through at least 42 parcels of property that are not owned by the City of Pelham. In order to construct the trail, 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. The parcels are categorized by segment priority. Segment Prioritization is discussed in section 5.7 of this report.

### 2.5 Utilities

GIS data was collected to identify utilities located in the study area. These in-place utilities include overhead power, sanitary sewer, gas, water and telephone. Unfortunately, not all of the existing utilities have been incorporated into GIS mapping, but what has been is included in the project mapping. An example of this is sanitary sewer. The entirety of the in-place sanitary sewer system does not appear in the GIS data; however, sanitary sewer manholes were identified during the field review. Due to the location of the trail, along Bishop Creek, it can be assumed that sanitary sewer is most likely located throughout the majority of the proposed trail system. It is expected that any utility conflicts would be minor and could be avoided by revising the trail alignment or narrowing the trail if needed.
3 Environmental Features

3.1 Threatened and Endangered Species

A letter was sent to the United States Fish and Wildlife Service (USFWS) on February 23, 2015 to obtain background information on potential items of concern. USFWS responded with a letter dated March 27, 2015 noting that there are thirteen endangered, threatened or proposed endangered 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 City from moving forward with a trail project but it will have an impact on the project. Should the City 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 February 23, 2015 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 some areas of prime farmland and farmland of statewide importance. The intent of the letter is to obtain concurrence from NRCS that these farmlands would not be impacted by the proposed trail. Per correspondence from NRCS dated March 5, 2015, there is in fact no prime farmland located in the project area since the area has been committed to other use. Appendix C provides the package submitted to NRCS and their concurrence.

3.3 Hydraulic Review

There are several areas within the study area that experience frequent flooding. The reason for these flooding issues and potential remedies for the flooding was reviewed as part of the existing conditions evaluation for this study. Appendix D provides a more detailed overview of the existing drainage conditions along Bishop Creek. In summary, Bishop Creek receives runoff from a large portion of Shelby County, Indian Springs, and Oak Mountain State Park. The main areas that experience flooding include low-lying areas such as the Belle Vista Community, Chandalar Townhomes, Green Park Trailer Park, Southgate Estates, and commercial parking areas in the vicinity of Oak Mountain Amphitheater.

The flooding is primarily caused by the flow of the creek exceeding the capacity of the creek channel. When large storm events occur, low-lying areas provide temporary storage for water until stormwater runoff lessens and the low-lying areas are allowed to drain back to the creek. The risk of flooding may be lessened through the use of water detainment at the upstream end of the watershed and by increasing the capacity of the creek channel on the downstream end of Bishop Creek. The mapping included in Appendix D shows areas where these improvements could be incorporated.

Several different potential stormwater management (pond) locations were identified during the Hydraulic Review. These ponds vary in size and cost of development. As part of the Hydraulic Review, an order of magnitude cost of $5,085,000 was estimated for the design and construction of all of the detention areas described above and shown in Appendix D. The following further details the cost to install all seven of the potential ponds. It should be noted that any modifications to the creek banks would require permitting through the United States Army Corps of Engineers (USACE) and FEMA mapping would have to be revised to accurately reflect these modifications.
The total combined quantity of material estimated to be excavated and removed from the flood area measures approximately 490,000 cubic yards. The overall estimate was based on having to pay contractors $10 per cubic yard for exporting material from the pond sites. This is a significant cost, which may be reduced if other earthwork projects in the area are in need of fill material. The City could designate the proposed pond areas as “borrow” areas for other local projects. This would allow for the ponds to be excavated at a greatly reduced cost. Furthermore, if the City has identified potential economic development opportunities, such as commercial or industrial project sites which need fill material, it may be able to arrange these projects in conjunction with the pond excavation projects.

Cost and time are two factors that would limit the City’s ability to construct all of the potential ponds discussed previously in this section. Therefore, two of the potential storm water management areas have been distinguished as “priority ponds”. These ponds are the larger of those identified and would provide the most benefit to the City. The mapping in Appendix D shows these two ponds labeled “Priority Pond #1” and “Priority Pond #2”. Priority Pond #1 is approximately 17.9 acres in size and is estimated to potentially yield +/- 135 acre-feet in stormwater storage capacity adjacent to Bishop Creek. Priority Pond #2 is approximately 10.1 acres in size and is estimated to potentially yield +/- 75 acre-feet in stormwater storage capacity adjacent to Bishop Creek. The estimated costs for these two ponds are provided in Table 2.

### Table 2: Priority Pond Cost Estimates

<table>
<thead>
<tr>
<th>Stormwater Management Area</th>
<th>Engineering Design, Consulting, and Permitting</th>
<th>Construction – Exporting Material from Pond Sites</th>
<th>Incidental Construction Costs – Mobilization, etc.</th>
<th>Total Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority Pond #1</td>
<td>$100,000</td>
<td>$2,178,000</td>
<td>$50,000</td>
<td>$2,328,000</td>
</tr>
<tr>
<td>Priority Pond #2</td>
<td>$100,000</td>
<td>$1,210,000</td>
<td>$50,000</td>
<td>$1,360,000</td>
</tr>
</tbody>
</table>

Notes:
1. These estimates are based on limited topographic information and should be field verified.
2. No geotechnical studies have been performed to determine depth to bedrock, which would impact construction costs.

The hydraulic review prepared in conjunction with this report is beneficial to the City in that it highlights areas where hydraulics could be improved; however, a more detailed design study should be performed to further evaluate the needs and potential improvements of the study area.

### 3.4 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. Should the City 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 in the project area or provide documentation that the area is clear of any historic property impacts.

Research performed by the University of Alabama’s Office of Archaeological Records (OAR) indicates there are eight known archaeological sites located along the proposed trail and eight known archaeological sites located in
close proximity of the proposed trail. The latter eight should not be impacted by the trail unless the trail alignment changes considerably. Of the eight sites located along the trail some could be avoided by shifting the alignment of the trail. However, due to the nature of the study area there is a strong likelihood that additional archaeological sites would be identified or existing site boundaries expanded during construction.

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. If federal or state money is used for the installation of the trail, a phase 1 cultural resources study would be required to identify and clear any unknown and known archaeological sites. Due to the sensitivity of these areas, it is important that the exact locations not be revealed to the general public. There have been instances when individuals have used the OAR mapping to vandalize and steal artifacts from known archaeological sites. If asphalt or concrete surfacing is selected, a layer of crushed stone must be installed beneath the surface in order to protect the potential archaeological sites that may be located beneath the trail. The cost of this layer of crushed stone is included in the cost estimates provided in this study.

If local funds are used, a phase 1 cultural resources study is not required. However, any work impacting Bishop Creek will require a United States Army Corps of Engineers (USACE) permit. For permitting purposes USACE requires a phase 1 cultural resources study for the entire project limits and not just localized areas.

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.

For this trail study, Section 4(f) may be a factor for the eastern terminus of the study at the intersection of Oak Mountain Park Road and John Findley Drive since the State of Alabama has ownership of all four corners of this intersection. Clarification is needed to determine the park boundaries so that Section 4(f) issues can be confirmed or ruled out. Since the City Park was established using public funds, careful attention must be paid to the determination of its Section 4(f) status during the preparation of the environmental document.

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.

Field observations reveal that there are areas along the trail corridor that have a high Hispanic population and low-income residences. English language proficiency may also be a concern in these areas. If a project is undertaken with Federal dollars that would affect these areas, the City will need to ensure that all planning and outreach components of the project comply with environmental justice regulations under NEPA.
4 Purpose and Need for Improvements

The City desires to provide the citizens of Pelham with improved connectivity within their community by installing a non-motorized, recreational trail system. In addition to providing non-motorized connectivity to City amenities, this recreational facility would further enhance the community’s connection to the scenic environment offered by Bishop Creek. A recreational trail that provides connectivity throughout the community would not only benefit livability in the immediate surrounding community, but it would also attract others to the area.

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

- **Healthier Environment:** Providing an alternative to motorized travel may reduce emission related pollution.
- **Healthier Pelham:** A trail will provide the community with an additional option for physical exercise to improve health of citizens. 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:** The introduction of a new 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 incorporating improvements into the study area is to offer additional recreational areas that allow people the opportunity to enjoy the scenic environment of Bishop Creek and provide non-motorized connectivity between various City features. Prior to the study initiation, the City developed a potential trail alignment. As part of the study, this proposed alignment was reviewed in the field for feasibility. It was determined that the proposed alignment was well suited to the project’s purpose and need with some small modifications based on field reviews and stakeholder input. No other practical alignments were identified that would fulfill the purpose and need and not cause numerous impacts to developed properties.

Since various alignments were not evaluated, the two build options presented in this section of the report focus on funding sources as their main distinction.

5.1 No Build Option

The No Build Option assumes no improvements are constructed. This option provides no improvement to pedestrian or bicycle accommodations and does not provide any recreational facility upgrades or installations.

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 City 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 5.8 of this report.

5.2.1 Trail User

The term trail user for build option 1 covers a variety of individuals. The width of a federally funded multi-use path allows for multiple users to comfortably use the trail simultaneously. These users can vary from recreational
cyclists and fitness enthusiasts to cross country runners and families. A federally funded trail must also be accessible for all users and compliant with the Americans with Disabilities Act (ADA).

5.2.2 Typical Section
Build Option 1 includes the use of Federal funds to construct a multi-use path. 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 E provides a typical section for this type of multi-use path.

Due to evidence discussed in the field review observation section of this report, there are areas along the existing YMCA trail that are currently experiencing bank failure. Although, varying issues contribute to this bank failure the close proximity of the trail to the top of the creek bank is a primary cause. The installation of a trail at the top of a creek bank requires vegetation removal. This vegetation provides critical bank stability. For this reason a separation, or buffer, between Bishop Creek and the proposed path has been included in the typical section.

Also discussed in the field review observations section of this report are areas where the trail alignment experiences pinch points. In these pinch point areas there is limited room between business and residential properties and Bishop Creek which makes providing a buffer between the creek and the proposed trail difficult. If right-of-way or a use agreement cannot be achieved between the City and property owners in these areas, a boardwalk system could be installed to transverse these tight areas. The boardwalk system could consist of wood plank or other manufactured materials.

5.3 Build Option 2 – Non-Federally Funded Multi-use Path
Build option 2 includes the use of non-federal funds, or local funds, to construct a multi-use path. The City 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 5.8 of this report.

5.3.1 Trail User
Like build option 1, the trail user for build option 2 varies and could simultaneously accommodate cyclists as well as pedestrians. Since the design and construction would not use federal funding, compliance with ADA may not be required if the trail serves a purely recreational purpose; however, since the City desires to use the proposed trail for general connectivity and event use it would be in the City’s best interest to provide accessibility for all potential users.

5.3.2 Typical Section
Since federal funds are not utilized for build option 2 the width of the proposed trail is not required to be 10 feet. This provides the City with the ability to select a smaller width; however, an appropriate width that accommodates both cyclists and pedestrians should be considered. Typically, sidewalks are designed with widths between four and six feet and bike lanes are designed with widths between four and five feet. Based on these dimensions, a non-federally funded multi-use path could be as small as eight feet. An additional two feet would provide a more comfortable interaction between users. The typical section for build option 2 is provided in Appendix E. For cost estimating purposes, a width of ten feet was used.

Potential bank failures and pinch points discussed for build option 1 also apply to build option 2. A separation, or buffer, between Bishop Creek and the proposed path should be included to reduce the risk of bank failure due to vegetation removal. Should right-of-way acquisition or use agreements not be obtained, a boardwalk system could be installed to transverse these tight areas. The boardwalk system could consist of wood plank or other manufactured materials.
5.4 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 the public right-of-way. These guidelines are more commonly referred to as PROWAG. Per PROWAG, design, construction, and any alteration of pedestrian facilities within the public right-of-way, including state and local right-of-way, must be made accessible for pedestrians with disabilities. Although PROWAG has not yet been officially adopted, once it is it will be mandatory that the guidelines set forth by the United States Access Board must be implemented into projects located within the public right-of-way. Taking into consideration these guidelines and the City’s desire to use the proposed trail as a connection between City amenities and an alternative path for pedestrians during events, accessibility for persons with disabilities should be provided no matter which build option is selected.

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, the topography in the area of the proposed trail appears to be relatively flat. However, during the field review one area that may present a challenge in meeting the slope standards was noted. The area is the portion of the proposed alignment along Oak Mountain Park Road where the alignment shifts from the roadside to a grade separated path. The maximum slope for a trail is 12% but this grade is only allowed for 10’. Special attention should be given to this area during the design phase. If the slope or any other requirements cannot be met, the City 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.
5.5 Trail Surfacing

As discussed in the accessibility portion of this report, the type of trail surfacing used for a recreational trail is important. The City has essentially three options when selecting a surface treatment for the proposed trail, 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 3.

Crushed Stone – Of the three surface treatments, crushed stone has the lowest installation cost at $25 per linear foot 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 frequent flooding. 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.

Within the Birmingham region, crushed stone has been utilized on trails in Irondale and Mountain Brook. Figure 2 is an example of a crushed stone trail in Jemison Park in Mountain Brook, Alabama. This trail is located primarily along Shades Creek and has similar topography as that seen in the Bishop Creek area. Figure 3 shows a trail that begins at the Grants Mill Road canoe launch in Irondale, Alabama. The crushed stone on this trail was mixed with a grout and lined with steel edging to create a more durable trail surface. The grout and sheeting also adds rigidity to the trail, which creates characteristics similar to concrete. Unfortunately in areas next to hillsides runoff can channelize and damage the trail as seen in Figure 4.
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 offers a porous surface, runoff can drain through the pavement which is beneficial during flooding. However, applying seal coats may eliminate this benefit. Another downside to asphalt as a surface treatment is the potential for environmental contamination during installation; however, this is a very small risk. 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, storm 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 5 is a photo of the Shades Creek Greenway located in Homewood, Alabama between Green Springs Highway and Brookwood Boulevard. The trail surfacing for the Shades Creek Greenway is primarily asphalt. Figure 6 is an additional view of the Shades Creek Greenway. 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. Another asphalt trail (not pictured) located near the City of Pelham is the Hillsboro Trail in Helena, Alabama.
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. Continued monitoring of this area would also be required since the possibility exists of flood waters removing large chunks of the concrete as has happened, per Pelham City officials, with in-place picnic tables and benches. 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 be transported during flooding, potentially causing issues downstream. Figure 7 shows an example of concrete sidewalk located in Trussville, Alabama that has been damaged by tree root growth.

The City 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. Since the City wishes to use the proposed trail for recreational, cross country meets, and mountain bike team events, the crushed stone surfacing appears to be the best choice. However, a high likelihood of flooding in areas near Bishop Creek should also be taken into consideration. Typically, the risk of flooding indicates that a crushed stone trail may require an increase in trail condition evaluations to be performed by City staff as well as continued maintenance. For this reason, the county may want to consider installing an asphalt trail along Bishop Creek and using crushed stone for the portion of the trail along Oak Mountain Park Road. The existing YMCA trail surface is crushed stone and appears to be holding up well to flooding conditions despite a few areas where creek bank failure is occurring as discussed in prior sections of this report. This bank failure is not a reflection on the surfacing type but on the hydraulics associated with the creek itself and lack of a vegetated buffer.

**Figure 7: Damaged Sidewalk, Trussville, Alabama**

<table>
<thead>
<tr>
<th>Surfacing Option</th>
<th>Nature Trail Feel</th>
<th>Lowest Installation Cost</th>
<th>Service Life</th>
<th>Lowest Maintenance Costs</th>
<th>Best Flood Performance</th>
<th>Road Cyclist Preference</th>
<th>Runner Preference</th>
<th>Easiest Installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crushed Stone</td>
<td>✓</td>
<td>✓</td>
<td>varies</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Asphalt</td>
<td></td>
<td>8-15 years</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete</td>
<td></td>
<td>25+ years</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.6 Maintenance and Security

While there are definite benefits to installing a trail, there are also some concerns. Two concerns that have been expressed by stakeholders include the need for maintenance and concerns regarding security along a trail. The two are in fact related. A well-maintained trail promotes trail use and can minimize criminal and undesirable activity. Maintenance including cleaning the trail and checking for any flood-related damage should be performed following large rain events. There are several tributaries that the proposed trail alignment crosses. These tributaries will have to be traversed using either a bridge or pipe culvert. A bridge or pipe culvert requires maintenance in the sense that the passages must be kept clear to avoid upstream flooding.

Additional security measures that can be utilized along the trail include posting trail rules and operating times, installing security cameras, and installing lighting. These safety measures have been included in the cost estimates discussed in section 5.8 of this report. Figure 8 shows an example of trail rules posted at the Shades Creek Greenway in Homewood, Alabama.

5.7 Segment Prioritization

The proposed trail is approximately six and a half miles in length. Ideally, the installation of the proposed trail would occur at one time; however, acquiring funding, urgency of other City projects, and scheduling could prevent this from happening. This section of the report assigns priority to the various segments of the trail. The City may use this priority ranking for direction when moving forward with the design and construction of the proposed trail.

Implementation priority is based upon the presence of existing facilities such as sidewalk and recreational features, immediate benefit, and known upcoming City projects. Table 4 summarizes the descriptions of each segment and Appendix F provides a map with the various segments highlighted.

<table>
<thead>
<tr>
<th>Priority Ranking</th>
<th>Segment</th>
<th>Length (linear feet)</th>
<th>Length (miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In-place sidewalk at City Park (Bearden Road Entrance) to City Park expansion extents</td>
<td>3,747</td>
<td>0.71</td>
</tr>
<tr>
<td>2</td>
<td>City Park expansion to existing YMCA trail</td>
<td>6,534</td>
<td>1.24</td>
</tr>
<tr>
<td>3</td>
<td>Existing YMCA trail bank repair</td>
<td>1,768</td>
<td>0.34</td>
</tr>
<tr>
<td>4</td>
<td>Oak Mountain Amphitheater to John Findley Drive</td>
<td>11,736</td>
<td>2.22</td>
</tr>
<tr>
<td>5</td>
<td>Existing YMCA trail to Oak Mountain Amphitheater</td>
<td>6,950</td>
<td>1.32</td>
</tr>
<tr>
<td>6</td>
<td>West of Bearden Road</td>
<td>3,100</td>
<td>0.59</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>33,835</strong></td>
<td><strong>6.4</strong></td>
</tr>
</tbody>
</table>

Figure 8: Example of Trail Rules
5.8 Funding Sources

Costs associated with the design and construction of the proposed trail could exceed the City’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 5 details funding sources, the category of the source and type of project for which the funding can be used.

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>Category</th>
<th>Relevant Project Type</th>
<th>Match Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congestion Mitigation and Air Quality Improvement</td>
<td>Federal</td>
<td>Surface transportation projects including pedestrian facilities</td>
<td>80% Federal/ 20% Sponsoring Agency</td>
</tr>
<tr>
<td>Program (CMAQ)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation Alternatives Program (TAP)</td>
<td>Federal</td>
<td>Off road pedestrian and bicycle facilities</td>
<td>80% Federal/ 20% Sponsoring Agency</td>
</tr>
<tr>
<td>Recreational Trails Program (RTP)</td>
<td>Federal</td>
<td>Development and maintenance of recreational trails and trail-related facilities</td>
<td>80% Federal/ 20% Sponsoring Agency</td>
</tr>
<tr>
<td>National Park Service Land &amp; Water Conservation Fund</td>
<td>Federal</td>
<td>Outdoor recreational areas</td>
<td>50% Federal/ 50% Sponsoring Agency</td>
</tr>
<tr>
<td>(LWCF)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TIGER Discretionary Grants</td>
<td>Federal</td>
<td>Economic Development and Community Connection</td>
<td>Varies (as little as 20% to as much as 3.5 times the funding amount)</td>
</tr>
<tr>
<td>American Hiking Society’s National Trails Fund</td>
<td>Private</td>
<td>Recreational hiking projects</td>
<td>NA</td>
</tr>
<tr>
<td>American Forests Global ReLeaf</td>
<td>Private</td>
<td>Trail tree plantings</td>
<td>NA</td>
</tr>
<tr>
<td>PeopleForBikes</td>
<td>Private</td>
<td>Bike facilities</td>
<td>NA</td>
</tr>
<tr>
<td>Surdna Foundation</td>
<td>Private</td>
<td>Sustainable Environments</td>
<td>NA</td>
</tr>
</tbody>
</table>

Federal Funding

The use of federal funding for the construction of pedestrian facilities within a transportation project includes the condition that the new facilities be 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 are authorized through the Moving Ahead for Progress in the 21st Century Act (MAP-21). Funding authorization for MAP-21 is set to expire in summer 2015. It is uncertain at this time if Congress will choose to extend this program, terminate the program, or replace it. The funding amounts discussed in the following program descriptions are based on the current funding authorization.

- 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. Currently, RPCGB administers $10.8 million of CMAQ funding. Approximately half of this amount is designated for pedestrian projects. 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 City 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 City’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/

- The Transportation Alternative Program (TAP) eligible activities that are relevant to the build options described in this report include the construction of off-road trail facilities for pedestrians and cyclists. Design of these trails is not covered by TAP funds, meaning the City would have to use other funding for engineering services. TAP funds are funneled through RPCGB. Each year RPCGB distributes $1.2 million in TAP funding. The maximum grant amount that can be issued by RPCGB is $500,000. In addition to the TAP funding administered by RPCGB, the state also receives approximately $8 million in TAP funding, which allows for 15-20 projects per year. The state may choose to use this funding for projects located anywhere in the state. Like CMAQ funding, an 80/20 match is required with TAP funding. TAP funds cover 80% of the construction cost and the City 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.

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

- 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. A City could seek both RTP and LWCF funding for the same project; however, ADECA must approve of this before an application can be submitted.

  - Recreational Trails Program (RTP) – Each year ADECA holds a pre-application meeting to discuss the available funding and maximum grant values. This meeting is not mandatory but is encouraged. The 2015 meeting was held on June 30, 2015 and pre-applications are due July 31, 2015. A project will not be considered if a pre-application was not submitted. The timeframe for the 2016 grants should be similar to the 2015 dates. Eligible RTP projects include the development and maintenance of recreational trails and trail related facilities for motorized and non-motorized uses. Per FHWA, if RTP funds are used for trail related projects, Section 4(f) does not apply. Currently, ADECA has approximately $1,153,278 in RTP funds available and there are four funding categories: non-motorized, single-use trails; non-motorized, diverse-use trails; motorized, diverse-use trails; and education. The trail discussed in this report falls under the “non-motorized, diverse-use trail” category. For 2015, projects that fall in this category are eligible for $100,000 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. At the time this report was prepared, 2015 numbers including the total amount of available funding and individual grant ceiling was unknown. However, it is assumed that these numbers would be fairly close to the 2014 numbers. In 2014, ADECA had an estimated $570,000 in available funding, setting the maximum amount for an individual grant at $50,000. Since LWCF is a 50/50 matching program, this means that for a project receiving the maximum $50,000 grant, the sponsoring agency would be responsible for $50,000 in order for a $100,000 project to be completely funded. If the project exceeds $100,000 the sponsoring agency would be responsible for funding the excess. It should be noted that securing LWCF funds for the proposed trail would require the City 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

- TIGER (Transportation Investment Generating Economic Recovery) discretionary grants fund projects that seek to encourage community revitalization by focusing on projects that generate economic development and provide cohesion to a disconnected community. In April of 2015 it was announced that $500 million in grants would be provided. Since the application deadline has passed for this year, the City could apply for a grant in 2016. Although it has not been approved yet, the proposed budget for TIGER grants in 2016 was cut to $250 million. The process for obtaining a TIGER grant is very competitive and will be even more so next year since less funds will be available. The first step in acquiring TIGER funds is submitting a Pre-Application. Final applications will not be accepted if a Pre-Application has not been submitted. Instructions in the form of a manual are available at the link listed below. The application process requires a cost benefit analysis. The local match for a TIGER project can be as low as 20 percent; however, typically for every dollar of TIGER funds the sponsoring agency or agencies has provided 3.5 dollars. For this reason, it may be beneficial to the City to partner with other agencies, such as Shelby County, Oak Mountain State Park, or the Fresh Water Land Trust, in order to fund a trail project. Since there is no ALDOT involvement, the timeframe to complete a TIGER project can be estimated between two and four years.
http://www.transportation.gov/tiger

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 National Trails Fund provides grants once per year for projects improving hiking access. In order to receive a grant the City will have to become a member of the Hiking Alliance. Grants range from $500 to $5000.

- The American Forests Global ReLeaf program works to restore forests with the goal of restoring forest ecosystems. Typical Global ReLeaf projects cover areas of 20 acres or more. Although their main focus is tree planting, Global ReLeaf offers funding for maintenance and invasive species removal.

- People for Bikes 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. Grants distributed in the Fall of 2014 ranged from $1500 for bike racks to $10,000 to help fund a trail project in Missouri. In 2009 People for Bikes 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.

- The Surdna Foundation provides funding through three programs: sustainable environments, strong local economies, and thriving cultures. The proposed trail project falls into the category of sustainable environments since it would provide increased access and mobility and could reduce the number of vehicle miles traveled within the community.

### 5.9 Cost Estimates

Cost estimates were prepared for each segment of the proposed trail. Table 6 shows the estimated project cost and provides recommended funding types per proposed trail segment. The amounts shown in the estimated costs for the City 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 City along with the 20% funding match for construction costs. CMAQ is the recommended funding type for segments 2, 4, and 5. For these projects, the federal funding covers 80% of the engineering and construction costs; therefore, the City is responsible for a 20% funding match. Similar to CMAQ, RTP also provides 80% funding but is capped at $100,000. For Segment 6, RTP funds, instead of CMAQ or TAP, are recommended since the length of the segment is less than a mile 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 6 are estimated and are subject to change.

If the City elects to solely use local money to fund any segment or the entire proposed trail, the estimated cost for the City would increase compared to what is shown in Table 6. 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 City increases with the use of local funds the estimated timeframe is typically reduced considerably since the City 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 City funds a project include some required permitting, preparation and approval of an environmental document, and public involvement meetings.

The costs shown in Table 6 are reflective of using crushed stone as the surface treatment for each segment. A ten-foot trail width is also assumed. In areas where pinch points exist, concrete boardwalk was assumed. This cost may be eliminated in some areas if the City acquires additional right-of-way or use-agreements from property owners. Right-of-way costs are not included in the cost estimates. It should be noted that if the City is able to take advantage of volunteer labor to build the proposed trail, the local funds cost could be reduced.

<table>
<thead>
<tr>
<th>Priority Ranking</th>
<th>Segment</th>
<th>Length (miles)</th>
<th>Recommended Funding Type</th>
<th>Estimated Project Cost*</th>
<th>Estimated Cost for City</th>
<th>Estimated Timeframe to Completion</th>
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<tbody>
<tr>
<td>1</td>
<td>In-place sidewalk at City Park (Bearden Road Entrance) to City Park expansion extents</td>
<td>0.71</td>
<td>TAP</td>
<td>$276,000</td>
<td>$112,000</td>
<td>3-5 years</td>
</tr>
<tr>
<td>2</td>
<td>City Park expansion to existing YMCA trail</td>
<td>1.24</td>
<td>CMAQ</td>
<td>$893,000</td>
<td>$178,600</td>
<td>3-5 years</td>
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<tr>
<td>3</td>
<td>Existing YMCA trail bank repair</td>
<td>0.34</td>
<td>RTP</td>
<td>$76,000</td>
<td>$15,200</td>
<td>1-3 years</td>
</tr>
<tr>
<td>4</td>
<td>Oak Mountain Amphitheater to John Findley Drive</td>
<td>2.22</td>
<td>CMAQ</td>
<td>$960,000</td>
<td>$192,000</td>
<td>3-5 years</td>
</tr>
<tr>
<td>5</td>
<td>Existing YMCA trail to Oak Mountain Amphitheater</td>
<td>1.32</td>
<td>CMAQ</td>
<td>$609,000</td>
<td>$121,800</td>
<td>3-5 years</td>
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<tr>
<td>6</td>
<td>West of Bearden Road</td>
<td>0.59</td>
<td>RTP</td>
<td>$241,000</td>
<td>$141,000</td>
<td>1-3 years</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>6.4</strong></td>
<td><strong>Total</strong></td>
<td><strong>$3,055,000</strong></td>
<td><strong>$760,600</strong></td>
<td><strong>1-3 years</strong></td>
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</table>

*All segment costs based on crushed stone surface. Right-of-way cost is not included.

### 6 Other Considered Alternatives

Several other improvement alternatives were considered for the Pelham trail; however, it was determined early in the evaluation process that these options would not fulfill the City’s vision for the project. The considered alternatives that were eliminated include bike lanes and sidewalks along US Highway 31, a sole-purpose mountain bike trail, and a sole-purpose hiking trail.

#### 6.1 Bike Lanes and Sidewalks

The option to install bike lanes and sidewalks along the US Highway 31 corridor was eliminated for two reasons: heavy traffic flow on US Highway 31, and a lack of recreational potential. US Highway 31 carries a large amount of traffic. The heavy traffic load exceeds the capacity of the existing lanes on US Highway 31 causing the current level of service (LOS) experienced by motor vehicles to be LOS F. Although adding bike lanes and sidewalks would improve access for cyclists and pedestrians along this corridor, the likelihood of cyclists and pedestrians using this route is low due to the amount of cars and the speed in which they travel. Additional lanes to accommodate the growing traffic volumes would be needed in addition to bike lanes and sidewalks in order to improve the LOS and the prospect of non-motorized travel. Secondly, bike lanes and sidewalks along a major thoroughfare do not fulfill...
the City’s desire to provide a natural recreational facility for its citizens. Placing cyclists and pedestrians along US Highway 31 takes them away from the scenic setting offered by the Bishop Creek environment. For these two reasons the option of installing bike lanes and sidewalks along US Highway 31 was eliminated from further study.

6.2 Mountain Bike Trail
A mountain bike trail fulfills the City’s need to provide a recreational facility but it only accommodates one type of user. Typically a mountain bike trail is two feet in width and provides a more rugged trail which is appealing to mountain bikers. Some pedestrians may elect to use a mountain bike trail for fitness goals; however, a two foot trail does not allow for sharing and forces either the mountain biker or pedestrian off the dedicated path. Although a mountain bike trail would offer a marketable feature for the City it would not accommodate multiple types of users. For this reason, the option of a mountain bike trail was eliminated from further study.

6.3 Hiking Trail
Similar to a mountain bike trail, a hiking trail fulfills the City’s desire to provide a recreational facility but it also only accommodates one type of user. Even though a hiking trail is wider than a mountain bike trail at approximately four feet, it still doesn’t provide enough room for sharing with cyclists. Like a mountain bike trail, a hiking trail would offer a marketable feature for the City but it would not accommodate multiple types of users. For this reason, the option of a hiking trail was eliminated from further study.

7 Stakeholder Input and Public Involvement
An in-field stakeholder meeting was held on April 9, 2015. Prior to this meeting a technical memorandum that summarized field review findings, existing conditions, and background research was provided to the City for their distribution to stakeholders. To start the meeting participants met at the Bearden Road entrance of the City Park, near the western terminus of the study area. An overview of the technical memorandum was provided and input from stakeholders was requested. The agenda for the meeting included several stops along the proposed trail alignment. Meeting minutes are included in Appendix H.

A short presentation was presented at the April 30, 2015 City of Pelham Town Hall Meeting. This presentation included background information on the study, current status of the study, and next steps. An information table was also set up at the Town Hall Meeting and included a roll map of the proposed trail alignment and a print of a potential typical section. Attendees were given the option to fill out a comment form. The form provided questions and comment sections for participant feedback. Of the completed forms received, all were in favor of the City installing a trail (the comment forms are included in Appendix I).

Forms indicated that 82% of those completing the form are residents of Pelham. Concerning trail function and purpose, the majority of those that completed the form indicated they would like the trail to function for pedestrians and bicyclists. Participants also indicated their main purpose for utilizing the trail would be fitness and exercise, followed by recreation, and non-motorized connectivity. Participants were also given the opportunity to note trail features that they felt were most important. Lighting was the most popular feature; however, one attendee suggested closing the trial at dusk. Other desired features topping the list included trash receptacles and benches, followed by security cameras and picnic tables. Other suggestions included additional parking and access points, work out stations, wireless internet access, emergency contact boxes, pet accommodations, restrooms, water stations, and weather shelters. In addition to desired features, several attendees expressed concerns, including the potential runoff associated with construction and the possibility of trail users disturbing current residents along the proposed trail alignment.
8 Next Steps
If the City of Pelham chooses to move forward with implementing the entire length of the proposed trail or just portions and would like to pursue Federal CMAQ or TAP funding, the next step would be to request funding from RPCGB. Typically, the funding request process begins by a request to include a project in RPCGB’s Transportation Improvement Program (TIP). The TIP is a four year program that lists the projects that will be undertaken in the next four years. The application deadline for the 2016-2019 TIP has passed; however, projects that utilize the APPLE program provide local governments the opportunity to request funding between TIP cycles.

Once 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, design would be finalized, followed by construction. If it is determined that additional right-of-way is required, acquisition would be conducted prior to construction.
List of Appendices

Appendix A – Field Review Observation Mapping and Study Area Photos
Appendix B – USFWS Concurrence Request Letter and USFWS Response
Appendix C – NRCS Concurrence Request Package and NRCS Concurrence
Appendix D – Bishop Creek Drainage Overview
Appendix E – Trail Typical Section
Appendix F – Segment Prioritization Map
Appendix G – Cost Estimates
Appendix H – Stakeholder Meeting Minutes
Appendix I – Town Hall Meeting Comment Forms
Appendix A

Field Review Observation Mapping and Study Area Photos
Legend

Under Bridge Crossing
Bridge Crossing
Crosswalk
YMCA Existing Trail
Existing Sidewalk
Proposed Trail
Existing Sidewalk Project

City Limits
Road Centerline
Curb Inlet
Open Ditch
Open Ditch Hidden
Driveway Paved
Driveway Unpaved
Sidewalk/Bike Edge
Sidewalk/Bike Centerline
Creek

Cemetery
Church
Landmarks
Storm Line
Manhole
Gravity Main
Power Pole
Powerline
Hydrant
Water Main
Trails
Edge Of Pavement

Concrete Drain
Culvert Pipe
Athletic Court
Athletic Field
Building
Mobile Home
Parking Area
Retention Basin
Water Area
Subdivision Boundary
Parcel Line

Note: Recorded Archaeological Sites are present in Areas 1, 3, 4, 5, and 6.

Project Key Map
Pelham Trail Corridor Study
Pelham, Alabama
Section 04 Area Map
Pelham Trail Corridor Study
Pelham, Alabama

Date Saved: 7/3/2015

1 in = 200 ft

Pelham Trail Corridor Study

Bank Failures

Pinch Point

Potential impact to homes

In-place Makeshift Bridge

Southgate Estates Mobile Home Park
Section 01 Photos

Bearden Road Bridge
View of City Owned Property

In-Place Sidewalk at City Park
In-Place Trail Behind Baseball Fields

Section 02 Photos

Pinch Point between Water Treatment Facility and Bishop Creek
Belle Vista Mobile Home Park
Section 03 Photos

Pinch Point between Industrial Building and Bishop Creek

In-Place Observation/Picnic Area Located at Industrial Building

In-Place Gate blocking Proposed Trail Alignment

Crosscreek Trail Bridge

Chandalar Drive Bridge
Section 04 Photos

In-Place YMCA Trail

Bank Failure along YMCA Trail

Additional Bank Failure along YMCA Trail

Pinch Point between Lumber Yard and Bishop Creek
Section 05 Photos

Makeshift Bridge

In-Place Worn Path

US Highway 31 Bridge

Area Behind Pelham Civic Complex
Section 07 and Section 08 Photos
Southbound View of Oak Mountain Park Road
Additional Southbound View of Oak Mountain Park Road
Shelf Area Above Roadway
View Beneath Interstate 65

Section 09 Photos
Oak Mountain Park Road looking Northbound
Intersection of Oak Mountain Park Road and John Findley Drive
### Parcels and Owners per Property Research and GIS Data

#### Segment Priority No. 1 - In-place sidewalk at City Park (Bearden Road Entrance) to City Park

**Expansion Extents**

<table>
<thead>
<tr>
<th>Parcel Owner</th>
<th>No. of Parcels</th>
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<tbody>
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<td>Shelby County</td>
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#### Segment Priority No. 2 - City Park Expansion to existing YMCA Trail

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<tr>
<td>Central Properties, LLC</td>
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<td>Peltown Realty LLP</td>
<td>4</td>
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<tr>
<td>Rodger D Bass</td>
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<tr>
<td>Thc City of Pelham</td>
<td>1</td>
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<tr>
<td>Chandalar South Homeowners Association</td>
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<td>Scella &amp; Donald Cross</td>
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#### Segment Priority No. 3 - YMCA Trail

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<tr>
<td>The Young Mens Christian Association of Birmingham</td>
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#### Segment Priority No. 4 - Oak Mountain Amphitheater to John Findley Drive

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<tr>
<td>Mesquite Development Inc.</td>
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<tr>
<td>Chick-Fil-A</td>
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<tr>
<td>Applebee's of North Alabama</td>
<td>1</td>
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<tr>
<td>Stanley Schwartz Alabama Inc.</td>
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<tr>
<td>Julius F. Wise</td>
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<tr>
<td>Oak Mountain Amphitheater</td>
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<tr>
<td>Bishop Creek Land LLC</td>
<td>1</td>
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<tr>
<td>Gerald D. Jr Colvin</td>
<td>1</td>
</tr>
<tr>
<td>State of Alabama</td>
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<tr>
<td>Gerald Jr. Charles Colvin</td>
<td>1</td>
</tr>
<tr>
<td>James B. Kovaka</td>
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#### Segment Priority No. 5 - Existing YMCA trail to Oak Mountain Amphitheater

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<tr>
<td>Richard Ruch</td>
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<tr>
<td>Matrix South, LLC</td>
<td>2</td>
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<tr>
<td>Truman &amp; Jaqueline S. Fancher</td>
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<tr>
<td>Great South Construction Co. INC</td>
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<tr>
<td>Matrix South, LLC</td>
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<tr>
<td>PelhamCity Board of Education</td>
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<tr>
<td>First Commercial Bank</td>
<td>1</td>
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<tr>
<td>Needham Kieth Jr. Byrd</td>
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<tr>
<td>JPP Properties LLC</td>
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</tr>
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<td>Oak Mountain Amphitheater</td>
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<tr>
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<tr>
<td>Oak Mountain Amphitheater</td>
<td>1</td>
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#### Segment Priority No. 6 - West of Bearden Road

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<th>Parcel Owner</th>
<th>No. of Parcels</th>
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<td>3</td>
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<tr>
<td>Total Number of City of Pelham Parcels</td>
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</tr>
<tr>
<td>Total Number Non-City of Pelham Parcels</td>
<td>42</td>
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</table>

*Segment Prioritization discussed in section 5.7 and a map of the segment priorities is provided in Appendix F.*
Appendix B

USFWS Concurrence Request Letter and USFWS Response
February 23, 2015

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

Subject: USFWS Species Request  
Trails and Greenways Study  
Regional Planning Commission of Greater Birmingham  
Pelham, Alabama

Dear Mr. Pearson:

The City of Pelham in conjunction with the Regional Planning Commission of Greater Birmingham is evaluating the feasibility of a potential trail system connecting existing sidewalk on Bearden Road near Pelham High School to the entrance of Oak Mountain State Park. The potential trail would generally follow along Cahaba Valley Creek.  

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,

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

Attachment
Oak Mountain State Park

Helena Rd

CR 105

ST 119

ST 261

Helena Rd

Bear Den Rd

Montgomery

Chattanooga

Shelby County

Jefferson County

Helena Rd

Pelham, Alabama

Proposed Trail

YMCA Existing Trail

Proposed Trail

Location Map

Trails and Greenways Study

Pelham, Alabama
Ms. Jennifer G. Brown, P.E.
Sain Associates
Two Perimeter Park South
Suite 500 East
Birmingham, AL 35243

Dear Ms. Brown:

Thank you for your February 23, 2015, letter requesting information on endangered and threatened species that may occur in the vicinity of a proposed trail system along Cahaba Valley Creek, connecting existing sidewalk on Bearden Road near Pelham High School to the entrance of Oak Mountain State Park in Shelby County, Alabama. The proposed trail system is located at approximately 33.3213 N and 86.8082 W. 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).

**Endangered, Threatened, and Proposed Species**

The following endangered, threatened, and proposed species may occur in the project area:

Gray bat, *Myotis grisescens* - Endangered
Indiana bat, *Myotis sodalis* - Endangered
Northern long-eared bat, *Myotis septentrionalis* - Proposed Endangered
Alabama moccasinshell, *Medionidus acutissimus* - Threatened
Fineline pocketbook, *Lampsilis atilis* - Threatened
Orange-nacre mucket, *Lampsilis perovalis* - Threatened
Ovate clubshell, *Pleurobema perovatum* - Endangered
Southern acornshell, *Epioblasma othcaloogensis* - Endangered
Southern clubshell, *Pleurobema decisum* - Endangered
Southern pigtoe, *Pleurobema georgianum* - Endangered
Triangular kidneystone, *Psychobranchus greenii* - Endangered
Upland combshell, *Epioblasma metastriata* - Endangered
Tennessee yellow-eyed grass, *Xyris tennesseensis* - Endangered
Gentian pinkroot, *Spigelia gentianoides* - Endangered
Recommended Surveys

We recommend a habitat assessment, followed by surveys as appropriate, for the species listed above be conducted by a permitted surveyor. Prior experience with each of these particular species is strongly recommended for the person(s) undertaking the survey(s). Please provide the name of the surveyor, his/her credentials, and a thorough description of survey methods and habitats present.

The northern long-eared bat is proposed as endangered, and unless projects are likely to jeopardize the continued existence of this species, conferencing under section 7 of the ESA is not required. In this case, your proposed project does not rise to the level of “likely to jeopardize”; therefore, no section 7 conferencing is recommended for the northern long-eared bat. However, please be aware that the status of this species may change in the very near future. A final decision on its listing status is to be made in April 2015, at which time the species may be listed as endangered, or threatened, or not at all. If this species is listed as either endangered or threatened, the information provided below will be useful in determining if there is suitable habitat within the project area and next steps.

Suitable summer habitat for Indiana bats (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.

In order to avoid impacts to spring/summer roosting and maternity colonies of the Indiana bat in the State of Alabama, all proposed projects that may impact suitable Indiana bat habitat should follow the procedures outlined in the Range-wide Indiana Bat Protection and Enhancement Plan Guidelines (July 2009), which were developed by a team comprised of the U.S. Fish and Wildlife Service, Office of Surface Mining, and a group of Regulatory Authorities representing the Interstate Mining Compact Commission. While the purpose of these guidelines is to aid coal mining applicants in understanding the options and protocols associated with assuring compliance with the 1996 Biological Opinion on implementation of the Surface Mining Control and Reclamation Act (SMCRA), they are equally applicable to other land-clearing projects within the State. In accordance with that guidance, when project areas contain potential summer habitat, tree clearing should 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 developer 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, then we recommend that the project proponent proceed to acoustic and/or mist-netting surveys to determine presence or probable absence of Indiana bats at the project site in accordance with the 2014 Range-wide Indiana Bat Summer Survey Guidelines (January 2014) (http://www.fws.gov/midwest/endangered/mammals/inba/surveys/pdf/2014IBatSummerSurveyGuidelines13Jan2014.pdf).

With respect to the gray bat and 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.

We recommend that surveys for the plant species listed above be conducted by a qualified botanist if appropriate habitats exist in the project area. Prior experience with the species is strongly recommended for the botanist conducting the survey. A visit to a known population of each of these species immediately prior to any surveys is recommended to become familiar with the species, habitat and condition of plants at that time of year. Surveys cannot be accepted if the plants have no above-ground vegetation at the time of the surveys. Please provide the name of the surveyor, his/her credentials, and a thorough description of survey methods and habitats present, including shrub and forb species observed. If it can be demonstrated that no suitable habitat exists for these species within the impacted areas through a detailed description of the plant community (including grasses, forbs, and shrubs) and/or site photographs showing unsuitable habitat throughout the entire project area, a species survey is unnecessary (although we would appreciate notification of habitat suitability survey results).


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. Karen Marlowe of my staff at (205) 726-2667. Please refer to the reference number located at the top of this letter in future phone calls or written correspondence.

Sincerely,

[Signature]

William J. Pearson
Field Supervisor
Alabama Ecological Services Field Office
Appendix C

NRCS Concurrence Request Package and NRCS Concurrence
February 23, 2015

Mr. Milton Tuck  
NRCS  
PO Box 861482  
Tuscaloosa, AL 35486

Subject: Primary and Unique Farmland Concurrence Request  
          Trails and Greenways Study  
          Pelham, Alabama

Dear Mr. Tuck:

The City of Pelham in conjunction with the Regional Planning Commission of Greater Birmingham is evaluating the feasibility of a potential trail system connecting the existing sidewalk on Bearden Road near Pelham High School to the entrance of Oak Mountain State Park. The potential trail would generally follow along Cahaba Valley Creek. Mapping is included for your use in determining the prime farmland status for the subject project.

The area of interest shown on the attached mapping produced via the online Web Soil Survey indicates some areas of prime farmland and farmland of statewide importance. However, considering the proximity of the potential trail to the creek it is likely that these farmland areas would not be impacted.

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

Sincerely,

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

MAP INFORMATION

Streams and Canals

Transportation

Rail

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
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 7, Sep 15, 2014

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

<table>
<thead>
<tr>
<th>Map unit symbol</th>
<th>Map unit name</th>
<th>Rating</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>AnB</td>
<td>Allen loam, 2 to 6 percent slopes</td>
<td>All areas are prime farmland</td>
<td>31.8</td>
<td>1.2%</td>
</tr>
<tr>
<td>BmF</td>
<td>Bodine-Minval complex, 25 to 45 percent slopes</td>
<td>Not prime farmland</td>
<td>917.9</td>
<td>34.5%</td>
</tr>
<tr>
<td>Ch</td>
<td>Choccolocco loam, occasionally flooded</td>
<td>All areas are prime farmland</td>
<td>128.2</td>
<td>4.8%</td>
</tr>
<tr>
<td>CS</td>
<td>Choccolocco-Sterrett association, frequently flooded</td>
<td>Farmland of statewide importance</td>
<td>14.0</td>
<td>0.5%</td>
</tr>
<tr>
<td>DeC2</td>
<td>Dewey clay loam, 6 to 10 percent slopes, eroded</td>
<td>Farmland of statewide importance</td>
<td>57.1</td>
<td>2.1%</td>
</tr>
<tr>
<td>DtC</td>
<td>Dewey-Tupelo-Urban land complex, 0 to 8 percent slopes</td>
<td>Not prime farmland</td>
<td>240.5</td>
<td>9.0%</td>
</tr>
<tr>
<td>ElB</td>
<td>Etowah silt loam, 2 to 6 percent slopes</td>
<td>All areas are prime farmland</td>
<td>35.9</td>
<td>1.3%</td>
</tr>
<tr>
<td>MfD</td>
<td>Minvale-Fullerton complex, 6 to 15 percent slopes</td>
<td>Not prime farmland</td>
<td>89.0</td>
<td>3.3%</td>
</tr>
<tr>
<td>MuE</td>
<td>Minvale-Fullerton-Urban land complex, 6 to 25 percent slopes</td>
<td>Not prime farmland</td>
<td>206.3</td>
<td>7.7%</td>
</tr>
<tr>
<td>QuB</td>
<td>Quitman loam, 0 to 4 percent slopes</td>
<td>All areas are prime farmland</td>
<td>2.7</td>
<td>0.1%</td>
</tr>
<tr>
<td>ToD</td>
<td>Townley silt loam, 4 to 12 percent slopes</td>
<td>Farmland of statewide importance</td>
<td>197.1</td>
<td>7.4%</td>
</tr>
<tr>
<td>TsE</td>
<td>Townley-Sunlight complex, 12 to 35 percent slopes</td>
<td>Not prime farmland</td>
<td>200.8</td>
<td>7.5%</td>
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<tr>
<td>TIE</td>
<td>Townley-Urban land complex, 4 to 25 percent slopes</td>
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<td>74.6</td>
<td>2.8%</td>
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<tr>
<td>Tu</td>
<td>Tupelo loam, frequently flooded</td>
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<td>334.4</td>
<td>12.6%</td>
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<tr>
<td>Tx</td>
<td>Tupelo-Dewey complex</td>
<td>Farmland of statewide importance</td>
<td>126.7</td>
<td>4.8%</td>
</tr>
<tr>
<td>W</td>
<td>Water</td>
<td>Not prime farmland</td>
<td>5.6</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

**Totals for Area of interest**

|                | 2,662.7 | 100.0% |

---

**Farmland Classification—Summary by Map Unit—Shelby County, Alabama (AL117)**
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
Rural Economic and Community Development

RE: Identification of Important Farmland and Delineation of Executive Order Wetlands:

Project Lines

Prime Farmland

Wetland

Other Farmland of Local Importance

The Prime Farmland has been identified along the project area in the color of GREEN.

The Wetland has been identified along the project area in the color of BLUE.

Other Farmland of local importance has been identified in the color of RED.

The completion of this report as directed by Farmland Protection Act Guidelines also meets requirements directed by Departmental regulation 9500-3 Land use Policy Guidelines.

Milton Tuck
Resource Soil Scientist

REMARKS:

*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.
# FARMLAND CONVERSION IMPACT RATING

**PART I (To be completed by Federal Agency)**

<table>
<thead>
<tr>
<th>Name of Project</th>
<th>Date Of Land Evaluation Request</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trails and Greenways Study</td>
<td>2/23/15</td>
</tr>
</tbody>
</table>

Federal Agency Involved: [Regional Planning Commission]

County and State: Shelby Co., Alabama

**PART II (To be completed by NRCS)**

<table>
<thead>
<tr>
<th>Does the site contain Prime, Unique, Statewide or Local Important Farmland?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>(If no, the FPSPA does not apply - do not complete additional parts of this form)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Major Crop(s): Farmable Land in Gov't Jurisdiction

<table>
<thead>
<tr>
<th>Name of Land Evaluation System Used</th>
<th>Name of State or Local Site Assessment System</th>
<th>Date Land Evaluation Returned by NRCS</th>
</tr>
</thead>
</table>

**PART III (To be completed by Federal Agency)**

<table>
<thead>
<tr>
<th>Site</th>
<th>Alternative Site Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site A</td>
<td>Site B</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Site</th>
<th>Total Acres To Be Converted Directly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site A</td>
<td>Site B</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site</th>
<th>Total Acres To Be Converted Indirectly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site A</td>
<td>Site B</td>
</tr>
</tbody>
</table>

**PART V (To be completed by NRCS): Land Evaluation Criteria**

**Site Assessment Criteria (Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)**

<table>
<thead>
<tr>
<th>Site</th>
<th>Maximum Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site A</td>
<td>Site B</td>
</tr>
</tbody>
</table>

1. Area In Non-urban Use (15)
2. Perimeter In Non-urban Use (10)
3. Percent Of Site Being Farmed (20)
4. Proportion 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**

180

**PART VII (To be completed by Federal Agency)**

Relative Value Of Farmland (From Part V)

100

**TOTAL POINTS (Total of above 2 lines)**

280

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: [Signature]

Date: 3/13/15

(See instructions on reverse side)
Appendix D

Bishop Creek Drainage Overview
TECHNICAL MEMORANDUM

DATE: March 10, 2015

TO: Jennifer Brown, P.E.

FROM: Darren Hamrick, P.E., MSCE, LEED AP

SUBJECT: Bishop Creek Drainage Overview

Pelham, AL SA# 14-0244

Purpose
This memorandum is intended to provide an overview of the existing drainage conditions along Bishop Creek within the city limits of Pelham, and to provide general recommendations to improve drainage conditions for planning purposes.

Existing Conditions
Bishop Creek receives runoff from a large portion of Shelby County, Indian Springs, and Oak Mountain State park. This creek flows westward, beneath Interstate 65, near the Oak Mountain Amphitheater, and then beneath U.S. Highway 31. It continues in a southwesterly direction, generally parallel to U.S. Hwy 31, before flowing into Buck Creek.

There are several areas along this creek that frequently flood. The commercial parking areas in the vicinity of Oak Mountain Amphitheater, Southgate Estates and Green Park Trailer Park, Chandalar Townhomes Community, and the Belle Vista Community.

Recommendations
In general, flooding occurs along Bishop Creek due to flows which exceed the capacity of the creek channel. During large storm events, the excess runoff which is above the creek capacity flows into the creek overbank areas, which are the areas that flood. These areas provide some conveyance for the excess flows, and some water infiltrates into the ground, but these low-lying areas primarily provide temporary storage for this water until the runoff subsides. As the storm water runoff subsides, these areas drain back into the creek channel.

Because this watershed is very large, it has several tributaries which contribute to the flows in Bishop Creek, and each of these tributaries flow into the creek at different times, depending on their respective characteristics and locations along the creek. The flows from each watershed add up in the creek channel and contribute to the peak, so it may be possible to reduce flooding in the creek by detaining water at the upstream end of the watershed and by improving the capacity of Bishop Creek at the downstream end.
**Stormwater Detention**

Detention of storm water contributions from tributaries should be done prior to discharging these flows into Bishop Creek. We have identified some locations where tributaries within our study area could possibly be stored in temporary holding areas to reduce the peak flowing in Bishop Creek itself. These areas are shown on the attached figure, along with the approximate acreage of detention for each area.

**Creek Conveyance**

On the downstream end of Bishop Creek, the creek’s limited capacity to convey storm water would need to be increased to reduce the amount of flooding around the creek. This conveyance could be increased by reducing the amount of friction along the banks of the creek by removing the underbrush and other obstructions to water flow. There are many areas along the creek where logs and other debris have been piled. These areas could be cleaned up, or brush removed, to allow water to flow more efficiently away from the overbank areas. This would provide some improvement to the flooding conditions, but would not completely resolve them.

The primary method for improving conveyance in Bishop Creek would be to increase the size of the creek’s cross-section so that it can carry more water without flooding into the overbank areas. However, where existing bridges cross the creek, it is unlikely that the creek cross section can be widened or increased. Therefore, these areas would have to be managed carefully with any creek improvements to get the best results. Any creek bank modifications would need to be permitted by the U.S. Army Corps of Engineers, and the FEMA maps would need to be updated to accurately reflect these modifications. Once permits were obtained, and the creek banks improved, one could expect an improvement in the drainage conditions around the creek.
Appendix E

Trail Typical Section
Appendix F

Segment Prioritization Map
Legend

- Priority 1
- Priority 2
- Priority 3
- Priority 4
- Priority 5
- Priority 6

Project

Existing Sidewalk Project

Segment Prioritization

Pelham Trail Corridor Study
Pelham, Alabama
Appendix G
Cost Estimates
Pelham Trail Study
Cost Summary

<table>
<thead>
<tr>
<th>Surfacings Type</th>
<th>Priority</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Crushed Stone Surfacing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Construction Costs</td>
<td>$163,829.89</td>
<td>$614,274.15</td>
<td>$32,823.32</td>
<td>$589,509.94</td>
<td>$380,034.49</td>
<td>$144,164.55</td>
<td>$1,924,640.00</td>
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<tr>
<td>Preliminary Engineering (15%)</td>
<td>$71,000.00</td>
<td>$124,000.00</td>
<td>$34,000.00</td>
<td>$222,000.00</td>
<td>$132,000.00</td>
<td>$59,000.00</td>
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<td></td>
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<td>Local Funds Grand Total:</td>
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<td>$739,000.00</td>
<td>$67,000.00</td>
<td>$812,000.00</td>
<td>$513,000.00</td>
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<tr>
<td>CE&amp;I and Indirect Costs (25%):</td>
<td>$40,957.47</td>
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<td>$8,205.83</td>
<td>$147,377.48</td>
<td>$95,008.62</td>
<td>$36,041.14</td>
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<td>CE&amp;I and Indirect Costs (25%):</td>
<td>$276,000.00</td>
<td>$893,000.00</td>
<td>$76,000.00</td>
<td>$960,000.00</td>
<td>$609,000.00</td>
<td>$241,000.00</td>
<td>$3,055,000.00</td>
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<tr>
<td><strong>Asphalt Surfacing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total Construction Costs</td>
<td>$211,378.89</td>
<td>$725,352.15</td>
<td>$32,823.32</td>
<td>$789,021.94</td>
<td>$498,184.49</td>
<td>$327,064.55</td>
<td>$2,583,830.00</td>
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<tr>
<td>Preliminary Engineering (15%)</td>
<td>$71,000.00</td>
<td>$124,000.00</td>
<td>$34,000.00</td>
<td>$222,000.00</td>
<td>$132,000.00</td>
<td>$59,000.00</td>
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<td></td>
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<tr>
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<td>$850,000.00</td>
<td>$67,000.00</td>
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<td>$631,000.00</td>
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<td>$3,230,000.00</td>
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<tr>
<td>CE&amp;I and Indirect Costs (25%):</td>
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<td>$181,338.04</td>
<td>$8,205.83</td>
<td>$197,255.48</td>
<td>$124,546.12</td>
<td>$81,766.14</td>
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<td></td>
</tr>
<tr>
<td>CE&amp;I and Indirect Costs (25%):</td>
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<td>$1,032,000.00</td>
<td>$76,000.00</td>
<td>$1,210,000.00</td>
<td>$756,000.00</td>
<td>$469,000.00</td>
<td>$3,879,000.00</td>
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<tr>
<td><strong>Concrete Surfacing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Construction Costs</td>
<td>$328,852.89</td>
<td>$999,780.15</td>
<td>$32,823.32</td>
<td>$1,281,933.94</td>
<td>$790,084.49</td>
<td>$327,064.55</td>
<td>$3,760,540.00</td>
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<tr>
<td>Preliminary Engineering (15%)</td>
<td>$71,000.00</td>
<td>$124,000.00</td>
<td>$34,000.00</td>
<td>$222,000.00</td>
<td>$132,000.00</td>
<td>$59,000.00</td>
<td></td>
<td></td>
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<tr>
<td>Local Funds Grand Total:</td>
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<td>$67,000.00</td>
<td>$1,504,000.00</td>
<td>$923,000.00</td>
<td>$387,000.00</td>
<td>$4,405,000.00</td>
<td></td>
</tr>
<tr>
<td>CE&amp;I and Indirect Costs (25%):</td>
<td>$82,213.22</td>
<td>$249,945.04</td>
<td>$8,205.83</td>
<td>$320,483.48</td>
<td>$197,521.12</td>
<td>$81,766.14</td>
<td></td>
<td></td>
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<tr>
<td>CE&amp;I and Indirect Costs (25%):</td>
<td>$483,000.00</td>
<td>$1,374,000.00</td>
<td>$76,000.00</td>
<td>$1,825,000.00</td>
<td>$1,121,000.00</td>
<td>$469,000.00</td>
<td>$5,348,000.00</td>
<td></td>
</tr>
</tbody>
</table>

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

**Proposed Trail**

Description: Cost to install entire length of the proposed trail as one construction project (6.4 Miles)

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearing &amp; Grubbing ($4000/Acre)</td>
<td>LS</td>
<td>1</td>
<td>$40,600.00</td>
<td>$40,600.00</td>
</tr>
<tr>
<td>Unclassified Excavation</td>
<td>CY</td>
<td>5269</td>
<td>$15.00</td>
<td>$79,035.00</td>
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<tr>
<td>Borrow Excavation</td>
<td>CY</td>
<td>1568</td>
<td>$15.00</td>
<td>$23,520.00</td>
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<tr>
<td>Structure Excavation</td>
<td>CY</td>
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<td>$16.00</td>
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<td>Foundation Backfill</td>
<td>CY</td>
<td>120</td>
<td>$35.00</td>
<td>$4,200.00</td>
</tr>
<tr>
<td>Crushed Stone Surface (Trail Repair at YMCA)</td>
<td>LF</td>
<td>150</td>
<td>$25.00</td>
<td>$3,750.00</td>
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<tr>
<td>Striping (Crosswalk)</td>
<td>SF</td>
<td>3647</td>
<td>$3.00</td>
<td>$10,941.00</td>
</tr>
<tr>
<td>Signs</td>
<td>SF</td>
<td>169</td>
<td>$15.00</td>
<td>$2,535.00</td>
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<tr>
<td>Roadway Pipe 24&quot;</td>
<td>LF</td>
<td>360</td>
<td>$40.00</td>
<td>$14,400.00</td>
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<tr>
<td>Roadway Pipe 36&quot;</td>
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<td>60</td>
<td>$70.00</td>
<td>$4,200.00</td>
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<tr>
<td>Boardwalk</td>
<td>LF</td>
<td>890</td>
<td>$350.00</td>
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<tr>
<td>Lighting</td>
<td>EA</td>
<td>341</td>
<td>$300.00</td>
<td>$102,300.00</td>
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<tr>
<td>Security Cameras</td>
<td>EA</td>
<td>171</td>
<td>$500.00</td>
<td>$85,500.00</td>
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<tr>
<td>Emergency Call Centers</td>
<td>EA</td>
<td>35</td>
<td>$4,000.00</td>
<td>$140,000.00</td>
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<tr>
<td>Erosion Control</td>
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<td>$135,340.00</td>
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<tr>
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<td>$14,715.94</td>
<td>$14,715.94</td>
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Total Fixed Cost: $1,146,711.34

<table>
<thead>
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<th>Item Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crushed Stone Surface</td>
<td>LF</td>
<td>31117</td>
<td>$25.00</td>
<td>$777,925.00</td>
</tr>
<tr>
<td>Asphalt (3&quot; Wearing 4&quot; CAB)</td>
<td>LF</td>
<td>31117</td>
<td>$42.00</td>
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<tr>
<td>Concrete Sidewalk</td>
<td>LF</td>
<td>31117</td>
<td>$84.00</td>
<td>$2,613,828.00</td>
</tr>
</tbody>
</table>

Total Costs:
- Crushed Stone: $1,924,636.34
- Asphalt Surfacing: $2,453,625.34
- Concrete Surfacing: $3,760,539.34

Preliminary Engineering:
- Crushed Stone: $640,000.00
- Asphalt Surfacing: $640,000.00
- Concrete Surfacing: $640,000.00

Local Funds Grand Total:
- Crushed Stone: $2,565,000
- Asphalt Surfacing: $3,094,000
- Concrete Surfacing: $4,401,000

CE & I and Indirect Costs (25%):
- Crushed Stone: $481,159.08
- Asphalt Surfacing: $613,406.33
- Concrete Surfacing: $940,134.83

Federal Funds Grand Total:
- Crushed Stone: $3,047,000
- Asphalt Surfacing: $3,708,000
- Concrete Surfacing: $5,342,000

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**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.
<table>
<thead>
<tr>
<th>Item Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearing &amp; Grubbing ($4000/Acre)</td>
<td>LS</td>
<td>1</td>
<td>$3,600.00</td>
<td>$3,600.00</td>
</tr>
<tr>
<td>Unclassified Excavation</td>
<td>CY</td>
<td>836</td>
<td>$15.00</td>
<td>$12,540.00</td>
</tr>
<tr>
<td>Borrow Excavation</td>
<td>CY</td>
<td>141</td>
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<td>$2,115.00</td>
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<tr>
<td>Structure Excavation</td>
<td>CY</td>
<td>0</td>
<td>$16.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Foundation Backfill</td>
<td>CY</td>
<td>0</td>
<td>$35.00</td>
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<tr>
<td>Striping (Crosswalk)</td>
<td>SF</td>
<td>0</td>
<td>$3.00</td>
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<td>Signs</td>
<td>SF</td>
<td>24</td>
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<tr>
<td>Roadway Pipe 24”</td>
<td>LF</td>
<td>0</td>
<td>$40.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Roadway Pipe 36”</td>
<td>LF</td>
<td>0</td>
<td>$70.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Boardwalk</td>
<td>LF</td>
<td>40</td>
<td>$350.00</td>
<td>$14,000.00</td>
</tr>
<tr>
<td>Lighting</td>
<td>EA</td>
<td>38</td>
<td>$300.00</td>
<td>$11,400.00</td>
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<tr>
<td>Security Cameras</td>
<td>EA</td>
<td>19</td>
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<td>$9,500.00</td>
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<td>Emergency Call Centers</td>
<td>EA</td>
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<td>$16,000.00</td>
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<tr>
<td>Erosion Control</td>
<td>LF</td>
<td>3747</td>
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<td>$14,988.00</td>
</tr>
<tr>
<td>Traffic Control</td>
<td>LS</td>
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<td>$8,196.79</td>
<td>$8,196.79</td>
</tr>
<tr>
<td>Mobilization (9.7% of Overall Cost)</td>
<td>LS</td>
<td>1</td>
<td>$1,205.10</td>
<td>$1,205.10</td>
</tr>
<tr>
<td>Engineering Controls(1.3% of Overall Cost)</td>
<td>LS</td>
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Total Fixed Cost: $93,904.89

<table>
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<th>Unit</th>
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<th>Unit Price</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Crushed Stone Surface</td>
<td>LF</td>
<td>2797</td>
<td>$25.00</td>
<td>$69,925.00</td>
</tr>
<tr>
<td>Asphalt (3&quot; Wearing 4&quot; CAB)</td>
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<td>2797</td>
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<td>$117,474.00</td>
</tr>
<tr>
<td>Concrete Sidewalk</td>
<td>LF</td>
<td>2797</td>
<td>$84.00</td>
<td>$234,948.00</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Crushed Stone</th>
<th>Asphalt Surfacing</th>
<th>Concrete Surfacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary Engineering:</td>
<td>$71,000.00</td>
<td>$71,000.00</td>
<td>$71,000.00</td>
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<tr>
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<td>$283,000</td>
<td>$400,000</td>
</tr>
<tr>
<td>CE&amp;I and Indirect Costs (25%):</td>
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<td>$52,844.72</td>
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<tr>
<td>Federal Funds Grand Total:</td>
<td>$276,000</td>
<td>$336,000</td>
<td>$483,000</td>
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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**  
*Priority 2 Section of Proposed Trail*

Description: Segment between the City Park expansion and the existing YMCA trail (1.24 Miles)

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearing &amp; Grubbing ($4000/Acre)</td>
<td>LS</td>
<td>1</td>
<td>$8,400.00</td>
<td>$8,400.00</td>
</tr>
<tr>
<td>Unclassified Excavation</td>
<td>CY</td>
<td>1059</td>
<td>$15.00</td>
<td>$15,885.00</td>
</tr>
<tr>
<td>Borrow Excavation</td>
<td>CY</td>
<td>327</td>
<td>$15.00</td>
<td>$4,905.00</td>
</tr>
<tr>
<td>Structure Excavation</td>
<td>CY</td>
<td>94</td>
<td>$16.00</td>
<td>$1,504.00</td>
</tr>
<tr>
<td>Foundation Backfill</td>
<td>CY</td>
<td>43</td>
<td>$35.00</td>
<td>$1,505.00</td>
</tr>
<tr>
<td>Striping (Crosswalk)</td>
<td>SF</td>
<td>169</td>
<td>$3.00</td>
<td>$507.00</td>
</tr>
<tr>
<td>Signs</td>
<td>SF</td>
<td>49</td>
<td>$15.00</td>
<td>$735.00</td>
</tr>
<tr>
<td>Roadway Pipe 24&quot;</td>
<td>LF</td>
<td>120</td>
<td>$40.00</td>
<td>$4,800.00</td>
</tr>
<tr>
<td>Roadway Pipe 36&quot;</td>
<td>LF</td>
<td>30</td>
<td>$70.00</td>
<td>$2,100.00</td>
</tr>
<tr>
<td>Boardwalk</td>
<td>LF</td>
<td>700</td>
<td>$350.00</td>
<td>$245,000.00</td>
</tr>
<tr>
<td>Lighting</td>
<td>EA</td>
<td>66</td>
<td>$300.00</td>
<td>$19,800.00</td>
</tr>
<tr>
<td>Security Cameras</td>
<td>EA</td>
<td>33</td>
<td>$500.00</td>
<td>$16,500.00</td>
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<tr>
<td>Emergency Call Centers</td>
<td>EA</td>
<td>7</td>
<td>$4,000.00</td>
<td>$28,000.00</td>
</tr>
<tr>
<td>Erosion Control</td>
<td>LF</td>
<td>6534</td>
<td>$4.00</td>
<td>$26,136.00</td>
</tr>
<tr>
<td>Traffic Control</td>
<td>LS</td>
<td>1</td>
<td>$30,000.00</td>
<td>$30,000.00</td>
</tr>
<tr>
<td>Mobilization (9.7% of Overall Cost)</td>
<td>LS</td>
<td>1</td>
<td>$39,360.37</td>
<td>$39,360.37</td>
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<tr>
<td>Engineering Controls(1.3% of Overall Cost)</td>
<td>LS</td>
<td>1</td>
<td>$5,786.79</td>
<td>$5,786.79</td>
</tr>
</tbody>
</table>

Total Fixed Cost: $450,924.15

| Crushed Stone Surface                  | LF   | 6534     | $25.00     | $163,350.00 |
| Asphalt (3" Wearing 4" CAB)           | LF   | 6534     | $42.00     | $274,428.00 |
| Concrete Sidewalk                      | LF   | 6534     | $84.00     | $548,856.00 |

<table>
<thead>
<tr>
<th>Total Costs</th>
<th>Crushed Stone</th>
<th>Asphalt Surfacing</th>
<th>Concrete Surfacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary Engineering:</td>
<td>$614,274.15</td>
<td>$725,352.15</td>
<td>$999,780.15</td>
</tr>
<tr>
<td>Local Funds Grand Total:</td>
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<td>$850,000</td>
<td>$1,124,000</td>
</tr>
<tr>
<td>CE&amp;I and Indirect Costs (25%):</td>
<td>$153,568.54</td>
<td>$181,338.04</td>
<td>$249,945.04</td>
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<tr>
<td>Federal Funds Grand Total:</td>
<td>$893,000</td>
<td>$1,032,000</td>
<td>$1,374,000</td>
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</tbody>
</table>

**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

**Priority 3 Section of Proposed Trail**

Description: Existing YMCA trail bank repair (0.34 Miles)

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearing &amp; Grubbing ($4000/Acre)</td>
<td>LS</td>
<td>1</td>
<td>$200.00</td>
<td>$200.00</td>
</tr>
<tr>
<td>Unclassified Excavation</td>
<td>CY</td>
<td>21</td>
<td>$15.00</td>
<td>$315.00</td>
</tr>
<tr>
<td>Borrow Excavation</td>
<td>CY</td>
<td>8</td>
<td>$15.00</td>
<td>$120.00</td>
</tr>
<tr>
<td>Structure Excavation</td>
<td>CY</td>
<td>0</td>
<td>$16.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Foundation Backfill</td>
<td>CY</td>
<td>0</td>
<td>$35.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Crushed Stone Surface</td>
<td>LF</td>
<td>150</td>
<td>$25.00</td>
<td>$3,750.00</td>
</tr>
<tr>
<td>Striping (Crosswalk)</td>
<td>SF</td>
<td>0</td>
<td>$3.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Signs</td>
<td>SF</td>
<td>12</td>
<td>$15.00</td>
<td>$180.00</td>
</tr>
<tr>
<td>Roadway Pipe 24&quot;</td>
<td>LF</td>
<td>0</td>
<td>$40.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Roadway Pipe 36&quot;</td>
<td>LF</td>
<td>0</td>
<td>$70.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Lighting</td>
<td>EA</td>
<td>18</td>
<td>$300.00</td>
<td>$5,400.00</td>
</tr>
<tr>
<td>Security Cameras</td>
<td>EA</td>
<td>9</td>
<td>$500.00</td>
<td>$4,500.00</td>
</tr>
<tr>
<td>Emergency Call Centers</td>
<td>EA</td>
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<td>$8,000.00</td>
</tr>
<tr>
<td>Erosion Control</td>
<td>LF</td>
<td>1768</td>
<td>$4.00</td>
<td>$7,072.00</td>
</tr>
<tr>
<td>Traffic Control</td>
<td>LS</td>
<td>1</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Mobilization (9.7% of Overall Cost)</td>
<td>LS</td>
<td>1</td>
<td>$2,865.09</td>
<td>$2,865.09</td>
</tr>
<tr>
<td>Engineering Controls (1.3% of Overall Cost)</td>
<td>LS</td>
<td>1</td>
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<td>$421.23</td>
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</table>

**Total Fixed Cost:** $32,823.32

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crushed Stone Surface</td>
<td>LF</td>
<td>0</td>
<td>$25.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Asphalt (3&quot; Wearing 4&quot; CAB)</td>
<td>LF</td>
<td>0</td>
<td>$42.00</td>
<td>$0.00</td>
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<tr>
<td>Concrete Sidewalk</td>
<td>LF</td>
<td>0</td>
<td>$84.00</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

**Crushed Stone**
- Total Costs: $32,823.32
- Preliminary Engineering: $34,000.00
- Local Funds Grand Total: $67,000
- CE&I and Indirect Costs (25%): $8,205.83
- Federal Funds Grand Total: $76,000

**Asphalt Surfacing**
- Total Costs: $32,823.32
- Preliminary Engineering: $34,000.00
- Local Funds Grand Total: $67,000
- CE&I and Indirect Costs (25%): $8,205.83
- Federal Funds Grand Total: $76,000

**Concrete Surfacing**
- Total Costs: $32,823.32
- Preliminary Engineering: $34,000.00
- Local Funds Grand Total: $67,000
- CE&I and Indirect Costs (25%): $8,205.83
- Federal Funds Grand Total: $76,000

**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.
## OPINION OF PROBABLE COST

**Priority 4 Section of Proposed Trail**

Description: Segment between Oak Mountain Amphitheater and John Findley Drive (2.22 Miles)

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearing &amp; Grubbing ($4000/Acre)</td>
<td>LS</td>
<td>1</td>
<td>$15,200.00</td>
<td>$15,200.00</td>
</tr>
<tr>
<td>Unclassified Excavation</td>
<td>CY</td>
<td>1946</td>
<td>$15.00</td>
<td>$29,190.00</td>
</tr>
<tr>
<td>Borrow Excavation</td>
<td>CY</td>
<td>587</td>
<td>$15.00</td>
<td>$8,805.00</td>
</tr>
<tr>
<td>Structure Excavation</td>
<td>CY</td>
<td>34</td>
<td>$16.00</td>
<td>$544.00</td>
</tr>
<tr>
<td>Foundation Backfill</td>
<td>CY</td>
<td>17</td>
<td>$35.00</td>
<td>$595.00</td>
</tr>
<tr>
<td>Striping (Crosswalk)</td>
<td>SF</td>
<td>3055</td>
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<td>$9,165.00</td>
</tr>
<tr>
<td>Signs</td>
<td>SF</td>
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<td>$15.00</td>
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</tr>
<tr>
<td>Roadway Pipe 24&quot;</td>
<td>LF</td>
<td>60</td>
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<td>$2,400.00</td>
</tr>
<tr>
<td>Roadway Pipe 36&quot;</td>
<td>LF</td>
<td>0</td>
<td>$70.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Lighting</td>
<td>EA</td>
<td>118</td>
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<td>$35,400.00</td>
</tr>
<tr>
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<td>EA</td>
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<td>$29,500.00</td>
</tr>
<tr>
<td>Emergency Call Centers</td>
<td>EA</td>
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<td>$4,000.00</td>
<td>$48,000.00</td>
</tr>
<tr>
<td>Erosion Control</td>
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<tr>
<td>Traffic Control</td>
<td>LS</td>
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<td>$40,000.00</td>
<td>$40,000.00</td>
</tr>
<tr>
<td>Mobilization (9.7% of Overall Cost)</td>
<td>LS</td>
<td>1</td>
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<td>$25,846.91</td>
</tr>
<tr>
<td>Engineering Controls(1.3% of Overall Cost)</td>
<td>LS</td>
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<td>$3,800.03</td>
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</table>

**Total Fixed Cost:** $296,109.94

<table>
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<tr>
<th>Item Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crushed Stone Surface</td>
<td>LF</td>
<td>11736</td>
<td>$25.00</td>
<td>$293,400.00</td>
</tr>
<tr>
<td>Asphalt (3&quot; Wearing 4&quot; CAB)</td>
<td>LF</td>
<td>11736</td>
<td>$42.00</td>
<td>$492,912.00</td>
</tr>
<tr>
<td>Concrete Sidewalk</td>
<td>LF</td>
<td>11736</td>
<td>$64.00</td>
<td>$985,824.00</td>
</tr>
</tbody>
</table>

**Crushed Stone** $589,509.94
**Asphalt Surfacing** $789,021.94
**Concrete Surfacing** $1,281,933.94

**Total Costs**
- Preliminary Engineering: $222,000.00
- Local Funds Grand Total: $812,000
- CE&I and Indirect Costs (25%): $147,377.48
- Federal Funds Grand Total: $960,000

**Total**
- $222,000.00
- $1,012,000
- $1,504,000

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**OPINION OF PROBABLE COST**

*Priority 5 Section of Proposed Trail*

Description: Segment connecting the existing YMCA trail and Oak Mountain Amphitheater (1.32 Miles)

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearing &amp; Grubbing ($4000/Acre)</td>
<td>LS</td>
<td>1</td>
<td>$9,200.00</td>
<td>$9,200.00</td>
</tr>
<tr>
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<td>$14,595.00</td>
</tr>
<tr>
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<td>CY</td>
<td>350</td>
<td>$15.00</td>
<td>$5,250.00</td>
</tr>
<tr>
<td>Structure Excavation</td>
<td>CY</td>
<td>77</td>
<td>$16.00</td>
<td>$1,232.00</td>
</tr>
<tr>
<td>Foundation Backfill</td>
<td>CY</td>
<td>35</td>
<td>$35.00</td>
<td>$1,225.00</td>
</tr>
<tr>
<td>Striping (Crosswalk)</td>
<td>SF</td>
<td>423</td>
<td>$3.00</td>
<td>$1,269.00</td>
</tr>
<tr>
<td>Signs</td>
<td>SF</td>
<td>24</td>
<td>$15.00</td>
<td>$360.00</td>
</tr>
<tr>
<td>Roadway Pipe 24&quot;</td>
<td>LF</td>
<td>90</td>
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<td>$3,600.00</td>
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**Total Fixed Cost:** $206,284.49

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**Crushed Stone**

Total Costs: $380,034.49  
Preliminary Engineering: $132,000.00  
Local Funds Grand Total: $513,000  
CE&I and Indirect Costs (25%): $95,008.62  
Federal Funds Grand Total: $609,000

**Asphalt Surfacing**

Total Costs: $498,184.49  
Preliminary Engineering: $132,000.00  
CE&I and Indirect Costs (25%): $124,546.12  
Federal Funds Grand Total: $756,000

**Concrete Surfacing**

Total Costs: $790,084.49  
Preliminary Engineering: $132,000.00  
CE&I and Indirect Costs (25%): $197,521.12  
Federal Funds Grand Total: $1,121,000

**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.
### Item Description

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<th>Unit Price</th>
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<td>Concrete Sidewalk</td>
<td>LF</td>
<td>3100</td>
<td>$84.00</td>
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**Total Costs**

- Crushed Stone: $144,164.55
- Asphalt Surfacing: $196,864.55
- Concrete Surfacing: $327,064.55

**Preliminary Engineering:**

- Crushed Stone: $59,000.00
- Asphalt Surfacing: $59,000.00
- Concrete Surfacing: $59,000.00

**Local Funds Grand Total:**

- Crushed Stone: $204,000
- Asphalt Surfacing: $256,000
- Concrete Surfacing: $387,000

**CE&I and Indirect Costs (25%)**

- Crushed Stone: $36,041.14
- Asphalt Surfacing: $49,216.14
- Concrete Surfacing: $81,766.14

**Federal Funds Grand Total:**

- Crushed Stone: $241,000
- Asphalt Surfacing: $306,000
- Concrete Surfacing: $469,000

**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.
The purpose of this meeting was to discuss the technical memorandum distributed to Stakeholders by the City, provide updates to the Stakeholders on the project, and gain input on potential trail alternatives.

DISCUSSION:

- The trails and greenways study was initiated by the City through the RPCGB APPLE Program.
- The purpose of the APPLE program is to determine feasibility of a project to receive federal funding.
- A general overview of the project was provided. The purpose of the project is to evaluate the feasibility of a trail system throughout the City of Pelham. The scope of the project includes review of existing conditions, preparation of a technical memorandum, and developing and evaluating concepts/alternatives.
- Mr. Hayes stated that there are some discrepancies in the plan presented in the technical memo compared to what the City had in mind for the trail. These areas were discussed as the meeting progressed.
- Where the proposed trail would connect to the existing sidewalk at the City Park near Bearden Road, the technical memo proposed connecting where the in-place sidewalk ends. Mr. Hayes voiced that the City would like for Sain to look at an alignment option that enters the woods quicker.
- Mr. Crandall informed the group that several people have mentioned to him that they would like for the vegetated area near Bearden Road be cleared so the view of the Creek could be enjoyed by passing motorists. However, other individuals prefer the privacy that the tree cover
provides. Mr. Kaczorowski with RPCGB stated that the trees help with water quality and bank stabilization. The consensus of the group was that the trees should not be cleared.

- Per the technical memo, overall, installation of a trail is feasible. There are areas that present more challenges than others. These are referred to as pinch points in the memo.
- The hydraulic review included in the technical memo was discussed. There are options for improving the flooding the City currently experiences.
- The archaeological sites discussed in the technical memo were discussed. Some of these sites no longer exist. The presence of these sites does not prevent the project from moving forward.
- The topic of environmental justice was discussed. When federal funds are used for a project, an evaluation of environmental justice issues must be performed.
- An update concerning USFW response and NRCS concurrence was provided. There are 13 endangered, threatened or proposed endangered species that have the potential to be in the study area. For federal funding, a study of these species would have to be performed. Per NRCS there are no unique or prime farmlands in the project area. No further study is required concerning farmlands.
- Sain inquired about the City’s vision of the trail. The City is looking to the study to determine the vision on a section by section basis.
- The City has received feedback from citizens that they are concerned about safety along the proposed trail, and they have expressed a desire for a bike path.
- Ms. Kiel expressed that the school system has a need for a cross-country running trail and a place for their new mountain bike team to ride. Ms. Kiel will check if there are any design requirements for a cross country trail. A follow up call by Ms. Kiel with the cross country coach confirmed the coach’s preference for a crushed gravel surface like the YMCA trail has.
- Several stops were made by the group during the meeting. Below lists the items that were discussed at these stops.
  - Stop One: City Park
    - The proposed trail alignment has been modified to go around the in-place sub-station which moves the trail away from the creek and eliminates one pinch point. The City plans to landscape around the sub-station.
    - The area previously designated for the Belle Vista Mobile Home Park will become part of the City Park Expansion. The technical memo will be revised to reflect this.
  - Drive-by: Crosscreek Trail Bridge
    - Further investigation of all beneath bridge crossings is required to determine if excavation is necessary and feasible to allow for head room.
    - If not, the trail could cross the roadway using cross walks and trail crossing warning signs.
    - The City has discussed the potential for the trail being located on property owned by the industrial business located near the Crosscreek Trail Bridge. Discussions thus far appear positive.
Stop Two: YMCA

- Immediate issues along this trail were discussed. The proposed trail should incorporate a vegetated buffer between the creek and trail to reduce the risk of bank failure.
- The trail is currently owned and maintained by the YMCA. The City will discuss plans for the trail with the YMCA prior to the Town Hall Meeting.

Drive-by: Southgate Estates

- Residential Impacts and potential Environmental Justice issues were discussed.
- Residents of Southgate Estates have created a path that leads from the community to the Jet-Pep gas station located on Highway 31.
- The installation of a trail could be a benefit to the residents of Southgate Estates.

Stop Three: Highway 31 Jet-Pep

- Stakeholders walked along a portion of the user created trail and visited an area that the hydraulic review recommends transforming into a stormwater detention area.
- The Mayor stated, that many residents have suggested that the creek be dredged allowing for more capacity. The City has previously investigated this suggestion; however, per the USACE, the creek sits on bedrock meaning dredging is not possible.

Drive-by: Oak Mountain Amphitheater & Oak Mountain Park Road

- The parking spots located near the in-place footbridge could be modified using striping to allow for the proposed trail to connect to the footbridge.
- The City is in favor of locating the proposed trail on the shelf area above Oak Mountain Park Road.
- The City never intended for the trail to cross beneath I-65 and prefer for the proposed trail to stay on one side of the roadway.
- The City engineer stated that there is a multi-use easement that runs along Oak Mountain Park Road and could be utilized for the proposed trail.
- The City stated that they plan to work with the Department of Conservation to extend the proposed trail into the State Park.

- The City is aware that the citizens’ main concern about the proposed trail is security. Solutions for this concern include lighting, emergency phones along the trail, and fencing.
- The City is considering installing a dog park on the property west of Bearden Road. This should be mentioned as a possible option in the Advance Planning Report. The alignment for the proposed trail in this area should be revised from loop to a simple turn around. The dog park would also include parking.
- Prior to the Town Hall Meeting set for April 30th, Sain will meet with Mayor Waters and City Council President Hayes to discuss the 10-12 minute powerpoint presentation that Sain will
present. Following the Town Hall Meeting presentation, Sain will be present to interact with citizens.

ACTION ITEMS:

- Ms. Kiel to verify if there are any requirements associated with a Cross Country trail.
- Sain to edit and then provide Mr. Hayes with the Technical Memo in a Word document for his comment.
Appendix I

Town Hall Meeting Comment Forms
Your comments are appreciated and will become part of the official study record. As such, they are available to the general public for inspection upon request.

Optional:
Your Name: Butch Byrd
Mailing Address: 1201 Stony Kirk Rd
City: Pelham State: AL Zip Code: 35124
E-Mail Address: wareablebyrd@yahoo.com

1. Are you an
   - [ ] Area Resident
   - [x] Property Owner
   - [x] Local Business Person
   - [ ] Other

2. Are you in favor of the City installing a trail?
   - [x] Yes
   - [ ] No

3. Would you be more likely to use the entire length of the proposed trail (Pelham High School to Oak Mountain State Park) or just a portion of the proposed trail?
   - [x] Entire Length
   - [ ] Portion
   - [ ] I would not use the trail

4. If you are more likely to use just a portion of the proposed trail, which section(s) most interests you? Comment:
   
5. Would you rather the proposed trail accommodate cyclists, pedestrians, or both?
   - [ ] Cyclists
   - [ ] Pedestrians
   - [x] Both

6. For what purpose would you most frequently use the trail?
   - [ ] Nature/Recreation
   - [x] Fitness/Exercise
   - [ ] Non-motorized travel between destinations along the trail

7. What additional trail features are most important to you (select all that apply)?
   - [x] Benches
   - [ ] Picnic Tables
   - [x] Trash Receptacles
   - [ ] Lighting—Close at Dusk
   - [ ] Security Cameras
   - [ ] Other: Work-out stations along the trail / Dog walking?

8. Please provide any additional information, suggestions, or concerns that you have concerning the trail.
   Appreciate the study!
Your comments are appreciated and will become part of the official study record. As such, they are available to the general public for inspection upon request.

Optional:
Your Name: [Handwritten Name]
Mailing Address: 817 Oak Forest Dr
City: Pelham State: AL Zip Code: 35124
E-Mail Address: [Handwritten Email]

1. Are you an
   ☒ Area Resident  ☐ Property Owner  ☐ Local Business Person  ☐ Other ________________________________

2. Are you in favor of the City installing a trail?
   ☒ Yes  ☐ No

3. Would you be more likely to use the entire length of the proposed trail (Pelham High School to Oak Mountain State Park) or just a portion of the proposed trail?
   ☒ Entire Length  ☐ Portion  ☐ I would not use the trail

4. If you are more likely to use just a portion of the proposed trail, which section(s) most interests you?
   Comment: _____________________________________________________________
   _____________________________________________________________

5. Would you rather the proposed trail accommodate cyclists, pedestrians, or both?
   ☒ Cyclists  ☐ Pedestrians  ☐ Both

6. For what purpose would you most frequently use the trail?
   ☐ Nature/Recreation  ☒ Fitness/Exercise  ☐ Non-motorized travel between destinations along the trail

7. What additional trail features are most important to you (select all that apply)?
   ☐ Benches
   ☐ Picnic Tables
   ☐ Trash Receptacles
   ☐ Lighting
   ☐ Security Cameras
   ☐ Other: ____________________________________________________________

8. Please provide any additional information, suggestions, or concerns that you have concerning the trail.
   ____________________________
Your comments are appreciated and will become part of the official study record. As such, they are available to the general public for inspection upon request.

Optional:
Your Name: Janis Parks
Mailing Address: P.O. Box 1132
City: Pelham  State: AL  Zip Code: 35124
E-Mail Address:

1. Are you an
   □ Area Resident  □ Property Owner  □ Local Business Person  □ Other

2. Are you in favor of the City installing a trail?
   □ Yes  □ No

3. Would you be more likely to use the entire length of the proposed trail (Pelham High School to Oak Mountain State Park) or just a portion of the proposed trail?
   □ Entire Length  □ Portion  □ I would not use the trail

4. If you are more likely to use just a portion of the proposed trail, which section(s) most interests you?
   Comment:

5. Would you rather the proposed trail accommodate cyclists, pedestrians, or both?
   □ Cyclists  □ Pedestrians  □ Both

6. For what purpose would you most frequently use the trail?
   □ Nature/Recreation  □ Fitness/Exercise  □ Non-motorized travel between destinations along the trail

7. What additional trail features are most important to you (select all that apply)?
   □ Benches  □ Picnic Tables  □ Trash Receptacles  □ Lighting  □ Security Cameras  □ Other: ____________________

8. Please provide any additional information, suggestions, or concerns that you have concerning the trail.
   ____________________
Your comments are appreciated and will become part of the official study record. As such, they are available to the general public for inspection upon request.

Optional:
Your Name: ____________________________
Mailing Address: __________________________________________
City________________________ State_________ Zip Code ____________
E-Mail Address: __________________________________________

1. Are you an
[ ] Area Resident  [ ] Property Owner    [ ] Local Business Person    [ ] Other ____________________________

2. Are you in favor of the City installing a trail?
[ ] Yes        [ ] No

3. Would you be more likely to use the entire length of the proposed trail (Pelham High School to Oak Mountain State Park) or just a portion of the proposed trail?
[ ] Entire Length    [ ] Portion    [ ] I would not use the trail

4. If you are more likely to use just a portion of the proposed trail, which section(s) most interests you?
Comment: __________________________________________

5. Would you rather the proposed trail accommodate cyclists, pedestrians, or both?
[ ] Cyclists    [ ] Pedestrians    [ ] Both

6. For what purpose would you most frequently use the trail?
[ ] Nature/Recreation    [ ] Fitness/Exercise    [ ] Non-motorized travel between destinations along the trail

7. What additional trail features are most important to you (select all that apply)?
[ ] Benches
[ ] Picnic Tables
[ ] Trash Receptacles
[ ] Lighting
[ ] Security Cameras
[ ] Other: __________________________________________

8. Please provide any additional information, suggestions, or concerns that you have concerning the trail.
__________________________________________________________
__________________________________________________________
Your comments are appreciated and will become part of the official study record. As such, they are available to the general public for inspection upon request.

Optional:
Your Name: [Name]
Mailing Address: [Address]
City: [City] State: [State] Zip Code: [Zip Code]
E-Mail Address: [E-Mail]

1. Are you an
   - [☐] Area Resident
   - [☐] Property Owner
   - [☐] Local Business Person
   - [☐] Other

2. Are you in favor of the City installing a trail?
   - [☑] Yes
   - [☐] No

3. Would you be more likely to use the entire length of the proposed trail (Pelham High School to Oak Mountain State Park) or just a portion of the proposed trail?
   - [☑] Entire Length
   - [☐] Portion
   - [☐] I would not use the trail

4. If you are more likely to use just a portion of the proposed trail, which section(s) most interests you?
   Comment: __________________________
   __________________________
   __________________________

5. Would you rather the proposed trail accommodate cyclists, pedestrians, or both?
   - [☐] Cyclists
   - [☑] Pedestrians
   - [☐] Both

6. For what purpose would you most frequently use the trail?
   - [☐] Nature/Recreation
   - [☑] Fitness/Exercise
   - [☐] Non-motorized travel between destinations along the trail

7. What additional trail features are most important to you (select all that apply)?
   - [☐] Benches
   - [☐] Picnic Tables
   - [☑] Trash Receptacles
   - [☐] Lighting
   - [☐] Security Cameras
   - [☐] Other: __________________________

8. Please provide any additional information, suggestions, or concerns that you have concerning the trail.
   __________________________
   __________________________
   __________________________
Your comments are appreciated and will become part of the official study record. As such, they are available to the general public for inspection upon request.

Optional:
Your Name: Jeff Stephenson
Mailing Address: 127 Heather Ln
City: Pelham State: AL Zip Code: 35124
E-Mail Address: jdhaw2002@yahoo.com

1. Are you an
☑ Area Resident    ☐ Property Owner    ☐ Local Business Person    ☐ Other

2. Are you in favor of the City installing a trail?
☐ Yes    ☐ No

3. Would you be more likely to use the entire length of the proposed trail (Pelham High School to Oak Mountain State Park) or just a portion of the proposed trail?
☐ Entire Length    ☐ Portion    ☐ I would not use the trail

4. If you are more likely to use just a portion of the proposed trail, which section(s) most interests you? Comment:


5. Would you rather the proposed trail accommodate cyclists, pedestrians, or both?
☐ Cyclists    ☐ Pedestrians    ☑ Both

6. For what purpose would you most frequently use the trail?
☐ Nature/Recreation    ☑ Fitness/Exercise    ☐ Non-motorized travel between destinations along the trail

7. What additional trail features are most important to you (select all that apply)?
☐ Benches
☐ Picnic Tables
☐ Trash Receptacles
☑ Lighting
☐ Security Cameras
☐ Other:

8. Please provide any additional information, suggestions, or concerns that you have concerning the trail.


Your comments are appreciated and will become part of the official study record. As such, they are available to the general public for inspection upon request.

Optional:
Your Name: RICK VANNES RHODES
Mailing Address: 238 STRATHAVEN LN.
City: PELHAM State: AL Zip Code: 35124
E-Mail Address: rickrhoa@gmail.com

1. Are you an
   - Area Resident
   - Property Owner
   - Local Business Person
   - Other

2. Are you in favor of the City installing a trail?
   - Yes
   - No

3. Would you be more likely to use the entire length of the proposed trail (Pelham High School to Oak Mountain State Park) or just a portion of the proposed trail?
   - Entire Length
   - Portion
   - I would not use the trail

4. If you are more likely to use just a portion of the proposed trail, which section(s) most interests you?
   Comment: 

5. Would you rather the proposed trail accommodate cyclists, pedestrians, or both?
   - Cyclists
   - Pedestrians
   - Both

6. For what purpose would you most frequently use the trail?
   - Nature/Recreation
   - Fitness/Exercise
   - Non-motorized travel between destinations along the trail

7. What additional trail features are most important to you (select all that apply)?
   - Benches
   - Picnic Tables
   - Trash Receptacles
   - Lighting
   - Security Cameras
   - Other: Parking & access points

8. Please provide any additional information, suggestions, or concerns that you have concerning the trail.
   Important that there be a safe environment & easy access points be easily attainable.
Your comments are appreciated and will become part of the official study record. As such, they are available to the general public for inspection upon request.

Optional:
Your Name: Ange Hester
Mailing Address: 58F Crosscreek Trail
City: Pelham State: AL Zip Code: 35124
E-Mail Address: arhester@bellsouth.net

1. Are you an
   ☐ Area Resident ☐ Property Owner ☐ Local Business Person ☐ Other __________________________

2. Are you in favor of the City installing a trail?
   ☐ Yes ☐ No

3. Would you be more likely to use the entire length of the proposed trail (Pelham High School to Oak Mountain State Park) or just a portion of the proposed trail?
   ☐ Entire Length ☐ Portion ☐ I would not use the trail

4. If you are more likely to use just a portion of the proposed trail, which section(s) most interests you?
   Comment: Bearden Rd to Pelham Park section mostly but also the connection from Bearden Rd all the way to Oak Mtn. State Park on occasion.

5. Would you rather the proposed trail accommodate cyclists, pedestrians, or both?
   ☐ Cyclists ☐ Pedestrians ☐ Both

6. For what purpose would you most frequently use the trail?
   ☐ Nature/Recreation ☐ Fitness/Exercise ☐ Non-motorized travel between destinations along the trail

7. What additional trail features are most important to you (select all that apply)?
   ☐ Benches ☐ Picnic Tables ☐ Trash Receptacles ☐ Lighting ☐ Security Cameras ☐ Other: __________________________

8. Please provide any additional information, suggestions, or concerns that you have concerning the trail.
   I worry about homes along the trail and any runoff associated with the construction of the trail—how well as people on the trail that close to residential areas, will the people on the trail be a disturbance to existing residents?
Town Hall Meeting Comment Form  
RPC No. 1289.07  
Pelham Trails & Greenways Study – APPLE Program 
Pelham, AL  
April 30, 2015

Your comments are appreciated and will become part of the official study record. As such, they are available to the general public for inspection upon request.

Optional:
Your Name: [ALAN MCMILLAN]  
Mailing Address: [ADDRESS]  
City: [PELHAM] State: [AL] Zip Code: [35124]  
E-Mail Address: [MCMILLAN7@CHARTER.NET]

1. Are you an
   □ Area Resident  □ Property Owner  □ Local Business Person  □ Other

2. Are you in favor of the City installing a trail?
   ✔ Yes  □ No

3. Would you be more likely to use the entire length of the proposed trail (Pelham High School to Oak Mountain State Park) or just a portion of the proposed trail?
   ✔ Entire Length  □ Portion  □ I would not use the trail

4. If you are more likely to use just a portion of the proposed trail, which section(s) most interests you?
   Comment: [MAINLY IN CITY]

5. Would you rather the proposed trail accommodate cyclists, pedestrians, or both?
   □ Cyclists  □ Pedestrians  ✔ Both

6. For what purpose would you most frequently use the trail?
   □ Nature/Recreation  ✔ Fitness/Exercise  □ Non-motorized travel between destinations along the trail

7. What additional trail features are most important to you (select all that apply)?
   ✔ Benches  □ Picnic Tables  □ Trash Receptacles  ✔ Lighting  □ Security Cameras  □ Other: [EMERGENCY CONTACT BOXES]

8. Please provide any additional information, suggestions, or concerns that you have concerning the trail.
   [DRINKING WATER, WEATHER SHELTERS, RESTROOMS, AREAS FOR PARKING, MULTIPLE ENTRANCE AREAS FOR PUBLIC]
Town Hall Meeting Comment Form
RPC No. 1289.07
Pelham Trails & Greenways Study – APPLE Program
Pelham, AL
April 30, 2015

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Optional:
Your Name: Beth McMillan
Mailing Address: ________________________________
City_______________________ State__________ Zip Code__________
E-Mail Address: ________________________________

1. Are you an
  □ Area Resident  ☒ Property Owner  □ Local Business Person  □ Other ________________________________

2. Are you in favor of the City installing a trail?
   ☒ Yes  □ No

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   Comment: __________________________________________________________
   __________________________________________________________

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   ☐ Benches
   □ Picnic Tables
   □ Trash Receptacles
   ☒ Lighting
   □ Security Cameras
   □ Other: ______________________________________________________________

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   __________________________________________________________
   __________________________________________________________
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Optional: TRASH TAXI
Your Name: ROBERTO RODRIGUEZ
Mailing Address: 2116 AARON RD
City: PELHAM State: AL Zip Code: 35124
E-Mail Address: ROBERTO@TRASHTAXI.COM

1. Are you an
   □ Area Resident   □ Property Owner   □ Local Business Person   □ Other

2. Are you in favor of the City installing a trail?
   ☑ Yes   □ No

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   ☑ Benches   ☑ Picnic Tables   ☑ Trash Receptacles   ☑ Lighting   ☑ Security Cameras   □ Other: ____________________________

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   BE ENERGY EFFICIENT w/LIGHTING