Cobb County Bicycle and Pedestrian Improvement Plan

Chapter 7
7A Silver Comet Trail Extension
7B Noonday Creek Trail Extension
Alternatives Analyses

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CHAPTER 7A: SILVER COMET TRAIL EXTENSION ALTERNATIVES ANALYSIS

Chapter 7A: Silver Comet Trail Extension Alternatives Analysis

7A.1 INTRODUCTION AND BACKGROUND

As part of the Cobb County 2009 *Bicycle and Pedestrian Improvement Plan*, an alternatives analysis has been conducted to recommend an extension to the Silver Comet Trail to tie to the planned bicycle network in the City of Atlanta. As the project began, Cobb County officials stated that the overall goal of this extension is to tie from the eastern termination of the existing Silver Comet Trail to the City of Atlanta's Strategic Bicycle Network with a facility similar to that of the Silver Comet Trail. The process of identifying potential alternatives began with discussions with Cobb County staff at a project coordination meeting for the Silver Comet Trail Extension task on August 21, 2008. Subsequent to the August 21st meeting, RS&H staff completed an aerial review of the study area, followed by a field review. Four (4) alternatives were identified for this extension to the Silver Comet Trail in Cobb County, Georgia, southward to the City of Atlanta/Fulton County line. This technical memo details the process that was undertaken to identify these alternatives.

Because of the nature of the development of the southern part of Cobb County in the vicinity of the existing Silver Comet Trail, it is not possible to develop an alternative without at least part of the trail being a sidepath, a trail immediately adjacent to a roadway facility with little separation between the two. The American Association of State Highway and Transportation Officials (AASHTO) discourage the use of sidepaths. Because of sidepaths' close proximity to roadways, potential problems result. A list of these potential problems is published in the AASHTO *Guide for the Development of Bicycle Facilities*, and is replicated in Table 7A.1.

AASHTO: Problems Associated with Paths Located Immediately Adjacent to Roadways
1. Unless separated, they require one direction of bicycle traffic to ride against motor vehicle traffic, contrary to normal rules of the road.
2. When the path ends, bicyclists going against traffic will tend to continue to travel on the wrong side of the street. Likewise, bicyclists approaching a shared use path often travel on the wrong side of the street in getting to the path. Wrong-way travel by bicyclists is a major cause of bicycle/automobile crashes and should be discouraged at every opportunity.
3. At intersections, motorists entering or crossing the roadway often will not notice bicyclists approaching from their right, as they are not expecting contra-flow vehicles. Motorists turning to exit the roadway may likewise fail to notice the bicyclist. Even bicyclists coming from the left often go unnoticed, especially when sight distances are limited.
4. Signs posted for roadway users are backwards for contra-flow bike traffic; therefore these cyclists are unable to read the information without stopping and turning around.
5. When the available right-of-way is too narrow to accommodate all highway and shared use path features, it may be prudent to consider a reduction of the existing or proposed widths of the various highway (and bikeway) cross sectional elements (i.e., lane and shoulder widths, etc.). However, any reduction to less than AASHTO *Green Book* (or other applicable) design criteria must be supported by a documented engineering analysis.
6. Many bicyclists will use the roadway instead of the shared use path because they have found the roadway to be more convenient, better maintained, or safer. Bicyclists using the roadway may be harassed by some motorists who feel that in all cases bicyclists should be on the adjacent path.
7. Although the shared use path should be given the same priority through intersections as the parallel highway, motorists falsely expect bicyclists to stop or yield at all cross-streets and driveways. Efforts to require or encourage bicyclists to yield or stop at each cross-street and driveway are inappropriate and frequently ignored by bicyclists.
8. Stopped cross-street motor vehicle traffic or vehicles exiting side streets or driveways may block the path crossing.
9. Because of the proximity of motor vehicle traffic to opposing bicycle traffic, barriers are often necessary to keep motor vehicles out of shared use paths and bicycles out of traffic lanes. These barriers can represent an obstruction to bicyclists and motorists, can complicate maintenance of the facility, and can cause other problems as well.

Table 7A.1: AASHTO: Problems Associated with Paths Located Immediately Adjacent to Roadways

Source: Guide for the Development of Bicycle Facilities, AASHTO, 1999

For these reasons, Cobb County should carefully consider the installation of trail facilities immediately adjacent to roadways. Each of the alternatives recommended in this report involves a sidepath for all or part of its length. When a shared use path must be located next to a roadway, a wide separation (five feet or more) between the two is desired so that bicyclists and motorists alike recognize that the shared use path and the roadway are independent facilities.

7A.2 STUDY AREA

The study area for the alternatives analysis, shown in Figure 7A.1, was determined initially through discussions with Cobb County staff at the August 21, 2008 coordination meeting. The staff indicated that their preferred location to cross the Chattahoochee River is at Atlanta Road; therefore the alternatives analysis was focused in this area. This river crossing is described in section 7A.3 "Preferred Chattahoochee River Crossing." The Silver Comet Trail Extension Study Team also explored neighboring areas to ensure that all available opportunities were identified as alternatives were developed. A review of the City of Atlanta's *Connect Atlanta* Plan showed that there are two bicycle routes identified in Atlanta's Strategic Bicycle Network that connect to Cobb County in this region of Cobb County: 1) Marietta Boulevard (called Atlanta Road in Cobb County), identified as a Core Bike Route in the Atlanta plan, and 2) Paces Ferry Road, identified as a Secondary Bike Route in the Atlanta plan. Both of these routes are on-road facilities. Alternatives were developed to utilize these bike routes as connections into the City of Atlanta. Figure 7A.2 shows the proposed *Connect Atlanta* bicycle routes in northwest Atlanta.

Providing a trail from the Silver Comet Trail to the City of Atlanta in this area requires two major crossings: Interstate 285 and the Chattahoochee River at the Cobb County/Fulton County boundary. The following two sections describe the available opportunities for the Silver Comet Trail Extension to cross these two features using existing roadways and/or structures within the study area. The section "Preferred Chattahoochee River Crossing" provides more detailed information about the County's preferred river crossing, Atlanta Road, because it is utilized in three of the four alternatives presented in this memo. Figure 7A.3 follows, showing these crossings on a map.

7A.2.1 EXISTING CROSSINGS OF I-285

The study area offers seven (7) existing crossing locations of I-285. Each of these crossings was considered for potential trail inclusion, and is summarized below.

- *South Cobb Drive*: Existing bridge has minimal pedestrian features and would require trail structure to

be constructed adjacent to existing bridge.

- *Church Road*: Crosses under I-285 with adequate width for trail inclusion (10-20 feet).
- *CSX Railroad Corridor*: Crosses underneath I-285.
- *Atlanta Road*: New interchange currently being designed, but does not have adequate trail measures included. Proposed shoulders are eight (8) feet wide and the median ranges in width from 24 to 27 feet. Widths could be altered so that a trail facility could be included.
- *Cumberland Parkway*: Bridge has five-foot sidewalks only. A trail at this location would require either a change in median width and lane striping or a separate trail crossing structure adjacent to existing bridge.
- *Orchard Road*: This residential road is suitable for trail addition, but it does not adequately support the purpose of the Silver Comet Trail Extension. However, it could serve as an additional on-street alternative route. The bridge does not have adequate provisions and would require a trail crossing structure adjacent to existing bridge.
- *Paces Ferry Road*: Bridge has sidewalks and excess pavement. A trail facility could be added with a change in median width or lane striping.

7A.2.2 EXISTING CROSSINGS OF THE CHATTAHOOCHEE RIVER

The study area offers four (4) existing crossing locations of the Chattahoochee River, summarized below.

- *South Cobb Drive*: New bridge currently under construction includes only five-foot sidewalks. This location would require a trail crossing structure adjacent to existing bridge. There is not a connecting City of Atlanta bicycle route once in the City of Atlanta/Fulton County.
- *Atlanta Road*: New bridge currently under construction includes a twelve-foot trail facility along the western side. Connects to "Core" City of Atlanta bicycle route along Marietta Boulevard.
- *Paces Ferry Road/Hermi's Bridge*: An existing 16-foot pedestrian structure adjacent to road currently is being restored, and could be ideal for a trail facility. Cobb County Commission recently authorized for this construction to begin. Connects to "Secondary" City of Atlanta bicycle route along Paces Ferry Road.
- *US 41/SR 3/Northside Parkway*: A proposed bridge and corridor between Paces Mill Road (Cobb) and Mt. Paran Rd. (Fulton) include 12-foot multi-use path. However, this does not connect to an official City of Atlanta bicycle route once in the City of Atlanta/Fulton County.

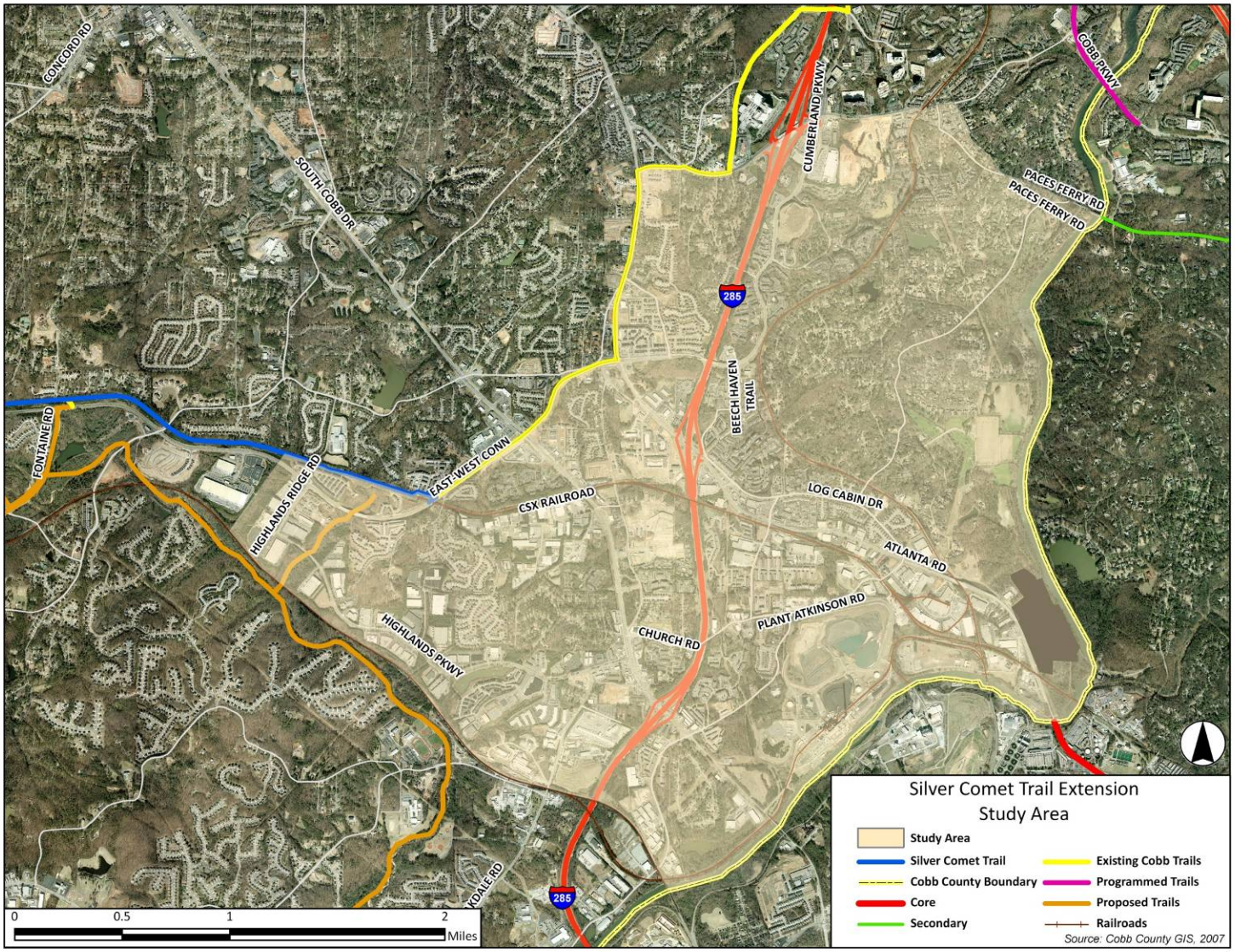

Figure 7A.1: Silver Comet Trail Extension Study Area

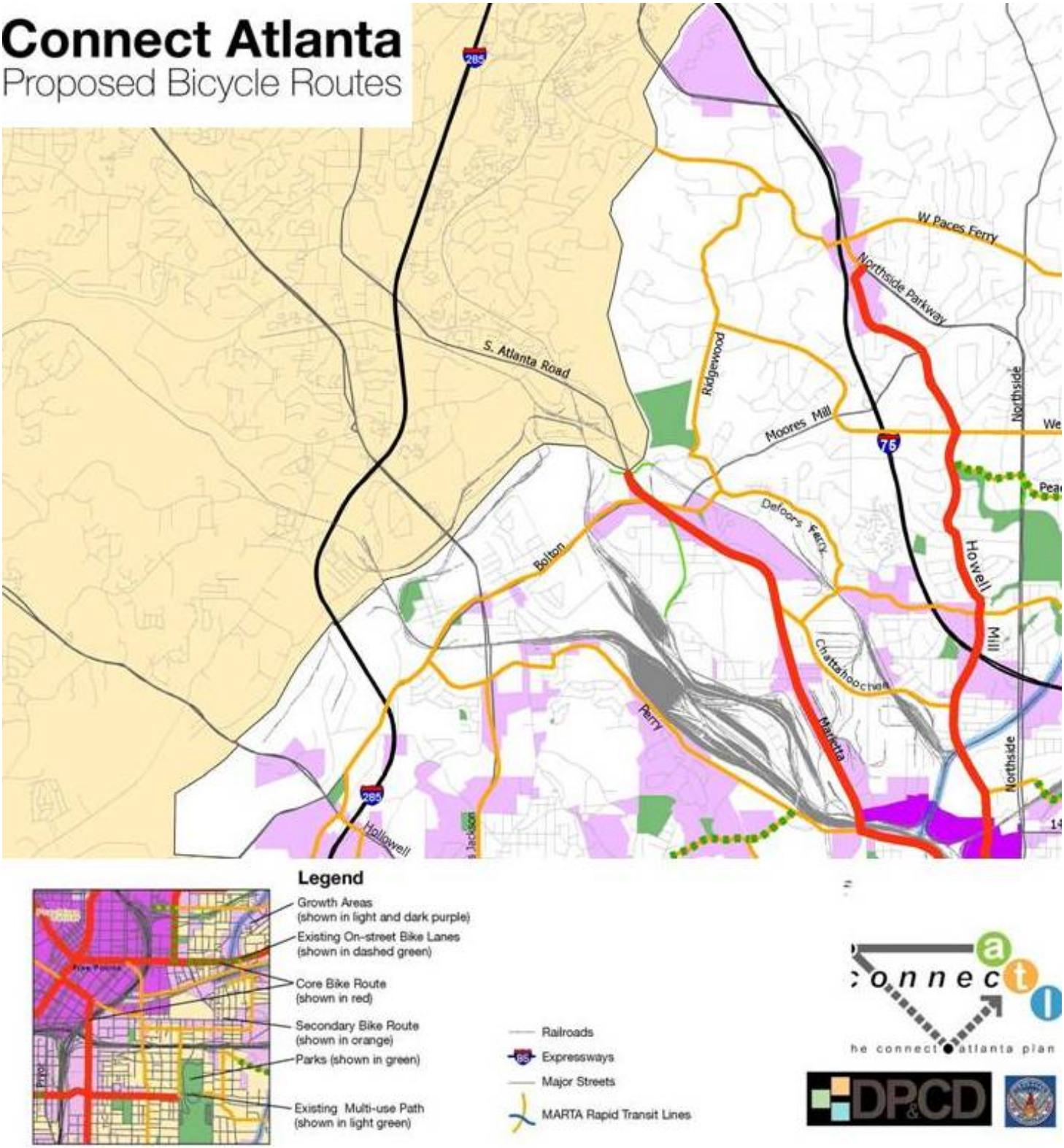

Figure 7A.2: Planned Bicycle Routes in Northwest Atlanta

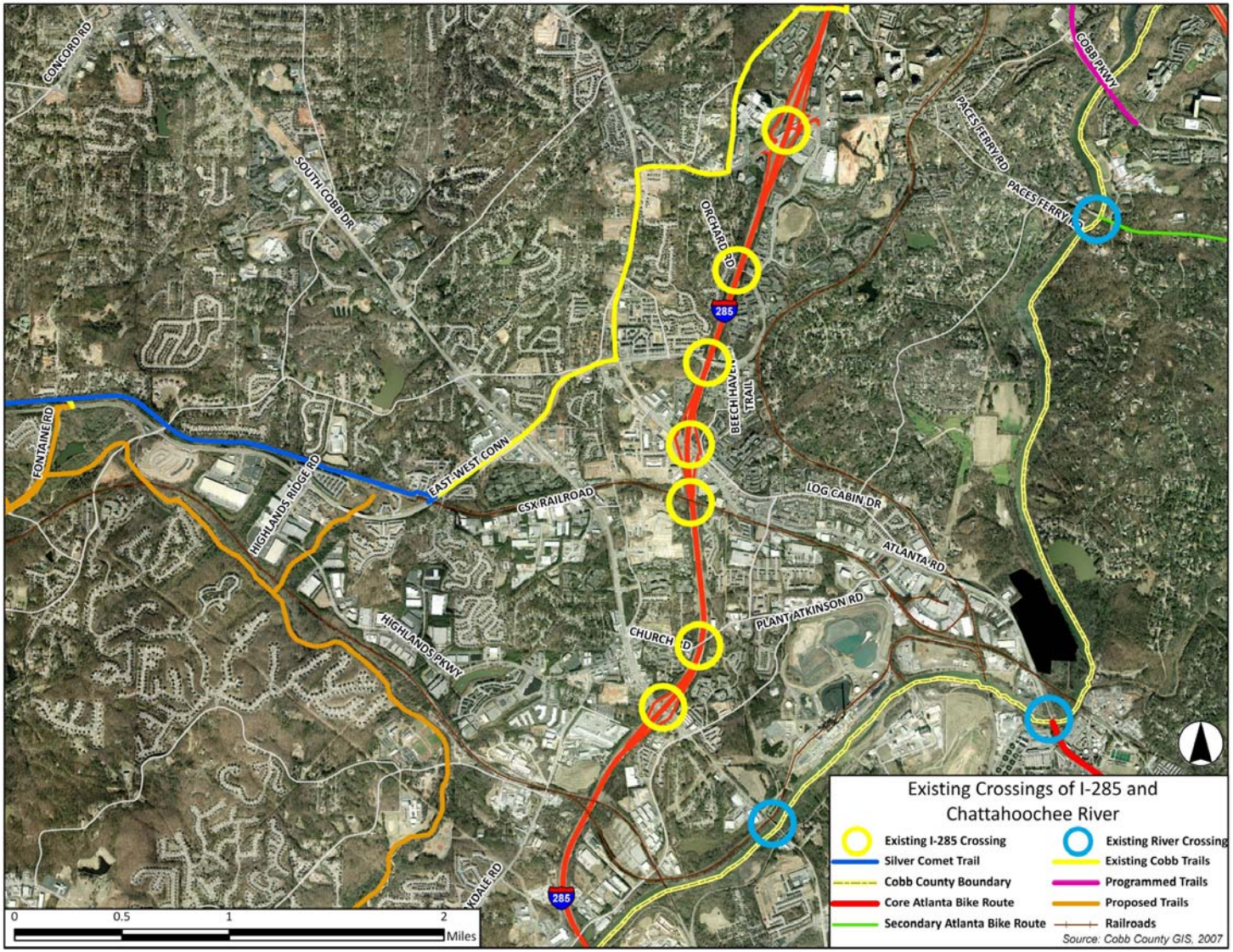

Figure 7A.3: Existing Crossings of I-285 and Chattahoochee River

7A.3 PREFERRED CHATTAHOOCHEE RIVER CROSSING

At the August 21, 2008 coordination meeting, County staff indicated a preferred Chattahoochee River crossing along Atlanta Road for several reasons: 1) Atlanta Road is included on the Georgia Department of Transportation (GDOT) *March to the Sea* State Bicycle Route, and 2) the new bridge at this location (currently under construction) includes a 12-foot trail facility, as shown in Figure 7A.6 on page 7A-11. A trail over this bridge would also pass within 500 feet of the existing Whetstone Creek Trail near the Bolton Road intersection in Fulton County.

Utilizing this bridge would require each alternative to be constructed as a sidepath south on Atlanta Road, a high volume roadway with a large amount of truck traffic. For this reason, sufficient separation between the trail facility and Atlanta Road is highly desirable. The trail would follow Atlanta Road along its southern/western side in order to tie to the new 12-foot facility on the new Atlanta Road bridge. Before reaching the river, the trail must first pass over one CSX rail line, and then underneath another immediately north of the Chattahoochee River. At the first crossing, the existing railroad overpass is approximately 66 feet wide, with two eleven-foot lanes in each direction and eleven-foot shoulders. In order to accommodate a trail, the striping on this bridge must be adjusted or a separate trail structure must be constructed.

Approximately ½-mile south, the railroad crosses Atlanta Road at a severe skew, and the supporting piers are angled across the Atlanta Road median and shoulders, occupying the majority of the right of way not used by motorists, shown in Figure 7A.4. The orientation of these piers makes the shoulders unavailable for trail placement; on both sides, the piers occupy most of the area between the edge of pavement and the railroad embankment. The edge of the angled pier sits approximately four feet from the edge of travel of Atlanta Road. A trail could be accommodated along the western side between the railroad embankment and the pier if the excessive brush overgrowth is cleared, the embankment is replaced with a retaining wall, and a barrier is placed between the trail and this pier. Additionally, there are billboards located on both the northwestern and southwestern sides of the railroad

Figure 7A.4: Railroad Piers at Atlanta Road

embankment that would need removal if a trail is to be placed along this side of Atlanta Road.

In addition to the railroad bridge option, an additional option is to follow Nifda Drive south from Atlanta Road, just north of the railroad bridge. Nifda Drive also crosses beneath the railroad (shown in Figure 7A.5), and there is excess right of way on the eastern side of Nifda Drive. A trail could be located along the eastern side of Nifda Drive to cross the railroad, or along the northern edge of the railroad embankment further south. A potential trail would follow the railroad embankment/northern edge of the Reliant Corporation property back to Atlanta Road. This would require significant brush clearing along the railroad embankment. From here, the trail would continue along the western side of Atlanta Road to cross the Chattahoochee River into the City of Atlanta/Fulton County, and follow the bicycle route along Marietta Boulevard.

Figure 7A.5: Nifda Drive at CSX Railroad

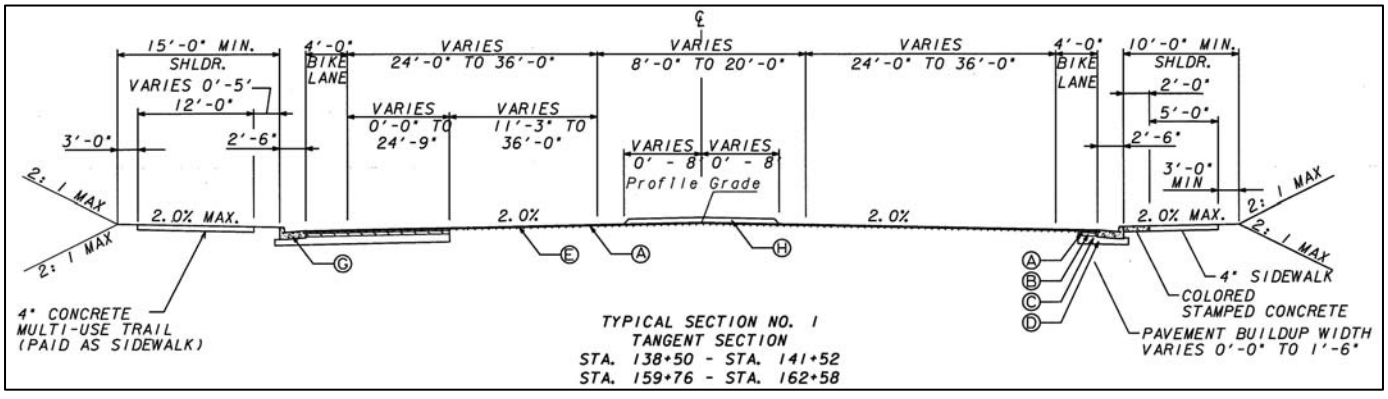

Figure 7A.6: Atlanta Road over Chattahoochee River Typical Section

7A.4 PLANNED AND PROGRAMMED PROJECTS

Part of the alternative identification process included an examination of other planned or programmed projects to determine if any could be modified to include all or part of the Silver Comet Trail Extension. Table 7A.2 below lists the projects that were identified in this process.

A review of these projects concluded that each is too advanced in the design or construction process to make any design modifications to include provisions for the Silver Comet Trail Extension.

Project Number (Sponsor)	Project Name	Description
752300 (GDOT)	I-285 @ CR 4519/Atlanta Road	Interchange modifications at Atlanta Road and I-285
752710 (GDOT)	CS 3498/Atlanta Road @ Chattahoochee River Fulton-Cobb Line	New bridge construction and roadway upgrade to four lanes
0004512 (GDOT)	Hermi's Bridge @ Chattahoochee River along Paces Ferry Road	Improved pedestrian use of Hermi's Bridge
752760 (GDOT)	SR 280/S. Cobb Dr. from Bolton Rd./Fulton NW to Atlanta Road and Bridge	South Cobb Drive improvements and bridge replacement over Chattahoochee River
D7140 (Cobb County)	Log Cabin Drive Sidewalks	Sidewalk construction from Brownwood Lane to Woodland Brook Drive

Table 7A.2: Planned and Programmed Projects
Source: SCT Extension Study Team

7A.5 ALTERNATIVES ANALYSIS

After discussions with Cobb County staff and field investigation, four alternatives were identified for consideration. The following sections provide detailed information about each of these alternatives. Figure 7A.7 displays the alternatives on a map.

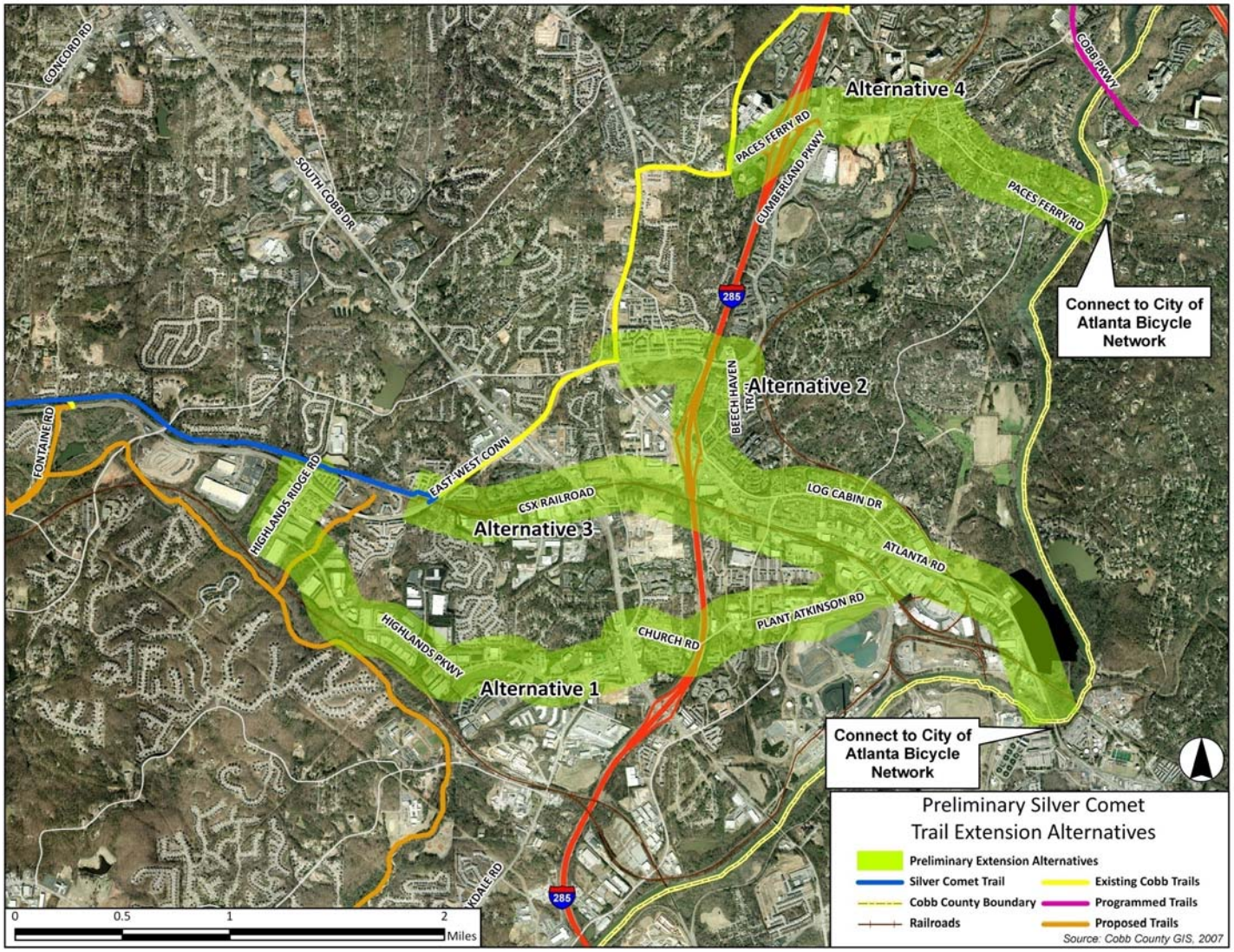

Figure 7A.7: Preliminary Silver Comet Trail Extension

7A.5.1 ALTERNATIVE #1: HIGHLANDS PARKWAY

HIGHLANDS RIDGE ROAD – HIGHLANDS HIGHWAY – CHURCH ROAD/PLANT ATKINSON ROAD – ATLANTA ROAD

As shown in Figure 7A.7 on the previous page, Alternative 1 begins at the Mavell Road trailhead near the intersection of the East-West Connector and Creekside Place. It travels to the City of Atlanta along Highlands Ridge Road, Highlands Parkway, Church Road, Plant Atkinson Road, and Atlanta Road. This route is divided into three segments, shown in Figure 7A.8 below, as well as an optional short-term connection from the East-West Connector to South Cobb Drive (described in the following section). Segment 1 begins at the Mavell Road trailhead and continues along Highlands Ridge Road and Highlands Parkway, and ends at the intersection of South Cobb Drive and Church Road. Segment 2 begins at the intersection of South Cobb Drive and Church Road, and travels along Church Road and Plant Atkinson Road, and ends at the intersection of Atlanta Road and Plant Atkinson Road. Segment 3 begins at the intersection of Atlanta Road and Plant Atkinson Road, and travels along Atlanta Road to the Cobb County/Fulton County line at the Chattahoochee River. These segments are detailed in the following sections.

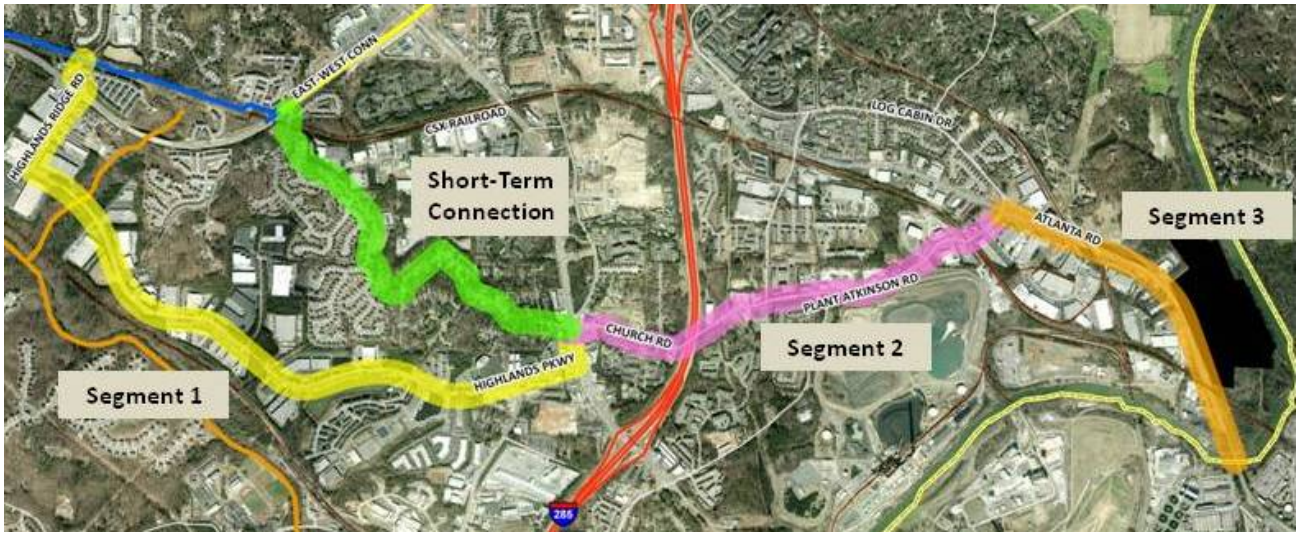

Figure 7A.8: Alternative 1 Segments Overview

Route Detail

Segment 1 of Alternative 1 would spur south from the Mavell Road trailhead to cross the East-West Connector. Negotiations with the Homeowner's

Figure 7A.9. Highlands Parkway

Association for the Creekside at Vinings neighborhood would need to take place in order to agree on the use of private property for the trail. The trail alignment would cross the East-West Connector at the signalized intersection with Creekside Place/Highlands Ridge Road to utilize existing pedestrian features. It would then follow Highlands Ridge Road southwest for approximately ¼-mile to the intersection with Highlands Parkway. The vacant wooded area to the west of Highlands Ridge Road and south of the East-West Connector, behind the retail/commercial buildings, was considered as an alternative to Highlands Ridge Road. This area is located approximately 75 feet below the existing buildings. Due to this extreme elevation change, this option was removed from consideration.Next, the trail alignment would follow Highlands Parkway southeast to South Cobb Drive. Highlands Parkway has two lanes in each direction with a median for most of its length, excluding the first one thousand feet, heading east. A typical cross section of Highlands Parkway is shown in Figure 7A.9. The Highlands Parkway area is characterized mostly by light industrial and commercial parcels along a four-lane divided roadway. This roadway has rolling grades with curb and gutter and five-foot sidewalks along both sides. The southern side of the roadway is the most appropriate for a trail because of better sight distance at driveways, a broader shoulder in many locations and scenic views of Lake Highland. The majority

Figure 7A.10: Severe sidewalk drop off

of the corridor has adequate shoulder for trail inclusion, although in some areas the shoulder needs regrading due to embankments, as indicated by guardrail. Approximately 0.7 miles along Highlands Parkway, the edges of the sidewalk on the southern side of the roadway severely drop off to either side for a stretch of ¼-mile, as shown in Figure 7A.10. On the southeastern side of Highlands Parkway just west of the intersection with South Cobb Drive, there is an existing retaining

wall along the edge of the parcel fronting Highlands Parkway. There is approximately 13 feet of available width between the back of curb and the face of wall. Although this amount of space is prohibitive for the addition of a shared-use trail and appropriate clear shoulder widths, it is possible for additional accommodations to be made by encroaching onto the parking lot of the adjacent parcel or by reducing the available trail width at this pinch point.

Another option considered in lieu of the Highlands Ridge Road/Highlands Parkway corridor is one that passes through a residential area on the northern side of Highlands Parkway, through the Camp Highland Estates neighborhood or through the Argo Road/Kenwood Road neighborhood. From aerial examination, Camp Highland Road was identified as a potential cut-through to Highlands Parkway from the East-West Connector utilizing a large, vacant parcel that is owned by the surrounding neighborhood. Review in the field indicated this option was not viable because of a very small railroad bridge immediately south of the East-West Connector, significant elevation changes, limited shoulder space and the secluded feel of the neighborhood. An additional neighborhood route following Argo Road to Lewis Drive, Crowe Drive, and Kenwood Road was also considered to bypass Highlands Parkway. However, due to steep grades, tight right of way, and the previously mentioned small railroad bridge, this was also determined not to be a viable alternative.

As previously stated, steep grades and tight right of way make the Argo Road neighborhood not an ideal location for a permanent trail facility. However, in the short term, a bike route could easily be signed at little cost through this area to provide a route toward Atlanta from the Silver Comet Trail. Because this would be an on-road bike route, the previously mentioned small railroad bridge would not be an issue. This would serve as either a temporary route until a trail could be constructed along Highlands Ridge Road and Highlands Parkway, or a permanent optional route once the Highlands Parkway route is constructed. Crowe Drive and Kenwood Road have particularly steep grades, so signs should be posted at the beginning of this route to advise riders of the challenges presented by the terrain if this route is chosen.

From Highlands Parkway, the trail would next follow along the west side of South Cobb Drive for one block north, to Church Road, where it would cross South Cobb Drive using the pedestrian features that are already in place. This concludes Segment 1 of Alternative 1.

From the intersection of South Cobb Drive and Church Road, Segment 2 would proceed east along Church Road. Church Road is a two-lane undivided roadway with significant rolling grades and a rural shoulder. Along this stretch, the northern side of

the roadway has new development with new sidewalk and landscaping, making the south side a better choice for trail location. The roadside here is relatively flat and would require little additional grading. Where Church Road passes under I-285 approximately ½-mile to the east of the South Cobb Drive intersection (shown in Figure 7A.11), the width of the existing shoulder is adequate for trail placement, but it is currently in poor condition and needs improvement.

Figure 7A.11: Church Rd/I-285 Underpass

To the west of I-285, Church Road is primarily newer residential development, while to the east, it is industrial. On the east side of I-285, the trail would remain on the southern side of the roadway continuing to the intersection of North Church Lane and Plant Atkinson Road. At this point, Church Road turns north as North Church Lane, and the trail would continue east on Plant Atkinson Road. Approximately 125 feet to the east of I-285, there is a very old, small church on the southern side of the roadway (Grace Community Fellowship) that should be avoided due to the National Environmental Policy Act (NEPA) and other environmental regulations. To the east of this church, there is a very small amount of available right of way and a small, single-story office building with parking up to the apparent right of way line. A trail on this side of the road would take at least a third of this building's available parking.

The frontage of the Plant Atkinson property is an excellent potential trail location if an agreement can be made with Georgia Power to utilize the property. Along the northern side of the parcel, the driveway serves as a separator between the property's reservoir and Plant Atkinson Road; there is a large drainage swale and a grassy slope between them. This area between the driveway and the Plant Atkinson Road edge of pavement varies between 50 feet and 210 feet width, and continues for approximately 1,100 feet. The frontage of the Plant Atkinson property can be seen in Figure 7A.12.

Figure 7A.12: Plant Atkinson/GA Power Property

Once past the Plant Atkinson property, there is an at-grade railroad crossing, but the rail line is overgrown and inactive. However, coordination with the railroad would be required at this location to make proper trail crossing accommodations. All measures would

be taken to ensure the safety of trail users, such as appropriate warning signage, pavement markings, crossing surface material, and a crossing angle as close to ninety degrees as possible. The intersection with Atlanta Road is 675 feet to the northeast from this railroad crossing. Between the crossing and the intersection, there is a church, its parking lot and a small open field on the northern parcel. The southern two parcels are light industrial with parking lots up to the right of way line. The northern side of this final stretch of Plant Atkinson Road is the most suited for trail placement. This is the conclusion of Segment 2.

From this point, Segment 3 of Alternative 1 would turn south onto Atlanta Road to cross the Chattahoochee River into Fulton County, as described in the Study Area section of this report.

Alternative 1 Connections and Land Use

A crucial component of the alternatives analysis process was a review of land use connectivity and access to various destinations in this region of Cobb County. Cobb County future land use maps were consulted to determine the potential access to destinations such as parks, public services, shopping centers, and other activity centers.

This analysis found that the proposed route for Alternative 1 travels through varying land uses, such as medium density residential, high density residential, industrial compatible, transportation communications, and public-institutional. There is also conservation land located along the Chattahoochee River. The following table, 7A.3, provides an overview of the land use and connections which are also illustrated in Figure 7A.13.

	Park/Recreation/ Conservation	School	Library	Transit	Existing Trail or Trailhead Access	Emergency Services	High Density Residential	Medium Density Residential	Low Density Residential	Very Low Residential	Community Activity Center	Regional Activity Center	Industrial	Industrial Compatible	Transportation Communications	Public Institutional
Alternative 1 Highlands Pkwy*	•			•	•		•	•			•		•	•	•	•

Table 7A.3: Alternative 1: Neighboring Connections and Land Use

**Note: Significant portions of Alternative 1 lie in the City of Smyrna, for which land use information is not available. Source: SCT Extension Study Team*

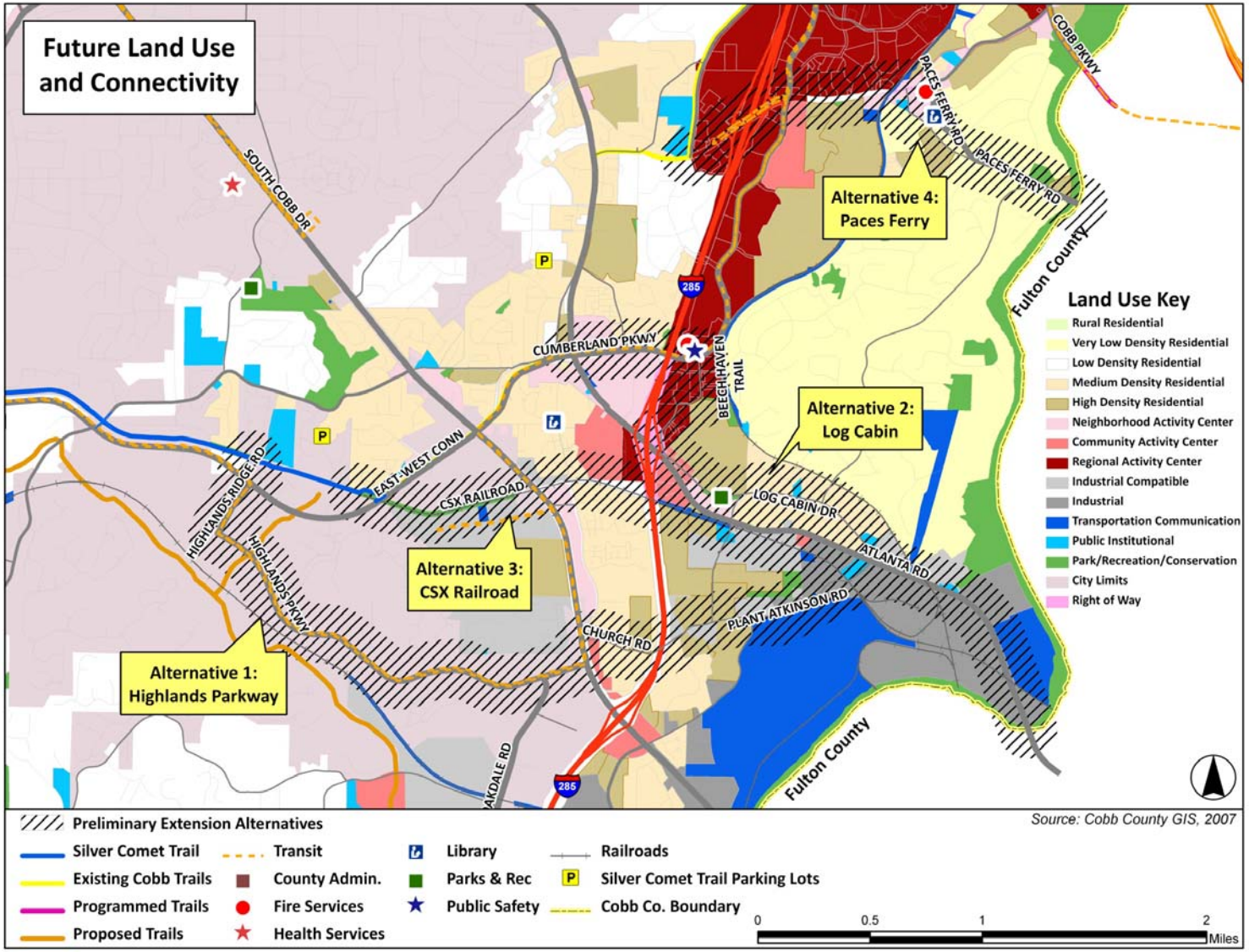

Figure 7A.13: Future Land Use and Connectivity

Alternative 1 Opportunities and Challenges

Opportunities and challenges were also identified as each alternative was developed. These were the result of careful examination of each potential route in the field, aerial reviews of each, and an assessment of the surrounding land use and connections served. Table 7A.4 below provides a summary of opportunities and challenges associated with Alternative 1. Map identification numbers are provided for referencing each opportunity or challenge in Figure 7A.14.

Opportunities	**Map ID**
Ties directly to the existing Silver Comet Trail and the Mavell Road Trailhead	1A
Little conflict with high volume roadways	throughout
Scenic views along Highlands Parkway	1B
Utilizes existing crossing measure of I-285, along Church Road	1C
Atlanta Road crossing of Chattahoochee River provides full trail width	1D
Ties to City of Atlanta Strategic Bicycle Network along Marietta Boulevard in Fulton County	1E
Brings the Silver Comet Trail to within 500 feet of the existing Whetstone Creek Trail near the Bolton Road intersection in Fulton County	1F
Follows transit route along Highlands Ridge Road and Highlands Parkway	1G
Short-term temporary route available through Argo Road neighborhood	1H
Challenges	
Trail would be a sidepath along a roadway for its entire length	throughout
Significant elevation changes	throughout
Pinch point at Highlands Parkway/South Cobb Drive	1I
Church Road/Plant Atkinson Road area is very industrial	1J
Old neighborhood church on Church Road would potentially be impacted	1K
At-grade railroad crossing at Plant Atkinson Road	1L
Several conflicts points with high volume roadways: East-West Connector, South Cobb Drive, and Atlanta Road	throughout
Multiple driveway crossings required	throughout

Table 7A.4: Alternative 1: Opportunities and Challenges
Source: SCT Extension Study Team

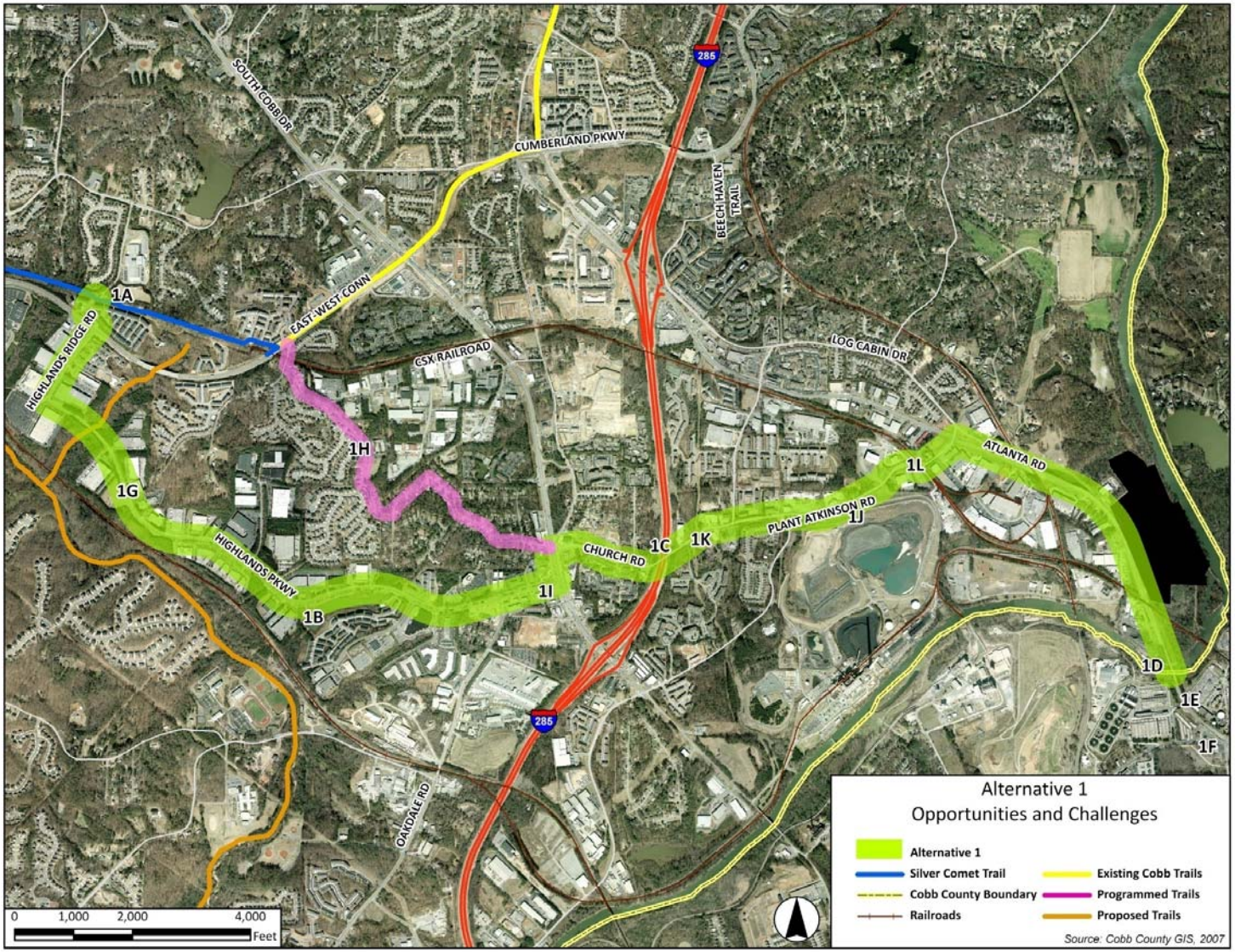

Figure 7A.14: Alternative 1: Opportunities and Challenges

Next Steps

Input received at the March 19, 2009 Project Management Team (PMT) meeting indicated that the Highlands Parkway alternative is currently preferred by Cobb County staff. Because of its location along the rights of way of existing roadways and the opportunity for a short-term connection along Argo Road and Kenwood Road to South Cobb Drive, this alignment was viewed as the most feasible. The logical next step was to make a final determination of the preferred alternative so that cost estimation and prioritization can be completed.

On May 5, 2009, an additional PMT meeting was held with Cobb County staff. At this meeting, it was determined that Alternative 1 remains one of the Cobb County staff's preferred alternatives due to its feasibility of construction and satisfaction of the purpose of the Silver Comet Trail Extension. A cost estimate was developed for this alternative, which can be found in the section "Cost Estimates."

7A.5.2 ALTERNATIVE #2: LOG CABIN

CUMBERLAND PARKWAY – LOG CABIN DRIVE – ATLANTA ROAD

As shown in Figure 7A.7 on page 7A-13 of this document, Alternative 2 begins along the Silver Comet Cumberland Connector Trail at the intersection of the East-West Connector/Cumberland Parkway and Atlanta Road. It travels to the City of Atlanta along Cumberland Parkway, the outer right of way of I-285, Log Cabin Drive, Elizabeth Lane, and Atlanta Road. This route is divided into three segments, shown in Figure 7A.15. Segment 1 begins at the intersection of the East-West Connector/Cumberland Parkway and Atlanta Road, and continues along Cumberland Parkway to Beech Haven Trail. From here it follows the boundary of the I-285 right of way, and ends at Log Cabin Drive. Segment 2 travels along Log Cabin Drive to its intersection with Plant Atkinson Road. Segment 3 begins at the intersection of Log Cabin Drive and Plant Atkinson Road, and travels along Log Cabin Drive and Elizabeth Lane, until it ends at Atlanta Road; it then follows Atlanta Road to the Cobb County/Fulton County line at the Chattahoochee River. These segments are detailed in the following sections.

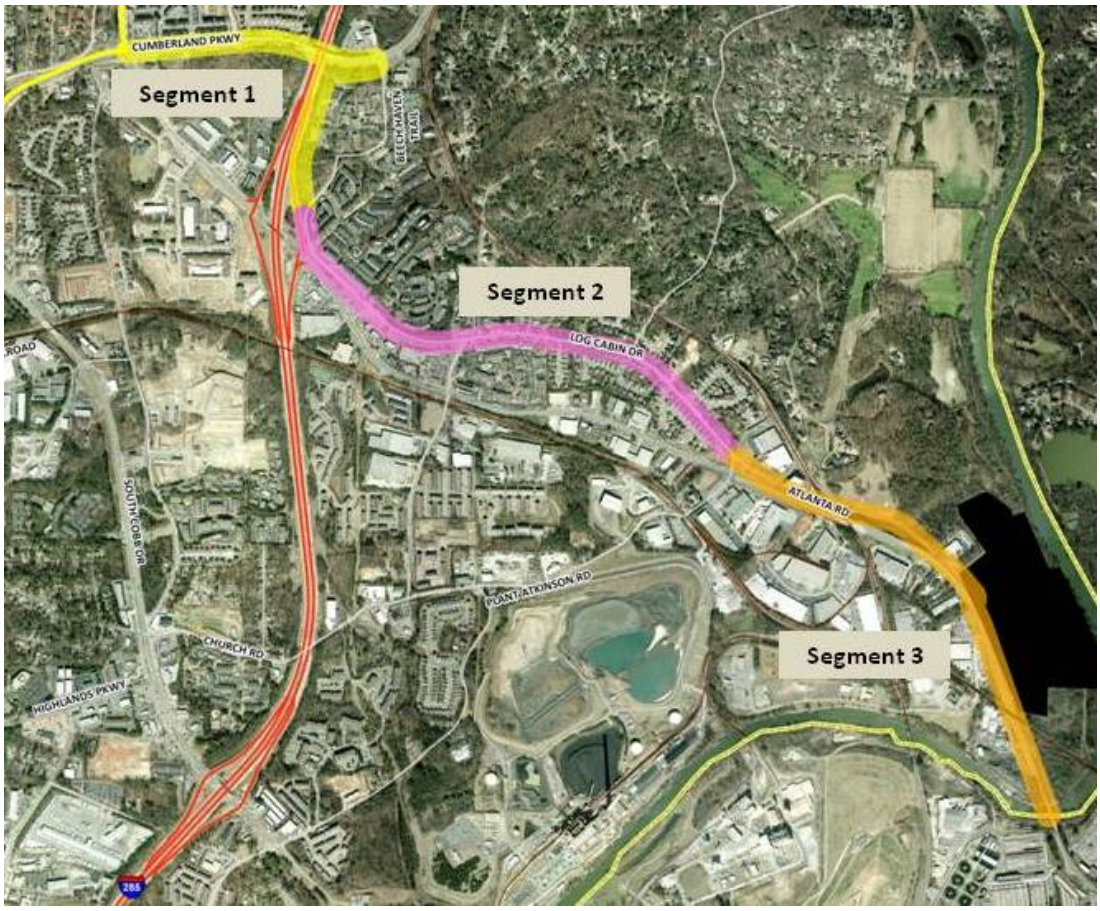

Figure 7A.15: Alternative 2 Segments Overview

Route Detail

From the existing Silver Comet Trail at the intersection of the East-West Connector and South Cobb Drive, the existing Cumberland Connector Trail follows the northern side of Cumberland Parkway to the intersection with Atlanta Road. At this point, Segment 1 of Alternative 2 for the Silver Comet Trail Extension would begin. The trail would cross Atlanta Road using the existing pedestrian accommodations, and then follow the southern side of Cumberland Parkway to the traffic signal at Beech Haven Trail. Cumberland Parkway is currently a four-lane divided highway with curb and gutter and five-foot sidewalks along both sides. The existing bridge over I-285, shown in Figure 7A.16, has five foot sidewalks in both directions. The bridge is not currently wide enough to accommodate a trail that is wider than five feet, but the median and/or travel lane widths could be reduced across the bridge to allow adequate space for a trail. Construction of a separate bridge for the trail (similar to those at the I-285

crossings at Mt. Wilkerson Parkway and Cumberland Boulevard to the north) would provide an additional feasible crossing alternative.
The trail alternative continues approximately 500 feet east of the Cumberland Parkway bridge over I-285 to the intersection with Beech Haven Trail. From here, the trail alternative turns back to the west toward I-285 where it would follow the I-285 right of way south for approximately ⅓-mile to the intersection of Beech Haven Trail and Log Cabin Drive. Cobb County ordinances currently prohibit any apparatus propelled by human or animal power on the right of way of limited access highways. However, if Cobb County wishes to amend this ordinance, the Silver Comet Trail Extension could then be constructed along this portion of I-285. The trail would sit approximately 30 feet away from I-285, behind a large swale and a row of trees. This is adequate separation to give the trail user a safe and secure feeling while riding along this interstate. An additional physical barrier, such as fencing, would likely be installed as well.

An additional option considered instead of utilizing the I-285 right of way is Beech Haven Trail. From Cumberland Parkway, the trail would turn south along Beech Haven Trail to Log Cabin Drive. Beech Haven Trail is a two-lane undivided roadway with rural shoulders, no sidewalks, a rolling profile, and sharp horizontal curves. It travels through a residential area, with several apartment and condominium complexes and one church located along the corridor. The right of way is only approximately 40 feet wide, and many of the properties along Beech Haven Trail have parking lots or established landscaping that extend up to the apparent right of way line. These obstacles would require significant property acquisition and shoulder re-grading in order to incorporate a trail facility. A very sharp, almost 90-degree horizontal turn (shown in Figure 7A.17) is located approximately 1475 feet from the start of Beech Haven Trail, with curb and gutter present for a short stretch of 200 feet. There are horizontal sight distance concerns from both directions as well as steep drop-offs to either side, with a very large culvert passing underneath. This difficult terrain and tight right of way led to the decision to remove this portion of Alternative 2 from consideration.

Figure 7A.16: Cumberland Parkway over I-285

Figure 7A.17: Beech Haven Trail 90-degree Curve

As Beech Haven Trail turns south and becomes Log Cabin Drive, Segment 1 of Alternative 2 ends, and Segment 2 begins. Here the trail would depart from the I-285 right of way and travel along Log Cabin Drive. Because there are only 18 feet of available right of way between the I-285 ramp and Log Cabin Drive, the trail must either be relocated to the opposite side of Beech Haven Trail or become a bike lane for a short stretch. A new Atlanta Road/I-285 interchange is currently being designed, but the conceptual designs do not show any additional space in the right of way (shared with Log Cabin Drive) for a trail facility.

Log Cabin Drive is a two-lane roadway with five-foot sidewalks in many sections. A typical cross section is shown in Figure 7A.18. The Atlanta Road/I-285 interchange is immediately adjacent to the northern terminus of Log Cabin Drive. The Log Cabin corridor is primarily residential, with the exception of several parcels at the northern end: a large multi-use development, a shopping center and a gas station. There are several driveways with acceleration and deceleration lanes accessing the multi-use development. Trail addition along this corridor would require a significant amount of coordination with adjacent property owners, in particular the numerous apartment and condominium complexes. There is only a small amount of existing right of way along this corridor, and many of the neighborhoods and complexes have installed extensive landscaping along the roadway. However, a significant amount of this landscaping is located within the Log Cabin Drive right of way.

Currently, a Cobb County Department of Transportation Special Purpose Local Option Sales Tax (SPLOST) project is underway to add sidewalk along the northern/eastern side of Log Cabin Drive between Brownwood Lane and Woodland Brook Drive. This construction is expected to be completed around Spring 2010. The southern/western side of Log Cabin Drive is the most suitable for trail placement because: 1) it does not impact the new sidewalk, 2) there is more available right of way, and 3) there are fewer driveway conflicts.

Figure 7A.18: Log Cabin Drive

Figure 7A.19: Trolley Line Park/ Eberhart Street

Located along Log Cabin Drive is Trolley Line Park, a linear park along the western side of the corridor that stretches for approximately 750 feet. This park is partially within the Log Cabin Drive right of way and partially on private property. It consists of a 10-foot wide paved path that is a combination of brick and concrete pavers. The area is well lit and has benches, trash receptacles and small shelters. In several areas the paving widens to display multiple informational signs detailing the area's significant history with the Atlanta-Marietta trolley line. Located directly behind this park and adjacent to a shopping center is an asphalt strip approximately 18 feet wide that extends for the entire length of the park to North Church Lane (shown in Figure 7A.19). The asphalt is in good condition, and it appears to be a road that is no longer in use; it was formerly Eberhart Street. This would be an ideal location for a trail, as it is separated from Log Cabin Drive and does not interfere with other pedestrians who may be in the Trolley Line Park. However, the Log Cabin Community Church, a historic church, is located along this corridor, and a significant portion of its parking lot is located along the southern/western side of the Log Cabin Drive right of way. The church and its property would not be impacted by this trail alternative, but mitigation efforts would likely be taken to provide adequate parking for the facility. Segment 2 of Alternative 2 continues to the intersection of Log Cabin Drive and Plant Atkinson Road.

From here, Segment 3 of Alternative 2 follows Log Cabin Drive to Elizabeth Lane. Between the end of Log Cabin Drive and the start of Elizabeth lane, the proposed trail alternative must pass over the CSX Railroad, potentially on the Atlanta Road bridge or on an adjacent structure. Elizabeth Lane is a very low-volume street that serves several County properties and one business. A trail would follow along the frontage of these County-owned properties adjacent to Atlanta Road, to the signalized intersection with Nifda Boulevard. At this point, Segment 2 ends and Segment 3 of Alternative 2 begins. The proposed trail would turn onto Atlanta Road to cross the Chattahoochee River into Fulton County, as previously described in the Study Area section, of this report.

Alternative 2 Connections and Land Use

As stated previously, a crucial component of the alternatives analysis process was a review of land use connectivity and access to various destinations in this region of Cobb County. Cobb County future land use maps were consulted to determine the potential access to destinations such as parks, public services, shopping centers, and other activity centers. This analysis found that the proposed route for Alternative 2 travels through land uses including medium density residential, high density residential, very low density residential, regional activity center, industrial, industrial compatible, transportation communications, and public-institutional. Trolley Line Park is located on Log Cabin Drive near its intersection with North Church Lane. A Cobb Community Transit (CCT) route operates along Cumberland Parkway, which would provide access to other parts of the County for trail users. Cobb County's Fire Station No. 4 and Police Precinct No. 3 are located at the intersection of Cumberland Parkway and Beech Haven Trail. There is also conservation land located along the Chattahoochee River. The following table, 7A.5, provides an overview of the land use and connections surrounding Alternative 2. Figure 7A.13 on page 7A-14 of this document displays the land use and connections on a map.

	Park/Recreation/ Conservation	School	Library	Transit	Existing Trail or Trailhead Access	Emergency Services	High Density Residential	Medium Density Residential	Low Density Residential	Very Low Residential	Community Activity Center	Regional Activity Center	Industrial	Industrial Compatible	Transportation Communications	Public Institutional
Alternative 2 Log Cabin	•			•	•	•	•	•		•		•	•	•	•	•

Table 7A.5: Alternative 2: Neighboring Connections and Land Use

Alternative 2 Opportunities and Challenges

Opportunities and challenges were also identified as each alternative was developed. These were the result of careful examination of each potential route in the field, aerial reviews of each, and an assessment of the surrounding land use and connections served. Table 7A.6 provides a summary of opportunities and challenges associated with Alternative 2. Map identification numbers are provided for referencing each opportunity or challenge in Figure 7A.20 of this document.

Opportunities	**Map ID**
Connection to Trolley Line Park along Log Cabin Drive	2A
Connections to multiple neighborhoods along Log Cabin Drive	throughout
Emergency Services station located along route	2B
Follows transit route along Cumberland Parkway	2C
County-owned property located along Elizabeth Lane	2D
Atlanta Road crossing of Chattahoochee River provides full trail width	2E
Ties to City of Atlanta Strategic Bicycle Network along Marietta Boulevard in Fulton County	2F
Brings the Silver Comet Trail to within 500 feet of the existing Whetstone Creek Trail near the Bolton Road intersection in Fulton County	2G
Challenges	
Trail would be a sidepath along a roadway for most of its length	throughout
Crossing of I-285 along Cumberland Parkway not suitable for a trail addition without improvements or new crossing structure	2H
Cobb County ordinance regarding use of human-powered vehicles along limited access highways would need revision	throughout
Extremely tight pinch point at Log Cabin Drive and the I-285 interchange	2I
Buildings, parking lots, and established landscaping encroach against or close to right of way	throughout
Several conflicts points with high volume roadways: East-West Connector, Cumberland Parkway, and Atlanta Road	throughout
Many driveway crossings required	throughout

Table 7A.6: Alternative 2: Opportunities and Challenges

Source: SCT Extension Study Team

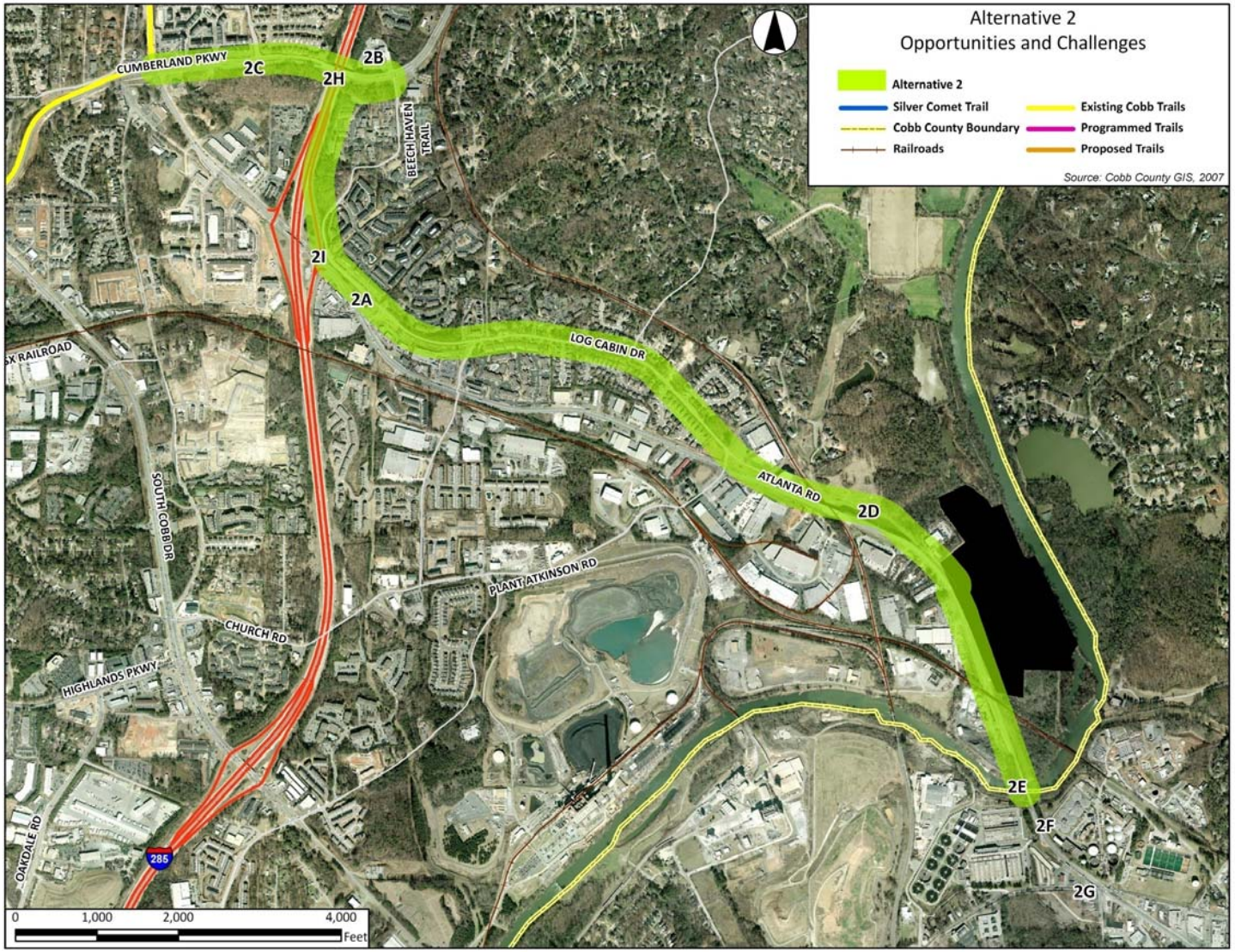

Figure 7A.20: Alternative 2: Opportunities and Challenges

Next Steps

Input received at the March 19, 2009 PMT meeting indicated that Alternative 2 would be desirable if Cobb County ordinances were changed to allow human-powered vehicles along the I-285 right of way. However, Cobb County staff agreed that if the ordinance could not be changed, then this alternative would no longer be feasible due to the terrain of the only other option, Beech Haven Trail. The next include:

- Determining if Cobb County would like to pursue changing the ordinance prohibiting human-powered vehicles along the rights of way of limited access roadways.
- Making a final determination of the preferred alternative so that cost estimation and prioritization can be completed.
- If Alternative 2 is the preferred alternative, begin making efforts to change ordinance.

At the May 5, 2009 PMT meeting, Cobb County staff confirmed that they would like to continue to pursue Alternative 2 as one of the preferred alternatives. It was also determined at this meeting that staff were in favor of changing the ordinance regarding the use of the I-285 right of way for a trail location. A cost estimate was developed for this alternative, which can be found in the "Cost Estimates" section at the end of the document.

7A.5.3 ALTERNATIVE 3: CSX RAILROAD

EXISTING CSX RAILROAD FROM EAST-WEST CONNECTOR TO PLANT ATKINSON ROAD TO ATLANTA ROAD

As shown in Figure 7A.7, Alternative 3 begins at the termination of the Silver Comet Trail along the East-West Connector near the Camp Highland Road intersection, and travels along the CSX Transportation railroad to its intersection with Plant Atkinson Road. Alternative 3 then travels along Atlanta Road to the City of Atlanta. This route is divided into two segments, shown in Figure 7A.21. Segment 1 begins at the Silver Comet Trail near the intersection of the East-West Connector and Camp Highland Road. It then continues along the CSX railroad to Plant Atkinson Road. Segment 2 briefly follows Plant Atkinson Road to Atlanta Road, and follows Atlanta Road to the Cobb County/Fulton County line at the Chattahoochee River. These segments are detailed in the following sections.

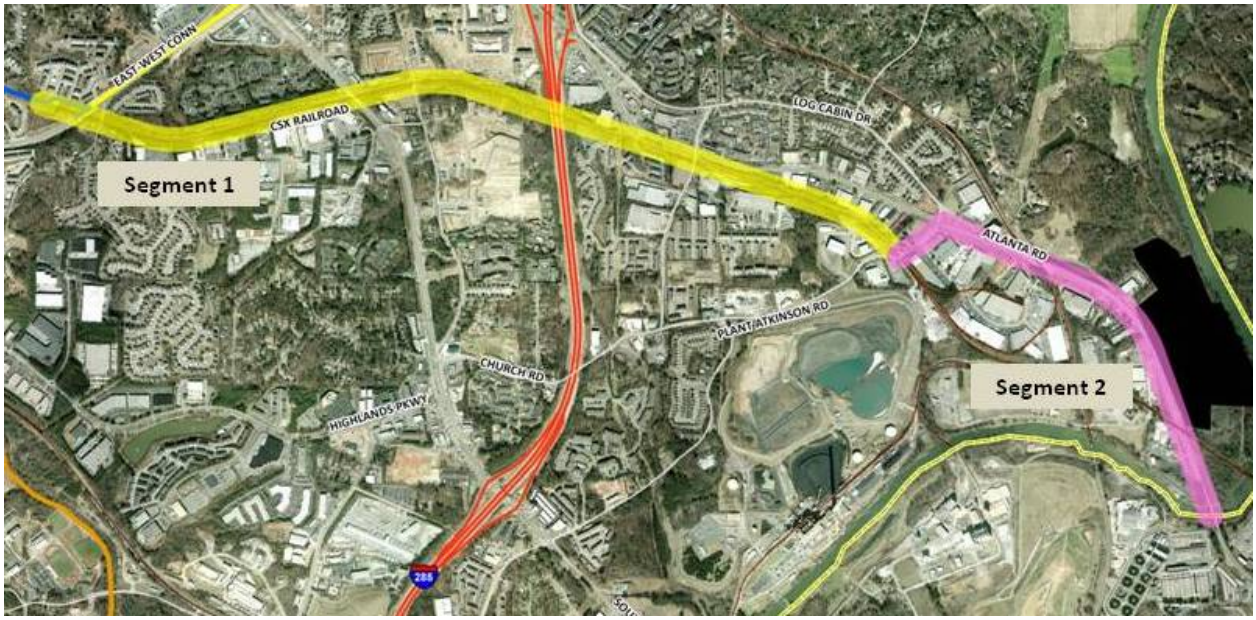

Figure 7A.21: Alternative 3 Segments Overview

Route Detail

An existing CSX Transportation railroad bed extends from the final trailhead of the Silver Comet Trail at the East-West Connector near the intersection with Camp Highland Road. This railroad is currently inactive north of Plant Atkinson Road and is extremely overgrown in places, as seen in Figure 7A.22, but the track remains in place for the entire corridor.

Figure 7A.22: Railroad near Plant Atkinson Road

Although there are no active uses of the railroad from Plant Atkinson north to the Silver Comet Trail corridor, CSX and/or neighboring business are utilizing the corridor to periodically store train cars. Segment 1 of Alternative 3 would follow this railroad bed along the southern side of the existing tracks southeast toward South Cobb Drive, and on toward Plant Atkinson Road. At Plant Atkinson, the railroad becomes active, so this trail alternative would need to shift to the roadside of Plant Atkinson Road to Atlanta Road. At the intersection of the railroad and Plant Atkinson Road, Segment 1 of Alternative 3 ends, and Segment 2 begins. From this point, the trail would turn onto Atlanta Road to cross the Chattahoochee River into

Fulton County, as previously described in the "Study Area" section of this report.

From the East-West Connector to South Cobb Drive, the CSX Railroad right of way varies between 190 feet and 170 feet in width. For the majority of the railroad corridor from South Cobb Drive to Plant Atkinson Road, the right of way is 100 feet in width. Approximately 350 feet to the southeast from I-285, there is a 445-foot stretch with 150-foot right of way. For about 375 feet immediately following this section, the right of way varies between 75 feet and 100 feet. The narrowest part of this section, however, is undeveloped land. An easement agreement could likely be made with owner of this property (Beazer Homes Corporation). Approximately 1300 feet before its intersection with Plant Atkinson Road, the right of way widens to between 160 and 190 feet for a length of about 630 feet. Along the entire portion of the CSX Railroad corridor that would be shared with a trail, the setback would be maximized and barriers would be employed to further separate trail traffic from train traffic and deter trespassing onto CSX property. These barriers could take the form of fencing, vegetation, vertical grade changes, ditches, or a combination of more than one of these measures.

Utilizing the CSX Railroad bed would allow for a grade separated crossing of South Cobb Drive, I-285, and North Church Lane. The railroad currently passes underneath each of these roadways, so no additional crossing facility would be required. At-grade roadway crossings would be required at Oakland Road and Old Atlanta Station Drive. Both of these roadways are very low volume, and all safety measures would be taken at the crossings to ensure that the safety of both trail users and roadway traffic would not be compromised. There are two parcels along this corridor to which track spurs for loading/unloading purposes: the parcel owned by Southern States Landfill Inc. immediately to the west of South Cobb Drive, and the parcel owned by George R. Davidson and James R. Sentell southeast of North Church Lane. However, it is unlikely that either of these is in use because the surrounding tracks are overgrown, and they only lead to destinations further north where the track ends. Appropriate crossing measures would be taken across both of these track spurs.

In order for this alternative to remain under consideration, negotiations with CSX Transportation must be undertaken to determine a property arrangement, such as an easement, license, or purchase. It is likely that an easement would be sought in this situation. An easement agreement would guarantee exclusive use of the property by Cobb County, while also providing protection for CSX against liability and damage to tracks. In addition to barriers, clear signage must be used to clearly indicate that the trail is separate from the railroad and to warn trail users to remain on the trail

corridor and off of the tracks, where they would be considered trespassers.

Alternative 3 Connections and Land Use

As stated in previously, a crucial component of the alternatives analysis process was a review of land use connectivity and access to various destinations in this region of Cobb County. Cobb County future land use maps were consulted to determine the potential access to destinations such as parks, public services, shopping centers, and other activity centers. This analysis found that the proposed route for Alternative 3 travels through land uses including medium density residential, high density residential, community activity center, regional activity center, industrial, industrial compatible, transportation communications, and public-institutional. A Cobb Community Transit (CCT) route operates along South Cobb Drive, which Alternative 3 crosses. This would provide trail users access to other parts of the County. Conservation land is located along the Chattahoochee River. The following table, 7A.7, provides an overview of the land use and connections surrounding Alternative 3. Figure 7A.13 on page 7A-19 of this document displays the land use and connections on a map.

	Park/Recreation/ Conservation	School	Library	Transit	Existing Trail or Trailhead Access	Emergency Services	High Density Residential	Medium Density Residential	Low Density Residential	Very Low Residential	Community Activity Center	Regional Activity Center	Industrial	Industrial Compatible	Transportation Communications	Public Institutional
Alternative 3 CSX Railroad*	•			•	•		•	•			•	•	•	•	•	•

Table 7A.7: Alternative 3: Neighboring Connections and Land Use

**Note: Significant portions of Alternative 3 lie in the City of Smyrna, for which land use information is not available.*

Source: SCT Extension Study Team

Alternative 3 Opportunities and Challenges

Opportunities and challenges were also identified as each alternative was developed. These were the result of careful examination of each potential route in the field, aerial reviews of each, and an assessment of the surrounding land use and connections served. Table 7A.8 below provides a summary of opportunities and challenges associated with Alternative 3. Map identification numbers are provided for referencing each opportunity or challenge in Figure 7A.23.

Opportunities	Map ID
With the exception of Atlanta Road, at-grade crossings with high volume roadways avoided by utilizing existing underpasses	throughout
Direct route from Silver Comet Trail to City of Atlanta	3A
Very few driveway crossings required while following CSX Railroad	throughout
Majority of railroad remains inactive and much is overgrown	throughout
Atlanta Road crossing of Chattahoochee River provides full trail width	3B
Ties to City of Atlanta Strategic Bicycle Network along Marietta Boulevard in Fulton County	3C
Brings the Silver Comet Trail to within 500 feet of the existing Whetstone Creek Trail near the Bolton Road intersection in Fulton County	3D
Provides a connection to transit route at South Cobb Drive	3E
Highly favored by the public at January workshops	throughout
Challenges	
Requires extensive coordination/negotiation with railroad and potentially costly arrangements for shared use of CSX property	throughout
Rail line is currently used to store cars	throughout
Traveling adjacent to Atlanta Road is not desirable due to its high volume	3F

Table 7A.8: Alternative 3: Opportunities and Challenges
Source: SCT Extension Study Team

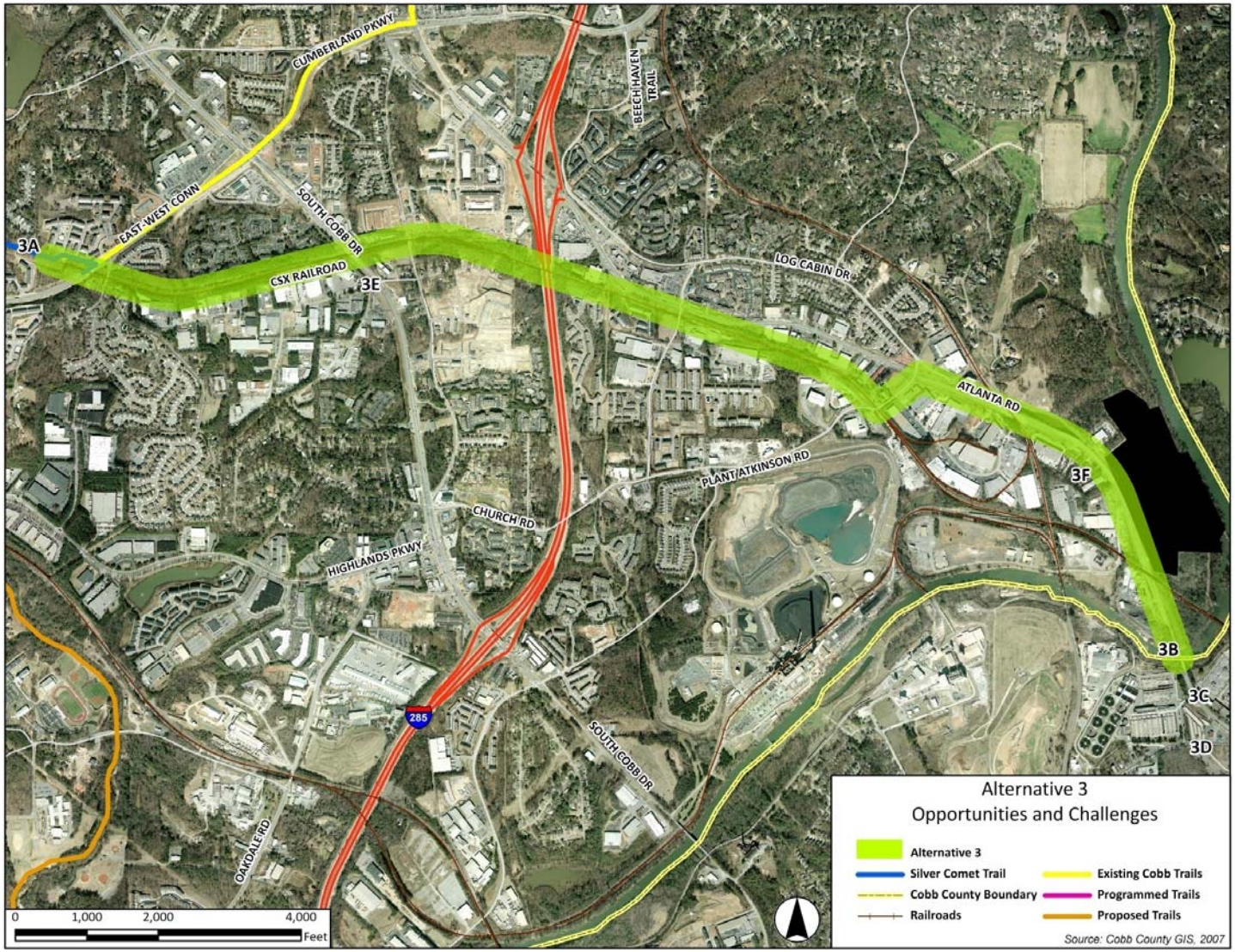

Figure 7A.23: Alternative 3: Opportunities and Challenges

Next Steps

At the March 19, 2009 PMT Meeting, Cobb County staff noted that CSX Transportation has previously been approached by Sam Olens (Cobb County Chair) and Ed McBrayer (Executive Director, the PATH Foundation) regarding the use of this right of way. These negotiation attempts resulted in CSX indicating that they are not able to work with the County to share the use of this right of way or make it more affordable for the County. Based upon comments received at the March 19th meeting, a compromise with CSX seems unlikely, and this alternative does not seem feasible for further consideration.

Because of the past difficulty of negotiating with CSX Transportation, it was determined at the May 5, 2009 PMT meeting that it is no longer feasible to continue to pursue Alternative 3. Therefore, this alternative was removed from consideration.

7A.5.4 ALTERNATIVE #4: PACES FERRY ROAD

SILVER COMET TRAIL CUMBERLAND CONNECTION TO PACES FERRY ROAD – NEW PACES FERRY ROAD – PACES FERRY ROAD

As shown in Figure 7A.7 on page 7A-11 of this document, Alternative 4 begins at the intersection of Spring Hill Parkway and Paces Ferry Road, and travels along Paces Ferry Road to downtown Vinings. It then turns south on New Paces Ferry Road, and continues to the intersection with Paces Ferry Road. It travels along Paces Ferry Road to the Cobb County/Fulton County line at the Chattahoochee River. This route is divided into two segments, shown in Figure 7A.24 below. Segment 1 begins at the Silver Comet Cumberland Connector Trail at the intersection of Spring Hill Parkway and Paces Ferry Road. It then continues

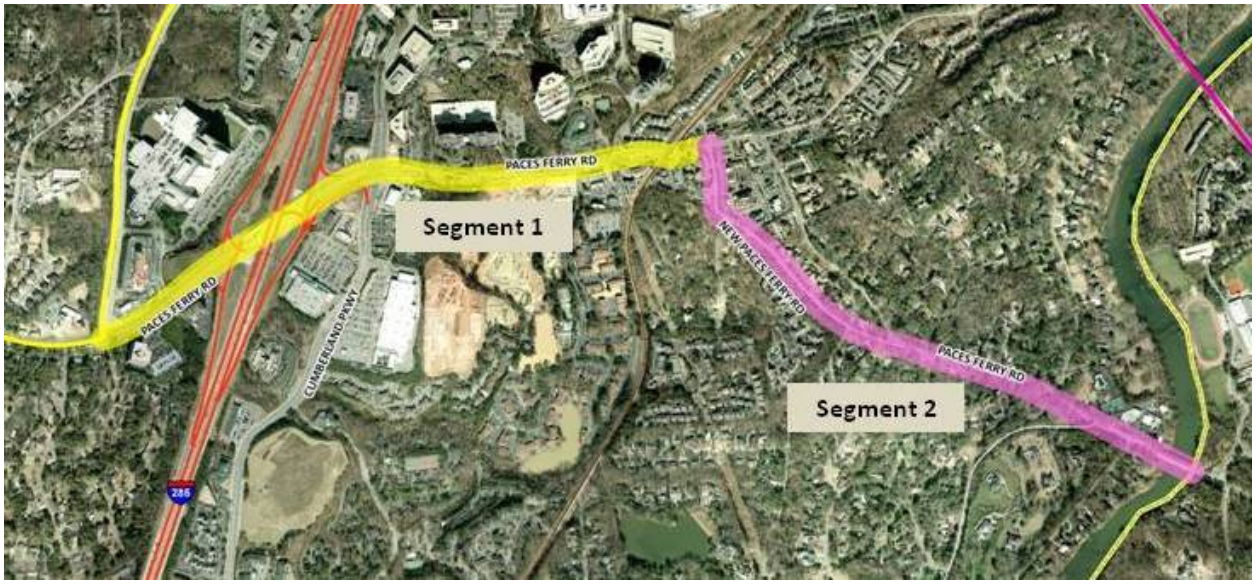

Figure 7A.24: Alternate 4 Segments Overview

along Paces Ferry Road to its intersection with New Paces Ferry Road. Segment 2 follows New Paces Ferry Road south to the intersection with Paces Ferry Road, and it then follows Paces Ferry Road to the Cobb County/Fulton County line at the Chattahoochee River. These segments are detailed in the following sections

Route Detail

The Cumberland Connector Trail begins at the termination of the Silver Comet Trail at the East-West Connector and follows the Cumberland Connector Trail to the intersection of Paces Ferry Road and Spring Hill Parkway. At this point, Segment 1 of Alternative 4 begins. The proposed trail alternative would follow Paces Ferry Road over the I-285 overpass toward downtown Vinings, as shown in Figure 7A.25. Once crossing I-285, it travels through several "big box" type shopping centers for approximately ½-mile. On the western side of downtown Vinings, the trail would need to cross the CSX Railroad. Around 400 feet east of the railroad crossing at the intersection of Paces Ferry Road with New Paces Ferry Road, Segment 1 of Alternative 4 ends and Segment 2 begins.

The proposed trail would turn south on New Paces Ferry Road toward its intersection with Paces Ferry Road. Here it would travel through the Vinings retail area before entering a primarily single-family residential area. The right of way along New Paces Ferry Road is approximately 80 feet in width, with adequate space on the southern/western side of the road for trail placement. New Paces Ferry Road terminates at Paces Ferry Road, and the trail would be along the southern side until it must cross the Chattahoochee River to travel into the City of Atlanta/Fulton County. There is an existing 16-foot pedestrian bridge,

Figure 7A.25: Paces Ferry Road/I-285 Overpass

Hermi's Bridge (shown in Figure 7A.26), adjacent to the Paces Ferry Road bridge over the river. This is an ideal trail location, but the trail must first cross Paces Ferry Road so that it is on the northern side of the road. The most suitable place for this crossing would be at the signalized intersection at Woodland Brook Drive. At the Fulton County line, the trail would tie to the City of Atlanta bicycle route along Paces Ferry Road that leads into Buckhead. This alternative lies outside of Cobb County's previously-identified study area, but remained under consideration because it still meets the primary goal of the Silver Comet Trail Extension, to provide a connection between the existing Silver Comet Trail and the City of Atlanta Strategic Bicycle Network.

Figure 7A.26: Hermi's Bridge

Alternative 4 Connections and Land Use

As stated previously, a crucial component of the alternatives analysis process was a review of land use connectivity and access to various destinations in this region of Cobb County. Cobb County future land use maps were consulted to determine the potential access to destinations such as parks, public services, shopping centers, and other activity centers. This analysis found that the proposed route for Alternative 4 travels through land uses including very low density residential, high density residential, community activity center, regional activity center, transportation communications, and public-institutional. Conservation land is located along the Chattahoochee River. A Cobb County Public Library is located on Paces Ferry Road in the heart of downtown Vinings. A CCT route operates along Cumberland Parkway and on Paces Ferry Road between Cumberland Parkway and Spring Hill Parkway. This would provide trail users additional access to other parts of the County. Table 7A.9 provides an overview of the land use and connections surrounding Alternative 4. Figure 7A.13 displays the land use and connections on a map.

Alternative 4 Opportunities and Challenges

Opportunities and challenges were also identified as each alternative was developed. These were the result of careful examination of each potential route in the field, aerial reviews of each, and an assessment of the surrounding land use and connections served. Table 7A.10 below provides a summary of opportunities and challenges associated with Alternative 4. Map identification numbers are provided for referencing each opportunity or challenge in Figure 7A.27.

	Park/Recreation/ Conservation	School	Library	Transit	Existing Trail or Trailhead Access	Emergency Services	High Density Residential	Medium Density Residential	Low Density Residential	Very Low Residential	Community Activity Center	Regional Activity Center	Industrial	Industrial Compatible	Transportation Communications	Public Institutional
Alternative 4 Paces Ferry	•		•	•	•	•	•			•	•	•			•	•

Table 7A.9: Alternative 4: Neighboring Connections and Land Use
Source: SCT Extension Study Team

Opportunities	**Map ID**
Little conflict with high volume, multi-lane roadways	throughout
Travels through historic downtown Vinings	4A
Hermi's Bridge over the Chattahoochee River at Paces Ferry Road provides full trail width	4B
Ties to City of Atlanta Strategic Bicycle Network along Paces Ferry Road	4C
Connects to transit route at Cumberland Parkway and Paces Ferry Road	4D
Provides access to Public Library in downtown Vinings	4E
Comes within close proximity of Emergency Services station	4F
Trail length is the shortest of all alternatives	throughout
Challenges	
Trail would be a sidepath along a roadway for its entire length	throughout
Trail must cross railroad in downtown Vinings	4G
Tight right of way on Paces Ferry Road in downtown Vinings	4H
Conflict point with high volume roadway, Paces Ferry Road	4I
Multiple driveway crossings required	throughout
Trail does not utilize County-preferred Chattahoochee River crossing	throughout

Table 7A.10: Alternative 4: Opportunities and Challenges Source: SCT Extension Study Team

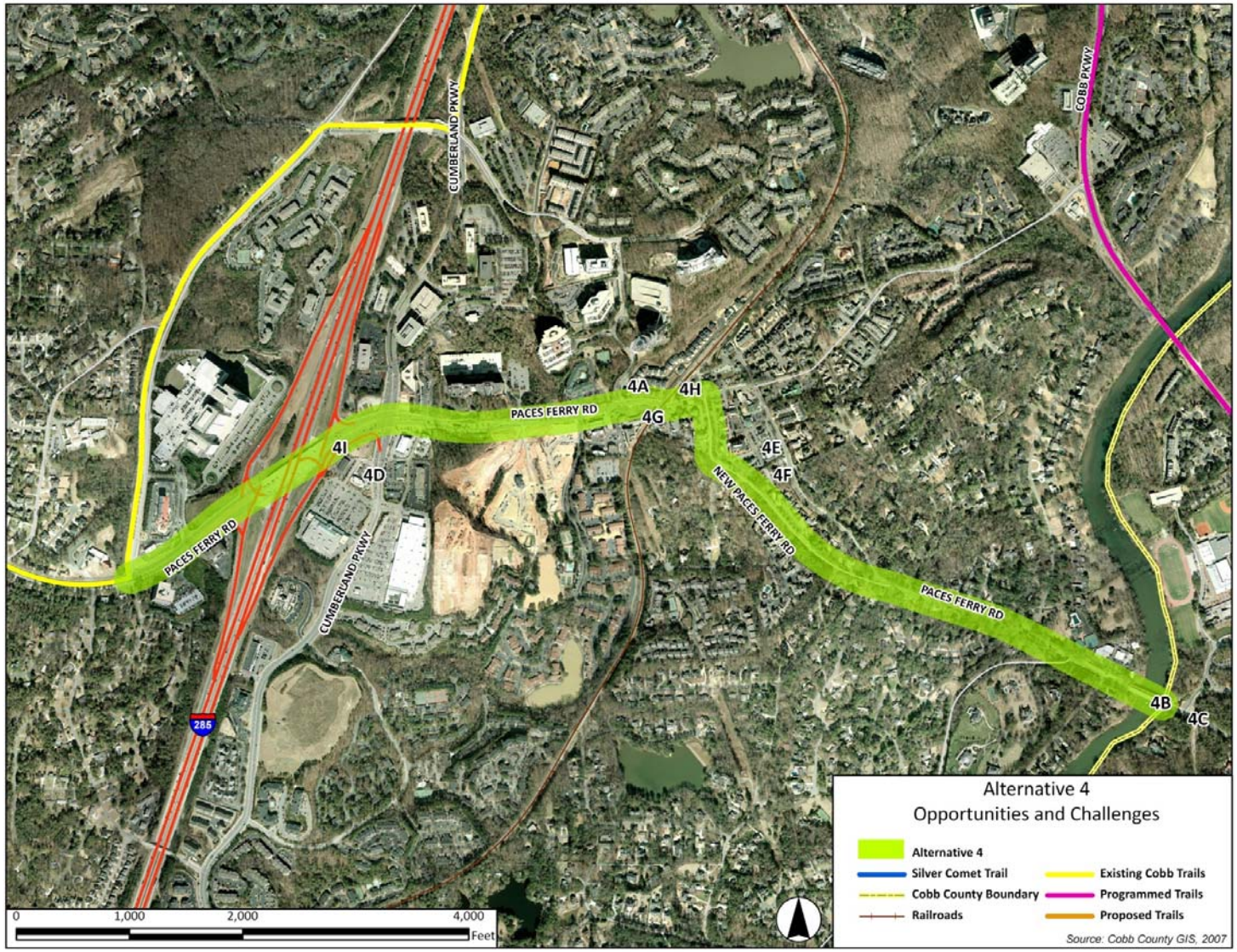

Figure 7A.27: Alternative 4: Opportunities and Challenge

Next Steps

At the March 19, 2009 PMT meeting, Cobb County staff noted that the Paces Ferry route is not as desirable as the other alternatives because it does not utilize the Atlanta Road crossing of the Chattahoochee River. The next step was for Cobb County staff to determine if they would like to no longer consider this alternative.

At the May 5, 2009 PMT meeting, it was determined that Alternative 4 does not fully meet the purpose of the Silver Comet Trail Extension in that it does not utilize the Atlanta Road crossing of the Chattahoochee River. The County's intent for the trail extension is to provide a direct connection to facilities that lead to the downtown Atlanta area, which this alternative does not accomplish. Therefore, this alternative was removed from consideration.

7A.5.5 OTHER ALTERNATIVES CONSIDERED

An additional alternative considered was a spur from the proposed Nickajack Creek Trail, on the west of I-285, to South Cobb Drive and into the City of Atlanta/Fulton County. Beyond the proposed alignment of the Nickajack Creek Trail, a suitable location for this alternative trail could not be identified. The existing South Cobb Drive bridge over I-285 is approximately 100 feet wide, with two eleven-foot lanes in each direction, a twelve-foot left turn lane in each direction, a 15-foot concrete median, and six-foot shoulders. Additionally, the new South Cobb Drive bridge over the Chattahoochee River (currently under construction) does not have adequate trail provisions, and a new, costly, trail crossing structure would be required. Finally, there is not a City of Atlanta bicycle route to connect to once the Chattahoochee River is crossed. This does not support a primary goal of the Silver Comet Trail Extension project, to tie to the City of Atlanta Strategic Bicycle Network for continued access into the center of Atlanta. For these reasons, this alternative does not appear to be viable and has been eliminated from further consideration.

7A.6 PUBLIC INVOLVEMENT

On January 20, 21, and 22, 2009, public workshops for the 2009 Cobb County Bicycle and Pedestrian Plan were held at various locations throughout the County. At each meeting, there was a station providing information about the Silver Comet Trail Extension and seeking feedback from the public. First, citizens participated in an exercise in which they were given two small stickers to place on the large map of the four Silver Comet Trail Extension alternatives that was displayed. The participants were asked to place these stickers to indicate areas that they would like to see the proposed Silver Comet Trail Extension pass through or near. A total of 100 stickers were placed on the map. These locations are summarized as follows:

- 28 were placed at the Atlanta Road bridge over the Chattahoochee River at the connection to the City of Atlanta.
- 23 were placed at the western terminus of the CSX Railroad alternative, at the eastern terminus of the existing Silver Comet Trail.
- Nine (9) were placed at the Paces Ferry Road bridge over the Chattahoochee River (Hermi's Bridge) at the connection to the City of Atlanta.
- Seven (7) were placed at the Cobb Parkway crossing of the Chattahoochee River, at the Chattahoochee River National Recreation Area.
- Six (6) were placed at the western terminus of the Paces Mill alternative, at the intersection of Paces Ferry Road and Spring Hill Parkway.
- Five (5) were placed at the western terminus of the Beech Haven Trail/Log Cabin Road alternative, at the intersection of Cumberland Parkway and Atlanta Road.
- Four (4) were placed at the intersection of Highlands Parkway and S. Cobb Drive.
- Three (3) were placed at the intersection of the proposed Nickajack Creek Trail and Cooper Lake Road Southeast.
- Three (3) were placed along the southern portion of the proposed Nickajack Creek Trail
- Three (3) were placed at the intersection of Paces Ferry Road and Cumberland Parkway.
- Three (3) were placed in downtown Vinings.
- Two (2) were placed at the Kroger shopping center on Church Road near its intersection with Log Cabin Road.
- One (1) was placed at the western terminus of the Highlands Parkway alternative, at the intersection of Highlands Ridge Road and East-West Connector.

- One (1) was placed at the I-285 overpass with the CSX Railroad.
- One (1) was placed at the Cumberland Parkway overpass of I-285.
- One (1) dot was placed on Atlanta Road at Vinings Parkway Southeast.

Secondly, citizens were asked to fill out a comment form to provide feedback on each alternative. Questions asked included, What is your favorite alternative? What are some pros/cons of each alternative? Are there any other routes you would suggest? A total of 65 completed comment forms were received for the Silver Comet Trail Extension task at the January 20, 21, and 22, 2009 Public Workshops. These comments are summarized in Table 7A.11. Table 7A.12 identifies the pros and cons that were named for each alternative.

Comments	Total Received
Favor Highlands Parkway alternative	3
Favor CSX Transportation alternative	30
Favor Beech Haven Trail/Log Cabin Road alternative	2
Favor Paces Mill alternative	7
Favor any utilizing Atlanta Road	6
Uncommitted	5
No Comment	12

Table 7A.11: Public Workshops Summary of Comments

Alternative	Pro/Con	Comments
Highlands Parkway	PRO	Good route for following existing roads
		Existing roadside trees could offer shade
		Provides good access to Church Road and I-285
		May be a cheaper option
		May help local businesses
		Comes within a close proximity of a neglected part of the County
		Comes within a few miles of Veterans Memorial Highway, Chattahoochee River, and City of Atlanta
	CON	Significant grade changes and curves
		Area is too industrial and commercial
		Does not keep with the rural character of the trail
		Somewhat of a low population density in the area
		Highlands Parkway/Church Road intersection is terrible and Plant Atkinson Road is ugly
		A lot of driveways and curb cuts
CSX Railroad	PRO	Good extension of the existing Silver Comet Trail
		Provides a better grade by staying on the rail line
		Allows for bikes to keep off of roads
		Much more direct than the other routes
		Flat and straight, which is good for families
		Does not have multiple roadway crossings
	CON	Trains utilize the route
		Expensive to acquire the property
		Heavily industrial
Beech Haven/Log Cabin	PRO	Good connection to Silver Comet Connector
		Looks the most do-able
		Cheap
		Passes close to Kroger
	CON	A lot of hills
		Too narrow and windy for families
		A lot of driveways and curb cuts

Table 7A.12: Summary of Pros and Cons

Source: January 2009 Public Workshops, 2009 Cobb County Bicycle and Pedestrian Plan

Alternative	Pro/Con	Comments
Paces Mill	PRO	Further north than other routes
		A highly populated area that connects to shopping/retail areas
		Can connect to Cumberland Mall and offices in the area
		Might have the most daily commute potential
		Closest to Sandy Springs
		Scenic
	CON	Too far away
		Not contiguous to existing trail
		Cumberland Connector is not good at all for bicycling
		A lot of driveways and curb cuts
		Too much traffic
		Too far north off of a direct route into town
		Too hilly, hard to climb for novice bicyclists
General	PRO	Atlanta Road connection to City of Atlanta is a good route people could take to work
		All eventually link to the City of Atlanta
		Atlanta Road is more family friendly as the hills around the river are not as steep
	CON	No access from North Cobb area
		Not proposed in close proximity to high density residential areas
		All head through an industrialized area, not conducive to walking/biking
		Connecting to an on-road bike route in Atlanta is not the best use of funds
		Trail should go through lower crime areas
		Some routes are more direct than others

Table 7A.12 Continued

Several citizens suggested other routes for a potential extension of the Silver Comet Trail. One suggested connecting the route to the Cumberland Cobb Community Transit (CCT) bus station, because this would allow car-free access to the Silver Comet Trail for a large number of people. Another suggested a trail or bike lane for the full length of Atlanta Road south to the Fulton County line. One citizen suggested a route along South Cobb Drive to Ridge Road to Atlanta Road, connecting to the City of Atlanta. One citizen suggested using part of the Nickajack Creek Trail. Finally, the U.S. 41 corridor was suggested to connect to the Governor's Mansion and to Peachtree Street in the City of Atlanta.

Citizens also identified routes that do not connect to the City of Atlanta. These routes include:

- A northern connection to the Kennesaw Mountain Recreation Area and Lake Allatoona;
- A north-south connection to the Marietta area;
- A connection to other places that provide or plan for off road facilities, such as the Roswell Greenway;
- A connection from Cumberland Boulevard to Akers Mill to Powers Ferry Road, connecting to the Chattahoochee trail system;
- Additions to the mountain trails like those at Sope Creek;
- A connection to the north to the Town Center area;
- A connection from the Southwest Cobb area (Six Flags) to the Silver Comet Trail; and
- A connection to the Bob Callan Trail, where there is a dense residential area and mixed-use developments.

There were several suggestions for additional goals that should be considered when choosing the preferred alignment for the Silver Comet Trail Extension. These include safety, connections to as many Cobb County recreation areas as possible, minimizing grade crossings and street running, accessibility to public transportation (CCT and Marta), connections to tourist and historical sites, connections to high density population centers, possibility for parking and other facilities, steepness of grade, traffic volumes and scenic views, commuter volume to Atlanta, and inclusion of shade trees.

7A.7 PRIORITIZATION

A component of the Silver Comet Trail Extension task is to prioritize each proposed alternative to aid in the selection of a preferred alternative. In order to determine the most suitable method of prioritizing each of the proposed alternatives, a peer review was conducted to evaluate what factors other counties/regions use to rank and prioritize their bicycle and/or pedestrian projects, and how a rank or score is calculated. Table 7A.13 below shows the results of the peer review process.

Plan	Route Type	Prioritization Factors	Ranking Calculation
Atlanta Regional Commission (ARC) Bicycle and Pedestrian Plan	**Bicycle Facilities**	• Difference between target bicycle LOS and existing road LOS (ΔLOS) • Potential bicycling activity based on Latent Demand Method (Dm) • Degree of congestion by travel time index (Cg) • No. votes segment received in Community Open House Workshop (Pub) • If passes through LCI study site (LCI) • If passes through Station Community on UGPM (Sta) • Relative level of bicycle-friendly policies of jurisdiction of project (Pol) • Unit construction cost (Cost)	Score = (0.3ΔLOS + 0.2 Dm + 0.1Pub + 0.05LCI + 0.05Sta + 0.1Pol) / Cost
Paulding County, GA Trail & Greenway Master Plan	**Trails**	• Right of way ownership (20%) • Connections served (20%) • Construction Cost (20%) • Vehicular Exposure/Conflict (15%) • User Comfort (15%) • User Types Accommodated (10%)	Score = SUM (percent x points for each)

Table 7A.13: Prioritization Peer Review: Factors and Scoring

Plan	Route Type	Prioritization Factors	Ranking Calculation
City of Wilson, NC Comprehensive Bicycle Plan	**Signed Routes**	• Require little to no add'l improvements • Provide access to major destinations • Often parallel to Expert-only routes (no scoring used)	NA
	On-Road: based on Public Input, Project Characteristics, and Constructability/Cost	• Accessiblity (4 possible pts.) • Safety (1 possible pt.) • Centrality (1 possible pt.) • Connectivity (1 possible pt.)	Score = total points [max 7]
	Off-Road	None given	NA
Durhamwalks Pedestrian Plan (City of Durham, NC)	**Corridor Projects**	• Top tier: Project Type (1, 0.5 or 0 pts) • Second Tier: Presence of transit (1 or 0), Proximity to schools (1 or 0), Safety need (1, 0.75, 0.5, 0.25 or 0), Road Type (1, 0.5 or 0) • Third Tier: Nearby Compatible Land Uses (1 or 0), Public comments (1, 0.75, 0.5, 0.25 or 0), Proximity to parks and rec centers (1 or 0), presence of greenways (1 or 0)	Score = 3 (Top Tier pts.) + 2 (Sum of Second Tier pts.) + (Sum of Third Tier pts.) [max 15]
Albemarle Comprehensive Pedestrian Plan (NCDOT)	**Pedestrian Routes**	• Connectivity (10 pts possible for each): Destination Access; Access to special groups - youth, elderly, low income, etc; Already used as social trail or connection; Closes gaps or improves exist. Facilities • Safety (10 pts possible for each): Improves safety for special groups, Improves existing known safety issue, Improves routes with high verhicular volume or provides alternate route • Ease of Implementation (10 pts possible for each): Already in consideration by City or a development, Supported by officials and/or public, Can be implemented at reasonable cost	Score = total points [max 100]

Table 7A.13 Continued

Plan	Route Type	Prioritization Factors	Ranking Calculation
City of Elk Grove (CA) Trails Master Plan	**Trail Projects**	• Trail Connectivity for Transportation and Recreation (22 pts. possible) • Trail Linkages to Destinations (18+ pts. possible) • Trail Safety (6 pts. possible) • Trail Geographical Distribution (5 pts. possible)	Score = total points
Thurston County Regional Planning Council (WA) Regional Trails Plan	**Trail Projects**	• Existing Facility • Connectivity • Safety • Greenways/Open Space Network • Lost Opportunities (i.e. would it be a lost opportunity if not acted on soon) • Project Readiness • Level of Use (i.e. urban or rural area, variety of users)	Not given
City/County of Durham, NC Comprehensive Bicycle Transportation Plan	**Bicycle Facilities**	• Proximity to schools • Access to parks, recreation and points of interest • Transportation System integration • Residential/Commercial/Employment destinations	Not given
Massachusetts Bicycle Coalition	**Bicycle Facilities**	• Regional Quality (5 pts for each town passed through, 25 possible pts) • Connectivity with other routes (10 possible pts.) • Directness (10 possible pts.) • Traffic volume (10 possible pts. for low volume traffic) • Population density (10 pts. for facilities in urban areas) • Improvement to exist. bicycling facility (15 possible pts.) • Public land ownership (15 possible pts.) • Scenic route (5 points)	Score = total points

Table 7A.13 Continued

Next Steps

RS&H has developed a proposed set of criteria, and review and comments were requested from the Project Management Team at the May 5, 2009 meeting. Input was sought to determine what prioritization factors are most important to the County in determining a preferred alignment for the Silver Comet Trail Extension into the City of Atlanta. Cobb County staff did not have objections to the proposed prioritization criteria presented by the consultant team. These proposed criteria are found on the following pages.

Table 7A.14 below displays the results of the prioritization of each alignment, each with two different paving options, concrete and asphalt. Points were awarded on a 100-point scale, with zero being the worst score and 100 the best. Table 7A.15 on the following page presents an overview of the criteria found through the peer review, as well as the set of criteria that was recommended for the Silver Comet Trail Extension, also based on the review of the criteria used by peer jurisdictions. Table 7A.16 displays the methodology used to award points to each alignment for prioritization.

The Log Cabin Drive alignment (Alternative 2) received the highest priority ranking, at 60 points. The score is the same for both the concrete paving option and the asphalt paving option. Because both Alternative 1 and Alternative 2 are in the same general vicinity, the surrounding land uses, amenities, roadway types and transit access are extremely similar. The only criterion that substantially sets the alternatives apart from one another is the estimated cost of each. Cost estimates are provided in at the end of this document.

	SCORING							
	Project Cost (25%)	Connections/Destinations Served (15%)	Right of Way Ownership (15%)	User Comfort/ Vehicular Exposure (15%)	Presence of Transit (10%)	Public Involvement (10%)	Surrounding Land Use (10%)	
Route	**Points Awarded**							**TOTAL**
Alt. 1 - Highlands Pkwy, Paving Option 1 (Concrete)	10	4	5	12	10	1	5	**47**
Alt. 1 - Highlands Pkwy, Paving Option 2 (Asphalt)	15	4	5	12	10	1	5	**52**
Alt. 2 - Log Cabin Drive, Paving Option 1 (Concrete)	20	9	5	10	10	1	5	**60**
Alt. 2 - Log Cabin Drive, Paving Option 2 (Asphalt)	20	9	5	10	10	1	5	**60**

Table 7A.14: Silver Comet Trail Extension Priority Matrix

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		CRITERIA																														
		Target Bicycle LOS vs. Road LOS	Potential Bicycling Activity	Degree of Congestion	Public Involvement	Passes through LCI or Station Community	Level of Bicycle-Friendly Policies of Jurisdiction	Construction Cost	Right of Way Ownership	Connections/Major Destinations Served	Vehicular Exposure/ Conflict	User Comfort/ Safety	Type of Users Accommodated	Requirements for Add'l Improvements	Parallel to Expert-Only Routes	Accessibility	Project Type	Presence of Transit	Proximity to Schools	Nearby Land Use	Presence of Greenways	Ease of Implementation	Trail Geographic Distribution	Existing Facility	Lost Opportunities	Project Readiness	Level of Use	Transportation System Integration	Regional Quality	Connectivity with Other Routes	Directness	Traffic Volume on Roadway	Population Density	Improvements to Existing Bicycle Facility	Scenic Route
JURISDICTION	ARC	•	•	•	•	•	•	•																										
	Paulding County, GA								•	•	•	•	•																						
	City of Wilson, NC									•		•		•	•	•																		
	Durhamwalks				•					•		•					•	•	•	•	•													
	Albemarle Pedestrian Plan									•		•										•												
	City of Elk Grove, CA									•		•											•							•				
	Thurston County RPC											•									•			•	•	•	•							
	Durham, NC									•									•									•						
	MA Bicycle Coalition								•																				•	•	•	•	•	•	•
	Silver Comet Trail Extension Recommended Criteria				•			•	•	•		•						•		•											•			

Table 7A.15: Prioritization Matrix

Project Cost (25%)	***Value***
Cost < $3,000,000	***25***
$3,000,000 ≤ Cost < $4,000,000	***20***
$4,000,000 ≤ Cost < $5,000,000	***15***
$5,000,000 ≤ Cost	***10***
	(Possible 25 total value)

Connections/Destinations Served (15%)	***Value***
Schools:	
Directly Serves	***3***
Within 1/4 mile	***2***
Parks:	
Directly Serves	***3***
Within 1/4 mile	***2***
Residences:	
Serves Primarily Highly Dense Development	***2***
Serves Primarily Moderately Dense Development	***1***
Serves Primarily Minimumly Dense Development	***0***
Business Districts:	
Shopping Center	***2***
Commercial Area	***1***
	(Possible 15 total value)

Right-of-Way Ownership (15%)	***Value***
All or most land owned by Cobb County	***15***
All land partially owned by Cobb County & partially owned by GDOT	***10***
Land partially owned by Cobb County, GDOT and privately	***5***
All land owned privately	***0***
	(Possible 15 total value)

User Comfort/Vehicular Exposure (15%)	***Value***
Major Roadway Crossings = 0 - 2	***10***
Major Roadway Crossings = 3 - 5	***5***
Major Roadway Crossings = 5+	***0***
Minor Roadway Crossings = 0 - 2	***5***
Minor Roadway Crossings = 3 - 5	***2***
Minor Roadway Crossings = 5+	***0***
	(Possible 15 total value)

Presence of Transit (10%)	***Value***
Direct Access to Transit Route	***10***
Access to Transit Route Within 1/4 Mile	***5***
No Transit Access	***0***
	(Possible 10 total value)

Public Involvement (10%)	***Value***
Received >20 Votes at Public Workshops	***10***
Received Between 10 and 20 Votes at Public Workshops	***5***
Received <10 Votes at Public Workshops	***1***
	(Possible 10 total value)

Surrounding Land Use (10%)	***Value***
Primarily Residential	***10***
Mix of Residential, Commercial, Industrial	***5***
Highly Industrial	***0***
	(Possible 10 total value)

SCORE = SUM OF POINTS PER CATEGORY

TOTAL POSSIBLE POINTS = 100

Table 7A.16: Prioritization Methodology

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7A.8 COST ESTIMATES

For the remaining two alternatives, Alternative 1 (Highlands Parkway) and Alternative 2 (Log Cabin Drive), a cost comparison was completed. This analysis consisted of compiling the anticipated costs associated with each alignment, including costs for engineering, right of way and construction. Current construction costs were obtained from Cobb County DOT as well as GDOT. Right of way costs were obtained from the Georgia Rapid Transit Authority's (GRTA) costing tool. For each alternative, cost estimates were developed using a concrete paving option as well as an asphalt paving option. The least expensive alternative is Alternative 2, built with an asphalt surface, at $3,289,822. The most expensive is Alternative 1, built with a concrete surface, at $5,311,505. Table 7A.17 below shows an overview of the cost of each alternative, and more detailed cost estimates are provided on the following pages in Tables 7A.18 – 7A.21.

Alternative	Construction Cost	Preliminary Engineering Cost	Right of Way Cost	Total Cost
2: Log Cabin Drive, Asphalt	$1,533,365.30	$122,669.22	$1,633,787.50	**$3,289,822.02**
2: Log Cabin Drive, Concrete	$2,060,320.30	$164,825.62	$1,633,787.50	**$3,858,933.42**
1: Highlands Parkway, Asphalt	$2,271,670.75	$181,733.66	$2,192,155.26	**$4,645,559.67**
1: Highlands Parkway, Concrete	$2,888,286.75	$231,062.94	$2,192,155.26	**$5,311,504.95**

Table 7A.17: Overview of Alternative Costs

General Information			
Length (mi):	3.92	**Minor Roadway Crossings:**	
Width (ft):	10	Lake Ridge Drive	Maner Road
Right of Way Width (ft):	8	Oakdale Road	Nifda Drive
Temp. Easement Width (ft):	5	Tibarron Parkway	
Major Roadway Crossings:		**Driveway Crossings:**	
East-West Connector (utilize existing crossing features)		Residential: 3	
S. Cobb Drive (utilize existing crossing features)		Commercial: 32	

Mainline Cost

Item	Unit	Unit Price	Quantity	Cost
Traffic Control	EA	$75,000	1	$75,000.00
Conc. Sidewalk, 6 in. thick	SY	$41.72	22,997	$959,448.75
Curb and Gutter (6"x24")	LF	$38.58	4,979	$192,089.82
Storm Drain Pipe (18")	LF	$36.80	3,321	$122,212.54
Catch Basin	EA	$2,453.15	14	$34,897.81
Class B Concrete, Retaining Wall	CY	$919.63	275	$252,898.25
Galv. Steel Pipe Handrail, 2 in. Round	LF	$34.50	275	$9,487.50
Grassing (5 ft. width)	SY	$6.91	11,499	$79,455.79
Concrete Side Barrier, Type 2	LF	$313.93	475	$149,116.75
Skip Traffic Stripe, 5 in, Yellow	LF	$0.22	20,698	$4,553.47
Solid Traffic Stripe, 24 in, White	LF	$2.01	20	$40.20
Pavement Marking Symbol, RR Crossing Symbol	EA	$158.00	2	$316.00
Highway Signs, Tp 2 Mat'l, Refl. Sheeting, Tp 9	SF	$41.39	60	$2,483.40
Erosion Control	LS	N/A	1	$125,000.00
Grading Complete/Earthwork	LS	N/A	1	$75,000.00
			Total, Mainline:	**$2,082,000.28**

Additional Items for Major Crossings

Item	Unit	Unit Price	Quantity	Cost
Bollards (2 per crossing)	EA	$649.21	2	$1,298.42
			Subtotal, per Major Crossing:	$1,298.42
			Number of Major Crossings:	2
			Total, Major Crossings:	**$2,596.84**

Additional Items for Minor Crossings

Item	Unit	Unit Price	Quantity	Cost
Curb Cut Wheelchair Ramp, Type D (2 per crossing)	EA	$630.00	2	$1,260.00
Solid Traffic Stripe, 8 in, White	LF	$1.63	105	$171.15
			Subtotal, per Minor Crossing:	$1,431.15
			Number of Minor Crossings:	5
			Total, Minor Crossings:	**$7,155.75**

Additional Items for Driveway Crossings

Item	Unit	Unit Price	Quantity	Cost
Driveway Concrete, 6 In. Thickness (for comm. driveways)	SY	$36.56	184	$6,727.04
Concrete Valley Gutter, 6 In. (for residential driveways)	SY	$26.75	45	$1,203.75
Number of Residential Driveways: 3			Subtotal, Res. Driveways:	$3,611.25
Number of Commercial Driveways: 32			Subtotal, Comm. Driveways:	$215,265.28
			Total, Driveway Crossings:	**$218,876.53**
			Construction Cost, Subtotal:	***$2,310,629.40***
			25% Contingency:	***$577,657.35***
			TOTAL CONSTRUCTION COST:	**$2,888,286.75**

Right of Way

Item	Unit	Unit Price	Quantity	Cost
Right of Way - Suburban, commercial	SF	$10.86	140,744	$1,528,476.36
Right of Way - Suburban, residential	SF	$2.65	24,837	$65,818.37
Temporary Easement - Suburban, commercial	SF	$6.52	87,965	$573,178.64
Temporary Easement - Suburban, residential	SF	$1.59	15,523	$24,681.89
			Total, Right of Way:	**$2,192,155.26**

Preliminary Engineering

Item	Unit	Unit Price	Quantity	Cost
Preliminary Engineering	N/A	N/A	N/A	$206,398.30
			Total, Preliminary Engineering:	**$206,398.30**

TOTAL COST, ALTERNATIVE 1, PAVING OPTION 1:	***$5,286,840.31***

Alternative 1 Notes/Assumptions:

1. Item descriptions and unit costs based on current (2008) Georgia DOT pay item index.
2. Curb and gutter estimated for addition where it is not currently present along alignments.
3. Catch basins placed every 350 feet, where curb and gutter is required. Storm drain pipe is assumed for one third of length where curb and gutter is required.
4. Retaining wall anticipated along parcels on Highlands Parkway where there is severe sidewalk droppoff, as indicated in alternatives analysis report. Handrail will be placed at the same locations.
5. Concrete barriers anticipated at pinch points, including Highlands Parkway/S. Cobb Drive intersection and adjacent to Grace Community Fellowship Church on Church Road.
6. Erosion control and grading complete/earthwork costs estimated from similar Cobb DOT projects.
7. Square yardage for concrete valley gutter estimated by average driveway size along alignment.
8. Signage quantities calculated based on roadway/trail crossing standards.
9. Right of way surrounding Alternative 1 assumed to be 85% commercial, 15% residential. Right of way cost taken from Georgia Rapid Transit Authority (GRTA) Costing Tool. Temporary easement cost assumed at 60% of right of way cost.
10. Required right of way and temporary easement widths estimated from available existing right of way data.
11. Preliminary Engineering cost obtained from the average of 8% of construction cost of the concrete option, and 8% of construction cost of asphalt option.
12. N/A = Not applicable.

t Trail Extension

Table 7A.18: Preliminary Cost Analysis, Alternative 1: Highlands Parkway, Paving Option 1 - Concrete

General Information			
Length (mi):	3.92	**Minor Roadway Crossings:**	
Width (ft):	10	Lake Ridge Drive	Maner Road
Right of Way Width (ft):	8	Oakdale Road	Nifda Drive
Temp. Easement Width (ft):	5	Tibarron Parkway	
Major Roadway Crossings:		**Driveway Crossings:**	
East-West Connector (utilize existing crossing features)		Residential: 3	
S. Cobb Drive (utilize existing crossing features)		Commercial: 32	

Mainline Cost

Item	Unit	Unit Price	Quantity	Cost
Traffic Control	EA	$75,000	1	$75,000.00
4" GAB	SY	$8.00	22,997	$183,978.67
Surface Course (12.5 mm)	SY	$6.04	22,997	$138,903.89
Binder (19 mm)	SY	$6.23	22,997	$143,273.39
Curb and Gutter (6"x24")	LF	$38.58	4,979	$192,089.82
Storm Drain Pipe (18")	LF	$36.80	3,321	$122,212.54
Catch Basin	EA	$2,453.15	14	$34,897.81
Class B Concrete, Retaining Wall	CY	$919.63	275	$252,898.25
Galv. Steel Pipe Handrail, 2 in. Round	LF	$34.50	275	$9,487.50
Grassing (5 ft. width)	SY	$6.91	11,499	$79,455.79
Concrete Side Barrier, Type 2	LF	$313.93	475	$149,116.75
Skip Traffic Stripe, 5 in, Yellow	LF	$0.22	20,698	$4,553.47
Solid Traffic Stripe, 24 in, White	LF	$2.01	20	$40.20
Pavement Marking Symbol, RR Crossing Symbol	EA	$158.00	2	$316.00
Highway Signs, Tp 2 Mat'l, Refl. Sheeting, Tp 9	SF	$41.39	60	$2,483.40
Erosion Control	LS	N/A	1	$125,000.00
Grading Complete/Earthwork	LS	N/A	1	$75,000.00
			Total, Mainline:	**$1,588,707.48**

Additional Items for Major Crossings

Item	Unit	Unit Price	Quantity	Cost
Bollards (2 per crossing)	EA	$649.21	2	$1,298.42
			Subtotal, per Major Crossing:	$1,298.42
			Number of Major Crossings:	2
			Total, Major Crossings:	**$2,596.84**

Additional Items for Minor Crossings

Item	Unit	Unit Price	Quantity	Cost
Curb Cut Wheelchair Ramp, Type D (2 per crossing)	EA	$630.00	2	$1,260.00
Solid Traffic Stripe, 8 in, White	LF	$1.63	105	$171.15
			Subtotal, per Minor Crossing:	$1,431.15
			Number of Minor Crossings:	5
			Total, Minor Crossings:	**$7,155.75**

Additional Items for Driveway Crossings

Item	Unit	Unit Price	Quantity	Cost
Driveway Concrete, 6 In. Thickness (for comm. driveways)	SY	$36.56	184	$6,727.04
Concrete Valley Gutter, 6 In. (for residential driveways)	SY	$26.75	45	$1,203.75
Number of Residential Driveways: 3			Subtotal, Res. Driveways:	$3,611.25
Number of Commercial Crossings: 32			Subtotal, Comm. Driveways:	$215,265.28
			Total, Driveway Crossings:	**$218,876.53**
			Construction Cost, Subtotal:	***$1,817,336.60***
			25% Contingency:	***$454,334.15***
			TOTAL CONSTRUCTION COST:	**$2,271,670.75**

Right of Way

Item	Unit	Unit Price	Quantity	Cost
Right of Way - Suburban, commercial	SF	$10.86	140,744	$1,528,476.36
Right of Way - Suburban, residential	SF	$2.65	24,837	$65,818.37
Temporary Easement - Suburban, commercial	SF	$6.52	87,965	$573,178.64
Temporary Easement - Suburban, residential	SF	$1.59	15,523	$24,681.89
			Total, Right of Way:	**$2,192,155.26**

Preliminary Engineering

Item	Unit	Unit Price	Quantity	Cost
Preliminary Engineering	N/A	N/A	N/A	$206,398.30
			Total, Preliminary Engineering:	**$206,398.30**

TOTAL COST, ALTERNATIVE 1, PAVING OPTION 2:	***$4,670,224.31***

Alternative 1 Notes/Assumptions:

1. Item descriptions and unit costs based on current (2008) Georgia DOT pay item index.
2. Curb and gutter estimated for addition where it is not currently present along alignments.
3. Catch basins placed every 350 feet, where curb and gutter is required. Storm drain pipe is assumed for one third of length where curb and gutter is required.
4. Retaining wall anticipated along parcels on Highlands Parkway where there is severe sidewalk droppoff, as indicated in alternatives analysis report. Handrail will be placed at the same locations.
5. Concrete barriers anticipated at pinch points, including Highlands Parkway/S. Cobb Drive intersection and adjacent to Grace Community Fellowship Church on Church Road.
6. Erosion control and grading complete/earthwork costs estimated from similar Cobb DOT projects.
7. Square yardage for concrete valley gutter estimated by average driveway size along alignment.
8. Signage quantities calculated based on roadway/trail crossing standards.
9. Right of way surrounding Alternative 1 assumed to be 85% commercial, 15% residential. Right of way cost taken from Georgia Rapid Transit Authority (GRTA) Costing Tool. Temporary easement cost assumed at 60% of right of way cost.
10. Required right of way and temporary easement widths estimated from available existing right of way data.
11. Preliminary Engineering cost obtained from the average of 8% of construction cost of the concrete option, and 8% of construction cost of asphalt option.
12. N/A = Not applicable.

'ail Extension

Table 7A.19: Preliminary Cost Analysis, Alternative 1: Highlands Parkway, Paving Option 2 - Asphalt

General Information

Length (mi):	3.35
Width (ft):	10
Right of Way Width (ft):	8
Temp. Easement Width (ft):	5

Minor Roadway Crossings:

Brownwood Lane	Rosebrook Place
North Church Lane	Plant Atkinson Road
Trolley Court	Elizabeth Lane
Woodland Brook Drive	Nifda Drive

Major Roadway Crossings:

Atlanta Road/Cumberland Pkwy (utilize existing crossing features)

Atlanta Road/Nifda Dr (utilize existing crossing features)

Driveway Crossings:

Residential: 2

Commercial: 7

Mainline Cost

Item	Unit	Unit Price	Quantity	Cost
Traffic Control	EA	$75,000	1	$75,000.00
Conc. Sidewalk, 6 in. thick	SY	$41.72	19,653	$819,937.07
Curb and Gutter (6"x24")	LF	$38.58	4,979	$192,089.82
Storm Drain Pipe (18")	LF	$36.80	3,321	$122,212.54
Catch Basin	EA	$2,453.15	14	$34,897.81
Grassing (5 ft. width)	SY	$6.91	9,827	$67,902.27
Chain Link Fence, ZC Coat, 6 ft, 9 GA	LF	$33.46	2,000	$66,920.00
Skip Traffic Stripe, 5 in, Yellow	LF	$0.22	17,688	$3,891.36
Highway Signs, Tp 2 Mat'l, Refl. Sheeting, Tp 9	SF	$41.39	45	$1,862.55
Erosion Control	LS	N/A	1	$125,000.00
Grading Complete/Earthwork	LS	N/A	1	$75,000.00
			Total, Mainline:	**$1,584,713.42**

Additional Items for Major Crossings

Item	Unit	Unit Price	Quantity	Cost
Bollards (2 per crossing)	EA	$649.21	2	$1,298.42
			Subtotal, per Major Crossing:	$1,298.42
			Number of Major Crossings:	2
			Total, Major Crossings:	**$2,596.84**

Additional Items for Minor Crossings

Item	Unit	Unit Price	Quantity	Cost
Curb Cut Wheelchair Ramp, Type D (2 per crossing)	EA	$630.00	2	$1,260.00
Solid Traffic Stripe, 8 in, White	LF	$1.63	105	$171.15
			Subtotal, per Minor Crossing:	$1,431.15
			Number of Minor Crossings:	8
			Total, Minor Crossings:	**$11,449.20**

Additional Items for Driveway Crossings

Item	Unit	Unit Price	Quantity	Cost
Driveway Concrete, 6 In. Thickness (for comm. driveways)	SY	$36.56	184	$6,727.04
Concrete Valley Gutter, 6 In. (for residential driveways)	SY	$26.75	45	$1,203.75
Number of Residential Driveways: 2			Subtotal, Res. Driveways:	$2,407.50
Number of Commercial Driveways: 7			Subtotal, Comm. Driveways:	$47,089.28
			Total, Driveway Crossings:	**$49,496.78**
			Construction Cost, Subtotal:	***$1,648,256.24***
			25% Contingency:	***$412,064.06***
			TOTAL CONSTRUCTION COST:	**$2,060,320.30**

Right of Way

Item	Unit	Unit Price	Quantity	Cost
Right of Way - Suburban, commercial	SF	$10.86	99,053	$1,075,713.41
Right of Way - Suburban, residential	SF	$2.65	42,451	$112,495.68
Temporary Easement - Suburban, commercial	SF	$6.52	61,908	$403,392.53
Temporary Easement - Suburban, residential	SF	$1.59	26,532	$42,185.88
			Total, Right of Way:	**$1,633,787.50**

Preliminary Engineering

Item	Unit	Unit Price	Quantity	Cost
Preliminary Engineering	N/A	N/A	N/A	$143,762.41
			Total, Preliminary Engineering:	**$143,762.41**

TOTAL COST, ALTERNATIVE 2, PAVING OPTION 1: ***$3,837,870.20***

Alternative 2 Notes/Assumptions:

1. Item descriptions and unit costs based on current (2008) Georgia DOT pay item index.
2. Curb and gutter estimated for addition where it is not currently present along alignments.
3. Catch basins placed every 350 feet, where curb and gutter is required. Storm drain pipe is assumed for one third of length where curb and gutter is required.
4. Chain link fence required along I-285, approx. 2,000 feet.
5. Erosion control and grading complete/earthwork costs estimated from similar Cobb DOT projects.
6. Signage quantities calculated based on roadway/trail crossing standards.
7. Right of way surrounding Alternative 1 assumed to be 85% commercial, 15% residential. Right of way cost taken from Georgia Rapid Transit Authority (GRTA) Costing Tool. Temporary easement cost assumed at 60% of right of way cost.
8. Required right of way and temporary easement widths estimated from available existing right of way data.
9. Preliminary Engineering cost obtained from the average of 8% of construction cost of the concrete option, and 8% of construction cost of asphalt option.
10. N/A = Not applicable.

r Comet Trail Extension

Table 7A.20: Preliminary Cost Analysis, Alternative 2: Log Cabin Drive, Paving Option 1 - Concrete

General Information

Length (mi):	3.35	**Minor Roadway Crossings:**	
Width (ft):	10	Brownwood Lane	Rosebrook Place
Right of Way Width (ft):	8	North Church Lane	Plant Atkinson Road
Temp. Easement Width (ft):	5	Trolley Court	Elizabeth Lane
		Woodland Brook Drive	Nifda Drive

Major Roadway Crossings:
Atlanta Road/Cumberland Pkwy (utilize existing crossing features)
Atlanta Road/Nifda Dr (utilize existing crossing features)

Driveway Crossings:
Residential: 2
Commercial: 7

Mainline Cost

Item	Unit	Unit Price	Quantity	Cost
Traffic Control	EA	$75,000	1	$75,000.00
4" GAB	SY	$8.00	19,653	$157,226.67
Surface Course (12.5 mm)	SY	$6.04	19,653	$118,706.13
Binder (19 mm)	SY	$6.23	19,653	$122,440.27
Curb and Gutter (6"x24")	LF	$38.58	4,979	$192,089.82
Storm Drain Pipe (18")	LF	$36.80	3,321	$122,212.54
Catch Basin	EA	$2,453.15	14	$34,897.81
Grassing (5 ft. width)	SY	$6.91	9,827	$67,902.27
Chain Link Fence, ZC Coat, 6 ft, 9 GA	LF	$33.46	2,000	$66,920.00
Skip Traffic Stripe, 5 in, Yellow	LF	$0.22	17,688	$3,891.36
Highway Signs, Tp 2 Mat'l, Refl. Sheeting, Tp 9	SF	$41.39	45	$1,862.55
Erosion Control	LS	N/A	1	$125,000.00
Grading Complete/Earthwork	LS	N/A	1	$75,000.00
			Total, Mainline:	**$1,163,149.42**

Additional Items for Major Crossings

Item	Unit	Unit Price	Quantity	Cost
Bollards (2 per crossing)	EA	$649.21	2	$1,298.42
			Subtotal, per Major Crossing:	$1,298.42
			Number of Major Crossings:	2
			Total, Major Crossings:	**$2,596.84**

Additional Items for Minor Crossings

Item	Unit	Unit Price	Quantity	Cost
Curb Cut Wheelchair Ramp, Type D (2 per crossing)	EA	$630.00	2	$1,260.00
Solid Traffic Stripe, 8 in, White	LF	$1.63	105	$171.15
			Subtotal, per Minor Crossing:	$1,431.15
			Number of Minor Crossings:	8
			Total, Minor Crossings:	**$11,449.20**

Additional Items for Driveway Crossings

Item	Unit	Unit Price	Quantity	Cost
Driveway Concrete, 6 In. Thickness (for comm. driveways)	SY	$36.56	184	$6,727.04
Concrete Valley Gutter, 6 In. (for residential driveways)	SY	$26.75	45	$1,203.75
Number of Residential Driveways: 2			Subtotal, Res. Driveways:	$2,407.50
Number of Commercial Driveways: 7			Subtotal, Comm. Driveways:	$47,089.28
			Total, Driveway Crossings:	**$49,496.78**
			Construction Cost, Subtotal:	***$1,226,692.24***
			25% Contingency:	***$306,673.06***
			TOTAL CONSTRUCTION COST:	**$1,533,365.30**

Right of Way

Item	Unit	Unit Price	Quantity	Cost
Right of Way - Suburban, commercial	SF	$10.86	99,053	$1,075,713.41
Right of Way - Suburban, residential	SF	$2.65	42,451	$112,495.68
Temporary Easement - Suburban, commercial	SF	$6.52	61,908	$403,392.53
Temporary Easement - Suburban, residential	SF	$1.59	26,532	$42,185.88
			Total, Right of Way:	**$1,633,787.50**

Preliminary Engineering

Item	Unit	Unit Price	Quantity	Cost
Preliminary Engineering, 8% of Construction Cost	N/A	N/A	N/A	$143,762.41
			Total, Preliminary Engineering:	**$143,762.41**

TOTAL COST, ALTERNATIVE 2, PAVING OPTION 2:	***$3,310,915.20***

Alternative 2 Notes/Assumptions:
1. Item descriptions and unit costs based on current (2008) Georgia DOT pay item index.
2. Curb and gutter estimated for addition where it is not currently present along alignments.
3. Catch basins placed every 350 feet, where curb and gutter is required. Storm drain pipe is assumed for one third of length where curb and gutter is required.
4. Chain link fence required along I-285, approx. 2,000 feet.
5. Erosion control and grading complete/earthwork costs estimated from similar Cobb DOT projects.
6. Signage quantities calculated based on roadway/trail crossing standards.
7. Right of way surrounding Alternative 1 assumed to be 85% commercial, 15% residential. Right of way cost taken from Georgia Rapid Transit Authority (GRTA) Costing Tool. Temporary easement cost assumed at 60% of right of way cost.
8. Required right of way and temporary easement widths estimated from available existing right of way data.
9. Preliminary Engineering cost obtained from the average of 8% of construction cost of the concrete option, and 8% of construction cost of asphalt option.
10. N/A = Not applicable.

r Comet Trail Extension

Table 7A.21: Preliminary Cost Analysis, Alternative 2: Log Cabin Drive, Paving Option 2 - Asphalt

Table of Contents

CHAPTER 7B: NOONDAY CREEK TRAIL EXTENSION ALTERNATIVES ANALYSIS

Chapter 7B: Noonday Creek Trail Extension Alternatives Analysis

7B.1 INTRODUCTION AND BACKGROUND

As part of the 2009 Cobb County *Bicycle and Pedestrian Improvement Plan*, an alternatives analysis has been conducted to recommend an alignment for an extension to the programmed Noonday Creek Trail, which is divided into three (3) phases. Phase 1 begins at the intersection of US 41/Cobb Parkway and Greers Chapel Road and ends at the intersection of US 41/Cobb Parkway and Roberts Road. Phase 2C begins at the intersection of US 41/Cobb Parkway and Roberts Road and ends at Bells Ferry Road. The Noonday Creek Trail Extension is designated as Phase 3 of the overall Noonday Creek Trail, and is planned to extend from the termination of Phase 2C at Bells Ferry Road north to the Cherokee County line.

Noonday Creek begins south of Kennesaw, near the intersection of Stilesboro Road and Kennesaw-Due West Road. It travels northeast to I-75/I-575, where it turns north and travels to Cherokee County and eventually terminates at Lake Allatoona. The Noonday Creek Trail Extension will begin immediately east of I-575 at Bells Ferry Road, and will continue north to Cherokee County. The previous phase of this trail (Phase 2C) terminates at Bells Ferry Road to the north of Barrett Parkway. Cobb County wishes to determine the best possible alignment for this final phase of the Noonday Creek Trail.

Currently, a Cobb County sewer easement travels along Noonday Creek for its entire length between Bells Ferry Road and just south of the Cherokee County line. The easement is managed by the Cobb County Water System. This sewer easement is approximately 20 feet wide and travels along the western side of the creek. In some areas, along parts of Noonday Park and northward to the water treatment facility, there is a sewer easement on both the east and west sides of the creek. Additionally, there are some County-owned parcels located along Noonday Creek. Ideally, this trail would be located along all or portions of this easement, and would be ten to twelve feet wide and paved for multi-purpose use. This sewer easement and County-owned property are shown in Figure 7B.1.

According to the Cobb County Water System Land Acquisition Department, this sewer easement is only to be used for the purpose of the sewer system. In order to locate a trail along this easement, the Cobb County Department of Transportation would have to acquire an additional easement for the purpose of the trail.

While this would come at a significant cost to the County, the value of the property where the sewer easement exists is already diminished somewhat because it is already utilized by the sewer system, as indicated by the Cobb County Water System Land Acquisition Department. In order for the trail to be located along this sewer easement, approval must be obtained from affected property owners for active uses to be permitted along the easement. According to the Cobb County Water System management, in the past it has been difficult for the County to acquire property along Noonday Creek between the Canterbury subdivision and Hawkins Store Road.

The proposed trail's location along the creek presents a valuable opportunity to highlight this resource. Carefully selected rest areas and educational signage would enhance the trail user's experience and inform them about the surrounding area, both environmentally and historically. These amenities would help to further define the trail's character and help to set the tone for an enjoyable experience, as well as make it community-friendly. Other amenities that would be suitable in this area are a nature preserve, wildlife refuge, or exercise stations/equipment.

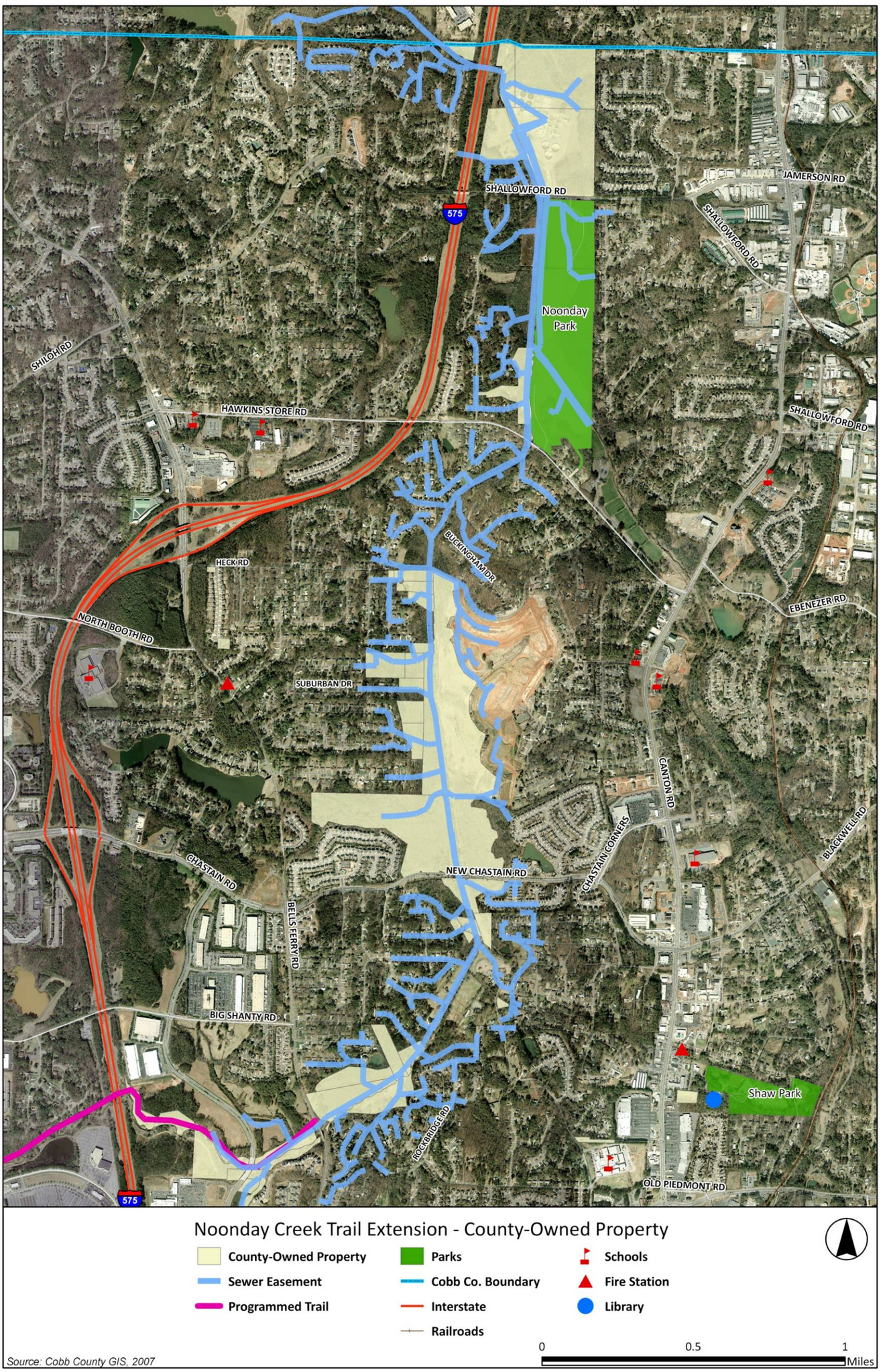

Figure 7B.1: Cobb County Owned Property and Water System Sewer Easement.

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7B.2 STUDY AREA

The study area for the alternatives analysis, shown in Figure 7B.2, was determined initially through discussions with Cobb County staff at a study kickoff meeting on July 14, 2009. The study area is bound by Bells Ferry Road and I-575 to the west, Canton Road to the east, the Cherokee County line to the north, and Barrett Parkway/Piedmont Road to the south. This area was carefully studied in order to determine the most practical and effective alignment for the trail.

7B.2.1 ALTERNATIVE SELECTION PROCESS

The purpose of the July 14 meeting was to identify potential trail alignments and various issues and opportunities in the area. Five alignments were initially identified through conversations with Cobb County staff, aerial review, analysis of County-owned property, and on-site review of the study area. The initial five (5) alternatives are shown in 7B.3 on the following page. These five alternatives consisted of:

- **Noonday Creek Alternative:** Completely follows Noonday Creek corridor from Bells Ferry Road north to the Cherokee County line;
- **Canton Road Alternative:** Begins at Bells Ferry Road, follows Noonday Creek corridor north to New Chastain Road, to Chastain Corners, to Canton Road, north to Hawkins Store Road, west to Noonday Creek corridor, north to Cherokee County line;
- **New Chastain Alternative:** Follows Bells Ferry Road north to New Chastain Road, east to Noonday Creek corridor, north to Hawkins Store Road and the Cherokee County line;
- **Bells Ferry Alternative:** Follows Bells Ferry Road to south of Parkwood Drive, east along Cobb County property to Noonday Creek corridor, to Hawkins Store Road and the Cherokee County line;
- **575 Alternative:** Follows Bells Ferry Road north to I-575 right of way and follows it north to Hawkins Store Road, east to Noonday Creek corridor, north to the Cherokee County line.

On Wednesday, July 29, 2009, a meeting was held with Cobb County staff in order to discuss these five (5) alternatives and identify further opportunities and challenges associated with each. After in-depth discussions, a decision was made to narrow these five (5) alternatives down to only three (3) for more detailed analysis. These three (3) alternatives are shown in Figure 7B.4 and consist of:

- **Noonday Creek Alternative**: completely follows Noonday Creek;
- **Canton Road Alternative**: A combination of the previously defined **Canton Road** and **New Chastain Alternatives**; and
- **Bells Ferry Alternative**.

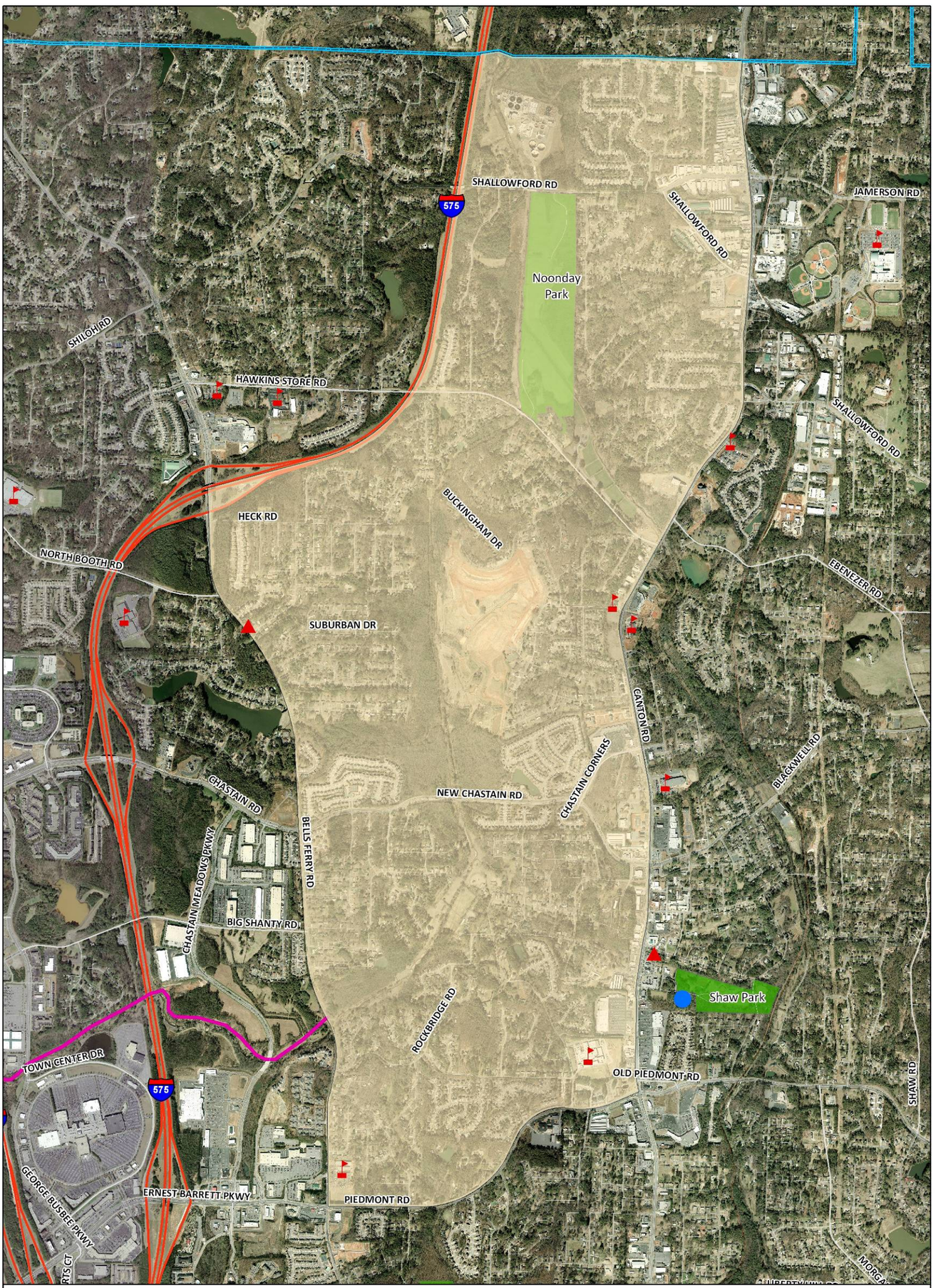

Figure 7B.2: Study Area

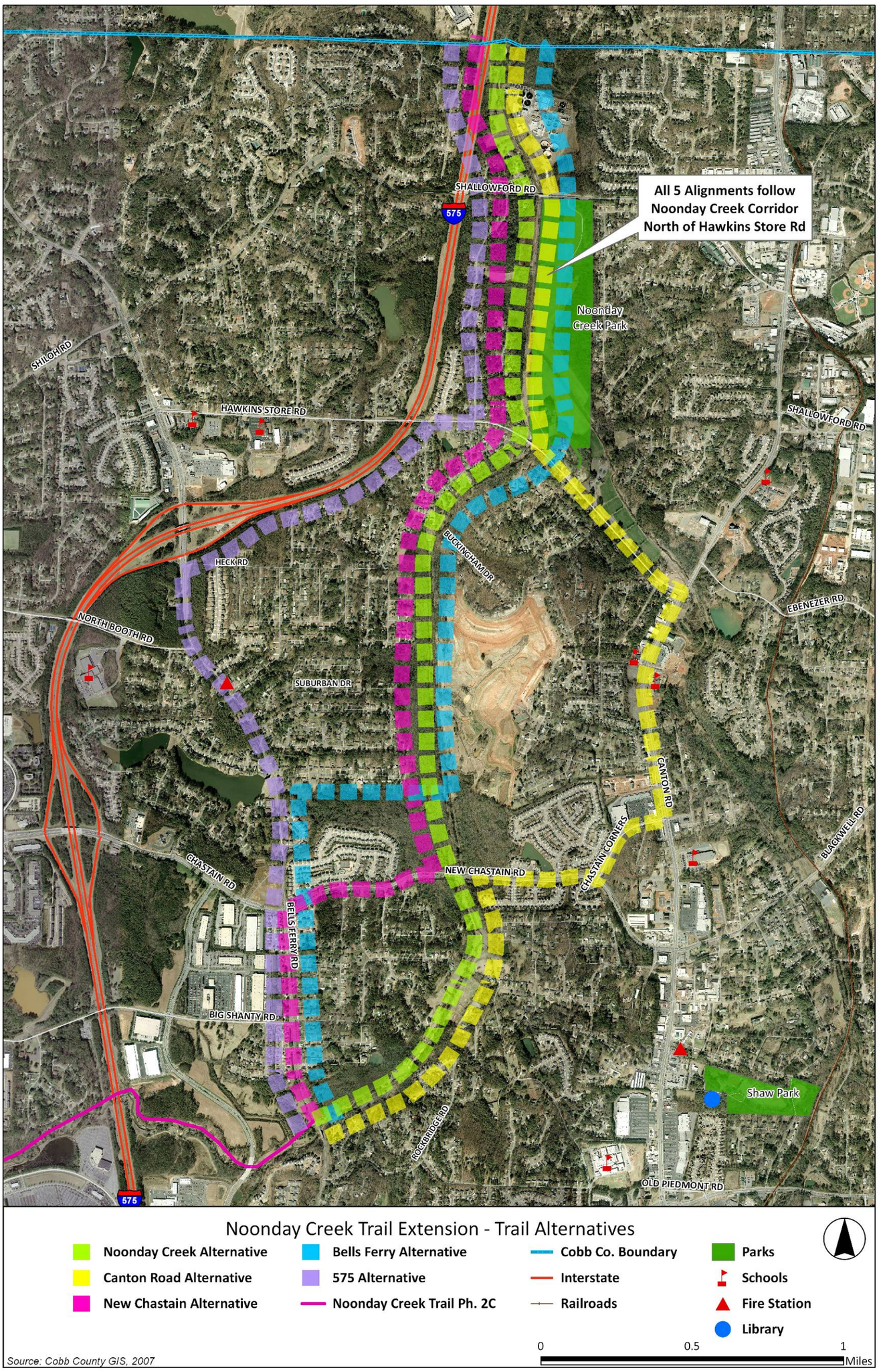

Figure 7B.3: Noonday Creek Trail Extension - Trail Alternatives

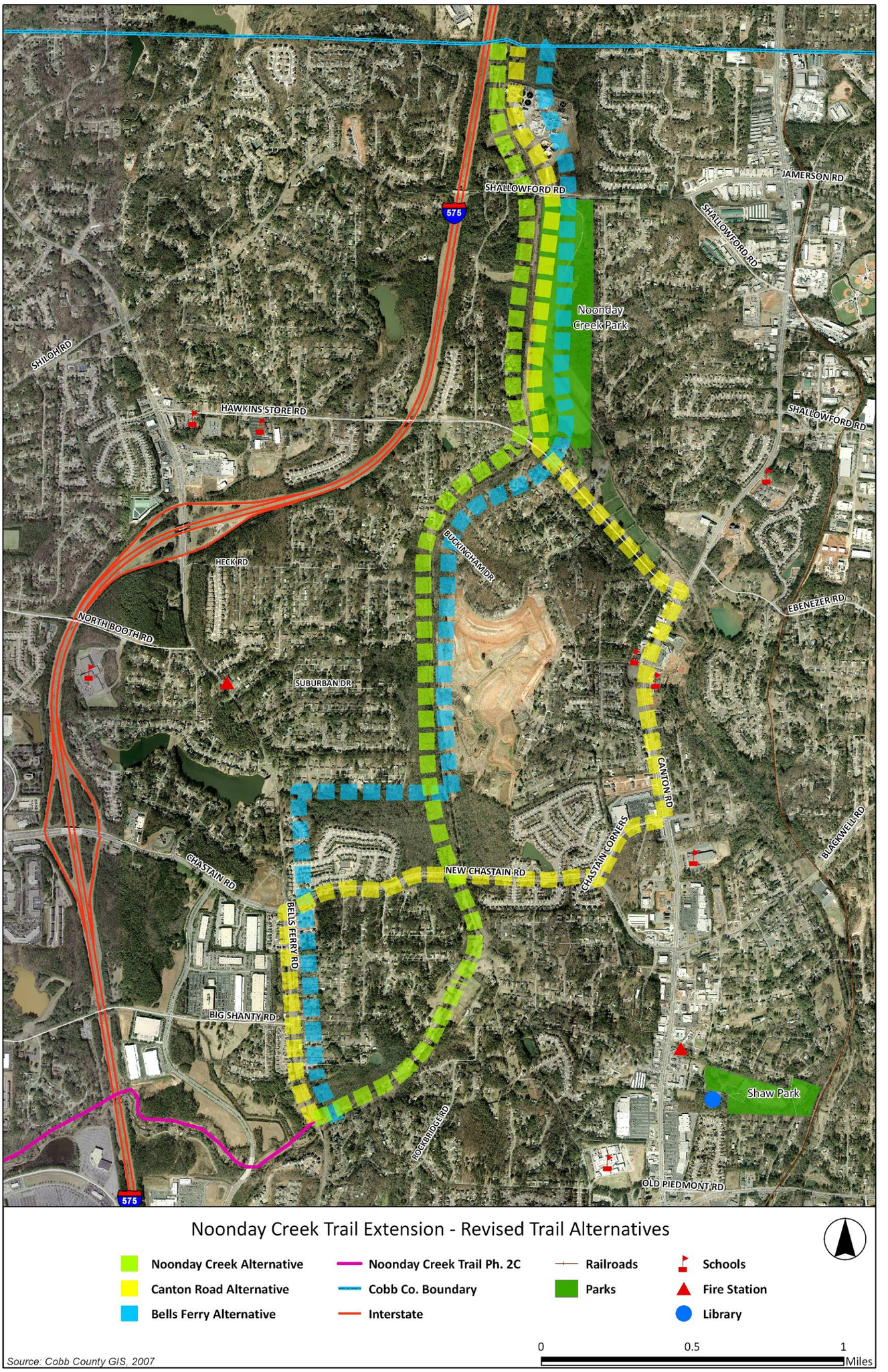

Figure 7B.4: Trail Alternatives, Revised

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In order to ensure that the most logical northern terminus was chosen, coordination with Cherokee County was undertaken. Cherokee County does not currently have any trail plans in the vicinity of Noonday Creek. However, in June of 2008 the City of Woodstock's parks and recreation department conducted the Greenprints Project, a green infrastructure master plan. This project proposes a trail along Noonday Creek in southern Cherokee County, which would tie directly to the Noonday Creek Trail Extension in Cobb County.

7B.2.2 POTENTIAL TRAILHEAD LOCATIONS

Additionally, locations were considered to serve as potential trailheads for the Noonday Creek Trail Extension. Noonday Park on Hawkins Store Road has multiple soccer fields, a picnic area, playground, concessions, and parking. Because of the large amount of parking available, this would be an ideal location for a trailhead, with the addition of trail information, bike racks, and other trail amenities. At the northern end of the park, there is a cleared area that is not currently being used. Additional parking spaces could be added here due to high-volume activities that often occur at the park on weekends.

Park and ride lots in the area were also examined to determine if one could be enhanced to serve as a trailhead. The closest existing lot to the proposed Noonday Creek Trail Extension is on Busbee Parkway. This lot is located west of Noonday Creek between I-75 and I-575 and would require trail users to traverse a heavily-traveled area using Busbee Parkway and Big Shanty Road in order to access the trail. Because of the distance from the proposed trail and the lack of bicycle or pedestrian features such as sidewalks or bike lanes, this trailhead would not adequately meet the needs of trail users, especially those who are beginning riders or wheelchair users.

Proposed park and ride lots in the area were also considered as potential locations for trailheads for the Noonday Creek Trail Extension. The Georgia Regional Transportation Authority (GRTA) has proposed a new GRTA Xpress park and ride lot at the intersection of I-575 and Bells Ferry Road. This location is within the study area for the Noonday Creek Trail Extension; however, it is located approximately 0.80 miles west of any proposed trail alternative and would not provide immediate trail access, making it unsuitable to serve as a trailhead for this project. Additionally, a GRTA park and ride lot is proposed at Children's Healthcare at Town Center on Busbee Parkway. The Noonday Creek Trail Phase 2C will include a spur from the trail to this lot, which will serve as a trailhead. This trailhead will tie to the Noonday Creek Trail Extension by way of the Noonday Creek Trail Phase 2C.

There are multiple locations in this study area where Cobb County currently owns parcels of land, such as

where Noonday Creek crosses Bells Ferry Road or the where it crosses New Chastain Road. Both of these locations would be excellent trailhead locations to serve this trail corridor. Amenities such as parking, bike racks, and trail information could be added to either of these parcels to meet the needs of those using this trail and enhance the overall trail experience.

These potential trailhead locations are shown in the figure on the following page.

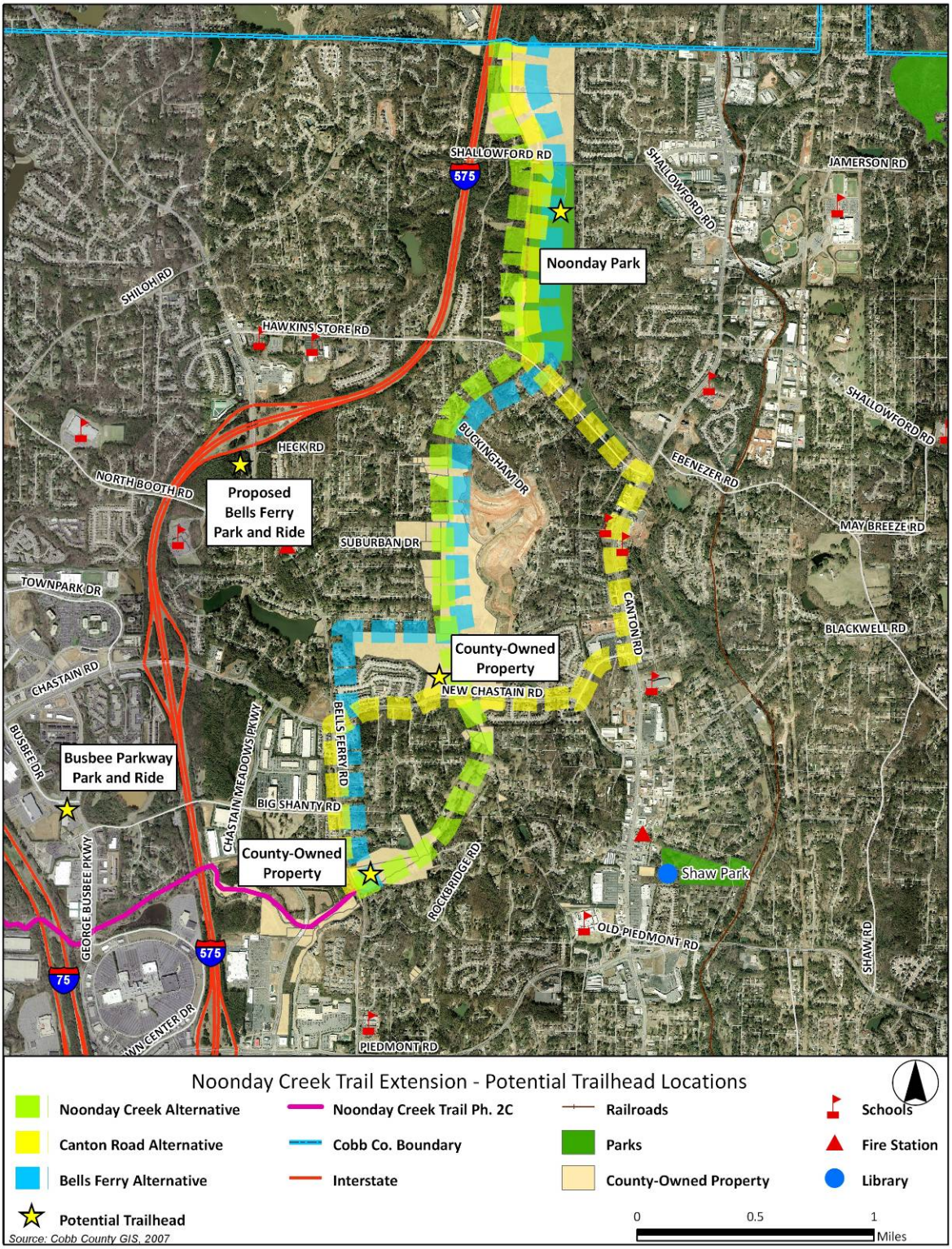

Figure 7B.5: Potential Trailhead Locations

7B.2.3 SOUTHERN TERMINATION POINT

As discussed previously in the Introduction, the Noonday Creek Trail Extension will begin at the termination of the Noonday Creek Trail Phase 2C, where Bells Ferry Road crosses Noonday Creek. The trail follows the existing sewer easement, which does not travel under the Bells Ferry Road bridge, but rather crosses the roadway at grade. Considerations must be made at this location to ensure that these two phases of the Noonday Creek Trail tie together seamlessly, whether the trail travels under the Bells Ferry Road bridge or across a mid-block crossing. It is possible for the trail to travel underneath the existing roadway bridge on the northern side of the creek. Bridge bents are located approximately 50 feet apart, with 39 feet of available width on the western side, and 42 feet on the eastern side. Because of the close proximity to Noonday Creek, the trail would minimize impacts as a boardwalk structure.

If a mid-block crossing is desired for this trail/roadway intersection, the crossing would ideally be at a 90-degree angle to maximize safety. Both the trail and the roadway would have adequate signage, striping, and, if necessary, signalization, to ensure that both trail and roadway users are aware of the intersection. Guidelines for selecting appropriate mid-block crossing treatments are included in Chapter 6 (Design Guidelines) in this *Bicycle and Pedestrian Improvement Plan.*

7B.2.4 USE OF SIDEPATHS

Due to the nature of the development in the northeastern part of Cobb County, two of the three potential alignments for the Noonday Creek Trail Extension require that at least part of the trail to be a sidepath, which is a trail immediately adjacent to a roadway facility with little separation between the two. The American Association of State Highway and Transportation Officials (AASHTO) discourages the use of sidepaths because of their close proximity to roadways that results in problems. Table 7B.1 on the following page presents a summary of issues associated with sidepaths based upon the AASHTO *Guide for the Development of Bicycle Facilities*.

AASHTO: Problems Associated with Paths Located Immediately Adjacent to Roadways (i.e., Sidepaths)
1. Unless separated, they require one direction of bicycle traffic to ride against motor vehicle traffic, contrary to normal rules of the road.
2. When the path ends, bicyclists going against traffic will tend to continue to travel on the wrong side of the street. Likewise, bicyclists approaching a shared use path often travel on the wrong side of the street in getting to the path. Wrong-way travel by bicyclists is a major cause of bicycle/automobile crashes and should be discouraged at every opportunity.
3. At intersections, motorists entering or crossing the roadway often will not notice bicyclists approaching from their right, as they are not expecting contra-flow vehicles. Motorists turning to exit the roadway may likewise fail to notice the bicyclist. Even bicyclists coming from the left often go unnoticed, especially when sight distances are limited.
4. Signs posted for roadway users are backwards for contra-flow bike traffic; therefore these cyclists are unable to read the information without stopping and turning around.
5. When the available right-of-way is too narrow to accommodate all highway and shared use path features, it may be prudent to consider a reduction of the existing or proposed widths of the various highway (and bikeway) cross sectional elements (i.e., lane and shoulder widths, etc.). However, any reduction to less than AASHTO *Green Book* (or other applicable) design criteria must be supported by a documented engineering analysis.
6. Many bicyclists will use the roadway instead of the shared use path because they have found the roadway to be more convenient, better maintained, or safer. Bicyclists using the roadway may be harassed by some motorists who feel that in all cases bicyclists should be on the adjacent path.
7. Although the shared use path should be given the same priority through intersections as the parallel highway, motorists falsely expect bicyclists to stop or yield at all cross-streets and driveways. Efforts to require or encourage bicyclists to yield or stop at each cross-street and driveway are inappropriate and frequently ignored by bicyclists.
8. Stopped cross-street motor vehicle traffic or vehicles exiting side streets or driveways may block the path crossing.
9. Because of the proximity of motor vehicle traffic to opposing bicycle traffic, barriers are often necessary to keep motor vehicles out of shared use paths and bicycles out of traffic lanes. These barriers can represent an obstruction to bicyclists and motorists, can complicate maintenance of the facility, and can cause other problems as well.

Table 7B.1: Excerpts from AASHTO Guide for the Development of Bicycle Facilities
Source: Guide for the Development of Bicycle Facilities, AASHTO, 1999

For these reasons, Cobb County should carefully consider the installation of trail facilities immediately adjacent to roadways. When a shared use path must be located next to a roadway, a wide separation (five feet or more) between the two is desired so that bicyclists and motorists alike recognize that the shared use path and the roadway are independent facilities.

7B.2.4 PLANNED AND PROGRAMMED PROJECTS

Part of the alternative identification process included an examination of other planned or programmed projects to determine if any could be modified to include all or part of the Noonday Creek Trail Extension. Table 7B.2 below lists the projects that were identified in this process.

The Noonday Creek Multi-Use Trail Phase 2C is currently under development and the Noonday Creek Trail Extension will coordinate with its termination point. The Bells Ferry Road Corridor Improvement Project is part of Cobb County's 2005 Special Purpose Local Option Sales Tax (SPLOST) program, and construction is scheduled to begin in 2010. At intersections, this project includes additional left and right turn lanes, new sidewalks, updated roadside signs and pavement markings, and improved signal timing.

Because this project is advanced in the design process, it is not feasible to include all or parts of the Noonday Creek Trail Extension project.

Additionally, a corridor study was completed by Cobb County in 2005 along the Canton Road corridor. Table 7B.3 on the following page shows projects recommended by this study that could potentially incorporate portions of the Noonday Creek Trail Extension, if an alternative along Canton Road is utilized.

If the Canton Road Alternative is chosen for the Noonday Creek Trail Extension, these projects could potentially be amended to include portions of the Noonday Creek Trail Extension.

Project Number/Sponsor	Project Name	Description
CM-0004-00(511)/GDOT	Noonday Creek Multi-Use Trail, Phase 2C	Trail facility from Cobb Pkwy/US 41 to Bells Ferry Road
D6040/Cobb County	Bells Ferry Road Corridor Improvement	Intersection improvements along sections of Bells Ferry Road

Table 7B.2: Planned and Programmed Projects
Source: Noonday Creek Trail Extension Study Team

Project Description	Type of Improvement	Engineering Year
Canton Road from Chastain Corners to Jamerson Road	Multi-Use Trail	2011
New Chastain Road/ Blackwell Road	Intersection Improvements	2008
Chastain Corners Road/Canton Road	Intersection Improvements	2008
Hawkins Store Road/Canton Road	Intersection Improvements	2011

Table 7B.3: Canton Road Corridor Study, Recommended Projects near Noonday Creek Trail Extension Study Area
Source: Canton Road Corridor Study

7B.3 ALTERNATIVES ANALYSIS

The following sections provide detailed analysis of each of the three Noonday Creek Trail Extension alternatives. Each alternative is broken down into segments so that it can be more carefully analyzed.

7B.3.1 NOONDAY CREEK ALTERNATIVE

COMPLETELY FOLLOWS THE NOONDAY CREEK CORRIDOR FROM BELLS FERRY ROAD TO THE CHEROKEE COUNTY LINE

As shown in Figure 7B.4 on page 7B-9 of this document, the Noonday Creek Alternative begins at the termination of the Noonday Creek Trail Phase 2C on Bells Ferry Road south of the intersection with Big Shanty Road. The Noonday Creek Alternative is divided into three (3) segments, shown in Figure 7B.6 to the right. Segment one begins at Bells Ferry Road and travels northeast to New Chastain Road, along the existing Noonday Creek corridor. Segment two also follows the creek corridor and travels north from New Chastain Road to Hawkins Store Road. Segment three follows the creek from Hawkins Store Road to the Cherokee County line. These segments are described in detail in the following sections.

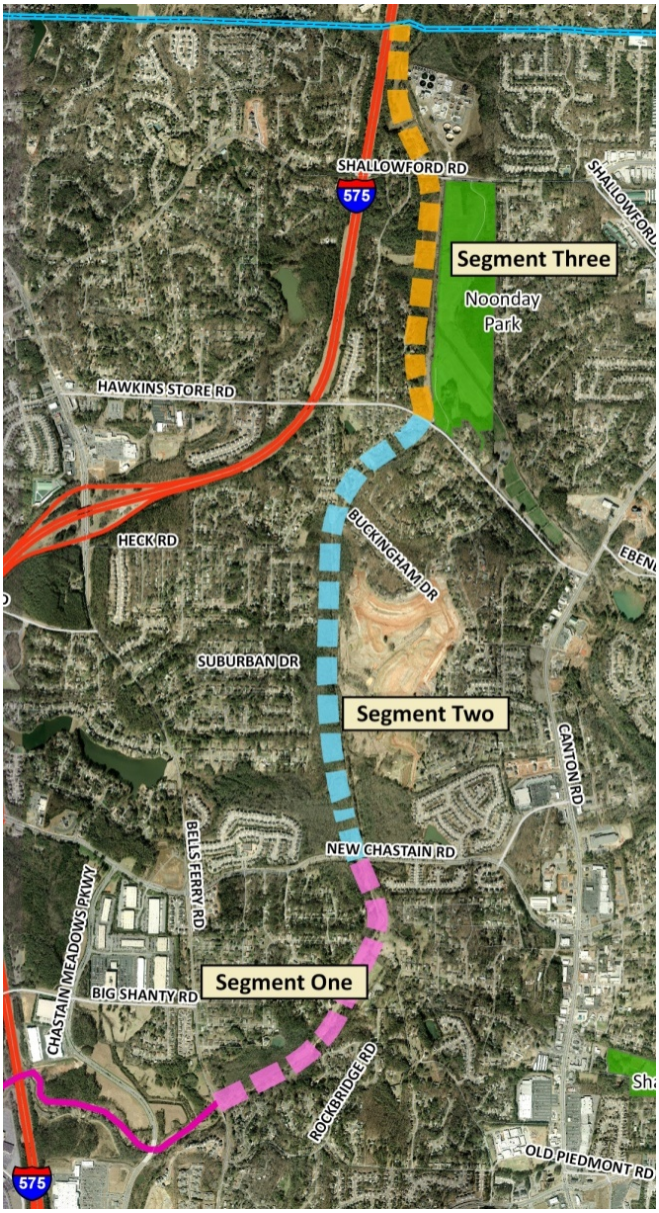

Figure 7B.6: Noonday Creek Alternative Segments Overview

Route Detail

Segment one of the Noonday Creek Alternative begins along Bells Ferry Road at the bridge over Noonday Creek between Lloyd Drive and Rockbridge Road, the termination point for the Noonday Creek Trail Phase 2C. This segment is approximately one (1) mile long. In this area, Noonday Creek travels north-south, beginning further west in Cobb County and continuing to Cherokee County to the north, and beyond to Lake Allatoona. The trail would follow the existing Cobb County Water System sewer easement that runs along the western side of the creek. The existing easement is approximately 20 feet in width. In order to satisfy clear zone requirements that involve maintaining a clear area without any obstructions along the sides of the trail, as well as provide adequate width for side slopes to tie back to grade, additional right of way would be necessary along this easement. There are also several houses that sit along the creek, very close to the sewer easement. Additionally, Cobb County owns property along approximately 3,030 feet (0.57 mile) of this easement along segment one. This leaves approximately 0.43 mile of private property along this segment. If necessary, the trail could become narrower in these locations so that the sewer easement could fully accommodate it, without acquiring private property.

The trail would continue to follow the sewer easement toward New Chastain Road, where there is an existing roadway bridge over the creek. Here the easement turns slightly to the west around the roadway bridge, where the sewer easement crosses New Chastain Road at grade. The existing roadway bridge is only approximately 85 feet wide and the creek is 35 feet wide, leaving only approximately 25 feet on either side of the creek for potential trail location. On the southern side of New Chastain Road on the western side of the bridge, there is approximately 14 feet of usable width for a trail, and there is 19 feet on the northern side of the road, also on the western side of the bridge. As shown in Figure 7B.7 below, there are several pipes and a support structure located adjacent to the New Chastain Road bridge. The trail would likely be narrowed to 10 feet at this location so that it could travel under the bridge and the pipes, and boardwalk would be used to minimize impacts.

Figure 7B.7: New Chastain Road Bridge

However, if desired, a mid-block crossing could be utilized at this

location. Appropriate measures must be taken to ensure that a safe and effective mid-block crossing is constructed, which is especially important along this roadway due to high volumes and speeds as well as horizontal sight distance concerns. A horizontal curve on New Chastain Road to the west of the existing sewer easement would require advance warning features.

Figure 7B.8: Cobb County Sewer Easement

The second segment of the Noonday Creek Alternative extends for approximately 1.6 miles from New Chastain Road northward along Noonday Creek to Hawkins Store Road. In this area, the sewer easement travels along the western side of Noonday Creek, and Cobb County owns property along approximately one (1) mile of the creek, beginning at New Chastain Road up to the approximate location of the southern leg of Heck Road. From Heck Road north to Hawkins Store Road (0.5 mile), there are multiple houses that are located close to the creek, which could hinder trail placement along this portion of the creek if additional right of way is needed outside of the 20-foot easement.

Private property is located along approximately 0.50 miles of this segment. In order to locate the trail along the sewer easement, it might be necessary to temporarily narrow the trail in these sections from 12 feet to ten (10) feet, or even eight (8), if necessary.

The Chastain Glen subdivision is located along New Chastain Road just to the east of Noonday Creek. Currently, this subdivision has a stipulation in its bylaws that states that the neighboring sewer easement and the surrounding County-owned parcel must only be used as greenspace. It states:

> "For twenty (20) years after the conveyance of Property to Purchaser [Cobb County], Purchaser will maintain property as part of a perpetual greenspace tract. Said greenspace tract shall not be improved or developed in any way whatsoever, and the natural topography, timber, and foliage therein shall remain undisturbed and entirely in its natural state."

Because this stipulation limits the County in its use of the sewer easement that travels adjacent to Noonday Creek in this area, as well as the surrounding County-owned property, County attorneys are currently negotiating with Chastain Glen Homeowners to potentially remove this portion of the bylaws. If successful, the stipulation would be removed so that a trail could be constructed along the sewer easement.

This segment also passes to the west of Canterbury subdivision, part of which is currently under construction. This subdivision has several internal gravel trails that travel near the creek, and along the Noonday Creek Alternative, the Noonday Creek Trail Extension would likely provide access to these trails, as well. A portion of these trails is shown below in Figure 7B.9.

Figure 7B.9: Trails within Canterbury Subdivision

North of Heck Road, Noonday Creek curves toward the northeast. In this area, there are multiple houses that are located close to Noonday Creek and the Cobb County sewer easement (some as close as 50 feet), particularly along Farmbrook Trail. This is shown in Figure 7B.10 below. While the sewer easement continues north to Hawkins Store Road it lies very close to these houses for a 0.5-mile stretch. If the Noonday Creek Trail Extension is located along the sewer easement in this area, it is possible that homeowners could object to a public trail proposed so close to their property, particularly if additional right of way is needed outside of the 20-foot easement.

Figure 7B.10: Noonday Creek near Heck Road

The third segment of the Noonday Creek Alternative begins at Hawkins Store Road, and extends northward along Noonday Creek to the Cherokee County line. This segment is approximately 1.4 miles in length, and Cobb County owns approximately 0.75 mile of property along this segment. Much like at New Chastain Road, the sewer easement does not travel under

the Hawkins Store Road bridge over Noonday Creek, it instead curves to the west and crosses Hawkins Store Road at grade.

The roadway bridge over Noonday Creek has adequate space for the trail underneath the bridge as a boardwalk facility, with 36 feet of available width of the southern side and 40 feet on the northern side. This area under the bridge is fairly flat and would accommodate the trail well. However, if a mid-block crossing is desired, that could be located to the west of the bridge where the sewer easement currently crosses Hawkins Store Road. Appropriate measures must be taken for a safe and effective mid-block crossing. A horizontal curve on Hawkins Store Road to the west of the existing sewer easement would require advance warning features.

Figure 7B.11: Noonday Creek Adjacent to Noonday Park

Immediately north of Hawkins Store Road is Noonday Park. This facility has 12 soccer fields, two (2) soccer practice fields, two (2) football/soccer fields, a picnic pavilion, a playground, a BMX track, two (2) concession buildings, and a meeting room. This park would serve as a trailhead-type facility for the Noonday Creek Trail Extension, with ample parking for those who wish to access the trail. The trail would be located along the west side of Noonday Creek. Figure 7B.11 shows a view of Noonday Creek as it passes Noonday Park.

Along the western side of Noonday Creek adjacent to Noonday Park, the area of the sewer easement and an additional power easement is a more open area that is not overgrown like much of the sewer easement in other areas of Noonday Creek. Coordination with the owner of this power easement would likely be required if the trail is located along this portion of the sewer easement. Georgia Power states that its easements may be shared with recreational uses, as long as certain standards are followed and an agreement is properly executed. Some general considerations include:

- Avoid undermining structures or anchors;
- Keep access to right of way facilities open;
- Protect guy wires and anchors;
- Protect any buried facilities on the right of way;
- Meet or exceed National Electric Safety Code standards;

- Cross perpendicular (90 degrees) to the right of way.

Each of these considerations can be met adequately for the Noonday Creek Trail Extension. As the trail is closer to design and construction, Georgia Power should be consulted further to ensure that easement-sharing arrangements are suitable for both Cobb County and Georgia Power.

At the northern end of Noonday Park, a pedestrian bridge would span from the sewer easement on the east side of the creek of Noonday Park on the west side of the creek. From this point north, the trail would follow the eastern side of Noonday Creek, along the Cobb County property and the sewer easement, once it also crosses to the eastern side of Noonday Creek.

North of Noonday Park, the trail would cross Shallowford Road. The existing Shallowford Road bridge (shown in Figure 7B.12) has ample space for a trail underneath, with 30-40 feet of available width (depending on which side of road) and a flat area next to the creek. A water treatment plant is located along the east side of Noonday Creek between Shallowford Road and the Cherokee County line. The trail would remain outside the fence surrounding the treatment plant and access to the plant would not be available to trail users. Appropriate security measures should be taken for this plant, such as security fencing. The sewer easement crosses to the east side of the creek to access this plant, and remains on this side until its termination. The trail would follow the sewer easement on the eastern side of the creek. The sewer easement ends approximately 180 feet north of the water treatment plant, but Cobb County owns the parcels along the western side of the water treatment plant, as well as parcels north of the sewer easement to the Cherokee County line. The trail would follow these parcels to the north once the sewer easement ends.

Figure 7B.12: Shallowford Road Bridge over Noonday Creek

The Noonday Creek Alternative affects approximately 44 parcels along Noonday Creek. Seventeen of these parcels are County-owned, and 27 are privately owned. There would be no displacements as a result of this alternative.

Noonday Creek Alternative Connections and Land Use

A crucial component of the alternatives analysis process was a review of land use connectivity and access to various destinations in this region of Cobb County. Cobb County future land use

maps were consulted to determine the potential access to destinations such as parks, public services, shopping centers, and other activity centers. This analysis found that the proposed route for the Noonday Creek Alternative travels through varying land uses, primarily low density residential and parks/recreation/conservation. Noonday Park is also located along this alternative. Table 7B.4 provides an overview of the land use and connections surrounding the Noonday Creek Alternative. Figure 7B.13 on page 7B-22 of this document displays the land use and connections on a map.

Opportunities and challenges were also identified as each alternative was developed. These were the result of careful examination of each potential route in the field, aerial reviews of each, and an assessment of the surrounding land use and connections served. Table 7B.5 on the following page provides a summary of opportunities and challenges associated with the Noonday Creek Alternative. Map identification numbers are provided for referencing each opportunity or challenge in Figure 7B.14.

Noonday Creek Alternative Opportunities and Challenges

	Park/Recreation/ Conservation	School	Transit	Medium Density Residential	Low Density Residential	Neighborhood Activity Center	Transportation Communications	Public Institutional
Noonday Creek Alternative	•			•	•		•	•

Table 7B.4: Noonday Creek Alternative: Neighboring Connections and Land Use

Opportunities	Map ID
Trail would not be a sidepath along a roadway for any of its length; completely follows Cobb County sewer easement	Throughout
In addition to the sewer easement, much of land along Noonday Creek is County-owned (2.32 miles)	Throughout
New Chastain Road, Hawkins Store Road and Shallowford Road appear to have adequate space for trail under existing bridges over Noonday Creek	1A
Adjacent to Noonday Park	1B
Challenges	
Potential conflicts with several houses located close to creek	1C
Sewer easement only 20 feet wide; additional width needed for clear zone requirements in some areas	Throughout
Sewer easement ends south of Cherokee line; therefore Cobb County property or power easement must be utilized	1D
Chastain Glen subdivision will not allow any active uses, including trails, on easement adjacent to their property	1E

Table 7B.5: Noonday Creek Alternative: Opportunities and Challenges
Source: Noonday Creek Trail Extension Study Team

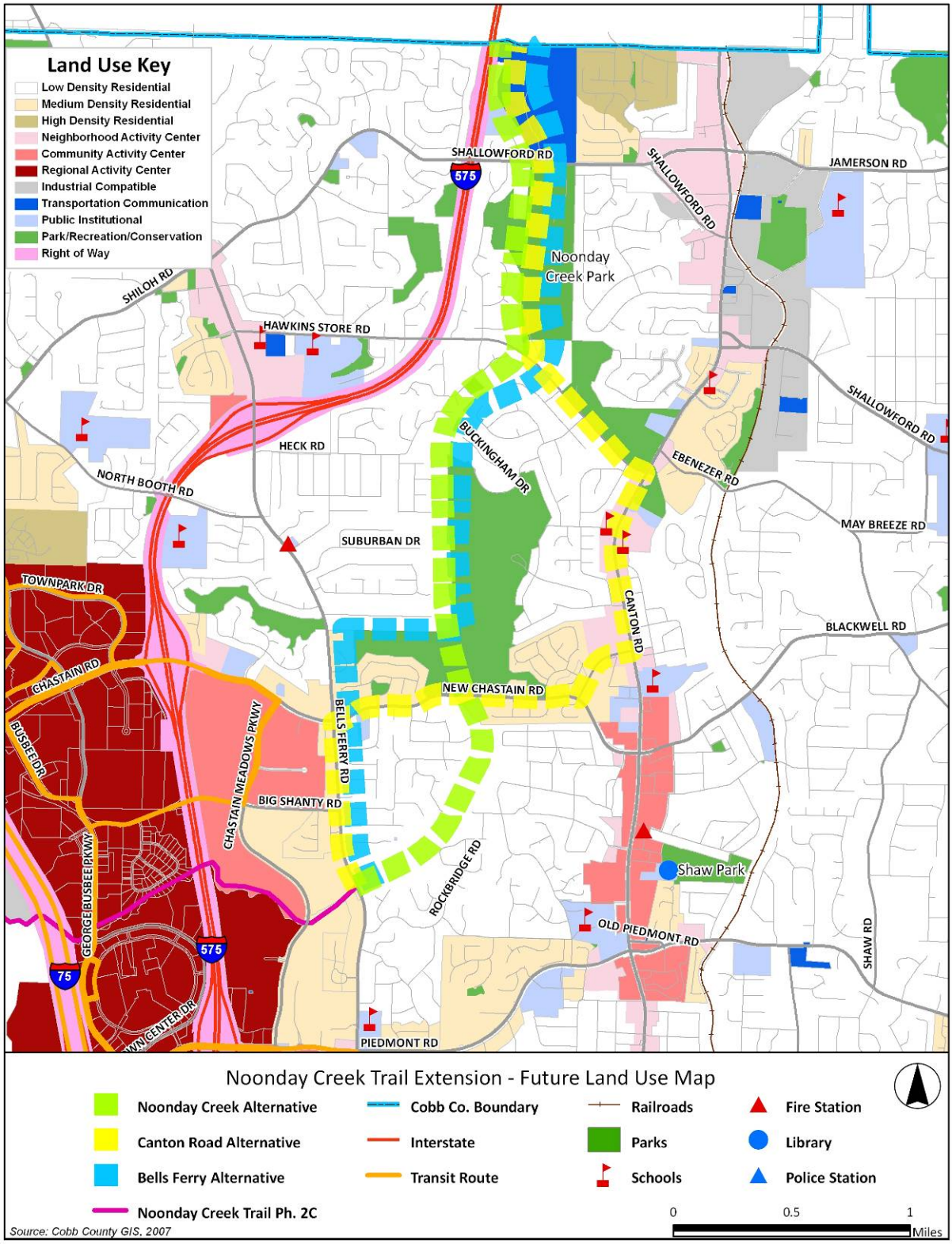

Figure 7B.13: Future Land Use and Connectivity

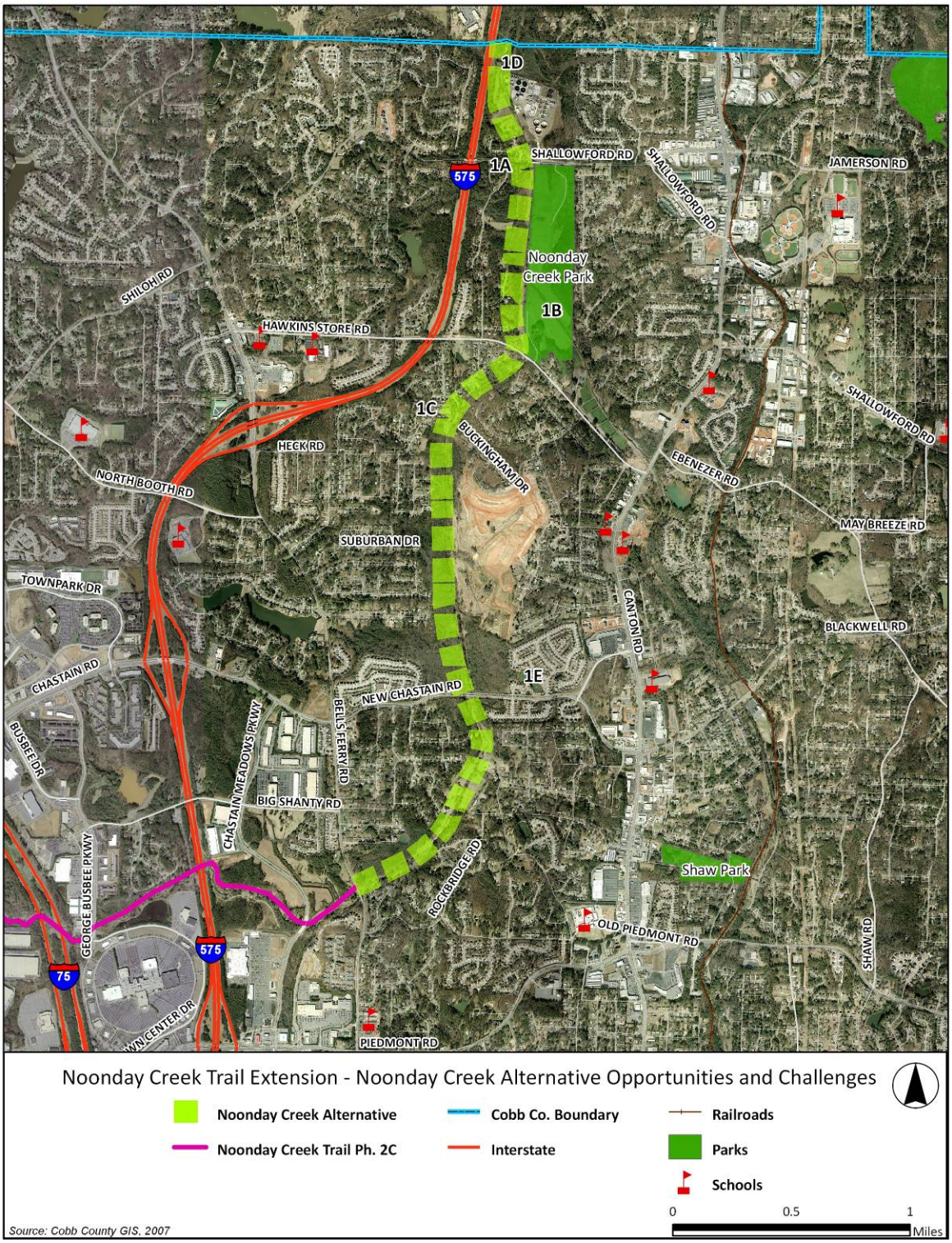

Figure 7B.14: Noonday Creek Alternative: Opportunities and Challenges

7B.3.2 CANTON ROAD ALTERNATIVE

FOLLOWS BELLS FERRY ROAD TO NEW CHASTAIN ROAD, TO CHASTAIN CORNERS, TO CANTON ROAD, TO HAWKINS STORE ROAD, TO THE NOONDAY CREEK CORRIDOR, AND NORTH TO CHEROKEE COUNTY LINE

As shown in Figure 7B.4 on page 7B-9 of this document, the Canton Road Alternative begins at the termination of the Noonday Creek Trail Phase 2C on Bells Ferry Road south of the intersection with Big Shanty Road. This route is divided into three (3) segments, shown in Figure 7B.15 to the right. Segment one begins along Bells Ferry Road and travels north to New Chastain Road, turns east onto New Chastain Road, and follows it to the Noonday Creek corridor. Segment two follows New Chastain Road from Noonday Creek east to Chastain Corners, follows Chastain Corners to Canton Road, follows Canton Road to Hawkins Store Road, and follows Hawkins Store Road to Noonday Creek. Segment three follows the creek from Hawkins Store Road north to the Cherokee County line. These segments are described in detail in the following sections.

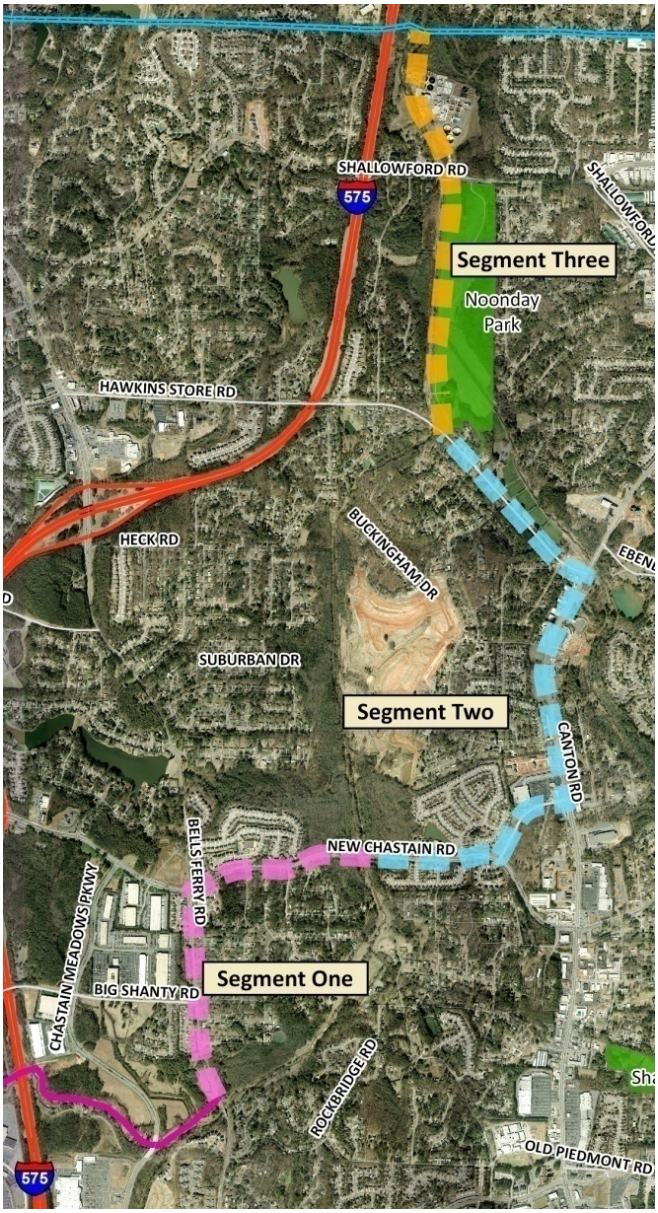

Figure 7B.15: Canton Road Alternative Segments Overview

Route Detail

Segment one of the Canton Road Alternative begins along Bells Ferry Road at the bridge over Noonday Creek between Lloyd Drive and Rockbridge Road, the termination point for the Noonday Creek Trail Phase 2C. Segment one is approximately 1.4 miles in length. It would travel along Bells Ferry Road for approximately 0.75 mile, to the intersection of New Chastain Road. Bells Ferry Road in this area has two (2) lanes, with approximately 70-80 feet of right of way and a speed limit of 45 miles per hour (mph). At intersections with Bellestone Way, Big Shanty Road, Chastain Landings Court/Chastain Manor Way, and New Chastain Road, additional turn lanes are present. Bells Ferry Road is primarily residential.

From Bells Ferry Road, the trail would turn east onto New Chastain Road, and follow it for 0.6 miles. New Chastain Road is a four-lane, divided roadway, with a 20-foot landscaped median and a 45 mph speed limit. A typical section of New Chastain Road is shown in Figure 7B.16 to the right. There are power lines along the south side of the road, indicating that a power easement is most likely present. This power easement could potentially be shared with a trail, depending on its width. Right of way is extremely tight along the northern side of New Chastain Road. Because of this, the trail would be most suitable along the southern side, where there is at most 23 feet of right of way outside of the existing sidewalk, but only for a stretch of approximately 460 feet. For the remaining 0.5 mile of segment 2, existing right of way outside the sidewalk on the southern side is only 12 feet at maximum, and there is no right of way in many places outside the existing sidewalk. It is possible that the median could be reconstructed for additional available right of way to allow room for a trail. However, there are turn lanes in place of the larger median at Chastain Crossing, Chastain Trace, and Sumter Drive. In these locations there is no additional median width that could be reconstructed for additional right of way. Additionally, the twin roadway bridges over Noonday Creek do not have sufficient width to accommodate a trail alongside New Chastain Road, so a new roadway bridge or a separate pedestrian structure would be required. Even if the median was reconstructed to provide additional right of way, the roadway bridge would still not have sufficient width.

Figure 7B.16: New Chastain Road

Segment two is 2.32 miles long, and begins at Noonday Creek and travels approximately 0.5 mile along New Chastain Road east to Chastain Corners. New Chastain Road along this segment is very similar to the previous segment, with two lanes in each direction, a landscaped median, and a speed limit of 45 mph. There is a sidewalk along the southern side of the roadway. Turn lanes are present at the intersections with Claybrooke Drive, Chastain Glen Lane, and Chastain Corners. Right of way is very limited in most of this area, with only approximately eight (8) feet outside of the existing sidewalk on the southern side. At the intersection with Chastain Corners, there is a large amount of right of way in the northwest quadrant of the intersection.

Figure 7B.17: Chastain Corners

Segment two then turns north onto Chastain Corners, for approximately 0.3 mile. This is a two-lane roadway, with a 13-foot two-way left turn lane and a five-foot sidewalk on the western side. The trail would turn from New Chastain Road to Chastain Corners utilizing the existing crossing measures that are currently in place, including crosswalks and pedestrian signals. Right of way near the intersection with New Chastain Road is approximately 90 feet wide, and it is approximately 105 feet wide near the intersection with Canton Road, due to added turn lanes. A trail along Chastain Corners would be suitable along the eastern side of the road, where there is not currently a sidewalk and the property is not as developed as the western side. For approximately 0.2 mile along the eastern side of Chastain Corners from the intersection with New Chastain Road northward to just west of Blackwell Circle, the property is undeveloped and is owned by the Marietta Church of God of Prophecy. Figure 7B.17 to the left shows this portion of Chastain Corners, looking south toward New Chastain Road. Additionally, the travel lanes and two-way left turn lane could be restriped for additional right of way width that could be used for a trail.

From Chastain Corners, the trail would turn north onto Canton Road. This is a four-lane, undivided highway, with a center two-way left turn lane and a 45 mph speed limit. Canton Road is heavily travelled and has multiple intersections, as well as driveways, accessing the surrounding businesses. In order for the trail to not have an unnecessary crossing with Canton Road, the most feasible location for the trail would be along the western side of the roadway. Canton Road is heavily developed, but on the western side between Coventry Drive and Kensington Drive, there is a large, undeveloped parcel with

approximately 1,000 feet of frontage along Canton Road. While the existing right of way in this area is approximately 90 feet in width, behind the existing edge of pavement, there is very little right of way available. Right of way acquisition would be required, in an area where large signage and parking lots, many with retaining walls, sit immediately outside of the right of way, and sometimes inside the right of way. These obstacles and the lack of open space outside the edge of pavement would make it difficult for trail addition along this roadway.

The trail would turn from Canton Road west onto Hawkins Store Road, and follow it to the Noonday Creek crossing. Hawkins Store Road is a two-lane roadway with a speed limit of 40 mph. There is a sidewalk along the northeastern side of the road, and right of way is approximately 50 feet in width. Figure 7B.18 shows a typical view of Hawkins Store Road. The trail would be most suitable on the northeastern side of the roadway, in order to avoid a mid-block crossing at Noonday Park. However, on this side of Hawkins Store Road, the edge of the right of way is directly behind the existing sidewalk, leaving little or no room for a trail without acquisition of private property. On the southwestern side, there is approximately 14 feet of available right of way behind the edge of pavement, but a mid-block crossing would be required once the trail turns onto the Noonday Creek corridor.

Once passing Noonday Park on the northern side of Hawkins Store Road,

Figure 7B.18: Hawkins Store Road

a bridge crosses Noonday Creek. In order to turn onto the Noonday Creek corridor where the third segment begins, the trail must cross this bridge to reach the sewer easement along the western side of the creek. This bridge is 48 feet in width, which includes two travel lanes, a center turn lane to access Noonday Park, and 5.5-foot shoulders. Unless the lanes are restriped and the turn lane is removed, this bridge would not be wide enough to accommodate a trail facility, and the bridge would have to be reconstructed or a separate trail structure would be required alongside it.

The third segment of the Canton Road Alternative begins at Hawkins Store Road, and extends northward along Noonday Creek to the Cherokee County line. This segment is approximately 1.4 miles in length. It follows the same route as segment three of the Noonday Creek

Alternative, and is discussed in detail in the previous section.

The Canton Road Alternative affects approximately 83 parcels along this alignment. Seven of these parcels are County-owned, and 76 are privately owned. There would be no displacements as a result of this alternative, but approximately six parking lots along Canton Road would be impacted and would lose some available parking.

Canton Road Alternative Connections and Land Use

A crucial component of the alternatives analysis process was a review of land use connectivity and access to various destinations in this region of Cobb County. Cobb County future land use maps were consulted to determine the potential access to destinations such as parks, public services, shopping centers, and other activity centers. This analysis found that the proposed route for the Canton Road Alternative travels through land uses that include low density residential, medium density residential, neighborhood activity center, public institutional, parks/recreation/ conservation, and transportation communication.

Noonday Park and Canterbury Soccer Park are also located along this route. There are two (2) schools located along Canton Road along this alternative: Montessori School of Woodstock and Kids R Kids International. Blackwell Elementary is also located on Canton Road very close to the Canton Road Alternative. Table 7B.6 provides an overview of the land use and connections surrounding the Canton Road Alternative. Figure 7B.13 on page 7B-25 of this document displays the land use and connections on a map.

Canton Road Alternative Opportunities and Challenges

Opportunities and challenges were also identified as each alternative was developed. These were the result of careful examination of each potential route in the field, aerial reviews of each, and an assessment of the surrounding land use and connections served. Table 7B.7 on the next page provides a summary of opportunities and challenges associated with the Canton Road Alternative. Map identification numbers are provided for referencing each opportunity or challenge in Figure 7B.19.

	Park/Recreation/ Conservation	School	Transit	Medium Density Residential	Low Density Residential	Neighborhood Activity Center	Transportation Communications	Public Institutional
Canton Road Alternative	•	•		•	•	•	•	•

Table 7B.6: Canton Road Alternative: Neighboring Connections and Land Use

Opportunities	**Map ID**
Does not require renegotiation of easement with Chastain Glen subdivision	2A
Much of land along Noonday Creek is County-owned or maintained	Throughout
Adjacent to Noonday Park	2B
Shallowford Road has adequate space for trail under existing bridge over Noonday Creek	2C
Two schools are located along route, on Canton Road	2D
Provides direct access to multiple businesses along Canton Road	2E
Would follow sewer easement for approximately 1.36 miles	2F
Challenges	
New Chastain Road has narrow right of way west of Noonday Creek	2G
Sewer easement is only 20 feet wide; additional width needed for clear zone requirements in some areas	Throughout
Trail would be a sidepath along roadways for approximately 3.67 mi.	Throughout
Heavy development on Canton Road with businesses and parking lots right up to right of way, many with retaining walls	2H
Sewer easement ends south of Cherokee line; County-owned property or power easement must be utilized	2J

Table 7B.7: Canton Road Alternative: Opportunities and Challenges
Source: Noonday Creek Trail Extension Study Team

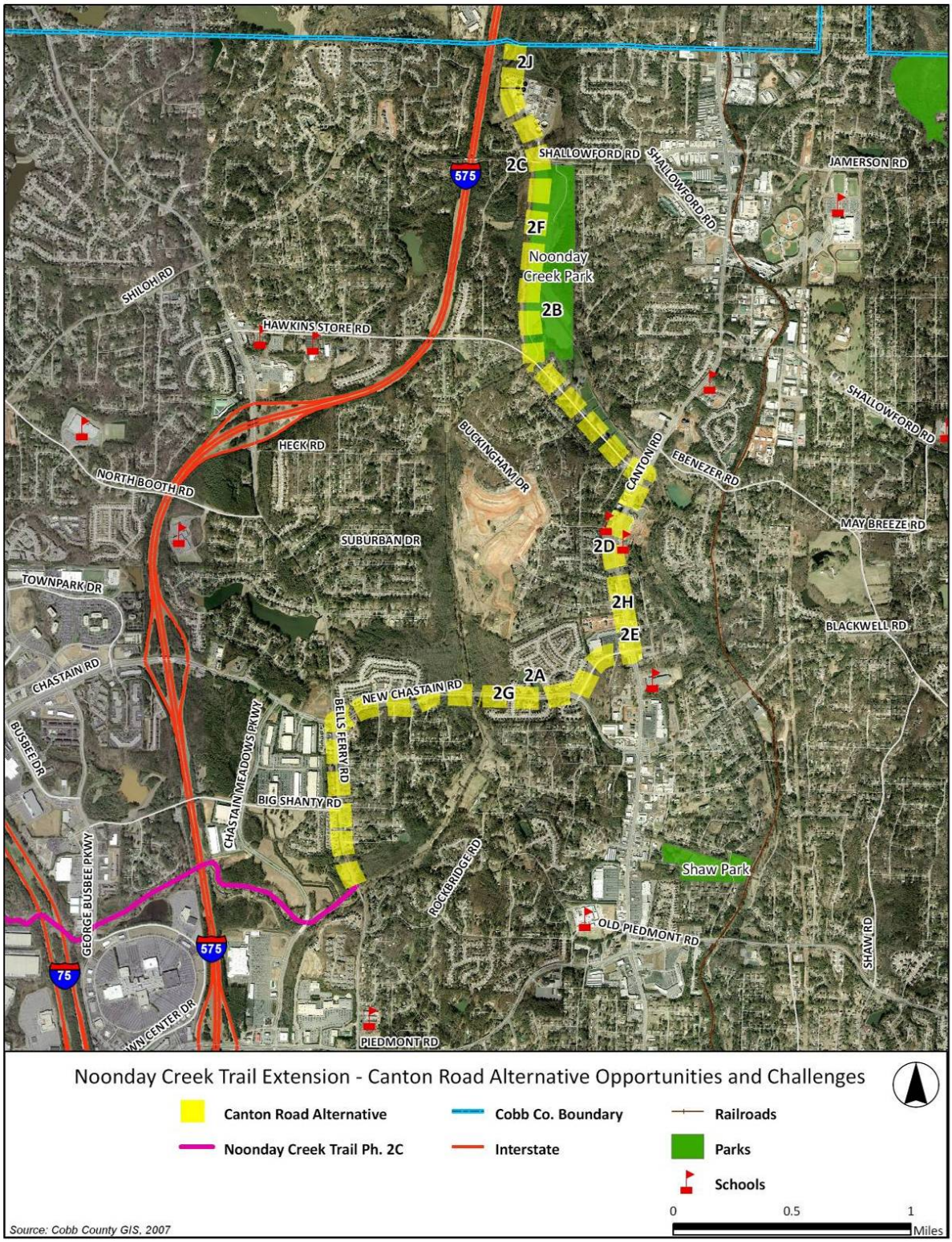

Figure 7B.19: Canton Road Alternative: Opportunities and Challenges

7B.3.3 BELLS FERRY ALTERNATIVE

FOLLOWS BELLS FERRY ROAD TO SOUTH OF PARKWOOD DRIVE, FOLLOWS SEWER EASEMENT/COUNTY PROPERTY TO NOONDAY CREEK, FOLLOWS NOONDAY CREEK CORRIDOR NORTH TO THE CHEROKEE COUNTY LINE

As shown in Figure 7B.4 on page 7B-9 of this document, the Bells Ferry Alternative begins at the termination of the Noonday Creek Trail Phase 2C on Bells Ferry Road south of the intersection with Big Shanty Road. This route is divided into three segments, shown in the Figure 7B.20 to the right. Segment one begins along Bells Ferry Road and travels north to just south of Parkwood Drive. At this point, segment two begins and turns east along the County-owned property and sewer easement to the Noonday Creek corridor, and follows the creek corridor north to Hawkins Store Road. Segment three follows the creek from Hawkins Store Road north to the Cherokee County line. These segments are described in detail in the following sections.

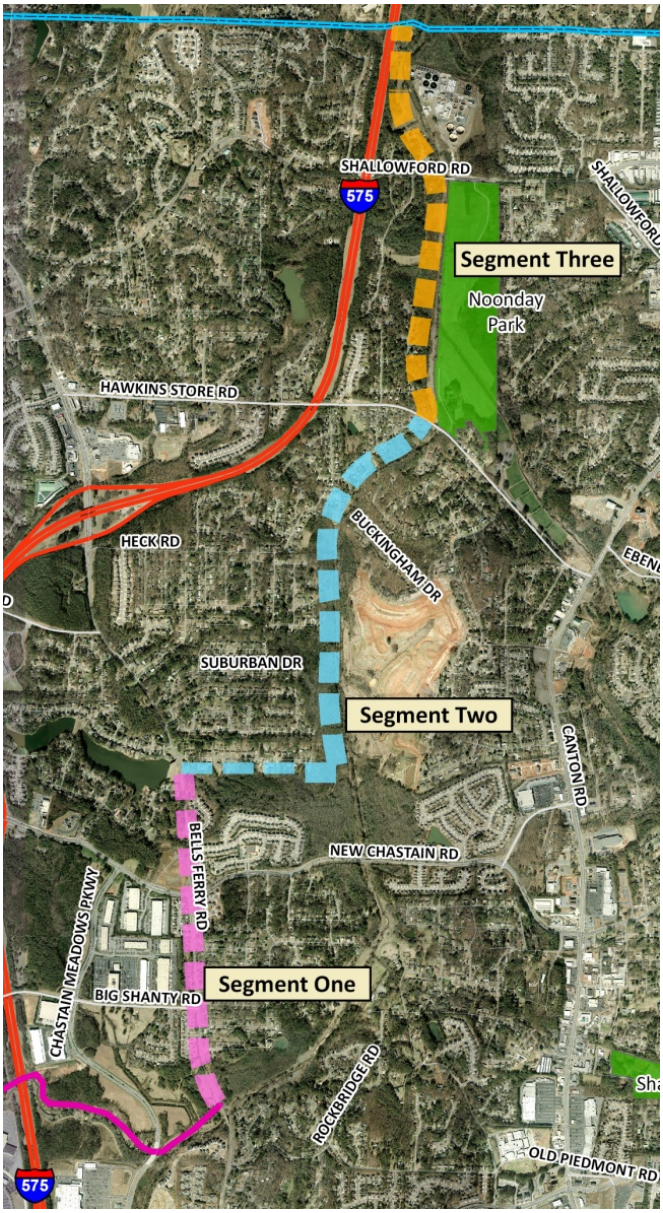

Figure 7B.20: Bells Ferry Alternative Segments Overview

Route Detail

Segment one of the Bells Ferry Alternative begins along Bells Ferry Road at the bridge over Noonday Creek between Lloyd Drive and Rockbridge Road, the termination point for the Noonday Creek Trail Phase 2C. Segment one is approximately 1.13 miles in length. Similar to the Canton Road Alternative, it would first travel along Bells Ferry Road. In the area of Bells Ferry Road from Noonday Creek north to Parkwood Drive, Bells Ferry Road has two (2) lanes, with approximately 70-80 feet of right of way and a speed limit of 45 mph. At intersections with Bellestone Way, Big Shanty Road, Chastain Landings Court/Chastain Manor Way, New Chastain Road, and Estates Landing Drive, additional turn lanes are present. Bells Ferry Road is primarily residential. A typical section of Bells Ferry Road is shown in Figure 7B.21 below.

Figure 7B.21: Bells Ferry Road

The trail would cross New Chastain Road utilizing the existing intersection features, including pedestrian signals and crosswalks. Additional enhancements could also aid in making this busy intersection more suitable for a trail crossing, including enhanced signal timing that incorporates trail users and clear signage and striping to alert road users of the trail's presence.

Segment two is 1.86 miles in length and travels eastward about 300 feet to the south of Parkwood Drive, on the existing sewer easement and County-owned property. Along this segment, Cobb County owns property along approximately 1.20 miles of the 1.86-mile long segment. There is an existing pond just east of Bells Ferry Road, and the trail would follow the sewer easement, which travels on the northern side of this pond. However, just east of Bells Ferry Road are two (2) parcels that must be traversed and are not owned by the County. These are fairly large parcels, and houses sit in the far southern portions, leaving adequate space for trail addition on the northern sides of the parcels, if some agreement could be made with property owners for a potential easement. This area is shown in the Figure 7B.22 on the following page.

Figure 7B.22: Parkwood Drive Property Detail

The sewer easement in this area is 20 feet wide and travels east toward Noonday Creek, where it connects to the existing 20-foot wide sewer easement that follows the creek along its west side.

This segment also passes to the west of Canterbury subdivision, part of which is currently under construction. This subdivision has several internal gravel trails that travel near the creek, and along the Bells Ferry Alternative, the Noonday Creek Extension Trail would likely provide access to these trails, as well.

North of Heck Road, Noonday Creek curves toward the northeast, shown in Figure 7B.22 to the right. In this area, there are multiple houses that are located close to Noonday Creek and the Cobb County sewer easement (some as close as 50 feet), particularly along Farmbrook Trail. While the sewer easement continues north to Hawkins Store Road it lies very close to these houses for a 0.5-mile stretch.

If the Noonday Creek Trail Extension is located along the sewer easement in this area, it is possible that homeowners could object to a public trail proposed so close to their property, particularly if additional right of way is needed outside of the 20-foot easement.

The third segment of the Bells Ferry Alternative begins at Hawkins Store Road, and extends northward along Noonday Creek to the Cherokee County line. This segment is approximately 1.4 miles in length. It follows the same route as segment three of the Noonday Creek Alternative and the Canton Road Alternative, and is discussed in detail in the previous section discussing the Noonday Creek Alternative.

Figure 7B.23: Noonday Creek near Heck Road

The Bells Ferry Alternative affects approximately 59 parcels along the alignment. Nine of these parcels are County-owned, and 50 are privately

owned. There would be no displacements as a result of this alternative.

Bells Ferry Alternative Connections and Land Use

A crucial component of the alternatives analysis process was a review of land use connectivity and access to various destinations in this region of Cobb County. Cobb County future land use maps were consulted to determine the potential access to destinations such as parks, public services, shopping centers, and other activity centers. This analysis found that the proposed route for the Bells Ferry Alternative travels through land uses that include low density residential, medium density residential, public institutional, parks/recreation/ conservation, and transportation communication. Noonday Park is also located along this route. The following Table 7B.8 provides an overview of the land use and connections surrounding the Bells Ferry Alternative. Figure 7B.13 on page 7B-25 of this document displays the land use and connections on a map.

Bells Ferry Alternative Opportunities and Challenges

Opportunities and challenges were also identified as each alternative was developed. These were the result of careful examination of each potential route in the field, aerial reviews of each, and an assessment of the surrounding land use and connections served. Table 7B.9 below provides a summary of opportunities and challenges associated with the Bells Ferry Alternative. Map identification numbers are provided for referencing each opportunity or challenge in Figure 7B.24.

	Park/Recreation/ Conservation	School	Transit	Medium Density Residential	Low Density Residential	Neighborhood Activity Center	Transportation Communications	Public Institutional
Bells Ferry Alternative	•			•	•		•	•

Table 7B.8: Bells Ferry Alternative: Neighboring Connections and Land Use

Opportunities	Map ID
Does not require renegotiation of easement with Chastain Glen subdivision	3A
Much of land along Noonday Creek is County-owned or maintained	Throughout
Adjacent to Noonday Park	3B
Hawkins Store Road and Shallowford Road have adequate space for trail under existing bridges over Noonday Creek	3C
Would follow sewer easement for approximately 2.68 miles	Throughout
Challenges	
Potential conflicts with several houses located close to creek	3D
Sewer easement is only 20 feet wide; additional width needed for clear zone requirements in some areas	Throughout
Trail would be a sidepath along roadways for approximately 1.11 mi.	Throughout
Sewer easement ends south of Cherokee line; County-owned property or power easement must be utilized	3E
Negotiations with property owners would be required along two parcels east of Bells Ferry Road at start of Segment 2	3F

Table 7B.9: Bells Ferry Alternative: Opportunities and Challenges
Source: Noonday Creek Trail Extension Study Team

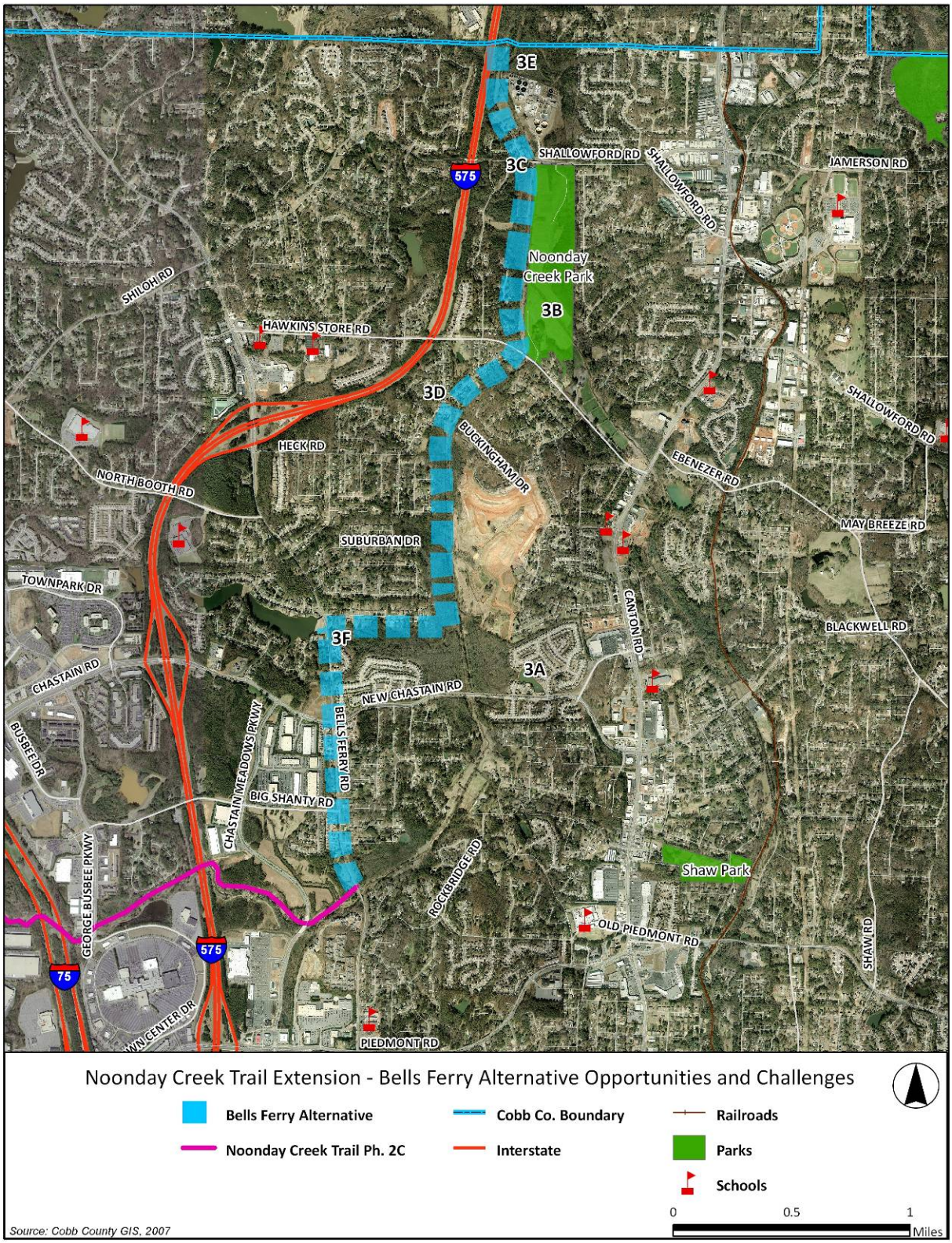

Figure 7B.24: Bells Ferry Alternative: Opportunities and Challenges.

7B.4 PAVEMENT MATERIALS

Traditional surface materials considered for the Noonday Creek Trail Extension include asphalt and concrete. It is very important to maintain a smooth top course for in-line skaters, bicyclists, and pedestrians. While the traditional asphalt and concrete materials adequately meet the needs of trail users, but there are additional alternative, more sustainable materials that can be taken advantage of as well. The following table shows potential alternative trail pavement materials.

Material	Pro	Con	Maintenance Required	Permeable?	Cost Per SF	Other Locations
Asphalt	•Smooth surface ideal for bicycles and in-line skaters •Can be repaired quickly	•Does not blend well with native environment •Heavy construction vehicles need access	Pothole patching as necessary	N	$2.75	Silver Comet Trail in Cobb County, GA
Concrete	•Hardest surface used for trails •Lowest maintenance •Responds well to weather changes (freeze/thaw)	•Not as desirable to in-line skaters and bicycles because of rougher surface	Inspection for settlement and cracking; repair as needed	N	$4.75	Silver Comet Trail in Paulding County, GA
Stabilized Earth	•Easy to apply •Can make use of some existing in-place material •Aesthetics better match the surrounding environment	•Easy for vegetation to take root	Stabilizer should be reapplied every 1-2 years, depending on use	Y	$2.50	Rio Rancho Bosque Trail, Rio Rancho, NM
Rubberized Asphalt	•Can make use of recycled rubber tires •Studies indicate it lasts longer than conventional asphalt •Require less maintenance than conventional asphalt	•More costly than conventional asphalt •Not currently used frequently •For small projects, lower demand means higher cost. But, if timed with other projects, could be produced simultaneously to lower cost.	Pothole patching as necessary	N	$3.00	Withlacoochee State Trail, West-central FL

Table 7B.10: Potential Trail Pavements

Material	Pro	Con	Maintenance Required	Permeable?	Cost Per SF	Other Locations
Permeable Asphalt	•Preserves natural drainage patterns •Reduces stormwater runoff into bodies of water	•Difficult to install in remote areas that cannot be easily accessed with required equipment/machinery.	•Occasional sweeping and washing to keep pores unclogged, ± 4 times/year •Pothole patching as necessary	Y	$3.50	Bear Creek Trail, Redmond, WA
Permeable Concrete	• Preserves natural drainage patterns •Filtration improves runoff quality •Smooth and skid-resistant •A cooler surface that can reduce heat island effect	•Placement slower than traditional concrete •Concrete not as desirable for bicycles	Occasional sweeping and washing to keep pores unclogged, ± 4 times/year	Y	$6.00	Stevens Creek Trail, Cupertino, CA
Recycled Asphalt	•Makes old asphalt usable instead of having to dispose of it	•More costly than conventional asphalt •Conception exists that unknown impurities may be in recycled asphalt •Works well as subgrade, but not always best for top layer •Cost of hauling it to site could make it impractical	Pothole patching as necessary	Y	$2.75	Rio Grande Trail, Glenwood Springs, CO
Glassphalt	•Uses recycled glass material as an aggregate	•Must be mixed with other aggregates (e.g., asphalt)	Pothole patching as necessary	N	$2.75	UNI Loop Trail, Cedar Falls, IA Street paving in: Baltimore, Maryland, Pennsylvania

Table 7B.10 Continued

7B.5 PUBLIC INVOLVEMENT

On September 15, 16 and 17, 2009, public workshops for the 2009 Cobb County Bicycle and Pedestrian Improvement Plan were held at various locations throughout the County: the Cobb County Central Library, the South Cobb Regional Library and the East Cobb Government Service Center. At each meeting, there was a station providing information about the Noonday Creek Trail Extension along with the Silver Comet Trail Extension, which was also previously presented at the January 2009 Public Workshops. Feedback was requested from citizens regarding the Noonday Creek Trail Extension. Citizens were asked to fill out a comment form to provide feedback on each alternative. Questions asked included, What is your favorite alternative? What are some pros and cons of each alternative? Are there any other routes or connections you would suggest? A total of 17 completed comment forms were received for the Noonday Creek Trail Extension task at the September 15, 16 and 17, 2009 Public Workshops. These comments are summarized in Table 7B.11. Table 7B.12 identifies the pros and cons that were named for each alternative.

Comments	Total Received
Favor Noonday Creek Alternative	9
Favor Canton Road Alternative	4
Favor Bells Ferry Alternative	1
Uncommitted	1
No Comment	2

Table 7B.11: Public Workshops Summary of Comments

Alternative	Pro/Con	Comments
Noonday Creek Alternative	PRO	Utilizes more of County-owned property
		Appears to be pleasant, looks most scenic, most direct
		Would be primarily separate from traffic, less interaction with vehicle traffic
		Simple, straight forward, most likely to have use from the general public
		Creates a “true” trail (as opposed to bike lanes) surrounded by lots of nature and green space
		Use of existing sewer easement for safety
		Good for mountain bike single track
		Similar to Silver Comet trail-type facility- sheltered, more natural and flat
		Separation from traffic promotes use by families with children
	CON	Noonday Creek flooding or at least bank erosion may be an issue- gets a lot of runoff from Town Center, which can cause 5-8 ft rise in creek level (e.g., Hurricane Dennis, 2005)
		Water quality impacts to creek during construction
		Safety concerns
Canton Road Alternative	PRO	Most desirable for getting to work, shopping, etc
		Around a populated area that will use the path
		Access to schools
		Most appropriate for leisure
	CON	Following busy roads is not enjoyable for bike riding (Canton Road is very busy and very fast)
		Mix of people and traffic is not desirable for families bringing children
		Least desirable for recreation
		Significant hills
		Has many turns, is most indirect, easy to get lost due to missed turns
		Longer route
		Not as much nature

Table 7B.12: Summary of Pros and Cons

Alternative	Pro/Con	Comments
Bells Ferry Alternative	PRO	Nice mixture of green space, nice for all bikes and walking
	CON	Following busy roads is not enjoyable for bike riding
		Significant hills
		Mix of people and traffic is not desirable for families bringing children
General	PRO	Use of Cobb County Water System sewer easement
		Access provided to Noonday Park
	CON	Sidepaths create dangerous situations
		Biking on wide streets with high traffic is undesirable

Table 7B.12 Continued

Several citizens suggested additional routes for the extension of the Noonday Creek Trail. These consisted of:

- Take Canton Road Alternative across Canton Road down Maybreeze Road to Shallowford Road and connect to a planned trail there.
- Follow Jamerson, Shallowford and Shiloh Roads to get to Kennesaw.
- Create a loop back to the beginning of this trail, possibly along the side of the highway.
- Connect to Canton Road along Hawkins Store Road and New Chastain Road, if bike lanes and sidewalks can be used along these streets.

Citizens also identified routes and connections that do not lie in the study area for the Noonday Creek Trail Extension. These routes and connections are:

- Atlanta Road to Marietta Square
- Spring Road to Concord Road to the Silver Comet Trail
- Ebenezer Road to Post Oak Tritt Road to City of Roswell bike paths and trails along the Chattahoochee River
- Better access is needed through the Galleria area to get to Fulton County.
- A connection over to the Silver Comet Trail

7B.6 PRIORITIZATION

A component of the Noonday Creek Trail Extension task is to prioritize each proposed alternative to aid in the selection of a preferred alternative. In order to determine the most suitable method of prioritizing each of the proposed alternatives, a peer review was conducted to evaluate what factors other counties/regions use to rank and prioritize their bicycle and/or pedestrian projects, and how a rank or score is calculated. Table 7B.13 shows the results of the peer review process.

Plan	Route Type	Prioritization Factors	Ranking Calculation
Atlanta Regional Commission (ARC) Bicycle and Pedestrian Plan	**Bicycle Facilities**	• Difference between target bicycle LOS and existing road LOS (ΔLOS) • Potential bicycling activity based on Latent Demand Method (Dm) • Degree of congestion by travel time index (Cg) • No. votes segment received in Community Open House Workshop (Pub) • If passes through LCI study site (LCI) • If passes through Station Community on UGPM (Sta) • Relative level of bicycle-friendly policies of jurisdiction of project (Pol) • Unit construction cost (Cost)	Score = (0.3ΔLOS + 0.2 Dm + 0.1Pub + 0.05LCI + 0.05Sta + 0.1Pol) / Cost
Paulding County, GA Trail & Greenway Master Plan	**Trails**	• Right of way ownership (20%) • Connections served (20%) • Construction Cost (20%) • Vehicular Exposure/Conflict (15%) • User Comfort (15%) • User Types Accommodated (10%)	Score = SUM (percent x points for each)
City of Wilson, NC Comprehensive Bicycle Plan	**Signed Routes**	• Require little to no add'l improvements • Provide access to major destinations • Often parallel to Expert-only routes (no scoring used)	NA

Table 7B.13: Prioritization Peer Review: Factors and Scoring

Plan	Route Type	Prioritization Factors	Ranking Calculation
	On-Road: based on Public Input, Project Characteristics, and Constructability/Cost	• Accessiblity (4 possible pts.) • Safety (1 possible pt.) • Centrality (1 possible pt.) • Connectivity (1 possible pt.)	Score = total points [max 7]
	Off-Road	None given	NA
Durhamwalks Pedestrian Plan (City of Durham, NC)	**Corridor Projects**	• Top tier: Project Type (1, 0.5 or 0 pts) • Second Tier: Presence of transit (1 or 0), Proximity to schools (1 or 0), Safety need (1, 0.75, 0.5, 0.25 or 0), Road Type (1, 0.5 or 0) • Third Tier: Nearby Compatible Land Uses (1 or 0), Public comments (1, 0.75, 0.5, 0.25 or 0), Proximity to parks and rec centers (1 or 0), presence of greenways (1 or 0)	Score = 3 (Top Tier pts.) + 2 (Sum of Second Tier pts.) + (Sum of Third Tier pts.) [max 15]
Albemarle Comprehensive Pedestrian Plan (NCDOT)	**Pedestrian Routes**	• Connectivity (10 pts possible for each): Destination Access; Access to special groups - youth, elderly, low income, etc; Already used as social trail or connection; Closes gaps or improves exist. Facilities • Safety (10 pts possible for each): Improves safety for special groups, Improves existing known safety issue, Improves routes with high verhicular volume or provides alternate route • Ease of Implementation (10 pts possible for each): Already in consideration by City or a development, Supported by officials and/or public, Can be implemented at reasonable cost	Score = total points [max 100]
City of Elk Grove (CA) Trails Master Plan	**Trail Projects**	• Trail Connectivity for Transportation and Recreation (22 pts. possible) • Trail Linkages to Destinations (18+ pts. possible) • Trail Safety (6 pts. possible) • Trail Geographical Distribution (5 pts. possible)	Score = total points
Thurston County Regional Planning Council (WA) Regional Trails Plan	**Trail Projects**	• Existing Facility • Connectivity • Safety • Greenways/Open Space Network • Lost Opportunities (i.e. would it be a lost opportunity if not acted on soon) • Project Readiness • Level of Use (i.e. urban or rural area, variety of users)	Not given
City/County of Durham, NC Comprehensive Bicycle Transportation Plan	**Bicycle Facilities**	• Proximity to schools • Access to parks, recreation and points of interest • Transportation System integration • Residential/Commercial/Employment destinations	Not given

Table 7B.13 Continued

Plan	Route Type	Prioritization Factors	Ranking Calculation
Massachusetts Bicycle Coalition	**Bicycle Facilities**	• Regional Quality (5 pts for each town passed through, 25 possible pts) • Connectivity with other routes (10 possible pts.) • Directness (10 possible pts.) • Traffic volume (10 possible pts. for low volume traffic) • Population density (10 pts. for facilities in urban areas) • Improvement to exist. bicycling facility (15 possible pts.) • Public land ownership (15 possible pts.) • Scenic route (5 points)	Score = total points
Silver Comet Trail Extension (Cobb County Bicycle and Pedestrian Improvement Plan)	**Bicycle and Pedestrian Facilities**	• Public Involvement • Construction Cost • Right of Way Ownership • Connections/Major Destinations Served • User Comfort/Safety • Presence of Transit • Nearby Land Use • Traffic Volume on Roadway	Score = total points

Table 7B.13 Continued

7B.6.1 NEXT STEPS

Based on analysis and feedback from the Silver Comet Trail Extension task of the Cobb County *Bicycle and Pedestrian Improvement Plan*, the consultant team has developed a proposed set of prioritization criteria. Review and comments were requested from the Project Management Team at the May 5, 2009 meeting. Input was sought to determine what prioritization factors are most important to the County in determining a preferred alignment for the Silver Comet Trail Extension into the City of Atlanta. In order to maintain consistency, these same criteria were used for the Noonday Creek Trail Extension. These proposed criteria are found on the following pages, as well as the criteria used by the peer jurisdictions.

Table 7B.14 on the following page presents an overview of the criteria found through the peer review, as well as the set of criteria recommended for the Silver Comet Trail Extension and the Noonday Creek Trail Extension. Table 7B.15 displays the recommended methodology used to award points to each alignment for prioritization.

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		CRITERIA																														
		Target Bicycle LOS vs. Road LOS	Potential Bicycling Activity	Degree of Congestion	Public Involvement	Passes through LCI or Station Community	Level of Bicycle-Friendly Policies of Jurisdiction	Construction Cost	Right of Way Ownership	Connections/Major Destinations Served	Vehicular Exposure/ Conflict	User Comfort/Safety	Type of Users Accommodated	Requirements for Add'l Improvements	Parallel to Expert-Only Routes	Accessibility	Project Type	Presence of Transit	Proximity to Schools	Nearby Land Use	Presence of Greenways	Ease of Implementation	Trail Geographic Distribution	Existing Facility	Lost Opportunities	Project Readiness	Level of Use	Transportation System Integration	Regional Quality	Connectivity with Other Routes	Directness	Traffic Volume on Roadway	Population Density	Improvements to Existing Bicycle Facility	Scenic Route
JURISDICTION	ARC	•	•	•	•	•	•	•																									
	Paulding County, GA								•	•	•	•	•																					
	City of Wilson, NC									•		•		•	•	•																	
	Durhamwalks				•					•		•					•	•	•	•	•												
	Albemarle Pedestrian Plan									•		•										•											
	City of Elk Grove, CA									•		•											•							•			
	Thurston County RPC											•									•				•	•	•	•					
	Durham, NC									•									•									•					
	MA Bicycle Coalition								•																				•	•	•	•	•	•
	Silver Comet Trail Extension				•			•	•	•		•						•		•											•		
	Noonday Creek Trail Extension Recommended Criteria				•			•	•	•		•						•		•											•		

Table 7B.14: Prioritization Matrix

Project Cost (25%)	***Value***
Cost < $3,000,000	***25***
$3,000,000 ≤ Cost < $4,000,000	***20***
$4,000,000 ≤ Cost < $5,000,000	***15***
$5,000,000 ≤ Cost	***10***
	(Possible 25 total value)

Connections/Destinations Served (15%)	***Value***
Schools:	
Directly Serves	***3***
Within 1/4 mile	***2***
Parks:	
Directly Serves	***3***
Within 1/4 mile	***2***
Residences:	
Serves Primarily Highly Dense Development	***2***
Serves Primarily Moderately Dense Development	***1***
Serves Primarily Minimally Dense Development	***0***
Business Districts:	
Shopping Center	***2***
Commercial Area	***1***
	(Possible 15 total value)

Right-of-Way Ownership (15%)	***Value***
All or most land owned by Cobb County	***15***
All land partially owned by Cobb County & partially owned by GDOT	***10***
Land partially owned by Cobb County, GDOT and privately	***5***
All land owned privately	***0***
	(Possible 15 total value)

User Comfort/Vehicular Exposure (15%)	***Value***
Major Roadway Crossings = 0 - 2	***10***
Major Roadway Crossings = 3 - 5	***5***
Major Roadway Crossings = 5+	***0***
Minor Roadway Crossings = 0 - 2	***5***
Minor Roadway Crossings = 3 - 5	***2***
Minor Roadway Crossings = 5+	***0***
	(Possible 15 total value)

Presence of Transit (10%)	***Value***
Direct Access to Transit Route	***10***
Access to Transit Route Within 1/4 Mile	***5***
No Transit Access	***0***
	(Possible 10 total value)

Public Involvement (10%)	***Value***
Received >20 Votes at Public Workshops	***10***
Received Between 10 and 20 Votes at Public Workshops	***5***
Received <10 Votes at Public Workshops	***1***
	(Possible 10 total value)

Surrounding Land Use (10%)	***Value***
Primarily Residential	***10***
Mix of Residential, Commercial, Industrial	***5***
Highly Industrial	***0***
	(Possible 10 total value)

SCORE = SUM OF POINTS PER CATEGORY

TOTAL POSSIBLE POINTS = 100

Table 7B.15: Prioritization Methodology

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7B.7 COST ESTIMATES

For the three (3) alternatives, the Noonday Creek Alternative, Canton Road Alternative, and Bells Ferry Alternative, a cost comparison was completed. This analysis consisted of compiling the anticipated costs associated with each alignment, including costs for engineering, right of way and construction. Current construction costs were obtained from Cobb County DOT as well as the Georgia Department of Transportation. Right of way costs were obtained from the Georgia Rapid Transit Authority's (GRTA) costing tool.

For each alternative, cost estimates were developed using a concrete paving option as well as an asphalt paving option. The least expensive alternative is the Noonday Creek Alternative, built with an asphalt surface, at $1,574,565.50. The most expensive is the Canton Road Alternative, built with a concrete surface, at $4,412,242.50. Table 7B.16 below shows an overview of the cost of each alternative, and more detailed cost estimates are provided on the following pages in Tables 7B.17-7B.22.

Alternative	Construction Cost	Preliminary Engineering Cost	Right of Way Cost	Total Cost
Noonday Creek Alternative, Asphalt	$951,066.83	$101,422.17	$522,076.50	**$1,574,565.50**
Noonday Creek Alternative, Concrete	$1,584,487.31	$101,422.17	$522,076.50	**$2,207,985.98**
Bells Ferry Alternative, Asphalt	$1,576,974.68	$153,779.85	$730,417.38	**$2,461,171.91**
Bells Ferry Alternative, Concrete	$2,267,521.68	$153,779.85	$730,417.38	**$3,151,718.91**
Canton Road Alternative, Asphalt	$2,085,122.21	$199,024.82	$1,322,719.47	**$3,606,866.50**
Canton Road Alternative, Concrete	$2,890,498.21	$199,024.82	$1,322,719.47	**$4,412,242.50**

Table 7B.16: Overview of Alternative Costs

Table 7B.17: Preliminary Cost Analysis, Noonday Creek Alternative, Paving Option 1 - Concrete

General Information				
Length (mi):	3.99		**Roadway Crossings:**	
Width (ft):	10		New Chastain Road	
Right of Way Width (ft):	0		Bells Ferry Road	
Temp. Easement Width (ft):	0		Hawkins Store Road	
Perm. Easement Width (ft):	25			
County-owned Property along Creek (linear feet):		10,560		
Driveway Crossings:	Residential:	0	Commercial:	0

Mainline Cost

Item	Unit	Unit Price	Quantity	Cost
Traffic Control	EA	$75,000	1	$75,000.00
Conc. Sidewalk, 6 in. thick	SY	$41.72	23,408	$976,581.76
Curb and Gutter (6"x24")	LF	$38.58	-	$0.00
Storm Drain Pipe (18")	LF	$36.80	-	$0.00
Catch Basin	EA	$2,453.15	-	$0.00
Grassing (5 ft. width)	SY	$6.91	-	$0.00
Skip Traffic Stripe, 5 in, Yellow	LF	$0.22	21,067	$4,634.78
Solid Traffic Stripe, 24 in, White	LF	$2.01	20	$40.20
Highway Signs, Tp 2 Mat'l, Refl. Sheeting, Tp 9	SF	$41.39	60	$2,483.40
Erosion Control	LS	N/A	1	$125,000.00
Grading Complete/Earthwork	LS	N/A	1	$75,000.00
			Total, Mainline:	**$1,258,740.14**

Additional Items for Crossings

Item	Unit	Unit Price	Quantity	Cost
Concrete Header Curb	LF	$16.00	68	$1,088.00
Pavement Marking Word (6 per crossing, for trail and road)	EA	$65.00	6	$390.00
Solid Traffic Stripe, 8 in, White	LF	$1.63	130	$211.90
Curb Cut Wheelchair Ramp, Type D (2 per crossing)	EA	$630.00	2	$1,260.00
			Subtotal, per New Crossing:	$2,949.90
			Number of New Crossings:	3
			Total, New Crossings:	**$8,849.70**
			Construction Cost, Subtotal:	***$1,267,589.84***
			25% Contingency:	***$316,897.46***
			TOTAL CONSTRUCTION COST:	**$1,584,487.31**

Right of Way

Item	Unit	Unit Price	Quantity	Cost
Right of Way - Suburban, residential	SF	$2.65	0	$0.00
Permanent Easement - Suburban, residential	SF	$1.99	262,680	$522,076.50
Temporary Easement - Suburban, residential	SF	$1.59	0	$0.00
			Subtotal, Right of Way:	$522,076.50
			Total, Right of Way:	**$522,076.50**

Preliminary Engineering

Item	Unit	Unit Price	Quantity	Cost
Preliminary Engineering	N/A	N/A	N/A	$101,422.17
			Total, Preliminary Engineering:	**$101,422.17**

TOTAL COST, NOONDAY CREEK ALTERNATIVE, PAVING OPTION 1 (CONCRETE):	***$2,207,985.98***

Noonday Creek Alternative Notes/Assumptions:

1. Item descriptions and unit costs based on current (2008) Georgia DOT pay item index.
2. Curb and gutter estimated for addition where it is not currently present along alignments.
3. Catch basins placed every 350 feet, where curb and gutter is required. Storm drain pipe is assumed for one third of length where curb and gutter is required.
4. Erosion control and grading complete/earthwork costs estimated from similar Cobb DOT projects.
5. Signage quantities calculated based on roadway/trail crossing standards.
6. Right of way surrounding the Noonday Creek Alternative assumed to 100% residential. Right of way cost taken from Georgia Rapid Transit Authority (GRTA) Costing Tool. Temporary easement cost assumed at 60% of right of way cost. Permanent easement cost assumed at 75% of right of way cost. Right of way total accounts for existing County-owned property located along the alignment.
7. Because the Noonday Creek Alternative is proposed entirely along the Noonday Creek corridor, right of way acqusition is assumed to include only a permanent easement along the creek.
8. Preliminary Engineering cost obtained from the average of 8% of construction cost of the concrete option, and 8% of construction cost of asphalt option.
9. N/A = Not applicable.

Table 7B.18: Preliminary Cost Analysis, Noonday Creek Alternative, Paving Option 2 - Asphalt

General Information				
Length (mi):	3.99		**Roadway Crossings:**	
Width (ft):	10		New Chastain Road	
Right of Way Width (ft):	0		Bells Ferry Road	
Temp. Easement Width (ft):	0		Hawkins Store Road	
Perm. Easement Width (ft):	25			
County-owned Property along Creek (linear feet):		10,560		
Driveway Crossings:	Residential:	0	Commercial:	0

Mainline Cost				
Item	**Unit**	**Unit Price**	**Quantity**	**Cost**
Traffic Control	EA	$75,000	1	$75,000.00
4" GAB	SY	$8.00	23,408	$187,264.00
Surface Course (12.5 mm)	SY	$6.04	23,408	$141,384.32
Binder (19 mm)	SY	$6.23	23,408	$145,831.84
Curb and Gutter (6"x24")	LF	$38.58	-	$0.00
Storm Drain Pipe (18")	LF	$36.80	-	$0.00
Catch Basin	EA	$2,453.15	-	$0.00
Grassing (5 ft. width)	SY	$6.91	-	$0.00
Skip Traffic Stripe, 5 in, Yellow	LF	$0.22	0	$0.00
Solid Traffic Stripe, 24 in, White	LF	$2.01	20	$40.20
Highway Signs, Tp 2 Mat'l, Refl. Sheeting, Tp 9	SF	$41.39	60	$2,483.40
Erosion Control	LS	N/A	1	$125,000.00
Grading Complete/Earthwork	LS	N/A	1	$75,000.00
			Total, Mainline:	**$752,003.76**

Additional Items for Crossings				
Item	**Unit**	**Unit Price**	**Quantity**	**Cost**
Concrete Header Curb	LF	$16.00	68	$1,088.00
Pavement Marking Word (6 per crossing, for trail and road)	EA	$65.00	6	$390.00
Solid Traffic Stripe, 8 in, White	LF	$1.63	130	$211.90
Curb Cut Wheelchair Ramp, Type D (2 per crossing)	EA	$630.00	2	$1,260.00
			Subtotal, per New Crossing:	$2,949.90
			Number of New Crossings:	3
			Total, New Crossings:	**$8,849.70**
			Construction Cost, Subtotal:	***$760,853.46***
			25% Contingency:	***$190,213.37***
			TOTAL CONSTRUCTION COST:	**$951,066.83**

Right of Way				
Item	**Unit**	**Unit Price**	**Quantity**	**Cost**
Right of Way - Suburban, residential	SF	$2.65	0	$0.00
Permanent Easement - Suburban, residential	SF	$1.99	262,680	$522,076.50
Temporary Easement - Suburban, residential	SF	$1.59	0	$0.00
			Subtotal, Right of Way:	$522,076.50
			Total, Right of Way:	**$522,076.50**

Preliminary Engineering				
Item	**Unit**	**Unit Price**	**Quantity**	**Cost**
Preliminary Engineering	N/A	N/A	N/A	$101,422.17
			Total, Preliminary Engineering:	**$101,422.17**

TOTAL COST, NOONDAY CREEK ALTERNATIVE, PAVING OPTION 2 (ASPHALT):	***$1,574,565.50***

Noonday Creek Alternative Notes/Assumptions:

1. Item descriptions and unit costs based on current (2008) Georgia DOT pay item index.
2. Curb and gutter estimated for addition where it is not currently present along alignments.
3. Catch basins placed every 350 feet, where curb and gutter is required. Storm drain pipe is assumed for one third of length where curb and gutter is required.
4. Erosion control and grading complete/earthwork costs estimated from similar Cobb DOT projects.
5. Signage quantities calculated based on roadway/trail crossing standards.
6. Right of way surrounding the Noonday Creek Alternative assumed to 100% residential. Right of way cost taken from Georgia Rapid Transit Authority (GRTA) Costing Tool. Temporary easement cost assumed at 60% of right of way cost. Permanent easement cost assumed at 75% of right of way cost. Right of way total accounts for existing County-owned property located along the alignment.
7. Because the Noonday Creek Alternative is proposed entirely along the Noonday Creek corridor, right of way acqusition is assumed to include only a permanent easement along the creek.
8. Preliminary Engineering cost obtained from the average of 8% of construction cost of the concrete option, and 8% of construction cost of asphalt option.
9. N/A = Not applicable.

Table 7B.19: Preliminary Cost Analysis, Canton Road Alternative, Paving Option 1 - Concrete

General Information

Length (mi):	5.12	**Minor Roadway Crossings:**	
Width (ft):	10	Lloyd Dr	Chastain Trace
Right of Way Width (ft):	8	Brookhaven Dr	Sumter Dr
Temp. Easement Width (ft):	5	Kathryn Dr	Claybrooke Dr
Perm. Easement Width (ft):	25	Christine Dr	Coventry Dr
County-owned Property along Creek (linear feet):	3,960	Willard Dr	Kensington Dr
		Chastain Manor Way	Ansley Dr
Major Roadway Crossings:		Chastain Crossing	
Bells Ferry Rd			
New Chastain Rd/Chastain Corners (utilize exist. crossing features)		**Driveway Crossings:**	
Hawkins Store Rd (utilize exist. crossing features)		Residential:	11
		Commercial:	22

Mainline Cost

Item	Unit	Unit Price	Quantity	Cost
Traffic Control	EA	$75,000	1	$75,000.00
Conc. Sidewalk, 6 in. thick	SY	$41.72	30,037	$1,253,157.55
Curb and Gutter (6"x24")	LF	$38.58	6,520	$251,541.60
Storm Drain Pipe (18")	LF	$36.80	4,349	$160,037.31
Catch Basin	EA	$2,453.15	19	$45,698.68
Grassing (5 ft. width)	SY	$6.91	10,912	$75,401.92
Skip Traffic Stripe, 5 in, Yellow	LF	$0.22	27,034	$5,947.39
Highway Signs, Tp 2 Mat'l, Refl. Sheeting, Tp 9	SF	$41.39	45	$1,862.55
Erosion Control	LS	N/A	1	$160,000.00
Grading Complete/Earthwork	LS	N/A	1	$95,000.00
			Total, Mainline:	**$2,123,647.00**

Additional Items for Major Crossings at Existing Intersections

Item	Unit	Unit Price	Quantity	Cost
Bollards (2 per crossing)	EA	$649.21	2	$1,298.42
			Subtotal, per Existing Crossing:	$1,298.42
			Number of Existing Crossings:	2
			Total, Existing Crossings:	**$2,596.84**

Additional Items for New Roadway Crossings (Major)

Item	Unit	Unit Price	Quantity	Cost
Concrete Header Curb	LF	$16.00	68	$1,088.00
Pavement Marking Word (6 per crossing, for trail and road)	EA	$65.00	6	$390.00
Solid Traffic Stripe, 8 in, White	LF	$1.63	130	$211.90
Curb Cut Wheelchair Ramp, Type D (2 per crossing)	EA	$630.00	2	$1,260.00
			Subtotal, per Major Crossing:	$2,949.90
			Number of Major Crossings:	1
			Total, Major Crossings:	**$2,949.90**

Additional Items for New Roadway Crossings (Minor)

Item	Unit	Unit Price	Quantity	Cost
Concrete Header Curb	LF	$16.00	68	$1,088.00
Pavement Marking Word (6 per crossing, for trail and road)	EA	$65.00	6	$390.00
Solid Traffic Stripe, 8 in, White	LF	$1.63	130	$211.90
			Subtotal, per Minor Crossing:	$1,689.90
			Number of Minor Crossings:	13
			Total, Minor Crossings:	**$21,968.70**

Additional Items for Driveway Crossings

Item	Unit	Unit Price	Quantity	Cost
Driveway Concrete, 6 In. Thickness (for comm. driveways)	SY	$36.56	184	$6,727.04
Concrete Valley Gutter, 6 In. (for residential driveways)	SY	$26.75	45	$1,203.75
Number of Residential Driveways: 11			Subtotal, Res. Driveways:	$13,241.25
Number of Commercial Driveways: 22			Subtotal, Comm. Driveways:	$147,994.88
			Total, Driveway Crossings:	**$161,236.13**
			Construction Cost, Subtotal:	***$2,312,398.57***
			25% Contingency:	***$578,099.64***
			TOTAL CONSTRUCTION COST:	**$2,890,498.21**

Right of Way

Item	Unit	Unit Price	Quantity	Cost
Right of Way - Suburban, commercial	SF	$10.86	51,854	$563,132.53
Right of Way - Suburban, residential	SF	$2.65	103,708	$274,825.27
Permanent Easement - Suburban residential	SF	$1.99	85,800	$170,527.50
Temporary Easement - Suburban, commercial	SF	$6.52	32,409	$211,174.70
Temporary Easement - Suburban, residential	SF	$1.59	64,817	$103,059.48
			Total, Right of Way:	**$1,322,719.47**

Preliminary Engineering

Item	Unit	Unit Price	Quantity	Cost
Preliminary Engineering	N/A	N/A	N/A	$199,024.82
			Total, Preliminary Engineering:	**$199,024.82**

TOTAL COST, CANTON ROAD ALTERNATIVE PAVING OPTION 1 (CONCRETE):	***$4,412,242.50***

Alternative 2 Notes/Assumptions:

1. Item descriptions and unit costs based on current (2008) Georgia DOT pay item index.
2. Curb and gutter estimated for addition where it is not currently present along alignments.
3. Catch basins placed every 350 feet, where curb and gutter is required. Storm drain pipe is assumed for one third of length where curb and gutter is required.
4. Erosion control and grading complete/earthwork costs estimated from similar Cobb DOT projects.
5. Signage quantities calculated based on roadway/trail crossing standards.
6. Right of way surrounding the Canton Road Alternative assumed to be 66% residential and 33% commerical where right of way is calculated along roadways. Along Noonday Creek, right of way is 100% residential. Right of way cost taken from Georgia Rapid Transit Authority (GRTA) Costing Tool. Temporary easement cost assumed at 60% of right of way cost. Permanent easement cost assumed at 75% of right of way cost. Right of way total accounts for existing County-owned property located along the alignment.
7. Required right of way and temporary easement widths estimated from available existing right of way data.
8. Preliminary Engineering cost obtained from the average of 8% of construction cost of the concrete option, and 8% of construction cost of asphalt option.
9. N/A = Not applicable.

Table 7B.20: Preliminary Cost Analysis, Canton Road Alternative, Paving Option 2 - Asphalt

General Information

Length (mi):	5.12	**Minor Roadway Crossings:**	
Width (ft):	10	Lloyd Dr	Chastain Trace
Right of Way Width (ft):	8	Brookhaven Dr	Sumter Dr
Temp. Easement Width (ft):	5	Kathryn Dr	Claybrooke Dr
Perm. Easement Width (ft):	25	Christine Dr	Coventry Dr
County-owned Property along Creek (linear feet):	3,960	Willard Dr	Kensington Dr
		Chastain Manor Way	Ansley Dr
Major Roadway Crossings:		Chastain Crossing	
Bells Ferry Rd			
New Chastain Rd/Chastain Corners (utilize exist. crossing features)		**Driveway Crossings:**	
Hawkins Store Rd (utilize exist. crossing features)		Residential:	11
		Commercial:	22

Mainline Cost

Item	Unit	Unit Price	Quantity	Cost
Traffic Control	EA	$75,000	1	$75,000.00
4" GAB	SY	$8.00	30,037	$240,298.67
Surface Course (12.5 mm)	SY	$6.04	30,037	$181,425.49
Binder (19 mm)	SY	$6.23	30,037	$187,132.59
Curb and Gutter (6"x24")	LF	$38.58	6,520	$251,541.60
Storm Drain Pipe (18")	LF	$36.80	4,349	$160,037.31
Catch Basin	EA	$2,453.15	19	$45,698.68
Grassing (5 ft. width)	SY	$6.91	10,912	$75,401.92
Skip Traffic Stripe, 5 in, Yellow	LF	$0.22	27,034	$5,947.39
Highway Signs, Tp 2 Mat'l, Refl. Sheeting, Tp 9	SF	$41.39	45	$1,862.55
Erosion Control	LS	N/A	1	$160,000.00
Grading Complete/Earthwork	LS	N/A	1	$95,000.00
			Total, Mainline:	**$1,479,346.20**

Additional Items for Major Crossings at Existing Intersections

Item	Unit	Unit Price	Quantity	Cost
Bollards (2 per crossing)	EA	$649.21	2	$1,298.42
			Subtotal, per Existing Crossing:	$1,298.42
			Number of Existing Crossings:	2
			Total, Existing Crossings:	**$2,596.84**

Additional Items for New Roadway Crossings (Major)

Item	Unit	Unit Price	Quantity	Cost
Concrete Header Curb	LF	$16.00	68	$1,088.00
Pavement Marking Word (6 per crossing, for trail and road)	EA	$65.00	6	$390.00
Solid Traffic Stripe, 8 in, White	LF	$1.63	130	$211.90
Curb Cut Wheelchair Ramp, Type D (2 per crossing)	EA	$630.00	2	$1,260.00
			Subtotal, per Major Crossing:	$2,949.90
			Number of Major Crossings:	1
			Total, Major Crossings:	**$2,949.90**

Additional Items for New Roadway Crossings (Minor)

Item	Unit	Unit Price	Quantity	Cost
Concrete Header Curb	LF	$16.00	68	$1,088.00
Pavement Marking Word (6 per crossing, for trail and road)	EA	$65.00	6	$390.00
Solid Traffic Stripe, 8 in, White	LF	$1.63	130	$211.90
			Subtotal, per Minor Crossing:	$1,689.90
			Number of Minor Crossings:	13
			Total, Minor Crossings:	**$21,968.70**

Additional Items for Driveway Crossings

Item	Unit	Unit Price	Quantity	Cost
Driveway Concrete, 6 In. Thickness (for comm. driveways)	SY	$36.56	184	$6,727.04
Concrete Valley Gutter, 6 In. (for residential driveways)	SY	$26.75	45	$1,203.75
Number of Residential Driveways: 11			Subtotal, Res. Driveways:	$13,241.25
Number of Commercial Driveways: 22			Subtotal, Comm. Driveways:	$147,994.88
			Total, Driveway Crossings:	**$161,236.13**
			Construction Cost, Subtotal:	***$1,668,097.77***
			25% Contingency:	***$417,024.44***
			TOTAL CONSTRUCTION COST:	$2,085,122.21

Right of Way

Item	Unit	Unit Price	Quantity	Cost
Right of Way - Suburban, commercial	SF	$10.86	51,854	$563,132.53
Right of Way - Suburban, residential	SF	$2.65	103,708	$274,825.27
Permanent Easement - Suburban residential	SF	$1.99	85,800	$170,527.50
Temporary Easement - Suburban, commercial	SF	$6.52	32,409	$211,174.70
Temporary Easement - Suburban, residential	SF	$1.59	64,817	$103,059.48
			Total, Right of Way:	**$1,322,719.47**

Preliminary Engineering

Item	Unit	Unit Price	Quantity	Cost
Preliminary Engineering	N/A	N/A	N/A	$199,024.82
			Total, Preliminary Engineering:	**$199,024.82**

TOTAL COST, CANTON ROAD ALTERNATIVE, PAVING OPTION 2 (ASPHALT):	***$3,606,866.50***

Canton Road Alternative Notes/Assumptions:

1. Item descriptions and unit costs based on current (2008) Georgia DOT pay item index.
2. Curb and gutter estimated for addition where it is not currently present along alignments.
3. Catch basins placed every 350 feet, where curb and gutter is required. Storm drain pipe is assumed for one third of length where curb and gutter is required.
4. Erosion control and grading complete/earthwork costs estimated from similar Cobb DOT projects.
5. Signage quantities calculated based on roadway/trail crossing standards.
6. Right of way surrounding the Canton Road Alternative assumed to be 66% residential and 33% commerical where right of way is calculated along roadways. Along Noonday Creek, right of way is 100% residential. Right of way cost taken from Georgia Rapid Transit Authority (GRTA) Costing Tool. Temporary easement cost assumed at 60% of right of way cost. Permanent easement cost assumed at 75% of right of way cost. Right of way total accounts for existing County-owned property located along the alignment.
7. Required right of way and temporary easement widths estimated from available existing right of way data.
8. Preliminary Engineering cost obtained from the average of 8% of construction cost of the concrete option, and 8% of construction cost of asphalt option.
9. N/A = Not applicable.

Table 7B.21: Preliminary Cost Analysis, Bells Ferry Alternative, Paving Option 1 - Concrete

General Information

Length (mi):	4.39	**Minor Roadway Crossings:**	
Width (ft):	10	Lloyd Dr	Christine Dr
Right of Way Width (ft):	8	Brookhaven Dr	Willard Dr
Temp. Easement Width (ft):	5	Kathryn Dr	Estates Landing Drive
Perm. Easement Width (ft):	25		
County-owned Property along Creek (linear feet):	11,352		

Major Roadway Crossings:	**Driveway Crossings:**
Bells Ferry Rd	Residential: 7
New Chastain Rd (utilize exist. crossing features)	Commercial: 0
Hawkins Store Rd	

Mainline Cost

Item	Unit	Unit Price	Quantity	Cost
Traffic Control	EA	$75,000	1	$75,000.00
Conc. Sidewalk, 6 in. thick	SY	$41.72	25,755	$1,074,484.69
Curb and Gutter (6"x24")	LF	$38.58	4,910	$189,427.80
Storm Drain Pipe (18")	LF	$36.80	3,275	$120,518.90
Catch Basin	EA	$2,453.15	14	$34,414.19
Grassing (5 ft. width)	SY	$6.91	10,912	$75,401.92
Skip Traffic Stripe, 5 in, Yellow	LF	$0.22	23,179	$5,099.42
Highway Signs, Tp 2 Mat'l, Refl. Sheeting, Tp 9	SF	$41.39	45	$1,862.55
Erosion Control	LS	N/A	1	$135,000.00
Grading Complete/Earthwork	LS	N/A	1	$80,000.00
			Total, Mainline:	**$1,791,209.47**

Additional Items for Major Crossings at Existing Intersections

Item	Unit	Unit Price	Quantity	Cost
Bollards (2 per crossing)	EA	$649.21	2	$1,298.42
			Subtotal, per Existing Crossing:	$1,298.42
			Number of Existing Crossings:	1
			Total, Existing Crossings:	**$1,298.42**

Additional Items for New Roadway Crossings (Major)

Item	Unit	Unit Price	Quantity	Cost
Concrete Header Curb	LF	$16.00	68	$1,088.00
Pavement Marking Word (6 per crossing, for trail and road)	EA	$65.00	6	$390.00
Solid Traffic Stripe, 8 in, White	LF	$1.63	130	$211.90
Curb Cut Wheelchair Ramp, Type D (2 per crossing)	EA	$630.00	2	$1,260.00
			Subtotal, per Major Crossing:	$1,471.90
			Number of Major Crossings:	2
			Total, Major Crossings:	**$2,943.80**

Additional Items for New Roadway Crossings (Minor)

Item	Unit	Unit Price	Quantity	Cost
Concrete Header Curb	LF	$16.00	68	$1,088.00
Pavement Marking Word (6 per crossing, for trail and road)	EA	$65.00	6	$390.00
Solid Traffic Stripe, 8 in, White	LF	$1.63	130	$211.90
			Subtotal, per Minor Crossing:	$1,689.90
			Number of Minor Crossings:	6
			Total, Minor Crossings:	**$10,139.40**

Additional Items for Driveway Crossings

Item	Unit	Unit Price	Quantity	Cost
Driveway Concrete, 6 In. Thickness (for comm. driveways)	SY	$36.56	184	$6,727.04
Concrete Valley Gutter, 6 In. (for residential driveways)	SY	$26.75	45	$1,203.75
Number of Residential Driveways: 7			Subtotal, Res. Driveways:	$8,426.25
Number of Commercial Driveways: 0			Subtotal, Comm. Driveways:	$0.00
			Total, Driveway Crossings:	**$8,426.25**
			Construction Cost, Subtotal:	***$1,814,017.34***
			25% Contingency:	***$453,504.34***
			TOTAL CONSTRUCTION COST:	$2,267,521.68

Right of Way

Item	Unit	Unit Price	Quantity	Cost
Right of Way - Suburban, residential	SF	$2.65	126,298	$334,688.64
Permanent Easement - Suburban residential	SF	$1.99	135,960	$270,220.50
Temporary Easement - Suburban, residential	SF	$1.59	78,936	$125,508.24
			Total, Right of Way:	**$730,417.38**

Preliminary Engineering

Item	Unit	Unit Price	Quantity	Cost
Preliminary Engineering	N/A	N/A	N/A	$153,779.85
			Total, Preliminary Engineering:	**$153,779.85**

TOTAL COST, BELLS FERRY ALTERNATIVE, PAVING OPTION 1 (CONCRETE):	***$3,151,718.91***

Bells Ferry Alternative Notes/Assumptions:

1. Item descriptions and unit costs based on current (2008) Georgia DOT pay item index.
2. Curb and gutter estimated for addition where it is not currently present along alignments.
3. Catch basins placed every 350 feet, where curb and gutter is required. Storm drain pipe is assumed for one third of length where curb and gutter is required.
4. Erosion control and grading complete/earthwork costs estimated from similar Cobb DOT projects.
5. Signage quantities calculated based on roadway/trail crossing standards.
6. Right of way surrounding the Bells Ferry Alternative assumed to be 100% residential. Right of way cost taken from Georgia Rapid Transit Authority (GRTA) Costing Tool. Permanent easement cost assumed at 75% of right of way cost. Temporary easement cost assumed at 60% of right of way cost. Permanent easement cost assumed at 75% of right of way cost. Right of way total accounts for existing County-owned property located along the alignment.
7. Required right of way and temporary easement widths estimated from available existing right of way data.
8. Preliminary Engineering cost obtained from the average of 8% of construction cost of the concrete option, and 8% of construction cost of asphalt option.
9. N/A = Not applicable.

Table 7B.22: Preliminary Cost Analysis, Bells Ferry Alternative, Paving Option 2 - Asphalt

General Information			
Length (mi):	4.39	**Minor Roadway Crossings:**	
Width (ft):	10	Lloyd Dr	Christine Dr
Right of Way Width (ft):	8	Brookhaven Dr	Willard Dr
Temp. Easement Width (ft):	5	Kathryn Dr	Estates Landing Drive
Perm. Easement Width (ft):	25		
County-owned Property along Creek (linear feet):	11,352		
Major Roadway Crossings:		**Driveway Crossings:**	
Bells Ferry Rd		Residential: 7	
New Chastain Rd (utilize exist. crossing features)		Commercial: 0	
Hawkins Store Rd			

Mainline Cost

Item	Unit	Unit Price	Quantity	Cost
Traffic Control	EA	$75,000	1	$75,000.00
4" GAB	SY	$8.00	25,755	$206,037.33
Surface Course (12.5 mm)	SY	$6.04	25,755	$155,558.19
Binder (19 mm)	SY	$6.23	25,755	$160,451.57
Curb and Gutter (6"x24")	LF	$38.58	4,910	$189,427.80
Storm Drain Pipe (18")	LF	$36.80	3,275	$120,518.90
Catch Basin	EA	$2,453.15	14	$34,414.19
Grassing (5 ft. width)	SY	$6.91	10,912	$75,401.92
Skip Traffic Stripe, 5 in, Yellow	LF	$0.22	23,179	$5,099.42
Highway Signs, Tp 2 Mat'l, Refl. Sheeting, Tp 9	SF	$41.39	45	$1,862.55
Erosion Control	LS	N/A	1	$135,000.00
Grading Complete/Earthwork	LS	N/A	1	$80,000.00
			Total, Mainline:	**$1,238,771.87**

Additional Items for Major Crossings at Existing Intersections

Item	Unit	Unit Price	Quantity	Cost
Bollards (2 per crossing)	EA	$649.21	2	$1,298.42
			Subtotal, per Existing Crossing:	$1,298.42
			Number of Existing Crossings:	1
			Total, Existing Crossings:	**$1,298.42**

Additional Items for New Roadway Crossings (Major)

Item	Unit	Unit Price	Quantity	Cost
Concrete Header Curb	LF	$16.00	68	$1,088.00
Pavement Marking Word (6 per crossing, for trail and road)	EA	$65.00	6	$390.00
Solid Traffic Stripe, 8 in, White	LF	$1.63	130	$211.90
Curb Cut Wheelchair Ramp, Type D (2 per crossing)	EA	$630.00	2	$1,260.00
			Subtotal, per Major Crossing:	$1,471.90
			Number of Major Crossings:	2
			Total, Major Crossings:	**$2,943.80**

Additional Items for New Roadway Crossings (Minor)

Item	Unit	Unit Price	Quantity	Cost
Concrete Header Curb	LF	$16.00	68	$1,088.00
Pavement Marking Word (6 per crossing, for trail and road)	EA	$65.00	6	$390.00
Solid Traffic Stripe, 8 in, White	LF	$1.63	130	$211.90
			Subtotal, per Minor Crossing:	$1,689.90
			Number of Minor Crossings:	6
			Total, Minor Crossings:	**$10,139.40**

Additional Items for Driveway Crossings

Item	Unit	Unit Price	Quantity	Cost
Driveway Concrete, 6 In. Thickness (for comm. driveways)	SY	$36.56	184	$6,727.04
Concrete Valley Gutter, 6 In. (for residential driveways)	SY	$26.75	45	$1,203.75
Number of Residential Driveways: 7			Subtotal, Res. Driveways:	$8,426.25
Number of Commercial Driveways: 0			Subtotal, Comm. Driveways:	$0.00
			Total, Driveway Crossings:	**$8,426.25**
			Construction Cost, Subtotal:	***$1,261,579.74***
			25% Contingency:	***$315,394.94***
			TOTAL CONSTRUCTION COST:	**$1,576,974.68**

Right of Way

Item	Unit	Unit Price	Quantity	Cost
Right of Way - Suburban, residential	SF	$2.65	126,298	$334,688.64
Permanent Easement - Suburban residential	SF	$1.99	135,960	$270,220.50
Temporary Easement - Suburban, residential	SF	$1.59	78,936	$125,508.24
			Total, Right of Way:	**$730,417.38**

Preliminary Engineering

Item	Unit	Unit Price	Quantity	Cost
Preliminary Engineering	N/A	N/A	N/A	$153,779.85
			Total, Preliminary Engineering:	**$153,779.85**

TOTAL COST, BELLS FERRY ALTERNATIVE, PAVING OPTION 2 (ASPHALT):	***$2,461,171.91***

Bells Ferry Alternative Notes/Assumptions:

1. Item descriptions and unit costs based on current (2008) Georgia DOT pay item index.
2. Curb and gutter estimated for addition where it is not currently present along alignments.
3. Catch basins placed every 350 feet, where curb and gutter is required. Storm drain pipe is assumed for one third of length where curb and gutter is required.
5. Erosion control and grading complete/earthwork costs estimated from similar Cobb DOT projects.
6. Signage quantities calculated based on roadway/trail crossing standards.
7. Right of way surrounding Bells Ferry Alternative assumed to be 85% commercial, 15% residential. Right of way cost taken from Georgia Rapid Transit Authority (GRTA) Costing Tool. Temporary easement cost assumed at 60% of right of way cost. Permanent easement cost assumed at 75% of right of way cost. Right of way total accounts for existing County-owned property located along the alignment.
8. Required right of way and temporary easement widths estimated from available existing right of way data.
9. Preliminary Engineering cost obtained from the average of 8% of construction cost of the concrete option, and 8% of construction cost of asphalt option.
10. N/A = Not applicable.