

Prepared for



**SANDY SPRINGS**  
GEORGIA  
Project T-7243

Final Report

# North End Roadway Safety Analysis



Prepared by



September 2022

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# Acronyms / Abbreviations

CIP	Capital Improvement Program
CMF	Crash Modification Factor
GDOT	Georgia Department of Transportation
GEARS	Georgia Electronic Accident Report System
MARTA	Metropolitan Atlanta Rapid Transit Authority
MMIP	Major Mobility Investment Program
TMC	Traffic Management Center

# Glossary

access management	proactive management of vehicular access points to land parcels adjacent to all manner of roadways
first-mile/last-mile	first and last segments of transit trips between origins/destinations and transit provided segments
high visibility crosswalks	crosswalks with thermoplastic pavement markings in a ladder pattern to increase visibility
KABCO	crash severity rating system ranging from fatal crashes to property damage only crashes
Level of Service	qualitative measure used to rate to the quality of service of highways, sidewalks and transit facilities
mid-block	between two intersections
multimodal	characterized by several different modes of activities
Numetric	statewide crash database and dashboard
pedestrian refuge	areas within the travel roadway where pedestrians are protected from vehicles by raised medians/islands
pocket median	limited length, raised, landscaped median for traffic calming and pedestrian safety purposes
sidepath	sidewalk, trail, or multiuse path
unprotected	pedestrian crossing street without signalization granting right-of-way over vehicular traffic

# Introduction and Purpose

This North End Roadway Safety Analysis Study evaluated potential safety measures and presented recommendations to implement the most cost-effective solutions to improve safety and increase mobility for all users in the North End area of Sandy Springs.

The North End Roadway Safety Analysis study area consists of four roadway corridors located on the north side of Sandy Springs. The City of Sandy Springs identified 14 intersections and one roadway segment in the four roadway corridors that have experienced higher than normal number of vehicular crashes from 2016 to 2020. Based on an analysis performed by City staff with 2017 crash data, these intersections were ranked between third highest (Northridge Road at SR 400 southbound ramps) to 137th highest (Hope Road at Roswell Road) crash locations in the City. These intersections and roadway segments include:

1. Roswell Road (SR 9) Corridor
  - a. Northridge Road at Roswell Road
  - b. Roswell Road – Street Address Numbers 8331-8386
  - c. Northridge Parkway at Roswell Road
  - d. Hightower Trail at Roswell Road
  - e. Hope Road at Roswell Road
  - f. Huntcliff at Roswell Road
2. Dunwoody Place Corridor
  - a. Dunwoody Place at North River Drive
  - b. Cedar Run at Dunwoody Place
  - c. Dunwoody Place at Roberts Drive
  - d. Dunwoody Place at Hightower Trail
  - e. Dunwoody Place at Northridge Parkway
3. Northridge Road Corridor
  - a. Colquitt Road at Northridge Road
  - b. Northridge Road at SR 400 South
  - c. Northridge Road at SR 400 North
4. Roberts Drive
  - a. Pride Place at Roberts Drive

These intersections and roadway segment are illustrated in **Figure 1** on the following page.

North End Safety Study - Sandy Springs, GA

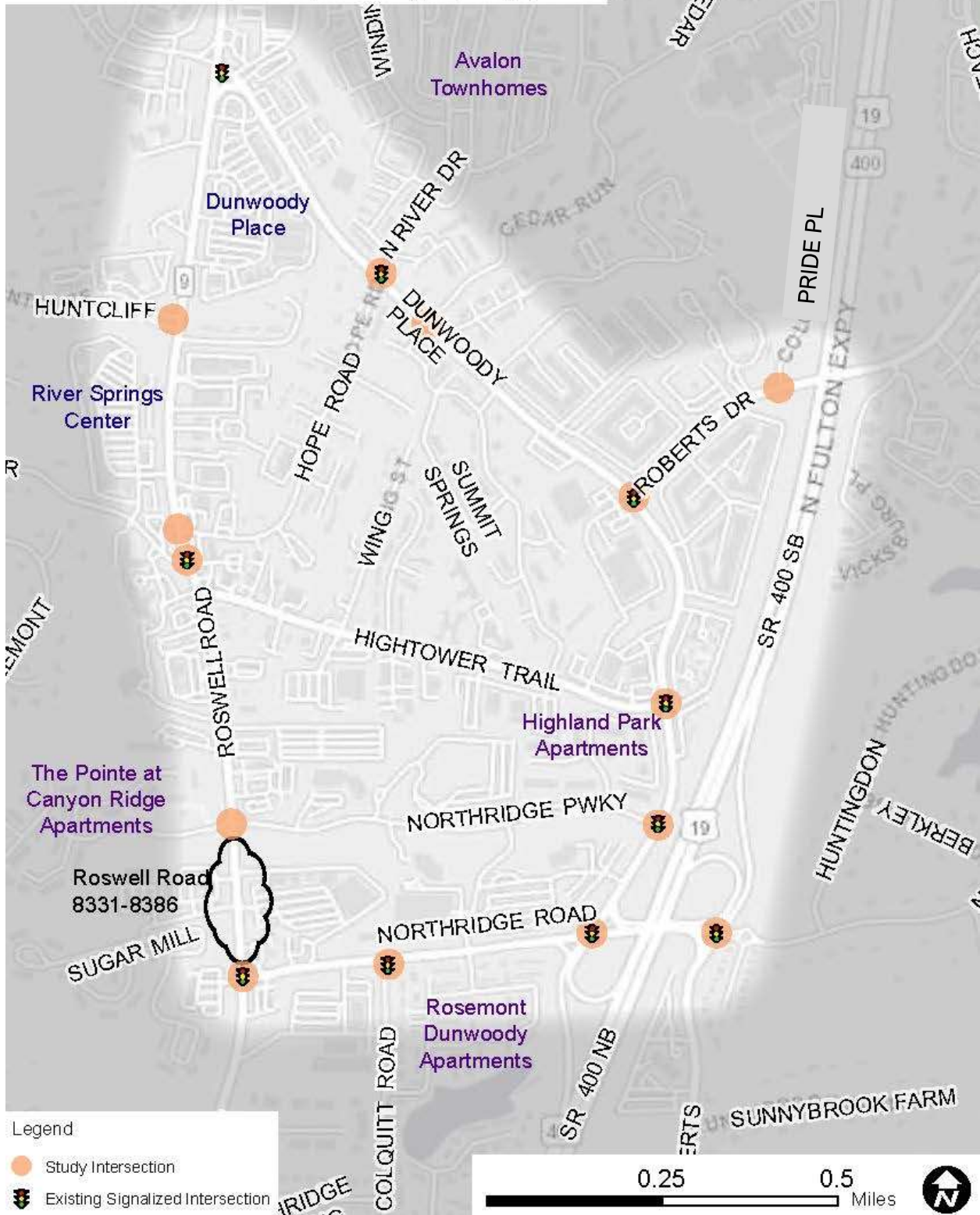


Figure 1: Study Area

While the roadway safety component of this study was focused on primarily the 14 intersections and one roadway segment above, the multimodal analysis component was more focused on the overall corridors and evaluated pedestrian, bicycle and transit facilities along Roswell Road, Dunwoody Place and Northridge Road.

This report describes the analysis, needs assessment and key recommendations relative to vehicular/multimodal safety and connectivity within the study area. Ultimately, the goal of this study is to develop recommendations for the North End area to create a safe, convenient and comfortable environment for people on two feet, two wheels, or behind the wheel. This effort is not focused solely on motor vehicle safety, but on safe, inviting transit accessibility as well. Strategic transportation investment and safe modal choices will result in a healthy return on investment through reinvestment by the development community.

The North End Safety Analysis primary corridors included four-lane divided arterials (Roswell Road south of Northridge Parkway); five-lane, undivided arterials (Roswell Road north of Northridge Parkway); four-lane, undivided arterials (Northridge Road and Dunwoody Place) and two-lane, undivided roadways (Roberts Drive).

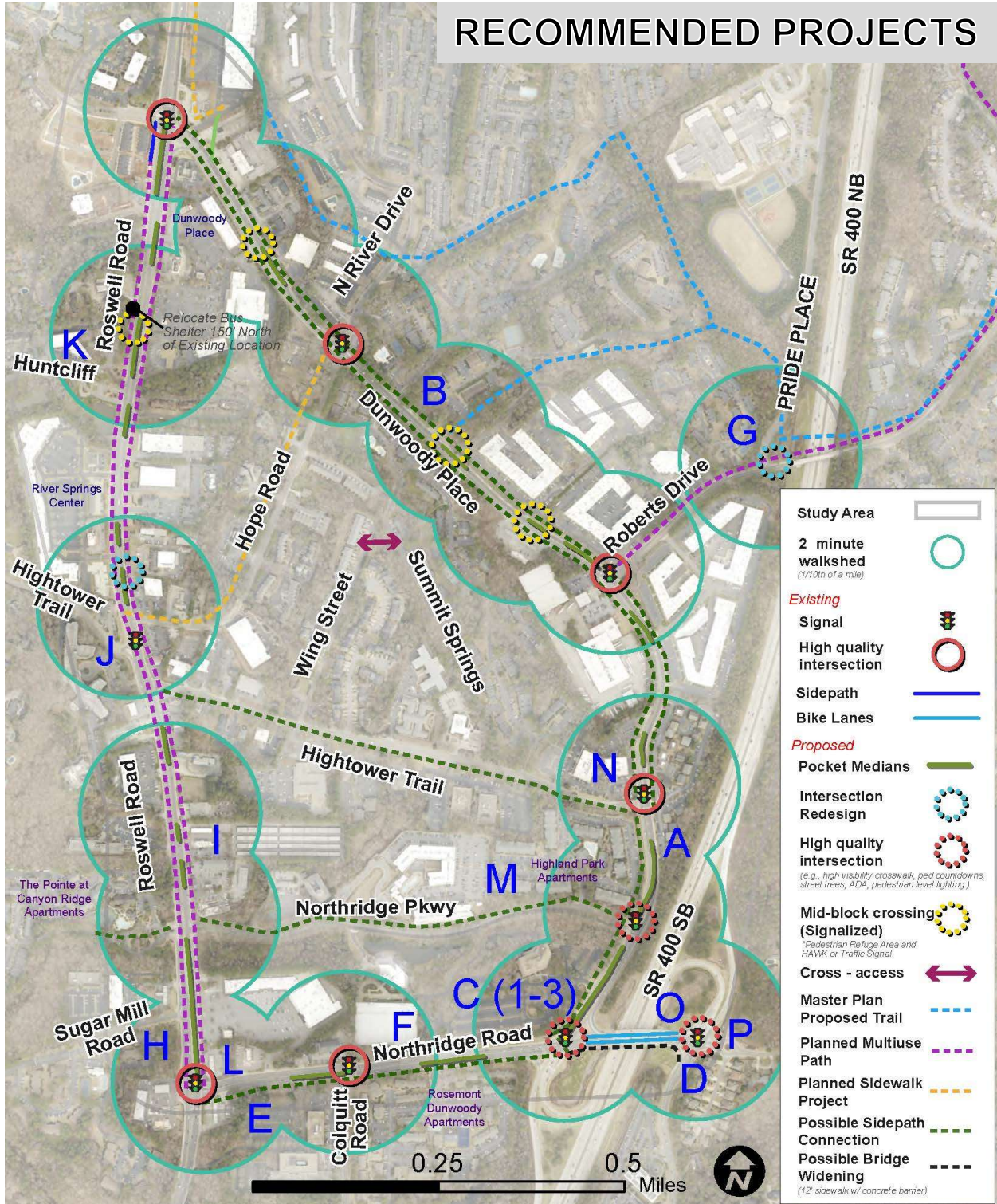
The North End Safety Analysis area contains residential development of several densities, employment, and retail destinations. Providing safe and quality access to transit for a diverse population is a key goal of this study.

# The Results

This study identified twenty-seven (27) roadway/intersection and fourteen (14) multimodal related projects to improve safety and mobility for the North End community. After the feasibility of implementing these projects were evaluated and vetted with City Staff members and the community, many of the components were combined to develop eighteen (18) separate construction projects (A through P) that included both safety and multimodal elements and were recommended for further evaluation (see **Figure 2** on the following page).



# RECOMMENDED PROJECTS



Source: Stantec, 2022

Figure 2: Recommended Projects

The scope and magnitude of these projects ranged between low-cost pavement marking projects and major roadway reconstruction projects. These projects were also prioritized into three implementation tiers (**Tiers 1, 2 and 3**). **Tier 1** projects were low-cost projects that could be implemented with upcoming roadway resurfacing projects or roadside signing projects. **Tier 2** projects were medium-sized traffic signal modifications or revisions to currently programmed projects. **Tier 3** projects were multi-million-dollar projects that would require programming revisions in future Sandy Springs Transportation Improvement Programs. The details for each project are provided in the fact sheets in **Appendix A** and are summarized and categorized by tier in **Table 1** on the following page.

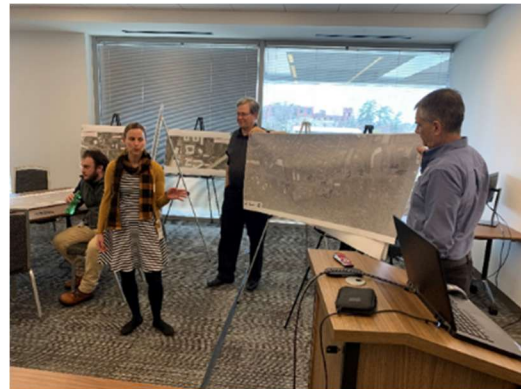
Project/Tier			Intersection/ Corridor	Project Category
Tier 1	Tier 2	Tier 3		
C-1			Northridge Road at SR 400 SB	Intersection/Multiuse Path/Lighting
C-2			Northridge Road at SR 400 SB	Signal Phasing
C-3			Northridge Road at SR 400 SB	Overhead Signs
D			Northridge Road at SR 400 NB	Intersection/Multiuse Path/Lighting
E			Northridge Rd (Roswell Rd to Colquitt Rd)	Pavement Markings
L			Northridge Road at Roswell Road	Pavement Markings
M			Northridge Parkway	Wayfinding Guide Signs
N			Dunwoody Place at Hightower Trail	Roadside Warning Signs
	G		Roberts Drive (Dunwoody Place to SR 400)	Intersection/Multiuse Path/Lighting
	O		Northridge Road at SR 400 NB	Overhead Signs
		A	Dunwoody Place South	Median/Intersection/Multiuse Path/Lighting
		B	Dunwoody Place North	Median/Intersection/Midblock Crossings/ Multiuse Path/Lighting
		F	Northridge Rd (Roswell Rd to Dunwoody Pl)	Widening/Median/Intersection/ Multiuse Path/Lighting
		H	Roswell Rd (Northridge Rd to Northridge Pkwy)	Median/U-turn Eyebrow/ Traffic Signal/Multiuse Path/Lighting
		I	Roswell Rd (Northridge Pkwy to Mrs. Winner's)	Median/Intersection/Midblock Crossing/ Multiuse Path/Lighting
		J	Roswell Rd at Hightower Tr/Hope Rd	Road Realignment/Median/ Intersection/Multiuse Path/Lighting
		K	Roswell Road at Huntcliff	Median/Midblock Crossing/ Multiuse Path/Lighting
		P	Northridge Road at SR 400 NB	Bridge Widening

Source: Stantec, 2022

**Table 1: Recommended Project Summary by Tier**

Many of the projects were configured to be implemented separately; however, adjacent projects could be combined depending on funding availability and scheduling constraints. Since these projects were not identified in the current Transportation Special Purpose Local Option Sales Tax (T-SPLOST) 2021 program, any future T-SPLOST funding would require completing the typical T-SPLOST approval process. Individual projects could be submitted to GDOT or other regional partners for potential funding including GDOT's Highway Safety Improvement Program (HSIP) or other programmed projects (i.e., SR 400 Express Lanes Design Build project (PI# 0001757)).

The project vetting process included a one-day stakeholder design workshop, community outreach activities and meetings with representatives from Sandy Springs Public Works. The one-day stakeholder design workshop was held on March 15, 2022, with City staff members from various departments, GDOT District Seven and Office of Traffic Operations staff and MARTA planning staff.



Community outreach efforts included online web-based interactive mapping survey, visual preference surveys and a public information open house. Key takeaways for multimodal safety included:

- The need for safe and convenient street crossings
- Extend pedestrian connectivity into residential areas and key destinations along the corridors
- Needs for dedicated and separated bicycle facilities
- Enhance transit stops with shelters, receptacles, landscaping and technology
- Add more shade trees
- Improve pedestrian scale lighting
- Traffic calming measures to address speeding concerns



A detailed summary of the Community Outreach activities is included in the Technical Appendix.

# Existing Conditions Assessment

The assessment of existing conditions included:

- ✓ Site visits
- ✓ Reviewing intersection CCTV video footage of peak hour operations
- ✓ Gather and analyze crash data
- ✓ Determine multimodal level of service

Project site visits observed traffic conditions in real-time, geometric issues, multimodal facilities and roadway/pavement/ signage conditions. Peak period CCTV video was collected at all the signalized intersections in the study area that had operational CCTV cameras. A sample still image from these CCTV videos, which demonstrated the challenges of crossing Roswell Road between signalized intersections is shown in **Figure 3** below. Five years of crash data (2016 to 2020) were analyzed by collecting crash records for the study intersections and roadway segment, preparing collision diagrams using collected crash data and identifying crash patterns based on the information gleaned from the collision diagrams.



Source: City of Sandy Springs Traffic Management Center (TMC), 2022

Figure 3: Unprotected Pedestrian Crossing Roswell Road

### Crash Analysis

Historical crash data were collected from two GDOT sources: GEARS and Numetric. GEARS data provided information related to vehicular related crashes, while Numetric supplied information related to bicycle and pedestrian involved crashes.

A total of 1,181 vehicular related crashes occurred from 2016 to 2020 at the study intersections and roadway segment. These crashes are broken down by crash type, injury severity and year in **Table 2** below.

Crash Type	Fatality	Injury A	Injury B	Injury C	Property Damage Only (O)	Total Crashes	Percentage of Total Crashes
Angle	1	4	30	75	219	329	28%
Head On	0	0	5	5	16	26	2%
Not a Collision with Motor Vehicle	0	1	3	7	24	35	3%
Rear End	0	4	17	117	402	540	46%
Sideswipe-Opposite Direction	0	0	0	0	13	13	1%
Sideswipe-Same Direction	0	1	3	14	143	161	14%
On Roadway	0	0	4	11	62	77	7%
<b>Total Crashes</b>	<b>1</b>	<b>10</b>	<b>62</b>	<b>229</b>	<b>879</b>	<b>1181</b>	
<b>Percentage of Total Crashes</b>	<b>0%</b>	<b>1%</b>	<b>5%</b>	<b>19%</b>	<b>74%</b>		
<b>Crashes by Year</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>		
	297	280	228	241	135		
<b>Percentage of Total Crashes</b>	<b>25%</b>	<b>24%</b>	<b>19%</b>	<b>20%</b>	<b>11%</b>		

Source: Georgia Electronic Accident Reporting System (GEARS), Crashes 2016 – 2020, December 2021

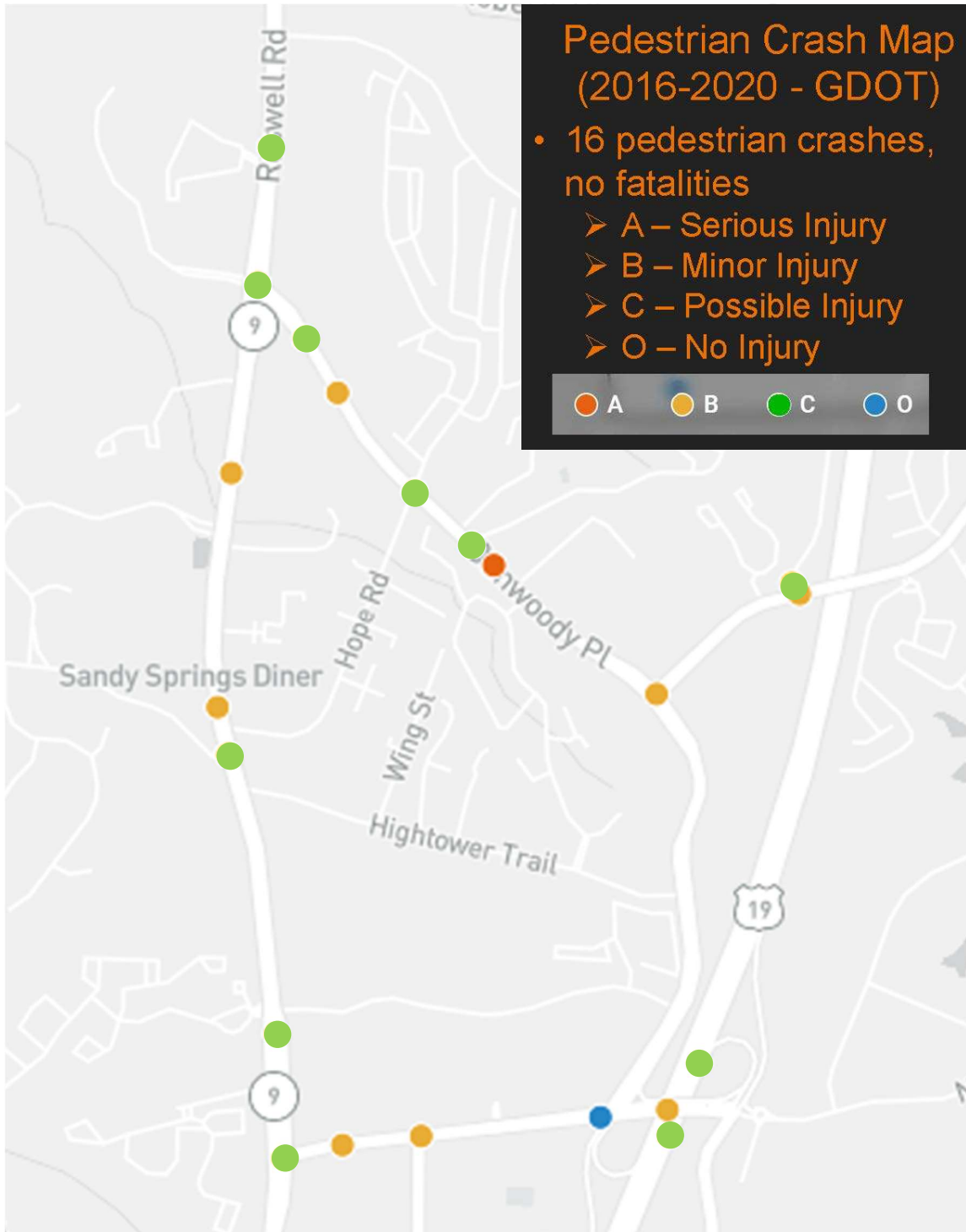
**Table 2: Crash Statistics for Study Area**

There were two fatal crashes reported during this period of time; however, one of these fatal crashes was coded incorrectly and was actually a property damage only crash. The only fatal crash reported correctly, was an angle crash at Dunwoody Place and Northridge Parkway that was caused by a distracted driver running the traffic signal and colliding with a vehicle entering the intersection from Hightower Trail. Since this fatal crash was caused by driver error, there were no mitigation measures identified within the scope of this project. Even though it occurred outside the analysis period, a recent fatal crash (July 2, 2022) occurred along Northridge Parkway at 2:49 AM when the driver of a single vehicle lost control, drove over the curb and struck a tree after traveling at high speed. Similar to the first fatal crash noted, there were no mitigation measures identified within the scope of this project.

Rear end crashes accounted for the majority of crashes (46%) and injury crashes (46%) in the study area; however, 85% of the rear end injury crashes were the least severe category (C). While angle crashes only accounted for 28% of the total crashes, these angle crashes accounted for 48% of the more severe injury crashes (K through B).

A detailed review of vehicular crash records is included in the Technical Appendix. This appendix includes fifteen (15) collision diagrams for the study area intersections and roadway segment.

Eighteen pedestrian related crashes occurred from 2016 to 2020 on the major streets in the study area (see **Figure 4** on the following page). Sidewalks, on-street bicycle facilities, crosswalks, and multi-use paths will provide opportunities for enhanced access or first-mile/last-mile connections to transit.



Source: GDOT Numetric Crash Portal, 2021 ([https://gdot.numetric.net/crash-data#/?view\\_id=7](https://gdot.numetric.net/crash-data#/?view_id=7))

**Figure 4: Pedestrian Related Crashes**

### Previous Studies and Projects

Previous documents, plans and programs were reviewed in advance of the needs assessment task. These documents included the City of Sandy Springs - Bicycle, Pedestrian and Trail Implementation Plan (2014); City of Sandy Springs Development Code and Zoning Map (2018); MARTA Transit Stop Ridership reporting; City's Capital Improvement Program (CIP); Roswell Road Access Management Plan; North End Boulevard Safety Study; and GDOT's Major Mobility Investment Program (MMIP) projects. The review of previous efforts and planned projects helped to better understand community needs and safety concerns relative to the multimodal mobility and connectivity.

The SR 400 Express Lanes Design Build project (PI# 0001757) is implementing express lanes from the MARTA North Springs Station to McFarland Parkway. This project is rebuilding the Roberts Drive bridge over SR 400, which would impact the implementation of the project to add a left turn lane at Pride Place (**Concept G**). The SR 400 Express Lanes project is also planning modifications to the SR 400/Northridge Road interchange that could impact the recommendations from this study for the ramp terminal intersections of the SR 400/Northridge Road interchange (**Concepts C & D**).

The Roswell Road Access Management Plan is an ongoing study to evaluate access management strategies along the Roswell Road corridor in Sandy Springs. This study overlaps the North End Roadway Safety Analysis Study on Roswell Road between Northridge Road and Dunwoody Place. The two study teams coordinated recommendations on Roswell Road. The Roswell Road Access Management Plan is also planning modifications to Roswell Road that could impact the recommendations from the North End Roadway Safety Analysis Study (**Concepts H, I, J, K & L**).

The North End Boulevard Safety Study is another ongoing study to evaluate Roswell Road between Dunwoody Place and the Chattahoochee River. This study overlaps the North End Roadway Safety Analysis Study on Dunwoody Place between Roswell Road and the Publix Shopping Center. The two study teams coordinated recommendations on Dunwoody Place. The North End Boulevard Safety Study is also planning modifications to Dunwoody Place that could impact the recommendations from the North End Roadway Safety Analysis Study (**Concept B**).



# Recommendations

Change is always difficult for some communities. That is, some of these roads have been around for over 100 years. Some of them probably started out as horse and wagon trails. So, it stands to reason that the initial function and target audience may have changed over time as well, certainly since they have been paved over and widened. In fact, this study area was most likely rural at some point in time and has now transitioned into a more urban context. Now is the time to think about how this network of streets serve people, not just cars. This study presents an opportunity to right-size these important mobility corridors, to provide safe, convenient and comfortable connections to places and people. As the adage goes: when everything else is equal, the tie must go to the pedestrian in a changing urban environment.

The Transportation Program related to North End Safety Analysis Study includes specific recommendations for through lanes, relocated intersections, left and right turn lanes, signal modifications, signing/pavement marking enhancements, pocket medians, sidewalks, multiuse paths, mid-block crosswalks with pedestrian refuge islands, transit stops, transit stop amenities and pedestrian scale lighting.

These safety related improvements were based on engineering judgement, AASHTO Highway Safety Manual, and the Crash Modification Factor (CMF) Clearinghouse. These multimodal related improvements were based on multimodal level of service analysis and previous experience in creating a transportation network that provides mobility for all users.

This Transportation Program which includes estimates of probable implementation costs is summarized in **Table 3** on the following page. These projects could be incorporated into the city-wide capital improvement program based on ease of implementation such as low costs, overall community support or benefit/cost ratios.

The estimates of probable implementation costs in **Table 3** include the following components:

Implementation Cost Elements	
Roadway pavement/curb & gutter	Grading/Clearing/Grubbing
Traffic Control	Drainage
Signing and Pavement Markings	Traffic Signals
Bridge Widening	Landscaped and Concrete Raised Medians
Retaining Walls	Sidewalk/Multiuse Paths
Pedestrian Lighting	Signalized Mid-block Crossings
MARTA Bus Stop Relocations	Engineering/Inspection
Construction Contingency (30%)	Right-of-Way
Utility Relocation	

Project	Intersection/ Corridor	Project Category	Project Description	Project Cost
A	Dunwoody Place South	Median/Intersection/Multiuse Path/Lighting	Narrow raised median, lowering roadway grade at Hightower Trail, signal modifications and multiuse paths with pedestrian level lighting on Dunwoody Place.	\$ 13,367,000
B	Dunwoody Place North	Median/Intersection/Midblock Crossings/ Multiuse Path/Lighting	Center turn lane/raised median, RCUT at Cedar Run, midblock crossings, signal modifications and multiuse paths with pedestrian level lighting on Dunwoody Pl.	\$ 13,513,000
C-1	Northridge Road at SR 400 SB	Intersection/Multiuse Path/Lighting	Right and left turn lane modifications and multiuse paths with pedestrian level lighting on Northridge Road.	\$ 196,000
C-2	Northridge Road at SR 400 SB	Signal Phasing	Signal phasing modifications.	\$ 193,000
C-3	Northridge Road at SR 400 SB	Overhead Signs	Overhead signs on SR 400 Southbound off-ramp.	\$ 198,000
D	Northridge Rd at SR 400 NB	Intersection/Multiuse Path/Lighting	Right turn lane modifications and multiuse paths with pedestrian level lighting on Northridge Rd.	\$ 327,000
E	Northridge Rd (Roswell Rd to Colquitt Rd)	Pavement Markings	Pavement markings and delineators	\$ 26,000
F	Northridge Rd (Roswell Rd to Dunwoody Pl)	Widening/Median/Intersection/Multiuse Path/Lighting	Third eastbound lane, left turn lane, raised median, dual right turn lanes, RCUT at Highland Park Trail/Rosemont Dunwoody Apartments, signal modifications and multiuse paths with pedestrian level lighting on Northridge Road.	\$ 12,528,000
G	Roberts Dr (Dunwoody Pl to SR 400)	Intersection/Multiuse Path/Lighting	Left turn lane at Roberts Drive and Pride Place and multiuse path on south side of Roberts Drive.	\$ 2,988,000
H	Roswell Rd (Northridge Rd to Northridge Pkwy)	Median/U-turn Eyebrow/Traffic Signal/ Multiuse Path/Lighting	Raised median on northbound approach to Northridge Road and multiuse path on both sides of Roswell Road.	\$ 2,211,000
I	Roswell Rd (Northridge Pkwy to Mrs. Winner's)	Median/Intersection/Midblock Crossing/ Multiuse Path/Lighting	Raised median, RCUT at Northridge Parkway, U-turn eyebrow at Huntridge Center Shopping Center, midblock crossing, and multiuse paths with pedestrian level lighting on Roswell Road.	\$ 2,871,000
J	Roswell Rd at Hightower Tr/Hope Rd	Road Realignment/Median/ Intersection/ Multiuse Path/Lighting	Raised median, RCUT at Hightower Trail east, U-turn eyebrow at Hightower Trail west/Hope Road and multiuse paths with pedestrian level lighting on Roswell Road.	\$ 9,281,000
K	Roswell Rd at Huntcliff	Median/Midblock Crossing/Multiuse Path/Lighting	Raised median, midblock crossing, & multiuse paths with pedestrian level lighting on Roswell Rd.	\$ 2,781,000
L	Northridge Road at Roswell Road	Pavement Markings	Pavement markings	\$ 13,000
M	Northridge Parkway	Wayfinding Guide Signs	Wayfinding Guide Signs to Roswell Road	\$ 36,000
N	Dunwoody Place at Hightower Trail	Roadside Warning Signs	Actuated Flashing and Static Warning Signs	\$ 82,000
O	Northridge Rd at SR 400 NB	Overhead Signs	Overhead signs on SR 400 Northbound off-ramp.	\$ 381,000
P	Northridge Rd at SR 400 NB	Bridge Widening	Northridge Road over SR 400 bridge widening for multiuse path.	\$ 3,561,000

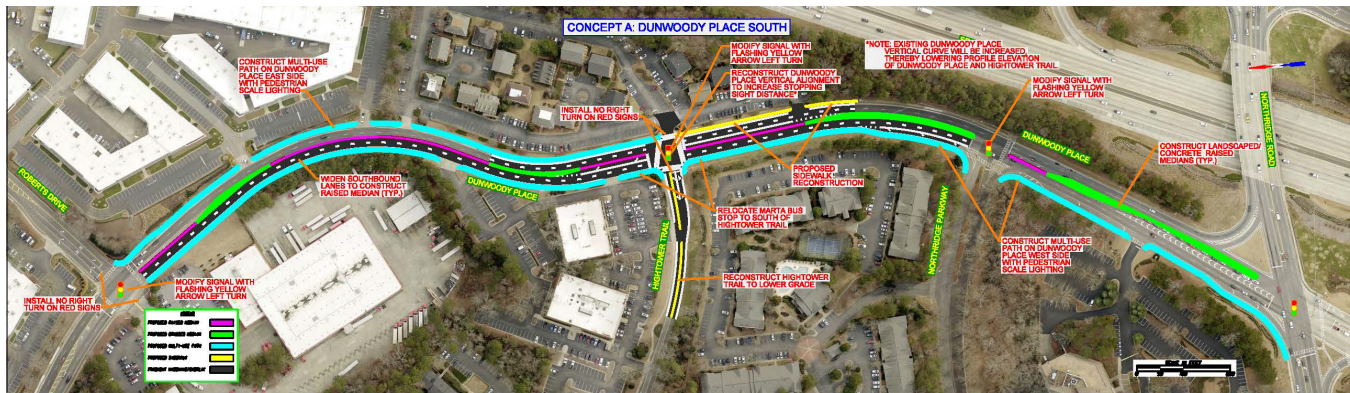
Source: Stantec (2022)

**Table 3: North End Transportation Program**

# Appendix A

## **FACT SHEETS**

<b>Project ID</b>	A
<b>Project Category</b>	Median/Intersection/Multiuse Trail Improvements
<b>Project Location</b>	Dunwoody Place
<b>Project Description</b>	Narrow raised median, lowering roadway grade at Hightower Trail, signal modifications and multiuse paths with pedestrian level lighting on Dunwoody Place.
<b>Limits</b>	Northridge Road to Roberts Drive
<b>Implementation Tier</b>	3



Additional Project Information	
<b>Project Addresses Concerns</b>	Number and severity of crashes related to left turning vehicles. Limited stopping sight distance on Dunwoody Place at Hightower Trail due to sharp crest vertical curve. Lack of bicycle accommodations on Dunwoody Place.
<b>Recommended Actions</b>	Raised median on Dunwoody Place to prevent vehicles from crossing the centerline into oncoming traffic and control access. Modification of traffic signals and signing at Northridge Parkway, Hightower Trail, and Roberts Drive to protect left and right turning vehicles and provide protected facility for bicycles along Dunwoody Place.
<b>Other</b>	Frequent mid-block U-turns have occurred along Dunwoody Place due to the absence of a raised median.

<b>Project ID</b>	A
<b>Project Category</b>	Median/Intersection/Multiuse Trail Improvements
<b>Project Location</b>	Dunwoody Place

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	Unfamiliar drivers that exit SR 400 NB at Northridge Road and are trapped by the outside right turn lane and forced to use Dunwoody Place attempt to U-turn as soon as possible to get back to Northridge Road. There were multiple crashes along Dunwoody Place and Northridge Parkway caused by these U-turn movements from 2016 to 2020.	Construct raised median on Dunwoody Place to eliminate mid-block U-turns.	Should reduce the number of crashes for vehicles traveling NB on Dunwoody Place.
2	Unprotected left turns on Dunwoody Place at Northridge Parkway.	Modify existing traffic signal to add flashing yellow arrow.	Should reduce the number of left turn related crashes.
3	Limited stopping sight distance along Dunwoody Place at Hightower Trail due to sharp crest vertical curve.	Lengthen existing crest vertical curve by lowering grade.	Increased stopping sight distance should reduce number of rear-end crashes related to vehicles queuing along Dunwoody Place.
4	Unprotected left turns on Dunwoody Place at Hightower Trail.	Modify existing traffic signal to add flashing yellow arrow.	Should reduce the number of left turn related crashes.
5	Limited intersection sight distance for right turns from Hightower Trail and Northridge 400 Office Park.	Restrict right turns on red.	Should reduce the number of right turn related crashes.
6	Limited intersection sight distance for right turns from Roberts Drive and Coca-Cola Bottling Company.	Restrict right turns on red.	Should reduce the number of right turn related crashes.
7	MARTA bus stops are not located on Dunwoody Place for optimum traffic operations.	Relocate MARTA bus stops and upgrade amenities	
8	Bicycles traveling on Dunwoody Place must ride unprotected with all other vehicles.	Construct multi-use path with pedestrian level lighting on Dunwoody Place from Northridge Rd. to Roberts Dr.	Should reduce future bicycle related crashes along Dunwoody Place.

<b>Project ID</b>	A
<b>Project Category</b>	Median/Intersection/Multiuse Trail Improvements
<b>Project Location</b>	Dunwoody Place

**Recommendations - Construct roadway and traffic signal modifications on Dunwoody Place, MARTA bus stop enhancements and multiuse paths on both sides of Dunwoody Place.**

**Benefits:** Provides separate left turn lane to remove left turning vehicles from through lane to avoid conflicts and provide safe queue areas for vehicles to wait for an acceptable gap in traffic. Provides separate bicycle facility to remove conflicts between motor vehicles and bicycles.

**Impacts:** Requires additional right-of-way along Dunwoody Place and restricts access to several commercial driveways.

**Costs:** Estimate of probable costs assumes independent implementation of the proposed project.

**Additional Considerations:** Project could be combined with other adjacent projects.

**Addresses Issue(s):** High

Preliminary Project Estimate of Probable Costs	
Preliminary Engineering:	\$886K
Construction Cost:	\$5,909K
Utility Relocation Cost:	\$2,000K
Contingency Cost:	\$2,038K
Right-of-Way Cost:	\$2,534K
Total Project Cost:	<b>\$13,367K</b>

## Options Not Recommended

### Option A – Widen Dunwoody Place for a 24-ft Median

**Benefits:** Provides additional space for pedestrian refuge at intersections.

**Impacts:** Requires significantly more right-of-way along Dunwoody Place as preferred option.

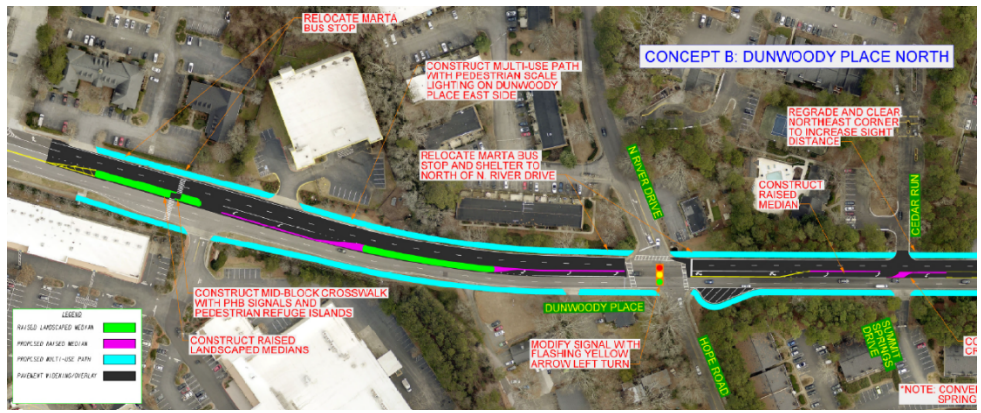
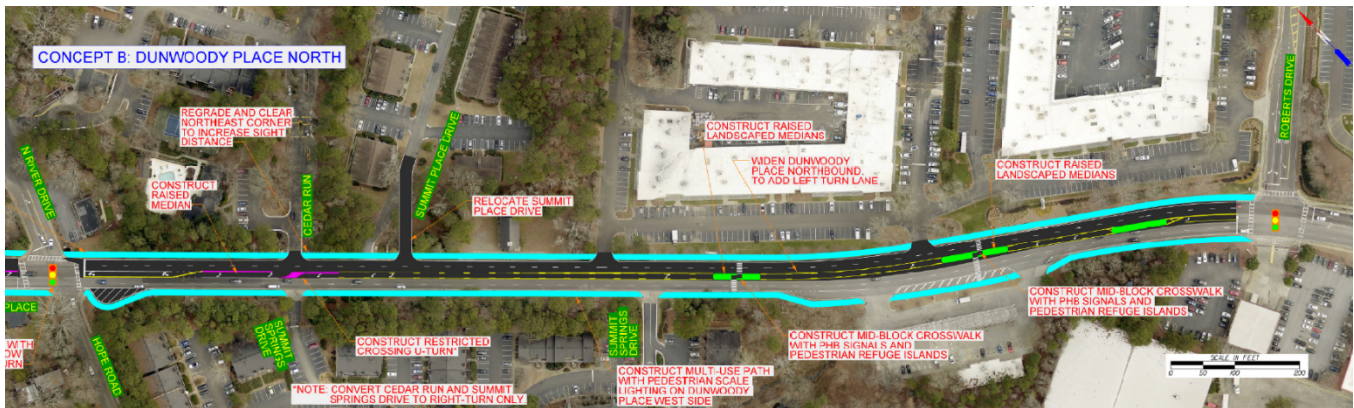
**Costs:** Estimate of probable costs would be significantly higher than the preferred option.

**Additional Considerations:** Could impact existing parking areas.

**Addresses Issue(s):** High

A safety Benefit/Cost ratio was estimated for constructing raised median on Dunwoody Place (4.3).

<b>Project ID</b>	B
<b>Project Category</b>	Median/Intersection/Midblock Crossings/Multiuse Trail Improvements
<b>Project Location</b>	Dunwoody Place
<b>Project Description</b>	Center turn lane/raised median, RCUT at Cedar Run, midblock crossings, signal modifications and multiuse paths with pedestrian level lighting on Dunwoody Pl.
<b>Limits</b>	Roberts Drive to Publix Shopping Center
<b>Implementation Tier</b>	3



Additional Project Information	
<b>Project Addresses Concerns</b>	Number and severity of crashes related to left turning vehicles. Lack of signalized pedestrian crossings along Dunwoody Place. Lack of bicycle accommodations on Dunwoody Place. Limited intersection sight distance at Cedar Run.
<b>Recommended Actions</b>	Raised median on Dunwoody Place to control access. RCUT at Cedar Run and realignment of Summit Place Dr. Regrade Cedar Run intersection to increase sight distance. U-turn eyebrow at North River Dr. Dedicated left turn lane and modification of traffic signal at North River Dr/Hope Rd to protect left turning vehicles. Provide protected facility for bicycles along Dunwoody Place. Relocate MARTA bus stops.
<b>Other</b>	Twelve commercial driveways along Dunwoody Place within the project. MARTA buses (Routes 85 & 87) typically service 420 passengers daily at bus stops within this project.

<b>Project ID</b>	<b>B</b>
<b>Project Category</b>	Median/Intersection/Midblock Crossings/Multiuse Trail Improvements
<b>Project Location</b>	Dunwoody Place

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	Unprotected left turns on Dunwoody Pl at Cedar Run/Summit Springs Drive.	Construct RCUT and raised median on Dunwoody Pl at Cedar Run/Summit Springs Dr to reduce mid-block U-turns.	By creating a right-in/right-out only intersection, should reduce the number of crashes for vehicles turning onto Dunwoody Place.
2	Unprotected left turns on Dunwoody Place at North River Drive/Hope Road.	Construct a dedicated left turn lane on Dunwoody Place and modify existing traffic signal to add flashing yellow arrow.	Should reduce the number of left turn related crashes.
3	Limited intersection sight distance along Dunwoody Place at Cedar Run due to roadway embankments.	Regrade intersection to improve intersection sight distance.	Improved sight distance should reduce number of crashes related to vehicles turning onto Dunwoody Pl from Cedar Run.
4	Lack of protected pedestrian crossings on Dunwoody Pl to accommodate pedestrian activity.	Add 3 signalized (Pedestrian Hybrid Beacon) pedestrian midblock crossings at Publix, Pontoon Brewing Co & QuikTrip.	Should reduce the number of pedestrian related crashes.
5	MARTA bus stops are not located on Dunwoody Place for optimum traffic operations.	Shift MARTA bus stops to improve intersection operations or closer to proposed midblock crossings.	Should reduce the number of pedestrian related crashes and improved intersection traffic operations.
6	Limited spacing between Cedar Run and Summit Place Drive (120 feet).	Realign Summit Place Drive further south.	Should reduce the number of crashes related to the vehicle interactions between driveways.
7	Bicycles traveling on Dunwoody Place must ride unprotected with all other vehicles.	Construct multi-use path w/ pedestrian level lighting on Dunwoody Place from Roberts Drive to Publix Shopping Center.	Should reduce future bicycle related crashes along Dunwoody Place.



<b>Project ID</b>	B
<b>Project Category</b>	Median/Intersection/Midblock Crossings/Multiuse Trail Improvements
<b>Project Location</b>	Dunwoody Place

**Recommendations - Construct roadway and traffic signal modifications on Dunwoody Place, signalized pedestrian midblock crossings, MARTA bus stop enhancements and multiuse paths on both sides of Dunwoody Place.**

**Benefits:** Eliminates problematic left turn movements at Cedar Run/Summit Springs Drive. Provides separate left turn lane to remove left turning vehicles from through lane to avoid conflicts and provide safe queue areas for vehicles to wait for an acceptable gap in traffic. Provides protected pedestrian crossings of Dunwoody Place. Provides separate bicycle facility to remove conflicts between motor vehicles and bicycles.

**Impacts:** Requires additional right-of-way along Dunwoody Place and relocation of Summit Place Dr. Restricts access to several commercial driveways including Cedar Run/Summit Springs Drive.

**Costs:** Estimate of probable costs assumes independent implementation of the proposed project.

**Additional Considerations:** Project could be combined with other adjacent projects.

**Addresses Issue(s):** High

<b>Preliminary Project Estimate of Probable Costs</b>	
Preliminary Engineering:	\$1,133K
Construction Cost:	\$7,554K
Utility Relocation Cost:	\$300K
Contingency Cost:	\$2,606K
Right-of-Way Cost:	\$1,920K
<b>Total Project Cost:</b>	<b>\$13,513K</b>

## Options Not Recommended

### Option A – Widen Dunwoody Place for a 24-ft Median

**Benefits:** Provides additional space for pedestrian refuge at intersections.

**Impacts:** Requires significantly more right-of-way along Dunwoody Place as preferred option.

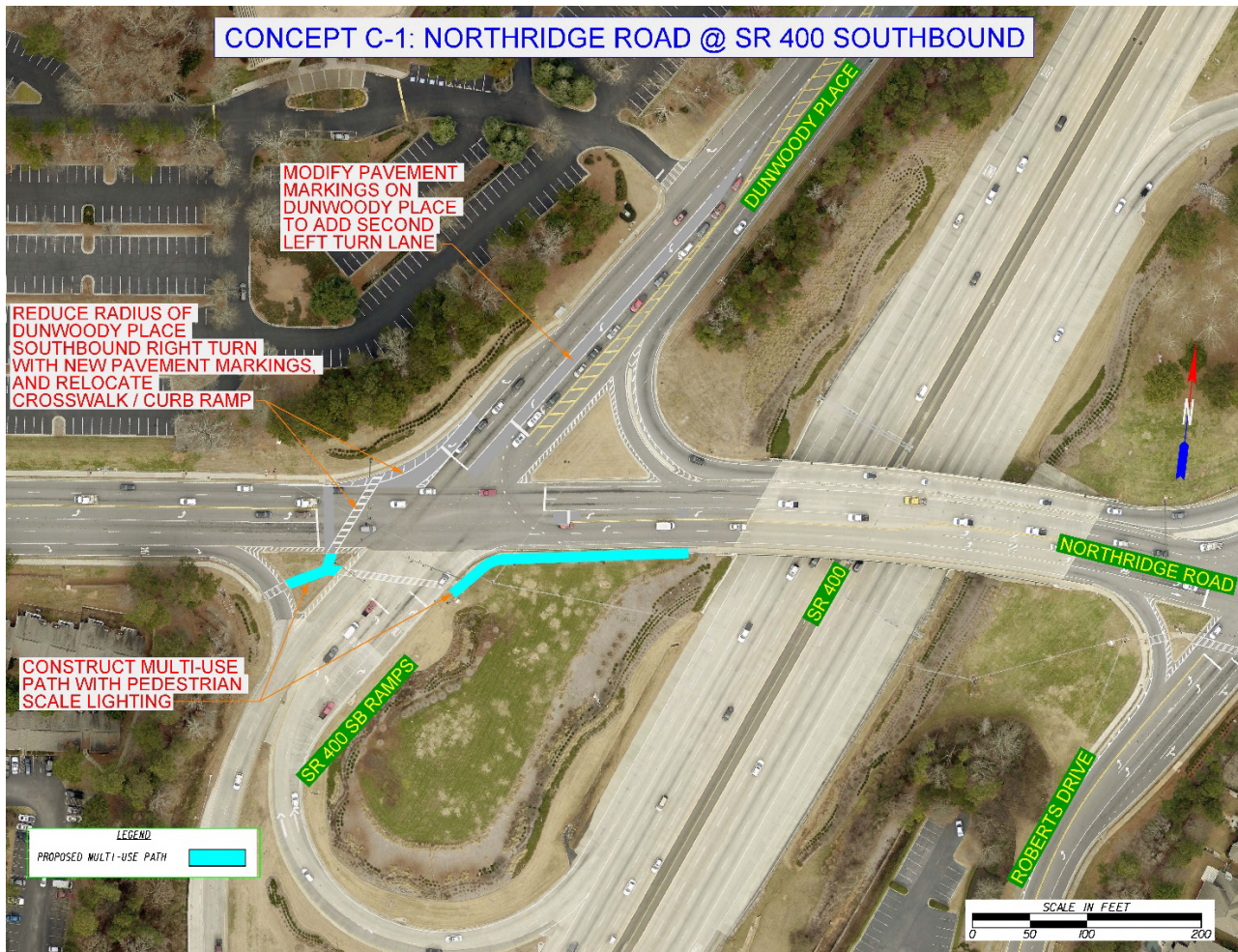
**Costs:** Estimate of probable costs would be significantly higher than the preferred option.

**Additional Considerations:** Could impact existing parking areas.

**Addresses Issue(s):** High

A safety B/C ratio for constructing restricted crossing U-turn intersection at Cedar Run and Dunwoody Place (1.1).

<b>Project ID</b>	C-1
<b>Project Category</b>	Intersection/Multiuse Path with Pedestrian Level Lighting Improvements
<b>Project Location</b>	Northridge Road
<b>Project Description</b>	Right and left turn lane modifications and multiuse paths with pedestrian level lighting on Northridge Road.
<b>Limits</b>	Dunwoody Place
<b>Implementation Tier</b>	1



## Additional Project Information

<b>Project Addresses Concerns</b>	Number and severity of crashes related to left and right turning vehicles. Problematic pedestrian crossing of Northridge Road. Lack of continuous bicycle accommodations on Northridge Road.
<b>Recommended Actions</b>	Revise alignments of Dunwoody Place SB right turn and Northridge Road crosswalk. Provide protected facility for bicycles along Northridge Rd.

<b>Project ID</b>	C-1
<b>Project Category</b>	Intersection/Multiuse Path with Pedestrian Level Lighting Improvements
<b>Project Location</b>	Northridge Road

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	Potential for pedestrian related crashes at Northridge Road crosswalk due to high speed right turns and extended distance between right turn and crosswalk.	Shorten radius of right turn lane to reduce speeds and improve visibility of traffic from North Ridge Rd. Realign crosswalk to parallel Dunwoody Pl.	Should reduce the number of future pedestrian related crashes.
2	Existing bicycle lanes on Northridge Road bridge over SR 400 do not connect to any other bicycle facilities; therefore, are seldom used.	Construct multi-use path with pedestrian level lighting on south side of Northridge Road from Dunwoody Pl. to Northridge Rd overpass.	Should reduce the number of pedestrian and bicycle related crashes.

### Recommendations - Construct roadway modifications on Northridge Road and multiuse path with pedestrian level lighting on south side of Northridge Road.

**Benefits:** Provides additional capacity for left turns from Dunwoody Place. Provides continuation of proposed bicycle facility over SR 400.

**Impacts:** Minimal

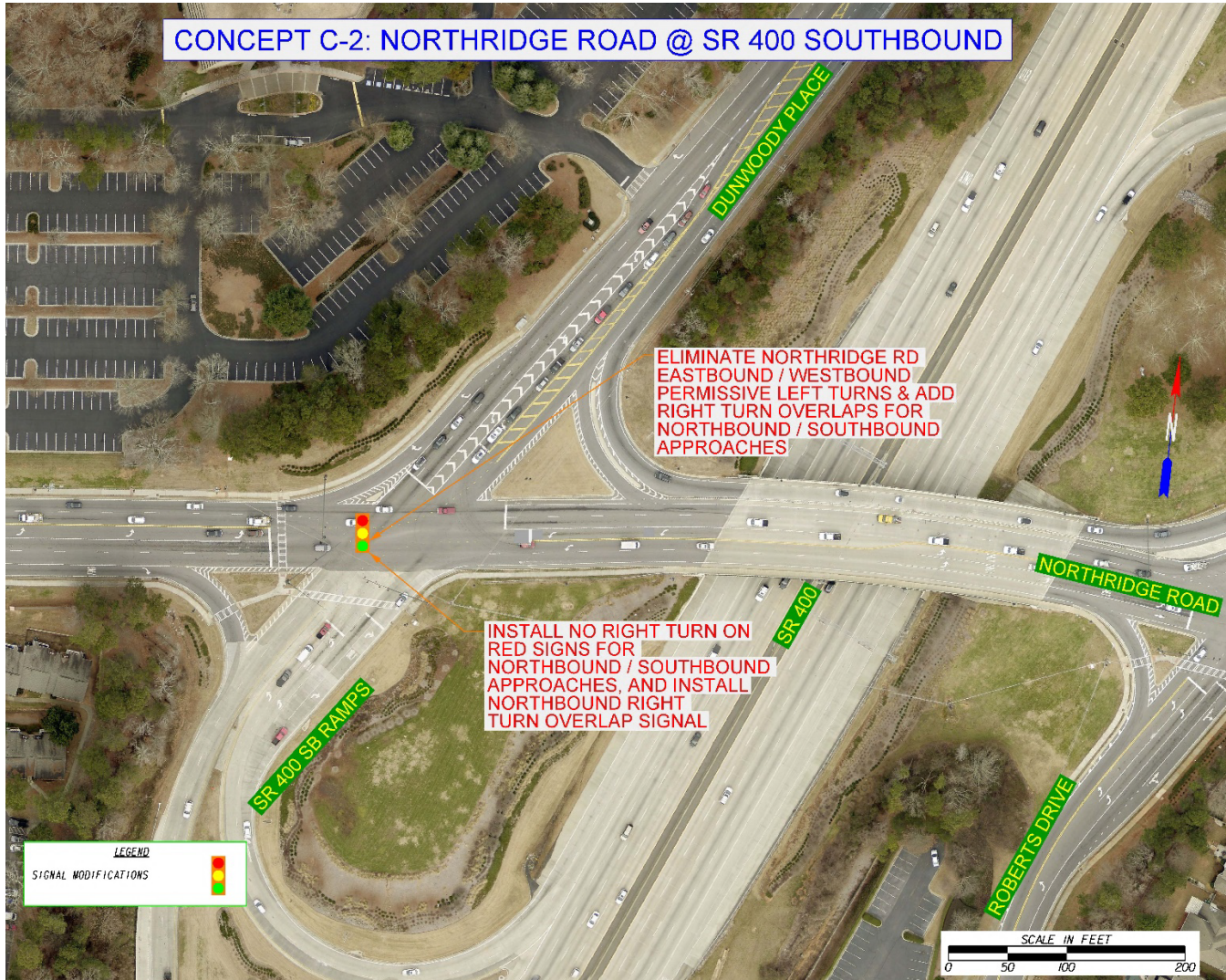
**Costs:** Estimate of probable costs assumes independent implementation of the proposed project.

**Additional Considerations:** Multiuse path components need to be combined with other adjacent projects to provide continuous bicycle route.

**Addresses Issue(s):** High

Preliminary Project Estimate of Probable Costs	
Preliminary Engineering:	\$47K
Construction Cost:	\$104K
Utility Relocation Cost:	\$-----
Contingency Cost:	\$45K
Right-of-Way Cost:	\$-----
<b>Total Project Cost:</b>	<b>\$196K</b>

<b>Project ID</b>	C-2
<b>Project Category</b>	Signal Phasing Improvements
<b>Project Location</b>	Northridge Road
<b>Project Description</b>	Signal phasing modifications.
<b>Limits</b>	Dunwoody Place
<b>Implementation Tier</b>	1



<b>Additional Project Information</b>	
<b>Project Addresses Concerns</b>	Number and severity of crashes related to left and right turning vehicles.
<b>Recommended Actions</b>	Modification of traffic signal phasing at Northridge Road and Dunwoody Place to restrict right turns on red and permitted left turns.

<b>Project ID</b>	C-2
<b>Project Category</b>	Signal Phasing Improvements
<b>Project Location</b>	Northridge Road

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	Permitted left turns on Northridge Road at Dunwoody Place causing right angle crashes with injuries.	Modify existing traffic signal to eliminate permitted left turns.	Should reduce the number of left turn related crashes.
2	High number of right turn crashes from Dunwoody Place and SR 400 SB off-ramp.	Modify existing traffic signal to eliminate right turns on red and add right turn overlap phases.	Should reduce the number of right turn related crashes.

### Recommendations - Construct traffic signal modifications on Northridge Road.

**Benefits:** Reduces potential left turn and right turn crashes occurring during permitted phases.

**Impacts:** Minimal

**Costs:** Estimate of probable costs assumes independent implementation of the proposed project.

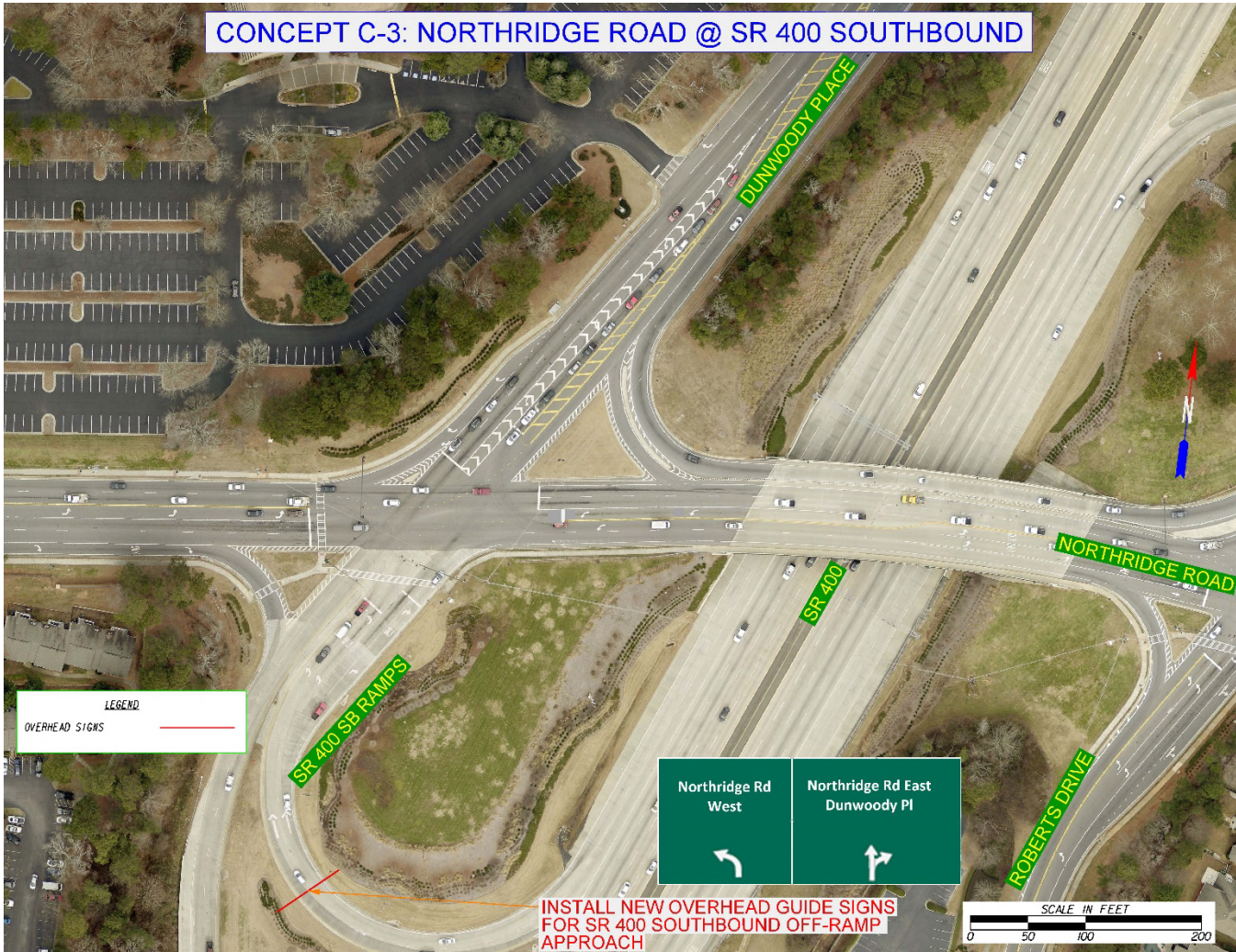
**Additional Considerations:** None

**Addresses Issue(s):** High

Preliminary Project Estimate of Probable Costs	
Preliminary Engineering:	\$39K
Construction Cost:	\$109K
Utility Relocation Cost:	\$-----
Contingency Cost:	\$45K
Right-of-Way Cost:	\$-----
<b>Total Project Cost:</b>	<b>\$193K</b>

A safety Benefit/Cost ratio was estimated for restricting permitted left and right turns on Northridge Road/Dunwoody Place/SR 400 SR off-ramp (2.0).

<b>Project ID</b>	C-3
<b>Project Category</b>	Overhead Sign
<b>Project Location</b>	Northridge Road
<b>Project Description</b>	Overhead signs on SR 400 southbound off-ramp to Northridge Road.
<b>Limits</b>	Dunwoody Place
<b>Implementation Tier</b>	1



Additional Project Information	
<b>Project Addresses Concerns</b>	Inadequate directional signage on SR 400 southbound off-ramp to Northridge Road.
<b>Recommended Actions</b>	Provide overhead guide sign for SR 400 southbound off-ramp to Northridge Road.

<b>Project ID</b>	C-3
<b>Project Category</b>	Overhead Sign
<b>Project Location</b>	Northridge Road

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	Unfamiliar drivers that exit SR 400 SB at Northridge Road and are trapped in the wrong lane as they approach Northridge Road.	Install overhead guide sign along SR 400 SB off-ramp to assign lane movements.	Should reduce the number of crashes for vehicles making last minute weave movements on the ramp.

### Recommendations - Construct overhead guide sign on SR 400 southbound off-ramp to Northridge Road.

**Benefits:** Provides additional decision time for drivers exiting SR 400 southbound at Northridge Road.

**Impacts:** Minimal

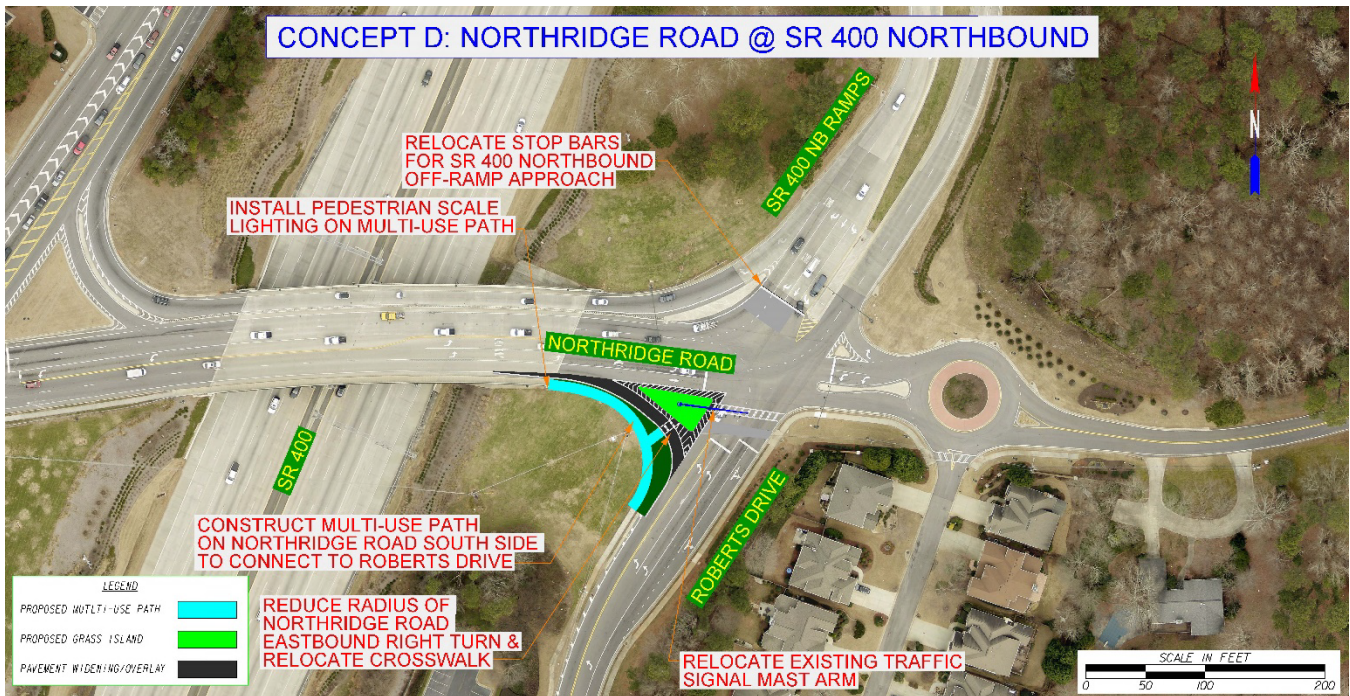
**Costs:** Estimate of probable costs assumes independent implementation of the proposed project.

**Additional Considerations:** None.

**Addresses Issue(s):** High

Preliminary Project Estimate of Probable Costs	
Preliminary Engineering:	\$30K
Construction Cost:	\$150K
Utility Relocation Cost:	\$-----
Contingency Cost:	\$18K
Right-of-Way Cost:	\$-----
<b>Total Project Cost:</b>	<b>\$198K</b>

<b>Project ID</b>	D
<b>Project Category</b>	Intersection/Multiuse Path with Pedestrian Level Lighting Improvements
<b>Project Location</b>	Northridge Road
<b>Project Description</b>	Right turn lane modifications and multiuse paths with pedestrian level lighting on Northridge Road.
<b>Limits</b>	Roberts Drive
<b>Implementation Tier</b>	1



Additional Project Information	
<b>Project Addresses Concerns</b>	Number and severity of crashes related to left and right turning vehicles.
<b>Recommended Actions</b>	Revise alignment of Northridge Road EB right turn lane. Relocate stop bar for SR 400 NB off-ramp through and right turn lanes.



<b>Project ID</b>	D
<b>Project Category</b>	Intersection/Multiuse Path with Pedestrian Level Lighting Improvements
<b>Project Location</b>	Northridge Road

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	Permitted right turns on Northridge Road at Roberts Drive causing rear end crashes due to high speeds and a difficult angle to view conflicting vehicles.	Modify existing right turn lane to reduce speeds and provide a better viewing angle.	Should reduce the number of right turn related crashes.
2	High number of left turn crashes from the Northridge Road eastbound approach with vehicles crossing Northridge Road from the SR 400 NB off-ramp.	Set the SR 400 NB off-ramp stop bar back from the intersection for the through and right turn lanes to improve visibility of vehicles queued in the off-ramp approach and to provide additional time to avoid vehicles turning left from Northridge Road.	Should reduce the number of left turn related crashes.

### Recommendations - Construct roadway and pavement marking modifications on Northridge Road and multiuse path with pedestrian level lighting on south side of Northridge Road.

**Benefits:** Reduces speeds and improves viewing angles for Northridge Rd EB right turning vehicles.

**Impacts:** Minimal.

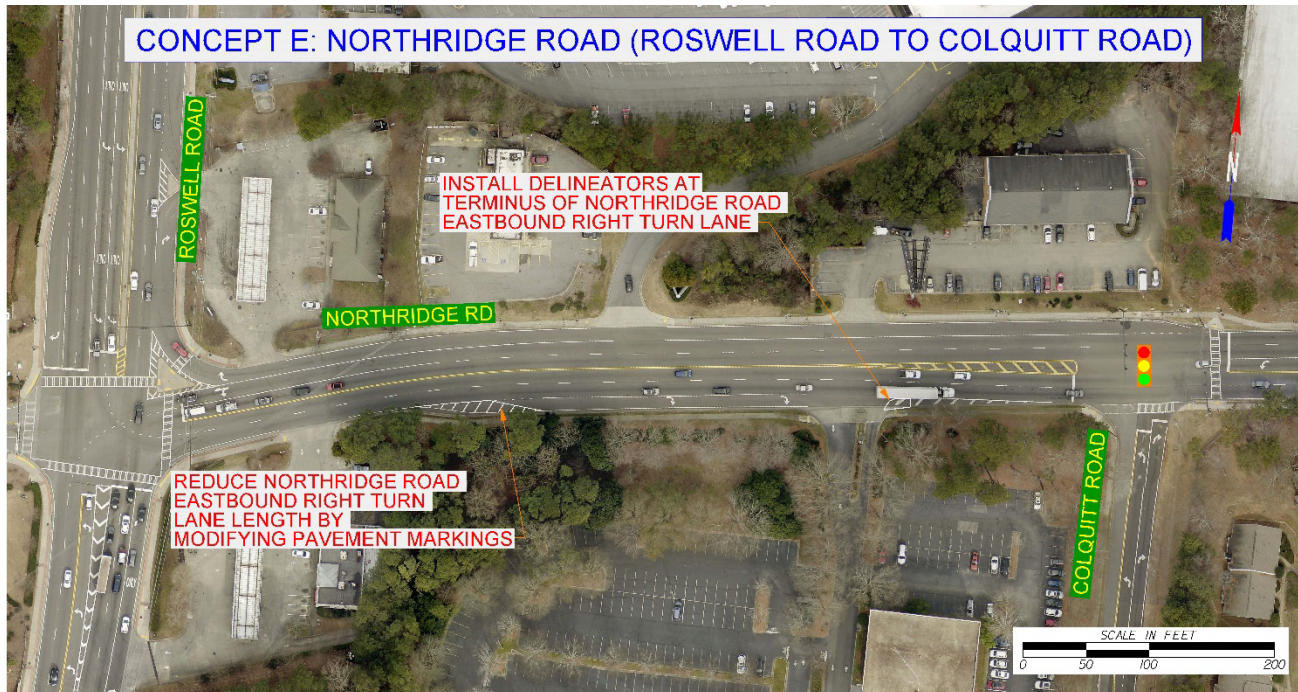
**Costs:** Estimate of probable costs assumes independent implementation of the proposed project.

**Additional Considerations:** Multiuse path components need to be combined with other adjacent projects to provide continuous bicycle route.

**Addresses Issue(s):** High

Preliminary Project Estimate of Probable Costs	
Preliminary Engineering:	\$54K
Construction Cost:	\$218K
Utility Relocation Cost:	\$-----
Contingency Cost:	\$55K
Right-of-Way Cost:	\$-----
<b>Total Project Cost:</b>	<b>\$327K</b>

<b>Project ID</b>	E
<b>Project Category</b>	Pavement Markings
<b>Project Location</b>	Northridge Road
<b>Project Description</b>	Pavement markings and delineators
<b>Limits</b>	Roswell Road to Colquitt Road
<b>Implementation Tier</b>	1



Additional Project Information	
<b>Project Addresses Concerns</b>	Excessive weaving vehicles on Northridge Road eastbound
<b>Recommended Actions</b>	Add pavement markings and delineators within the Northridge Road eastbound right turn lane at Northridge Center
<b>Other</b>	Could be incorporated with the next repaving project on Northridge Road.

<b>Project ID</b>	E
<b>Project Category</b>	Pavement Markings
<b>Project Location</b>	Northridge Road

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	Some unfamiliar drivers that turn onto Northridge Road eastbound from Roswell Road weave onto the Northridge Center right turn lane believing the lane continues through Colquitt Road. This occurs because the end of the right turn lane is hidden by the crest vertical curve on Northridge Road.	Add pavement markings at the beginning of the right turn lane to shorten the right turn lane by 80 feet so that drivers can see the end of the right turn lane prior to entering this lane. Add delineators at the end of the right turn lane to make it more visible.	Reduces the number of drivers that unintentionally use the right turn lane into the Northridge Center.

### Recommendations – Install pavement markings on Northridge Road.

**Benefits:** Reduces last minute weaving of vehicles trapped by Northridge Road eastbound right turn lane at Northridge Center.

**Impacts:** Minimal

**Costs:** Estimate of probable costs assumes independent implementation of the proposed project.

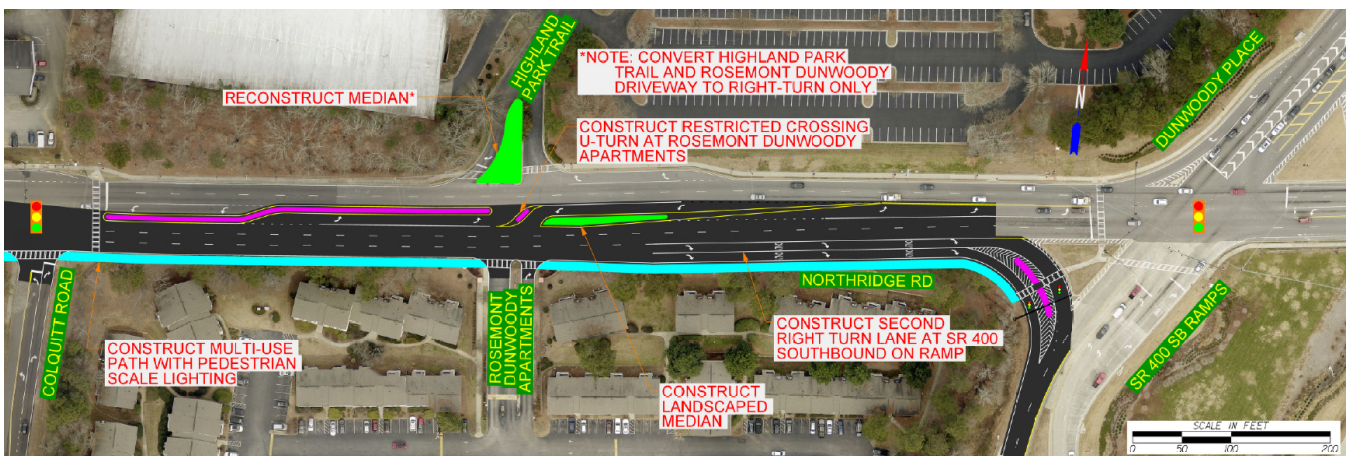
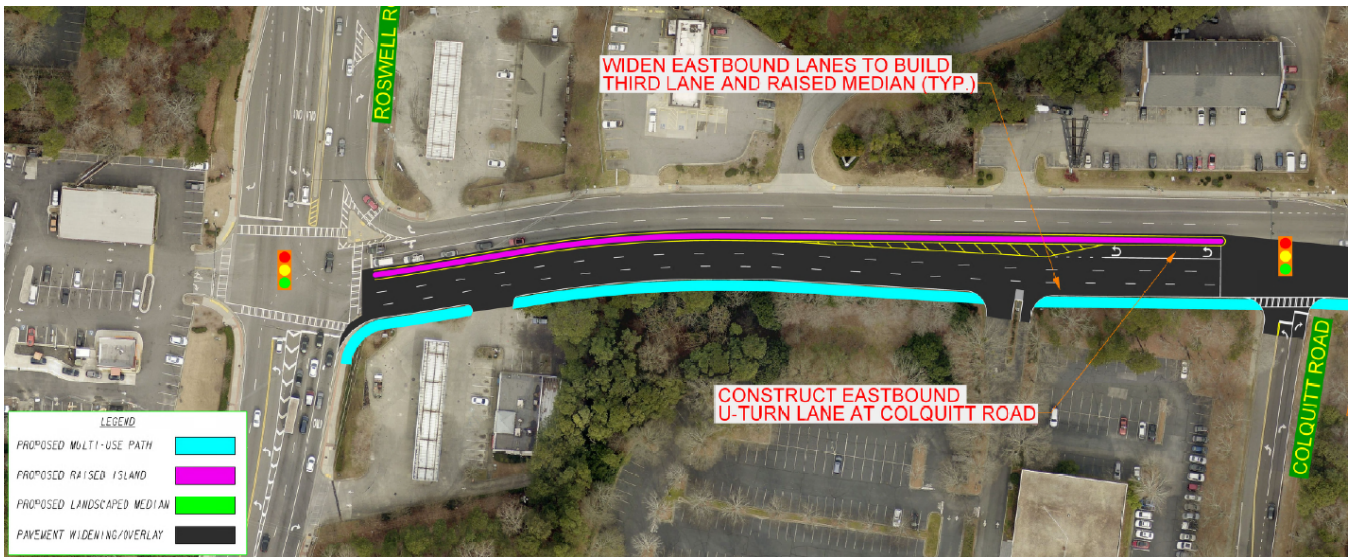
**Additional Considerations:** This is an early implementation project that can provide benefits prior to the ultimate widening of Northridge Road to three lanes from Roswell Road to Dunwoody Place. This project that can be implemented with the next Northridge Road repaving project.

**Addresses Issue(s):** High

Preliminary Project Estimate of Probable Costs	
Preliminary Engineering:	\$----
Construction Cost:	\$20K
Right-of-Way Cost:	\$----
Utility Relocation Cost:	\$----
Contingency Cost:	\$6K
<b>Total Project Cost:</b>	<b>\$26K</b>

A safety Benefit/Cost ratio was estimated for new pavement markings on Northridge Road (3.9).

<b>Project ID</b>	F
<b>Project Category</b>	Widening/Median/Intersection/Multiuse Trail Improvements
<b>Project Location</b>	Northridge Road
<b>Project Description</b>	Third eastbound lane, left turn lane, raised median, dual right turn lanes, RCUT at Highland Park Trail/Rosemont Dunwoody Apartments, signal modifications and multiuse paths with pedestrian level lighting on Northridge Road.
<b>Limits</b>	Roswell Road to Dunwoody Place
<b>Implementation Tier</b>	3



<b>Project ID</b>	F
<b>Project Category</b>	Widening/Median/Intersection/Multiuse Trail Improvements
<b>Project Location</b>	Northridge Road

Additional Project Information	
<b>Project Addresses Concerns</b>	Number and severity of crashes related to left and right turning vehicles. Excessive weaving on Northridge Road eastbound to reach SR 400. Lack of bicycle accommodations on Northridge Road.
<b>Recommended Actions</b>	Raised median on Northridge Road to control access. RCUT at Highland Park Trail/Rosemont Dunwoody Apartments. Modification of traffic signal at Colquitt Drive to protect U-turning vehicles. Modification of traffic signal at Dunwoody Place to provide signalized eastbound right turn onto SR 400 southbound on-ramp. Provide protected facility for bicycles along Northridge Road.
<b>Other</b>	Traffic from Highland Park Trail and Rosemont Dunwoody Apartments have alternate paths to accommodate left turning vehicles that would be restricted by proposed RCUT.

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	A large percentage of vehicles traveling on Northridge Road eastbound turn right at Dunwoody Place to go south on SR 400. These vehicles compete to use the outside lane of Northridge Road; thereby creating undesirable weaving conditions.	Construct a third eastbound lane on Northridge Road and dual right turn lanes at Dunwoody Place.	Should reduce the number of crashes for vehicles traveling EB on Northridge Road.
2	Unprotected left turns on Northridge Road eastbound at Waffle House and Goodwill Shopping Center.	Construct raised median and signalized U-turn to accommodate these movements.	Should reduce the number of left turn related crashes.
3	Unprotected left turns from Highland Park Trail and Rosemont Dunwoody Apartments.	Construct RCUT at Highland Park Trail/ Rosemont Dunwoody Apartments to create right-in-right-out only intersection.	Should reduce angle crashes and injuries at this intersection.
4	Excessive number of eastbound to southbound right turn crashes at Northridge Road/Dunwoody Place.	Construct signalized dual right turns.	Should reduce the number of right turn related crashes.
5	Bicycles traveling on Northridge Road must ride unprotected with all other vehicles.	Construct multi-use path w/ pedestrian level lighting on south side of Northridge Road from Roswell Road.to Dunwoody Place.	Should reduce future bicycle related crashes along Northridge Road.

<b>Project ID</b>	F
<b>Project Category</b>	Widening/Median/Intersection/Multiuse Trail Improvements
<b>Project Location</b>	Northridge Road

### Recommendations - Construct roadway and traffic signal modifications on Northridge Road and multiuse paths on south side of Northridge Road.

**Benefits:** Eliminates problematic left turn movements at various commercial driveways and Highland Park Trail by providing positive access control along Northridge Road. Provides separate left turn lane to remove left turning vehicles from through lane to avoid conflicts and provide safe queue areas for vehicles to wait for an acceptable gap in traffic. Provides separate bicycle facility to remove conflicts between motor vehicles and bicycles.

**Impacts:** Requires additional right-of-way along Northridge Road and restricts access to several commercial driveways.

**Costs:** Estimate of probable costs assumes independent implementation of the proposed project.

**Additional Considerations:** Project could be combined with other adjacent projects.

**Addresses Issue(s):** High

Preliminary Project Estimate of Probable Costs	
Preliminary Engineering:	\$1,069K
Construction Cost:	\$7,129K
Utility Relocation Cost:	\$350K
Contingency Cost:	\$2,460K
Right-of-Way Cost:	\$1,520K
<b>Total Project Cost:</b>	<b>\$12,528K</b>

### Options Not Recommended

#### Option A – Widen Northridge Road for a 20-ft Median

**Benefits:** Provides additional access control along Northridge Road.

**Impacts:** Requires less right-of-way along Northridge Road as preferred option but does not provide the same level of traffic operational improvement.

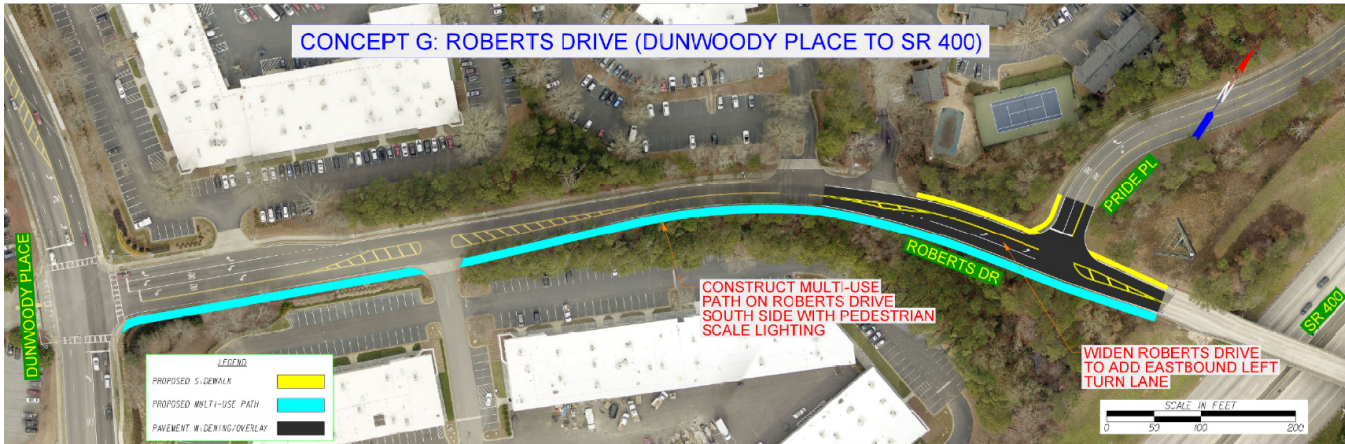
**Costs:** Estimate of probable costs would be less than the preferred option.

**Additional Considerations:** There would be high probability of a future project to add a third eastbound lane on Northridge Road.

**Addresses Issue(s):** Low

A safety Benefit/Cost ratio was estimated for constructing raised median; U-turn lane; and RCUT on Northridge Road (1.8).

<b>Project ID</b>	G
<b>Project Category</b>	Intersection/Multiuse Trail Improvements
<b>Project Location</b>	Roberts Drive
<b>Project Description</b>	Left turn lane at Roberts Drive and Pride Place and multiuse path on south side of Roberts Drive.
<b>Limits</b>	Dunwoody Place to SR 400
<b>Implementation Tier</b>	1



Additional Project Information	
<b>Project Addresses Concerns</b>	Number and severity of crashes related to left turning vehicles. Lack of bicycle accommodations on Roberts Drive.
<b>Recommended Actions</b>	Separate left turning vehicles on the Roberts Dr eastbound approach at Pride Place from through vehicles and provide protected facility for bicycles along south side of Roberts Drive.
<b>Other</b>	Pride Place serves as the primary access to Sandy Springs Charter Middle School.

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	There were 24 crashes at this intersection from 2016 to 2020. Many of these crashes (15) were rear end crashes related to left turns from Roberts Drive to Pride Place. Six rear end crashes resulted in injuries. The injury severities included one KABCO A rating, one B and nine C ratings.	Construct eastbound left turn lane on Roberts Drive at Pride Place	Should reduce the number of rear-end crashes for vehicles traveling EB on Roberts Dr by separating left turns from through vehicles.
2	Bicycles traveling on Roberts Drive must ride unprotected with all other vehicles.	Construct multi-use path on south side of Roberts Dr from Dunwoody Place to SR 400.	Should reduce future bicycle related crashes along Roberts Drive.

<b>Project ID</b>	G
<b>Project Category</b>	Intersection/Multiuse Trail Improvements
<b>Project Location</b>	Roberts Drive

Preliminary Project Estimate of Probable Costs	
Preliminary Engineering:	\$235K
Construction Cost:	\$1,569K
Utility Relocation Cost:	\$75K
Contingency Cost:	\$541K
Right-of-Way Cost:	\$568K
<b>Total Project Cost:</b>	<b>\$2,988K</b>

### Recommendations - Construct a new left turn lane on the Roberts Dr eastbound approach at Pride Place and multiuse path on south side of Roberts Drive.

**Benefits:** Provides separate left turn lane to remove left turning vehicles from through lane to avoid conflicts and provide safe queue areas for vehicles to wait for an acceptable gap in westbound traffic. Provides separate bicycle facility to remove conflicts between motor vehicles and bicycles.

**Impacts:** Requires additional right-of-way along Roberts Drive.

**Costs:** Estimate of probable costs assumes independent implementation of the proposed project; however, actual cost may be lower if improvements can be incorporated into SR 400 Express Lanes project.

**Additional Considerations:** SR 400 Express Lanes project is replacing existing Roberts Drive bridge over SR 400 and reconstructing the Roberts Drive approaches to the bridge.

**Addresses Issue(s):** High

### Options Not Recommended

#### Option A – Roberts Drive Bypass Lane

**Benefits:** Provides additional roadway width to allow through vehicles to bypass left turning vehicles.

**Impacts:** Requires similar right-of-way along Roberts Drive as preferred option; however, does not provide similar protection for left turning vehicles.

**Costs:** Estimate of probable costs may be slightly less than preferred option.

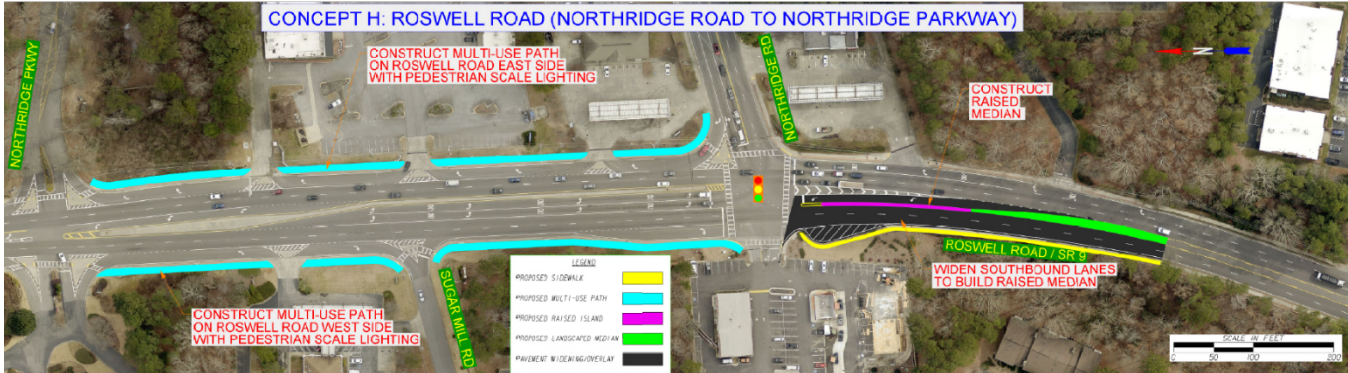
**Additional Considerations:** Large vehicles turning left on Roberts Drive may block view of vehicles entering the intersection from Pride Place.

**Addresses Issue(s):** Moderate

A safety Benefit/Cost ratio was estimated for constructing left turn lane on Roberts Drive (0.93).



<b>Project ID</b>	H
<b>Project Category</b>	Median/U-turn Eyebrow/Traffic Signal/Multiuse Trail Improvements
<b>Project Location</b>	Roswell Road
<b>Project Description</b>	Raised median on northbound approach to Northridge Road and multiuse path on both sides of Roswell Road.
<b>Limits</b>	Northridge Road to Northridge Parkway
<b>Implementation Tier</b>	3



Additional Project Information	
<b>Project Addresses Concerns</b>	Proximity of driveways accessing Roswell Road from the Chevron Service Station and Northridge Center to the intersection with Northridge Road. Lack of bicycle accommodations on Roswell Road.
<b>Recommended Actions</b>	Raised median on northbound approach of Roswell Road; U-turn eyebrow for northbound approach; relocation of signal mast arm in northwest corner; and protected facility for bicycles along both sides of Roswell Road.
<b>Other</b>	No existing parking areas would be impacted by the proposed improvements.

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	There were over 50 crashes that occurred along the southern approach of this intersection from 2016 to 2020. Over fifteen of these crashes resulted in injuries.	Construct a minimum 550-ft long raised median and U-turn eyebrow on the south leg of the Roswell Road/ Northridge Road intersection.	Should reduce the number of crashes related to left turning vehicles that are crossing the median of Roswell Road in this area.
2	Bicycles traveling on Roswell Road must ride unprotected with all other vehicles.	Construct multi-use path on both sides of Roswell Road from Northridge Road to Northridge Parkway.	Should reduce future bicycle related crashes along Roswell Road.

<b>Project ID</b>	H
<b>Project Category</b>	Median/Traffic Signal/Multiuse Trail Improvements
<b>Project Location</b>	Roswell Road

<b>Preliminary Project Estimate of Probable Costs</b>	
Preliminary Engineering:	\$182K
Construction Cost:	\$1,211K
Utility Relocation Cost:	\$100K
Contingency Cost:	\$418K
Right-of-Way Cost:	\$300K
<b>Total Project Cost:</b>	<b>\$2,211K</b>

**Recommendations - Construct a raised median and U-turn eyebrow on the southern approach at Northridge Road and multiuse path on both sides of Roswell Road.**

**Benefits:** Removes hazardous left turn movements that currently cross the existing flush median of Roswell Road. Provides separate bicycle facility to remove conflicts between motor vehicles and bicycles.

**Impacts:** Requires additional right-of-way along Roswell Road, relocation of one existing signal mast arm pole and reduces access to two commercial driveways close to Northridge Road.

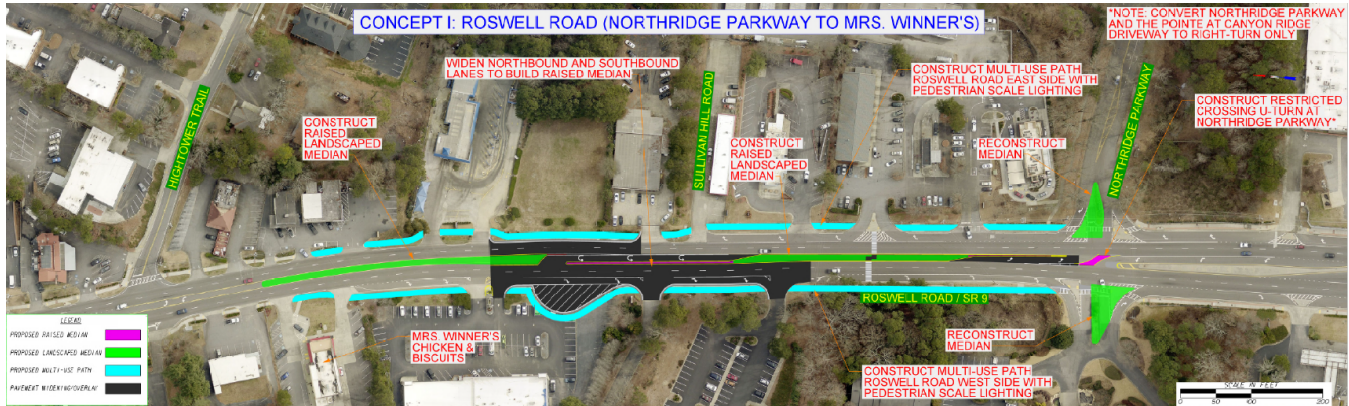
**Costs:** Estimate of probable costs assumes independent implementation of the proposed project.

**Additional Considerations:** Project could be combined with other adjacent projects.

**Addresses Issue(s):** High

A safety Benefit/Cost ratio was estimated for constructing median and multi-use trail on Roswell Road (0.5).

<b>Project ID</b>	I
<b>Project Category</b>	Median/Intersection/Midblock Crossing/Multiuse Trail Improvements
<b>Project Location</b>	Roswell Road
<b>Project Description</b>	Raised median, RCUT at Northridge Parkway, U-turn eyebrow at Huntridge Center Shopping Center, midblock crossing, and multiuse paths with pedestrian level lighting on Roswell Road.
<b>Limits</b>	Northridge Parkway to Mrs. Winner's Chicken & Biscuits (8550 Roswell Road)
<b>Implementation Tier</b>	3



Additional Project Information	
<b>Project Addresses Concerns</b>	Number and severity of crashes related to left turning vehicles due to the absence of access control on Roswell Road. Lack of signalized pedestrian crossings and bicycle accommodations on Roswell Road.
<b>Recommended Actions</b>	Raised median on Roswell Road to control access. RCUT at Northridge Parkway and U-turn eyebrow at Huntridge Center Shopping Center on Roswell Road. Signalized (Hybrid Pedestrian Beacon) pedestrian midblock crossing at Goodyear Auto Service Center (8445 Roswell Road). Provide protected facility for bicycles along Roswell Road.
<b>Other</b>	MARTA buses (Route No. 87) typically pick up and drop off 130 passengers every day at the Roswell Road bus stops within this project.

<b>Project ID</b>	I
<b>Project Category</b>	Median/Intersection/Midblock Crossing/Multiuse Trail Improvements
<b>Project Location</b>	Roswell Road

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	Unprotected left turns on Roswell Road at Northridge Parkway and The Pointe at Canyon Ridge Apartments driveway contributed to many of the 53 crashes that occurred at this intersection between 2016 and 2020.	Construct RCUT and raised median on Roswell Road at Northridge Parkway and The Pointe at Canyon Ridge Apartments driveway.	By creating a right-in/right-out only intersection, should reduce the number of crashes for vehicles turning onto Roswell Road.
2	Twelve commercial driveways along Roswell Road between Northridge Parkway and Mrs. Winner's Chicken & Biscuits (1,150 feet) are resulting in frequent left turn related crashes.	Construct raised median on Roswell Road between Northridge Parkway and Mrs. Winner's Chicken & Biscuits (8550 Roswell Road)	Should reduce the number of left turn related crashes.
3	Lack of protected pedestrian crossings on Roswell Road to accommodate pedestrian activity including MARTA Bus Route No. 87 patrons.	Add signalized (Pedestrian Hybrid Beacon) pedestrian midblock crossing at Goodyear Auto Service Center (8445 Roswell Road).	Should reduce the number of pedestrian related crashes.
4	Bicycles traveling on Roswell Road must ride unprotected with all other vehicles.	Construct multi-use path w/ pedestrian level lighting on both sides of Roswell Road from Northridge Parkway to Mrs. Winner's Chicken & Biscuits (8550 Roswell Road).	Should reduce future bicycle related crashes along Roswell Road.

<b>Project ID</b>	I
<b>Project Category</b>	Median/Intersection/Midblock Crossing/Multiuse Trail Improvements
<b>Project Location</b>	Roswell Road

**Recommendations - Construct roadway modifications on Roswell Road, signalized pedestrian midblock crossing and multiuse paths on both sides of Roswell Road.**

**Benefits:** Eliminates problematic left turn movements at Northridge Parkway and The Pointe at Canyon Ridge Apartments driveway. Provides positive access control for the multiple commercial properties along Roswell Road. Provides protected pedestrian crossing of Roswell Road. Provides separate bicycle facility to remove conflicts between motor vehicles and bicycles.

**Impacts:** Requires additional right-of-way along Roswell Road and restricts access to Northridge Parkway and The Pointe at Canyon Ridge Apartments driveway and multiple other commercial driveways.

**Costs:** Estimate of probable costs assumes independent implementation of the proposed project.

**Additional Considerations:** Project could be combined with other adjacent projects.

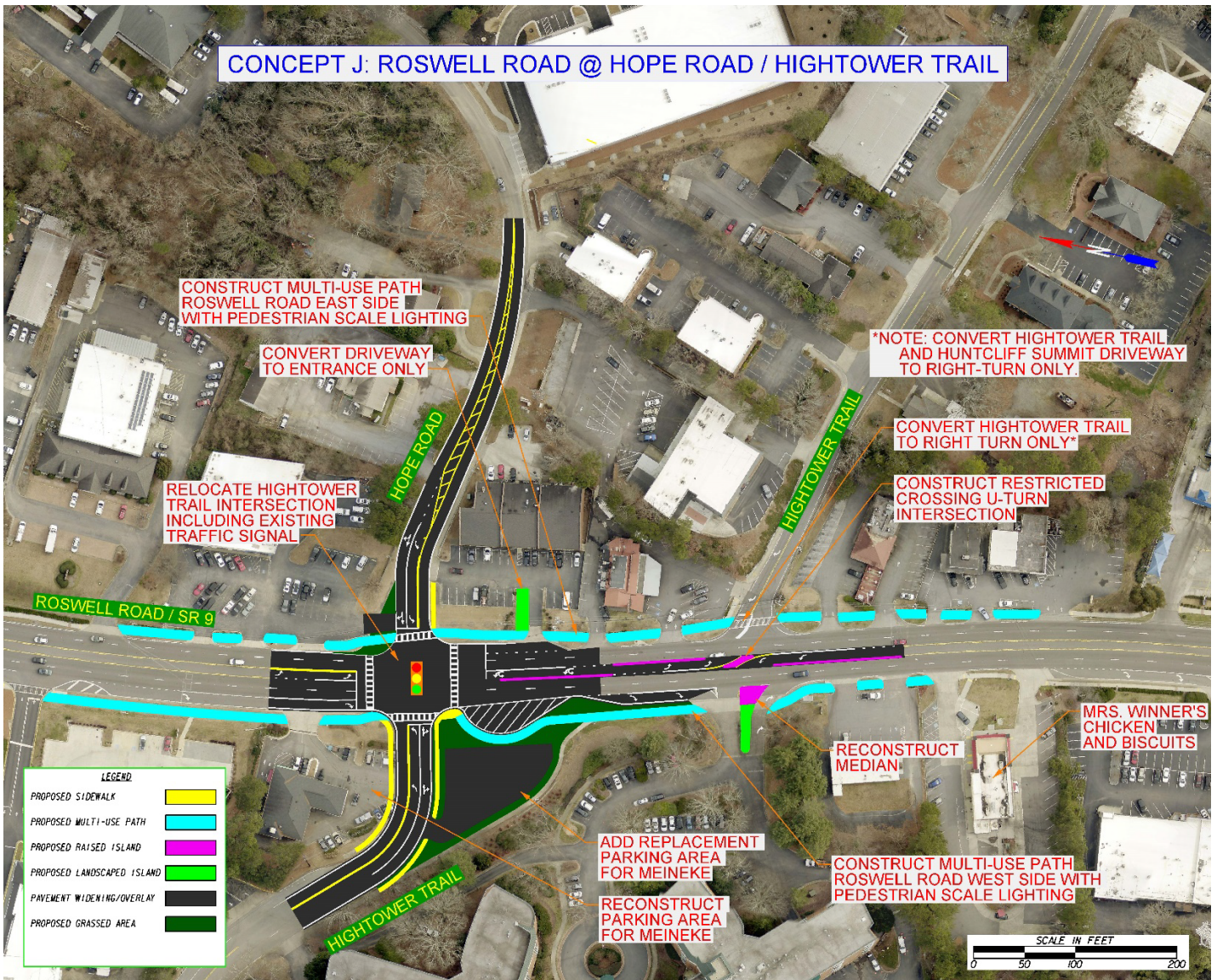
**Addresses Issue(s):** High

Preliminary Project Estimate of Probable Costs	
Preliminary Engineering:	\$185K
Construction Cost:	\$1,233K
Utility Relocation Cost:	\$200K
Contingency Cost:	\$425K
Right-of-Way Cost:	\$828K
<b>Total Project Cost:</b>	<b>\$2,871K</b>

## Options Not Recommended

Option A – Traffic Signal at Northridge Parkway
<p><b>Benefits:</b> Provides protected left turns in and out of Northridge Parkway and The Pointe at Canyon Ridge Apartments driveway.</p> <p><b>Impacts:</b> Creates more traffic congestion and rear end crashes on Roswell Road than the preferred option.</p> <p><b>Costs:</b> The cost of operating and maintaining a new traffic signal will be significantly higher than the preferred option.</p> <p><b>Additional Considerations:</b> Existing hourly traffic volumes from Northridge Parkway and The Pointe at Canyon Ridge Apartments driveway do not meet GDOT’s traffic signal warrant thresholds.</p> <p><b>Addresses Issue(s):</b> Medium</p>

<b>Project ID</b>	J
<b>Project Category</b>	Road Realignment/Median/Intersection/Multiuse Trail Improvements
<b>Project Location</b>	Roswell Road
<b>Project Description</b>	Raised median, RCUT at Northridge Parkway, U-turn eyebrow at Huntridge Center Shopping Center and multiuse paths with pedestrian level lighting on Roswell Road.
<b>Limits</b>	Mrs. Winner's Chicken & Biscuits (8550 Roswell Road) to Sandy Springs Diner (8612 Roswell Road)
<b>Implementation Tier</b>	3



<b>Project ID</b>	J
<b>Project Category</b>	Road Realignment/Median/Intersection/Multiuse Trail Improvements
<b>Project Location</b>	Roswell Road

Additional Project Information	
<b>Project Addresses Concerns</b>	Close spacing of existing intersections (three in 400 feet). Number and severity of crashes from 2016 - 2020 along this segment of Roswell Road (97). Lack of bicycle accommodations on Roswell Road.
<b>Recommended Actions</b>	Realign Hightower Trail (west)/traffic signal to intersect with Hope Road. Raised median on Roswell Road to control access. RCUT at Hightower Trail (east)/Huntcliff Summit driveway and U-turn eyebrow at Hightower Trail (east)/Hope Road on Roswell Road. Provide protected facility for bicycles along Roswell Road.
<b>Other</b>	May require displacement of Meineke Car Care Center or at a minimum, reconfiguration of associated parking.

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	Unprotected left turns on Roswell Road at Hightower Trail (east)/ Huntcliff Summit driveway contributed to many of the 75 crashes that occurred at this intersection between 2016 and 2020.	Construct RCUT and raised median on Roswell Road at Hightower Trail (east)/ Huntcliff Summit driveway to convert both approaches to right-in/right-out intersections.	By creating a right-in/right-out only intersection, should reduce the number of crashes for vehicles turning onto Roswell Road.
2	One T-intersection and two 4-legged intersections along Roswell Road between Hightower Trail (east)/ Huntcliff Summit driveway and Hope Road (400 feet) are resulting in frequent left turn related crashes.	Realign Hightower Trail (west) to intersect with Hope Road. Relocated existing traffic signal to new intersection.	Should reduce the number of left turn related crashes at Hope Road.
3	Bicycles traveling on Roswell Road must ride unprotected with all other vehicles.	Construct multi-use path w/ pedestrian level lighting on both sides of Roswell Road from Mrs. Winner's Chicken & Biscuits (8550 Roswell Road) to Sandy Springs Diner (8612 Roswell Road).	Should reduce future bicycle related crashes along Roswell Road.

<b>Project ID</b>	J
<b>Project Category</b>	Road Realignment/Median/Intersection/Multiuse Trail Improvements
<b>Project Location</b>	Roswell Road

**Recommendations - Construct roadway modifications on Roswell Road, Hightower Trail and Hope Road and multiuse paths on both sides of Roswell Road.**

**Benefits:** Eliminates problematic left turn movements at Hightower Trail (east)/ Huntcliff Summit driveway. Provides protected left and through movements to and from Hope Road. Provides separate bicycle facility to remove conflicts between motor vehicles and bicycles.

**Impacts:** Requires additional right-of-way along Roswell Road including potential displacement of Meineke Car Care Center. Restricts access to Hightower Trail (east)/ Huntcliff Summit driveway; however, alternate paths currently exist or would be provided. Reduces direct access to Roswell Road for Subway/Beef Grill Shopping Center (8599 Roswell Road) by converting driveway to entrance only and relocating traffic signal away from shopping center driveway.

**Costs:** Estimate of probable costs assumes independent implementation of the proposed project.

**Additional Considerations:** Project could be combined with other adjacent projects.

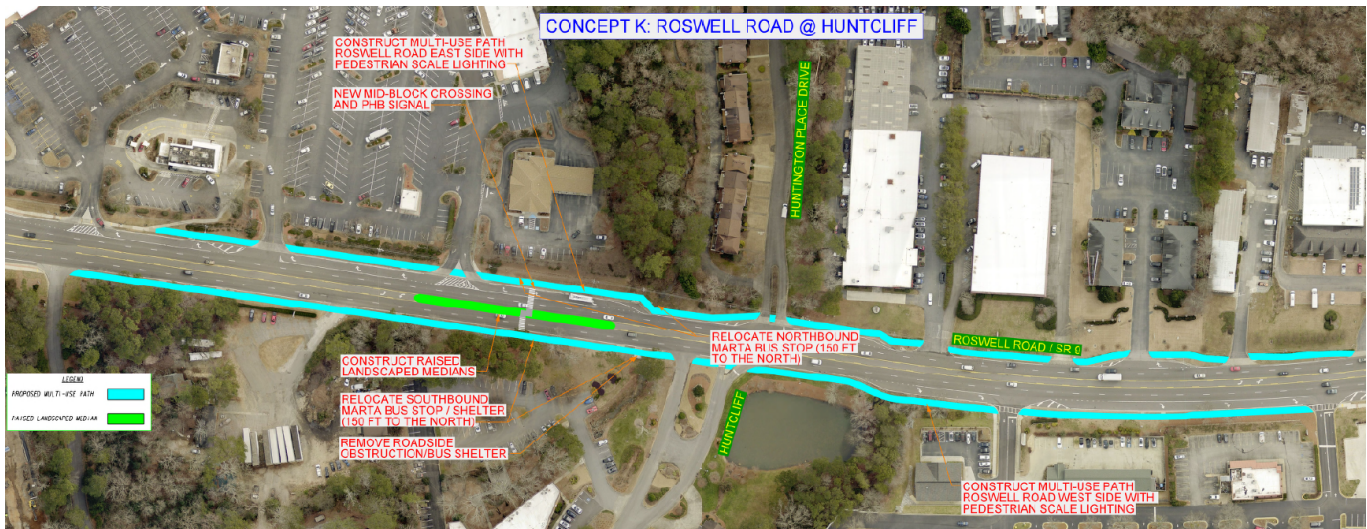
**Addresses Issue(s):** High

<b>Preliminary Project Estimate of Probable Costs</b>	
Preliminary Engineering:	\$628K
Construction Cost:	\$4,190K
Utility Relocation Cost:	\$350K
Contingency Cost:	\$1,445K
Right-of-Way Cost:	\$2,668K
<b>Total Project Cost:</b>	<b>\$9,281K</b>

A safety Benefit/Cost ratio was estimated for constructing roadway and multi-use path improvements (0.2).



<b>Project ID</b>	K
<b>Project Category</b>	Median/Midblock Crossing/Multiuse Trail Improvements
<b>Project Location</b>	Roswell Road
<b>Project Description</b>	Raised median, midblock crossing, and multiuse paths with pedestrian level lighting on Roswell Road.
<b>Limits</b>	Sandy Springs Diner (8612 Roswell Road) to The Forest at Huntcliff (8740 Roswell Road)
<b>Implementation Tier</b>	3



Additional Project Information	
<b>Project Addresses Concerns</b>	Lack of signalized pedestrian crossings and bicycle accommodations on Roswell Road. Limited intersection sight distance at Huntcliff intersection.
<b>Recommended Actions</b>	Raised median on Roswell Road to control access and provide pedestrian refuge area. Signalized (Hybrid Pedestrian Beacon) pedestrian midblock crossing at Wells Fargo Bank (8721 Roswell Road). Provide protected facility for bicycles along Roswell Road. Relocate MARTA bus stops.
<b>Other</b>	MARTA buses (Route No. 87) typically pick up and drop off 85 passengers every day at the Roswell Road bus stops within this project.

<b>Project ID</b>	K
<b>Project Category</b>	Median/Midblock Crossing/Multiuse Trail Improvements
<b>Project Location</b>	Roswell Road

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	Lack of protected pedestrian crossings on Roswell Road to accommodate pedestrian activity including MARTA Bus Route No. 87 patrons.	Add signalized (Pedestrian Hybrid Beacon) pedestrian midblock crossing at Wells Fargo Bank (8721 Roswell Road).	Should reduce the number of pedestrian related crashes.
2	Bicycles traveling on Roswell Road must ride unprotected with all other vehicles.	Construct multi-use path w/ pedestrian level lighting on both sides of Roswell Road from Sandy Springs Diner (8612 Roswell Road) to The Forest at Huntcliff (8740 Roswell Road).	Should reduce future bicycle related crashes along Roswell Road.
3	Limited intersection sight distance for Huntcliff/Huntington Place Drive	Relocate MARTA bus stops 150 feet further north of Huntcliff and trim back landscaping in SE corner of Huntington Place Dr.	Increased intersection side street sight distance.

### Recommendations - Construct roadside clearing on Roswell Road, signalized pedestrian midblock crossing and multiuse paths on both sides of Roswell Road.

**Benefits:** Increases intersection sight distance at Huntcliff/Huntington Place Drive. Provides protected pedestrian crossing of Roswell Road. Provides separate bicycle facility to remove conflicts between motor vehicles and bicycles.

**Impacts:** Requires additional right-of-way along Roswell Road.

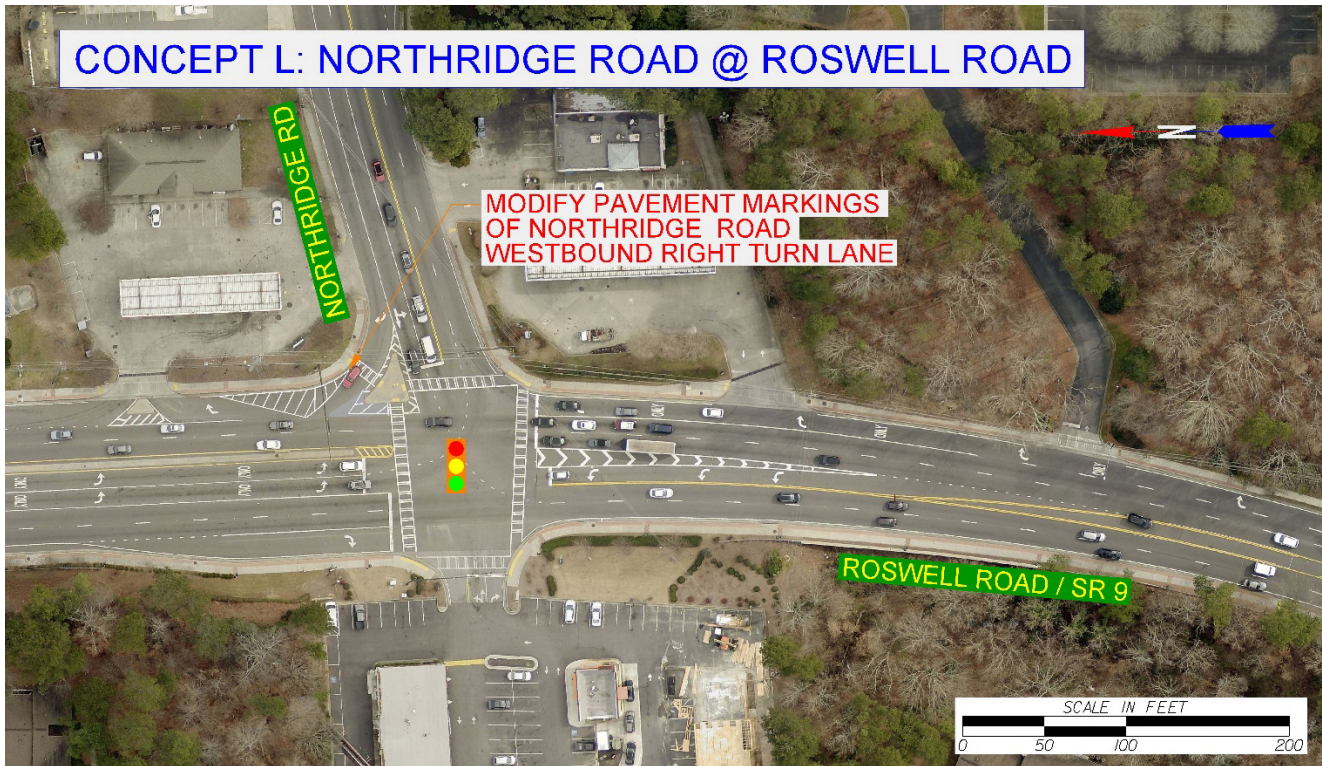
**Costs:** Estimate of probable costs assumes independent implementation of the proposed project.

**Additional Considerations:** Project could be combined with other adjacent projects.

**Addresses Issue(s):** High

Preliminary Project Estimate of Probable Costs	
Preliminary Engineering:	\$157K
Construction Cost:	\$1,048K
Utility Relocation Cost:	\$75K
Contingency Cost:	\$361K
Right-of-Way Cost:	\$1,140K
<b>Total Project Cost:</b>	<b>\$2,781K</b>

<b>Project ID</b>	L
<b>Project Category</b>	Pavement Markings
<b>Project Location</b>	Roswell Road
<b>Project Description</b>	Pavement markings
<b>Limits</b>	Northridge Road
<b>Implementation Tier</b>	1



Additional Project Information	
<b>Project Addresses Concerns</b>	Right turning vehicles stop abruptly on Northridge Road northbound
<b>Recommended Actions</b>	Modify pavement markings that direct Northridge Road westbound right turning vehicles to merge with Roswell Road northbound vehicles
<b>Other</b>	Could be incorporated with the next repaving project on Roswell Road.

<b>Project ID</b>	L
<b>Project Category</b>	Pavement Markings
<b>Project Location</b>	Roswell Road

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	Due to existing ambiguous pavement markings, some unfamiliar drivers that turn onto Roswell Road northbound from Northridge Road westbound mistakenly believe that they are turning into a Roswell Road acceleration lane. They are turning into a short right turn lane that terminates at the Exxon Service Station. This results in some drivers stopping abruptly in the Exxon right turn lane, which causes frequent rear end crashes (30 in five years).	Modify pavement markings to direct vehicles into the outside through lane on Roswell Road northbound instead of the Exxon right turn lane.	Reduces the number of drivers that are trapped in the Exxon Service Station right turn lane.

### Recommendations – Install pavement markings on Roswell Road.

**Benefits:** Reduces abrupt stopping of vehicles trapped by Exxon Service Station northbound right turn lane.

**Impacts:** Minimal

**Costs:** Estimate of probable costs assumes independent implementation of the proposed project.

**Additional Considerations:** This is an early implementation project that can be implemented with the next Roswell Road repaving project.

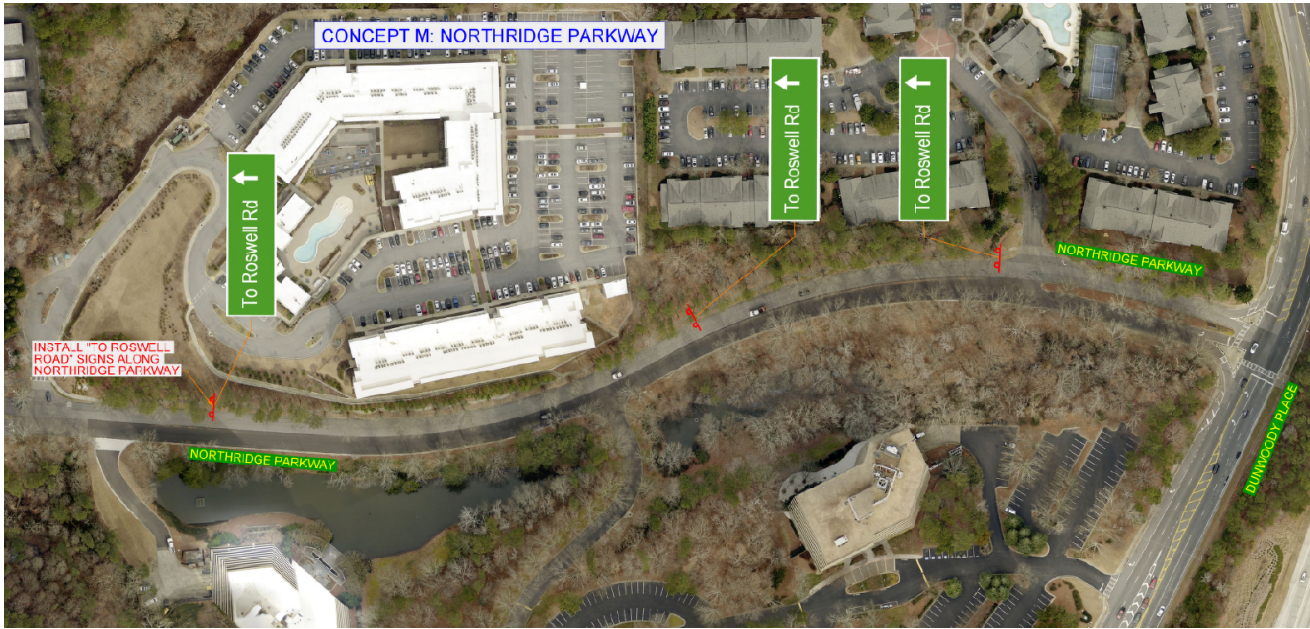
**Addresses Issue(s):** High

### Preliminary Project Estimate of Probable Costs

Preliminary Engineering:	\$----
Construction Cost:	\$10K
Right-of-Way Cost:	\$----
Utility Relocation Cost:	\$----
Contingency Cost:	\$3K
<b>Total Project Cost:</b>	<b>\$13K</b>

A safety Benefit/Cost ratio was estimated for new pavement markings on Roswell Road (3.5).

<b>Project ID</b>	M
<b>Project Category</b>	Wayfinding Guide Signs
<b>Project Location</b>	Northridge Parkway
<b>Project Description</b>	Wayfinding Guide Signs to Roswell Road
<b>Limits</b>	Dunwoody Place to Highland Park Trail
<b>Implementation Tier</b>	1



Additional Project Information	
<b>Project Addresses Concerns</b>	Vehicles traveling westbound on Northridge Parkway that abruptly make U-turns at Highland Park Apartments.
<b>Recommended Actions</b>	Install wayfinding guide signs on Northridge Parkway westbound to direct vehicles to Roswell Road via Northridge Parkway.
<b>Other</b>	Cost estimate could be reduced by reducing the number of signs.

<b>Project ID</b>	M
<b>Project Category</b>	Wayfinding Guide Signs
<b>Project Location</b>	Northridge Parkway

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	Unfamiliar drivers exiting SR 400 NB at Northridge Rd are trapped by outside right turn lane and forced to use Dunwoody Pl. They attempt to U-turn as soon as possible to get back to Northridge Rd. causing crashes along Dunwoody Pl and Northridge Pkwy.	Install three ground-mounted wayfinding guide signs on Northridge Parkway westbound to direct vehicles to Roswell Road.	Reduces the number of drivers that make U-turns at Highland Park Apartments.

### Recommendations – Install pavement markings on Roswell Road.

**Benefits:** Reduces abrupt U-turning of vehicles trapped by SR 400 NB off-ramp right turn to Dunwoody Place.

**Impacts:** Minimal

**Costs:** Estimate of probable costs assumes independent implementation of the proposed project.

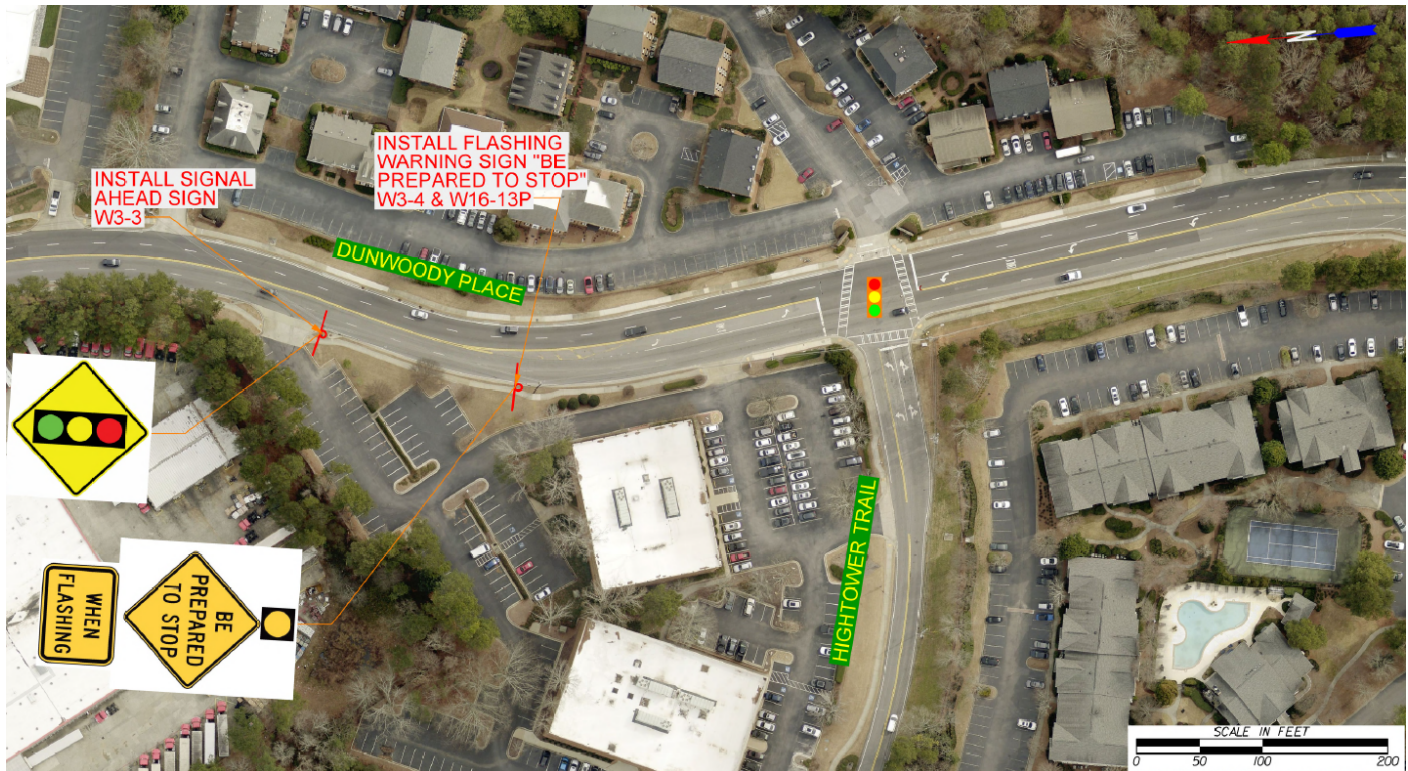
**Additional Considerations:** This is an early implementation project that can be implemented with one to three signs.

**Addresses Issue(s):** High

### Preliminary Project Estimate of Probable Costs

Preliminary Engineering:	\$3,600
Construction Cost:	\$24,000
Right-of-Way Cost:	\$----
Utility Relocation Cost:	\$----
Contingency Cost:	\$8,300
<b>Total Project Cost:</b>	<b>\$35,900</b>

<b>Project ID</b>	N
<b>Project Category</b>	Roadside Warning Signs
<b>Project Location</b>	Dunwoody Place
<b>Project Description</b>	Actuated Flashing and Static Warning Signs
<b>Limits</b>	Hightower Trail
<b>Implementation Tier</b>	1



### Additional Project Information

<b>Project Addresses Concerns</b>	Vehicles traveling southbound on Dunwoody Place (approaching Hightower Trail) abruptly stop at the back of the queue of vehicles stopped at the congested Northridge Road intersection.
<b>Recommended Actions</b>	Install static signal ahead warning sign (W3-3) and flashing warning signs (W3-4 & W16-13P) on Dunwoody Place southbound.

<b>Project ID</b>	N
<b>Project Category</b>	Roadside Warning Signs
<b>Project Location</b>	Dunwoody Place

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	Vehicles traveling southbound on Dunwoody Place (approaching Hightower Trail) abruptly stop at the back of the queue of vehicles stopped at the congested Northridge Road/Dunwoody Place intersection. These vehicles have limited visual warning due to the sharp crest vertical curve on Dunwoody Place.	Install one static signal ahead warning sign (W3-3) and one set of flashing warning signs (W3-4 & W16-13P) on Dunwoody Place southbound. The flashing warning sign flashes only when built in sensors detect when southbound vehicles stop south of Hightower Trail.	Reduces the number of southbound rear end crashes on Dunwoody Place, south of Hightower Trail.

### Recommendations – Install warning signs on Dunwoody Place.

**Benefits:** Reduces the number of southbound rear end crashes on Dunwoody Place.

**Impacts:** Minimal

**Costs:** Estimate of probable costs assumes independent implementation of the proposed project.

**Additional Considerations:** This is an early implementation project that can be implemented with or without vehicle sensors.

**Addresses Issue(s):** High

Preliminary Project Estimate of Probable Costs	
Preliminary Engineering:	\$8,300
Construction Cost:	\$55,000
Right-of-Way Cost:	\$---
Utility Relocation Cost:	\$---
Contingency Cost:	\$19,000
<b>Total Project Cost:</b>	<b>\$82,300</b>



<b>Project ID</b>	0
<b>Project Category</b>	Overhead Sign
<b>Project Location</b>	Northridge Road
<b>Project Description</b>	Overhead signs on SR 400 Northbound off-ramp to Northridge Road.
<b>Limits</b>	Roberts Drive
<b>Implementation Tier</b>	2



Additional Project Information	
<b>Project Addresses Concerns</b>	Inadequate directional signage on SR 400 NB off-ramp.
<b>Recommended Actions</b>	Provide overhead guide sign for SR 400 NB off-ramp.

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	Unfamiliar drivers exiting SR 400 NB to Northridge Rd are trapped by outside right turn lane and forced to use Dunwoody Pl. They attempt to U-turn as soon as possible to get back to Northridge Rd. causing crashes along Dunwoody Pl and Northridge Pkwy.	Install overhead guide sign along SR 400 Northbound off-ramp to Northridge Road to warn unfamiliar drivers of the lane to Dunwoody Place.	Should reduce the number of crashes from drivers that are trapped by the Dunwoody Place right turn lane.

<b>Project ID</b>	O
<b>Project Category</b>	Overhead Sign
<b>Project Location</b>	Northridge Road

### Recommendations - Construct overhead guide sign on SR 400 NB off-ramp.

**Benefits:** Reduces the number of vehicles trapped by the SR 400 Northbound off-ramp right turn lane to Dunwoody Pl.

**Impacts:** Minimal.

**Costs:** Estimate of probable costs assumes independent implementation of the proposed project.

**Additional Considerations:** None.

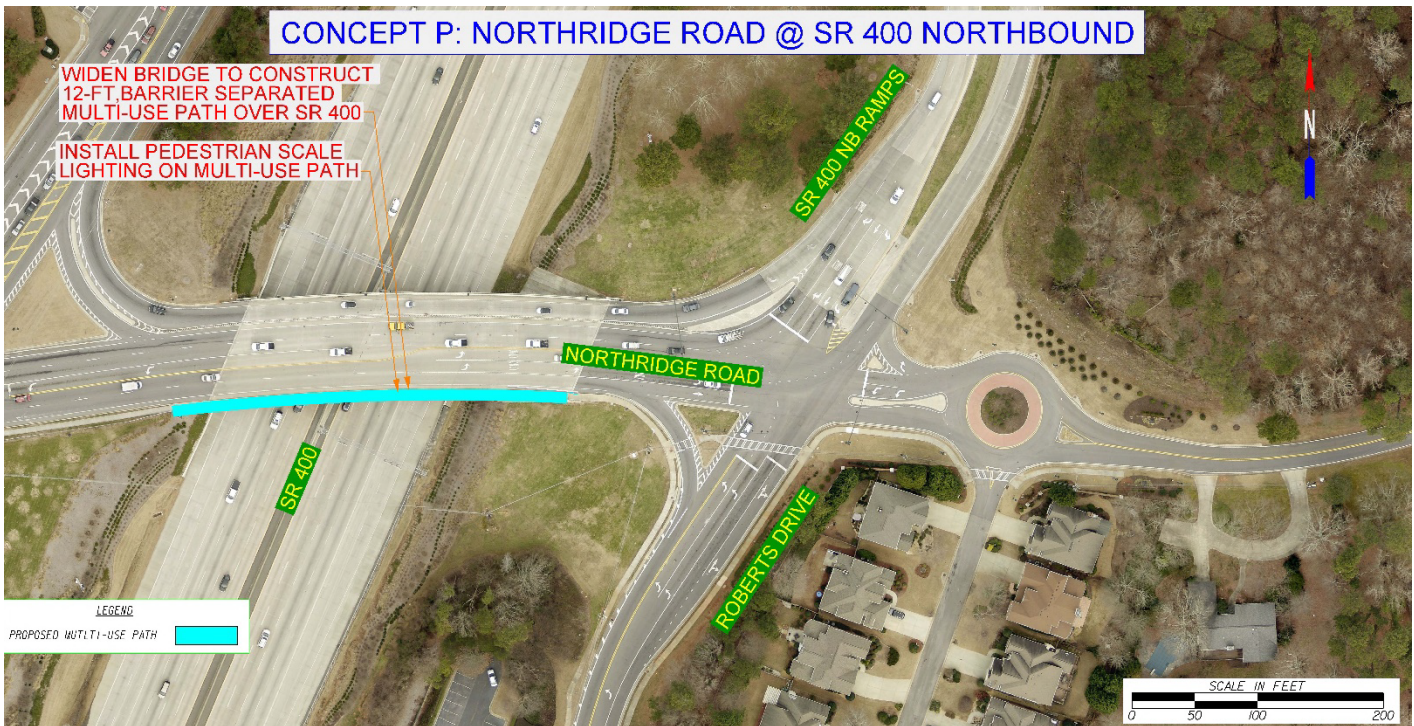
**Addresses Issue(s):** High

### Preliminary Project Estimate of Probable Costs

Preliminary Engineering:	\$66K
Construction Cost:	\$265K
Utility Relocation Cost:	\$-----
Contingency Cost:	\$50K
Right-of-Way Cost:	\$-----
<b>Total Project Cost:</b>	<b>\$381K</b>

A safety Benefit/Cost ratio was estimated for installing overhead guide sign on Northridge Road/SR 400 NB off-ramp (2.1).

<b>Project ID</b>	P
<b>Project Category</b>	Bridge Widening/Multiuse Path with Pedestrian Level Lighting Improvements
<b>Project Location</b>	Northridge Road
<b>Project Description</b>	Bridge widening and multiuse paths with pedestrian level lighting on Northridge Road.
<b>Limits</b>	Roberts Drive
<b>Implementation Tier</b>	3



Additional Project Information	
<b>Project Addresses Concerns</b>	Lack of continuous bicycle accommodations on Northridge Road.
<b>Recommended Actions</b>	Widen the existing Northridge Road overpass to provide protected facility for bicycles with pedestrian level lighting along Northridge Rd.

<b>Project ID</b>	P
<b>Project Category</b>	Bridge Widening/Multiuse Path with Pedestrian Level Lighting Improvements
<b>Project Location</b>	Northridge Road

#	Existing Conditions/Safety Concerns	Recommendations	Benefits
1	Existing bicycle lane on Northridge Road bridge over SR 400 does not connect to any other bicycle facilities; therefore, is seldom used.	Widen existing Northridge Rd overpass to provide barrier separated multiuse path for peds and bicycles with pedestrian level lighting along Northridge Rd.	Should reduce the number of pedestrian and bicycle related crashes.

<p><b>Recommendations - Widen the Northridge Road overpass bridge for multiuse path with pedestrian level lighting on south side of Northridge Road.</b></p> <p><b>Benefits:</b> Provides separate ped/bicycle facility to remove conflicts between motor vehicles and ped/bicycles.</p> <p><b>Impacts:</b> Minimal.</p> <p><b>Costs:</b> Estimate of probable costs assumes independent implementation of the proposed project.</p> <p><b>Additional Considerations:</b> Multiuse path components need to be combined with other adjacent projects to provide continuous bicycle route.</p> <p><b>Addresses Issue(s):</b> High</p>
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Preliminary Project Estimate of Probable Costs	
Preliminary Engineering:	\$456K
Construction Cost:	\$2,283K
Utility Relocation Cost:	\$-----
Contingency Cost:	\$822K
Right-of-Way Cost:	\$-----
<b>Total Project Cost:</b>	<b>\$3,561K</b>

## Options Not Recommended

<p><b>Option A – Separate Pedestrian Bridge over SR 400</b></p> <p><b>Benefits:</b> Separates pedestrian and bicycle traffic from vehicular traffic on Northridge Road.</p> <p><b>Impacts:</b> Less traffic control impacts on Northridge Road than preferred option.</p> <p><b>Costs:</b> Estimate of probable costs would be slightly higher than the preferred option.</p> <p><b>Additional Considerations:</b> Requires additional multiuse path improvements to justify costs.</p> <p><b>Addresses Issue(s):</b> High</p>
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