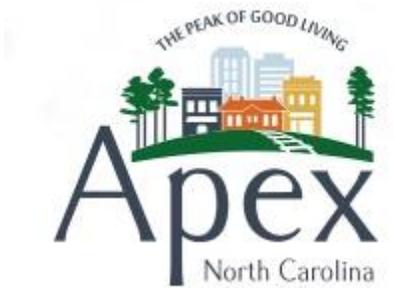


APEX PEAKWAY SOUTHEAST CONNECTOR

FEASIBILITY STUDY REPORT



Prepared by
Kimley-Horn and Associates, Inc.
NC License #F-0102
for the
Town of Apex

KHA Project #011200029

June 2018



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1.0 Introduction

This feasibility study describes the proposed Apex Peakway Southeast (SE) Connector project. This project proposes to extend Apex Peakway from its existing intersection with NC 55 (E. Williams Street) to the existing intersection of Schieffelin Road with Center Street. As a part of this project, Schieffelin Road will be widened and realigned to accommodate the new section of Apex Peakway. Unless otherwise noted in this report, “Apex Peakway” refers to the proposed alignment from NC 55 to Center Street, and “Schieffelin Road” refers to the existing segment that will be tied into the new Apex Peakway at realigned James Street.

The project is approximately 0.75 miles in length. The proposed project location is shown on Figure 1.

The purpose of this feasibility study is to guide project planning by: providing a functional design and estimated costs, gathering and responding to initial public input, and identifying potential problems that may require consideration in the future planning and design phases.

2.0 Background

The Town of Apex is located in Wake County, and is adjacent to the Town of Cary to the north and east, Town of Holly Springs to the south, and Chatham County to the west. Apex is part of the Capital Area Metropolitan Planning Organization (CAMPO). Land uses along the corridor consist of a mix of businesses and residences.

The *Apex Comprehensive Transportation Plan* lists the construction/widening of the Apex Peakway as a high priority.



3.0 Project Description

3.1 DESIGN

The design proposes a road on new alignment for approximately 0.35 miles from NC 55 to Schieffelin Road, and widening existing Schieffelin Road for approximately 0.40 miles from James Street to Center Street. Schieffelin Road and James Street will be realigned to create a 4-leg intersection with the new section of Apex Peakway. It is assumed that the segment of Schieffelin Road to be widened will be renamed as Apex Peakway. The proposed design is shown on Figure 2.

The road is envisioned to be four lanes with a median, including a 10-foot wide shared-use asphalt path on the west side and a 5-foot wide concrete sidewalk on the east side. This design is consistent with previously approved local plans. Functional designs have been prepared as part of this feasibility study.

The following image shows the proposed typical section on the Apex Peakway SE Connector:

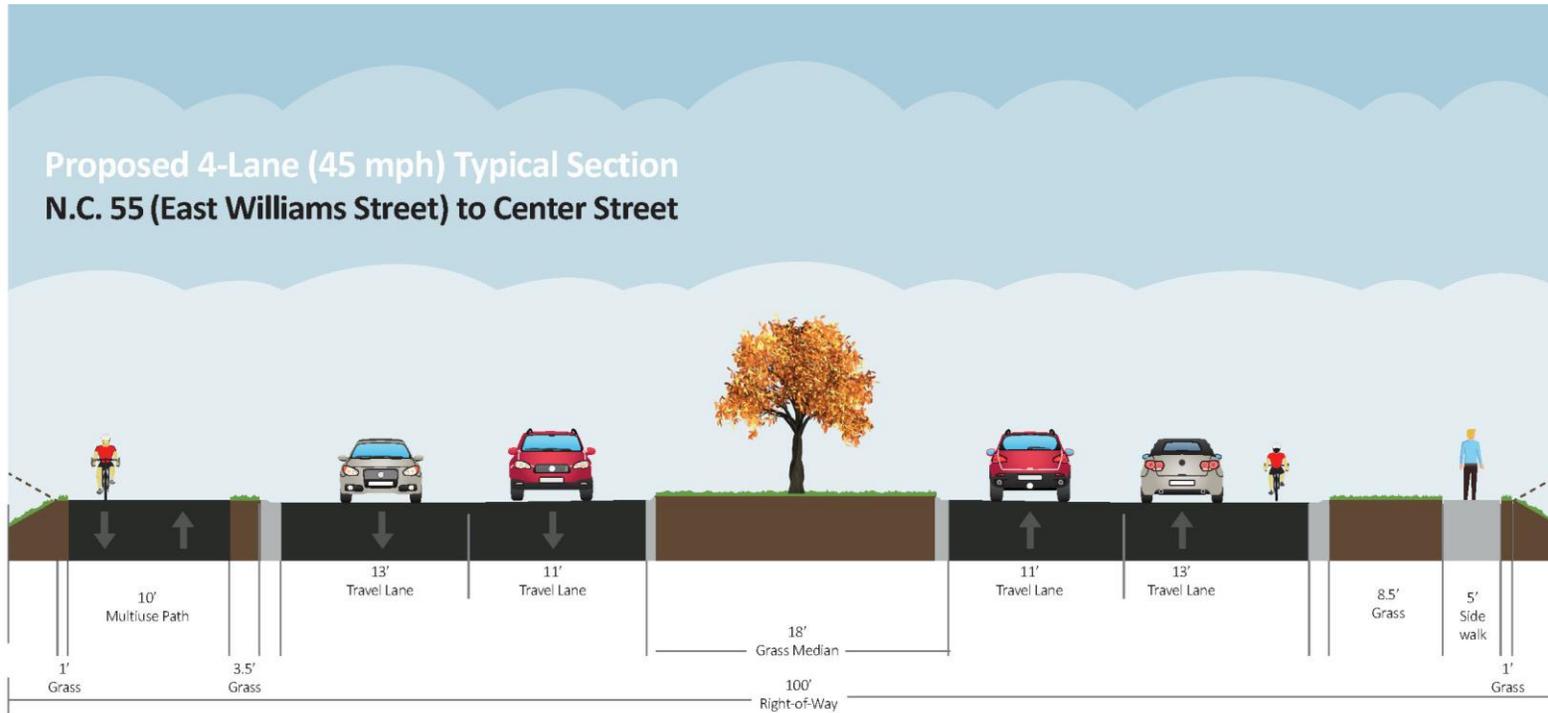


Figure 1: Proposed Apex Peakway SE Connector Typical Section

The following images show the new location section of the Apex Peakway SE Connector before and after the project. The photo was taken on the existing Apex Peakway at NC 55 facing northeast.

Before:



Figure 2: Existing Apex Peakway and NC 55 Intersection facing northeast

After:



Figure 3: Proposed Improvements to Intersection of Apex Peakway and NC 55 facing northeast

The following images show the existing section of Schieffelin Road before and after the project. The photo was taken facing north between Investment Boulevard and Center Street.

Before:



Figure 4: Existing Schieffelin Road facing north between Investment Boulevard and Center Street

After:



Figure 5: Proposed Schieffelin Road facing north between Investment Boulevard and Center Street



3.2 COSTS

The estimated costs for the Apex SE Connector project were divided into three sections: construction, utility relocation, and right of way. Utility costs were prepared using CAMPO’s cost estimator spreadsheet, and right-of-way estimates were provided by the Town. Costs are summarized in **Table 1**.

Table 1: Preliminary Opinion of Probable Construction Costs

Item	Estimated Cost
Construction	\$8,750,000
Utility Relocation*	\$1,310,000
Right of Way	\$3,100,000
Contingency (45%)	\$3,940,000
<i>Estimated Total Cost</i>	<i>\$17,100,000</i>

*Based on 15% of total construction cost as requested by the Town of Apex
 Note: Cost estimates have been rounded to the nearest \$10,000 for purposes of this study.

4.0 Traffic Analysis

Based on the *Apex Peakway Southeast Connector Traffic Capacity Analysis Report* (Final, July 31, 2018), it is recommended that the Apex Peakway SE Connector be constructed as a 4-lane section to provide acceptable traffic operations in both the short and long term.

The traffic analysis included improvements associated with two nearby projects from the Statewide Transportation Improvements Program (STIP), U-5825 and U-2901. Project U-5825 includes the widening of Ten-Ten Road from Apex Peakway to Kildaire Farm Road and has an anticipated construction year of 2023. Project U-2901 includes the widening of NC 55 from the US 1 ramps to Hunter Street and has an anticipated construction year of 2021.

Based on results of the traffic analysis, the proposed design includes new and extended turn lanes, additional receiving lanes, and new and modified traffic signals. These are reflected in the functional designs, shown on Figure 2.

Analyses indicate that all study intersections are expected to operate at an acceptable level-of-service (LOS D or better) for the 2040 Build condition with the exception of the unsignalized intersection of Apex Peakway at Investment Boulevard. Based on the analyses, this intersection may operate with moderate to long delays for the minor street



approach (Investment Boulevard) during the peak hours if it remains unsignalized. However, based on the projected traffic volumes, this intersection is not expected to meet signal warrants, and it is not uncommon for stop-controlled side-street approaches to experience long delays along major through corridors during peak hours. **Table 2** on the following page details the results of the Synchro intersection analyses for the scenarios outlined above.

It should be noted that the improvements identified at the intersections of Apex Peakway and Center Street as well as Apex Peakway and NC 55 as a part of projects U-5825 and U-2901 are based on a different traffic forecast than that which was completed for the Apex Peakway SE Connector project. Therefore, there were some variances between the laneage recommendations from the Apex Peakway SE Connector analysis and those presented in the traffic capacity analysis for U-5825 (June 2017, VHB) and U-2901 (January 2017, VHB).



Table 2: Level of Service Summary

Condition	AM Peak-Hour LOS (Delay)	PM Peak-Hour LOS (Delay)
Apex Peakway at Center Street (Signalized)		
No Build (2017)	C (24.8)	C (25.3)
No Build (2040)	F (129.1)	E (68.2)
Build (2040) – <i>Protected-only Left-turn Phasing</i>	D (48.5)	D (50.0)
Build (2040) – <i>Protected-Permitted Left-Turn Phasing</i>	D (51.2)	D (51.7)
Apex Peakway at Investment Boulevard (Unsignalized)*		
No Build (2017)	WB – A (5.1)	WB – A (4.9)
No Build (2040)	WB – F (560.2)	WB – F (65.6)
Build (2040)	WB – F (68.6) SBL – C (22.6) NBU – A (7.9)	WB – D (32.3) SBL – B (12.9) NBU – B (11.9)
Apex Peakway at Olive Street (Unsignalized)*		
No Build (2017)	EB – A (4.1)	EB – A (5.0)
No Build (2040)	EB – F (346.9)	EB – E (40.4)
Build (2040)	EB – A (6.5)	EB – C (16.4)
Apex Peakway at James Street (Unsignalized)*		
No Build (2017) – <i>Unsignalized*</i>	EB – A (5.8) WB – A (4.0)	EB – A (5.4) WB – A (5.1)
No Build (2040) – <i>Unsignalized*</i>	EB – F (120.3) WB – B (14.8)	EB – C (17.5) WB – B (12.4)
Build (2040) – <i>Signalized</i>	WB – B (12.2)	WB – A (7.4)
Apex Peakway at Realigned Schieffelin Road/Realigned James Street (Signalized)*		
Build (2040)	B (14.8)	B (10.5)
NC 55 at Apex Peakway (Signalized)		
No Build (2017)	B (18.1)	C (20.1)
No Build (2040)	B (19.0)	C (21.6)
Build (2040)	C (34.3)	C (31.5)

*Unsignalized intersection delays are reported from SimTraffic version 9.1.



5.0 Environmental Screening

An environmental screening was performed to identify potential environmental features that will likely required further evaluation in future project development phases. **Table 3** includes a summary of anticipated impacts for the Apex Peakway SE Connector project.

5.1 NATURAL RESOURCES

A preliminary review of the environmental resources in the vicinity of the project study corridor was conducted by Kimley-Horn environmental scientists on October 5, 2017 and October 12, 2017. Impacts to natural resources are summarized in **Table 3**.

5.1.1 Streams

NC Department of Environmental Quality (NCDEQ) Division of Water Resources (NCDWR) identifies four unnamed tributaries (UT) to Middle Creek within 50 feet of the project study corridor. All four streams were identified in the field by Kimley-Horn staff, but were not delineated. Figure 3 shows the streams in the vicinity of the project study corridor.

In accordance with Section 303(d) of the Clean Water Act, states are required to develop a list of water bodies not meeting federal water quality standards or that have impaired uses. No streams within or within 1.0 mile of the study area are listed on the North Carolina 2014 Final 303(d) or the 2016 Draft 303(d) lists of impaired waters.

There are no water supply watersheds, Outstanding Resource Waters (ORW), or High Quality Waters (HQW) within the study corridor or within one mile downstream of the study area.

5.1.2 Wetlands

The National Wetland Inventory (NWI) identifies three wetlands within 50 feet of the project study corridor. Wetlands were identified in the field, but were not delineated. Wetlands along the project corridor are a mix of relic pond beds and seeps. Figure 3 shows the wetlands in the vicinity of the project study corridor.

5.1.3 Buffer Rules

The project corridor is located within the Neuse River Basin; therefore, streamside riparian areas may be subject to the Neuse River Basin Buffer Rules administered by NCDWR. In addition to the buffer requirements administered by NCDWR, the Town of Apex Unified Development Ordinance (UDO) requires an additional 50-foot buffer be placed on all perennial streams.



5.1.4 Floodplains

The FEMA Digital Flood Insurance Rate Map (DFIRM) 3720074100J (effective May 2, 2006) indicates there are no 100-year floodplains or FEMA-regulated floodways located near the study corridor.

5.1.1 Threatened and Endangered Species

The US Fish and Wildlife Service (USFWS) lists four federally-protected species known to occur in Wake County: Michaux’s sumac, red-cockaded woodpecker, dwarf wedgemussel, and northern long-eared bat. NC Natural Heritage Program (NCNHP) (updated July 2017) records indicate no known occurrences within 1.0-mile of the project corridor. Kimley-Horn biologists conducted pedestrian surveys for Michaux’s sumac, red-cockaded woodpecker, and dwarf wedgemussel within areas of suitable habitat on October 12, 2017, and no individuals were observed. Due to the lack of recorded occurrences and the lack of observed individuals, it has been determined that the proposed project will have “*No Effect*” on these three species.

The USFWS has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared bat (NLEB) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for NLEB for the NCDOT program is May Affect, Likely to Adversely Affect. The PBO provides incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Wake County, where the proposed project is located. This level of incidental take is authorized from the effective date of a final listing determination through April 30, 2020.

The yellow lance is listed as “Proposed” in Wake County. Species that are listed as proposed are currently under consideration for official listing as endangered or threatened, and do not require Section 7 consultation.

5.2 COMMUNITY RESOURCES

A map review was completed within the project corridor, and was verified with a field investigation. Figure 4 shows the community resources in the vicinity of the project study corridor.

Two religious facilities are along the corridor. The Ambassador Presbyterian Church is located in the southwest quadrant of the Apex Peakway and Center Street intersection. The Apex Mosque is located in the northwest quadrant of the Apex Peakway and Center Street intersection. No impacts are anticipated to either facility. However, the median



divided roadway will likely change the Ambassador Presbyterian Church driveway to right-in/right-out due to the close proximity to Center Street.

Clairmont Park is located approximately 400 feet west of Apex Peakway. No impacts to the park are anticipated.

5.3 HISTORIC RESOURCES

A preliminary review of the NC State Historic Preservation Office (SHPO) HPOWEB GIS Service was conducted to identify known historic resources in the vicinity of the project corridor. The Apex Historic District is listed on the National Register of Historic Places and is located approximately 0.3 miles west of the proposed roadway (see Figure 4).

5.4 ENVIRONMENTAL JUSTICE POPULATIONS

NCDOT's Census Look-Up tool was used to obtain information on low-income and minority communities in the area surrounding the project area. The Apex SE Connector is located within Census Tract (CT) 534.18, Block Group (BG) 2.

Census data indicates a notable presence of low-income populations within CT 534.18, BG 2. The BG has 25.3% of the population that is considered to be below the poverty level as compared to Wake County's Below Poverty Level population percentage of 11.3%. A mobile home park (Apex Mobile Estates) is within the proposed project corridor.

Census data also indicates a Spanish language-speaking population within CT 534.18, BG 2 that may require the possible need for oral interpreters at meetings, targeted media advertising, and other outreach actions. The BG is estimated to have 363 Spanish-speaking individuals, making up 29.4% of the BG population, that speak English less than very well. Apex Mobile Estates is home to a Spanish-speaking population.

To ensure that the identified populations received full and fair participation in the public involvement process, bilingual postcards advertising the public meeting were mailed via the USPS Every Door Direct Mail (EDDM) service. EDDM provides a more thorough method of reaching non-owner occupied properties. A translator was available at the public meeting, and the public meeting handout was provided in both English and Spanish.

5.5 SURROUNDING DEVELOPMENT

Utilizing the Town's Interactive Development Map, a review of the current and anticipated development in the area surrounding the project was conducted. A Sam's Xpress Car Wash has recently been constructed at the intersection of NC 55 and Apex Peakway. The Peak City Business Park (Schieffelin Industrial) is a development that is



currently under construction. It is located east of the proposed Apex SE Connector and would have direct access from the realigned Energy Drive.

The approved developments in the vicinity of the project corridor include Cambridge Village of Apex (Phase II), EJ Iron Works, and the Center Street Flex Expansion. Also, additional development in the Old Mill Village subdivision are under construction.

Figure 4 shows the developments that are under construction or have been approved near the project study corridor.

5.6 EDUCATIONAL RESOURCES

Wake County Public School System (WCPSS) was contacted for input on how the proposed Apex SE Connector may affect school busing. Approximately 15 school buses travel in the morning and afternoon on the section of Schieffelin Road that would be widened. WCPSS anticipates that additional bus routes would use the completed Apex Peakway SE Connector, and feels this project would be beneficial to school bus transportation. The input form is in **Appendix A**.

5.7 EMERGENCY MEDICAL SERVICE RESOURCES

Local emergency service providers were contacted for input on how the proposed Apex SE Connector may affect EMS response. The input form is in **Appendix A**.

According to EMS Chief Heath, Investment Boulevard has the highest call volume of roads in the vicinity of the proposed project. Police Chief Letteney noted there are relatively high call volumes in the Apex Mobile Estates. Overall, the emergency service providers agreed that the proposed project will positively affect response times and access in the vicinity of the study area. It was noted that the project may help relieve some congestion from surrounding streets.

The emergency service providers requested that special consideration be given to access along the proposed corridor, both during and after construction. Since no alternative access exists to James Street, emergency access would need to be maintained during construction.

5.8 COMMUNITY COHESION

Apex Mobile Estates and 55 James at Midtown are neighborhoods immediately adjacent to the corridor.

- The proposed project is anticipated to require relocation of approximately 10 mobile homes, which may be perceived as a negative effect on the overall Apex Mobile Estates neighborhood.



- 55 James at Midtown has evidence of cohesion, including a homeowner’s association. During the public meeting, several residents of 55 James at Midtown noted that pedestrians from other communities cut through their neighborhood. The proposed project will include pedestrian accommodations, and may reduce the number of pedestrians cutting through that neighborhood.

5.9 ECONOMIC AND BUSINESS IMPACTS

The additional connectivity from NC 55 to Center Street is projected to attract additional traffic to the Apex Peakway SE Connector corridor, which is anticipated to have an overall positive impact on the commercial/retail developments near the project corridor. Adding a median on the existing Schieffelin Road will change access to businesses.

5.10 MULTIMODAL

As part of the Apex Peakway SE Connector, a multi-use path will be built on the west side of the road, and a sidewalk will be built on the east side of the road. This is consistent with the Town’s plan to build a multiuse path along the inside of the full Apex Peakway loop. In addition, the outside lanes of the Apex Peakway SE Connector will be 13’ to provide additional width for bicycles traveling on-road along the corridor. Sidewalk connections are proposed to be constructed between the Apex Peakway SE Connector and Apex Mobile Estates along Seagram Street and Gilby Road.

During the public meeting, several citizens requested crosswalks. Crosswalks were not included in the concept design phase, but will be considered in subsequent design phases when construction funding is programmed.

Go Triangle Route 311 (Apex-RTC) travels along Old Raleigh Road and Hughes Street in Apex. The proposed Apex Peakway SE Connector project is not anticipated to affect transit activities.

5.11 MOBILITY AND ACCESS

The new route from NC 55 to Center Street will improve mobility through this area. Addition of a median will increase mobility but reduce direct access to adjacent properties. In addition, the following changes are proposed:

- A new connection will be made between the 55 James at Midtown subdivision and the Apex Peakway, as planned for during the initial neighborhood development.
- The Apex Mobile Estates neighborhood currently accesses James Street. The modified road network will provide access from the neighborhood to Apex



Peakway (right-in/right-out) and to Schieffelin Road (full movement) via a new Energy Drive extension.

- James Street and the existing Schieffelin Road will be realigned to intersect with Apex Peakway at a 4-leg intersection.
- Existing intersections and driveways along the corridor will be converted to right-in/right out except at Investment Boulevard and James Street/Schieffelin Road.

5.12 INDIRECT AND CUMULATIVE EFFECTS

The new connection between NC 55 and Center Street is anticipated to reduce travel times through the area. The project also will add new access to several properties near Schieffelin Road and James Street. Overall, this project is not expected to create new development, but will facilitate growth occurring in this area.

5.13 RELOCATIONS

Based on the functional design, approximately 10 residences in Apex Mobile Estates may be relocated. Additionally, two businesses at the intersection of Apex Peakway and Center Street (Center Street Grocery and Dragonfly Pond Works) may be relocated. These two businesses have also been identified as potential relocations due to NCDOT project U-5825 (right-of-way scheduled for FY 2021 and construction scheduled for FY 2023 in the 2018 STIP). These relocation totals are preliminary and are subject to change.



6.0 Summary of Impacts

Potential impacts of the proposed project, based on functional designs, are summarized in Table 3.

Table 3: Potential Impact Summary

Impact	No Build	Build
Residential Relocations	None	10
Business Relocations	None	2 (which also may be impacted by U-5825)
Mobility and Access	No change	Change in access to adjacent properties and streets
Multimodal Accommodations	No change	New sidewalk and multiuse path, wide outside lane for bicycle travel
Consistent with Local Plans	Not consistent	Consistent
Parks	None	None
Streams	None	Approximately 665 linear feet
Wetlands	None	Approximately 1.1 acres
Historic Resources	None	None
Community Resources	None	No direct impacts
Travel Time	No change	Reduction anticipated
Environmental Justice Populations	None	Potential disproportionate and adverse effect to minority and low-income populations if there are direct or indirect impacts within Apex Mobile Estates
Surrounding Development	None	No change in current proposed development; potential for change in future development patterns
Educational Resources	None	Beneficial to school bus transportation
EMS Resources	None	Positively impact response times and access near the study area
Community Cohesion	None	Potential negative impact to Apex Mobile Estates; potential reduction in pedestrian cut through traffic in 55 James at Midtown
Economic and Business Impacts	None	Positive: attract additional traffic
Indirect and Cumulative Effects	None	Facilitate growth in the area



7.0 Public Involvement

A public meeting was held on November 2, 2017 at the Apex Town Hall. A total of 27 citizens attended the public meeting. Paper comment forms and online survey kiosks were available prior to and at the public meeting for citizens to provide input. A total of 83 respondents answered at least one question from the survey. Below are the main responses gathered from the surveys.

- Approximately 70% of survey respondents indicated that the project would affect them in either a somewhat positive or very positive manner.
- More than half (53%) of the survey respondents indicated that the project should receive a high priority in terms of transportation needs in Apex.
- Approximately 65% of the survey respondents indicated that they felt “very good” about the proposed design.
- Approximately 63% of the survey respondents were in favor of the project.

Several recommendations and considerations for the next phase of design are based on public input received during this feasibility study:

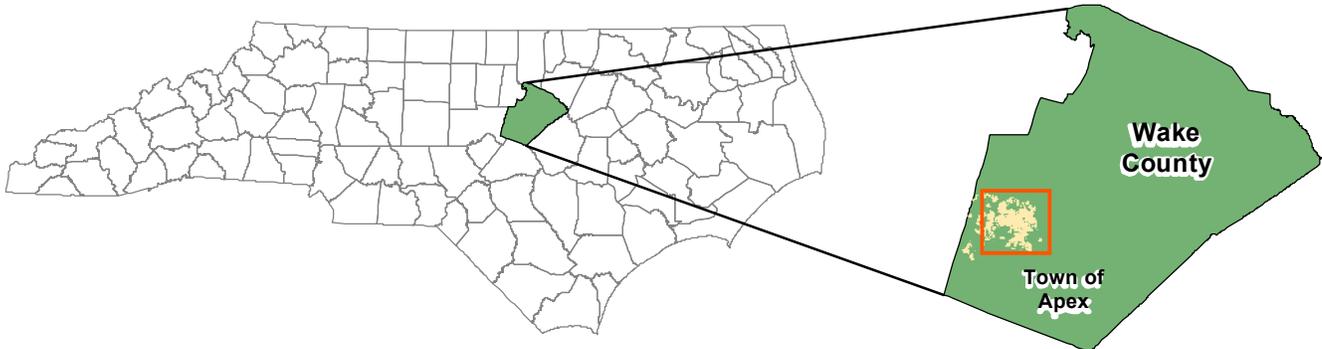
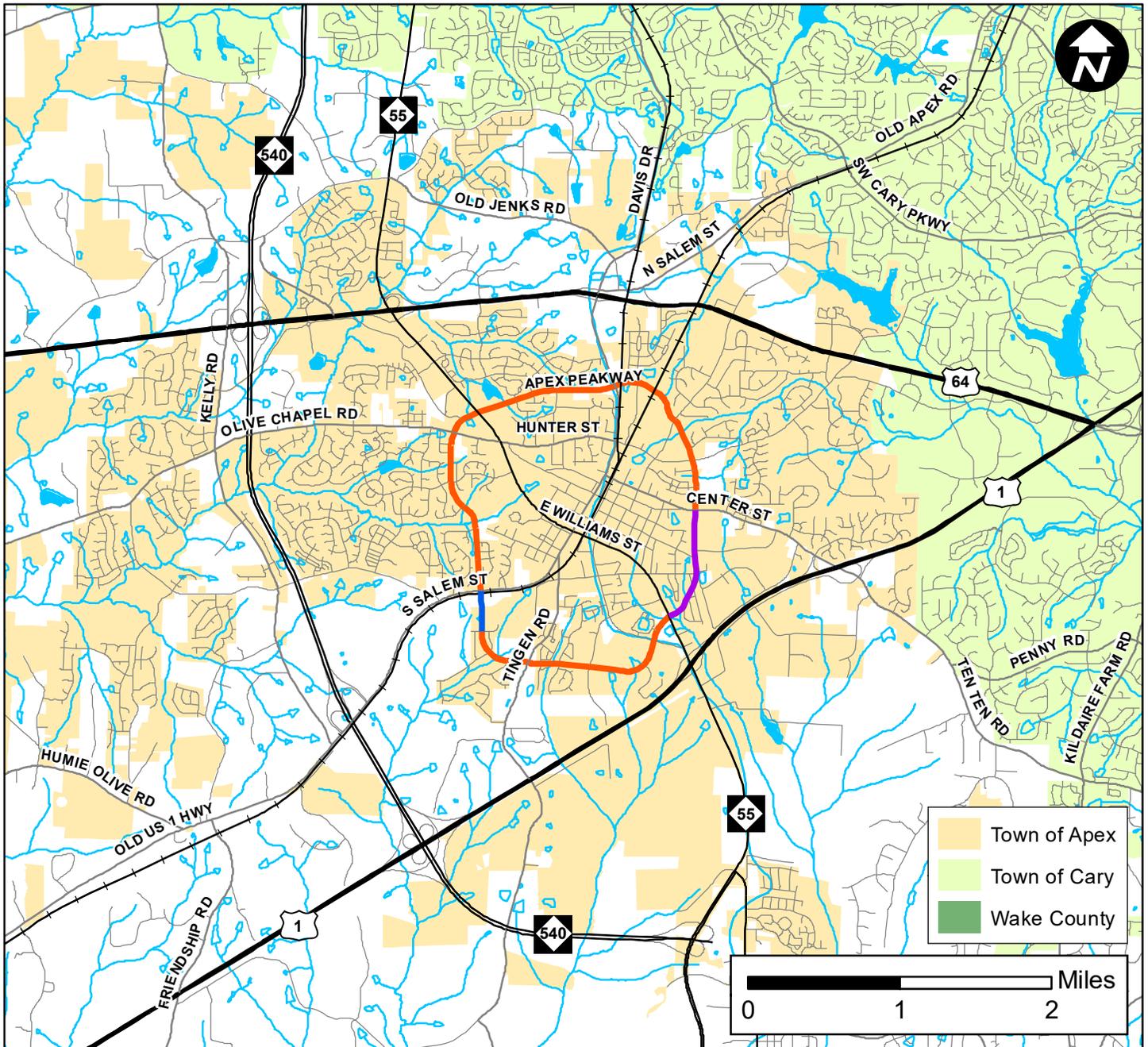
- Minimize number of lanes where possible
- Consider including pedestrian and bicycle crossings
- Minimize removing trees
- Bury the overhead utility lines
- Disconnect Seagram Street and/or Gilby Road from the proposed Apex Peakway
- Minimize impacts to properties
- Include a median left-turn lane to access Investment Boulevard

A more detailed analysis of the public comments and responses to the comments can be seen in **Appendix B**.



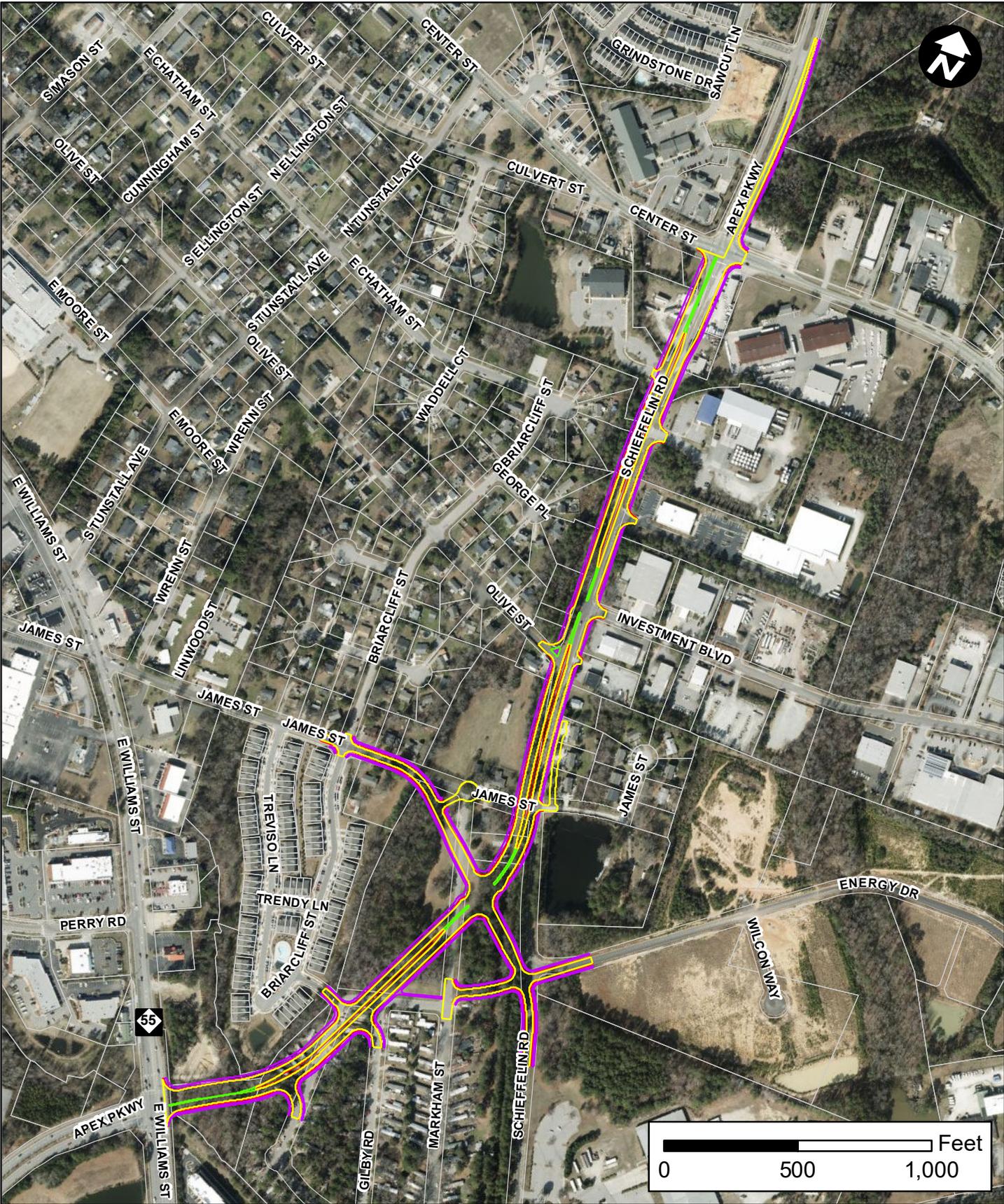
FEASIBILITY STUDY REPORT – APEX PEAKWAY SOUTHEAST CONNECTOR
APEX, NC

Figures



- Existing Apex Peakway
- Proposed Apex Peakway SE Connector
- Future Apex Peakway SW Connector

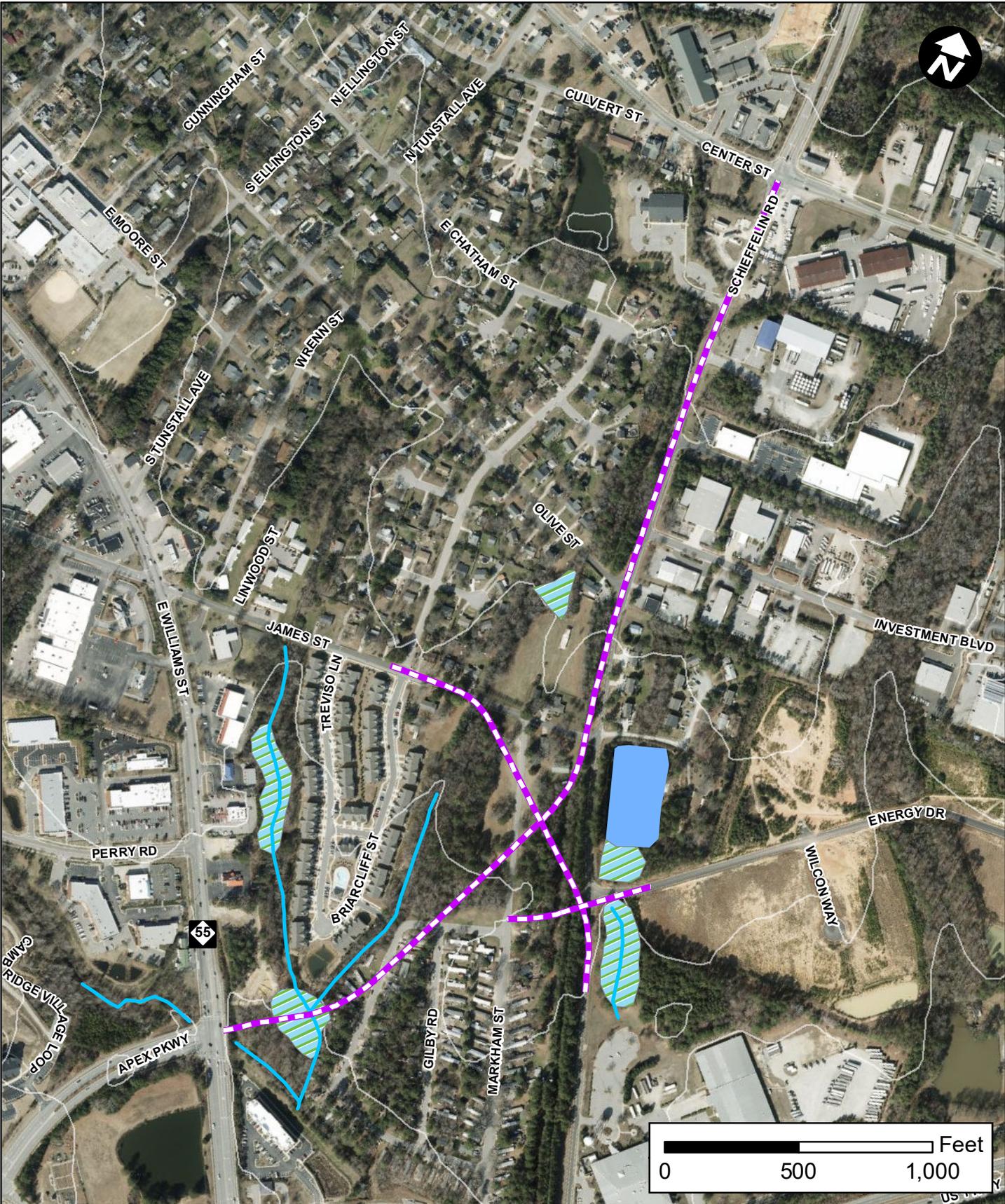
Figure 1:
Vicinity Map
 Apex Peakway SE Connector
 Apex, Wake County



- Proposed Edge of Travel
- Proposed Concrete Island
- Proposed Curb and Gutter
- Proposed Sidewalk

Figure 2:
Design Map
 Apex Peakway SE Connector
 Apex, Wake County





-  Proposed Apex Peakway SE Connector
-  Approximate Stream
-  Approximate Wetland
-  Approximate Pond

Figure 3:
Environmental Features Map
 Apex Peakway SE Connector
 Apex, Wake County





FEASIBILITY STUDY REPORT – APEX PEAKWAY SOUTHEAST CONNECTOR
APEX, NC

Appendix A: Project Input Forms

**Local Schools Input Form for
APEX SOUTHEAST CONNECTOR**

Contact Information

Completed Via: Email Phone

Interviewee Name: Stephen Sposato, AICP

Title/Position: Transportation Planner

Organization/Agency: Wake County Public School System (WCPSS)

Email: ssposato2@wcpss.net

Phone Number: (919) 533-7837

Check all questions that apply and provide a detailed explanation of your response in the field provided.	Check if item is applicable
<p>1. How many school travel in the vicinity of the proposed project per day (total # of daily buses, total # daily of trips)? Please specify which roads are used.</p> <p>The proposed Apex South Connector would be beneficial to school bus transportation. We have a middle school and two elementary schools in close proximity the study area. For the purpose of this exercise, please assume approximately 15 school buses make morning and afternoon trips along this section of Schieffelin Road. The number of trips will likely increase substantially with the completion of the connector.</p>	<input checked="" type="checkbox"/>
<p>2. Do pedestrians or carpool traffic use roads in the vicinity of the project to access local schools? If yes, please describe the location and time(s) of day.</p> <p>Given the proximity to Apex Middle School, roads in the vicinity of the project include carpool traffic and pedestrians. There are a significant number of students that reside nearby the project.</p>	<input checked="" type="checkbox"/>
<p>3. Are there any Safe Routes to School plans in place at schools in the vicinity of the project?</p> <p>We are not aware of a written plan, but a portion of the study area is within the No Transport/ Walk Zone for Apex Middle School. (Yellow school bus transportation is not provided within the the No Transport/ Walk Zone for Apex Middle School.) We have been coordinating with the Town of Apex on pedestrian related improvements in the vicinity of Apex Middle School.</p>	<input checked="" type="checkbox"/>
<p>4. Based on your knowledge of the project area, do you have any concerns with the condition/capacity of potential detour routes or the location of resources along these routes with respect to school traffic, if any of the existing routes would need to be closed during construction?</p> <p>As it has not been determined whether there will be any significant closures associated with this project, we are unable to respond to this question at this time.</p>	<input checked="" type="checkbox"/>
<p>5. Are there any future time periods or events that you know of where construction activities along Schieffelin Road, at the intersection of NC 55 (E Williams Street)/Apex Peakway, or at the intersection of Center Street/Apex Peakway would be of particular concern?</p> <p>WCPSS has been working with the NCDOT to avoid closures at the start of the school year and when students are taking end of semester exams. Here is a link to our school calendars: http://www.wcpss.net/calendars. It would be helpful if any major disruptions occur during the summer, on weekends, or between 9:30 AM and 2:15 PM on weekdays.</p>	<input checked="" type="checkbox"/>
<p>6. Rate the overall impact on school transportation if the roadways were closed or at reduced capacity for up to a year:</p> <p>See response to #4 above.</p> <p> <input type="checkbox"/> No Impact <input type="checkbox"/> Low Impact <input checked="" type="checkbox"/> Moderate Impact <input type="checkbox"/> High Impact </p>	

<p>7. Is there anyone else you feel should be contacted regarding this project (i.e. local officials or stakeholders)?</p> <p>The NCDOT has been doing a very good job coordinating major projects with the school district and local jurisdictions. The Town of Apex is an excellent partner.</p>	<input checked="" type="checkbox"/>
<p>8. Are there any other concerns you have regarding the potential impact or benefit of this project on school transportation services or any additional comments? Please be as specific as possible.</p> <p>Given the close proximity of the project with Apex Middle School, the design should accommodate both carpool and pedestrian related trips. Special attention should be given to sidewalk connectivity. The design of intersections should promote the safe crossing for pedestrians.</p> <p>We appreciate the opportunity to provide input. The key is the pre-planning and coordination with stakeholders, including WCPSS Transportation. The earlier we have information the better we are able to plan and communicate with our schools and families.</p>	<input checked="" type="checkbox"/>

**Local Emergency Services Input Form for
APEX PEAKWAY SE CONNECTOR – FEASIBILITY STUDY
COMMUNITY IMPACT ASSESSMENT**

Contact Information

Interviewee Name: Prepared by Shannon Cox with input from: Chief John Letteney (Police), Chief Randall Heath (EMS), Assistant Chief Jeff Maynard (Fire) Date: 11/17/2017
 Title/Position: Senior Transportation Planner Phone Number: 919-249-3505
 Organization/Agency: Town of Apex Completed Via: Email Phone
 Email: Shannon.cox@apexnc.org

For all applicable questions, please provide a detailed explanation of your response in the field provided.	Check if item is applicable
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<p>1. Are there any concerns related to emergency services for this project? Please be as specific as possible (e.g. location in a high call volume area, closure could affect response to schools, weight restrictions, expected new development in the area, coordination with partner agency required to facilitate service).</p> <p><i>For fire calls, Investment Boulevard has the highest call volume in the study area. For police, there are relatively heavy call volumes in Apex Mobile Estates.</i></p> <p><i>For median-divided facilities such as this, special consideration needs to be given to access. Specific recommendations are provided under question 8.</i></p>	<input checked="" type="checkbox"/>
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<p>2. Based on your knowledge of the project area, do you have any concerns with the condition/capacity of other routes travelers are likely to use to detour around the project area during construction, or the location of resources along these routes?</p> <p><i>Emergency access to the James Street cul de sac needs to be maintained during construction – there is no alternative access route to this part of the study area.</i></p> <p><i>Ensure access from Marco Drive to the Apex Mobile Estates is open and potentially improved during construction.</i></p>	<input checked="" type="checkbox"/>
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<p>3. Are there any future time periods or events that you know of where a reduction in number of lanes for construction would be of particular concern?</p> <p><i>Investment Boulevard is very busy at certain times of day and certain days of week (primarily rush hour). This is the main access for numerous businesses. In addition, events and services at XL Sports and the churches along the corridor can create heavy traffic volumes. Evaluate the need for a traffic signal at Investment Blvd and Apex Peakway as part of this project. If possible, the signal could just be activated at peak periods.</i></p>	<input checked="" type="checkbox"/>
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<p>4. Rate the overall impact of the completed project on emergency services overall:</p> <p><input type="checkbox"/> No Impact <input type="checkbox"/> Negative Impact <input checked="" type="checkbox"/> Positive Impact</p> <p><i>This project is long overdue and will have a significantly positive impact on emergency services. It will improve access and response times to the study area and is anticipated to relieve some of the congestion on other roads. In the study area James Street, in particular, experiences heavy congestion.</i></p>	
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<p>5. Rate the overall impact on emergency services if the roadways were at reduced capacity for up to a year:</p> <p><input type="checkbox"/> No Impact <input checked="" type="checkbox"/> Low Impact <input type="checkbox"/> Moderate Impact <input type="checkbox"/> High Impact</p> <p><i>Other than the area served by the James Street cul de sac, there are alternative access routes to all properties in the study area. It is anticipated construction would have a low impact on emergency services.</i></p>	
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<p>6. Are road names referenced by the names locals would use? Yes</p>	<input checked="" type="checkbox"/>
<p>7. Is there anyone else you feel should be contacted regarding this project (i.e. local officials or stakeholders)? <i>The most important stakeholders to involve are those that would be impacted directly by the project along the project corridor and alternative access routes.</i></p>	<input checked="" type="checkbox"/>
<p>8. Do you have any other concerns regarding the potential impact of this project on emergency services, or any additional comments? Please be as specific as possible.</p> <ul style="list-style-type: none"> • <i>The right-in/right-out at Olive Street is a positive change.</i> • <i>Maintaining pedestrian access for the Apex Mobile Estates as shown is also important - many of these residents travel by foot.</i> • <i>Consider another U-turn bulb out at the north side of Apex Peakway and Investment Blvd. The businesses on the east side of the Apex Peakway generate heavy truck traffic and would benefit from a u-turn in this location.</i> • <i>Consider how to provide emergency access for fire trucks in front of the church along Apex Peakway. One idea is to provide a break in the median for emergency access only. However, this raises concerns that others will use the access illegally. Perhaps flexible bollards could be placed to prevent illegal use. Another option is to look at potential access for Ambassador Presbyterian Church onto Center Street.</i> • <i>Consider a roundabout at Energy Drive and James Street to slow traffic as it approaches the intersection of James Street and Apex Peakway.</i> 	<input checked="" type="checkbox"/>



Appendix B: Public Comment Summary and Responses

**Apex Peakway SE Connector
Apex, Wake County, NC**

**Public Meeting (November 2, 2017)
Comment Summary and Responses**

December 8, 2017

A public meeting was held on November 2, 2017 at the Apex Town Hall in Apex, NC. Approximately 27 members of the public attended the public meeting. Paper comment forms and online survey kiosks were available at the public meeting. The online survey remained open through November 23. A total of 82 survey respondents answered at least one question of the online survey, and one person submitted the paper survey. Responses to comments and concerns presented by the public are shown below the corresponding public input in *italics*.

The survey posed four multiple choice questions regarding the project and how the public received the proposed design. Only one response per question was permitted. Each of the response options, and corresponding percentage of responses received, are shown in *Figures 1-4* below. Areas for additional comments were also available for each question. Following the project specific questions, four demographic questions were included in the survey. These questions were also multiple choice allowing only one response, except for the question asking the respondents which race/ethnicity they identified with.

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Question 1: How would the project affect you?

The majority (70%) of survey respondents indicated that the project would affect them in either a somewhat positive or very positive manner (Figure 1). 13% of the respondents indicated that they would be somewhat or very negatively affected by the project.

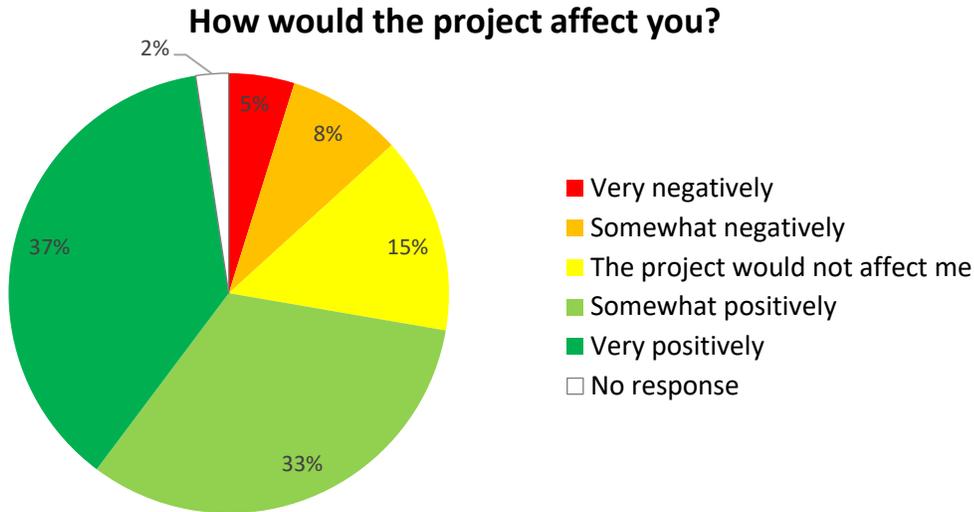


Figure 1: Distribution of responses to Question 1

14 comments, summarized below, were provided in response to this question.

Comments in Support of Project

- Bike and pedestrian accommodations are included (x4)
- This new road will provide better access to nearby locations (x3)
- The project will improve access, traffic flow, and/or congestion (x3)
- The Peakway Connector would help to address the issue that Tunstall is currently used as a cut through between N.C. 55 and Center Street
- Project will complete the Peakway Loop – a longtime goal of Council

Comments Presenting Concerns about the Project

- Concerned about how long the project will take
 - *Response: Funding for the construction of this project has not yet been identified. At this point in the process, the timeline for construction is unknown; more details will be developed once funding has been identified and the detailed design process begins.*
- Concerned there may be impacts
 - *Response: Impacts to the community, environment, and property will be minimized where feasible. The current conceptual design is anticipated to result in several relocations, and addition of a median will change access to adjacent properties.*
- SW Apex Peakway Connector should continue to take priority
 - *Response: The SW Apex Peakway Connector project is of higher priority to the Town of Apex. The SW Connector is funded, and is currently in final design with estimated completion in 2020-21.*

- Benefits will only be received by non-Apex residents
 - *Response: The goal of the SE Apex Parkway Connector project is to complete the Apex Parkway which will increase mobility around the Town of Apex. The new connection between N.C. 55 (East Williams Street) and Center Street will provide improved connectivity for local and commuter traffic, and is anticipated to benefit residents and non-residents of Apex.*

Question 2: What priority would you assign to this project in thinking about all of the transportation needs in Apex?

More than half (53%) of the respondents (*Figure 2*) responded that the Apex SE connector project should receive a high priority in terms of transportation needs in Apex. The low priority option was only chosen by 7% of the respondents.

What priority would you assign to this project in thinking about all of the transportation needs in Apex?

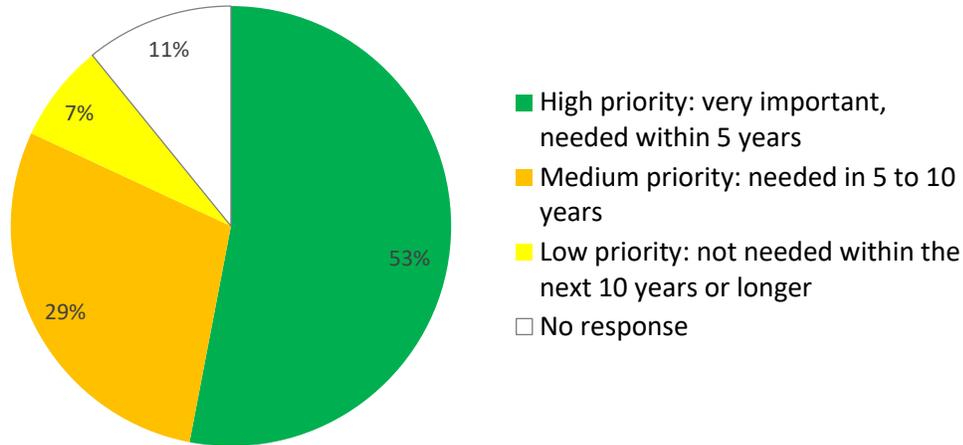


Figure 2: Distribution of responses to Question 2

6 comments, summarized below, were provided in response to this question.

Comments Supporting a High Priority

- Completion of the Peakway is past due
- This helps promote infill development instead of sprawl

Comments Supporting a Low Priority

- The SW Apex Peakway Connector should continue to be a higher priority (x3)
 - SW Apex Peakway Connector will improve access to South Salem area
 - SW Apex Peakway Connector will improve congestion on South Salem Street and N.C. 55
 - *Response: The completion of the Apex Peakway is listed as a high priority in the Apex Comprehensive Transportation Plan. Sections of the Peakway are being built as funding becomes available. The SW Apex Peakway Connector project is of higher priority to the Town of Apex. The SW Connector is funded, and is currently in final design with estimated completion in 2019.*
- Other higher priority projects identified by public survey respondents
 - Jessie Drive
 - *Response: The Town of Apex has recently publicized a Request for Qualifications (RFQ) for an engineering consultant to perform transportation planning and engineering services from the feasibility study phase through final design, permitting, right-of-way acquisition and utilities relocation phase for the*

improvement and extension of Jessie Drive from Ten-Ten Road to N.C. 55 (East Williams Street) in Apex.

- Highway 55 widening
 - *Response: NCDOT Project U-2901 is currently in design and will include further public involvement throughout the process. The project is currently scheduled for construction beginning in 2022.*
- Richardson Road
 - *Response: The Richardson Road Extension is listed in the 2011 Town of Apex Transportation Plan. Town staff anticipate a budget item for a 3-phase study and design of Richardson Road from Humie Olive Road to Old US 1 in the upcoming budget year, though this has not been finalized. The design is a priority for the Town because of a pending development project (Friendship Station) and associated permitting issues that need to be resolved before the Richardson Road Extension can be built.*
- Avoid increasing ease of traversing *through* Apex. Investment will only benefit non-residents
 - *Response: In addition to improving mobility through Apex, this project will also improve mobility within Apex, providing a shorter route and improved access within the Town.*

Question 3: What do you think about the proposed design?

A total of 65% of the respondents indicated that they felt “very good” about the proposed design, while an additional 8% thought some work needed to be done (Figure 3). 4% of the respondents thought the proposed design was “not good.”

What do you think about the proposed design?

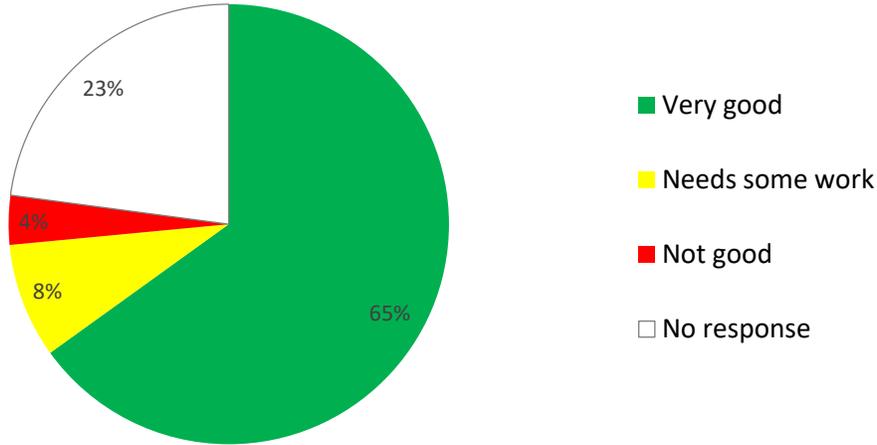


Figure 3: Distribution of responses to Question 3

14 comments, summarized below, were provided in response to this question.

Comments in Support of Proposed Design

- This will increase tourism and traffic flow throughout the Peakway
- This will help with the light at James Street and N.C. 55
- Nice transitions and integration of existing roads
- Many modes included in plan
- Would like to see the design applied to existing sections of the Peakway
- Through traffic on neighborhood streets like James and Olive will be reduced

Comments Presenting Concerns/Design Suggestions

- Why are so many lanes needed, while existing sections of the Apex Peakway are only two lanes?
Would rather include less lanes to reduce impacts to residences and commercial properties (x2)
 - Response: Current traffic projections and analysis for the short and long term recommend a 4-lane roadway section be designed for this project. The Apex Peakway long-range plan envisioned a variety of typical sections along the loop based on unique characteristics of each section. However, some sections were built with two lanes with the ultimate plan to widen them to four lanes. As traffic demands change and as funding becomes available, the Town of Apex will consider widening other existing sections of the Apex Peakway.
- Pedestrian and bicycle crossing will be more difficult with a four-lane road
 - Response: The current feasibility design doesn't include crosswalks which will be added during the final design. With the current analysis, the intersections of the Apex Peakway at

N.C. 55 and at Center Street are anticipated to warrant traffic signals, where pedestrian signals may be included.

- Minimize cutting down trees
 - *Response: Environmental impacts will be minimized where feasible.*
- Bury the utilities
 - *Response: Burying utilities is an enhancement that the Town could consider during final design. However, the cost of burying utilities is often prohibitively high.*
- Don't have Seagram and Gilby connect to the Peakway – disconnect Seagram
 - *Response: Seagram Street and Gilby Road are proposed to connect with the Peakway as right-in/right-out intersections. This provides access to the neighborhood southeast of the new road. During the next phase of design, additional public outreach and design will investigate options to potentially consolidate access points to the neighborhood, if requested.*
- What constraints were considered when causing the alignment to impact the Larry Taylor Homes property rather than the 55 James at Midtown neighborhood?
 - *Response: The current alignment was selected to provide access to both neighborhoods, create proper geometry at intersections, and minimize where possible, environmental and property impacts. An alignment shifted further toward the 55 James at Midtown neighborhood would result in a more skewed intersection at N.C. 55 and a substandard curve where the new alignment ties into existing Schieffelin Road. The Peakway design already skews northward to cut through a portion of right of way previously dedicated by 55 James at Midtown. Development to the south did not account for the future Peakway.*
- Include short median left-turn lane near Investment Boulevard to allow access to businesses
 - *Response: A median divided typical section was chosen for the SE Apex Peakway Connector project to promote mobility and safety along the corridor. Median (two-way) left turn lanes have been found to present safety issues and are no longer being promoted by the NCDOT on multi-lane roadways such as the proposed SE Apex Peakway Connector. Investment Boulevard will be designed to allow U-turns.*
- Ugly design will negatively affect my subdivision and bring more cut thru traffic
 - *Response: It is anticipated that this project will reduce traffic on local roads that are currently being used as the primary route from N.C. 55 and Center Street. On James Street, for example, traffic is anticipated to be reduced by approximately 50%. The landscaped median and pedestrian facilities will improve the appearance and functionality of the roadway.*
- Expensive to buy ROW along Schieffelin Road and mobile home park
 - *Response: This project will include costs for right-of-way, utility relocation, and construction. These estimates will be part of the funding requested when the Town pursues state or federal funds.*
- Safety study should be conducted on James Street due to potential increase in traffic
 - *Response: The proposed project is anticipated to reduce traffic on James Street, since drivers will have the option to access Schieffelin Road/Apex Peakway via the new connector instead of via James Street. The July 2017 traffic forecast projects that traffic on James Street will be reduced by approximately 50%.*

Other Comments

One respondent provided a comment about another transportation project in Apex, the Apex Peakway SW connector. The comment suggested having the proposed road go across the railroad track instead of over a bridge.

Question 4: Are you generally in favor of the project, understanding there may be changes following the open house?

63% of the survey respondents were in favor of the project, with an additional 7% responding “maybe, pending further changes and more information” (Figure 4). 7% identified that they were not in favor of the project.

Are you generally in favor of the project, understanding there may be changes following the open house?

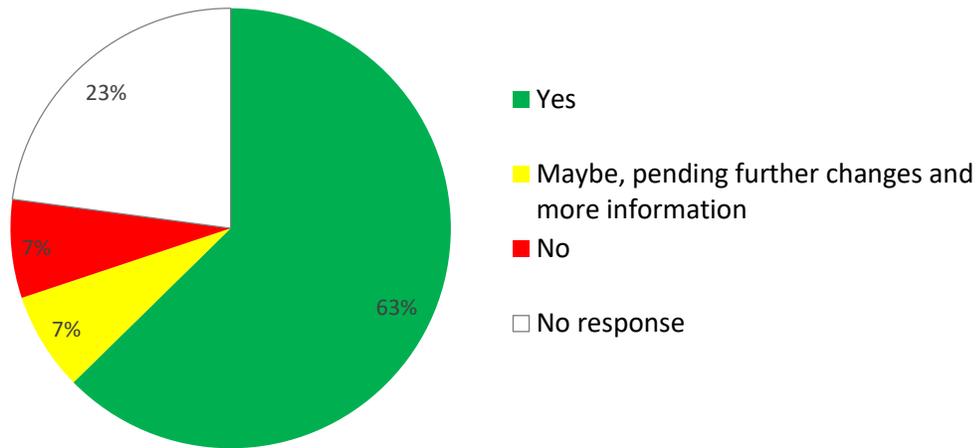


Figure 4: Distribution of responses to Question 4

One comment was received for question 4.

- You have to accommodate growth. Not doing so is not an option.
 - Response: The traffic analysis performed for this project took into account current, short term, and long term (year 2040) traffic demands for the roadway and surrounding facilities based on the planned and projected growth of the Town of Apex. The roadway will help to accommodate growth in traffic around the southeast side of downtown Apex.

Comments Provided on Public Meeting Maps Displayed

During the public meeting, members of the public made several suggestions on the proposed design maps. The following comments were received on the maps:

- On Briarcliff Street, carry the concrete sidewalk from the 55 James at Midtown neighborhood all the way to the Apex Peakway, rather than transitioning it to an asphalt path within the neighborhood.
 - *Response: This suggestion will be taken in to consideration during the next design phase.*
- Use best management practices (BMPs) for stormwater in 55 James at Midtown neighborhood.
 - *Response: Hydraulic design for this project will be done during the final design phase.*
- Lengthen the left-turn lane on the existing Apex Peakway at the Center Street intersection.
 - *Response: This suggestion will be taken into consideration during the next design phase.*

Demographic Data

Four questions were included in the survey to capture demographic data reflective of the survey respondents.

- More than half (58%) of survey respondents (*Figure 6*) identified themselves as not living in the study area (*Figure 5*).



Figure 5: Apex Peakway SE Connector Project Study Area

Do you live or work within the study area shown in the image?

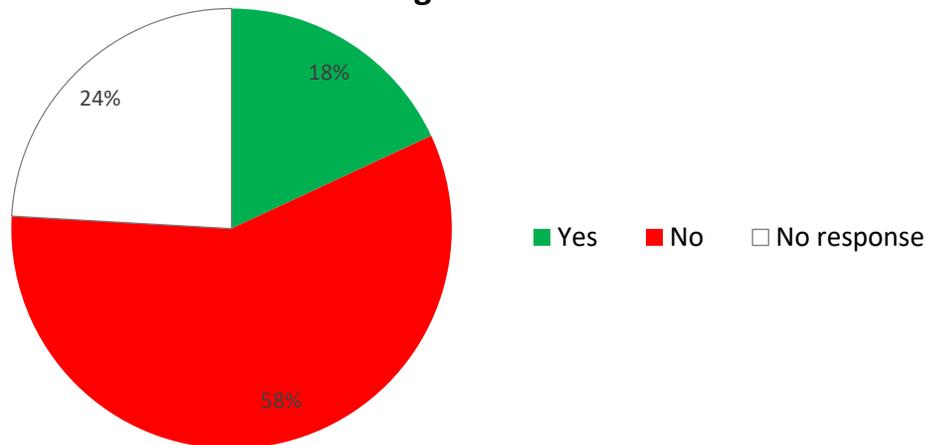


Figure 6: Distribution of survey respondents that live within study area

- 65% of the respondents identified as white/Caucasian for their race or ethnicity (*Figure 7*). No survey respondents identified as Black/African-American, Hispanic or Latino, Asian American, American Indian or Alaskan Native, or Native Hawaiian or other Pacific Islander.

What is your race or ethnicity?

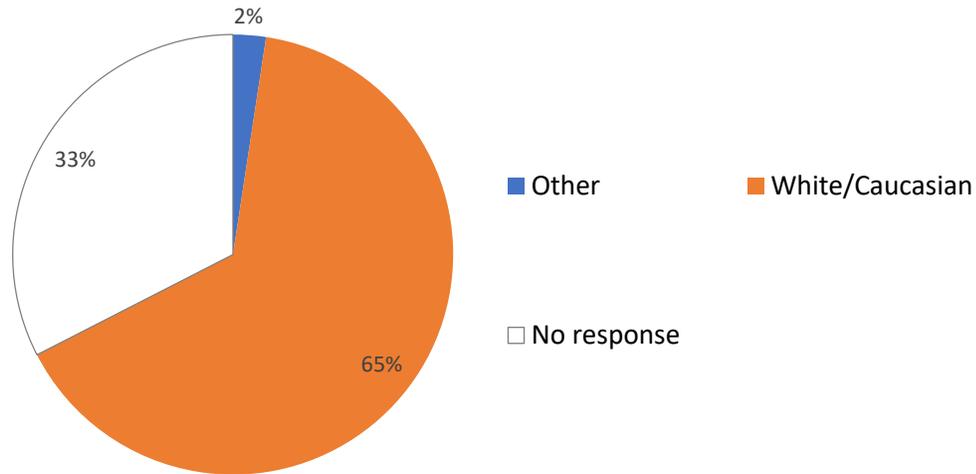


Figure 7: Distribution of race or ethnicity identified by respondents

- 57% of the respondents reported earning more than \$60,000 as an annual household income (*Figure 8*). No survey respondents identified earning an annual household income between \$20,000 and \$40,000.

What is your annual household income?

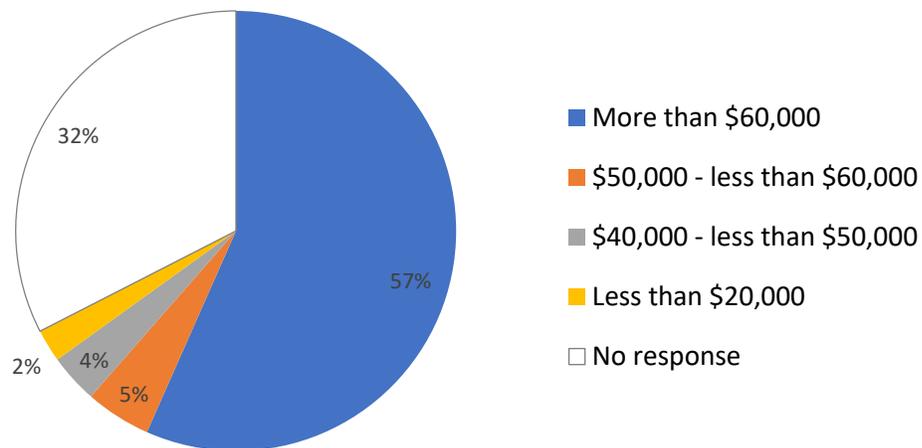


Figure 8: Distribution of annual household income for survey respondents

- The average household size reported was 3, with the largest proportion of households (30%) reporting 4 people living in the household (Figure 8). No respondents identified having 7, 8, or more than 8 people living in the household.

How many people live in your household?

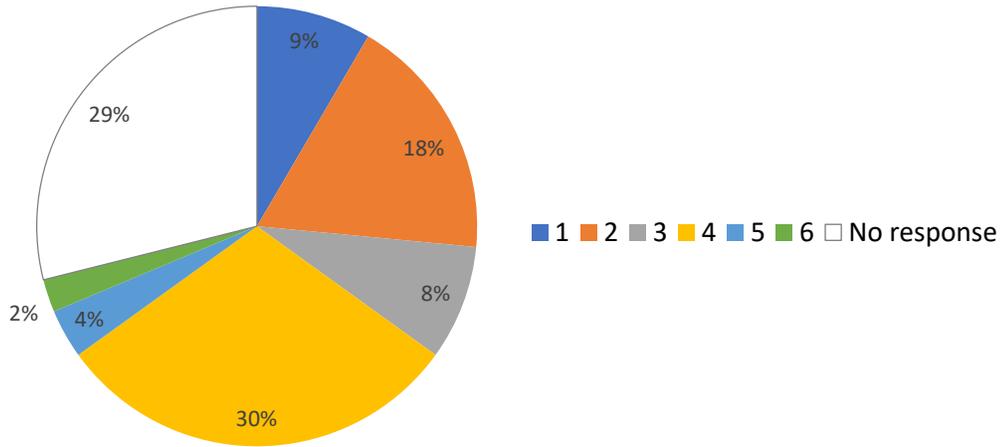


Figure 9: Distribution of household size reported by survey respondents