



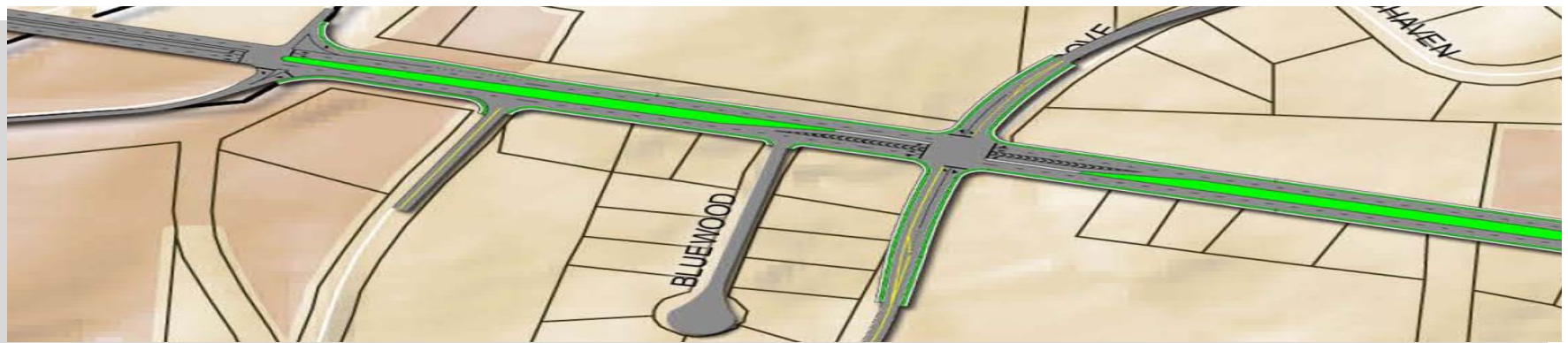
## PROJECT BACKGROUND

The City of Archdale in cooperation with the High Point Urban Area Metropolitan Planning Organization (HPMPO) and the North Carolina Department of Transportation (NCDOT) commissioned the creation of a corridor study for the Hwy 62 corridor. The project limits included the section of road from Fairfield Road east to the US Hwy 311 Bypass. The primary emphasis of the study was to develop an interim and long-term transportation strategy that responds to changing conditions along the corridor. The study considered safety, traffic operations, access management, land use, environment and multi-modal accommodations. The study included a robust public outreach process including Steering Committee meetings, stakeholder interviews, design charrette, workshop, and council presentation. The outcome of the planning process was a series of deliverables including:

Preferred Access Strategy: This exhibit communicates an agreed upon access configuration for the corridor including the location of future traffic signals, right-in-right-out, and directional cross-overs.

Connector Street Plan: This deliverable conveys the recommended side street connectivity that supports the preferred access strategy and reduces motorist reliance on key intersection movements through the creation of alternative routes. Most of these streets will be implemented incrementally as development occurs.

Concept Design: A typical cross-section and concept design were prepared for the preferred alternative. The design includes sufficient design to reinforce the preferred access strategy, preliminary laneage and intersection capacity, pedestrian and bicycle accommodations, opportunities for lighting and landscaping.



*Perspective from the Hwy 62 Corridor Study*



## WEANT ROAD AT NC 62: DEFINING THE PROBLEM

The corridor study process confirmed a heavy northbound left-turn movement during the morning peak period (7:00am-9:00am). This movement is related to commuter and school generated traffic. There were also numerous groups and individuals that expressed the desire for a traffic signal to be installed at this location. However, the close proximity of this intersection to the I-85 interchange ramps (approx 400 feet) is in direct conflict with accepted spacing standards (1,000'-1,500'). Signalization at this location would result in inefficient traffic progression resulting from inadequate spacing. There is also a documented concern related to the queuing of vehicles and their potential to block or interfere with intersection operations and safety. For this reason, signalization at the existing Weant Road intersection has not been endorsed by local agencies and is not recommended in the Hwy 62 Corridor Study.



Further complicating this intersection is the high volume of traffic projected to pass through the intersection. 2035 traffic projections anticipate 27,600 vehicles per day on NC 62 in the vicinity of Weant Road. In response to the geometric conditions and projected volumes a series of alternatives were evaluated. The preferred recommendation included the realignment of existing Weant Road to a point opposite existing Modlin Grove Road. The resulting four-way intersection increases the distance from the interchange ramps

an amount acceptable for future signalization. Other alignment options were considered including the realignment of Weant Road utilizing Bluewood Court. While this option moved the intersection away from the I-85 interchange it created an offset configuration with Modlin Grove Road that further complicated traffic operations and safety. Furthermore, it did not move the intersection an acceptable distance from the I-85 interchange ramps.

The corridor study recommended further analysis to confirm the feasibility of realigning the Weant Road intersection. After completion of the corridor study the City of Archdale in conjunction with the HPMPPO commissioned the Weant Road Feasibility Study.

## WORKBOOK

This workbook serves as a summary of the Weant Road Feasibility Study and includes information regarding the study process, transportation design, environment, and implementation. The components of the workbook are described in the following subsections.

### Project Process

The workbook offers a brief overview of the planning process used to identify issues, create alternatives, develop evaluation criteria, and ultimately formulate recommendations.



## Concept Development

The workbook provides a summary of alternatives generated during the study. The expressed intent was to evaluate a set of options. Each option included a common characteristic, the realignment of Weant Road directly opposite Modlin Grove Road.

## Concept Evaluation

A systematic evaluation of traffic operations and safety was developed to assess the current conditions within the study area as well as the projected horizon year (2035) conditions. This analysis of capacity and safety deficiencies became the cornerstone in the evaluation of the preferred alignment.

## Preferred Alternative

The roadway realignment concepts were all intended to improve safety, address projected capacity deficiencies, and minimize environmental (human and natural) impacts. The preferred alternative therefore represents the option that best responds to these criteria. In effect, it was the responsibility of project participants to identify an alternative that responds to the defined project needs, was consistent with the established design parameters, and complemented the corridor context.

## Action Plan

The project process was developed with implementation in mind. The Action Plan is intended to provide guidance on next steps, potential funding, and a strategy for implementation.

## Appendix

The Appendix provides documentation of the traffic and air quality analysis, concepts, resource mapping, and functional design plans as well as the data utilized in their development.



*A view to the east  
along Hwy 62*



## PROJECT PROCESS

Weant Road is a two-lane regionally significant corridor that serves the growing suburban residential population in Archdale providing connections to US 311 Bus (Main Street), US Hwy 311 / Future I-74 and I-85. With land development trends and traffic growth anticipated to increase over time, local officials will face growing pressure to address operational and safety concerns at the intersection of NC 62 and Weant Road.

The Weant Road Feasibility Study allowed the City of Archdale, HPMPO, and NCDOT to pick up where the corridor study concluded. The feasibility study allowed the Project Steering Committee the opportunity to consider alignment choices, design concepts, and solutions that balance the competing interests of environmental impacts, traffic safety, and future development.

## PROJECT STEERING COMMITTEE

The Project Steering Committee was formed at the beginning of the project to provide technical oversight for the formulation of recommendations and strategies. The steering committee was comprised of members of the City of Archdale, High Point MPO, and the North Carolina Department of Transportation. The steering committee met frequently during the project to provide localized guidance, brainstorm concepts, review alternatives, and formulate implementation strategies.

## ALIGNMENT ALTERNATIVES

Several alternatives for consideration and evaluation were developed and reviewed in conjunction with the project steering committee. The development of the alternatives was focused on the primary objective of creating a new location for northbound Weant Road traffic to make a left-turn onto NC 62 in a manner suitable for future traffic signalization. Intersection level traffic analysis and crash analysis was performed to aid in the evaluation of alternatives. Air quality analysis was also included in the evaluation.

Concept design plans, showing the horizontal geometry were developed for each of the three alternatives. The intent of the concept designs was to determine if the alignments developed could meet design criteria established by NCDOT.

## ENVIRONMENTAL REVIEW

As a part of this feasibility study a preliminary environmental review was prepared for the study area. The environmental review represents a reasonable attempt to identify potential sources of contamination, significant natural features, and areas where avoidance should be exercised. Both natural and human features were considered. Avoiding the built environment included minimizing impacts to existing structures and limiting the amount of right-of-way required for construction.



## FUNCTIONAL DESIGN

Upon the selection of a preferred alternative, functional design plans were prepared utilizing available topographical and aerial data. While this information is less detailed than survey data, it represents an affordable means to establish a relative understanding of the potential impacts to environmental features, the built environment, and probable construction cost.

Functional design plans were developed based on best practices including current NCDOT and AASHTO (American Association of State Highway Transportation Officials) roadway design guidelines. Horizontal and vertical functional design plans were prepared to determine potential impacts and constructability.

## CONCEPT OVERVIEW

The existing intersection between Weant Road and NC 62 is functionally too close to the I-85 interchange ramps (a distance of 370 feet), to accommodate the current and future traffic demands under its current design configuration and stop control.

The NC 62 corridor study provided a recommendation for the realignment of Weant Road to occur opposite the existing intersection of NC 62 and Modlin Grove Road. This location was preferred over others because of its distance east of the signalized interchange ramps as well as its connectivity to other streets. At 1,100 feet east of the I-85 ramps, this location provides optimum

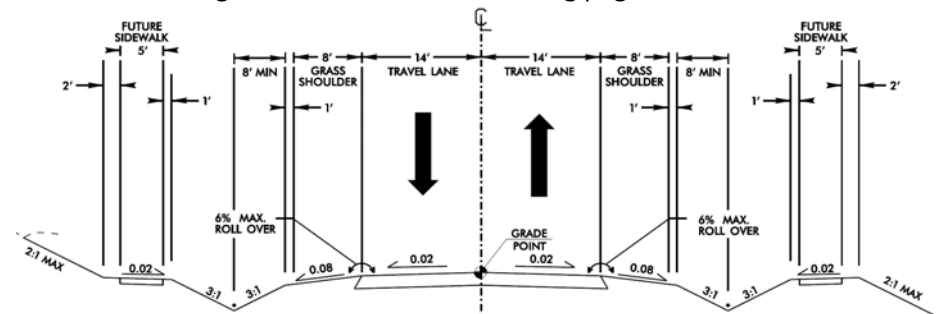
signal spacing as well as the ability to minimize the interruption of traffic progression along NC 62.

While the new terminus of Weant Road was identified in the NC 62 corridor study, the alignment of the realignment required additional study. For this reason, the feasibility study explored three alternative alignments.

## ALIGNMENT ALTERNATIVES

The study area includes a residential neighborhood located along Bluewood Court with the remainder of the area generally undeveloped with agricultural and forest land. Three alternatives were developed, each with varying design features and alignments, but all achieving the desired terminus location with NC 62 at Modlin Grove Road.

All three of the alternatives utilize a standard typical section consisting of a two-lane shoulder section. Each alternative also considered future sidewalk placement. Each of the alternatives is discussed in greater detail on the following pages.

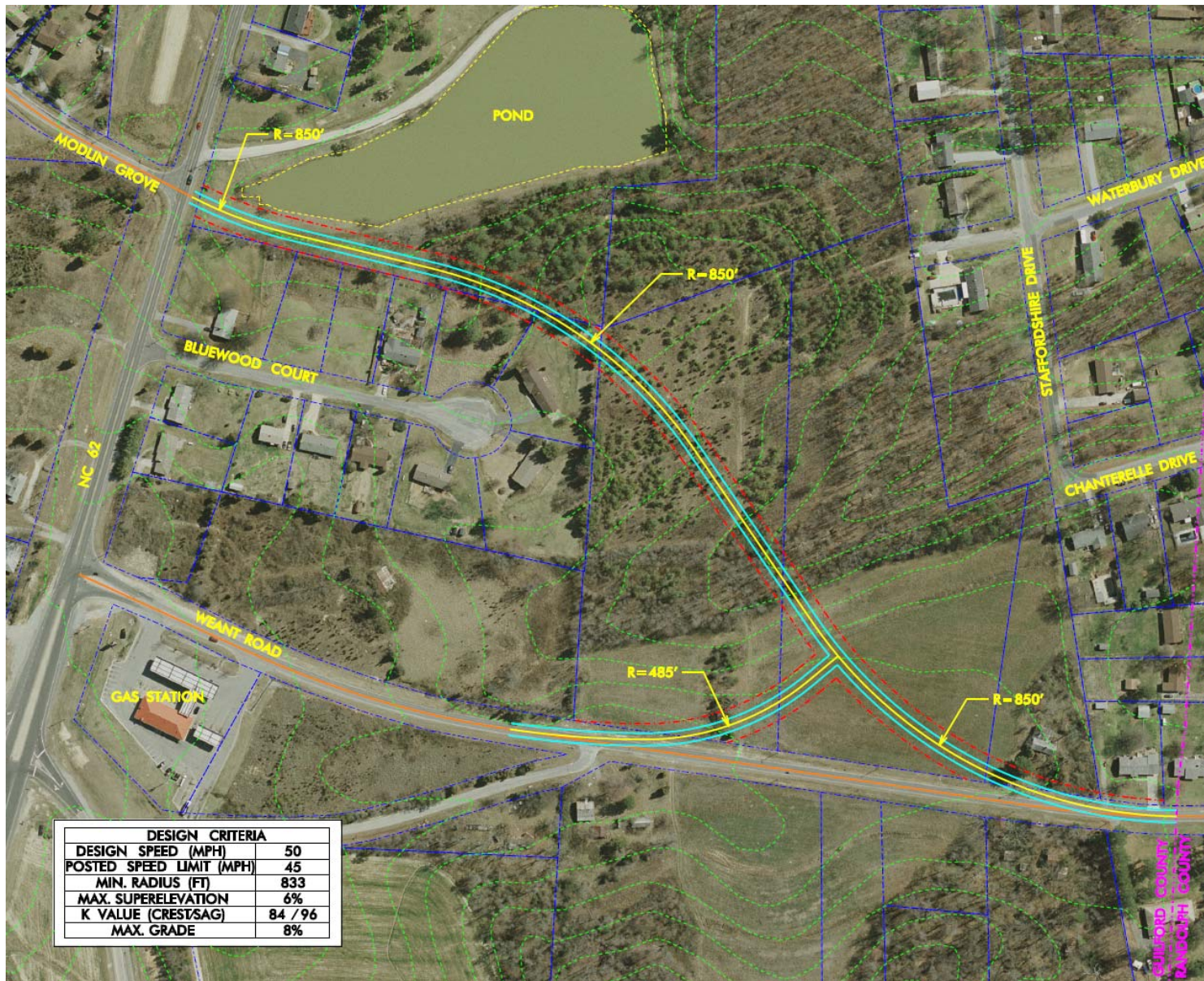


Typical section of the Weant Road realignment





# Weant Road Feasibility Study



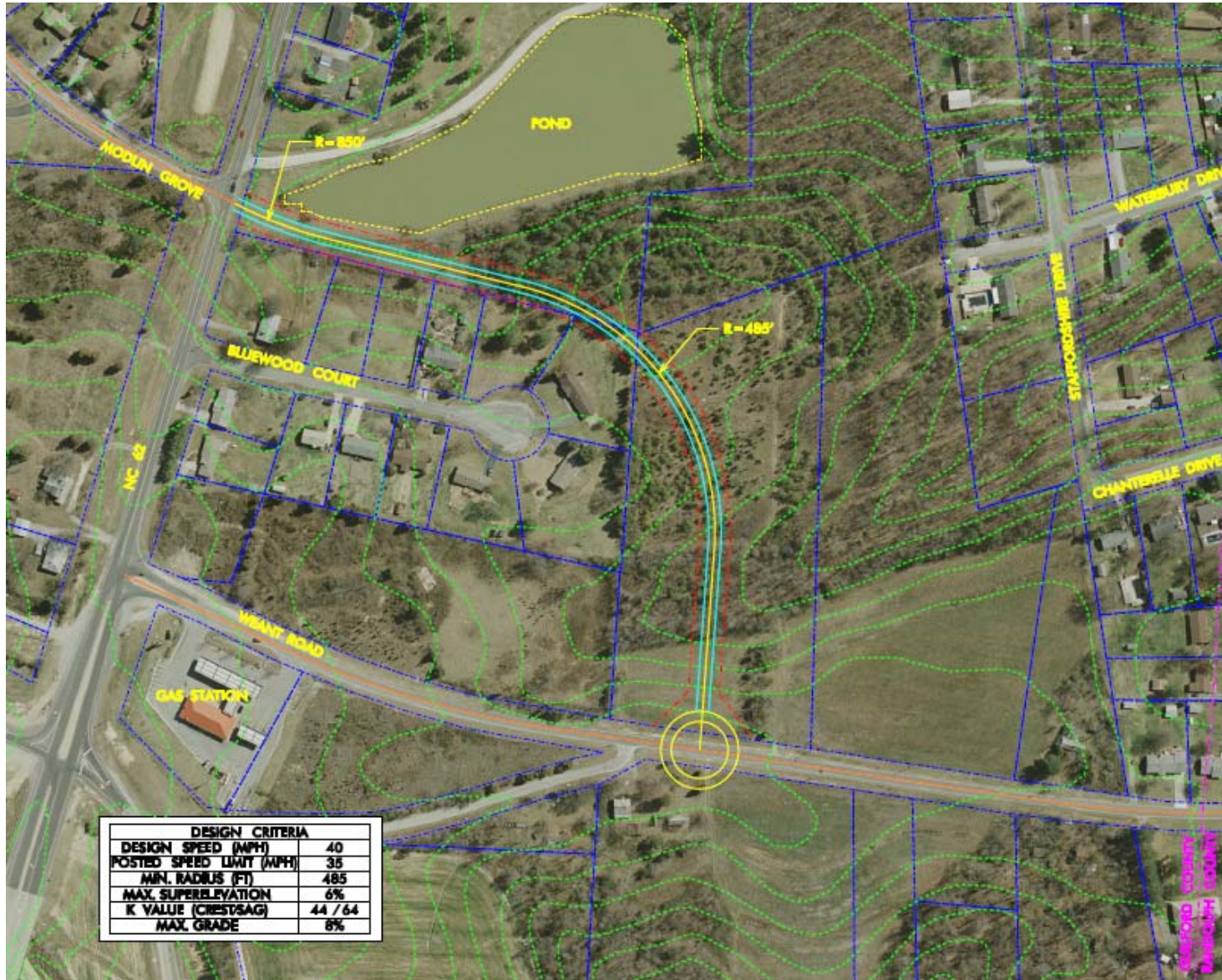
Alternative 1:  
Concept Design







# Weant Road Feasibility Study



Alternative 2:  
Concept Design



# Weant Road Feasibility Study

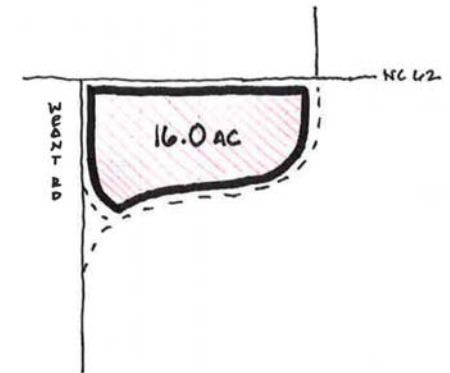
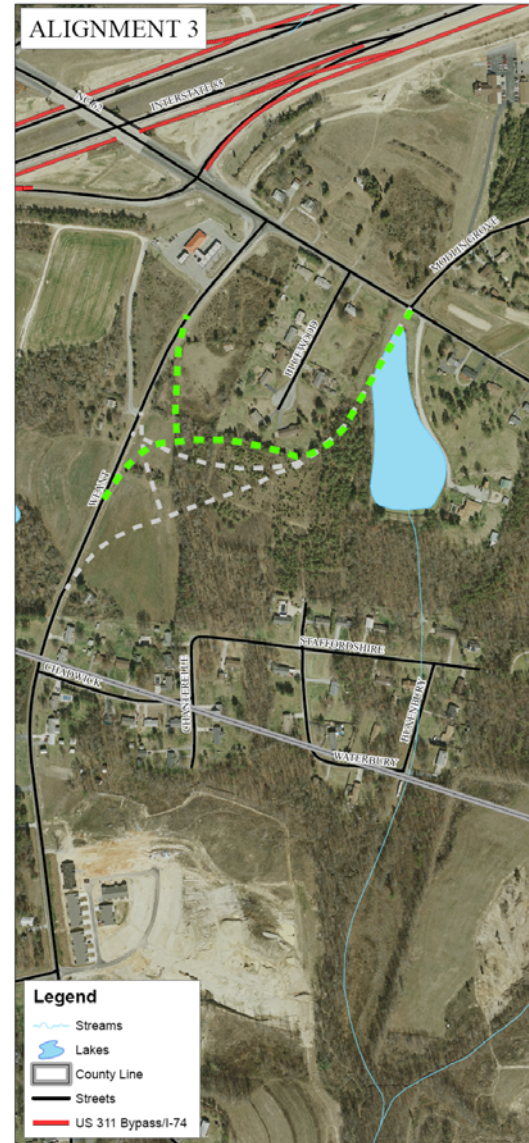
## ALTERNATIVE 3

Alternative 3 (ALT 3) maintains the terminus point with NC 62 and parallels Woods Lake adjacent to the residential homes (like ALTs 1 and 2). ALT 3 takes the form of ALT 1 but utilizes tighter radii and smaller tangent (straight) sections to compress the layout. The compression of the layout avoids any encroachment into Randolph County as well as minimizes the number of impacted land parcels.

To achieve the compressed configuration, ALT 3 utilizes a 40 mph design speed. The reduced design speed allows the utilization of tighter radii. This creates the need for a change in the posted speed limit along Weant Road from 45 mph to 35 mph.

Like ALT 1, ALT 3 realigns Weant Road onto a new location which requires a realignment of the northern section of existing Weant Road. Under this configuration, drivers along Weant Road have a seamless transition to utilize the new intersection with NC 62 unlike ALT 2.

.....  
*Alternative 3 Alignment*



**Design Speed:** 40 mph

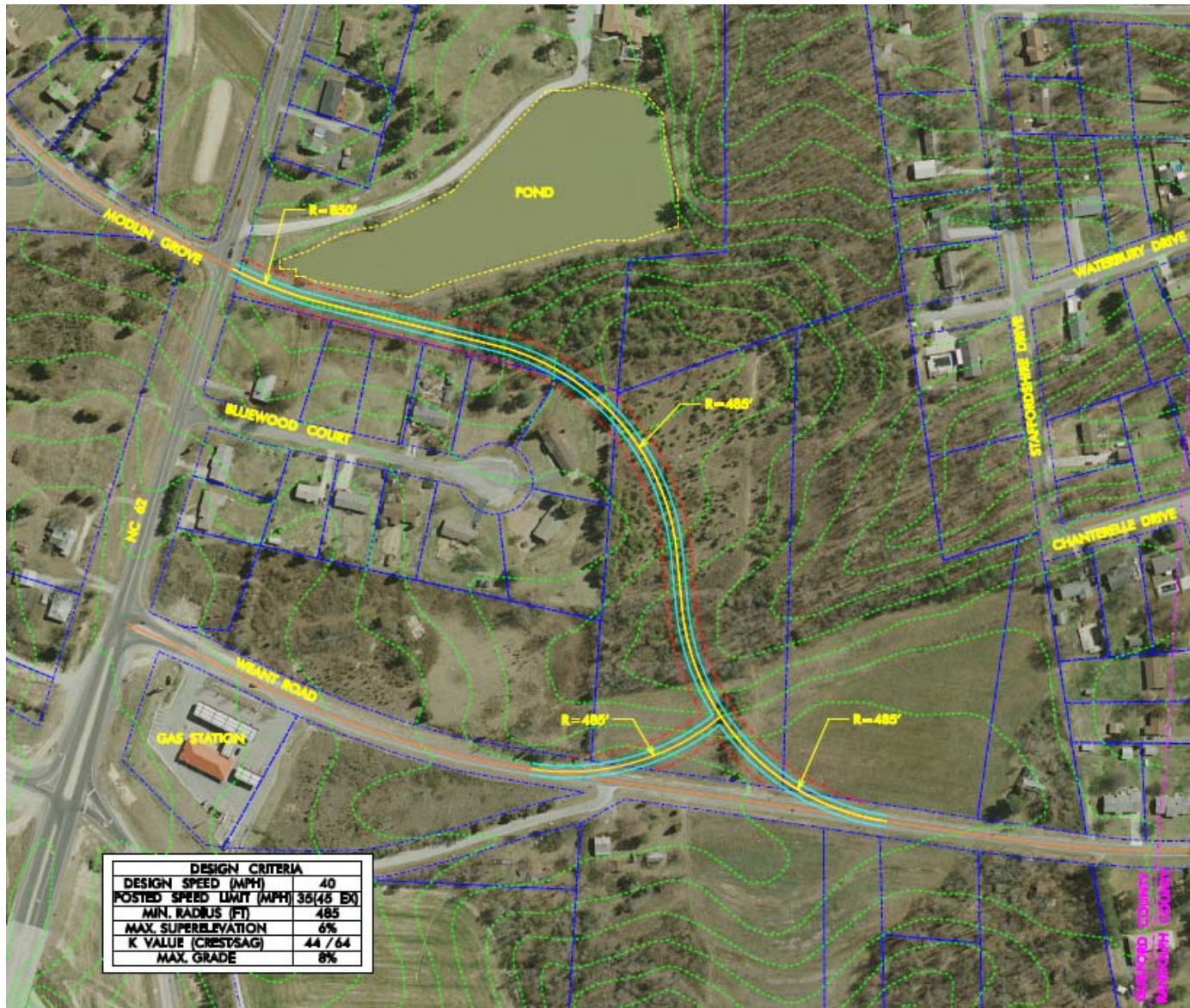
**Length:** 1,900 feet

**Right-of-Way:** 2.6 acres

- Fewer property impacts
- Seamless connection to new intersection with NC 62
- Provides indirect access to undeveloped property west of existing Weant Road
- Creates 16.0 acre parcel



# Weant Road Feasibility Study



Alternative 3:  
Concept Design



## ENVIRONMENTAL REVIEW

The general study area associated with the project includes the area bounded by existing Weant Road to the west, the Guilford/Randolph County line to the south, NC 62 to the north and along Woods Lake to the east. The study area includes some residential uses including the neighborhood located south of NC 62 along Bluefield Court. The remainder of the study area is undeveloped forest and agricultural lands.

A field reconnaissance visit was performed for the study area in September of 2010. No environmental concerns such as stained soils, evidence of spills or releases, or stressed vegetation were observed during the field visit. Environmental features such as the 3.8 acre wood lake to the east, a potential stream located within the middle of the study area, and a potential wetland along eastern edge of existing Weant Road were observed. One home located at the southern boundary of the study area may be eligible for inclusion in the national registry of historic homes. It should be noted that the home is in disrepair.

A review of historical topographical and aerial photography for the study area was performed. The review indicated that portions of the study area had been cultivated or forested prior to 1951.

Two pole mounted transformers are located within the study area. One is centrally located on Bluewood Court with the other being located on Woods Lake Farm Road in the eastern portion of the

study area. No staining, leaking or corrosion was observed in conjunction with the transformers.





# Weant Road Feasibility Study

As discussed earlier, the 3.8 acre Woods Lake and a potential stream were identified during the field investigation. Both water features fall under the Randleman Watershed regulations. The regulations place protective buffers along and around these water features: Zone 1 (30 feet) and Zone 2 (20 feet). The Zone 1 buffer begins at the normal pool elevation and Zone 2 begins at the terminus of Zone 1.

Current regulations allow for disturbance within these zones; however, mitigation of the impacts may be required. Potential permits include the following:

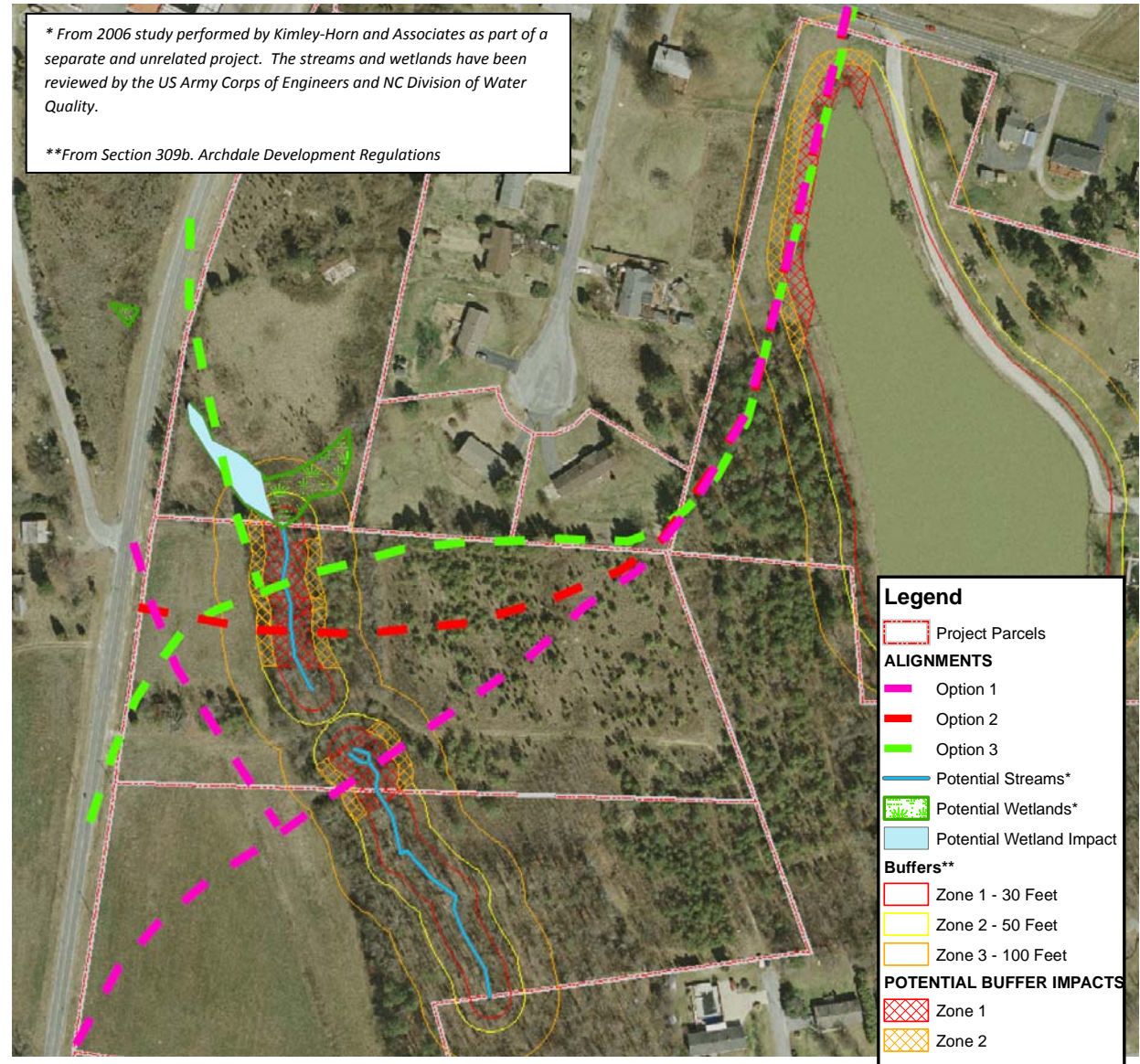
### Stream, Wetland and/or Open Water

- Section 401 – NC Division of Water Quality
- Section 401 – US Army Corp of Engineers

### Buffer Impacts

- Watershed Protection permit – City of Archdale

The image to the right highlights features from the field investigation, the Zone 1 and Zone 2 buffer requirements and the Archdale buffer requirements (Zone 1, Zone 2, and Zone 3).





There are three different types of impacts, each with a different measure of mitigation. Stream, riparian wetlands, and buffer (Zone 1, Zone 2). Stream impacts are calculated on a linear foot basis. Mitigation is set at \$338/linear foot of disturbed stream impact. Riparian wetlands are calculated on a per acre impact basis at \$44,883 per acre. Randleman Lake buffer impacts (Zone 1 and Zone 2) are based on a per square foot basis of impact. Mitigation per square foot of impact is \$0.96.

None of the three alternatives impact known wetlands; however, the preferred alternative does cross an ephemeral (transient) stream. The stream is a result of the drainage basin created from existing Weant Road and the Bluewood Court neighborhood. There is an existing crossing of the stream currently in place. It should be noted that the stream does appear to be ephemeral in that water is not consistently flowing and is typically present only after periods of precipitation. Field observations in September did not reveal any flowing water present. Observations in early January revealed flowing water in the stream bed. The observations occurred after a precipitation event.

Each of the alternative alignments passes adjacent to Woods Lake with parts of the roadway inside Zone 1 and Zone 2 buffers. Impact, as defined by NCDENR, includes any part of the roadway including right-of-way. Preliminary calculations indicate that approximately 26,000 square foot of roadway will be within Zone 1 and Zone 2.

Further understanding of the potential buffer and stream impacts along with the required mitigation will be determined during the development of the construction plans.



*Water flow in the ephemeral stream  
(January 2011)*



## TRAFFIC AND SAFETY ANALYSIS

Long term traffic growth and traffic safety are two of the most pressing issues within the study area. Over time, increased traffic associated with growth of the Archdale community coupled with inadequate roadway infrastructure has the potential to result in traffic congestion and the erosion of traffic safety.

The NC 62 Corridor Study identifies the intersection of NC 62 and Weant Road as the second highest crash location within the corridor with seven crashes reported over a 36-month period (between 2007-2010). The predominant crash type was determined to be rear-end, slow or stopped. For the same time period the intersection of Modlin Grove Road and NC 62 reported no crashes.

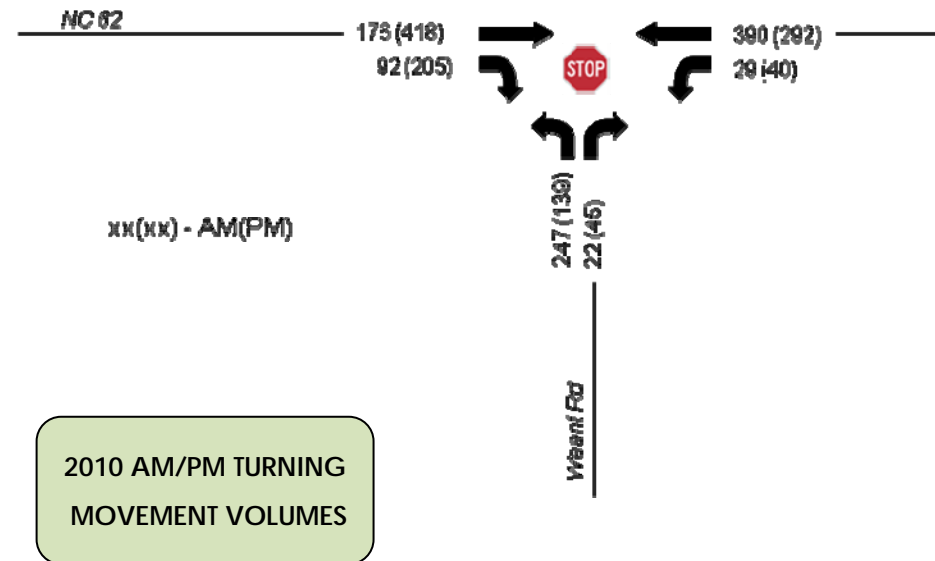
As a part of the feasibility study, intersection level capacity analysis was prepared for the intersection of Weant Road and Modlin Grove Road with NC 62.

AM and PM turning movement counts were collected for the intersection of NC 62 and Weant Road on September 9, 2010. Table 1 highlights the results of the traffic capacity analysis. The results of the analysis indicate that the intersection operates at Level of Service (LOS) E during both the AM and PM peak hours.

**Table 1. Intersection Level-of-Service Summary (Existing)**

Intersection	Peak-Hour LOS (Delay)	
	AM	PM
<i>NC 62 and Weant Road</i>	<i>38.9 (E)</i>	<i>41.3 (E)</i>

*Unsignalized intersections* indicated in *italics* and LOS and delay represent that of the most delayed minor street approach.





# Weant Road Feasibility Study

Since each of the alternatives developed utilize the same terminus location with NC 62 and Modlin Grove Road, intersection level capacity analysis was prepared for the horizon year “Build”, with the realignment and “No Build”, without the improvement.

Based on conversations with members of the steering committee it was determined that the new intersection of Modlin Grove Road/Weant Road and NC 62, under the build conditions, should include left-turn lanes on NC 62 and future signalization.

Table 2 outlines the results of the analysis under both Build and No Build conditions for the 2015 Horizon year.

The results of the 2015 Build analysis indicate that the realigned Weant Road intersection will operate at an acceptable LOS. The No Build condition for 2015 shows further degradation of the intersection to unacceptable levels.

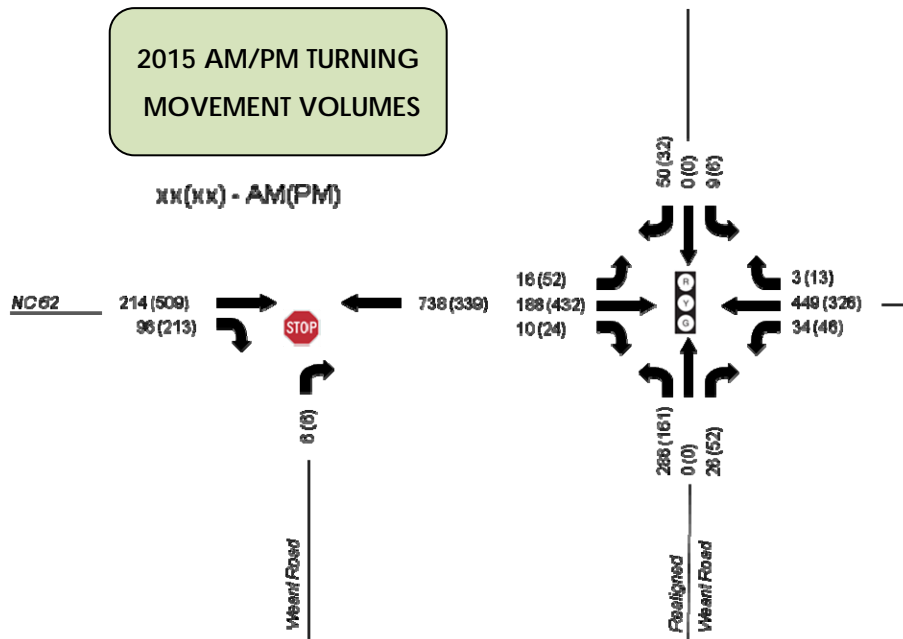


Table 2. Intersection Level-of-Service Summary 2015		
Intersection	Peak-Hour LOS (Delay)	
	AM	PM
<b>2015 Build Conditions</b>		
NC 62 and Weant Road	10.0 (A)	B (13.2)
NC 62 and Modlin Grove/Weant Road	16.9 (B)	10.9 (B)
<b>2015 No Build Conditions</b>		
NC 62 and Weant Road	468.4 (F)	90.8 (F)

*Unsignalized intersections indicated in italics and LOS and delay represent that of the most delayed minor street approach.*





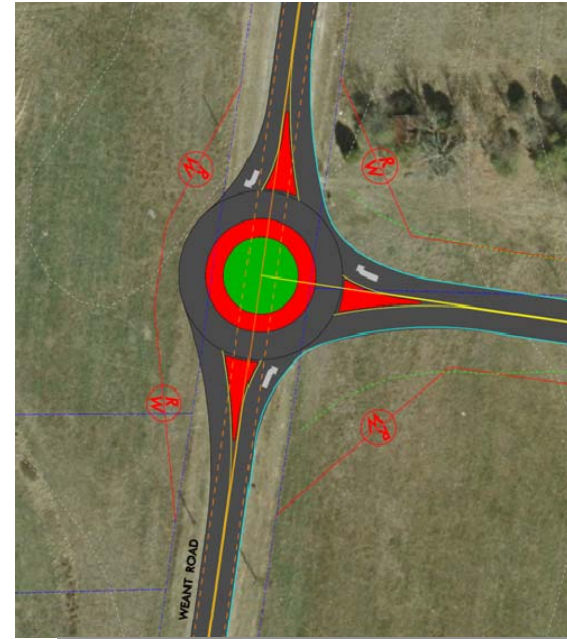
## PREFERRED ALTERNATIVE

Using the information collected in the environmental review, the conceptual designs, and the traffic capacity and safety analysis, the project steering committee determined that Alternative 2 best met the needs both short-term and long-term for Weant Road.

Alternative 2 was chosen based on the premise that it balanced the needs of the commuting traffic utilizing Weant Road and potential future land development needs in the area. Whereas, Alternatives 1 and 3 accomplished each of these needs, it gave priority to the commuting traffic needs over land development.

The project steering committee determined that existing Weant Road and realigned Weant Road intersections traffic control should be provided through the use of a roundabout. Where Alternatives 1 and 3 were direct connections not requiring Weant Road traffic to turn, Alternative 2 requires that northbound traffic make a right turn to utilize the signalized intersection with NC 62. The installation of a roundabout allows for this movement to be more fluid. Consideration was given to providing a northbound bypass lane from existing Weant Road to realigned Weant Road to provide a more seamless movement as provided in Alternatives 1 and 3. However, after additional review it was determined that the movement would likely have a detrimental impact on traffic safety.

Realigned Weant Road is designed as a two-lane shoulder and ditch section. A shoulder and ditch section was chosen because it minimized the environmental impact to the area. Furthermore, it



*Proposed roundabout at Weant Road and the new Weant Road Connector*

allows for future widening without significant infrastructure removal/rebuilding.

As previously discussed, Randleman watershed requirements around Woods Lake will likely require coordination with the NC Department of Water Quality and the US Army Corp of Engineers. For this reason much consideration was given to how the eastern edge was treated. To minimize the impact area within the buffers around the lake, curb and gutter was proposed along the eastern edge. The implementation of curb and gutter would allow for a



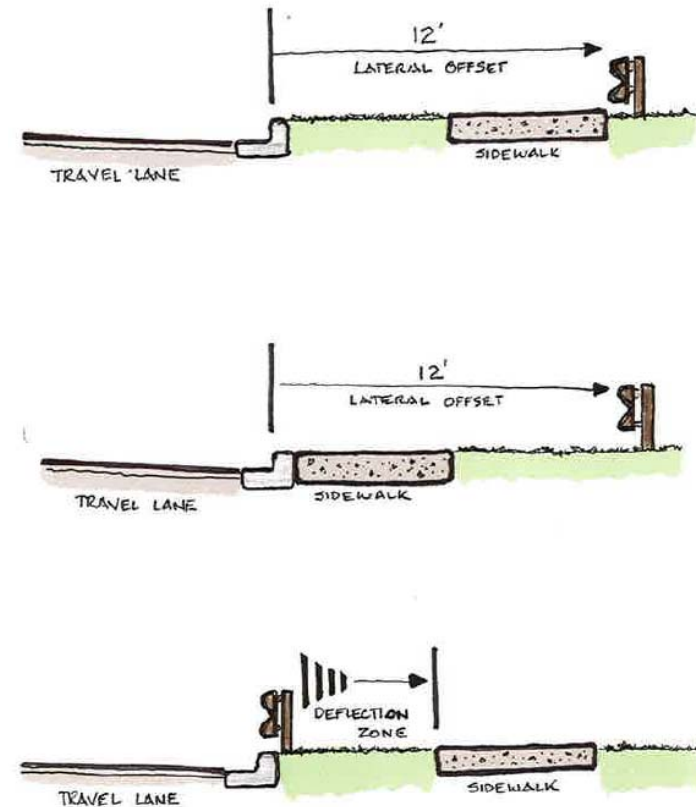
reduction in the necessary width for implementation of the desired elements (sidewalk and guardrail).

The close proximity of the proposed road to Woods Lake requires the installation of guardrail for vehicular protection. With the installation of sidewalk adjacent to or in close proximity to the curb and gutter, special consideration for placement of the guardrail has to be given. With a curb and gutter edge treatment, vehicles have the potential to be “vaulted” if the curb is struck at a sufficient speed. Improper placement of the guardrail in proximity to the curb and gutter can aid in the vaulting, defeating its intended purpose.

Current sidewalk design preference is to provide separation between the back of curb and the sidewalk for increased safety to pedestrians. Based on current design guidelines a minimum of 12 feet is required from the face of curb to the face of guardrail. Should the guardrail be placed flush with the curb face, a minimum of 2 feet should be provided to account for the deflection of guardrail. Further evaluation of the placement of both the guardrail, including the type, as well as the placement of the sidewalk should be given during the design phase.

Context appropriate or decorative guardrail can be substituted in lieu of the standard galvanized guardrail as found on highways. Examples of decorative guardrail are shown to the right.

## GUARDRAIL PLACEMENT DIAGRAMS





*Examples of decorative guardrail treatments*

In addition to the improvements associated with the Weant Road connector, improvements along NC 62, at the new intersection with Modlin Grove Road, and at the existing intersection between Weant Road and NC 62 are required. With the creation of the new intersection between Modlin Grove Road, Weant Road connector and NC 62, left-turn lanes and traffic signalization are proposed. The NCDOT recommends that left-turn lanes be installed on all approaches with the installation of a traffic signal. This allows the intersection to maximize the capacity of the intersection. However, if at the time of implementation traffic volumes along the side-street do not warrant the need for a left turn lane, consideration for

removing the turn lane will be given.

Improvements to the existing Modlin Grove Road were considered in the preferred concept. It should be noted that improvements to existing Modlin Grove Road are not required to achieve an acceptable LOS or for the intersection to function properly. During the development of construction drawings, further review is recommended.

At the existing intersection of Weant Road and NC 62, the intersection is to be modified to prohibit left-turning movements. With the installation of the Weant Road connector, the need for these movements will not exist. To restrict these movements, a concrete monolithic island is recommended to be installed along NC 62 from the terminus of the existing island to a point south of Weant Road but north of the intersection of NC 62 and Bluewood Court.

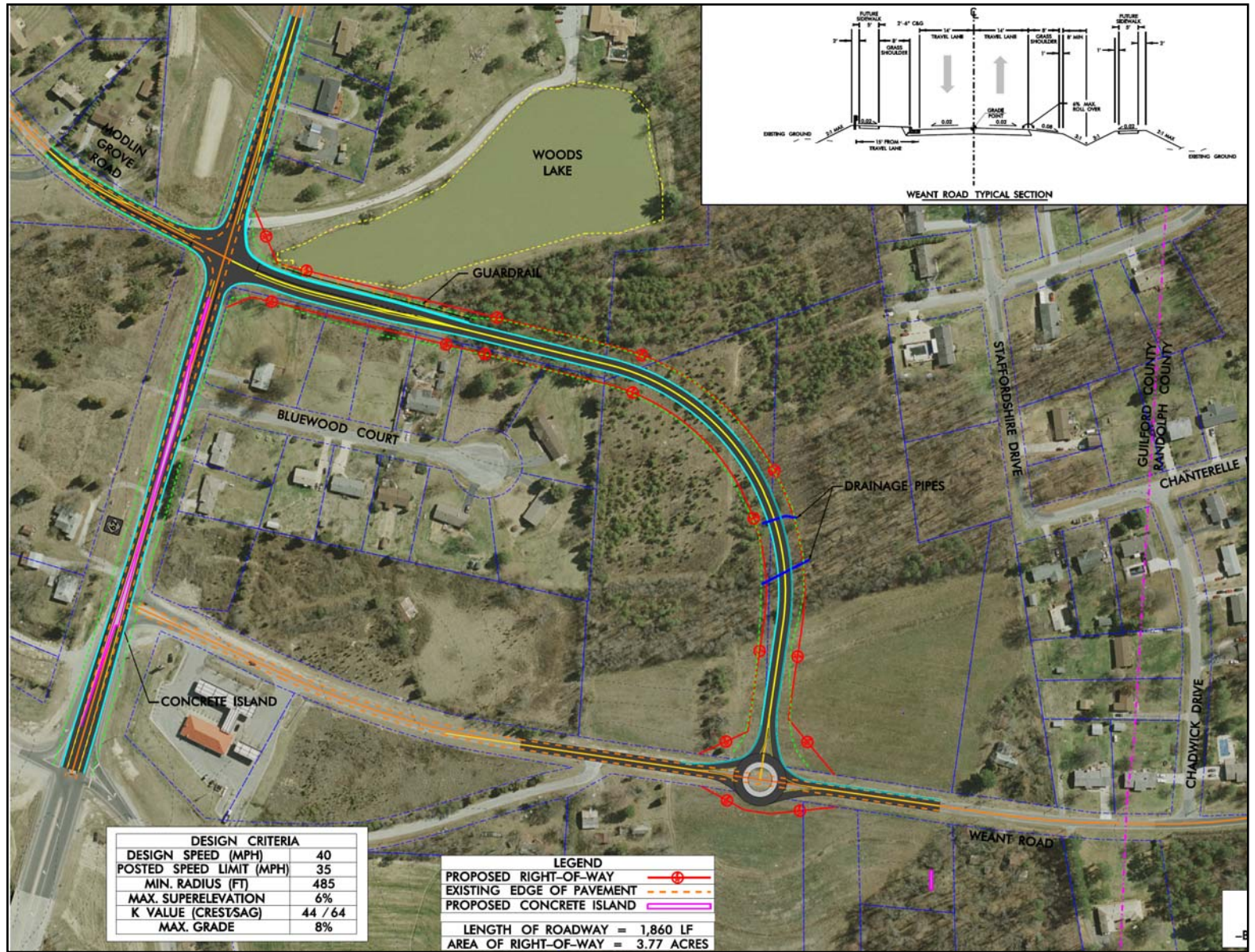
Consideration was given to extending the island along NC 62 to the new intersection with the Weant Road connector (resulting in a right-in/right-out access at Bluewood Court.) The intent was to provide access management to the adjacent properties between Weant Road and the Weant Road Connector. However, to implement the median along this section of roadway would require the construction of a U-turn bulb at the new intersection with the Weant Road connector which would require additional right-of-way. To avoid further costs, the median was minimized along NC 62.

*The preferred alternative is depicted on the following page.*



# Weant Road Feasibility Study

Preferred Alternative:  
Functional Design Concept





## PROBABLE CONSTRUCTION COST

A preliminary Opinion of Probable Construction Cost (OPCC) was prepared for the preferred alternative. The OPCC utilized inputs developed from the functional design plans including:

- Pavement type and thickness
- Curb and gutter
- Erosion control
- Traffic control
- Markings and striping

The OPCC for the Weant Road connector, for the design as depicted on the previous page:

Weant Road Connector	\$740,000
Curb and gutter adjacent to Woods Lake	\$44,000
Improvements to NC 62	\$439,000
Roundabout	\$320,000
<hr/>	
Total:	\$1,543,000

## AIR QUALITY ANALYSIS

As a part of the evaluation of the Weant Road Connector, air quality analysis was prepared to evaluate the impacts the proposed connector and its signalization will have on air quality for the study area.

Analysis indicates that while the proposed addition of a signal is expected to reduce the average delay for vehicles traveling northbound on Weant Road, it actually introduces approximately 13 seconds of delay to vehicles on NC 62.

A conservative estimate of the change in emissions resulting from the proposed improvements was assumed to occur only during the two-hour morning and two-hour evening peak periods for a total of four hours per day. The change in delay was adjusted as follows:

$$\text{Change in Delay} = (82.46 \text{ veh-hrs/day}) * (4 \text{ peak hrs}/24 \text{ hrs}) = 13.74 \text{ veh-hrs/day}$$

### *Change in Emissions*

Emission rates were established using Mobile 6 with input values representing Guilford County.

The 2010 hourly pollutant emission rates for the corresponding pollutants are:

$$\text{CO: } (30.974 \text{ g/mi}) * (2.5 \text{ mi/hr}) * (1 \text{ kg}/1000 \text{ g}) = 0.077 \text{ kg/veh-hr}$$

$$\text{VOC: } (5.427 \text{ g/mi}) * (2.5 \text{ mi/hr}) * (1 \text{ kg}/1000 \text{ g}) = 0.014 \text{ kg/veh-hr}$$

$$\text{NOX: } (2.077 \text{ g/mi}) * (2.5 \text{ mi/hr}) * (1 \text{ kg}/1000 \text{ g}) = 0.005 \text{ kg/veh-hr}$$

The increase in emissions was then calculated in terms of daily and annual values. The annual estimations are based on 250 weekdays in a year. The calculations are as follows:



# Weant Road Feasibility Study

## Daily:

$$\text{CO: } (0.077 \text{ kg/veh-hr}) * (13.74 \text{ veh-hrs/day}) = 1.058 \text{ kg/day}$$

$$\text{VOC: } (0.014 \text{ kg/veh-hr}) * (13.74 \text{ veh-hrs/day}) = 0.192 \text{ kg/day}$$

$$\text{NOX: } (0.005 \text{ kg/veh-hr}) * (13.74 \text{ veh-hrs/day}) = 0.069 \text{ kg/day}$$

$$\text{Estimated Increase in Daily Emissions} = 1.319 \text{ kg/day}$$

## Annual:

$$\text{CO: } (1.058 \text{ kg/day}) * (250 \text{ days/year}) = 264.5 \text{ kg/year}$$

$$\text{VOC: } (0.192 \text{ kg/day}) * (250 \text{ days/year}) = 48.1 \text{ kg/year}$$

$$\text{NOX: } (0.069 \text{ kg/day}) * (250 \text{ days/year}) = 17.2 \text{ kg/year}$$

$$\text{Estimated Increase in Daily Emissions} = 329.8 \text{ kg/year}$$

*This space intentionally left blank.*



## ACTION PLAN

The momentum and support gained from the NC 62 Corridor Study as well as the Weant Road Feasibility Study should be capitalized upon. The following action items are intended to provide guidance for the successful implementation of the Weant Road project. While not an exhaustive inventory of action items, the Action Plan does highlight major milestones required for funding, design and construction.

The timeframe for implementation can be influenced by several factors including:

- Funding availability-source
- Permitting
- Development activities
- Right-of-way acquisition

With this in mind, all of the improvements are not likely to be made at one time. However, it is imperative that NC 62 be improved to accommodate this anticipated increase in traffic. Currently, the NCDOT Transportation Improvement Program (TIP) does not include improvements to this section of NC 62. In addition to the widening of NC 62, the connector street plan must also be coordinated and implemented to fully reap the benefits improving NC 62.

**Table 3: Summary Action Items**

General Action Items	Time-frame	Responsible Party
Adopt the findings of the Weant Road Feasibility Study	2011	City of Archdale
Integrate the findings and recommendation of this study into the HPMPO Long-Range Transportation Plan.	2011	HPMPO
Develop construction design plans for Weant Road realignment	2011	Archdale-NCDOT
Perform necessary permitting with NCDOT, NCDENR and City of Archdale	2011	Archdale-NCDOT
Work collaboratively with NCDOT to secure funding and initiate implementation	Ongoing	City of Archdale/ HPMPO/NCDOT
Work with NCDOT (site plan development process) to construct access management improvements including intersection redesign, driveway consolidation, cross-access between properties, etc.	Incrementally	City Planning/ Engineering Staff/ NCDOT
Require the implementation of the connector street plan incrementally as development occurs.	Incrementally	City Planning/ Development Community



Many citizens expressed frustration during the charrette process over the lack of funding resources and likely timing for implementation of the proposed improvements. Unfortunately, the planning, design, and construction of publicly-funded transportation projects typically takes five to seven years (once a funding source has been identified). Local, state, and private partnerships offer strategic advantages to implementing improvements.

Some improvements will occur as a result of development and redevelopment opportunities. The majority of responsibility for implementing these recommendations will be a coordinated effort between NCDOT, the City of Archdale, and the High-Point Area Metropolitan Planning Organization (HPMPO).

## PRIMARY FUNDING OPTIONS

There are essentially four potential-primary-public funding sources for the realignment of Weant Road and corresponding improvements to NC 62. These transportation resources are described below.

### **Municipal Bonds**

Transportation bonds have been instrumental in the strategic implementation of local roadways, transit, and non-motorized travel throughout North Carolina. Voters in communities both large and small regularly approve the use of bonds in order to improve their transportation system. Nearly all of the improvements

identified in this study could be financially supported using a transportation bond program. Where the improvement occurs on state owned street, approvals and encroachment permits will be required from NCDOT.

### **Transportation Improvement Program (TIP)**

The state's Transportation Improvement Program (TIP) supports communities through an array of funding resources including Federal Aid Construction Funds and State Construction Funds. As part of the application process, strict criteria must be met before project selection. Criteria include providing right-of-way information, meeting a set of design standards, showing a need for a project, local support of the project, and the inclusion of the project in the community's planning processes. While technically a viable funding option, new projects such as the Weant Road realignment will not likely be competitive when considering the depth of projects already competing for scarce TIP funding.

### **High Hazard Elimination Funds**

The High Hazard Elimination program is a federally funded safety program which requires that a systematic approach be used to add eligible safety projects to the TIP. These projects typically cost in the range of several hundred thousand dollars (which means they likely couldn't be used to fund the entirety of the Weant Road relocation).

All projects considered for this program must go through a rigorous evaluation and ranking procedure and all projects funded will be





based on this ranking process. The use of federal funds would require a more detailed environmental approval process (NEPA).

### **Surface Transportation Program – Direct Apportionment (STP-DA)**

The STP-DA program was established in the state of North Carolina in order to provide the Metropolitan Planning Organizations with additional funding and increased control over the distribution of funds. STP-DA funds provide the municipality full control over the planning and design phases of a project. This enables the MPO to directly program the funding for the project as long as the project continues to conform to NCDOT policies. However, usage of STP-DA funds requires the local agency to provide a 20% funding match as well as money for project planning and design.

### **NCDOT Division Funds**

NCDOT separates the state into 14 divisions. Guilford County is in Division 7. Division funds are another resource that provides allocations or discretionary funding for special projects within each division. Sub categories of funding that may be appropriate for the Weant Road realignment includes:

Small Urban: The intent of these funds is to provide small improvements to existing roadways. Projects are selected and managed by the NCDOT Divisions. Projects are capped at \$250,000 which would only fund a portion of the Weant Road project. A detailed checklist for the program can be found at the following: [http://www.ncdot.gov/doh/preconstruct/traffic/tepl/Topics/F-21/F-21\\_mm.pdf](http://www.ncdot.gov/doh/preconstruct/traffic/tepl/Topics/F-21/F-21_mm.pdf)

Secondary Roads Program: This program was established primary to fund to paving of secondary dirt, gravel, and sand roads. Recent changes permit the use of these funds for the construction of improvements to existing roads. This program is managed by each Division with project endorsement occurring at the county level.

Discretionary Funds (Statewide/Division): A limited amount of funding is allocated annually for discretionary use to make improvements on any project at the discretion of the Division and Board of Transportation. More information about this program can be found at the following:

<http://www.ncdot.gov/doh/preconstruct/traffic/tepl/MOM/MN-10.pdf>

## **CONCLUSION**

Successful implementation of the NC 62 Corridor Access Plan will depend to a great extent on the ability of local government, HPMPO, and NCDOT to work together in collaboration. This feasibility study provides a summary of the implementation strategy, including a list of specific projects, a phasing plan, planning level cost estimates, available funding sources, and agencies responsible for implementing the vision. However, the nature of the recommendations does not require that all improvements are completed in unison. This should allow the City, HPMPO, and NCDOT the flexibility to implement improvements in phases while employing multiple funding sources to complete the project.