FINAL

FEASIBILITY STUDY
SURRETT DRIVE IMPROVEMENTS

Guilford and Randolph Counties
High Point, Archdale, and Trinity Cities

Prepared for:

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Section Page

TABLES

FIGURES (are included at the end of the study)

APPENDIX

1.0 INTRODUCTION

The High Point Metropolitan Planning Organization (HPMPO) has prepared this feasibility study to evaluate future improvements to Surrett Drive, which is located within the cities of High Point, Archdale, and Trinity (Guilford and Randolph counties).

This feasibility study is the initial step in the planning and design process for improvements to Surrett Drive. The purpose of this study is to describe the proposed action, evaluate potential alternatives for the proposed action, and identify a preferred alternative.

The evaluation includes an estimate of costs and identification of potential issues that may require consideration in the planning and design phase of the project. As such, this study is not the product of exhaustive environmental or design investigations. Natural and human environment features within the study area are based on available data.

1.1 General Description

1.1.1 Project Vicinity

The project area is bordered by High Point and Greensboro to the north, Thomasville to the west, Asheboro to the south, and Archdale to the east (**Figure 1-1**).

Primary routes in the project area include Interstate 85 (I-85), Business I-85, and North Carolina Highway 62 (NC 62). I-85 is a statewide east-west facility connecting Charlotte in southern North Carolina with Chapel Hill, Durham, and the Triangle Area in central North Carolina. Business I-85 connects Greensboro to the northeast with Thomasville to the west. NC 62 is a local east-west facility connecting Thomasville to the west with Archdale to the east.

1.1.2 Surrett Drive

The subject section of Surrett Drive is approximately 4.5 miles in length. It extends from the intersection of Surrett Drive and West Market Center Drive in Guilford County southward, crossing Business 85, and continuing to the interchange of Surrett Drive with the I-85 ramps in Randolph County (**Figure 1-2**).

Surrett Drive is a two-lane radial roadway functionally classified as minor arterial. There are five signalized intersections and ten unsignalized intersections along this segment of Surrett Drive. A railroad track closely parallels the east side of the roadway from Archdale Boulevard north to Fraley Road.

Traffic generated by the commercial and industrial uses within the study area utilize Surrett Drive to connect with the Triad area, including Winston-Salem, Greensboro, and High Point, and the suburban/rural communities of Archdale, Trinity, and Randolph County. Locally, Surrett Drive connects residential areas to the south with employment centers along Surrett Drive and in High Point.

Land use within the northern end of the study area is heavily industrial, with manufacturing, warehousing, and other uses typically associated with heavy traffic and truck or freight movements. Along the southern half, Surrett Drive serves a mix of commercial uses, a high school, and low-density residential uses.

1.1.3 Project Termini

Logical termini are defined as (1) rational end points for a transportation improvement, and (2) rational end points for a review of the environmental impacts. In order to ensure meaningful evaluation of alternatives and to avoid commitments to transportation improvements before they are fully evaluated, the action shall:

1. Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
2. Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and
3. Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

The proposed project is intended to improve mobility and capacity along the Surrett Drive corridor. With this in mind, potential locations for project termini were evaluated.

On the northern end, the proposed project would terminate at the intersection of West Market Center Drive. On the southern end, the project crosses I-85 Business and terminates at the intersection of Surrett Drive and the I-85 ramps. West Market Center Drive is a gateway to downtown High Point and I-85 is the highest capacity facility along Surrett Drive. These termini are logical, as improvements in this section of Surrett Drive would connect a major highway with a downtown destination and serve both local and regional travelers, which is the function of this arterial roadway. The project is approximately 4.5 miles long, a sufficient length in order to evaluate alternatives and impacts.

2 PURPOSE AND NEED

2.1 PURPOSE OF PROPOSED ACTION

The purpose of the proposed action is to improve mobility and capacity along Surrett Drive within the project study area.

2.2 NEED FOR PROPOSED ACTION

The existing two-lane radial arterial has poor vertical alignment and substandard pavement width over much of its length (11-foot travel lanes and no shoulder).

As discussed in **Section 3**, Surrett Drive is currently operating at an unacceptable level of service, with traffic volumes projected to increase in the future. Furthermore, a review of historical crash data revealed a predominance of rear-end accidents, which is indicative of a high level of congestion (**Section 3.3**).

To compound the existing congested condition of Surrett Drive, the HPMPO's member jurisdictions expect substantial growth throughout this corridor and surrounding areas, particularly in Trinity. Trinity is planning to extend public sewer lines to properties along the roadway.

According to the High Point Thoroughfare Plan Map, Surrett Drive is considered a major thoroughfare. The High Point 2030 Long Range Transportation Plan (LRTP) identifies Surrett Drive, from Market Center Drive to Business I-85, and from Fairfield Drive to Sealy Drive, as seriously congested with a Level of Service (LOS) F. According to the LRTP, these sections of Surrett Drive are recommended for improvements, including signal coordination and the addition of physical capacity. Similarly, due to capacity needs, the City of Trinity Land Development Plan (September, 2006) calls for widening Surrett Drive to a four-lane divided facility.

3 TRAFFIC OPERATIONS AND SAFETY

The discussion provided in this section is based on the *Final Surrett Drive Travel Demand Forecast Report*, dated May 29 2008 (**Appendix A**), and the *Final Surrett Drive Traffic Operations Analysis Technical Memorandum,* dated August 2008 (**Appendix B**).

3.1 TRAFFIC VOLUMES

The existing (year 2007) and no-build (year 2035) average annual daily traffic (AADT) volumes are illustrated in **Figures 4-1 through 4-4** and **Figures 5-1 through 5-4**, respectively, of the *Final Surrett Drive Traffic Operations Analysis Technical Memorandum* (**Appendix B**).

As shown in **Table 3-1**, the AADT varies throughout the corridor. Currently, traffic volumes north of Sealy Drive are approximately double (50 percent higher) than volumes between Sealy Drive and I-85. In the future, traffic volumes are projected to increase throughout the corridor, with volumes in the southern half projected to approximately double. The highest traffic volumes occur between West Fairfield Road and the unsignalized intersection of Murray Circle/Archdale Boulevard intersection, both currently and in the future.

Table 3-1: Existing (Year 2007) and No-Build (Year 2035) Annual Average Daily Traffic Volumes

Surrett Drive Segment	2007 AADT	2035 AADT
North of Market Center Drive)	5,800	6,400
Market Center Drive to I-85 Business	10,200	12,600
I-85 Business to Fraley Road / Finch Avenue	12,400	17,400
Fraley Road / Finch Avenue to Fairfield Road	11,200	15,200
Fairfield Road to Eden Terrace / Corporation Drive	14,600	21,600
Eden Terrace / Corporation Drive to Archdale Bl. / Murray Circle	14,000	20,600
Archdale Blvd. / Murray Circle to Sealy Drive / Darr Airport Road	13,000	19,400
Sealy Drive / Darr Airport Road to Mendenhall Road	8,600 – 9,200*	15,600
Mendhenhall Road to Mendenhall Road Extension	10,000	15,600
Mendenhall Road Extension to Trinity High School Drive	8,400	15,400
Trinity High School Drive to Uwharrie Road	8,400	15,400
Uwharrie Road to Turnpike Road	8,400	16,800
Turnpike Road to NC Highway 62	8,600	17,000
NC Highway 62 to I-85	7,000	14,600
South of I-85	4,000	10,200

Source: *Final Surrett Drive Traffic Operations Analysis Technical Memorandum,* August 2008.

* AADT varies from 9,200 vpd just south of Sealy Drive / Darr Airport Road to 8,600 vpd just north of Mendenhall Road.

3.2 TRAFFIC OPERATIONS

The level of service (LOS) is a measure of traffic congestion. The LOS is defined with letter designations from A to F that can be applied to both roadway segments and intersections. LOS A represents the best operating conditions and LOS F the worst. In urban areas, LOS D is generally considered acceptable, while in rural areas LOS C is considered acceptable.

3.2.1 Existing (Year 2007) Intersection Conditions

LOS was analyzed for fifteen intersections within the study area. **Table 3-2** summarizes the LOS and estimated intersection capacity.

Table 3-2: Existing (Year 2007) Intersection Conditions

Surrett Drive Intersection	Signalized / Unsignalized	AM Peak Hour		PM Peak HOUR	
		LOS	Capacity v/c	LOS	Capacity v/c
Market Center Drive (SR 1961)	Signalized	C	0.62	C	0.57
I-85 Business SB Ramps	Unsignalized	**D**	0.66	**F**	1.07
I-85 Business NB Ramps	Unsignalized	**F***	2.36	**F**	1.48
Fraley Road / Finch Avenue	Signalized	C	0.88	C	0.77
Fairfield Road (SR 1300)	Signalized	**E**	1.16	**F**	1.22
Eden Terrace / Corporation Drive	Unsignalized	**F**	>9.99	**F**	7.04
Archdale Blvd. / Murray Circle	Unsignalized	**F***	0.94	**F***	0.98
Sealy Drive / Darr Airport Road	Signalized	B	0.79	B	0.53
Mendhenhall Road	Unsignalized	C	0.40	C	0.34
Mendenhall Road Extension	Unsignalized	C	0.26	B	0.16
Trinity High School Drive	Unsignalized	C	0.09	C	0.16
Turnpike Road	Unsignalized	**D**	0.49	**D**	0.40
NC Highway 62	Signalized	C	0.76	C	0.74
I-85 SB Ramps / Dwight Street	Unsignalized	C	0.28	C	0.37
I-85 NB Ramps	Unsignalized	C	0.37	B	0.22

Source: *Final Surrett Drive Traffic Operations Analysis Technical Memorandum,* August 2008.

* Stop-controlled intersection with unacceptable side street LOS, but does not warrant signalization.

One of the five signalized intersections (Fairfield Road) currently operates with an unacceptable LOS. Of the ten unsignalized intersections, four currently operate with an unacceptable LOS. Three of these intersections (I-85 Business SB Ramps, I-85 Business NB Ramps, and Eden Terrace / Corporation Drive) experience side street delays and queue lengths long enough to warrant further investigation for signalization.

3.2.2 No Build (Year 2035) Intersection Conditions

A No-Build traffic analysis was performed to assess how the studied intersections would operate in the year 2035 if only currently planned improvements are made to Surrett Drive.

The No-Build (Year 2035) Conditions anticipate the improvements to Mendenhall Road. These improvements involve the realignment of Mendenhall Road across from the existing Mendenhall Road Extension to create a four-leg signalized intersection. The current three-leg intersection with Mendenhall Road would be eliminated.

The No-Build Conditions also include a new Surrett Drive intersection with Uwharrie Road / Sisters Lane Extension. This intersection is currently planned to be located between Trinity High School Drive and Turnpike Road.

The last improvement anticipated under the No-Build Conditions includes the creation of an improved west leg of the Surrett Drive / Darr Airport Road intersection.

The No-Build (Year 2035) intersection analysis indicates that four of the six signalized intersections are projected to operate with an unacceptable LOS in 2035 (**Table 3-3**). It should be noted that the improved Mendenhall Road Extension intersection is assumed to operate with signal control under the No-Build Conditions. All nine unsignalized intersections are projected to operate with an unacceptable LOS. Seven of these intersections experience side street delays and queue lengths long

enough to warrant further investigation for signalization. Two stop-controlled intersections operate with an unacceptable LOS, but do not warrant signalization based on analyzed queue lengths and critical movement volumes.

Table 3-3: No-Build (Year 2035) Intersection Conditions

Surrett Drive Intersection	Signalized / Unsignalized	AM Peak Hour		PM Peak HOUR	
		LOS	Capacity v/c	LOS	Capacity v/c
Market Center Drive (SR 1961)	Signalized	C	0.71	C	0.66
I-85 Business SB Ramps	Unsignalized	F	1.59	F	2.60
I-85 Business NB Ramps	Unsignalized	F	>9.99	F	8.39
Fraley Road / Finch Avenue	Signalized	E	1.32	C	0.92
Fairfield Road (SR 1300)	Signalized	F	1.62	F	1.73
Eden Terrace / Corporation Drive	Unsignalized	F	>9.99	F	>9.99
Archdale Blvd. / Murray Circle	Unsignalized	F	>9.99	F	>9.99
Sealy Drive / Darr Airport Road	Signalized	E	1.10	D	0.97
Mendenhall Road Extension	Signalized	C	0.92	C	0.91
Trinity High School Drive	Unsignalized	F*	0.56	F*	0.81
Uwharrie Road	Unsignalized	F*	1.48	F*	1.08
Turnpike Road	Unsignalized	F	>9.99	F	>9.99
NC Highway 62	Signalized	F	1.43	F	1.33
I-85 SB Ramps / Dwight Street	Unsignalized	F	1.72	F	2.32
I-85 NB Ramps	Unsignalized	F	1.30	F*	0.96

Source: *Final Surrett Drive Traffic Operations Analysis Technical Memorandum,* August 2008.

* Stop-controlled intersection with unacceptable side street LOS, but does not warrant signalization.

3.3 SAFETY

Traffic crashes are often the result of deficiencies in the capacity of a transportation facility. Crash data was collected for 15 intersections along Surrett Drive for the three year period from May 1, 2004 to April 30, 2007. The NCDOT Traffic Engineering Accident Analysis System Intersection Analysis Report is included in **Appendix C**.

Crash data collected for these intersections includes the total number of crashes, types of crashes, and numbers of injury and property-only crashes (**Table 3-4** and **Table 3-5**). No fatality crashes were reported for the subject intersections.

Table 3-4: Crash Types

Surrett Intersection	Left Turn	Right Turn	Rear End	Run off Road & Fixed Object	Angle	Side Swipe	Other
Market Center Drive (SR 1961)/College Drive (SR 1962)	0	1	1	0	7	0	1
I-85 Business/US 29/US 70 NB Ramps	0	0	2	0	1	0	0
I-85 Business/US 29/US 70 SB Ramps	0	0	1	0	0	0	0
Finch Avenue/Fraley Road	0	0	1	0	1	0	1
Fairfield Road (SR 1300)	7	0	10	0	2	4	0
Mendenhall Road (5R 1610)	1	1	8	2	0	0	0

Table 3-4: Crash Types

Surrett Intersection	Left Turn	Right Turn	Rear End	Run off Road & Fixed Object	Angle	Side Swipe	Other
Mendenhall Road (SR 1599)	2	0	3	0	0	0	0
Trinity High School Drive (SR 1748)	2	0	2	3	0	0	0
Turnpike Road (SR 1882) (Old Turnpike Rd)	2	0	2	0	3	0	1
Hopewell Church Road (SR 3252)/Trindale Road (NC 62)	1	2	2	0	1	0	1
TOTAL	**15**	**4**	**32**	**5**	**15**	**4**	**4**

Source: NCDOT Traffic Engineering Accident Analysis System Intersection Analysis Report (May 1, 2004 through April 30, 2007)

Table 3-5: Crash Severity

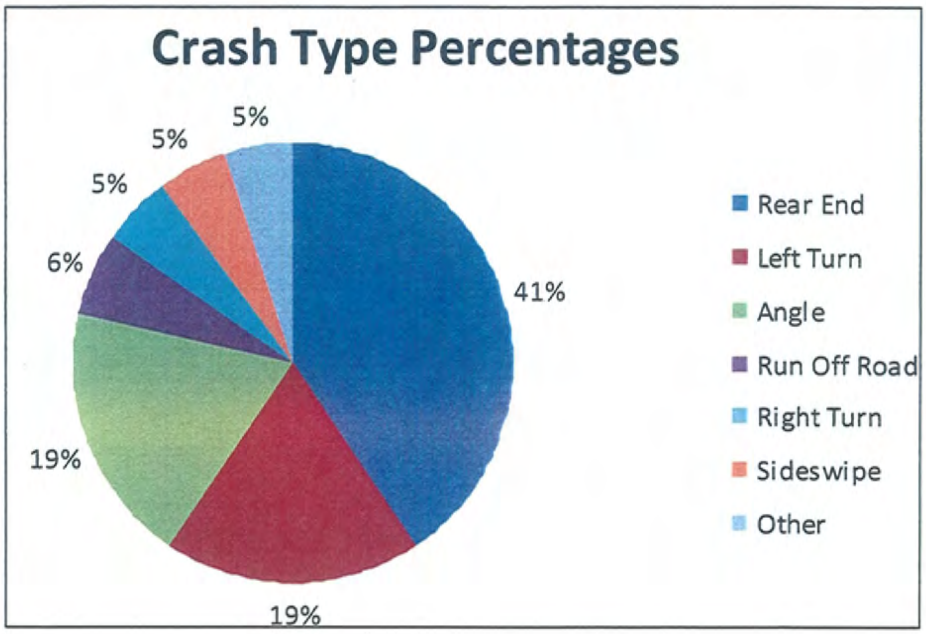
Surrett Intersection	No. of Crashes	No. of Injury Crashes	No. of Property Damage Only Crashes	Crashes/100 million vehicles Entered
Market Center Dr. (SR 1961)/College Dr. (SR 1962)	10	7	3	40.05
I-85 Business/US 29/US 70 NB Ramps	3	0	3	26.34
I-85 Business/US 29/US 70 SB Ramps	1	0	1	8.78
Finch Avenue/Fraley Road	3	1	2	20.45
Fairfield Road (SR 1300)	23	11	12	79.56
Mendenhall Road (SR 1610)	12	4	8	111.83
Mendenhall Road (SR 1599)	5	3	2	48.07
Trinity High School Drive (SR 1748)	7	5	2	65.23
Turnpike Road (SR 1882) (Old Turnpike Rd)	8	4	4	62.98
Hopewell Church Rd. (SR 3252)/Trindale Rd. (NC 62)	7	2	5	41.51

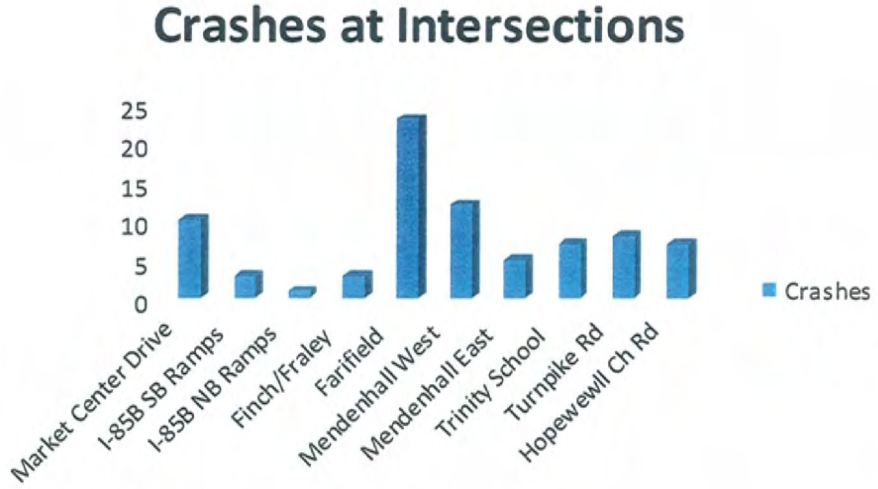
Source: NCDOT Traffic Engineering Accident Analysis System Intersection Analysis Report (May 1, 2004 through April 30, 2007)

A review of the crash data suggests a direct correlation between the prevalent crash types and traffic congestion along Surrett Drive. As shown in the following pie chart, out of the total of 79 crashes recorded, 32 (approximately 41 percent) of the crashes involved rear-end collisions. These types of crashes are expected to occur where a combination of high volumes and a large number of slowing, stopping and/or turning movements cause interruptions to the traffic flow. As illustrated in the following line graph, the highest concentrations of rear-end crashes occurred at the Surrett Drive / Fairfield Road intersection.

The second most common crash types within the study area were left turn and angle. Within the study area, 15 (19 percent) of the total crashes involved collisions while making a left turn at the Surrett Drive / Fairfield Road intersection. Fifteen (19 percent) angle crashes took place at Surrett Drive / Market Center Drive intersection.

These types of crashes typically occur when a driver fails to respond to changes in traffic signal phases (running red lights) or attempts to use insufficient gaps in the opposing traffic stream. An angle type crash is an indicator of congested conditions and represents the effect such conditions can have on driver behavior.


Crash Type Percentages
5%
5%
5%
6%
41%
19%
19%
Rear End
Left Turn
Angle
Run Off Road
Right Turn
Sideswipe
Other


Crashes at Intersections
25
20
15
10
5
0
Market Center Drive
I-85B SB Ramps
I-85B NB Ramps
Finch/Fraley
Farifield
Mendenhall West
Mendenhall East
Trinity School
Turnpike Rd
Hopewell Ch Rd
Crashes

4 ALTERNATIVES

The purpose of the feasibility study is to provide an initial screening of the Surrett Drive improvement options so that the High Point Department of Transportation can better plan for future right of way needs. Four project alternatives are considered; Minor Widening, Traffic Operations, Major Widening, and Ultimate Section. The Preliminary Plans for these alternatives can be found in **Appendix D**. In addition, the viability of a new location alternative is considered.

4.1 MINOR WIDENING ALTERNATIVE

The Minor Widening Alternative would widen the existing two lanes on Surrett Drive from a variable existing width to 12-foot lanes with a four-foot paved shoulder entirely within the existing right of way. Typical cross sections for the Minor Widening Alternative are illustrated in **Figure 4-1**.

Additional lanes are not proposed under this alternative. Intersection improvements consist of signal phase modifications that would require additional signal equipment, and the conversion of stop-controlled intersections to signalized intersections when warranted. Improvements to existing intersection geometry or turn lanes are not proposed.

4.2 TRAFFIC OPERATIONS ALTERNATIVE

The goal of the Traffic Operations Alternative is to improve the LOS at intersections along Surrett Drive without overall facility improvements. Some additional right of way would be needed for this alternative.

The Traffic Operations Alternative for the project has been developed based on the results of the traffic operations analysis and queuing analysis. The Traffic Operations Alternative is divided into two sections, A (south) and B (north). Section A is south of Archdale Boulevard (approximately the center of the corridor) and is defined as rural with a 50 mph design speed. Section B is north of Archdale Boulevard and is defined as urban with a 40 mph design speed.

The Traffic Operations Alternative includes intersection improvements such as minor widening in intersection areas, the addition of turn lanes, signal phase modifications that would require additional signal equipment, and the conversion of stop-controlled intersections to signalized intersections when warranted. In addition, this alternative includes the realignment of Mendenhall Road to tie into the Mendenhall Road extension. The following nine intersections, from south to north, would be improved under this alternative:

- I-85 southbound off ramp/loop
- NC 62
- Mendenhall Road and Extension
- Sealy Drive
- Archdale Boulevard
- Corporation Drive/Eden Terrace
- Fairfield Road
- Fraley Road
- Business 85 Ramps

4.3 MAJOR WIDENING ALTERNATIVE

As with the Traffic Operations Alternative, the Major Widening Alternative is divided into the same two sections (A & B) (Section A (south) at 50 mph design speed and Section B (north) at 40 mph speed).

Typical cross sections for the Major Widening Alternative are illustrated in **Figure 4-2**. This alternative includes widening Surrett Drive from two lanes to four lanes. The proposed typical sections for Section A include a four-lane facility with a 17.5-foot raised median. Outside paved shoulders would be located from the I-85 interchange to 800 feet north of Mendenhall Road. Outside curb and gutter would be utilized from 800 feet north of Mendenhall Road to Archdale Drive. In addition, this alternative includes the realignment of Mendenhall Road to tie into the Mendenhall Road extension.

The proposed typical section for Section B (north) is a five-lane curb and gutter facility from Archdale Drive to North Market Drive. A four-foot berm would be constructed along the right side of the typical section, closely paralleling the existing railroad right of way.

The Major Widening Alternative also includes the upgrade of the existing I-85 Business interchange consisting of a new bridge and ramp and loop realignments.

4.4 ULTIMATE SECTION ALTERNATIVE

The Ultimate Section Alternative also is divided in Section A (south) and Section B (north), with the same design speeds as the Traffic Operations and Major Widening Alternatives. This alternative reflects the desirable maximum cross-section width, without consideration of existing constraints.

Typical cross sections for the Ultimate Section Alternative are included in **Figure 4-3**. The proposed typical sections for Section A (south) include a four-lane divided facility with a 23-foot raised median. Outside paved shoulders would be utilized from the I-85 interchange to 800 feet north of Mendenhall Road. Outside curb and gutter would be utilized from 800 feet north of Mendenhall Road to Archdale Drive. In addition, this alternative includes the realignment of Mendenhall Road to tie into the Mendenhall Road extension.

The proposed typical sections for Section B (north) include a four-lane divided facility with a 23-foot raised median. Outside curb and gutter would be included from Archdale Drive to North Market Drive.

Under the Ultimate Section Alternative, a 45-foot offset is proposed from the centerline of the existing railroad tracks to the back of the two-foot, six-inch- curb and gutter located on the east side of the typical section. This offset would provide adequate distance to construct a full berm width plus an assumed railroad ditch while accommodating the potential for future utility relocation.

This option also calls for the redesign of the existing I-85 Business interchange. The existing half-clover interchange would be removed and replaced with a new compressed diamond interchange utilizing ramps in each quadrant.

4.5 OTHER ALTERNATIVES CONSIDERED

A cursory evaluation of the existing natural and human environment features and an engineering judgment of the alternatives considered were conducted to determine if analysis of a new location alternative would be warranted to avoid excessive environmental or cost impacts that may be associated with the widening or traffic operations alternatives.

A new location alternative would involve the construction of a four-lane median divided facility similar to the Major Widening Alternative. In order to alleviate congestion throughout the project corridor, the new location facility would have to be located within the general vicinity of the Surrett Drive corridor. A new facility constructed between Business 85 and I-85 would be substantially more expensive and create more impacts than the Major Widening Alternative, Minor Widening Alternative, and Traffic Operations Alternative.

A more common-sense approach to potential road network improvements is shown in the Thoroughfare Plan. As shown in **Figure 1-2**, the Thoroughfare Plan proposes improvements to Surrett Drive as well as several shorter new location roadway connections. These include extension of Sealy Road west to Mendenhall Road, and extension of Shore Road south to connect to the Sealy Road Extension, and the extension of Uwharrie/Sisters Lane from Mendenhall Road south to Surrett Drive. Extending Uwharrie/Sisters Lane to Surrett Drive would create a parallel corridor to Surrett Drive from just south of Trinity High School to Fairfield Road.

5 ENVIROMENTAL IMPACTS

This feasibility study includes a preliminary screening of the existing natural and human environment features within the study area. The intent of this review is to identify the nature and approximate magnitude of potential environmental impacts early in the process. The information obtained for the environmental screening is from readily available State and county databases and a windshield survey. No detailed survey work was conducted for this study. As such, this screening is not a substitute for the Federal environmental documentation process.

For comparative purposes, **Table 5-1** includes the length in miles and the existing and total right of way acreages for each alternative. As shown in **Table 5-1**, the Minor Widening Alternative would not require additional right of way acreage. However, the Ultimate Section Alternative would require the highest increase in right of way acreage.

Table 5-1: Right of Way Acreage per Alternative

Alternative	Length (miles)	Existing ROW (acres)	Additional ROW (acres)	Total ROW (acres)
Minor Widening	4.0	36.6	0.0	36.6
Traffic Operations	3.3	38.3	5.0	43.3
Major Widening	4.5	59.5	16.8	76.3
Ultimate Section	4.5	71.7	24.6	96.3

Source: Project Designs, PBS&J, 2008

Known natural and human environment features along Surrett Drive are shown in **Figure 5-1** (southern section) and **Figure 5-2** (northern section) and discussed below.

5.1 NATURAL ENVIRONMENT

5.1.1 Water Resources

As shown in **Figures 5-1** and **5-2**, the project study area contains several floodways, including a 100-year and 500-year floodplain.

Portions of the project study area are located within the Cape Fear and Yadkin watersheds (Letter from NC Division of Water Quality dated November 21, 2007 included in **Appendix E**). The Cape Fear watershed is a Class III protected watershed. Water Supply III (WS-III) waters are not used as sources of potable water. The Yadkin watershed is a Class IV protected watershed. Water Supply IV (WS-IV) waters are used as sources of potable water. WS-IV waters are generally in *moderately to highly developed* watersheds, and involve some categorical restrictions on discharges.

Based on a screening of GIS data for each alternative, potential impacts to watersheds within the project study area were calculated. As shown in **Table 5-2**, implementation of the Ultimate Section Alternative would result in the most impacts to local watersheds.

The southern project area crosses the upper reaches of the Uwharrie River just north of the intersection of Surrett Drive and Turnpike Road. Richland Creek, which is a 303(d) listed stream, traverses the northern portion of the study area just north of Elm Street. Muddy Creek, which is a North Carolina impaired stream, parallels Sealy Drive, and is located east of Surrett Drive from Murray Circle to just north of Eden Terrace / Corporation Drive. As shown in **Table 5-2**, implementation of the Ultimate Section Alternative would result in the most stream crossings. A review of the National Wetland Inventory (NWI) reveals several wetlands throughout the study area (**Figure 5-1** and **Figure 5-2**). In addition, implementation of the Ultimate Section Alternative would result in the most impacts to NWI wetlands.

Table 5-2: Water Resource Impacts

Resource		Minor Widening Alternative	Traffic Operations Alternative	Major Widening Alternative	Ultimate Section Alternative
Floodplains (acres)	Total	2.5	3.5	4.5	6.0
	Impacts by Stream	A Zone - (0.89) (Uwharrie River) A Zone - (1.45) (Little Uwharrie Creek) AE Zone – (0.3) (Richland Creek) 500-Yr Zone - (0.15) (Richland Creek)	A Zone – (3.5) (Little Uwharrie River)	A Zone – (1.13) (Uwharrie River) A Zone – (1.67) (Little Uwharrie River) AE Zone – (1.6) (Richland Creek) 500-Yr Zone - (0.8) (Richland Creek)	A Zone – (1.18) (Uwharrie River) A Zone – (4.61) (Little Uwharrie Creek) AE Zone – (0.9) (Richland Creek) 500-Yr Zone (0.8) (Richland Creek)
Watersheds (acres)	Total	36.6	43.3	76.3	96.3
	Impacts by Watershed	Cape Fear - (11.21) Yadkin - (25.45)	Cape Fear - (18.45) Yadkin - (24.85)	Cape Fear - (31.36) Yadkin - (44.95)	Cape Fear - (42.48) Yadkin - (53.81)
Streams (# of crossings)	Total	3	4	5	6
	Impacts by Stream	Little Uwharrie River (1) Uwharrie River (1) Tributary to Richland Creek (1)	Little Uwharrie River (3) Muddy Creek (1)	Little Uwharrie River (2) Uwharrie River (1) Tributaries to Richland Creek (2)	Little Uwharrie River (3) Uwharrie River (1) Tributaries to Richland Creek (2)
Total Streams (linear feet within ROW)	Total	443.6	721.5	785.8	1,185.3
	Impacts by Stream	Little Uwharrie River (224.9) Uwharrie River (129.8) Tributary to Richland Creek (88.8)	Little Uwharrie River (571.7) Muddy Creek (149.7)	Little Uwharrie River (312.3) Uwharrie River (163.7) Tributaries to Richland Creek (309.7)	Little Uwharrie River (864) Uwharrie River (170.9) Tributaries to Richland Creek (150.3)
NWI Wetlands (acres)	Total	0.5	0.0	0.6	0.7
	Wetland	Uwharrie River		Uwharrie River	Uwharrie River

Source: Available GIS Data

5.1.2 Protected Species

The NC Department of Environment and Natural Resources - Natural Heritage Program provided information regarding resources in the project area in a letter dated November 26, 2007. This letter is included in **Appendix E**. There are no records of rare species, significant natural communities, significant natural heritage areas, or conservation/managed areas along the project or within one mile of the project.

Although there are no recorded occurrences of Natural Heritage Program elements, there may be protected species or significant natural communities in the undeveloped areas along the project that have simply not been surveyed.

5.2 HUMAN ENVIRONMENT

5.2.1 Land Use

Land use within the northern end of the study area is heavily industrial, with manufacturing, warehousing, and other uses typically associated with heavy traffic and trucking movements. Along the southern portion of the corridor, Surrett Drive serves a mix of commercial uses, the Guilrand Fire Department, Trinity High School, and low-density residential uses.

5.2.2 Hazardous Materials

As shown on **Figure 5-1** and **Figure 5-2**), there are several hazardous substance disposal sites within the project study area. The hazardous materials site owned by Duke Refining Corporation located on Jarrell Street, just north of US-85 Business, would impact implementation of the Major Widening Alternative and Ultimate Section Alternative. Hazardous materials sites likely would not impact either of the two other project alternatives. Additional studies would be needed to determine the conditions on the site and severity of impact.

5.2.3 Farmland

There are no active farming operations within the Surrett Drive corridor and much of the study area is developed. However, some vacant areas within Randolph County may be viable farmland. As such, soil data and USGS maps for the Randolph County portion of the study area were analyzed. As shown in **Table 5-3**, the Ultimate Section Alternative, which would require the most right of way, also would impact the most farmland soils.

Table 5-3: Farmland Soils Impacts

Alternative	Prime Farmland Soils (acres)	Farmland Soils of Statewide Importance (acres)
Minor Widening	7.8	2.0
Traffic Operations	9.4	3.2
Major Widening	10.9	2.8
Ultimate Section	13.4	2.9

Source: Natural Resource Conservation Service, 2008

5.2.4 Archaeological and Historic Resources

The State Historic Preservation Office (HPO) provided information regarding known archaeological and historic resources in the project area in a letter dated January 15, 2008. This letter is included in **Appendix E**.

Archaeological Resources. In their letter dated January 15, 2008 (**Appendix E**), the State Historic Preservation Office states that "there are no recorded archaeological sites in the immediate vicinity of Surrett Drive". They also state that "If the proposed improvements are not extensive, the majority of the project should have no effect on archaeological resources. The area of the crossing of the Uhwarrie River may have the potential to affect as yet unrecorded archaeological sites. We recommend that you forward plans of this area as they develop, so we may advise you as to any needed archaeological investigations in that area."

Historic Resources. There is one known historic resource in the area of potential effect, the Highland Cotton Mill and Village (Site GF 636). This historic district is located one block to the northwest of the project terminus at West Market Street. Impacts to this historic district are not anticipated under any of the project alternatives.

5.2.5 Economics

According to the Employment Security Commission of North Carolina (http://www.ncesc.com/), in 2006 Manufacturing was the largest employment sector, accounting for approximately 42 percent of the private sector employment base of Randolph County. Trade, Transportation and Utilities ranked as the largest employment sector for Guilford County.

The NC Department of Commerce annually ranks the State's 100 counties based on economic well-being and assigns each a Tier designation. The 41 most distressed counties are designated as Tier 1, the next 39 as Tier 2 and the 20 least distressed as Tier 3. Randolph County has a Tier 2 ranking and Guilford County has a Tier 3 ranking (http://www.nccommerce.com).

If most of the businesses along the route remain after construction, improvements to Surrett Drive likely would benefit the economy of the High Point area by providing better access to I-85 from downtown High Point and the commercial/industrial area of the northern half of Surrett Drive.

5.2.6 Environmental Justice

Federal laws and regulations require the evaluation of effects of transportation actions on minority and low-income populations, which in the past have been underserved in the decision-making process.

The need to identify low-income and minority populations and incorporate their input in the project's decision-making process gained greater emphasis as a result of Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-income Populations* (February 11, 1994). This Order directs all Federal agencies to determine whether a proposed action would have a disproportionately high and adverse impact on minority and/or low-income populations.

In April 1997, the US Department of Transportation (USDOT) issued the *USDOT Order on Environmental Justice to Address Environmental Justice in Minority Populations and Low-Income Populations (DOT Order 5610.2)* to summarize and expand upon the requirements of Executive Order 12898 on environmental justice. The Order generally describes the process for incorporating environmental justice principles into all USDOT existing programs, policies, and activities that are undertaken, funded, or approved by the FHWA, the FTA, or other USDOT entities.

The three fundamental environmental justice principles are:

1)To avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority and low-income populations.
2)To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
3)To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

The USDOT Order 5610.2 defines "minority" in the definition section of its appendix and provides definitions of four minority groups addressed by Executive Order 12898. These groups are:

1)Black – a person having origins in any of the black racial groups of Africa.
2)Hispanic – a person of Mexican, Puerto Rican, Cuban, Central or South America, or other Spanish culture or origin regardless of race.
3)Asian – a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.

4)American Indian and Alaskan Native – a person having origins in any of the original people of North America and who maintains tribal affiliation or community attachment.

It also defines 'low-income' as a person (of any race) whose household income (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services poverty guidelines.

As shown in **Table 5-4**, the project study area is included in six Census Tract Block Groups. The median household income and total population within these block groups were studied.

Table 5-4: Census Block Groups in Study Area

Randolph County	Guilford County
CT 315.01, BG 1	CT 143, BG 2
CT 316.01, BG 1 & 3	CT 145.01, BG 1
CT 316.02, BG 1	

Source: Census 2000

Household Income. Data on median household income within the corridor were compared to Randolph ($38,348) and Guilford ($42,618) counties and the State ($39,184). The median household income for the four Census Tract Block Groups in Randolph County ranged between $34,375 (CT 316.02, BG 1) and $48,438 (CT 316.01, BG 3). Of the four Census Tract Block Groups, only CT 316.02, BG 1 was lower than Randolph County and the State. In contrast, the median household incomes for both of the Census Tract Block Groups within Guilford County were lower than Guilford County and the State (CT 143, BG 2 with $28,626 and CT 145.01, BG 1 with $31,625).

Race/Ethnicity. Whites are the predominant racial group in the project area, consisting of comprising approximately 91 percent of the population in the study area block groups. Census Tract 143 Block Group 2, located in Guilford County, is the most diverse, with approximately 54 percent white, 18 percent Black or African American, 16 percent Asian, and 9.2 percent Hispanic or Latino. Census Tract 145.01 Block Group 1, also located in Guilford County, is approximately 74 percent white, 13 percent Black or African American, 4.2 percent Asian, and 9.9 percent Hispanic or Latino. In contrast, the Census Tract Block Groups located in Randolph County are less diverse with the white population ranging between 89 and 98 percent.

Based upon the above review of the Census data and a project site visits there does not appear to be relatively high percentages of minority populations in the area. Although the economic make-up of the corridor includes lower household income levels, the income levels are not below that identified by the US Department of Health and Human Services poverty guidelines (**Table 5-5**). As such, implementation of either of the project alternatives would not disproportionately impact any special populations identified in the environmental justice requirements.

Table 5-5: 2008 Poverty Guidelines

Persons in Family/Household	48 Contiguous States and DC
1	$10,400
2	$14,000
3	$17,600
4	$21,200
5	$24,800
6	$28,400
7	$32,000
8*	$35,600

Source: Federal Register, Vol. 73, No. 15, January 23, 2008. *Each additional person, add $3,600.

5.2.7 Property Acquisition and Relocation

All of the alternatives were reviewed to determine the number of parcels to be acquired and the approximate number of relocations, with the exception of the Minor Widening Alternative. Since this alternative would not include improvements outside the existing right of way, property acquisition would not be required and there would be no associated right of way costs. Identification of impacted parcels per alternative and right of way cost estimates are included in **Appendix F**.

In order to determine the approximate number of acquisitions and relocations, aerial preliminary plan sheets, county GIS property data systems, and other real estate data base websites were reviewed. A field review was not conducted. Potentially impacted parcels were identified and the property tax

records obtained for base information for each alternative. **Table 5-6** includes the number of impacted parcels that are located within the right of way for each alternative based on current land use, as well as the number of potential relocation parcels per alternative.

Table 5-6: Land Uses Within Right of Way

Alternative	Potential Relocations	Number of Parcels in Right of Way						
		Total Parcels	General Comm/ Retail	Industrial	Light Manufacturing	Church	Residential	Vacant Land
Traffic Operations	2	69	9	8	6	2	16	28
Major Widening	11	107	12	15	7	3	24	46
Ultimate Section	22	119	12	17	9	3	28	50

Source: Right of Way Estimate, PBS&J, 2008

5.2.8 Right of Way and Construction Costs

Right-of-way costs were estimated using tax values available on-line at the Guilford County and Randolph County websites. **Appendix F** contains the estimate spreadsheets. If the proposed right of way passed through a structure, the parcel was assumed to be a relocation, and the entire tax value was assumed for the right-of-way cost estimate. For partial takes of parcels, the cost was estimated by multiplying the tax-assessed land value by the percent of the parcel required for right of way. These values were multiplied by a factor of three to account for market conditions, relocation costs, and other contingencies.

Preliminary construction costs for each alternative also were developed. The breakdown of the costs associated with the construction of each alternative can be found in **Appendix F**.

The total estimated costs (construction and right of way) in 2008 dollars are listed in **Table 5-7**. As expected, the Ultimate Section Alternative would cost the most to implement and the Minor Widening Alternative the least.

Table 5-7: Estimated Right of Way and Construction Costs by Alternative

Alternative	Construction Cost ($millions)			Right of Way Cost ($millions)			Total Cost
	Section A (south)	Section B (north)	Total A+B	Section A (south)	Section B (north)	Total A+B	
Minor Widening (not divided into sections)	$7.10	--	$7.10	--	--	--	$7.10
Traffic Operations	$4.45	$9.00	$13.45	$2.61	$0.17	$2.77	$16.22
Major Widening	$14.20	$14.20	$28.40	$3.54	$6.38	$9.92	$38.32
Ultimate Section	$14.40	$21.00	$35.40	$4.33	$32.81	$37.14	$72.54

Source: Right of Way Estimate, PBS&J, 2008

6 RECOMMENDATIONS

As described in Section 4, there are four alternatives considered for increasing capacity and improving congestion along the Surrett Drive corridor. When comparing the potential impacts associated with implementation of the four project alternatives, implementation of the Ultimate Section Alternative would result in the most impacts to the natural and human environment. However, this alternative would result in the most improvements to capacity. Conversely, the Minor Widening Alternative would cost the least, but also result in the least benefit.

This feasibility study recommends implementing a combination of the Ultimate Section Alternative south of Archdale Boulevard (Section A) and the Traffic Operations Alternative north of Archdale Boulevard (Section B). South of Archdale Boulevard, land uses are more suburban and there is more room to increase right of way without causing a substantial number of relocations.

Room for improvements north of Archdale Boulevard is constrained by dense industrial/commercial development and the proximity of the rail line directly along the east side of existing Surrett Drive. The Traffic Operations Alternative would provide the best balance between cost and impacts north of Archdale Boulevard.

Total estimated costs for a combined Ultimate Section (Section A)/Traffic Operations (Section B) Alternative would be $27.9 million, including $23.4 million for construction and $4.5 million for right of way.

7 PUBLIC INVOLVEMENT

Public involvement and input has been encouraged throughout the development of the project. Local government and planning officials were informed of the progress on the project through a meeting held in September 2007. Comments were requested from various resource agencies with an interest in the project through a letter mailed in November 2007. A scoping meeting in March 2008 was conducted between the HPMPO, project consulting team, and the NCDOT to obtain NCDOT concerns and comments regarding the project and associated feasibility study. Finally, a public meeting was held in November 2008 where interested citizens provided comments on the project. Available summaries and minutes, notices, agendas, sign-in sheets, and comments for the above-noted meetings, are included in **Appendix G**.

7.1 LOCAL GOVERNMENT AND PLANNING OFFICIALS MEETING

The Local Government and Planning Officials Meeting was held on September 25, 2007 at the High Point Municipal Building. Meeting attendees included:

- David Hyder – City of High Point
- Phil Wylie – City of High Point
- Fran Andrews – Mayor, City of Trinity
- Adam Stumb – City of Trinity
- Bert Lance-Stone – Mayor, City of Archdale
- John A. (Andy) Bailey – NCDOT
- Jill Gurak – PBS&J
- Kiersten Giugno – PBS&J

The purpose of the meeting was to interview local government and planning officials regarding their knowledge of the Surrett Drive area. Meeting Materials included a prepared questionnaire and an aerial map of project study area. The following bullets outline the main topics raised and discussed at the meeting:

- Corridor Use – The am peak traffic is heaviest northbound, and primarily includes commuters. The pm peak traffic primarily includes southbound commuters. Trinity High School and various commercial and industrial uses generate commuter and truck traffic along Surrett Drive. Most truck traffic uses Surrett Drive north of Sealy Drive. To access I-85 Business, most trucks turn onto Fairfield Drive to the Green Drive interchange because there is a better acceleration lane there compared to the Surrett Drive interchange.
- Safety – Trucks generally do not access I-85 Business from Surrett Drive directly because of the existing grade and associated sight issues at the Surrett Drive/I-85 Business interchange.

  The juxtaposition of the two Mendenhall Road intersections with Surrett Drive represents a perceived safety issue. Also, the condition of the roadway, the 11-foot lanes, and lack of paved shoulders make some drivers feel uncomfortable traveling the roadway.
- Current Projects – TIP Project U-2702 is a safety and drainage improvement project that include the addition of turn lanes at Eden Terrace, changing the grade at Surrett Drive, changing the railroad alignment, and increasing the size of the existing drainage infrastructure under the railroad. This area frequently floods and there is a sign posted on Surrett Drive that the area is subject to flooding.

  The replacement of the Surrett Drive bridge over I-85 Business is being studied. The replacement is estimated to be approximately two to three years out and a Categorical Exclusion currently is being prepared by NCDOT pursuant to the National Environmental Policy Act.

- Stormwater – Stormwater overflow is an issue in low-lying areas, particularly along Surrett Drive at Eden Terrace and on the creek crossing at Mendenhall Road (between Surrett Drive and Uwharrie Drive). That culvert has been replaced about once every two years due to wash outs. Many of the culverts/pipes under the railroad tracks are now undersized.
- Planned or Future Development – It was noted that the potential for development just north of I-85 is high. The fallow field located north of Sealy Drive has a for sale sign and there have been previous discussions about this site being developed for mixed use; however, previous discussions were halted due to water and sewer issues. Water and sewer are provided along Surrett Drive north of Trinity. Within Trinity, water lines are available, but no sewer. New sewer lines are planned by Trinity in the Surrett Drive area in the next phase of their expansion plans.
- Bicycle Path – Interest in a bicycle lane along Surrett Drive was conveyed. State Bike Route 8 follows both sections of Mendenhall Road on either side of Surrett Drive.
- Railroad – The proximity of the existing railroad track parallel to Surrett Drive north of Archdale Boulevard could constrain future improvements to Surrett Drive.
- Parks/Greenway – The area located north of Old Turnpike is currently planned for a park and greenway extending northward toward Trinity High School and continuing beyond the school and connecting to existing green space to the north.
- Environmental – There are several industrial uses within the area. Hazardous materials may be present and could be an issue with construction.
- Study Area Limits – It was suggested that the southern limit be extended to approximately 1,000 feet past I-85.

7.2 AGENCY COORDINATION

A Notice of Planning Coordination letter, dated November 14, 2007, was mailed to various resource agencies with jurisdiction over the project. The letter provided information to the agencies regarding project alternatives, study area boundaries, and potential environmental impacts. Information and comments on the project were requested. The following agencies responded with comments.

- NC Department of Cultural Resources, State Historic Preservation Office
- NC Department of Environment and Natural Resources, Natural Heritage Program
- NC Division of Water Quality, Surface Water Protection Section
- NC Department of Transportation, Feasibility Studies Unit
- NC Department of Transportation, Division of Bicycle and Pedestrian Transportation

In accordance with NCDOT requirements for the preparation of feasibility studies, a project scoping meeting was held between the HPMPO, consulting team and the NCDOT on March 11, 2008. The scoping meeting was attended by the following individuals:

- David Hyder – City of High Point
- Derrick Lewis – NCDOT, Feasibility Studies Unit
- Ed Robbins – NCDOT, Roadway Design
- Gary Lovering – NCDOT, Roadway Design
- Travis Braswell – NCDOT, Congestion Management
- Bao Long Le – NCDOT, Congestion Management
- Doumit Ishak – NCDOT, Traffic Engineering
- Jill Gurak – PBS&J
- Kiersten Giugno – PBS&J
- Clint Morgan – PBS&J
- Bryan Lambeth – PBS&J

At this project scoping meeting, the NCDOT requested additional design work; including median turn lanes, u-turn bulbs and right of way limits. NCDOT requested that an 'Ultimate Section' alternative be developed with the aforementioned design elements. As such, a fourth alternative was added for analysis in the feasibility study.

7.3 Public Meeting

A public meeting was held on November 19, 2008 at the Trinity Memorial United Methodist Church located at 7110 NC Highway 62. The meeting was conducted by the HPMPO and project consulting team. A newsletter announcing the meeting was mailed to property owners located within a quarter-mile of Surrett Drive in the project study area. The purpose of the meeting was to solicit public input on the project and the recommended alternative.

Approximately 21 citizens attended the workshop. In general, the attendees agreed that improvements were needed along Surrett Drive. Nine comment forms were received. All nine forms included comments in support of the project. The following is a summary of the comments received:

- Five requests for a traffic signal at the intersection of Surrett Drive and Trinity High School Road.
- One request for additional traffic signals through the corridor and for safety reasons to start as soon as possible.
- One request for a greenway from Archdale Boulevard to NC Highway 62.
- One agreement with the study and Ultimate Section south of Archdale Boulevard.
- One request for the Ultimate Section Alternative throughout the study corridor.

Appendix A

Final Surrett Drive Travel Demand Forecast Report

Surrett Drive Travel Demand Forecast Report: Guilford and Randolph Counties, NC

FOR:

PBS&J

BY:

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Project No. 00024.00

May 29, 2008

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Table of Contents:

1. Introduction

The following report details the information gathered and the process used to develop the travel demand forecast for the Surrett Drive Corridor. This information will assist in capacity analysis and alternative selection. The forecast area extends approximately 4.5 miles, from the intersection of Surrett Drive and West Market Center Drive in Guilford County southward to the intersection of Surrett Drive with the I-85 ramps in Randolph County.

2. Project Location

Surrett Drive extends from the southwest corner of Guilford County to the northwest corner of Randolph County. The project area is located within the cities of High Point, Archdale, and Trinity. The project area is bordered by High Point and Greensboro to the north, Thomasville to the west, Asheboro to the south, and Archdale to the east. Interstate 85 is a statewide northeast-southwest facility connecting Charlotte in southern North Carolina with Chapel Hill, Durham, and the Triangle Area in central North Carolina. Business 85 connects Greensboro to the northeast with Thomasville to the west. North Carolina Highway 62 (NC 62) is a local east-west facility connecting Thomasville to the west with Archdale to the east.

3. Project Area Description

The project area includes the cities of High Point, Archdale, and Trinity. This area provides a connection between the Triad area, including Winston-Salem, Greensboro, and High Point, and the suburban/rural communities of Archdale, Trinity, and Randolph County. This area is included in the High Point Metropolitan Planning Organization, of which all the cities the project passes through are members. Surrett Drive currently serves a mix of land uses, with industrial (including manufacturing, industrial, and warehousing zoning designations) and low density residential (including residential-agricultural and low density subdivision zoning) making up the majority of the corridor. The entire project area is within a designated watershed associated with Lake Reece.

The project corridor begins in the High Point city limits, in Planning Community 7 (as defined by the High Point Land Use Plan), described as one of the two most urban areas of the city with concentrated residential and industrial uses. Population densities are relatively high in this area, however actual population totals have been on the decline in recent years. Further, there is the potential for this trend to continue for some time into the future.

Areas identified as 'quality farmland' according to the City of Trinity Land Development Plan (September, 2006) are located in the northern part of Randolph County, in the Archdale area north of the Surrett Drive-Sealy Road split, and again in the southern project corridor near the Surrett Drive-Turnpike Road intersection.

The southern project area crosses the upper reaches of the Uwharrie River just north of the intersection of Surrett Drive and Turnpike Road.

The High Point Thoroughfare Plan designates Surrett Drive as a major thoroughfare and is planned for widening to a four-lane divided facility due to capacity needs according to the City of Trinity Land Development Plan (September, 2006). Surrett Drive from Market Center Drive to Business 85 and from Fairfield Drive to Sealy Drive has been identified as seriously congested with LOS F (High Point 2030 Long Range Transportation Plan). These sections of Surrett Drive are recommended for improvement in the next two years with signal coordination and additional physical capacity recommended as possible solutions (High Point 2030 Long Range Transportation Plan).

4. Socioeconomic Factors

According to the US Census 2000, the median yearly salary was $30,575 for Randolph County and $35,498 for Trinity. The largest employment group in the County was manufacturing at 34.8% according to the US Census 2000 (manufacturing accounts for 47% of employment in the county according to the Randolph County Growth Management Plan, 2002). See Table 1, below, for a comparison of employment information for the cities and counties the project area includes. This is a high commuting area with 32% of the total work force commuting to work in areas outside Randolph County (Randolph County Growth Management Plan, 2002).

Table 1: Employment Data

	Archdale	High Point	Trinity	Guilford County	Randolph County	NC
Population (2000)	9,014	85,839	6,690	421,048	130,454	8,049,313
Population (2006)	9,451	97,796	6,988	451,905	140,410	8,856,505
Employed*	5,209 (73.3%)	42,250 (64.1%)	3,720 (68.0%)	217,104 (65.4%)	67,150 (66.3%)	3,824,741 (60.8%)
Median Yearly Salary ($)	34,449(M) 24,456(F)	33,411(M) 25,293(F)	35,498(M) 22,208(F)	35,940(M) 27,092(F)	30,575(M) 22,503(F)	32,132(M) 24,978(F)
Manufacturing Emp.	29.3%	25.1%	32.2%	18.5%	34.8%	19.7%
Education/ Health/ Social Serv. Emp.	12.5%	16.7%	12.8%	18.7%	13.1%	19.2%
Retail Emp.	12.8%	11.8%	13.4%	11.5%	11.1%	11.5%

* note – Employment percentage based on population 16 years and older
Source: US Census Quickfacts

5. Local Input

Local input was provided through an interview with High Point Transportation Department. Data from this interview used in the development of the forecast includes the following:

- AM peak traffic is heaviest in the northbound direction

This information, validated by hourly count data, assisted in determining the peak direction shown on the forecast.

- Potential for development north of I-85 is high

The growth rate resulting for the forecast was higher in the southern section of the planning area.

- There is no existing or planned public transportation service in the study corridor. No adjustment was made to forecast volumes based on additional modes becoming available.

6. Data Collection and Review

Several sources of data were used to estimate future growth in the corridor, as well as other provided data such as truck percentages, directional splits, and peaking characteristics. Primarily, the forecast is based on the following:

- NCDOT, Annual Average Daily Traffic (AADT) maps, 1990 – 2006, where available
- City of High Point, Summer Count Program, turning movement counts at all project intersections, June 2007, (some additional June 2005) normalized using NCDOT AADT conversion factors
- High Point MPO, Long Range Transportation Plan (LRTP)
- General land use observed during field visit
- Existing travel patterns as observed during field visit
- Triad Regional Model, design year 2035 projected volumes (version 1.0)
- NCDOT, B-4760, Traffic Forecast, August 2007
- NCDOT, U-2702, Traffic Forecast, Surrett Drive, Eden Terrace and Corporation Drive, April 2004
- Aerial photography

Transportation Improvement Projects

The following projects were included in the NCDOT 2007-2013 Transportation Improvement Program at the time of this forecast. These projects were assumed to be complete by the year 2035 (including those currently without funding).

- U-3432 - Guilford and Randolph Counties. Surrett Drive (SR 1595-SR1216), Eden Terrace to Market Center Drive. Widen to multi-lane. Unfunded.

- B-4760 - Guilford County. Surrett Drive, replacement of Bridge #77 over US29/US70/I85 Business. Right of way scheduled for FY 2011; Construction scheduled for FY 2012.

- U-2702 - Archdale High Point, Randolph County. SR 1592 (Eden Terrace) and SR 1595 (Surrett Drive) intersection improvement. South of Eden Terrace-Corporation Drive north to West Fairfield Road, widen Surrett Drive to three lanes, improve grade and drainage in area. Construction scheduled for FY 2009.

- R-609 - Guilford/Forsyth/Randolph Counties. US 311 Bypass, south of SR 1920 east of Archdale to W of High Point Reservoir, four-lane divided facility on new location. Three sections of this project are complete with the remaining two sections scheduled for construction in FY 2007.

- R-2606 - Randolph County. US 311 Future I-74, south of SR 1920 to US 220 north of Asheboro. This strategic corridor project is accounted for in the model used to develop future forecast data.

These projects are in Divisions 7 and 8, specifically in Guilford and Randolph Counties.

7. Forecasting Methodology

A review of the volumes and supporting information for the NCDOT Traffic Forecast (B-4760 dated 08-20-2007) found this information to be applicable to the Surrett Drive forecast. Additionally, there were overlapping areas between the B-4760 forecast and the Surrett Drive study area, specifically the northern portion of the project. Therefore, the B-4760 forecast was utilized to verify the assumptions in the northern portion of the study area.

Base Year Forecast Development

AADT trend-lines were developed for locations where available. These trend lines were developed using historic count data, and calculation of average annual growth rates. The recent AADT data was also compared to recent manual turning movement count data (as provided by the City of High Point). A comparison of manual turning movement counts (all 12 hours in duration) to AADT data showed that manual counts were consistently around 75% of the AADT value. Since manual counts were taken in the summer months, typically having less traffic, and were obtained for only 12 hours (6:00am to 6:00pm), those counts would be expected to be less than the AADT for the same link. Thus, base year directional volumes are based on the count data, adjusted as described.

Future Year Forecast Development

Developing estimates of future volumes was accomplished by reviewing the collected data, comparing trends to the model volumes, then reviewing the estimate to determine if the projected volume was reasonable based on average annual growth, as well as the ability of the surrounding land use to supply enough traffic to maintain the assumed growth rate.

The Triad Regional Model was used mainly to estimate the volume change brought on by future connections such as the Mendenhall Road realignment, Sealy Drive connector, and Uwharrie Road/Sisters Lane extension. Additionally, the growth rate calculated by comparing AADT data to 2035 model volumes was compared to past AADT growth trends. Further, the growth rate resulting from a comparison of base year to future year volumes in the B-4760 forecast was obtained, and compared against the model and past trends.

In some instances, negative growth trends were found when comparing AADT data over the past several years. This information was used to help choose an appropriate growth rate, but was not calculated directly, as the trend of negative growth is not expected to continue through the design year of the project (2035). The negative growth rates did, however, shed light on the recent decline in traffic, and as such, caused planners to keep their estimates of average annual growth rates lower (in the 1-2% per year range).

A growth rate of around 1% was calculated for the northern planning area. This assumption seemed reasonable, as this area was the most developed at the time of the forecast. Between Sealy and NC 62, AADT forecast showed an average annual growth rate of around 3%. This increase is mostly due to new connections such as Sealy connector and Uwharrie Road/Sisters Lane extension. Those projects, which send the majority of their traffic to NC 62, I-85, and the south, caused this increase in growth rate. The growth rate from I-85 to the south (4% average annual growth rate) was determined to be reasonable since most of the developable land was in the southern section of the forecast area. These rates match the historic trends found through the corridor. A comparison of historic growth and forecast growth can be found in Appendix C - Historic ADT Data.

Also, aerial photography and data collected during the site visit was used to estimate the amount of developable land in the corridor. While much of the land in the northern portion was heavily developed with industrial uses, the land uses transitioned between medium residential (sub-division type development) to low density and farm areas. Slopes through the area were mostly rolling, and thereby were not seen as an impediment to development. Thus, even with recent negative growth trends, the area was still determined to have the potential to increase in both population, and employment.

Once chosen growth rates were applied to links and turning movements, these volumes were adjusted to provide mathematically balanced turning movements (note that standard procedure is to provide balanced AADT data, but not balanced truck or peak data).

Truck Percentage

The truck percentages shown in the forecast are based on data from the B-4760 forecast, as well as manual turning movement counts. Land use through a large portion of the forecast area is heavily industrial, with manufacturing, automotive (Thomas Bus Company) and other uses typically associated with heavy trucking movements. This pattern of land use, along with the types of products made, was assumed to exist in the design year as well. Therefore, truck percentages were not changed between the base year forecast (calculated based on count data) and the future year.

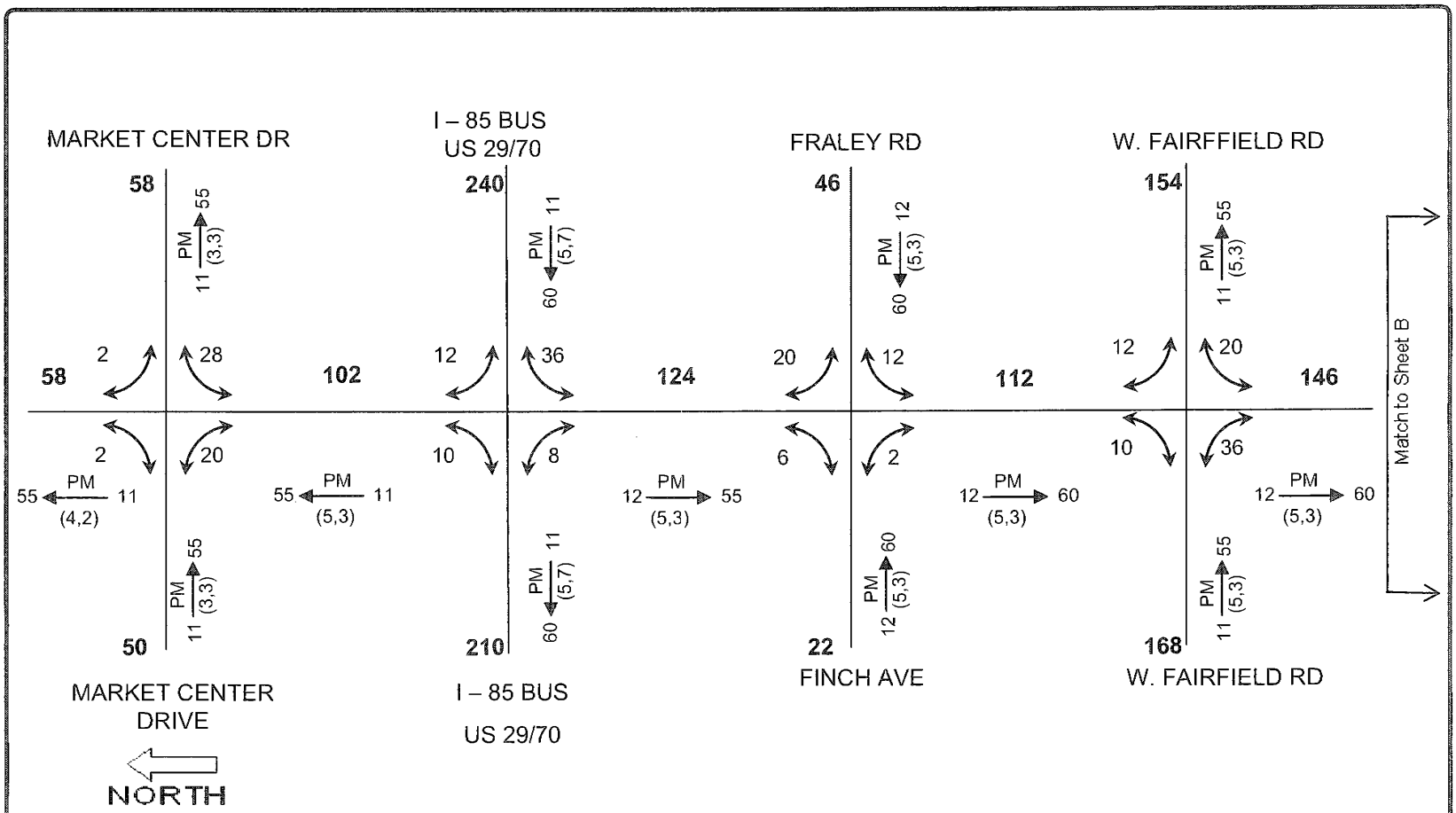
Peaking Characteristics and Directional Distribution

As described in the previous section, the assumption was made that the existing patterns of development will continue into the design year. Also, with the presence of I-85 in the study area, it was not thought that future minor connections, or small changes in development along any Y-line would change the general travel patterns through the area. Therefore, the peaking and directional distribution factors remained unchanged.

While in many instances, higher congestion in a corridor or area can reduce the percentage of daily traffic occurring during one peak hour (peak spreading), the forecast assumed that the majority of new development would be mostly residential (especially in the southern study area), thereby continuing the pattern of leaving for work during the peak, and returning likewise.

8. Results

The result of this study is a project level traffic forecast for the years 2007 and 2035, as shown on Figures 1 and 2. Interim volumes may be estimated by straight-line interpolation.



LEGEND

K	Design Hourly Volume (%) = K30
PM	PM Peak Period
D	Directional Split (%)
(d,t)	%Duals, %TTST's
→	Indicates direction D; reverse for AM
-1	Indicates volume much less than 100
XXX	Volumes are AADT in Hundreds

K PM → D (d,t)

Proposed Facility

Break line

SURRETT DRIVE FEASIBILITY STUDY

TRAVEL DEMAND FORECAST

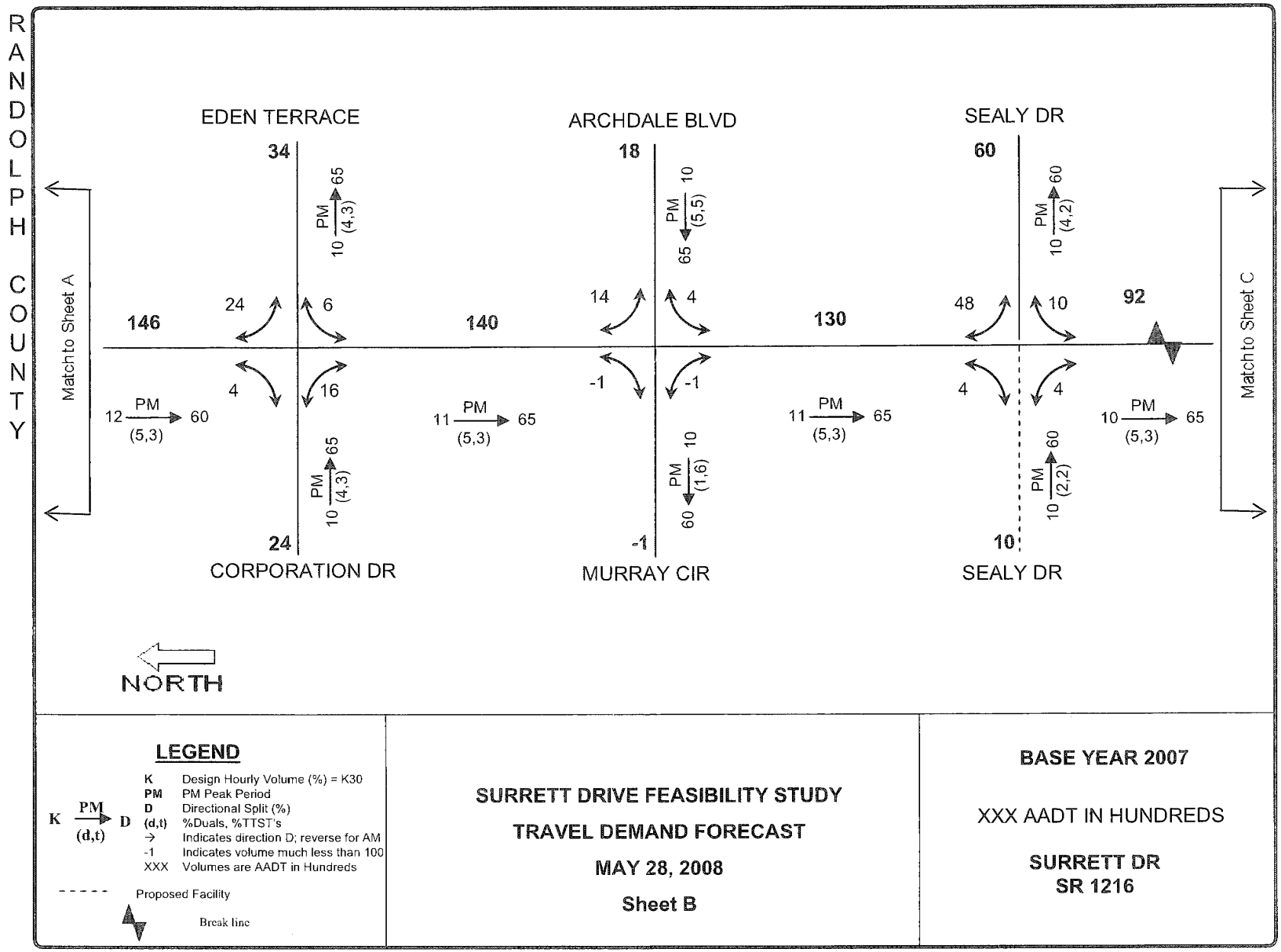
MAY 28, 2008

Sheet A

BASE YEAR 2007

XXX AADT IN HUNDREDS

SURRETT DR
SR 1216



LEGEND

K PM (d,t) D

K	Design Hourly Volume (%) = K30
PM	PM Peak Period
D	Directional Split (%)
(d,t)	%Duals, %TTST's
→	Indicates direction D; reverse for AM
-1	Indicates volume much less than 100
XXX	Volumes are AADT in Hundreds

Proposed Facility

Break line

SURRETT DRIVE FEASIBILITY STUDY

TRAVEL DEMAND FORECAST

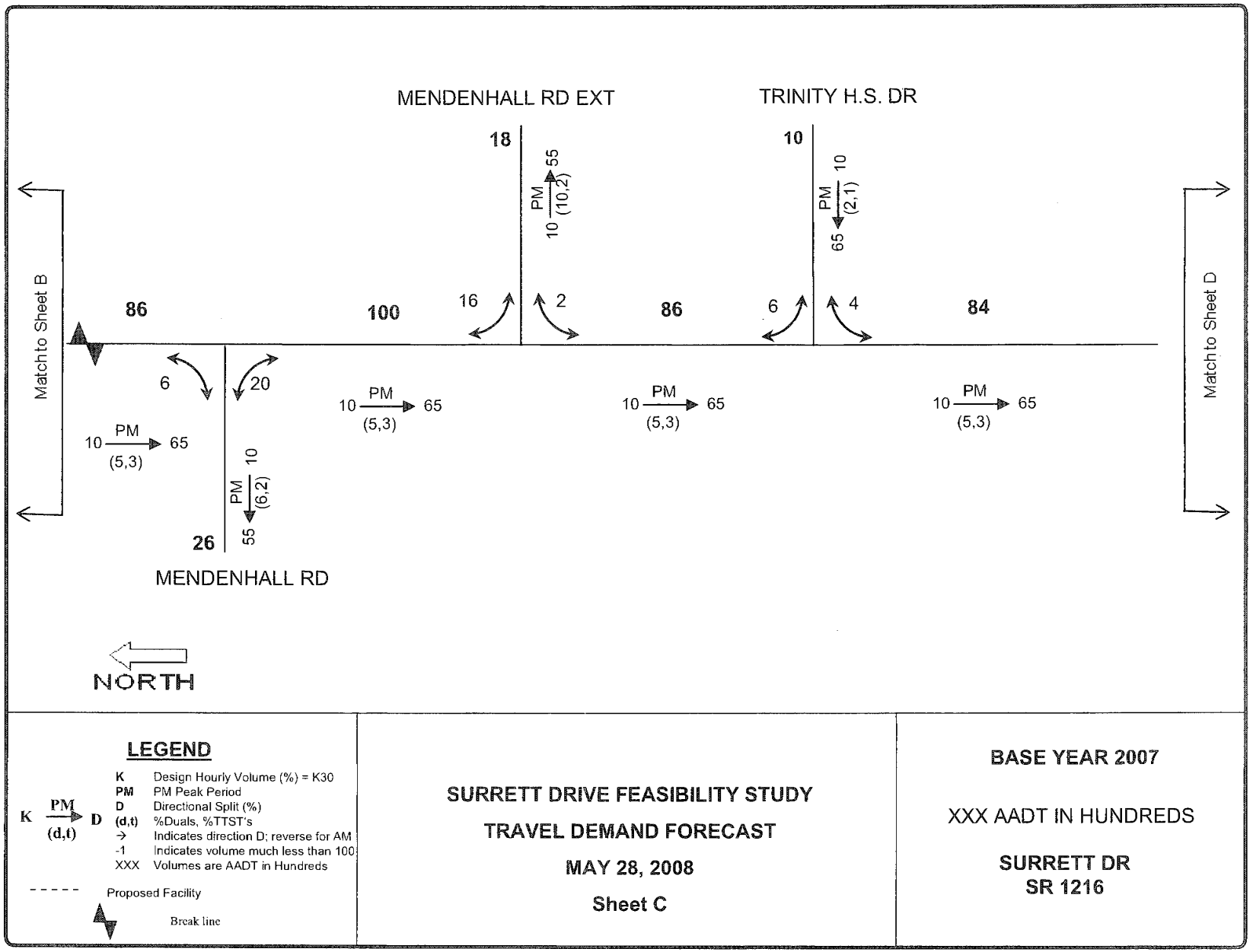
MAY 28, 2008

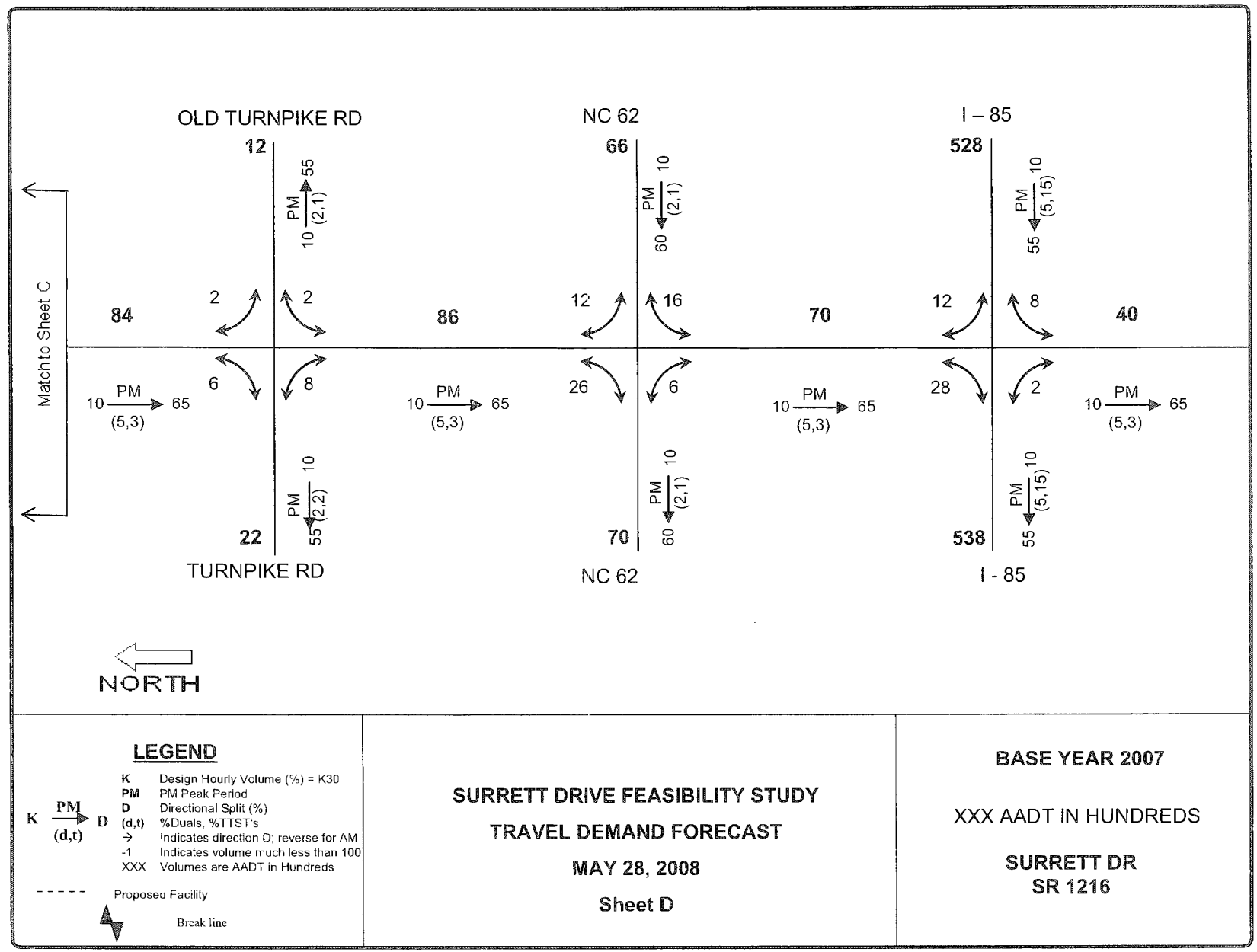
Sheet B

BASE YEAR 2007

XXX AADT IN HUNDREDS

SURRETT DR
SR 1216


MENDENHALL RD EXT
TRINITY H.S. DR
18
10
PM 10 (10,2) 55
PM 65 (2,1) 10
Match to Sheet B
86
100
16
2
86
6
4
84
Match to Sheet D
6
20
PM 10 (5,3) 65
PM 10 (5,3) 65
PM 10 (5,3) 65
PM 10 (5,3) 65
PM 10 (6,2) 55
26
MENDENHALL RD
NORTH
LEGEND
K Design Hourly Volume (%) = K30
PM PM Peak Period
D Directional Split (%)
(d,t) %Duals, %TTST's
→ Indicates direction D; reverse for AM
-1 Indicates volume much less than 100
XXX Volumes are AADT in Hundreds
Proposed Facility
Break line
SURRETT DRIVE FEASIBILITY STUDY
TRAVEL DEMAND FORECAST
MAY 28, 2008
Sheet C
BASE YEAR 2007
XXX AADT IN HUNDREDS
SURRETT DR
SR 1216



LEGEND

K PM D (d,t)

K	Design Hourly Volume (%) = K30
PM	PM Peak Period
D	Directional Split (%)
(d,t)	%Duals, %TTST's
→	Indicates direction D; reverse for AM
-1	Indicates volume much less than 100
XXX	Volumes are AADT in Hundreds

Proposed Facility

Break line

SURRETT DRIVE FEASIBILITY STUDY

TRAVEL DEMAND FORECAST

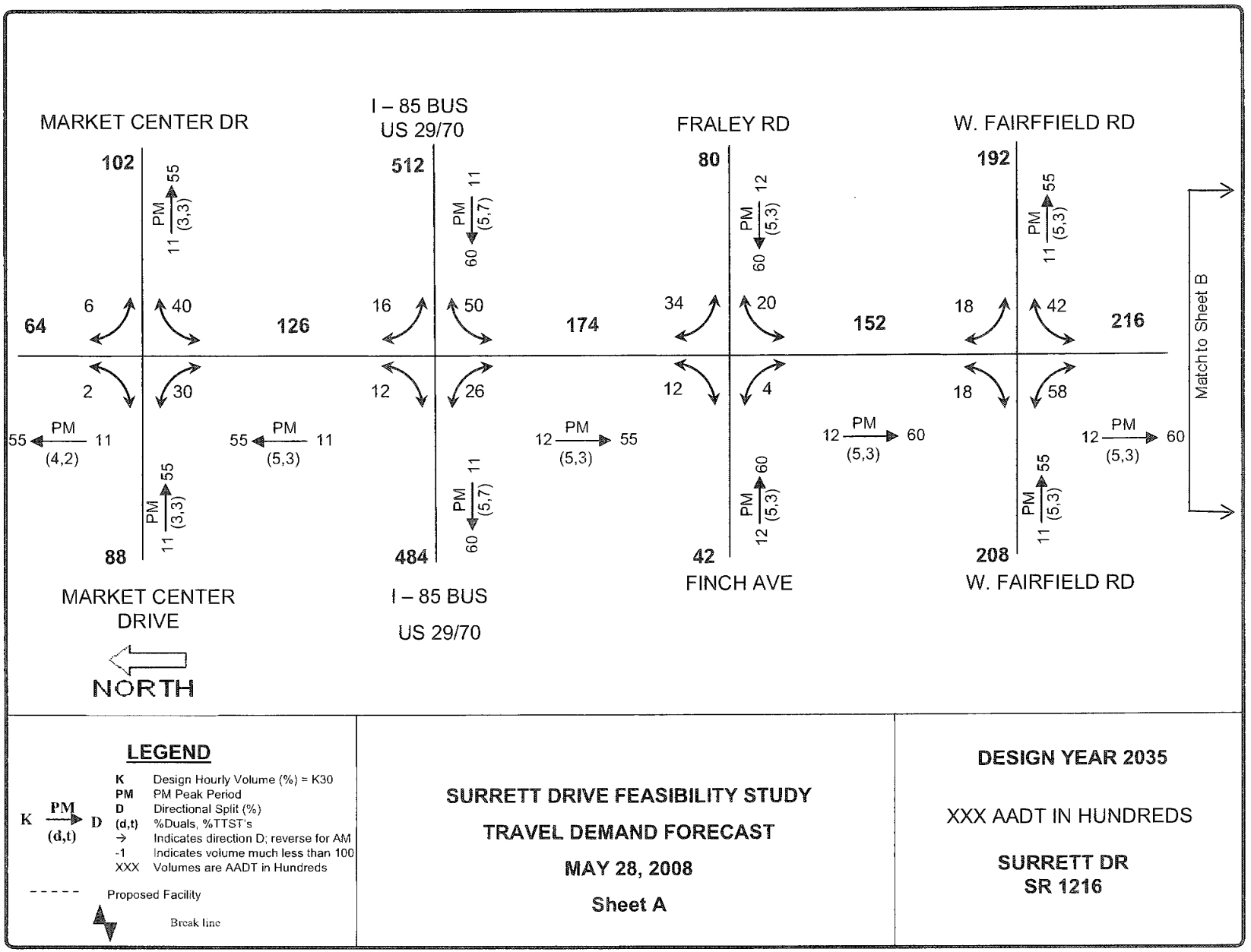
MAY 28, 2008

Sheet D

BASE YEAR 2007

XXX AADT IN HUNDREDS

SURRETT DR
SR 1216


MARKET CENTER DR
I – 85 BUS
US 29/70
FRALEY RD
W. FAIRFFIELD RD
102
512
80
192
PM 11 (3,3) 55
PM 60 (5,7) 11
PM 60 (5,3) 12
PM 11 (5,3) 55
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126
174
152
216
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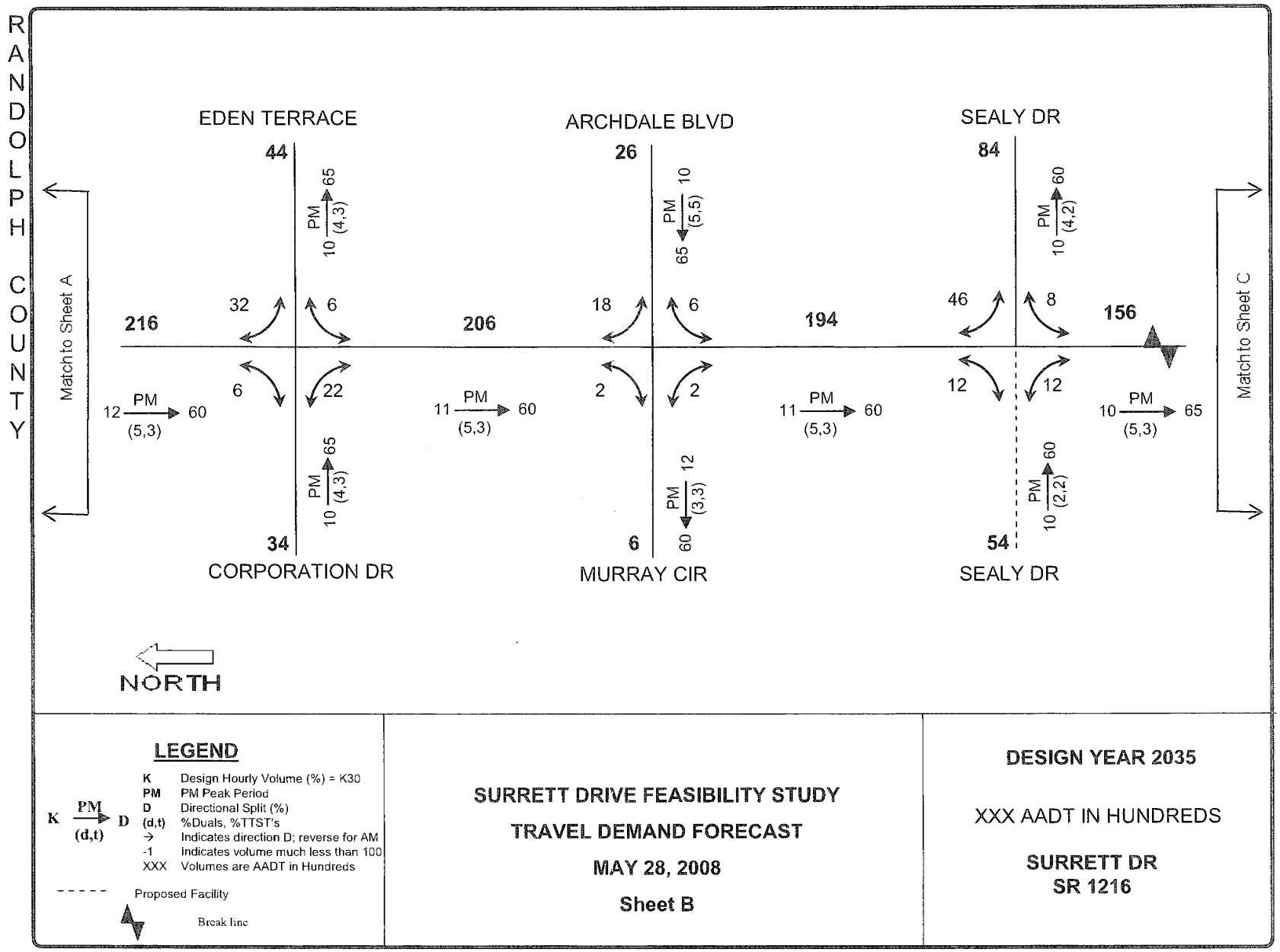
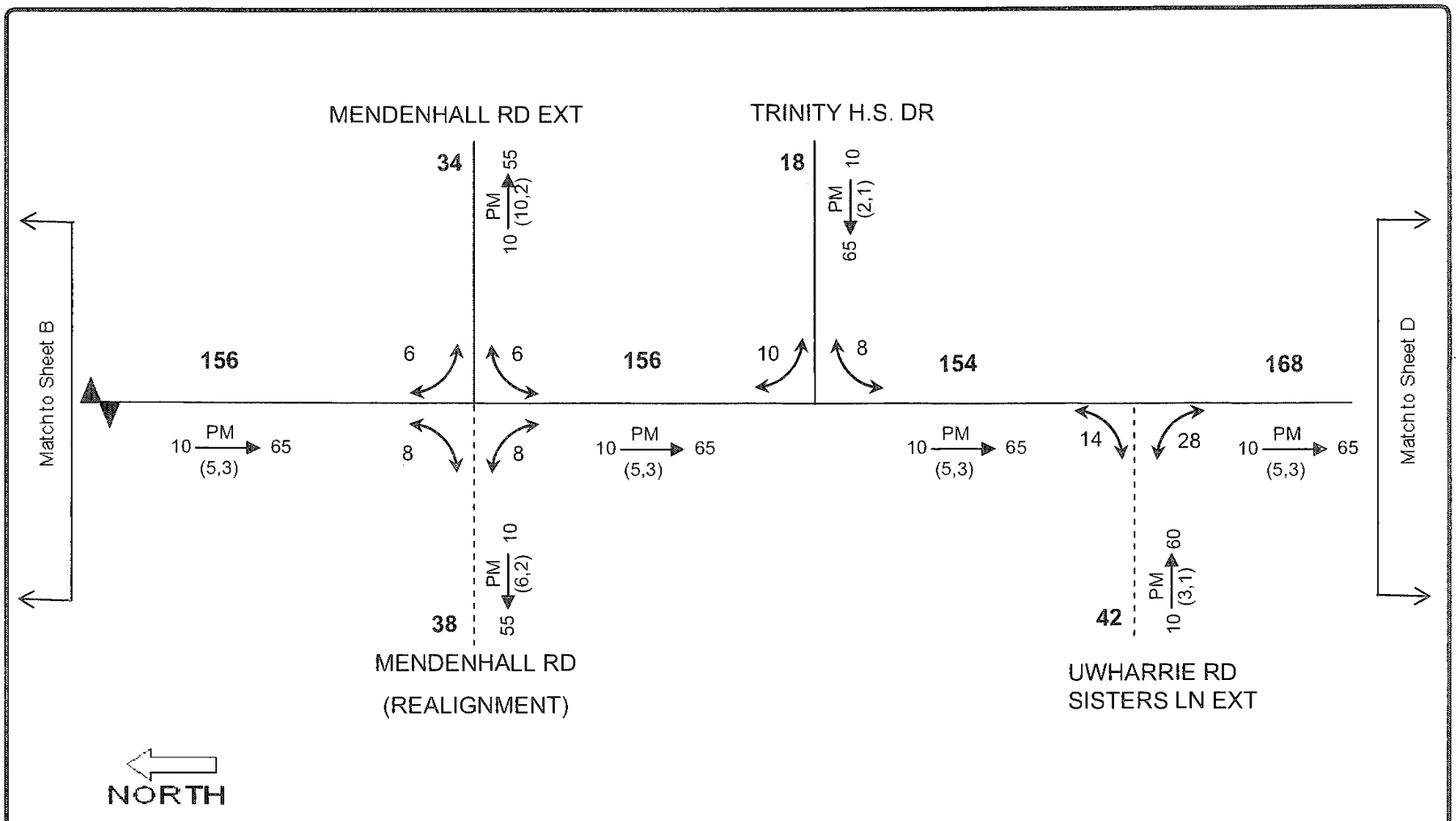
58
55 PM (4,2) 11
55 PM (5,3) 11
12 PM (5,3) 55
12 PM (5,3) 60
12 PM (5,3) 60
PM 11 (3,3) 55
PM 60 (5,7) 11
PM 12 (5,3) 60
PM 11 (5,3) 55
88
484
42
208
MARKET CENTER DRIVE
I – 85 BUS
US 29/70
FINCH AVE
W. FAIRFIELD RD
NORTH
Match to Sheet B
GUILFORD COUNTY
LEGEND
K PM (d,t) D
K Design Hourly Volume (%) = K30
PM PM Peak Period
D Directional Split (%)
(d,t) %Duals, %TTST's
→ Indicates direction D; reverse for AM
-1 Indicates volume much less than 100
XXX Volumes are AADT in Hundreds
Proposed Facility
Break line
SURRETT DRIVE FEASIBILITY STUDY
TRAVEL DEMAND FORECAST
MAY 28, 2008
Sheet A
DESIGN YEAR 2035
XXX AADT IN HUNDREDS
SURRETT DR
SR 1216


RANDOLPH COUNTY
EDEN TERRACE
ARCHDALE BLVD
SEALY DR
44
26
84
PM 10 (4,3) 65
PM 65 (5,5) 10
PM 10 (4,2) 60
Match to Sheet A
Match to Sheet C
32
6
18
6
46
8
216
206
194
156
6
22
2
2
12
12
12 PM (5,3) 60
11 PM (5,3) 60
11 PM (5,3) 60
10 PM (5,3) 65
PM 10 (4,3) 65
PM 60 (3,3) 12
PM 10 (2,2) 60
34
6
54
CORPORATION DR
MURRAY CIR
SEALY DR
NORTH
LEGEND
K Design Hourly Volume (%) = K30
PM PM Peak Period
D Directional Split (%)
(d,t) %Duals, %TTST's
→ Indicates direction D; reverse for AM
-1 Indicates volume much less than 100
XXX Volumes are AADT in Hundreds
Proposed Facility
Break line
SURRETT DRIVE FEASIBILITY STUDY
TRAVEL DEMAND FORECAST
MAY 28, 2008
Sheet B
DESIGN YEAR 2035
XXX AADT IN HUNDREDS
SURRETT DR
SR 1216



LEGEND

K PM → D (d,t)

K	Design Hourly Volume (%) = K30
PM	PM Peak Period
D	Directional Split (%)
(d,t)	%Duals, %TTST's
→	Indicates direction D; reverse for AM
-1	Indicates volume much less than 100
XXX	Volumes are AADT in Hundreds

Proposed Facility

Break line

SURRETT DRIVE FEASIBILITY STUDY

TRAVEL DEMAND FORECAST

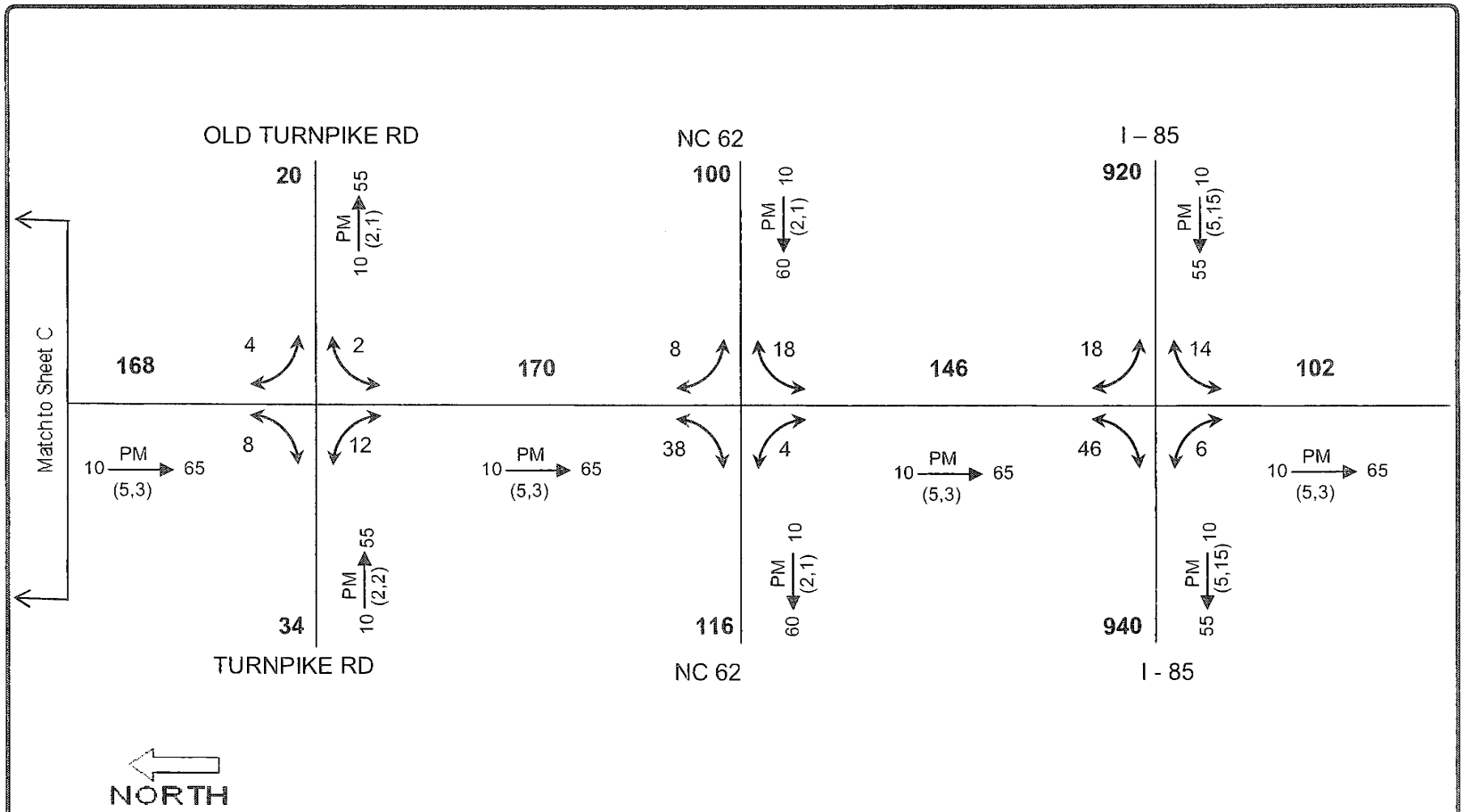
MAY 28, 2008

Sheet C

DESIGN YEAR 2035

XXX AADT IN HUNDREDS

SURRETT DR
SR 1216



LEGEND

K PM (d,t) D

K	Design Hourly Volume (%) = K30
PM	PM Peak Period
D	Directional Split (%)
(d,t)	%Duals, %TTST's
→	Indicates direction D; reverse for AM
-1	Indicates volume much less than 100
XXX	Volumes are AADT in Hundreds

Proposed Facility

Break line

SURRETT DRIVE FEASIBILITY STUDY

TRAVEL DEMAND FORECAST

MAY 28, 2008

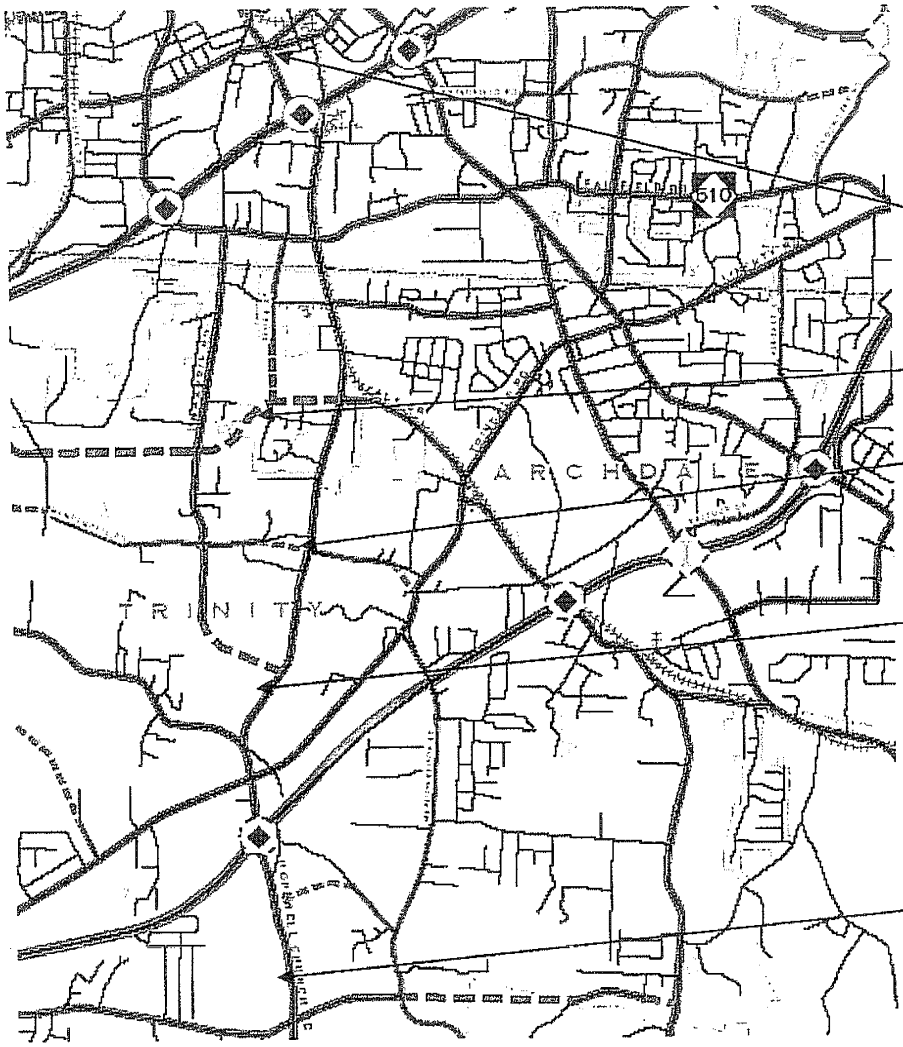
Sheet D

DESIGN YEAR 2035

XXX AADT IN HUNDREDS

SURRETT DR
SR 1216

Appendix A
Misc. Local Planning Data



From High Point Thoroughfare Plan
(http://www.hpdot.net/HPMPO/plans/ThoroughfarePlan.pdf)

Historic AADT Estimates

Title - Replace with text

Surrett Drive Forecast Data

ID #	Location Description	2035 Est	2007 Est	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	Overall Growth Rate	Forecast assumed rate
1	Mainline Data																					
2	NPL - Market Center Drive (SR 1961)	6400	5800																			0.4%
3	Market Center Drive (SR 1961) - I-85 Bus	12600	10200				10000		10000		11000		10800			10700		11200		11200	-0.9%	0.8%
4	I-85 Bus - Finch Ave	17400	12400		9400		9300		11000		10000		11000			11000		11000		11000	-1.0%	1.2%
5	Finch Ave - Fairfiled (SR 1300)	15200	11200		9800		9300		9300		10000		9800			9800		9500		9500	0.2%	1.1%
6	Fairfiled (SR 1300) - Corporation Dr	21600	14600		12000		14000		11000		12000		12000			9600		9300		9300	1.7%	1.4%
7	Corporation Dr - Murray Circle	20600	14000		12000		14000		11000				11700								0.3%	1.4%
8	Murray Circle - Sealy Dr	19400	13000		13000		13000		12000		11000		12000			9700		9000		8900	2.6%	1.4%
9	Sealy Dr - Mendenhall Road	15600	9200																			1.9%
10	Mendenhall Road - Trinity HS Dr	15600	8600																			2.1%
11	Trinity HS Dr - Turnpike Rd (SR 1558)	16800	8400																			2.5%
12	Turnpike Rd (SR 1558) - NC 62	17000	8600		8500		7800		7100		7400										2.3%	2.5%
13	NC 62 - I-85	14600	6600																			2.9%
14	I-85 - SPL	10200	3600																			3.8%
15																						
16	Y-Line Data																					
17	Market Center Drive (SR 1961) (E)	10200	8000																			0.9%
18	Market Center Drive (SR 1961) (W)	8800	7200																			0.7%
19	I-85 Bus (E)	51200	24000		23000		23000		19000		20000		18000					17000		17000	2.0%	2.7%
20	I-85 Bus (W)	48400	21000		21000		19000		19000		19000		18000			16000		17000		18000	1.0%	3.0%
21	Finch Ave (W)	4200	2200																			2.3%
22	Fraley Rd (E)	8000	4600																			2.0%
23	Fairfield Rd (SR 1300) (E)	19200	15400		14000		14000		14000		16000		14000			15000		14000		14000	0.0%	0.8%
24	Fairfield Rd (SR 1300) (W)	20800	16800		16000		18000		17000		19000		17000			17000		18000		19000	-1.1%	0.8%
25	Corporation Drive (E)	4400	3400																			0.9%
26	Corporation Drive (W)	3400	2400																			1.3%
27	Murray Circle	600																				#DIV/0!
28	Archdale Blvd	2600	1800																			
29	Sealy Drive (SR 1596) (E)	8400	6000		5900		6100		5400		5200		5200			7200		5300		5600	0.3%	1.2%
30	Sealy Drive (SR 1596) (W)	5400	1000																			6.2%
31	Mendenhall Road (SR 1610) (W)	3800	2600		2500						3200		3000								-2.3%	1.4%
32	Mendenhall Road (SR 1610) Ext	3400	1800																			2.3%
33	Trinity HS	1800	1000																			2.1%
34	Turnpike Road (SR 1558) (E)	2000	1200																			1.8%
35	Turnpike Road (SR 1558) (W)	3400	2200																			1.6%
36	NC 62 (E)	10000	6600		6400		5700		5400		5400										2.9%	1.5%
37	NC 62 (W)	11600	7000																			1.8%
38	I-85 (E)	92000	52800																			2.0%

Appendix B

Surrett Drive Traffic Operations Analysis Technical Memorandum

FINAL

TRAFFIC OPERATIONS TECHNICAL MEMORANDUM

SURRETT DRIVE CORRIDOR FEASIBILITY STUDY
GUILFORD AND RANDOLPH COUNTIES

Prepared For:

High Point Urban Area MPO

Prepared By:

PBS&J
1616 East Millbrook Road, Suite 310
Raleigh, NC 27609

August 2008

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APPENDICES

1 INTRODUCTION

1.1 Study Purpose

The High Point Metropolitan Planning Organization (HPMPO) has commissioned the Surrett Drive Feasibility Study to evaluate future improvements to Surrett Drive, located within the cities of High Point, Archdale, and Trinity (Guilford and Randolph counties). The feasibility study is the initial step in the planning and design process for improvements to Surrett Drive. The purpose of the study is to describe the proposed action, evaluate potential alternatives for the proposed action, and identify a preferred alternative.

In support of the feasibility study, this Traffic Operations Technical Memorandum was created to assist in the development and evaluation of corridor improvement options. The purpose of this report is to present the results of the operations Level of Service (LOS) analysis and queue analysis for the studied Surrett Drive intersections.

Intersection LOS analysis was performed for the following conditions:

- Year 2007 Existing
- Year 2035 No-Build
- Year 2035 Build – Minor Widening
- Year 2035 Build – Traffic Operations
- Year 2035 Build – Major Widening

1.2 Project Description

The study area of Surrett Drive is approximately 4.5 miles in length. It extends from the intersection of Surrett Drive and West Market Center Drive in Guilford County southward, crossing Business I-85, and continuing to the I-85 ramp terminal intersections in Randolph County. A project vicinity map can be found in **Figure 1-1** and a more detailed map of the study corridor can be found in **Figure 1-2**.

Surrett Drive is a two-lane radial roadway with a functional classification of minor arterial. There are five signalized intersections and ten unsignalized intersections along this segment of Surrett Drive. A railroad track closely parallels the east side of the roadway from Archdale Boulevard north to Fraley Road.

Existing intersections included in the analysis were:

- Surrett Drive / Market Street (signalized)
- Surrett Drive / Business I-85 SB Ramps (stop-controlled)
- Surrett Drive / Business I-85 NB Ramps (stop-controlled)

- Surrett Drive / Fraley Road / Finch Avenue (signalized)
- Surrett Drive / Fairfield Road (signalized)
- Surrett Drive / Eden Terrace / Corporation Drive (stop-controlled)
- Surrett Drive / Archdale Boulevard / Murray Circle (stop-controlled)
- Surrett Drive / Sealy Drive / Darr Airport Road (signalized)
- Surrett Drive / Mendenhall Road (stop-controlled)
- Surrett Drive / Mendenhall Road Extension (stop-controlled)
- Surrett Drive / Trinity High School Drive (stop-controlled)
- Surrett Drive / Turnpike Road (stop-controlled)
- Surrett Drive / NC 62 (signalized)
- Surrett Drive / I-85 SB Ramps / Dwight Street (stop-controlled)
- Surrett Drive / I-85 NB Ramps (stop-controlled)

Future analyzed intersections created by realignment or extension of existing roads included in the HPMPO's transportation plans were:

- Surrett Drive / Mendenhall Road (signalized)
- Surrett Drive / Uwharrie Road (stop controlled)

2 TRAFFIC VOLUMES AND CHARACTERISTICS

Gibson Engineers (a subconsultant to PBS&J) provided annual average daily traffic (AADT) forecast volumes for the 2007 Existing and 2035 conditions. Traffic characteristics including K30, Directional Split, PM Peak Direction Flow, Dual Truck%, and TTST%, were provided in the Gibson Engineers forecast. **Appendix A** contains the Surrett Drive Feasibility traffic forecasts.

A comparison of 2007 and 2035 Surrett Drive segment AADT volumes can be found in **Table 2-1**.

Table 2-1. Surrett Drive AADT Comparison

Surrett Drive Segment	2007 Existing AADT	2035 AADT
North of Market Center Drive	5,800	6,400
Market Center Drive to Business I-85	10,200	12,600
Business I-85 to Fraley Road / Finch Avenue	12,400	17,400
Fraley Road / Finch Avenue to Fairfield Road	11,200	15,200

Table 2-1. Surrett Drive AADT Comparison

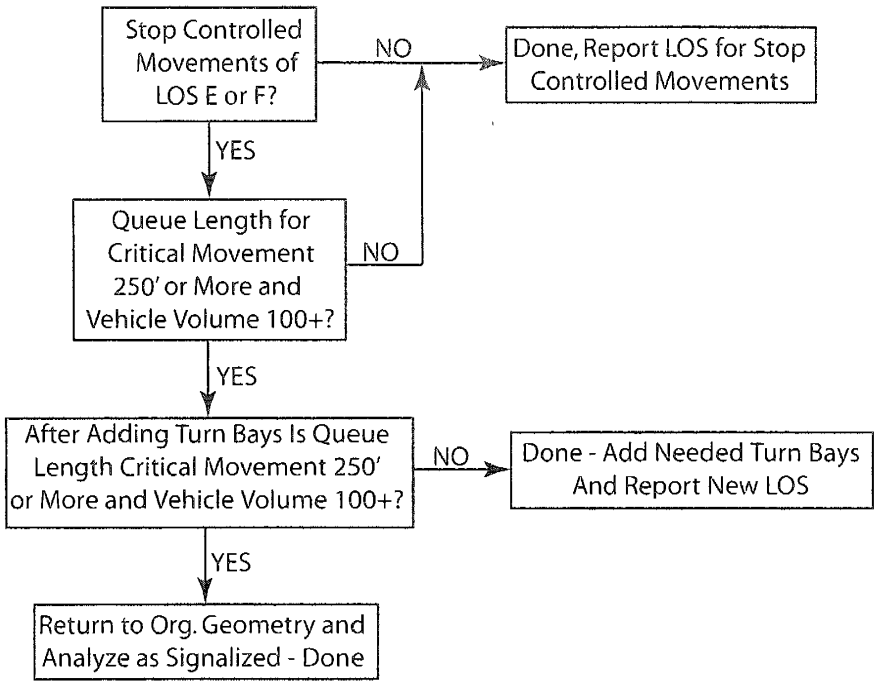
Surrett Drive Segment	2007 Existing AADT	2035 AADT
Fairfield Road to Eden Terrace / Corporation Drive	14,600	21,600
Eden Terrace / Corporation Drive to Archdale Blvd. / Murray Circle	14,000	20,600
Archdale Blvd. / Murray Circle to Sealy Drive / Darr Airport Road	13,000	19,400
Sealy Drive / Darr Airport Road to Mendenhall Road	8,600 - 9,200*	15,600
Mendenhall Road to Mendenhall Road Extension	10,000	15,600
Mendenhall Road Extension to Trinity High School Drive	8,600	15,600
Trinity High School Drive to Uwharrie Road	8,400	15,400
Uwharrie Road to Turnpike Road	8,400	16,800
Turnpike Road to NC 62	8,600	17,000
NC 62 to I-85	7,000	14,600
South of I-85	4,000	10,200
* AADT varies from 9,200 vehicles per day just south of Sealy Drive / Darr Airport Road to 8,600 vehicles per day just north of Mendenhall Road.		

2007 Existing and year 2035 conditions AM and PM peak hour turning movement volumes were developed from the AADT forecast volumes following the NCDOT Congestion Management Section's volume breakout guidelines. **Appendix A** contains the peak hour breakout sheets.

3 OPERATIONS ANALYSIS METHODOLOGY

The intersection LOS analysis was performed following the NCDOT Congestion Management Section's Capacity Analysis Guidelines for TIP Project Traffic Analyses.

Highway Capacity Software 2000 (HCS 2000, version 4.1f) was used to determine the LOS, corresponding delay, and capacity at unsignalized intersections. For the unsignalized intersections analyzed in this report, the capacity and LOS represent the characteristics of the worst performing stop-controlled movement. To determine if the intersection needed to be analyzed as signalized for new intersections under the No-Build scenario, or for intersections analyzed under Build conditions, the flowchart on Page 4 was followed to determine what improvements to recommend.



Synchro Version 7 (Build 755) was used to determine the LOS, corresponding delay, and capacity at signalized intersections. For the signalized intersections analyzed in this report, the delay and LOS represent the characteristics for the overall intersection; while the capacity is for the worst performing lane group (maximum v/c). LOS D or better is considered acceptable for all signalized intersections.

To assist in the development of the intersection geometry improvements, a queuing analysis was performed for the three 2035 build alternatives, in accordance with NCDOT Congestion Management Capacity Analysis Guidelines. The analysis was performed for both the AM and PM peak hour periods and the peak hour with the largest queue was reported.

The 95th percentile queue lengths for each yield or stop controlled lane of the unsignalized intersection were calculated based on the HCS 2000 peak hour traffic analysis results. The 95th percentile queue lengths for each lane of the signalized intersection were calculated based on the SimTraffic traffic simulation results. The simulation utilizes specific information such as traffic signal timings, peak hour volumes and factors, storage bay lengths, etc. to develop a sophisticated visual model of the roadway network operations. Based on NCDOT guidelines, 100 feet was the minimum queue distance reported.

4 YEAR 2007 EXISTING CONDITIONS ANALYSIS

There are five signalized intersections and ten unsignalized intersections in the analyzed study area of Surrett Drive. Speeds along Surrett Drive vary from 35 mph beginning in the north to 55 mph at the south end of the study area.

For the purposes of the signalized intersection analysis of the existing conditions, existing signal phasing

was obtained from field observations. The intersection of Surrett Drive and Market Street was analyzed as a coordinated signal, with Market Street as the major (coordinated) street. All other signals were analyzed as operating under fully actuated conditions.

Intersection data sheets showing the existing conditions of all study area intersections listed in **Section 1** of this report are included in **Appendix B**.

Existing intersection operations results showing the analyzed intersection capacity and LOS based on year 2007 traffic are shown in **Table 4-1**. The analyzed Existing Condition intersection peak hour turning movement volumes, lane geometry, and LOS are presented in **Figures 4-1 through 4-4**. The intersection analysis reports are provided in **Appendix C**.

Table 4-1. Year 2007 Existing Intersection Conditions

	AM Peak Hour		PM Peak Hour	
Intersection	**Capacity (v/c)**	**LOS**	**Capacity (v/c)**	**LOS**
Surrett Drive / Market Center Drive (signalized)	0.62	C	0.57	C
Surrett Drive / Business I-85 SB Ramps (stop-controlled)	0.66	D	1.07	F
Surrett Drive / Business I-85 NB Ramps (stop-controlled)	2.36	F*	1.48	F
Surrett Drive / Fraley Road / Finch Ave. (signalized)	0.88	C	0.77	C
Surrett Drive / Fairfield Road (signalized)	1.16	E	1.22	F
Surrett Drive / Eden Terrace / Corporation Drive (stop-controlled)	>9.99	F	7.04	F
Surrett Drive / Archdale Blvd. / Murray Circle (stop-controlled)	0.94	F*	0.98	F*
Surrett Drive / Sealy Drive / Darr Airport Road (signalized)	0.79	B	0.53	B
Surrett Drive / Mendenhall Road (stop-controlled)	0.40	C	0.34	C
Surrett Drive / Mendenhall Road Extension (stop-controlled)	0.26	C	0.16	B
Surrett Drive / Trinity High School Drive (stop-controlled)	0.09	C	0.16	C
Surrett Drive / Turnpike Road (stop-controlled)	0.49	D	0.40	D
Surrett Drive / NC 62 (signalized)	0.76	C	0.74	C
Surrett Drive / I-85 SB Ramps / Dwight Street (stop-controlled)	0.28	C	0.37	C
Surrett Drive / I-85 NB Ramps (stop-controlled)	0.37	C	0.22	B

* Stop-controlled intersection with unacceptable side street LOS, but does not warrant signalization

The Existing Condition intersection analysis indicates that one of the five signalized intersections (Surrett Drive / Fairfield Road) operates with an unacceptable LOS. Of the ten unsignalized intersections, four currently operate with an unacceptable LOS. Three of these intersections (Surrett Drive / Business I-85 SB Ramps, Surrett Drive / Business I-85 NB Ramps and Surrett Drive / Eden Terrace / Corporation Drive) experience side street delays and queue lengths long enough to warrant further investigation for signalization.

5 YEAR 2035 NO-BUILD CONDITIONS ANALYSIS

A No-Build traffic analysis was performed to assess how the studied intersections would operate in the year 2035 if only currently planned improvements were made to Surrett Drive.

A significant planned improvement that would create a new intersection is the realignment of Mendenhall Road. Per direction of High Point MPO staff, the realignment of Mendenhall Road across from the Mendenhall Road Extension would create a new four-leg signalized intersection. The current unsignalized three-leg intersection with Mendenhall Road would be eliminated.

The No-Build conditions also include a new Surrett Drive intersection with Uwharrie Road / Sisters Lane Extension. This intersection is currently planned to be located between Trinity High School Drive and Turnpike Road.

Finally, the intersection with Scaly Drive is assumed to be improved as the new Darr Airport Road creates an improved west leg of this intersection.

The 2035 No-Build intersection operation results showing the analyzed intersection capacity and LOS based on year 2035 traffic are shown in **Table 5-1**. The analyzed No-Build intersection peak hour turning movement volumes, lane geometry, and LOS are presented in **Figures 5-1 through 5-4**. The intersection analysis reports are provided in **Appendix C**.

Table 5-1. Year 2035 No-Build Intersection Conditions

	AM Peak Hour		PM Peak Hour	
Intersection	**Capacity (v/c)**	**LOS**	**Capacity (v/c)**	**LOS**
Surrett Drive / Market Center Drive (signalized)	0.71	C	0.66	C
Surrett Drive / Business I-85 SB Ramps (stop-controlled)	1.59	F	2.60	F
Surrett Drive / Business I-85 NB Ramps (stop-controlled)	>9.99	F	8.39	F
Surrett Drive / Fraley Road / Finch Avenue (signalized)	1.32	E	0.92	C
Surrett Drive / Fairfield Road (signalized)	1.62	F	1.73	F
Surrett Drive / Eden Terrace / Corporation Drive	>9.99	F	>9.99	F

Table 5-1. Year 2035 No-Build Intersection Conditions

Intersection	AM Peak Hour		PM Peak Hour	
	Capacity (v/c)	LOS	Capacity (v/c)	LOS
(stop-controlled)				
Surrett Drive / Archdale Boulevard / Murray Circle (stop-controlled)	>9.99	F	>9.99	F
Surrett Drive / Sealy Drive / Darr Airport Road (signalized)	1.10	E	0.97	D
Surrett Drive / Mendenhall Road Extension (signalized)	0.92	C	0.91	C
Surrett Drive / Trinity High School Drive (stop controlled)	0.56	F*	0.81	F*
Surrett Drive / Uwharrie Road (stop controlled)	1.48	F*	1.08	F*
Surrett Drive / Turnpike Road (stop-controlled)	>9.99	F	>9.99	F
Surrett Drive / NC 62 (signalized)	1.43	F	1.33	F
Surrett Drive / I-85 SB Ramps / Dwight Street (stop-controlled)	1.72	F	2.32	F
Surrett Drive / I-85 NB Ramps (stop-controlled)	1.30	F	0.96	F*

* Stop-controlled intersection with unacceptable side street LOS, but does not warrant signalization

The 2035 No-Build intersection analysis indicates that four of the six signalized intersections are projected to operate with an unacceptable LOS. It should be noted that the improved Mendenhall Road Extension intersection is assumed to operate with signal control under the No-Build conditions. All nine unsignalized intersections are projected to operate with an unacceptable LOS. Seven of these intersections experience side street delays and queue lengths long enough to warrant further investigation for signalization. Two stop controlled intersections operate with an unacceptable LOS, but do not warrant signalization under the outlined method for signalization, based on analyzed queue lengths and critical movement volumes.

6 YEAR 2035 BUILD ALTERNATIVES

There are currently three Build Alternatives being considered for the Surrett Drive Feasibility Study. These alternatives are identified as the Minor Widening Alternative, the Traffic Operations Alternative, and the Major Widening Alternative. The three alternatives are described below:

Minor Widening Alternative

The Minor Widening Alternative would widen the current two lanes on Surrett Drive from 11 to 12 feet

and make provisions for bicycles and pedestrians, as well as the addition of intersection improvements that would not include additional pavement. Intersection improvements would consist of signal phase modifications that would require additional signal equipment, and the conversion of stop-controlled intersections to signalized intersections when warranted.

Traffic Operations Alternative

The goal of the Traffic Operations Alternative is to improve the LOS at intersections along Surrett Drive, without overall facility widening. Improvements would consist of the addition of turn bays, signal phase modifications that would require additional signal equipment, and the conversion of stop-controlled intersections to signalized intersections when warranted.

Major Widening Alternative

The Major Widening Alternative would widen Surrett Drive from two lanes to four lanes with provisions for bicycles and pedestrians. Additional improvements would consist of the addition of turn bays, signal phase modifications that would require additional signal equipment, and the conversion of stop-controlled intersections to signalized intersections when warranted.

6.1 Minor Widening Alternative Results

The intersection analysis for the Minor Widening Alternative recommends that seven currently stop-controlled intersections be changed to operate under signal control. Individual intersection improvements recommended as part of the Minor Widening Alternative are as follows:

Surrett Drive / Market Street

- None

Surrett Drive / Business I-85 SB Ramps

- Signalized intersection

Surrett Drive / Business I-85 NB Ramps

- Signalized intersection

Surrett Drive / Fraley Road / Finch Avenue

- None

Surrett Drive / Fairfield Road

- None

Surrett Drive / Eden Terrace / Corporation Drive

- Signalized intersection

Surrett Drive / Archdale Boulevard / Murray Circle

- Signalized intersection

Surrett Drive / Sealy Drive / Darr Airport Road

- None

Surrett Drive / Mendenhall Road Extension

- None

Surrett Drive / Trinity High School Drive

- None

Surrett Drive / Uwharrie Road

- None

Surrett Drive / Turnpike Road

- Signalized intersection

Surrett Drive / NC 62

- None

Surrett Drive / I-85 SB Ramps / Dwight Street

- Signalized intersection

Surrett Drive / I-85 NB Ramps

- Signalized intersection

6.1.1 Intersection Analysis Results

Minor Widening Alternative intersection operations results showing the analyzed intersection capacity and LOS are shown in **Table 6-1**. The analyzed Minor Widening Alternative intersection peak hour turning movement volumes, lane geometry, and LOS are presented in **Figures 6-1 through 6-4**. The intersection analysis reports are provided in **Appendix C**.

Table 6-1. Year 2035 Minor Widening Alternative LOS Results

	AM Peak Hour		PM Peak Hour	
Intersection	**Capacity (v/c)**	**LOS**	**Capacity (v/c)**	**LOS**
Surrett Drive at Market Center Drive (signalized)	0.71	C	0.66	C

Table 6-1. Year 2035 Minor Widening Alternative LOS Results

Intersection	AM Peak Hour		PM Peak Hour	
	Capacity (v/c)	LOS	Capacity (v/c)	LOS
Surrett Drive at Business I-85 SB Ramps (signalized)	1.28	E	1.38	F
Surrett Drive at Business I-85 NB Ramps (signalized)	1.19	F	1.08	E
Surrett Drive at Fraley Road / Finch Avenue (signalized)	1.29	F	0.98	D
Surrett Drive at Fairfield Road (signalized)	1.62	F	1.75	F
Surrett Drive at Eden Terrace / Corporation Drive (signalized)	1.43	F	1.82	F
Surrett Drive at Archdale Boulevard / Murray Circle (signalized)	1.01	B	1.25	D
Surrett Drive at Sealy Drive / Darr Airport Road (signalized)	1.10	E	1.03	D
Surrett Drive at Mendenhall Road Extension (signalized)	0.99	C	0.96	C
Surrett Drive at Trinity High School Drive (stop-controlled)	0.56	F*	0.81	F*
Surrett Drive / Uwharrie Road (stop-controlled)	1.48	F*	1.08	F*
Surrett Drive at Turnpike Road (signalized)	0.94	C	0.90	B
Surrett Drive at NC 62 (signalized)	1.68	F	1.60	F
Surrett Drive at I-85 SB Ramps / Dwight Street (signalized)	0.71	C	0.74	C
Surrett Drive at I-85 NB Ramps (signalized)	0.74	C	0.67	B

* Stop-controlled intersection with unacceptable side street LOS, but does not warrant signalization

Under the Minor Widening Alternative, all but two intersections were analyzed as operating under signal control. Intersection analysis indicates that seven of the thirteen signalized intersections are projected to operate with an unacceptable LOS. Because the Minor Widening Alternative will not add intersection capacity by adding turn lanes or through lanes, an acceptable LOS could not be produced at these intersections with the forecasted volumes. The two stop controlled intersections operate with an unacceptable LOS, but do not warrant signalization under the outlined method for signalization, based on analyzed queue lengths and critical movement volumes.

It should be noted that the LOS for some intersections under the Minor Widening Alternative are worse than those of the No Build Condition even though no modification to the intersections were made. The deteriorated LOS is the result of left turn movements that operated as permitted or permitted and protected under the No Build Condition, being changed to protected only under the Build Alternatives.

This phasing change was only made at intersections were a dedicated left turn lane is present. Per NCDOT Congestion Management Guidelines, for the analysis of future improvements, left turns were analyzed as protected only to provide a conservative LOS and identify the maximum queue storage necessary in the event that protected only phasing becomes necessary.

6.1.2 Queue Analysis Results

For intersections included in the Minor Widening Alternative, the design year conditions, which included year 2035 traffic volumes, were initially simulated. Due to the poor operating conditions, which were expected based on the results of the LOS analysis, the simulation results showed gridlock conditions throughout the network. To provide a simulation free of gridlock conditions, peak hour traffic volumes at signalized intersections were reduced on an intersection by intersection basis to a level so all movements would have a volume to capacity (v/c) ratio of 0.90 or less. To achieve the v/c ratios, the design year volumes were reduced as follows:

- Surrett Drive / Market Street – Volumes not reduced
- Surrett Drive / Business I-85 SB Ramps – Volumes reduced by 30%
- Surrett Drive / Business I-85 NB Ramps – Volumes reduced by 25%
- Surrett Drive / Fraley Road / Finch Avenue – Volumes reduced by 30%
- Surrett Drive / Fairfield Road – Volumes reduced by 50%
- Surrett Drive / Eden Terrace / Corporation Drive – Volumes reduced by 40%
- Surrett Drive / Archdale Boulevard / Murray Circle – Volumes reduced by 20%
- Surrett Drive / Sealy Drive / Darr Airport Road – Volumes reduced by 20%
- Surrett Drive / Mendenhall Road – Volumes reduced by 10%
- Surrett Drive / Trinity High School Drive – Volumes not reduced
- Surrett Drive / Uwharrie Road – Volumes not reduced
- Surrett Drive / Turnpike Road – Volumes reduced by 5%
- Surrett Drive / NC 62 – Volumes reduced by 45%
- Surrett Drive / I-85 SB Ramps / Dwight Street – Volumes not reduced
- Surrett Drive / I-85 NB Ramps – Volumes not reduced

Minor Widening Alternative queue analysis results are shown in **Table 6-2 and Figures 6-5 to 6-8**. The queue analysis reports for signalized intersections are provided in **Appendix D** and the queue reports for unsignalized intersections are included in HCS unsignalized LOS report **(Appendix C)**.

Table 6-2. Year 2035 Minor Widening Alternative Queue Analysis Results

Movement	Volume Reduction (to achieve v/c of 0.90 or less)	Number of Lanes	Queue Length (ft)
Surrett Drive at Market Center Drive (signalized)			
Eastbound Left Turn	Volumes not reduced	1	100
Westbound Left Turn		1	275
Northbound Left Turn		1	175
Southbound Left Turn		1	100
Surrett Drive at Business I-85 NB Ramps (signalized)			
Northbound Left Turn	Volumes reduced by 25%	1	300
Surrett Drive at Fraley Road / Finch Avenue (signalized)			
Eastbound Left Turn	Volumes reduced by 30%	1	125
Westbound Left Turn		1	175
Westbound Right Turn		1	225
Northbound Left Turn		1	450
Southbound Left Turn		1	275
Southbound Right Turn		1	100
Surrett Drive at Fairfield Road (signalized)			
Eastbound Left Turn	Volumes reduced by 50%	1	100
Westbound Left Turn		1	200
Northbound Left Turn		1	300
Southbound Left Turn		1	350
Surrett Drive at Sealy Drive / Darr Airport Road (signalized)			
Eastbound Left Turn	Volumes reduced by 20%	1	125
Westbound Left Turn		1	100
Westbound Right Turn		1	300
Northbound Left Turn		1	350
Southbound Left Turn		1	425
Surrett Drive at Mendenhall Road Extension (signalized)			
Northbound Left Turn	Volumes reduced by 10%	1	100
Southbound Left Turn		1	100

Table 6-2. Year 2035 Minor Widening Alternative Queue Analysis Results

Movement	Volume Reduction (to achieve v/c of 0.90 or less)	Number of Lanes	Queue Length (ft)
Surrett Drive / Uwharrie Road (stop-controlled)			
Eastbound Left Turn	Volumes not reduced	1	200
Westbound Right Turn		1	150
Surrett Drive at NC 62 (signalized)			
Northbound Left Turn	Volumes reduced by 45%	1	100
Southbound Left Turn		1	150
Surrett Drive at I-85 SB Ramps / Dwight Street (signalized)			
Northbound Right Turn	Volumes not reduced	1	100
Southbound Left Turn		1	300
Surrett Drive at I-85 NB Ramps (signalized)			
Northbound Left Turn	Volumes not reduced	1	125
Southbound Right Turn		1	100

6.2 Traffic Operations Alternative Results

The intersection analysis for the Traffic Operations Alternative recommends that five currently stop-controlled intersections be changed to operate under signal control. Individual intersection improvements recommended as part of the Traffic Operations Alternative are as follows:

Surrett Drive / Market Street

- None

Surrett Drive / Business I-85 SB Ramps

- Signalized intersection
- Added eastbound exclusive right and left turn lanes
- Added a northbound exclusive left turn lane

Surrett Drive / Business I-85 NB Ramps

- Signalized intersection
- Added a southbound exclusive right turn lane
- Added eastbound exclusive right and left turn lanes

Surrett Drive / Fraley Road / Finch Avenue

- Added a second southbound left turn lane

- Added a northbound exclusive right turn lane

Surrett Drive / Fairfield Road

- Added a southbound exclusive right turn lane
- Added a eastbound exclusive right turn lane
- Added a second northbound left turn lane
- Added a northbound exclusive right turn lane
- Added a westbound exclusive right turn lane

Surrett Drive / Eden Terrace / Corporation Drive

- Signalized intersection
- Added a southbound exclusive left turn lane
- Added a northbound exclusive left turn lane
- Added a westbound exclusive right turn lane

Surrett Drive / Archdale Boulevard / Murray Circle

- Added a southbound exclusive left turn lane
- Added a eastbound exclusive right turn lane
- Added a northbound exclusive left turn lane
- Added a westbound exclusive right turn lane

Surrett Drive / Sealy Drive / Darr Airport Road

- None

Surrett Drive / Mendenhall Road Extension

- None

Surrett Drive / Trinity High School Drive

- None

Surrett Drive / Uwharrie Road

- None

Surrett Drive / Turnpike Road

- Signalized intersection

Surrett Drive / NC 62

- Added a southbound through and right lane
- Added a eastbound exclusive left turn lane
- Added a northbound exclusive right turn lane
- Added a westbound exclusive left turn lane

Surrett Drive / I-85 SB Ramps / Dwight Street

- Added a westbound exclusive left turn lane

Surrett Drive / I-85 NB Ramps

- Signalized intersection

6.2.1 Intersection Analysis Results

Traffic Operations Alternative intersection operations results showing the analyzed intersection capacity and LOS are shown in **Table 6-3**. The analyzed Minor Widening Alternative intersection peak hour turning movement volumes, lane geometry, and LOS are presented in **Figures 6-9 through 6-12**. The intersection analysis reports are provided in **Appendix C**.

Table 6-3. Year 2035 Traffic Operations Alternative LOS Results

	AM Peak Hour		PM Peak Hour	
Intersection	**Capacity (v/c)**	**LOS**	**Capacity (v/c)**	**LOS**
Surrett Drive at Market Center Drive (signalized)	0.71	C	0.66	C
Surrett Drive at Business I-85 SB Ramps (signalized)	0.73	B	0.79	C
Surrett Drive at Business I-85 NB Ramps (signalized)	1.07	D	0.90	C
Surrett Drive at Fraley Road / Finch Avenue (signalized)	1.01	D	0.98	D
Surrett Drive at Fairfield Road (signalized)	1.25	F	1.32	F
Surrett Drive at Eden Terrace / Corporation Drive (signalized)	1.10	D	1.21	E
Surrett Drive at Archdale Boulevard / Murray Circle (stop-controlled)	0.81	F*	>9.99	F*
Surrett Drive at Sealy Drive / Darr Airport Road	1.10	E	0.95	C

Table 6-3. Year 2035 Traffic Operations Alternative LOS Results

Intersection	AM Peak Hour		PM Peak Hour	
	Capacity (v/c)	LOS	Capacity (v/c)	LOS
(signalized)				
Surrett Drive at Mendenhall Road Extension (signalized)	0.99	C	0.96	C
Surrett Drive at Trinity High School Drive (stop-controlled)	0.56	F*	0.81	F*
Surrett Drive / Uwharrie Road (stop-controlled)	1.48	F*	1.08	F*
Surrett Drive at Turnpike Road (signalized)	0.94	C	0.90	C
Surrett Drive at NC 62 (signalized)	1.24	F	1.02	D
Surrett Drive at I-85 SB Ramps / Dwight Street (stop-controlled)	1.32	F*	1.96	F*
Surrett Drive at I-85 NB Ramps (signalized)	0.74	C	0.67	B

* Stop-controlled intersection with unacceptable side street LOS, but does not warrant signalization

The Traffic Operations Alternative intersections analysis indicates that four of the eleven signalized intersections are projected to operate with an unacceptable LOS. These failing intersections require additional through lanes in order to accommodate the forecasted volumes, but these improvements were not permitted under this build alternative. The four stop-controlled intersections operate with an unacceptable LOS, but do not warrant signalization under the outlined method for signalization, based on analyzed queue lengths and critical movement volumes.

6.2.2 Queue Analysis Results

For intersections included in the Traffic Operations Alternative, the design year conditions, which included year 2035 traffic volumes, were initially simulated. Due to the poor operating conditions, which were expected based on the results of the LOS analysis, the simulation results showed gridlock conditions throughout the network. To provide a simulation free of gridlock conditions, peak hour traffic volumes at signalized intersections were reduced on an intersection by intersection basis to a level so all movements would have a volume to capacity (v/c) ratio of 0.90 or less. To achieve the v/c ratios, the design year volumes were reduced as follows:

- Surrett Drive / Market Street – Volumes not reduced
- Surrett Drive / Business I-85 SB Ramps – Volumes not reduced
- Surrett Drive / Business I-85 NB Ramps – Volumes reduced by 10%

- Surrett Drive / Fraley Road / Finch Avenue – Volumes reduced by 15%
- Surrett Drive / Fairfield Road – Volumes reduced by 35%
- Surrett Drive / Eden Terrace / Corporation Drive – Volumes reduced by 30%
- Surrett Drive / Archdale Boulevard / Murray Circle – Volumes not reduced
- Surrett Drive / Sealy Drive / Darr Airport Road – Volumes reduced by 20%
- Surrett Drive / Mendenhall Road – Volumes reduced by 10%
- Surrett Drive / Trinity High School Drive – Volumes not reduced
- Surrett Drive / Uwharrie Road – Volumes not reduced
- Surrett Drive / Turnpike Road – Volumes reduced by 5%
- Surrett Drive / NC 62 – Volumes reduced by 30%
- Surrett Drive / I-85 SB Ramps / Dwight Street – Volumes not reduced
- Surrett Drive / I-85 NB Ramps – Volumes not reduced

Minor Widening Alternative queue analysis results are shown in **Table 6-4 and Figures 6-13 to 6-16**. The queue analysis reports for signalized intersections are provided in **Appendix D** and the queue reports for unsignalized intersections are included in HCS unsignalized LOS report **(Appendix C).**

Table 6-4. Year 2035 Traffic Operations Alternative Queue Analysis Results

Movement	Volume Reduction (to achieve v/c of 0.90 or less)	Number of Lanes	Queue Length (ft)
Surrett Drive at Market Center Drive (signalized)			
Eastbound Left Turn	Volumes not reduced	1	100
Westbound Left Turn		1	300
Northbound Left Turn		1	200
Southbound Left Turn		1	375
Surrett Drive at Business I-85 SB Ramps (signalized)			
Eastbound Left Turn	Volumes not reduced	1	175
Eastbound Right Turn		1	450
Northbound Left Turn		1	225
Surrett Drive at Business I-85 NB Ramps (signalized)			
Eastbound Left Turn	Volumes reduced by 10%	1	125
Eastbound Right Turn		1	200
Northbound Left Turn		1	325

Table 6-4. Year 2035 Traffic Operations Alternative Queue Analysis Results

Movement	Volume Reduction (to achieve v/c of 0.90 or less)	Number of Lanes	Queue Length (ft)
Southbound Right Turn		1	150
Surrett Drive at Fraley Road / Finch Avenue (signalized)			
Eastbound Left Turn	Volumes reduced by 15%	1	175
Westbound Left Turn		1	275
Westbound Right Turn		1	275
Northbound Left Turn		1	200
Northbound Right Turn		1	100
Southbound Left Turn		2	150
Southbound Right Turn		1	100
Surrett Drive at Fairfield Road (signalized)			
Eastbound Left Turn	Volumes reduced by 35%	1	125
Eastbound Right Turn		1	225
Westbound Left Turn		1	250
Westbound Right Turn		1	100
Northbound Left Turn		2	175
Northbound Right Turn		1	150
Southbound Left Turn		1	125
Southbound Right Turn		1	100
Surrett Drive at Eden Terrace / Corporation Drive (signalized)			
Westbound Right Turn	Volumes reduced by 30%	1	200
Northbound Left Turn		1	150
Southbound Left Turn		1	225
Surrett Drive at Archdale Blvd. / Murray Circle (stop-controlled)			
Eastbound Right Turn	Volumes not reduced	1	100
Westbound Right Turn		1	125
Northbound Left Turn		1	100
Southbound Left Turn		1	100
Surrett Drive at Sealy Drive / Darr Airport Road (signalized)			
Eastbound Left Turn	Volumes reduced by 20%	1	125
Westbound Left Turn		1	100
Westbound Right Turn		1	250
Northbound Left Turn		1	200
Southbound Left Turn		1	375

Table 6-4. Year 2035 Traffic Operations Alternative Queue Analysis Results

Movement	Volume Reduction (to achieve v/c of 0.90 or less)	Number of Lanes	Queue Length (ft)
Southbound Right Turn		1	100
Surrett Drive at Mendenhall Road Extension (signalized)			
Northbound Left Turn	Volumes reduced by 10%	1	100
Southbound Left Turn		1	100
Surrett Drive / Uwharrie Road (stop-controlled)			
Eastbound Left Turn	Volumes not reduced	1	200
Eastbound Right Turn		1	150
Surrett Drive at NC 62 (signalized)			
Eastbound Left Turn	Volumes reduced by 30%	1	550
Westbound Left Turn		1	475
Northbound Left Turn		1	100
Northbound Right Turn		1	125
Southbound Left Turn		1	100
Surrett Drive at I-85 SB Ramps / Dwight Street (stop-controlled)			
Westbound Left Turn	Volumes not reduced	1	225
Northbound Right Turn		1	100
Southbound Left Turn		1	100
Surrett Drive at I-85 NB Ramps (signalized)			
Northbound Left Turn	Volumes not reduced	1	125
Southbound Right Turn		1	100

6.3 Major Widening Alternative Results

In addition to the widening of Surrett Drive to a four-lane section, intersection improvements recommended as part of the Major Widening Alternative are as follows:

Surrett Drive / Market Street

- None

Surrett Drive / Business I-85 SB Ramps

- Added exclusive northbound left turn lane
- Added exclusive eastbound left turn lane

Surrett Drive / Business I-85 NB Ramps

- Added exclusive eastbound left turn lane

Surrett Drive / Fraley Road / Finch Avenue

- None

Surrett Drive / Fairfield Road

- Added exclusive northbound left turn lane
- Added exclusive northbound right turn lane
- Added exclusive southbound right turn lane
- Added exclusive eastbound right turn lane

Surrett Drive / Eden Terrace / Corporation Drive

- Added exclusive northbound left turn lane
- Added exclusive southbound left turn lane

Surrett Drive / Archdale Blvd. / Murray Circle

- Added exclusive northbound left turn lane
- Added exclusive southbound left turn lane
- Added exclusive westbound left turn lane

Surrett Drive / Sealy Drive / Darr Airport Road

- None

Surrett Drive / Mendenhall Road Extension

- None

Surrett Drive / Trinity High School Drive

- Added exclusive southbound left turn lane

Surrett Drive / Uwharrie Road

- Added exclusive northbound left turn lane

Surrett Drive / Turnpike Road

- Added exclusive northbound left turn lane
- Added exclusive southbound left turn lane

Surrett Drive / NC 62

- Added exclusive eastbound left turn lane
- Added exclusive westbound left turn lane

Surrett Drive / I-85 SB Ramps / Dwight Street

- Added exclusive westbound left turn lane

Surrett Drive / I-85 NB Ramps

- None

6.3.1 Intersection Analysis Results

Major Widening Alternative intersection operations results showing the analyzed intersection capacity and LOS are shown in **Table 6-5**. The analyzed Major Widening Alternative intersection peak hour turning movement volumes, lane geometry, and LOS are presented in **Figures 6-17** through **6-20**. The intersection analysis reports are provided in **Appendix C**.

Table 6-5. Year 2035 Major Widening Alternative LOS Results

	AM Peak Hour		PM Peak Hour	
Intersection	**Capacity (v/c)**	**LOS**	**Capacity (v/c)**	**LOS**
Surrett Drive / Market Center Drive (signalized)	0.71	C	0.66	C
Surrett Drive / Business I-85 SB Ramps (stop-controlled)	0.71	E*	1.12	F*
Surrett Drive / Business I-85 NB Ramps (stop-controlled)	5.00	F*	2.41	F*
Surrett Drive / Fraley Road / Finch Avenue (signalized)	0.83	C	0.69	C
Surrett Drive / Fairfield Road (signalized)	0.91	D	1.03	D
Surrett Drive / Eden Terrace / Corporation Drive (signalized)	0.81	C	0.84	C
Surrett Drive / Archdale Boulevard / Murray Circle (stop-controlled)	2.62	F*	2.75	F*
Surrett Drive / Sealy Drive / Darr Airport Road (signalized)	0.76	D	0.79	D
Surrett Drive / Mendenhall Road Extension (signalized)	0.78	B	0.69	B
Surrett Drive / Trinity High School Drive (stop-controlled)	0.41	E*	0.46	D
Surrett Drive / Uwharrie Road (stop-controlled)	0.84	F*	0.90	F*
Surrett Drive / Turnpike Road	0.66	B	0.67	B

Table 6-5. Year 2035 Major Widening Alternative LOS Results

	AM Peak Hour		PM Peak Hour	
Intersection	**Capacity (v/c)**	**LOS**	**Capacity (v/c)**	**LOS**
(signalized)				
Surrett Drive / NC 62 (signalized)	0.92	D	1.02	D
Surrett Drive / I-85 SB Ramps / Dwight Street (stop-controlled)	1.32	F*	1.96	F*
Surrett Drive / I-85 NB Ramps (signalized)	0.74	C	0.67	B

* Stop-controlled intersection with unacceptable side street LOS, but does not warrant signalization

The Major Widening Alternative intersections analysis indicates that all of the nine signalized intersections are projected to operate with an acceptable LOS. The six stop-controlled intersections operate with an unacceptable LOS, but do not warrant signalization, based on analyzed queue lengths and critical movement volumes.

6.3.2 Queue Analysis Results

For intersections included in the Major Widening Alternative, the design year conditions, which included year 2035 traffic volumes, were initially simulated. Due to the poor operating conditions, which were expected based on the results of the LOS analysis, the simulation results showed gridlock conditions throughout the network. To provide a simulation free of gridlock conditions, peak hour traffic volumes at signalized intersections were reduced on an intersection by intersection basis to a level so all movements would have a volume to capacity (v/c) ratio of 0.90 or less. To achieve the v/c ratios, the design year volumes were reduced as follows:

- Surrett Drive / Market Street – Volumes not reduced
- Surrett Drive / Business I-85 SB Ramps – Volumes not reduced
- Surrett Drive / Business I-85 NB Ramps – Volumes not reduced
- Surrett Drive / Fraley Road / Finch Avenue – Volumes not reduced
- Surrett Drive / Fairfield Road – Volumes reduced by 20%
- Surrett Drive / Eden Terrace / Corporation Drive – Volumes not reduced
- Surrett Drive / Archdale Boulevard. / Murray Circle – Volumes not reduced
- Surrett Drive / Sealy Drive / Darr Airport Road – Volumes not reduced
- Surrett Drive / Mendenhall Road – Volumes not reduced
- Surrett Drive / Trinity High School Drive – Volumes not reduced

- Surrett Drive / Uwharrie Road – Volumes not reduced
- Surrett Drive / Turnpike Road – Volumes not reduced
- Surrett Drive / NC 62 – Volumes reduced by 15%
- Surrett Drive / I-85 SB Ramps / Dwight Street – Volumes not reduced
- Surrett Drive / I-85 NB Ramps – Volumes not reduced

Major Widening Alternative queue analysis results are shown in **Table 6-6 and Figures 6-21 to 6-24**. The queue analysis reports for signalized intersections are provided in **Appendix D** and the queue reports for unsignalized intersections are included in HCS unsignalized LOS report **(Appendix C)**.

Table 6-6. Year 2035 Major Widening Alternative Queue Analysis Results

Movement	Volume Reduction (to achieve v/c of 0.90 or less)	Number of Lanes	Queue Length (ft)
Surrett Drive at Market Center Drive (signalized)			
Eastbound Left Turn	Volumes not reduced	1	100
Westbound Left Turn		1	275
Northbound Left Turn		1	175
Southbound Left Turn		1	100
Surrett Drive at Business I-85 SB Ramps (stop-controlled)			
Eastbound Left Turn	Volumes not reduced	1	200
Eastbound Right Turn		1	150
Northbound Left Turn		1	100
Surrett Drive at Business I-85 NB Ramps (stop-controlled)			
Eastbound Left Turn	Volumes not reduced	1	225
Eastbound Right Turn		1	100
Northbound Left Turn		1	150
Surrett Drive at Fraley Road / Finch Avenue (signalized)			
Eastbound Left Turn	Volumes not reduced	1	150
Westbound Left Turn		1	225
Westbound Right Turn		1	225
Northbound Left Turn		1	100
Southbound Left Turn		1	300
Surrett Drive at Fairfield Road (signalized)			
Eastbound Left Turn	Volumes reduced by 20%	1	150

Table 6-6. Year 2035 Major Widening Alternative Queue Analysis Results

Movement	Volume Reduction (to achieve v/c of 0.90 or less)	Number of Lanes	Queue Length (ft)
Eastbound Right Turn		1	250
Westbound Left Turn		1	300
Northbound Left Turn		2	175
Northbound Right Turn		1	175
Southbound Left Turn		1	125
Southbound Right Turn		1	100
Surrett Drive at Eden Terrace / Corporation Drive (signalized)			
Northbound Left Turn	Volumes not reduced	1	150
Southbound Left Turn		1	300
Surrett Drive at Archdale Boulevard / Murray Circle (stop-controlled)			
Westbound Left Turn	Volumes not reduced	1	Not Calculated*
Northbound Left Turn		1	100
Southbound Left Turn		1	100
Surrett Drive at Sealy Drive / Darr Airport Road (signalized)			
Eastbound Left Turn	Volumes not reduced	1	150
Westbound Left Turn		1	100
Westbound Right Turn		1	275
Northbound Left Turn		1	100
Southbound Left Turn		1	375
Surrett Drive at Mendenhall Road Extension (signalized)			
Northbound Left Turn	Volumes not reduced	1	100
Southbound Left Turn		1	100
Surrett Drive at Trinity High School Drive (stop-controlled)			
Southbound Left Turn	Volumes not reduced	1	100
Surrett Drive / Uwharrie Road (stop-controlled)			
Eastbound Left Turn	Volumes not reduced	1	125
Eastbound Right Turn		1	100
Northbound Left Turn		1	100
Surrett Drive at Turnpike Road (signalized)			
Northbound Left Turn	Volumes not reduced	1	125
Southbound Left Turn		1	100
Surrett Drive at NC 62 (signalized)			
Eastbound Left Turn	Volumes reduced by 15%	1	250
Westbound Left Turn		1	375

Table 6-6. Year 2035 Major Widening Alternative Queue Analysis Results

Movement	Volume Reduction (to achieve v/c of 0.90 or less)	Number of Lanes	Queue Length (ft)
Northbound Left Turn		1	100
Southbound Left Turn		1	100
Surrett Drive at I-85 SB Ramps / Dwight Street (stop-controlled)			
Westbound Left Turn	Volumes not reduced	1	225
Northbound Right Turn		1	100
Southbound Left Turn		1	100
Surrett Drive at I-85 NB Ramps (signalized)			
Northbound Left Turn	Volumes not reduced	1	150
Southbound Right Turn		1	100

*Due to large delay, the queue length was not able to be calculated by HCS

6.4 Alternative LOS Comparison

Table 6-7 presents a summary of the LOS analysis results for the three Build alternatives.

Table 6-7. Build Alternatives LOS Comparison

Intersection	Minor Widening Alternative LOS	Traffic Operations Alternative LOS	Major Widening Alternative LOS
Surrett Drive at Market Center Drive	C (C) (signalized)	C (C) (signalized)	C (C) (signalized)
Surrett Drive at Business I-85 SB Ramps	E (F) (signalized)	B (C) (signalized)	E (F)* (stop-controlled)
Surrett Drive at Business I-85 NB Ramps	F (E) (signalized)	D (C) (signalized)	F (F)* (stop-controlled)
Surrett Drive at Fraley Road / Finch Avenue	F (D) (signalized)	D (D) (signalized)	C (C) (signalized)
Surrett Drive at Fairfield Road	F (F) (signalized)	F (F) (signalized)	D (D) (signalized)
Surrett Drive at Eden Terrace / Corporation Drive	F (F) (signalized)	D (E) (signalized)	C (C) (signalized)
Surrett Drive at Archdale Blvd. / Murray Circle	B (D) (signalized)	F (F)* (stop-controlled)	F (F)* (stop-controlled)
Surrett Drive at Sealy Drive / Darr Airport Road	E (D) (signalized)	E (C) (signalized)	D (D) (signalized)

Table 6-7. Build Alternatives LOS Comparison

Intersection	Minor Widening Alternative LOS	Traffic Operations Alternative LOS	Major Widening Alternative LOS
Surrett Drive at Mendenhall Road Extension	C (C) (signalized)	C (C) (signalized)	B (B) (signalized)
Surrett Drive at Trinity High School Drive	F (F)* (stop-controlled)	F (F)* (stop-controlled)	E (D)* (stop-controlled)
Surrett Drive / Uwharrie Road	F (F)* (stop-controlled)	F (F)* (stop-controlled)	F (F)* (stop-controlled)
Surrett Drive at Turnpike Road	C (B) (signalized)	C (C) (signalized)	B (B) (signalized)
Surrett Drive at NC 62	F (F) (signalized)	F (D) (signalized)	D (D) (signalized)
Surrett Drive at I-85 SB Ramps / Dwight Street	C (C) (signalized)	F (F)* (stop-controlled)	F (F)* (stop-controlled)
Surrett Drive at I-85 NB Ramps	C (B) (signalized)	C (B) (signalized)	C (B) (signalized)

* Stop-controlled intersection with unacceptable side street LOS, but does not warrant signalization

7 CONCLUSIONS

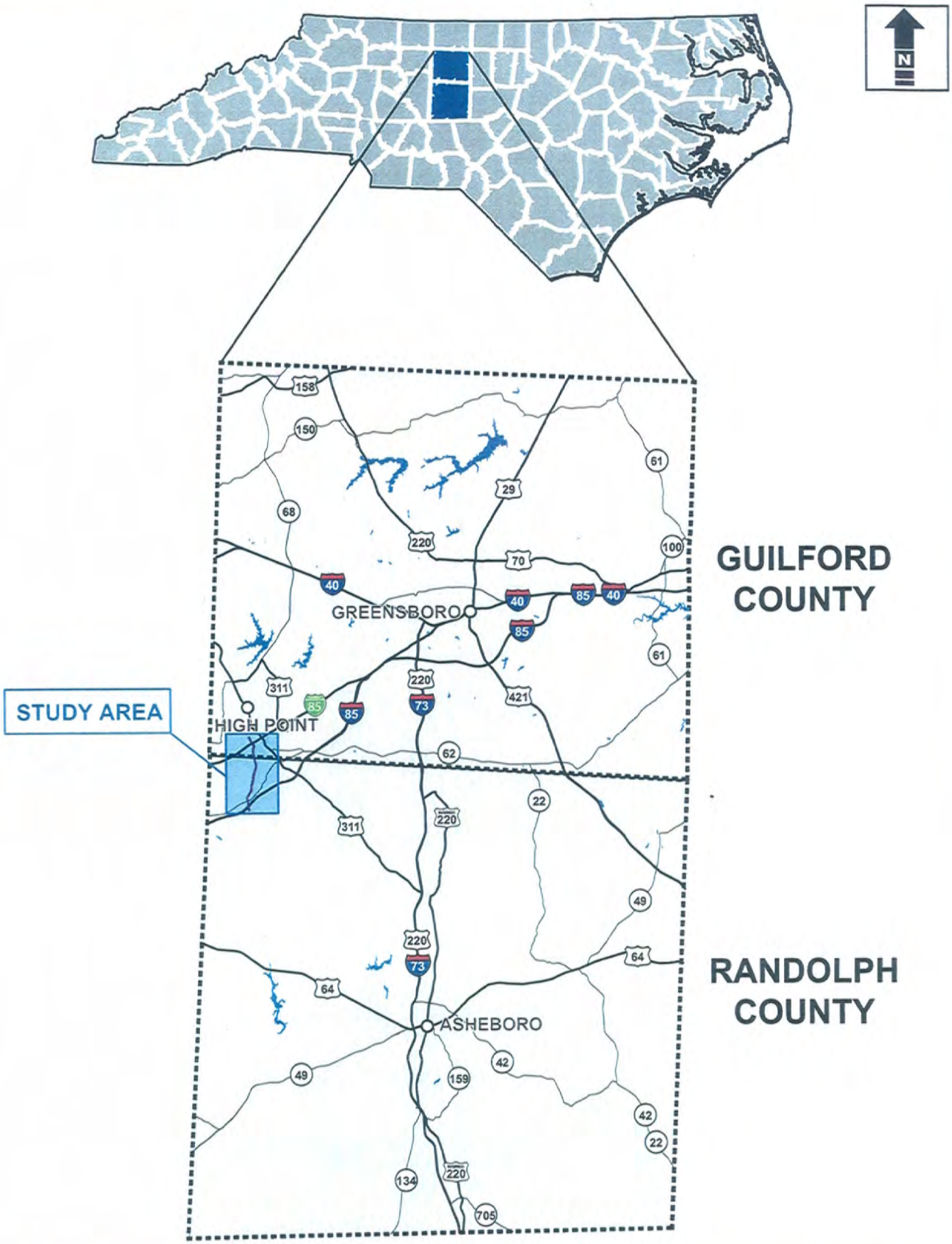
Under existing conditions along Surrett Drive, four intersections currently operate at an unacceptable LOS. By the year 2035, with no improvements other than those already scheduled to occur, the number of intersections operating at an unacceptable LOS will have increased from four to eleven.

The three Build Alternatives analyzed for this project improved operations along the corridor with varying levels of success. The intersection improvement options under the Minor Widening Alternative were limited to the signalization of stop-controlled intersections and did not allow for the addition of turn bays or additional lanes. Under these conditions, the Minor Widening Alternative required the signalization of all but two intersections and still had seven intersections fail to reach an acceptable LOS.

The Traffic Operations Alternative allowed for the addition of turn bays to intersections where receiving lanes were present. The Traffic Operations Alternative produced better results than the Minor Widening Alternative, but still had four intersections with an unacceptable LOS.

The Major Widening Alternative would allow all the improvements included in the other two Build Alternatives, as well as widening Surrett Drive from a two lane road to a four lane road. This additional lane in each direction greatly increases the LOS of many of the intersections and reduces the need for turn bays at many of the intersections. The Major Widening Alternative would produce an acceptable LOS for all the signalized intersections along Surrett Drive and would not require as many signalized intersections

as called for in the other alternatives. The Major Widening Alternative would also be able to sustain an acceptable LOS longer than any of the other alternatives as traffic volumes along Surrett Drive continue to grow.



VicinityMapSurrett.ai 01_31_08

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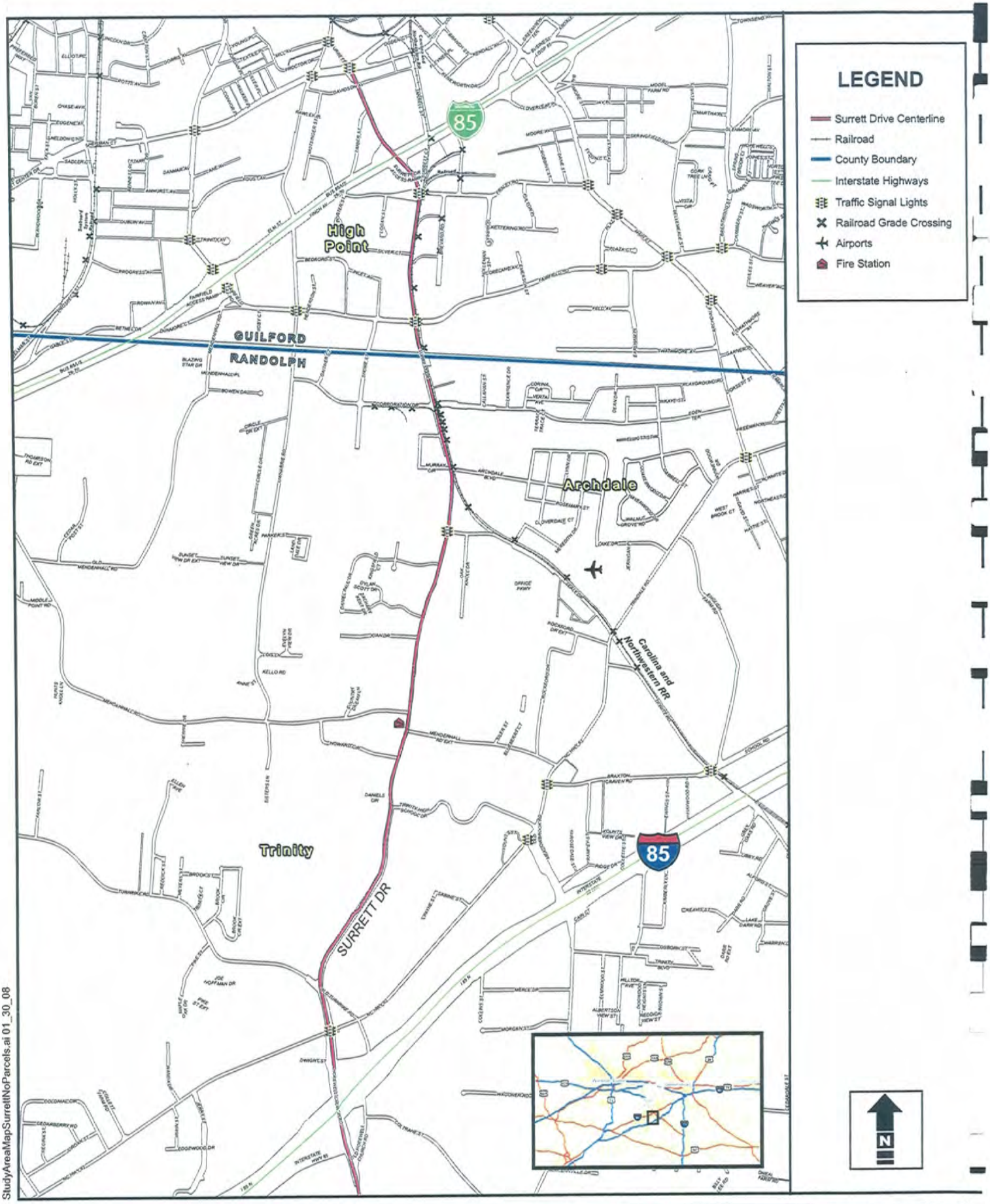
Traffic Operational and Safety Improvements to

Surrett Drive from West Market Center Drive to I-85

Guilford and Randolph Counties

Surrett Drive Vicinity Map

Figure 1-1



StudyAreaMapSurrettNoParcels.ai 01_30_08

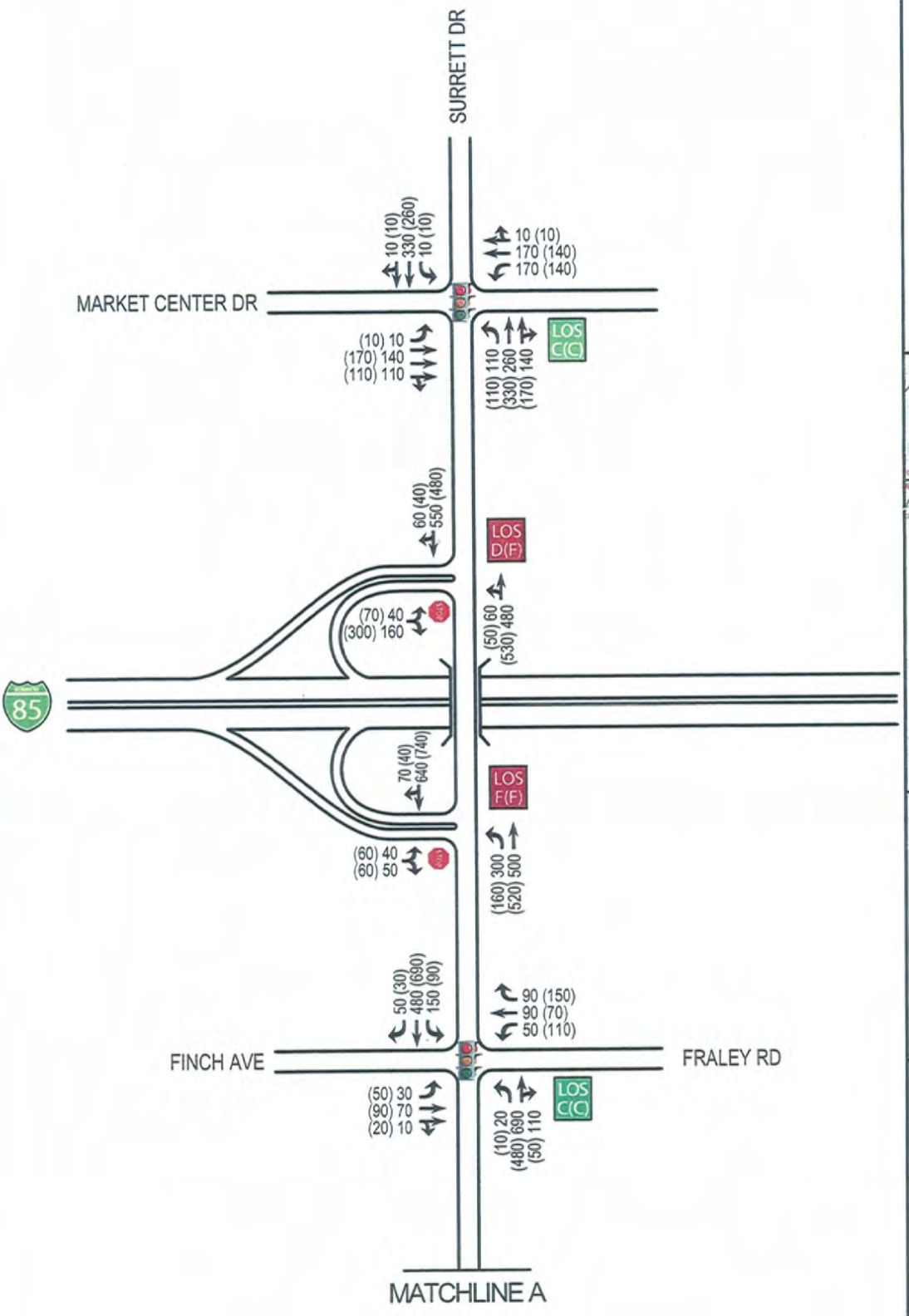
Traffic Operational and Safety Improvements to

Surrett Drive from West Market Center Drive to I-85

Guilford and Randolph Counties

Surrett Drive Study Area Map

Figure 1-2



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX (XX) AM (PM) Peak Hour Volumes
- Lane Geometry
- Level of Service A-C
- Level of Service D
- Level of Service E
- Level of Service F
- Level of Service E/F Stop-Controlled Intersection with a Critical Movement Volume of 100 VPH or Less or Critical Movement Queue Length is less than 250'

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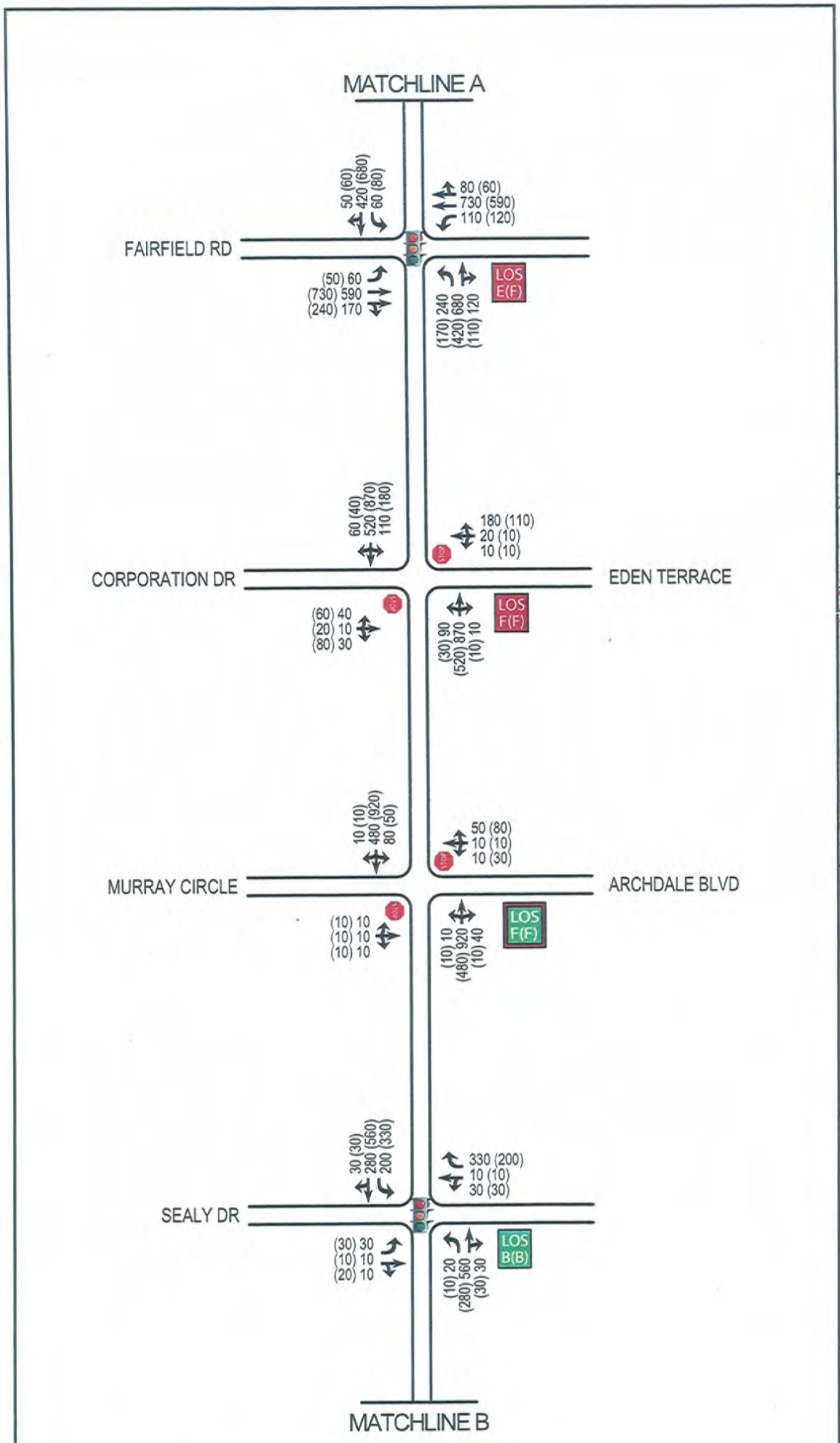
2007 Existing Conditions, Lane Geometry and Levels of Service

Figure 4 - 1



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX (XX) AM (PM) Peak Hour Volumes
- Lane Geometry
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- Level of Service D
- Level of Service E
- Level of Service F
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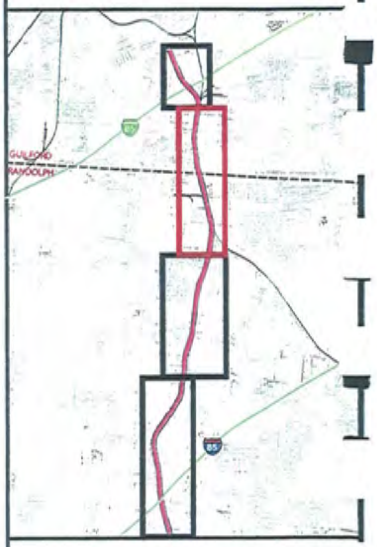

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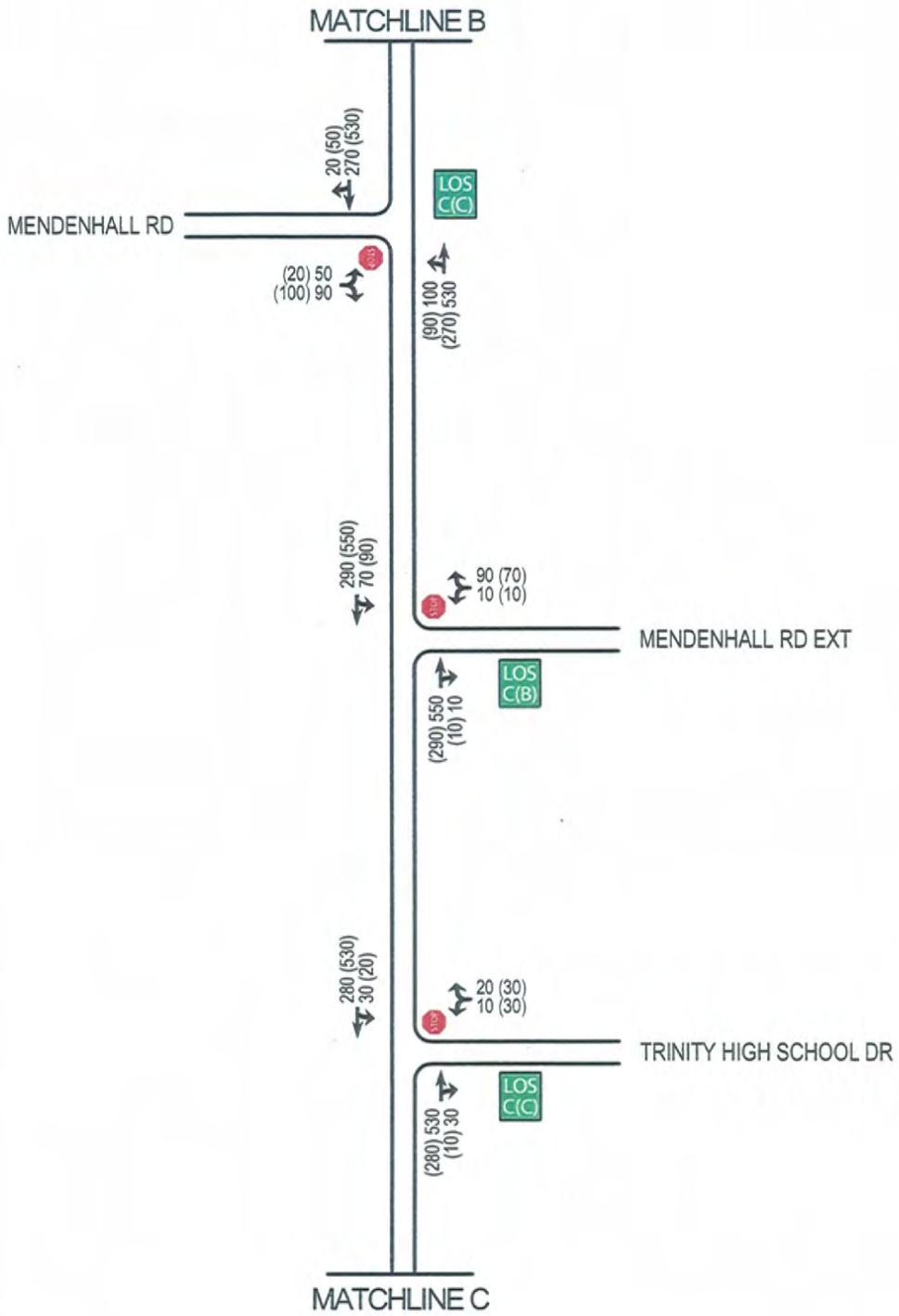
2007 Existing Conditions, Lane Geometry and Levels of Service

Figure 4 - 2



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
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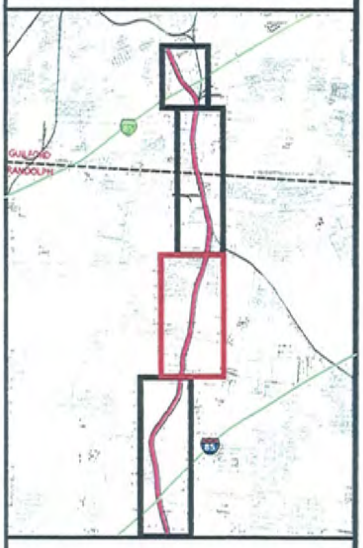

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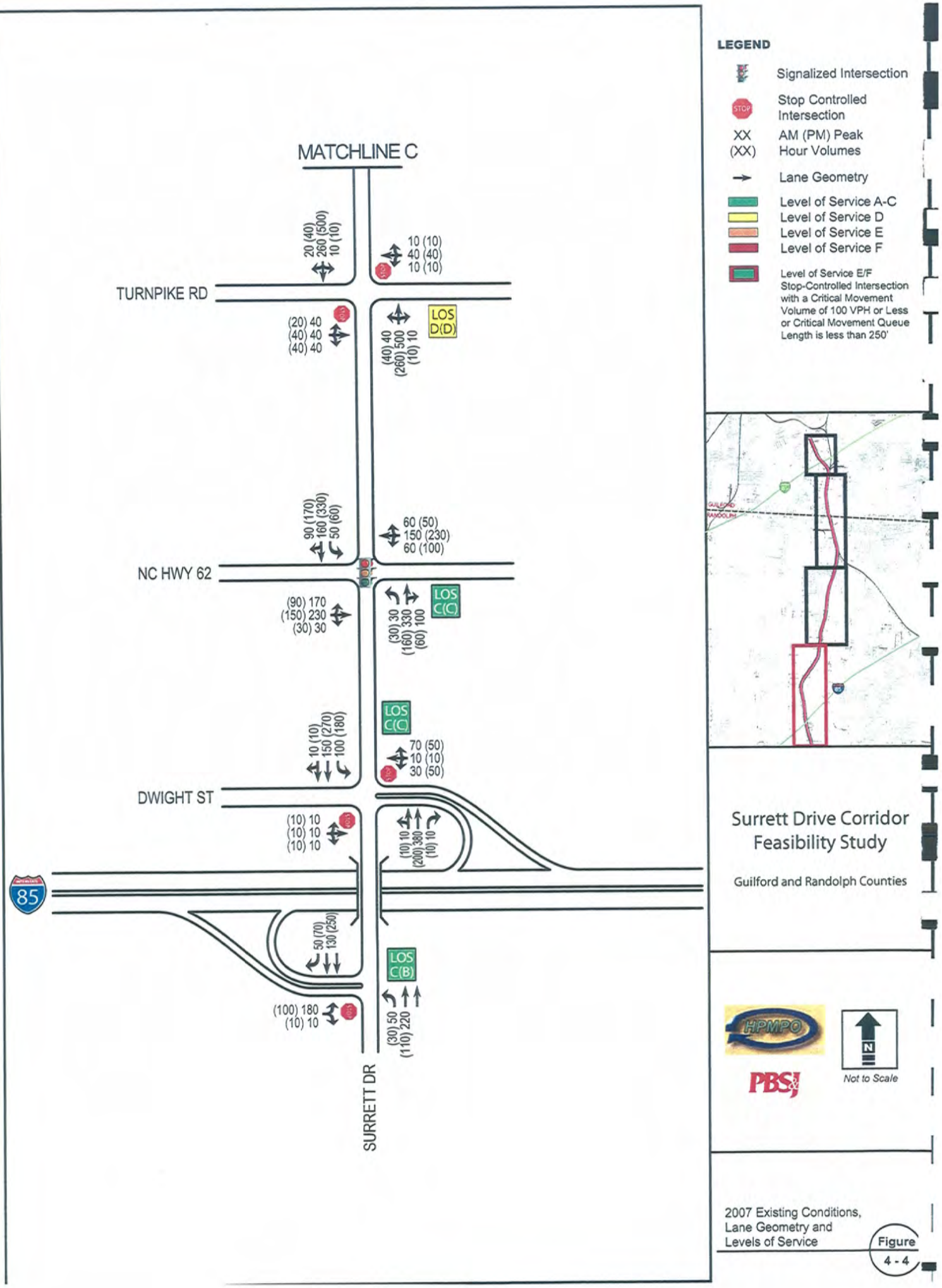
2007 Existing Conditions, Lane Geometry and Levels of Service

Figure 4 - 3


MATCHLINE C
TURNPIKE RD
NC HWY 62
DWIGHT ST
SURRETT DR
85
20 (40)
260 (500)
10 (10)
10 (10)
40 (40)
10 (10)
(20) 40
(40) 40
(40) 40
LOS D(D)
(40) 40
(260) 500
(10) 10
90 (170)
160 (330)
50 (60)
60 (50)
150 (230)
60 (100)
(90) 170
(150) 230
(30) 30
LOS C(C)
(30) 30
(160) 330
(60) 100
LOS C(C)
10 (10)
150 (270)
100 (180)
70 (50)
10 (10)
30 (50)
(10) 10
(10) 10
(10) 10
(10) 10
(200) 380
(10) 10
50 (70)
130 (250)
LOS C(B)
(100) 180
(10) 10
(30) 50
(110) 220
LEGEND
Signalized Intersection
Stop Controlled Intersection
XX (XX) AM (PM) Peak Hour Volumes
Lane Geometry
Level of Service A-C
Level of Service D
Level of Service E
Level of Service F
Level of Service E/F Stop-Controlled Intersection with a Critical Movement Volume of 100 VPH or Less or Critical Movement Queue Length is less than 250'
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Guilford and Randolph Counties
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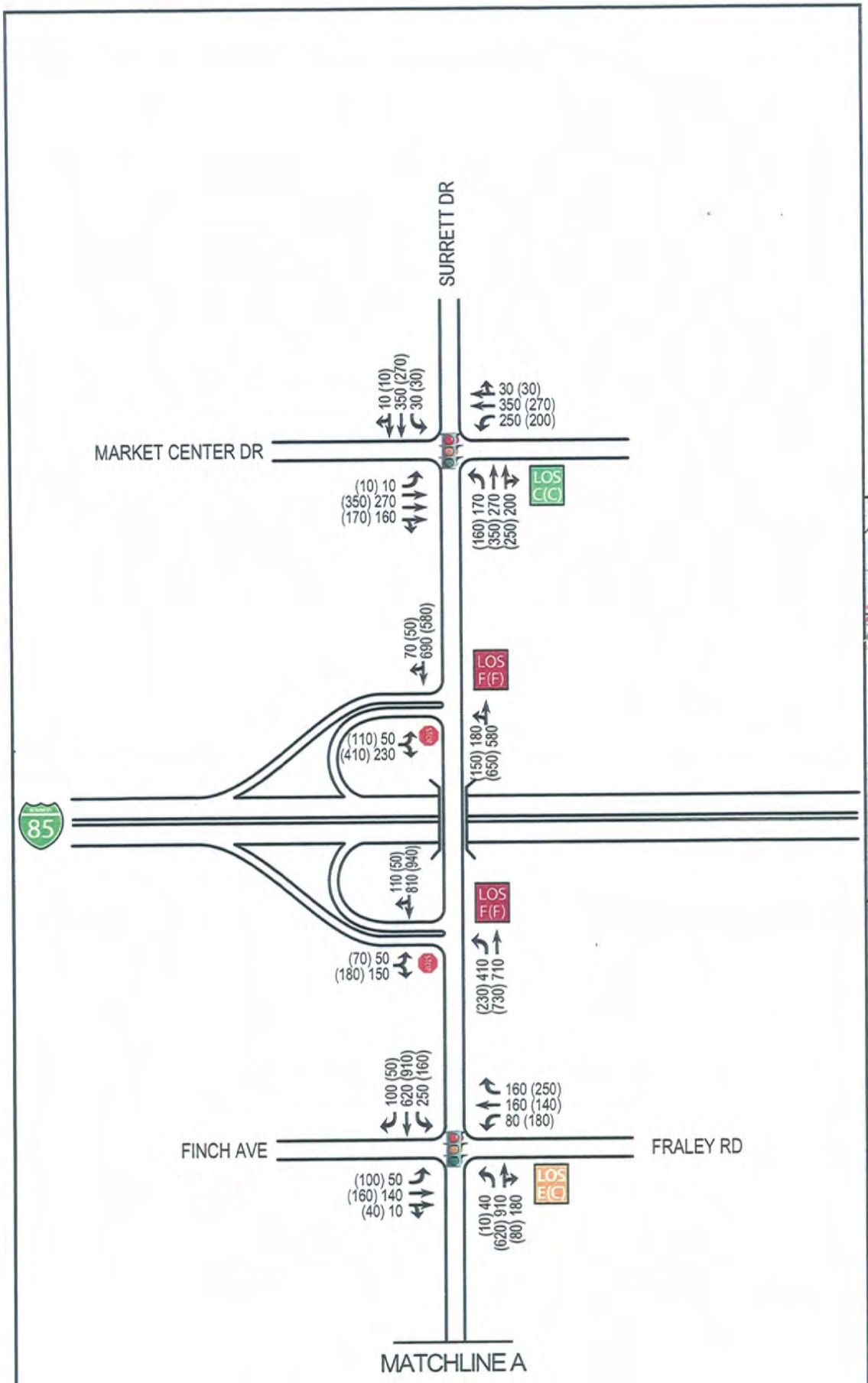
Not to Scale
2007 Existing Conditions, Lane Geometry and Levels of Service
Figure 4 - 4



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX (XX) AM (PM) Peak Hour Volumes
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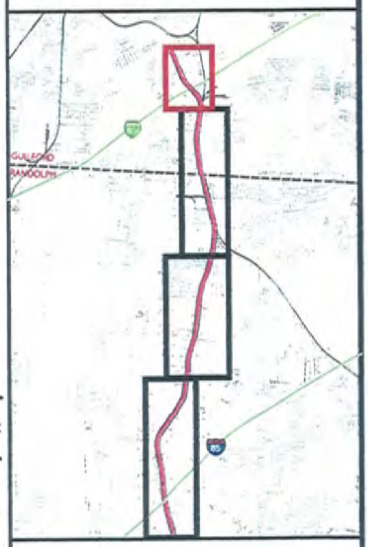

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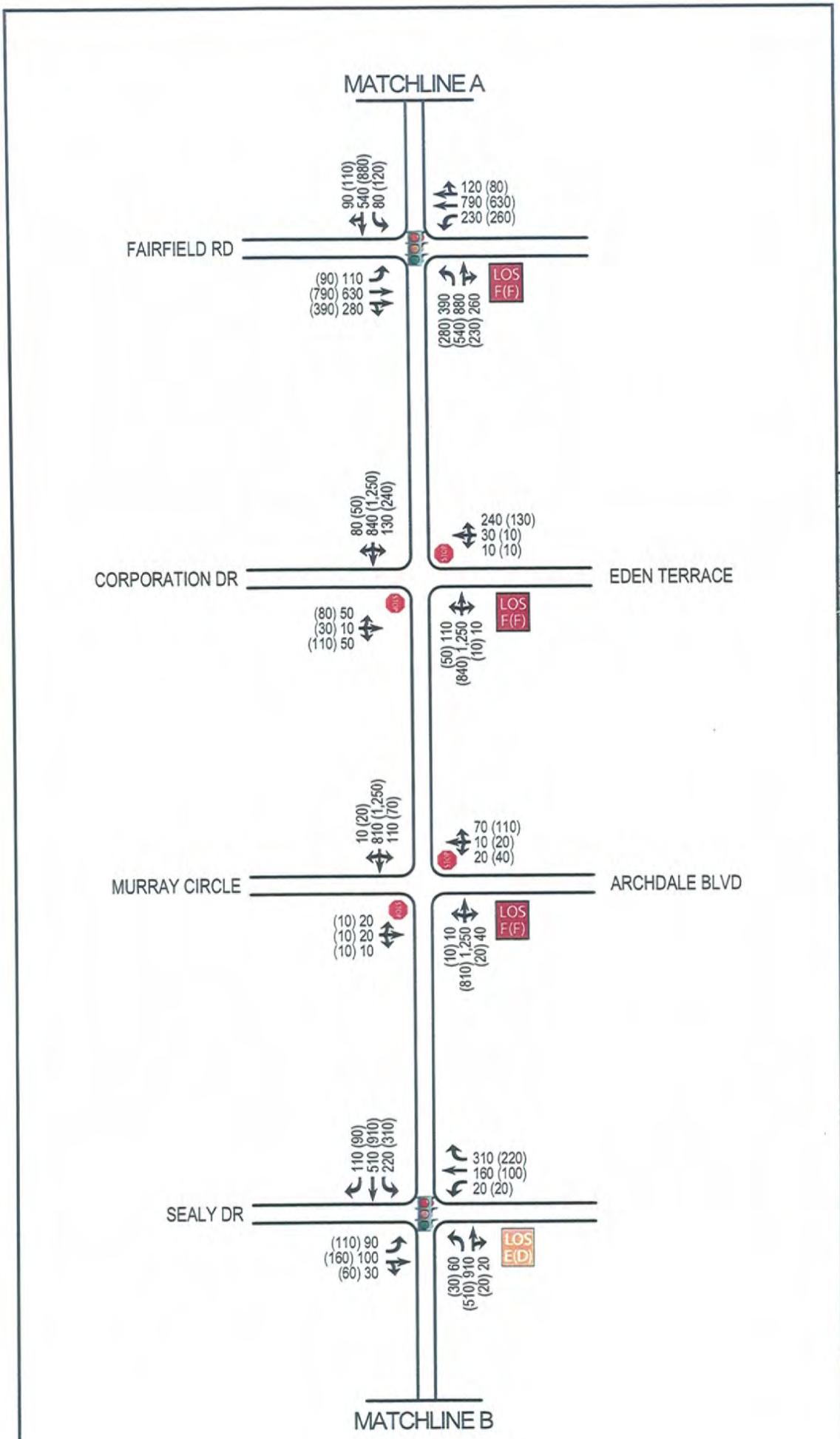
2035 No-Build Conditions, Lane Geometry and Levels of Service

Figure 5 - 1



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
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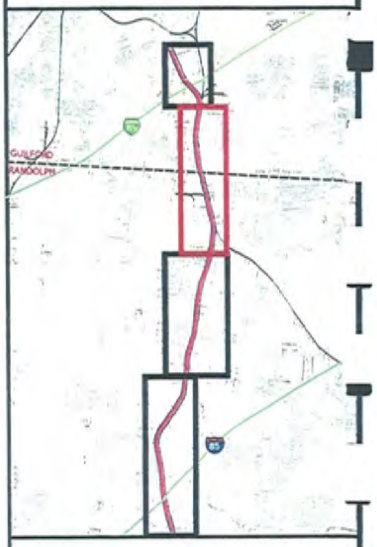

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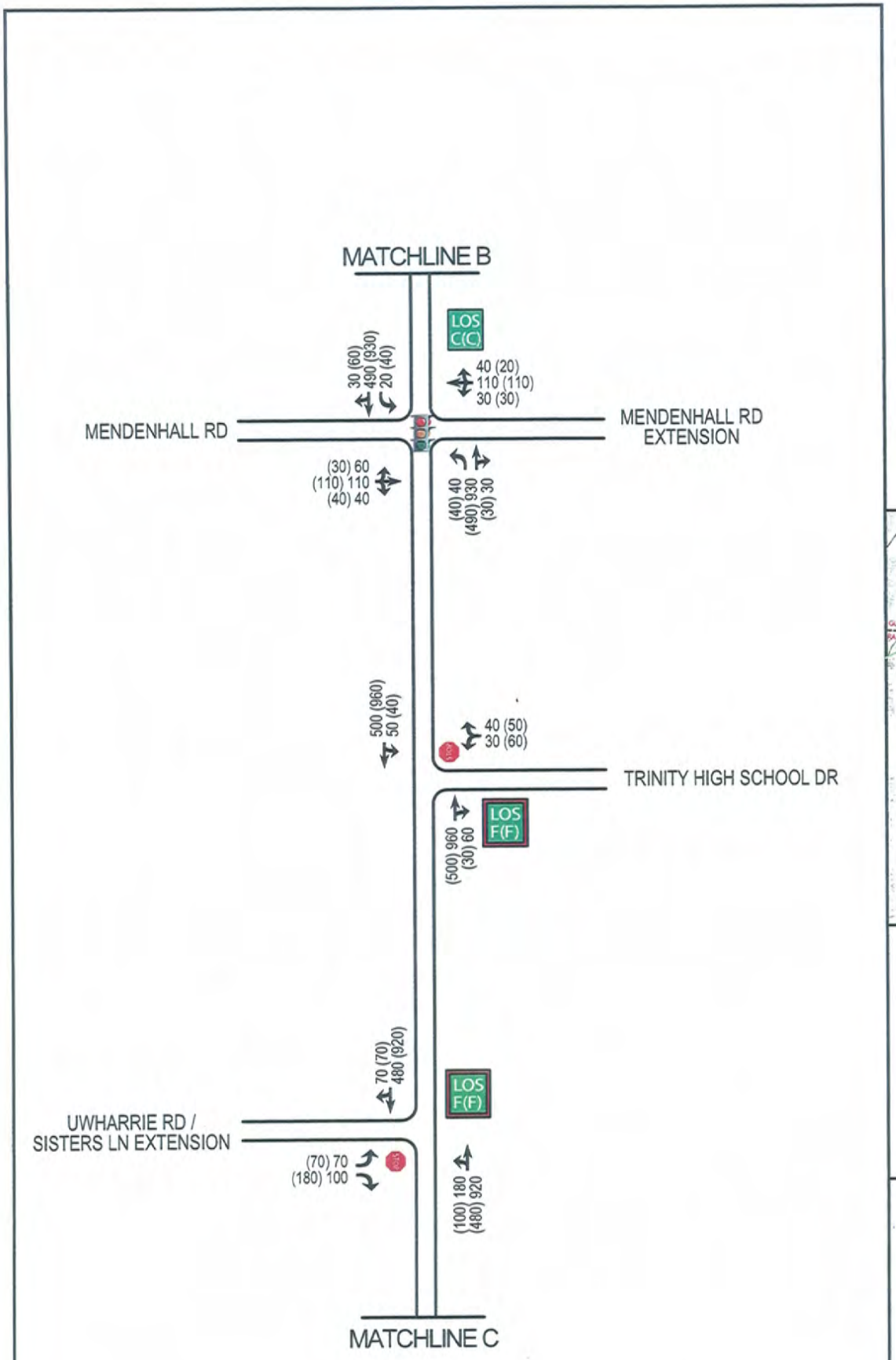
2035 No-Build Conditions, Lane Geometry and Levels of Service

Figure 5 - 2



LEGEND

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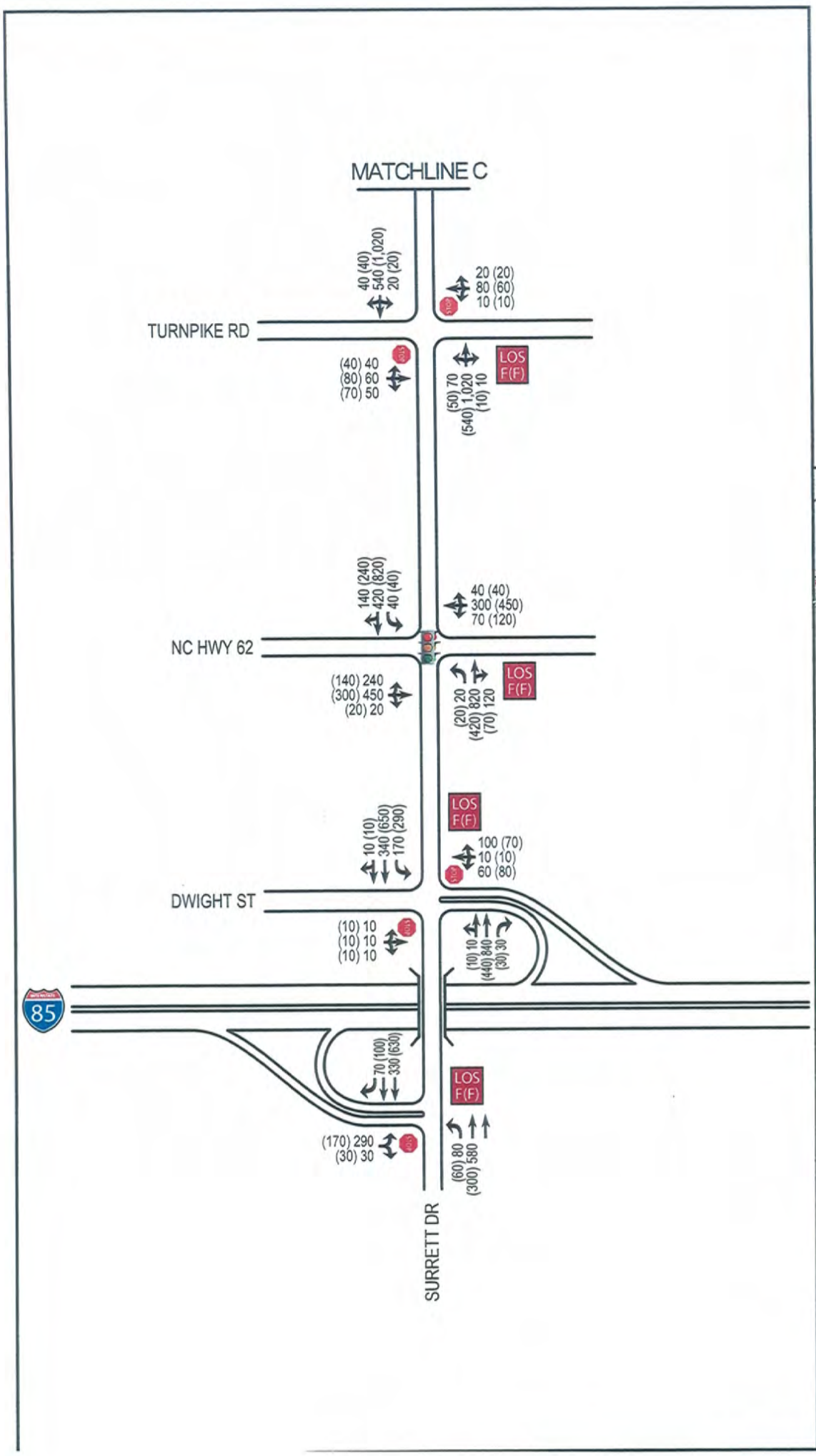
2035 No-Build Conditions, Lane Geometry and Levels of Service

Figure 5 - 3



LEGEND

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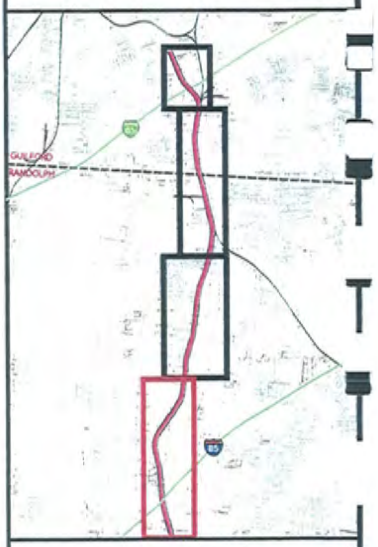

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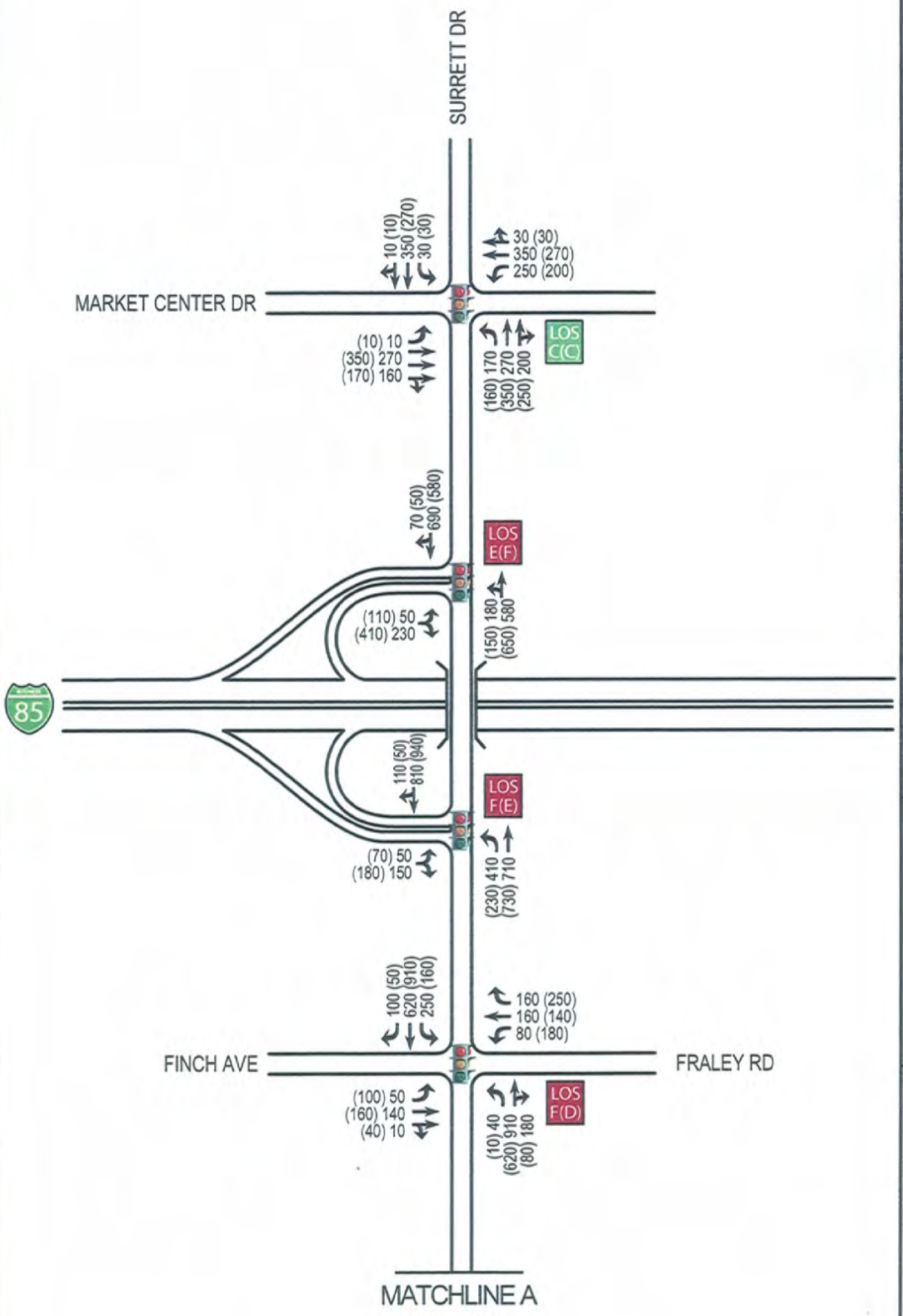
2035 No-Build Conditions, Lane Geometry and Levels of Service

Figure 5 - 4



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX (XX) AM (PM) Peak Hour Volumes
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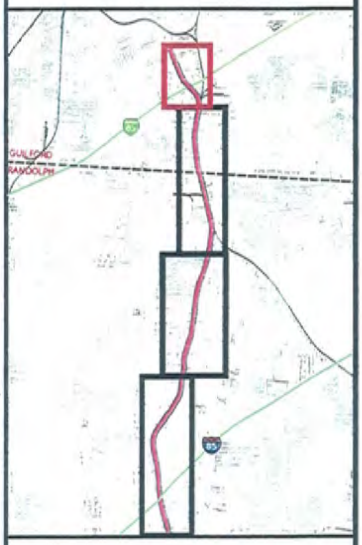

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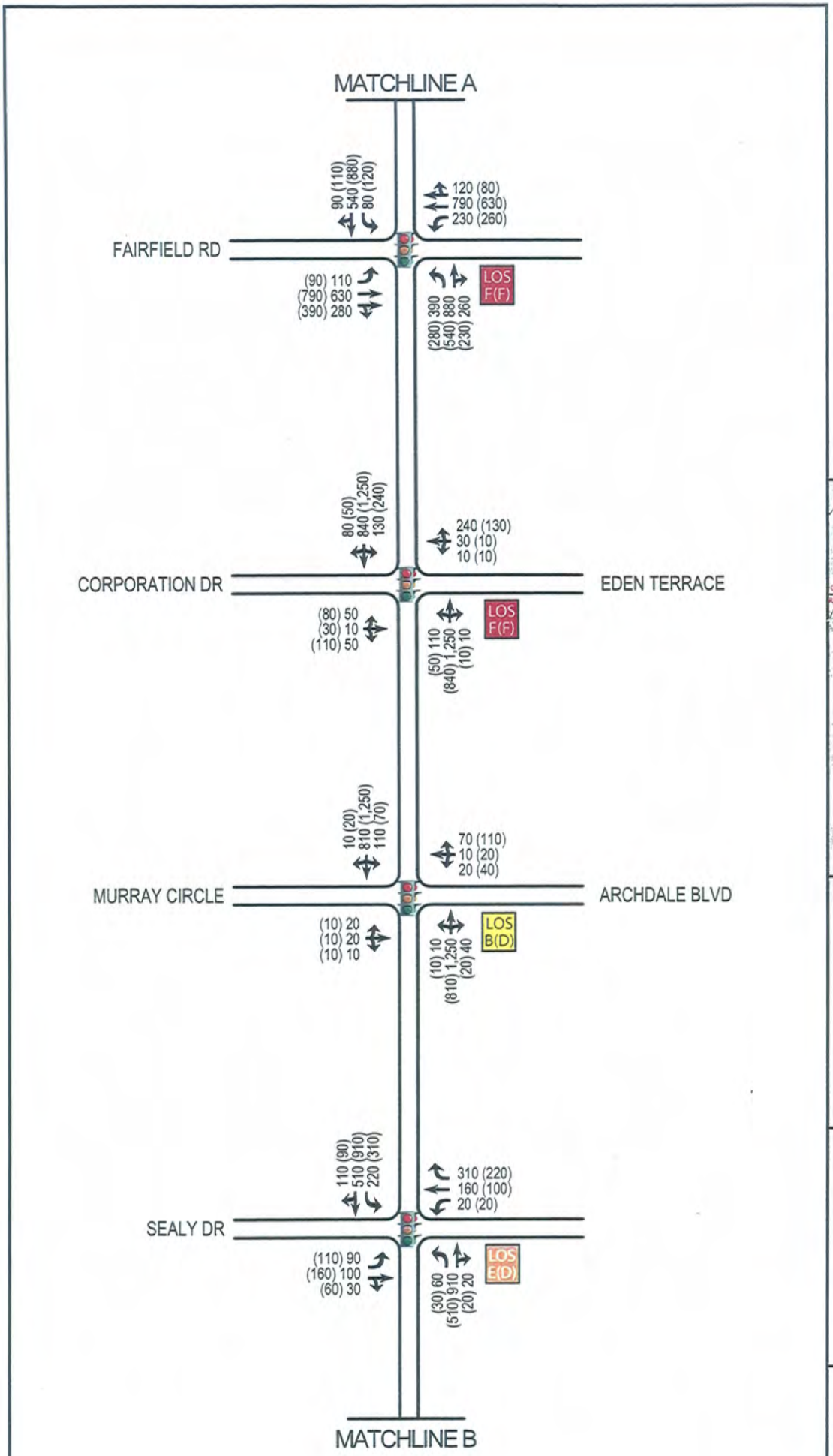
2035 Minor Widening Conditions
Lane Geometry and
Levels of Service

Figure 6 - 1



LEGEND

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- Stop Controlled Intersection
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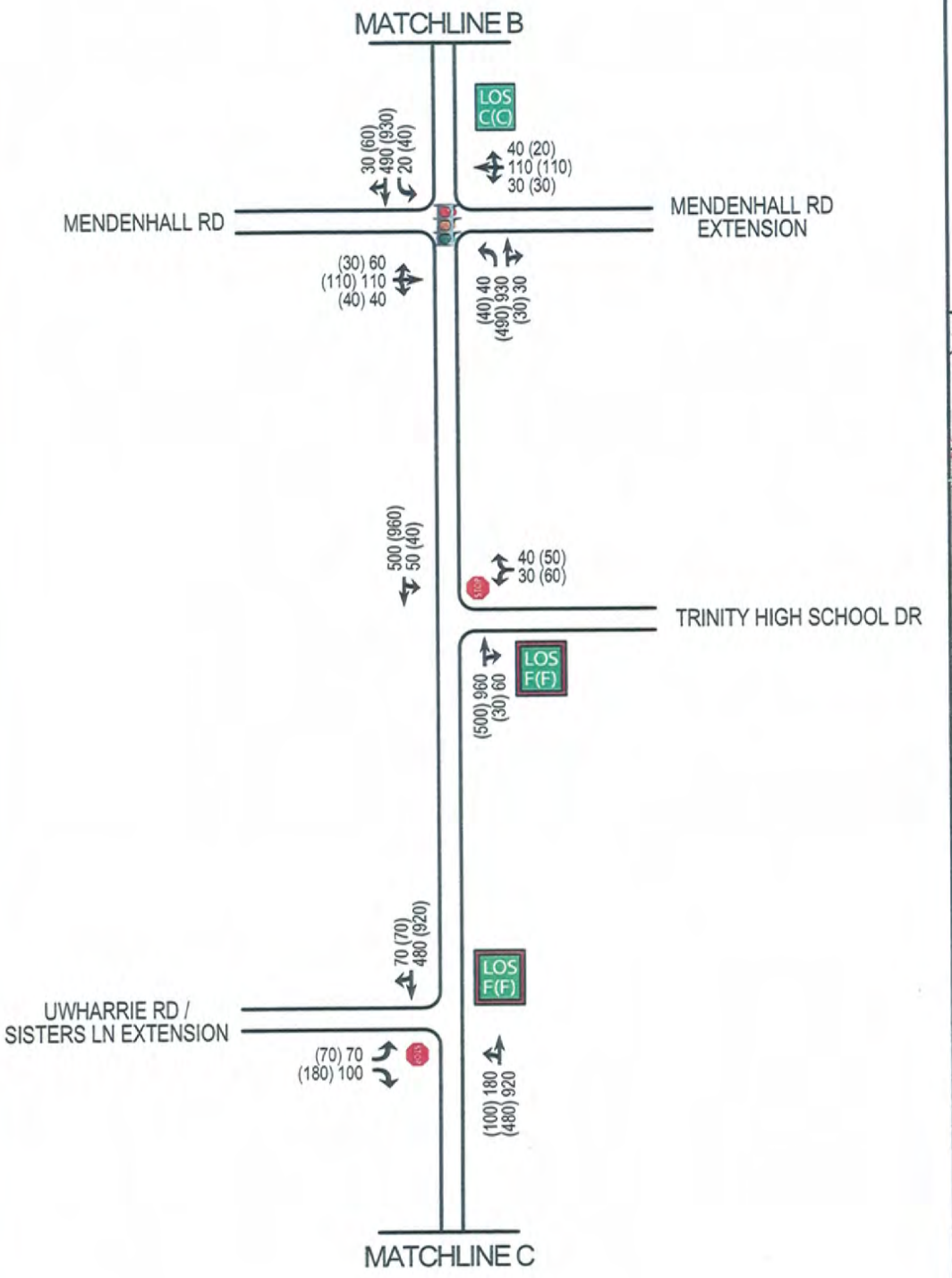
2035 Minor Widening Conditions
Lane Geometry and
Levels of Service

Figure 6 - 2



LEGEND

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- Stop Controlled Intersection
- XX (XX) AM (PM) Peak Hour Volumes
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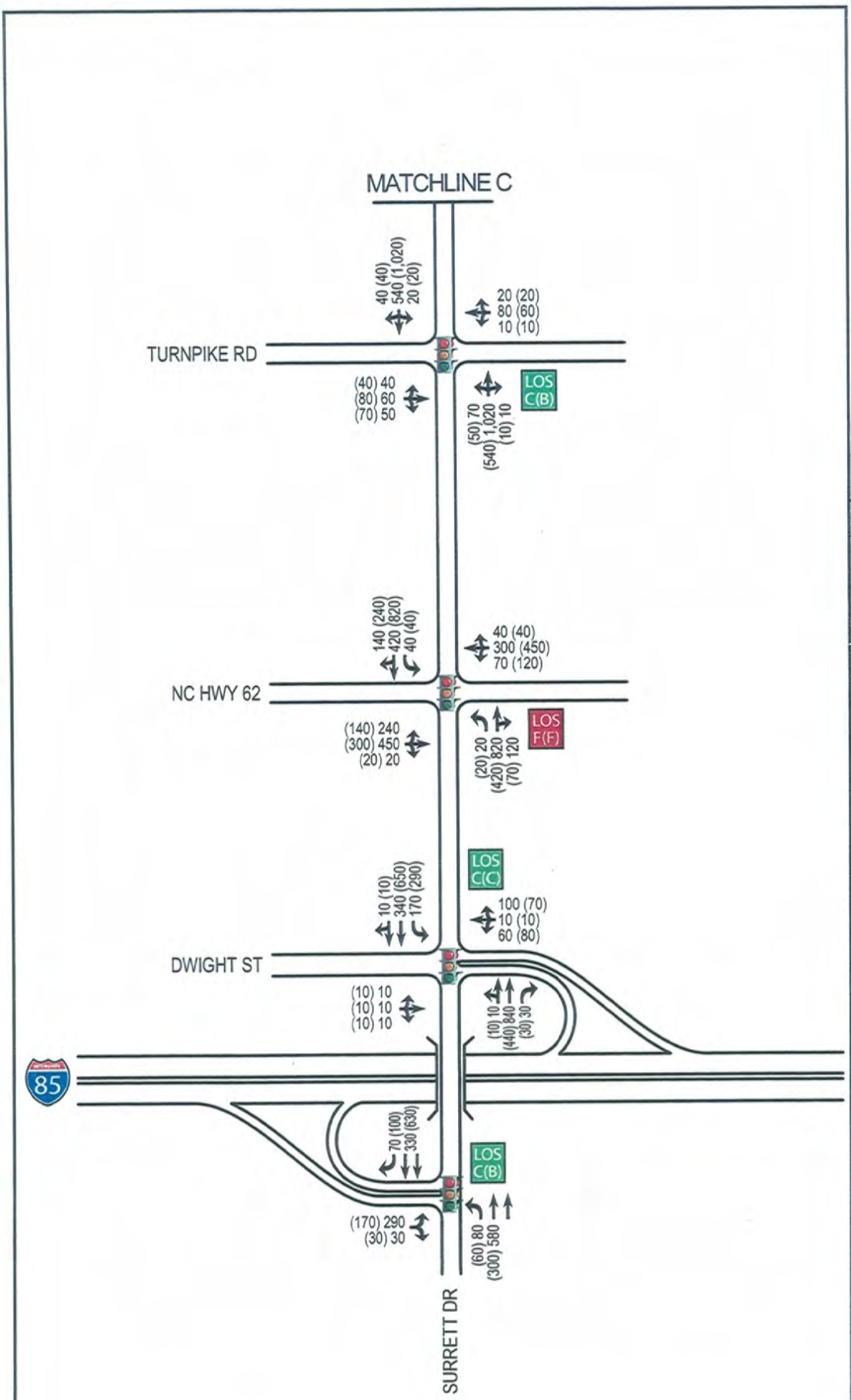
2035 Minor Widening Conditions
Lane Geometry and
Levels of Service

Figure 6 - 3



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX (XX) AM (PM) Peak Hour Volumes
- Lane Geometry
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- Level of Service D
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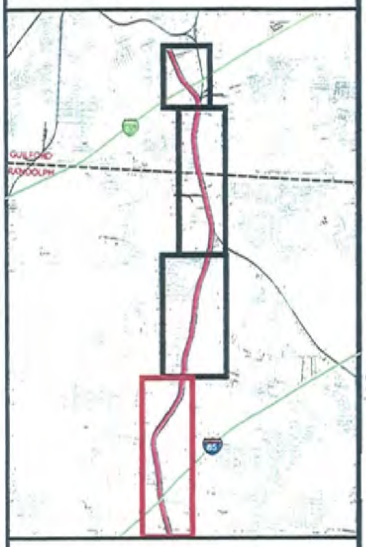

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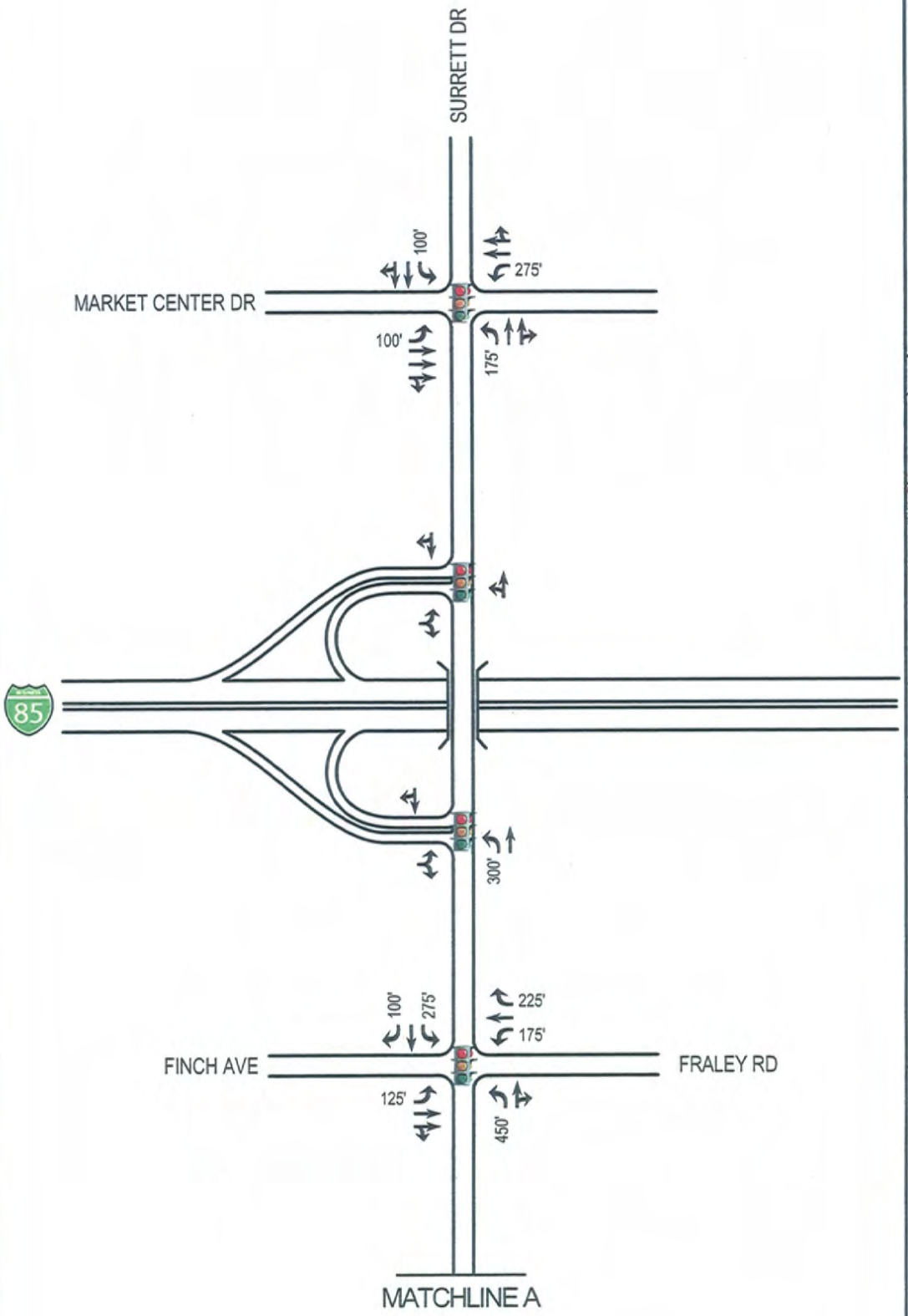
Not to Scale

2035 Minor Widening Conditions
Lane Geometry and
Levels of Service

Figure 6 - 4



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX' Queue Length
- Lane Geometry

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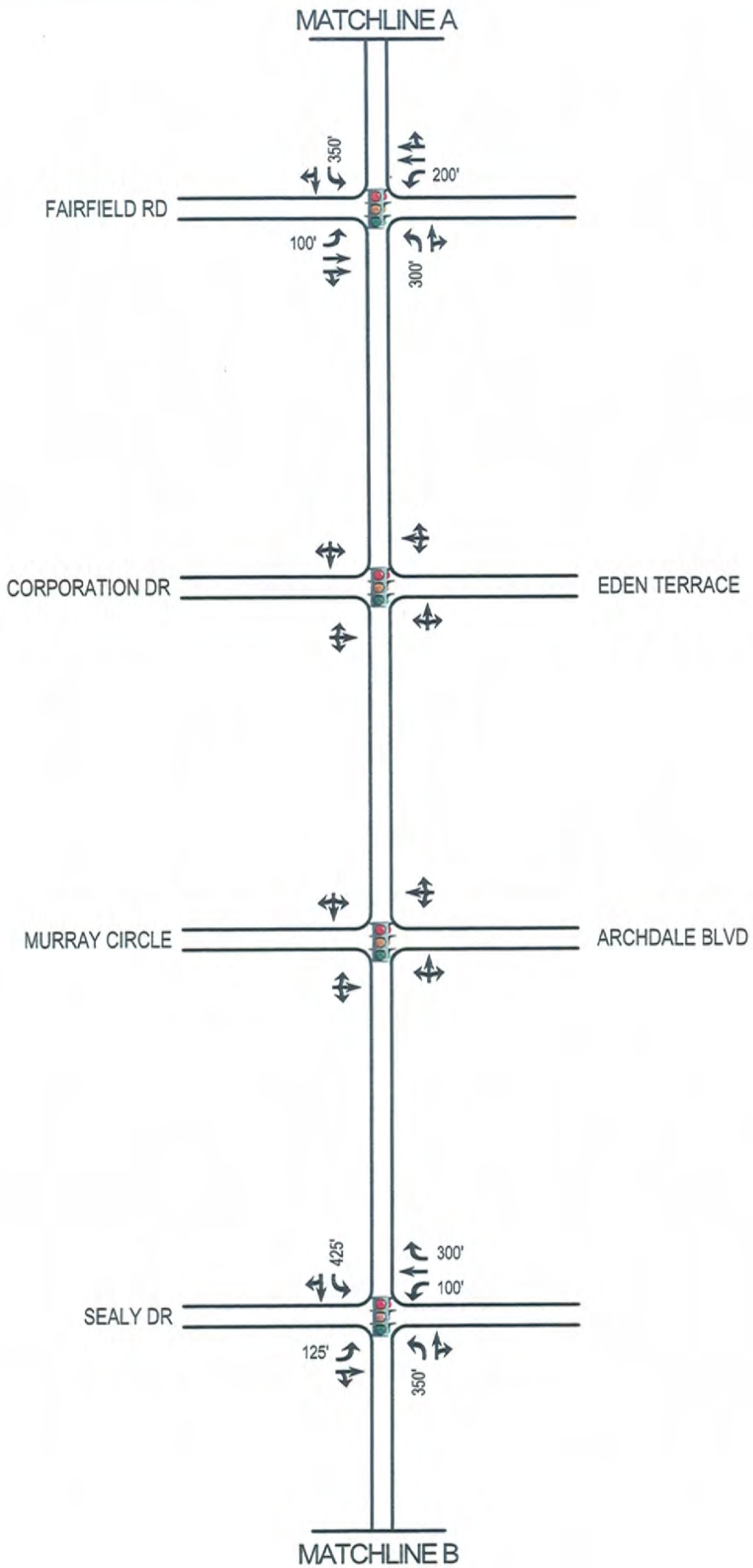
2035 Minor Widening Queue Results Lane Geometry and Queue Lengths

Figure 6 - 5



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX' Queue Length
- Lane Geometry

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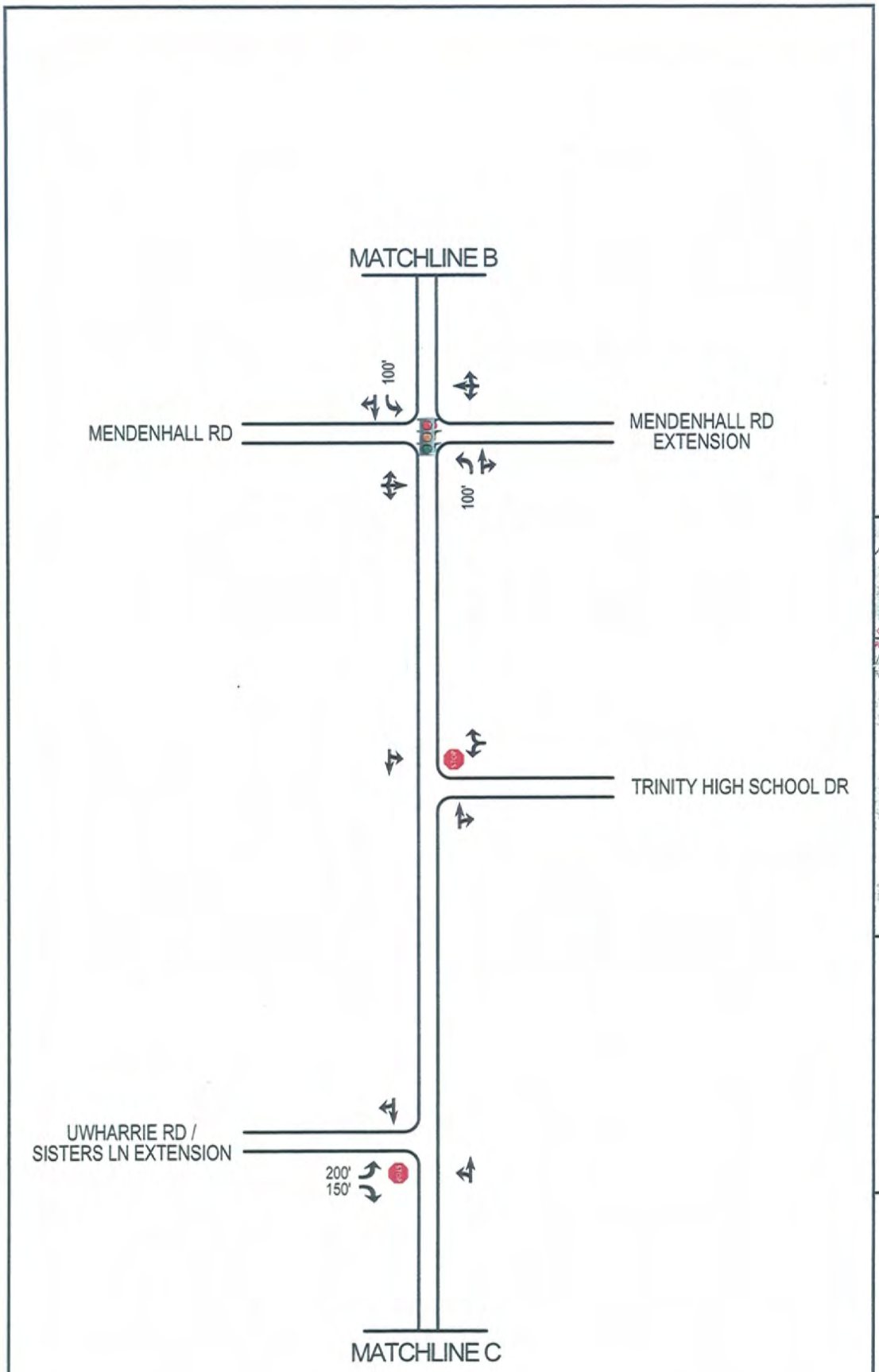
Not to Scale

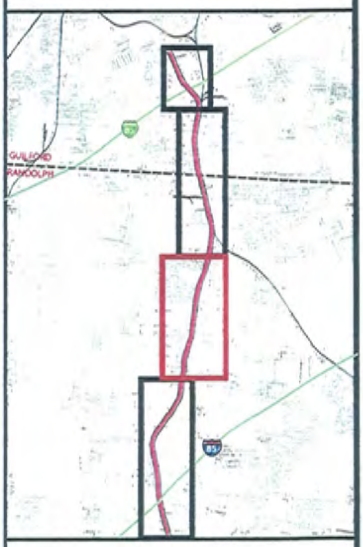
2035 Minor Widening Queue Results
Lane Geometry and
Queue Lengths

Figure 6 - 6



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX' Queue Length
- Lane Geometry



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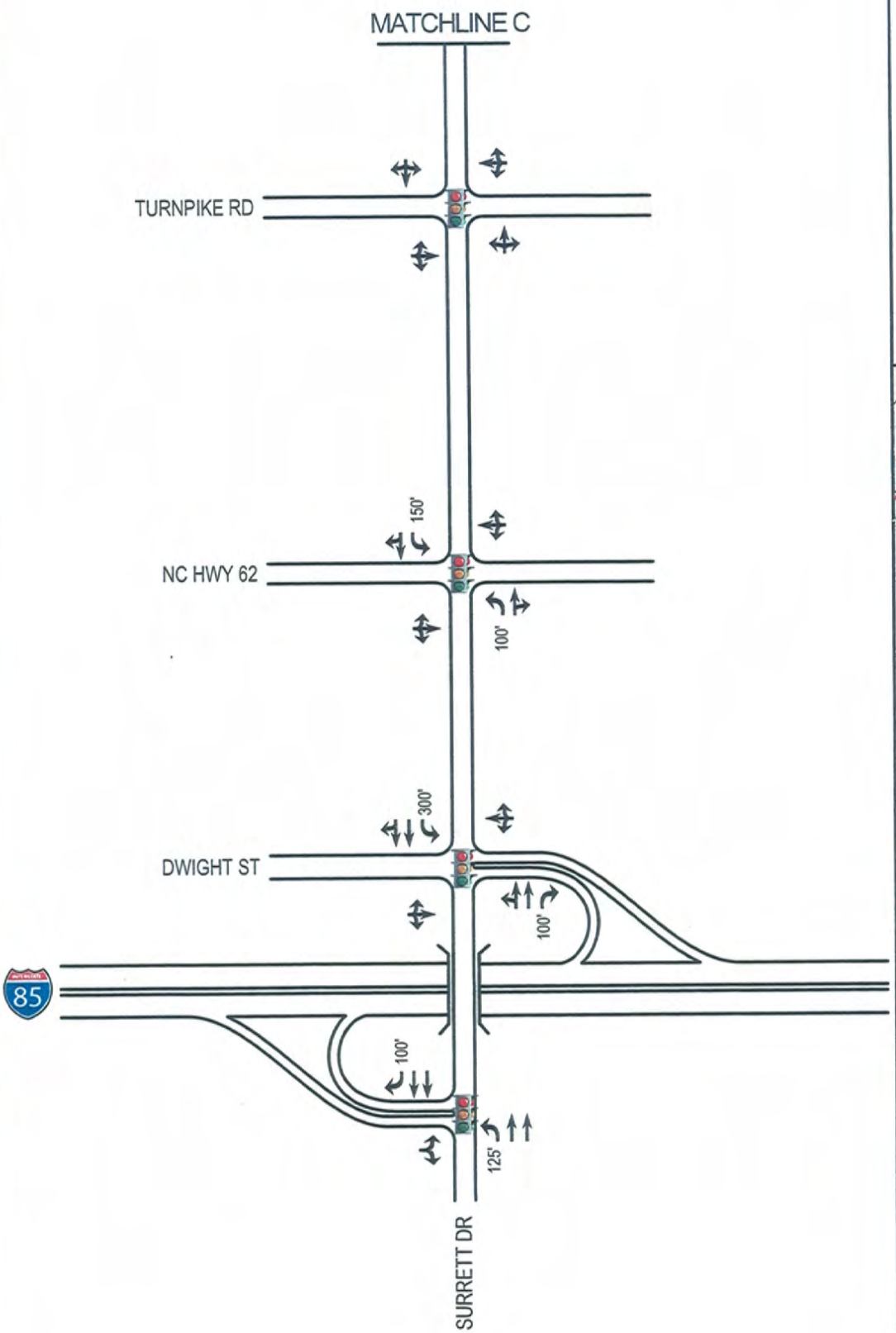
Not to Scale

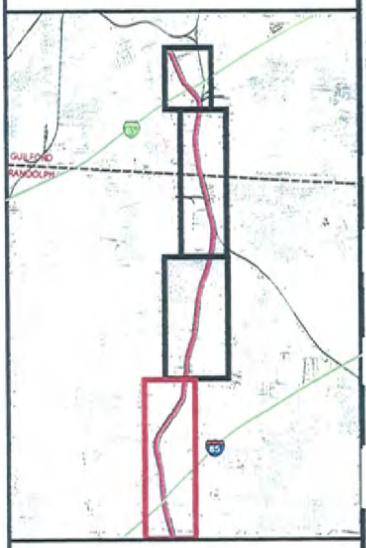
2035 Minor Widening Queue Results
Lane Geometry and Queue Lengths

Figure 6 - 7



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX' Queue Length
- Lane Geometry



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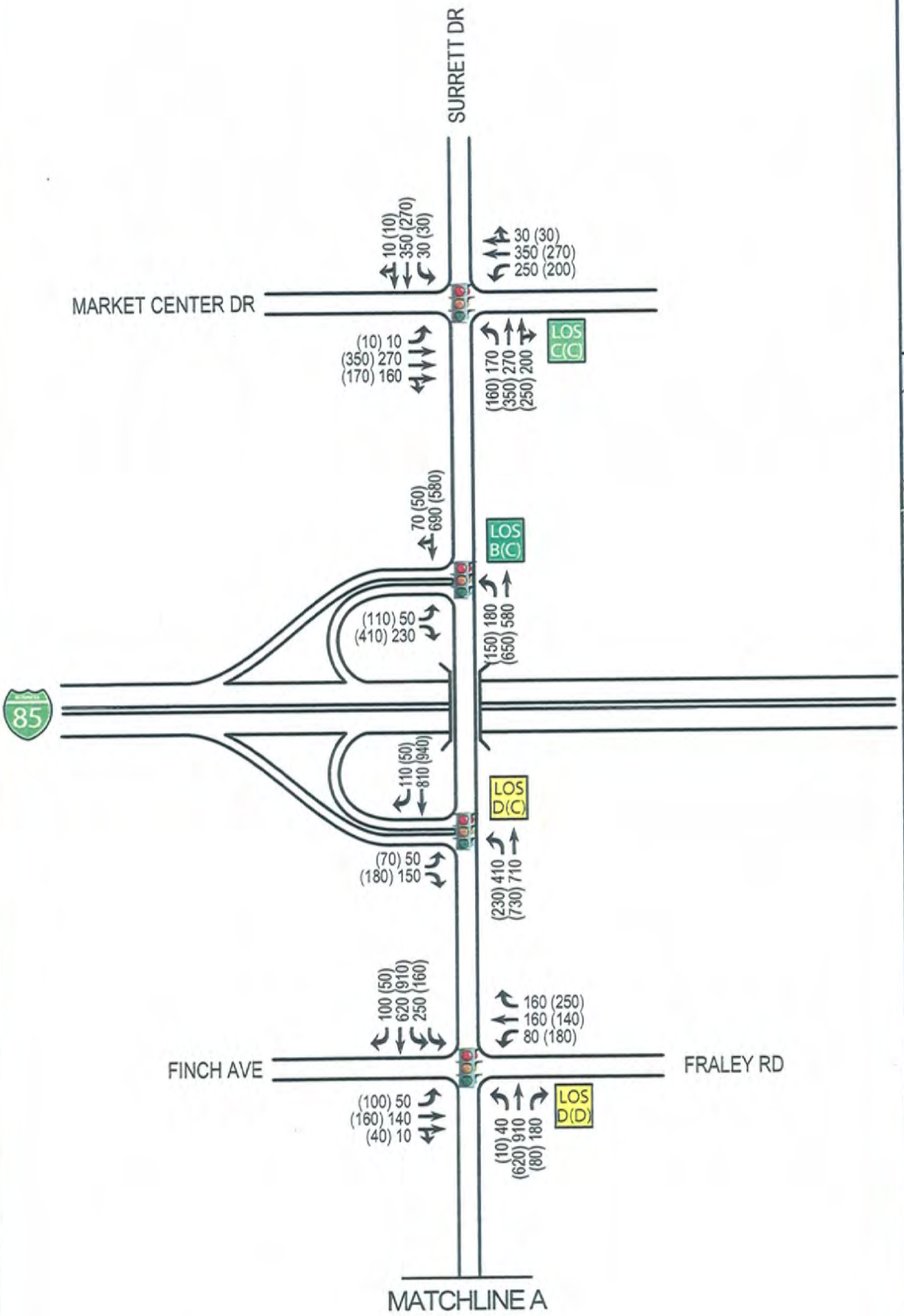
2035 Minor Widening Queue Results
Lane Geometry and
Queue Lengths

Figure 6 - 8



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX (XX) AM (PM) Peak Hour Volumes
- Lane Geometry
- Level of Service A-C
- Level of Service D
- Level of Service E
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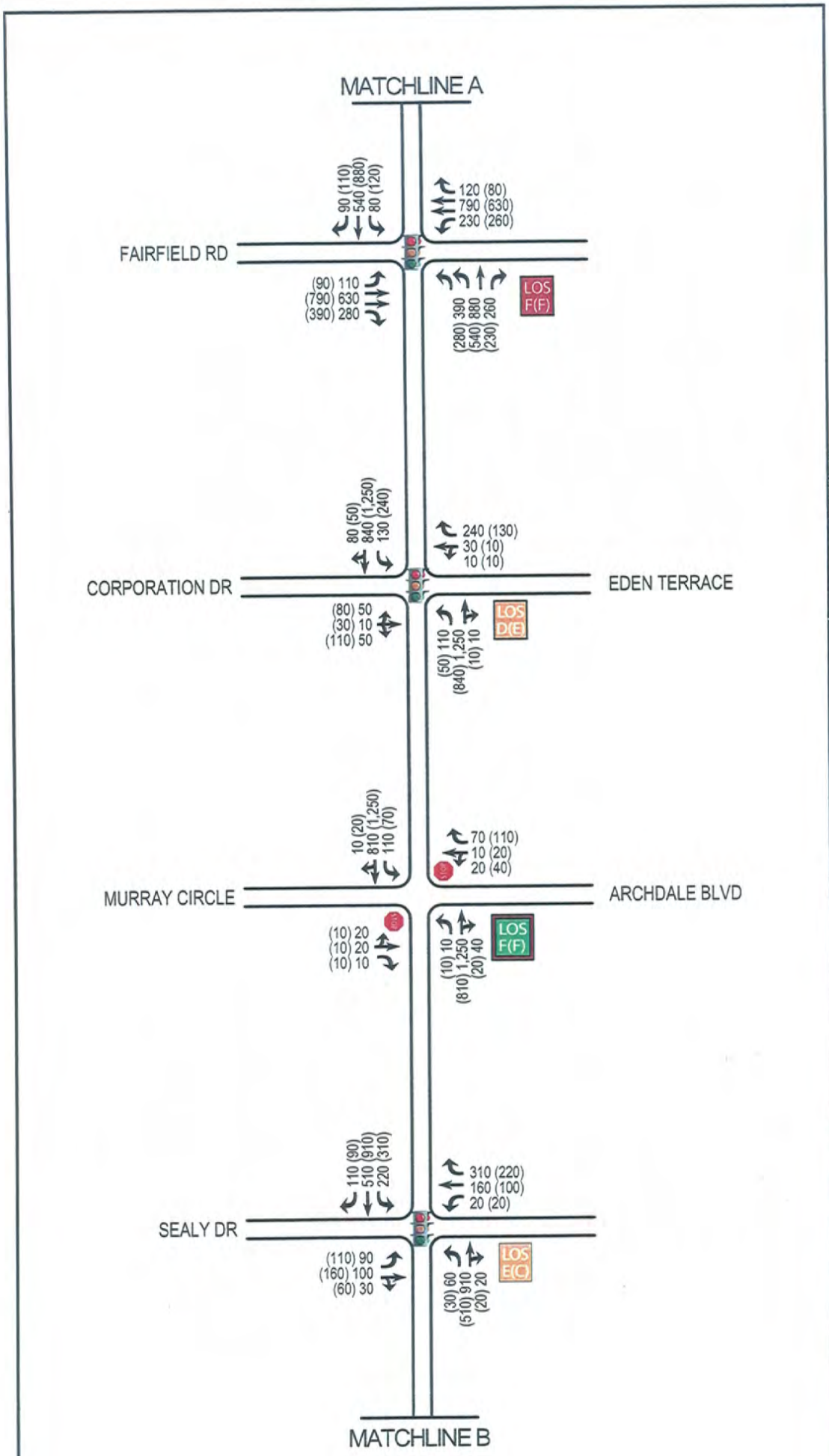
2035 Traffic Operations Conditions
Lane Geometry and
Levels of Service

Figure 6 - 9



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX (XX) AM (PM) Peak Hour Volumes
- Lane Geometry
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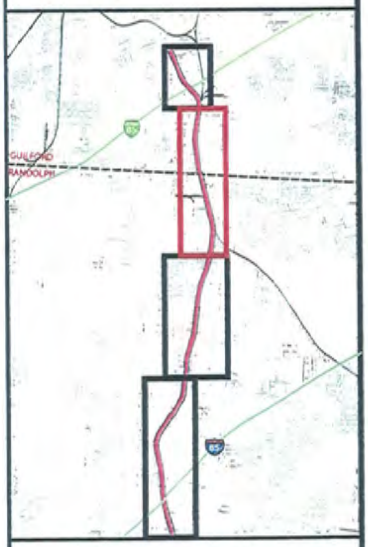
- Level of Service E/F Stop-Controlled Intersection with a Critical Movement Volume of 100 VPH or Less or Critical Movement Queue Length is less than 250'



Surrett Drive Corridor Feasibility Study

Guilford and Randolph Counties

HPMPO

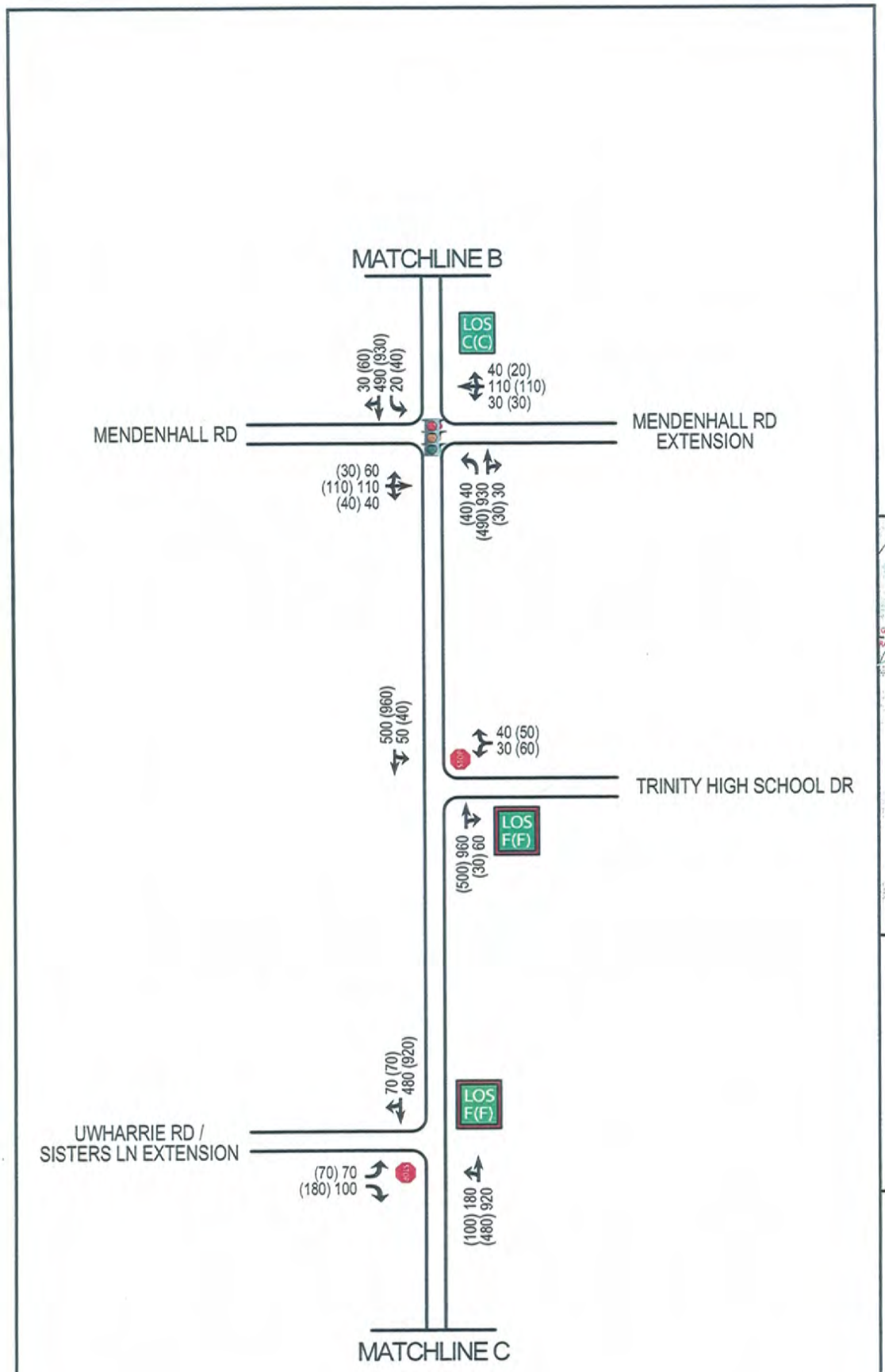
PBSJ

N

Not to Scale

2035 Traffic Operations Conditions Lane Geometry and Levels of Service

Figure 6 - 10



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX (XX) AM (PM) Peak Hour Volumes
- Lane Geometry
- Level of Service A-C
- Level of Service D
- Level of Service E
- Level of Service F
- Level of Service E/F Stop-Controlled Intersection with a Critical Movement Volume of 100 VPH or Less or Critical Movement Queue Length is less than 250'

Surrett Drive Corridor Feasibility Study

Guilford and Randolph Counties

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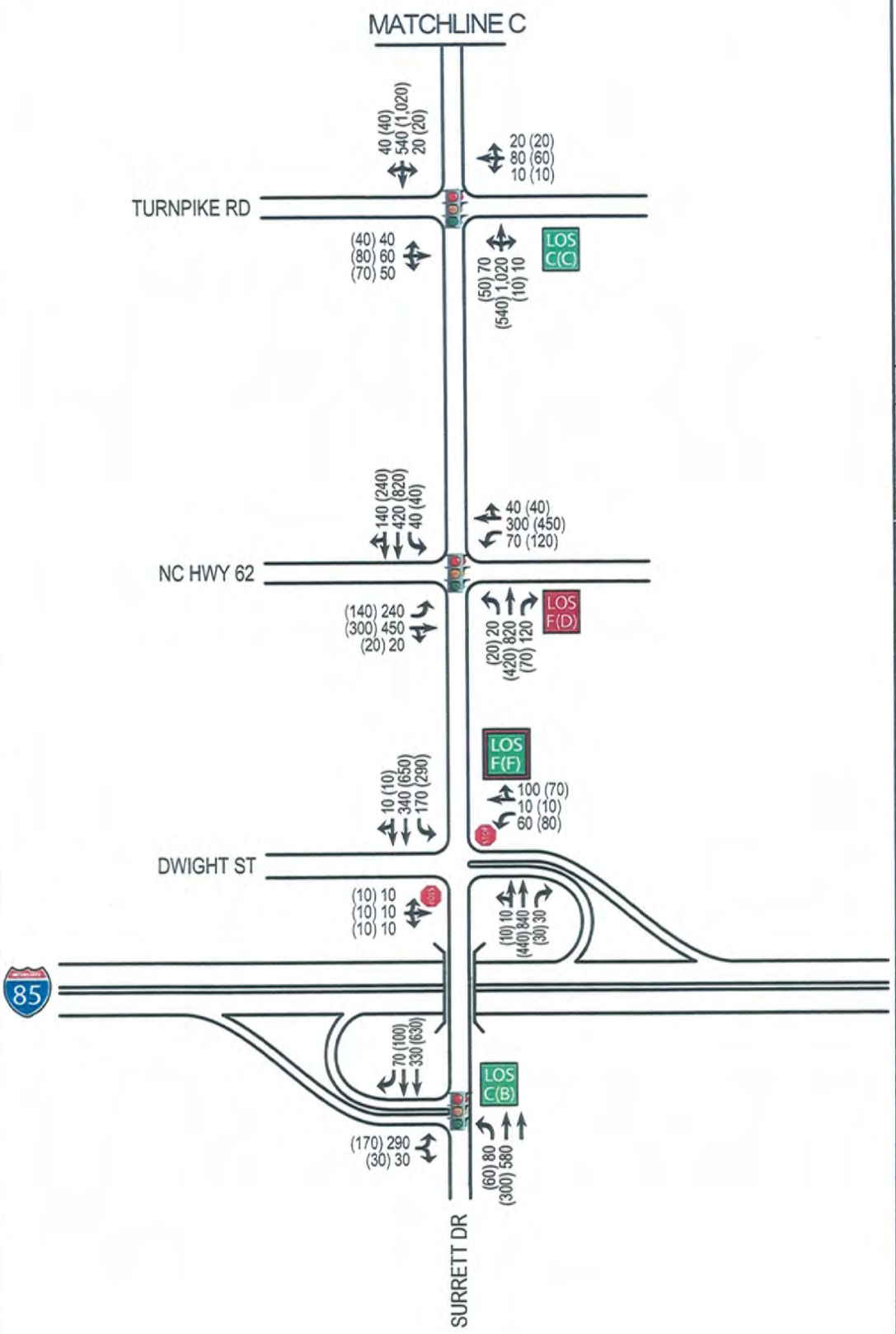
Not to Scale

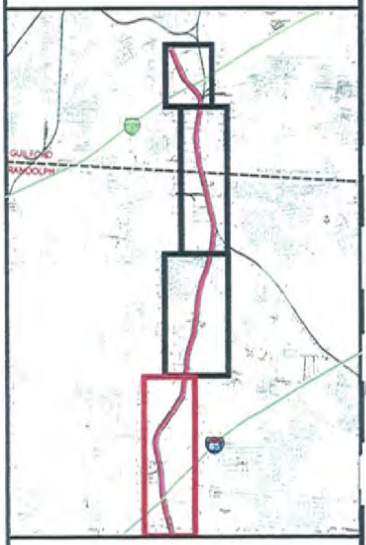
2035 Traffic Operations Conditions
Lane Geometry and
Levels of Service

Figure 6 - 11



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX (XX) AM (PM) Peak Hour Volumes
- Lane Geometry
- Level of Service A-C
- Level of Service D
- Level of Service E
- Level of Service F
- Level of Service E/F Stop-Controlled Intersection with a Critical Movement Volume of 100 VPH or Less or Critical Movement Queue Length is less than 250'



Surrett Drive Corridor Feasibility Study

Guilford and Randolph Counties

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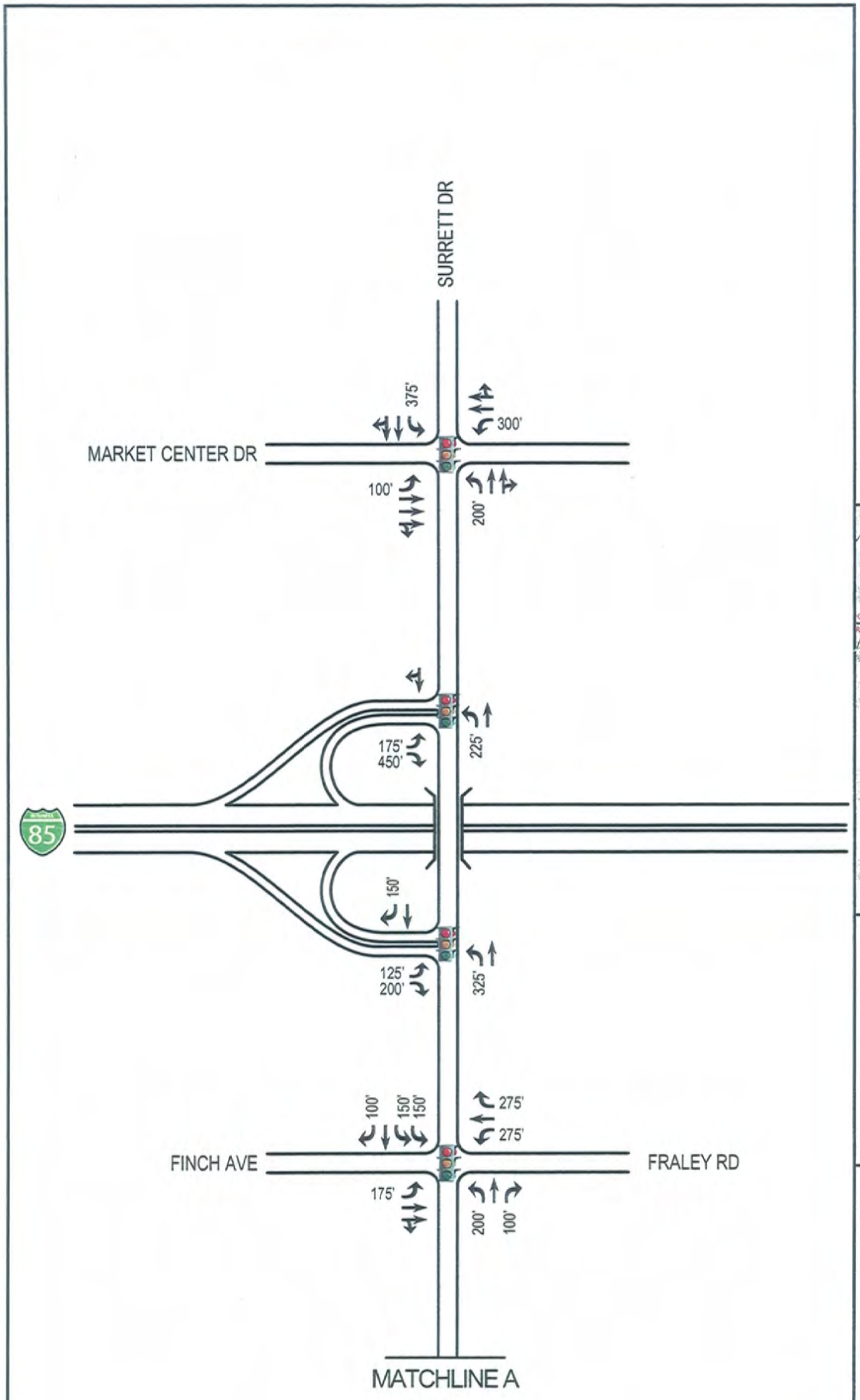
Not to Scale

2035 Traffic Operations Conditions
Lane Geometry and
Levels of Service

Figure 6 - 12



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX' Queue Length
- Lane Geometry

Surrett Drive Corridor Feasibility Study

Guilford and Randolph Counties

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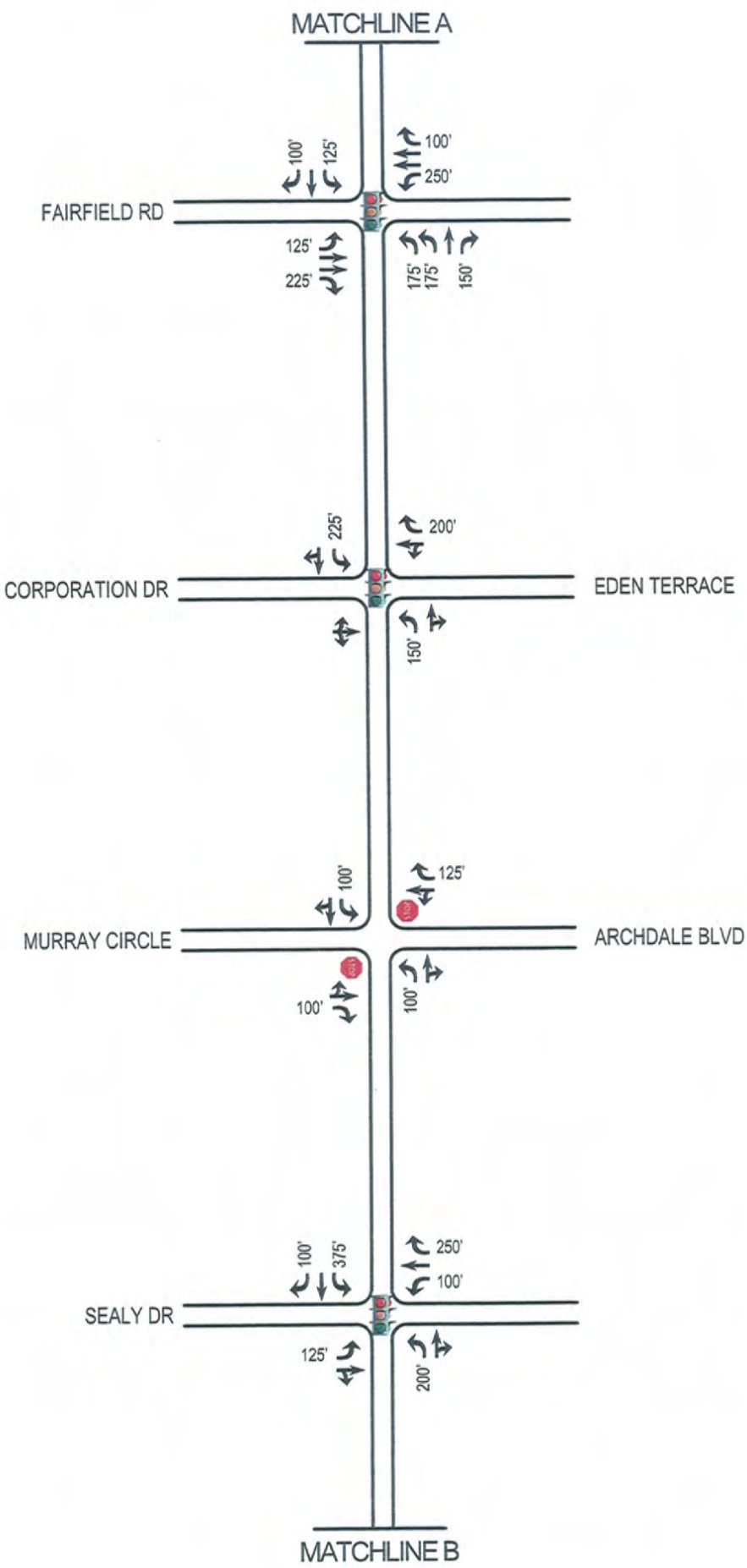
Not to Scale

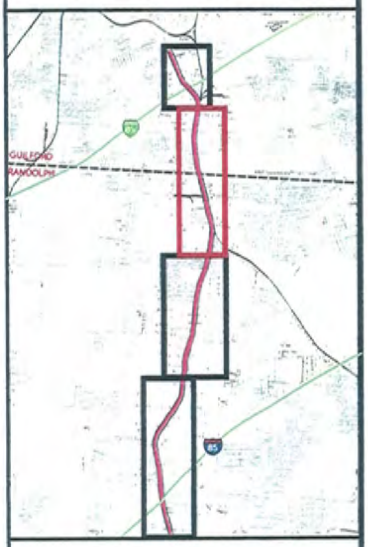
2035 Traffic Operations Queue Results
Lane Geometry and
Queue Lengths

Figure 6 - 13



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX' Queue Length
- Lane Geometry



Surrett Drive Corridor Feasibility Study

Guilford and Randolph Counties

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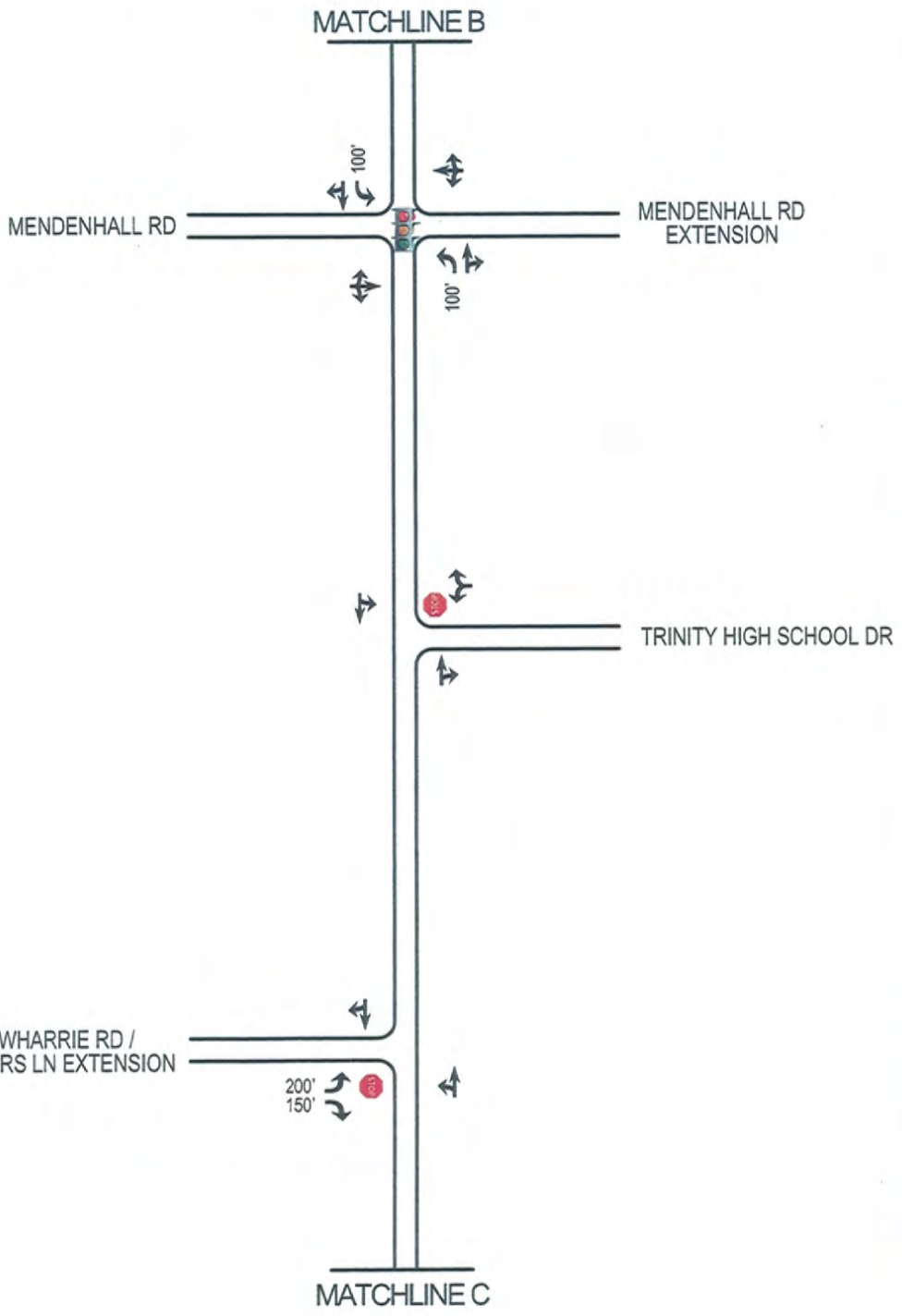
2035 Traffic Operations Queue Results
Lane Geometry and
Queue Lengths

Figure 6 - 14



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX' Queue Length
- Lane Geometry

Surrett Drive Corridor Feasibility Study

Guilford and Randolph Counties

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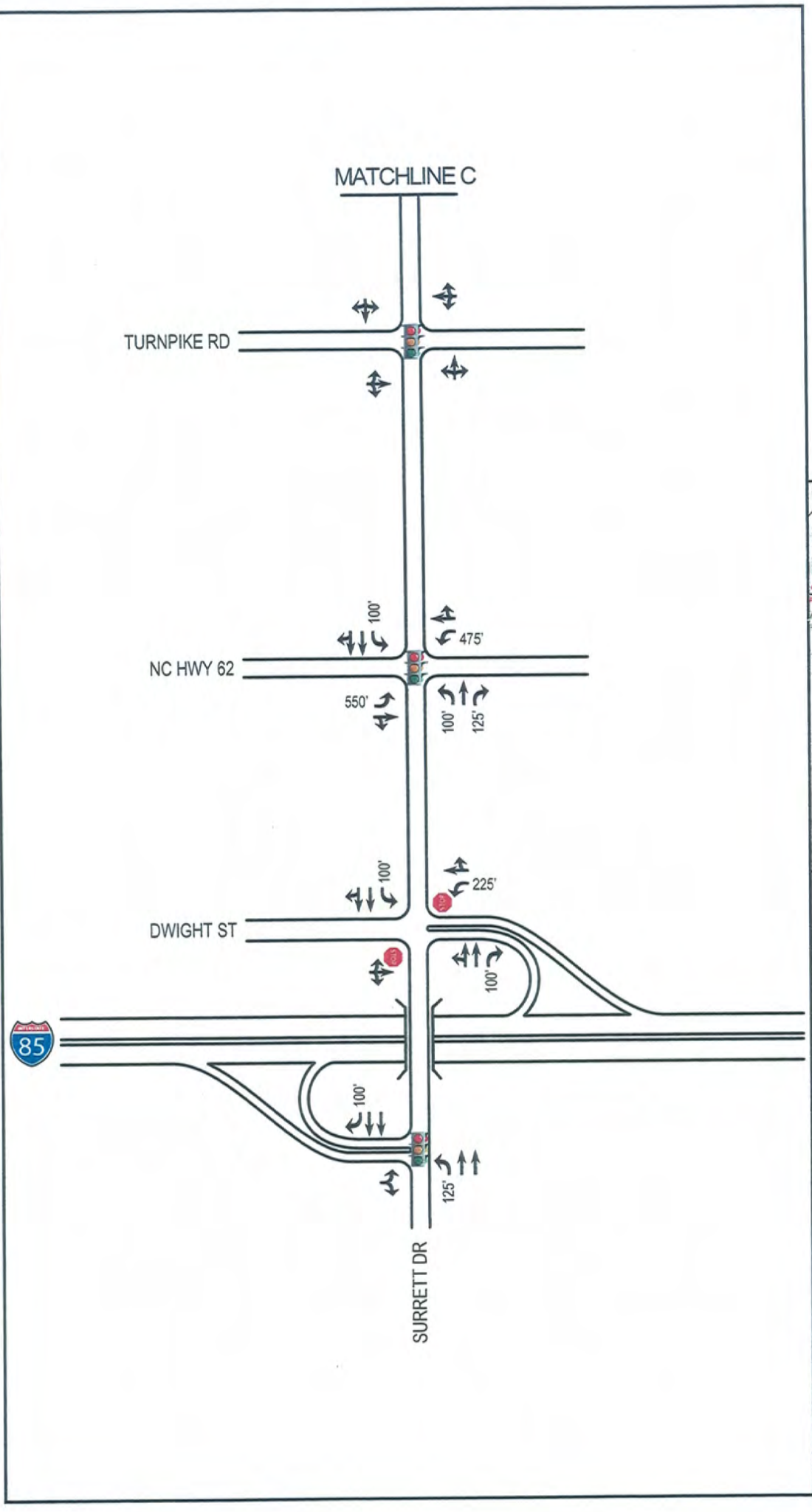
Not to Scale

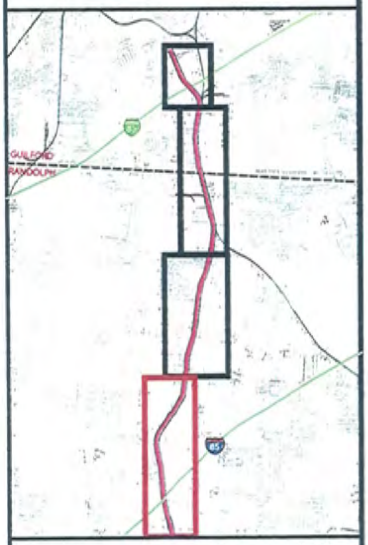
2035 Traffic Operations Queue Results
Lane Geometry and
Queue Lengths

Figure 6 - 15



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX' Queue Length
- Lane Geometry



Surrett Drive Corridor Feasibility Study

Guilford and Randolph Counties

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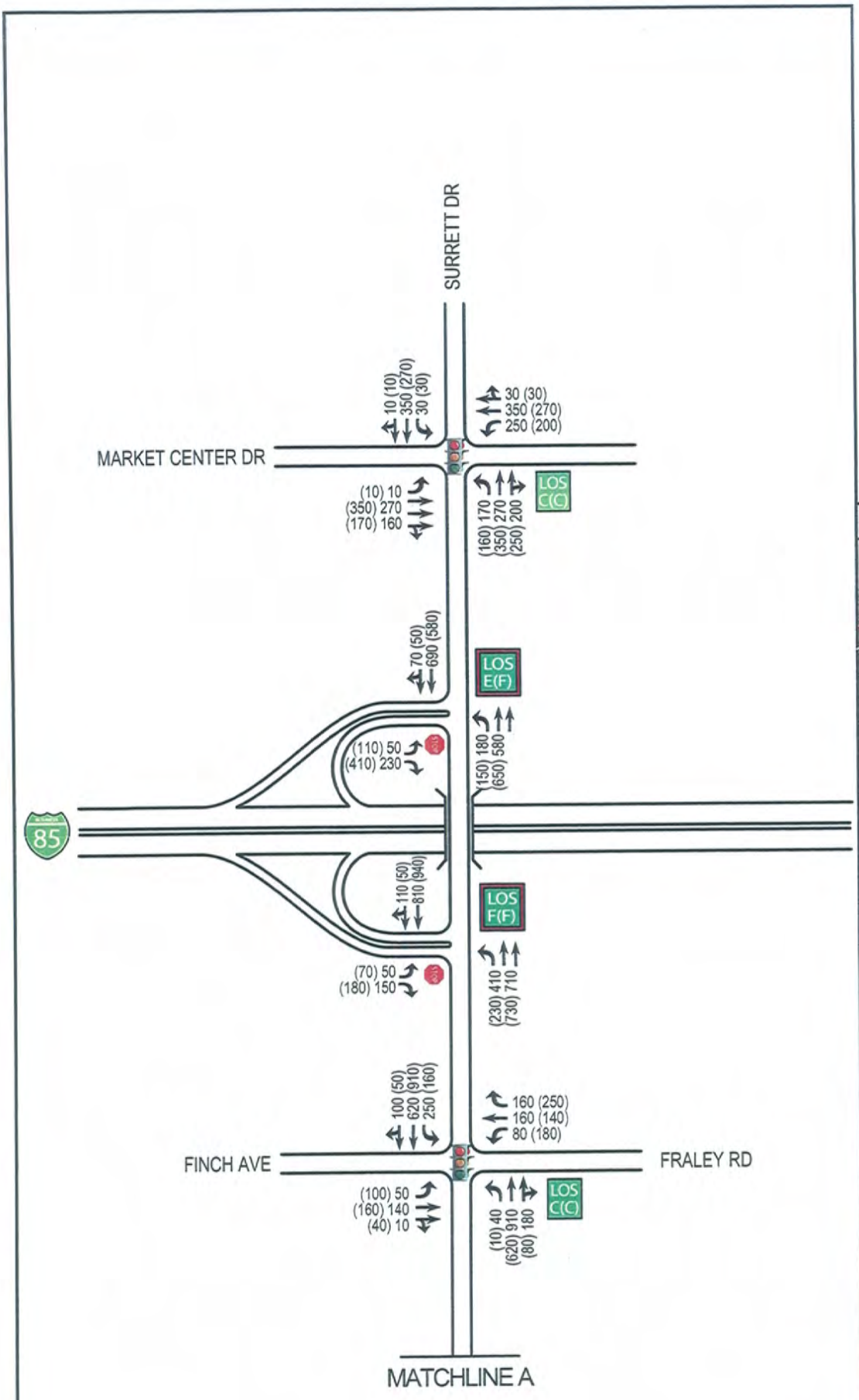
Not to Scale

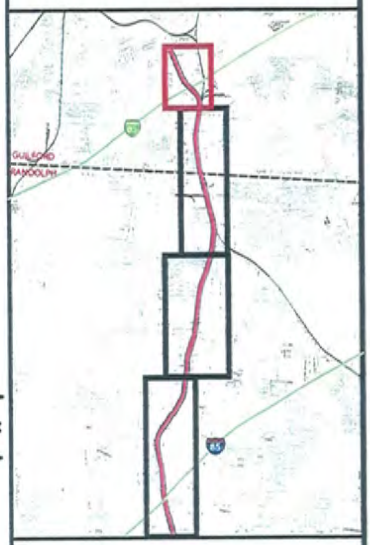
2035 Traffic Operations Queue Results
Lane Geometry and
Queue Lengths

Figure 6 - 16



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX (XX) AM (PM) Peak Hour Volumes
- Lane Geometry
- Level of Service A-C
- Level of Service D
- Level of Service E
- Level of Service F
- Level of Service E/F Stop-Controlled Intersection with a Critical Movement Volume of 100 VPH or Less or Critical Movement Queue Length is less than 250'



Surrett Drive Corridor Feasibility Study

Guilford and Randolph Counties

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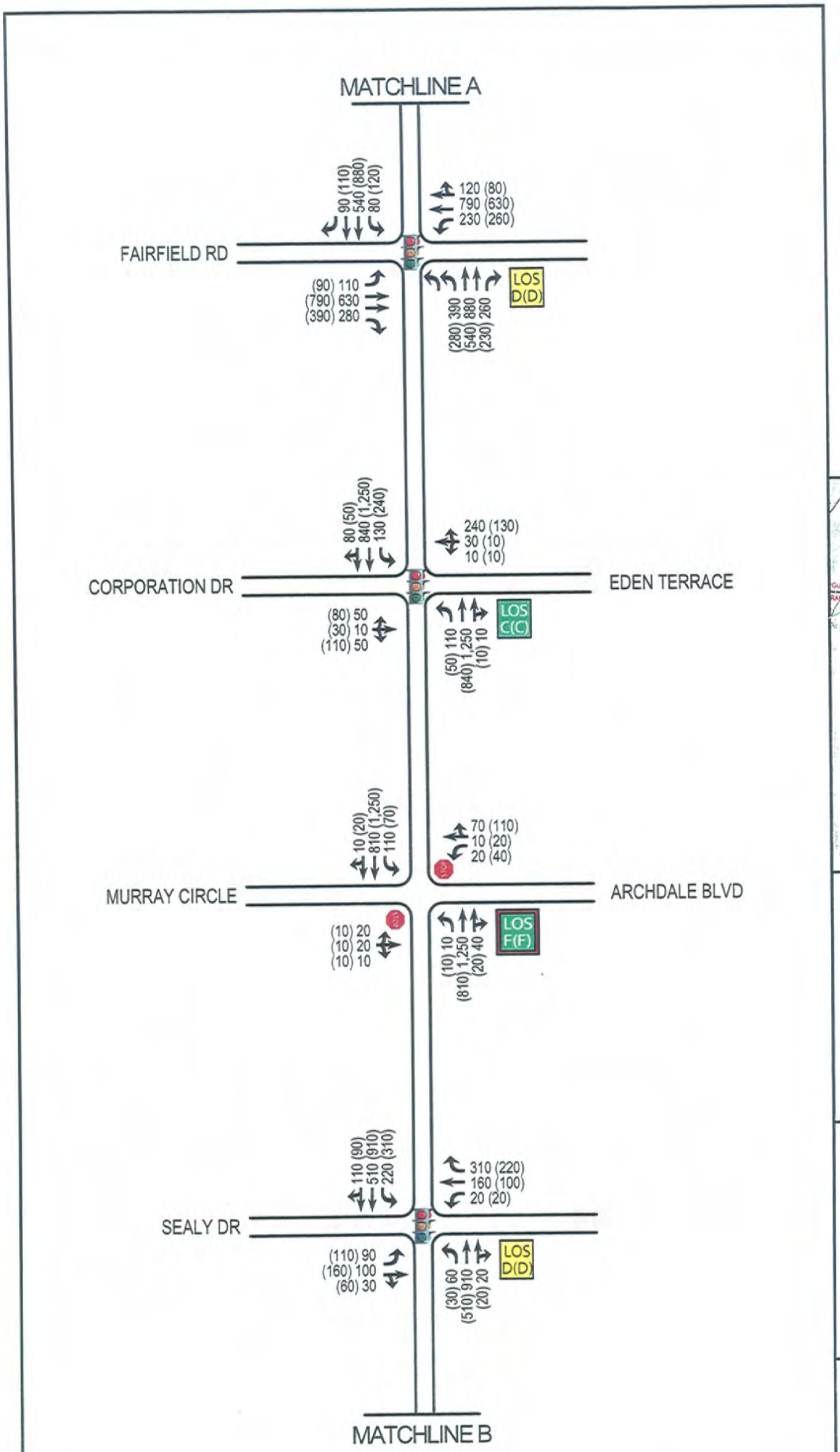
2035 Major Widening Conditions
Lane Geometry and
Levels of Service

Figure 6 - 17



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX (XX) AM (PM) Peak Hour Volumes
- Lane Geometry
- Level of Service A-C
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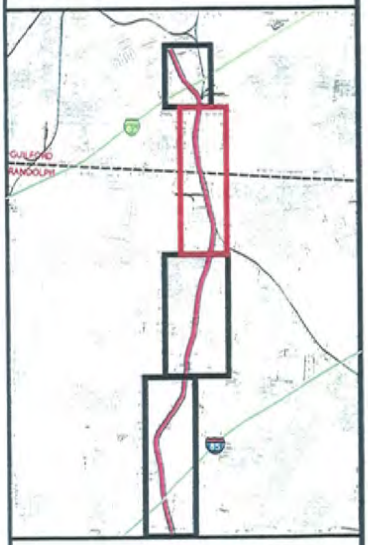
- Level of Service E
- Level of Service F
- Level of Service E/F Stop-Controlled Intersection with a Critical Movement Volume of 100 VPH or Less or Critical Movement Queue Length is less than 250'



Surrett Drive Corridor Feasibility Study

Guilford and Randolph Counties

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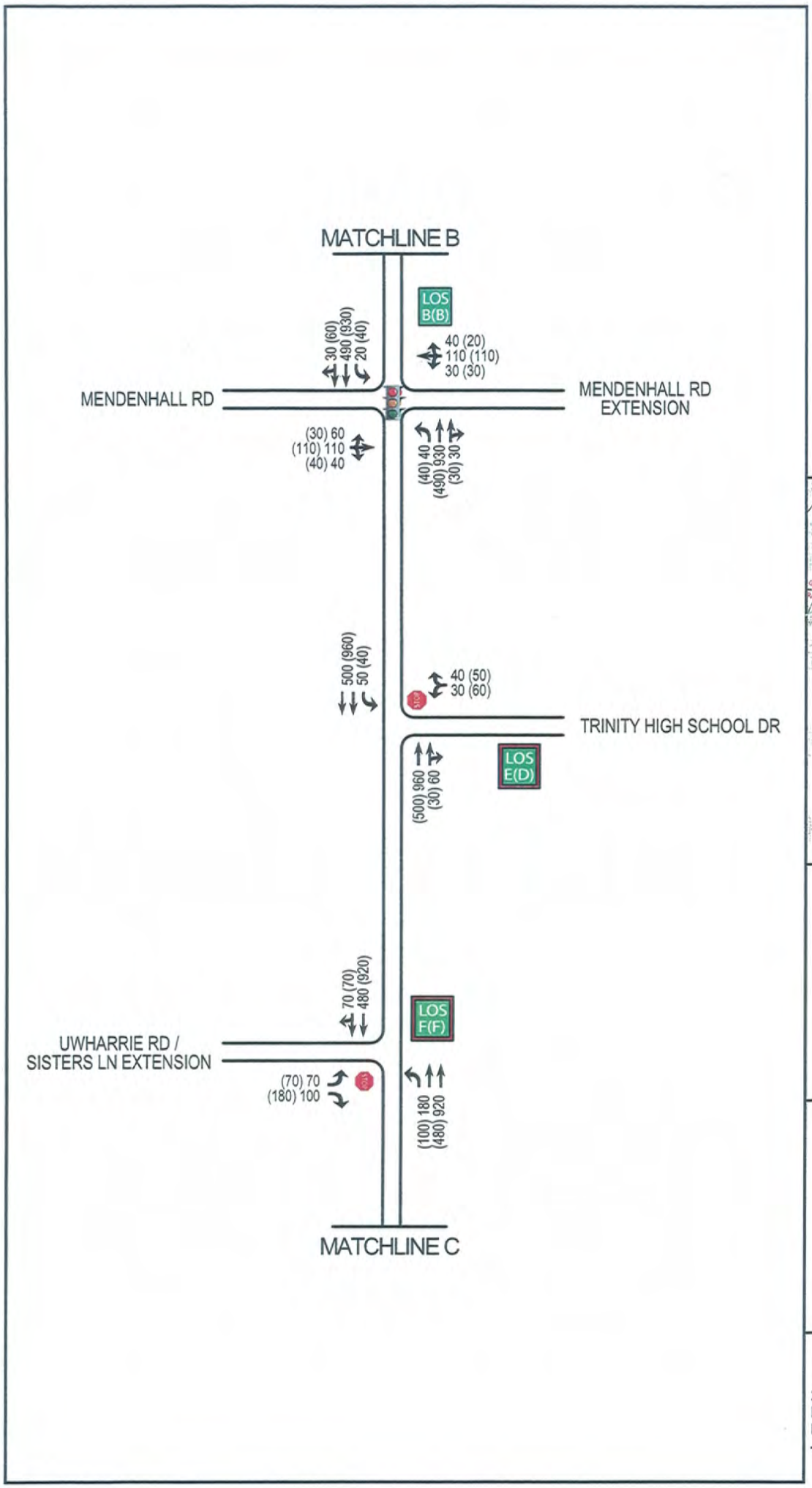
Not to Scale

2035 Major Widening Conditions
Lane Geometry and
Levels of Service

Figure 6 - 18



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX (XX) AM (PM) Peak Hour Volumes
- Lane Geometry
- Level of Service A-C
- Level of Service D
- Level of Service E
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Surrett Drive Corridor Feasibility Study

Guilford and Randolph Counties

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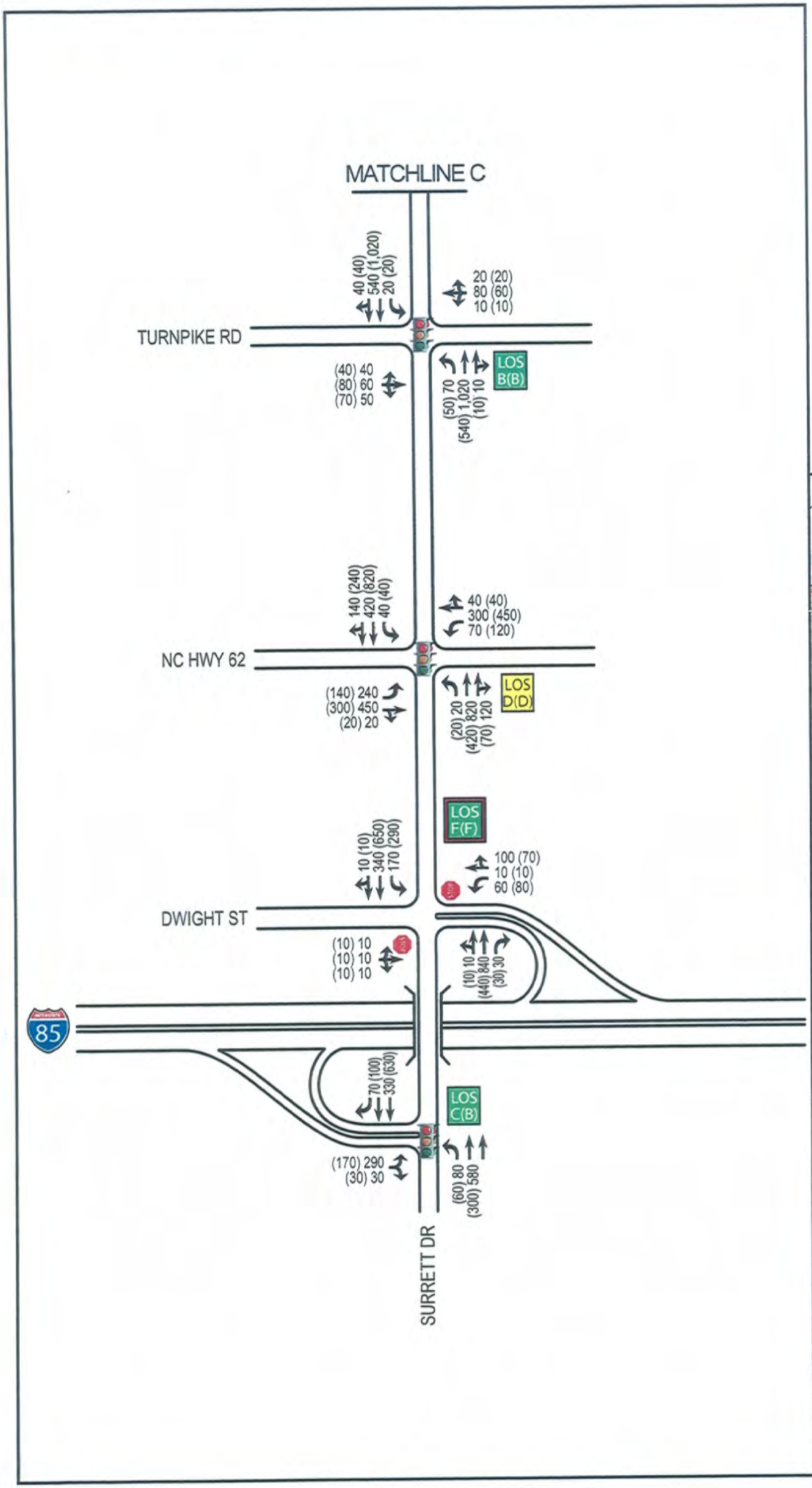
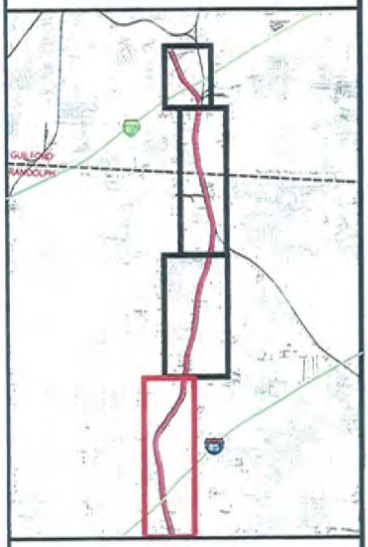
2035 Major Widening Conditions
Lane Geometry and
Levels of Service

Figure 6 - 19



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX (XX) AM (PM) Peak Hour Volumes
- Lane Geometry
- Level of Service A-C
- Level of Service D
- Level of Service E
- Level of Service F
- Level of Service E/F Stop-Controlled Intersection with a Critical Movement Volume of 100 VPH or Less or Critical Movement Queue Length is less than 250'



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Guilford and Randolph Counties

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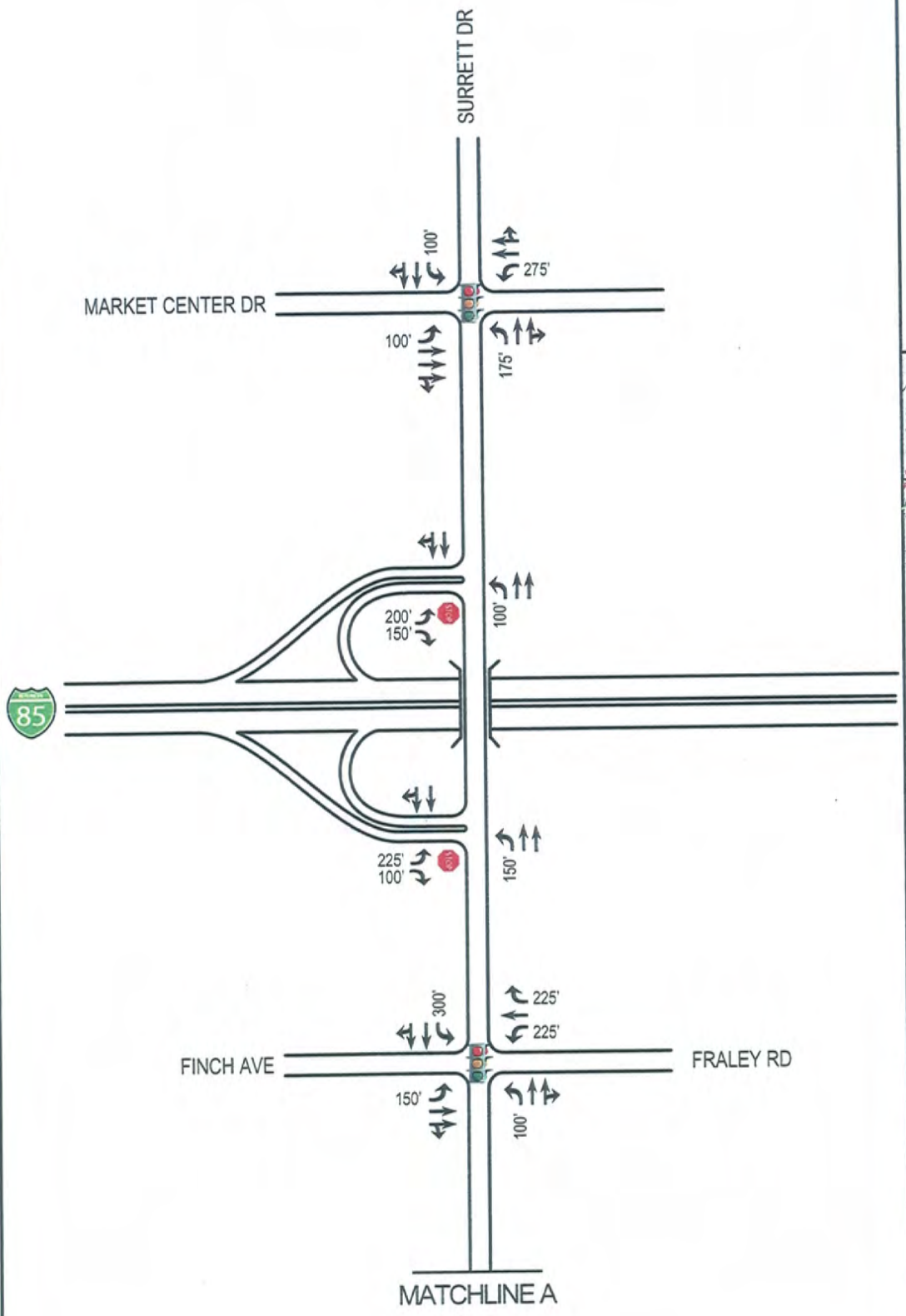
2035 Major Widening Conditions
Lane Geometry and
Levels of Service

Figure 6 - 20



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX' Queue Length
- Lane Geometry

Surrett Drive Corridor Feasibility Study

Guilford and Randolph Counties

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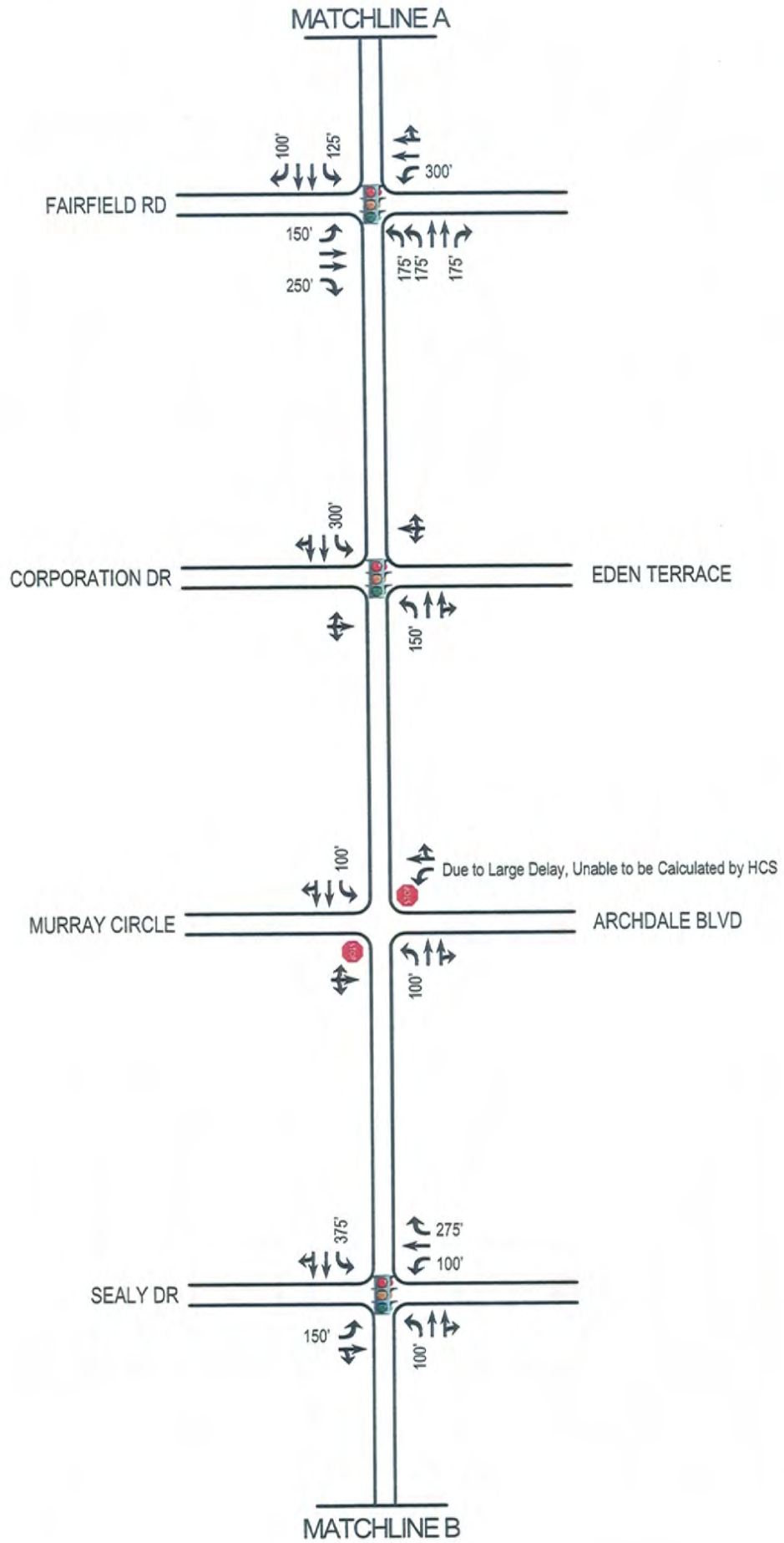
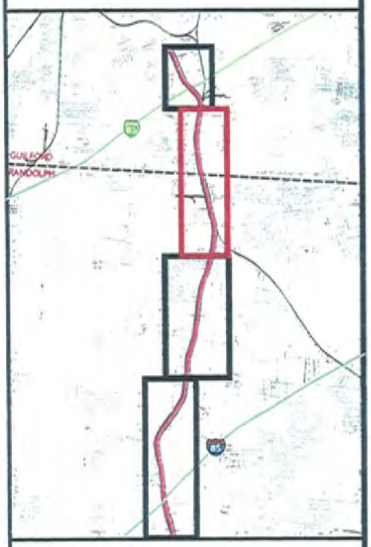
2035 Major Widening Queue Results
Lane Geometry and
Queue Lengths

Figure 6 - 21



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX' Queue Length
- Lane Geometry



Surrett Drive Corridor Feasibility Study

Guilford and Randolph Counties

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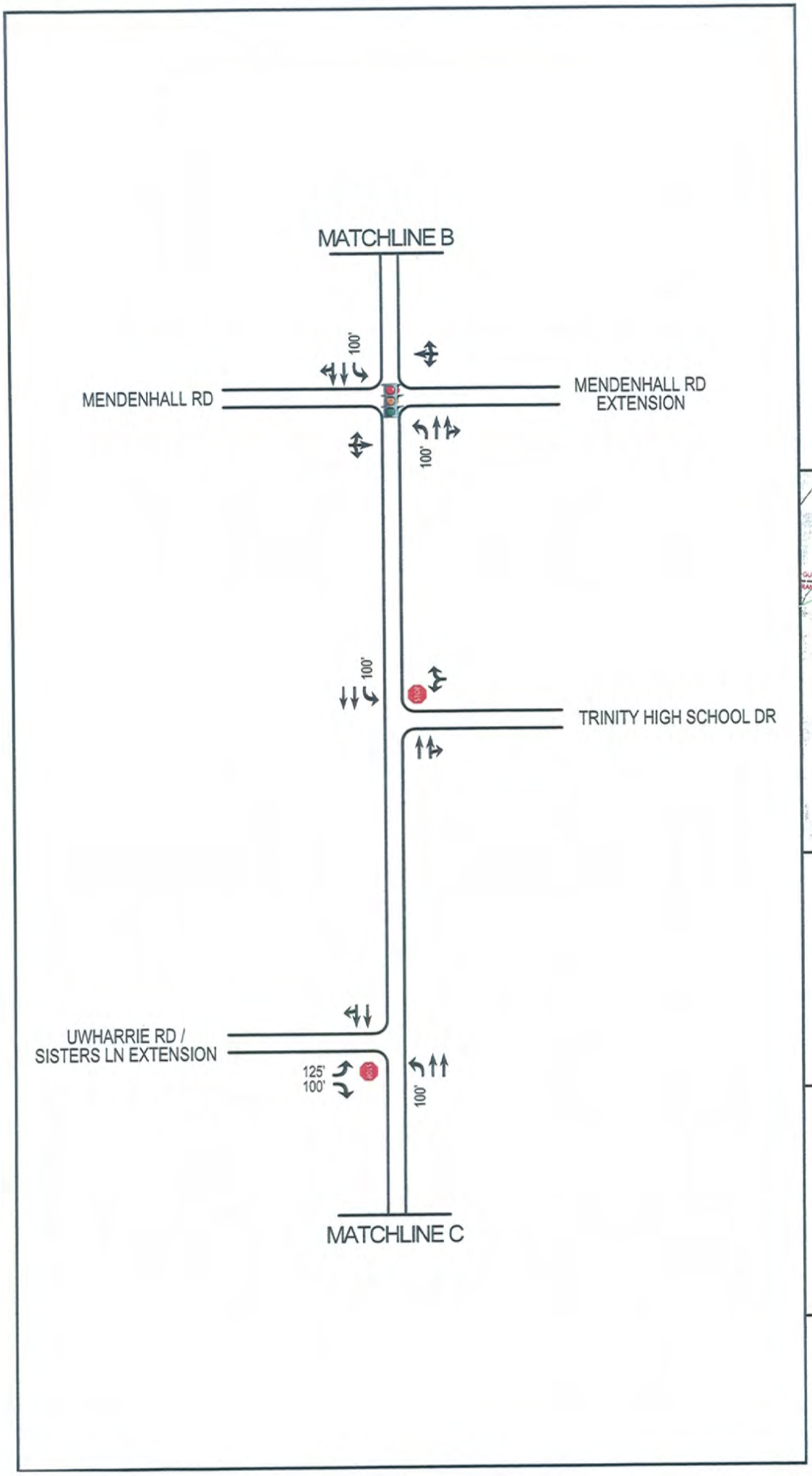
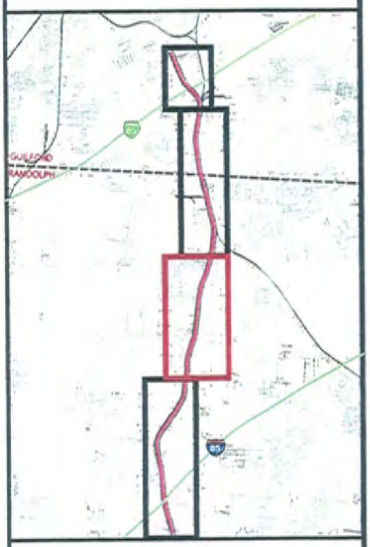
2035 Major Widening Queue Results
Lane Geometry and
Queue Lengths

Figure 6 - 22



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX' Queue Length
- Lane Geometry



Surrett Drive Corridor Feasibility Study

Guilford and Randolph Counties

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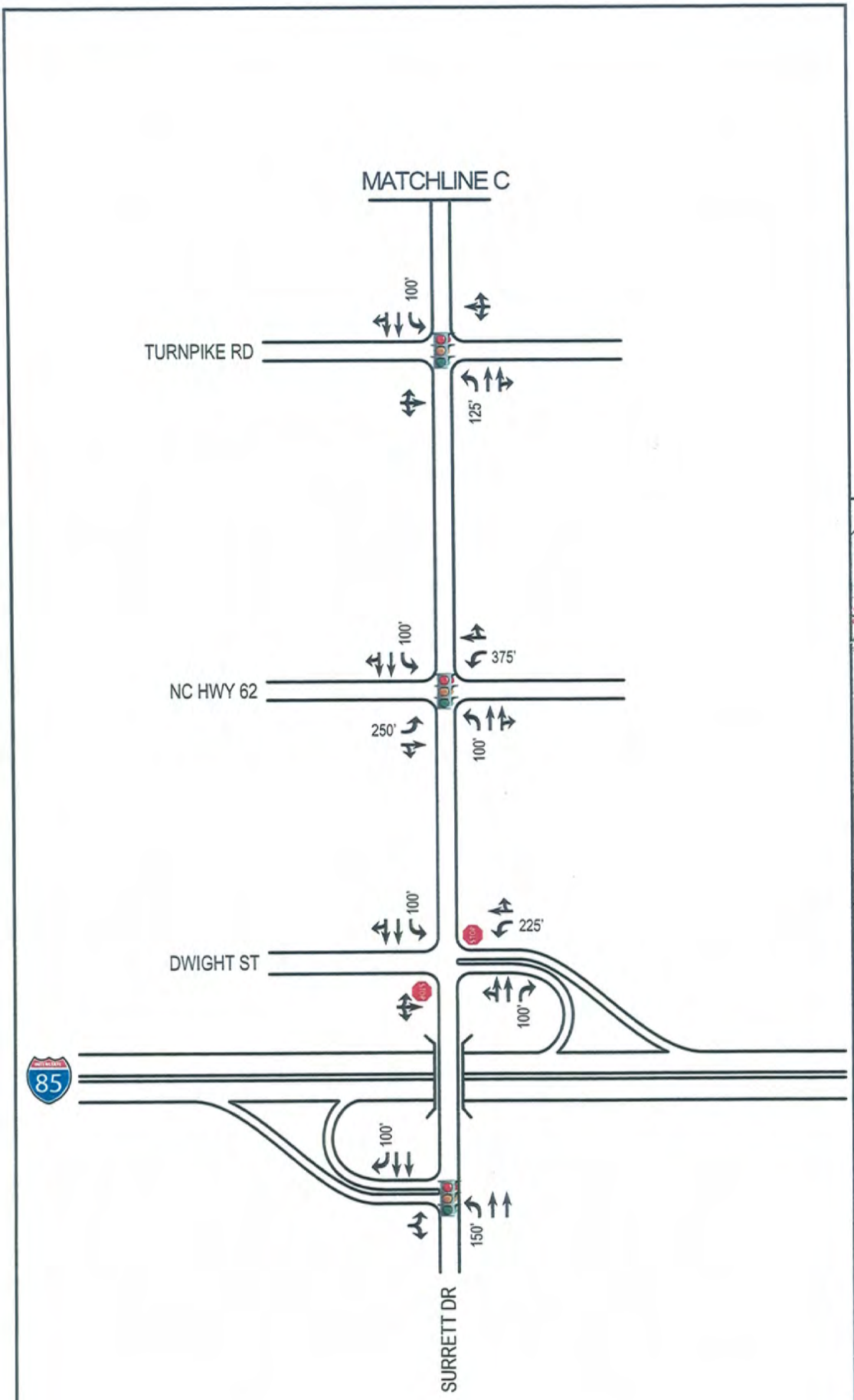
Not to Scale

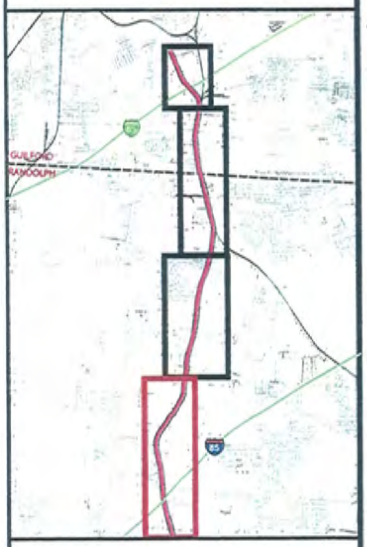
2035 Major Widening Queue Results
Lane Geometry and
Queue Lengths

Figure 6 - 23



LEGEND

- Signalized Intersection
- Stop Controlled Intersection
- XX' Queue Length
- Lane Geometry



Surrett Drive Corridor Feasibility Study

Guilford and Randolph Counties

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2035 Major Widening Queue Results
Lane Geometry and
Queue Lengths

Figure 6 - 24

Appendix C

Surrett Drive Crash Data

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Study Criteria Summary

County: RANDOLPH **City:** All and Rural
Date: 05/01/2004 **to** 04/30/2007 **Study:** SDF200709151
Location: SR 1595 (Surrett Dr) and SR 1748 (Trinity High School Dr)

Report Details

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op
1	**101207476**	06/09/2004 15:48	LEFT TURN, SAME ROADWAY	$ 4000	0	0	0	1	1	1	1	1	0	13	1
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 45 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:** 8	**Obj Strk:**										
Unit 2 : 1	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
2	**101291705**	09/24/2004 22:10	FIXED OBJECT	$ 1000	0	0	0	1	1	4	1	1	0	1	1
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** W	**Veh Mnvr / Ped Actn:** 12	**Obj Strk:** 58										
3	**101331403**	11/09/2004 18:30	LEFT TURN, DIFFERENT ROADWAYS	$ 500	0	0	0	0	1	2	1	1	0	1	1
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 45 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
Unit 2 : 32	**Alchl/Drgs:** 7	**Speed:** 15 MPH	**Dir:** W	**Veh Mnvr / Ped Actn:** 8	**Obj Strk:**										
4	**101422811**	03/01/2005 22:10	FIXED OBJECT	$ 1900	0	0	1	0	1	5	1	5	0	13	1
Unit 1 : 2	**Alchl/Drgs:** 1	**Speed:** 45 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:** 60										
5	**101427693**	03/07/2005 00:54	FIXED OBJECT	$ 5000	0	0	1	0	1	4	1	5	0	13	1
Unit 1 : 3	**Alchl/Drgs:** 0	**Speed:** 45 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:** 58										
6	**101508825**	06/30/2005 07:45	REAR END, SLOW OR STOP	$ 5800	0	0	0	0	1	1	1	1	0	13	1
Unit 1 : 2	**Alchl/Drgs:** 0	**Speed:** 45 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
Unit 2 : 4	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:** 1	**Obj Strk:**										
7	**101682708**	02/23/2006 18:50	REAR END, SLOW OR STOP	$ 6000	0	0	1	0	1	5	1	1	0	13	1
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 45 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:** 1	**Obj Strk:**										
Unit 2 : 4	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op

Legend for Report Details:

Acc No - Accident Number
Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
Condition: R - Road Surface, L - Ambient Light, W - Weather
Rd Ch - Road Character
Rd Ci - Roadway Contributing Circumstances
Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
Alchl/Drgs - Alcohol Drugs Suspected
Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
Obj Strk - Object Struck

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	7	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	5	71.43
Total Injury Crashes	5	71.43
Property Damage Only Crashes	2	28.57
Night Crashes	4	57.14
Wet Crashes	0	0.00
Alcohol/Drugs Involvement Crashes	1	14.29

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	7	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	3	42.86
Class C Crashes	2	28.57
Property Damage Only Crashes	2	28.57

Vehicle Exposure Statistics

Annual ADT = 9800

Total Vehicle Exposure = 10.73 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	65.23
Fatal Crash Rate	0.00
Non Fatal Crash Rate	46.59
Night Crash Rate	37.28
Wet Crash Rate	0.00
EPDO Rate	410.03

Miscellaneous Statistics

Severity Index =	6.29
EPDO Crash Index =	44.00
Estimated Property Damage Total = $	24200.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
FIXED OBJECT	3	42.86
LEFT TURN, DIFFERENT ROADWAYS	1	14.29
LEFT TURN, SAME ROADWAY	1	14.29
REAR END, SLOW OR STOP	2	28.57

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	3	60.00
Class C Injuries	2	40.00
Total Non-Fatal Injuries	5	100.00
Total Injuries	5	100.00

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	0	0.00
Feb	1	14.29
Mar	2	28.57
Apr	0	0.00
May	0	0.00
Jun	2	28.57
Jul	0	0.00
Aug	0	0.00
Sep	1	14.29
Oct	0	0.00
Nov	1	14.29
Dec	0	0.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	1	14.29
Tue	2	28.57
Wed	1	14.29
Thu	2	28.57
Fri	1	14.29
Sat	0	0.00
Sun	0	0.00

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	1	14.29
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	1	14.29
0800-0859	0	0.00
0900-0959	0	0.00
1000-1059	0	0.00
1100-1159	0	0.00
1200-1259	0	0.00
1300-1359	0	0.00
1400-1459	0	0.00
1500-1559	1	14.29
1600-1659	0	0.00
1700-1759	0	0.00
1800-1859	2	28.57
1900-1959	0	0.00
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	2	28.57
2300-2359	0	0.00

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	2	0	0	2
Dark	4	0	0	4
Other	1	0	0	1
Total	7	0	0	7

Object Struck Summary

Object Type	Times Struck	Percent of Total
DITCH	2	66.67
MAILBOX	1	33.33

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
LIGHT TRUCK (MINI-VAN, PANEL)	1	9.09
PASSENGER CAR	5	45.45
PICKUP	2	18.18
SPORT UTILITY	2	18.18
UNKNOWN	1	9.09

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2004	3	0	2	1
2005	3	0	2	1
2006	1	0	1	0
Total	7	0	5	2

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2004	0	2
2005	0	2
2006	0	1
Total	0	5

Miscellaneous Totals

Year	Property Damage	EPDO Index
2004	$ 5500	17.80
2005	$ 12700	17.80
2006	$ 6000	8.40
Total	$ 24200	44.00

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road & Fixed Object	Angle	Side Swipe	Other
2004	2	0	0	1	0	0	0
2005	0	0	1	2	0	0	0
2006	0	0	1	0	0	0	0
Total	2	0	2	3	0	0	0

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
SDF200709151	200709151			76.8	8.4	9800	

Request Date	Courier Service	Phone No.	Ext.	Fax No.
09/20/2007		919-876-6888		919-876-6848

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
RANDOLPH	75	8	All and Rural		150	05/01/2004	04/30/2007	3.00

Location Text

SR 1595 (Surrett Dr) and SR 1748 (Trinity High School Dr)

Requestor

Kiersten Giugno
PBS&J
1616 E Millbrook Rd
Suite 310

Excluded Accidents

101611892

Fiche Roads

Name	Code
SR 1595	40001595
SURRATT	50029707
SR 1748	40001748
TRINITY	50030972
TRINITY HI SCHL	50030978
SR 1558	40001558
TURNPIKE	50031164
SR 1882	40001882
OLD TURNPIKE	50022809
SR 3252	40003252
HOPEWELL CHURCH	50014407
NC 62	30000062
TRINDALE	50030970
I 85	10000085

Intersection Road Combinations

Name	Code	Code	Name
SR 1595	40001595	40001748	SR 1748
SR 1595	40001595	50030972	TRINITY
SR 1595	40001595	50030978	TRINITY HI SCHL
SURRATT	50029707	40001748	SR 1748
SURRATT	50029707	50030972	TRINITY

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Study Criteria Summary

County: RANDOLPH **City:** All and Rural
Date: 05/01/2004 **to** 04/30/2007 **Study:** CJN200709137
Location: SR 1595 (SURRETT DRIVE) AND SR 1610 (MENDENHALL ROAD)

Report Details

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries F	A	B	C	Condition R	L	W	Road Ch	Ci	Trfc Ctl Dv	Op
1	**101436694**	03/19/2005 10:45	LEFT TURN, SAME ROADWAY	$ 8200	0	0	0	0	1	1	2	3	0	13	1
Unit 1 : 2	**Alchl/Drgs:** 0	**Speed:** 30 MPH	**Dir:** NW	**Veh Mnvr / Ped Actn:** 8	**Obj Strk:**										
Unit 2 : 1	**Alchl/Drgs:** 0	**Speed:** 40 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
2	**101669523**	02/03/2006 14:45	REAR END, SLOW OR STOP	$ 4900	0	0	0	5	1	1	1	3	0	13	
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 1	**Obj Strk:**										
Unit 2 : 1	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
3	**101689109**	03/05/2006 19:56	REAR END, SLOW OR STOP	$ 1700	0	0	0	0	1	4	1	1	0	1	1
Unit 1 : 2	**Alchl/Drgs:** 0	**Speed:** 45 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 11	**Obj Strk:**										
Unit 2 : 4	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 1	**Obj Strk:**										
4	**101693686**	03/12/2006 12:15	REAR END, SLOW OR STOP	$ 3300	0	0	0	0	1	1	1	4	0	13	1
Unit 1 : 4	**Alchl/Drgs:** 0	**Speed:** 35 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
Unit 2 : 4	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 1	**Obj Strk:**										
5	**101700945**	03/23/2006 12:45	REAR END, SLOW OR STOP	$ 1500	0	0	0	0	1	1	1	1	0	13	1
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 45 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
Unit 2 : 1	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 1	**Obj Strk:**										
6	**101716246**	04/17/2006 14:45	FIXED OBJECT	$ 1550	0	0	0	0	2	1	3	3	0	13	1
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 50 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:** 64										
7	**101734954**	05/16/2006 17:00	REAR END, SLOW OR STOP	$ 8300	0	0	0	4	1	1	1	3	0	0	
Unit 1 : 4	**Alchl/Drgs:** 0	**Speed:** 45 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 1	**Obj Strk:**										
Unit 2 : 2	**Alchl/Drgs:** 0	**Speed:** 40 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
8	**101746420**	06/06/2006 16:51	RIGHT TURN, DIFFERENT ROADWAYS	$ 4900	0	0	0	0	1	1	1	3	0	13	1
Unit 1 : 4	**Alchl/Drgs:** 0	**Speed:** 45 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 1	**Obj Strk:**										
Unit 2 : 1	**Alchl/Drgs:** 0	**Speed:** 70 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:** 7	**Obj Strk:**										

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op
9	**101882020**	11/09/2006 13:15	REAR END, SLOW OR STOP	$ 1700	0	0	0	3	1	1	1	4	0	13	1
Unit	**1** : 4	**Alchl/Drgs:** 0	**Speed:** 45 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 4			**Obj Strk:**							
Unit	**2** : 1	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 1			**Obj Strk:** 64							
10	**101910099**	12/11/2006 17:35	REAR END, TURN	$ 2000	0	0	0	0	1	1	1	1	0	1	1
Unit	**1** : 1	**Alchl/Drgs:** 0	**Speed:** 5 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 7			**Obj Strk:**							
Unit	**2** : 1	**Alchl/Drgs:** 0	**Speed:** 5 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 4			**Obj Strk:**							
11	**101927718**	01/02/2007 14:45	REAR END, SLOW OR STOP	$ 6500	0	0	0	4	1	1	1	3	0	13	1
Unit	**1** : 4	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 1			**Obj Strk:**							
Unit	**2** : 4	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 1			**Obj Strk:**							
12	**101907533**	01/08/2007 07:58	FIXED OBJECT	$ 1000	0	0	0	0	2	8	2	3	0	13	1
Unit	**1** : 1	**Alchl/Drgs:** 7	**Speed:** 45 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:** 4			**Obj Strk:** 58							

Legend for Report Details:

Acc No - Accident Number
Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
Condition: R - Road Surface, L - Ambient Light, W - Weather
Rd Ch - Road Character
Rd Ci - Roadway Contributing Circumstances
Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
Alchl/Drgs - Alcohol Drugs Suspected
Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
Obj Strk - Object Struck

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	12	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	4	33.33
Total Injury Crashes	4	33.33
Property Damage Only Crashes	8	66.67
Night Crashes	1	8.33
Wet Crashes	2	16.67
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	12	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	0	0.00
Class C Crashes	4	33.33
Property Damage Only Crashes	8	66.67

Vehicle Exposure Statistics

Annual ADT = 9800

Total Vehicle Exposure = 10.73 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	111.83
Fatal Crash Rate	0.00
Non Fatal Crash Rate	37.28
Night Crash Rate	9.32
Wet Crash Rate	18.64
EPDO Rate	387.66

Miscellaneous Statistics

Severity Index =	3.47
EPDO Crash Index =	41.60
Estimated Property Damage Total = $	45550.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
FIXED OBJECT	2	16.67
LEFT TURN, SAME ROADWAY	1	8.33
REAR END, SLOW OR STOP	7	58.33
REAR END, TURN	1	8.33
RIGHT TURN, DIFFERENT ROADWAYS	1	8.33

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	0	0.00
Class C Injuries	16	100.00
Total Non-Fatal Injuries	16	100.00
Total Injuries	16	100.00

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	2	16.67
Feb	1	8.33
Mar	4	33.33
Apr	1	8.33
May	1	8.33
Jun	1	8.33
Jul	0	0.00
Aug	0	0.00
Sep	0	0.00
Oct	0	0.00
Nov	1	8.33
Dec	1	8.33

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	3	25.00
Tue	3	25.00
Wed	0	0.00
Thu	2	16.67
Fri	1	8.33
Sat	1	8.33
Sun	2	16.67

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	1	8.33
0800-0859	0	0.00
0900-0959	0	0.00
1000-1059	1	8.33
1100-1159	0	0.00
1200-1259	2	16.67
1300-1359	1	8.33
1400-1459	3	25.00
1500-1559	0	0.00
1600-1659	1	8.33
1700-1759	2	16.67
1800-1859	0	0.00
1900-1959	1	8.33
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	0	0.00

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	9	1	0	10
Dark	1	0	0	1
Other	0	1	0	1
Total	10	2	0	12

Object Struck Summary

Object Type	Times Struck	Percent of Total
DITCH	1	33.33
OTHER FIXED OBJECT	2	66.67

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
PASSENGER CAR	11	50.00
PICKUP	3	13.64
SPORT UTILITY	8	36.36

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2005	1	0	0	1
2006	9	0	3	6
2007	2	0	1	1
Total	12	0	4	8

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2005	0	0
2006	0	12
2007	0	4
Total	0	16

Miscellaneous Totals

Year	Property Damage	EPDO Index
2005	$ 8200	1.00
2006	$ 29850	31.20
2007	$ 7500	9.40
Total	$ 45550	41.60

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road & Fixed Object	Angle	Side Swipe	Other
2005	1	0	0	0	0	0	0
2006	0	1	7	1	0	0	0
2007	0	0	1	1	0	0	0
Total	1	1	8	2	0	0	0

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
CJN200709137	200709137			76.8	8.4	9800	

Request Date	Courier Service	Phone No.	Ext.	Fax No.
09/21/2007		919-876-6888		919-876-6848

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
RANDOLPH	75	8	All and Rural		150	05/01/2004	04/30/2007	3.00

Location Text	Requestor
SR 1595 (SURRETT DRIVE) AND SR 1610 (MENDENHALL ROAD)	KIERSTEN GIUGNO PBSJ 1616-310 EAST MILLBROOK ROAD

Included Accidents

101436694

Fiche Roads

Name	Code
SR 1610	40001610
SR 1595	40001595
SURRATT	50029707

Intersection Road Combinations

Name	Code	Code	Name
SR 1595	40001595	40001610	SR 1610
SURRATT	50029707	40001610	SR 1610

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Study Criteria Summary

County: RANDOLPH **City:** All and Rural
Date: 05/01/2004 **to** 04/30/2007 **Study:** CJN200709138
Location: SR 1595 (SURRETT DRIVE) AND SR 1599 (MENDENHALL ROAD EXTENSION)

Report Details

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op
1	101436694	03/19/2005 10:45	LEFT TURN, SAME ROADWAY	$ 8200	0	0	0	0	1	1	2	3	0	13	1
Unit 1 : 2	Alchl/Drgs: 0	Speed: 30 MPH	Dir: NW	Veh Mnvr / Ped Actn: 8	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 40 MPH	Dir: S	Veh Mnvr / Ped Actn: 4	Obj Strk:										
2	101537921	08/10/2005 16:38	LEFT TURN, SAME ROADWAY	$ 7500	0	0	0	1	1	1	1	3	0	1	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: S	Veh Mnvr / Ped Actn: 8	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: N	Veh Mnvr / Ped Actn: 4	Obj Strk:										
3	101551562	08/29/2005 17:40	REAR END, SLOW OR STOP	$ 1000	0	0	0	0	1	1	1	3	0	13	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 40 MPH	Dir: S	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 2 : 4	Alchl/Drgs: 0	Speed: 0 MPH	Dir: S	Veh Mnvr / Ped Actn: 1	Obj Strk:										
4	101619565	11/28/2005 07:40	REAR END, SLOW OR STOP	$ 8000	0	0	0	2	2	1	5	2	0	13	1
Unit 1 : 4	Alchl/Drgs: 0	Speed: 45 MPH	Dir: S	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: S	Veh Mnvr / Ped Actn: 1	Obj Strk:										
5	101831629	09/14/2006 11:40	REAR END, SLOW OR STOP	$ 11000	0	0	2	0	1	1	2	2	0	13	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: S	Veh Mnvr / Ped Actn: 1	Obj Strk:										
Unit 2 : 2	Alchl/Drgs: 0	Speed: 45 MPH	Dir: S	Veh Mnvr / Ped Actn: 4	Obj Strk:										

Legend for Report Details:

Acc No - Accident Number
Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
Condition: R - Road Surface, L - Ambient Light, W - Weather
Rd Ch - Road Character
Rd Ci - Roadway Contributing Circumstances
Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
Alchl/Drgs - Alcohol Drugs Suspected
Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
Obj Strk - Object Struck

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	5	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	3	60.00
Total Injury Crashes	3	60.00
Property Damage Only Crashes	2	40.00
Night Crashes	0	0.00
Wet Crashes	1	20.00
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	5	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	1	20.00
Class C Crashes	2	40.00
Property Damage Only Crashes	2	40.00

Vehicle Exposure Statistics

Annual ADT = 9500

Total Vehicle Exposure = 10.4 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	48.07
Fatal Crash Rate	0.00
Non Fatal Crash Rate	28.84
Night Crash Rate	0.00
Wet Crash Rate	9.61
EPDO Rate	261.48

Miscellaneous Statistics

Severity Index =	5.44
EPDO Crash Index =	27.20
Estimated Property Damage Total = $	35700.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
LEFT TURN, SAME ROADWAY	2	40.00
REAR END, SLOW OR STOP	3	60.00

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	2	40.00
Class C Injuries	3	60.00
Total Non-Fatal Injuries	5	100.00
Total Injuries	5	100.00

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	0	0.00
Feb	0	0.00
Mar	1	20.00
Apr	0	0.00
May	0	0.00
Jun	0	0.00
Jul	0	0.00
Aug	2	40.00
Sep	1	20.00
Oct	0	0.00
Nov	1	20.00
Dec	0	0.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	2	40.00
Tue	0	0.00
Wed	1	20.00
Thu	1	20.00
Fri	0	0.00
Sat	1	20.00
Sun	0	0.00

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	1	20.00
0800-0859	0	0.00
0900-0959	0	0.00
1000-1059	1	20.00
1100-1159	1	20.00
1200-1259	0	0.00
1300-1359	0	0.00
1400-1459	0	0.00
1500-1559	0	0.00
1600-1659	1	20.00
1700-1759	1	20.00
1800-1859	0	0.00
1900-1959	0	0.00
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	0	0.00

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	4	1	0	5
Dark	0	0	0	0
Other	0	0	0	0
Total	4	1	0	5

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
PASSENGER CAR	6	60.00
PICKUP	2	20.00
SPORT UTILITY	2	20.00

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2005	4	0	2	2
2006	1	0	1	0
Total	5	0	3	2

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2005	0	3
2006	0	2
Total	0	5

Miscellaneous Totals

Year	Property Damage	EPDO Index
2005	$ 24700	18.80
2006	$ 11000	8.40
Total	$ 35700	27.20

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road & Fixed Object	Angle	Side Swipe	Other
2005	2	0	2	0	0	0	0
2006	0	0	1	0	0	0	0
Total	2	0	3	0	0	0	0

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
CJN200709138	200709138			76.8	8.4	9500	

Request Date	Courier Service	Phone No.	Ext.	Fax No.
09/21/2007		919-876-6888		919-876-6848

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
RANDOLPH	75	8	All and Rural		150	05/01/2004	04/30/2007	3.00

Location Text	Requestor
SR 1595 (SURRETT DRIVE) AND SR 1599 (MENDENHALL ROAD EXTENSION)	KIERSTEN GIUGNO PBSJ 1616-310 EAST MILLBROOK ROAD

Fiche Roads

Name	Code
SURRATT	50029707
SR 1599	40001599
SR 1595	40001595

Intersection Road Combinations

Name	Code	Code	Name
SR 1595	40001595	40001599	SR 1599
SURRATT	50029707	40001599	SR 1599

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Study Criteria Summary

County: GUILFORD **City:** All and Rural
Date: 05/01/2004 **to** 04/30/2007 **Study:** GMM200709129
Location: SR 4053 (SURRETT DR) AND SR 1961 (MARKET CENTER DR)-SR 1962 (COLLEGE DR)

Report Details

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries F	A	B	C	Condition R	L	W	Road Ch	Ci	Trfc Ctl Dv	Op
1	101204380	06/04/2004 11:36	BACKING UP	$ 2300	0	0	0	0	2	1	3	1	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: S	Veh Mnvr / Ped Actn: 1	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: N	Veh Mnvr / Ped Actn: 1	Obj Strk:										
2	101264546	08/20/2004 08:07	ANGLE	$ 3500	0	0	1	0	1	1	1	1	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 35 MPH	Dir: W	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 2 : 2	Alchl/Drgs: 0	Speed: 35 MPH	Dir: N	Veh Mnvr / Ped Actn: 4	Obj Strk:										
3	101357872	12/12/2004 14:45	ANGLE	$ 2200	0	0	0	1	2	1	2	3	0	3	1
Unit 1 : 2	Alchl/Drgs: 0	Speed: 15 MPH	Dir: S	Veh Mnvr / Ped Actn: 8	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 37 MPH	Dir: N	Veh Mnvr / Ped Actn: 4	Obj Strk:										
4	101521872	07/20/2005 15:40	ANGLE	$ 14000	0	0	0	2	1	1	1	1	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 45 MPH	Dir: E	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 20 MPH	Dir: N	Veh Mnvr / Ped Actn: 12	Obj Strk:										
5	101544098	08/19/2005 15:35	ANGLE	$ 7500	0	0	1	1	1	1	1	1	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 35 MPH	Dir: W	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 2 : 4	Alchl/Drgs: 0	Speed: 0 MPH	Dir: N	Veh Mnvr / Ped Actn: 4	Obj Strk:										
6	101689732	03/04/2006 13:20	REAR END, SLOW OR STOP	$ 1900	0	0	0	0	1	1	1	3	0	3	1
Unit 1 : 2	Alchl/Drgs: 0	Speed: 20 MPH	Dir: E	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 20 MPH	Dir: E	Veh Mnvr / Ped Actn: 4	Obj Strk:										
7	101737624	05/22/2006 14:53	ANGLE	$ 6500	0	0	0	2	1	1	1	3	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 30 MPH	Dir: N	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 30 MPH	Dir: W	Veh Mnvr / Ped Actn: 4	Obj Strk:										
8	101823257	09/02/2006 17:40	ANGLE	$ 22000	0	0	2	1	1	1	1	1	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 45 MPH	Dir: E	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 35 MPH	Dir: N	Veh Mnvr / Ped Actn: 4	Obj Strk:										

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op
Unit 3 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: W	Veh Mnvr / Ped Actn: 1	Obj Strk:										
9	101935913	11/22/2006 19:19	RIGHT TURN, SAME ROADWAY	$ 2000	0	0	0	0	2	4	3	1	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 10 MPH	Dir: E	Veh Mnvr / Ped Actn: 16	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 10 MPH	Dir: E	Veh Mnvr / Ped Actn: 16	Obj Strk:										
10	101898702	11/27/2006 16:50	ANGLE	$ 2100	0	0	0	2	1	2	1	2	0	3	1
Unit 1 : 2	Alchl/Drgs: 0	Speed: 45 MPH	Dir: W	Veh Mnvr / Ped Actn: 16	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 35 MPH	Dir: N	Veh Mnvr / Ped Actn: 16	Obj Strk:										

Legend for Report Details:

Acc No - Accident Number
Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
Condition: R - Road Surface, L - Ambient Light, W - Weather
Rd Ch - Road Character
Rd Ci - Roadway Contributing Circumstances
Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
Alchl/Drgs - Alcohol Drugs Suspected
Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
Obj Strk - Object Struck

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	10	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	7	70.00
Total Injury Crashes	7	70.00
Property Damage Only Crashes	3	30.00
Night Crashes	1	10.00
Wet Crashes	3	30.00
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	10	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	3	30.00
Class C Crashes	4	40.00
Property Damage Only Crashes	3	30.00

Vehicle Exposure Statistics

Annual ADT = 22800

Total Vehicle Exposure = 24.97 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	40.05
Fatal Crash Rate	0.00
Non Fatal Crash Rate	28.04
Night Crash Rate	4.01
Wet Crash Rate	12.02
EPDO Rate	247.54

Miscellaneous Statistics

Severity Index =	6.18
EPDO Crash Index =	61.80
Estimated Property Damage Total = $	64000.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	7	70.00
BACKING UP	1	10.00
REAR END, SLOW OR STOP	1	10.00
RIGHT TURN, SAME ROADWAY	1	10.00

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	4	30.77
Class C Injuries	9	69.23
Total Non-Fatal Injuries	13	100.00
Total Injuries	13	100.00

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	0	0.00
Feb	0	0.00
Mar	1	10.00
Apr	0	0.00
May	1	10.00
Jun	1	10.00
Jul	1	10.00
Aug	2	20.00
Sep	1	10.00
Oct	0	0.00
Nov	2	20.00
Dec	1	10.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	2	20.00
Tue	0	0.00
Wed	2	20.00
Thu	0	0.00
Fri	3	30.00
Sat	2	20.00
Sun	1	10.00

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	0	0.00
0800-0859	1	10.00
0900-0959	0	0.00
1000-1059	0	0.00
1100-1159	1	10.00
1200-1259	0	0.00
1300-1359	1	10.00
1400-1459	2	20.00
1500-1559	2	20.00
1600-1659	1	10.00
1700-1759	1	10.00
1800-1859	0	0.00
1900-1959	1	10.00
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	0	0.00

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	6	2	0	8
Dark	0	1	0	1
Other	1	0	0	1
Total	7	3	0	10

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
PASSENGER CAR	16	76.19
PICKUP	4	19.05
SPORT UTILITY	1	4.76

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2004	3	0	2	1
2005	2	0	2	0
2006	5	0	3	2
Total	10	0	7	3

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2004	0	2
2005	0	4
2006	0	7
Total	0	13

Miscellaneous Totals

Year	Property Damage	EPDO Index
2004	$ 8000	17.80
2005	$ 21500	16.80
2006	$ 34500	27.20
Total	$ 64000	61.80

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road & Fixed Object	Angle	Side Swipe	Other
2004	0	0	0	0	2	0	1
2005	0	0	0	0	2	0	0
2006	0	1	1	0	3	0	0
Total	0	1	1	0	7	0	1

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
GMM200709129	200709129			76.8	8.4	22800	

Request Date	Courier Service	Phone No.	Ext.	Fax No.
09/18/2007		(919)876-6888		

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
GUILFORD	40	7	All and Rural		150	05/01/2004	04/30/2007	3.00

Location Text

SR 4053 (SURRETT DR) AND SR 1961 (MARKET CENTER DR)-SR 1962 (COLLEGE DR)

Requestor

MS. KIERSTEN GIUGNO
PBS&J
1616 EAST MILLBROOK ROAD

Included Accidents

101898702
101737624
101689732

Fiche Roads

Name	Code
SR 4053	40004053
SURRATT	50029707
SR 1961	40001961
MARKET CENTER	50018943
SR 1962	40001962
COLLEGE	50006592

Intersection Road Combinations

Name	Code	Code	Name
SR 1961	40001961	50006592	COLLEGE
SR 1961	40001961	50029707	SURRATT
SR 1961	40001961	40004053	SR 4053
MARKET CENTER	50018943	40001962	SR 1962
MARKET CENTER	50018943	50006592	COLLEGE
SR 1961	40001961	40001962	SR 1962
MARKET CENTER	50018943	40004053	SR 4053
MARKET CENTER	50018943	50029707	SURRATT
SR 4053	40004053	40001962	SR 1962
SR 4053	40004053	50006592	COLLEGE
SURRATT	50029707	40001962	SR 1962
SURRATT	50029707	50006592	COLLEGE

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Study Criteria Summary

County: GUILFORD **City:** All and Rural
Date: 05/01/2004 **to** 04/30/2007 **Study:** GMM200709130
Location: SR 4053 (SURRETT DR) AND I-85 BUSINESS-US 29-US 70 SB RAMPS

Report Details

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op
1	101572401	09/29/2005 17:06	REAR END, SLOW OR STOP	$ 2800	0	0	0	0	1	1	2	1	0	0	

Unit 1 : 1	Alchl/Drgs: 0	Speed: 25 MPH	Dir: N	Veh Mnvr / Ped Actn: 4	Obj Strk:
Unit 2 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: N	Veh Mnvr / Ped Actn: 1	Obj Strk:
Unit 3 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: N	Veh Mnvr / Ped Actn: 1	Obj Strk:

Legend for Report Details:

Acc No - Accident Number
Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
Condition: R - Road Surface, L - Ambient Light, W - Weather
Rd Ch - Road Character
Rd Ci - Roadway Contributing Circumstances
Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
Alchl/Drgs - Alcohol Drugs Suspected
Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
Obj Strk - Object Struck

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	1	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	0	0.00
Total Injury Crashes	0	0.00
Property Damage Only Crashes	1	100.00
Night Crashes	0	0.00
Wet Crashes	0	0.00
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	1	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	0	0.00
Class C Crashes	0	0.00
Property Damage Only Crashes	1	100.00

Vehicle Exposure Statistics

Annual ADT = 10400

Total Vehicle Exposure = 11.39 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	8.78
Fatal Crash Rate	0.00
Non Fatal Crash Rate	0.00
Night Crash Rate	0.00
Wet Crash Rate	0.00
EPDO Rate	8.78

Miscellaneous Statistics

Severity Index =	1.00
EPDO Crash Index =	1.00
Estimated Property Damage Total = $	2800.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
REAR END, SLOW OR STOP	1	100.00

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	0	0.00
Class C Injuries	0	0.00
Total Non-Fatal Injuries	0	0.00
Total Injuries	0	0.00

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	0	0.00
Feb	0	0.00
Mar	0	0.00
Apr	0	0.00
May	0	0.00
Jun	0	0.00
Jul	0	0.00
Aug	0	0.00
Sep	1	100.00
Oct	0	0.00
Nov	0	0.00
Dec	0	0.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	0	0.00
Tue	0	0.00
Wed	0	0.00
Thu	1	100.00
Fri	0	0.00
Sat	0	0.00
Sun	0	0.00

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	0	0.00
0800-0859	0	0.00
0900-0959	0	0.00
1000-1059	0	0.00
1100-1159	0	0.00
1200-1259	0	0.00
1300-1359	0	0.00
1400-1459	0	0.00
1500-1559	0	0.00
1600-1659	0	0.00
1700-1759	1	100.00
1800-1859	0	0.00
1900-1959	0	0.00
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	0	0.00

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	1	0	0	1
Dark	0	0	0	0
Other	0	0	0	0
Total	1	0	0	1

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
PASSENGER CAR	3	100.00

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2005	1	0	0	1
Total	1	0	0	1

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2005	0	0
Total	0	0

Miscellaneous Totals

Year	Property Damage	EPDO Index
2005	$ 2800	1.00
Total	$ 2800	1.00

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road & Fixed Object	Angle	Side Swipe	Other
2005	0	0	1	0	0	0	0
Total	0	0	1	0	0	0	0

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
GMM200709130	200709130			76.8	8.4	10400	

Request Date	Courier Service	Phone No.	Ext.	Fax No.
09/18/2007		(919)876-6888		

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
GUILFORD	40	7	All and Rural		150	05/01/2004	04/30/2007	3.00

Location Text

SR 4053 (SURRETT DR) AND I-85 BUSINESS-US 29-US 70 SB RAMPS

Requestor

MS. KIERSTEN GIUGNO
PBS&J
1616 EAST MILLBROOK RD

Excluded Accidents

101258292
101444959
101573277
101586034
101738012
101754180
101810748
101854719
101901142
101923488
101946071
101948803
101983479
102002406
102007700

Fiche Roads

Name	Code
I 85B	19000085
SURRATT	50029707
US 29	20000029
US 70	20000070
SR 4053	40004053

Intersection Road Combinations

Name	Code	Code	Name
SR 4053	40004053	19000085	I 85B
SR 4053	40004053	20000029	US 29
SR 4053	40004053	20000070	US 70
SURRATT	50029707	19000085	I 85B
SURRATT	50029707	20000029	US 29
SURRATT	50029707	20000070	US 70

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Study Criteria Summary

County: GUILFORD **City:** All and Rural
Date: 05/01/2004 **to** 04/30/2007 **Study:** GMM200709131
Location: SR 4053 (SURRETT DR) AND I-85 BUSINESS-US 29-US 70 NB RAMPS

Report Details

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op
1	101208370	06/10/2004 14:55	ANGLE	$ 3000	0	0	0	0	1	1	1	1	0	1	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 5 MPH	Dir: E	Veh Mnvr / Ped Actn: 8	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 30 MPH	Dir: S	Veh Mnvr / Ped Actn: 4	Obj Strk:										
2	101586034	10/17/2005 07:58	REAR END, SLOW OR STOP	$ 3300	0	0	0	0	1	1	1	1	0	1	1
Unit 1 : 4	Alchl/Drgs: 0	Speed: 0 MPH	Dir: E	Veh Mnvr / Ped Actn: 12	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: E	Veh Mnvr / Ped Actn: 11	Obj Strk:										
3	101738012	05/23/2006 08:41	REAR END, TURN	$ 1600	0	0	0	0	1	1	1	1	0	1	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 5 MPH	Dir: N	Veh Mnvr / Ped Actn: 7	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: N	Veh Mnvr / Ped Actn: 1	Obj Strk:										

Legend for Report Details:

Acc No - Accident Number
Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
Condition: R - Road Surface, L - Ambient Light, W - Weather
Rd Ch - Road Character
Rd Ci - Roadway Contributing Circumstances
Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
Alchl/Drgs - Alcohol Drugs Suspected
Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
Obj Strk - Object Struck

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	3	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	0	0.00
Total Injury Crashes	0	0.00
Property Damage Only Crashes	3	100.00
Night Crashes	0	0.00
Wet Crashes	0	0.00
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	3	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	0	0.00
Class C Crashes	0	0.00
Property Damage Only Crashes	3	100.00

Vehicle Exposure Statistics

Annual ADT = 10400

Total Vehicle Exposure = 11.39 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	26.34
Fatal Crash Rate	0.00
Non Fatal Crash Rate	0.00
Night Crash Rate	0.00
Wet Crash Rate	0.00
EPDO Rate	26.34

Miscellaneous Statistics

Severity Index =	1.00
EPDO Crash Index =	3.00
Estimated Property Damage Total = $	7900.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	1	33.33
REAR END, SLOW OR STOP	1	33.33
REAR END, TURN	1	33.33

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	0	0.00
Class C Injuries	0	0.00
Total Non-Fatal Injuries	0	0.00
Total Injuries	0	0.00

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	0	0.00
Feb	0	0.00
Mar	0	0.00
Apr	0	0.00
May	1	33.33
Jun	1	33.33
Jul	0	0.00
Aug	0	0.00
Sep	0	0.00
Oct	1	33.33
Nov	0	0.00
Dec	0	0.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	1	33.33
Tue	1	33.33
Wed	0	0.00
Thu	1	33.33
Fri	0	0.00
Sat	0	0.00
Sun	0	0.00

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	1	33.33
0800-0859	1	33.33
0900-0959	0	0.00
1000-1059	0	0.00
1100-1159	0	0.00
1200-1259	0	0.00
1300-1359	0	0.00
1400-1459	1	33.33
1500-1559	0	0.00
1600-1659	0	0.00
1700-1759	0	0.00
1800-1859	0	0.00
1900-1959	0	0.00
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	0	0.00

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	3	0	0	3
Dark	0	0	0	0
Other	0	0	0	0
Total	3	0	0	3

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
PASSENGER CAR	5	83.33
SPORT UTILITY	1	16.67

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2004	1	0	0	1
2005	1	0	0	1
2006	1	0	0	1
Total	3	0	0	3

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2004	0	0
2005	0	0
2006	0	0
Total	0	0

Miscellaneous Totals

Year	Property Damage	EPDO Index
2004	$ 3000	1.00
2005	$ 3300	1.00
2006	$ 1600	1.00
Total	$ 7900	3.00

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road & Fixed Object	Angle	Side Swipe	Other
2004	0	0	0	0	1	0	0
2005	0	0	1	0	0	0	0
2006	0	0	1	0	0	0	0
Total	0	0	2	0	1	0	0

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
GMM200709131	200709131			76.8	8.4	10400	

Request Date	Courier Service	Phone No.	Ext.	Fax No.
09/18/2007		(919)876-6888		

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
GUILFORD	40	7	All and Rural		150	05/01/2004	04/30/2007	3.00

Location Text

SR 4053 (SURRETT DR) AND I-85 BUSINESS-US 29-US 70 NB RAMPS

Requestor

MS. KIERSTEN GIUGNO
PBS&J
1616 EAST MILLBROOK RD

Included Accidents

101208370

Excluded Accidents

101258292
101444959
101572401
101573277
101754180
101810748
101854719
101901142
101923488
101946071
101948803
101983479
102002406
102007700

Fiche Roads

Name	Code
SR 4053	40004053
SURRATT	50029707
I 85B	19000085
US 29	20000029
US 70	20000070

Intersection Road Combinations

Name	Code	Code	Name
SR 4053	40004053	20000029	US 29
SR 4053	40004053	20000070	US 70
SURRATT	50029707	19000085	I 85B
SR 4053	40004053	19000085	I 85B
SURRATT	50029707	20000029	US 29
SURRATT	50029707	20000070	US 70

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Study Criteria Summary

County: GUILFORD **City:** All and Rural
Date: 05/01/2004 **to** 04/30/2007 **Study:** GMM200709133
Location: SR 4053 (SURRETT DR) AND FINCH AVE-FRALEY RD

Report Details

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op
1	101200756	06/01/2004 16:03	OVERTURN/ROLLOVER	$ 10000	0	0	0	0	1	1	1	1	0	3	1
Unit 1 : 10	Alchl/Drgs: 0	Speed: 30 MPH	Dir: W	Veh Mnvr / Ped Actn: 7	Obj Strk:										
2	101242104	07/25/2004 15:40	REAR END, SLOW OR STOP	$ 3100	0	0	0	0	1	1	2	1	0	12	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 5 MPH	Dir: N	Veh Mnvr / Ped Actn: 11	Obj Strk:										
Unit 2 : 10	Alchl/Drgs: 0	Speed: 0 MPH	Dir: N	Veh Mnvr / Ped Actn: 16	Obj Strk:										
3	101844212	09/30/2006 15:38	ANGLE	$ 4500	0	0	0	1	1	1	1	1	0		
Unit 1 : 2	Alchl/Drgs: 0	Speed: 20 MPH	Dir: W	Veh Mnvr / Ped Actn: 9	Obj Strk:										
Unit 2 : 2	Alchl/Drgs: 0	Speed: 20 MPH	Dir: W	Veh Mnvr / Ped Actn: 4	Obj Strk:										

Legend for Report Details:

Acc No - Accident Number
Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
Condition: R - Road Surface, L - Ambient Light, W - Weather
Rd Ch - Road Character
Rd Ci - Roadway Contributing Circumstances
Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
Alchl/Drgs - Alcohol Drugs Suspected
Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
Obj Strk - Object Struck

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	3	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	1	33.33
Total Injury Crashes	1	33.33
Property Damage Only Crashes	2	66.67
Night Crashes	0	0.00
Wet Crashes	0	0.00
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	3	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	0	0.00
Class C Crashes	1	33.33
Property Damage Only Crashes	2	66.67

Vehicle Exposure Statistics

Annual ADT = 13400

Total Vehicle Exposure = 14.67 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	20.45
Fatal Crash Rate	0.00
Non Fatal Crash Rate	6.82
Night Crash Rate	0.00
Wet Crash Rate	0.00
EPDO Rate	70.88

Miscellaneous Statistics

Severity Index =	3.47
EPDO Crash Index =	10.40
Estimated Property Damage Total = $	17600.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	1	33.33
OVERTURN/ROLLOVER	1	33.33
REAR END, SLOW OR STOP	1	33.33

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	0	0.00
Class C Injuries	1	100.00
Total Non-Fatal Injuries	1	100.00
Total Injuries	1	100.00

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	0	0.00
Feb	0	0.00
Mar	0	0.00
Apr	0	0.00
May	0	0.00
Jun	1	33.33
Jul	1	33.33
Aug	0	0.00
Sep	1	33.33
Oct	0	0.00
Nov	0	0.00
Dec	0	0.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	0	0.00
Tue	1	33.33
Wed	0	0.00
Thu	0	0.00
Fri	0	0.00
Sat	1	33.33
Sun	1	33.33

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	0	0.00
0800-0859	0	0.00
0900-0959	0	0.00
1000-1059	0	0.00
1100-1159	0	0.00
1200-1259	0	0.00
1300-1359	0	0.00
1400-1459	0	0.00
1500-1559	2	66.67
1600-1659	1	33.33
1700-1759	0	0.00
1800-1859	0	0.00
1900-1959	0	0.00
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	0	0.00

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	3	0	0	3
Dark	0	0	0	0
Other	0	0	0	0
Total	3	0	0	3

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
PASSENGER CAR	1	20.00
PICKUP	2	40.00
SINGLE UNIT TRUCK (2-AXLE, 6-TIRE)	2	40.00

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2004	2	0	0	2
2006	1	0	1	0
Total	3	0	1	2

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2004	0	0
2006	0	1
Total	0	1

Miscellaneous Totals

Year	Property Damage	EPDO Index
2004	$ 13100	2.00
2006	$ 4500	8.40
Total	$ 17600	10.40

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road & Fixed Object	Angle	Side Swipe	Other
2004	0	0	1	0	0	0	1
2006	0	0	0	0	1	0	0
Total	0	0	1	0	1	0	1

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
GMM200709133	200709133			76.8	8.4	13400	

Request Date	Courier Service	Phone No.	Ext.	Fax No.
09/18/2007		(919)876-6888		

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
GUILFORD	40	7	All and Rural		150	05/01/2004	04/30/2007	3.00

Location Text	Requestor
SR 4053 (SURRETT DR) AND FINCH AVE-FRALEY RD	MS. KIERSTEN GIUGNO PBS&J 1616 EAST MILLBROOK RD

Fiche Roads

Name	Code
SURRATT	50029707
FINCH	50010498
SR 4053	40004053
FRALEY	50011060

Intersection Road Combinations

Name	Code	Code	Name
SR 4053	40004053	50010498	FINCH
SURRATT	50029707	50010498	FINCH
SR 4053	40004053	50011060	FRALEY
SURRATT	50029707	50011060	FRALEY

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Study Criteria Summary

County: GUILFORD **City:** All and Rural
Date: 05/01/2004 **to** 04/30/2007 **Study:** GMM200709134
Location: SR 4053 (SURRETT DR) AND SR 1300 (FAIRFIELD RD)

Report Details

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries F	A	B	C	Condition R	L	W	Road Ch	Ci	Trfc Ctl Dv	Op
1	101228711	07/06/2004 18:00	SIDESWIPE, OPPOSITE DIRECTION	$ 2000	0	0	0	0	1	1	1	1	0	3	1
Unit 1 : 2	Alchl/Drgs: 0	Speed: 40 MPH	Dir: E	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 2 : 2	Alchl/Drgs: 0	Speed: 35 MPH	Dir: N	Veh Mnvr / Ped Actn: 16	Obj Strk:										
2	101236476	07/17/2004 19:04	LEFT TURN, SAME ROADWAY	$ 2000	0	0	0	1	2	1	3	1	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 20 MPH	Dir: N	Veh Mnvr / Ped Actn: 8	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 20 MPH	Dir: S	Veh Mnvr / Ped Actn: 4	Obj Strk:										
3	101251522	08/05/2004 16:16	LEFT TURN, SAME ROADWAY	$ 9500	0	0	0	1	1	1	1	1	0	3	1
Unit 1 : 2	Alchl/Drgs: 0	Speed: 30 MPH	Dir: E	Veh Mnvr / Ped Actn: 4	Obj Strk: 58										
Unit 2 : 2	Alchl/Drgs: 0	Speed: 10 MPH	Dir: W	Veh Mnvr / Ped Actn: 8	Obj Strk:										
4	101304148	10/08/2004 10:34	LEFT TURN, DIFFERENT ROADWAYS	$ 4200	0	0	0	1	1	1	1	3	0	0	
Unit 1 : 4	Alchl/Drgs: 0	Speed: 5 MPH	Dir: NE	Veh Mnvr / Ped Actn: 8	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 35 MPH	Dir: S	Veh Mnvr / Ped Actn: 4	Obj Strk:										
5	101384656	01/12/2005 16:40	REAR END, SLOW OR STOP	$ 1800	0	0	0	0	1	1	2	3	0	0	
Unit 1 : 1	Alchl/Drgs: 0	Speed: 15 MPH	Dir: N	Veh Mnvr / Ped Actn: 6	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: N	Veh Mnvr / Ped Actn: 1	Obj Strk:										
Unit 3 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: N	Veh Mnvr / Ped Actn: 1	Obj Strk:										
6	101415097	02/19/2005 10:20	REAR END, SLOW OR STOP	$ 8500	0	0	0	1	1	1	1	1	0	0	
Unit 1 : 1	Alchl/Drgs: 0	Speed: 30 MPH	Dir: W	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 2 : 2	Alchl/Drgs: 0	Speed: 0 MPH	Dir: W	Veh Mnvr / Ped Actn: 1	Obj Strk:										
7	101423487	03/02/2005 10:27	REAR END, SLOW OR STOP	$ 2000	0	0	0	0	1	1	1	1	0		
Unit 1 : 1	Alchl/Drgs: 0	Speed: 15 MPH	Dir: W	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 2 : 3	Alchl/Drgs: 0	Speed: 15 MPH	Dir: W	Veh Mnvr / Ped Actn: 4	Obj Strk:										
8	101499284	06/16/2005 16:36	REAR END, SLOW OR STOP	$ 3020	0	0	0	0	1	1	1	1	0	3	1
Unit 1 : 4	Alchl/Drgs: 0	Speed: 10 MPH	Dir: E	Veh Mnvr / Ped Actn: 4	Obj Strk:										

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries F	A	B	C	Condition R	L	W	Road Ch	Ci	Trfc Ctl Dv	Op
Unit 2 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: E	Veh Mnvr / Ped Actn: 1	Obj Strk:										
9	101479222	09/02/2005 08:28	REAR END, SLOW OR STOP	$ 1400	0	0	0	0	1	1	1	1	0	0	
Unit 1 : 14	Alchl/Drgs: 0	Speed: 20 MPH	Dir: W	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: W	Veh Mnvr / Ped Actn: 1	Obj Strk:										
10	101591376	10/28/2005 14:55	LEFT TURN, SAME ROADWAY	$ 3500	0	0	0	0	1	1	1	1	0	3	1
Unit 1 : 14	Alchl/Drgs: 0	Speed: 10 MPH	Dir: N	Veh Mnvr / Ped Actn: 8	Obj Strk:										
Unit 2 : 2	Alchl/Drgs: 0	Speed: 35 MPH	Dir: S	Veh Mnvr / Ped Actn: 4	Obj Strk:										
11	101597877	11/01/2005 16:35	SIDESWIPE, SAME DIRECTION	$ 2500	0	0	0	2	1	1	1	1	0		
Unit 1 : 1	Alchl/Drgs: 0	Speed: 30 MPH	Dir: W	Veh Mnvr / Ped Actn: 5	Obj Strk:										
Unit 2 : 4	Alchl/Drgs: 0	Speed: 30 MPH	Dir: W	Veh Mnvr / Ped Actn: 4	Obj Strk:										
12	101611790	11/18/2005 17:19	LEFT TURN, DIFFERENT ROADWAYS	$ 6000	0	0	0	0	1	4	1	1	0	0	
Unit 1 : 1	Alchl/Drgs: 0	Speed: 15 MPH	Dir: NW	Veh Mnvr / Ped Actn: 12	Obj Strk:										
Unit 2 : 4	Alchl/Drgs: 0	Speed: 30 MPH	Dir: NE	Veh Mnvr / Ped Actn: 4	Obj Strk:										
13	101629872	12/09/2005 12:12	ANGLE	$ 10000	0	0	0	1	1	1	1	1	0	3	1
Unit 1 : 7	Alchl/Drgs: 0	Speed: 0 MPH	Dir: E	Veh Mnvr / Ped Actn: 1	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 1 MPH	Dir: S	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 3 : 1	Alchl/Drgs: 0	Speed: 30 MPH	Dir: W	Veh Mnvr / Ped Actn: 4	Obj Strk:										
14	101676411	02/14/2006 12:33	REAR END, SLOW OR STOP	$ 2500	0	0	0	0	1	1	1	1	0	0	
Unit 1 : 1	Alchl/Drgs: 0	Speed: 25 MPH	Dir: E	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 25 MPH	Dir: E	Veh Mnvr / Ped Actn: 11	Obj Strk:										
15	101725639	05/02/2006 10:18	REAR END, SLOW OR STOP	$ 1250	0	0	0	1	1	1	2	1	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 35 MPH	Dir: N	Veh Mnvr / Ped Actn: 11	Obj Strk:										
Unit 2 : 2	Alchl/Drgs: 0	Speed: 0 MPH	Dir: N	Veh Mnvr / Ped Actn: 1	Obj Strk:										
16	101727596	05/04/2006 16:50	REAR END, SLOW OR STOP	$ 7000	0	0	0	3	1	1	1	3	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 15 MPH	Dir: E	Veh Mnvr / Ped Actn: 12	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 5 MPH	Dir: W	Veh Mnvr / Ped Actn: 12	Obj Strk:										
Unit 3 : 1	Alchl/Drgs: 0	Speed: 5 MPH	Dir: E	Veh Mnvr / Ped Actn: 12	Obj Strk:										
17	101798686	08/02/2006 11:00	REAR END, SLOW OR STOP	$ 390	0	0	0	1	1	1	1	1	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 40 MPH	Dir: E	Veh Mnvr / Ped Actn: 11	Obj Strk:										

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op
Unit 2 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: E	Veh Mnvr / Ped Actn: 1		Obj Strk:									
18	101825694	09/06/2006 17:17	SIDESWIPE, SAME DIRECTION	$ 3300	0	0	0	0	1	1	1	3	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 15 MPH	Dir: S	Veh Mnvr / Ped Actn: 5		Obj Strk:									
Unit 2 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: S	Veh Mnvr / Ped Actn: 1		Obj Strk:									
19	101831883	09/12/2006 12:58	SIDESWIPE, OPPOSITE DIRECTION	$ 2000	0	0	0	0	1	1	2	1	0	3	1
Unit 1 : 14	Alchl/Drgs: 0	Speed: 5 MPH	Dir: S	Veh Mnvr / Ped Actn: 8		Obj Strk:									
Unit 2 : 2	Alchl/Drgs: 0	Speed: 0 MPH	Dir: N	Veh Mnvr / Ped Actn: 1		Obj Strk:									
20	101880267	11/07/2006 12:16	ANGLE	$ 1500	0	0	0	0	2	1	2	1	0	3	1
Unit 1 : 2	Alchl/Drgs: 0	Speed: 10 MPH	Dir: S	Veh Mnvr / Ped Actn: 5		Obj Strk:									
Unit 2 : 5	Alchl/Drgs: 0	Speed: 10 MPH	Dir: E	Veh Mnvr / Ped Actn: 4		Obj Strk:									
21	101918404	12/19/2006 15:39	REAR END, SLOW OR STOP	$ 5200	0	0	0	2	1	1	1	1	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 30 MPH	Dir: N	Veh Mnvr / Ped Actn: 4		Obj Strk:									
Unit 2 : 1	Alchl/Drgs: 0	Speed: 5 MPH	Dir: N	Veh Mnvr / Ped Actn: 11		Obj Strk:									
22	101947922	01/29/2007 11:48	LEFT TURN, SAME ROADWAY	$ 1950	0	0	0	0	1	1	1	5	0	0	
Unit 1 : 4	Alchl/Drgs: 0	Speed: 11 MPH	Dir: E	Veh Mnvr / Ped Actn: 8		Obj Strk:									
Unit 2 : 1	Alchl/Drgs: 0	Speed: 25 MPH	Dir: W	Veh Mnvr / Ped Actn: 4		Obj Strk:									
23	102013973	04/17/2007 17:14	LEFT TURN, DIFFERENT ROADWAYS	$ 2900	0	0	0	1	1	1	1	3	0	0	
Unit 1 : 1	Alchl/Drgs: 0	Speed: 5 MPH	Dir: NW	Veh Mnvr / Ped Actn: 8		Obj Strk:									
Unit 2 : 1	Alchl/Drgs: 0	Speed: 15 MPH	Dir: E	Veh Mnvr / Ped Actn: 8		Obj Strk:									

Legend for Report Details:

Acc No - Accident Number
Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
Condition: R - Road Surface, L - Ambient Light, W - Weather
Rd Ch - Road Character
Rd Ci - Roadway Contributing Circumstances
Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
Alchl/Drgs - Alcohol Drugs Suspected
Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
Obj Strk - Object Struck

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	23	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	11	47.83
Total Injury Crashes	11	47.83
Property Damage Only Crashes	12	52.17
Night Crashes	1	4.35
Wet Crashes	2	8.70
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	23	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	0	0.00
Class C Crashes	11	47.83
Property Damage Only Crashes	12	52.17

Vehicle Exposure Statistics

Annual ADT = 26400

Total Vehicle Exposure = 28.91 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	79.56
Fatal Crash Rate	0.00
Non Fatal Crash Rate	38.05
Night Crash Rate	3.46
Wet Crash Rate	6.92
EPDO Rate	361.15

Miscellaneous Statistics

Severity Index =	4.54
EPDO Crash Index =	104.40
Estimated Property Damage Total = $	84410.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	2	8.70
LEFT TURN, DIFFERENT ROADWAYS	3	13.04
LEFT TURN, SAME ROADWAY	4	17.39
REAR END, SLOW OR STOP	10	43.48
SIDESWIPE, OPPOSITE DIRECTION	2	8.70
SIDESWIPE, SAME DIRECTION	2	8.70

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	0	0.00
Class C Injuries	15	100.00
Total Non-Fatal Injuries	15	100.00
Total Injuries	15	100.00

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	2	8.70
Feb	2	8.70
Mar	1	4.35
Apr	1	4.35
May	2	8.70
Jun	1	4.35
Jul	2	8.70
Aug	2	8.70
Sep	3	13.04
Oct	2	8.70
Nov	3	13.04
Dec	2	8.70

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	1	4.35
Tue	8	34.78
Wed	4	17.39
Thu	3	13.04
Fri	5	21.74
Sat	2	8.70
Sun	0	0.00

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	0	0.00
0800-0859	1	4.35
0900-0959	0	0.00
1000-1059	4	17.39
1100-1159	2	8.70
1200-1259	4	17.39
1300-1359	0	0.00
1400-1459	1	4.35
1500-1559	1	4.35
1600-1659	5	21.74
1700-1759	3	13.04
1800-1859	1	4.35
1900-1959	1	4.35
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	0	0.00

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	20	2	0	22
Dark	1	0	0	1
Other	0	0	0	0
Total	21	2	0	23

Object Struck Summary

Object Type	Times Struck	Percent of Total
DITCH	1	100.00

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
LIGHT TRUCK (MINI-VAN, PANEL)	1	2.04
PASSENGER CAR	29	59.18
PICKUP	9	18.37
SCHOOL BUS	1	2.04
SPORT UTILITY	5	10.20
TRACTOR/SEMI-TRAILER	3	6.12
VAN	1	2.04

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2004	4	0	3	1
2005	9	0	3	6
2006	8	0	4	4
2007	2	0	1	1
Total	23	0	11	12

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2004	0	3
2005	0	4
2006	0	7
2007	0	1
Total	0	15

Miscellaneous Totals

Year	Property Damage	EPDO Index
2004	$ 17700	26.20
2005	$ 38720	31.20
2006	$ 23140	37.60
2007	$ 4850	9.40
Total	$ 84410	104.40

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road & Fixed Object	Angle	Side Swipe	Other
2004	3	0	0	0	0	1	0
2005	2	0	5	0	1	1	0
2006	0	0	5	0	1	2	0
2007	2	0	0	0	0	0	0
Total	7	0	10	0	2	4	0

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
GMM200709134	200709134			76.8	8.4	26400	

Request Date	Courier Service	Phone No.	Ext.	Fax No.
09/18/2007		(919)876-6888		

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
GUILFORD	40	7	All and Rural		150	05/01/2004	04/30/2007	3.00

Location Text

SR 4053 (SURRETT DR) AND SR 1300 (FAIRFIELD RD)

Requestor

MS. KIERSTEN GIUGNO
PBS&J
1616 EAST MILLBROOK RD

Included Accidents

101228711
101236476
101384656
101423487
101479222
101611790
101727596
101798686
101825694
101880267
101947922
102013973

Fiche Roads

Name	Code
SR 4053	40004053
SURRATT	50029707
SR 1300	40001300
FAIRFIELD	50010082

Intersection Road Combinations

Name	Code	Code	Name
SR 4053	40004053	40001300	SR 1300
SR 4053	40004053	50010082	FAIRFIELD
SURRATT	50029707	40001300	SR 1300
SURRATT	50029707	50010082	FAIRFIELD

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Study Criteria Summary

County: RANDOLPH **City:** All and Rural
Date: 05/01/2004 **to** 04/30/2007 **Study:** SDF200709153
Location: SR 1595 (Surrett Dr)-SR 3252 (Hopewell Church Rd) and NC 62-Trindale Rd

Report Details

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries F	A	B	C	Condition R	L	W	Road Ch	Ci	Trfc Ctl Dv	Op
1	101546518	08/22/2005 16:00	RIGHT TURN, SAME ROADWAY	$ 2300	0	0	0	0	1	1	1	1	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 5 MPH	Dir: SW	Veh Mnvr / Ped Actn: 7	Obj Strk:										
Unit 2 : 2	Alchl/Drgs: 0	Speed: 5 MPH	Dir: SW	Veh Mnvr / Ped Actn: 6	Obj Strk:										
2	101570886	09/27/2005 09:10	REAR END, SLOW OR STOP	$ 4800	0	0	0	1	1	1	1	3	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 45 MPH	Dir: SW	Veh Mnvr / Ped Actn: 1	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 45 MPH	Dir: SW	Veh Mnvr / Ped Actn: 11	Obj Strk:										
3	101682692	02/23/2006 20:20	LEFT TURN, SAME ROADWAY	$ 4800	0	0	0	0	1	5	1	3	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 45 MPH	Dir: W	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 45 MPH	Dir: W	Veh Mnvr / Ped Actn: 4	Obj Strk:										
4	101698302	03/19/2006 15:15	BACKING UP	$ 3300	0	0	0	0	1	1	1	3	0	13	1
Unit 1 : 4	Alchl/Drgs: 0	Speed: 45 MPH	Dir: NE	Veh Mnvr / Ped Actn: 10	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 45 MPH	Dir: NE	Veh Mnvr / Ped Actn: 1	Obj Strk:										
5	101907553	12/08/2006 07:30	REAR END, SLOW OR STOP	$ 1000	0	0	0	0	1	1	1	3	0	3	1
Unit 1 : 1	Alchl/Drgs: 0	Speed: 5 MPH	Dir: N	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 0 MPH	Dir: N	Veh Mnvr / Ped Actn: 1	Obj Strk:										
6	101968370	03/28/2007 17:40	RIGHT TURN, SAME ROADWAY	$ 2000	0	0	0	0	1	1	1	3	0	3	1
Unit 1 : 11	Alchl/Drgs: 0	Speed: 10 MPH	Dir: SW	Veh Mnvr / Ped Actn: 7	Obj Strk:										
Unit 2 : 1	Alchl/Drgs: 0	Speed: 10 MPH	Dir: SW	Veh Mnvr / Ped Actn: 7	Obj Strk:										
7	101972999	04/24/2007 10:15	ANGLE	$ 3600	0	0	0	1	1	1	1	3	0	1	1
Unit 1 : 11	Alchl/Drgs: 0	Speed: 45 MPH	Dir: S	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit 2 : 2	Alchl/Drgs: 0	Speed: 45 MPH	Dir: E	Veh Mnvr / Ped Actn: 4	Obj Strk:										

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	7	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	2	28.57
Total Injury Crashes	2	28.57
Property Damage Only Crashes	5	71.43
Night Crashes	1	14.29
Wet Crashes	0	0.00
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	7	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	0	0.00
Class C Crashes	2	28.57
Property Damage Only Crashes	5	71.43

Vehicle Exposure Statistics

Annual ADT = 15400

Total Vehicle Exposure = 16.86 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	41.51
Fatal Crash Rate	0.00
Non Fatal Crash Rate	11.86
Night Crash Rate	5.93
Wet Crash Rate	0.00
EPDO Rate	129.28

Miscellaneous Statistics

Severity Index =	3.11
EPDO Crash Index =	21.80
Estimated Property Damage Total = $	21800.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	1	14.29
BACKING UP	1	14.29
LEFT TURN, SAME ROADWAY	1	14.29
REAR END, SLOW OR STOP	2	28.57
RIGHT TURN, SAME ROADWAY	2	28.57

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	0	0.00
Class C Injuries	2	100.00
Total Non-Fatal Injuries	2	100.00
Total Injuries	2	100.00

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	0	0.00
Feb	1	14.29
Mar	2	28.57
Apr	1	14.29
May	0	0.00
Jun	0	0.00
Jul	0	0.00
Aug	1	14.29
Sep	1	14.29
Oct	0	0.00
Nov	0	0.00
Dec	1	14.29

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	1	14.29
Tue	2	28.57
Wed	1	14.29
Thu	1	14.29
Fri	1	14.29
Sat	0	0.00
Sun	1	14.29

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	1	14.29
0800-0859	0	0.00
0900-0959	1	14.29
1000-1059	1	14.29
1100-1159	0	0.00
1200-1259	0	0.00
1300-1359	0	0.00
1400-1459	0	0.00
1500-1559	1	14.29
1600-1659	1	14.29
1700-1759	1	14.29
1800-1859	0	0.00
1900-1959	0	0.00
2000-2059	1	14.29
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	0	0.00

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	6	0	0	6
Dark	1	0	0	1
Other	0	0	0	0
Total	7	0	0	7

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
PASSENGER CAR	9	64.29
PICKUP	2	14.29
SINGLE UNIT TRUCK (3 OR MORE AXLES)	2	14.29
SPORT UTILITY	1	7.14

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2005	2	0	1	1
2006	3	0	0	3
2007	2	0	1	1
Total	7	0	2	5

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2005	0	1
2006	0	0
2007	0	1
Total	0	2

Miscellaneous Totals

Year	Property Damage	EPDO Index
2005	$ 7100	9.40
2006	$ 9100	3.00
2007	$ 5600	9.40
Total	$ 21800	21.80

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road & Fixed Object	Angle	Side Swipe	Other
2005	0	1	1	0	0	0	0
2006	1	0	1	0	0	0	1
2007	0	1	0	0	1	0	0
Total	1	2	2	0	1	0	1

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
SDF200709153	200709153			76.8	8.4	15400	

Request Date	Courier Service	Phone No.	Ext.	Fax No.
09/20/2007		919-876-6888		919-876-6848

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
RANDOLPH	75	8	All and Rural		0	05/01/2004	04/30/2007	3.00

Location Text

SR 1595 (Surrett Dr)-SR 3252 (Hopewell Church Rd) and NC 62-Trindale Rd

Requestor

Kiersten Giugno
PBS&J
1616 E Millbrook Rd
Suite 310

Included Accidents

101968370
101907553
101698302
101682692
101570886

Excluded Accidents

101667265
101296497

Fiche Roads

Name	Code
SURRATT	50029707
SR 1748	40001748
TRINITY	50030972
SR 1595	40001595
TRINITY HI SCHL	50030978
SR 1558	40001558
TURNPIKE	50031164
SR 1882	40001882
OLD TURNPIKE	50022809
SR 3252	40003252
HOPEWELL CHURCH	50014407
NC 62	30000062
TRINDALE	50030970
I 85	10000085

Fiche Roads

Name	Code

Intersection Road Combinations

Name	Code	Code	Name
SR 1595	40001595	40003252	SR 3252
SR 1595	40001595	50014407	HOPEWELL CHURCH
SR 1595	40001595	30000062	NC 62
SR 1595	40001595	50030970	TRINDALE
SURRATT	50029707	40003252	SR 3252
SURRATT	50029707	50014407	HOPEWELL CHURCH
SURRATT	50029707	30000062	NC 62
SURRATT	50029707	50030970	TRINDALE
SR 3252	40003252	30000062	NC 62
SR 3252	40003252	50030970	TRINDALE
HOPEWELL CHURCH	50014407	30000062	NC 62
HOPEWELL CHURCH	50014407	50030970	TRINDALE

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Fiche, Intersection, and Strip Reports Code Index

T - Type of Accident Codes

0 = UNKNOWN
1 = RAN OFF ROAD - RIGHT
2 = RAN OFF ROAD - LEFT
3 = RAN OFF ROAD - STRAIGHT
4 = JACKKNIFE
5 = OVERTURN/ROLLOVER
13 = OTHER NON-COLLISION
14 = PEDESTRIAN
15 = PEDALCYCLIST
16 = RR TRAIN, ENGINE
17 = ANIMAL
18 = MOVABLE OBJECT
19 = FIXED OBJECT
20 = PARKED MOTOR VEHICLE
21 = REAR END, SLOW OR STOP
22 = REAR END, TURN
23 = LEFT TURN, SAME ROADWAY
24 = LEFT TURN, DIFFERENT ROADWAYS
25 = RIGHT TURN, SAME ROADWAY
26 = RIGHT TURN, DIFFERENT ROADWAYS
27 = HEAD ON
28 = SIDESWIPE, SAME DIRECTION
29 = SIDESWIPE, OPPOSITE DIRECTION
30 = ANGLE
31 = BACKING UP
32 = OTHER COLLISION WITH VEHICLE

F - Road Feature Codes

0 = NO SPECIAL FEATURE
1 = BRIDGE
2 = BRIDGE APPROACH
3 = UNDERPASS
4 = DRIVEWAY, PUBLIC
5 = DRIVEWAY, PRIVATE
6 = ALLEY INTERSECTION
7 = FOUR-WAY INTERSECTION
8 = T-INTERSECTION
9 = Y-INTERSECTION
10 = TRAFFIC CIRCLE/ROUNDABOUT
11 = FIVE-POINT, OR MORE
12 = RELATED TO INTERSECTION
13 = NON-INTERSECTION MEDIAN CROSSING
14 = END OR BEGINNING - DIVIDED HIGHWAY
15 = OFF RAMP ENTRY
16 = OFF RAMP PROPER
17 = OFF RAMP TERMINAL ON CROSSROAD
18 = MERGE LANE BETWEEN ON AND OFF RAMP
19 = ON RAMP ENTRY
20 = ON RAMP PROPER
21 = ON RAMP TERMINAL ON CROSSROAD
22 = RAILROAD CROSSING
23 = TUNNEL
24 = SHARED-USE PATHS OR TRAILS
25 = OTHER

R - Road Condition Codes

1 = DRY
2 = WET
3 = WATER (STANDING, MOVING)
4 = ICE
5 = SNOW
6 = SLUSH
7 = SAND, MUD, DIRT, GRAVEL
8 = FUEL, OIL
9 = OTHER
10 = UNKNOWN

L - Light Condition Codes

1 = DAYLIGHT
2 = DUSK
3 = DAWN
4 = DARK - LIGHTED ROADWAY
5 = DARK - ROADWAY NOT LIGHTED
6 = DARK - UNKNOWN LIGHTING
7 = OTHER
8 = UNKNOWN

W - Weather Condition Codes

1 = CLEAR
2 = CLOUDY
3 = RAIN
4 = SNOW
5 = FOG, SMOG, SMOKE
6 = SLEET, HAIL, FREEZING RAIN/DRIZZLE
7 = SEVERE CROSSWINDS
8 = BLOWING SAND, DIRT, SNOW
9 = OTHER

S - Accident Severity Codes

K = FATAL
A = A-LEVEL INJURY
B = B-LEVEL INJURY
C = C-LEVEL INJURY
O = PROPERTY DAMAGE ONLY

Ch - Road Character

1 = STRAIGHT, LEVEL
2 = STRAIGHT, HILLCREST
3 = STRAIGHT, GRADE
4 = STRAIGHT, BOTTOM (SAG)
5 = CURVE, LEVEL
6 = CURVE, HILLCREST
7 = CURVE, GRADE
8 = CURVE, BOTTOM (SAG)
9 = OTHER

Op - Traffic Control Operating

1 = YES
2 = NO
3 = UNKNOWN

Veh Mnvr - Vehicle Maneuver Codes

1 = STOPPED IN TRAVEL LANE
2 = PARKED OUT OF TRAVEL LANES
3 = PARKED IN TRAVEL LANES
4 = GOING STRAIGHT AHEAD
5 = CHANGING LANES OR MERGING
6 = PASSING
7 = MAKING RIGHT TURN
8 = MAKING LEFT TURN
9 = MAKING U-TURN
10 = BACKING
11 = SLOWING OR STOPPING
12 = STARTING IN ROADWAY
13 = PARKING
14 = LEAVING PARKED POSITION
15 = AVOIDING OBJECT IN ROAD

Dv - Traffic Control Device

0 = NO CONTROL PRESENT
1 = STOP SIGN
2 = YIELD SIGN
3 = STOP AND GO SIGNAL
4 = FLASHING SIGNAL WITH STOP SIGN
5 = FLASHING SIGNAL WITHOUT STOP SIGN
6 = RR GATE AND FLASHER
7 = RR FLASHER
8 = RR CROSSBUCKS ONLY
9 = HUMAN CONTROL
10 = WARNING SIGN
11 = SCHOOL ZONE SIGNS
12 = FLASHING STOP AND GO SIGNAL
13 = DOUBLE YELLOW LINE, NO PASSING ZONE
14 = OTHER

Alchl/Drgs - Driver Alcohol/Drugs Suspected Status Codes

0 = NO
1 = YES - ALCOHOL, IMPAIRMENT SUSPECTED
2 = YES - ALCOHOL, NO IMPAIRMENT DETECTED
3 = YES - OTHER DRUGS, IMPAIRMENT SUSPECTED
4 = YES - OTHER DRUGS, NO IMPAIRMENT DETECTED
5 = YES - ALCOHOL AND OTHER DRUGS, IMPAIRMENT SUSPECTED
6 = YES - ALCOHOL AND OTHER DRUGS, NO IMPAIRMENT DETECTED
7 = UNKNOWN

Ped Actn - Pedestrian Action Codes

1 = ENTERING OR CROSSING SPECIFIED LOCATION
2 = WALKING, RIDING, RUNNING/JOGGING WITH TRAFFIC
3 = WALKING, RIDING, RUNNING/JOGGING AGAINST TRAFFIC
4 = WORKING
5 = PUSHING VEHICLE
6 = APPROACHING OR LEAVING VEHICLE
7 = PLAYING
8 = STANDING
9 = OTHER

Ci - Roadway Contributing Circumstances

0 = NONE (NO UNUSUAL CONDITIONS)
1 = ROAD SURFACE CONDITION
2 = DEBRIS
3 = RUT, HOLES, BUMPS
4 = WORK ZONE (CONSTRUCTION, MAINTENANCE, UTILITY)
5 = WORN TRAVEL-POLISHED SURFACE
6 = OBSTRUCTION IN ROADWAY
7 = TRAFFIC CONTROL DEVICE INOPERATIVE, NOT VISIBLE OR MISSING
8 = SHOULDERS LOW, SOFT OR HIGH
9 = NO SHOULDERS
10 = NON-HIGHWAY WORK
11 = OTHER
12 = UNKNOWN

Obj Strk - Object Struck Codes

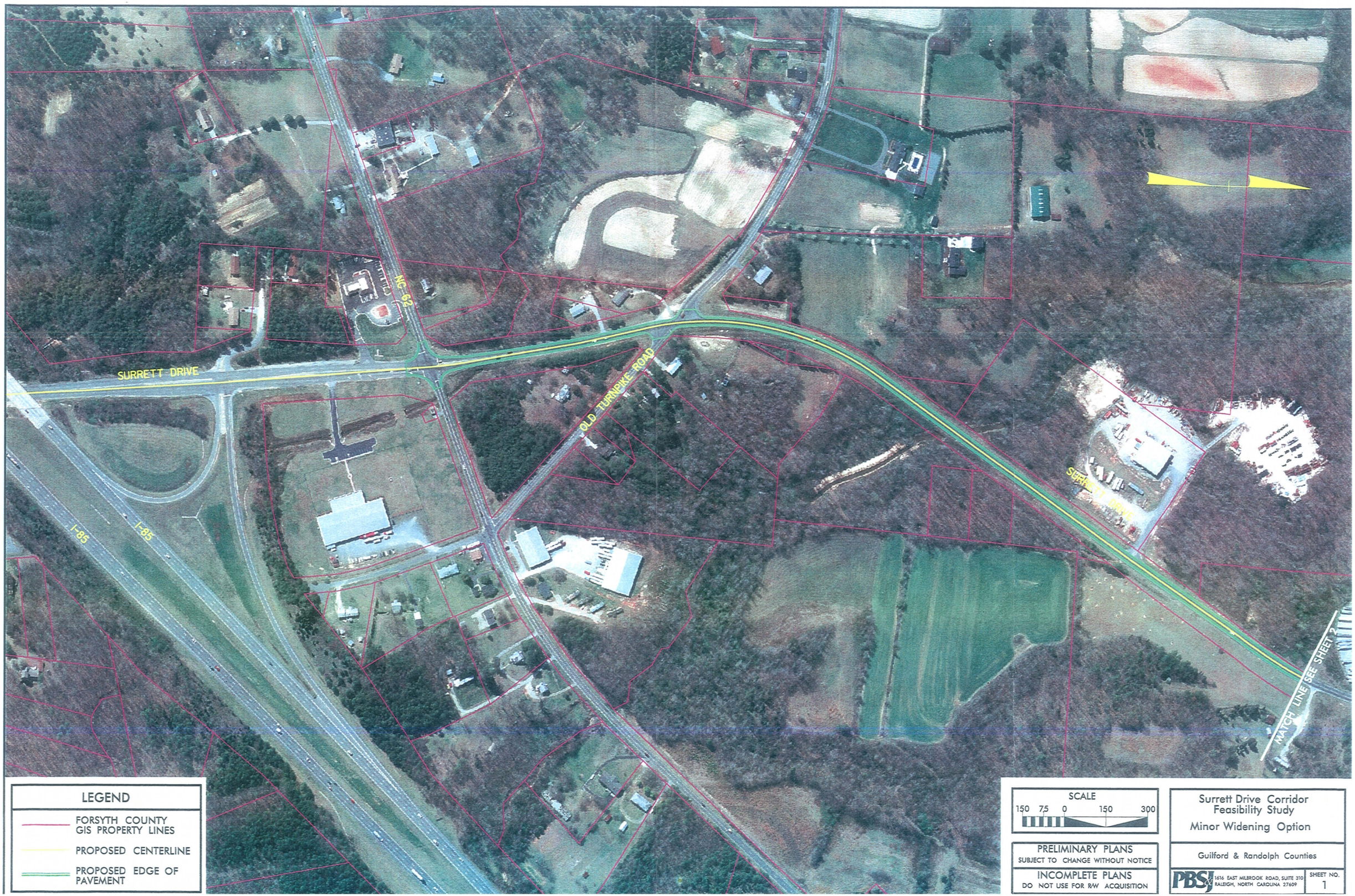
14 = PEDESTRIAN
15 = PEDALCYCLIST
17 = ANIMAL
18 = MOVABLE OBJECT
20 = PARKED MOTOR VEHICLE
33 = TREE
34 = UTILITY POLE
35 = LUMINAIRE POLE NON-BREAKAWAY
36 = LUMINAIRE POLE BREAKAWAY
37 = OFFICIAL HIGHWAY SIGN NON-BREAKAWAY
38 = OFFICIAL HIGHWAY SIGN BREAKAWAY
39 = OVERHEAD SIGN SUPPORT
40 = COMMERCIAL SIGN
41 = GUARDRAIL END ON SHOULDER
42 = GUARDRAIL FACE ON SHOULDER
43 = GUARDRAIL END IN MEDIAN
44 = GUARDRAIL FACE IN MEDIAN
45 = SHOULDER BARRIER END
46 = SHOULDER BARRIER FACE
47 = MEDIAN BARRIER END
48 = MEDIAN BARRIER FACE
49 = BRIDGE RAIL END
50 = BRIDGE RAIL FACE
51 = OVERHEAD PART UNDERPASS
52 = PIER ON SHOULDER OF UNDERPASS
53 = PIER IN MEDIAN OF UNDERPASS
54 = ABUTMENT OF UNDERPASS
55 = TRAFFIC ISLAND CURB OR MEDIAN
56 = CATCH BASIN OR CULVERT ON SHOULDER
57 = CATCH BASIN OR CULVERT ON MEDIAN
58 = DITCH
59 = EMBANKMENT
60 = MAILBOX
61 = FENCE OR FENCE POST
62 = CONTRUCTION BARRIER
63 = CRASH CUSHION
64 = OTHER FIXED OBJECT

Unit # - Vehicle Style Codes

1 = PASSENGER CAR
2 = PICKUP
3 = LIGHT TRUCK (MINI-VAN, PANEL)
4 = SPORT UTILITY
5 = VAN
6 = COMMERCIAL BUS
7 = SCHOOL BUS
8 = ACTIVITY BUS
9 = OTHER BUS
10 = SINGLE UNIT TRUCK (2-AXLE, 6-TIRE)
11 = SINGLE UNIT TRUCK (3 OR MORE AXLES)
12 = TRUCK/TRAILER
13 = TRUCK/TRACTOR
14 = TRACTOR/SEMI-TRAILER
15 = TRACTOR/DOULBES
16 = UNKNOWN HEAVY TRUCK
17 = TAXICAB
18 = FARM EQUIPMENT
19 = FARM TRACTOR
20 = MOTORCYCLE
21 = MOPED
22 = MOTOR SCOOTER OR MOTOR BIKE
23 = PEDALCYCLE
24 = PEDESTRIAN
25 = MOTOR HOME/RECREATIONAL VEHICLE
26 = OTHER
27 = ALL TERRAIN VEHICLE (ATV)
28 = FIRETRUCK
29 = EMS VEHICLE, AMBULANCE, RESCUE SQUAD
30 = MILITARY
31 = POLICE
32 = UNKNOWN

Appendix D

Preliminary Plans



LEGEND

- FORSYTH COUNTY GIS PROPERTY LINES
- PROPOSED CENTERLINE
- PROPOSED EDGE OF PAVEMENT

SCALE
150 75 0 150 300

PRELIMINARY PLANS
SUBJECT TO CHANGE WITHOUT NOTICE

INCOMPLETE PLANS
DO NOT USE FOR RW ACQUISITION

Surrett Drive Corridor Feasibility Study

Minor Widening Option

Guilford & Randolph Counties

PBSJ
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609

SHEET NO. 1

LEGEND

- FORSYTH COUNTY GIS PROPERTY LINES
- PROPOSED CENTERLINE
- PROPOSED EDGE OF PAVEMENT

SCALE
150 75 0 150 300

PRELIMINARY PLANS
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INCOMPLETE PLANS
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Surrett Drive Corridor Feasibility Study

Minor Widening Option

Guilford & Randolph Counties

PBSJ
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609

SHEET NO. 2


MATCH LINE SEE SHEET 2
JOAN DRIVE
DIANE PAUL DRIVE
SURRETT DRIVE
DIANE PAUL DRIVE
SURRETT DRIVE
SEALY DRIVE
MURRAY CIRCLE
ARCHDALE BLVD
MATCH LINE SEE SHEET
LEGEND
FORSYTH COUNTY GIS PROPERTY LINES
PROPOSED CENTERLINE
PROPOSED EDGE OF PAVEMENT
PROPOSED 2'-6" CURB AND GUTTER
SCALE
150 75 0 150 300
PRELIMINARY PLANS
SUBJECT TO CHANGE WITHOUT NOTICE
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
Surrett Drive Corridor Feasibility Study
Minor Widening Option
Guilford & Randolph Counties
PBSJ
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
SHEET NO.
3

SURRETT DRIVE

CORPORATION DRIVE

FAIRFIELD ROAD

EDEN TERRACE

MATCH LINE SEE SHEET 3

MATCH LINE SEE SHEET 5

LEGEND

- FORSYTH COUNTY GIS PROPERTY LINES
- PROPOSED CENTERLINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED 2'-6" CURB AND GUTTER

SCALE

150 7.5 0 150 300

PRELIMINARY PLANS
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Surrett Drive Corridor Feasibility Study

Minor Widening Option

Guilford & Randolph Counties

PBS&J 1616 EAST MILBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609

SHEET NO. 4

LEGEND

- FORSYTH COUNTY GIS PROPERTY LINES
- PROPOSED CENTERLINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED 2'-6" CURB AND GUTTER

SCALE

150 75 0 150 300

PRELIMINARY PLANS
SUBJECT TO CHANGE WITHOUT NOTICE

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

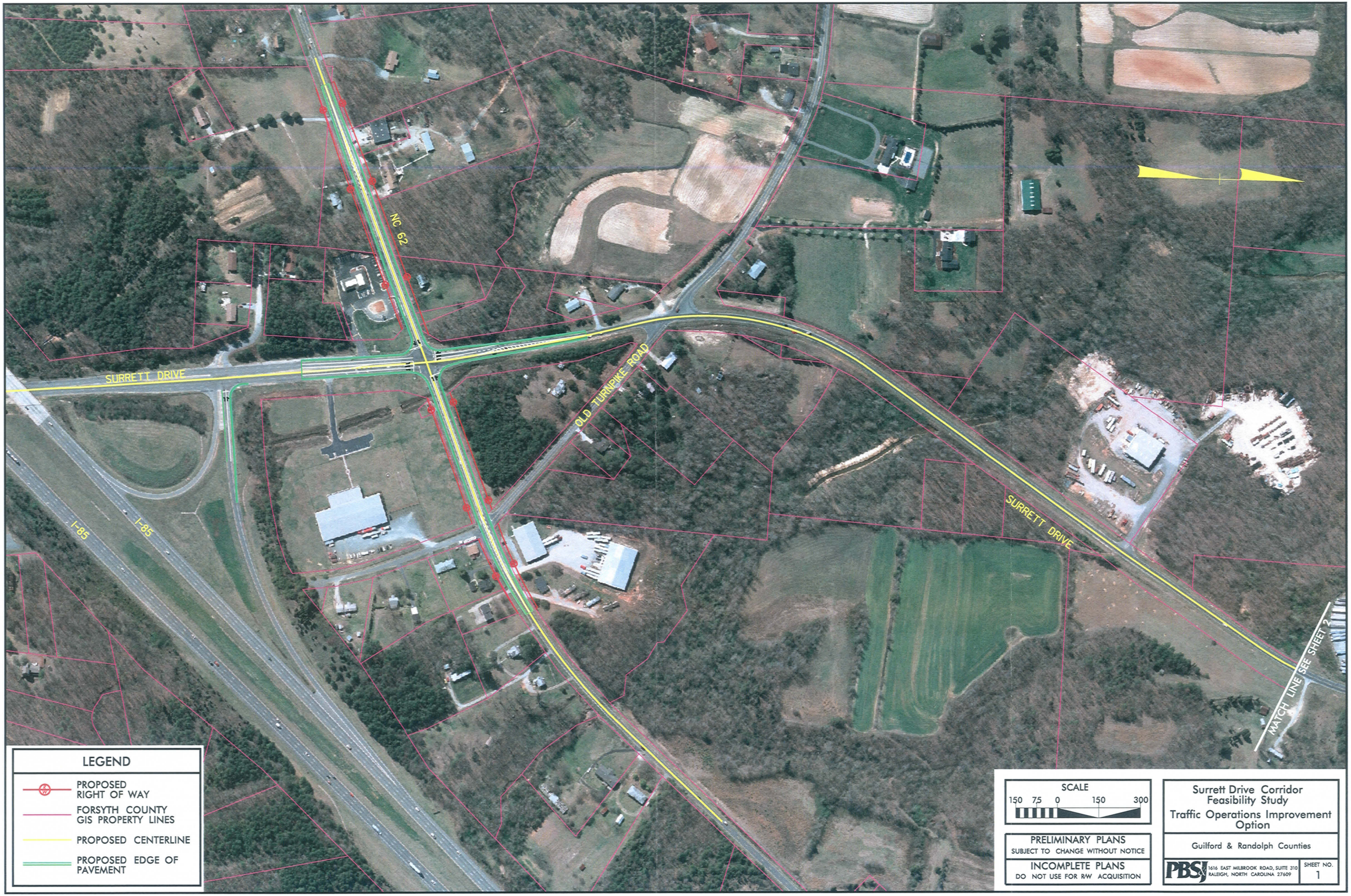
Surrett Drive Corridor Feasibility Study

Minor Widening Option

Guilford & Randolph Counties

PBSJ 1616 EAST MILBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609

SHEET NO. 5



LEGEND

- PROPOSED RIGHT OF WAY
- FORSYTH COUNTY GIS PROPERTY LINES
- PROPOSED CENTERLINE
- PROPOSED EDGE OF PAVEMENT

SCALE
150 75 0 150 300

PRELIMINARY PLANS
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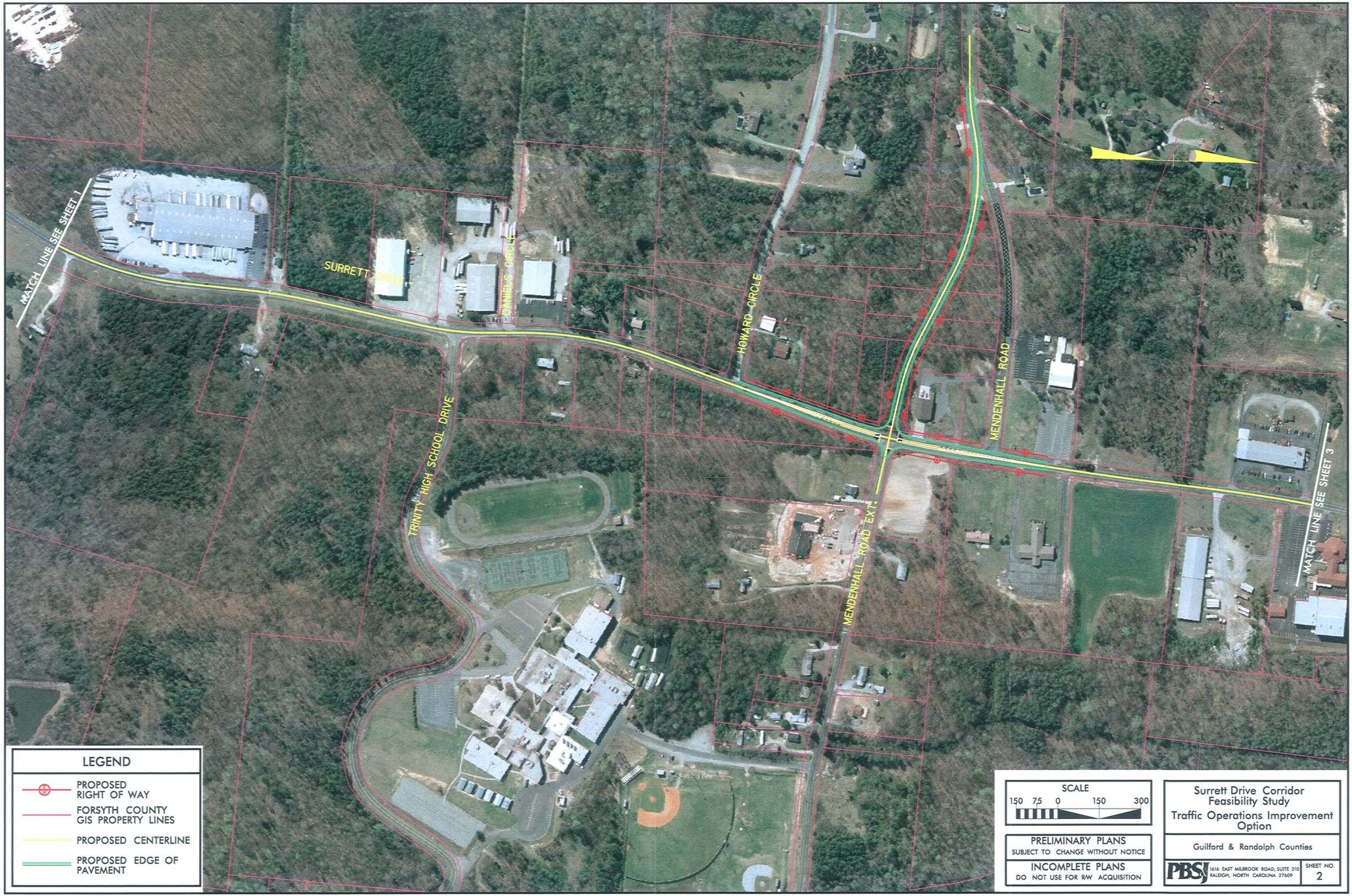
Surrett Drive Corridor Feasibility Study

Traffic Operations Improvement Option

Guilford & Randolph Counties

PBSJ
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609

SHEET NO. 1



LEGEND

- PROPOSED RIGHT OF WAY
- FORSYTH COUNTY GIS PROPERTY LINES
- PROPOSED CENTERLINE
- PROPOSED EDGE OF PAVEMENT

SCALE

150 75 0 150 300

PRELIMINARY PLANS
SUBJECT TO CHANGE WITHOUT NOTICE

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

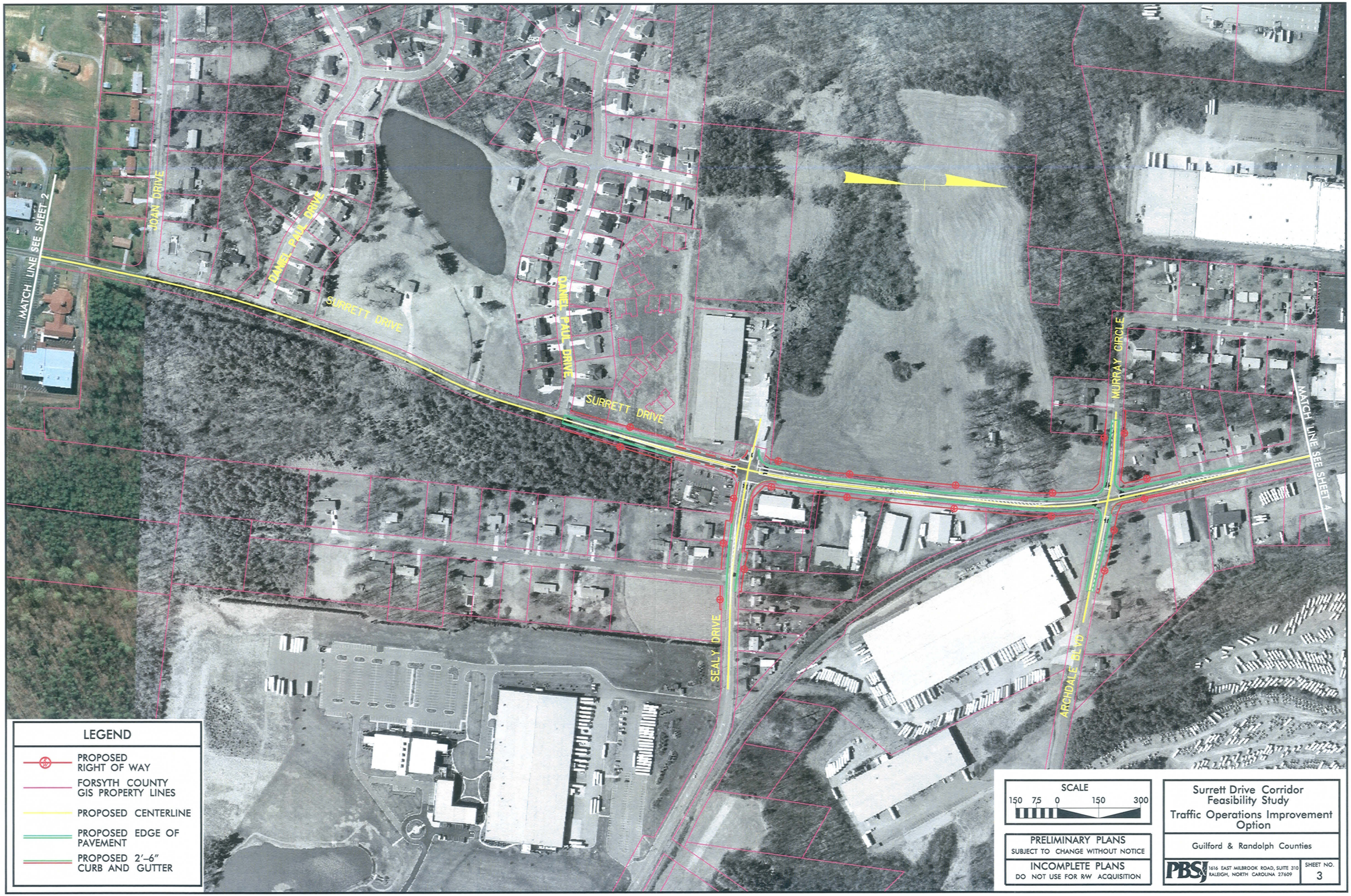
Surrett Drive Corridor Feasibility Study

Traffic Operations Improvement Option

Guilford & Randolph Counties

PBSJ
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609

SHEET NO. 2



LEGEND

- PROPOSED RIGHT OF WAY
- FORSYTH COUNTY GIS PROPERTY LINES
- PROPOSED CENTERLINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED 2'–6" CURB AND GUTTER

SCALE
150 75 0 150 300

PRELIMINARY PLANS
SUBJECT TO CHANGE WITHOUT NOTICE

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

Surrett Drive Corridor Feasibility Study

Traffic Operations Improvement Option

Guilford & Randolph Counties

PBSJ
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609

SHEET NO. 3


CORPORATION DRIVE
FAIRFIELD ROAD
SURRETT DRIVE
SURRETT DRIVE
MATCH LINE SEE SHEET 3
MATCH LINE SEE SHEET 5
LEGEND
PROPOSED RIGHT OF WAY
FORSYTH COUNTY GIS PROPERTY LINES
PROPOSED CENTERLINE
PROPOSED EDGE OF PAVEMENT
PROPOSED 2'-6" CURB AND GUTTER
SCALE
150 75 0 150 300
PRELIMINARY PLANS
SUBJECT TO CHANGE WITHOUT NOTICE
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
Surrett Drive Corridor Feasibility Study
Traffic Operations Improvement Option
Guilford & Randolph Counties
PBSJ
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
SHEET NO.
4

TIMBER ST.

SURRETT DRIVE

DAVIDSON AVE.

MARKET CENTER DR.

TIMBER ST.

FINCH AVE.

I-85 BUS.

MATCH LINE SEE SHEET 4

SURRETT CT.

I-85 BUS.

LEGEND

- PROPOSED RIGHT OF WAY
- FORSYTH COUNTY GIS PROPERTY LINES
- PROPOSED CENTERLINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED 2'-6" CURB AND GUTTER

SCALE

150 75 0 150 300

PRELIMINARY PLANS
SUBJECT TO CHANGE WITHOUT NOTICE

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

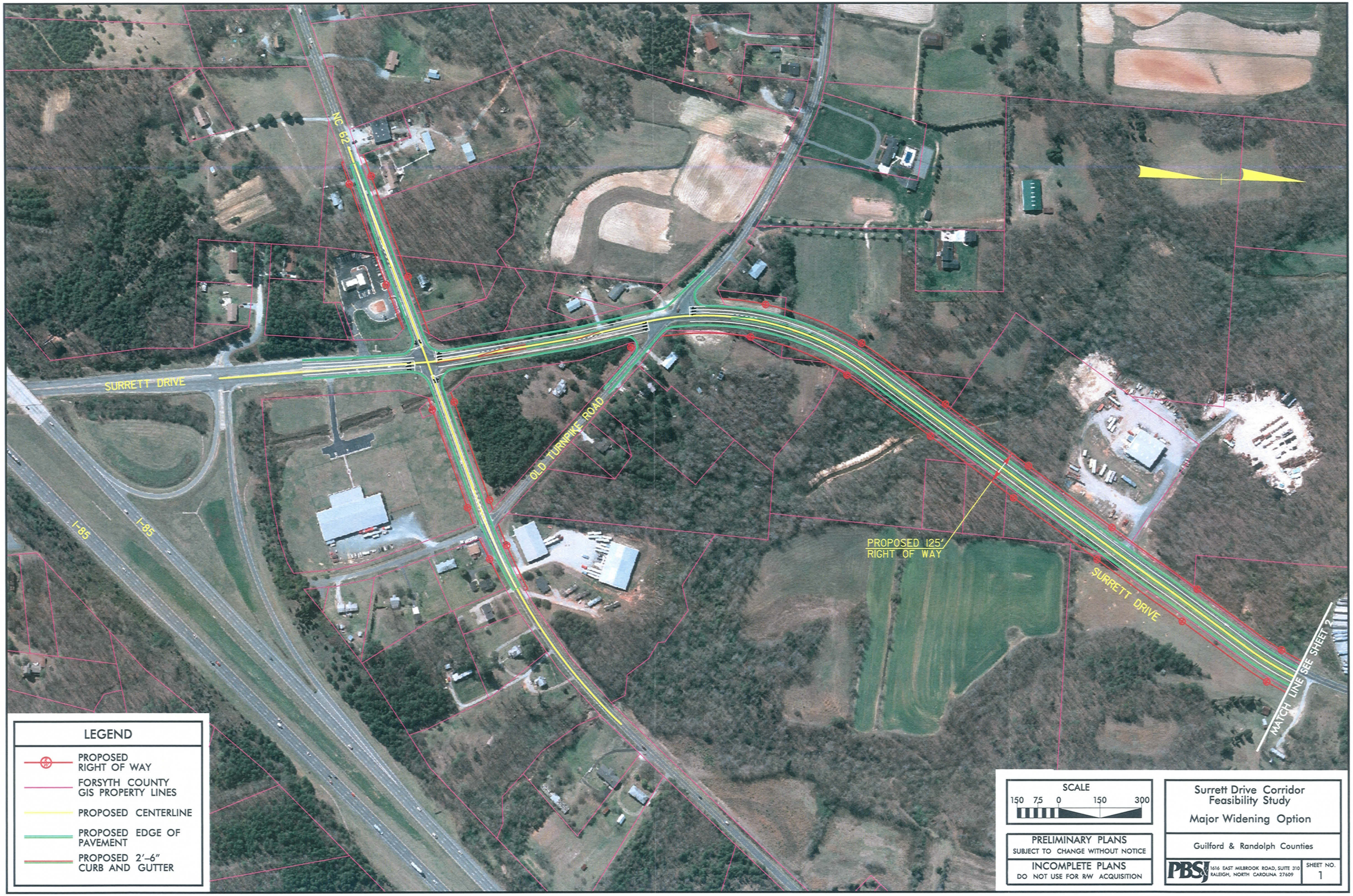
Surrett Drive Corridor Feasibility Study

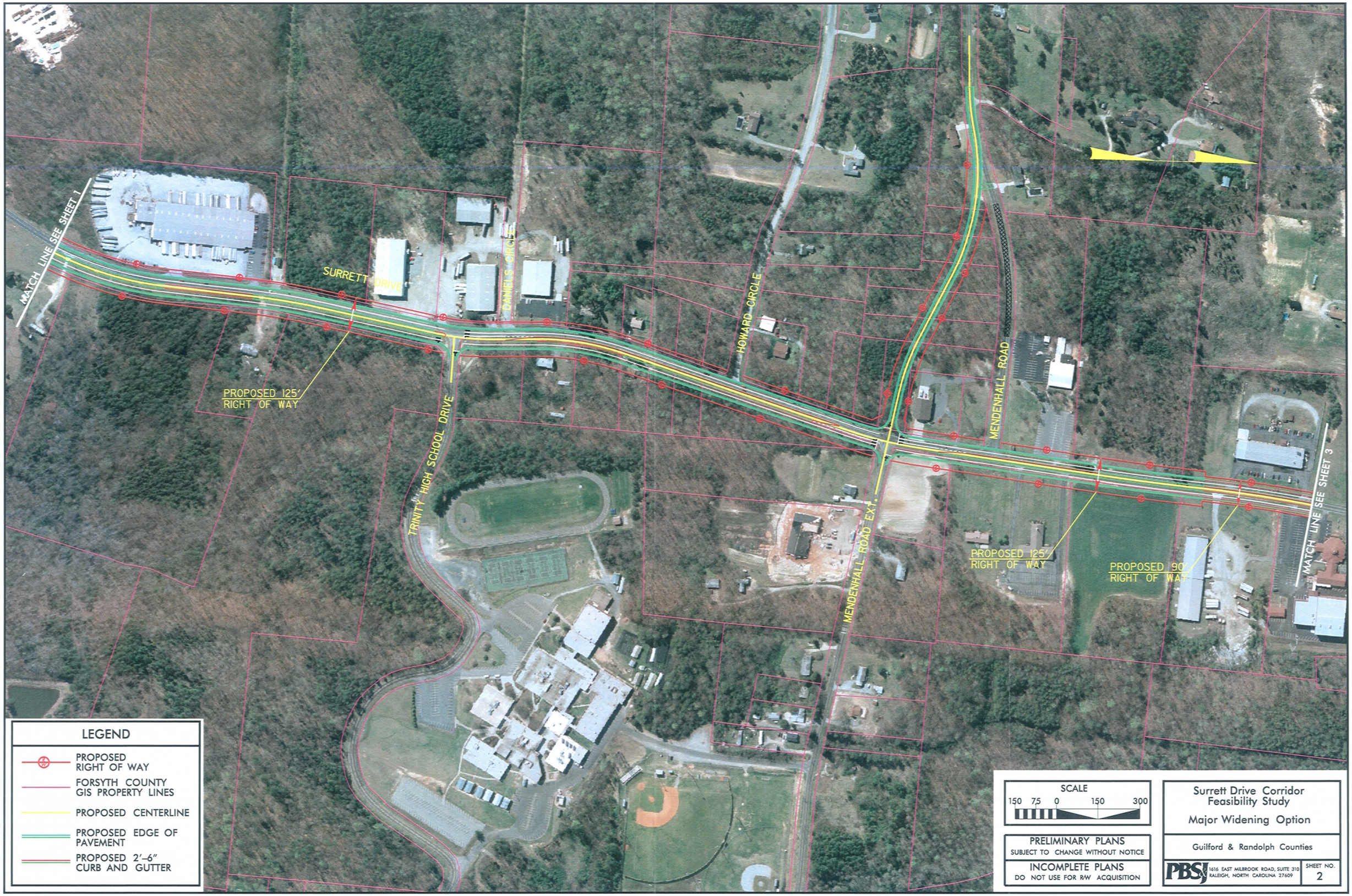
Traffic Operations Improvement Option

Guilford & Randolph Counties

PBSJ
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609

SHEET NO. 5


NC 62
SURRETT DRIVE
OLD TURNPIKE ROAD
I-85
I-85
PROPOSED 125'
RIGHT OF WAY
SURRETT DRIVE
MATCH LINE SEE SHEET 2
LEGEND
PROPOSED RIGHT OF WAY
FORSYTH COUNTY GIS PROPERTY LINES
PROPOSED CENTERLINE
PROPOSED EDGE OF PAVEMENT
PROPOSED 2'-6" CURB AND GUTTER
SCALE
150 75 0 150 300
PRELIMINARY PLANS
SUBJECT TO CHANGE WITHOUT NOTICE
INCOMPLETE PLANS
DO NOT USE FOR RW ACQUISITION
Surrett Drive Corridor
Feasibility Study
Major Widening Option
Guilford & Randolph Counties
PBSJ
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
SHEET NO.
1



LEGEND

- PROPOSED RIGHT OF WAY
- FORSYTH COUNTY GIS PROPERTY LINES
- PROPOSED CENTERLINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED 2'-6" CURB AND GUTTER

SCALE
150 75 0 150 300

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Surrett Drive Corridor Feasibility Study

Major Widening Option

Guilford & Randolph Counties

PBSJ
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609

SHEET NO. 2


MATCH LINE SEE SHEET 2
JOAN DRIVE
SURRETT DRIVE
SURRETT DRIVE
PROPOSED 90'
RIGHT OF WAY
PROPOSED
MINIMUM 90'
RIGHT OF WAY
MURRAY CIRCLE
MATCH LINE SEE SHEET 4
SEALY DRIVE
ARCHDALE BLVD
LEGEND
PROPOSED
RIGHT OF WAY
FORSYTH COUNTY
GIS PROPERTY LINES
PROPOSED CENTERLINE
PROPOSED EDGE OF
PAVEMENT
PROPOSED 2'-6"
CURB AND GUTTER
SCALE
150 75 0 150 300
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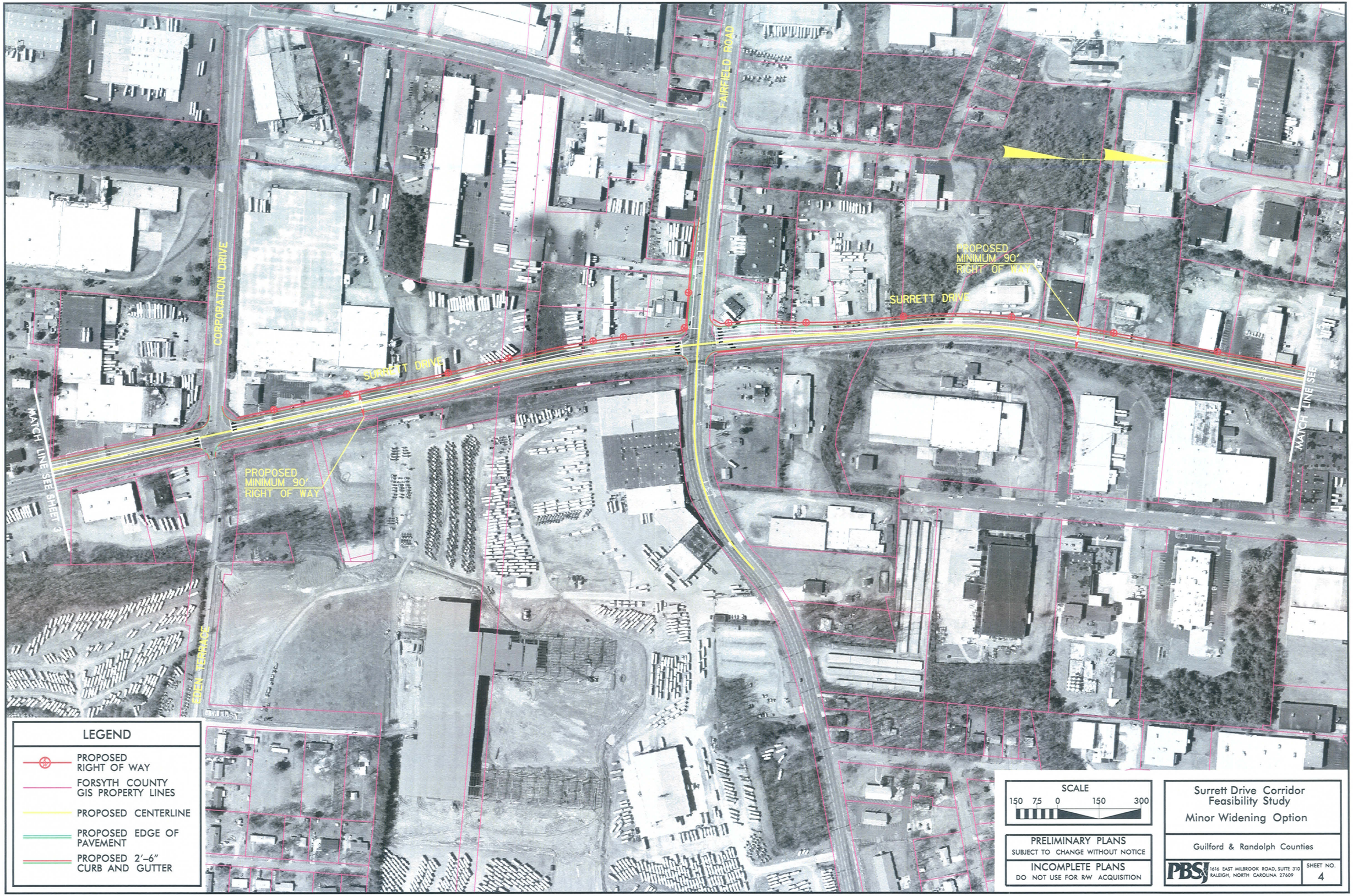
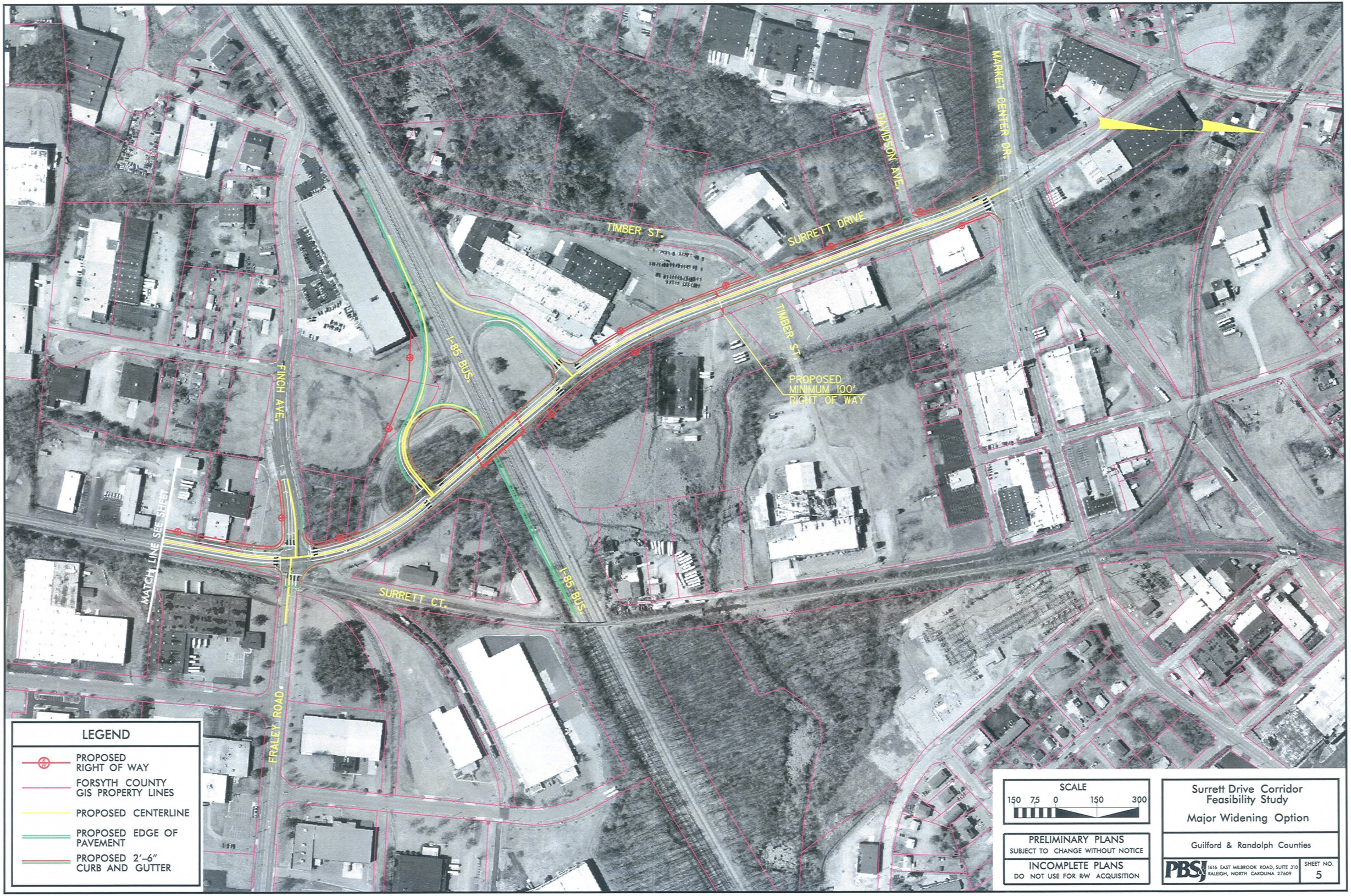
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
SHEET NO.
3


CORPORATION DRIVE
FAIRFIELD ROAD
SURRETT DRIVE
SURRETT DRIVE
PROPOSED
MINIMUM 90'
RIGHT OF WAY
PROPOSED
MINIMUM 90'
RIGHT OF WAY
MATCH LINE SEE SHEET 3
MATCH LINE SEE
EDEN TERRACE
LEGEND
PROPOSED
RIGHT OF WAY
FORSYTH COUNTY
GIS PROPERTY LINES
PROPOSED CENTERLINE
PROPOSED EDGE OF
PAVEMENT
PROPOSED 2'-6"
CURB AND GUTTER
SCALE
150 75 0 150 300
PRELIMINARY PLANS
SUBJECT TO CHANGE WITHOUT NOTICE
INCOMPLETE PLANS
DO NOT USE FOR RW ACQUISITION
Surrett Drive Corridor
Feasibility Study
Minor Widening Option
Guilford & Randolph Counties
PBSJ
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
SHEET NO.
4



LEGEND

- PROPOSED RIGHT OF WAY
- FORSYTH COUNTY GIS PROPERTY LINES
- PROPOSED CENTERLINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED 2'-6" CURB AND GUTTER

SCALE
150 75 0 150 300

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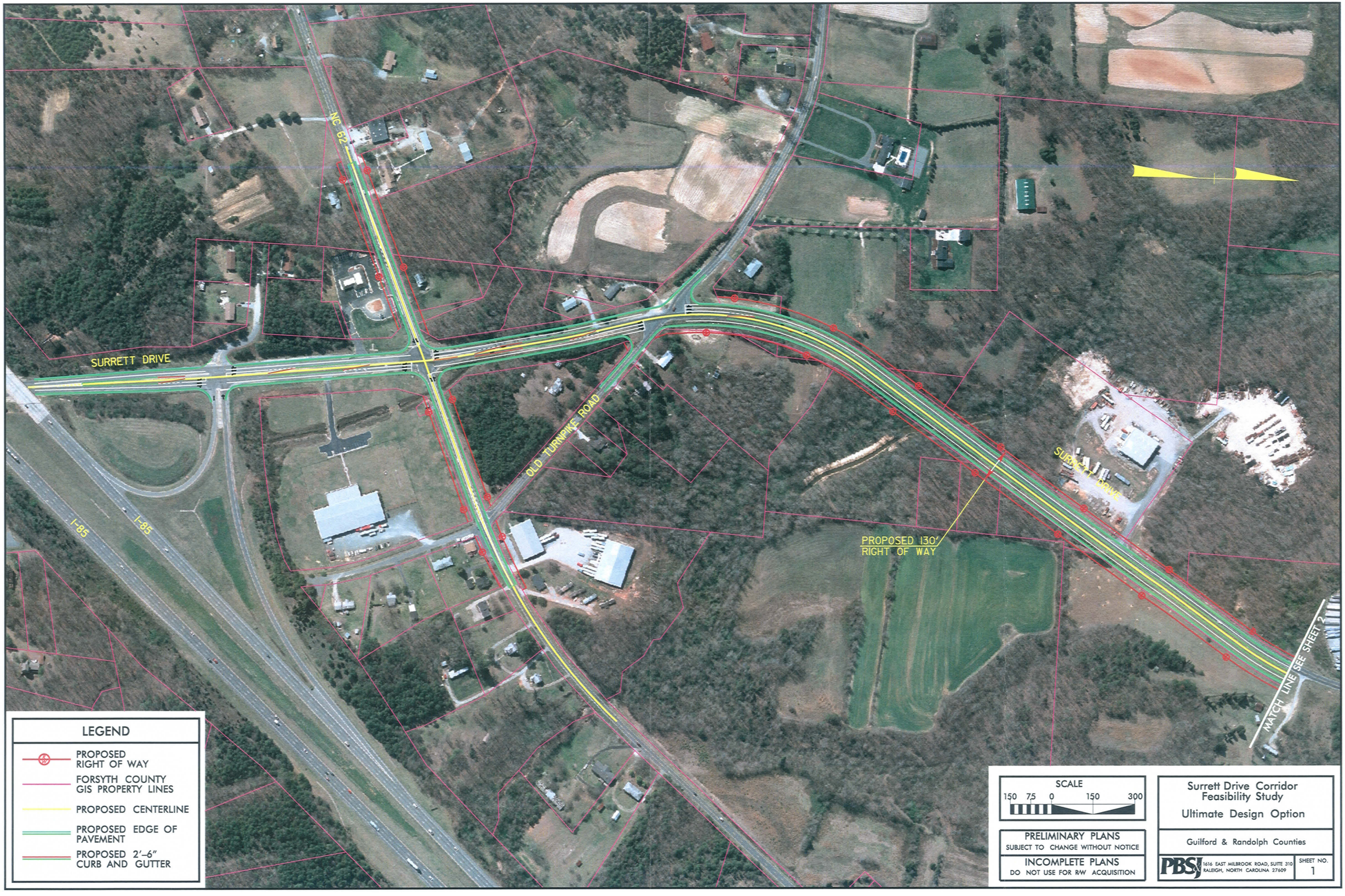
Surrett Drive Corridor Feasibility Study

Major Widening Option

Guilford & Randolph Counties

PBSJ
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609

SHEET NO. 5



LEGEND

- PROPOSED RIGHT OF WAY
- FORSYTH COUNTY GIS PROPERTY LINES
- PROPOSED CENTERLINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED 2'-6" CURB AND GUTTER

SCALE
150 75 0 150 300

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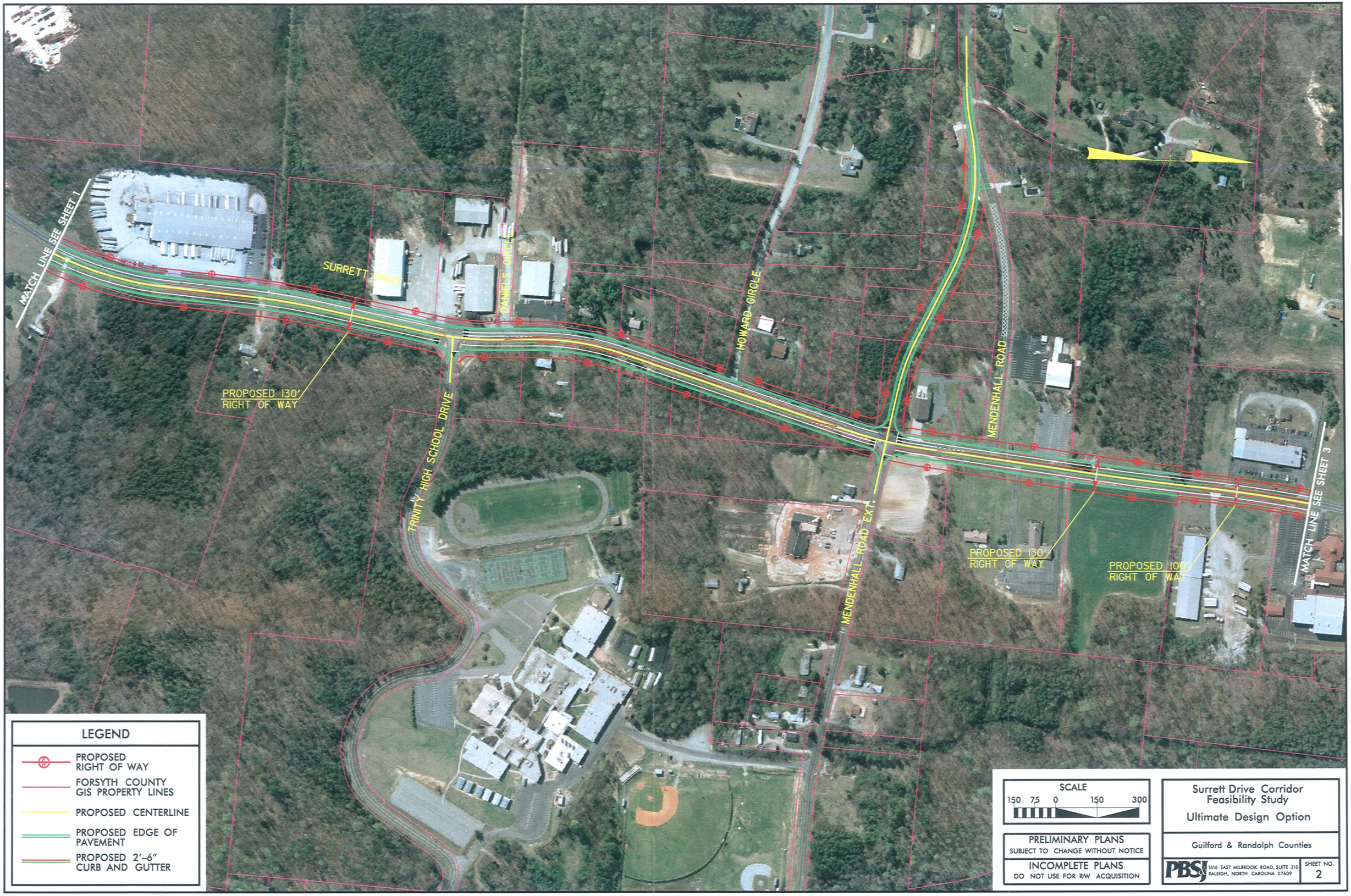
Surrett Drive Corridor Feasibility Study

Ultimate Design Option

Guilford & Randolph Counties

PBSJ
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609

SHEET NO. 1



LEGEND

- PROPOSED RIGHT OF WAY
- FORSYTH COUNTY GIS PROPERTY LINES
- PROPOSED CENTERLINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED 2'-6" CURB AND GUTTER

SCALE
150 75 0 150 300

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Surrett Drive Corridor Feasibility Study

Ultimate Design Option

Guilford & Randolph Counties

PBSJ 1616 EAST MILBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609

SHEET NO. 2

LEGEND

- PROPOSED RIGHT OF WAY
- FORSYTH COUNTY GIS PROPERTY LINES
- PROPOSED CENTERLINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED 2'–6" CURB AND GUTTER

SCALE
150 75 0 150 300

PRELIMINARY PLANS
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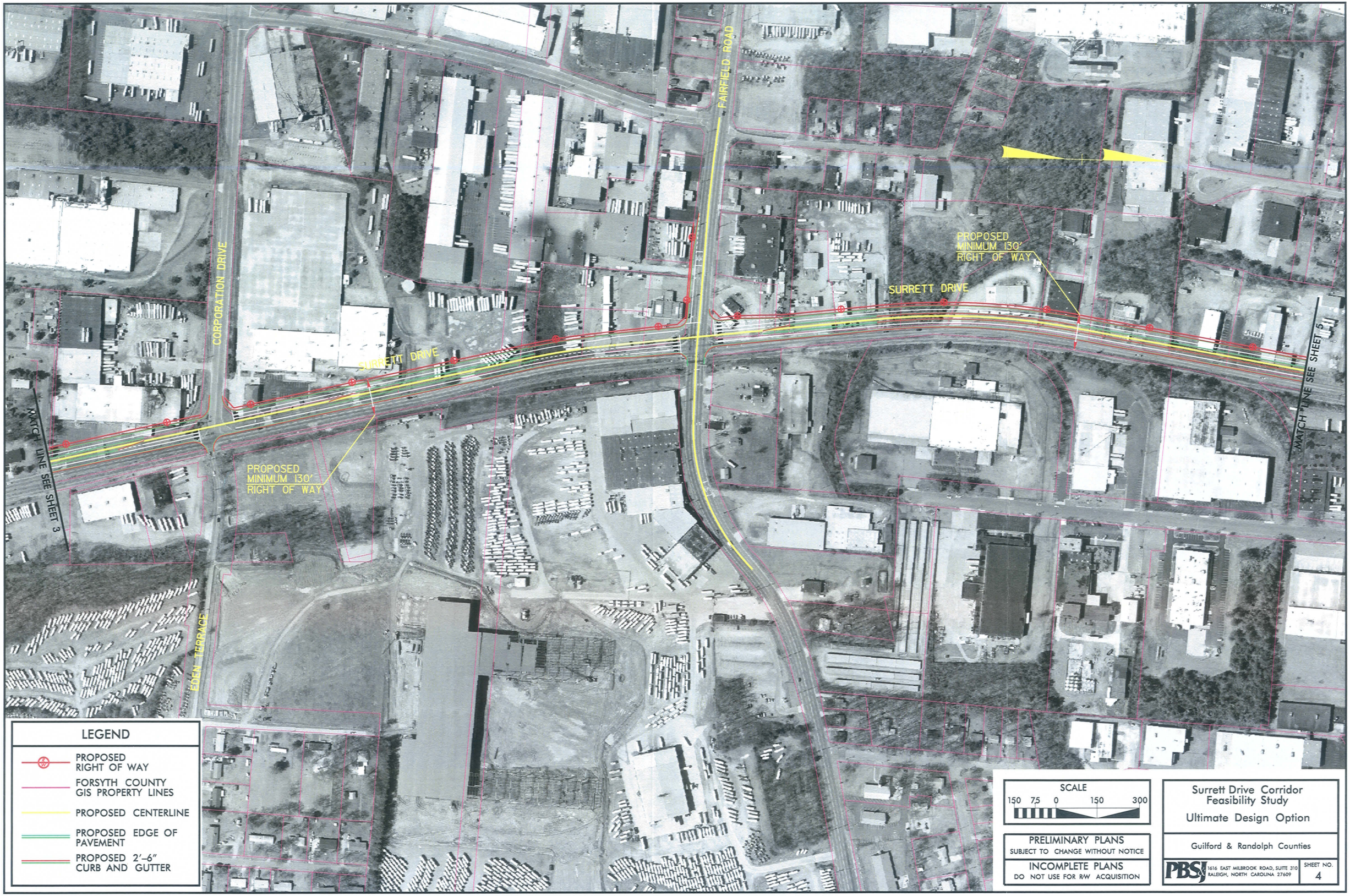
Guilford & Randolph Counties

PBSJ
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609

SHEET NO. 3



LEGEND

- PROPOSED RIGHT OF WAY
- FORSYTH COUNTY GIS PROPERTY LINES
- PROPOSED CENTERLINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED 2'-6" CURB AND GUTTER

SCALE
150 75 0 150 300

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Ultimate Design Option

Guilford & Randolph Counties

PBSJ
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609

SHEET NO. 4


TIMBER ST.
SURRETT DRIVE
DAVIDSON AVE.
MARKET CENTER DR.
FINCH AVE.
I-85 BUS.
TIMBER ST.
PROPOSED
MINIMUM 100'
RIGHT OF WAY
MATCH LINE SEE SHEET 4
SURRETT CT.
I-85 BUS.
FRALEY ROAD
LEGEND
PROPOSED
RIGHT OF WAY
FORSYTH COUNTY
GIS PROPERTY LINES
PROPOSED CENTERLINE
PROPOSED EDGE OF
PAVEMENT
PROPOSED 2'-6"
CURB AND GUTTER
SCALE
150 75 0 150 300
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Feasibility Study
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Guilford & Randolph Counties
PBSJ
1616 EAST MILBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
SHEET NO.
5

Appendix E

Scoping Comments

Michael F. Easley, Governor

William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Coleen H. Sullins, Director
Division of Water Quality

November 21, 2007

Jill Gurak, PE, AICP
PBS & J
1616 East Millbrook Road, Suite 310
Raleigh, NC 27609-4968

Subject: **Scoping Comments on Feasibility of Proposed Improvements to Surrett Drive from the Intersection of Surrett Drive and West market Center Drive in Guilford County South to the Intersection of Surrett Drive and the I-85 Ramps in Randolph County, Guilford and Randolph Counties**

Dear Ms. Gurak:

Please reference your correspondence dated November 14, 2007 in which you requested comments for the above referenced project. A preliminary analysis of the project reveals the potential for multiple impacts to perennial streams and jurisdictional wetlands in the project area. More specifically, impacts to:

Stream Name	River Basin	Stream Classification(s)	Stream Index Number
Richland Creek	Cape Fear	WS-IV	17-7-(0.5)
Muddy Creek	Cape Fear	WS-IV	17-19-(1)
Uwharrie River	Yadkin	WS-III	13-2-(0.5)

Further investigations at a higher resolution should be undertaken to verify the presence of other streams and/or jurisdictional wetlands in the area. In the event that any jurisdictional areas are identified, the Division of Water Quality requests that PBS & J, other representatives of the High Point Urban Area Metropolitan Planning Organization (HPMPO) or the permittee consider the following environmental issues for the proposed project:

1. The environmental document shall provide a detailed and itemized presentation of the proposed impacts to wetlands and streams with corresponding mapping. If mitigation is necessary as required by 15A NCAC 2H.0506(h), it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. Appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification.

2. Environmental assessment alternatives shall consider design criteria that reduce the impacts to streams and wetlands from storm water runoff. These alternatives shall include road designs that allow for treatment of the storm water runoff through best management practices as detailed in the most recent version of NC DWQ *Stormwater Best Management Practices*, such as grassed swales, buffer areas, preformed scour holes, retention basins, etc.

3. After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, the permittee is respectfully reminded that they will need to demonstrate the avoidance and minimization of impacts to wetlands (and streams) to the maximum extent practical. In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(h)}, mitigation will be required for impacts of greater than one (1) acre to wetlands.

North Carolina Division of Water Quality
Internet: h2o.enr.state.nc.us

610 East Center Avenue, Suite 301
Mooresville, NC 28115

Phone (704) 663-1699
Fax (704) 663-6040

In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as wetland mitigation.

4. In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(h)}, mitigation will be required for impacts of greater than 150 linear feet to any single perennial stream. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as stream mitigation.

5. DWQ is very concerned with sediment and erosion impacts that could result from this project. The permittee address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts.

6. If a bridge is being replaced with a hydraulic conveyance other than another bridge, DWQ believes the use of a Nationwide Permit may be required. Please contact the US Army Corp of Engineers to determine the required permit(s).

7. If the old bridge is removed, no discharge of bridge material into surface waters is allowed unless otherwise authorized by the US ACOE. Strict adherence to the Corps of Engineers guidelines for bridge demolition will be a condition of the 401 Water Quality Certification.

8. Bridge supports (bents) shall not be placed in the stream when possible.

9. Whenever possible, the DWQ prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the streambanks and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges allow for human and wildlife passage beneath the structure, do not block fish passage and do not block navigation by canoeists and boaters.

10. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of NC DWQ *Stormwater Best Management Practices.*

11. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.

12. If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas shall be seeded or mulched to stabilize the soil and appropriate native woody species should be planted. When using temporary structures the area shall be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.

13. Placement of culverts and other structures in waters, streams, and wetlands shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures.

The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by DWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NC DWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.

14. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel shall be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.

15. If foundation test borings are necessary; it should be noted in the document. Geotechnical work is approved under General 401 Certification Number 3494/Nationwide Permit No. 6 for Survey Activities.

16. Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250.

17. All work in or adjacent to stream waters shall be conducted in a dry work area unless otherwise approved by NC DWQ. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures should be used to prevent excavation in flowing water.

18. Sediment and erosion control measures shall not be placed in wetlands and streams.

19. Borrow/waste areas shall avoid wetlands to the maximum extent practical. Impacts to wetlands in borrow/waste areas could precipitate compensatory mitigation.

20. While the use of National Wetland Inventory (NWI) maps, NC Coastal Region Evaluation of Wetland Significance (NC-CREWS) maps and soil survey maps are useful tools, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.

21. Heavy equipment shall be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment shall be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.

22. In most cases, the DWQ prefers the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour should be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure shall be removed and the approach fills removed from the 100-year floodplain. Approach fills should be removed and restored to the natural ground elevation. The area shall be stabilized with grass and planted with native tree species. Tall fescue shall not be used in riparian areas.

23. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.

Thank you for requesting our input at this time. The permittee is reminded that issuance of a 401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost. If you have any questions or require additional information, please contact Polly Lespinasse at (704) 663-1699.

Sincerely,

Robert B. Krebs
Regional Supervisor
Surface Water Protection Section

cc: David Hyder, HPMPO
Richard Spencer, US Army Corps of Engineers, Wilmington Field Office
Felix Davila, Federal Highway Administration
Chris Militscher, Environmental Protection Agency
Travis Wilson, NC Wildlife Resources Commission
Gary Jordan, US Fish and Wildlife Service
Sonia Gregory, DWQ Central Office
File Copy

NCDENR
North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor

William G. Ross Jr., Secretary

November 26, 2007

Ms. Jill S. Gurak
PBS&J
1616 E. Millbrook Road, Suite 310
Raleigh, NC 27609-4968

Subject: Surrett Drive Feasibility Study; High Point, Archdale, and Trinity, Guilford and Randolph counties

Dear Ms. Jurak:

The Natural Heritage Program has no record of rare species, significant natural communities, significant natural heritage areas, or conservation/managed areas at the site nor within a mile of the project area. Although our maps do not show records of such natural heritage elements in the project area, it does not necessarily mean that they are not present. It may simply mean that the area has not been surveyed. The use of Natural Heritage Program data should not be substituted for actual field surveys, particularly if the project area contains suitable habitat for rare species, significant natural communities, or priority natural areas.

You may wish to check the Natural Heritage Program database website at www.ncnhp.org for a listing of rare plants and animals and significant natural communities in the county and on the quad map. Our Program also has a new website that allows users to obtain information on element occurrences and significant natural heritage areas within two miles of a given location: <http://nhpweb.enr.state.nc.us/nhis/public/gmap75_main.phtml>. The user name is "public" and the password is "heritage". You may want to click "Help" for more information.

NC OneMap now provides digital Natural Heritage data online for free. This service provides site specific information on GIS layers with Natural Heritage Program rare species occurrences and Significant Natural Heritage Areas. The NC OneMap website provides Element Occurrence (EO) ID numbers (instead of species name), and the data user is then encouraged to contact the Natural Heritage Program for detailed information. This service allows the user to quickly and efficiently get site specific NHP data without visiting the NHP workroom or waiting for the Information Request to be answered by NHP staff. For more information about data formats and access, visit <www.nconemap.com/data.html>, or email NC OneMap at <dataq@ncmail.net>.

Please do not hesitate to contact me at 919-715-8697 if you have questions or need further information.

Sincerely,

Harry E. LeGrand, Jr., Zoologist
Natural Heritage Program

1601 Mail Service Center, Raleigh, North Carolina 27699-1601
Phone: 919-733-4984 \ FAX: 919-715-3060 \ Internet: www.enr.state.nc.us/ENR

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

W. LYNDO TIPPETT
SECRETARY

December 7, 2007

Mr. David Hyder, P.E.
City of High Point
211 South Hamilton Street
High Point, N.C. 27261

SUBJECT: Proposed Surrett Drive Feasibility Study in Guilford County

Dear Mr. Hyder:

Thank you for your recent letter informing us of the High Point Metropolitan Planning Organization's (MPMPO) intension to prepare a feasibility study of proposed improvements to Surrett Drive in Guilford County. It is our understanding that PBS&J is the private engineering firm selected to perform this study for the HPMPO. By copy of this memorandum, I am requesting that you and PBS&J coordinate your traffic forecast efforts on this study directly with Ms. Deborah Hutchings, P.E. of our Transportation Planning Branch. I will be the primary contact for NCDOT on the remaining portions of this feasibility study and the assigned Roadway Project Engineer will be Mr. Gary Lovering, P.E.

I have attached a copy of our current Feasibility Study Scoping Procedures. If additional information is needed, you may contact me at (919) 733-2039.

Sincerely yours,

Derrick W. Lewis, P.E.
Feasibility Studies Unit Head
Program Development Branch

DWL/dl

cc: Ms. Deborah M. Barbour, P.E. Director of Reconstruction
Mr. Art McMillan, P.E., State Highway Design Engineer
Mr. Mike Mills, P.E. Division Engineer, Division 7
Ms. Deborah Hutchings, P.E., Transportation Planning Branch
Mr. Gary Lovering, P.E., Roadway Design Unit
Ms. Jill Gurak, P.E., PBS&J

Program Development Branch
North Carolina Department of Transportation
1534 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1534
Phone 919-733-2039 Fax 919-733-3585

FEASIBILITY STUDIES UNIT SCOPING PROCEDURES

Please Note:

- The Scoping Procedures are written for both widening and new location candidate TIP highway projects including high profile replacement projects.
- **Scoping meetings will be held for all in-house and consultant projects.**
- The Scoping Procedures are written specifically for in-house projects; however, they can be used for consultant projects too.
- The Scoping Procedures consist of two items:
  1. Step-by-Step Procedures through the scoping meeting
  2. General overview of remainder of process beyond the scoping meeting

STEP-BY-STEP PROCEDURES

A. Initial Project Scope

After the feasibility study is assigned, the Feasibility Studies Engineer will request the appropriate Division Engineer, Transportation Planning Branch (TPB) Unit Head (for the applicable geographic area) and State Roadway Design Engineer provide the names of the Division, TPB contact person and Roadway Project Engineer for the project.

The Feasibility Studies Engineer should then discuss the candidate project with the appropriate Division, Roadway Design and TPB staff. The topics to be discussed with the appropriate staff should include:

- Discussion of initial scope of project and alignments that should be considered in traffic forecast request for project. (Division and TPB)

- Discussion of origin of feasibility study request and the need that should be addressed. (Division and TPB)

- Division and Feasibility Study staff may be able to provide insight into the priority of the project to the Department (let TPB know up front that this is high profile) or other special needs they foresee during project development

- Traffic forecasting tool(s) and traffic projections that are readily available – information in the study report (daily link volumes or other information that may be useful prior to the project traffic forecast)

However, if a project is unusually complex or sensitive, the Feasibility Studies Engineer may need to set up a formal *Preliminary Scoping Meeting* to discuss issues and alternatives before proceeding with the later stages of the Feasibility Study.

B. Project Research

After defining the initial scope, the assigned Feasibility Studies Engineer will research the project's background data, request project input from others inside and outside the DOT and request traffic forecasts on the alignments identified in the initial scope.

Background Information

The Feasibility Studies Engineer will research all the available background information from the following resources:

1. TIP Hearing Minutes
2. Approved Thoroughfare Plan, if applicable.
3. Roadway Functional Classification
4. Mileage Inventory and Straight line summary
5. Available Bridge Inventory Data, if applicable.
6. Obtain Available Mapping, Aerials, Topography, etc.
7. Signals and Geometrics Unit (Traffic Signal Inventory)
8. Current TIP document for related projects.
9. Existing GIS Databases
10. National Register of Historic Places and State Study List (Historic Properties)
11. Stream Classification
12. Natural Heritage Program (Threatened and/or Endangered Species)
13. National Wetland Inventory
14. Project Site Visit

Project Input

The Feasibility Studies Engineer will request various NCDOT units and local government officials/staff provide comments and concerns on the candidate project. The following is a list of the NCDOT units and local government officials/staff that are included in this process:

1. Roadway Design Unit
2. Traffic Engineering Safety Systems Unit (Crash Analysis)
3. Congestion Management Section (including ITS when appropriate)
4. NCDOT Rail Division (if applicable)
5. NCDOT Bicycle and Pedestrian Division
6. NCDOT Highway Division Engineer
7. NCDOT Work Zone Traffic Control Unit (WZTCU)
8. Local Government input (Municipal and/or County depending on project location)
9. Metropolitan Planning Organization (MPO)/Rural Planning Organization (RPO) Input
10. Alternate Delivery Systems Unit

Transportation Planning and Traffic Forecast Request

The Feasibility Studies Engineer will request that the Transportation Planning Branch prepare a Traffic Forecast as well as provide related planning level data that may provide some assistance with the project development. Some examples of additional information that might be useful are as follows:

- A copy of the latest Comprehensive Transportation Plan (CTP) or Thoroughfare Plan and any other information related to the candidate project including the
  - Status – complete, currently in update, outdated, etc.
  - Long-Range Transportation Plan (LRTP) update schedule MPOs
  - Local development patterns (information used to develop CTP/thoroughfare plan)
  - Local issues that arose during development of CTP/thoroughfare plan – concerns or support for project implementation
  - Environmental issues considered during development of CTP/thoroughfare plan
- Unique characteristics of the local area/project vicinity
- System-Level Purpose and Need Statement
- Whether or not the facility is identified as a Strategic Highway Corridor
- Recommended Cross Section for facility
- Recommended revision to project limits if different from one provided as well as justification for revision.
- Any extenuating circumstances that might influence the magnitude of the design year traffic (i.e., projections based on construction of an outer loop, etc.)?
- Any related projects in progress or on the CTP or LRTP and their possible effect on the subject project
- Any other information that is important to this project, such as the need for this project, as well as data indicating local support or opposition to the project.

C. Feasibility Study Scoping Meeting

The Feasibility Studies Engineer will schedule a Scoping Meeting within two months after receiving the projected traffic volumes and related information from the Transportation Planning Branch. The Feasibility Studies Engineer will request attendance from representatives of the following Branches/Units of the NCDOT:

- Roadway Design Unit
- Division(s)
- Traffic Engineering and Safety Systems Branch
- Project Development and Environmental Analysis Branch include the Project Development, Human Environment, and Natural Environment Units
- Work Zone Traffic Control Unit
- Hydraulics Unit
- Transportation Planning Branch
- Alternative Delivery Systems Unit

If deemed desirable, representatives from other units (i.e. Structure Design, Geotechnical Engineering, etc.) may also be requested to attend. At least one month before the scheduled scoping meeting, the Feasibility Studies Engineer should send a letter informing the attendees of the date, time and location. This letter should also include a project description, location map as well as the projected traffic volumes for the project. The contact person for the appropriate MPO and/or RPO will be sent a copy of this letter and given the opportunity to attend the scoping meeting. The State Highway Administrator, Director of Preconstruction and State Highway Design Engineer will be sent a copy of this letter for their information.

The topics to be discussed at this meeting should include:

1. The basic project description
2. Existing conditions
3. Planning level purpose and need
4. Strategic Corridor Status
5. The proposed roadway cross section(s) to be considered including:
   - Shoulder vs. curb and gutter
   - Median configuration and width
6. The intersection and interchange improvement(s) including
   - Spacing issues and requirements
   - Configurations
   - Auxiliary Turn Lanes
   - Side Street improvements (Y-line)
7. Right of way
   - Base width required
   - Control of Access
8. Environmental Information
   - River, Stream and Wetland impacts
   - Historic Properties

- Community Issues
- Economic Concerns
- Hazardous Waste Sites

9. Railroad issues
10. ITS improvements
11. Adjacent TIP projects
12. Discuss potential alternatives and alignments to be considered
13. Constructability Issues
14. Need to consider pedestrian impacts during construction and beyond.
15. Consider project network impacts and significance as it relates to the Work Zone Safety and Mobility Policy.

D. Feasibility Study Analysis and Preliminary Design

The Feasibility Studies Engineer will then analyze and evaluate all project data and comments gathered in order to develop preliminary project alternates to address the operational and safety concerns of the project. The analysis should include detailed capacity analyses, as well as an evaluation of the crash data, environmental and historic concerns, and project input from local governmental and other NCDOT sources. The Conceptual Designs shall then be prepared in order to determine the cost and impacts associated with the alternatives to be carried forward in the Feasibility Study.

E. Quality Control, Cost Estimates and Report Preparation

Prior to requesting cost estimates, the Feasibility Studies Engineer will setup a quality control meeting and discuss the conceptual designs with staff from the Roadway Design Unit, Traffic Engineering and Safety Systems Branch and Highway Division in order to refine the project alternatives.

After the project alternates are refined, the Feasibility Studies Engineer will request the construction, right-of-way, utility and ITS cost estimates for each alternate. Upon receipt of these cost estimates, the Draft Feasibility Study will send the appropriate Board of Transportation Member and Division Engineer for comments. After any comments and/or concerns from the Board Member and Division Engineer have been addressed, the Feasibility Studies Unit will finalize and distribute the Feasibility Study.

It should be noted that a Feasibility Study is a preliminary document that is the initial step in the planning and design process for a candidate project and not the product of exhaustive environmental or design investigations. The purpose of this feasibility study is to describe the proposed project including cost, and identify potential problems that may require consideration in the planning and design phases.

Once a candidate project is identified for funding in the TIP, a rigorous planning and design process that meets the requirements of the National Environmental Policy Act follows the Feasibility Study.

FILE SURRETTE DRIVE

North Carolina Department of Cultural Resources

State Historic Preservation Office

Peter B. Sandbeck, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

January 15, 2008

David Hyder, PE
HPMPO
211 South Hamilton Street
High Point, NC 27261

Re: Notice of Planning Coordination for the Surrett Drive Feasibility Study, Guilford and Randolph Counties, ER 07-2470

Dear Mr. Hyder:

Thank you for your letter of November 14, 2007, concerning the above project. We apologize for the delay in our response.

There are no recorded archaeological sites in the immediate vicinity of the existing Surrett Drive. If the proposed improvements are not extensive, the majority of the project should have no effect on archaeological resources. The area of the crossing of the Uwharrie River may have the potential to affect as yet unrecorded archaeological sites. We recommend that you forward plans for this area of the project as they develop, so we may advise you as to any needed archaeological investigations in that area.

The only property determined to have historical significance located within the area of potential effects is the Highland Cotton Mill and Village (GF 636). The Mill and village have been determined eligible for listing in the National Register of Historic Places.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/807-6579. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

Peter Sandbeck


HIST GB3
TRYON AV
CLIFFSIDE AV
FAIRVIEW ST
CENTENNIAL ST
KEARNS AV
AUSTIN ST
GREEN DR
AMOSS ST
MARTIN ST
WILLIS AV
STANTON PL
HIGHLAND AV
PARK ST
WHEELER AV
WARD AV
CASSELL ST
COLTRANE AV
TATE ST
EAST MARKET CENTER DR
VALLEY RIDGE DR
BLOCK GROUP: 370810143001
BLACK: 45.06%
HISPANIC: 46.9%
ASIAN: 0.5%
NATIVE AMERICAN: 1.48%
COLLEGE DR
FIXTURE PL
NATHAN HUNT DR
BLOCK GROUP: 370810143003
BLACK: 34.82%
HISPANIC: 21.53%
ASIAN: 6.07%
NATIVE AMERICAN: 1.03%
GREER AV
OSBORNE PL
BRANCH ST
KING ST
DORRIS AV
YOUNG PL
TEXTILE PL
MILL AV
PROCTOR DR
ELM ST
OGDEN ST
BLOCK GROUP: 370810143002
BLACK: 18.32%
HISPANIC: 19.23%
ASIAN: 21.35%
NATIVE AMERICAN: 1.79%
GREENVIEW TER
ARDALE DR
MAIN ST ACCESS RAMP
CLOVERLEAF PL
MAIN ST
DAVIDSON AV
CULLER PL
POWER PL
WALKER PL
CONNOR PL
WEST MARKET CENTER DR
KENILWORTH DR
JARRELL ST
MODEL FARM RD
BALTIMORE ST
JAY PL
BUSINESS LOOP 85 HWY
MOORE AV
MOTSINGER ST
TIMBER ST
SPRINGFIELD RD
ROBBINS ST
DANES ST
LANE AV
FOUST AV
SURRETT CT
BREVARD RD
FULTON PL
BLOCK GROUP: 370810145011
BLACK: 13.57%
HISPANIC: 9.88%
ASIAN: 5.01%
NATIVE AMERICAN: 1.71%
FINCH AV
FRALEY RD
PORTER ST
LOGAN ST
HIRRA PL

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

MEMO TO: Ms. Jill S. Gurak, PE, AICP
PBS&J

FROM: Helen Chaney
Division of Bicycle and Pedestrian Transportation

DATE: February 15, 2008

SUBJECT: Surrett Drive Feasibility Study, in High Point, Archdale and Trinity, NC

MESSAGE: In response to your request for information on a feasibility study for Surrett Drive, in High Point, Archdale and Trinity, the Division of Bicycle and Pedestrian Transportation has the following comments. A map illustrating the study area is attached to this memo for your review.

Currently, the Surrett Drive study area is a two-lane, undivided roadway with no paved shoulders. The study area passes through the city of High Point in Guilford County, and Archdale and Trinity in Randolph County. The feasibility study currently underway will consider a variety of options, including 1) a major widening of the facility to a four –lane facility alternative; 2) a traffic operation alternative; 3) a minor widening alternative; and 4) a new location alternative.

The comments supplied in this memo with respect to bicycle and pedestrian accommodations along the study area relate specifically to alternatives one and three, both of which would involve widening of the corridor. Our division has solicited comments on this feasibility study from David Hyder, serving as staff for the High Point Metropolitan Planning Organization as well as for the City of High Point. In addition, we have solicited comments from Jeff Wells, Planning Officer for the City of Archdale, and from Adam Stumb, Planning and Zoning Administrator for the City of Trinity. The planning administrators for the counties of Randolph and Guilford counties declined to comment on the project, noting that the contacts listed above would be more familiar with the project and better equipped to provide input.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
DIVISION OF BICYCLE & PEDESTRIAN TRANSPORTATION
1552 MAIL SERVICE CENTER
RALEIGH NC 27699-1552

TELEPHONE: 919-807-0780
FAX: 919-807-0768
WEBSITE: WWW.NCDOT.ORG/TRANSIT/BICYCLE/
EMAIL: HMCHANEY@DOT.STATE.NC.US

LOCATION:
CAMERON VILLAGE
401 OBERLIN RD.
SUITE 250
RALEIGH NC

If either of the two alternatives involving the widening of the corridor is chosen for this project, our division recommends that sidewalks be installed to accommodate the needs of pedestrians. Planners representing Archdale, Trinity and High Point have expressed interest in entering into a cost-sharing agreement to install sidewalks the full length of the study area.

David Hyder, Transportation Planning Administrator of the High Point Metropolitan Planning Organization, has expressed an interest in providing sidewalks along the full length of the study area. However, he has informed us that right of way constraints in the northern section of the study area due to rail right of way and the placement of businesses adjacent to the roadway, may preclude the possibility of installing sidewalks on both sides of the roadway. Instead, a sidewalk on only one side of the roadway may be feasible for this northern portion of Surrett Drive. However, Mr. Hyder has expressed interest in building sidewalk on both sides of the road along the southern portion of the study area, where right of way is less constrained.

Our division has determined that sidewalks on both sides of the street in the southern portion of the study area are warranted. These sidewalks will serve the needs of students walking to and from the various schools in the study vicinity. The Brandon Day School, a private school, is located roughly one-quarter mile from Surrett Drive. Youth Unlimited School, Hayworth Christian School, and High Point Christian Academy lie within roughly one and a half miles from Surrett Drive to the northwest.

In addition, sidewalks along the southern portion of the study area are warranted due to the many present and future alternative transportation generators in the area. Adam Stumb of the City of Trinity, noted that, while the portion of Surrett Drive corridor running through Trinity is relatively rural in character currently, it is expected that the corridor will develop rapidly as sewer lines are implemented along the corridor. In addition, Mr. Stumb explained that the City of Trinity has a vision for a new multi-use area to be developed adjacent to Surrett Drive. According to the Draft Land Development Plan for the City of Trinity, the land which lies within Trinity and between Surrett Drive and Highway 62 is planned to become a new downtown area for the town. It is specified in the draft plan that this portion of town will include a newly-constructed town hall, a community center, and significant retail, commercial and housing. The development in this area should generate additional trips from the southern portion of town, where the majority of Trinity's population currently lives.

Our division has also determined that sidewalks along one side of the roadway, as suggested by the HPMPO contact, are desirable, as this sidewalk segment will connect the new downtown of Archdale with the existing High Point downtown area.

Jeff Wells of the city of Archdale supports the implementation of sidewalks on both sides of the roadway wherever the right-of-way will allow. He notes that the Archdale Pedestrian Network Plan calls for sidewalks on both sides of Surrett Drive within the municipal limits.

In addition to the pedestrian amenities recommended by our division, we recommend that provisions be made for bicyclists along the southern portion of the corridor, where right of

way is available. The planners from the cities of Archdale and Trinity, as well as for the High Point Metropolitan Planning Organization, are in favor of wide outside lanes along this corridor under the road widening alternatives of the feasibility study.

The High Point Area Bicycle Map shows that State-Designated Bicycle Route No. 8 (Randolph County – Thomasville – Archdale) follows the majority of the portion of Surrett Drive falling within the City of Trinity. Under NCDOT policy, a bicycle accommodation should be provided for all designated state bicycle routes. Some consideration should be given to extending the bicycle accommodations northward, where sufficient right-of-way is available.

While it is true that the corridor is relatively rural in nature currently, as development arrives, bicyclists will have increased interest in using the corridor to travel from the more residential southern area to the planned Trinity second downtown area. The distance from the southern portion of the study area to the northern limit of Trinity is roughly 1.5 miles, a suitable length for a trip by bicycle and even by foot, for some.

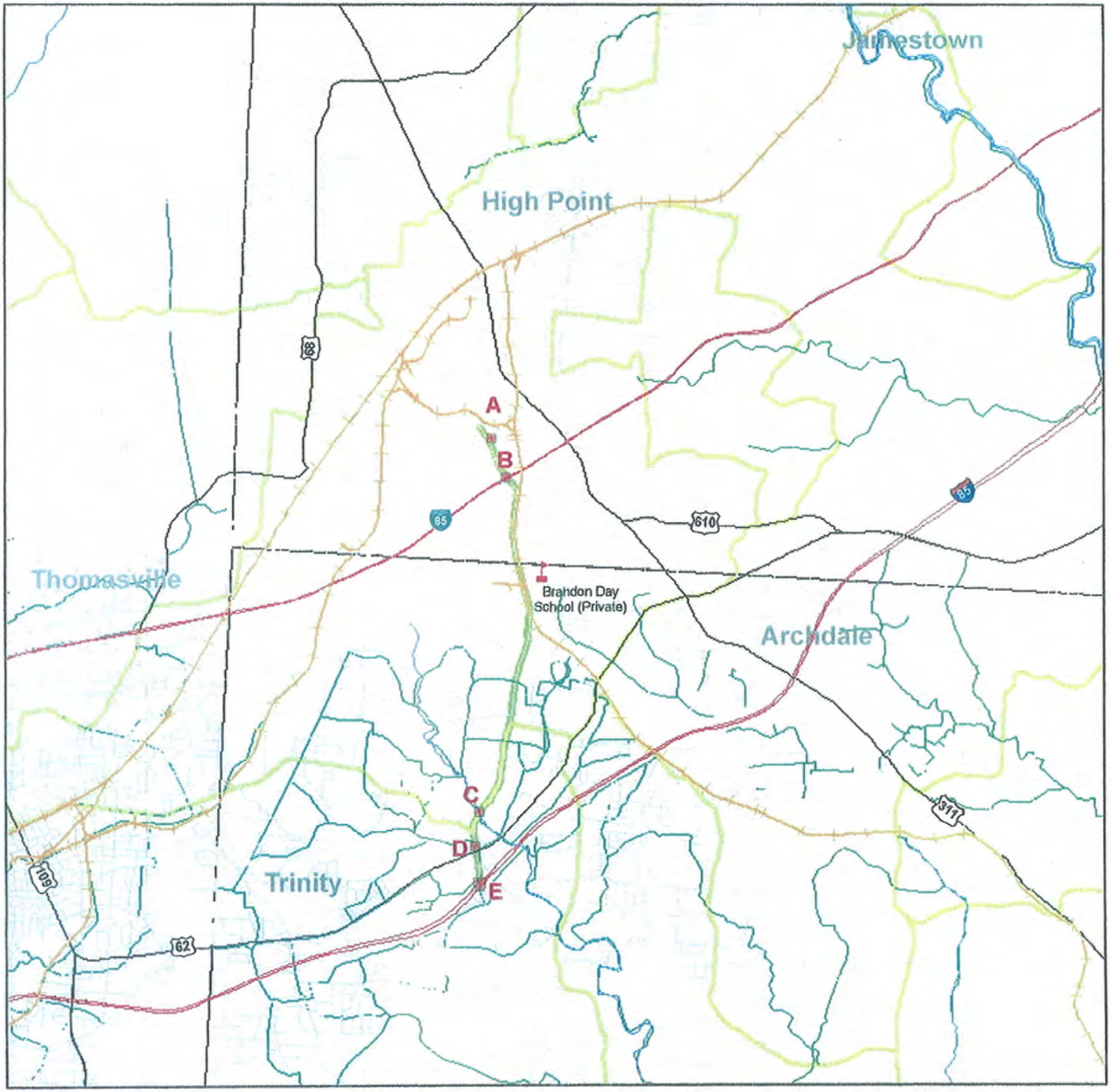
Accommodations for greenway corridors, which pass underneath of the southern portion of the Surrett Drive study area, will be essential in the planning of a widening of Surrett Drive. Two greenways which traverse the Surrett Drive study area are planned under the High Point Metropolitan Planning Organization's Long-Range Transportation Plan (2004-2030), adopted in October, 2004. The two greenways – one following the Uwharrie River and the other following the Little Uwharrie River – will be constructed upon sewer easements. The City of Trinity is currently in the process of obtaining these easements. The exact location of the sewer easements for the planned greenways following the Uwharrie and the Little Uwharrie rivers will be determined in short order. The city of Trinity is currently in process of acquiring these easements.

In order to accommodate the planned greenways, sufficient vertical and horizontal distance will need to be provided beneath the new bridges. Naturally, these two new bridges must be installed with the widening of the roadway, assuming this feasibility study option of widening the roadway is chosen. These bridges are listed on the attached map as bridges C and D. Neither of these bridges correspond to a TIP code.

A rail line owned by Norfolk Southern crosses Surrett Drive on an alignment adjacent to State Road 1592 in Randolph County. If this railway is to stay in place under the roadway widening alternative, then our division would recommend bike-safe crossings along the portion of the rail line traversing Surrett Drive.

The Division of Bicycle and Pedestrian Transportation appreciates the opportunity to comment. Please contact us if there is a need for additional information.

cc: Tom Norman, Director, Division of Bicycle and Pedestrian Transportation
Tim Gardiner, NCDOT Public Involvement and Community Studies



Guilford / Randolph Scoping of Feasibility Study: Surrett Drive, W. Mkt Center south to 1_85 ramp

- Surrett Drive Study Area
- Brandon Day School (Private)
- Bridge
- Railroads
- Waterways
- Interstates
- Primary Roads
- Roads
- Planned Greenways In HPMPO Long-Range Transportation Plan
- NCDOT Bike Routes

Appendix F

Surrett Drive Cost Estimates

August 4, 2008

Memo To: David Bass, PE
PBS&J

From: Doug Lane
Preliminary Estimate Engineer

Subject: Preliminary Construction Alternatives for Surrett Drive in High Point, Guilford County

SECTION	TRAFFIC OPERATIONS		MINOR WIDENING		MAJOR WIDENING		ULTIMATE	
	LENGTH (Miles)	CONSTR.COST	LENGTH (Miles)	CONSTR.COST	LENGTH	CONSTR.COST	LENGTH (Miles)	CONSTR.COST
A	1.50	$4,450,000	4.00	$7,100,000	2.80	$14,200,000	2.80	$14,400,000
B	1.80	$9,000,000			1.70	$14,200,000	1.70	$21,000,000
Totals	3.30	$13,450,000	4.00	$7,100,000	4.50	$28,400,000	4.50	$35,400,000

North Carolina Department of Transportation
Preliminary Estimate

TIP No. **Func** County: **Guilford**
Route **Surrett Drive (Traffic Operations A)**
From I-85 to Archdale Blvd
Typical Section TS #7 (3-Ln, 4'PS) and #8 (3-Ln C&G)

CONSTR. COST
$4,450,000

Prepared By: Clint Morgan, PE (PBS&J)
Requested By: David Bass, PE 7/31/08
Priced By: Doug Lane 8/4/08

Line Item	Des	Sec No.	Description	Quantity	Unit	Price	Amount
			Clearing and Grubbing	2.3	Acre	$ 30,000.00	$ 69,000.00
			Earthwork	22,850	CY	$ 11.00	$ 251,350.00
			Drainage				
			Drainage New Location Shld	1.50	Miles	$ 50,000.00	$ 75,000.00
			Drainage New Curb and Gutter	0.00	Miles		$ -
Traffic			Fine Grading	6,100	SY	$ 2.00	$ 12,200.00
Design Yr = 2035			Pavement Widening	11,650	SY	$ 45.00	$ 524,250.00
VPD = 21,600			New Pavement	5,150	SY	$ 43.00	$ 221,450.00
Trucks %= 8 %			Pavement 3" Resurfacing	20,700	SY	$ 15.00	$ 310,500.00
			_ "Average Asphalt Wedging	0	SY		$ -
			Subgrade Stabilization	90,550	SY	$ 6.00	$ 543,300.00
			1'-6" Concrete Curb and Gutter	0	LF	$ 13.00	$ -
			2'-6" Concrete Curb and Gutter	500	LF	$ 16.00	$ 8,000.00
			4" Concrete Sidewalk both sides	0	SY	$ 30.00	$ -
			7" Monolithic Islands	0	SY	$ 60.00	$ -
			Erosion Control	8.0	Acres	$ 15,000.00	$ 120,000.00
			New Traffic Signal	4	Each	$ 90,000.00	$ 360,000.00
			Traffic Control	1.5	Miles	$ 50,000.00	$ 75,000.00
			Thermo and Markers	1.5	Miles	$ 20,000.00	$ 30,000.00
			RC Box Culvert				
			Widen Exist. Culvert NC 62				
			Extend 1@12'x 12'-16'Ext-3'F-90Skew	16	LF	$ 4,544.00	$ 72,704.00
			Utility Construction				
			Relocate Existing Water Line		LF		$ -
			Relocate Existing Sewer Line		LF		$ -
			Misc. & Mob (15% Strs&Util)				$ 10,246.00
			Misc. & Mob (45% Functional)				$ 1,170,000.00

		Roadway
		$ 2,600,050.00
		Strs & Util
		$ 72,704.00
		$ 10,905.60
		$ 1,170,022.50

Lgth 1.5 Miles

Contract Cost	$ 3,853,000.00	
E. & C. 15%	$ 597,000.00	$ 577,950.00
Construction Cost	**$ 4,450,000.00**	

North Carolina Department of Transportation
Preliminary Estimate

TIP No. **Func** County: **Guilford**
Route **Surrett Drive (Traffic Operations B)**
From Archdale Blvd to North Market Drive
Typical Section TS #7 (3-Ln, 4'PS) and #8 (3-Ln C&G)

CONSTR. COST
$9,000,000

Prepared By: Clint Morgan
Requested By: David Bass, PE 7/31/08
Priced By: Doug Lane 8/4/08

Line Item	Des	Sec No.	Description	Quantity	Unit	Price	Amount	
			Clearing and Grubbing	2.3	Acre	$ 30,000.00	$ 67,500.00	
			Earthwork	95,200	CY	$ 8.00	$ 761,600.00	
			Reinforced Br App Fills	1	LS	$ 50,000.00	$ 50,000.00	
			Drainage New Shoulder	0.90	Miles	$ 50,000.00	$ 45,000.00	
			Drainage New Curb and Gutter	0.75	Miles	$ 250,000.00	$ 187,500.00	
			Fine Grading	12,100	SY	$ 2.00	$ 24,200.00	
Traffic			Pavement Widening	21,200	SY	$ 45.00	$ 954,000.00	
Design Yr = 2035			New Pavement	0	SY	$ 43.00	$ -	
VPD = 21,600			Pavement Resurfacing	26,200	SY	$ 15.00	$ 393,000.00	
Trucks = 8 %			Subgrade Stabilization	24,650	SY	$ 6.00	$ 147,900.00	
			2'-6" Concrete Curb and Gutter	7,950	LF	$ 16.00	$ 127,200.00	
			4" Concrete Sidewalk both sides	0	SY		$ -	
			7" Monolithic Islands	0	SY		$ -	
			Erosion Control	6.0	Acres	$ 15,000.00	$ 90,000.00	
			New Traffic Signal	6	Each	$ 80,000.00	$ 480,000.00	
			Traffic Control	1.8	Miles	$ 50,000.00	$ 90,000.00	
			Thermo and Markers	1.8	Miles	$ 20,000.00	$ 36,000.00	**Roadway**
			Guardrail	600	LF	$ 30.00	$ 18,000.00	$ 3,471,900.00
			Structures					
			New Bridge at I-85 Bus. Interchange					
Phase			ML over I-85 Bus. 74'x 200'	14,800	SF	$ 125.00	$ 1,850,000.00	
			Br App Slabs 2@74'x 25'	3,700	SF	$ 30.00	$ 111,000.00	
			Rem Ex Br/I-85 32'x 180'	5,760	SF	$ 20.00	$ 115,200.00	
			Utility Construction					
			Relocate Existing Water Line	3,500	LF	$ 70.00	$ 245,000.00	**Strs & Util**
			Relocate Existing Sewer Line	2,850	LF	$ 40.00	$ 114,000.00	$ 2,435,200.00
			Misc. & Mob (15% Strs&Util)				$ 365,900.00	$ 365,280.00
			Misc. & Mob (45% Functional)				$ 1,562,000.00	$ 1,562,355.00

Lgth 1.8 Miles

Contract Cost ..... $ 7,835,000.00
E. & C. 15% ..... $ 1,165,000.00 $ 1,175,250.00
Construction Cost ..... **$ 9,000,000.00**

North Carolina Department of Transportation
Preliminary Estimate

TIP No. **Func** County: **Guilford**
Route **Surrett Drive (Minor Widening Alternate)**
From From I-85 to I-85 Business
Typical Section Typical Section 1 and 1A
Widen existing to 12' lanes and 4' paved shoulder
Prepared By: Clint Morgan, PE (PBS&J)
Requested By: David Bass, PE 7/31/08
Priced By: Doug Lane 8/4/08

CONSTR. COST
$7,100,000

Line Item	Des	Sec No.	Description	Quantity	Unit	Price	Amount
			Clearing and Grubbing	2.2	Acre	$ 30,000.00	$ 66,000.00
			Earthwork	72,650	CY	$ 9.00	$ 653,850.00
			Drainage				
			Existing Curb Section	0.15	Miles	$ 100,000.00	$ 15,000.00
			New Ditch (TS 1)	2.65	Miles	$ 50,000.00	$ 132,500.00
			New Ditch and Curb (TS 1A)	1.10	Miles	$ 100,000.00	$ 110,000.00
Traffic			Fine Grading	17,500	SY	$ 2.00	$ 35,000.00
Design Yr = 2035			Pavement Widening	25,850	SY	$ 45.00	$ 1,163,250.00
VPD = 21,600			New Pavement	0	SY	$ 43.00	$ -
Trucks % = 8 %			Pavement 3" Resurfacing	43,650	SY	$ 15.00	$ 654,750.00
			"Average Asphalt Wedging	0	SY		$ -
			Subgrade Stabilization	32,500	SY	$ 6.00	$ 195,000.00
			2'-6" Concrete Curb and Gutter	5,850	LF	$ 16.00	$ 93,600.00
			Erosion Control	18.0	Acres	$ 15,000.00	$ 270,000.00
			New Traffic Signal (2-Lns Metal Poles)	8	Each	$ 70,000.00	$ 560,000.00
			Traffic Control	4.0	Miles	$ 50,000.00	$ 197,500.00
			Thermo and Markers	4.0	Miles	$ 20,000.00	$ 79,000.00
			Structures				
					SF		$ -
			Utility Construction				
			Relocate Existing Water Line		LF		$ -
			Relocate Existing Sewer Line		LF		$ -
			Misc. & Mob (15% Strs&Util)				
			Misc. & Mob (45% Functional)				$ 1,901,550.00

Lgth 4.0 Miles

		Roadway
		$ 4,225,450.00
Contract Cost	$ 6,127,000.00	
E. & C. 15%	$ 973,000.00	$ 919,050.00
Construction Cost	**$ 7,100,000.00**	$ 1,901,452.50

North Carolina Department of Transportation
Preliminary Estimate

TIP No. **Func** County: **Guilford**
Route **Surrett Drive (Major Widening A)**
From I-85 to Archdale Blvd
Typical Section TS #2 (4-LnShldr,23'RaisedMed,4'PS)and #3 (4-LnC&G,23'RaisedMed)

CONSTR. COST
$14,200,000

Prepared By: Clint Morgan, PE
Requested By: David Bass, PE 7/31/08
Priced By: Doug Lane 8/4/08

Line Item	Des	Sec No.	Description	Quantity	Unit	Price	Amount
			Clearing and Grubbing	8.0	Acre	$ 30,000.00	$ 240,000.00
			Earthwork	213,600	CY	$ 8.00	$ 1,708,800.00
			Drainage				
			TS2 SHLD w/Raised Median	1.65	Miles	$ 300,000.00	$ 495,000.00
			TS3 C&G w/Raised Median	0.85	Miles	$ 400,000.00	$ 340,000.00
			Drainage New Location Shld	0.30	Miles	$ 50,000.00	$ 15,000.00
Traffic							
Design Yr = 2035			Fine Grading	36,450	SY	$ 2.00	$ 72,900.00
VPD = 21,600			Pavement Widening	0	SY	$ 45.00	$ -
Trucks % = 8 %			New Pavement	73,100	SY	$ 43.00	$ 3,143,300.00
			Pavement Resurfacing	10,600	SY	$ 15.00	$ 159,000.00
			3.0"Average Asphalt Wedging	10,600	SY	$ 18.00	$ 190,800.00
			Subgrade Stabilization	89,800	SY	$ 6.00	$ 538,800.00
			1'-6" Concrete Curb and Gutter	20,150	LF	$ 13.00	$ 261,950.00
			2'-6" Concrete Curb and Gutter	8,800	LF	$ 16.00	$ 140,800.00
			4" Concrete Sidewalk both sides	0	SY	$ 30.00	$ -
			7" Monolithic Islands	750	SY	$ 60.00	$ 45,000.00
			Erosion Control	17.0	Acres	$ 15,000.00	$ 255,000.00
			New Traffic Signal	5	Each	$ 90,000.00	$ 450,000.00
			Traffic Control	2.8	Miles	$ 100,000.00	$ 275,000.00
			Thermo and Markers	2.8	Miles	$ 20,000.00	$ 55,000.00
			RC Box Culvert				
			Widen Exist. Culvert				
			Extend 4@12x12-20'Ext-3'F-90Skew	20	LF	$ 7,960.00	$ 159,200.00
			Utility Construction				
			Relocate Existing Water Line		LF		$ -
			Relocate Existing Sewer Line		LF		$ -
			Misc. & Mob (15% Strs&Util)				$ 23,450.00
			Misc. & Mob (45% Functional)				$ 3,774,000.00

Lgth 2.8 Miles

		Roadway
		$ 8,386,350.00
		Strs & Util
		$ 159,200.00
		$ 23,880.00
		$ 3,773,857.50
Contract Cost	$ 12,343,000.00	
E. & C. 15%	$ 1,857,000.00	$ 1,851,450.00
Construction Cost	**$ 14,200,000.00**	

North Carolina Department of Transportation
Preliminary Estimate

TIP No. **Func** County: **Guilford**
Route **Surrett Drive (Major Widening B)**
From Archdale Blvd to North of Market Drive
Typical Section TS #3 (4-LnC&G,23'RaisedMed) and #4 (5-Ln C&G)

CONSTR. COST
$14,200,000

Prepared By: Clint Morgan
Requested By: David Bass, PE 7/31/08
Priced By: Doug Lane 8/4/08

Line Item	Des	Sec No.	Description	Quantity	Unit	Price	Amount
			Clearing and Grubbing	2.4	Acre	$ 30,000.00	$ 72,000.00
			Earthwork	206,000	CY	$ 8.00	$ 1,648,000.00
			Reinforced Br App Fills	1	LS	$ 50,000.00	$ 50,000.00
			Drainage				
			TS4 5 Lane C&G	1.65	Miles	$ 300,000.00	$ 495,000.00
			New Ramp/Loop	0.45	Miles	$ 50,000.00	$ 22,500.00
Traffic			Fine Grading	15,450	SY	$ 2.00	$ 30,900.00
Design Yr = 2035			Pavement Widening	0	SY	$ 45.00	$ -
VPD = 21,600			New Pavement	45,700	SY	$ 43.00	$ 1,965,100.00
Trucks % = 8 %			Pavement Resurfacing	17,150	SY	$ 15.00	$ 257,250.00
			3.0"Average Asphalt Wedging	17,150	SY	$ 18.00	$ 308,700.00
			Subgrade Stabilization	52,350	SY	$ 6.00	$ 314,100.00
			2'-6" Concrete Curb and Gutter	17,750	LF	$ 16.00	$ 284,000.00
			4" Concrete Sidewalk both sides	0	SY	$ 30.00	$ -
			7" Monolithic Islands	150	SY	$ 60.00	$ 9,000.00
			Erosion Control	9.0	Acres	$ 15,000.00	$ 135,000.00
			New Traffic Signal	6	Each	$ 90,000.00	$ 540,000.00
			Traffic Control	1.7	Miles	$ 100,000.00	$ 165,000.00
			Thermo and Markers	1.7	Miles	$ 20,000.00	$ 33,000.00
			Guardrail	600	LF	$ 30.00	$ 18,000.00
			Structures				
			New Bridge at I-85 Bus. Interchange				
Phase			ML over I-85 Bus. 74'x 200'	14,800	SF	$ 125.00	$ 1,850,000.00
			Br App Slabs 2@25'x 74'	3,700	SF	$ 30.00	$ 111,000.00
			Rem Ex Br/I-85Bus 32'x 180'	5,760	SF	$ 20.00	$ 115,200.00
			Utility Construction				
			Relocate Existing Water Line	6,200	LF	$ 70.00	$ 434,000.00
			Relocate Existing Sewer Line	4,600	LF	$ 40.00	$ 184,000.00
			Misc. & Mob (15% Strs&Util)				$ 404,250.00
			Misc. & Mob (45% Functional)				$ 2,856,000.00

Lgth 1.7 Miles

Contract Cost	$ 12,302,000.00	
E. & C. 15%	$ 1,898,000.00	$ 1,845,300.00
Construction Cost	**$ 14,200,000.00**	

Roadway	
$ 6,347,550.00	
Strs & Util	
$ 2,694,200.00	
$ 404,130.00	
$ 2,856,397.50	

North Carolina Department of Transportation
Preliminary Estimate

TIP No. **Func** County: **Guilford**
Route **Surrett Drive (Ultimate Section A)**
From I-85 to Archdale Blvd
Typical Section TS #5 (4-Ln Shldr,23'Raised Med,4'PS)and #6 (4-LnC&G,23'Raised Med)

CONSTR. COST
$14,400,000

Prepared By: Clint Morgan, PE
Requested By: David Bass, PE 7/31/08
Priced By: Doug Lane 8/4/08

Line Item	Des	Sec No.	Description	Quantity	Unit	Price	Amount
			Clearing and Grubbing	8.7	Acre	$ 30,000.00	$ 261,000.00
			Earthwork	215,250	CY	$ 8.00	$ 1,722,000.00
			Pavement Removal		SY	$ 3.00	$ -
			Drainage				
			TS5 SHLD w/Raised Median	1.65	Miles	$ 300,000.00	$ 495,000.00
			TS3 C&G w/Raised Median	0.85	Miles	$ 400,000.00	$ 340,000.00
			New Location Shld	0.30	Miles	$ 50,000.00	$ 15,000.00
Traffic			Fine Grading	45,350	SY	$ 2.00	$ 90,700.00
Design Yr = 20335			Pavement Widening	0	SY	$ 45.00	$ -
VPD = 21,600			New Pavement	83,700	SY	$ 43.00	$ 3,599,100.00
Trucks % = 8 %			Pavement Resurfacing	0	SY	$ 15.00	$ -
			"Average Asphalt Wedging	0	SY		$ -
			Subgrade Stabilization	61,700	SY	$ 6.00	$ 370,200.00
			1'-6" Concrete Curb and Gutter	20,350	LF	$ 13.00	$ 264,550.00
			2'-6" Concrete Curb and Gutter	8,800	LF	$ 16.00	$ 140,800.00
			4" Concrete Sidewalk both sides	0	SY	$ 30.00	$ -
			7" Monolithic Islands	650	SY	$ 60.00	$ 39,000.00
			Erosion Control	22.0	Acres	$ 15,000.00	$ 330,000.00
			New Traffic Signal	5	Each	$ 90,000.00	$ 450,000.00
			Traffic Control	2.8	Miles	$ 100,000.00	$ 275,000.00
			Thermo and Markers	2.8	Miles	$ 20,000.00	$ 55,000.00
			RC Box Culvert				
			Widen Exist. Culvert				
			Extend 4@12x12-27.5'Ext-3'F-90Skew	27.50	LF	$ 7,960.00	$ 218,900.00
			Utility Construction				
			Relocate Existing Water Line		LF		$ -
			Relocate Existing Sewer Line		LF		$ -
			Misc. & Mob (15% Strs&Util)				$ 32,750.00
			Misc. & Mob (45% Functional)				$ 3,801,000.00

Lgth 2.8 Miles

		Roadway
Contract Cost	$ 12,500,000.00	$ 8,447,350.00
E. & C. 15%	$ 1,900,000.00	$ 1,875,000.00
Construction Cost	**$ 14,400,000.00**	
		Strs & Util
		$ 218,900.00
		$ 32,835.00
		$ 3,801,307.50

North Carolina Department of Transportation
Preliminary Estimate

TIP No. **Func** County: **Guilford**
Route **Surrett Drive (Ultimate Section B)**
From Archdale Blvd to North of Market Drive
Typical Section TS #5 (4-LnShldr,23'RaisedMed,4'PS)and #6 (4-LnC&G,23'RaisedMed)

CONSTR. COST
$21,000,000

Prepared By: Clint Morgan
Requested By: David Bass, PE 7/31/08
Priced By: Doug Lane 8/4/08

Line Item	Des	Sec No.	Description	Quantity	Unit	Price	Amount
			Clearing and Grubbing	6.5	Acre	$ 30,000.00	$ 195,000.00
			Earthwork	385,300	CY	$ 6.00	$ 2,311,800.00
			Reinforced Br App Fills	1	LS	$ 60,000.00	$ 60,000.00
			Pavement Removal		SY	$ 3.00	$ -
			Drainage				
			Drainage New Med. Divided C&G	1.65	Miles	$ 400,000.00	$ 660,000.00
			Drainage New Ramp	1.00	Miles	$ 50,000.00	$ 50,000.00
Traffic			Fine Grading	47,100	SY	$ 3.00	$ 141,300.00
Design Yr = 2035			Pavement Widening	0	SY	$ 45.00	$ -
VPD = 21,600			New Pavement	62,800	SY	$ 43.00	$ 2,700,400.00
Trucks %= 8 %			Pavement3" Resurfacing	0	SY	$ 15.00	$ -
			Subgrade Stabilization	64,700	SY	$ 6.00	$ 388,200.00
			1'-6" Concrete Curb and Gutter	12,650	LF	$ 13.00	$ 164,450.00
			2'-6" Concrete Curb and Gutter	17,150	LF	$ 16.00	$ 202,400.00
			4" Concrete Sidewalk both sides	0	SY	$ 30.00	$ -
			7" Monolithic Islands	1,250	SY	$ 60.00	$ 75,000.00
			Erosion Control	19.0	Acres	$ 15,000.00	$ 285,000.00
			Signing Diamond	1.0	LS	$ 90,000.00	$ 90,000.00
			New Traffic Signal	6	Each	$ 90,000.00	$ 540,000.00
			Traffic Control	1.7	Miles	$ 100,000.00	$ 165,000.00
			Thermo and Markers	1.7	Miles	$ 20,000.00	$ 33,000.00
			Guardrail	3,000	LF	$ 30.00	$ 90,000.00
			Railroad Realignment	800	LF	$ 125.00	$ 100,000.00
			Structures				
			New Bridge at I-85 Bus. Interchange				
Phase			ML over I-85 Bus. 87'x 200'	17,400	SF	$ 125.00	$ 2,175,000.00
			Br App Slabs 2@25'x 87'	4,350	SF	$ 30.00	$ 130,500.00
			Rem Ex Br 32'x 180'	5,760	SF	$ 20.00	$ 115,200.00
			RR over I-85 Bus. 15'x 320'	4,800	SF	$ 400.00	$ 1,920,000.00
			Rem Ex RR Br 15'x 200'	3,000	SF	$ 30.00	$ 90,000.00
			RC Box Culvert				
			Ramp/Creek 1@10x12-120'-3'F-90Ske	120	LF	$ 1,485.00	$ 178,200.00
			Retaining Wall				
			Wall along Ramp, Quad. B - 10' high	200	LF	$ 750.00	$ 150,000.00
			Utility Construction				
			Relocate Existing Water Line	7,300	LF	$ 70.00	$ 511,000.00
			Relocate Existing Sewer Line	4,600	LF	$ 40.00	$ 184,000.00
			Misc. & Mob (15% Strs&Util)				$ 833,550.00
			Misc. & Mob (45% Functional)				$ 3,668,000.00

Lgth 1.7 Miles

	Contract Cost	$ 18,207,000.00
	E. & C. 15%	$ 2,793,000.00
	Construction Cost	**$ 21,000,000.00**

Roadway	
$ 8,151,550.00	
RR,Strs,Util	
$ 5,553,900.00	
$ 833,085.00	
$ 3,668,197.50	
$ 2,731,050.00	

Preliminary Right of Way Estimate

SURRETT DRIVE - ULTIMATE DESIGN

	Date:	August 19, 2008			COST EST. #:		Conceptual						PROJ.:	Surrett Drive			FROM:	I-85	TO:	Bus. I-85
	ALT.:	Ultimate Design			FAP #:		N/A						COUNTIES:	Randolph and Guilford						
MAP	PAR	PARCEL ID	OWNER	DESIGN	LAND USE			LAND	Land Take	Land Take	LAND ASSESSED VALUE	$/SQ. FT.	IMP	IMP ASSESSED VALUE	$/SQ. FT.	TOTAL ASSESSED VALUE	RELO	Current use i.e. fast food, bank, industrial warehouse etc & type of building i.e. metal, cb, frame etc.		
PG	NO	NUMBER	NAME	SECTION	C	R	V	SQ. FT.	SF	$			SQ. FT.				Y or N			
1	1	7707166546	Communityone	A	X			66,211	4059.0		$131,200	$1.98	4,455	$425,390	$95.49	$556,590	Y	General commercial; CB/brick; First National Bank; significant impact to parking; no room for a cure.		
1	2	7707164533	Miller, Alice C.	A		X		69,260	5881.5	$ 2,423.60	$28,540	$0.41	1,984	$66,260	$33.40	$94,800	N	SFR; frame with siding; 1 AC primary site; .590 AC agricultural.		
1	3	7707171040	Slaughter, James B & Ann	A		X		154,638	3108.8	$ 807.37	$40,160	$0.26	4,976	$117,110	$23.53	$157,270	N	SFR; brick; agricultural acreage.		
1	4	7707163991	Grant, David Eugene & Ball, Ann G.	A			X	152,460	4303.7	$ 950.17	$33,660	$0.22				$33,660	N	Agricultural acreage.		
1	5	7707166814	Stone, James A et al	A		X		45,302	4902.6	$ 2,731.47	$25,240	$0.56	2,007	$65,610	$32.69	$90,850	N	SFR; brick; agricultural acreage.		
1	6	7707167832	Stone, James A et al	A			X	5,663	1031.6	$ 71.05	$390	$0.07				$390	N	Residual acreage.		
1	7	7707177042	Stone, James A et al	A			X	42,689	873.1	$ 118.22	$5,780	$0.14				$5,780	N	Agricultural acreage.		
1	8	7707176955	Duncan, Paul M & Edith H.	A			X	13,939	6974.3	$ 480.32	$960	$0.07				$960	N	Residual acreage.		
1	9	7707193250	Duncan, Paul M & Edith H.	A		X		1,120,363	11700.6	$ 1,627.53	$155,840	$0.14	1,984	$86,950	$43.83	$242,790	N	SFR; brick; agricultural acreage.		
1	10	7707282433	Wall, J. Lyndon & Kay D.	A			X	236,095	12555.9	$ 1,658.20	$31,180	$0.13				$31,180	N	Agricultural acreage.		
1	11	7707291230	Wall Properties LLC	A	X			348,916	9968.4	$ 2,980.09	$104,310	$0.30	11,466	$234,680	$20.47	$338,990	N	Industrial; 1 AC commercial; remainder agricultural acreage; 10,000 SF steel warehouse; 996 SF frame enclosure; Bryant Electric.		
1	12	7707292857	Wall, J. Lyndon & Kay D.	A			X	724,403	2227.3	$ 242.23	$78,780	$0.11				$78,780	N	Agricultural acreage.		
1 & 2	13	7708207268	P G Properties LLC	A	X			404,672	13798.7	$ 5,777.98	$169,450	$0.42	37,800	$499,220	$13.21	$668,670	N	Industrial; 3 AC commercial; 6.290 AC agricultural; 31,250 SF metal warehouse (truck terminal); 3,750 SF frame enclosure; 2,800 SF auto service garage; Carolina Pacific Distributors.		
2	14	7708118367	Randolph Co Board of Education	A			X	3,030,905	833.4	$ 194.79	$708,450	$0.23				$708,450	N	57.530 AC agricultural; 12.050 AC residual.		
2	15	7708208979	Aikens R. Keith & Wanda et al	A			X	129,373	4142.8	$ 2,890.61	$90,270	$0.70				$90,270	N	Undeveloped.		
2	16	7708219206	Aikens R. Keith & Wanda et al	A	X			114,563	3768.2	$ 2,600.47	$79,060	$0.69	21,280	$365,640	$17.18	$444,700	N	Industrial; 2 AC commercial; .630 AC agricultural; 20,000 SF metal warehouse; 392 SF frame enclosure; multi-tenant building.		
2	17	7708219429	C M D Partnership	A	X			102,366	2190.0	$ 1,624.24	$75,920	$0.74	26,700	$367,200	$13.75	$443,120	N	Light manufacturing; 2 AC commercial; .350 AC agricultural; metal bldg; High Point Bedding, Inc.		
2	18	7708218706	Daniels, Jerry R. & Susan A.	A	X			255,262	2280.1	$ 1,029.29	$115,230	$0.45	32,750	$446,520	$13.63	$561,750	N	Light Manufacturing; 2 AC commercial; 3.86 AC agricultural; 28,000 SF metal bldg; 4,750 SF frame enclosure; High Point Bedding, Inc.		
2	19	7708310945	Hedrick, Vera Louise	A		X		47,916	3253.7	$ 1,738.37	$25,600	$0.53	1,742	$35,990	$20.66	$61,590	N	SFR; wood frame; 1AC primary site; .100 AC agricultural.		
2	20	7708321019	Stoneman, Clarence & Brenda	A		X		19,166	1326.5	$ 1,038.16	$15,000	$0.78	1,442	$30,750	$21.32	$45,750	N	SFR; wood frame.		
2	21	7708321139	Leach, Fred T. & Betsy H.	A			X	21,780	1362.1	$ 584.73	$9,350	$0.43				$9,350	N	Undeveloped.		
2	22	7708322219	Proctor, L. M.	A			X	41,818	7431.5	$ 3,189.93	$17,950	$0.43				$17,950	N	Undeveloped.		
2	23	7708322400	Cochran, George Michael	A			X	21,780	1515.5	$ 650.60	$9,350	$0.43				$9,350	N	Undeveloped.		
2	24	7708322640	Gammons, Doris H.	A		X		48,787	3753.8	$ 2,154.37	$28,000	$0.57	3,660	$88,040	$24.05	$116,040	N	SFR; log home.		
2	25	7708321714	Gammons, Doris H.	A			X	71,003	1981.6	$ 627.40	$22,480	$0.32				$22,480	N	1 AC undeveloped; .630 AC agricultural.		
2	26	7708323804	R & T Lumber Sales LLC	A			X	28,314	1916.3	$ 823.01	$12,160	$0.43				$12,160	N	Undeveloped.		
2	27	7708323924	Idol, Joey G. & Tammy J.	A			X	29,185	2145.9	$ 921.31	$12,530	$0.43				$12,530	N	Undeveloped.		
2	28	7708333033	Leach, Fred T. & Betsy H.	A			X	30,492	22116.9	$ 9,494.65	$13,090	$0.43				$13,090	N	Undeveloped.		
2	29	7708334108	Guil-Rand Fire Protection Assoc Inc.	A	X			46,609	5716.0	$ 2,068.88	$16,870	$0.36	3,780	$243,030		$259,900	N	General commercial; .550 AC primary site; .520 AC agricultural; fire rescue station?		
2	30	7708334322	Guil-Rand Fire Protection Assoc Inc.	A			X	25,265	2694.8	$ 371.19	$3,480	$0.14				$3,480	N	Agricultural.		
2	31	7708332245	Guil-Rand Fire Protection Assoc Inc.	A			X	30,056	3718.0	$ 512.13	$4,140	$0.14				$4,140	N	Agricultural.		
2	32	7708331137	Kestler, Mary Ina	A			X	46,609	7777.1	$ 3,338.84	$20,010	$0.43				$20,010	N	Undeveloped.		
2	33	7708330148	Proctor, L. M.	A			X	47,480	8773.7	$ 1,208.50	$6,540	$0.14				$6,540	N	Agricultural.		
2	34	7708239138	R & T Lumber Sales LLC	A			X	40,075	9145.4	$ 1,259.69	$5,520	$0.14				$5,520	N	Agricultural.		
2	35	7708238246	R & T Lumber Sales LLC	A			X	26,572	8372.0	$ 3,594.99	$11,410	$0.43				$11,410	N	Undeveloped.		
2	36	7708237245	Clapp, Patricia Kestler et al	A			X	23,522	7976.7	$ 3,425.02	$10,100	$0.43				$10,100	N	Undeveloped.		
2	37	7708234220	Hayworth, Hunter J	A		X		94,961	9926.0	$ 3,353.25	$32,080	$0.34	1,992	$69,540	$34.91	$101,620	N	SFR; Brick; 1 AC primary site; 1.180AC agricultural.		

Preliminary Right of Way Estimate

SURRETT DRIVE - ULTIMATE DESIGN

	Date:	August 19, 2008			COST EST. #:		Conceptual						PROJ.:	Surrett Drive			FROM:	I-85	TO:	Bus. I-85
	ALT.:	Ultimate Design			FAP #:		N/A						COUNTIES:	Randolph and Guilford						

MAP PG	PAR NO	PARCEL ID NUMBER	OWNER NAME	DESIGN SECTION	LAND USE C	LAND USE R	LAND USE V	LAND SQ. FT.	Land Take SF	Land Take $	LAND ASSESSED VALUE	$/SQ. FT.	IMP SQ. FT.	IMP ASSESSED VALUE	$/SQ. FT.	TOTAL ASSESSED VALUE	RELO Y or N	Current use i.e. fast food, bank, industrial warehouse etc & type of building i.e. metal, cb, frame etc.
2	38	7708332519	Faith Baptist Church Archdale	A	X			224,770	8995.9	$ 5,162.93	$129,000	$0.57	10,512	$450,890	$42.89	$579,890	N	Church; Metal bldg; significant impact to parking.
2	39	7708331973	Bouldin, Ora M. Trust	A			X	374,616	12200.4	$ 2,299.29	$70,600	$0.19				$70,600	N	1 AC primary site; 7.6 AC agricultural.
2	40	7708344464	Walker, Lawrence E. & Patricia B.	A	X			283,140	12404.1	$ 5,362.25	$122,400	$0.43	12,600	$311,260	$24.70	$433,660	N	General commercial; 2 AC commercial; 4.5 AC agricultural; Metal bldg; 1,920 SF office; 10,680 SF auto service; Larry Walker & Sons Body Shop.
2	41	7708346853	Bryant, Nancy D.	A		X		27,999	3321.4	$ 2,571.79	$21,680	$0.77	1,760	$68,280	$38.80	$89,960	N	SFR; brick.
2	42	7708357008	Benson, John E. & Barbara A.	A		X		40,264	2452.2	$ 1,477.51	$24,260	$0.60	2,052	$89,330	$43.53	$113,590	N	SFR; brick.
2	43	7708355274	Greer, Patricia R.	A		X		58,370	696.5	$ 301.29	$25,250	$0.43	2,572	$97,190	$37.79	$122,440	N	SFR; brick.
2	44	7708357383	BDC Associates Inc.	A			X	8,796	164.5	$ 41.15	$2,200	$0.25				$2,200	N	Residual acreage.
3	45	7708462506	Hollinger, John C. III & Pattie J.	A		X		15,682	435.5	$ 852.08	$30,680	$1.96	4,238	$170,660	$40.27	$201,340	N	SFR; frame with siding.
3	46	7708462815	Kingsfield Townhomes LLC	A		X		75,359	1777.0	$ -		$0.00				$0	N	Multi-family residential; land area for common areas only - not parent tract; land and improvements are assessed by individual units.
3	47	7708471163	Schwarz, Jeffrey	A	X			179,903	4190.5	$ 3,410.85	$146,430	$0.81	72,775	$1,428,990	$19.64	$1,575,420	N	Industrial; 3 AC commercial; 1.130 AC agricultural; 66,000 SF cb warehouse; 6,775 wood frame enclosure; Momentum Group.
3	48	7708379629	Swiggett, James R. et al	A			X	872,071	26409.4	$ 13,641.24	$450,450	$0.52				$450,450	N	Agricultural.
3	49	7708480188	Cloverdale Church of the Living God	A			X	435,600	24629.1	$ 12,721.66	$225,000	$0.52				$225,000	N	Agricultural.
3	50A	7708484614	Sellers, William Marvin Sr. & Nancy	B		X		31,799	15542.6	$ 10,987.72	$22,480	$0.71	2,540	$92,420	$36.39	$114,900	Y	SFR; masonry/frame.
3	50B	7708483603	Sellers, William Marvin Sr. & Nancy	B				15,682	0.0	$ -	$17,840	$1.14				$17,840	N	This site does not have any direct impact but is contiguous to and appears to be part of the home site.
3	51	7708482771	Bodiford, Gene W.	B		X		21,000	3991.3	$ 3,841.11	$20,210	$0.96	2,130	$90,790	$42.62	$111,000	Y	SFR; brick.
3	52	7708482810	Jackson, Junny O. & Ann S.	B		X		28,300	4070.1	$ 3,126.68	$21,740	$0.77	2,248	$85,140	$37.87	$106,880	Y	SFR; brick.
3	53	7708482900	Williams, Donald R. & Irene H.	B		X		25,000	4225.8	$ 3,558.15	$21,050	$0.84	2,091	$68,750	$32.88	$89,800	Y	SFR; brick.
3	54	7708491091	Crouch, Kenneth D.	B		X		24,606	3799.0	$ 3,237.58	$20,970	$0.85	2,496	$74,520	$29.86	$95,490	Y	SFR; brick.
3	55	7708399425	Hendrix Batting Company Inc.	B	X			279,220	20963.4	$ 17,533.11	$233,530	$0.84	122,559	$2,446,450	$19.96	$2,679,980	Y	Light manufacturing; CB & brick bldg; 7,808 SF office; 90,411 SF light manufacturing; 19,939 SF warehouse; 2,400 SF auto service; partial impact
3	56	7709306012	M.5 Corp	B	X			650,786	52841.4	$ 41,817.67	$515,020	$0.79	302,100	$4,402,100	$14.57	$4,917,120	Y	Light manufacturing; CB & brick bldg; 7,760 SF office; 293,060 SF manufacturing; building & parking impacted which could cause relo - however due to size of site and affected improvements, they would probably try to cure the site.
3	57A	18-00-0112-0-0003-00-003	Service Distributing Co Inc.	B				32,670	13215.4	$ 26,050.60	$64,400	$1.97				$64,400	N	Commercial; site is impacted but not counted separately due to "parent tract".
3	57B	18-00-0112-0-0003-00-004	Service Distributing Co Inc.	B				25,265	15941.1	$ 15,016.91	$23,800	$0.94				$23,800	N	Commercial; no direct impact to site but included in parent tract.
3	57C	18-00-0112-0-0003-00-005	Service Distributing Co Inc.	B	X			33,106	0.0	$ -	$49,000	$1.48				$49,000	Y	Industrial; improved site but no building assessment available; impact to building & semi trailer storage; potential relo, but would probably try to cure site.
3	57D	18-00-0112-0-0003-00-006	Service Distributing Co Inc.	B				33,106	0.0	$ -	$28,000	$0.85				$28,000	N	Industrial; improved but no building assessment available; no direct impact to site but included in parent tract.
3	58	18-00-0112-0-0003-00-007	Wilcohess LLC	B	X			36,155	10733.7	$ 12,795.56	$43,100	$1.19	7,917	$336,700	$42.53	$379,800	Y	General commercial; gas station/convenience store; impact to site could be enough to cause relo.
3	59	18-00-0273-0-0002-00-012	High Point Industrial Leasing	B	X			226,512	249.7	$ 343.91	$312,000	$1.38	132,801	$2,392,500	$18.02	$2,704,500	N	Industrial; very minor impact - land only.
3	60	18-00-0273-0-0002-00-006	Darr, Henry H. J. L. Jr. & High Point Industrial Leasing Co.	B			X	23,958	347.1	$ 749.06	$51,700	$2.16				$51,700	N	Industrial acreage.
3	61A	18-00-0112-0-0001-00-003	Smith & Shore Oil Co	B	X			28,750	13331.5	$ 26,246.13	$56,600	$1.97	2,606	$100,400	$38.53	$157,000	Y	General commercial; convenience store (2,110 SF frame building with 496 SF canopy).

Preliminary Right of Way Estimate

SURRETT DRIVE - ULTIMATE DESIGN

	Date:	August 19, 2008			COST EST. #:		Conceptual						PROJ.:	Surrett Drive			FROM:	I-85	TO:	Bus. I-85
	ALT.:	Ultimate Design			FAP #:		N/A						COUNTIES:	Randolph and Guilford						

MAP	PAR	PARCEL ID	OWNER	DESIGN	LAND USE			LAND	Land Take	Land Take	LAND ASSESSED		IMP				RELO	
PG	NO	NUMBER	NAME	SECTION	C	R	V	SQ. FT.	SF	$	VALUE	$/SQ. FT.	SQ. FT.	IMP ASSESSED VALUE	$/SQ. FT.	TOTAL ASSESSED VALUE	Y or N	Current use i.e. fast food, bank, industrial warehouse etc & type of building i.e. metal, cb, frame etc.
3	61B	18-00-0112-0-0001-00-004	Smith & Shore Oil Co	B				10,454	4159.2	$ 6,126.71	$15,400	$1.47				$15,400	N	Commercial acreage; site is impacted but not counted separately due to "parent tract".
3	62	18-00-0112-0-0001-00-002	Thomas Built Buses Inc C/O Laura Collins	B	X			74,052	3555.0	$ 5,007.05	$104,300	$1.41	31,664	$678,900	$21.44	$783,200	N	Industrial; warehouse (31,022 SF masonry building with 438 SF canopy and 204 SF unfinished storage).
3	63	18-00-0112-0-0001-00-012	Simanco Inc	B	X			22,216	11861.1	$ 11,799.37	$22,100	$0.99				$22,100	N	Industrial; improved site but no building assessment available.
3 & 4	64	18-00-0112-0-0001-00-005	Grand Central Express Inc	B	X			170,755	18923.6	$ 22,153.48	$199,900	$1.17	7,529	$411,000	$54.59	$610,900	Y	General commercial; car wash (2,661 SF masonry building, with 96 SF canopy, 96 SF finished storage, 198 SF office, 522 SF unfinished storage, 1,456 SF SDA); Auto Sales Repair (2,500 SF steel building).
3 & 4	65	18-00-0112-0-0001-00-006	Varner Co	B		X		124,146	15075.6	$ 17,656.58	$145,400	$1.17	1,260	$2,700	$2.14	$148,100	N	SFR; Frame.
4	66	18-00-0112-0-0001-00-007	Sartin, Edward L.	B	X			108,900	24417.7	$ 28,588.26	$127,500	$1.17	8,730	$200,100	$22.92	$327,600	Y	General commercial; service or repair (7,770 SF steel building with 960 SF office).
4	67	18-00-0112-0-0001-00-008	Williard Investment LLC	B	X			30,928	11147.9	$ 15,607.60	$43,300	$1.40	14,658	$150,100	$10.24	$193,400	Y	Industrial; warehouse (14,338 SF masonry building with 16 SF canopy, 124 SF CLP, 180 SF unfinished storage).
4	68	18-00-0112-0-0001-00-009	West, Jimmy E. & Jo Ann	B			X	6,970	3843.1	$ 5,789.75	$10,500	$1.51				$10,500	N	Commercial.
4	69	18-00-0112-0-0001-00-010	Kingston Investments LLC	B	X			121,097	19584.9	$ 26,976.42	$166,800	$1.38	3,000	$78,700	$26.23	$245,500	N	General commercial; lounge-night club (3,000 SF steel building).
4	70	18-00-0063-0-0002-00-001	Saunders, David L. Family Limited Partnership	B	X			78,408	17996.7	$ 27,772.66	$121,000	$1.54	8,050	$123,400	$15.33	$244,400	Y	Industrial; warehouse (6,272 SF masonry building with 1,680 SF office and 98 SF canopy).
4	71	18-00-0063-0-0002-00-002	Saunders, David L. & Patricia W.	B	X			135,907	31594.5	$ 46,354.71	$199,400	$1.47	12,264	$233,600	$19.05	$433,000	Y	Industrial; (11,400 SF steel building with 504 SF uncovered area and 360 SF canopy).
4	72	18-00-0063-0-0002-00-003	Gable, Claude C. & Mickey H.	B	X			57,499	11955.0	$ 16,238.22	$78,100	$1.36	19,433	$371,100	$19.10	$449,200	Y	Light manufacturing; (18,464 SF masonry building with 393 SF canopy and 576 SF office).
4	73	18-00-0063-0-0003-00-001	Kester William V., Jr. & Robert L. Kester BB&T Attn SP Assets # 16885	B			X	21,780	2478.3	$ 989.97	$8,700	$0.40				$8,700	N	Commercial.
4	74	18-00-0063-0-0003-00-002	Kester William V., Jr. & Robert L. Kester BB&T Attn SP Assets # 16885	B			X	16,553	3022.2	$ 4,473.17	$24,500	$1.48				$24,500	N	Commercial.
4	75	18-00-0063-0-0003-00-005	Kester William V., Jr. & Robert L. Kester BB&T Attn SP Assets # 16885	B			X	9,583	1938.4	$ 6,371.62	$31,500	$3.29				$31,500	N	Commercial.
4	76	18-00-0063-0-0003-00-003	Kester William V., Jr. & Robert L. Kester BB&T Attn SP Assets # 16885	B			X	153,767	3812.1	$ 4,945.94	$199,500	$1.30				$199,500	N	Commercial.
4	77	18-00-0063-0-0003-00-004	Kester William V., Jr. & Robert L. Kester BB&T Attn SP Assets # 16885	B	X			231,739	4498.0	$ 6,801.18	$350,400	$1.51	167,368	$6,348,400	$37.93	$6,698,800	N	General commercial; furniture show room (50,400 SF masonry building with 624 SF finished storage, 520 SF finished enclosed porch, and 50,400 SF finished upper story)/Furniture Show Room (21,720 SF masonry building with 264 SF finished storage, 21,720 SF semi-finished area, and 21,720 SF finished upper story).
4	78	18-00-0079-0-0002-00-001	Bradley, Cecil Edward, Jr. & Ruby, Louise H.	B	X			335,848	29312.4	$ 37,529.97	$430,000	$1.28	117,996	$1,969,500	$16.69	$2,399,500	N	Industrial; (101,726 SF masonry building with 5,980 SF office, 3,020 SF CLP, and 480 SF canopy)/Warehouse (5,640 SF masonry building with 1,150 SF office).
4	79	18-00-0080-0-0001-00-007	IICS Properties LLC	B	X			137,214	8029.6	$ 8,894.82	$152,000	$1.11	49,201	$653,300	$13.28	$805,300	N	Industrial; office (1,750 SF masonry building)/Industrial (20,209 SF masonry building with 750 SF CLP, 420 SF finished storage, 600 SF office, and 600 SF mezzanine)/Industrial (11,150 SF masonry building)/Industrial (10,772 SF masonry building)/Warehouse (2,950 SF masonry building).
4	80	18-00-0080-0-0001-00-008	Stewart, H. Clifton, Sr. & Eva Mae	B			X	114,998	11343.0	$ 6,391.60	$64,800	$0.56				$64,800	N	Industrial acreage.

Preliminary Right of Way Estimate

SURRETT DRIVE - ULTIMATE DESIGN

	Date:	August 19, 2008			COST EST. #:		Conceptual						PROJ.:	Surrett Drive			FROM:	I-85	TO:	Bus. I-85
	ALT.:	Ultimate Design			FAP #:		N/A						COUNTIES:	Randolph and Guilford						
MAP	PAR	PARCEL ID	OWNER	DESIGN	LAND USE			LAND	Land Take	Land Take	LAND ASSESSED		IMP	IMP ASSESSED		TOTAL ASSESSED	RELO	Current use i.e. fast food, bank, industrial warehouse etc & type of building i.e. metal, cb, frame etc.
PG	NO	NUMBER	NAME	SECTION	C	R	V	SQ. FT.	SF	$	VALUE	$/SQ. FT.	SQ. FT.	VALUE	$/SQ. FT.	VALUE	Y or N	
4	81	18-00-0043-0-0003-00-006	Ashley Manor Inc	B	X			150,718	1123.3	$ 1,061.30	$142,400	$0.94	42,468	$635,900	$14.97	$778,300	N	Industrial; (40,824 SF masonry building with 300 SF CLP, 1,260 SF office, and 84 SF canopy.
4	82	18-00-0079-0-0001-00-015	N C State Highway Comm	B			X	153,331	29472.4	$ 14,416.04	$75,000	$0.49				$75,000	N	Unknown use.
4	83	18-00-0079-0-0001-00-016	Custom Drum Services Inc	B			X	7,841	6384.6	$ 3,419.97	$4,200	$0.54				$4,200	N	Commercial.
4	84	18-00-0079-0-0001-00-001	Custom Drum Services Inc	B	X			54,450	6531.7	$ 6,609.69	$55,100	$1.01	11,312	$196,600	$17.38	$251,700	N	Industrial; no impact to warehouse building.
4	85	18-00-0079-0-0003-00-005	Richardson, Curtis L. & Earlene M.	B	X			14,375	4440.7	$ 4,880.96	$15,800	$1.10	6,165	$156,700	$25.42	$172,500	N	Industrial; no impact to building.
4	86	18-00-0079-0-0003-00-004	Richardson, Curtis Lamont & Earline M.	B		X		27,443	6362.5	$ 7,790.03	$33,600	$1.22	1,456	$21,000	$14.42	$54,600	N	SFR; stucco.
4	87	18-00-0079-0-0003-00-003	Richardson, Curtis Lamont & Earline M.	B			X	34,848	2336.1	$ 2,701.62	$40,300	$1.16				$40,300	N	Potential industrial.
3	88	7708485076	Darr, J.L., Jr. & Carol L.	A			X	10,454	326.7	$ 122.48	$3,920	$0.37				$3,920	N	Residential acreage.
3	89	7708476656	Lewis, Jack F. et al	A	X			87,120	1237.6	$ 1,250.12	$88,000	$1.01	19,200	$266,890	$13.90	$354,890	N	Light manufacturing; no impact to buildings; Carolina Furniture Warehouse & Greenleaf Apparel Inc.
3	90	7708476449	E & E Properties Inc	A	X			63,162	606.3	$ 625.23	$65,130	$1.03	18,038	$171,510	$9.51	$236,640	N	Industrial; no impact to buildings (1 AC commercial; 0.450 AC agricultural).
3	91	7708477324	Blake, John A., Jr. & Minnie L.	A		X		9,767	44.5	$ 22.25	$4,880	$0.50	800	$6,840	$8.55	$11,720	N	No impact to structure; building appears to be a private garage.
3	92	7708475256	Blake, John A., Jr. & Minnie L.	A	X			30,056	1772.8	$ 2,389.42	$40,510	$1.35	12,051	$189,530	$15.73	$230,040	Y	Light manufacturing; no impact to office-warehouse building; impacts parking & on-site traffice flow; Blakeline Furniture.
3	93	7708464997	McPherson, John A. & Linda C.	A	X			37,897	6386.3	$ 16,489.24	$97,850	$2.58	2,930	$171,130	$58.41	$268,980	Y	General commerical; restaurant; significant impact to parking; Archdale Barbeque.
2 & 3	94	7708451277	Gunn, Rebekah McBane	A			X	894,287	79648.9	$ 10,886.32	$122,230	$0.14				$122,230	N	Agricultural acreage.
2	95	7708440516	Trindale Pentacostal Holiness Ch	A	X			178,596	5954.0	$ 1,453.53	$43,600	$0.24	52,388	$2,506,560	$47.85	$2,550,160	N	Church; no impact to buildings; may impact parking.
2	96	7708440224	Walker, James Leroy	A	X			217,800	7181.4	$ 3,481.90	$105,600	$0.48	24,000	$328,280	$13.68	$433,880	N	Light manufacturing; no impact to buildings; W & W Furniture.
2	97	7708339888	Welborn, Robert L. & Joyce T.	A			X	235,224	15598.4	$ 2,990.71	$45,100	$0.19				$45,100	N	1 AC undeveloped; 4.4 AC agricultural.
2	98	7708339446	North Carolina West District	A	X			287,496	17158.1	$ 4,631.25	$77,600	$0.27	11,232	$550,580	$49.02	$628,180	N	Church & parsonage; no impact to buildings; (2 AC primary site; 4.6 AC agriculture).
2	99	7708337142	Cagle, Clifford Claude, Jr.	A			X	77,972	10362.4	$ 1,427.32	$10,740	$0.14				$10,740	N	Agricultural acreage.
2	100	7708326777	Cook, Roger & Mildred	A		X		170,755	1377.0	$ 342.88	$42,520	$0.25	1,993	$58,490	$29.35	$101,010	N	SFR; frame with siding; 1 AC primary site; 2.92 AC agricultural.
2	101	7708324582	High Point Church of God	A			X	69,696	33528.1	$ 4,618.20	$9,600	$0.14				$9,600	N	Agricultural acreage.
2	102	7708324118	Hudspeth, Pattie Conrad	A			X	22,216	5624.6	$ 2,415.38	$9,540	$0.43				$9,540	N	Undeveloped.
2	103	7708324009	Aikens, Jimmy & Gertrude	A		X		26,136	6232.1	$ 3,576.71	$15,000	$0.57	864	$21,560	$24.95	$36,560	Y	SFR; frame with siding.
2	104	7708313986	D W Morgan Electric Co Inc.	A			X	47,045	9248.3	$ 3,971.00	$20,200	$0.43				$20,200	N	Undeveloped.
2	105	7708313766	Fivecoat, Lavada J.	A		X		55,757	10797.3	$ 5,166.58	$26,680	$0.48	2,407	$57,070	$23.71	$83,750	Y	SFR; brick; 1 AC primary site; .280 AC agricultural.
2	106	7708313557	Lamb, Clifton H.	A		X		67,518	14555.0	$ 6,100.68	$28,300	$0.42	1,044	$28,070	$26.89	$56,370	Y	SFR; frame with siding; 1 AC primary site; .550 AC agricultural.
2	107	7708317064	City of Trinity	A		X		1,366,913	10766.6	$ 3,472.22	$440,830	$0.32	2,091	$78,670	$37.62	$519,500	N	SFR; frame with siding; 1 AC primary site; 30.380 AC residual.
2	108	7708303637	Hutchins, Billy Ray & Helen S.	A		X		80,150	4772.9	$ 1,788.84	$30,040	$0.37	1,600	$31,440	$19.65	$61,480	N	SFR; wood frame home.
1 & 2	109	7708305365	Hutchins, Billy Ray & Helen S.	A			X	686,941	9549.7	$ 1,315.38	$94,620	$0.14				$94,620	N	Agricultural acreage.
1	110	7707392536	Johnson, Charles Larry & Jean	A			X	821,542	18034.7	$ 2,901.22	$132,160	$0.16		$800		$132,960	N	1 AC primary site; 17.860 agricultural; misc site improvements.
1	111	7707294022	Wall, J. Lyndon & Kay D.	A			X	28,314	9083.1	$ 1,251.11	$3,900	$0.14				$3,900	N	Agricultural.
1	112	7707283845	Paschal, Wesley Jackson Jr. & Diane	A			X	33,541	3247.2	$ 447.27	$4,620	$0.14				$4,620	N	Agricultural.
1	113	7707283639	Paschal, Diane G.	A			X	39,204	3.5	$ 0.33	$3,780	$0.10				$3,780	N	Agricultural.
1	114	7707189064	Wall Properties LLC	A		X		178,160	3105.8	$ 750.82	$43,070	$0.24	1,632	$78,520	$48.11	$121,590	N	SFR; brick; 1 AC primary site; 3.09 AC agricultural.
1	115	7707270109	Wise, Loretta D.	A			X	172,062	11279.8	$ 2,781.57	$42,430	$0.25				$42,430	N	1 AC primary site; 2.950 AC agricultural; site appears to be improved on the aerial.

Preliminary Right of Way Estimate

SURRETT DRIVE - ULTIMATE DESIGN

	Date:	August 19, 2008			COST EST. #:		Conceptual						PROJ.:	Surrett Drive			FROM:	I-85	TO:	Bus. I-85
	ALT.:	Ultimate Design			FAP #:		N/A						COUNTIES:	Randolph and Guilford						
MAP	PAR	PARCEL ID	OWNER	DESIGN	LAND USE			LAND	Land Take	Land Take	LAND ASSESSED		IMP	IMP ASSESSED		TOTAL ASSESSED	RELO	Current use i.e. fast food, bank, industrial warehouse etc & type of building i.e. metal, cb, frame etc.			
PG	NO	NUMBER	NAME	SECTION	C	R	V	SQ. FT.	SF	$	VALUE	$/SQ. FT.	SQ. FT.	VALUE	$/SQ. FT.	VALUE	Y or N				
1	116	7707277415	Aikens, Andy & Keith	A	X			309,712	4997.8	$ 2,340.34	$145,030	$0.47	27,505	$455,990	$16.58	$601,020	N	Light manufacturing; 3 AC primary site; 4.110 AC agricultural; 10,625 SF warehouse; 1,352 SF duplex; 15,384 SF multi-unit warehouse; JRW Enterprises.			
1	117	7707266968	First Triad Investments Inc.	A	X			43,560	1452.6	$ 2,685.84	$80,540	$1.85	1,200	$27,990	$23.33	$108,530	N	General commercial; retail store; The Communications Center.			
1	118	7707263538	Labonte Racing Inc.	A	X			385,942	5672.5	$ 3,486.33	$237,200	$0.61	25,840	$600,360	$23.23	$837,560	N	General commercial; 1 AC commercial; 7.860 AC agricultural; auto parts/service; Labonte Racing.			
1	119	7707260872	Davidson Water Inc.	A			X	2,178	589.5	$ 37.89	$140	$0.06				$140	N	Residual acreage.			
			Total this page:		41	28	50			$ 724,277.89						11,654,960	22				
								Contingency Factor of 3*		$ 2,172,833.68						$ 34,964,880.00		Grand Total		$ 37,137,713.68	
* Contingency Factor of 3 includes market value and relocation costs																		Section A	$ 4,331,745.13	Section B	$ 32,805,968.55

Preliminary Right of Way Estimate
SURRETT DRIVE - MAJOR WIDENING OPTION

Date: August 19, 2008 | COST EST. #: Conceptual | PROJ.: Surrett Drive | FROM: I-85 | TO: Bus. I-85
ALT.: Major Widening Option | FAP #: N/A | COUNTIES: Randolph and Guilford

MAP PG	PAR NO	PARCEL ID NUMBER	OWNER NAME	DESIGN SECTION	LAND USE C	LAND USE R	LAND USE V	LAND SQ. FT.	Land Take SF	Land Take $	LAND ASSESSED VALUE	$/SQ. FT.	IMP SQ. FT.	IMP ASSESSED VALUE	$/SQ. FT.	TOTAL ASSESSED VALUE	RELO Y or N	Current use i.e. fast food, bank, industrial warehouse etc & type of building i.e. metal, cb, frame etc.
1	1	7707166546	Communityone	A	X			66,211	2591.97		$131,200	$1.98	4,455	$425,390	$95.49	$556,590	Y	General commercial; CB/brick; First National Bank; significant impact to parking; no room for a cure.
1	2	7707164533	Miller, Alice C.	A		X		69,260	2968.34	$ 1,223.16	$28,540	$0.41	1,984	$66,260	$33.40	$94,800	N	SFR; frame with siding; 1 AC primary site; .590 AC agricultural.
1	3	7707171040	Slaughter, James B & Ann	A		X		154,638	2671.12	$ 693.70	$40,160	$0.26	4,976	$117,110	$23.53	$157,270	N	SFR; brick; agricultural acreage.
1	4	7707163991	Grant, David Eugene & Ball, Ann G.	A			X	152,460	3263.02	$ 720.41	$33,660	$0.22				$33,660	N	Agricultural acreage.
1	5	7707166814	Stone, James A et al	A		X		45,302	3612.46	$ 2,012.66	$25,240	$0.56	2,007	$65,610	$32.69	$90,850	N	SFR; brick; agricultural acreage.
1	6	7707167832	Stone, James A et al	A			X	5,663	783.04	$ 53.93	$390	$0.07				$390	N	Residual acreage.
1	7	7707177042	Stone, James A et al	A			X	42,689	590.21	$ 79.91	$5,780	$0.14				$5,780	N	Agricultural acreage.
1	8	7707176955	Duncan, Paul M & Edith H.	A			X	13,939	5941.79	$ 409.21	$960	$0.07				$960	N	Residual acreage.
1	9	7707193250	Duncan, Paul M & Edith H.	A		X		1,120,363	9953.55	$ 1,384.52	$155,840	$0.14	1,984	$86,950	$43.83	$242,790	N	SFR; brick; agricultural acreage.
1	10	7707282433	Wall, J. Lyndon & Kay D.	A			X	236,095	10364.42	$ 1,368.78	$31,180	$0.13				$31,180	N	Agricultural acreage.
1	11	7707291230	Wall Properties LLC	A	X			348,916	7728.11	$ 2,310.35	$104,310	$0.30	11,466	$234,680	$20.47	$338,990	N	Industrial; 1 AC commercial; remainder agricultural acreage; 10,000 SF steel warehouse; 996 SF frame enclosure; Bryant Electric.
1	12	7707292857	Wall, J. Lyndon & Kay D.	A			X	724,403	1478.24	$ 160.76	$78,780	$0.11				$78,780	N	Agricultural acreage.
1 & 2	13	7708207268	P G Properties LLC	A	X			404,672	10358.06	$ 4,337.27	$169,450	$0.42	37,800	$499,220	$13.21	$668,670	N	Industrial; 3 AC commercial; 6.290 AC agricultural; 31,250 SF metal warehouse (truck terminal); 3,750 SF frame enclosure; 2,800 SF auto service garage; Carolina Pacific Distributors.
2	14	7708118367	Randolph Co Board of Education	A			X	3,030,905	562.75	$ 131.54	$708,450	$0.23				$708,450	N	57.530 AC agricultural; 12.050 AC residual.
2	15	7708208979	Aikens R. Keith & Wanda et al	A			X	129,373	3307.72	$ 2,307.96	$90,270	$0.70				$90,270	N	Undeveloped.
2	16	7708219206	Aikens R. Keith & Wanda et al	A	X			114,563	3056.57	$ 2,109.35	$79,060	$0.69	21,280	$365,640	$17.18	$444,700	N	Industrial; 2 AC commercial; .630 AC agricultural; 20,000 SF metal warehouse; 392 SF frame enclosure; multi-tenant building.
2	17	7708219429	C M D Partnership	A	X			102,366	1578.85	$ 1,170.96	$75,920	$0.74	26,700	$367,200	$13.75	$443,120	N	Light manufacturing; 2 AC commercial; .350 AC agricultural; metal bldg; High Point Bedding, Inc.
2	18	7708218706	Daniels, Jerry R. & Susan A.	A	X			255,262	1727.96	$ 780.04	$115,230	$0.45	32,750	$446,520	$13.63	$561,750	N	Light Manufacturing; 2 AC commercial; 3.86 AC agricultural; 28,000 SF metal bldg; 4,750 SF frame enclosure; High Point Bedding, Inc.
2	19	7708310945	Hedrick, Vera Louise	A		X		47,916	2691.06	$ 1,437.75	$25,600	$0.53	1,742	$35,990	$20.66	$61,590	N	SFR; wood frame; 1AC primary site; .100 AC agricultural.
2	20	7708321019	Stoneman, Clarence & Brenda	A		X		19,166	1036.53	$ 811.21	$15,000	$0.78	1,442	$30,750	$21.32	$45,750	N	SFR; wood frame.
2	21	7708321139	Leach, Fred T. & Betsy H.	A			X	21,780	1089.06	$ 467.53	$9,350	$0.43				$9,350	N	Undeveloped.
2	22	7708322219	Proctor, L. M.	A			X	41,818	6858.94	$ 2,944.17	$17,950	$0.43				$17,950	N	Undeveloped.
2	23	7708322400	Cochran, George Michael	A			X	21,780	1253.46	$ 538.10	$9,350	$0.43				$9,350	N	Undeveloped.
2	24	7708322640	Gammons, Doris H.	A		X		48,787	3173.33	$ 1,821.24	$28,000	$0.57	3,660	$88,040	$24.05	$116,040	N	SFR; log home.
2	25	7708321714	Gammons, Doris H.	A			X	71,003	1690.33	$ 535.17	$22,480	$0.32				$22,480	N	1 AC undeveloped; .630 AC agricultural.
2	26	7708323804	R & T Lumber Sales LLC	A			X	28,314	1641.26	$ 704.87	$12,160	$0.43				$12,160	N	Undeveloped.
2	27	7708323924	Idol, Joey G. & Tammy J.	A			X	29,185	1883.26	$ 808.53	$12,530	$0.43				$12,530	N	Undeveloped.
2	28	7708333033	Leach, Fred T. & Betsy H.	A			X	30,492	22122.18	$ 9,496.90	$13,090	$0.43				$13,090	N	Undeveloped.
2	29	7708334108	Guil-Rand Fire Protection Assoc Inc.	A	X			46,609	5247.73	$ 1,899.39	$16,870	$0.36	3,780	$243,030	$64.29	$259,900	N	General commercial; .550 AC primary site; .520 AC agricultural; fire rescue station?
2	30	7708334322	Guil-Rand Fire Protection Assoc Inc.	A			X	25,265	2429.47	$ 334.64	$3,480	$0.14				$3,480	N	Agricultural.
2	31	7708332245	Guil-Rand Fire Protection Assoc Inc.	A			X	30,056	3718.04	$ 512.13	$4,140	$0.14				$4,140	N	Agricultural.
2	32	7708331137	Kestler, Mary Ina	A			X	46,609	7777.14	$ 3,338.84	$20,010	$0.43				$20,010	N	Undeveloped.
2	33	7708330148	Proctor, L. M.	A			X	47,480	8773.70	$ 1,208.50	$6,540	$0.14				$6,540	N	Agricultural.
2	34	7708239138	R & T Lumber Sales LLC	A			X	40,075	9145.36	$ 1,259.69	$5,520	$0.14				$5,520	N	Agricultural.
2	35	7708238246	R & T Lumber Sales LLC	A			X	26,572	8372.02	$ 3,594.99	$11,410	$0.43				$11,410	N	Undeveloped.
2	36	7708237245	Clapp, Patricia Kestler et al	A			X	23,522	7977.88	$ 3,425.53	$10,100	$0.43				$10,100	N	Undeveloped.
2	37	7708234220	Hayworth, Hunter J	A		X		94,961	9957.33	$ 3,363.82	$32,080	$0.34	1,992	$69,540	$34.91	$101,620	N	SFR; Brick; 1 AC primary site; 1.180AC agricultural.
2	38	7708332519	Faith Baptist Church Archdale	A	X			224,770	8257.71	$ 4,739.27	$129,000	$0.57	10,512	$450,890	$42.89	$579,890	N	Church; Metal bldg; significant impact to parking.
2	39	7708331973	Bouldin, Ora M. Trust	A			X	374,616	11082.28	$ 2,088.56	$70,600	$0.19				$70,600	N	1 AC primary site; 7.6 AC agricultural.
2	40	7708344464	Walker, Lawrence E. & Patricia B.	A	X			283,140	10794.61	$ 4,666.46	$122,400	$0.43	12,600	$311,260	$24.70	$433,660	N	General commercial; 2 AC commercial; 4.5 AC agricultural; Metal bldg; 1,920 SF office; 10,680 SF auto service; Larry Walker & Sons Body Shop.
2	41	7708346853	Bryant, Nancy D.	A		X		27,999	2335.26	$ 1,808.22	$21,680	$0.77	1,760	$68,280	$38.80	$89,960	N	SFR; brick.
2	42	7708357008	Benson, John E. & Barbara A.	A		X		40,264	1491.21	$ 898.49	$24,260	$0.60	2,052	$89,330	$43.53	$113,590	N	SFR; brick.

Preliminary Right of Way Estimate
SURRETT DRIVE - MAJOR WIDENING OPTION

Date: August 19, 2008 | COST EST. #: Conceptual | PROJ.: Surrett Drive | FROM: I-85 | TO: Bus. I-85
ALT.: Major Widening Option | FAP #: N/A | COUNTIES: Randolph and Guilford

MAP PG	PAR NO	PARCEL ID NUMBER	OWNER NAME	DESIGN SECTION	LAND USE C	LAND USE R	LAND USE V	LAND SQ. FT.	Land Take SF	Land Take $	LAND ASSESSED VALUE	$/SQ. FT.	IMP SQ. FT.	IMP ASSESSED VALUE	$/SQ. FT.	TOTAL ASSESSED VALUE	RELO Y or N	Current use i.e. fast food, bank, industrial warehouse etc & type of building i.e. metal, cb, frame etc.
2	43	7708355274	Greer, Patricia R.	A		X		58,370	249.94	$ 108.12	$25,250	$0.43	2,572	$97,190	$37.79	$122,440	N	SFR; brick.
2	44	7708357383	BDC Associates Inc.	A			X	8,796	0.00	$ -	$2,200	$0.25				$2,200	N	Residual acreage.
3	45	7708462506	Hollinger, John C. III & Pattie J.	A		X		15,682	965.25	$ 1,888.45	$30,680	$1.96	4,238	$170,660	$40.27	$201,340	N	SFR; frame with siding.
3	46	7708462815	Kingsfield Townhomes LLC	A		X		75,359	1774.14	$ -		$0.00				$0	N	Multi-family residential; land area for common areas only - not parent tract; land and improvements are assessed by individual units.
3	47	7708471163	Schwarz, Jeffrey	A	X			179,903	3255.64	$ 2,649.90	$146,430	$0.81	72,775	$1,428,990	$19.64	$1,575,420	N	Industrial; 3 AC commercial; 1.130 AC agricultural; 66,000 SF cb warehouse; 6,775 wood frame enclosure; Momentum Group.
3	48	7708379629	Swiggett, James R. et al	A			X	872,071	22932.64	$ 11,845.37	$450,450	$0.52				$450,450	N	Agricultural.
3	49	7708480188	Cloverdale Church of the Living God	A			X	435,600	20123.86	$ 10,394.56	$225,000	$0.52				$225,000	N	Agricultural.
3	50A	7708484614	Sellers, William Marvin Sr. & Nancy	B		X		31,799	7074.45	$ 5,001.25	$22,480	$0.71	2,540	$92,420	$36.39	$114,900	N	SFR; masonry/frame.
3	50B	7708483603	Sellers, William Marvin Sr. & Nancy	B				15,682	0.00	$ -	$17,840	$1.14				$17,840	N	This site does not have any direct impact but is contiguous to and appears to be part of the home site.
3	56	7709306012	M.5 Corp	B	X			650,786	13803.34	$ 10,923.70	$515,020	$0.79	302,100	$4,402,100	$14.57	$4,917,120	N	Light manufacturing; CB & brick bldg; 7,760 SF office; 293,060 SF manufacturing; minor impact; should be curable.
3	57A	00-0112-0-0003-00-(	Service Distributing Co Inc.	B				32,670	7675.86	$ 15,130.87	$64,400	$1.97				$64,400	N	Commercial; site is impacted but not counted separately due to "parent tract".
3	57B	00-0112-0-0003-00-(	Service Distributing Co Inc.	B				25,265	0.00	$ -	$23,800	$0.94				$23,800	N	Commercial; no direct impact to site, but included in parent tract.
3	57C	00-0112-0-0003-00-(	Service Distributing Co Inc.	B	X			33,106	10112.45	$ 14,967.57	$49,000	$1.48				$49,000	N	Industrial; improved site but no building assessment available; impact to building & semi trailer storage; potential relo, but would probably try to cure site.
3	57D	00-0112-0-0003-00-(	Service Distributing Co Inc.	B				33,106	0.00	$ -	$28,000	$0.85				$28,000	N	Industrial; improved but no building assessment available; no direct impact to site, but included in parent tract.
3	58	00-0112-0-0003-00-(	Wilcohess LLC	B	X			36,155	6745.11	$ 8,040.82	$43,100	$1.19	7,917	$336,700	$42.53	$379,800	Y	General commercial; gas station/convenience store; impact to site could be enough to cause relo.
3	59	00-0273-0-0002-00-(	High Point Industrial Leasing	B	X			226,512	249.68	$ 343.91	$312,000	$1.38	132,801	$2,392,500	$18.02	$2,704,500	N	Industrial; very minor impact - land only.
3	60	00-0273-0-0002-00-(	Darr, Henry H. J. L. Jr. & High Point Industrial Leasing Co.	B			X	23,958	333.12	$ 718.85	$51,700	$2.16				$51,700	N	Industrial acreage.
3	61A	00-0112-0-0001-00-(	Smith & Shore Oil Co	B	X			28,750	9481.37	$ 18,666.20	$56,600	$1.97	2,606	$100,400	$38.53	$157,000	Y	General commercial; convenience store (2,110 SF frame building with 496 SF canopy).
3	61B	00-0112-0-0001-00-(	Smith & Shore Oil Co	B				10,454	3010.55	$ 4,434.73	$15,400	$1.47				$15,400	N	Commercial acreage; site is impacted but not counted separately due to "parent tract".
3	62	00-0112-0-0001-00-(	Thomas Built Buses Inc C/O Laura Collins	B	X			74,052	2268.15	$ 3,194.62	$104,300	$1.41	31,664	$678,900	$21.44	$783,200	N	Industrial; warehouse (31,022 SF masonry building with 438 SF canopy and 204 SF unfinished storage).
3	63	00-0112-0-0001-00-(	Simanco Inc	B	X			22,216	5683.68	$ 5,654.10	$22,100	$0.99				$22,100	N	Industrial; improved site but no building assessment available.
3 & 4	64	00-0112-0-0001-00-(	Grand Central Express Inc	B	X			170,755	7781.19	$ 9,109.30	$199,900	$1.17	7,529	$411,000	$54.59	$610,900	N	General commercial; car wash (2,661 SF masonry building, with 96 SF canopy, 96 SF finished storage, 198 SF office, 522 SF unfinished storage, 1,456 SF SDA); Auto Sales Repair (2,500 SF steel building).
3 & 4	65	00-0112-0-0001-00-(	Varner Co	B		X		124,146	6650.95	$ 7,789.60	$145,400	$1.17	1,260	$2,700	$2.14	$148,100	N	SFR; frame.
4	66	00-0112-0-0001-00-(	Sartin, Edward L.	B	X			108,900	11399.06	$ 13,346.01	$127,500	$1.17	8,730	$200,100	$22.92	$327,600	N	General commercial; service or repair (7,770 SF steel building with 960 SF office).
4	67	00-0112-0-0001-00-(	Williard Investment LLC	B	X			30,928	5066.73	$ 7,093.64	$43,300	$1.40	14,658	$150,100	$10.24	$193,400	Y	Industrial; warehouse (14,338 SF masonry building with 16 SF canopy, 124 SF CLP, 180 SF unfinished storage).
4	68	00-0112-0-0001-00-(	West, Jimmy E. & Jo Ann	B			X	6,970	1809.08	$ 2,725.45	$10,500	$1.51				$10,500	N	Commercial.
4	69	00-0112-0-0001-00-(	Kingston Investments LLC	B	X			121,097	9594.75	$ 13,215.91	$166,800	$1.38	3,000	$78,700	$26.23	$245,500	N	General commercial; lounge-night club (3,000 SF steel building).
4	70	00-0063-0-0002-00-(	Saunders, David L. Family Limited Partnership	B	X			78,408	9238.86	$ 14,257.50	$121,000	$1.54	8,050	$123,400	$15.33	$244,400	Y	Industrial; warehouse (6,272 SF masonry building with 1,680 SF office and 98 SF canopy).
4	71	00-0063-0-0002-00-(	Saunders, David L. & Patricia W.	B	X			135,907	15807.77	$ 23,192.80	$199,400	$1.47	12,264	$233,600	$19.05	$433,000	Y	Industrial; (11,400 SF steel building with 504 SF uncovered area and 360 SF canopy).

Preliminary Right of Way Estimate
SURRETT DRIVE - MAJOR WIDENING OPTION

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MAP PG	PAR NO	PARCEL ID NUMBER	OWNER NAME	DESIGN SECTION	LAND USE C	LAND USE R	LAND USE V	LAND SQ. FT.	Land Take SF	Land Take $	LAND ASSESSED VALUE	$/SQ. FT.	IMP SQ. FT.	IMP ASSESSED VALUE	$/SQ. FT.	TOTAL ASSESSED VALUE	RELO Y or N	Current use i.e. fast food, bank, industrial warehouse etc & type of building i.e. metal, cb, frame etc.
4	72	00-0063-0-0002-00-(	Gable, Claude C. & Mickey H.	B	X			57,499	5499.13	$ 7,469.36	$78,100	$1.36	19,433	$371,100	$19.10	$449,200	Y	Light manufacturing; (18,464 SF masonry building with 393 SF canopy and 576 SF office).
4	73	00-0063-0-0003-00-(	Kester William V., Jr. & Robert L. Kester BB&T Attn SP Assets # 16885	B			X	21,780	778.09	$ 310.81	$8,700	$0.40				$8,700	N	Commercial.
4	74	00-0063-0-0003-00-(	Kester William V., Jr. & Robert L. Kester BB&T Attn SP Assets # 16885	B			X	16,553	1197.90	$ 1,773.02	$24,500	$1.48				$24,500	N	Commercial.
4	75	00-0063-0-0003-00-(	Kester William V., Jr. & Robert L. Kester BB&T Attn SP Assets # 16885	B			X	9,583	1071.59	$ 3,522.31	$31,500	$3.29				$31,500	N	Commercial.
4	76	00-0063-0-0003-00-(	Kester William V., Jr. & Robert L. Kester BB&T Attn SP Assets # 16885	B			X	153,767	17833.47	$ 23,137.49	$199,500	$1.30				$199,500	N	Commercial.
4	77	00-0063-0-0003-00-(	Kester William V., Jr. & Robert L. Kester BB&T Attn SP Assets # 16885	B	X			231,739	9451.71	$ 14,291.41	$350,400	$1.51	167,368	$6,348,400	$37.93	$6,698,800	N	General commercial; furniture show room (50,400 SF masonry building with 624 SF finished storage, 520 SF finished enclosed porch, and 50,400 SF finished upper story)/Furniture Show Room (21,720 SF masonry building with 264 SF finished storage, 21,720 SF semi-finished area, and 21,720 SF finished upper story).
4	78	00-0079-0-0002-00-(	Bradley, Cecil Edward, Jr. & Ruby, Louise H.	B	X			335,848	18675.16	$ 23,910.60	$430,000	$1.28	117,996	$1,969,500	$16.69	$2,399,500	N	Industrial; (101,726 SF masonry building with 5,980 SF office, 3,020 SF CLP, and 480 SF canopy)/Warehouse (5,640 SF masonry building with 1,150 SF office).
4	79	00-0080-0-0001-00-(	HCS Properties LLC	B	X			137,214	6004.30	$ 6,651.32	$152,000	$1.11	49,201	$653,300	$13.28	$805,300	N	Industrial; office (1,750 SF masonry building)/Industrial (20,209 SF masonry building with 750 SF CLP, 420 SF finished storage, 600 SF office, and 600 SF mezzanine)/Industrial (11,150 SF masonry building)/Industrial (10,772 SF masonry building)/Warehouse (2,950 SF masonry building).
4	80	00-0080-0-0001-00-(	Stewart, H. Clifton, Sr. & Eva Mae	B			X	114,998	8346.89	$ 4,703.36	$64,800	$0.56				$64,800	N	Industrial acreage.
4	81	00-0043-0-0003-00-(	Ashley Manor Inc	B	X			150,718	691.12	$ 652.97	$142,400	$0.94	42,468	$635,900	$14.97	$778,300	N	Industrial; (40,824 SF masonry building with 300 SF CLP, 1,260 SF office, and 84 SF canopy.
4	82	00-0079-0-0001-00-(	N C State Highway Comm	B			X	153,331	6506.34	$ 3,182.49	$75,000	$0.49				$75,000	N	Unknown use.
3	92	7708475256	Blake, John A., Jr. & Minnie L.	A	X			30,056	585.59	$ 789.25	$40,510	$1.35	12,051	$189,530	$15.73	$230,040	N	Light manufacturing; no impact to office-warehouse building; may impact some parking; Blakeline Furniture.
3	93	7708464997	McPherson, John A. & Linda C.	A	X			37,897	4854.86	$ 12,535.17	$97,850	$2.58	2,930	$171,130	$58.41	$268,980	Y	General commercial; restaurant; significant impact to parking; Archdale Barbeque.
2 & 3	94	7708451277	Gunn, Rebekah McBane	A			X	894,287	56923.67	$ 7,780.26	$122,230	$0.14				$122,230	N	Agricultural acreage.
2	95	7708440516	Trindale Pentacostal Holiness Ch	A	X			178,596	4533.93	$ 1,106.85	$43,600	$0.24	52,388	$2,506,560	$47.85	$2,550,160	N	Church; no impact to buildings; may impact parking.
2	96	7708440224	Walker, James Leroy	A	X			217,800	6864.42	$ 3,328.20	$105,600	$0.48	24,000	$328,280	$13.68	$433,880	N	Light manufacturing; no impact to buildings; W & W Furniture.
2	97	7708339888	Welborn, Robert L. & Joyce T.	A			X	235,224	14557.67	$ 2,791.17	$45,100	$0.19				$45,100	N	1 AC undeveloped; 4.4 AC agricultural.
2	98	7708339446	North Carolina West District	A	X			287,496	15939.36	$ 4,302.30	$77,600	$0.27	11,232	$550,580	$49.02	$628,180	N	Church & parsonage; no impact to buildings; (2 AC primary site; 4.6 AC agriculture).
2	99	7708337142	Cagle, Clifford Claude, Jr.	A			X	77,972	9859.71	$ 1,358.09	$10,740	$0.14				$10,740	N	Agricultural acreage.
2	100	7708326777	Cook, Roger & Mildred	A		X		170,755	1043.76	$ 259.91	$42,520	$0.25	1,993	$58,490	$29.35	$101,010	N	SFR; frame with siding; 1 AC primary site; 2.92 AC agricultural.
2	101	7708324582	High Point Church of God	A			X	69,696	32003.83	$ 4,408.24	$9,600	$0.14				$9,600	N	Agricultural acreage.
2	102	7708324118	Hudspeth, Pattie Conrad	A			X	22,216	5354.22	$ 2,299.25	$9,540	$0.43				$9,540	N	Undeveloped.
2	103	7708324009	Aikens, Jimmy & Gertrude	A		X		26,136	5940.20	$ 3,409.21	$15,000	$0.57	864	$21,560	$24.95	$36,560	Y	SFR; frame with siding.
2	104	7708313986	D W Morgan Electric Co Inc.	A			X	47,045	8788.59	$ 3,773.63	$20,200	$0.43				$20,200	N	Undeveloped.
2	105	7708313766	Fivecoat, Lavada J.	A		X		55,757	10281.43	$ 4,919.73	$26,680	$0.48	2,407	$57,070	$23.71	$83,750	Y	SFR; brick; 1 AC primary site; .280 AC agricultural.
2	106	7708313557	Lamb, Clifton H.	A		X		67,518	13751.35	$ 5,763.84	$28,300	$0.42	1,044	$28,070	$26.89	$56,370	Y	SFR; frame with siding; 1 AC primary site; .550 AC agricultural.
2	107	7708317064	City of Trinity	A		X		1,366,913	8981.86	$ 2,896.65	$440,830	$0.32	2,091	$78,670	$37.62	$519,500	N	SFR; frame with siding; 1 AC primary site; 30.380 AC residual.
2	108	7708303637	Hutchins, Billy Ray & Helen S.	A		X		80,150	4193.11	$ 1,571.56	$30,040	$0.37	1,600	$31,440	$19.65	$61,480	N	SFR; wood frame home.
1 & 2	109	7708305365	Hutchins, Billy Ray & Helen S.	A			X	686,941	7907.19	$ 1,089.15	$94,620	$0.14				$94,620	N	Agricultural acreage.

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1	110	7707392536	Johnson, Charles Larry & Jean	A			X	821,542	15391.74	$ 2,476.04	$132,160	$0.16		$800		$132,960	N	1 AC primary site; 17.860 agricultural; misc site improvements.
1	111	7707294022	Wall, J. Lyndon & Kay D.	A			X	28,314	8070.99	$ 1,111.71	$3,900	$0.14				$3,900	N	Agricultural.
1	112	7707283845	Paschal, Wesley Jackson Jr. & Diane	A			X	33,541	2758.65	$ 379.98	$4,620	$0.14				$4,620	N	Agricultural.
1	114	7707189064	Wall Properties LLC	A		X		178,160	2072.53	$ 501.03	$43,070	$0.24	1,632	$78,520	$48.11	$121,590	N	SFR; brick; 1 AC primary site; 3.09 AC agricultural.
1	115	7707270109	Wise, Loretta D.	A			X	172,062	8363.20	$ 2,062.34	$42,430	$0.25				$42,430	N	1 AC primary site; 2.950 AC agricultural; appears improved on aerial.
1	116	7707277415	Aikens, Andy & Keith	A	X			309,712	3303.66	$ 1,547.02	$145,030	$0.47	27,505	$455,990	$16.58	$601,020	N	Light manufacturing; 3 AC primary site; 4.110 AC agricultural; 10,625 SF warehouse; 1,352 SF duplex; 15,384 SF multi-unit warehouse; JRW Enterprises.
1	117	7707266968	First Triad Investments Inc.	A	X			43,560	638.95	$ 1,181.39	$80,540	$1.85	1,200	$27,990	$23.33	$108,530	N	General commercial; retail store; The Communications Center.
1	118	7707263538	Labonte Racing Inc.	A	X			385,942	3047.09	$ 1,872.74	$237,200	$0.61	25,840	$600,360	$23.23	$837,560	N	General commercial; 1 AC commercial; 7.860 AC agricultural; auto parts/service; Labonte Racing.
1	119	7707260872	Davidson Water Inc.	A			X	2,178	289.11	$ 18.58	$140	$0.06				$140	N	Residual acreage.
2	120	7708366015	Clodfelter, Bobby R. & Shirley S.	A		X		572,378	2632.32	$ 508.36	$110,540	$0.19	10,927	$307,760	$28.17	$418,300	N	SFR; brick; 1 AC primary site; 1 AC secondary site; 11.140 AC agricultural.
2 & 3	121	7708461356	Helms, Eric & Karen	A		X		18,731	827.19	$ 1,489.58	$33,730	$1.80	2,591	$178,090	$68.73	$211,820	N	SFR; frame with siding.
4	122	00-0043-0-0004-00-(	Haines, H. H. Jr. & Janet Raynell D. Britt	B	X			37,462	779.92	$ 1,261.65	$60,600	$1.62	22,210	$397,900	$17.92	$458,500	N	Industrial; cb building.
			Total this page:		37	24	46			$ 447,049.77						2,859,050	11	
										Contingency Factor of 3* $ 1,341,149.30						$8,577,150.00		Grand Total $ 9,918,299.30

* Contingency Factor of 3 includes market value and relocation costs

Section A $ 3,541,878.42 Section B $ 6,376,420.88

Preliminary Right of Way Estimate

SURRETT DRIVE - TRAFFIC OPERATIONS IMPROVEMENT OPTION

Date: August 19, 2008 | COST EST. #: Conceptual | PROJ.: Surrett Drive | FROM: I-85 | TO: Bus. I-85

ALT.: Traffic Improvement Option | FAP #: N/A | COUNTIES: Randolph and Guilford

MAP PG	PAR NO	PARCEL ID NUMBER	OWNER NAME	DESIGN SECTION	LAND USE C	LAND USE R	LAND USE V	LAND SQ. FT.	Land Take SF	Land Take $	LAND ASSESSED VALUE	$/SQ. FT.	IMP SQ. FT.	IMP ASSESSED VALUE	$/SQ. FT.	TOTAL ASSESSED VALUE	RELO Y or N	Current use i.e. fast food, bank, industrial warehouse etc & type of building i.e. metal, cb, frame etc.
1	1	7707166546	Communityone	A	X			66,211	2159.36		$131,200	$1.98	4,455	$425,390	$95.49	$556,590	Y	General commercial; CB/brick; First National Bank; significant impact to parking; no room for a cure.
1	2	7707164533	Miller, Alice C.	A		X		69,260	3903.70	$ 1,608.59	$28,540	$0.41	1,984	$66,260	$33.40	$94,800	N	SFR; frame with siding; 1 AC primary site; .590 AC agricultural.
1	3	7707171040	Slaughter, James B & Ann	A		X		154,638	2667.35	$ 692.72	$40,160	$0.26	4,976	$117,110	$23.53	$157,270	N	SFR; brick; agricultural acreage.
1	4	7707163991	Grant, David Eugene & Ball, Ann G.	A			X	152,460	3263.05	$ 720.41	$33,660	$0.22				$33,660	N	Agricultural acreage.
1	5	7707166814	Stone, James A et al	A		X		45,302	3612.46	$ 2,012.66	$25,240	$0.56	2,007	$65,610	$32.69	$90,850	N	SFR; brick; agricultural acreage.
1	6	7707167832	Stone, James A et al	A			X	5,663	783.04	$ 53.93	$390	$0.07				$390	N	Residual acreage.
1	7	7707177042	Stone, James A et al	A			X	42,689	590.21	$ 79.91	$5,780	$0.14				$5,780	N	Agricultural acreage.
2	24	7708322640	Gammons, Doris H.	A		X		48,787	2118.35	$ 1,215.77	$28,000	$0.57	3,660	$88,040	$24.05	$116,040	N	SFR; log home.
2	25	7708321714	Gammons, Doris H.	A			X	71,003	1096.71	$ 347.22	$22,480	$0.32				$22,480	N	1 AC undeveloped; .630 AC agricultural.
2	26	7708323804	R & T Lumber Sales LLC	A			X	28,314	957.88	$ 411.38	$12,160	$0.43				$12,160	N	Undeveloped.
2	27	7708323924	Idol, Joey G. & Tammy J.	A			X	29,185	1060.85	$ 455.45	$12,530	$0.43				$12,530	N	Undeveloped.
2	28	7708333033	Leach, Fred T. & Betsy H.	A			X	30,492	19644.74	$ 8,433.35	$13,090	$0.43				$13,090	N	Undeveloped.
2	29	7708334108	Guil-Rand Fire Protection Assoc Inc.	A	X			46,609	2191.00	$ 793.02	$16,870	$0.36	3,780	$243,030	$64.29	$259,900	N	General commercial; .550 AC primary site; .520 AC agricultural; fire rescue station?
2	30	7708334322	Guil-Rand Fire Protection Assoc Inc.	A			X	25,265	830.26	$ 114.36	$3,480	$0.14				$3,480	N	Agricultural.
2	31	7708332245	Guil-Rand Fire Protection Assoc Inc.	A			X	30,056	3070.55	$ 422.94	$4,140	$0.14				$4,140	N	Agricultural.
2	32	7708331137	Kestler, Mary Ina	A			X	46,609	6610.91	$ 2,838.16	$20,010	$0.43				$20,010	N	Undeveloped.
2	33	7708330148	Proctor, L. M.	A			X	47,480	7457.64	$ 1,027.22	$6,540	$0.14				$6,540	N	Agricultural.
2	34	7708239138	R & T Lumber Sales LLC	A			X	40,075	7773.98	$ 1,070.80	$5,520	$0.14				$5,520	N	Agricultural.
2	35	7708238246	R & T Lumber Sales LLC	A			X	26,572	7115.92	$ 3,055.62	$11,410	$0.43				$11,410	N	Undeveloped.
2	36	7708237245	Clapp, Patricia Kestler et al	A			X	23,522	6779.81	$ 2,911.10	$10,100	$0.43				$10,100	N	Undeveloped.
2	37	7708234220	Hayworth, Hunter J	A		X		94,961	10281.59	$ 3,473.36	$32,080	$0.34	1,992	$69,540	$34.91	$101,620	N	SFR; brick; 1 AC primary site; 1.180AC agricultural.
2	38	7708332519	Faith Baptist Church Archdale	A	X			224,770	1415.23	$ 812.23	$129,000	$0.57	10,512	$450,890	$42.89	$579,890	N	Church; metal bldg; significant impact to parking.
3	45	7708462506	Hollinger, John C. III & Pattie J.	A		X		15,682	1179.69	$ 2,307.99	$30,680	$1.96	4,238	$170,660	$40.27	$201,340	N	SFR; frame with siding.
3	46	7708462815	Kingsfield Townhomes LLC	A		X		75,359	1256.66	$ -		$0.00				$0	N	Multi-family residential; land area for common areas only - not parent tract; land and improvements are assessed by individual units.
3	48	7708379629	Swiggett, James R. et al	A			X	872,071	9010.79	$ 4,654.33	$450,450	$0.52				$450,450	N	Agricultural.
3	49	7708480188	Cloverdale Church of the Living God	A			X	435,600	7693.34	$ 3,973.83	$225,000	$0.52				$225,000	N	Agricultural.
3	50A	7708484614	Sellers, William Marvin Sr. & Nancy	B		X		31,799	4279.00	$ 3,025.02	$22,480	$0.71	2,540	$92,420	$36.39	$114,900	N	SFR; masonry/frame.
3	50B	7708483603	Sellers, William Marvin Sr. & Nancy	B				15,682	886.39	$ 1,008.39	$17,840	$1.14				$17,840	N	This site does not have any direct impact but is contiguous to and appears to be part of home site.
3	56	7709306012	M.5 Corp	B	X			650,786	1752.11	$ 1,386.58	$515,020	$0.79	302,100	$4,402,100	$14.57	$4,917,120	N	Light manufacturing; CB & brick bldg; 7,760 SF office; 293,060 SF manufacturing; minimal impact.
3	57A	18-00-0112-0-0003-00-003	Service Distributing Co Inc.	B				32,670	4093.25	$ 8,068.73	$64,400	$1.97				$64,400	N	Commercial; site is impacted but not counted separately due to "parent tract".
3	57B	18-00-0112-0-0003-00-004	Service Distributing Co Inc.	B				25,265	0.00	$ -	$23,800	$0.94				$23,800	N	Commercial; no direct impact to this site but included in parent tract.
3	57C	18-00-0112-0-0003-00-005	Service Distributing Co Inc.	B	X			33,106	4066.32	$ 6,018.61	$49,000	$1.48				$49,000	N	Industrial; improved site but no building assessment available; impact to building & semi trailer storage; potential relo, but would probably try to cure site.
3	57D	18-00-0112-0-0003-00-006	Service Distributing Co Inc.	B				33,106	0.00	$ -	$28,000	$0.85				$28,000	N	Industrial; improved but no building assessment available; no direct impact to this site but included in parent tract.
3	58	18-00-0112-0-0003-00-007	Wilcohess LLC	B	X			36,155	3575.52	$ 4,262.36	$43,100	$1.19	7,917	$336,700	$42.53	$379,800	N	General commercial; gas station/convenience store; impact to site could be enough to cause relo.
3	59	18-00-0273-0-0002-00-012	High Point Industrial Leasing	B	X			226,512	267.94	$ 369.06	$312,000	$1.38	132,801	$2,392,500	$18.02	$2,704,500	N	Industrial; very minor impact - land only.
3	61A	18-00-0112-0-0001-00-003	Smith & Shore Oil Co	B	X			28,750	2011.97	$ 3,961.02	$56,600	$1.97	2,606	$100,400	$38.53	$157,000	N	General commercial; convenience store (2,110 SF frame building with 496 SF canopy).
3	61B	18-00-0112-0-0001-00-004	Smith & Shore Oil Co	B				10,454	377.80	$ 556.53	$15,400	$1.47				$15,400	N	Commercial acreage; site is impacted but not counted separately due to "parent tract".
3	62	18-00-0112-0-0001-00-002	Thomas Built Buses Inc C/O Laura Collins	B	X			74,052	188.46	$ 265.44	$104,300	$1.41	31,664	$678,900	$21.44	$783,200	N	Industrial; warehouse (31,022 SF masonry building with 438 SF canopy and 204 SF unfinished storage).
3	63	18-00-0112-0-0001-00-012	Simanco Inc	B	X			22,216	426.83	$ 424.61	$22,100	$0.99				$22,100	N	Industrial; improved site but no building assessment available.

Preliminary Right of Way Estimate

SURRETT DRIVE - TRAFFIC OPERATIONS IMPROVEMENT OPTION

Date: August 19, 2008 | COST EST. #: Conceptual | PROJ.: Surrett Drive | FROM: I-85 | TO: Bus. I-85

ALT.: Traffic Improvement Option | FAP #: N/A | COUNTIES: Randolph and Guilford

MAP PG	PAR NO	PARCEL ID NUMBER	OWNER NAME	DESIGN SECTION	LAND USE C	LAND USE R	LAND USE V	LAND SQ. FT.	Land Take SF	Land Take $	LAND ASSESSED VALUE	$/SQ. FT.	IMP SQ. FT.	IMP ASSESSED VALUE	$/SQ. FT.	TOTAL ASSESSED VALUE	RELO Y or N	Current use i.e. fast food, bank, industrial warehouse etc & type of building i.e. metal, cb, frame etc.
3 & 4	64	18-00-0112-0-0001-00-005	Grand Central Express Inc	B	X			170,755	308.56	$ 361.22	$199,900	$1.17	7,529	$411,000	$54.59	$610,900	N	General commercial; car wash (2,661 SF masonry building, with 96 SF canopy, 96 SF finished storage, 198 SF office, 522 SF unfinished storage, 1,456 SF SDA); Auto Sales Repair (2,500 SF steel building).
4	71	18-00-0063-0-0002-00-002	Saunders, David L. & Patricia W.	B	X			135,907	5133.01	$ 7,531.04	$199,400	$1.47	12,264	$233,600	$19.05	$433,000	N	Industrial; (11,400 SF steel building with 504 SF uncovered area and 360 SF canopy).
4	72	18-00-0063-0-0002-00-003	Gable, Claude C. & Mickey H.	B	X			57,499	1709.91	$ 2,322.54	$78,100	$1.36	19,433	$371,100	$19.10	$449,200	N	Light manufacturing; (18,464 SF masonry building with 393 SF canopy and 576 SF office).
4	73	18-00-0063-0-0003-00-001	Kester William V., Jr. & Robert L. Kester BB&T Attn SP Assets # 16885	B			X	21,780	1598.69	$ 638.59	$8,700	$0.40				$8,700	N	Commercial.
4	74	18-00-0063-0-0003-00-002	Kester William V., Jr. & Robert L. Kester BB&T Attn SP Assets # 16885	B			X	16,553	2302.27	$ 3,407.61	$24,500	$1.48				$24,500	N	Commercial.
4	75	18-00-0063-0-0003-00-005	Kester William V., Jr. & Robert L. Kester BB&T Attn SP Assets # 16885	B			X	9,583	1406.40	$ 4,622.83	$31,500	$3.29				$31,500	N	Commercial.
4	78	18-00-0079-0-0002-00-001	Bradley, Cecil Edward, Jr. & Ruby, Louise H.	B	X			335,848	887.79	$ 1,136.67	$430,000	$1.28	117,996	$1,969,500	$16.69	$2,399,500	N	Industrial; (101,726 SF masonry building with 5,980 SF office, 3,020 SF CLP, and 480 SF canopy)/Warehouse (5,640 SF masonry building with 1,150 SF office).
4	82	18-00-0079-0-0001-00-015	N C State Highway Comm	B			X	153,331	3365.76	$ 1,646.32	$75,000	$0.49				$75,000	N	Unknown use.
3	88	7708485076	Darr, J.L., Jr. & Carol L.	A			X	10,454	2876.93	$ 1,078.74	$3,920	$0.37				$3,920	N	Residential acreage.
3	89	7708476656	Lewis, Jack F. et al	A	X			87,120	5365.61	$ 5,419.81	$88,000	$1.01	19,200	$266,890	$13.90	$354,890	N	Light manufacturing; no impact to buildings; Carolina Furniture Warehouse & Greenleaf Apparel.
3	90	7708476449	E & E Properties Inc	A	X			63,162	3389.75	$ 3,495.37	$65,130	$1.03	18,038	$171,510	$9.51	$236,640	N	Industrial; no impact to buildings (1 AC commercial; 0.450 AC agricultural).
3	91	7708477324	Blake, John A., Jr. & Minnie L.	A		X		9,767	268.19	$ 134.00	$4,880	$0.50	800	$6,840	$8.55	$11,720	N	No impact to structure; building appears to be a private garage.
3	92	7708475256	Blake, John A., Jr. & Minnie L.	A	X			30,056	3204.11	$ 4,318.49	$40,510	$1.35	12,051	$189,530	$15.73	$230,040	Y	Light manufacturing; no impact to office-warehouse building; impacts parking & on-site traffice flow; Blakeline Furniture.
3	93	7708464997	McPherson, John A. & Linda C.	A	X			37,897	616.46	$ 1,591.68	$97,850	$2.58	2,930	$171,130	$58.41	$268,980	N	General commerical; restaurant; minimal impact; Archdale Barbeque.
2 & 3	94	7708451277	Gunn, Rebekah McBane	A			X	894,287	3606.75	$ 492.97	$122,230	$0.14				$122,230	N	Agricultural acreage.
2	98	7708339446	North Carolina West District	A	X			287,496	2982.23	$ 804.95	$77,600	$0.27	11,232	$550,580	$49.02	$628,180	N	Church & parsonage; no impact to buildings; (2 AC primary site; 4.6 AC agriculture).
2	99	7708337142	Cagle, Clifford Claude, Jr.	A			X	77,972	3920.51	$ 540.02	$10,740	$0.14				$10,740	N	Agricultural acreage.
2	101	7708324582	High Point Church of God	A			X	69,696	5913.09	$ 814.47	$9,600	$0.14				$9,600	N	Agricultural acreage.
1	115	7707270109	Wise, Loretta D.	A			X	172,062	7829.13	$ 1,930.64	$42,430	$0.25				$42,430	N	1 AC primary site; 2.950 AC agricultural; site appears to be improved on aerial.
1	116	7707277415	Aikens, Andy & Keith	A	X			309,712	4320.03	$ 2,022.96	$145,030	$0.47	27,505	$455,990	$16.58	$601,020	N	Light manufacturing; 3 AC primary site; 4.110 AC agricultural; 10,625 SF warehouse; 1,352 SF duplex; 15,384 SF multi-unit warehouse; JRW Enterprises.
1	117	7707266968	First Triad Investments Inc.	A	X			43,560	1201.98	$ 2,222.39	$80,540	$1.85	1,200	$27,990	$23.33	$108,530	N	General commercial; retail store; The Communications Center.
1	118	7707263538	Labonte Racing Inc.	A	X			385,942	3142.14	$ 1,931.16	$237,200	$0.61	25,840	$600,360	$23.23	$837,560	N	General commercial; 1 AC commercial; 7.860 AC agricultural; auto parts/service; Labonte Racing.
1	119	7707260872	Davidson Water Inc.	A			X	2,178	289.11	$ 18.58	$140	$0.06				$140	N	Residual acreage.
1	123	7707163257	Harmon, Michael & Bobbie G.	A		X		336,283	364.76	$ 70.85	$65,320	$0.19	5,460	$82,700	$15.15	$148,020	N	SFR; brick; 1 AC primary site; 6.72 AC agricultural.
1	124	7707068701	Miller, Philip R. & Cheryl W.	A		X		202,554	2007.33	$ 409.58	$41,330	$0.20	2,840	$97,860	$34.46	$139,190	N	SFR ; frame; 1 AC primary site; 3.65 AC agricultural.
1	125	7707161750	Helmstetler, Darren L. & Jaimee S.	A	X			20,473	1428.44	$ 3,067.13	$43,960	$2.15	4,000	$58,210	$14.55	$102,170	N	Light manufacturing; (4,000 SF masonry building); Archdale Welding Service.
1	126	7707278004	Childress, Betty	A		X		20,038	212.88	$ 232.14	$21,850	$1.09	1,509	$65,390	$43.33	$87,240	N	SFR; frame with siding.
3	127	7708466937	Hawley, Mathew L. & Rebecca J.	A	X			20,038	1409.22	$ 3,804.79	$54,100	$2.70	1,482	$60,620	$40.90	$114,720	N	Commercial site improved with SFR; brick.
3	128	7708467936	Jernigan, William Gail et al	A		X		20,000	1061.74	$ 1,061.74	$20,000	$1.00	2,325	$87,620	$37.69	$107,620	N	SFR; brick.
3	129	7708469739	Collett, J. C. Jr. & Brown, Jayn C.	A			X	80,586	638.08	$ 232.71	$29,390	$0.36				$29,390	N	Residential acreage.
3	130	7708478334	Clapp, John W. & Margaret R.	A		X		34,160	841.97	$ 566.16	$22,970	$0.67	913	$26,870	$29.43	$49,840	N	SFR; wood frame.
3	131	7708477241	Brown, Catherine Elizabeth	A		X		39,375	1090.45	$ 1,384.43	$49,990	$1.27	1,540	$42,880	$27.84	$92,870	N	SFR; frame with siding.

Preliminary Right of Way Estimate

SURRETT DRIVE - TRAFFIC OPERATIONS IMPROVEMENT OPTION

Date: August 19, 2008 | COST EST. #: Conceptual | PROJ.: Surrett Drive | FROM: I-85 | TO: Bus. I-85

ALT.: Traffic Improvement Option | FAP #: N/A | COUNTIES: Randolph and Guilford

MAP PG	PAR NO	PARCEL ID NUMBER	OWNER NAME	DESIGN SECTION	LAND USE C	LAND USE R	LAND USE V	LAND SQ. FT.	Land Take SF	Land Take $	LAND ASSESSED VALUE	$/SQ. FT.	IMP SQ. FT.	IMP ASSESSED VALUE	$/SQ. FT.	TOTAL ASSESSED VALUE	RELO Y or N	Current use i.e. fast food, bank, industrial warehouse etc & type of building i.e. metal, ch, frame etc.
3	132	7708476263	Blake, John A. Jr. & Minnie L.	A		X		17,424	422.79	$ 653.94	$26,950	$1.55	2,168	$85,740	$39.55	$112,690	N	SFR; brick.
3	133	7708487599	Dixon, Brian L. & Lori S.	B			X	125,888	5163.52	$ 4,431.03	$108,030	$0.86				$108,030	N	2 AC commercial site; .890 AC agricultural.
4	134	18-00-0081-0-0002-00-003	Snyder Paper Corporation	B	X			186,437	165.80	$ 190.32	$214,000	$1.15	69,399	$1,166,500	$16.81	$1,380,500	N	Industrial; minimal impact; site should be avoided.
			Total this page:		25	16	28			$ 137,420.61						786,630	2	
										Contingency Factor of 3*	$ 412,261.82					$ 2,359,890.00		

Grand Total $ 2,772,151.82

Section A $ 2,605,248.24 Section B $ 166,903.58

* Contingency Factor of 3 includes market value and relocation costs

Appendix G

Public Involvement Information

Surrett Drive Feasibility Study
Questions for Local Planning Officials
September 25, 2007

Thank you for providing input regarding this study.

- ***General***

1. Do you have any questions or concerns related to this project?

- ***Land Use***

2. Do you have any land use, growth management, or other plans/policies that would be relevant to our study? Or anticipate changes/updates to your Land Use Plan?
3. Are the land uses in the area changing? If so, how?
4. Can you tell us about proposed new development in the area?
5. Can you tell us about any neighborhoods that contain low-income, minority, or elderly groups in the area?
6. Who are the major employers within the study area?
7. Any plans for major expansion of utilities (ie. Adding water/sewer service to areas currently without)
8. Current public transportation service and plans to expand (bus stop?)

- ***Perception of Existing Conditions***

9. Do you perceive any safety or mobility problems within the study area or at specific intersections or locations? Please be specific.
10. What do you think causes these mobility and safety problems?
11. Does your jurisdiction have any plans for the coming years that could shape recommendations to improve safety and mobility within the study area?
12. How do members of your community use this corridor?
13. How important is the corridor to the daily work and social life of your community?
14. Are you aware of any environmentally-related challenges in the area?
15. Do you anticipate future environmental problems in the area? What will cause these problems?
16. Are there ways improvements to the corridor can solve or prevent these environmental problems?
17. Perceived direction of primary flow in am/pm
18. Perceived truck percentage (high/med/low)

SIGN-IN SHEET

Surrett Dr Feasibility Study

Sept 25 2007

Name	Organization	email
Jill Gurak	PBSJ	jsgurak@pbsj.com
Kiersten Grugno	PBSJ	Krgiugno@pbsj.com
FRAN ANDREWS	City of Trinity	FRANANDREWS @NORTHSTATE.NET
Bert Lance-Stone	City of Archdale	Bertstone@northstate.net
John A. (Andy) Bailey	NCDOT-TPB	jabailey@dot.state.nc.us
Adam Stumb	City of Trinity	planner-trinity@triad.rr.com
DAVID HYDE	CITY OF NI	

Surrett Drive Feasibility Study
Local Government and Planning Officials Meeting Minutes

Date: September 25, 2007

Time: 11:30 – 1:00 pm

Location: High Point Municipal Building (3rd Floor Conference Room)
211 South Hamilton Street
High Point, NC 27260

Attendees: David Hyder – City of High Point
Phil Wylie - City of High Point
Fran Andrews – Mayor, City of Trinity
Adam Stumb – City of Trinity
Bert Lance-Stone – Mayor, City of Archdale
John A. (Andy) Bailey – NCDOT – TPB
Jill Gurak – PBS&J
Kiersten Giugno – PBS&J

Meeting Materials:

- Questionnaire for Local Officials
- Aerial Map of Feasibility Study Area

Purpose: The purpose of the meeting was to interview local government and planning officials regarding their knowledge of the Surrett Drive area.

Discussion: Mr. Hyder began the meeting with a brief description of the Surrett Drive feasibility study. He then turned the meeting over to Ms. Gurak who briefed the group on the purpose of the meeting and introduced aerial mapping of the Surrett Drive corridor. The discussion is broken down into the following topics:

- **Corridor Use** – The am peak traffic is heaviest northbound, and primarily includes commuters. The pm peak traffic primarily includes southbound commuters. Trinity High School and various commercial and industrial uses generate commuter and truck traffic along Surrett Drive. Most truck traffic uses Surrett Drive north of Sealy Drive. To access I-85 Business, most trucks turn onto Fairfield Drive to the Green Drive interchange because there is a better acceleration lane there compared to the Surrett Drive interchange.

- **Safety** – Trucks generally do not access I-85 Business from Surrett Drive directly because of the existing grade and associated sight issues at the Surrett Drive/I-85 Business interchange.

The juxtaposition of the two Mendenhall Road intersections with Surrett Drive represents a perceived safety issue. Also, the condition of the roadway, the 11-foot lanes, and lack of paved shoulders make some drivers feel uncomfortable traveling the roadway.

- **Current Projects** – TIP Project U-2702 is a safety and drainage improvement project that include the addition of turn lanes at Eden Terrace, changing the grade at Surrett Drive, changing the railroad alignment, and increasing the size of the existing drainage infrastructure under the railroad. This area frequently floods and there is a sign posted on Surrett Drive that the area is subject to flooding.

  The replacement of the Surrett Drive bridge over I-85 Business is being studied. The replacement is estimated to be approximately two to three years out and a Categorical Exclusion currently is being prepared by NCDOT pursuant to the National Environmental Policy Act.

- **Stormwater** – Stormwater overflow is an issue in low-lying areas, particularly along Surrett Drive at Eden Terrace and on the creek crossing at Mendenhall Road (between Surrett Drive and Uwharrie Drive). That culvert has been replaced about once every two years due to wash outs. Many of the culverts/pipes under the railroad tracks are now undersized.

- **Planning Documents** – The City of High Point's Land Use Plan is available online and a hard copy of the Land Use Plan Map was provided to PBS&J at the meeting. Mr. Hyder noted that the existing Land Use Plan is fairly current. Any changes to the plan would likely be limited to the northern side of the City.

  The Trinity Connection, Fall 2006 (Volume 3, Issue 2), was provided to PBS&J at the meeting. This newsletter includes the City of Trinity Land Development Plan Future Land Use map. It was noted that the complete Land Use Plan is available on the City of Trinity's website.

  It was noted that the Archdale Land Use Plan is available online.

- **Planned or Future Development** – It was noted that the potential for development just north of I-85 is high. It was agreed that any available information regarding development plans within this area would be provided to PBS&J.

  The fallow field located north of Sealy Drive has a for sale sign and there have been previous discussions about this site being developed for mixed use; however, previous discussions were halted due to water and sewer issues.

  Water and sewer are provided along Surrett Drive north of Trinity. Within Trinity, water lines are available, but no sewer. New sewer lines are planned by Trinity in the Surrett Drive area in the next phase of their expansion plans.

- **Employers** – Some of the major employers within the Feasibility Study corridor include: Fireplace Supply, Trinity High School, Bernards, and Thomas Built. Thomas Built just finished a plant expansion.

- **Bicycle Path** – Interest in a bicycle lane along Surrett Drive was conveyed. It was noted that the occasional bicyclist is seen on Surrett Drive, even though there are no paved shoulders or bike lanes. State Bike Route 8 follows both sections of Mendenhall Road on either side of Surrett Drive.

- **Public Transportation** – There is no public transportation service through the feasibility study area.

- **Railroad** – The proximity of the existing railroad track parallel to Surrett Drive north of Archdale Boulevard could constrain future improvements to Surrett Drive. It was noted that the railroad in this area is a spur track owned by Winston-Salem Southbound and it carries just a few daily trips. Based on this understanding, it was suggested that relocation of the track should not be ruled out.

- **Parks/Greenway** - The area located north of Old Turnpike is currently planned for a park and greenway extending northward toward Trinity High School and continuing beyond the school and connecting to existing green space to the north. Trinity just purchased about 30 acres in this location south of Trinity High School and is getting ready to develop a park plan for the land.

- **Environmental** – Attendees did not have knowledge of hazardous waste sites in the area. However, since there are several industrial uses within the area, hazardous materials are likely present and could be an issue with construction. A recycling center used to be located on County-owned land directly across Surrett Drive from Trinity High School. The center, a citizen drop-off point, is now closed.

- **Public Meeting Venue** – Several public meeting venues were discussed. Historically, public meetings in the area have been held in local churches. There are several churches within the area with adequate space. Trinity High School would be a good choice for meeting space if schedules could be worked out.

- **Study Area Limits** – Mr. Hyder asked the group if they felt the Feasibility Study area limits were appropriate. It was suggested that the southern limit be extended to approximately 1,000 feet past I-85.

Surrett Drive Feasibility Study – Notice of Planning Coordination Mailing Labels

Ms. Polly Lespinasse
NC Division of Water Quality
610 East Center Ave, Suite 301
Mooresville, NC 28115

Mr. John Hennessy
NC Division of Water Quality
1650 Mail Service Center
Raleigh, NC 27699-1650

Ms. Linda Pearsall
NC Natural Heritage Program
1601 Mail Service Center
Raleigh, NC 27699-1601

Ms. Marla Chambers
NC Wildlife Resources Commission
4614 Wilgrove-Mint Hill Rd, Suite M
Charlotte, NC 28227

Ms. Renee Gledhill-Early
State Historic Preservation Office
4617 Mail Service Center
Raleigh, NC 27699-4617

Mr. Tim Johnson, PE
NC Department of Transportation
Division 8
P.O. Box 1067
Aberdeen, NC 27813

Mr. Mike Mills, PE
NC Department of Transportation
Division 7
P.O. Box 14996
Greensboro, NC 27415-4996

Mr. Art McMillan, PE
NC Department of Transportation
Highway Design Branch
1584 Mail Service Center
Raleigh, NC 27699-1584

Ms. Deborah M. Barbour, PE
NC Department of Transportation
Director of Preconstruction
1541 Mail Service Center
Raleigh, NC 27699-1541

Mr. Mike Bruff, PE
NC Department of Transportation
Manager, Transportation Planning Branch
1554 Mail Service Center
Raleigh, NC 27699-1554

Mr. Eric Midkiff, PE
NC Department of Transportation
Project Development Unit Head, Central Region
1548 Mail Service Center
Raleigh, NC 27699-1548

Mr. Jay Bennett, PE
NC Department of Transportation
State Roadway Design Engineer
1582 Mail Service Center
Raleigh, NC 27699-1582

Mr. Jim Dunlop, PE
NC Department of Transportation
Congestion Management Section
1561 Mail Service Center
Raleigh, NC 27699-1561

Mr. Patrick B. Simmons
NC Department of Transportation
Rail Division
1553 Mail Service Center
Raleigh, NC 27699-1553

Mr. Tom Norman
NC Department of Transportation
Director, Bicycle & Pedestrian Division
1552 Mail Service Center
Raleigh, NC 27699-1552

Mr. J. Stuart Bourne, PE
NC Department of Transportation
State Work Zone Traffic Engineer
1580 Mail Service Center
Raleigh, NC 27699-1580

Mr. Rodger Rochelle, PE
NC Department of Transportation
State Alternative Delivery Engineer
1595 Mail Service Center
Raleigh, NC 27699-1595

Ms. Marella Buncick
US Fish and Wildlife Service
160 Zillicoa Street
Asheville, NC 28801

Mr. Chris Militcher
US Environmental Protection Agency
310 New Bern Ave, Suite 410
Raleigh, NC 27601

Ms. Kathy Matthews
US Environmental Protection Agency
310 New Bern Ave, Suite 410
Raleigh, NC 27601

Mr. Andy Williams
US Army Corps of Engineers
6508 Falls of Neuse Road, Suite 120
Raleigh, NC 27615

Mr. Richard Spencer
US Army Corps of Engineers
PO Box 1890
Wilmington, NC 28402

Mr. Clarence Coleman
Operations Engineer
Federal Highway Administration
310 New Bern Ave, Suite 410
Raleigh, NC 27601

HPMPO
High Point Urban Area Metropolitan Planning Organization

November 14, 2007

High Point

Archdale

Jamestown

Thomasville

Trinity

Wallburg

Davidson County

Forsyth County

Guilford County

Randolph County

Name, Title
Street address
City, North Carolina, 25

Subject: Notice of Planning Coordination for the Surrett Drive Feasibility Study

Dear Mr._____:

The High Point Metropolitan Planning Organization (HPMPO) has initiated the preparation of a feasibility study for future improvements to Surrett Drive, located within the cities of High Point, Archdale, and Trinity (**Figure 1**). The subject section of Surrett Drive is approximately 4.5 miles in length and extends from the intersection of Surrett Drive and West Market Center Drive in Guilford County southward to the intersection of Surrett Drive with the I-85 ramps in Randolph County.

Surrett Drive is a two-lane radial arterial connecting residential areas to the south with employment centers along Surrett Drive and in High Point. There are five signalized intersections and several unsignalized intersections along this segment of Surrett Drive. A railroad track closely parallels the east side of the roadway from Archdale Boulevard north to Fraley Road. The existing facility has poor vertical alignment and substandard pavement width (11-foot travel lanes and no shoulder). Existing land uses are predominantly commercial and industrial on the north end of the study area transitioning to residential land uses towards the south. The HPMPO's member jurisdictions expect significant growth along Surrett Drive and surrounding areas.

The purpose of the feasibility study is to provide initial screening of the Surrett Drive improvement options so that the High Point Department of Transportation can better plan for future right-of-way needs. Three project alternatives are anticipated to be considered; a major widening alternative (to a four-lane facility), a traffic operations alternative, and a minor widening alternative. The viability of a new location alternative also will be considered. The feasibility study will be completed in accordance with NC Department of Transportation standards.

The feasibility study will examine the existing natural and human environment features within the study area and determine the nature and approximate magnitude of potential environmental impacts from each alternative. Resources and features to be evaluated include environmental justice, wetlands and streams, protected species, hazardous waste sites, prime and unique farmland, water quality, floodplain impacts, air quality, utilities, historic and archaeological resources, Section 4(f), Section 106, and Section 6(f) properties, as well as potential impacts on impaired waters (Section 303D). **Figures 2a** and **2b** show known human and natural environment features along Surrett Drive using data from State and county databases and a windshield survey.

211 South Hamilton St., High Point, N.C. 27261
Telephone (336) 883-3225 FAX (336) 883-8568 TDD (336) 883-8517

HPMPO
High Point Urban Area Metropolitan Planning Organization

Project level traffic forecasts and capacity analysis for the base year and the project design year (2035) will be developed. The traffic forecasts will include mainline volumes, turning movements at intersections, peak hour traffic, directional split, and truck percentages.

We would appreciate any information you might have that would be helpful in establishing the project study area, developing alternatives, and evaluating potential environmental impacts. Please direct your comments to:

Ms. Jill S. Gurak, PE, AICP
PBS&J
1616 E. Millbrook Road, Suite 310
Raleigh, NC 27609-4968
(919) 876-6888 / jsgurak@pbsj.com

If you have any questions concerning the feasibility study, please feel free to call Ms. Gurak, at the number above, or myself at (336) 883-3233.

Sincerely,

David Hyder, P.E.
Transportation Planning Administrator

encl: Figures 1 and 2

cc: Derrick Lewis, NCDOT Feasibility Studies Unit
Jill Gurak, PBS&J

FILE SURRETTE DRIVE.

North Carolina Department of Cultural Resources

State Historic Preservation Office

Peter B. Sandbeck, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

January 15, 2008

David Hyder, PE
HPMPO
211 South Hamilton Street
High Point, NC 27261

Re: Notice of Planning Coordination for the Surrett Drive Feasibility Study, Guilford and Randolph Counties, ER 07-2470

Dear Mr. Hyder:

Thank you for your letter of November 14, 2007, concerning the above project. We apologize for the delay in our response.

There are no recorded archaeological sites in the immediate vicinity of the existing Surrett Drive. If the proposed improvements are not extensive, the majority of the project should have no effect on archaeological resources. The area of the crossing of the Uwharrie River may have the potential to affect as yet unrecorded archaeological sites. We recommend that you forward plans for this area of the project as they develop, so we may advise you as to any needed archaeological investigations in that area.

The only property determined to have historical significance located within the area of potential effects is the Highland Cotton Mill and Village (GF 636). The Mill and village have been determined eligible for listing in the National Register of Historic Places.

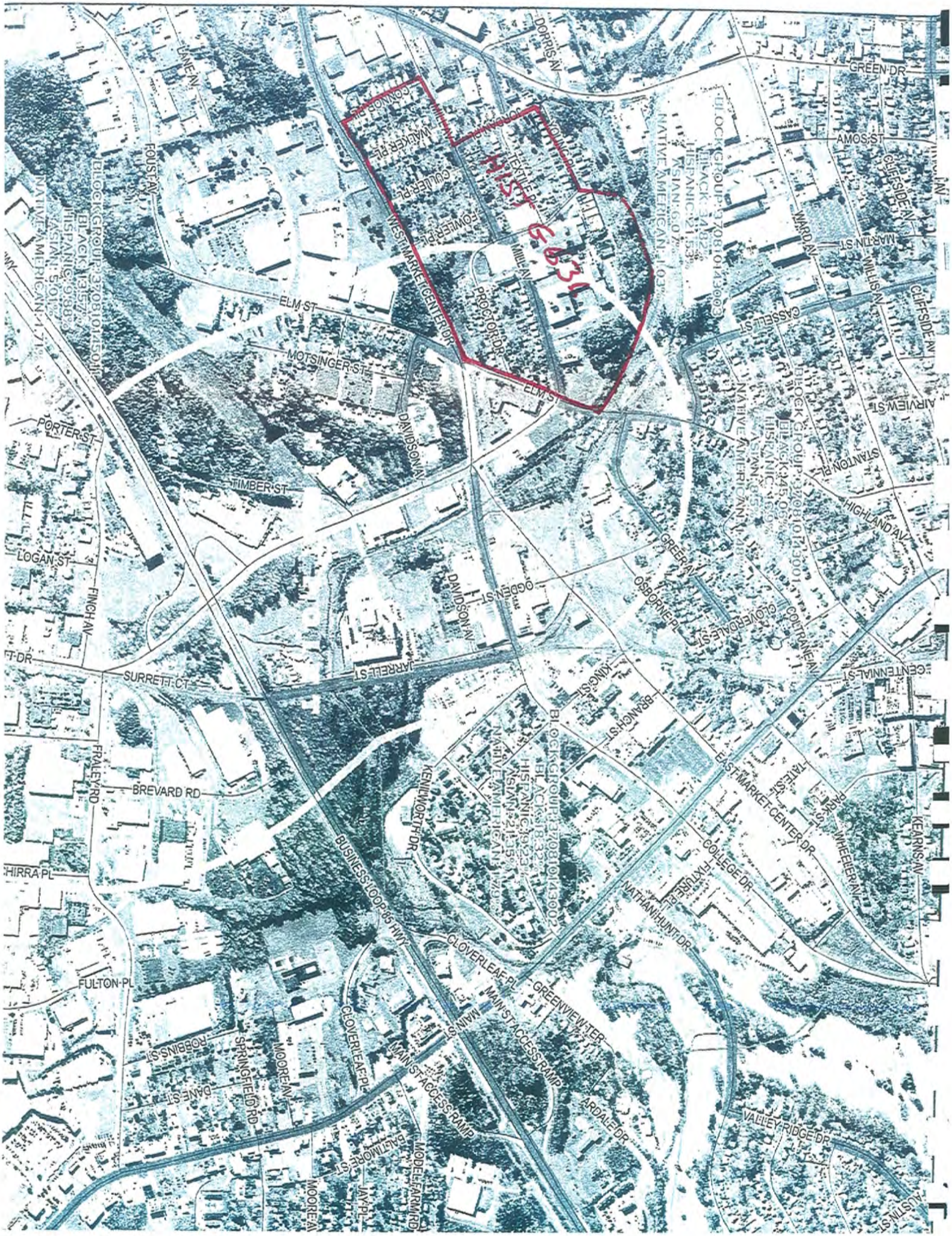
The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/807-6579. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

Peter Sandbeck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ELM ST
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PARK ST
WHEELER AV
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COLLEGE DR
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VALLEY RIDGE DR
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SPRINGFIELD RD
DANE ST
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JAY PL
MODEL FARM RD
FOUST AV
LANE AV
GOWNOR PL
BLOCK GROUP: 370810143002
BLACK: 3457
HISPANIC: 9.98%
ASIAN: 5.01%
NATIVE AMERICAN: 1.71%
BLOCK GROUP: 370810143003
BLACK: 3402
HISPANIC: 21.53%
ASIAN: 6.07%
NATIVE AMERICAN: 1.03%
BLOCK GROUP: 370810143001
BLACK: 2450
HISPANIC: 15.69%
ASIAN: 6.05%
NATIVE AMERICAN: 1.88%
BLOCK GROUP: 370810143002
BLACK: 3234
HISPANIC: 19.23%
ASIAN: 2.15%
NATIVE AMERICAN: 1.29%

NCDENR
North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor

William G. Ross Jr., Secretary

November 26, 2007

Ms. Jill S. Gurak
PBS&J
1616 E. Millbrook Road, Suite 310
Raleigh, NC 27609-4968

Subject: Surrett Drive Feasibility Study; High Point, Archdale, and Trinity, Guilford and Randolph counties

Dear Ms. Jurak:

The Natural Heritage Program has no record of rare species, significant natural communities, significant natural heritage areas, or conservation/managed areas at the site nor within a mile of the project area. Although our maps do not show records of such natural heritage elements in the project area, it does not necessarily mean that they are not present. It may simply mean that the area has not been surveyed. The use of Natural Heritage Program data should not be substituted for actual field surveys, particularly if the project area contains suitable habitat for rare species, significant natural communities, or priority natural areas.

You may wish to check the Natural Heritage Program database website at www.ncnhp.org for a listing of rare plants and animals and significant natural communities in the county and on the quad map. Our Program also has a new website that allows users to obtain information on element occurrences and significant natural heritage areas within two miles of a given location: <http://nhpweb.enr.state.nc.us/nhis/public/gmap75_main.phtml>. The user name is "public" and the password is "heritage". You may want to click "Help" for more information.

NC OneMap now provides digital Natural Heritage data online for free. This service provides site specific information on GIS layers with Natural Heritage Program rare species occurrences and Significant Natural Heritage Areas. The NC OneMap website provides Element Occurrence (EO) ID numbers (instead of species name), and the data user is then encouraged to contact the Natural Heritage Program for detailed information. This service allows the user to quickly and efficiently get site specific NHP data without visiting the NHP workroom or waiting for the Information Request to be answered by NHP staff. For more information about data formats and access, visit <www.nconemap.com/data.html>, or email NC OneMap at <dataq@ncmail.net>.

Please do not hesitate to contact me at 919-715-8697 if you have questions or need further information.

Sincerely,

Harry E. LeGrand, Jr., Zoologist
Natural Heritage Program

Michael F. Easley, Governor

William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Coleen H. Sullins, Director
Division of Water Quality

November 21, 2007

Jill Gurak, PE, AICP
PBS & J
1616 East Millbrook Road, Suite 310
Raleigh, NC 27609-4968

Subject: **Scoping Comments on Feasibility of Proposed Improvements to Surrett Drive from the Intersection of Surrett Drive and West market Center Drive in Guilford County South to the Intersection of Surrett Drive and the I-85 Ramps in Randolph County, Guilford and Randolph Counties**

Dear Ms. Gurak:

Please reference your correspondence dated November 14, 2007 in which you requested comments for the above referenced project. A preliminary analysis of the project reveals the potential for multiple impacts to perennial streams and jurisdictional wetlands in the project area. More specifically, impacts to:

Stream Name	River Basin	Stream Classification(s)	Stream Index Number
Richland Creek	Cape Fear	WS-IV	17-7-(0.5)
Muddy Creek	Cape Fear	WS-IV	17-19-(1)
Uwharrie River	Yadkin	WS-III	13-2-(0.5)

Further investigations at a higher resolution should be undertaken to verify the presence of other streams and/or jurisdictional wetlands in the area. In the event that any jurisdictional areas are identified, the Division of Water Quality requests that PBS & J, other representatives of the High Point Urban Area Metropolitan Planning Organization (HPMPO) or the permittee consider the following environmental issues for the proposed project:

1. The environmental document shall provide a detailed and itemized presentation of the proposed impacts to wetlands and streams with corresponding mapping. If mitigation is necessary as required by 15A NCAC 2H.0506(h), it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. Appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification.

2. Environmental assessment alternatives shall consider design criteria that reduce the impacts to streams and wetlands from storm water runoff. These alternatives shall include road designs that allow for treatment of the storm water runoff through best management practices as detailed in the most recent version of NC DWQ *Stormwater Best Management Practices*, such as grassed swales, buffer areas, preformed scour holes, retention basins, etc.

3. After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, the permittee is respectfully reminded that they will need to demonstrate the avoidance and minimization of impacts to wetlands (and streams) to the maximum extent practical. In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(h)}, mitigation will be required for impacts of greater than one (1) acre to wetlands.

In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as wetland mitigation.

4. In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(h)}, mitigation will be required for impacts of greater than 150 linear feet to any single perennial stream. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as stream mitigation.

5. DWQ is very concerned with sediment and erosion impacts that could result from this project. The permittee address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts.

6. If a bridge is being replaced with a hydraulic conveyance other than another bridge, DWQ believes the use of a Nationwide Permit may be required. Please contact the US Army Corp of Engineers to determine the required permit(s).

7. If the old bridge is removed, no discharge of bridge material into surface waters is allowed unless otherwise authorized by the US ACOE. Strict adherence to the Corps of Engineers guidelines for bridge demolition will be a condition of the 401 Water Quality Certification.

8. Bridge supports (bents) shall not be placed in the stream when possible.

9. Whenever possible, the DWQ prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the streambanks and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges allow for human and wildlife passage beneath the structure, do not block fish passage and do not block navigation by canoeists and boaters.

10. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of NC DWQ *Stormwater Best Management Practices.*

11. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.

12. If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas shall be seeded or mulched to stabilize the soil and appropriate native woody species should be planted. When using temporary structures the area shall be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.

13. Placement of culverts and other structures in waters, streams, and wetlands shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures.

The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by DWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NC DWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.

14. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel shall be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.

15. If foundation test borings are necessary; it should be noted in the document. Geotechnical work is approved under General 401 Certification Number 3494/Nationwide Permit No. 6 for Survey Activities.

16. Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250.

17. All work in or adjacent to stream waters shall be conducted in a dry work area unless otherwise approved by NC DWQ. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures should be used to prevent excavation in flowing water.

18. Sediment and erosion control measures shall not be placed in wetlands and streams.

19. Borrow/waste areas shall avoid wetlands to the maximum extent practical. Impacts to wetlands in borrow/waste areas could precipitate compensatory mitigation.

20. While the use of National Wetland Inventory (NWI) maps, NC Coastal Region Evaluation of Wetland Significance (NC-CREWS) maps and soil survey maps are useful tools, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.

21. Heavy equipment shall be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment shall be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.

22. In most cases, the DWQ prefers the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour should be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure shall be removed and the approach fills removed from the 100-year floodplain. Approach fills should be removed and restored to the natural ground elevation. The area shall be stabilized with grass and planted with native tree species. Tall fescue shall not be used in riparian areas.

23. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.

Thank you for requesting our input at this time. The permittee is reminded that issuance of a 401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost. If you have any questions or require additional information, please contact Polly Lespinasse at (704) 663-1699.

Sincerely,

Robert B. Krebs
Regional Supervisor
Surface Water Protection Section

cc: David Hyder, HPMPO
Richard Spencer, US Army Corps of Engineers, Wilmington Field Office
Felix Davila, Federal Highway Administration
Chris Militscher, Environmental Protection Agency
Travis Wilson, NC Wildlife Resources Commission
Gary Jordan, US Fish and Wildlife Service
Sonia Gregory, DWQ Central Office
File Copy

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

MEMO TO: Ms. Jill S. Gurak, PE, AICP
PBS&J

FROM: Helen Chaney
Division of Bicycle and Pedestrian Transportation

DATE: February 15, 2008

SUBJECT: Surrett Drive Feasibility Study, in High Point, Archdale and Trinity, NC

MESSAGE: In response to your request for information on a feasibility study for Surrett Drive, in High Point, Archdale and Trinity, the Division of Bicycle and Pedestrian Transportation has the following comments. A map illustrating the study area is attached to this memo for your review.

Currently, the Surrett Drive study area is a two-lane, undivided roadway with no paved shoulders. The study area passes through the city of High Point in Guilford County, and Archdale and Trinity in Randolph County. The feasibility study currently underway will consider a variety of options, including 1) a major widening of the facility to a four –lane facility alternative; 2) a traffic operation alternative; 3) a minor widening alternative; and 4) a new location alternative.

The comments supplied in this memo with respect to bicycle and pedestrian accommodations along the study area relate specifically to alternatives one and three, both of which would involve widening of the corridor. Our division has solicited comments on this feasibility study from David Hyder, serving as staff for the High Point Metropolitan Planning Organization as well as for the City of High Point. In addition, we have solicited comments from Jeff Wells, Planning Officer for the City of Archdale, and from Adam Stumb, Planning and Zoning Administrator for the City of Trinity. The planning administrators for the counties of Randolph and Guilford counties declined to comment on the project, noting that the contacts listed above would be more familiar with the project and better equipped to provide input.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
DIVISION OF BICYCLE & PEDESTRIAN TRANSPORTATION
1552 MAIL SERVICE CENTER
RALEIGH NC 27699-1552

TELEPHONE: 919-807-0780
FAX: 919-807-0768
WEBSITE: WWW.NCDOT.ORG/TRANSIT/BICYCLE/
EMAIL: HMCHANEY@DOT.STATE.NC.US

LOCATION:
CAMERON VILLAGE
401 OBERLIN RD.
SUITE 250
RALEIGH NC

If either of the two alternatives involving the widening of the corridor is chosen for this project, our division recommends that sidewalks be installed to accommodate the needs of pedestrians. Planners representing Archdale, Trinity and High Point have expressed interest in entering into a cost-sharing agreement to install sidewalks the full length of the study area.

David Hyder, Transportation Planning Administrator of the High Point Metropolitan Planning Organization, has expressed an interest in providing sidewalks along the full length of the study area. However, he has informed us that right of way constraints in the northern section of the study area due to rail right of way and the placement of businesses adjacent to the roadway, may preclude the possibility of installing sidewalks on both sides of the roadway. Instead, a sidewalk on only one side of the roadway may be feasible for this northern portion of Surrett Drive. However, Mr. Hyder has expressed interest in building sidewalk on both sides of the road along the southern portion of the study area, where right of way is less constrained.

Our division has determined that sidewalks on both sides of the street in the southern portion of the study area are warranted. These sidewalks will serve the needs of students walking to and from the various schools in the study vicinity. The Brandon Day School, a private school, is located roughly one-quarter mile from Surrett Drive. Youth Unlimited School, Hayworth Christian School, and High Point Christian Academy lie within roughly one and a half miles from Surrett Drive to the northwest.

In addition, sidewalks along the southern portion of the study area are warranted due to the many present and future alternative transportation generators in the area. Adam Stumb of the City of Trinity, noted that, while the portion of Surrett Drive corridor running through Trinity is relatively rural in character currently, it is expected that the corridor will develop rapidly as sewer lines are implemented along the corridor. In addition, Mr. Stumb explained that the City of Trinity has a vision for a new multi-use area to be developed adjacent to Surrett Drive. According to the Draft Land Development Plan for the City of Trinity, the land which lies within Trinity and between Surrett Drive and Highway 62 is planned to become a new downtown area for the town. It is specified in the draft plan that this portion of town will include a newly-constructed town hall, a community center, and significant retail, commercial and housing. The development in this area should generate additional trips from the southern portion of town, where the majority of Trinity's population currently lives.

Our division has also determined that sidewalks along one side of the roadway, as suggested by the HPMPO contact, are desirable, as this sidewalk segment will connect the new downtown of Archdale with the existing High Point downtown area.

Jeff Wells of the city of Archdale supports the implementation of sidewalks on both sides of the roadway wherever the right-of-way will allow. He notes that the Archdale Pedestrian Network Plan calls for sidewalks on both sides of Surrett Drive within the municipal limits.

In addition to the pedestrian amenities recommended by our division, we recommend that provisions be made for bicyclists along the southern portion of the corridor, where right of

way is available. The planners from the cities of Archdale and Trinity, as well as for the High Point Metropolitan Planning Organization, are in favor of wide outside lanes along this corridor under the road widening alternatives of the feasibility study.

The High Point Area Bicycle Map shows that State-Designated Bicycle Route No. 8 (Randolph County – Thomasville – Archdale) follows the majority of the portion of Surrett Drive falling within the City of Trinity. Under NCDOT policy, a bicycle accommodation should be provided for all designated state bicycle routes. Some consideration should be given to extending the bicycle accommodations northward, where sufficient right-of-way is available.

While it is true that the corridor is relatively rural in nature currently, as development arrives, bicyclists will have increased interest in using the corridor to travel from the more residential southern area to the planned Trinity second downtown area. The distance from the southern portion of the study area to the northern limit of Trinity is roughly 1.5 miles, a suitable length for a trip by bicycle and even by foot, for some.

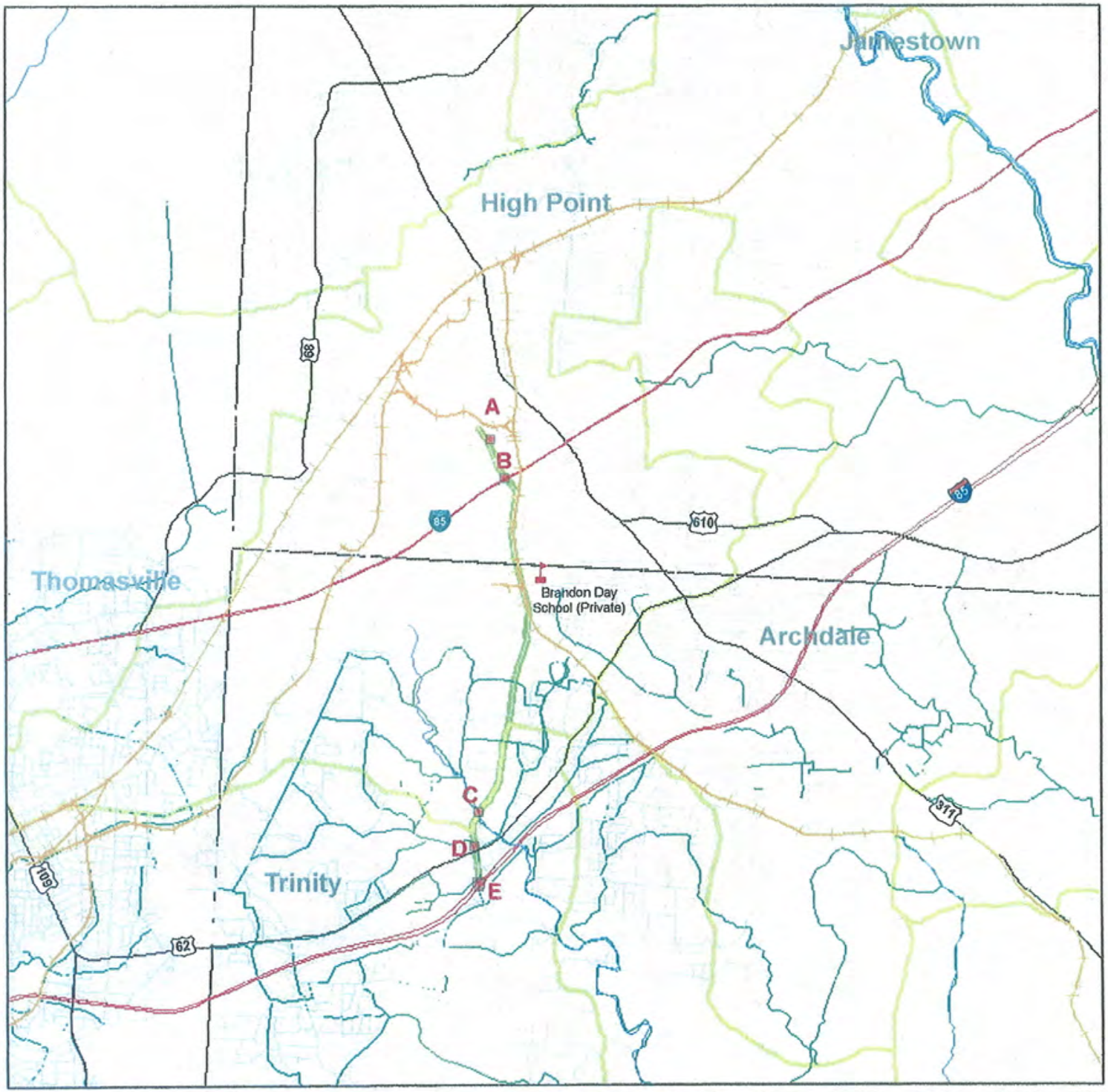
Accommodations for greenway corridors, which pass underneath of the southern portion of the Surrett Drive study area, will be essential in the planning of a widening of Surrett Drive. Two greenways which traverse the Surrett Drive study area are planned under the High Point Metropolitan Planning Organization's Long-Range Transportation Plan (2004-2030), adopted in October, 2004. The two greenways – one following the Uwharrie River and the other following the Little Uwharrie River – will be constructed upon sewer easements. The City of Trinity is currently in the process of obtaining these easements. The exact location of the sewer easements for the planned greenways following the Uwharrie and the Little Uwharrie rivers will be determined in short order. The city of Trinity is currently in process of acquiring these easements.

In order to accommodate the planned greenways, sufficient vertical and horizontal distance will need to be provided beneath the new bridges. Naturally, these two new bridges must be installed with the widening of the roadway, assuming this feasibility study option of widening the roadway is chosen. These bridges are listed on the attached map as bridges C and D. Neither of these bridges correspond to a TIP code.

A rail line owned by Norfolk Southern crosses Surrett Drive on an alignment adjacent to State Road 1592 in Randolph County. If this railway is to stay in place under the roadway widening alternative, then our division would recommend bike-safe crossings along the portion of the rail line traversing Surrett Drive.

The Division of Bicycle and Pedestrian Transportation appreciates the opportunity to comment. Please contact us if there is a need for additional information.

cc: Tom Norman, Director, Division of Bicycle and Pedestrian Transportation
Tim Gardiner, NCDOT Public Involvement and Community Studies



Guilford / Randolph Scoping of Feasibility Study: Surrett Drive, W. Mkt Center south to 1_85 ramp

- Surrett Drive Study Area
- Brandon Day School (Private)
- Bridge
- Railroads
- Waterways
- Interstates
- Primary Roads
- Roads
- Planned Greenways In HPMPO Long-Range Transportation Plan
- NCDOT Bike Routes

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

W. LYNDO TIPPETT
SECRETARY

December 7, 2007

Mr. David Hyder, P.E.
City of High Point
211 South Hamilton Street
High Point, N.C. 27261

SUBJECT: Proposed Surrett Drive Feasibility Study in Guilford County

Dear Mr. Hyder:

Thank you for your recent letter informing us of the High Point Metropolitan Planning Organization's (MPMPO) intension to prepare a feasibility study of proposed improvements to Surrett Drive in Guilford County. It is our understanding that PBS&J is the private engineering firm selected to perform this study for the HPMPO. By copy of this memorandum, I am requesting that you and PBS&J coordinate your traffic forecast efforts on this study directly with Ms. Deborah Hutchings, P.E. of our Transportation Planning Branch. I will be the primary contact for NCDOT on the remaining portions of this feasibility study and the assigned Roadway Project Engineer will be Mr. Gary Lovering, P.E.

I have attached a copy of our current Feasibility Study Scoping Procedures. If additional information is needed, you may contact me at (919) 733-2039.

Sincerely yours,

Derrick W. Lewis, P.E.
Feasibility Studies Unit Head
Program Development Branch

DWL/dl
cc: Ms. Deborah M. Barbour, P.E. Director of Reconstruction
Mr. Art McMillan, P.E., State Highway Design Engineer
Mr. Mike Mills, P.E. Division Engineer, Division 7
Ms. Deborah Hutchings, P.E., Transportation Planning Branch
Mr. Gary Lovering, P.E., Roadway Design Unit
Ms. Jill Gurak, P.E., PBS&J

Program Development Branch
North Carolina Department of Transportation
1534 MAIL SERVICE CENTER, RALEIGH, N.C 27699-1534
Phone 919-733-2039 Fax 919-733-3585

FEASIBILITY STUDIES UNIT SCOPING PROCEDURES

Please Note:

- The Scoping Procedures are written for both widening and new location candidate TIP highway projects including high profile replacement projects.
- **Scoping meetings will be held for all in-house and consultant projects.**
- The Scoping Procedures are written specifically for in-house projects; however, they can be used for consultant projects too.
- The Scoping Procedures consist of two items:
  1. Step-by-Step Procedures through the scoping meeting
  2. General overview of remainder of process beyond the scoping meeting

STEP-BY-STEP PROCEDURES

A. Initial Project Scope

After the feasibility study is assigned, the Feasibility Studies Engineer will request the appropriate Division Engineer, Transportation Planning Branch (TPB) Unit Head (for the applicable geographic area) and State Roadway Design Engineer provide the names of the Division, TPB contact person and Roadway Project Engineer for the project.

The Feasibility Studies Engineer should then discuss the candidate project with the appropriate Division, Roadway Design and TPB staff. The topics to be discussed with the appropriate staff should include:

- Discussion of initial scope of project and alignments that should be considered in traffic forecast request for project. (Division and TPB)

- Discussion of origin of feasibility study request and the need that should be addressed. (Division and TPB)

- Division and Feasibility Study staff may be able to provide insight into the priority of the project to the Department (let TPB know up front that this is high profile) or other special needs they foresee during project development

- Traffic forecasting tool(s) and traffic projections that are readily available – information in the study report (daily link volumes or other information that may be useful prior to the project traffic forecast)

However, if a project is unusually complex or sensitive, the Feasibility Studies Engineer may need to set up a formal *Preliminary Scoping Meeting* to discuss issues and alternatives before proceeding with the later stages of the Feasibility Study.

B. Project Research

After defining the initial scope, the assigned Feasibility Studies Engineer will research the project's background data, request project input from others inside and outside the DOT and request traffic forecasts on the alignments identified in the initial scope.

Background Information

The Feasibility Studies Engineer will research all the available background information from the following resources:

1. TIP Hearing Minutes
2. Approved Thoroughfare Plan, if applicable.
3. Roadway Functional Classification
4. Mileage Inventory and Straight line summary
5. Available Bridge Inventory Data, if applicable.
6. Obtain Available Mapping, Aerials, Topography, etc.
7. Signals and Geometrics Unit (Traffic Signal Inventory)
8. Current TIP document for related projects.
9. Existing GIS Databases
10. National Register of Historic Places and State Study List (Historic Properties)
11. Stream Classification
12. Natural Heritage Program (Threatened and/or Endangered Species)
13. National Wetland Inventory
14. Project Site Visit

Project Input

The Feasibility Studies Engineer will request various NCDOT units and local government officials/staff provide comments and concerns on the candidate project. The following is a list of the NCDOT units and local government officials/staff that are included in this process:

1. Roadway Design Unit
2. Traffic Engineering Safety Systems Unit (Crash Analysis)
3. Congestion Management Section (including ITS when appropriate)
4. NCDOT Rail Division (if applicable)
5. NCDOT Bicycle and Pedestrian Division
6. NCDOT Highway Division Engineer
7. NCDOT Work Zone Traffic Control Unit (WZTCU)
8. Local Government input (Municipal and/or County depending on project location)
9. Metropolitan Planning Organization (MPO)/Rural Planning Organization (RPO) Input
10. Alternate Delivery Systems Unit

Transportation Planning and Traffic Forecast Request

The Feasibility Studies Engineer will request that the Transportation Planning Branch prepare a Traffic Forecast as well as provide related planning level data that may provide some assistance with the project development. Some examples of additional information that might be useful are as follows:

- A copy of the latest Comprehensive Transportation Plan (CTP) or Thoroughfare Plan and any other information related to the candidate project including the
  - Status – complete, currently in update, outdated, etc.
  - Long-Range Transportation Plan (LRTP) update schedule MPOs
  - Local development patterns (information used to develop CTP/thoroughfare plan)
  - Local issues that arose during development of CTP/thoroughfare plan – concerns or support for project implementation
  - Environmental issues considered during development of CTP/thoroughfare plan
- Unique characteristics of the local area/project vicinity
- System-Level Purpose and Need Statement
- Whether or not the facility is identified as a Strategic Highway Corridor
- Recommended Cross Section for facility
- Recommended revision to project limits if different from one provided as well as justification for revision.
- Any extenuating circumstances that might influence the magnitude of the design year traffic (i.e., projections based on construction of an outer loop, etc.)?
- Any related projects in progress or on the CTP or LRTP and their possible effect on the subject project
- Any other information that is important to this project, such as the need for this project, as well as data indicating local support or opposition to the project.

C. Feasibility Study Scoping Meeting

The Feasibility Studies Engineer will schedule a Scoping Meeting within two months after receiving the projected traffic volumes and related information from the Transportation Planning Branch. The Feasibility Studies Engineer will request attendance from representatives of the following Branches/Units of the NCDOT:

- Roadway Design Unit
- Division(s)
- Traffic Engineering and Safety Systems Branch
- Project Development and Environmental Analysis Branch include the Project Development, Human Environment, and Natural Environment Units
- Work Zone Traffic Control Unit
- Hydraulics Unit
- Transportation Planning Branch
- Alternative Delivery Systems Unit

If deemed desirable, representatives from other units (i.e. Structure Design, Geotechnical Engineering, etc.) may also be requested to attend. At least one month before the scheduled scoping meeting, the Feasibility Studies Engineer should send a letter informing the attendees of the date, time and location. This letter should also include a project description, location map as well as the projected traffic volumes for the project. The contact person for the appropriate MPO and/or RPO will be sent a copy of this letter and given the opportunity to attend the scoping meeting. The State Highway Administrator, Director of Preconstruction and State Highway Design Engineer will be sent a copy of this letter for their information.

The topics to be discussed at this meeting should include:

1. The basic project description
2. Existing conditions
3. Planning level purpose and need
4. Strategic Corridor Status
5. The proposed roadway cross section(s) to be considered including:
   - Shoulder vs. curb and gutter
   - Median configuration and width
6. The intersection and interchange improvement(s) including
   - Spacing issues and requirements
   - Configurations
   - Auxiliary Turn Lanes
   - Side Street improvements (Y-line)
7. Right of way
   - Base width required
   - Control of Access
8. Environmental Information
   - River, Stream and Wetland impacts
   - Historic Properties

- Community Issues
- Economic Concerns
- Hazardous Waste Sites

9. Railroad issues
10. ITS improvements
11. Adjacent TIP projects
12. Discuss potential alternatives and alignments to be considered
13. Constructability Issues
14. Need to consider pedestrian impacts during construction and beyond.
15. Consider project network impacts and significance as it relates to the Work Zone Safety and Mobility Policy.

D. Feasibility Study Analysis and Preliminary Design

The Feasibility Studies Engineer will then analyze and evaluate all project data and comments gathered in order to develop preliminary project alternates to address the operational and safety concerns of the project. The analysis should include detailed capacity analyses, as well as an evaluation of the crash data, environmental and historic concerns, and project input from local governmental and other NCDOT sources. The Conceptual Designs shall then be prepared in order to determine the cost and impacts associated with the alternatives to be carried forward in the Feasibility Study.

E. Quality Control, Cost Estimates and Report Preparation

Prior to requesting cost estimates, the Feasibility Studies Engineer will setup a quality control meeting and discuss the conceptual designs with staff from the Roadway Design Unit, Traffic Engineering and Safety Systems Branch and Highway Division in order to refine the project alternatives.

After the project alternates are refined, the Feasibility Studies Engineer will request the construction, right-of-way, utility and ITS cost estimates for each alternate. Upon receipt of these cost estimates, the Draft Feasibility Study will send the appropriate Board of Transportation Member and Division Engineer for comments. After any comments and/or concerns from the Board Member and Division Engineer have been addressed, the Feasibility Studies Unit will finalize and distribute the Feasibility Study.

It should be noted that a Feasibility Study is a preliminary document that is the initial step in the planning and design process for a candidate project and not the product of exhaustive environmental or design investigations. The purpose of this feasibility study is to describe the proposed project including cost, and identify potential problems that may require consideration in the planning and design phases.

Once a candidate project is identified for funding in the TIP, a rigorous planning and design process that meets the requirements of the National Environmental Policy Act follows the Feasibility Study.

HPMPO
High Point Urban Area Metropolitan Planning Organization

High Point

Archdale

Jamestown

Thomasville

Trinity

Wallburg

Davidson County

Forsyth County

Guilford County

Randolph County

Surrett Drive Improvement Project
Feasibility Study
Scoping Meeting Agenda

March 11, 2008

1. Project Description
2. Purpose and Need
3. Adjacent TIP Projects
4. Traffic Projections
5. Existing Conditions
   - Surrett Drive Characteristics
   - Pedestrian and Bicycle Use
   - Railroad Issues
6. Environmental Information
   - Streams and Wetlands
   - Historic Properties
   - Community Issues
   - Economic Concerns
   - Hazardous Materials
7. Agency Scoping Comments
8. Alternatives
   - Minor Widening
   - Traffic Operations
   - Major Widening
9. Constructability Issues

211 South Hamilton St., High Point, N.C. 27261
Telephone (336) 883-3225 FAX (336) 883-8568 TDD (336) 883-8517

SURRETT DRIVE FEASIBILITY STUDY - NCDOT SCOPING MEETING 3/16/10

Name	Organization
Clint Morgan	PBSJ
Bryan Lambeth	PBSJ
Derrick Lewis	NCDOT - Feasibility Studies
Ed Robbins	NCDOT - Roadway Design
Gary Lovering	NCDOT Rdwy Des -
Travis Braswell	NCDOT - Congestion Management
DOUMIT ISHAK	NC DOT - TRaffic Engineering.
DAVID HYDE	CITY OF WILL POINT
BAO LONG LE	NCDOT - Congestion Mgmt.
KIERSTEN GILLIGNO	PBS&J
Jill Gurak	PBS&J

Surrett Drive Improvements Feasibility Study

November 19, 2008 from 6:00pm to 8:00pm
at Trinity Memorial United Methodist Church
at 7110 NC Highway 62

Public Meeting Location

Trinity Memorial United Methodist Church
7110 NC Highway 62

At the meeting you can:

REVIEW displays
Maps showing the project alternatives will be available for you to review.

TALK with officials
They will be available to answer your questions.

TELL us what you think
Your input counts! Comment sheets will be available for you to provide project input.

What is the High Point Urban Area MPO?

Every metropolitan area with a population of more than 50,000 persons must have a designated Metropolitan Planning Organization for transportation to qualify for federal highway or transit assistance. The High Point Urban Area Metropolitan Planning Organization, HPMPO, is responsible for establishing a continuing, cooperative and comprehensive transportation planning process for the High Point Urban Area.

Transportation planning needs to be regional in scope because transportation systems cross governmental boundaries. The HPMPO members include High Point, Archdale, Jamestown, Thomasville, Trinity, Wallburg, Davidson County, Forsyth County, Guilford County and Randolph County.

What is the Purpose of the Project?

The purpose of the proposed project is to improve mobility and capacity along Surrett Drive.

- The existing two-lane road has poor vertical alignment and narrow pavement width over much of its length.
- Surrett Drive is currently operating at a poor level of service with traffic volumes expected to increase in the future.
- Crash data revealed rear-end accidents were the most common type, which often indicates a high level of congestion.

What is a Feasibility Study?

A feasibility study is the initial screening and evaluation of alternative remedial actions from a technical, environmental, and cost perspective. A feasibility study for a roadway project typically includes a purpose and need statement, base year and future year traffic projections, capacity analyses, logical end points, project alternatives, environmental screening, and probable project costs.

David Hyder, PE
P.O. Box 230
High Point, NC 27621

HPMPO

Surrett Drive Improvements Feasibility Study

The High Point Metropolitan Planning Organization (HPMPO) is currently studying the feasibility of several options for improving traffic flow along a 4.5-mile section of Surrett Drive. This section begins at the intersection of Surrett Drive and West Market Center Drive in Guilford County and extends southward crossing Business 85, and ending at the interchange of Surrett Drive with the I-85 ramps in Randolph County.

Want to express your opinion? Attend the Public Meeting on Wednesday November 19, 2008 at Trinity Memorial United Methodist Church at 7110 NC Highway 62. See inside for more information.

For more information please contact:

David Hyder, PE
High Point Metropolitan Planning Organization
P.O. Box 230
High Point, NC 27261
336.883.3233 phone
david.hyder@highpointnc.gov

Jill Gurak, PE, AICP
PBS&J
1616 E. Millbrook Rd, Suite 310
Raleigh, NC 27609
919.876.6888 phone
jsgurak@pbsj.com

PBSJ

What are the alternatives?

There are four project alternatives being considered:

- **Minor Widening Alternative**
  - Widen existing lanes and add a paved shoulder within the existing right of way
  - Add signals to intersections when needed
- **Traffic Operations Alternative**
  - Implement various improvements at nine intersections
  - Realign Mendenhall Road to tie into its extension
- **Major Widening Alternative**
  - Widen to four lanes with paved shoulders and a median from I-85 to Archdale Drive
  - Widen to five lanes from Archdale Drive to North Market Drive
  - Realign Mendenhall Road to tie into its extension
  - Upgrade I-85 Business interchange ramps and loops
- **Ultimate Section Alternative**
  - Widen to four lanes with paved shoulders and a median
  - Realign Mendenhall Road to tie into its extension
  - Redesign I-85 Business interchange to a compressed diamond with ramps in each quadrant

What issues are considered?

The Feasibility Study includes discussions of the following potential environmental impacts:

- Right of Way and Construction Costs
- Property Acquisition and Relocation
- Water Resources
- Protected Species
- Land Use
- Hazardous Materials
- Farmland
- Archaeological and Historic Resources
- Environmental Justice

What does the Feasibility Study recommend?

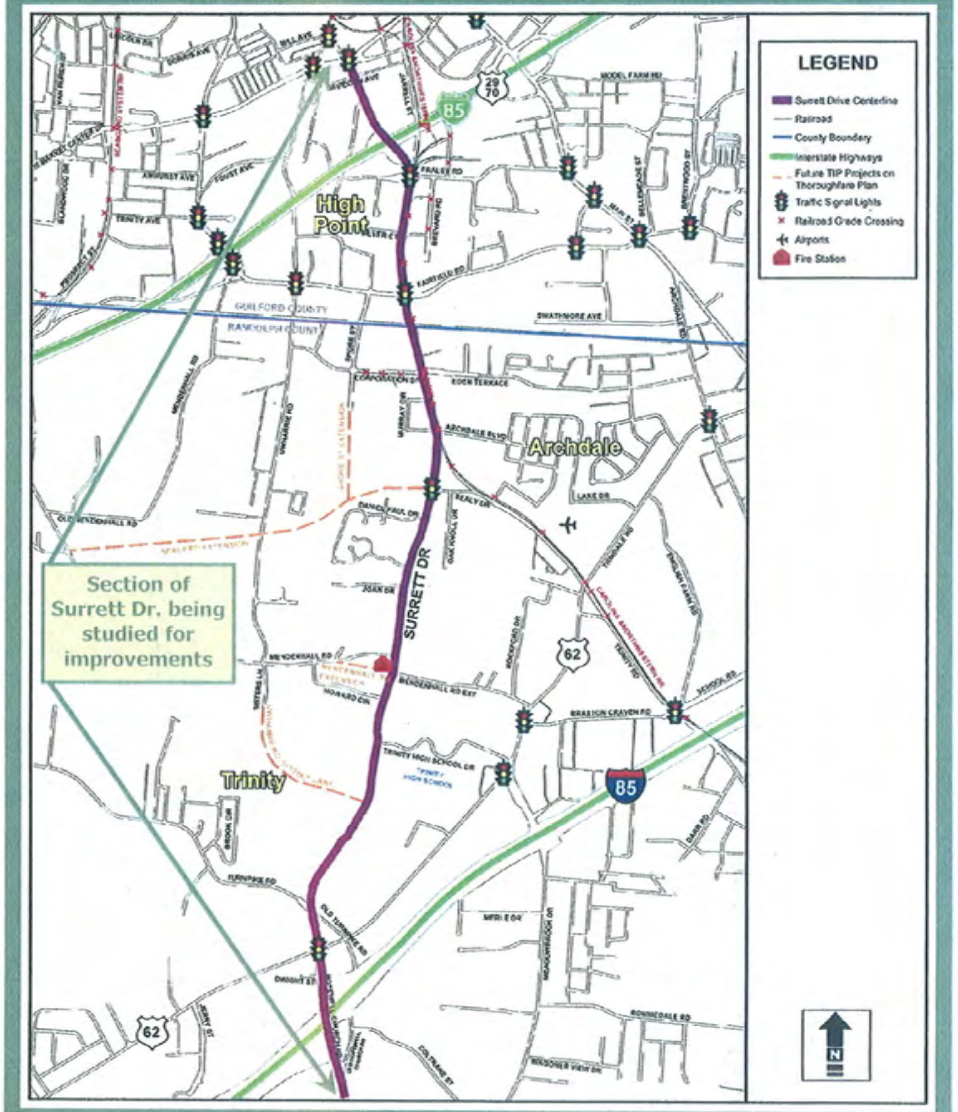
The feasibility study recommends building a combination of the Ultimate Section Alternative south of Archdale Drive and the Traffic Operations Alternative north of Archdale Drive. South of Archdale Drive, land uses are less developed, which accommodate an increase in right of way without causing a substantial number of relocations. Room for improvements north of Archdale Drive is constrained by dense industrial/commercial uses and the proximity of the rail line along the east side of Surrett Drive.

What happens next?

- After the public meeting, the project team will consider public and agency input. A summary of the comments made at this meeting will be prepared.
- With the addition of a public involvement discussion, the Feasibility Study Report will be finalized.
- Local officials will review the recommendations of the Feasibility Study.
- The HPMPO will use the Feasibility Study to help prioritize the project in its plans and to help identify potential funding.
- A schedule to complete the project has not been established. It will depend upon funding availability.

Looking south down Surrett Drive at Archdale Boulevard

SURRETT DRIVE FEASIBILITY STUDY



Surrett Drive Improvements
Guilford and Randolph Counties
High Point, Archdale, and Trinity Cities

HPMPO

PUBLIC MEETING | **NOVEMBER 19, 2008**

SIGN-IN SHEET

NAME	ADDRESS & EMAIL
Rick Morris	104 Daniel Paul rkhmorris@Northstate.
Susan & Jerry Daniels	P.O. Box 7225 - High Point, NC 27264 5419 Surrett Dr. High Point NC 27263
Terry Garner	12724 Pamplona Dr W.F, NC 27587
Mike Theodore	405 Blandwood Ave GSO NC 27401
John+Linda McPherson	114 Daniel Paul Dr Archdale, NC 27263
Ed Cornwell	P.O. Box 7408 HP 27264 e.cornwell@ rendrixbatting.com
Larry & Jean Johnson	306 Freemont Dr T-Ville NC, 27360
Eric & Karen Helms	518 Daniel Paul Dr. Archdale, NC 27263
Keith Aikens	5060 Ronnie Dale Rd Trinity NC 273
Andy Aikens	Po Box 780 Trinity NC 27370
Jimmy Aikens	Po Box 503 Trinity NC 27370
Ann Bailie	PO Box 50 Trinity 27370
Joey Idol	5163 Ronniedale Rd Trinity N.C. 27370
Bill & Helen Hutchens	5207 N.C. Hwy 62 Trinity N.C 27370

Surrett Drive Improvements
Guilford and Randolph Counties
High Point, Archdale, and Trinity Cities

PUBLIC MEETING | **NOVEMBER 19, 2008**

SIGN-IN SHEET

NAME	ADDRESS & EMAIL
Ken Gauck	2400 Surrett Dr
Arnold Wattenbarger	2402 Surrett Dr.

Surrett Drive Improvements

Guilford and Randolph Counties
High Point, Archdale, and Trinity Cities

PUBLIC MEETING | **NOVEMBER 19, 2008**

COMMENT FORM

Your input is important to us! Please fill out this form and drop it into the COMMENT BOX.

Name: Jimmy Aikens

Address: PoBox 503 Trinity NC 27370

Phone Number:

Email:

Organization:

(i.e., neighborhood association, community group, business, etc.)

☐ *Please check here if you wish to be added to the project mailing list*

COMMENTS: Need Red Light At Trinity High Rd

Continue on back if more room is needed.

You can also mail, fax or email your comments to:

Mr. David Hyder, PE
High Point MPO
P.O. Box 230
High Point, NC 27261
336.883.3233 phone
david.hyder@highpointnc.gov

--or--

Ms. Jill Gurak, PE, AICP
PBS&J
1616 E. Millbrook Rd, Suite 310
Raleigh, NC 27609
919.876.6888 phone
jsgurak@pbsj.com

Surrett Drive Improvements

Guilford and Randolph Counties
High Point, Archdale, and Trinity Cities

PUBLIC MEETING | **NOVEMBER 19, 2008**

COMMENT FORM

Your input is important to us! Please fill out this form and drop it into the COMMENT BOX.

Name: Andy Aikens

Address: Po Box 780 Trinity NC 27370

Phone Number:

Email:

Organization:

(i.e., neighborhood association, community group, business, etc.)

☐ *Please check here if you wish to be added to the project mailing list*

COMMENTS: Need Red light At Trinity High school Rd meets up with surratt

Continue on back if more room is needed.

You can also mail, fax or email your comments to:

Mr. David Hyder, PE
High Point MPO
P.O. Box 230
High Point, NC 27261
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Surrett Drive Improvements

Guilford and Randolph Counties
High Point, Archdale, and Trinity Cities

PUBLIC MEETING | **NOVEMBER 19, 2008**

COMMENT FORM

Your input is important to us! Please fill out this form and drop it into the COMMENT BOX.

Name: Bill & Helen Hutchins

Address: 5207 NC HWY 62
Trinity, NC 27370

Phone Number: 336-431-2409

Email:

Organization:

(i.e., neighborhood association, community group, business, etc.)

☐ *Please check here if you wish to be added to the project mailing list*

COMMENTS: I agree with the study especially the ultimate preferred alternative south of Archdale Drive

Continue on back if more room is needed.

You can also mail, fax or email your comments to:

Mr. David Hyder, PE
High Point MPO
P.O. Box 230
High Point, NC 27261
336.883.3233 phone
david.hyder@highpointnc.gov

--or--

Ms. Jill Gurak, PE, AICP
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Surrett Drive Improvements

Guilford and Randolph Counties
High Point, Archdale, and Trinity Cities

HPMPO

PUBLIC MEETING | **NOVEMBER 19, 2008**

COMMENT FORM

Your input is important to us! Please fill out this form and drop it into the COMMENT BOX.

Name: Rick Morris

Address: 104 Daniel Paul Pr.
Archdale NC

Phone Number:

Email: rlchmorris@Northstate.net

Organization:

(i.e., neighborhood association, community group, business, etc.)

☑ *Please check here if you wish to be added to the project mailing list*

COMMENTS:

Would like Green Way Built from Archdale Blvd to Highway 62 on side of New Highway.

Could be linked to New YMCA

Could be linked to Soccer fields

For Safety and Health reasons

Continue on back if more room is needed.

You can also mail, fax or email your comments to:

Mr. David Hyder, PE
High Point MPO
P.O. Box 230
High Point, NC 27261
336.883.3233 phone
david.hyder@highpointnc.gov

--or--

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Surrett Drive Improvements

Guilford and Randolph Counties
High Point, Archdale, and Trinity Cities

PUBLIC MEETING | **NOVEMBER 19, 2008**

COMMENT FORM

Your input is important to us! Please fill out this form and drop it into the COMMENT BOX.

Name: Ken Crouch

Address: 2400 Surrett Dr

Phone Number: @ 336 434-3611

Email:

Organization:

(i.e., neighborhood association, community group, business, etc.)

☑ *Please check here if you wish to be added to the project mailing list*

COMMENTS:

If you widen the road 4 lanes South there will be a bottle neck North. They need to make it all the way to B. 85

Continue on back if more room is needed.

You can also mail, fax or email your comments to:

Mr. David Hyder, PE
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P.O. Box 230
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Surrett Drive Improvements

Guilford and Randolph Counties
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HPMPO

PUBLIC MEETING | **NOVEMBER 19, 2008**

COMMENT FORM

Your input is important to us! Please fill out this form and drop it into the COMMENT BOX.

Name: Joey Idol
Address: 5163 Ronniedale Rd.
Trinity, N.C. 27370
Phone Number: 336. 861-4306
Email: jidol floorcovering@Northstate.Net
Organization:
(i.e., neighborhood association, community group, business, etc.)

☑ *Please check here if you wish to be added to the project mailing list*

COMMENTS: get started asSoon Possible
For Safety Reasons
Keep Informed, More Stop Lights
Traffic is very Fast through this
Area

Continue on back if more room is needed.

You can also mail, fax or email your comments to:

Mr. David Hyder, PE
High Point MPO
P.O. Box 230
High Point, NC 27261
336.883.3233 phone
david.hyder@highpointnc.gov

--or--

Ms. Jill Gurak, PE, AICP
PBS&J
1616 E. Millbrook Rd, Suite 310
Raleigh, NC 27609
919.876.6888 phone
jsgurak@pbsj.com

Surrett Drive Improvements

Guilford and Randolph Counties
High Point, Archdale, and Trinity Cities

HPMPO

PUBLIC MEETING | **NOVEMBER 19, 2008**

COMMENT FORM

Your input is important to us! Please fill out this form and drop it into the COMMENT BOX.

Name: Jerry Daniels - High Point Bedding

Address: 5419 Surrett Dr. High Point NC 27263
H.P. NC

Phone Number: 336-861-6803

Email: hpbedding@northstate.net

Organization:

(i.e., neighborhood association, community group, business, etc.)

☐ *Please check here if you wish to be added to the project mailing list*

COMMENTS:

Need sec light @ Trinity High School Rd and Surrett Dr -

Continue on back if more room is needed.

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COMMENT FORM

Your input is important to us! Please fill out this form and drop it into the COMMENT BOX.

Name: Susan Daniels

Address: 5419 Surrett Dr. High Point Bedding
High Point NC 27264

Phone Number: 336 861-6803

Email: kp bedding@northstate.net

Organization:

(i.e., neighborhood association, community group, business, etc.)

☐ *Please check here if you wish to be added to the project mailing list*

COMMENTS:

Need red light @ Trinity, High School Rd @ Surrett Dr —

Continue on back if more room is needed.

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High Point, NC 27261
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COMMENT FORM

Your input is important to us! Please fill out this form and drop it into the COMMENT BOX.

Name: Keith Aikens

Address: Ronnie Dale Rd Trinity NC 27370

Phone Number: 336-431-9529 or 336-382-4192

Email:

Organization:

(i.e., neighborhood association, community group, business, etc.)

☐ *Please check here if you wish to be added to the project mailing list*

COMMENTS: Need Red light At Trinity High Rd N - Surratt Drive

Continue on back if more room is needed.

You can also mail, fax or email your comments to:

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High Point MPO
P.O. Box 230
High Point, NC 27261
336.883.3233 phone
david.hyder@highpointnc.gov

--or--

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SURRETT DRIVE IMPROVEMENTS

Public Meeting – November 19, 2008

What I Heard

Comment # JSE

Gentleman who lives at north int. of Murray/Surrett concerned that going from 4 lanes to 2 just south of his house will eventually force widening @ his house. He'll be in limbo then for selling his house.

Comment #

Staff Notes

Initials:

SURRETT DRIVE IMPROVEMENTS

Public Meeting – November 19, 2008

What I Heard

Comment # 1

want light @ HS

Comment # 2

Why project must. D Archdale now
& not want until this point?
that project was on books already
for one is out 7-10 yrs.

Staff Notes

Initials: VG

SURRETT DRIVE IMPROVEMENTS

Public Meeting – November 19, 2008

What I Heard

Comment # 3

Smith HS - bldgs x from school are difficult to access b/c road is too small

red lights @ H.S.

- 2 deaths

Comment # 4

A main rd to HP.

I dont want people zipping thru at 65 mph.

Staff Notes

Initials: KG

SURRETT DRIVE IMPROVEMENTS

Public Meeting – November 19, 2008

What I Heard

Comment # 5

Please make maps available to City of Trinity - for the public to view on website & post hard copy in their office

Adam Stumb

Comment #

Ann Bailey

Stripe for bike lanes (use paved shoulder)

about to put out an RFP for land planning - new sewer huge area for Trinity - our core/soul.

Staff Notes

Initials: YB

SURRETT DRIVE IMPROVEMENTS

Public Meeting – November 19, 2008

What I Heard

Comment # 1

NEED SIGNAL @ TRINITY 1/1/6

Comment #

WORM ARLN VALE RD

Staff Notes

Initials:_____