

ORIGINAL TO GENERAL FILES

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

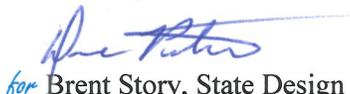
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**OFFICE OF DESIGN POLICY & SUPPORT  
INTERDEPARTMENTAL CORRESPONDENCE**

**FILE** P.I. #250510-  
STP00-7001-00(009)  
GDOT District 2 - Tennille  
Richmond County  
Reconstruction/Rehabilitation on CR  
1501/Wrightsboro Rd from Jimmie Dyes Pkwy to  
I-520 Ramps

**OFFICE** Design Policy & Support

**DATE** 9/26/2011

**FROM**  for Brent Story, State Design Policy Engineer

**TO** SEE DISTRIBUTION

**SUBJECT** APPROVED REVISED CONCEPT REPORT

Attached is the approved Revised Concept Report for the above subject project.

Attachment

**DISTRIBUTION:**

Genetha Rice-Singleton, Program Control Administrator  
Bobby Hilliard, State Program Delivery Engineer  
Cindy VanDyke, State Transportation Planning Administrator  
Angela Robinson, Financial Management Administrator  
Glenn Bowman, State Environmental Administrator  
Ben Rabun, State Bridge Engineer  
Kathy Zahul, State Traffic Engineer  
Georgene Geary, State Materials & Research Engineer  
Ron Wishon, State Project Review Engineer  
Jeff Baker, State Utilities Engineer  
Ken Thompson, Statewide Location Bureau Chief  
Michael Henry, Systems & Classification Branch Chief  
James Smith, District Engineer  
Vonda Everett, District Planning and Programming Engineer  
Jamie Lindsey, District Utilities Engineer  
Brandon Kirby, Project Manager  
BOARD MEMBER - 10th Congressional District

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

REVISED PROJECT CONCEPT REPORT

Project Number: STP00-7001-00(009)  
County: Richmond  
P.I. Number: 250510  
Federal Route Number: N/A  
State Route Number: Temp. S.R. 1102

*This concept revision consists of the relocation of Barton Chapel Road to line up with existing Augusta West Parkway. This relocation would combine two "T" intersections into one four-legged intersection.*

Submitted for approval:

DATE 6-27-11

Taylor Wright  
Taylor Wright, Atkins

DATE 6/27/11

David Griffith  
David Griffith, City of Augusta/Richmond County

DATE 6/30/11

Bobby Hilliard  
Bobby Hilliard, Office of Program Delivery

DATE 6/30/11

Brandon Kirby  
Brandon Kirby, Project Manager

Recommendation for approval:

DATE 8-1-11

\* Glenn Bowman kmox  
State Environmental Administrator

DATE 8-19-11

\* Ben Rabun kmox  
State Bridge Design Engineer

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Plan (RTP) and/or the State Transportation Improvement Program (STIP).

DATE 8-4-11

\* Cynthia VanDyke kmox  
State Transportation Planning Administrator

\* Recommendation on file

## REVISED PROJECT CONCEPT REPORT

**Need and Purpose:** (See attached approved Need and Purpose)

**Project location:** The proposed project is Wrightsboro Road in the city of Augusta. The project begins at mile marker 0.49, approximately 2400 feet east of the intersection with Jimmie Dyess Parkway where the existing five-lane section ends, and extends approximately 2.4 miles to mile marker 2.89 - the intersection of the I-520 southbound ramps.

**Description of the approved concept:** The approved concept is the widening and reconstruction of Wrightsboro Road from a two-lane section to a four-lane road with a 20' raised median. The proposed alignment follows the existing Wrightsboro Road from the project beginning to Maddox Drive. Wrightsboro Road is realigned between Maddox Drive and Barton Chapel Road in order to avoid impacts to historic resources that were identified in this corridor.

Improvements to Barton Chapel Road and Augusta West Parkway are also included. Augusta West is proposed to stay in its existing location. Barton Chapel Road was proposed to be realigned slightly to the west to satisfy current guidelines for intersection spacing while minimizing impacts to existing residential and commercial developments in the area.

**PDP Classification:** Major  Minor

**Federal Oversight:** Full Oversight ( ), Exempt ( X ), State Funded ( ), or Other ( )

**Functional Classification:** Urban Principal Arterial

**U. S. Route Number(s):** N/A **State Route Number(s):** Temp. S.R. 1102

**Traffic (AADT) as shown in the approved concept:**

Base Year: 29,660 (2000) Design Year: 39,500 (2020)

**Updated traffic data (AADT):**

Base Year: 35,040 (2012) Design Year: 51,620 (2032)

**Approved Programmed/Schedule:**

P.E. 1998 R/W: 2007 Construction: 2015

**VE Study Required** Yes (X) No ( ) VE Study held June 15-18, 2009

**Benefit/Cost Ratio** N/A

**Is the project located in an Ozone Non-attainment area?** Yes ( ) No (X)

**Is the project in a PM2.5 Non-attainment area?**

Yes(  ) No (X)

If yes to either, provide a comparison between the proposed project concept and the conforming plan’s model description. Include such features as project limits, number of through lanes, proposed open to traffic year, etc.

<p><b>Approved Features:</b></p> <ul style="list-style-type: none"> <li>• <b>Alignment of Barton Chapel Road (from concept revision dated 8/21/02)</b> – Barton Chapel Road will be relocated approximately 180' to the west, and Augusta West Parkway will remain at its current location. The proposed intersection locations of Barton Chapel Road and Augusta West Parkway with Wrightsboro Road were designed to provide adequate distance for required left turn queue lengths, and to satisfy current intersection spacing requirements.</li> </ul>	<p><b>Proposed Features:</b></p> <ul style="list-style-type: none"> <li>• <b>Alignment of Barton Chapel Road</b> – Barton Chapel would be relocated to the east to the existing intersection of Augusta West Pkwy, thereby creating one 4-legged intersection.</li> </ul>
<p><b>Reason for Change:</b></p> <ul style="list-style-type: none"> <li>• <b>Alignment of Barton Chapel Road</b> - This realignment would combine two signalized “T” intersections into one four-legged intersection, thereby improving operations on Wrightsboro Road in the highly commercialized area near I-520.</li> </ul>	

**Potential Environmental Impacts of Proposed Revision:**

Additional environmental impacts in the area of the Barton Chapel Road realignment are expected to be minimal and limited to additional noise impacts. There are no wetlands or waters of the U.S., T&E habitat or eligible historic structures located in this area of the proposed revision.

**Have proposed Revisions Been Reviewed by Environmental Staff? (X) Yes ( ) No**

**Environmental Responsibilities (Studies/Documents/Permits):** Consultant

**NEPA:** The environmental document will require a reevaluation as a result of the proposed revisions.

**Ecology:** Additional surveys would be required. No wetlands or waters of the U.S. or T&E habitat are located within the proposed Barton Chapel Road realignment revision area.

**Archeology:** Additional surveys are required. No archaeological resources are located within the area of the proposed Barton Chapel Road realignment revision. A Short Form for Negative Findings would be prepared.

**History:** Additional survey will be required for the expanded APE in the area of the Barton Chapel Road realignment. No eligible resources are located within the area of the revision.

**Air/Noise:** An increased number of noise impacts are expected as a result of the proposed Barton Chapel Road realignment revision. Addendums to both the Air and Noise analyses will be required.

**Public Involvement:** An additional PIOH was held on January 7, 2010 to show the proposed Barton Chapel Road realignment revisions to the public.

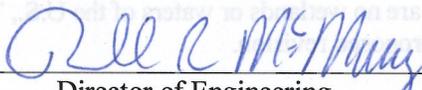
<b>Updated Cost Estimate</b>	
Base Construction Cost	\$17,860,651.95
Engineering and Inspection	\$ 893,032.60
Fuel & Asphalt Adjustment	\$ 3,446,318.70
<u>Total Construction Cost</u>	\$22,200,003.25
Right of Way	\$12,724,600.00
Utilities (reimbursable)	\$ 250,000.00
Environmental Mitigation	\$ 642,366.25

**Recommendation:** Recommend that the proposed revision to the concept be approved for implementation.

**Attachments:**

1. Need and Purpose Statement (from Approved Concept Report)
2. Sketch Map
3. Construction Cost Estimate
4. Fuel & Asphalt Adjustment Spreadsheet
5. Layouts of former alignment of Barton Chapel Rd and current realignment to Augusta West Pkwy
6. Traffic Analysis, including traffic diagrams

**Exempt projects**

Concur:   
Director of Engineering

Approve:  Date: 9-22-2011  
Chief Engineer

## **Need and Purpose:**

The proposed project would widen existing Wrightsboro Road, an urban principal arterial, to a four lane divided roadway. The existing roadway is a two-lane section with no turn lanes at intersections. The existing shoulder on the south side of Wrightsboro Road is mostly header curb with sidewalk and insufficient drainage structures. The north side of Wrightsboro Road is primarily narrow graded shoulders with steep ditches, which violate clear zone requirements and present a safety hazard. The existing land use along Wrightsboro Road is mostly residential with some commercial sites.

The proposed roadway consists of four through lanes, four-foot bike lanes in each direction, a 20' raised median, and turn lanes at median openings. Proposed shoulders include curb and gutter with adequate drainage structures and sidewalks on both sides. Streetlights will also be included along the future Wrightsboro Road.

Wrightsboro Road operates as an arterial between Jimmie Dyess Parkway and Interstate 520. Jimmie Dyess Parkway has recently been extended as a four-lane divided roadway from I-20 to Gate 1 of Ft. Gordon at US 78. Wrightsboro Road is a five-lane section from Barton Chapel Road to the east. Current land uses for Wrightsboro Road in the I-520 area are mostly commercial and no major shifts in land uses are anticipated. Therefore, current traffic patterns along Wrightsboro Road at the I-520 interchange are not expected to change.

Wrightsboro Road was widened to five lanes for approximately 2400 feet east of the intersection with Jimmie Dyess Parkway as part of the Jimmie Dyess Parkway widening project and improvements to the Jimmie Dyess/Wrightsboro Road intersection were made. It appears that in the mid 1970's, Wrightsboro Road was widened from two to five lanes from Barton Chapel Road to I-520 and from I-520 to Highland. The section of I-520 from Wrightsboro Road to Deans Bridge Road was opened in 1974. Augusta Mall, to the east of I-520, opened in the summer of 1978. It is possible that the Wrightsboro Road widening was initiated in coordination with the extension of I-520 or the opening of Augusta Mall.

Proposed improvements would begin at the existing five-lane section of Wrightsboro Road close to Jimmie Dyess Parkway and would end at the I-520 southbound ramp terminus where the proposed raised median ends. This widening will provide a continuous four-lane facility connecting I-20 and Fort Gordon with I-520 and commercial developments along Wrightsboro Road to the east. Approximately 60% of traffic along Wrightsboro Road continues through the I-520 interchange, and future projects have been, and are being studied to the east of the project end. The proposed improvements will not preclude recommendations to improve the ramps and interchange at I-520. The Wrightsboro Road project will also not preclude any improvements recommended as part of an area study to be done by the Augusta MPO for Augusta Mall to the east of I-520. The ARTS 2020 Plan does not include any other recommendations for Wrightsboro Road or its interchange with I-520.

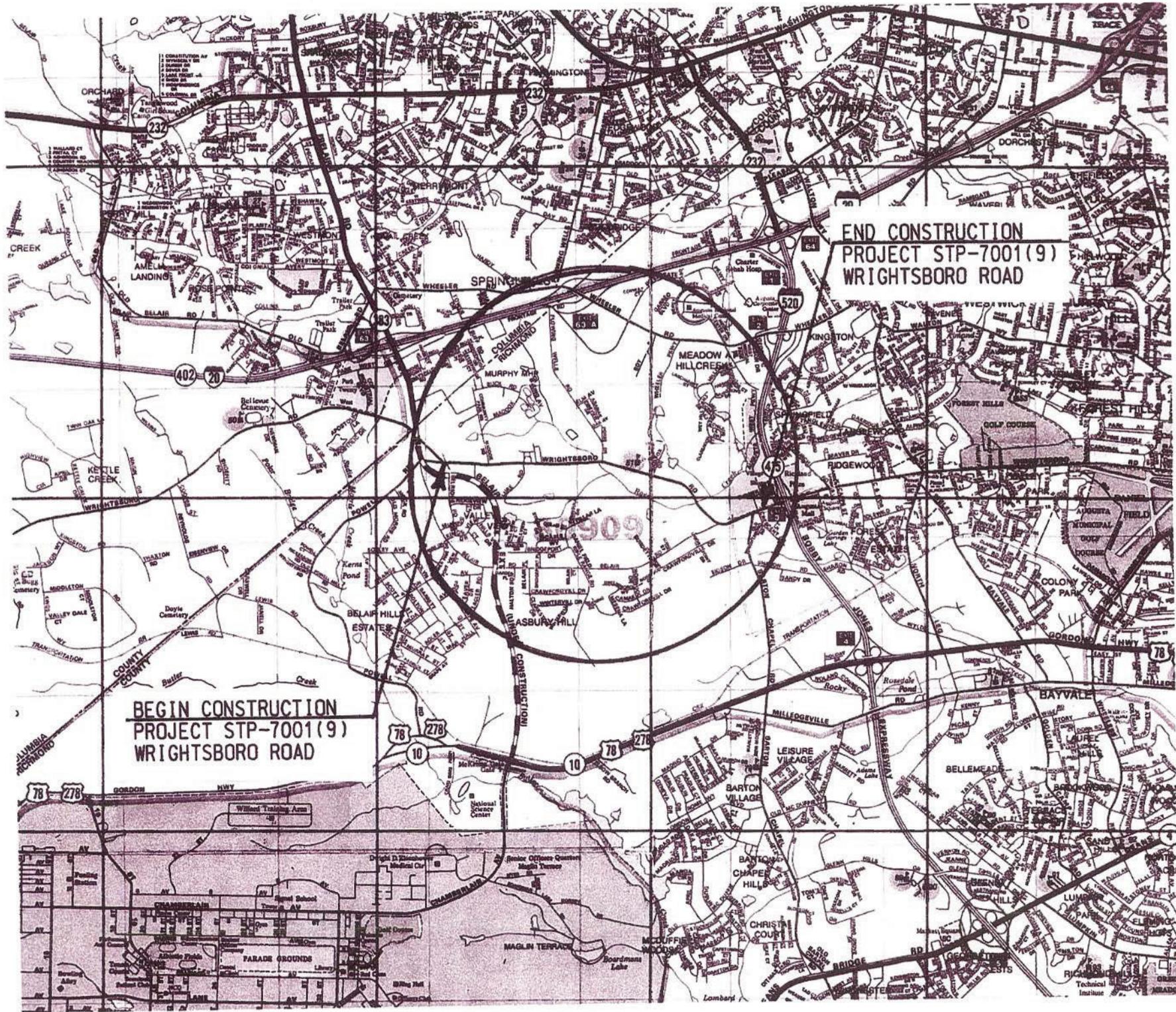
Based on the future traffic, the level of service will deteriorate on Wrightsboro Road without the proposed improvements. Projected average daily traffic between Jimmie Dyess Parkway and Belair Road is in the range of 28,000. According to general guidelines for arterial level of service analysis, Wrightsboro Road will operate at a level of service E for this segment if improvements are not made. The deterioration will be more significant on the eastern end of Wrightsboro Road where unacceptable levels of service will be experienced between Belair Road and I-520 southbound ramp termini during the peak hours. In addition, due to the conflicts with the left turns on Crescent Drive and the increased congestion in the AM peak, traffic will experience substantial delay traveling westbound in the future without the proposed

improvements. The proposed widening with the four lane divided design will improve the flow of traffic for future conditions. The future level of service with proposed improvements will result in no worse than a level of service D at the intersections along Wrightsboro Road, including the existing intersection configuration at Jimmy Dyess Pkwy.

The analysis of accidents was performed by segment and intersection. The accident and injury rates by segment are below GDOT's statewide average for Urban Principal Arterials for the western end of the facility. However the accident and injury rates by segment exceed GDOT's statewide average for the eastern portion of Wrightsboro Road between Belair Road and I-520 southbound ramp termini. The analysis of accidents by intersections shows that there is higher incidence of accidents on the eastern end of the project. Five of the intersections exceed the average number of accidents for Augusta per year based on the most recently available data provided by GDOT. The addition of right and left turn bays and a signal at the intersection with Belair Road will provide a more controlled environment for turning movements and will remove left turn vehicles from through traffic.

The proposed improvement is included in the Augusta Regional Transportation Study's (ARTS) adopted 2020 Plan. Pedestrian and bicycle facilities are recommended for the entire length of the project. The transportation study is a comprehensive, cooperative, and continuing transportation planning process conducted by the local governments and the Georgia and South Carolina Departments of Transportation in cooperation with the Federal Highway and Federal Transit Administrations. The proposed improvement is included in the current ARTS Transportation Improvement Program (TIP).

The purpose of this project is to correct roadway deficiencies, improve the operational efficiency, provide a safer transportation environment for vehicles, bicycles and pedestrians, and serve the transportation demand generated by the increase in developments.



**BEGIN CONSTRUCTION  
PROJECT STP-7001(9)  
WRIGHTSBORO ROAD**

**END CONSTRUCTION  
PROJECT STP-7001(9)  
WRIGHTSBORO ROAD**

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## STATE HIGHWAY AGENCY

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## JOB ESTIMATE REPORT

JOB NUMBER : 250510                      SPEC YEAR: 01  
 DESCRIPTION: WRIGHTSBORO ROAD  
                   CR 1501 FROM I-520 TO JIMMIE DYESS PKWY

## ITEMS FOR JOB 250510

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - STP00-7001-00(009)	1.000	600000.00	600000.00
0010	150-5010		EA	TRAF CTRL,PORTABLE IMPACT ATTN	2.000	14684.97	29369.94
0015	153-1300		EA	FIELD ENGINEERS OFFICE TP 3	1.000	78728.23	78728.23
0020	207-0203		CY	FOUND BKFILL MATL, TP II	480.000	56.35	27050.97
0025	208-0200		CY	ROCK EMBANKMENT	5000.000	15.32	76602.65
0030	210-0100		LS	GRADING COMPLETE - STP00-7001-00(009)	1.000	3500000.00	3500000.00
0035	310-1101		TN	GR AGGR BASE CRS, INCL MATL	68000.000	21.19	1440983.24
0040	402-1802		TN	RECYL AC PATCHING, INCL BM&HL	1000.000	110.09	110096.38
0045	402-1812		TN	RECYL AC LEVELING, INC BM&HL	19800.000	65.91	1305201.74
0050	402-3121		TN	RECYL AC 25MM SP,GP1/2,BM&HL	19800.000	72.51	1435799.97
0055	402-3130		TN	RECYL AC 12.5MM SP,GP2,BM&HL	11500.000	69.69	801518.84
0060	402-3190		TN	RECYL AC 19 MM SP,GP 1 OR 2 , INC BM&HL	10300.000	68.47	705317.63
0065	413-1000		GL	BITUM TACK COAT	9100.000	2.19	19975.05
0070	432-5010		SY	MILL ASPH CONC PVMT,VARB DEPTH	2600.000	5.76	14995.08
0075	441-0016		SY	DRIVEWAY CONCRETE, 6 IN TK	250.000	44.05	11014.95
0080	441-0018		SY	DRIVEWAY CONCRETE, 8 IN TK	1700.000	51.45	87471.83
0085	441-0104		SY	CONC SIDEWALK, 4 IN	20000.000	61.85	1237040.00
0090	441-0740		SY	CONC MEDIAN, 4 IN	1600.000	40.28	64460.43
0095	441-0748		SY	CONC MEDIAN, 6 IN	150.000	55.74	8361.39
0100	441-4020		SY	CONC VALLEY GUTTER, 6 IN	1800.000	36.73	66127.97
0105	441-4030		SY	CONC VALLEY GUTTER, 8 IN	480.000	46.48	22310.91
0110	441-5002		LF	CONC HEADER CURB, 6", TP 2	2600.000	16.11	41893.88
0115	441-6222		LF	CONC CURB & GUTTER/ 8"X30"TP2	36300.000	12.35	448323.51
0120	441-6740		LF	CONC CURB & GUTTER/ 8"X30" TP7	25600.000	13.94	356936.96
0125	444-1000		LF	SAWED JTS IN EXIST PVMTS - PCC	2200.000	5.31	11696.39
0130	446-1100		LF	PVMT REF FAB STRIPS, TP2,18 INCH WIDTH	19100.000	7.00	133819.57
0135	500-3101		CY	CLASS A CONCRETE	1600.000	500.39	800629.76
0140	500-3201		CY	CL B CONC, RET WALL	69.000	701.67	48415.41
0145	500-9999		CY	CL B CONC,BASE OR PVMT WIDEN	98.000	217.55	21320.03
0150	511-1000		LB	BAR REINF STEEL	175800.000	0.87	153207.94
0155	515-2020		LF	GALV STEEL PIPE HDRAIL,2",ROUD	150.000	40.20	6030.15
0160	550-1150		LF	STM DR PIPE 15",H 1-10	285.000	47.12	13431.53
0165	550-1180		LF	STM DR PIPE 18",H 1-10	12300.000	36.18	445014.00
0170	550-1240		LF	STM DR PIPE 24",H 1-10	4550.000	54.90	249824.85

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0175	550-1300	LF	STM DR PIPE 30",H 1-10	2700.000	63.03	170197.34
0180	550-1301	LF	STM DR PIPE 30",H 10-15	110.000	39.43	4337.84
0185	550-1360	LF	STM DR PIPE 36",H 1-10	540.000	81.66	44099.82
0190	550-2180	LF	SIDE DR PIPE 18",H 1-10	140.000	31.40	4396.16
0195	550-2420	LF	SIDE DR PIPE 42",H 1-10	190.000	80.26	15250.66
0200	550-3418	EA	SAFETY END SECTION 18",SD,4:1	7.000	705.96	4941.74
0205	550-3442	EA	SAFETY END SECTION 42",SD,4:1	1.000	500.00	500.00
0210	550-4218	EA	FLARED END SECT 18 IN, ST DR	1.000	730.04	730.04
0215	550-4224	EA	FLARED END SECT 24 IN, ST DR	2.000	752.66	1505.32
0220	550-4230	EA	FLARED END SECT 30 IN, ST DR	1.000	894.84	894.85
0225	550-4236	EA	FLARED END SECT 36 IN, ST DR	1.000	1203.78	1203.79
0230	573-2006	LF	UNDDR PIPE INCL DRAIN AGGR 6"	2000.000	36.01	72022.04
0235	611-3000	EA	RECONSTR CATCH BASIN, GROUP 1	7.000	2247.31	15731.17
0240	611-3010	EA	RECONSTR DROP INLET, GROUP 1	2.000	2221.94	4443.90
0245	611-3030	EA	REC STORM SEW MANHOLE, TYPE 1	1.000	2246.91	2246.91
0250	611-8040	EA	ADJUST DROP INLET TO GRADE	5.000	1338.03	6690.19
0255	611-8050	EA	ADJUST MANHOLE TO GRADE	4.000	1260.19	5040.79
0260	620-0100	LF	TEMP BARRIER, METHOD NO. 1	600.000	47.06	28239.19
0265	632-0003	EA	CHANGEABLE MESS SIGN,PORT,TP 3	4.000	15336.87	61347.50
0270	634-1200	EA	RIGHT OF WAY MARKERS	210.000	83.16	17465.48
0275	641-1200	LF	GUARDRAIL, TP W	1600.000	11.03	17652.38
0280	641-5001	EA	GUARDRAIL ANCHORAGE, TP 1	7.000	641.61	4491.32
0285	641-5012	EA	GUARDRAIL ANCHORAGE, TP 12	7.000	1732.05	12124.38
0290	643-8200	LF	BARRIER FENCE (ORANGE), 4 FT	2000.000	3.86	7737.64
0295	668-1100	EA	CATCH BASIN, GP 1	139.000	2574.02	357790.11
0300	668-1110	LF	CATCH BASIN, GP 1, ADDL DEPTH	80.000	262.63	21011.05
0305	668-2100	EA	DROP INLET, GP 1	24.000	2619.32	62863.84
0310	668-2105	EA	DROP INLET, GP 1, SPCL DES	1.000	3921.09	3921.09
0315	668-4300	EA	STORM SEW MANHOLE, TP 1	13.000	2554.28	33205.64
0320	668-4311	LF	ST SEW MANHOLE,TP 1,A DEP,CL 1	2.000	316.01	632.02
0325	668-5000	EA	JUNCTION BOX	2.000	1903.71	3807.42
0330	668-6000	EA	SPRING BOX	10.000	2321.02	23210.28
0335	603-2018	SY	STN DUMPED RIP RAP, TP 1, 18"	2000.000	54.94	109899.74
0340	603-7000	SY	PLASTIC FILTER FABRIC	2000.000	10.81	21631.92
0345	700-6910	AC	PERMANENT GRASSING	8.000	575.70	4605.64
0350	700-7000	TN	AGRICULTURAL LIME	22.000	56.53	1243.79
0355	700-7010	GL	LIQUID LIME	20.000	17.52	350.53
0360	700-8000	TN	FERTILIZER MIXED GRADE	10.000	368.59	3685.95
0365	700-8100	LB	FERTILIZER NITROGEN CONTENT	750.000	4.29	3224.94
0370	163-0232	AC	TEMPORARY GRASSING	4.000	593.86	2375.47
0375	163-0240	TN	MULCH	400.000	250.20	100080.30
0380	163-0501	EA	CONSTR AND REMOVE SILT CONTROL GATE,TP 1	3.000	843.12	2529.37
0385	163-0503	EA	CONSTR AND REMOVE SILT CONTROL GATE,TP 3	3.000	544.40	1633.22
0390	163-0520	LF	CONSTR AND REMOVE TEMP PIPE SLOPE DRAIN	1000.000	24.90	24903.28
0395	165-0010	LF	MAINT OF TEMP SILT FENCE, TP A	1500.000	1.35	2027.55

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0400	165-0020	LF	MAINT OF TEMP SILT FENCE, TP B	12400.000	7.07	87668.00
0405	165-0030	LF	MAINT OF TEMP SILT FENCE, TP C	3200.000	1.81	5801.22
0410	165-0085	EA	MAINT OF SILT CONTROL GATE, TP 1	3.000	335.18	1005.56
0415	165-0087	EA	MAINT OF SILT CONTROL GATE, TP 3	3.000	210.43	631.31
0420	167-1000	EA	WATER QUALITY MONITORING AND SAMPLING	2.000	1471.04	2942.10
0425	167-1500	MO	WATER QUALITY INSPECTIONS	24.000	1545.39	37089.40
0430	171-0010	LF	TEMPORARY SILT FENCE, TYPE A	3000.000	1.52	4562.31
0435	171-0020	LF	TEMPORARY SILT FENCE, TYPE B	24700.000	7.07	174629.00
0440	171-0030	LF	TEMPORARY SILT FENCE, TYPE C	6400.000	3.33	21334.53
0445	610-6515	EA	REM HIGHWAY SIGN, STD	5.000	79.29	396.47
0450	611-5360	EA	RESET HIGHWAY SIGN	5.000	260.77	1303.88
0455	636-1020	SF	HWY SGN,TP1MAT,REFL SH TP3	840.000	15.01	12611.80
0460	636-1029	SF	HWY SGN,TP2 MATL,REFL SH TP 3	20.000	8.99	179.80
0465	636-1033	SF	HWY SIGNS, TP1MAT,REFL SH TP 9	150.000	21.09	3163.87
0470	636-2070	LF	GALV STEEL POSTS, TP 7	52.000	11.13	579.06
0475	636-2080	LF	GALV STEEL POSTS, TP 8	1700.000	6.03	10267.88
0480	636-2090	LF	GALV STEEL POSTS, TP 9	330.000	14.66	4838.43
0485	639-2002	LF	STEEL WIRE STRAND CABLE, 3/8"	630.000	3.23	2036.20
0490	639-4003	EA	STRAIN POLE, TP III	2.000	6240.66	12481.33
0495	652-0094	EA	PVMT MARKING, SYMBOL, TP 4	23.000	69.34	1594.87
0500	652-0110	EA	PAVEMENT MARKING, ARROW, TP 1	23.000	49.69	1142.98
0505	652-5301	LF	SOLID TRAF STRIPE, 6 IN, WHITE	24800.000	0.19	4886.84
0510	652-5451	LF	SOLID TRAF STRIPE, 5 IN, WHITE	24800.000	0.04	1014.82
0515	652-6301	GLF	SKIP TRAF STRIPE, 6 IN, WHITE	2200.000	0.13	305.23
0520	652-6501	GLF	SKIP TRAF STRIPE, 5 IN, WHITE	2200.000	0.14	315.92
0525	653-0110	EA	THERM PVMT MARK, ARROW, TP 1	2.000	124.04	248.09
0530	653-0120	EA	THERM PVMT MARK, ARROW, TP 2	90.000	74.81	6733.33
0535	653-0170	EA	THERM PVMT MARK, ARROW, TP 7	18.000	108.54	1953.72
0540	653-0210	EA	THERM PVMT MARK, WORD , TP 1	12.000	114.88	1378.61
0545	653-0235	EA	THERM PVMT MARK, WORD , TP 3B	4.000	255.23	1020.93
0550	653-1501	LF	THERMO SOLID TRAF ST 5 IN, WHI	17500.000	0.40	7100.98
0555	653-1502	LF	THERMO SOLID TRAF ST, 5 IN YEL	32500.000	0.38	12489.10
0560	653-1704	LF	THERM SOLID TRAF STRIPE,24",WH	570.000	4.28	2441.99
0565	653-1804	LF	THERM SOLID TRAF STRIPE, 8",WH	7000.000	3.13	21932.47
0570	653-3501	GLF	THERMO SKIP TRAF ST, 5 IN, WHI	30000.000	0.21	6472.20
0575	653-3502	GLF	THERMO SKIP TRAF ST, 5 IN, YEL	1100.000	0.21	233.12
0580	653-6004	SY	THERM TRAF STRIPING, WHITE	590.000	5.83	3444.83
0585	653-6006	SY	THERM TRAF STRIPING, YELLOW	400.000	3.62	1450.44
0590	654-1001	EA	RAISED PVMT MARKERS TP 1	110.000	3.69	406.64
0595	654-1003	EA	RAISED PVMT MARKERS TP 3	680.000	5.90	4013.89
0600	639-3004	EA	STEEL STRAIN POLE, TP IV	1.000	7051.97	7051.98
0605	639-3004	EA	STEEL STRAIN POLE, TP IV	2.000	7051.97	14103.95
0610	639-3004	EA	STEEL STRAIN POLE, TP IV	2.000	7051.97	14103.95
0615	639-3004	EA	STEEL STRAIN POLE, TP IV	1.000	7051.97	7051.98
0620	647-1000	LS	TRAF SIGNAL INSTALLATION NO - 1	1.000	80000.00	80000.00
0625	647-1000	LS	TRAF SIGNAL INSTALLATION NO - 2	1.000	80000.00	80000.00
0630	647-1000	LS	TRAF SIGNAL INSTALLATION NO - 3	1.000	30000.00	30000.00
0635	647-2160	EA	PULL BOX, PB-6	4.000	1600.00	6400.00
0640	647-2170	EA	PULL BOX, PB-7	4.000	1658.59	6634.37
0645	682-6120	LF	CONDUIT, RIGID, 2 IN	200.000	19.40	3881.85

## STATE HIGHWAY AGENCY

DATE : 07/22/2011

PAGE : 4

## JOB ESTIMATE REPORT

0650	682-6233	LF	CONDUIT, NONMETL, TP 3, 2 IN	4000.000	6.99	27970.44
0655	935-1113	LF	OUT PLNT FBR OPT CBL, LOOSE TB, SM, 24 FBR	3600.000	4.42	15932.09
0660	935-1511	LF	OUT PLNT FBR OPT CBL, DROP, SM, 6 FBR	600.000	4.83	2902.14
0665	935-3103	EA	FIBER OPTIC CLOSURE, UNDRGRD, 24 FBR	3.000	643.13	1929.40
0670	935-4010	EA	FIBER OPTIC SPLICE, FUSION	10.000	51.52	515.21
0675	935-5050	EA	FIBER OPTIC PATCH CORD, SM	3.000	60.72	182.16
0680	935-6562	EA	EXT TRNSCVR, DRP&RPT, 1310SM, (SIGNAL JOBS)	3.000	2026.55	6079.66
0685	681-4215	EA	LIGHTING STD, 35 FT MH, POST TOP	161.000	1605.55	258493.55
0690	681-6246	EA	LUMINAIRE, TP 2, 250W, HP SODIUM	158.000	766.00	121028.00
0695	681-6366	EA	LUMINAIRE, TP 3, 400W, HP SODIUM	3.000	1256.68	3770.06
0700	682-1406	LF	CABLE, TP XHHW, AWG NO 6	27560.000	1.64	45323.80
0705	682-1409	LF	CABLE, TP XHHW, AWG NO 1	54100.000	2.87	155267.00
0710	682-6115	LF	CONDUIT, RIGID, 1 1/2 IN	6930.000	19.85	137574.64
0715	682-6221	LF	CONDUIT, NONMETL, TP 2, 1 1/2"	19000.000	5.68	107922.47
0720	682-6222	LF	CONDUIT, NONMETL, TP 2, 2 IN	100.000	2.27	227.84
0725	682-6322	LF	CONDUIT/ENCASED/TP 1, 2" 2-WAY	320.000	48.00	15360.00
0730	682-9000	LS	MAIN SVC PICK UP POINT	1.000	12873.00	12873.00
0735	682-9000	LS	MAIN SVC PICK UP POINT	1.000	12873.00	12873.00
0740	682-9000	LS	MAIN SVC PICK UP POINT	1.000	12873.00	12873.00
0745	682-9021	EA	ELEC JCT BX, CONC GRD MOUNTED	6.000	2212.99	13278.00
0750	441-0004	SY	CONC SLOPE PAV, 4 IN	22.000	34.01	748.26
0755	500-3101	CY	CLASS A CONCRETE	234.000	539.21	126177.00
0760	511-1000	LB	BAR REINF STEEL	37224.000	0.95	35429.43
0765	615-1200	LF	DIRECTIONAL BORE - 1	535.000	15.94	8529.29
0770	681-6620	EA	LUMINAIRE, TP A, 150W, HP SODIUM	6.000	584.38	3506.33
0775	682-1404	LF	CABLE, TP XHHW, AWG NO 10	390.000	1.05	412.58
0780	682-1405	LF	CABLE, TP XHHW, AWG NO 8	780.000	1.53	1198.89
0785	682-1406	LF	CABLE, TP XHHW, AWG NO 6	7010.000	1.67	11746.03
0790	682-1407	LF	CABLE, TP XHHW, AWG NO 4	10430.000	1.50	15660.02
0795	682-1408	LF	CABLE, TP XHHW, AWG NO 2	4140.000	5.54	22960.77
0800	682-6110	LF	CONDUIT, RIGID, 1 IN	1160.000	9.85	11429.00
0805	682-6219	LF	CONDUIT, NONMETL, TP 2, 1 IN	6150.000	3.57	22004.95
0810	682-6221	LF	CONDUIT, NONMETL, TP 2, 1 1/2"	100.000	5.68	568.01
0815	682-9000	LS	MAIN SVC PICK UP POINT	1.000	12873.00	12873.00
0820	682-9000	LS	MAIN SVC PICK UP POINT	1.000	12873.00	12873.00
0825	682-9021	EA	ELEC JCT BX, CONC GRD MOUNTED	13.000	1624.97	21124.71
0830	682-9023	EA	ELEC JCT BX, GALVANIZED, SIZE -	2.000	483.51	967.03
0835	683-1101	EA	LIGHT TOW/STEL/100'MH/LW EQUIP	12.000	18820.18	225842.21

ITEM TOTAL						17860651.95
INFLATED ITEM TOTAL						17860651.95

TOTALS FOR JOB 250510

ESTIMATED COST:						17860651.98
CONTINGENCY PERCENT ( 0.0 ):						0.00
ESTIMATED TOTAL:						17860651.98

PROJ. NO.

STP00-7001-00(009)

CALL NO.

9/29/2009

P.I. NO.

250510-

DATE

7/21/2011

INDEX (TYPE)

REG. UNLEADED

DATE	INDEX
Jul-11	\$ 3.455

DIESEL

	\$ 3.861
--	----------

LIQUID AC

	\$ 605.00
--	-----------

Link to Fuel and AC Index:

<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>

LIQUID AC ADJUSTMENTS

PA=[((APM-APL)/APL)-0.05]xTMTxAPL

Asphalt

Price Adjustment (PA)

\$ 2,228,820.00 \$ 2,228,820.00

Monthly Asphalt Cement Price month placed (APM)

Max. Cap 125% \$ 1,361.25

Monthly Asphalt Cement Price month project let (APL)

\$ 605.00

Total Monthly Tonnage of asphalt cement (TMT)

3070

ASPHALT	Tons	%AC	AC ton
Leveling	19800	5.0%	990
12.5 OGFC	0	5.0%	0
12.5 mm	11500	5.0%	575
9.5 mm SP	0	5.0%	0
25 mm SP	19800	5.0%	990
19 mm SP	10300	5.0%	515
	<b>61400</b>		<b>3070</b>

BITUMINOUS TACK COAT

Price Adjustment (PA)

\$ 28,376.01 \$ 28,376.01

Monthly Asphalt Cement Price month placed (APM)

Max. Cap 125% \$ 1,361.25

Monthly Asphalt Cement Price month project let (APL)

\$ 605.00

Total Monthly Tonnage of asphalt cement (TMT)

39.08541839

Bitum Tack

Gals	gals/ton	tons
9100	232.8234	39.0854184

PROJ. NO.

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**BITUMINOUS TACK COAT (surface treatment)**

Price Adjustment (PA)				\$	-	\$	-
Monthly Asphalt Cement Price month placed (APM)		Max. Cap	125%	\$	1,361.25		
Monthly Asphalt Cement Price month project let (APL)				\$	605.00		
Total Monthly Tonnage of asphalt cement (TMT)					0		

Bitum Tack	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.		0.20	0	232.8234	0
Double Surf. Trmt.		0.44	0	232.8234	0
Triple Surf. Trmt		0.71	0	232.8234	0
					0

<b>TOTAL LIQUID AC ADJUSTMENT</b>	<b>\$ 2,257,196.01</b>
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PROJ. NO.

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DATE

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**FUEL ADJUSTMENTS - ROADWAY**

FPA = (((FPM-FPL)/FPL)-.10]xQxF)FPL

**GRADED AGGREGATE BASE (Section 310)**

			REGULAR		TOTALS	
			UNLEADED	DIESEL		
Fuel Price Adjustment (FPA)			\$ 64,843.44	\$ 87,559.76	\$	152,403.20
Monthly Fuel Price for month work was accomplished (FPM)	Max. Cap	125%	\$ 7.774	\$ 8.687		
Monthly Fuel Price for month when project was let (FPL)			\$ 3.455	\$ 3.861		
Quantity Placed (Q)	Ton	68000				
Fuel Usage Factor (F)			0.24	0.29		

**ASPHALT (Sections 400 and 402)**

			REGULAR		TOTALS	
			UNLEADED	DIESEL		
Fuel Price Adjustment (FPA)			\$ 173,209.86	\$ 790,613.11	\$	963,822.97
Monthly Fuel Price for month work was accomplished (FPM)	Max. Cap	125%	\$ 7.774	\$ 8.687		
Monthly Fuel Price for month when project was let (FPL)			\$ 3.455	\$ 3.861		
Quantity Placed (Q)	Ton	61400				
Fuel Usage Factor (F)			0.71	2.90		

**EARTHWORK (Section 205 and 206)**

			REGULAR		TOTALS	
			UNLEADED	DIESEL		
Fuel Price Adjustment (FPA)			\$ 23,064.72	\$ 49,831.80	\$	72,896.52
Monthly Fuel Price for month work was accomplished (FPM)	Max. Cap	125%	\$ 7.774	\$ 8.687		
Monthly Fuel Price for month when project was let (FPL)			\$ 3.455	\$ 3.861		
Quantity Placed (Q)	Cy	38700				
Fuel Usage Factor (F)			0.15	0.29		

**CONCRETE PAVEMENT (Section 430)**

			REGULAR		TOTALS	
			UNLEADED	DIESEL		
Fuel Price Adjustment (FPA)			\$ -	\$ -	\$	-
Monthly Fuel Price for month work was accomplished (FPM)	Max. Cap	125%	\$ 7.774	\$ 8.687		
Monthly Fuel Price for month when project was let (FPL)			\$ 3.455	\$ 3.861		
Quantity Placed (Q)	Sy					
Fuel Usage Factor (F)			0.20	0.25		

<b>TOTAL ROADWAY FUEL ADJUSTMENTS</b>			\$ 261,118.02	\$ 928,004.67	\$	<b>1,189,122.69</b>
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PROJ. NO.

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DATE

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**FUEL ADJUSTMENTS - BRIDGE**

$FPA = (((FPM-FPL)/FPL) \cdot .10) \times (Q \times F / 1000) \times FPL$

						REGULAR UNLEADED	DIESEL	TOTALS
Fuel Price Adjustment (FPA)						\$ -	\$ -	\$ -
Monthly Fuel Price for month work was accomplished (FPM)		125%				\$ 7.774	\$ 8.687	
Monthly Fuel Price for month when project was let (FPL)						\$ 3.455	\$ 3.861	
Quantity Placed (Q)		Cost		\$ -				
Fuel Usage Factor (F)						1.5	8	
Section		Bridge 1 Cost	Bridge 2 Cost	Bridge 3 Cost	Bridge 4 Cost			
211	Bridge Excavation							
500	Superstr Conc Cl AA							
500	Class A Concrete							
500	Class AA Concrete							
500	Concrete Handrail							
500	Concrete Barrier							
501	Structural Steel							
507	Prestressed Conc Beams							
507	Prestressed Conc Beams							
507	Prestressed Conc Beams							
511	Super Reinforcement							
511	Bar Reinf Steel							
520	Piling							
520	Piling							
524	Drilled Caisson							
547	Pile Encasement							
547	Pile Encasement							
		\$ -	\$ -	\$ -	\$ -			
<b>TOTAL BRIDGE FUEL ADJUSTMENTS</b>						\$ -	\$ -	\$ -
<b>TOTAL FUEL ADJUSTMENT (ROADWAY AND BRIDGE)</b>						\$ 261,118.02	\$ 928,004.67	\$ 1,189,122.69

Use when bridge items haven't been established. Assumes 80% of the estimated bridge cost will qualify for fuel adjustments.

EST. BRIDGE COST	% COST w/ADJ.
	80%
COST	\$ -







# Memo

**To:** Taylor Wright  
**From:** Zhang Huang  
**Date:** 7/22/2009  
**Re:** Wrightsboro Road Traffic Analysis – STP00-7001-00(009)  
P.I. # 250510

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Attached are traffic analysis results for the Wrightsboro Road corridor between Maddox Road and Augusta West Parkway in Augusta Georgia.

The traffic analysis was performed for the following three scenarios, including both AM and PM peak periods.

- 2008 existing condition
- 2012 future with proposed improvements
- 2032 future with proposed improvements

The analysis was performed to study the traffic impact created by the realignment of Barton Chapel Road to Augusta West Parkway as well as by the proposed developments located along the newly aligned Barton Chapel Road. The proposed developments would occur on both sides of the realigned Barton Chapel Road south of Wrightsboro Road. The proposed realignment includes the closure of the existing intersections at Barton Chapel Road and the old Barton Chapel road becomes a cul-de-sac just south of the Wrightsboro road.

## Traffic Volumes

Traffic counts were collected on Tuesday, September 23 of 2008. The locations and types of counts selected for data collection are shown in Figure 1. The collected traffic counts along the corridor and at each intersection were refined and balanced to reflect a period for each peak hour as well as for 24-hour when vehicles are traveling along the corridor. The balanced volumes for AM and PM peak periods were used as input to the CORSIM analysis for the 2008 existing year.

Wrightboro Road corridor traffic volumes were also projected for year 2012 and 2032 based on the average annual traffic growth rate obtained from the Augusta Regional Transportation Study (ARTS) travel demand model, which accounts for any future projects in the corridor vicinity and beyond. This model estimates future traffic volumes on all major roadways in the Richmond County region and is based on the most current socioeconomic data (e.g. households, employment) forecasts available. The ARTS model allowed PBS&J to utilize all pertinent roadway and socioeconomic information in Richmond County in order to develop an unbiased estimate of future trips within the study area. The growth rates were obtained for daily as well as for peak periods of AM and PM respectively. The average growth rates are approximately 3 percent across the corridor as shown in Figure 2. In addition, intersection volumes were forecasted according to the traffic growth on the crossing streets using Fratar method which adjusts the turning movement volumes in accordance with the targeted growth on each of the intersection legs. The forecasted traffic volumes were also refined and balanced for each of the peak periods as well as for the 24-hour daily period. The existing 2008 and forecasted peak hour and daily traffic volumes along the corridor are shown in Appendix A (Wrightboro Road Traffic Volumes).

### **Traffic of Proposed Development**

Since no specific information available regarding the site plan of the proposed developments at the time when this analysis was performed, the following assumptions were made as to show how the traffic volumes related to the development are distributed.

It is assumed that along the new aligned Barton Chapel road, there will be an access point leading to both sides of the proposed developments. It is also assumed that there will be two right-in-right-out access driveways located along the Wrightboro Road. One is located to the east of the Augusta West Parkway, and the other is located to the west of Augusta West Parkway. The intersection at the old Barton Chapel Road can be utilized as an access driveway to serve the west portion of the proposed developments. Figure 3 shows the assumed the access point locations.

The analysis includes both 2012 and 2032 peak hour periods. Traffic volumes were assigned in two steps. First, the existing 2012 and 2032 traffic on the Barton Chapel Road were relocated to Augusta West Parkway and subsequently redistributed. Then, traffic volumes generated by the proposed developments were distributed based on the existing travel pattern, and superimposed on top of the redistributed volumes in the first step. Table 1 shows the assumptions made to the trip generation related to these developments. The trip generation rates were from the ITE Trip Generation Manual, 7th edition. It was assumed that the total trips generated by the whole development were evenly allocated between the two portions of the proposed developments on both sides of the realigned Barton Chapel Road.

**Table 1**  
**Gross Trip Generation Analysis**

Trip Generation Code	Land Use	Quantity (square feet)	Daily	AM Peak Period		PM Peak Period	
				In	Out	In	Out
492	Fitness Center	45,000	1,482	23	31	93	89
850	Grocery	54,340	5,030	131	84	294	282
820	Major Tenants	55,000	4,604	66	43	203	219
814	Mini-Major Tenants	12,000	551	27	17	22	28
814	Shops	28,840	1,271	45	29	40	51
<b>Total:</b>		<b>195,180</b>	<b>12,938</b>	<b>292</b>	<b>204</b>	<b>652</b>	<b>669</b>

### Level of Services Analysis

The Level of Service (LOS) analysis was performed using the CORSIM program, which incorporates all relevant roadway network elements into a single integrated transportation system. The program takes the input traffic volumes and provides vehicle travel delays according to the operational simulation for the corridor. The average vehicle delay at each intersection is summarized and then translated into LOSs based on the criteria specified in the 2000 edition of the Highway Capacity Manual.

The proposed realignment will shift the traffic on the old Barton Chapel Road to Augusta West Parkway increasing the traffic load at the existing intersection of Augusta West Parkway at Wrightsboro Road. In addition, the traffic volumes generated by the proposed developments will add another level of operational burden. The proposed developments will add approximately 500 and 1,300 vehicles during the AM and PM peak hours respectively. The analysis showed that without any improvements, this intersection will operate under unacceptable LOSs. Therefore, a list of suggested improvements was proposed to mitigate the operational burden at this intersection. Additionally, due to the increase in traffic volumes of the future year, additional through capacity is needed along the Wrightsboro Road. A four-lane section from west of old Barton Chapel Road to Maddox Road is required to maintain an acceptable operation condition on Wrightsboro Road in both 2012 and 2032. The proposed improvements are listed in the section discussed below.

The results showed that all intersections are and will be operating at acceptable LOSs during the peak hours of the current year and the future year 2012 when the proposed improvements are implemented. The analysis of 2032 traffic showed that the intersection at Flowing Wells Road, which is currently an unsignalized intersection, will be operating at unacceptable LOSs in both peak periods. Therefore, it is proposed that a signal be installed at this location during the period between 2012 and 2032 in order to ensure acceptable LOSs at this intersection. With all these proposed improvements, the analysis showed that all intersections along Wrightsboro Road will operate at acceptable LOSs in the year 2032.

The LOS analysis results for the suggested improvements are shown in both graphical and tabular formats in Appendix B at the end of this memorandum. (Wrightsboro Road LOS Analysis).

### **Proposed Improvements**

In order to maintain acceptable operating LOSs after the proposed roadway realignment and the development, the following improvements are suggested according to the traffic analysis with the stated assumptions listed above. These improvements are needed to accommodate the anticipated future increases in traffic volumes, the new travel patterns created by the Barton Chapel Road realignment, and the proposed developments, as well as to ensure that the westbound queue on Wrightsboro Road will not block the ramp access to I-520 east of the Augusta West Parkway. The detail of these proposed improvements are shown in diagrams in Appendix C at the end of this memorandum.

#### **Through Capacity Improvement**

- **Wrightsboro Road**  
Widen existing two-lane section between existing Barton Chapel Road and Maddox Road to a four-lane highway

#### **Intersection Capacity Improvements**

- **Maddox Road**  
Add 200 feet left turning bay eastbound on Wrightsboro Road  
Add 150 feet right turning bay westbound on Wrightsboro Road
- **Lukes Road**  
Add 200 feet left turning bay westbound on Wrightsboro Road  
Add 150 feet right turning bay eastbound on Wrightsboro Road
- **Flowing Wells Road**  
Add traffic signal (2032)

Add 200 feet left turning bay eastbound on Wrightsboro Road  
Add 150 feet right turning bay westbound on Wrightsboro Road

- Maddox Drive
  - Add 250 feet left turning bay eastbound on Wrightsboro Road
  - Add 150 feet right turning bay westbound on Wrightsboro Road
  
- Belair Road
  - Add traffic signal
  - Add 300 feet left turning bay westbound on Wrightsboro Road
  - Add 200 feet right turning bay eastbound on Wrightsboro Road
  - Add 250 feet right turning bay on Belair Road
  
- Existing Barton Chapel Road
  - Make existing intersection a right-in-right-out access on Wrightsboro Road for the proposed development complex
  - Add 200 feet right turning bay westbound on Wrightsboro Road to access the proposed development complex
  
- Crescent Road
  - Close intersection with Wrightsboro Road (South leg)
  - No proposed improvements (North leg)
  
- Re-aligned Augusta Parkway/Barton Chapel Road
  - Add 250 feet dual left turning bay eastbound on Wrightsboro Road
  - Add 220 feet dual left turning bay westbound on Wrightsboro Road
  - Add 200 feet right turning bay westbound on Wrightsboro Road
  - Add 300 feet dual left turning bay northbound on the realigned Barton Chapel Road
  - Add 100 feet right turning bay northbound on the realigned Barton Chapel Road
  - Add 180 feet dual left turning bay southbound on Augusta West Parkway
  - Add 100 feet right turning bay southbound on Augusta West Parkway

### **Historical Accident Data Analysis**

The accident data analysis was updated using the average of the three year record of 2004, 2005, and 2006. The records for 2007 were not complete at the time the data was requested. The accident rates for each segment of the Wrightsboro Road were calculated and compared against those published in "Statewide Mileage, Travel, and Accident Data – 2004" by GDOT. Along the Wrightsboro Road corridor between Belair Road and Augusta West Parkway, the rates for total number of accidents and for accidents involved with injury were higher than that of statewide

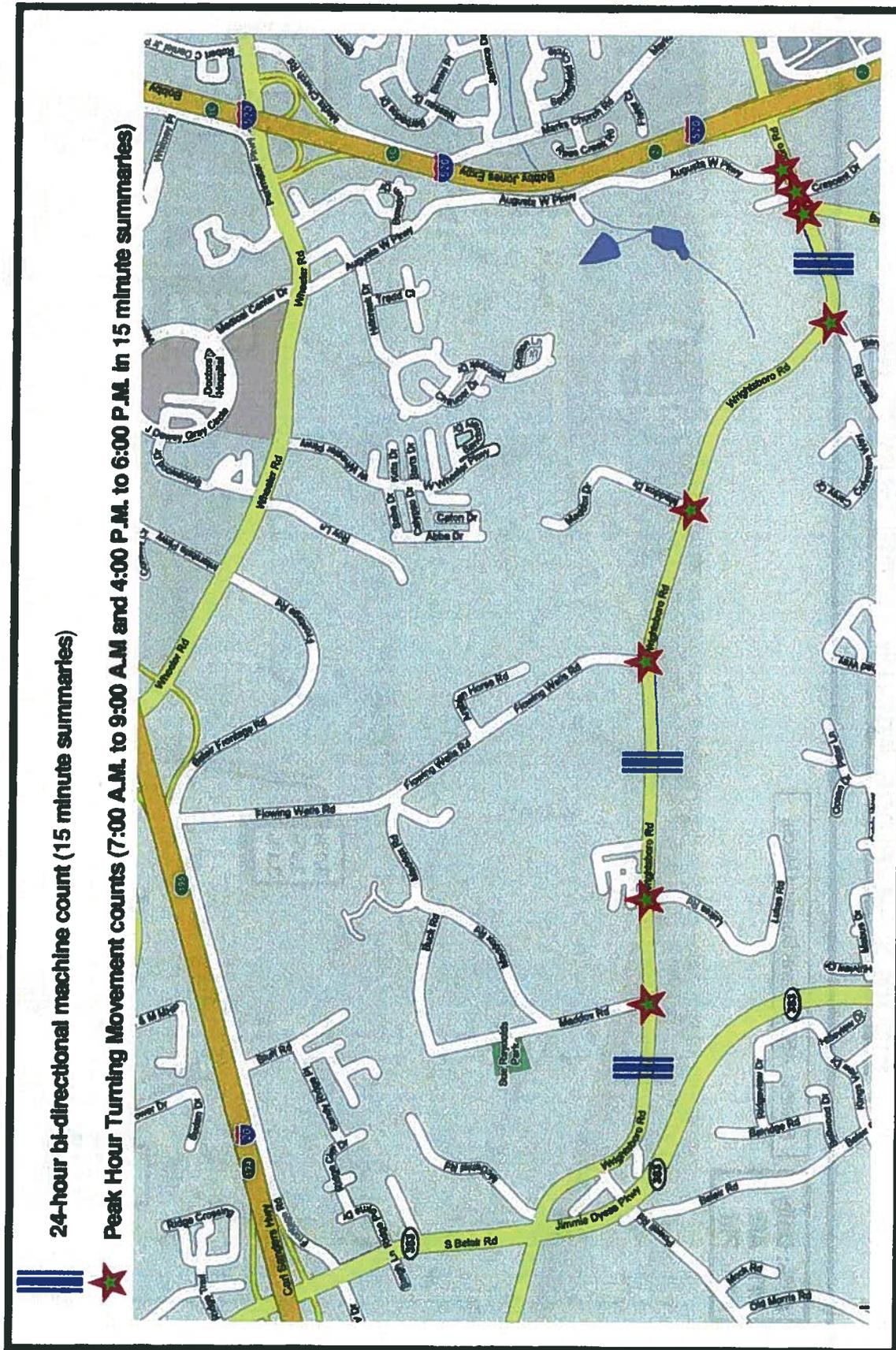
average for identical roadway functional class. On the corridor west of Belair Road, the rates are relatively lower than the statewide average. Significant increases of the accident rates were observed between the Barton Chapel Road and Augusta West Parkway.

The results for the accident analysis are shown in the Appendix D (Wrightsboro Road Accident Data Analysis).

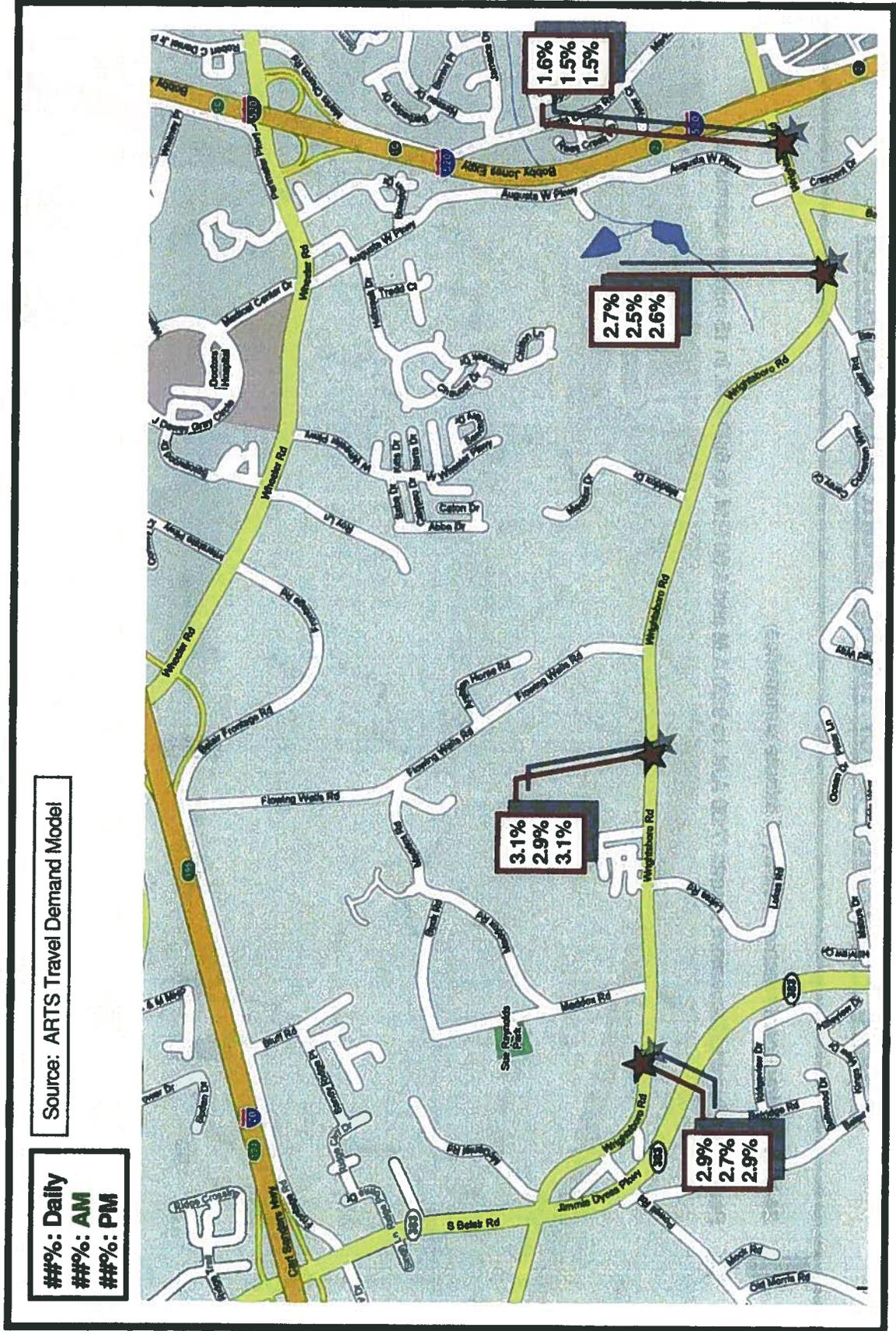
## **Conclusion**

The analysis showed that the proposed improvements are necessary to ensure that the intersection at the realigned Barton Chapel Road and Wrightsboro Road as well as the Wrightsboro Road corridor will operate at acceptable LOSs in both 2012 and 2023. The analysis also showed that westbound queue on Wrightsboro Road approaching the new intersection does not block the ramp terminus at I-520 under both 2012 and 2032 projected traffic. Therefore, it is highly unlikely that this westbound queue will block the ramp terminus at I-520 in 2032. Finally, since these improvements are deemed adequate with the proposed developments, they provide even better operational LOS without these proposed developments.

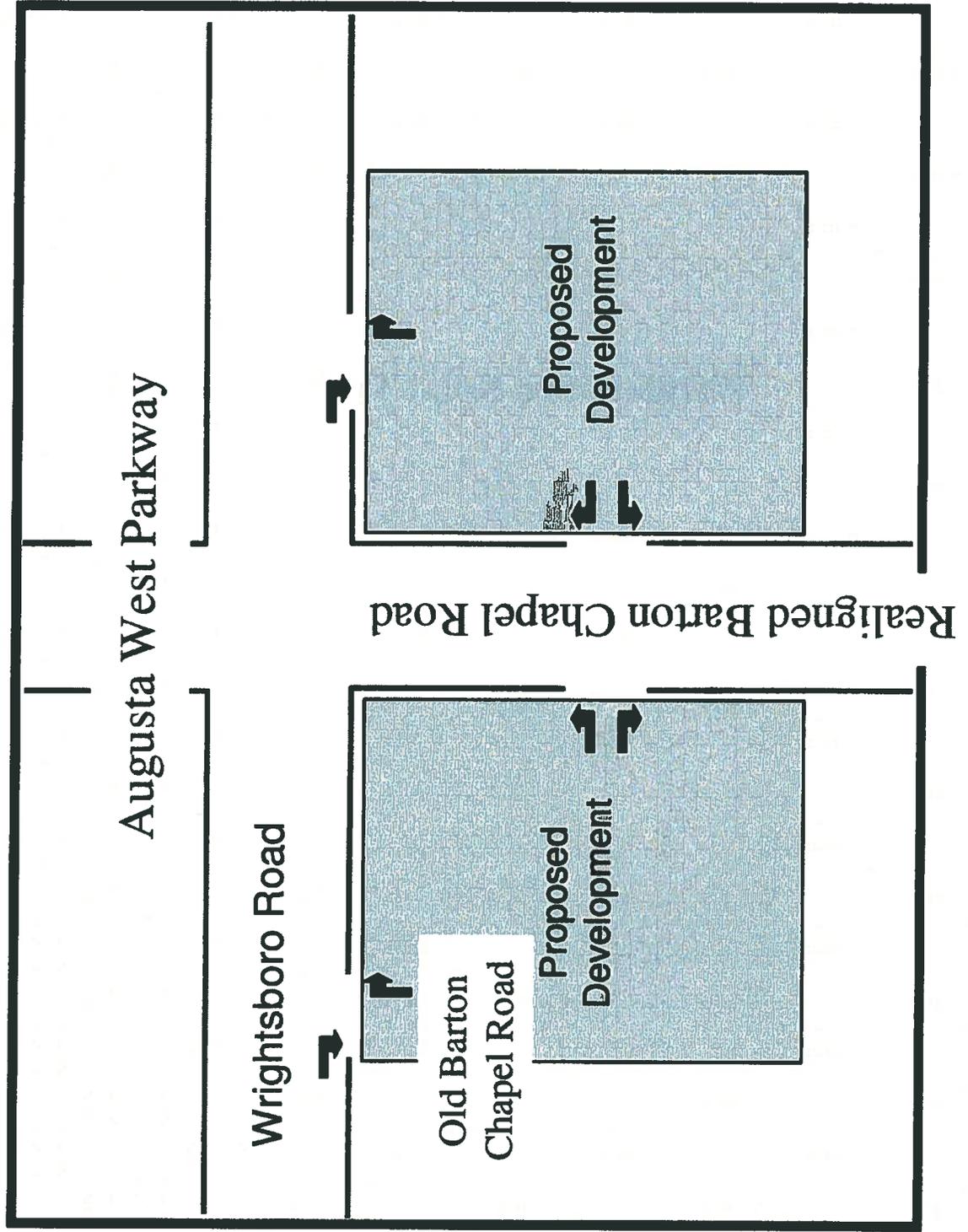
**Figure 1 – Locations for Traffic Count Data Collection**



**Figure 2 – Average Annual Traffic Growth Rates**



**Figure 3 – Driveway Access Locations**

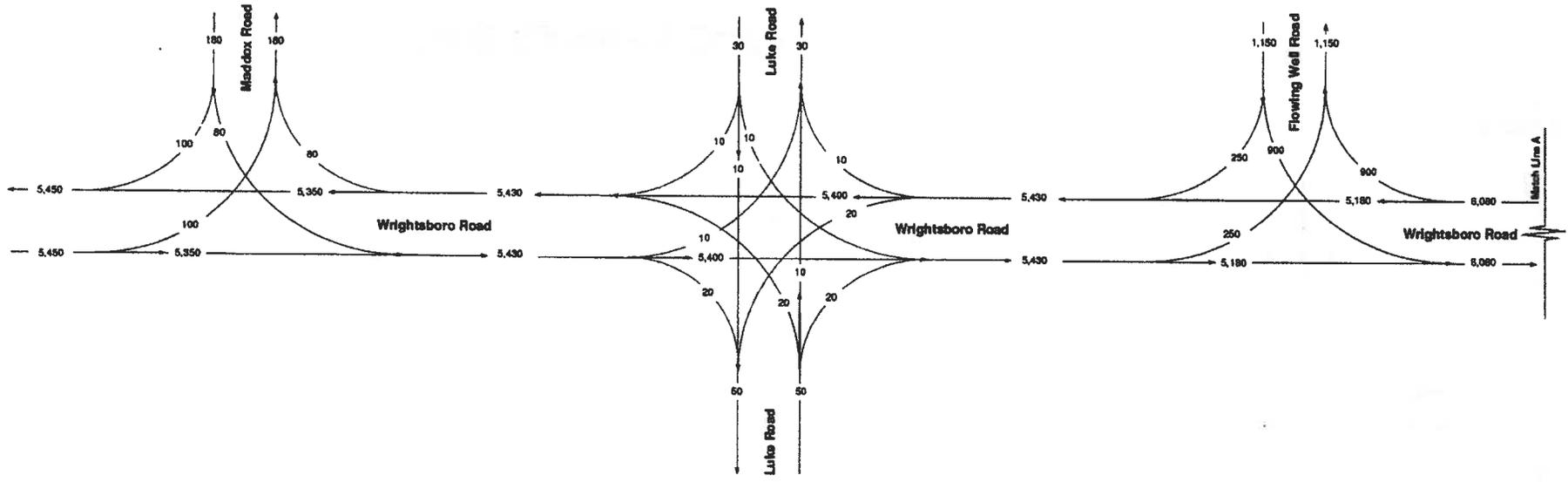


# Appendix A

## Wrightsboro Road Traffic Volumes



Not To Scale



### 2008 Existing Daily

**Legend:**  
 0000 - 2008 ADT Volumes

Wrightsboro Road  
 Truck 3%

STP00-7001-00(009)  
 P.I. # 250510  
 Wrightsboro Road  
 Richmond County

State of Georgia Department of Transportation  
 Office of Design

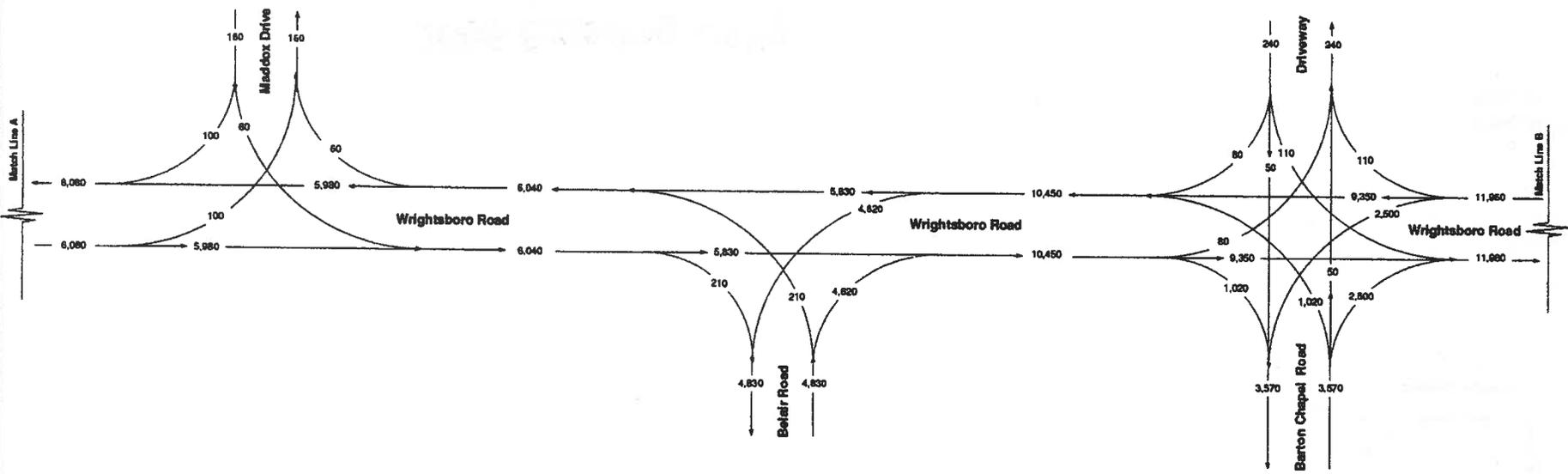
Wrightsboro Road  
 Augusta, Georgia

Design Traffic  
 Volumes

A



Not To Scale



### 2008 Existing Daily

**Legend:**  
 0000 - 2008 ADT Volumes

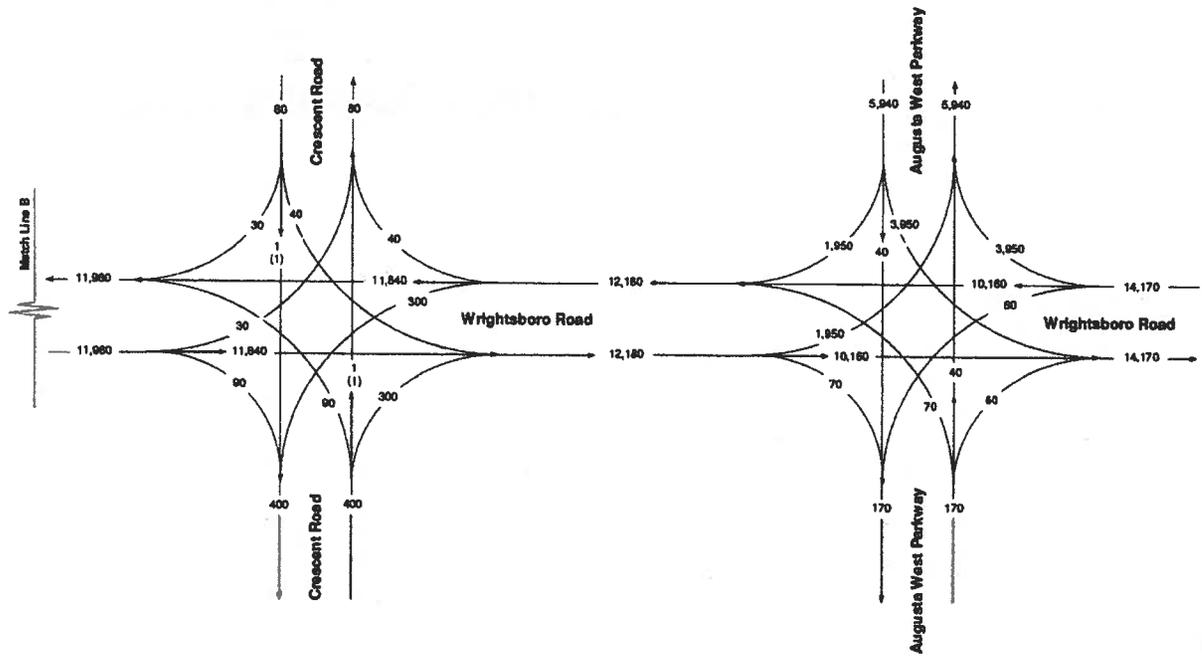
**Wrightsboro Road**  
 Truck 3%

STP00-7001-00(009)  
 P.I. # 250510  
 Wrightsboro Road  
 Richmond County

B



Not To Scale



AVG. = 8017

AVG. = 8017

16,034 → 16,050

Wrightsboro Road

Truck 3%

### 2008 Existing Daily

**Legend:**  
 0000 - 2008 ADT Volumes

STP00-7001-00(009)  
 P.I. # 250510  
 Wrightsboro Road  
 Richmond County

State of Georgia Department of Transportation  
 Office of Design

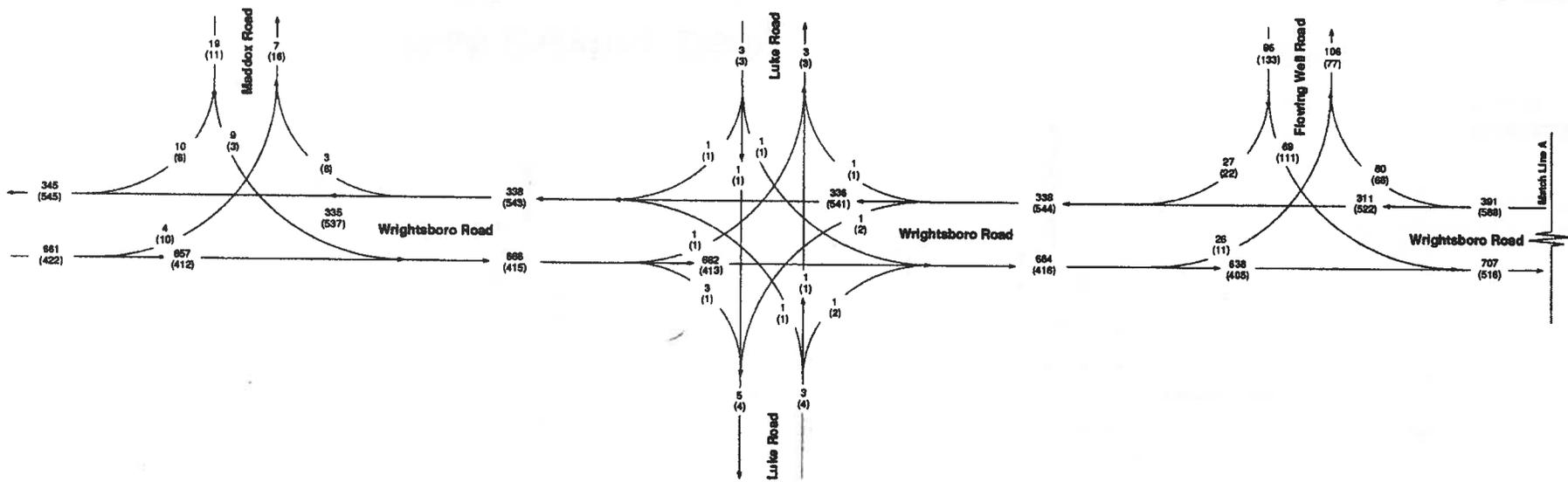
Wrightsboro Road  
 Augusta, Georgia

**Design Traffic Volumes**  
 Page 3 of 3





Not To Scale



## 2008 Existing Peak Hour

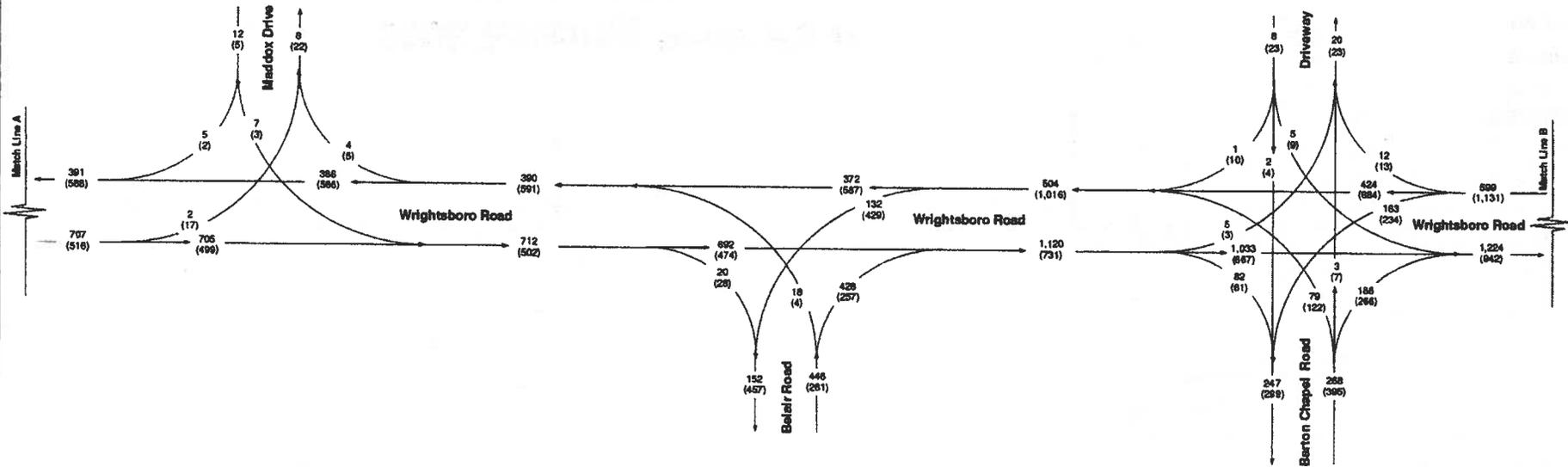
**Legend:**  
 0000 - 2008 AM Peak Hour Traffic Volumes  
 (0000) - 2008 PM Peak Hour Traffic Volumes

**Wrightsboro Road**  
 K - 9%  
 D - 60%  
 Truck 2%

STP00-7001-00(009)  
 P.I. # 250510  
 Wrightsboro Road  
 Richmond County



Not To Scale



## 2008 Existing Peak Hour

**Legend:**

0000 – 2008 AM Peak Hour Traffic Volumes  
 (0000) – 2008 PM Peak Hour Traffic Volumes

**Wrightsboro Road**

K – 9%  
 D – 60%  
 Truck 2%

STP00-7001-00(009)  
 P.I. # 250510  
 Wrightsboro Road  
 Richmond County

State of Georgia Department of Transportation  
 Office of Design

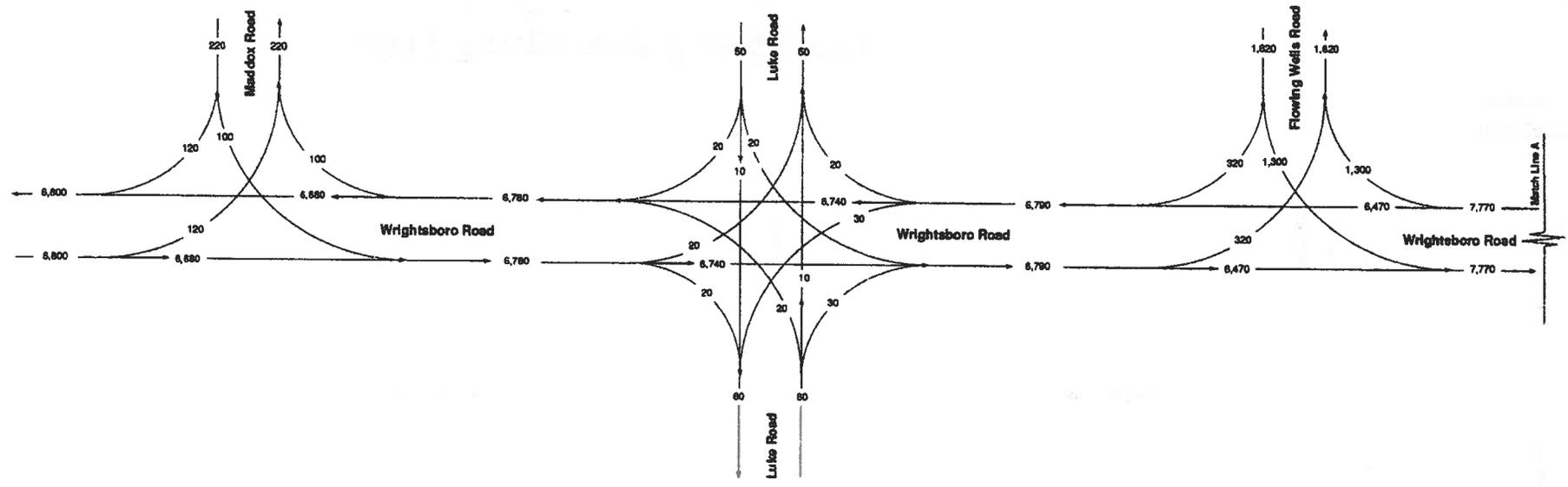
Wrightsboro Road  
 Augusta, Georgia

Design Traffic  
 Volumes





Not To Scale



Wrightsboro Road  
Truck 3%

### 2012 Proposed Build Daily

**Legend:**  
0000 - 2012 ADT Volumes

STP00-7001-00(009)  
P.I. # 250510  
Wrightsboro Road  
Richmond County

State of Georgia Department of Transportation  
Office of Design

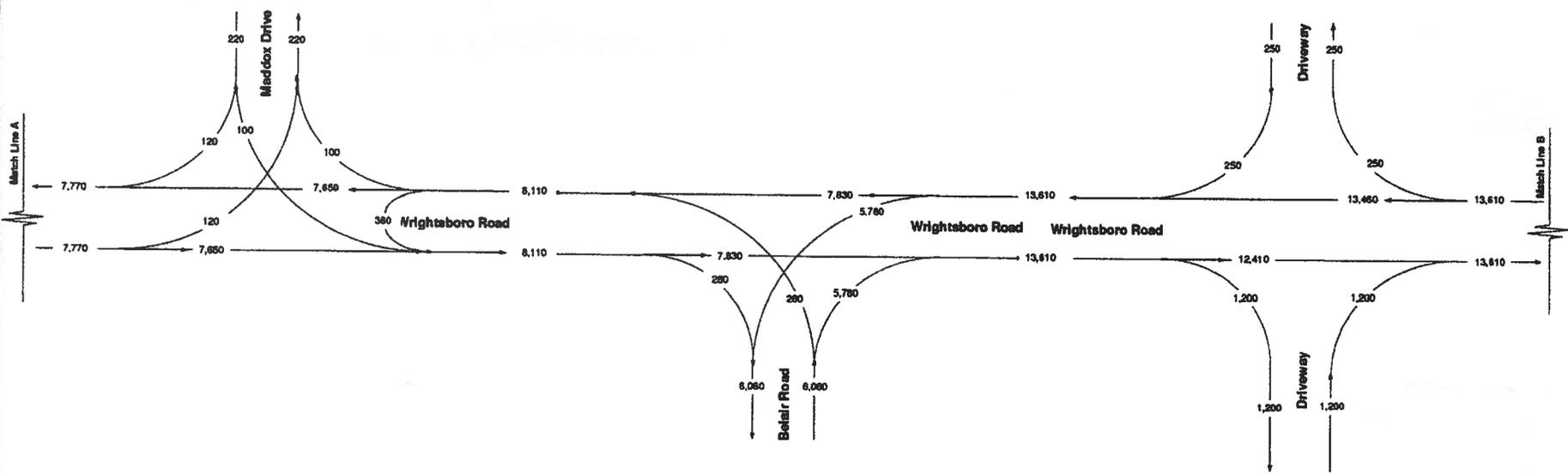
Wrightsboro Road  
Augusta, Georgia

Design Traffic  
Volumes

G



Not To Scale



**Wrightsboro Road**  
Truck 3%

# 2012 Proposed Build Daily

**Legend:**  
0000 - 2012 ADT Volumes

STP00-7001-00(009)  
P.I. # 250510  
Wrightsboro Road  
Richmond County

State of Georgia Department of Transportation  
Office of Design

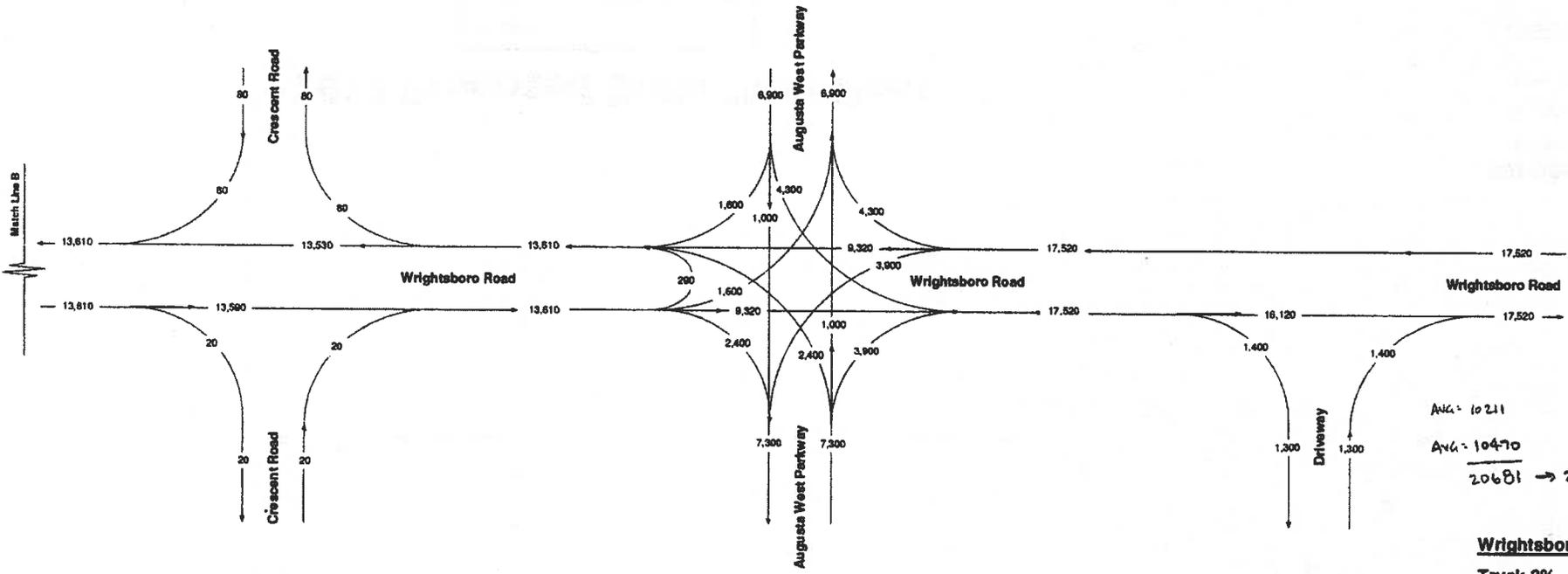
Wrightsboro Road  
Augusta, Georgia

**Design Traffic Volumes**  
Page 2 of 3

H



Not To Scale



### 2012 Proposed Build Daily

**Legend:**  
0000 - 2012 ADT Volumes

STP00-7001-00(009)  
P.I. # 250510  
Wrightsboro Road  
Richmond County

State of Georgia Department of Transportation  
Office of Design

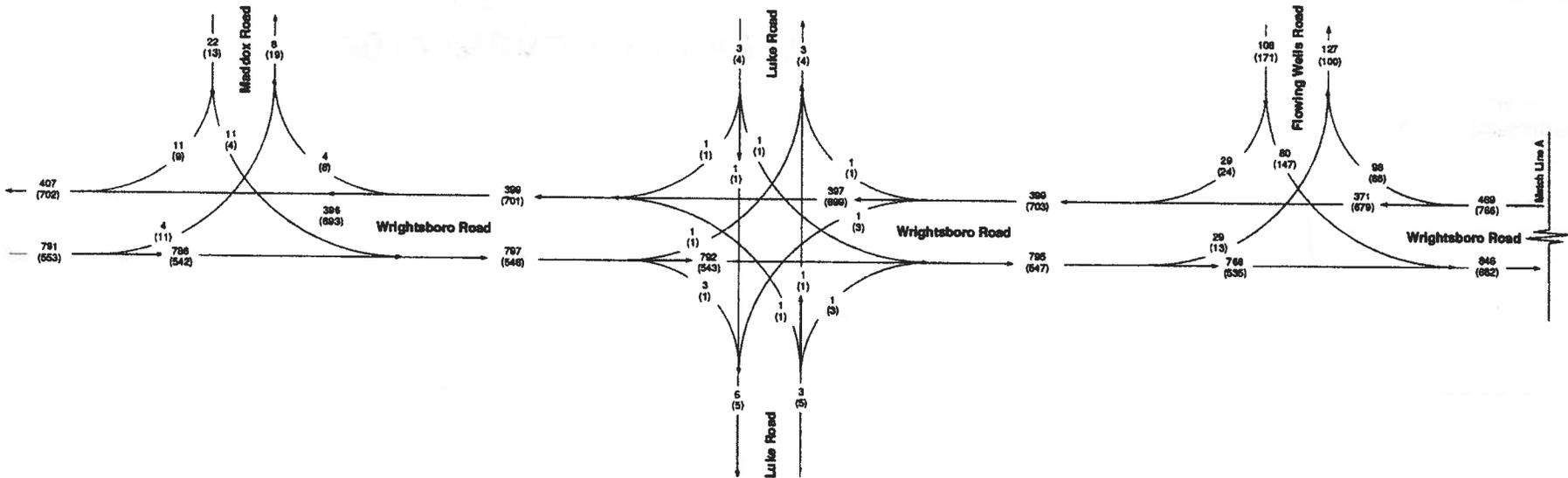
Wrightsboro Road  
Augusta, Georgia

Design Traffic  
Volumes

7



Not To Scale



### 2012 Proposed Build Peak Hour

**Legend:**  
 0000 - 2012 AM Peak Hour Traffic Volumes  
 (0000) - 2012 PM Peak Hour Traffic Volumes

**Wrightsboro Road**  
 K - 9%  
 D - 60%  
 Truck 2%

STP00-7001-00(009)  
 P.I. # 250510  
 Wrightsboro Road  
 Richmond County

State of Georgia Department of Transportation  
 Office of Design

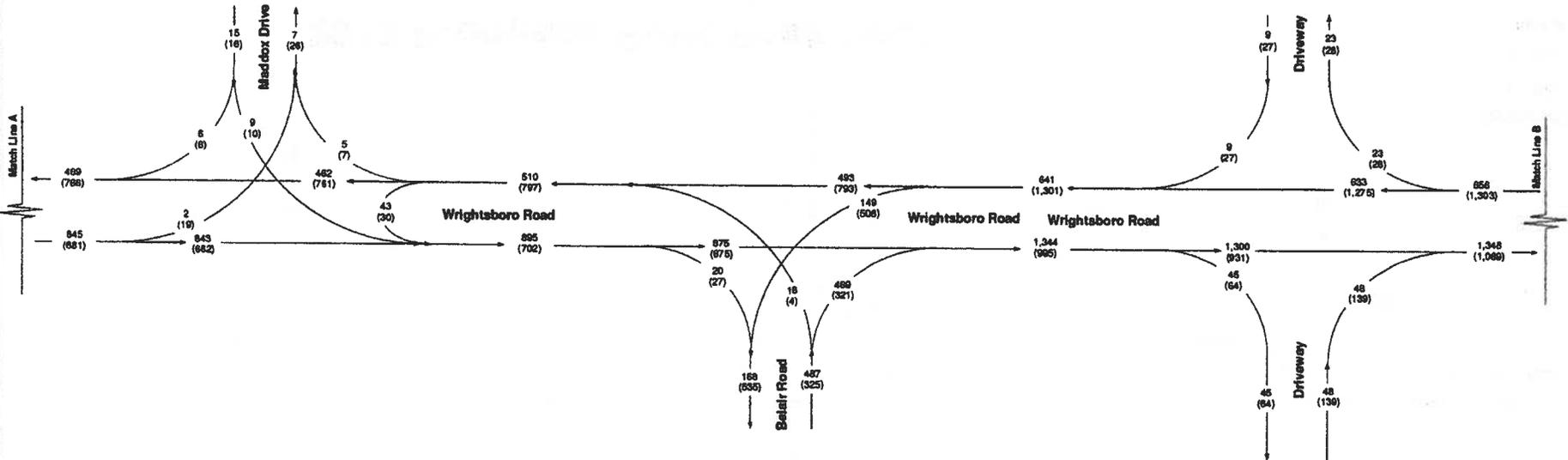
Wrightsboro Road  
 Augusta, Georgia

Design Traffic  
 Volumes

J



Not To Scale



# 2012 Proposed Build Peak Hour

**Legend:**  
 0000 – 2012 AM Peak Hour Traffic Volumes  
 (0000) – 2012 PM Peak Hour Traffic Volumes

**Wrightsboro Road**  
 K – 9%  
 D – 60%  
 Truck 2%

STP00-7001-00(009)  
 P.I. # 250510  
 Wrightsboro Road  
 Richmond County

State of Georgia Department of Transportation  
 Office of Design

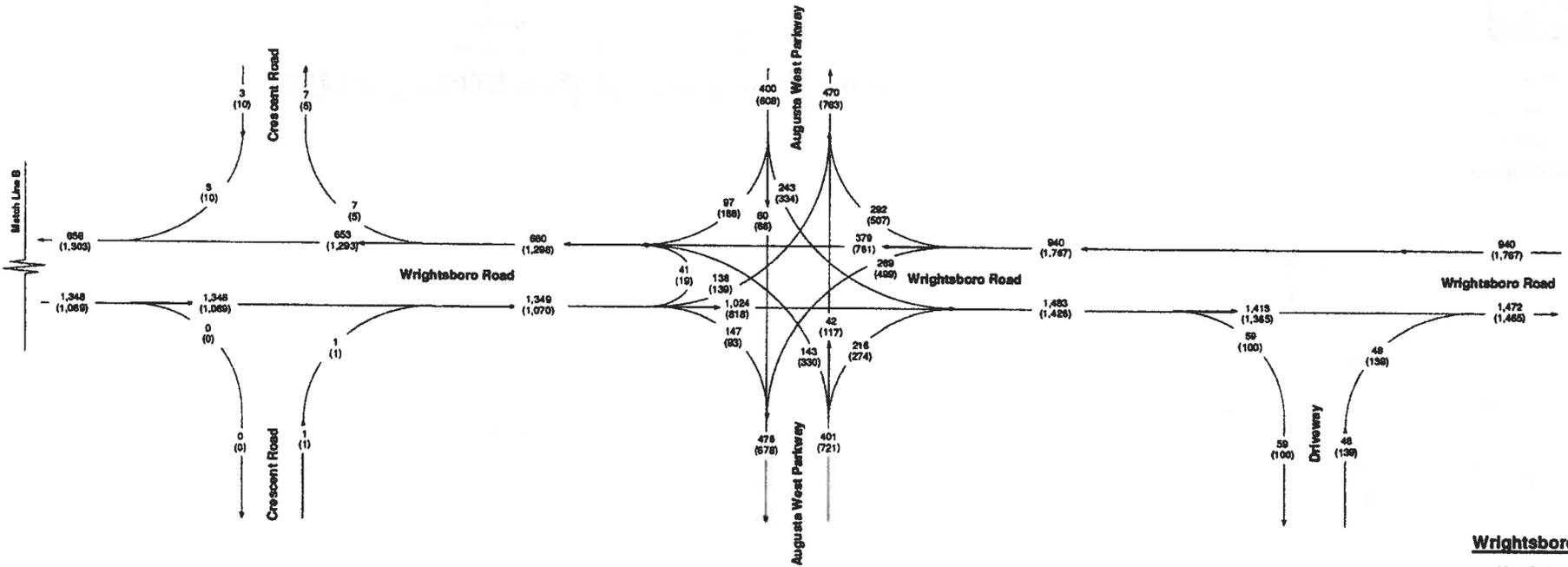
Wrightsboro Road  
 Augusta, Georgia

Design Traffic  
 Volumes  
 Page 2 of 3

K



Not To Scale



### 2012 Proposed Build Peak Hour

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 (0000) – 2012 PM Peak Hour Traffic Volumes

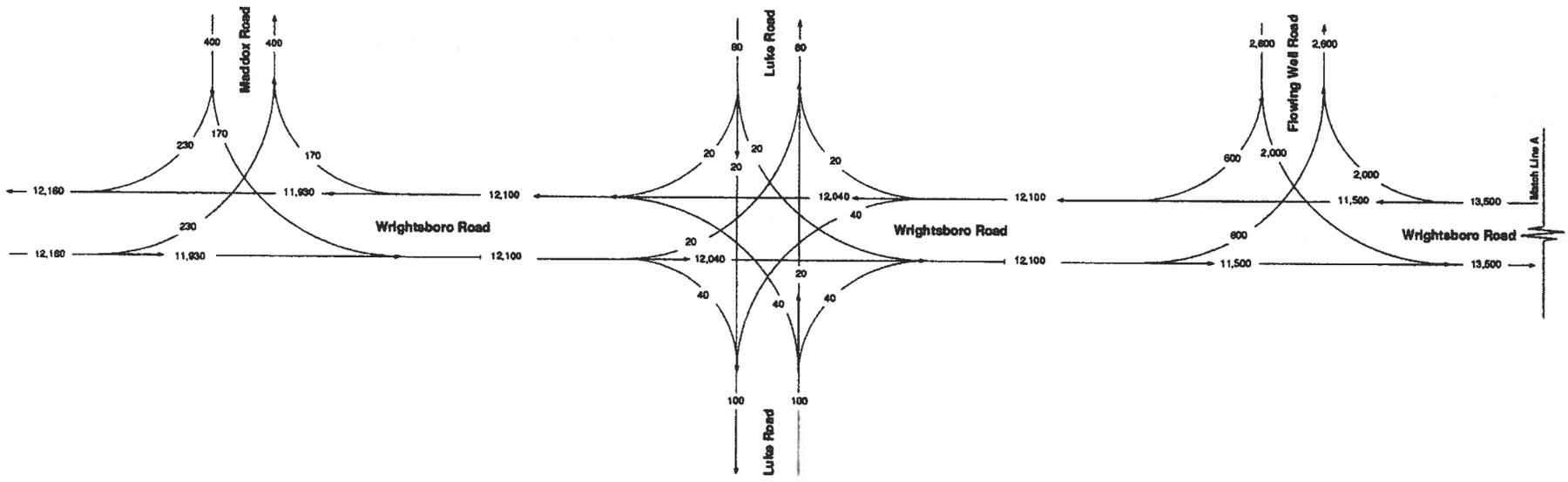
**Wrightsboro Road**  
 K – 9%  
 D – 60%  
 Truck 2%

STP00-7001-00(009)  
 P.I. # 250510  
 Wrightsboro Road  
 Richmond County

L



Not To Scale



Wrightsboro Road

Truck 3%

## 2032 Proposed Build Daily

**Legend:**  
0000 - 2032 ADT Volumes

STP00-7001-00(009)  
P.I. # 250510  
Wrightsboro Road  
Richmond County

State of Georgia Department of Transportation  
Office of Design

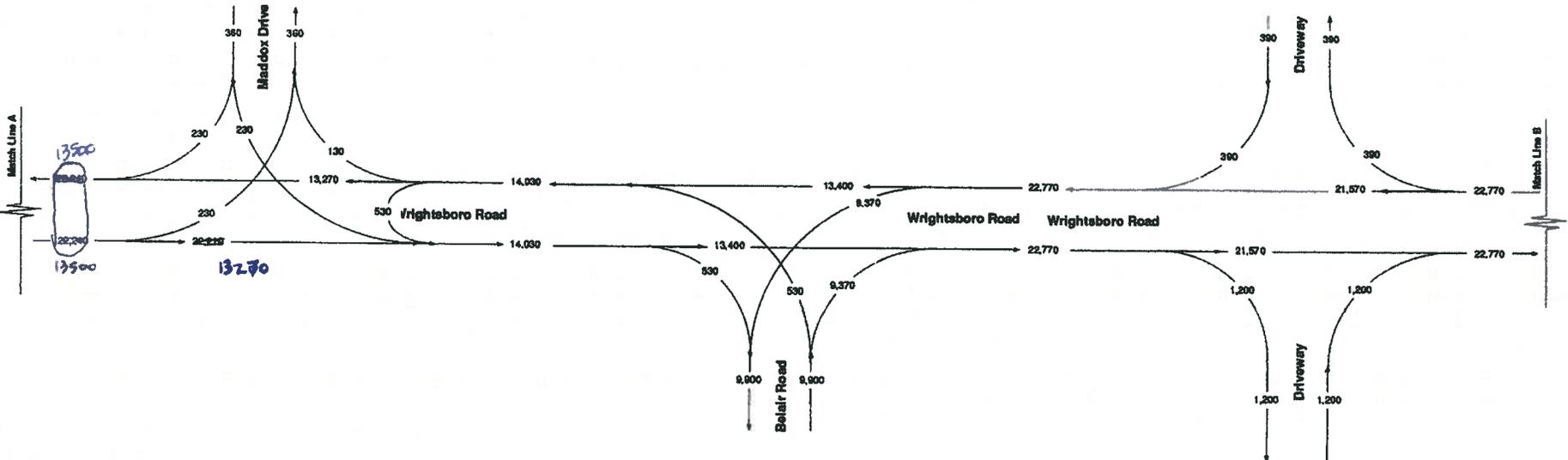
Wrightsboro Road  
Augusta, Georgia

Design Traffic  
Volumes

M



Not To Scale



**Wrightsboro Road**  
Truck 3%

### 2032 Proposed Build Daily

**Legend:**  
0000 - 2032 ADT Volumes

STP00-7001-00(009)  
P.I. # 250510  
Wrightsboro Road  
Richmond County

State of Georgia Department of Transportation  
Office of Design

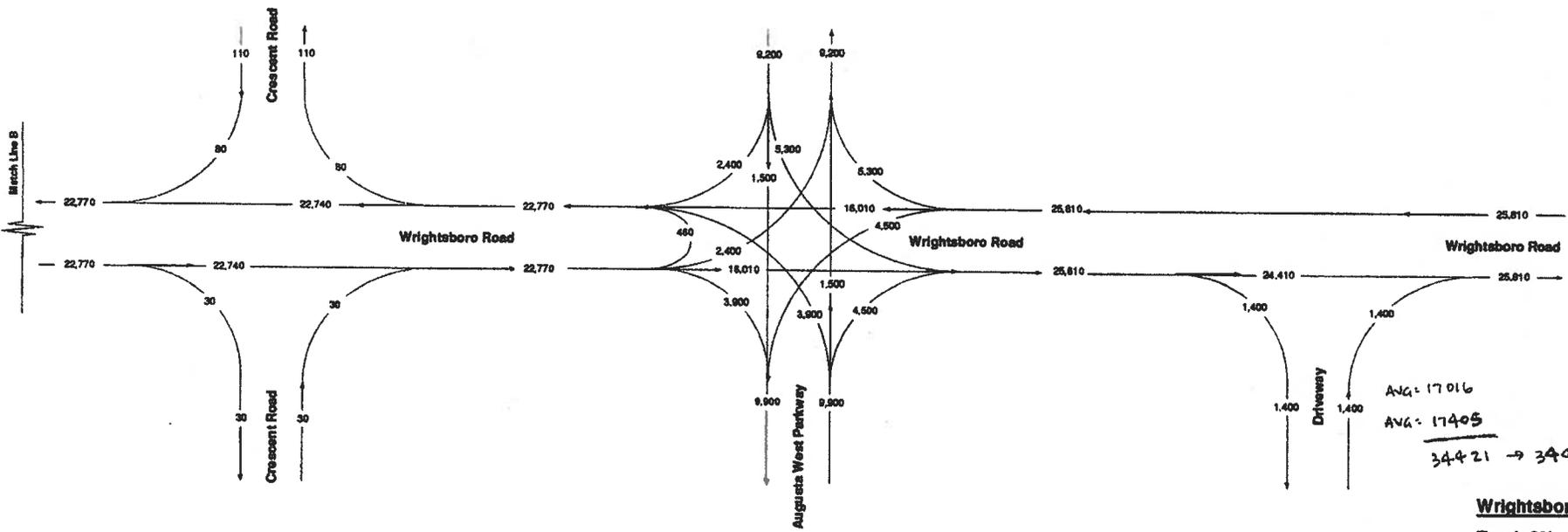
Wrightsboro Road  
Augusta, Georgia

**Design Traffic Volumes**  
Page 2 of 3

2



Not To Scale



Wrightsboro Road  
Truck 3%

### 2032 Proposed Build Daily

**Legend:**  
 0000 - 2032 ADT Volumes

STP00-7001-00(009)  
 P.I. # 250510  
 Wrightsboro Road  
 Richmond County

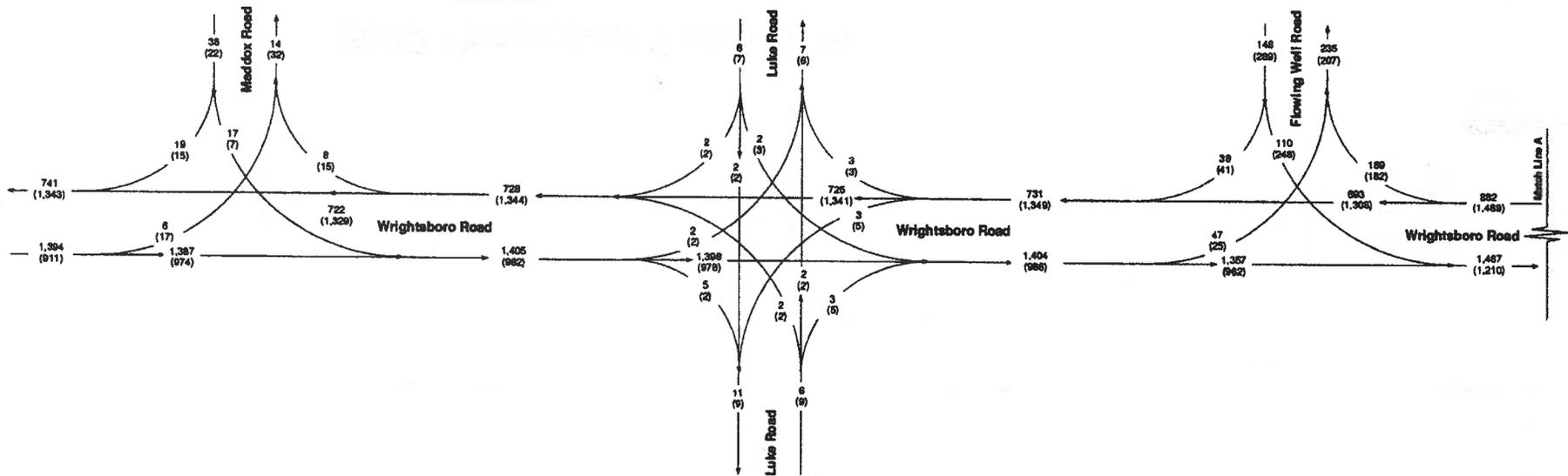
State of Georgia Department of Transportation  
 Office of Design

Wrightsboro Road  
 Augusta, Georgia

Design Traffic  
 Volumes  
 Page 3 of 3



Not To Scale



# 2032 Proposed Build Peak Hour

**Legend:**  
 0000 – 2032 AM Peak Hour Traffic Volumes  
 (0000) – 2032 PM Peak Hour Traffic Volumes

**Wrightsboro Road**  
 K – 9%  
 D – 60%  
 Truck 2%

STP00-7001-00(009)  
 P.I. # 250510  
 Wrightsboro Road  
 Richmond County

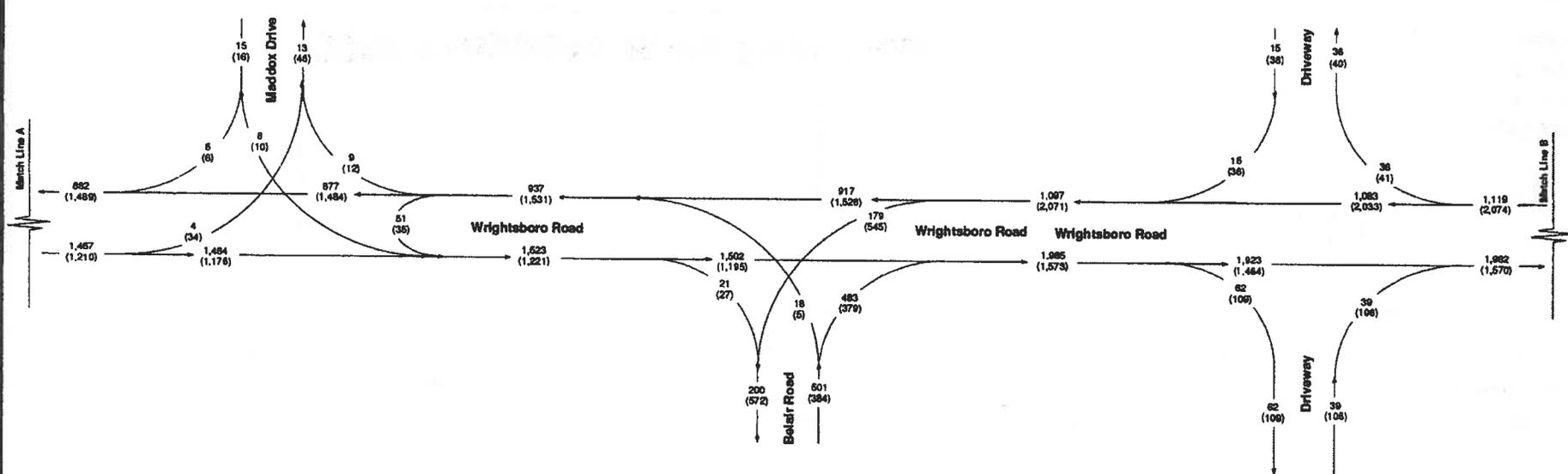
State of Georgia Department of Transportation  
 Office of Design

Wrightsboro Road  
 Augusta, Georgia

Design Traffic  
 Volumes  
 Page 1 of 3



Not To Scale



## 2032 Proposed Build Peak Hour

**Legend:**  
 0000 – 2032 AM Peak Hour Traffic Volumes  
 (0000) – 2032 PM Peak Hour Traffic Volumes

**Wrightsboro Road**  
 K – 9%  
 D – 60%  
 Truck 2%

STP00-7001-00(009)  
 P.I. # 250510  
 Wrightsboro Road  
 Richmond County

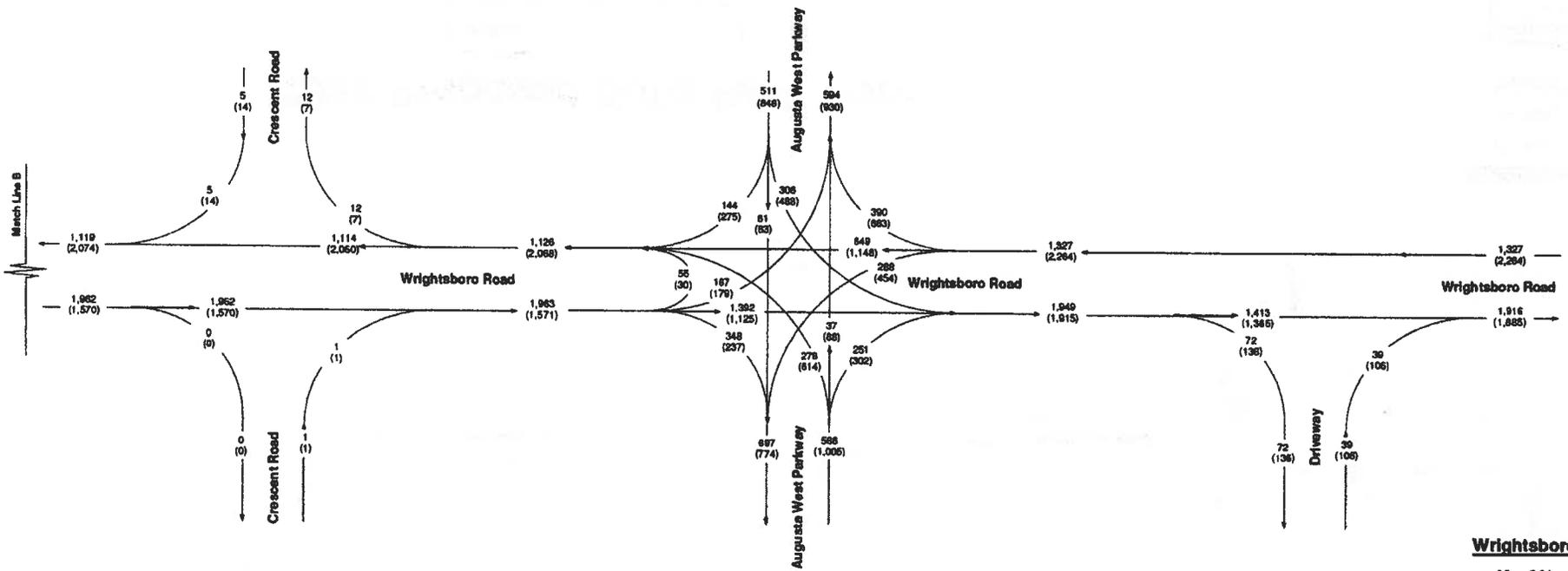
State of Georgia Department of Transportation  
 Office of Design

Wrightsboro Road  
 Augusta, Georgia

Design Traffic  
 Volumes



Not To Scale



# 2032 Proposed Build Peak Hour

**Legend:**  
 0000 - 2032 AM Peak Hour Traffic Volumes  
 (0000) - 2032 PM Peak Hour Traffic Volumes

**Wrightsboro Road**  
 K - 9%  
 D - 60%  
 Truck 2%

STP00-7001-00(009)  
 P.I. # 250510  
 Wrightsboro Road  
 Richmond County

State of Georgia Department of Transportation  
 Office of Design

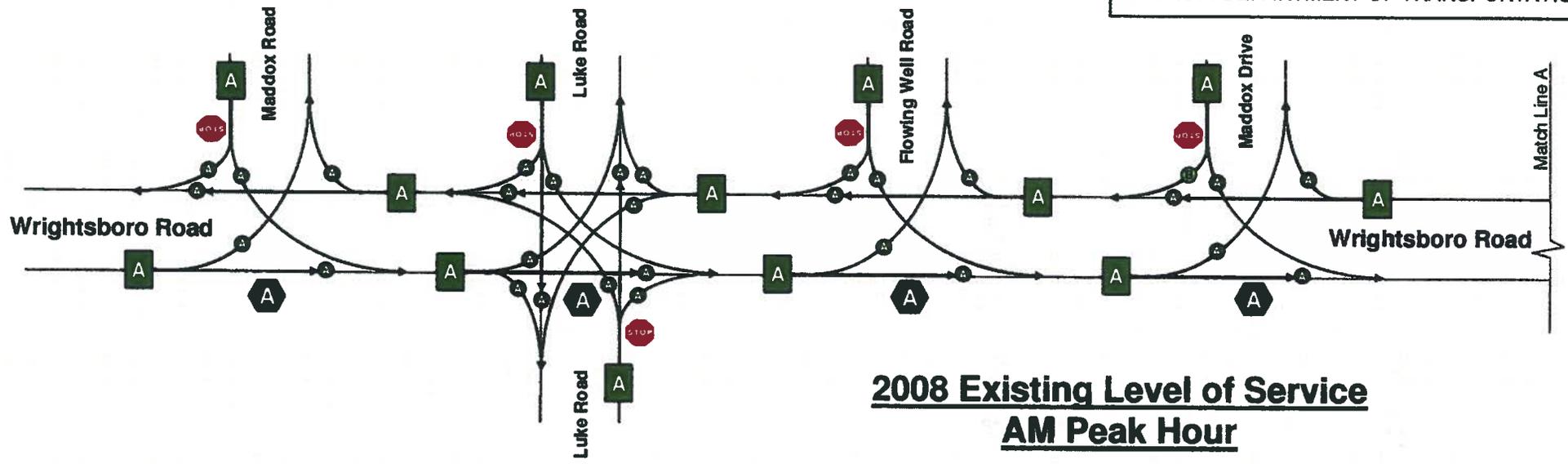
Wrightsboro Road  
 Augusta, Georgia

Design Traffic  
 Volumes  
 Page 3 of 3

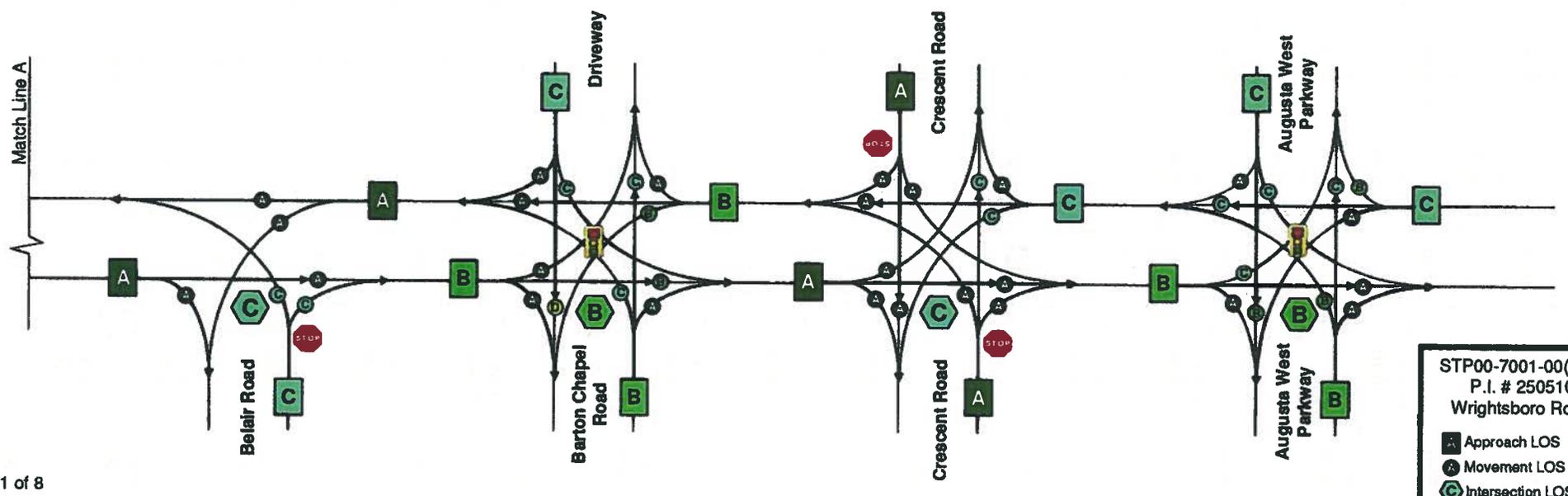
R

# Appendix B

## Wrightsboro Road LOS Analysis

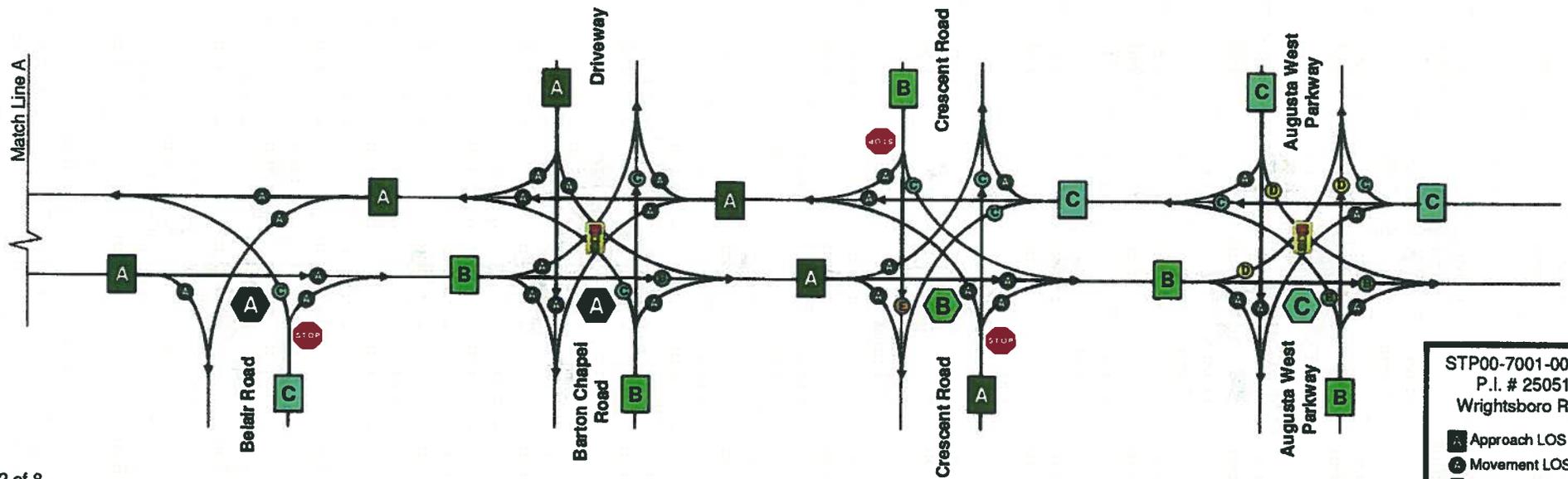
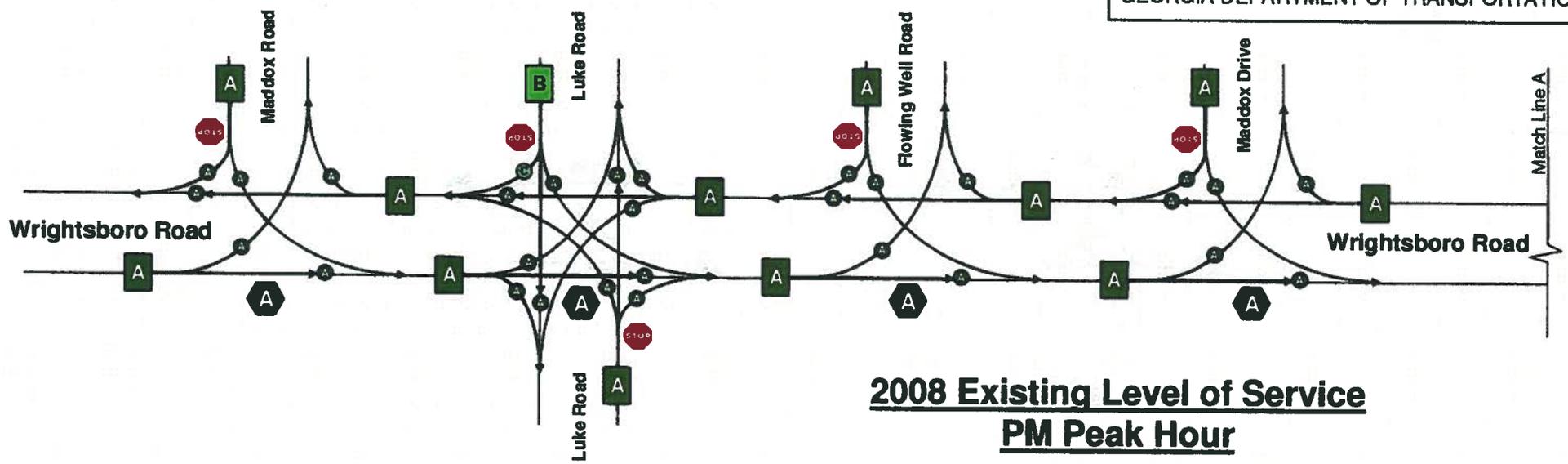


**2008 Existing Level of Service**  
**AM Peak Hour**



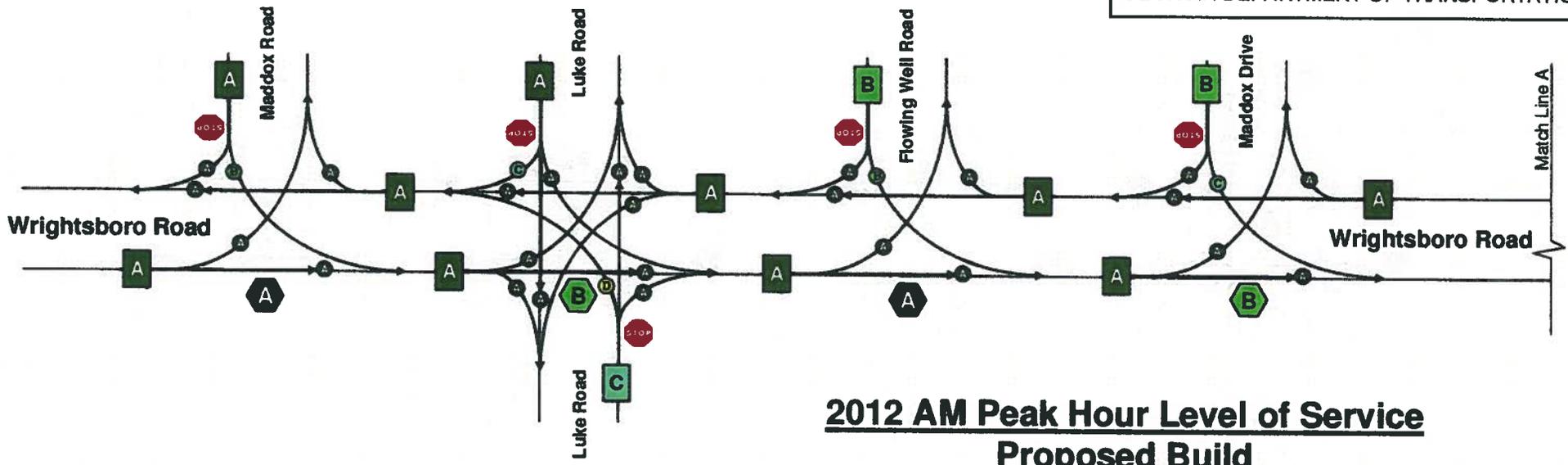
STP00-7001-00(009)  
P.I. # 250510  
Wrightsboro Road

- A Approach LOS
- A Movement LOS
- C Intersection LOS

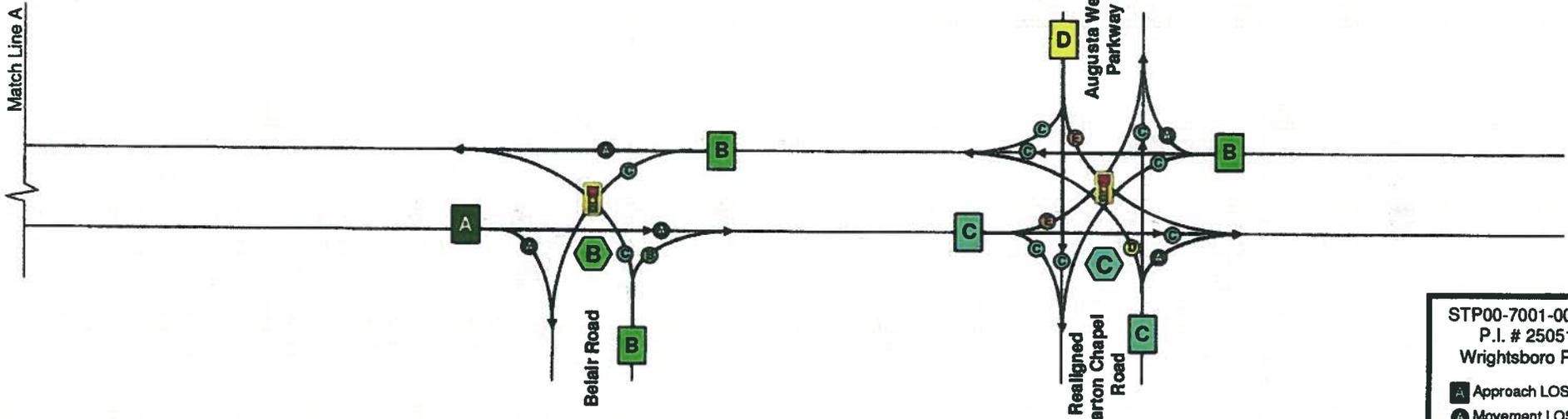


STP00-7001-00(009)  
P.I. # 250510  
Wrightsboro Road

- A Approach LOS
- B Movement LOS
- C Intersection LOS

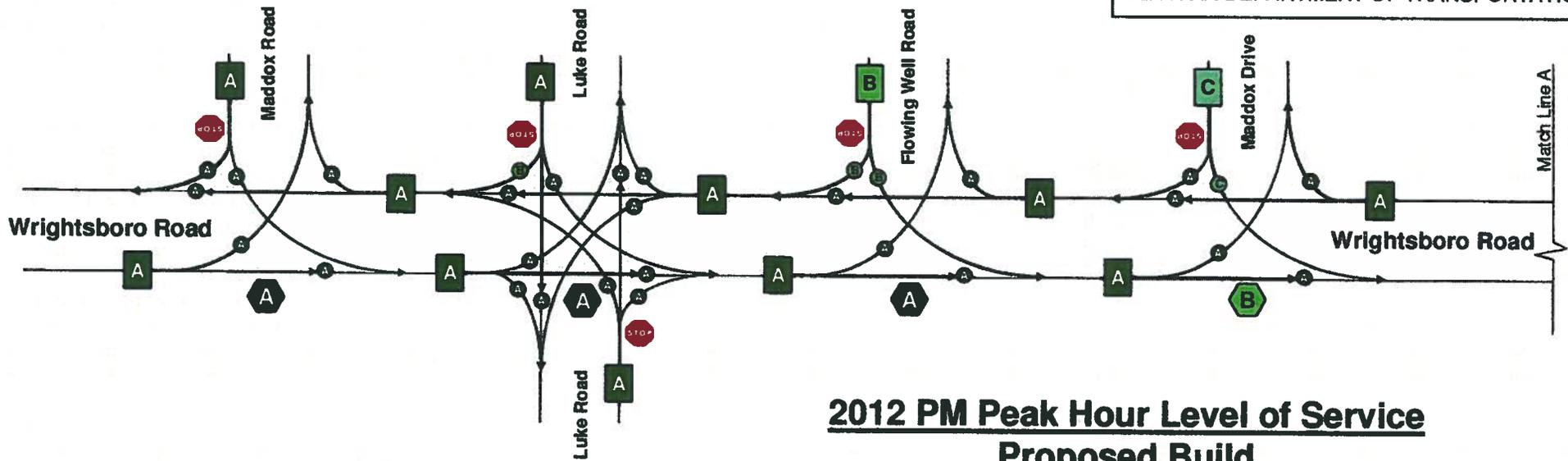


**2012 AM Peak Hour Level of Service  
Proposed Build**

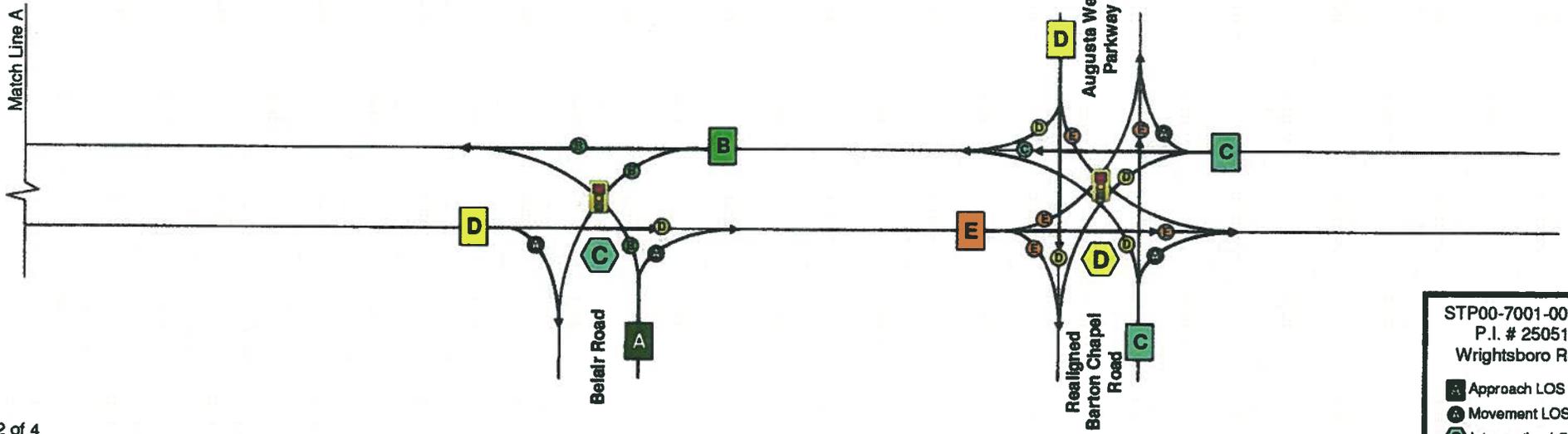


STP00-7001-00(009)  
P.I. # 250510  
Wrightsboro Road

- A Approach LOS
- A Movement LOS
- C Intersection LOS

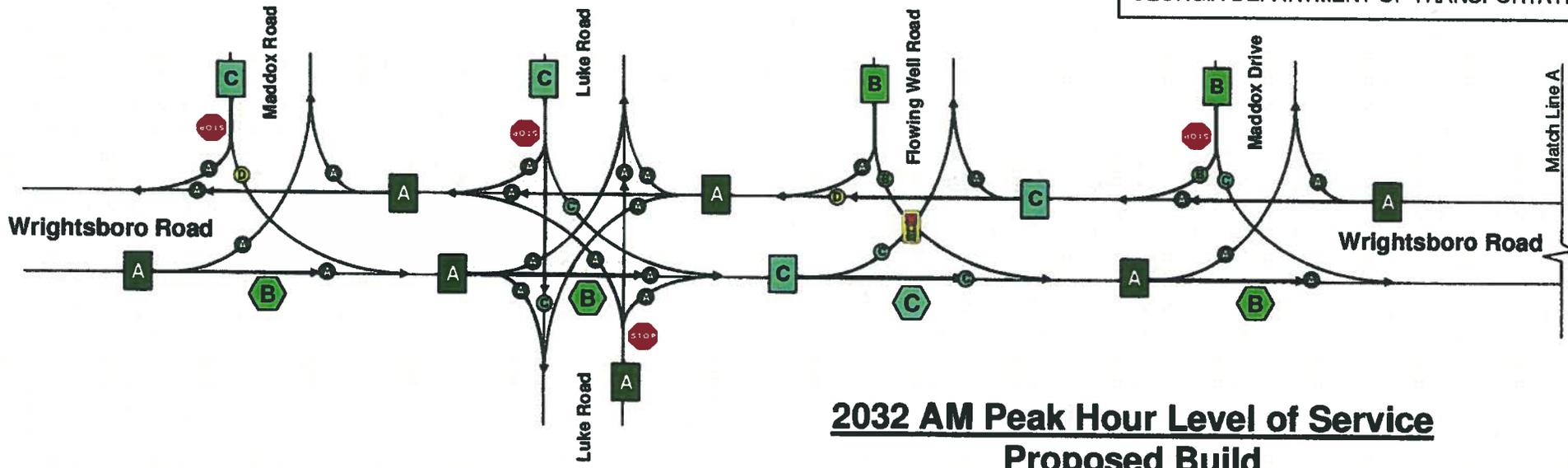


**2012 PM Peak Hour Level of Service  
Proposed Build**

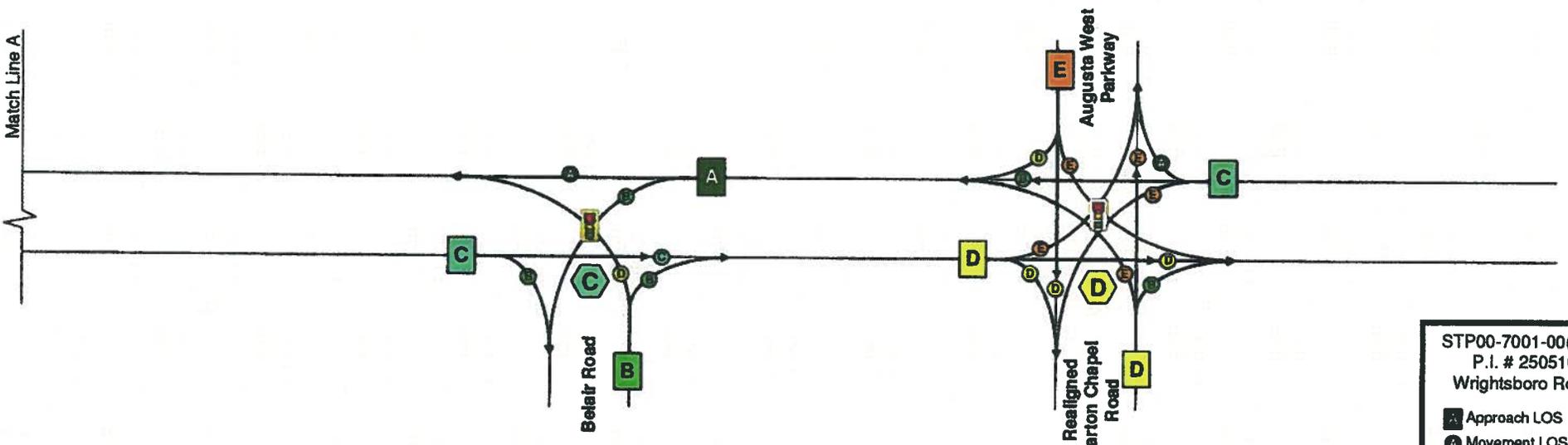


STP00-7001-00(009)  
P.I. # 250510  
Wrightsboro Road

- Approach LOS
- Movement LOS
- Intersection LOS

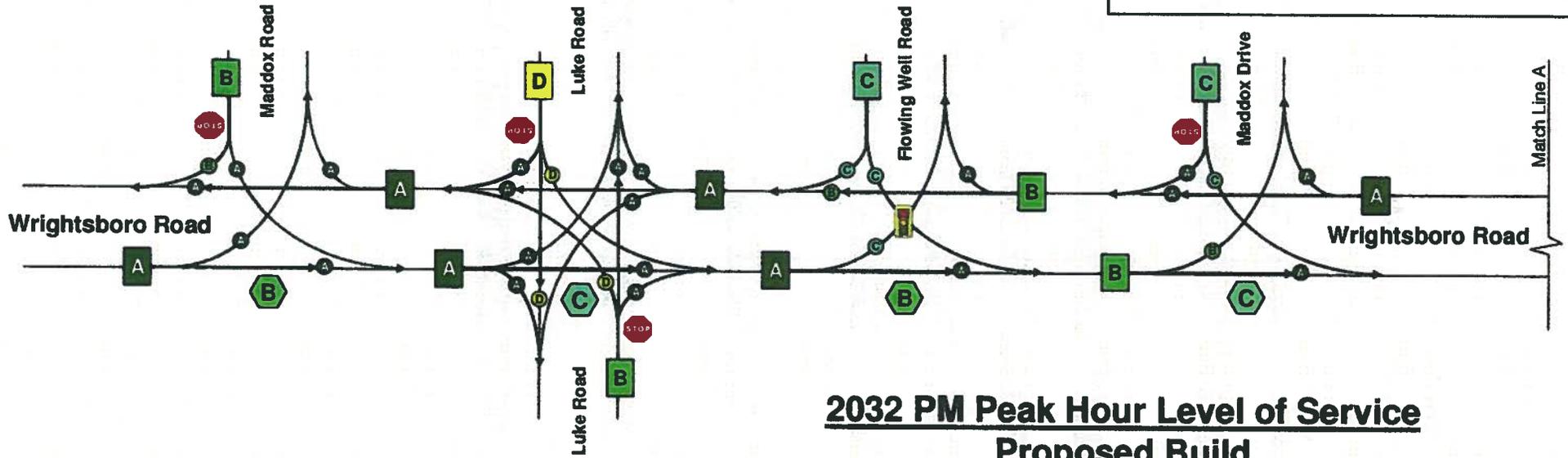


**2032 AM Peak Hour Level of Service  
Proposed Build**

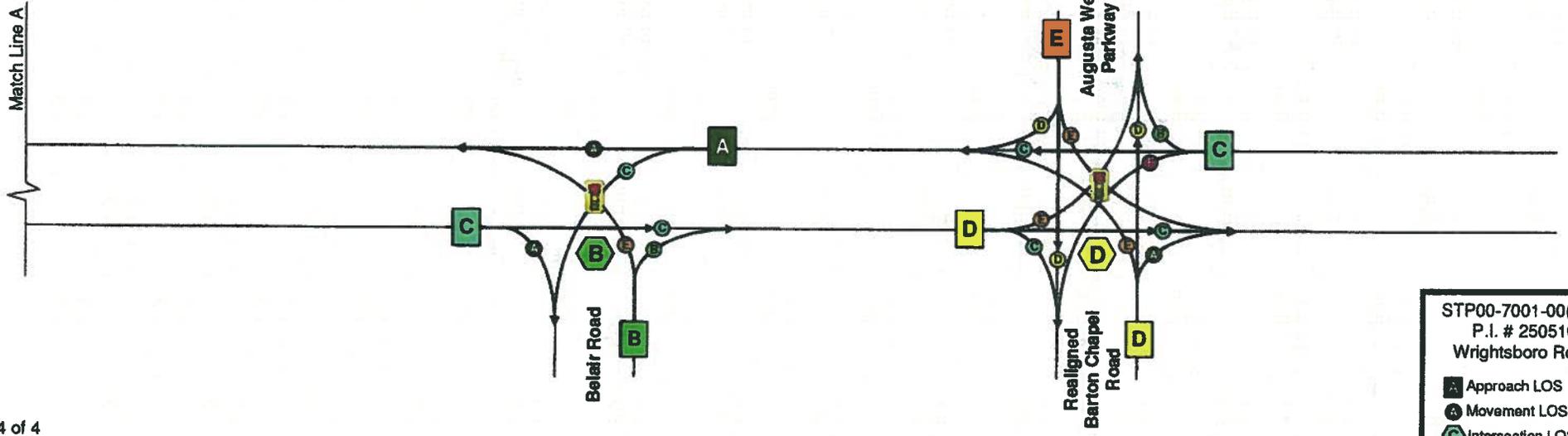


STP00-7001-00(009)  
P.I. # 250510  
Wrightsboro Road

- Approach LOS
- Movement LOS
- Intersection LOS



**2032 PM Peak Hour Level of Service  
Proposed Build**



STP00-7001-00(009)  
P.I. # 250510  
Wrightsboro Road

- A Approach LOS
- A Movement LOS
- C Intersection LOS

# Wrightsboro Rd

## Existing 2008 Conditions

### Intersection Level of Service by Approach

Intersection	Approach Direction	AM Peak Hour			PM Peak Hour		
		Approach Volume	Control Delay (sec/veh)	Level of Service	Approach Volume	Control Delay (sec/veh)	Level of Service
Wrightsboro Rd (E-W) Maddox Rd <sup>(1)</sup>	EB LT	4	1.5	A	10	4.0	A
	SB	19	4.3	A	11	3.5	A
	<b>Total</b>	<b>23</b>	<b>3.8</b>	<b>A</b>	<b>21</b>	<b>3.7</b>	<b>A</b>
Wrightsboro Rd (E-W) Lukes Rd <sup>(1)</sup>	EB LT	1	0.0	A	1	0.0	A
	WB LT	1	0.0	A	1	0.0	A
	NB	2	5.6	A	3	5.4	A
	SB	2	3.8	A	2	11.8	B
	<b>Total</b>	<b>6</b>	<b>3.1</b>	<b>A</b>	<b>7</b>	<b>5.7</b>	<b>A</b>
Wrightsboro Rd (E-W) Flowing Wells Rd <sup>(1)</sup>	EB LT	28	2.7	A	13	1.9	A
	SB	96	6.3	A	133	5.5	A
	<b>Total</b>	<b>124</b>	<b>5.5</b>	<b>A</b>	<b>146</b>	<b>5.2</b>	<b>A</b>
Wrightsboro Rd (E-W) Maddox Dr <sup>(1)</sup>	EB LT	1	0.0	A	21	5.6	A
	SB	11	8.6	A	4	3.7	A
	<b>Total</b>	<b>12</b>	<b>7.9</b>	<b>A</b>	<b>25</b>	<b>5.3</b>	<b>A</b>
Wrightsboro Rd (E-W) Belair Rd <sup>(1)</sup>	WB LT	132	5.4	A	435	8.7	A
	NB	446	18.0	C	263	7.9	A
	<b>Total</b>	<b>578</b>	<b>15.1</b>	<b>C</b>	<b>698</b>	<b>8.4</b>	<b>A</b>
Wrightsboro Rd (E-W) Barton Chapel Rd	EB	1,121	11.0	B	732	10.5	B
	WB	584	11.6	B	1,130	4.9	A
	NB	269	10.4	B	396	11.2	B
	SB	7	28.7	C	23	6.6	A
	<b>Total</b>	<b>1,981</b>	<b>11.2</b>	<b>B</b>	<b>2,281</b>	<b>7.8</b>	<b>A</b>
Wrightsboro Rd (E-W) Crescent Dr <sup>(1)</sup>	EB LT	1	0.0	A	1	0.0	A
	WB LT	41	23.7	C	14	24.5	C
	NB	27	6.7	A	35	5.9	A
	SB	2	0.0	A	8	12.9	B
	<b>Total</b>	<b>71</b>	<b>16.5</b>	<b>C</b>	<b>58</b>	<b>11.5</b>	<b>B</b>
Wrightsboro Rd (E-W) Augusta West Pkwy/Bobby Jones	EB	1,243	10.6	B	963	16.9	B
	WB	780	21.8	C	1,390	21.4	C
	NB	4	15.0	B	23	14.8	B
	SB	358	21.0	C	520	23.1	C
	<b>Total</b>	<b>2,385</b>	<b>15.8</b>	<b>B</b>	<b>2,896</b>	<b>20.2</b>	<b>C</b>

**Note:**

(1) Unsignalized Intersection

## Wrightsboro Rd Future 2012 Proposed Build Conditions Intersection Level of Service by Approach

Intersection	Approach Direction	AM Peak Hour			PM Peak Hour		
		Approach Volume	Control Delay (sec/veh)	Level of Service	Approach Volume	Control Delay (sec/veh)	Level of Service
Wrightsboro Rd (E-W) Maddox Rd <sup>(1)</sup>	EB LT	11	4.7	A	11	9.4	A
	SB	22	8.7	A	12	9.0	A
	<b>Total</b>	<b>33</b>	<b>7.4</b>	<b>A</b>	<b>23</b>	<b>9.2</b>	<b>A</b>
Wrightsboro Rd (E-W) Lukes Rd <sup>(1)</sup>	EB LT	1	0.0	A	1	0.0	A
	WB LT	1	0.0	A	1	0.0	A
	NB	5	16.9	C	4	5.6	A
	SB	2	9.3	A	3	7.7	A
	<b>Total</b>	<b>9</b>	<b>11.5</b>	<b>B</b>	<b>9</b>	<b>5.1</b>	<b>A</b>
Wrightsboro Rd (E-W) Flowing Wells Rd	EB	789	0.4	A	544	0.1	A
	WB	454	0.5	A	782	0.7	A
	SB	108	10.5	B	171	13.1	B
	<b>Total</b>	<b>1,351</b>	<b>1.2</b>	<b>A</b>	<b>1,497</b>	<b>1.9</b>	<b>A</b>
Wrightsboro Rd (E-W) Maddox Dr <sup>(1)</sup>	EB LT	1	0.0	A	15	4.2	A
	SB	14	13.4	B	15	17.6	C
	<b>Total</b>	<b>15</b>	<b>12.5</b>	<b>B</b>	<b>30</b>	<b>10.9</b>	<b>B</b>
Wrightsboro Rd (E-W) Belair Rd	EB	864	8.9	A	695	38.0	D
	WB	590	12.7	B	1,321	15.2	B
	NB	485	12.9	B	326	8.3	A
	<b>Total</b>	<b>1,939</b>	<b>11.1</b>	<b>B</b>	<b>2,342</b>	<b>21.0</b>	<b>C</b>
Wrightsboro Rd (E-W) Augusta West Pkwy/Bobby Jones	EB	1,326	29.6	C	1,079	60.6	E
	WB	941	17.1	B	1,771	26.6	C
	NB	411	22.0	C	737	29.2	C
	SB	396	49.3	D	609	53.6	D
	<b>Total</b>	<b>3,074</b>	<b>27.3</b>	<b>C</b>	<b>4,196</b>	<b>39.7</b>	<b>D</b>

**Note:**

(1) Unsignalized Intersection

# Wrightsboro Rd

## Future 2032 Proposed Build Conditions

### Intersection Level of Service by Approach

Intersection	Approach Direction	AM Peak Hour			PM Peak Hour		
		Approach Volume	Control Delay (sec/veh)	Level of Service	Approach Volume	Control Delay (sec/veh)	Level of Service
Wrightsboro Rd (E-W) Maddox Rd <sup>(1)</sup>	EB LT	16	4.4	A	17	9.1	A
	SB	37	18.6	C	22	12.1	B
	<b>Total</b>	<b>53</b>	<b>14.3</b>	<b>B</b>	<b>39</b>	<b>10.8</b>	<b>B</b>
Wrightsboro Rd (E-W) Lukes Rd <sup>(1)</sup>	EB LT	1	0.0	A	1	0.0	A
	WB LT	1	0.0	A	1	0.0	A
	NB	5	4.2	A	8	11.1	B
	SB	5	16.2	C	6	32.0	D
	<b>Total</b>	<b>12</b>	<b>8.5</b>	<b>D</b>	<b>16</b>	<b>17.6</b>	<b>C</b>
Wrightsboro Rd (E-W) Flowing Wells Rd	EB	1,409	21.5	C	984	6.7	A
	WB	897	29.9	C	1,151	15.4	B
	SB	147	10.4	B	289	25.7	C
	<b>Total</b>	<b>2,453</b>	<b>23.9</b>	<b>C</b>	<b>2,424</b>	<b>13.1</b>	<b>B</b>
Wrightsboro Rd (E-W) Maddox Dr <sup>(1)</sup>	EB LT	1	0.0	A	40	13.8	B
	SB	14	13.7	B	15	20.3	C
	<b>Total</b>	<b>15</b>	<b>12.8</b>	<b>B</b>	<b>55</b>	<b>15.6</b>	<b>C</b>
Wrightsboro Rd (E-W) Belair Rd	EB	1,479	33.3	C	1,181	30.2	C
	WB	1,075	7.8	A	2,085	7.0	A
	NB	501	19.9	B	382	15.0	B
	<b>Total</b>	<b>3,055</b>	<b>22.1</b>	<b>C</b>	<b>3,648</b>	<b>15.3</b>	<b>B</b>
Wrightsboro Rd (E-W) Augusta West Pkwy/Bobby Jones	EB	1,909	39.3	D	1,523	36.7	D
	WB	1,325	21.2	C	2,262	32.7	C
	NB	605	39.2	D	1,015	44.5	D
	SB	512	57.8	E	848	57.3	E
	<b>Total</b>	<b>4,351</b>	<b>36.0</b>	<b>D</b>	<b>5,648</b>	<b>39.6</b>	<b>D</b>

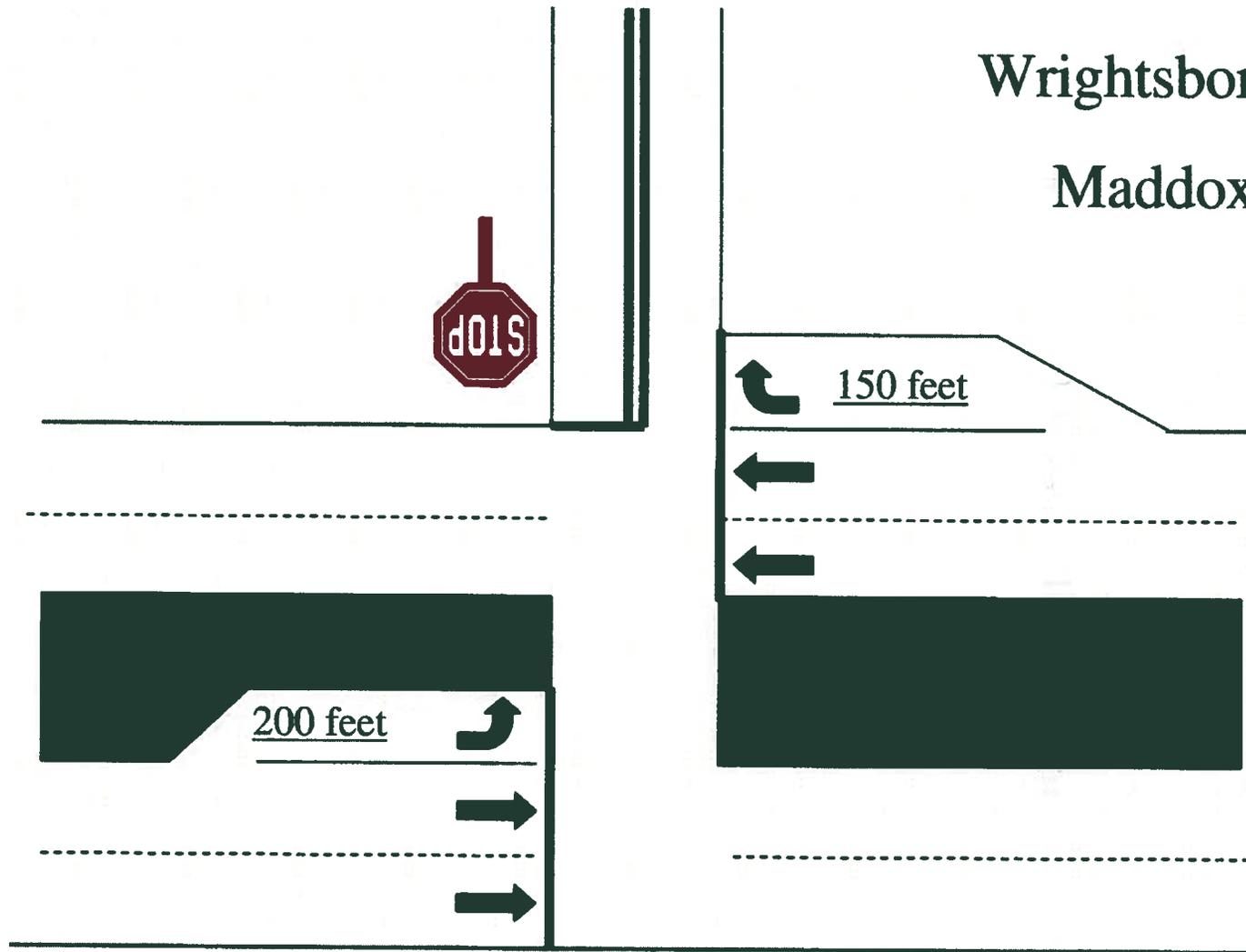
**Note:**

(1) Unsignalized Intersection

# Appendix C

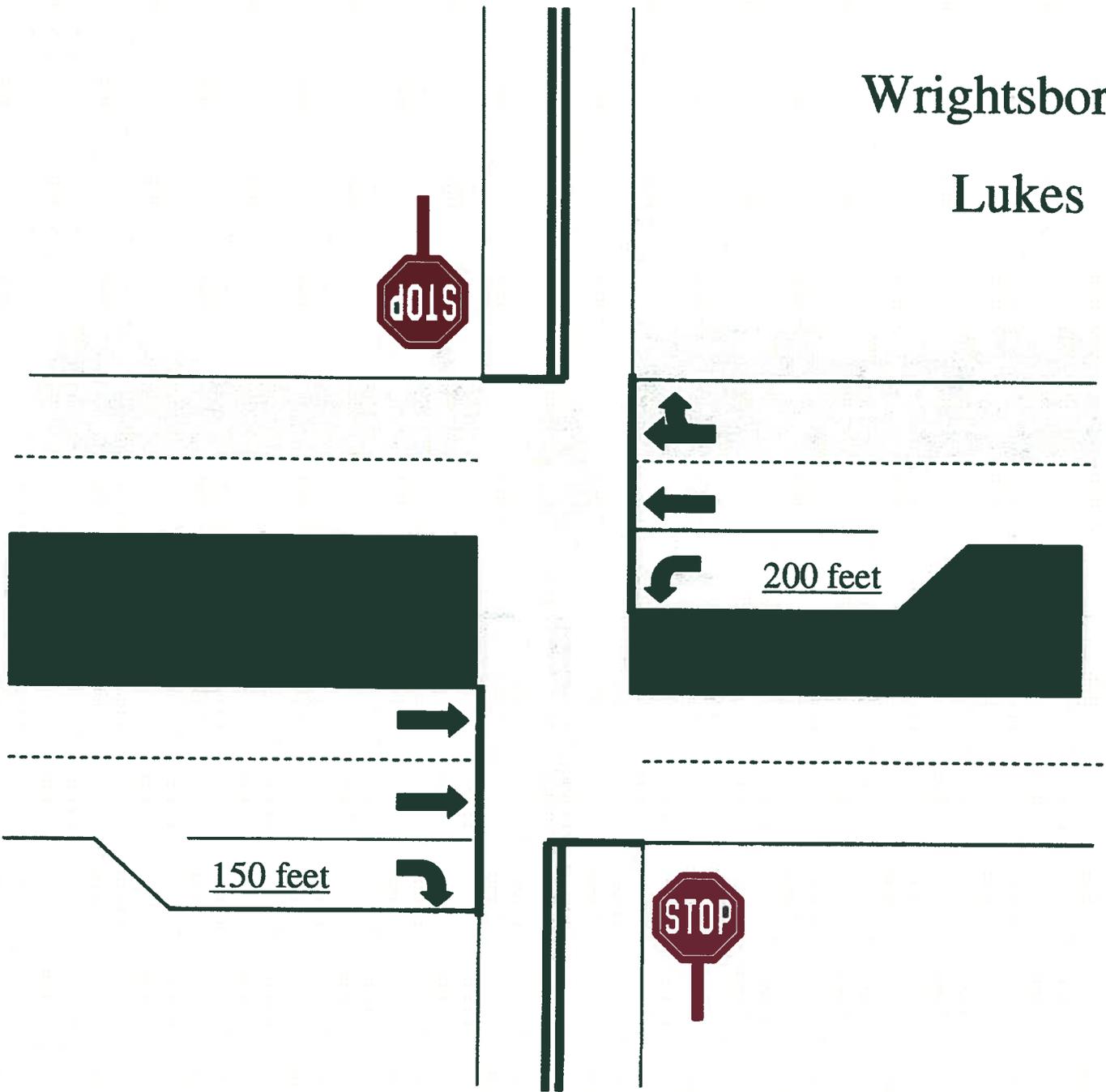
## Wrightsboro Road Proposed Improvements

# Wrightsboro Road at Maddox Road



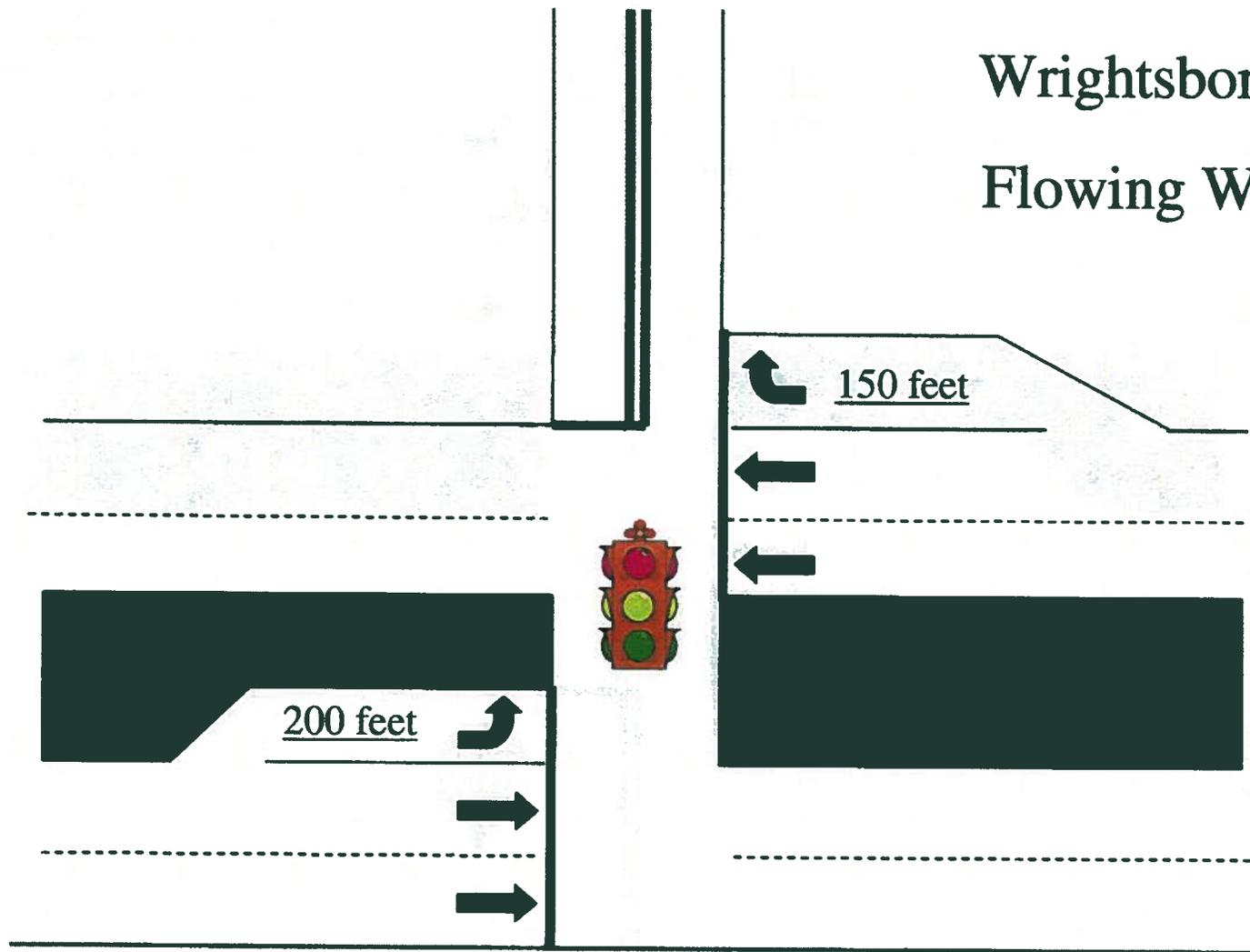
↑  
North  
Not to Scale

# Wrightsboro Road at Lukes Road



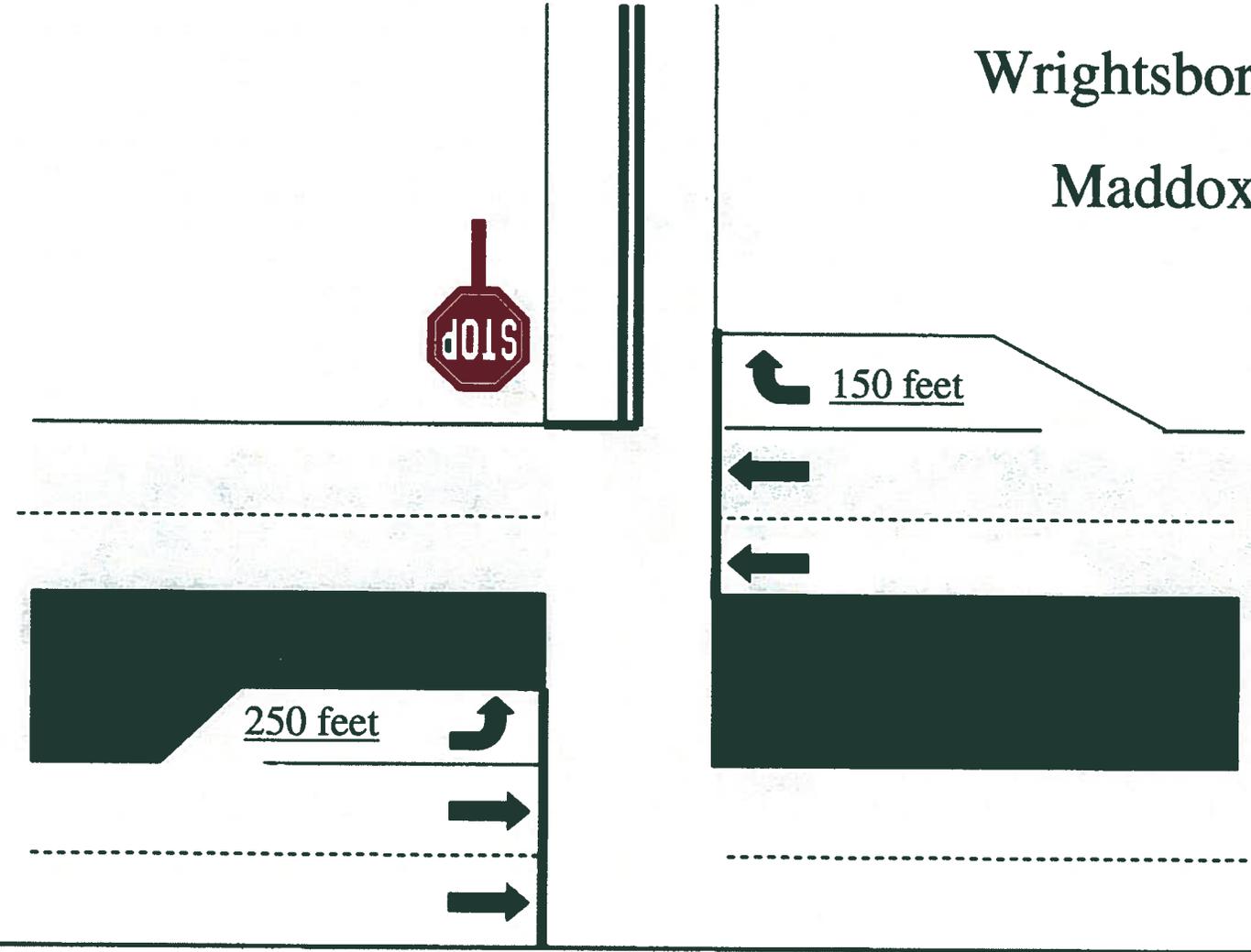
↑  
North  
Not to Scale

# Wrightsboro Road at Flowing Wells Road



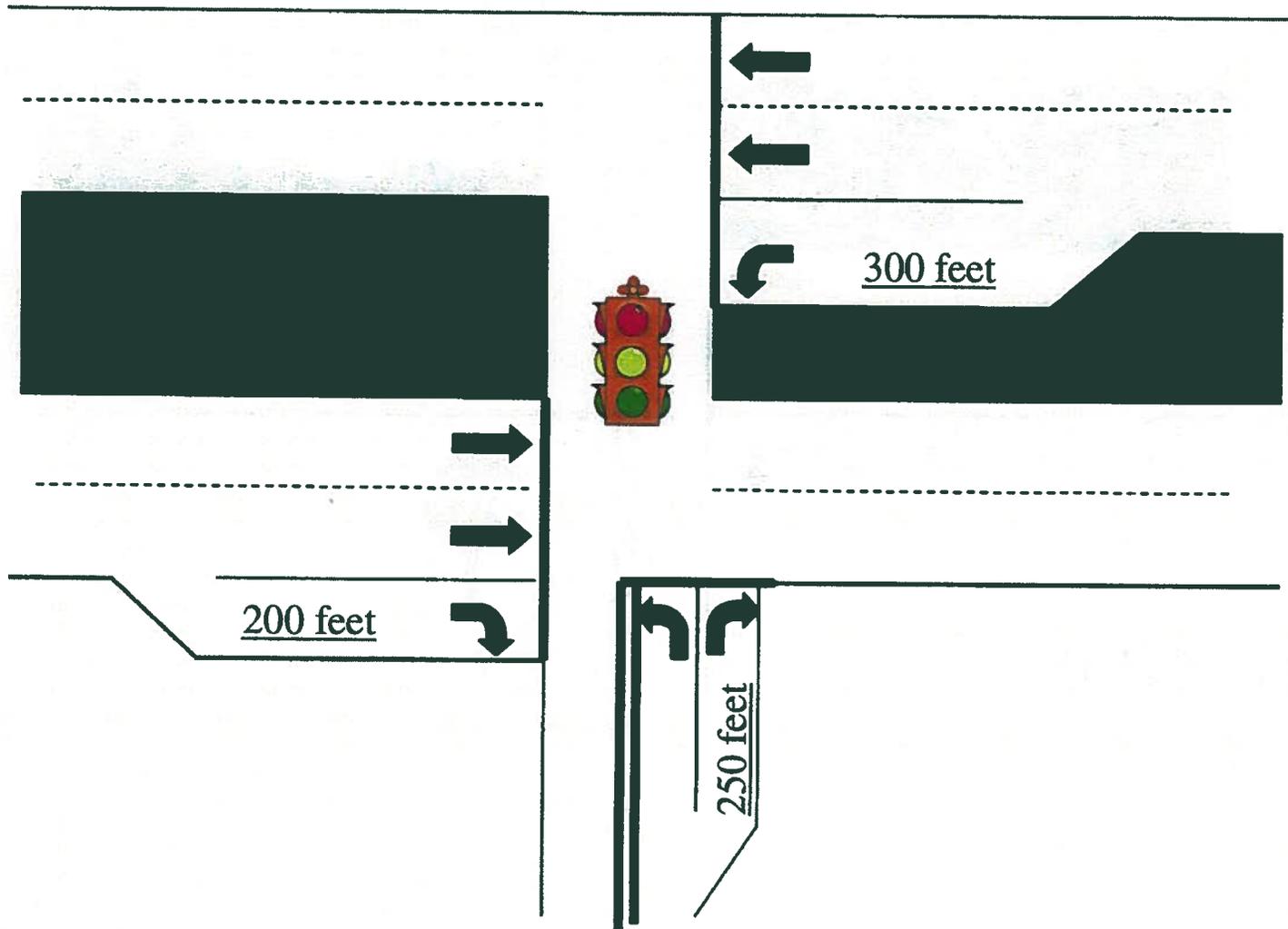
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North  
Not to Scale

# Wrightsboro Road at Maddox Drive



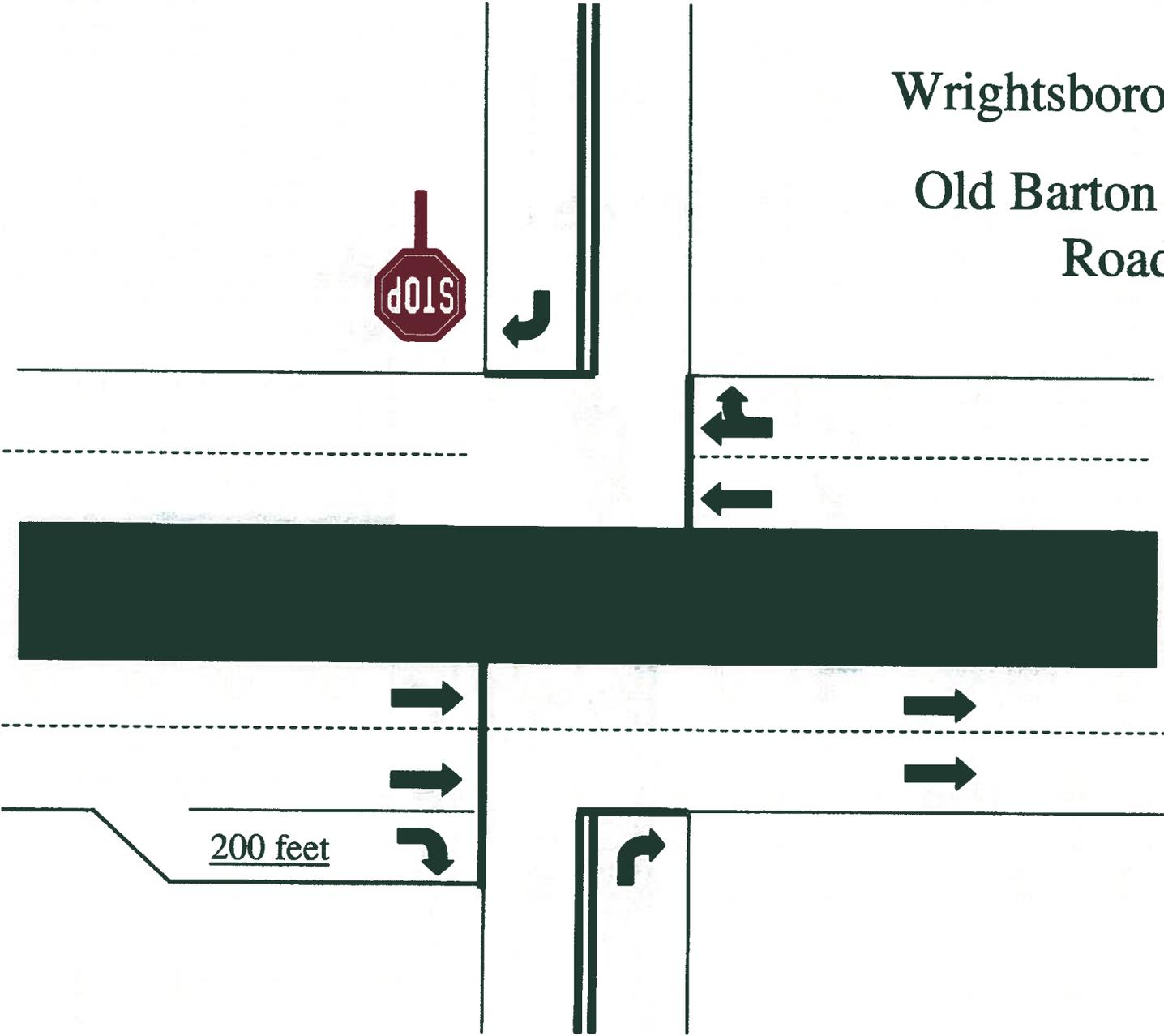
↑  
North  
Not to Scale

# Wrightsboro Road at Belair Road



↑  
North  
Not to Scale

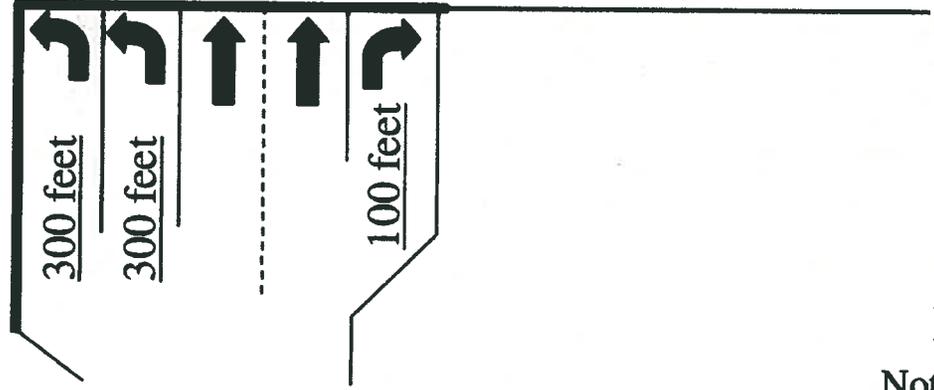
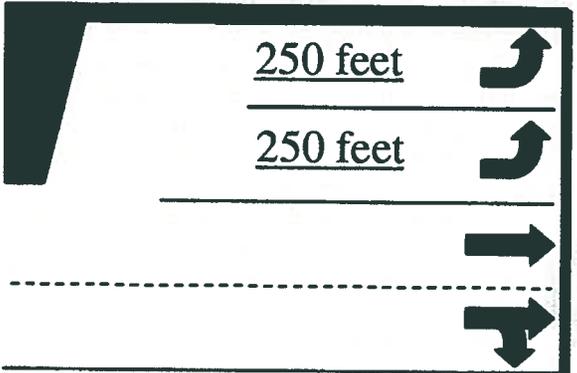
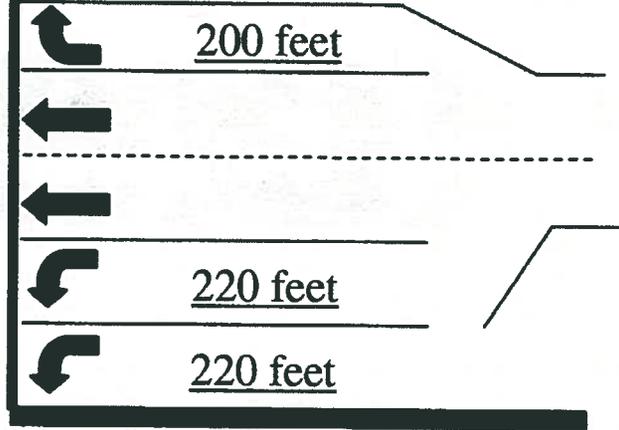
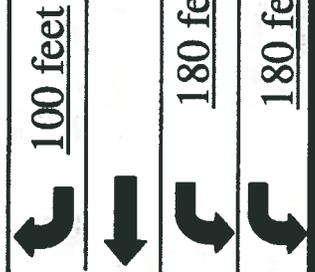
Wrightsboro Road at  
Old Barton Chapel  
Road



200 feet

↑  
North  
Not to Scale

# Wrightsboro Road at Re-Aligned Augusta Parkway/Barton Chapel



North  
Not to Scale

# Appendix D

## Wrightsboro Road Accident Data Analysis

## Wrightsboro Road Accident Analysis for Segments

<u>Segment*</u>				<u>2004-2006</u>			Wrightsboro Road Accident Rate	Comparison to GDOT's 2004 Accident Rate for Urban Principal Arterial (637)	Wrightsboro Road Injury Rate	Comparison to GDOT's 2004 Injury Rate for Urban Principal Arterial (247)
From	To	Distance in Feet	Distance in Miles	Average Volume	Average Number of Accidents	Average Number of Injuries				
Maddox Rd	Maddox Dr	7850.0	1.5	10,806	10.7	6.3	181.9	Below	108.0	Below
Maddox Dr	Belair Rd	3850.0	0.7	11,020	9.0	2.3	306.9	Below	79.6	Below
Belair Rd	Barton Chapel Rd	1700.0	0.3	20,877	17.3	6.7	706.5	Exceed	271.7	Exceed
Barton Chapel Rd	Augusta West Pkwy/Bobby Jones	600.0	0.1	25,120	23.3	7.3	2239.5	Exceed	703.8	Exceed

**\*Note**

The number of accidents and injuries for the intersection at the western end of the segment and any intervening intersections are included in the segment analysis, except for Barton Chapel Rd to August West Pkwy, which includes values for both ends of the segment.