



September 23, 2004

Mr. Jerry Radman
MacGregor Development Company
201 Shannon Oaks Circle
Cary, North Carolina 27511

Reference: Booth Mountain Development
Chatham County, North Carolina

Subject: Revised Traffic Assessment with Total Adjacent Development Traffic

Dear Mr. Radman:

The Chatham County Planning Department has requested an analysis of all proposed site driveway intersections of the Booth Mountain Development to include traffic generated by adjacent developments. This letter provides a summary of the adjacent development trips considered in the analysis as well as the analysis results of future traffic conditions at full build out of the Booth Mountain development.

The August 13th study considered traffic generated by the North Chatham Elementary School (K-8) using the NCDOT School Calculator under existing conditions and trips generated by the future North Chatham High School as adjacent development. In addition to the North Chatham High School, this study considers trips generated by full build out of Briar Chapel and Chatham Downs as adjacent development. Briar Chapel is located between US 15-501 and Mann's Chapel Road north of Andrews Store Road. Peak hour trips generated by full build out of Briar Chapel were obtained from the TIA completed for Briar Chapel on the Chatham County website. Chatham Downs is a commercial development located at US 15-501 and Lystra Road. Peak hour trips generated by full build out of Chatham Downs were obtained from the July 2003 TIA report completed for the development and was provided by Chatham County. Refer to Figures 1, 2, and 3 for the peak hour trips generated by the high school, Briar Chapel, and Chatham Downs, respectively. Figure 4 illustrates the total adjacent development peak hour trips.

The total adjacent development trips were added to background (2011) traffic volumes shown in the August 13th traffic assessment prepared for the Booth Mountain development to determine future (2011) traffic (shown in Figure 5). The site driveway intersections were analyzed under future (2011) conditions to determine the levels of service. As shown in Table 1, analysis indicates that all three site driveways will operate at acceptable levels

of service in the a.m. and p.m. peak hours with adjacent development traffic. Further, all site driveway approaches are expected to operate at the same levels of service in the a.m. and p.m. peak hours under future (2011) conditions with the addition of Briar Chapel and Chatham Downs traffic as under future conditions shown in the August 13th traffic assessment. The site driveway intersections operate at acceptable levels of service due to the relatively low number of trips generated by the proposed Booth Mountain development in the a.m. and p.m. peak hours which is distributed to three site driveways. Analysis printouts of future conditions are included with this letter.

TABLE 1
FUTURE (2011) PEAK HOUR CAPACITY ANALYSIS RESULTS

INTERSECTION	A P P R O A C H	LANEAGE	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall	Approach	Overall
Lystra Road (EB/WB) And Site Driveway 1 (NB) (Unsignalized)	EB WB NB	1 TH-RT 1 LT-TH 1 LT-RT	-- LOS A ¹ LOS B ²	N/A	-- LOS A ¹ LOS B ²	N/A
Jack Bennett Road (EB/WB) and Site Driveway 2 (SB) (Unsignalized)	EB WB SB	1 LT-TH 1 TH-RT 1 LT-RT	LOS A ¹ -- LOS C ²	N/A	LOS A ¹ -- LOS B ²	N/A
Jack Bennett Road (EB/WB) and Site Driveway 3 (SB) (Unsignalized)	EB WB SB	1 LT-TH 1 TH-RT 1 LT-RT	LOS A ¹ -- LOS C ²	N/A	LOS A ¹ -- LOS B ²	N/A

NOTE: Improvements are indicated in **Bold** print
 1. Level of service for left turn movement on major approach.
 2. Level of service for minor approach.

Please contact me at (919) 872-0480 x 110 if there are any questions concerning this study.

Sincerely,
RAMEY KEMP & ASSOCIATES, INC.

Rynal G. Stephenson, P.E.

cc: