



NC 54 Study Methodology – Chapel Hill

Future No Build:

Need to analyze the existing network under future traffic conditions to establish a base line for comparing alternative improvement scenarios.

Project Name	ID	Approved DUs	Approved NON RES SF	Approved OFF SF	Approved Retail
Fire Station #2	n/a		64,448		
Glen Lennox	19	1,391	708,000	600,000	108,000
Stancell Car Wash	n/a		4,640		
Tri City Medical Building	49		101,389	60,000	

Approved Developments

Glen Lennox trip generation:

Total External Vehicle Trips (Driveway Volumes)

Phase	24 Hour Volumes			AM Peak Hour Trips			Noon Peak Hour Trips			PM Peak Hour Trips		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
1	5,100	5,100	10,200	268	178	445	265	252	518	288	324	612
2	3,664	3,664	7,328	630	224	855	301	294	594	260	601	861
3	886	886	1,772	24	131	155	89	111	200	130	64	195
TOTALS	9,651	9,651	19,300	923	533	1,455	655	656	1,312	678	989	1,668

Table ES-3 from Traffic Impact Study (2013) Prepared by HNTB

Assumed 50% of the trips will use the NC54/Hamilton Road intersection and 50/50 split for EB/WB.

Notes/Observations:

- As expected, the delay for all intersections increase
- At Hamilton Rd, the EBL, WBT, and NBL movements seem to be affected the most by the Glen Lennox development

Proposed Improvement Scenarios:

Synchro Optimization – Allowed Synchro to optimize network. Significant improvement for the side streets at the expense of the throughput along NC54.

Other Improvements to Consider:

- Adding lanes where possible
- Restricting movements during certain times of the day
- Queue Jump for transit