

**05-01-2019 Town Council Meeting**  
**Responses to Council Questions #1**

**ITEM #8: Review of Traffic Data in Response to 2018 Community Survey Results**

**Council Question:** Based on the traffic report, what can/should we take away in terms of council decision-making?

**Staff Response:** *The purpose of this report was to gather and analyze data related to traffic in Chapel Hill in response to the 2018 Community Survey result, with the intention of understanding the current state of traffic in Town. While the data is informative, we do not see it pointing to a single policy recommendation to Council. We think it will be important to share this data with users of the system to learn how the data fits with their experience. As we continue to explore traffic data and policy options, staff will incorporate the data into ongoing analysis and recommendations to Council about regional traffic management and local traffic and alternative transportation modes.*

**Council Question:** Some intersections/areas are seeing much higher volumes than others, but it's hard to even tell if those are unacceptable levels or just more than what people are used to. What are industry standards for acceptable levels of traffic at peak commuting times, since these two times are really the issue? How does that compare to what is happening?

**Staff Response:** *Staff does not feel that the traffic data conclusively points to whether the levels are unacceptable but the community survey does suggest that residents see traffic as an issue. An industry standard called Level of service (LOS) is a qualitative industry measure used to assess the level of motor vehicle traffic service based on performance measures like vehicle speed, density, congestion, etc. Generally speaking, LOS C or better is considered acceptable. The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC-MPO) uses LOS D or LOS E to determine whether a road needs improvement. The common goal for urban streets in peak hours is to attain LOS D, as attaining LOS C would require prohibitive cost and societal impact in bypass roads and lane additions. On the next page is a LOS breakdown for Town intersections at peak hours. This data was collected in November 2018 as part of the Town's biennial signal timing evaluation. It is important to note that LOS is used only for vehicles, and does not consider level of service or stress level for bikes and pedestrians. There are other metrics for evaluating the overall success of a roadway and/or intersection, and this can be evaluated as part of the TIA evaluation.*

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**ANALYSIS SUMMARY OF  
MLK JR. BLVD. (NC 86)**

ANALYZED INTERSECTIONS	INTERSECTION LOS		
	AM PEAK HOUR	NOON PEAK HOUR	PM PEAK HOUR
MLK Jr. Blvd. at I-40 WB Ramps	C	C	D
MLK Jr. Blvd. at I-40 EB Ramps	E	B	B
MLK Jr. Blvd. at Eubanks Rd.	D	D	C
MLK Jr. Blvd. at Perkins Dr.	B	A	B
MLK Jr. Blvd. at Weaver Dairy Rd.	C	C	C
MLK Jr. Blvd. at Westminster Dr.	B	A	C
MLK Jr. Blvd. at Homestead Rd.	B	C	C
MLK Jr. Blvd. at Northfield Dr.	A	A	A
MLK Jr. Blvd. at Piney Mountain Rd.	B	B	A
MLK Jr. Blvd. at Estes Dr.	F	F	F
MLK Jr. Blvd. at Hillsborough St.	B	C	B

**ANALYSIS SUMMARY OF  
15-501 NORTH (DURHAM CHAPEL BLVD.)**

ANALYZED INTERSECTIONS	INTERSECTION LOS		
	AM PEAK HOUR	NOON PEAK HOUR	PM PEAK HOUR
Durham Chapel Hill Blvd. at Lakeview Dr.	C	B	C
Durham Chapel Hill Blvd. at Eastowne Dr.	A	B	C
Durham Chapel Hill Blvd. at Sage Rd.	D	D	D
Durham Chapel Hill Blvd. NB U-Turn	B	B	B
Durham Chapel Hill Blvd. at Erwin Rd.	C	B	C
Durham Chapel Hill Blvd. at Europa Dr.	B	B	B
Durham Chapel Hill Blvd. SB U-Turn	A	B	B
Fordham Blvd. at Ephesus Church Rd.	C	D	D
Fordham Blvd. at Elliot Rd.	B	C	B
Fordham Blvd. at Willow Ave.	B	C	C
Fordham Blvd. at Estes Dr.	C	C	C

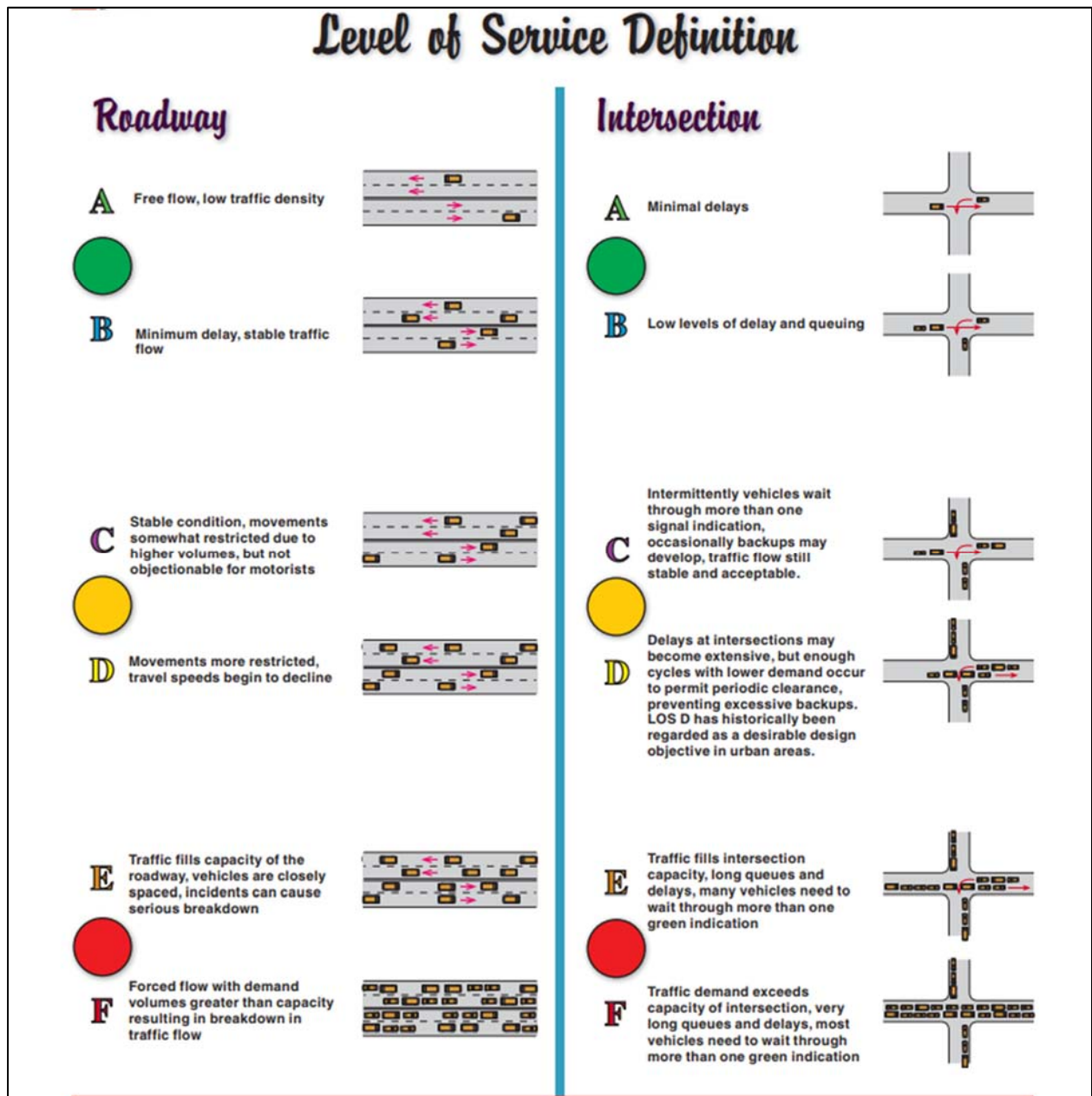
**ANALYSIS SUMMARY OF NC 54**

ANALYZED INTERSECTIONS	INTERSECTION LOS	
	AM PEAK HOUR	PM PEAK HOUR
NC 54 at Hamilton Rd.	C	B
NC 54 at Rogerson Dr.	A	A
NC 54 at Burning Tree Dr.	A	B
NC 54 at Barbee Chapel Rd.	A	B
NC 54 at Meadowmount Ln.	B	D
NC 54 at Barbee Chapel Rd. Ext.	D	D

**ANALYSIS SUMMARY OF  
15-501 SOUTH (COLUMBIA ST.)**

ANALYZED INTERSECTIONS	INTERSECTION LOS	
	AM PEAK HOUR	PM PEAK HOUR
Columbia St. at NC 54 WB Ramps	C	E
Columbia St. at NC 54 EB Ramps	C	C
Columbia St. at Mt. Carmel Church Rd.	E	D
Columbia St. at Bennett Rd.	B	B
Columbia St. at Market St.	B	D

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**Council Question:** What impact should this report have on future development and infrastructure needs? What does all this mean for our future planning and how does it connect to other departments?

**Staff Response:** *The purpose of this report was to gather and analyze data related to traffic in Chapel Hill in response to the 2018 Community Survey results. Based on the data, Town staff did not find a causal relationship between recent development and traffic patterns. At this point, Staff is pursuing the purchase of a Town-wide Traffic Model that may help inform future development and infrastructure decision making.*

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**Council Question:** What would the town-wide traffic model include exactly?

**Staff Response:**

- *We are planning to use TransModeler software for developing Town-wide traffic model*
- *Model has capability of completing a traffic impact study in one software package: Build/No Build scenario management, trip generation, trip distribution, LOS analysis, traffic signal optimization, Measures of Effectiveness (travel time, delay, fuel consumption) report creation, and 3-D visualization*
- *Analyzes traffic signal operations on coordinated arterials or at isolated intersections*
- *Conducts alternative analyses for roadway improvement projects on urban streets, freeways, and two-lane highways*
- *Evaluates intersection capacity improvements at signalized and unsignalized intersections and roundabouts with simulation-based methods*
- *Study the impacts of travel time and travel time reliability improvements on mixed urban streets*

**Council Question:** What kind of format would a town-wide traffic model come in?

**Staff Response:**

- *PDF Reports and 3-D Simulation*
- *Street network (GIS and PDF format) with Measures of Effectiveness (LOS, Travel Time, Delay, Fuel Consumption, Air Quality, etc)*

**Council Question:** Why is the travel time during the PM peak on 15-501 South (Columbia St.) listed as n/a?

**Staff Response:** *The travel time during the PM peak on 15-501 South (Columbia St.) is listed as n/a because there is no historical data available to compare the 2018 results to for the route.*

**Council Question:** Will AM peak travel time also be studied on 15-501 South (Columbia St.), MLK Jr. Blvd, 15-501 thru Fordham and NC East 54?

**Staff Response:** *Yes, AM peak travel time has been studied for these routes as well. PM Peak Hour is being shared in this presentation since the data indicates this time of day is when traffic*

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*is most challenging in Town. If there's interest, staff can share the results for AM peak travel time also.*

**Council Question:** How do the NCDOT sensors work?

**Staff Response:** *The North Carolina Department of Transportation (NCDOT) collects Average Annual Daily Traffic (AADT) in each North Carolina County on a biennial basis. The data is collected using portable sensors and deployed on the roadways in a given area for a 48-hour period. NCDOT deploys sensors in Chapel Hill on the odd year cycle near the start of the school year (i.e. August/September). The sensors are deployed at the same time of year for each measurement period so the data can be measured over time. The data collected by each NCDOT sensor undergoes a quality control process to ensure the data is valid and reliable.*

**Council Question:** How is the average annual daily traffic calculated?

**Staff Response:** *Average annual daily traffic is calculated by sensors that count the number of vehicles passing a specific point in a 24-hour period. After counting the number of vehicles passing a specific point for a 48-hour period, NCDOT annualizes the data by applying methods that remove seasonal and day-of-week biases during the collection period.*

**Council Question:** Does a decrease in AADT volume mean a decrease in traffic congestion?

**Staff Response:** *A decrease in AADT volume means there was a decrease in the overall number of cars driving on the road in the most recent measuring period compared to the previous measuring period.*

**Council Question:** Is there a way to determine what percentage of the AADT volume come from the pass-through traffic from Chatham County? With the anticipated development in Chatham County, is there any anticipated impact on the amount of pass-through traffic?

**Staff Response:** *There is not a way for Town staff to determine exactly what percentage of the AADT volume in Town comes from the pass-through traffic from Chatham County based on existing data available.*

**05-01-2019 Town Council Meeting**  
**Responses to Council Questions #2**

**ITEM #8: Review of Traffic Data in Response to 2018 Community Survey Results**

**Council Question:** How much is the model development project expected to cost and when will we know if grant funding is available?

**Staff Response:** *The total estimated cost is \$250,000.*

- *MPO Funding starting October 1, 2019: \$200,000*
- *Local Share: Town Operating Budget from Public Works: \$50,000*

**Council Question:** Does the TransModeler software also track and analyze bike/ped numbers and impacts?

**Staff Response:** *Yes, TransModeler is capable of analyzing and providing impacts of bike, pedestrian, and transit modes.*

**Council Question:** The data provided appears to be based on current conditions. If not already included, can you provide additional info on projects currently under construction, including how that impacts the numbers and findings in this report? (i.e. Wegmans, Apartment projects (Park, Fordham, Hillstone, Eastowne), Parking Deck....)?

**Staff Response:** *The purpose of this report was to gather and analyze data related to traffic in Chapel Hill in response to the 2018 Community Survey results. At this point, staff is pursuing the purchase of a Town-wide Traffic Model that may help inform future development and infrastructure decision making.*

**Council Question:** When neighbors come forward to talk about traffic concerns during development reviews, they talk about things other than just adding more traffic to main roads such as getting in and out of their neighborhoods and safety. By using average LOS and focusing on the flow on the main roads, I wonder if we are missing the things that are creating or contributing to this dissatisfaction. Is it possible to look a little more granularly to see, for instance, if there are places in town where the average LOS is acceptable but certain legs are failing in terms of excessive wait, backup past other cross streets, safe functionality for bike/ped...?

**Staff Response:** *This report relies upon available data so there are some limitations to the analysis. For example, the report is limited to locations in Town that provide sensor data, such as NCDOT sensors at specific locations and Town sensors at signalized intersections. Town staff would need to conduct special studies to evaluate the conditions at locations outside of the*

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*current analysis, like Somerset/Estes, in order to capture additional valid and reliable data if that is of interest to Council. In regards to public safety data, Town data shows no notable increases in crashes and/or crashes involving bike/pedestrians over the past five years.*

*There is additional, more granular data available to review that is not provided in the PowerPoint presentation but is provided in the Traffic Dashboard shown in the presentation. On the next page is a map that shows locations where the Town has experienced traffic volume increases (red) and traffic volume decreases (blue) from 2003 – 2017. As seen in the map, most of the locations with traffic increases are found on major corridors or roads with access to major corridors.*

