



## Town of Indian Trail

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### Memo

TO: Mayor and Town Council

FROM: Scott J. Kaufhold, P.E., Director of Engineering and Public Works

COUNCIL DATE: July 8, 2014

SUBJECT: Traffic Calming Measures for the Brookhaven Subdivision

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#### **Background Information:**

In mid 2010, the Brookhaven HOA contracted with Kimley-Horn and Associates, Inc., a Civil Engineering Consulting firm to conduct a Comprehensive Neighborhood-wide Street Study and provide recommendations for traffic calming measures throughout the development. The results were presented to the residents through HOA meetings and online discussions. According to information provided by the HOA to the Town, 74% of residents supported the recommended traffic calming measures which included a total of 18 proposed speed tables.

Following receipt of a formal request for Traffic Calming measures from the Town, staff collected existing traffic data to include both vehicular speed and volume on Camrose Crossing in the Brookhaven subdivision. The data was compared to that previously collected by the consultant with very similar results, thus providing warrant for the installation of temporary speed tables as outlined in the Traffic Calming Policy. Temporary speed tables were installed and a second round of traffic data was collected by staff afterwards to measure the effectiveness of the temporary devices in reducing vehicular speed and volume. The data was presented at the July 31<sup>st</sup> Brookhaven HOA meeting.

Results indicate that the temporary speed tables reduced the 85<sup>th</sup> percentile speed (the speed which no more than 15% of traffic is exceeding) from 32mph to 23mph with little change in traffic volume.

On June 23<sup>rd</sup>, staff delivered a flyer was delivered to residents along Camrose Crossing and Stanbury Drive informing them of the upcoming Public Hearing on the proposed traffic calming measures.

**Report Data:**

1) Pre-temporary speed table installation traffic data, 2) Post-temporary speed table installation traffic data, 3) Map of proposed & optional traffic calming measures, 4) public comments

**Required Actions:**

Receive public comment



## SPEED/VOLUME SURVEY BROOKHAVEN SUBDIVISION CAMROSE CROSSING

Date Start: 23-Aug-12  
Date End: 28-Aug-12

Direction 1

Date\Speed (MPH)	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	>65	Total
8/23/2012	0	2	4	15	93	97	26	3	2	0	0	0	0	0	242
8/24/2012	0	10	38	38	126	183	31	5	1	0	0	0	0	0	432
8/25/2012	0	1	7	14	88	128	36	6	1	0	0	0	0	0	281
8/26/2012	0	1	10	12	82	98	28	9	0	0	1	0	0	0	241
8/27/2012	0	2	7	21	99	136	41	4	0	0	0	0	0	0	310
8/28/2012	0	4	4	8	38	42	17	3	0	0	0	0	0	0	116
Direction 1 Total	0	20	70	108	526	684	179	30	4	0	1	0	0	0	1622

85 percentile = 29

Direction 2

Date\Speed (MPH)	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	>65	Total
8/23/2012	0	0	7	13	38	55	54	12	0	0	0	0	0	0	179
8/24/2012	0	3	26	16	64	144	108	36	2	0	0	0	0	0	399
8/25/2012	0	1	6	14	35	129	103	23	3	0	0	0	0	0	314
8/26/2012	0	2	13	11	36	64	90	25	1	0	0	0	0	0	242
8/27/2012	0	0	4	28	62	121	87	17	2	1	0	0	0	0	322
8/28/2012	0	0	2	11	28	69	61	15	0	0	0	0	0	0	186
Direction 2 Total	0	6	58	93	263	582	503	128	8	1	0	0	0	0	1642

85 percentile = 33

Combined

Date\Speed (MPH)	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	>65	Total
8/23/2012	0	2	11	28	131	152	80	15	2	0	0	0	0	0	421
8/24/2012	0	13	64	54	190	327	139	41	3	0	0	0	0	0	831
8/25/2012	0	2	13	28	123	257	139	29	4	0	0	0	0	0	595
8/26/2012	0	3	23	23	118	162	118	34	1	0	1	0	0	0	483
8/27/2012	0	2	11	49	161	257	128	21	2	1	0	0	0	0	632
8/28/2012	0	4	6	19	66	111	78	18	0	0	0	0	0	0	302
Combined Total	0	26	128	201	789	1266	682	158	12	1	1	0	0	0	3264

85 percentile = 32



**SPEED/VOLUME SURVEY (TYPE II)**  
**BROOKHAVEN SUBDIVISION**  
**CAMROSE CROSSING**  
 (Data Collection Period #1)

Date Start: 03-Dec-12  
 Date End: 10-Dec-12

Date\Speed (MPH)	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	>65	Total
12/3/2012	0	11	16	69	114	28	1	0	0	0	0	0	0	0	239
12/4/2012	0	9	23	79	153	40	4	0	0	0	0	0	0	0	308
12/5/2012	0	8	9	75	155	32	1	0	0	0	0	0	0	0	280
12/6/2012	0	7	16	87	164	42	2	0	0	0	0	0	0	0	318
12/7/2012	0	12	22	78	170	46	2	0	0	0	0	0	0	0	330
12/8/2012	0	21	30	75	147	42	4	0	1	0	0	0	0	0	320
12/9/2012	0	10	17	51	112	43	4	1	0	0	0	0	0	0	238
12/10/2012	0	0	2	13	23	7	1	0	0	0	0	0	0	0	46
Lane1 Total	0	78	135	527	1038	280	19	1	1	0	0	0	0	0	2079

85 percentile = 24

Date\Speed (MPH)	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	>65	Total
12/3/2012	0	1	41	98	32	1	0	0	0	0	0	0	0	0	173
12/4/2012	0	4	82	147	59	2	2	0	0	0	0	0	0	0	296
12/5/2012	0	2	72	162	41	6	0	0	0	0	0	0	0	0	283
12/6/2012	0	1	66	180	52	3	2	0	0	0	0	0	0	0	304
12/7/2012	0	2	61	217	56	8	0	0	0	0	0	0	0	0	344
12/8/2012	0	3	74	163	47	4	0	0	0	0	0	0	0	0	291
12/9/2012	0	1	53	155	40	14	0	0	0	0	0	0	0	0	263
12/10/2012	0	0	17	66	11	2	0	0	0	0	0	0	0	0	96
Lane2 Total	0	14	466	1188	338	40	4	0	0	0	0	0	0	0	2050

85 percentile = 20

Date\Speed (MPH)	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	>65	Total
12/3/2012	0	12	57	167	146	29	1	0	0	0	0	0	0	0	412
12/4/2012	0	13	105	226	212	42	6	0	0	0	0	0	0	0	604
12/5/2012	0	10	81	237	196	38	1	0	0	0	0	0	0	0	563
12/6/2012	0	8	82	267	216	45	4	0	0	0	0	0	0	0	622
12/7/2012	0	14	83	295	226	54	2	0	0	0	0	0	0	0	674
12/8/2012	0	24	104	238	194	46	4	0	1	0	0	0	0	0	611
12/9/2012	0	11	70	206	152	57	4	1	0	0	0	0	0	0	501
12/10/2012	0	0	19	79	34	9	1	0	0	0	0	0	0	0	142
Combined Total	0	92	601	1715	1376	320	23	1	1	0	0	0	0	0	4129

85 percentile = 23

## Scott Kaufhold

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**From:** Julie Ohmstede [ohmstede\_family@yahoo.com]  
**Sent:** Thursday, June 26, 2014 12:41 PM  
**To:** Scott Kaufhold  
**Cc:** Gary Ohmstede  
**Subject:** Traffic Calming

Mr. Kaufhold,

I received a letter in the mail in regards to a Traffic Calming public hearing on July 8. Since I may be in Idaho for work that day, I wanted to state my opinion in this email.

I am highly against any type of speed bumps placed on neighborhood streets. I see many cars avoiding them by driving in tree lawns and they redirect traffic to another route. Most importantly, is this the best way we can spend our city taxes?

I live on Camrose Crossing, one of the streets designated for the speed bumps. If it is proposed to add them to my street, let this be my public comment that I do not want one placed near my house. I value my lawn, my cars, and where my taxes go!

Thank you.

Julie Ohmstede  
4007 Camrose Crossing  
Indian Trail, NC

## Scott Kaufhold

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**From:** Mike Glatz [mglatz@uscoating.com]  
**Sent:** Monday, June 30, 2014 4:00 PM  
**To:** Scott Kaufhold  
**Cc:** glaquerre@yahoo.com  
**Subject:** Brookhaven proposed speed tables

Scott,

Good afternoon.

I received the flyer regarding the proposed speed tables in Brookhaven and have a few concerns with this approach:

- Potential message it sends to new home buyers when we sell in 4/5 years is that there is a speeding issue - - not to mention the possibility of reduced property value.
- Added noise from cars, work vehicles + trailers and trucks hitting these speed tables. The speed table "test" a year ago was near my home and I heard virtually every vehicle as they hit the tables. Not very enjoyable during those days when we can open windows as the weather cools or are sitting outside on the back patio.
- Most vehicles would slow just enough to keep from doing damage to their vehicles - - only to speed to the next speed table with a net effect of speeding in spurts. The noise from some cars speeding from table to table was annoying, also.
- Cars trying to mitigate the test speed tables started to partially drive on the lawns where the test tables were placed. I live at 4031 Camrose Crossing and understand one may be placed about 5 feet from my driveway. I certainly don't want people driving on my lawn trying to avoid as much of the table as possible.
- Waste of MY tax dollars to install something I absolutely do not want and that did not serve its intended purpose of slowing down the offenders - - they just sped from table to table.

I have spoken with several of my immediate neighbors – none of us want these things near our home – and to be frank – we don't want them in our neighborhood at all. I assume you are aware our association took a vote regarding the installation of speed tables. It did not pass. It is my understanding a few board members pushing this cause were frustrated it did not pass and then reached out to Indian Trail for a remedy – hence the test speed tables. If they are so inclined to have permanent speed tables – place them in front of their homes - - and let them pay for them!!

It is my opinion that the speeders are mostly residents of Brookhaven as I see the same offenders, frequently. Seems an alternate solution is to just write them tickets! This situation can go from a revenue waster to an actual revenue stream for Indian Trail - - maybe you can reduce my taxes as a result. The only feasible measure of slowing down the speeders is to hit them where they live - - - in the pocket book. Please don't make me pay for something that didn't work and that we don't not want.

Thanks in advance for your consideration.

MG

Mike Glatz  
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U. S. Coating Company  
465 Industrial Dr.  
Lexington, SC 29072  
Cell - 804-814-2493  
Customer Service - 800-863-4979  
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[www.uscoating.com](http://www.uscoating.com)

## Scott Kaufhold

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**From:** Richard Lehman [richardlehman@dynacast.com]  
**Sent:** Wednesday, July 02, 2014 2:11 PM  
**To:** Michael Alvarez; Dave Cohn; Chris King; Gary Savoie; David Drehs; Scott Kaufhold  
**Subject:** Speed Tables in Brookhaven

Dear Mayor, Council Members and SJK Engineering:

The purpose of this email is to express my frustration with the on-going speed table issue in the Brookhaven community. As you are well aware, this issue was put to a vote a three years ago when the streets of Brookhaven were under NCDOT control. Our HOA Board of Directors submitted a formal request for a traffic study since there was a previously documented speeding problem in Brookhaven. Speed tables were not installed at the time because the NCDOT required 70% of homeowners (not just voters) to vote in favor; there were 344 votes in favor and 378 were needed, or to put it another way, 196 homeowners voted against or did not vote which in substance is a no vote.

Given that the installation of speed tables was not approved by the homeowners previously, I would have hoped that the BOD would not have taken it upon themselves to request another traffic study given the results of the original referendum. The BOD is elected by the residents who made it known by way of referendum that speed tables were not wanted and the BOD should have respected that decision although they might disagree. However much to my dismay, I subsequently learned that a now former BOD member subsequently requested a new study by the town of Indian Trail which now is considering the speed tables once again!

I for one remain against the installation of speed tables in Brookhaven.

Thank you for your time.

Regards!

Richard J. Lehman Jr.  
Corporate Controller  
Dynacast International Inc.  
(980) 297-7354



# NEIGHBORHOOD TRAFFIC CALMING QUESTIONNAIRE FORM

Date: 2/10/2013

Name: Robert & Raechel McClellan

Address: 3116 Delamere Drive

City: Matthews State: NC Zip Code: 28104

The following questions are presented to help the Town gauge the overall feelings and attitudes of the citizens that are going to be primarily affected by the traffic calming devices. There is a comment section on the back of this page as well.

- 1) Do you currently live along the roadway section that the temporary traffic calming device is located? YES  NO
- 2) Is your home located adjacent to where the temporary traffic calming device was installed? YES  NO
- 3) Do you think that having traffic calming devices along the proposed roadway will be beneficial for this subdivision? YES  NO
- 4) Do you think having any type of traffic calming in this subdivision is warranted? YES  NO
- 5) Do you feel the visual impact of the speed tables and associated signage has a negative impact on the value of the adjacent properties? YES  NO
- 6) Do you feel there was an increase noise component in the immediate area of the temporary speed tables? YES  NO
- 7) Normally, traffic calming devices are located at property lines and near street lights. Would you have any issue with having the speed table located near or adjacent to your property if the design layout calls for it? YES  NO

8) Please write down any other comments you may want to express towards this process.

74% of Brookhaven homeowners voted for traffic calming devices – specifically, speed tables. We've had two open neighborhood meetings, a vote, online debates and more. All of the responses result in overwhelming support for action to reduce speeding here. We partnered with the NCDOT and Kimley-Horn to define five locations in Brookhaven that need traffic calming to deter bypass traffic that was noted in the Indian Trail plan. We are begging the Indian Trail Town Council to take action before someone's child is killed due to the twice-proven excessive speeding.

As a reminder...speeding in residential areas increases fear for children, fear by pedestrians and bicyclists, increases risk of vehicle crashes, increases the seriousness of injuries to other drivers, passengers, pedestrians and bicyclists struck by a vehicle, and increases noise from engine acceleration and tire friction (*Speeding in Residential Areas* [2003], Michael S. Scott, U.S. Dept. of Justice Office of Community Oriented Policing Services). Drivers are more likely to lose control of the vehicle, stopping distances are greater, and vehicle safety equipment is less effective at higher speeds (*Speeding in Residential Areas* [2003]). Even modestly higher speeds can spell the difference between life and death for pedestrians struck by a vehicle. The force of impact on the human body is more than one-third greater at 35 mph than at 30 mph (Dept. of the Environment, Transport and the Regions [1999]; National Highway Traffic Safety Administration [1999]).

- Each 1-mph reduction in avg. speeds results in a 5-percent reduction in vehicle crashes.
- Speeding is a contributing factor in about one-eighth of all crashes and in about one-third of all fatal crashes (Corbett and Simon [1999]; Dept. of the Environment, Transport and the Regions [1998]; National Highway Traffic Safety Administration [1997]).
- Two-thirds of children hurt or killed by vehicles are struck within several blocks of home and 53% of all fatal head injuries are to children in the street (American Journal of Public Health).

Speed tables and other traffic calming devices are proven to work. Children living near a speed table are 50% less likely to be hit and injured by a vehicle in their neighborhood. Children living within a block of a speed table were even less likely to be struck by a vehicle, with a 53-60% reduction in likelihood (The American Journal of Public Health). Traffic calming solutions decrease traffic crashes by 8-100% (ITE *Traffic Calming: State of the Practice*)

Traffic calming solutions decrease traffic crashes by 8-100% (ITE *Traffic Calming: State of the Practice*), lower noise levels by 4-5 dB by reducing vehicle acceleration (Dept. of the Environment, Transport and the Regions [1998]), and increased likelihood that drivers yield to pedestrians (speed table overview from the ITE). Without traffic calming devices, it is difficult for law enforcement to reduce average vehicle speeds below 25 mph (Corbett and Simon [1992]; Dept. of the Environment, Transport and the Regions [1998]; National Highway Traffic Safety Administration [1999]; Michigan Office of Highway Safety Planning [n.d.]; Glazer [1997]). Neighborhood crime has been shown to decrease with the installment of traffic calming techniques as decreased accessibility deters potential thieves and criminals, and traffic calming measures increase the value of property because areas with lower traffic volume and slower average speeds, streets are safer, causing homes to sell at a premium (*Speeding in Residential Areas* (2003), Michael S. Scott, U.S. Department of Justice Office of Community Oriented Policing Services).

Please help us by installing speed tables at the 5 NCDOT-endorsed locations in Brookhaven.

**Please return form by either fax or email:**

- 1) 704-821-1381
- 2) [tdh@engineering.indiantrail.org](mailto:tdh@engineering.indiantrail.org)





INDIAN TRAIL  
north carolina

**PUBLIC NOTICE**

**Public Hearing**

The Town of Indian Trail will be holding a Public Hearing on July 8, 2014 at 6:30 pm at the Civic Building located at 100 Navajo Trail to present traffic calming recommendations for Camrose Crossing and Stanbury Drive to the Town Council and to receive public comment. A map of the proposed traffic calming layout can be found at [www.indiantrail.org](http://www.indiantrail.org).

**June 25, 2014**



Brookhaven Subdivision  
 Phase 1 Area  
 Indian Trail , NC

**Proposed Neighborhood  
 Traffic Calming Layout**



Drawn By: TODD HUNTSINGER  
 Design By: SCOTT KAUFHOLD  
 Checked By: SCOTT KAUFHOLD  
 Date Created: 06/13/2014

1 inch = 130 feet