

FW: [External] FW: Turning Count Movements near Carolina Pines at Lake Wheeler- Sierra

From: Brennan, Sean P <spbrennan@ncdot.gov>
To: Billings, Amy <Amy.Billings@raleighnc.gov>
Cc: Neidringhaus, Amy N <anneidringhaus@ncdot.gov>, Huang, Yixuan <yhuang@ncdot.gov>
Sent: October 22, 2019 8:31:18 AM EDT

Amy,

We are okay with the roundabout at this intersection.

Regards,

Sean Brennan, PE

Senior Assistant District Engineer

Division 5/District 1

Department of Transportation

919-733-3213 office

919-715-5778 fax

spbrennan@ncdot.gov

4009 District Drive (Physical Address)

Raleigh, NC 27607

1575 Mail Service Center (Mailing Address)

Raleigh, NC 27699-1575

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From: Bunting, Clarence B <cbunting@ncdot.gov>
Sent: Thursday, October 10, 2019 12:53 PM
To: Brennan, Sean P <spbrennan@ncdot.gov>
Cc: Ishak, Doumit Y <dishak@ncdot.gov>; Lineberger, Nicholas C <nclineberger@ncdot.gov>; Walker, Braden M <bmwalker1@ncdot.gov>
Subject: FW: [External] FW: Turning Count Movements near Carolina Pines at Lake Wheeler- Sierra

Sean,

Congestion Management doesn't have any comments on the capacity analysis. Based on the projected volumes the roundabout should provide acceptable operations.

Our understanding is that the previous concern with the nearby intersection will be mitigated.

Please let us know if you need more information.

Thanks,

Clarence

From: Billings, Amy <Amy.Billings@raleighnc.gov>

Sent: Wednesday, September 25, 2019 4:34 PM

To: Dehler, Brian <bdehler@hwlochner.com>; Brennan, Sean P <spbrennan@ncdot.gov>; Neidringhaus, Amy N <anneidringhaus@ncdot.gov>; Ishak, Doumit Y <dishak@ncdot.gov>; Bunting, Clarence B <cbunting@ncdot.gov>; Howe, Tim <thowe@hwlochner.com>

Subject: [External] FW: Turning Count Movements near Carolina Pines at Lake Wheeler- Sierra

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov

To All,

Please see attached TCM for Lake Wheeler Road and Sierra Drive.

This information just came in today.

This data was requested in our last meeting discussion on 8/7/19 when we were considering a RABT at Carolina Pines Ave and Lake Wheeler Road.

Please let us know what the recommendation is from the DOT.

Thank you,

Amy

Amy Billings, PE

Senior Engineer

City of Raleigh

Engineering Services Department

Roadway Design & Construction

222 West Hargett Street | Raleigh, NC 27601

(p) 919-996-4103 | (c) 919-278-6092

amy.billings@raleighnc.gov

twitter.com/RaleighESDC

facebook.com/RaleighESDC <<https://www.facebook.com/RaleighEngineeringServicesDesignConstruction/>>

raleighnc.gov <<http://raleighnc.gov/>>

From: Duffy, Rebecca

Sent: Wednesday, September 25, 2019 4:05 PM

To: Billings, Amy <Amy.Billings@raleighnc.gov>

Subject: Lake Wheeler- Sierra

Here is the TMC for Lake Wheeler-Sierra

--

Rebecca M. Duffy, PE

Signs & Markings Manager

City of Raleigh

Department of Transportation - Traffic Engineering

Address: 222 West Hargett Street

PO Box 590

Raleigh, NC 27602

Phone: 919-996-4091

Email: rebecca.duffy@raleighnc.gov

Website: www.raleighnc.gov <<http://www.raleighnc.gov/>>

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1. 2019-09-11 Lake Wheeler - Sierra.pdf

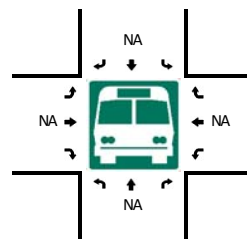
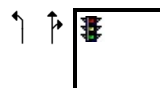
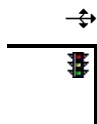
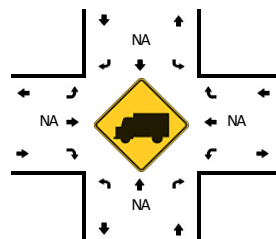
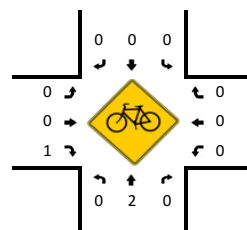
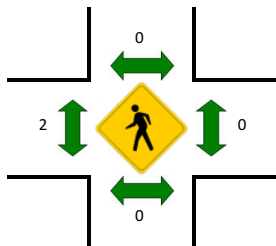
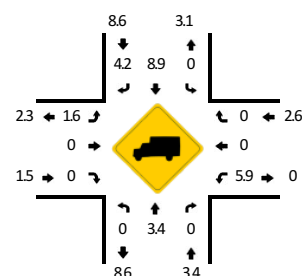
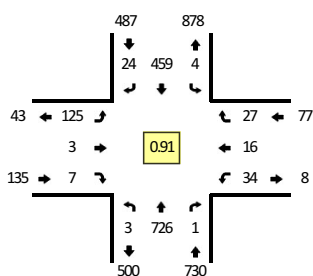
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2. CPA_Roundabout_Mtg_20190807_Draft Meeting Summary.docx

Type: application/vnd.openxmlformats-officedocument.wordprocessingml.document
Size: 38 KB (39,703 bytes)

LOCATION: Lake Wheeler Rd -- Sierra Dr**CITY/STATE:** Raleigh, NC**QC JOB #:** 15079710**DATE:** Wed, Sep 11 2019

Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

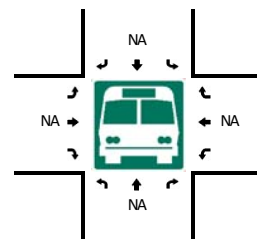
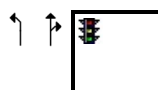
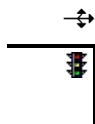
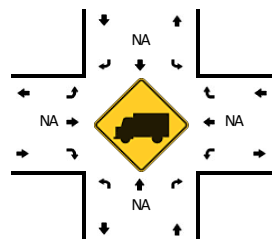
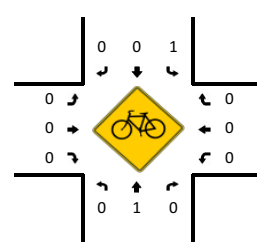
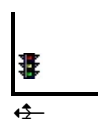
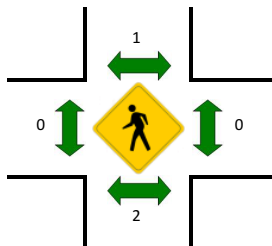
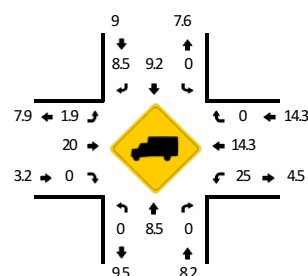
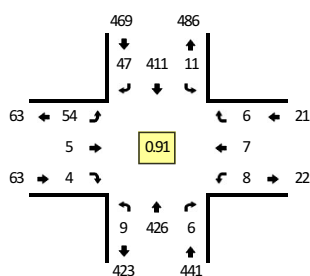


15-Min Count Period Beginning At	Lake Wheeler Rd (Northbound)				Lake Wheeler Rd (Southbound)				Sierra Dr (Eastbound)				Sierra Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	144	1	0	2	71	8	0	20	2	2	0	1	2	2	0	256	
7:15 AM	2	180	1	0	0	110	5	0	21	0	2	0	5	4	4	0	334	
7:30 AM	0	168	0	0	2	133	4	0	31	1	3	0	17	3	9	0	371	
7:45 AM	1	198	0	0	0	124	6	0	41	1	1	0	7	6	9	0	394	1355
8:00 AM	0	180	0	0	2	92	9	0	32	1	1	0	5	3	5	0	330	1429
8:15 AM	1	155	1	0	0	86	11	0	32	3	1	0	3	2	3	0	298	1393
8:30 AM	1	169	1	0	1	96	13	0	28	2	2	0	5	3	5	0	326	1348
8:45 AM	2	181	0	0	2	87	12	0	29	1	2	0	1	0	8	0	325	1279
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	4	792	0	0	0	496	24	0	164	4	4	0	28	24	36	0	1576	
Heavy Trucks	0	32	0	0	0	24	4	0	4	0	0	0	0	0	0	0	64	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
Railroad																		
Stopped Buses																		

Comments:

LOCATION: Lake Wheeler Rd -- Sierra Dr**CITY/STATE:** Raleigh, NC**QC JOB #:** 15079712**DATE:** Tue, Sep 10 2019

Peak-Hour: 12:00 PM -- 1:00 PM
Peak 15-Min: 12:30 PM -- 12:45 PM

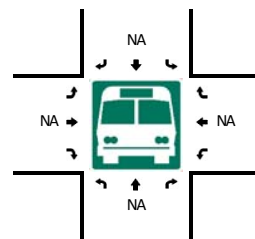
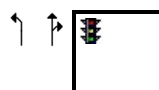
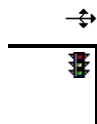
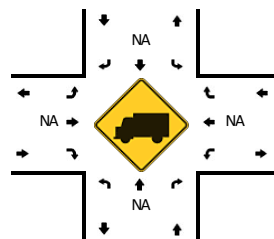
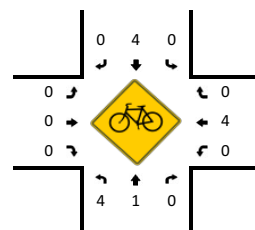
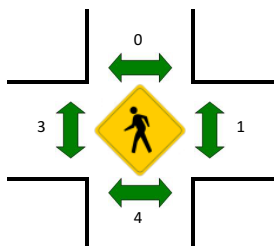
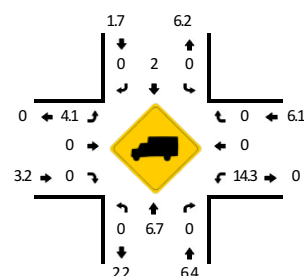
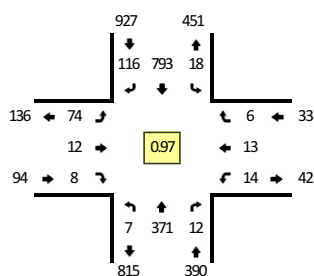


15-Min Count Period Beginning At	Lake Wheeler Rd (Northbound)				Lake Wheeler Rd (Southbound)				Sierra Dr (Eastbound)				Sierra Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:30 AM	1	111	0	0	3	117	10	0	13	2	2	0	3	0	4	0	266	
11:45 AM	3	97	3	0	2	108	10	0	10	0	0	0	3	2	1	0	239	
12:00 PM	4	101	2	0	4	99	8	0	10	2	1	0	1	2	2	0	236	
12:15 PM	1	98	1	0	3	92	19	0	15	1	1	0	2	2	1	0	236	977
12:30 PM	4	110	2	0	3	119	13	0	12	2	1	0	4	2	1	0	273	984
12:45 PM	0	117	1	0	1	101	7	0	17	0	1	0	1	1	2	0	249	994
1:00 PM	4	98	0	0	2	86	7	0	11	2	0	0	0	1	3	0	214	972
1:15 PM	0	87	0	0	0	102	10	1	16	1	3	0	0	1	3	0	224	960
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	16	440	8	0	12	476	52	0	48	8	4	0	16	8	4	0	1092	
Heavy Trucks	0	44	0	0	0	56	8	0	0	0	0	0	4	0	0	0	112	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad																		
Stopped Buses																		

Comments:

LOCATION: Lake Wheeler Rd -- Sierra Dr**CITY/STATE:** Raleigh, NC**QC JOB #:** 15079711**DATE:** Tue, Sep 10 2019

Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:30 PM -- 4:45 PM



15-Min Count Period Beginning At	Lake Wheeler Rd (Northbound)				Lake Wheeler Rd (Southbound)				Sierra Dr (Eastbound)				Sierra Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	100	3	0	2	178	20	0	16	2	1	0	1	0	0	0	325	
4:15 PM	3	84	1	0	3	173	23	0	21	2	1	0	3	0	1	0	315	
4:30 PM	2	116	2	0	5	196	28	0	11	0	3	0	5	3	1	0	372	
4:45 PM	2	100	2	0	4	196	25	0	18	5	3	0	1	2	4	0	362	1374
5:00 PM	2	74	3	0	6	216	29	0	18	3	2	0	3	3	0	0	359	1408
5:15 PM	1	81	5	0	3	185	34	0	27	4	0	0	5	5	1	0	351	1444
5:30 PM	2	93	3	0	3	126	29	0	22	3	4	0	2	2	1	0	290	1362
5:45 PM	3	87	3	0	3	160	35	0	21	7	3	0	1	7	5	0	335	1335
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	8	464	8	0	20	784	112	0	44	0	12	0	20	12	4	0	1488	
Heavy Trucks	0	32	0	0	0	20	0	0	0	0	0	0	4	0	0	0	56	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
Railroad																		
Stopped Buses																		

Comments:

DRAFT MEETING SUMMARY

Roundabout at Lake Wheeler
Carolina Pines Avenue Widening
From Lake Wheeler Rd to S. Saunders Street

Date: August 7th, 2019

Time: 2:00 PM

Location: NCDOT District 1 Offices, 4009 District Drive, Raleigh, 27607

Purpose: **Roundabout at Lake Wheeler**

Attendees:

Amy Neidringhous	NCDOT
Sean Brennan.....	NCDOT
Doumit Ishak	NCDOT
Clarence Bunting.....	NCDOT
Amy Billings	City of Raleigh
Brian Dehler	Lochner
Tim Howe.....	Lochner

Purpose:

The purpose of the meeting was to continue discussion regarding potential roundabout or signalized intersection alternatives at the Lake Wheeler Road / Carolina Pines Avenue intersection.

Discussion:

- Congestion Management has identified that traffic volumes on Lake Wheeler Road grew 37% from 2015 to 2019, while the traffic forecast was based on a 1% annual growth rate. There is significant new development further south nearer Fuquay-Varina along Lake Wheeler Road, likely to cause additional traffic growth. A potential new roundabout constructed at Carolina Pines under this project may be rendered obsolete should Lake Wheeler Road ever be widened to 4-lanes in the future. Those present noted that there is currently no plan to widen Lake Wheeler Road, and it is not listed in the TIP.
- Doumit noted a roundabout has benefits, but the existing signalized intersections just to the north (I-40 ramps) and south at Sierra Drive along Lake Wheeler would limit potential operational improvements from a roundabout at Carolina Pines. A larger benefit would result if a roundabout was constructed at Sierra Drive in conjunction with one at Carolina Pines Avenue.
- For the roundabout alternative, it was agreed to extend the splitter island south of the roundabout to limit both Lawrence Drive and the Grocery Boy driveway to right-in/right-out operations.
- The roundabout alternative would include (2) lanes through the roundabout for southbound Lake Wheeler traffic, which would be carried south to Sierra Drive, where the inside lane would become a Left-turn only lane, and the outside lane would be the Through/Right-turn movement.
- If recent traffic growth continues, it is likely traffic in the design year would exceed capacity for either the roundabout or a signalized intersection.
- Doumit and Clarence requested traffic count volumes along Sierra Drive to complete their study of the project area.
- Amy stated she will request counts from Jed Niffenegger and provide to those present.
- Doumit and Clarence will then provide their comments to the District who will then confer with the Division 5 staff who will provide NCDOT's official position on the intersection alternatives to the City.

The meeting was adjourned at approximately 3:15 PM.

(Meeting Summary Prepared By: Tim Howe, 08.08.2019)