

February 2, 2015

Mr. John O'Brien  
Transportation Manager  
City of North Miami  
1855 NE 142 Street  
North Miami, FL 33181

■  
600 N Pine Island Road  
Suite 450  
Plantation, Florida  
33324

Re: Neighborhood Traffic Calming Plan -Speed Limit Reduction  
North Miami, Florida

Dear Mr. O'Brien,

This document summarizes Phase 1 of the Neighborhood Traffic Calming Plan being developed for the City of North Miami. The City of North Miami retained Kimley-Horn to develop a Citywide Neighborhood Traffic Calming Plan to reduce speeding and cut-through traffic, and preserve the character and functionality of residential streets. This traffic management plan is developed to improve safety and quality of life for the City's residents.

Phase 1 consists of a feasibility assessment for lowering speed limits on the residential streets from 30 mph to 25 mph. After determining the outcome of the speed limit reduction request with the County, Phase 2 will include the development of traffic calming strategies for select residential streets.

The results of Phase 1 are summarized under the following broad sections:

- Review of Guidelines
- Data Analysis
- Recommendations

The results of this study will be submitted to Miami-Dade County Traffic Engineering Division for obtaining concurrence to lower the speed limit on residential streets.

Two maps depicting the City of North Miami's street network and functional classification are included in Appendix A.

## REVIEW OF GUIDELINES

The primary guidelines that were referenced during the speed limit reduction feasibility analysis are listed below.

- Section 316.189 of Florida Statute (F.S.)
- Florida Department of Transportation's (FDOT) *Speed Zoning for Highways, Roads and Streets in Florida*, dated March 2010.

The Florida Statute 316.189 stipulates that the maximum speed within any municipality or county is 30 mph. Within residential districts, a municipality may set a maximum speed limit of 20 or 25 mph on local streets after an investigation determines that such a limit is reasonable.

The Statewide guidelines for evaluating and establishing speed limits are specified in FDOT's *Speed Zoning for Highways, Roads and Streets in Florida*. Chapter 9 of the Speed Zoning Manual states that any alteration to speed limits on municipal or county streets must be based upon an engineering and traffic investigation. The applicable speed thresholds for determining speed limit are listed below.

- A speed limit should not differ from the 85<sup>th</sup> percentile speed or upper limit of the 10-mph pace by more than 3 mph and it shall not be less than 8mph.
- A speed limit of 4 to 8 mph less than the 85<sup>th</sup> percentile speed shall be supported by a supplemental investigation, which may consider factors such as roadway alignment, width, sight distance, traffic volume, crash experience, and roadside development.

In addition, Miami-Dade County, which has jurisdiction over traffic control devices installed on local roadways, has developed guidelines for traffic flow modification, including traffic calming and street closures. These guidelines are documented in the *Traffic Flow Modification/Street Closure Procedure*, dated January 2009. This document provides guidelines for determining when the livability of residential streets is compromised. An analysis of residential streets per livability criteria will be performed during Phase 2 when traffic calming strategies are developed.

#### **DATA ANALYSIS**

Traffic data analysis was conducted to determine the following:

- If vehicles exceed the posted speed, and
- If livability thresholds for residential streets are exceeded.

Traffic speed/volume data was collected at 28 representative residential street segments on Wednesday, October 1, 2014, Wednesday, October 15, 2014 and Tuesday, October 21, 2014. Appendix B includes the 24-hour traffic speed/volume counts.

**Speed Data Analysis**

The posted speed limit on the residential streets is 30 mph. A summary of 24-hour speed data that was collected for each street is provided in Table 3. The following descriptive statistics are used to analyze the speed data:

- 85<sup>th</sup> percentile speed – The speed at or below which 85% of vehicles are traveling; this measure is often used as the baseline for establishing the upper limit of "reasonable" speeds for the prevailing conditions.
- Average speed - Average speed is calculated as the sum of all speeds divided by the number of speed observations.
- 10-mile per hour pace – the 10-mile per hour speed range that encompasses the highest proportion of observed speeds.

Table 1 provides an overview of the 85<sup>th</sup> percentile speeds. Of the 28 road segments that were studied, 16 segments had an 85<sup>th</sup> percentile speed that was 30 mph or less. Only three road segments had an 85<sup>th</sup> percentile speed that exceeded 35 mph.

**Table 1 – Overview of 85<sup>th</sup> Percentile Speeds**

85 <sup>th</sup> Percentile Speed (mph)	Number of Road Segments
20 – 25	0
26 – 30	16
31 – 35	9
36 – 40	3

Table 2 summarizes the findings of the speed data analysis based on the criteria set forth by FDOT in Chapter 9 of the Speed Zoning Manual (previously summarized under Review Guidelines). Table 3 summarizes an analysis of individual street segments specific to warranting conditions for lowering speed limit to 25 mph.

**Table 2 - Speed Limit Reduction Opportunities**

Requirements for 25 mph Speed Limit	Number of Road Segments
Requirements Met	11
Supplemental Investigation Needed	13
Speed Calming Measures Required	4

A discussion of results summarized in Table 2 is provided below.

- There are 24 roadway segments where the 85<sup>th</sup> percentile speed and the upper limit of 10-mph pace are within 8 mph of the proposed 25 mph speed limit (i.e., both data points should be between 25 mph and 33 mph). Out of those 24 roadway segments 11 segments qualify for reducing the speed limit to 25 mph without further assessment because the 85<sup>th</sup> percentile speed is no greater than 3 mph of the proposed 25 mph speed limit (i.e., 85<sup>th</sup> percentile speed is 28 mph or less).

- There are 13 roadway segments where the 85<sup>th</sup> percentile speed is 4 to 8 mph higher than the proposed 25 mph speed limit. These roadways require a supplemental investigation to determine the lowering of speed limit to 25 mph. These streets are located within a dense residential area with closely spaced driveways and landscaping (see photos on page 6). The intersections within this grid road network are controlled by stop signs. Therefore, lowering of speed limit to 25 mph is justifiable to encourage uniform speeds within short blocks and improve safety of residents and especially the children who use the streets.
- There are four roadway segments where the 85<sup>th</sup> percentile speed limit is more than 8 mph greater than the proposed 25 mph speed limit. These roadway segments will require traffic calming measures to justify lowering of speed limit to 25 mph.

Table 3 – Summary of Speed Measurements

Roadway	Location	Average Speed (mph)	85 <sup>th</sup> Percentile (mph)	10-mph Pace	25 mph Requirements
NE 2 <sup>nd</sup> Avenue	North of NE 129 <sup>th</sup> St.	27	31	22-31	●
NE 3 <sup>rd</sup> Avenue	North of NE 125 <sup>th</sup> St.	25	29	21-30	●
NW 5 <sup>th</sup> Avenue	South of NW 130 <sup>th</sup> St.	26	32	21-30	●
NE 5 <sup>th</sup> Avenue	North of NE 137 <sup>th</sup> St.	29	35	24-33	●
NE 7 <sup>th</sup> Avenue	South of NE 135 <sup>th</sup> St.	21	28	18-27	○
NE 8 <sup>th</sup> Avenue	North of NE 127 <sup>th</sup> St.	26	30	21-30	●
NE 8 <sup>th</sup> Avenue	South of NE 140 <sup>th</sup> St.	26	30	21-30	●
NW 8 <sup>th</sup> Avenue	North of NW 129 <sup>th</sup> St.	25	30	21-30	●
NE 14 <sup>th</sup> Avenue	Between NE 131 <sup>st</sup> St. & NE 132 <sup>nd</sup> St.	30	36	26-35	●
NE 124 <sup>th</sup> Street	East of NE 18 <sup>th</sup> Ave.	21	28	20-29	○
NE 127 <sup>th</sup> Street	West of NE 6 <sup>th</sup> Ave.	22	26	18-27	○
NE 127 <sup>th</sup> Street	West of NE 12 <sup>th</sup> Ave.	23	28	20-29	○
NE 130 <sup>th</sup> Street	West of NE 12 <sup>th</sup> Ave.	23	28	20-29	○
NW 131 <sup>st</sup> Street	West of NW 10 <sup>th</sup> Ave.	27	32	23-32	●
NW 131 <sup>st</sup> Street	East of NW 5 <sup>th</sup> Ave.	27	32	23-32	●
NE 131 <sup>st</sup> Street	West of NE 12 <sup>th</sup> Ave.	25	29	21-30	●
NE 132 <sup>nd</sup> Terrace	West of NE 6 <sup>th</sup> Ave.	19	26	17-26	○
NE 133 <sup>rd</sup> Street	West of NE 6 <sup>th</sup> Ave.	22	27	19-28	○
NE 134 <sup>th</sup> Street	West of NE 6 <sup>th</sup> Ave.	24	28	20-29	○
NE 135 <sup>th</sup> Street	East of US-1	31	36	26-35	●
NE 138 <sup>th</sup> Street	Between NE 14 <sup>th</sup> Ave. & NE 16 <sup>th</sup> Ave.	25	30	21-30	●
NE 139 <sup>th</sup> Street	East of NE 13 <sup>th</sup> Ave.	27	32	23-32	●
Biscayne Bay Drive	East of N Bayshore Dr.	24	28	20-29	○
Canal Drive	Between NE 119 <sup>th</sup> Rd. & NE 120 <sup>th</sup> Rd.	22	26	18-27	○
Keystone Boulevard	East of Ixora Rd.	27	32	23-32	●
N Bayshore Drive	South of Keystone Blvd.	26	30	22-31	●
N Bayshore Drive	South of Biscayne Bay Dr.	24	28	20-29	○
Sans Souci Boulevard	East of NE 118 <sup>th</sup> Rd.	32	38	27-36	●

Legend: ○ Requirements Met; ● Supplemental Investigation Needed; ● Speed Calming Required

Typical layout of residential streets within North Miami



RECOMMENDATIONS

Based on the speed data analysis, the following conclusions and recommendations are made:

- Speed data analysis and supplemental investigations support the lowering of speed limit on local residential streets from 30 mph to 25 mph.
- Speed data further indicate that some residential roadways will require the installation of traffic calming measures to reduce the speed to support 25 mph speed limit.

Let me know if you have any questions or comments.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

A handwritten signature in blue ink that reads "R. Wijesundera". The signature is written in a cursive style with a horizontal line underneath the name.

Ravi Wijesundera, P.E.  
Project Manager