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MEMORANDUM

TO: Dirk Jablonski, P.E.
Director, Public Works Department

FROM: John Less, P.E.
Traffic Engineer, Engineering Services

SUBJECT: Traffic Safety Evaluation
Evergreen Drive, Leland Lane, Harmony Lane and 32nd Street

DATE: April 24, 2006

INTRODUCTION

Following the March 28, 2006 Public Works Committee meeting I was directed to prepare a general traffic safety evaluation of the area in the immediate vicinity of the Evergreen Apartments development. As per the Public Works Committee, this report considered the following:

- Harmony Lane from W. Saint Cloud Street to 32nd Street.
- Leland Lane from Evergreen Drive to 32nd Street.
- The proposed Evergreen Apartments' driveway to Harmony Lane.
- The proposed Evergreen Apartments' driveway to Evergreen Drive.

Prior to initiating this report, I reviewed the development plans for the Evergreen Apartments, Mr. Solon's January 25, 2006 report and Assistant Fire Chief Knight's February 27, 2006 report. Additionally, I listened to the pertinent segments of the audio recordings of the Committee Meetings of February 14, 2006 and March 28, 2006.

FINDINGS

Harmony Lane - W. Saint Cloud Street to 32nd Street

1) From 2003 to 2005, there was one mid-block crash on Harmony Lane; the crash involved a vehicle backing out of a driveway and hitting a parked vehicle. From 2003 to 2005, there was one crash at the 32nd Street intersection; the crash was a rear end crash that occurred within the NB lanes of 32nd Street. The crash history is insufficient to suggest any trends.

2) Harmony Lane is an asphalt roadway, 16-feet wide with 30-inch wide concrete curb & gutter on both sides. Parking is permitted on the north side of the street; parked vehicles reduce the width of the traveled way to approximately 10-feet. Asst. Chief Knight noted the difficulty that the reduced width creates for public safety vehicles; other large service vehicles expected to use the street, e.g. waste collection, delivery vehicles, etc., would have similar difficulties.

3) Volume and speed data was collected on Tuesday, April 18, 2006. Harmony Lane had an average daily traffic (ADT) of 100 vehicles per day (vpd). It is important to note that the configuration of Harmony Lane and W. St. Cloud Street creates significant variation in volume counts depending on where the count is taken, i.e. counts at the west end of the streets will be lower than those taken closer to 32nd Street. The counter was located to collect representative speed data and hence did not count the maximum number of vehicles using Harmony Lane. The 85th percentile speed on Harmony Lane was 19.5 MPH; the posted speed limit is 25 MPH.

4) Volume and speed data was also collected for 32nd Street near Harmony Lane. The ADT was 3,790 vpd and the 85th percentile speed was 31.5 MPH; the posted speed limit on 32nd Street is 25 MPH.

5) Harmony Lane is stop controlled at the 32nd Street intersection. Intersection sight distance was evaluated as per the criteria of A Policy on Geometric Design of Highways and Streets 2001 published by the American Association of State Highway and Transportation Officials (AASHTO). As Asst. Chief Knight's report noted, the existing hedgerow directly behind the sidewalk on the northwest corner severely restricts sight distance from Harmony Lane looking north.

Leland Lane – Evergreen Drive to 32nd Street

6) From 2003 to 2005, there were no mid-block crashes on Leland Lane. From 2003 to 2005, there were two crashes at the 32nd Street intersection; both crashes were rear end crashes that occurred within the NB lanes of 32nd Street. The crash history is insufficient to suggest any trends.

7) Leland Lane is an asphalt roadway, 28-feet wide with 30-inch wide concrete curb & gutter on both sides. Parking is permitted on both sides of the street; parked vehicles reduce the width of the traveled way to approximately 18-feet. The roadway width is adequate for the expected user vehicles on Evergreen Drive.

8) Volume and speed data was collected on Tuesday, April 18, 2006. Leland Lane had an ADT of 225 vehicles per day (vpd) and the 85th percentile speed was 26.5 MPH; the posted speed limit is 25 MPH.

9) Leland Lane is stop controlled at the 32nd Street and Evergreen Drive intersections. Intersection sight distance at both locations was evaluated as per the AASHTO criteria. Adequate sight distance exists at the 32nd Street intersection. There are no permanent objects that would restrict sight distance at the Evergreen Drive intersection however, parked vehicles on the east side of Evergreen Drive may restrict sight distance from Leland Lane.

Proposed Evergreen Apartments' driveway to Harmony Lane

10) Using the average trip generation rates published by the Institute of Transportation Engineers, a 16-unit apartment complex can be expected to create 10 trips during the AM peak hour, 11 trips during the PM peak hour and 110 trips in a 24-hour period.

11) The driveway will be stop controlled at Harmony Lane. Intersection sight distance was evaluated as per the AASHTO criteria and using the posted speed limit of 25 MPH. There are no permanent objects that would restrict sight distance from the driveway approach. It is important to note however that the close proximity of two adjacent residential driveways (house #3237 and 3245) will create a severe sight restriction when vehicles are parked on the driveways.

Proposed Evergreen Apartments' driveway to Evergreen Drive

12) Using the average trip generation rates published by the Institute of Transportation Engineers, a 16-unit apartment complex can be expected to create 10 trips during the AM peak hour, 11 trips during the PM peak hour and 110 trips in a 24-hour period.

13) Volume and speed data for Evergreen Drive was collected on Tuesday, April 18, 2006. Evergreen Drive had an ADT of 560 vehicles per day (vpd) and the 85th percentile speed was 28.2 MPH; the posted speed limit is 25 MPH.

14) The driveway will be stop controlled at Evergreen Drive. Intersection sight distance was evaluated as per the AASHTO criteria and using the posted speed limit of 25 MPH. There are no permanent objects that would restrict sight distance from the driveway approach. Like the Leland Lane/Evergreen Drive intersection, parked vehicles on the east side of Evergreen Drive may restrict sight distance at the driveway.

Please let me know if you have any questions or need further information.