TRANSPORTATION TECHNICAL MEMORANDUM

Date: July 28, 2020

To: Susan Habina-Woolard, PE
   Town Engineer
   Town of Matthews, Public Works Department

From: Michael Wickline, PE
   Principal
   Design Resource Group, PA (C02370)

Subject: Matthews Seniors Traffic Information (887-002)

Per Town of Matthews staff request, we provide the following memorandum detailing the Matthews Seniors project’s anticipated trip generation and trip assignment utilizing the adjacent roadways. As discussed below, the proposed senior residential development (see Figure 1), in our opinion will not have a significant impact on the adjacent roadways and nearby intersections. This is based on the estimated number of peak hour trips expected to be generated from the senior housing at the two proposed access locations.

We provide the following supporting information:

**Background Information**

Idlewild Road is classified as a minor arterial, with a posted speed limit of 45 mph. It is a two-lane undivided facility (one lane in each direction with appropriate right and left turn lanes). No curb/gutter, planting strip, bike lanes, or sidewalk are present on either side of the roadway south of Margaret Wallace Road (except for the frontage of the adjacent Lidl property).

 Idlewild Road Facing North Along Site  
 Idlewild Road Facing South Along Site
Geospatial information provided by NCDOT’s ArcGIS portal (Go! NC) was collected such as Annual Average Daily Traffic (AADT) and crash frequency where available in the vicinity of the site.

AADT for two-way volumes on roadways within the area of influence as well as the available crash data are depicted in the tables below.

### Annual Average Daily Traffic Volumes (veh. per day)

<table>
<thead>
<tr>
<th>Roadway</th>
<th>AADT (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idlewild Road south of Margaret Wallace Road</td>
<td>7,600 vpd (2018)</td>
</tr>
<tr>
<td>Idlewild Road north of Margaret Wallace Road</td>
<td>16,500 vpd (2018)</td>
</tr>
<tr>
<td>Margaret Wallace Road east of Dion Drive</td>
<td>16,000 vpd (2018)</td>
</tr>
</tbody>
</table>

### Crash Data from 2015-2019

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Severity Type</th>
<th>Total Crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idlewild Rd &amp; Margaret Wallace Rd</td>
<td>K &amp; A Injury</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>B &amp; C Injury</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>PDO</td>
<td>70</td>
</tr>
<tr>
<td>Notes:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K: Fatality, A: A injury type (disabling), B: B injury type (evident), C: injury type (possible), PDO: Property Damage Only</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Proposed Access**

According to the schematic site plan (see RZ1.0 and Figure 1 for the site plan on aerial), access to the development is expected to occur via two access locations:

- **Proposed Access “A” (Full Movement)** – unsignalized access located on Idlewild Road approximately 435 feet south of Margaret Wallace Road
- **Proposed Access “B” (Internal Connection to the Adjacent Development)** – unsignalized connection to the existing stub located within the adjacent Lidl development

**Projected Traffic**

The daily and peak-hour trip generation data for the site is presented in the table below for the proposed 128 attached senior housing units. Values derived for the anticipated trips generated by the site are obtained from the Institute of Transportation Engineers, *Trip Generation Manual, 10th Edition*, 2017.

<table>
<thead>
<tr>
<th>Land Use [ITE Code]</th>
<th>Proposed Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Adult Housing- Attached [252]</td>
<td>128 DU 490 9 17 26 19 15 34</td>
</tr>
</tbody>
</table>

Reference:


Under the proposed zoning the site is anticipated to generate approximately 26 AM peak hour trips and 34 PM peak hour trips.
The directional distribution assumes the following trip distribution percentages (see Figure 2 for the site directional distribution):

- 35% to/from the west on Margaret Wallace Road
- 25% to/from the east on Margaret Wallace Road
- 20% to/from the south on Idlewild Road
- 20% to/from the north on Idlewild Road

The AM and PM peak hour trip assignments were developed using the anticipated trip generation data and above trip distribution percentages and are detailed on Figure 3.

The existing laneage is shown on Figure 4, while the suggested laneage is shown on Figure 5.

It is our opinion that the trips generated by the proposed residential development will not significantly impact the area roadway network based on the minimal number of additional trips anticipated to utilize the adjacent roadways.

Please contact us should you have any questions or need any additional information.

Attachments:
- Figure 1 – Site Plan on Aerial
- Schematic Site Plan – RZ1.0
- Figure 2 – Site Directional Distribution
- Figure 3 – Peak Hour Site Trip Assignment
- Figure 4 – Existing Laneage
- Figure 5 – Suggested Laneage

cc:  
Michael Mahjoub NCDOT  
Kevin Woodley Buvermo Investments, Inc.  
Nick Bushon, PLA DRG  
File
LEGEND

〇 Stop Sign Control

Access "B" (Internal Connection)

Full Mvmt. Access "A"

SITE

LIDL

Margaret Wallace Rd

dewild Rd

Revised: 0

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LEGEND

- Traffic Signal
- Stop Sign Control

xx%/xx% Distribution Percentage

Site

Access "A"

Lidl Access #1

Access "B"

Idlewild Rd

Margaret Wallace Rd

Lidl Access #2

Idlewild Rd

Margaret Wallace Rd

Stop Sign Control

Figure 2

JULY 2020

REVISIONS:

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LEGEND

- Traffic Signal
- Stop Sign Control

VOLUMES: AM (PM)

Figure 3

JULY 2020

REVISIONS:
LEGEND

- Traffic Signal
- Stop Sign Control
- Existing Laneage

Figure 4

EXISTING LANEAGE
LEGEND

- Traffic Signal
- Stop Sign Control
- Existing Laneage
- Suggested Laneage

Figure 5

SUGGESTED LANEAGE

Continuous 3-Lane Section Along the Fite's Frontage