County Line Road (S.R. 1001) Corridor Analysis

Radnor Township & Lower Merion Township
Delaware & Montgomery County
January 2019
Study Intersections

1. County Line Road & Lancaster Avenue
2. County Line Road & Montrose Avenue
3. County Line Road & Roberts Road
4. County Line Road & Conestoga Road/Thomas Avenue/Glenbrook Road
5. County Line Road & S. Warner Avenue
6. County Line Road & Old Lancaster Avenue
7. County Line Road & Mondella Avenue
8. County Line Road & Lindsay Avenue
9. County Line Road & Bryn Mawr Avenue/Haverford Road/Railroad Avenue
10. County Line Road & Landover Road/Haverford Road
### Roadway Summary

**Table 1 – Existing Roadway Summary**

<table>
<thead>
<tr>
<th>ROAD</th>
<th>CARTWAY WIDTH</th>
<th>RIGHT-OF-WAY WIDTH</th>
<th>POSTED SPEED</th>
<th>85th PERCENTILE SPEED</th>
<th>AVERAGE DAILY TRAFFIC³</th>
</tr>
</thead>
<tbody>
<tr>
<td>County Line Rd between Montrose Ave and Roberts Rd</td>
<td>40'</td>
<td>50-60'</td>
<td>35 MPH</td>
<td>42.7¹ / 37.6²</td>
<td>8,165¹ / 7,547²</td>
</tr>
<tr>
<td>County Line Rd between Roberts Rd and Thomas Ave</td>
<td>40'</td>
<td>50-60'</td>
<td>35 MPH</td>
<td>42.2¹ / 33.6²</td>
<td>7,799¹ / 7,711²</td>
</tr>
<tr>
<td>County Line Rd between Thomas Ave and Mondella Ave</td>
<td>40'</td>
<td>50-54'</td>
<td>35 MPH</td>
<td>38¹ / 40²</td>
<td>9,475¹ / 10,138²</td>
</tr>
</tbody>
</table>

¹Southbound ²Northbound ³PennDOT Traffic Information Repository Data *(Appendix L)*
# Sight Distance Summary

## Table 2 – Sight Distance Summary

<table>
<thead>
<tr>
<th>Intersection Approach</th>
<th>Looking Left (in Feet)</th>
<th>Looking Right (in Feet)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Calculated¹</td>
<td>Available/Existing</td>
<td>Calculated¹</td>
</tr>
<tr>
<td>Southbound Montrose Ave</td>
<td>280</td>
<td>300+</td>
<td>374</td>
</tr>
<tr>
<td>Northbound Montrose Ave</td>
<td>374</td>
<td>190</td>
<td>280</td>
</tr>
<tr>
<td>Northbound Roberts Ave</td>
<td>283</td>
<td>300+</td>
<td>378</td>
</tr>
<tr>
<td>Southbound Roberts Ave</td>
<td>378</td>
<td>400+</td>
<td>283</td>
</tr>
<tr>
<td>Old Lancaster Road</td>
<td>354</td>
<td>250</td>
<td>244</td>
</tr>
<tr>
<td>Mondella Ave</td>
<td>283</td>
<td>300+</td>
<td>366</td>
</tr>
</tbody>
</table>

¹Based on PennDOT and AASHTO Minimum Stopping Sight Distance and the 85th Percentile speed of the roadway.
Crash Summary

- Number of crashes related to crossover traffic:
  - Montrose Avenue – 27
  - Roberts Road – 39

Table 3 – Crash Summary

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>County Line Road &amp; Lancaster Ave</td>
<td>6</td>
<td>13</td>
<td>3</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>County Line Road &amp; Montrose Ave</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>County Line Road &amp; Roberts Ave</td>
<td>14</td>
<td>7</td>
<td>12</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>County Line Road &amp; Thomas Ave/Conestoga Road</td>
<td>7</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>County Line Road &amp; South Warner Ave</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>--</td>
</tr>
<tr>
<td>County Line Road &amp; Old Lancaster Road</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>County Line Road &amp; Mondella Ave</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>County Line Road &amp; Lindsey Ave</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>County Line Road &amp; Brym Mawr Ave/ Glenbrook Ave/Railroad Ave</td>
<td>4</td>
<td>10</td>
<td>5</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>County Line Road &amp; Haverford Road/ Landover Road</td>
<td>9</td>
<td>6</td>
<td>5</td>
<td>8</td>
<td>5</td>
</tr>
</tbody>
</table>
Overall Corridor Improvements

- Provide speed limit signs at ½ mile increments along corridor
- Refresh pavement markings
- Upgraded pedestrian equipment, crosswalks and curb ramps
- Upgrade clearance intervals at all signalized intersections
- Extend traffic adaptive to include Roberts Road and Conestoga Road/Thomas Avenue intersections
Corridor Improvements

- Center left-turn lane (three lane facility) between Arthur Road & Roberts Road
- After road diet – potentially reduce speed limit from 35 MPH to 25 MPH
Intersection Improvements

- **Lancaster Avenue**
  - Curve warning signage
  - Red signal ahead

- **Montrose Avenue**
  - Channelized islands to restrict lefts and thru movements

- **Roberts Road**
  - Signalize
  - Coordinate with adjacent signal

- **Conestoga/Thomas/Glenbrook**
  - Dedicated left turn lane
  - Signal timing adjustments
Intersection Improvements

- **Old Lancaster Road**
  - Realign Old Lancaster Road between the northern and southern legs of the intersection to provide a safer through movement for vehicles

- **Bryn Mawr Avenue/Railroad Avenue**
  - Provide a dotted extension line between the northbound left-turn lane and the inside through lane
  - Install a nearside traffic signal head for the northbound left turn lane

- **Landover Road/Haverford Road**
  - Provide advanced dilemma zone radar detection at the intersection of County Line Road/Haverford Road & Landover Road
  - Provide an emergency pre-emption system
Channelized Island Alternatives

Sample Treatments
Intersection Improvements

- Old Lancaster Road
  - Realign to provide perpendicular alignment, increase sight lines, and restrict left turns from Old Lancaster
Intersection Improvements

- S. Warner Ave/Old Lancaster Rd
  - Reduce number of driveways at shopping center
Investigate installing RRFB’s at the following locations

- Lancaster Ave & Montrose Ave
- County Line Rd & Montrose Ave
- Conestoga Road & Montrose Ave
Existing Roadway Conditions
Proposed Roadway Conditions
QUESTIONS??
AM Peak Traffic Volumes
PM Peak Traffic Volumes
Saturday Peak Traffic Volumes